

CABLE CHAIN



SYSTEMS

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Corporate value and product idea



Available from stock



Delivery time today



No minimum order value



3 years guarantee



Professional solution design



3D CAD files



Free samples for test

LONGO specialized in the research, production, sales and service of cable chain systems.

As the hub of energy transmission in automation industry, cable chain systems have been widely used in various industries. With the rapid development of automation technology, higher requirements are increased for cable chain systems: higher speed and acceleration, higher load, long travel, or terrible conditions, etc. It depends on not only good products, but also professional solutions to make the application best.

LONGO has been developing the cable chain systems for more than ten years. We are constantly improving our product range and getting the expert knowledge from the help of our customers, which lead to the reliable and cost-effective solutions. Thanks to the cooperation with internationally renowned polymer material manufacturers, our modified materials can be used in various applications and working conditions.

At any time, "Protecting cables and hoses" is our first consideration when designing cable chains. They have smooth inner surface, rounded crossbar, cover and interior separation. The wear of cables and hoses is minimal because of no burrs and bumps. Higher strength and stability of cable chain, longer life of the whole systems. We are also committed to modularizing products, improving assembly efficiency and accuracy.

Improving quality and reducing costs for customers are our core values. This concept is rooted in the whole process from design to product delivery and after-sales service.





evolving londur materials

High performance materials

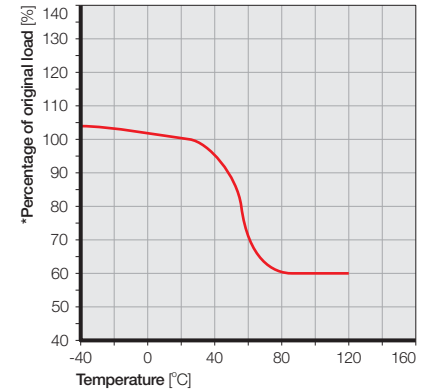
LONGO has developed a serie of high performance materials named **londur** for cable chain applications, which validated and recognized by the market. At the same time, we continuously improve the materials of this family. The **londur G**, **londur N**, **londur ESD** and other materials derived from this can be used in different working conditions. LONGO standard cable chains made from londur G material have high tensile resistance, low friction coefficient, good strength and toughness. They can be widely used in a variety of environments and temperature conditions. We are still expanding our material library. For some special applications, we are happy to offer solutions made from other materials. Please consult us.

Temperature resistance

LONGO cable chains made from londur G have a very wide temperature range. They can be used at temperatures from -40°C to +120°C. The diagram on the right shows the effect of temperature on load.

The lower the temperatures, the better the rigidity and the worse the toughness of cable chains. The impact resistance of cable chains will weaken sharply caused being brittle at temperatures below -20°C. In such case, we offer special cable chains made from cold-tough materials.

The rigidity of cable chains will weaken sharply caused lower fill weight and unsupported length at temperatures over +50°C. In such case, it should be especially checked whether the fill weight and driving force exceed the limit values of the cable chains. We also offer special cable chains made from heat-resistant materials.



Temperature range of londur G
-40°C to +120°C

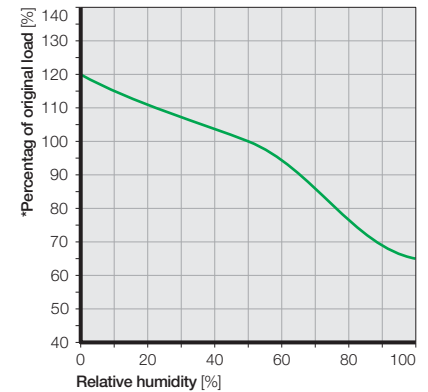
Humidity resistance

The performance of cable chains made from londur G is greatly affected by the relative humidity of the environment. The diagram on the right shows the effect of the relative humidity on load.

The lower the relative humidity, the better the rigidity and the worse the toughness of cable chains at saturated moisture absorption. In such case, cable chains are brittle and wear more.

The higher the relative humidity, the better the toughness and the worse the rigidity of cable chains at saturated moisture absorption. In such case, cable chains have lower fill weight and unsupported length, and wears more too.

londur G material has good performance in the range of 35-65%RH. For applications with extreme humidity conditions, please consult us.

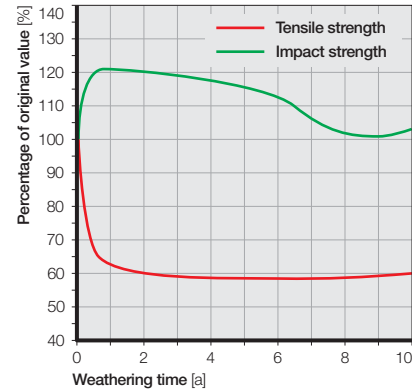


Humidity range of londur G
35% - 65%RH

*The original load is based on the measured value at 23°C and 50% relative humidity

Weathering resistance

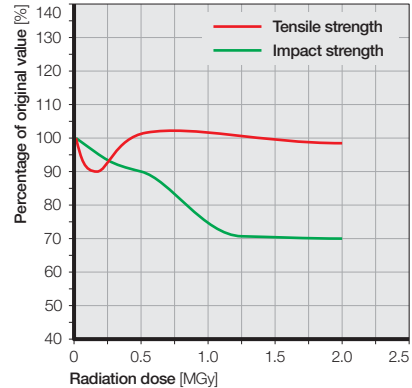
londur G has good weathering resistance and is very suitable for outdoor applications. The diagram on the right shows the change curve of tensile strength and impact strength of londur G with weathering time. Cable chains are in conditioning in the first year. After several years of weathering, the surface layer of standard grades is likely to show signs of wear down to several micrometers. Only a slight reduction of mechanical values is observed once the conditioned state has been reached. Cable chains made from londur G are stable and have a long service life in outdoor applications.



Weather resistance of londur G
UV-resistant

Radiation resistance

londur G has good radiation resistance and is suitable for applications with strong radiation such as nuclear power plants. The diagram on the right shows the change curve of tensile strength and impact strength of londur G with gamma radiation dose. In the range of 2.0MGy, the tensile strength of londur G changes little, and the impact strength is only reduced by 30%. In the range of 0.5MGy, the mechanical properties change very little. In the range of 10MGy, the electrical properties are almost unchanged.



Radiation resistance of londur G
High radiation resistance

Flammability

tested according to "UL94-Standard Tests for Flammability of Plastic Materials for Parts in Devices and Appliances", londur G falls into class HB for 3mm to 1mm thickness.

Tested according to DIN 4102, Part 1, "Fire Behaviour of Building Materials and Parts", londur G falls into class B2.

For further requirements such as materials with UL94-V2 or V0, please consult us.



Flammability of londur G
UL94 HB

Chemical resistance

londur G is good resistant to lubricants, fuels, hydraulic fluids, coolants, refrigerants, dyes, paints, cleaners, degreasing agents, aliphatic and aromatic hydrocarbons and many other solvents, but not resistant to oxidants, chlorinated hydrocarbons and acids.

Specifically, we can also provide high chemical resistant cable chains for applications with strong acid or alkali such as electrolytes, please consult us.



Chemical resistance of londur G
The table for details on page 9

Cleanroom

According to ISO 14644-1 cleanroom standard, cable chains made from londur G fall into class 1000 to 100,000, depending on the type of cable chains. For a higher cleanroom class, we offer super wear-resistant materials or other solutions, please consult us.



Cleanroom class of londur G
Class 1000 to 100,000

ATEX/ESD

londur G is an electrical insulating material. In some applications, such as prevention of explosive static charge in hazardous environments, and avoidance of static charge in manufacturing processes for electronic components or assemblies, cable chains made from londur ESD have permanent conductivity and can be safely used. LONGO ESD cable chains have certified by ATEX 2014/34/EU and correspond to classification EX II 2 GD Ex h IIC T6 Gb according to EN ISO 80079-36:2016 and EN ISO 80079-37:2016.



ATEX/ESD of londur ESD
Resistance < 10⁹ Ω·cm

Material data

Material property	Units	londur G	londur N	londur ESD
General properties				
Density	g/cm ³	1.38	1.14	1.2
Colour	—	Black	Black	Greyblue
Moisture absorption 23/50 r.h.	%	1.9	2.6	1.9
Maximum water absorption	%	6.3	8.5	7.3
Sliding friction coefficient	—	0.3	0.3	0.3
Mechanical properties				
Yield stress (dry/wet)	MPa	190/115	85/55	170/110
Elongation at break (dry/wet)	%	3.5/6	20/>50	3/5
Tensile modulus (dry/wet)	MPa	11800/6200	3100/1400	12000/7400
Flexural modulus (dry/wet)	MPa	10800/6500	2800/1300	10400/7000
Hardness Shore D	—	79	79	83
Electrical properties				
Volume resistivity	Ω*cm	> 10 ¹¹	> 10 ¹¹	< 10 ⁹
Surface resistivity	Ω	> 10 ¹¹	> 10 ¹¹	< 10 ⁹
Thermal properties				
Lower operating temperature	°C	-40	-40	-40
Upper operating temperature	°C	+120	+80	+80
Fire resistance as per UL94	—	HB	V2	HB

Colours

The colour of LONGO standard cable chains is black, and other colors offered upon request. The data listed in this catalog applies only to black chains. The characteristics of coloured chains may differ.

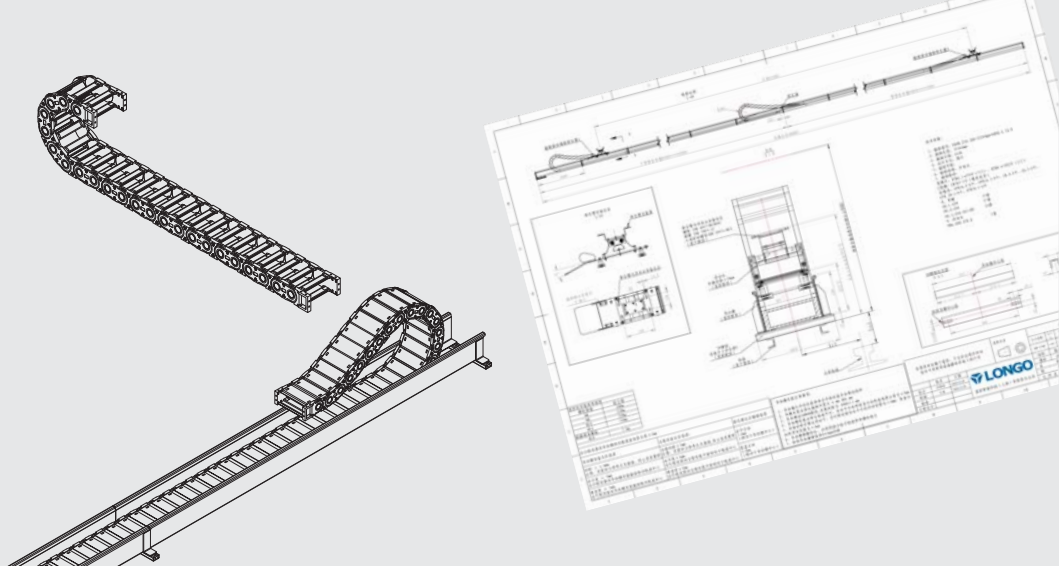


Chemical resistance

Medium	Concentration Weight %	londur G / N / ESD
Acetic acid	2	++
Acetone	100	++
Ammonia (aqueous)	10	++
Benzene	100	++
Bitumen	100	+
Boric acid (aqueous)	10	++
Butyric acid	100	+
Calcium chloride (aqueous)	Sat. aq. sol.	++
Caustic potash	10	++
Chlorinated hydrocarbons		++
Chlorine water	Sat. aq. sol.	—
Chromic acid (aqueous)	1	+
Colour		++
Diesel oil	100	++
Fats, cooking fat		++
Fluorinated hydrocarbons		++
Formaldehyde (aqueous)	30	+
Formic acid (aqueous)	2	+
Gasoline	100	++
Hydraulic oils		++
Hydrochloric acid	pH ₂	+
Hydrochloric acid	2	—
Hydrochloric acid	10	—
Ink, printing ink		++
Mercury		++
Methyl acetate	100	++
Milk		++
Mineral oil		++
Oil, cooking		++
Oil, lubricating oil		++
Oleic acid	100	++
Paraffin oil		++
Perchloroethylene	100	++
Polyester resins (with styrene)		++
Potassium carbonate (aqueous)	60	++
Potassium sulphate (aqueous)	100	++
Propane gas		++
Sodium carbonate (aqueous)	50	++
Tartaric acid		+
Vaseline		++
Zinc sulphate (aqueous)	10	++

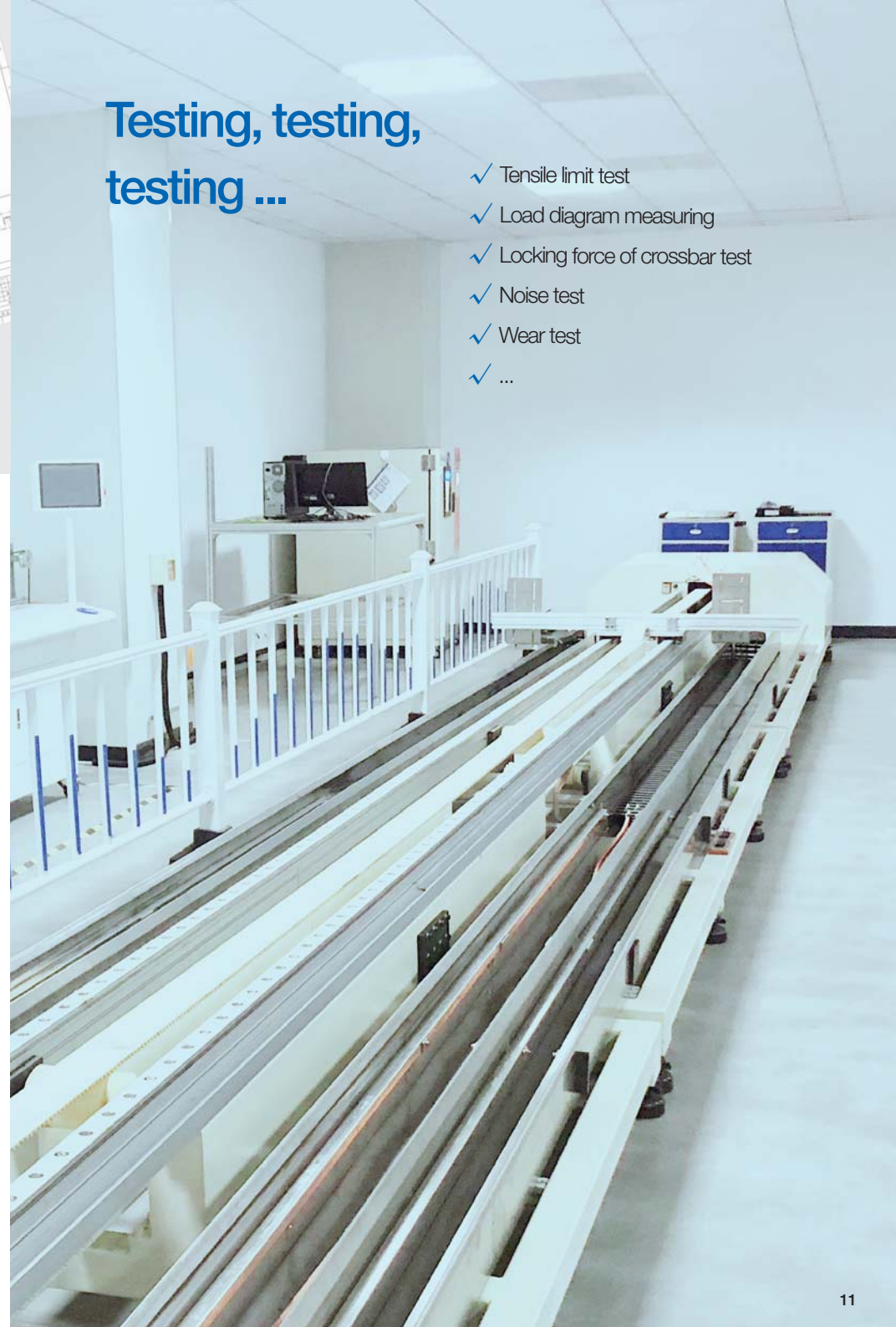


- ++ = Resistant
- + = Conditionally resistant
- = Non-resistant



Testing, testing, testing ...

- ✓ Tensile limit test
- ✓ Load diagram measuring
- ✓ Locking force of crossbar test
- ✓ Noise test
- ✓ Wear test
- ✓ ...



Design, 3D-CAD

Based on more than ten years of products and applications experience, LONGO can provide you with professional design and drawing services, such as the layout of cable chains, distribution of cables and hoses, BOM, etc. 3D models are downloaded for free and easily inserted into your product design. Then, you intuitively simulate the trajectory of cable chains and calculate the installation dimensions.

- ✓ Layout of cable chains
- ✓ Distribution of cables and hoses
- ✓ BOM
- ✓ 3D models inserted
- ✓ Simulate the trajectory
- ✓ Intuitive installation dimensions

3D-CAD System - Easymodeling

► www.longo-tech.com/easymodeling.html

Abbreviations

α	=	ngle of rotation	[°]	H_{Gi}	=	inner guide trough height	[mm]
β	=	Fixed end angle	[°]	h_i	=	Inner cable chain height	[mm]
ΔC	=	Offset fixed end	[mm]	H_z	=	Required clearance height	[mm]
ΔM	=	Deviation of the centre point	[mm]	K	=	Add-on for bending radius	[mm]
μ	=	Friction factor	[1]	K_1	=	Add-on for bending radius if the mounting point is lowered	[mm]
a	=	Acceleration	[m/s ²]	L_c	=	C-rail length	[mm]
B_a	=	Outer cable chain width	[mm]	L_G	=	Length of guide trough bottom	[mm]
B_{Ga}	=	Outer guide trough width	[mm]	L_k	=	Cable chain length	[mm]
B_{Gi}	=	Inner guide trough width	[mm]	m	=	Total mass of system	[kg]
B_i	=	Inner cable chain width	[mm]	n	=	Number of links	[1]
d	=	Outer cable diameter	[mm]	n_R	=	Number of the first rotated chain links	[1]
D	=	Over-length chain radius in final position	[mm]	n_z	=	Number of tiewrap plate teeth	[1]
D_i	=	Over-length for gliding	[mm]	P	=	Chain link pitch	[mm]
$F\mu$	=	Driving force against friction	[N]	R	=	Bending radius	[mm]
F_a	=	Driving force against acceleration	[N]	ra	=	Outer rail radius	[mm]
F_d	=	Driving force of system	[N]	Ra	=	Outer RBR chain radius	[mm]
FL_b	=	Unsupported length with sag	[m]	ri	=	Inner rail radius	[mm]
FL_G	=	Unsupported straight length	[m]	Ri	=	Inner RBR chain radius	[mm]
FL_u	=	Unsupported lower run	[m]	S	=	Length of travel	[mm]
FZ_{max}	=	Maximum fill weight for gliding	[kg/m]	T_1	=	Guide trough thickness	[mm]
H	=	Nominal clearance height	[mm]	T_2	=	Glide bar thickness	[mm]
H_i	=	Clearance height with lowered moving end	[mm]	v	=	Speed	[m/s]
ha	=	Outer cable chain height	[mm]	Y_{max}	=	Maximum deflection	[mm]
H_{Ga}	=	Outer guide trough height	[mm]	z	=	Camber	[mm]

Icons

	Inner height hi		Unsupported		Load diagram
	Cable outer diameter		Gliding		Mounting brackets
	Outer height ha		Vertical hanging		Tiewrap plate
	Inner width Bi		Vertical standing		Clamp
	Outer width Ba		Side-mounted straight		C-rail
	Chain link pitch P		Side-mounted rotary		Guide trough
	Bending radius R		Other applications		Clip extension
	Unsupported fill weight		Openable along the outer radius from both sides		Links extension
	Unsupported travel length		Openable along the inner radius from both sides		Rol chain
	Gliding fill weight		Openable along the inner and outer radius		Order example
	Gliding travel length		Standard		Information
	Speed v		Noise-optimised		
	Acceleration a		RBR		
	Vertical separator		NC		
	Full-width horizontal separator		ESD		
	Horizontal separator or distribution				

Legend ■ Standard □ Partially — Not available	Opening principle	Series	General dimensions								Unsupported				Sliding				Interior separation			Page
			Inner height hi [mm]	Cable dia. dmax [mm]	Outer height ha [mm]	Inner width Bi [mm]	Outer width Ba [mm]	Bending radii R [mm]	Link pitch P [mm]		Fill weight max [kg/m]	Travel length FLG max [m]	Speed Vmax [m/s]	Accel-eration amax [m/s²]	Fill weight max [kg/m]	Travel length Smax [m]	Speed Vmax [m/s]	Accel-eration amax [m/s²]	Vertical separator	Full-horizontal separator	Horizontal separator	
																						
NanoFlue - nano, smallest space																						
One-piece Non-openable																						
		N07	7	Φ 5	10	7 - 30	12 - 35	015 - 048	13		0.35	1.0	10	50	—	—	—	—	—	—	52	
EasyClip mini - small size, easy to assemble																						
Open Crossbars openable along the outer radius from both sides																						
		E10	10	Φ 8	14.4	10 - 50	18 - 58	018 - 038	20		0.7	1.5	10	50	0.5	30	4	20	■	■	—	62
		E15	15	Φ 13	19.4	10 - 50	18 - 58	028 - 075	20		1.25	2.5	10	50	0.8	40	4	20	■	■	—	70
		E17	17	Φ 14	23	15 - 50	27 - 62	028 - 180	30.3		1.5	3.0	10	50	1.0	70	4	20	■	■	■	78
		E21	21	Φ 18	28	25 - 100	37 - 112	035 - 180	33.3		1.75	3.5	10	50	1.2	70	4	20	■	■	■	86
Open Crossbars openable along the inner radius from both sides																						
		E10i	10	Φ 8	14.4	10 - 50	18 - 58	018 - 038	20		0.7	1.5	10	50	0.5	30	4	20	■	■	—	62
		E15i	15	Φ 13	19.4	10 - 50	18 - 58	028 - 075	20		1.25	2.5	10	50	0.8	40	4	20	■	■	—	70
		E17i	17	Φ 14	23	15 - 50	27 - 62	028 - 180	30.3		1.5	3.0	10	50	1.0	70	4	20	■	■	■	78
		E21i	21	Φ 18	28	25 - 100	37 - 112	035 - 180	33.3		1.75	3.5	10	50	1.2	70	4	20	■	■	■	86
EasyClip - lightweight, easy and quiet																						
Open Crossbars openable along the outer radius from both sides																						
		E26	26	Φ 23	36	25 - 100	40 - 115	048 - 250	46		5	4.0	10	50	2	100	4	25	■	■	■	100
		E36	36	Φ 32	50	50 - 175	67 - 192	063 - 300	56		10	5.5	10	50	4	125	4	25	■	■	■	108
Open Crossbars openable along the inner radius from both sides																						
		E26i	26	Φ 23	36	25 - 100	40 - 115	048 - 250	46		5	4.0	10	50	2	100	4	25	■	■	■	100
		E36i	36	Φ 32	50	50 - 175	67 - 192	063 - 300	56		10	5.5	10	50	4	125	4	25	■	■	■	108

Legend ■ Standard □ Partially — Not available	Opening principle	Series	General dimensions							Unsupported				Sliding				Interior separation			Page	
			Inner height	Cable dia.	Outer height	Inner width	Outer width	Bending radii		Link pitch	Fill weight max	Travel length	Speed	Accel-eration	Fill weight max	Travel length	Speed	Accel-eration	Vertical separator	Full-horizontal separator		Horizontal separator
			hi	d _{max}	ha	Bi	Ba	R		P	[kg/m]	FL ₀ max	v _{max}	a _{max}	[kg/m]	S _{max}	v _{max}	a _{max}				
			[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]		[m]	[m/s]	[m/s ²]		[m]	[m/s]	[m/s ²]				
GeMotion - stability, high load and long travel																						
Open Crossbars every link																						
		G34	34	Φ 31	54	50 - 400	72 - 422	063 - 300	56		27	7	10	50	8	200	5	30	■	□	■	124
		G44	44	Φ 40	64	50 - 400	76 - 426	075 - 350	67		40	8	10	50	12	250	5	30	■	□	■	136
		G60	60	Φ 54	88	75 - 500	109 - 534	135 - 500	91		67	10	10	50	15	350	5	30	■	□	■	148
		G80	80	Φ 72	108	75 - 500	125 - 550	150 - 600	111		75	12	10	50	30	350	5	30	■	□	■	160
		GS80	80	Φ 72	108	75 - 500	105 - 530	150 - 600	91		65	10	10	50	15	350	5	30	■	□	■	176
Open Crossbars every 2 nd link																						
		G34H	34	Φ 31	54	50 - 400	72 - 422	063 - 300	56		27	7	10	50	8	200	5	30	■	□	■	124
		G44H	44	Φ 40	64	50 - 400	76 - 426	075 - 350	67		40	8	10	50	12	250	5	30	■	□	■	136
		G60H	60	Φ 54	88	75 - 500	109 - 534	135 - 500	91		67	10	10	50	15	350	5	30	■	□	■	148
		G80H	80	Φ 72	108	75 - 500	125 - 550	150 - 600	111		75	12	10	50	30	350	5	30	■	□	■	160
		GS80H	80	Φ 72	108	75 - 500	105 - 530	150 - 600	91		65	10	10	50	15	350	5	30	■	□	■	176
Closed Swarf protection																						
		G34T	34	Φ 31	54	50 - 300	72 - 322	125 - 300	56		27	7	10	50	8	200	5	30	■	□	■	124
		G44T	44	Φ 40	64	50 - 300	76 - 326	125 - 350	67		40	8	10	50	12	250	5	30	■	□	■	136
		G60T	60	Φ 54	88	100 - 400	134 - 434	150 - 500	91		67	10	10	50	15	350	5	30	■	□	■	148
		G80T	80	Φ 72	108	100 - 400	150 - 450	200 - 600	111		75	12	10	50	30	350	5	30	■	□	■	160
		GS80T	80	Φ 72	108	100 - 400	130 - 430	200 - 600	91		65	10	10	50	15	350	5	30	■	□	■	176

Legend	Opening principle	Series	General dimensions								Unsupported				Sliding				Interior separation			Page
			Inner height	Cable dia.	Outer height	Inner width	Outer width	Bending radii	Link pitch		Fill weight max	Travel length	Speed	Accel-eration	Fill weight max	Travel length	Speed	Accel-eration	Vertical separator	Full-horizontal separator	Horizontal separator	
			hi [mm]	d _{max} [mm]	ha [mm]	Bi [mm]	Ba [mm]	R [mm]	P [mm]		[kg/m]	FL ₀ max [m]	V _{max} [m/s]	a _{max} [m/s²]	[kg/m]	S _{max} [m]	V _{max} [m/s]	a _{max} [m/s²]				
■ Standard																						
□ Partially																						
— Not available																						

TriCross - lightweight, easy and stability

Open | Crossbars every link

		TC48	48	Φ 43	64	50 - 200	70 - 220	075 - 350	67		40	8	10	50	—	—	—	—	■	■	■	194

TriCross M - the new standard series for high load

Open | Crossbars every link

		TC60M	60	Φ 54	88	75 - 500	101 - 526	135 - 500	91		67	10	10	50	15	300	5	30	■	□	■	208

Open | Crossbars every 2nd link

		TCH60M	60	Φ 54	88	75 - 500	101 - 526	135 - 500	91		67	10	10	50	15	300	5	30	■	□	■	208

Closed | Swarf protection

		TCR60M	60	Φ 54	88	100 - 400	126 - 426	150 - 500	91		67	10	10	50	15	300	5	30	■	□	■	208

Design

Design

applications, distribution rules



Based on the technology accumulated by our laboratory and experience of applications, some important technical information is summarized for helping you to design quickly and securely.

- Unsupported | Short travels
- Sliding | Long travels
- Vertical | Hanging
- Vertical | Standing
- Side-mounted | Straight
- Side-mounted | Rotary
- Distribution rules | Cables and hoses



Unsupported | Short travels



Unsupported

Definition: The upper run of cable chain operates without touching the lower run over the entire travel.

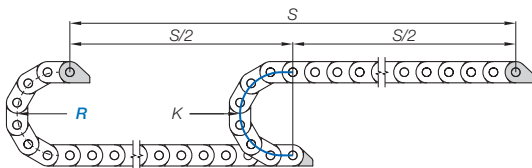
The unsupported application is the most common for short travels within 10m. LONGO cable chains are very suitable for applications with long unsupported length and high load, high speed and acceleration, and long service life.

Calculation of the cable chain length

For simple linear motion, if the fixed end of the cable chain is located in the centre of the travel, the cable chain length L_k is calculated by using half the length of travel $S/2$ and adding the value K for the bend radius. If the fixed end deviated the centre of the travel with ΔM , the cable chain length should add the deviation. Placing the fixed end in the centre of the travel is always the first choice as the most cost-effective solution because it requires the shortest cable chains, cables and hoses.

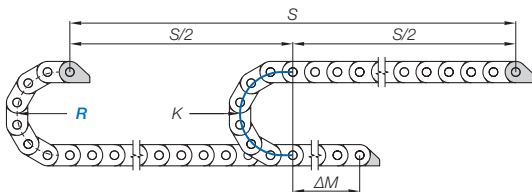
■ The fixed end in the centre of the travel

$$L_k = S/2 + K$$



■ The fixed end deviated the centre of the travel

$$L_k = S/2 + K + \Delta M$$



The fixed end in the centre of the travel is the most cost-effective solution!

$$K = \pi \cdot R + 2 \cdot P$$

L_k = Cable chain length

S = Length of travel

R = Bending radius

P = Chain link pitch

ΔM = Deviation of the centre point

K = Add-on for bending radius

K is taken from the data tables of the individual series

Unsupported | Short travels

Unsupported length

Definition: The unsupported distance between the moving end and the start of the radius arc of the cable chain.

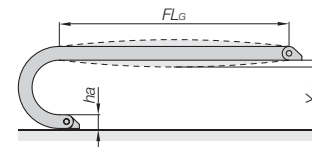
The maximum unsupported length depends on the chain series and the fill weight. According to the status of the unsupported cable chain, we differentiate among three types of unsupported length.

1. Unsupported with straight FL_G

Unsupported with straight is always recommended. The cable chain systems have high stability, and the minimum expected service life is 10 million cycles.

Advantages:

- High speed and acceleration
- Low noise and no additional vibration
- Less stress on cable chains and cables, long service life



$$FL_G: Y_{max} \leq 1/2 \cdot h_a$$

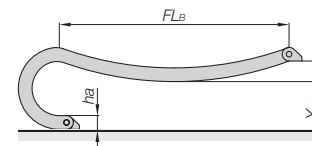
The upper run has camber, or is straight, or has a maximum sag of 1/2 chain link outer height

2. Unsupported with permitted sag FL_B

Unsupported with permitted sag can be used in applications of low speed and acceleration. However, noise and vibration will increase, service life will be reduced.

Advantages:

- Longer travel length or higher fill weight
- Economical solution thanks to smaller cable chain used

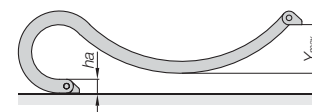


$$FL_B: 1/2 \cdot h_a < Y_{max} \leq R_{min}$$

The sag is less than the minimum bending radius of the selected chain series

3. Critical sag

Critical sag should be avoided. It greatly reduces the service life of the cable chains and the safety coefficient of the equipments. Applications may reach critical sag after long service times. In these cases, the cable chains should be replaced or the design should be changed. Please contact us.



$$\text{Critical sag: } Y_{max} > R_{min}$$

The sag is more than the minimum bending radius of the selected chain series



Checking the unsupported length and fill weight of applications by "Load diagram" of the selected cable chain, you can find the most suitable cable chain!

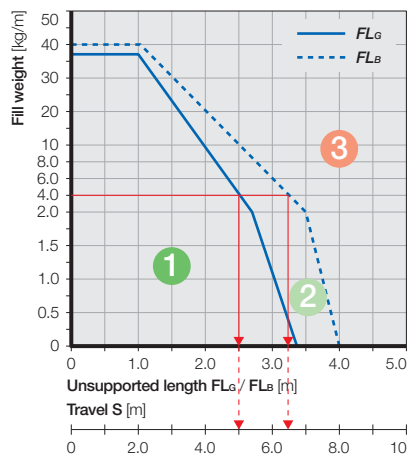
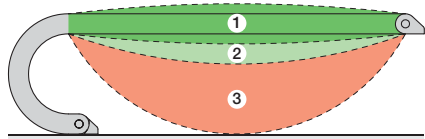


Unsupported | Short travels

Load diagram

On the right load diagram, the solid line is **unsupported with straight FL_G** , and the dashed line is **unsupported with permitted sag FL_B** . The two lines divide 3 areas:

1. FL_G ► The area to the left of the solid line
2. FL_B ► The area between the solid and dashed lines
3. Critical sag ► The area to the right of the dashed line



Load diagram used for:

- Checking whether the selected cable chain meets your application demands, according to the area where the intersection of the unsupported length and fill weight (all cables and hoses including contents) in the cable chain falls
- Identifying the maximum unsupported length with straight and permitted sag for the selected cable chain if the fill weight is fixed
- Identifying the maximum fill weight with straight and permitted sag for the selected cable chain if the unsupported length is fixed

Example

Fill weight = 4.0 kg/m
 Max. unsupported length FL_G = 2.5 m
 Max. unsupported length FL_B = 3.2 m
 Max. unsupported travel FL_G = 5.0 m
 Max. unsupported travel FL_B = 6.4 m



Load diagram is measured by the new cable chain which has the average weight (the average inner width) of every serie at normal temperature and humidity conditions. For closed or extremely wide cable chains, the maximum fill weight and unsupported length are reduced due to the increased weight of the cable chains. The cable chains will weaken in applications with high temperature and high humidity, and also weaken along with long-term load and increased wear.

Unsupported | Short travels

Support

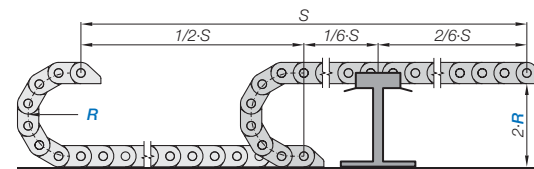
When the unsupported length is insufficient, support may be a good solution. But speed and acceleration are limited, and noise and vibration may arise. A stronger cable chain is always the first choice if conditions are permitted.

Three fundamental supports examples are detailed to below. The supports can be made of rollers or trays.

1. One support

The unsupported travel can be increased by a maximum of 50%:

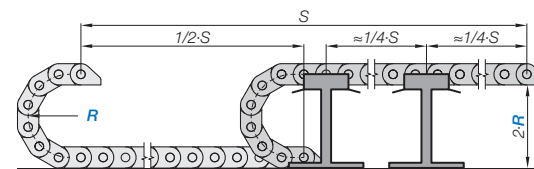
$$S_{\max} = 3 \cdot FL_G$$



2. Two supports

The unsupported travel can be increased by a maximum of 100%:

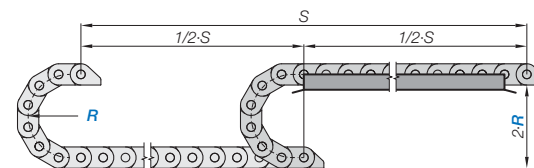
$$S_{\max} = 4 \cdot FL_G$$



3. Full supports

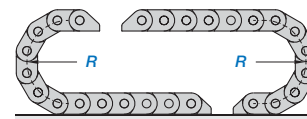
The unsupported travel can be increased by a maximum of 100%:

$$S_{\max} = 4 \cdot FL_G$$

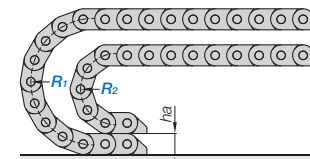


Opposed and nested

Opposed or nested is designed if the installation height and width are limited and the filled space needs to be increased. They are also good solutions for insufficient unsupported length.



Opposed with two cable chains



Nested with two cable chains

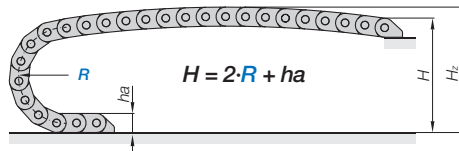


A certain gap between the nested cable chains is needed for smooth running
 The difference in bending radius of the adjacent cable chains is recommended: $R_1 - R_2 > 3/2 \cdot ha$

Unsupported | Short travels

Camber

Camber is the curve of the upper run along its unsupported length. All LONGO standard cable chains are manufactured with camber. The camber allows for longer unsupported lengths and increases service life.



Installation height

The required clearance height H_c is greater than the nominal clearance height H , taking the camber into account. In the installation dimensions section of each respective cable chain description, you will find the measurement H_c . Upon request, we can deliver cable chains without camber for restricted space applications - **NC** cable chains. However, the cable chains without camber have lower load-bearing capacity. Please consult us.

Mounting brackets

We recommend **pivoting mounting brackets** as standard for unsupported applications.

Pivoting mounting brackets can compensate for the camber, decrease the load on the first chain link in operation and be installed more easily.

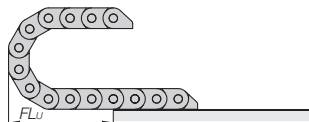
Exception: If the acceleration is greater than 20m/s^2 or the clearance height is limited. In such cases, locking mounting brackets are recommended to keep the cable chains under the H_c measurement and avoid taking the cable chains off.



Supporting surfaces

Unsupported cable chains normally require a supporting surface on which the lower run can roll. The surface can be made from many different materials with many configurations. Please ensure that dirt and debris cannot accumulate in the path of the cable chain.

If the lower run of the cable chains can not be supported, we call it **unsupported with overhang**. The maximum permitted overhang length FL_u depends on the chain type, the fill weight, and other factors. We recommend that the maximum overhang length is no more than $1/4$ of the unsupported straight length.



unsupported with overhang FL_u :

$$FL_{u\max} \leq 1/4 \cdot FL_g$$

The maximum overhang length is no more than $1/4$ of the unsupported straight length

Unsupported | Short travels

Noise-optimised

LONGO provides a lot of noise-optimised solutions for low noise applications. The operating noise of the cable chains depends on the following factors:

1. Speed and acceleration

The higher the speed and the acceleration, the louder the noise. LONGO cable chains that have been tested reach a low decibel level even at high speed and acceleration.



Cable chains running at high dynamics

2. The ratio of bending radius to pitch R/P

The larger the R/P value, the closer the bending radius of the cable chain is to an arc, running more smoothly with lower noise and vibration. The R/P value is very important for some applications required high accuracy. LONGO cable chains had optimised the ratio of inner height to pitch. We can also customize special specifications for your special applications.



R/P: small on the left and large on the right

3. Installation conditions

The noise is lowest when the cable chain is unsupported with straight, and increased with sag or supports. The supporting surfaces should be flat and avoid interference during operation. Laying elastic elements such as PU pad under the cable chain can reduce the overall noise of the equipment.



PU pad laid under the cable chain to reduce noise

4. The structure of cable chains

We are innovating the cable chains continuously to find more effective, simple and economical noise-optimised solutions. LONGO cable chains are designed with noise-optimized structures, which can significantly reduce operating noise.



Series E26 cable chains with elastic damping stop dogs



Gliding | Long travels



Gliding

Definition: The upper run of cable chain glides on the lower run or the supporting surface such as glide bars.

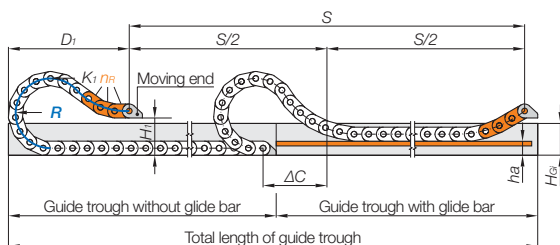
If the unsupported length is not sufficient, the gliding solution is the best alternative for long travels. A guide trough is usually necessary against offset. The moving end of the cable chain must be lowered and the first chain links rotated.

Calculation of the cable chain length

If the fixed end of the cable chain is located near the centre of the travel (offset fixed end ΔC), the cable chain length L_k is calculated by using half the length of travel $S/2$ and adding the value K_1 for the bend radius. The add-on for bending radius increases if the mounting point is lowered. Placing the fixed end offset the centre of the travel ΔC is the first choice as the most cost-effective solution, more than the centre of the travel.

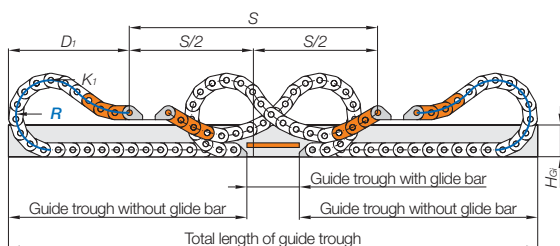
■ Gliding with one cable chain

Offset the centre of the travel ΔC



■ Gliding with two opposed cable chains

Restricted space, high load or two independent devices



Lowering the moving end and rotating the first chain links are very important!

$$L_k = S/2 + K_1$$

L_k = Cable chain length

S = Length of travel

R = Bending radius

H_1 = Lowered mounting height

H_{ga} = Inner guide trough height

ha = Outer cable chain height

ΔC = Offset fixed end

D_1 = Over-length for gliding

n_R = Number of the first rotated chain links

K_1 = Add-on with lowered moving end

K_1 is taken from the data tables of the individual series

Gliding | Long travels



Example of gliding application:

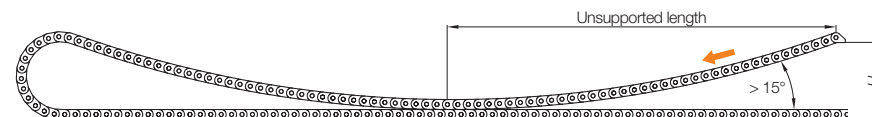
Lowering the moving end and rotating the first chain links

Lowered mounting height

If the bending radius is: $2 \cdot R > 3 \cdot ha$, the moving end of the cable chain must be lowered for gliding applications.

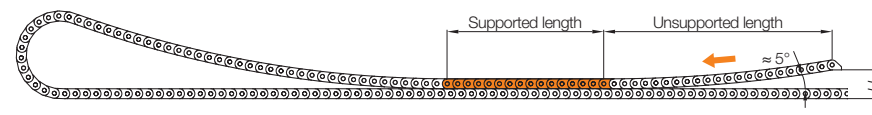
⊖ If the moving end is not lowered: $H = 2 \cdot R$

- ▶ Long unsupported length, critical sag and high internal stress of cable chain
- ▶ Big mounting angle, easy to break when cable chain returning



+ If the moving end is lowered: $H_1 = 3 \cdot ha$

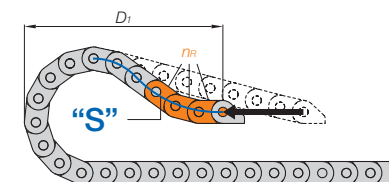
- ▶ Greatly reduce the unsupported length and relieve the internal stress of cable chain
- ▶ The mounting angle is about 5° , reducing the risk of breaking when cable chain returning
- ▶ Reduce wear and vibration, long service life



Rotated moving end links

The first chain links must be rotated if the moving end is lowered. n_R is taken from the data tables of the individual series, depending on chain type and bending radius R .

- ▶ Save installation space (smaller D_1)
- ▶ Reduce internal stress due to "S" shape of moving end
- ▶ Avoid cable chain rising up during operating



Gliding | Long travels

Support on moving end

Supporting the first chain links of moving end is usually necessary. The support plate can protect the moving end links against over-stressing and avoiding accidental break. The slope of the support plate is recommended to be 10°~15°, and it can support at least 3 moving end links or all rotated chain links.



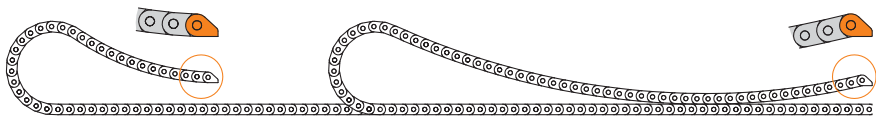
Mounting brackets

We recommend **pivoting mounting brackets** as standard for gliding applications.

The moving end links rotate at an angle when running to different positions for gliding applications. As shown in the figure below, when the cable chain runs from left to right, the moving end links rotate from top to bottom. Pivoting mounting brackets can well adapt to the rotation of these chain links, decrease the load on the moving end links and avoid stress concentration.



Standard

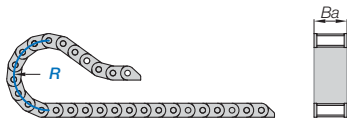


Stability of the cable chain

To ensure the stability of the cable chain and avoid overturning for gliding applications, the recommended ratio of the bending radius R to the outer width Ba is:

$$R/Ba \leq 4$$

The smaller the ratio, the higher the stability of the systems. If there is a lateral force, it is necessary to reduce the ratio or increase the height of the guide trough. Take outdoor high-altitude applications for example, the influence of wind must be considered.



Gliding | Long travels

Maximum fill weight F_{Zmax}

The maximum fill weight of the cable chain for gliding applications depends on the bending radius and speed.

■ The larger the bending radius, the lower the maximum fill weight

A larger bending radius means a longer unsupported length causing a higher bending moment. Therefore, the bending radius of the cable chain allowed by the cables or hoses is as small as possible.



■ The higher the speed, the lower the maximum fill weight

The speed v has a great influence on the maximum fill weight F_{Zmax} . The diagram on the right shows the relationship between F_{Zmax} of the cable chain G44.Bi.175 and v . On condition of $v > 1$ m/s, F_{Zmax} decreases proportionally if v increases. The wear will increase sharply and the life time will be greatly shortened if the load exceeds F_{Zmax} . Please consult us for detailed technical parameters.

Example: G44.Bi.175

v [m/s]	Ratio [%]	F_{Zmax} [kg/m]
1 m/s	100%	10 kg/m
2 m/s	50%	5 kg/m
3 m/s	33%	3.3 kg/m
4 m/s	25%	2.5 kg/m

Calculation of the driving force

For horizontal gliding applications, the driving force of system F_d is calculated by using the driving force against acceleration F_a and adding the driving force against friction F_μ :

$$F_d = F_a + F_\mu$$

Specially, the influence of gravity should be considered if the system is gliding on a slope.

The maximum driving force of the cable chain depends on the type, material and environment conditions. For complex sliding applications, please consult us to check the maximum driving force of the system and the cable chain.

RoI Chain ► Page 175

Rolling instead of gliding greatly reduces push-pull forces for long travels. RoI chain is very suitable for applications with high load or very long travels over 500 m.



Calculating the driving force is important for choosing the right chain!

$$F_a = m \cdot a \quad F_\mu = \mu \cdot m \cdot g$$

F_d = Driving force of system

F_a = Driving force against acceleration

F_μ = Driving force against friction

m = Total mass of system

a = Acceleration

g = Gravitational acceleration:
10 m/s²

μ = Friction factor

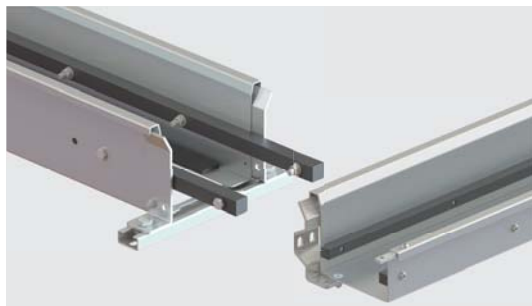
$\mu = 0.3$ for one cable chain

$\mu = 0.4$ for two opposed cable chains





Gliding | Long travels



Guide trough systems

Guide trough systems are necessary for the cable chain systems running stably in sliding applications. Various guide trough systems are available: modular, economical and easy to assemble. We recommend **GuidEasy** guide trough systems as standard for general guiding applications.

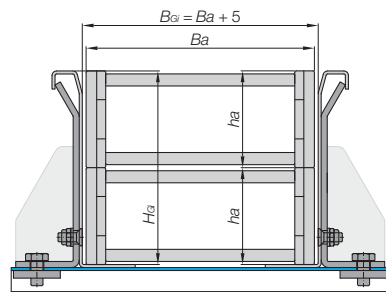


We recommend **GuidEasy** guide trough systems as standard!

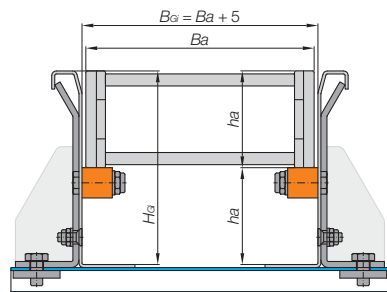
$$H_{Gi} \geq 2 \cdot h_a$$

$$B_{Gi} = B_a + 5$$

h_a = Outer cable chain height
 B_a = Outer cable chain width
 H_{Gi} = Inner guide trough height
 B_{Gi} = Inner Guide trough width



Guide trough without glide bars:
the upper run glides on the lower run



Guide trough with glide bars:
the upper run glides on the glide bars



Gliding | Long travels

Floating moving arm

The floating moving arm is required to ensure guiding of the cable chain without lateral forces in applications with excessive lateral offset. As a flexible connection, the floating moving arm has a relative movement between the cable chain and the system driver to compensate lateral offset. A floating moving arm is usually to be used in case of travel lengths longer than 50m with less precise guidance.

- Minimum horizontal compensation: $\pm 25\text{mm}$
- Easy assembly with CableFix clamps for strain relief
- Integrated support plate for moving end
- Customized by chain types, loads and operating conditions
- Material: galvanized steel or stainless steel



Free project drawing design

We recommend that our engineers design the gliding applications for you. We will offer the most cost-effective solution, taking the technical requirements and operating safety into consideration. The project drawings include the installation dimensions of cable chains and guide troughs, and the distribution of cables and hoses, etc. If necessary, we also provide the service of installation guide after-sales to ensure your systems safe and long service life.



Long travel of 138m with systems GeMotion, GuidEasy guide trough and floating moving arm in condition of high temperature and humidity



Vertical | Hanging



Vertical hanging

Definition: The cable chain operates in the vertical direction and the arc bending downwards.

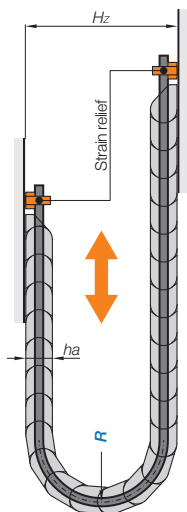
With LONGO cable chain systems, travels of over 100m are possible in vertical hanging applications. The cable chains fulfil the function of orderly conduit bundling only and should not absorb any further tensile forces. All cables and hoses must be secured carefully to both ends of the cable chains with strain relief so that they bear their own weight.

Calculation of the cable chain length

The formula is the same as that of unsupported applications for regular linear vertical hanging applications.

Camber

A standard LONGO cable chain with camber is suitable for vertical hanging applications if enough space is available. If space is restricted, a cable chain without camber can be used - NC chain.



The camber must be considered for calculating installation space!

Required space for standard chain:

$$Hz = 2 \cdot R + ha + z$$

Required space for NC chain:

$$Hz = 2 \cdot R + ha$$

Hz = Required clearance height

R = Bending radius

ha = Outer cable chain height

z = Camber

z is depended on chain series

Vertical | Hanging

Mounting brackets

We recommend **locking mounting brackets** as standard for vertical hanging applications.

The cable chains can not sway with locking mounting brackets during the movement.



Standard

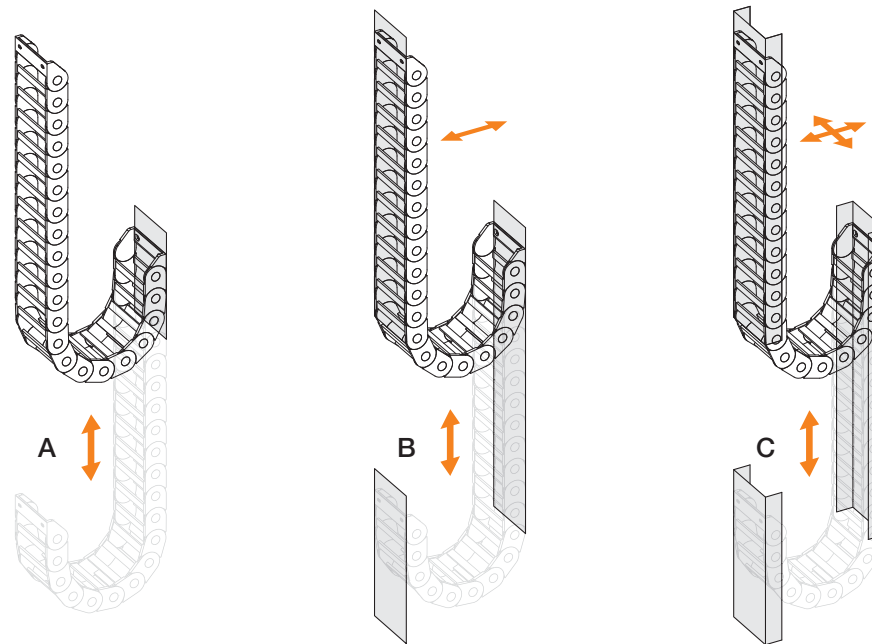
Support

■ Without lateral acceleration

If the application has a purely vertical movement without lateral acceleration, a lateral support is not necessary.

■ With lateral acceleration

If the application has lateral acceleration, a lateral support is required. Partial support is allowed, but it must at least cover the area in which the cable chain may sway. The layout in figure C is preferred.



Without support:

For applications without lateral acceleration

Planar support:

For applications with lateral acceleration as illustrated

U-shaped support:

For applications with lateral acceleration as illustrated



Vertical | Standing



Vertical standing

Definition: The cable chain operates in the vertical direction and the arc bending upwards.

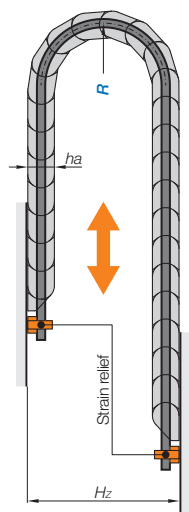
The cable chain must bear its own weight and the weight of the cables and hoses in vertical hanging applications, therefore the permitted travel is much shorter. The cable chain is far less stressed and more stable in a hanging application, so vertical hanging would be a better choice if the space is allowed. All cables and hoses must be secured carefully to both ends of the chains with strain relief.

Calculation of the cable chain length

The formula is the same as that of unsupported applications for regular linear vertical standing applications.

Camber

A standard LONGO cable chain with camber is suitable for vertical standing applications if enough space is available. If space is restricted, a cable chain without camber can be used - NC chain.



The camber must be considered for calculating installation space!

Required space for standard chain:

$$H_z = 2 \cdot R + h_a + z$$

Required space for NC chain:

$$H_z = 2 \cdot R + h_a$$

H_z = Required clearance height

R = Bending radius

h_a = Outer cable chain height

z = Camber

z is depended on chain series

Vertical | Standing

Mounting brackets

We recommend **locking mounting brackets** as standard for vertical standing applications.

The cable chains can not sway with locking mounting brackets during the movement.



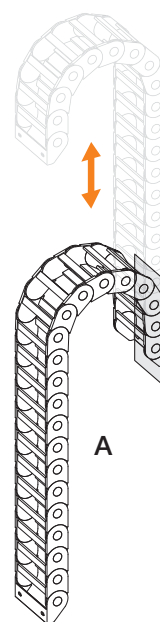
Support

■ Without lateral acceleration

If the application has a purely vertical movement without lateral acceleration, a lateral support is not necessary. For higher cable chain heights we recommend using a guide trough for the whole cable chain.

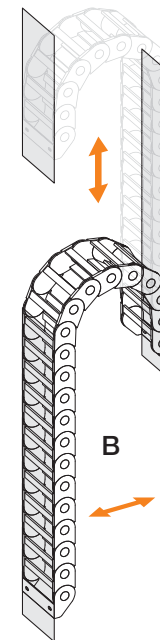
■ With lateral acceleration

If the application has lateral acceleration, a lateral support is required.



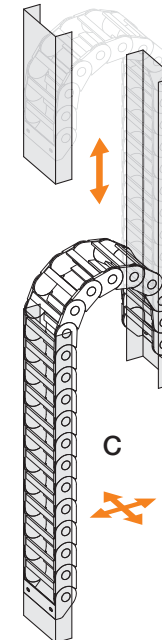
Without support:

For applications without lateral acceleration



Planar support:

For applications with lateral acceleration as illustrated



U-shaped support:

For applications with lateral acceleration as illustrated



Side-mounted | Straight



Side-mounted straight

Definition: The cable chain is placed on its side and has a linear movement in horizontal direction.

Side-mounted is used for applications with restricted installation height instead of unsupported. Unsupported for short travels or gliding for long travels is available depending on the supporting conditions and guide troughs.

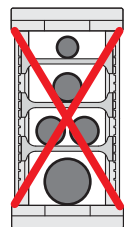
Calculation of the cable chain length

The formula is the same as that of unsupported applications for side-mounted straight applications.

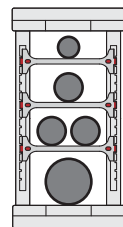
Distribution of cables and hoses

Distribution rules of cables and hoses for side-mounted applications:

- The cables and hoses are distributed from top to bottom in ascending order of weight for high stability
- Different layers should be separated by **locking separators**. The cables and hoses can not move freely if using movable separators and wear is increased



With movable separators



With locking separators

Mounting brackets

We recommend **locking mounting brackets** as standard for side-mounted straight applications.

Locking mounting brackets can prevent the cable chains from swinging during the movement.



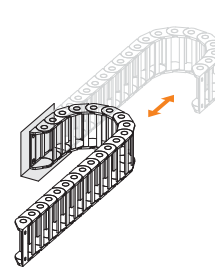
Side-mounted | Straight

Short travels, unsupported

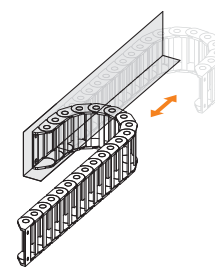
Side-mounted chains can be used unsupported to a limited extent. The unsupported length is dependent on the following factors:

- **Fill weight:** The greater the fill weight of the chains, the shorter the available unsupported length
- **Width of the chains:** The wider the width of the chains, the longer the available unsupported length
- **Bending radius:** The smaller the bending radius of the chains, the longer the available unsupported length

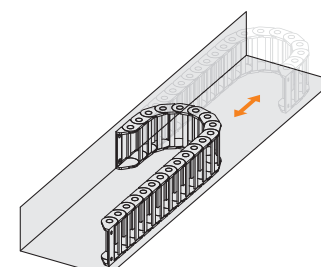
For applications with short travels and low fill weight, support is not necessary. If, however, the travels are long and the fill weight is high, the chains must then be supported either in whole or in part.



A. Without support



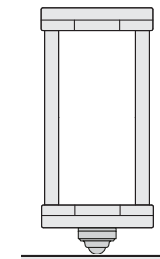
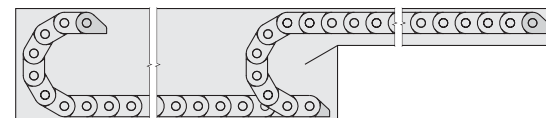
B. With single-sided support



C. With overall support

Long travels, gliding

Side-mounted chains can travel over 100m with adequate guidance. For regular side-mounted gliding applications, LONGO chains can glide directly on the guide surface which must be smooth and straight to reduce wear. For applications with high speed, great filling weight and long service life, chains with rolling accessories are available.



Cable chains with rolling accessories

Side-mounted | Rotary

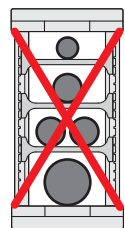


RBR Chain

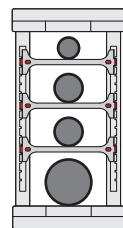
RBR chain has two bending radius of standard and reverse, so it can bend in two directions. All LONGO chains can be used in RBR design except the tubes. For example, Part No. G34.100.125/500, describes series G34 series with an inner width of 100mm, standard bending radius of 100mm and reverse bending radius of 500mm. The reverse bending radius of the RBR chain can be customized, but it should not be less than the minimum standard bending radius of the selected chain series.

Distribution of cables and hoses

Distribution rules of cables and hoses for side-mounted applications are applied to side-mounted rotary. The cables and hoses bend in two directions in circular movement which should be distributed in the center of the chain, and only one cable or hose is placed in a separate chamber as far as possible.



With movable separators



With locking separators

Mounting brackets

We recommend **Pivoting mounting brackets** as standard for side-mounted rotary applications.

Pivoting mounting brackets fit the circular rails better.



Standard

Side-mounted rotary

Definition: The cable chain is placed on their side and has a circular movement in horizontal direction.

RBR(Reverse Bending Radius) chain can rotate up to 540° along the outer rail or the inner rail. Circular movement in vertical direction is also possible. Guide troughs may be necessary, depending on the applications. Please consult us.

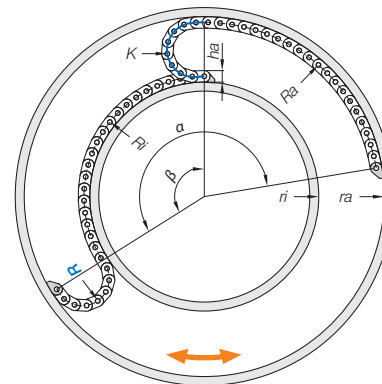
Side-mounted | Rotary

Calculation of the cable chain length

■ Stationary point at the inner radius

If $\beta = \alpha \cdot Ra / (Ri + Ra)$, the length of chain is shortest

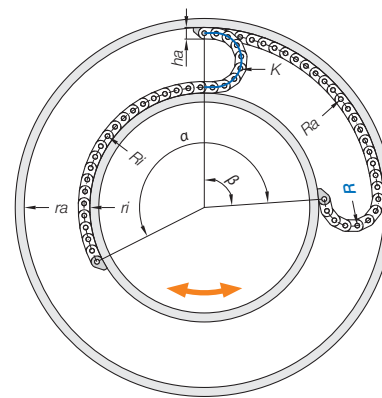
$$L_K = \pi \cdot (\beta / 180^\circ) \cdot Ri + K$$



■ Stationary point at the outer radius

If $\beta = \alpha \cdot Ri / (Ri + Ra)$, the length of chain is shortest

$$L_K = \pi \cdot (\beta / 180^\circ) \cdot Ra + K$$



With guide troughs, RBR chain can rotate smoothly!

$$Ra = ra - 1/2 \cdot ha$$

$$Ri = ri + 1/2 \cdot ha$$

L_K = Cable chain length

α = Angle of rotation

β = Fixed end angle

Ra = Outer RBR chain radius

Ri = Inner RBR chain radius

ra = Outer rail radius

ri = Inner rail radius

R = Bending radius

ha = Outer cable chain height

K = Add-on for bending radius

K is taken from the data tables of the individual series

RBR Chain | Available from stock

Series	Part No.
EasyClip mini	E15.20.048/100
EasyClip mini	E15.30.028/075

Distribution rules | Cables and hoses



Benifits of distribution

- Make your equipments more orderly
- Optimise the chain size and reduce costs
- Reduce wear of cables and hoses
- Prevent cables from torsion and breakage
- Maximize the service life of chain systems

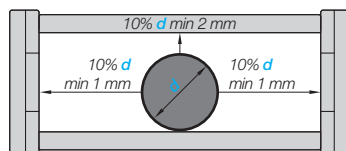
General distribution rules for cables and hoses are as follow. For complex applications, we are happy to provide professional distribution solutions for free, please consult us.

Clearance of cables and hoses

Cables and hoses must have additional clearances to move freely in the chain. Different minimum clearances are as follows:

- **Round electrical cables:** 10% of diameter
- **Flat electrical cables:** 10% of width/thickness each
- **Hydraulic hoses:** 20% of diameter
- **Pneumatics hoses:** 5-10% of diameter

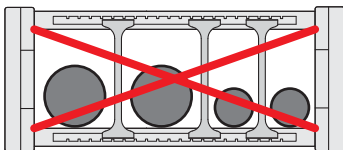
Please note: Don't fill chain more than 80%!



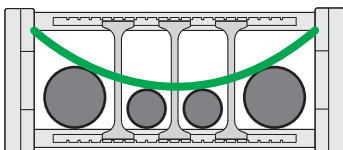
Clearance all around for round electrical cables

Weight distribution

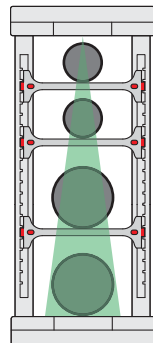
- For horizontal or vertical applications, the cable/hose weight should be symmetrically distributed along the width of the chain, with the heaviest cables/hoses laying on the outside. Even loading can help the chain to achieve its maximum service life.
- For side-mounted applications, the cables/hoses should be distributed from top to bottom in ascending order of weight for high stability. Different layers should be separated by locking separators.



Poor weight distribution



Good weight distribution

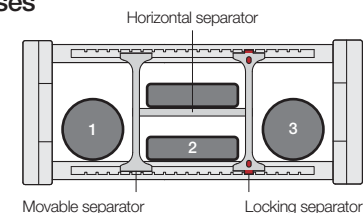


Good weight distribution

Distribution rules | Cables and hoses

Distribution rules of different cables and hoses

- Cables and hoses with different outer jacket materials must be separated to avoid sticking together. Electrical cables and hydraulic/pneumatics hoses should be separated, cables of different voltages should be separated.
- It is beneficial to place each cable and hose in a separate chamber if the space is allowed.
- Two flat cables next to one another should be kept apart with vertical separators and top of one another with horizontal separators. Flat and round cables should be laid separately in the chain.
- Sufficient room must be left in the chain for hydraulic hoses because of the expansion or contraction during pressure changes. As lateral movements of the hydraulic hoses can lead to increased abrasion, we recommend locking separators for the fixed position.



1. Round electrical cable
2. Flat electrical cable
3. hose

Distribution rules for numbers of cables

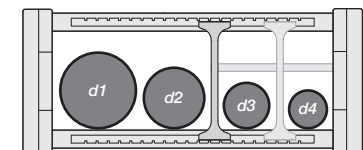
- A separator is required when the sum of the diameters of the cables laid side by side falls below $1.2 \times$ inner chain height hi .

$$d1 + d2 > 1.2 \cdot hi$$

A separator is not required

$$d1 + d2 \leq 1.2 \cdot hi$$

A vertical separator is required or a horizontal separator must be used to reduce the inner height



$$d1 + d2 > 1.2 \cdot hi$$

$$d3 + d4 \leq 1.2 \cdot hi$$

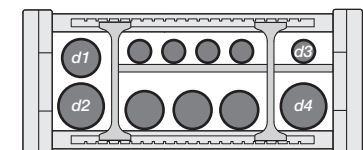
- If the inner width of the chain is not sufficient to separate the cables from each other, it is also possible to run two cables with similar diameter stacked one above the other. A horizontal sub-division using horizontal separator is required when the diameter of the cables vary too much.

$$d1 > 0.5 \cdot d2$$

A horizontal separator is not required for two stacked cables

$$d1 \leq 0.5 \cdot d2$$

A horizontal separator must be required for two stacked cables



$$d1 > 0.5 \cdot d2$$

$$d3 \leq 0.5 \cdot d4$$

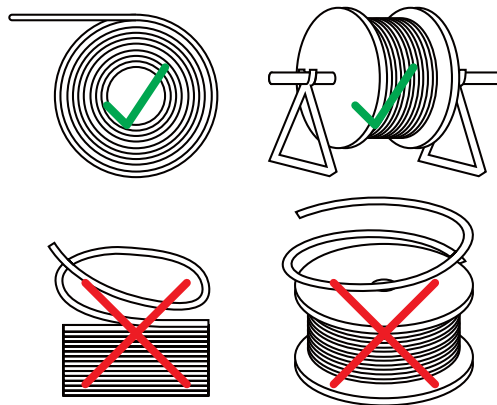


Standard separation: fitted every 2nd link

The distance between two sets of separators can be longer for applications with low speed and acceleration

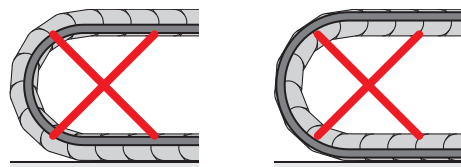
Cable unreeling

The cables must be laid straight without twisting from the drum. According to the requirements of the cable manufacturer, the cables after cutting may need to be laid out for some time to relieve stress before installation. Twisted cables should not be installed into the chain, otherwise the risk of torsion and breakage of cables would be increased.



Laying of cables and hoses

Cables and hoses must be able to move freely in the chain without any tension at the bending radius. They should be secured with strain relief at both ends. Hydraulic hoses expand or contract during pressure changes, so one-sided strain relief on the moving end is applied.

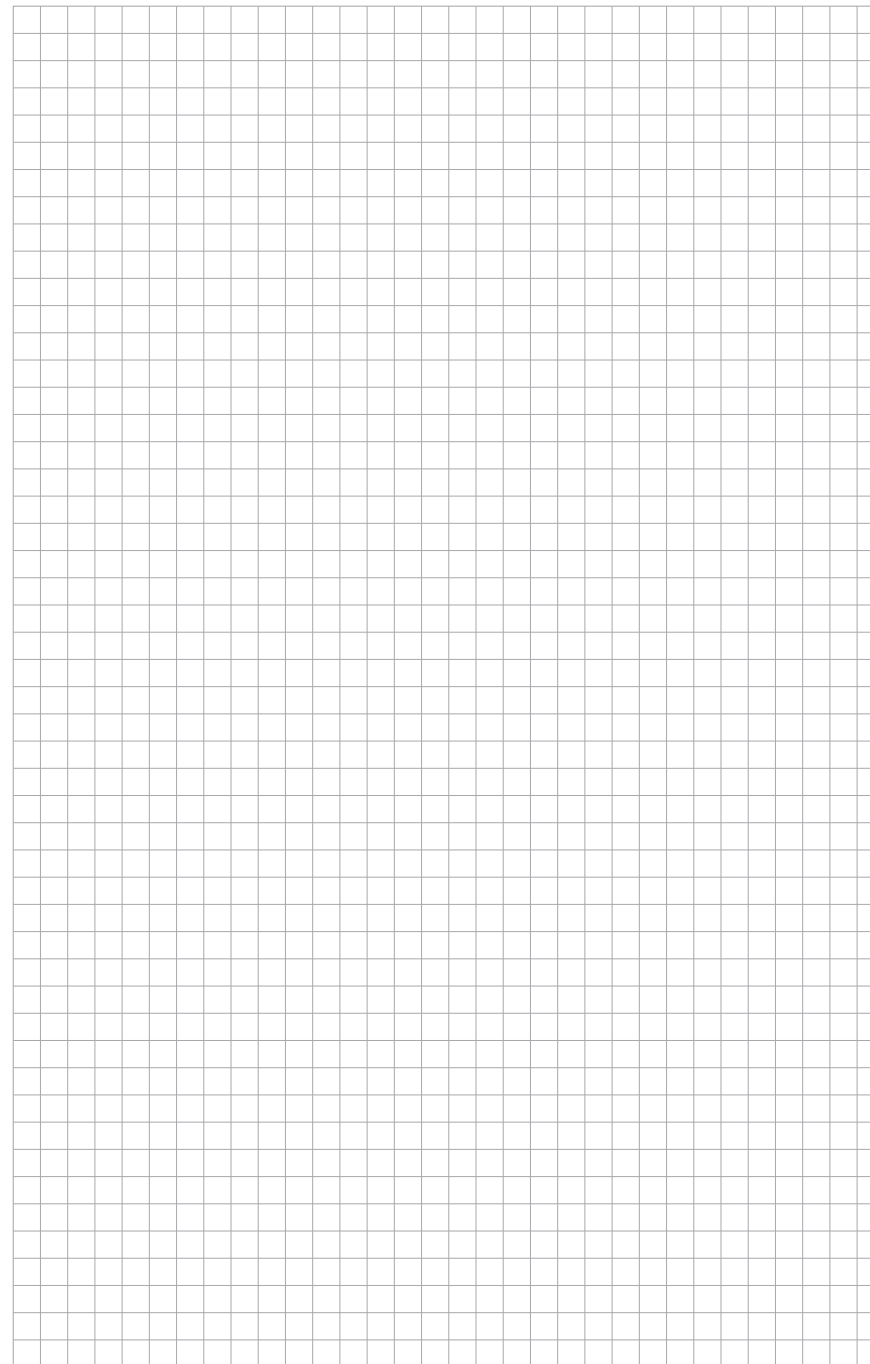
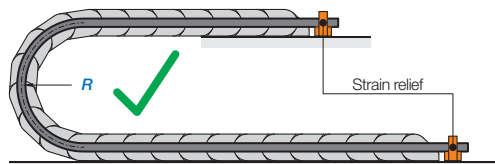


Bending radius R

The bending radius of the chain depends on the thickest or stiffest cable or hose. And it should be adjusted to the recommendations of the cable or hose manufacturer. The selection of a larger radius than the minimum will positively affect service life.

Reference for the permitted minimum bending radii of different cables and hoses are as follow:

Cable/hose	Min bending radius
Round electrical cable	$7.5-10 \times d$
Fiber optic cable	$10-15 \times d$
Pneumatics hose	$10-12 \times d$
Hydraulic hose	$10-15 \times d$



NanoFlue

NanoFlue

Nano, smallest sapce



NanoFlue is suitable for applications in extremely small space. One-piece, high torsion resistance and stability. Smooth running and low noise by small pitch. Lightweight and long service life.

- Smallest installation space
- One-piece, non-openable
- Small pitch, low vibration, low noise
- Multi stops, high stability
- Strong mounting brackets with or without tiewrap plates

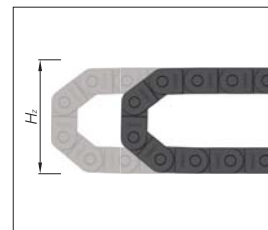
Typical industries and applications

Small carving machines | Linear modules | Electronic equipment | Test equipment | Medical equipment | Automatic doors

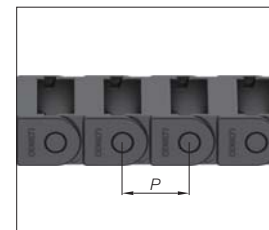
Nano, smallest space



- 1 Mounting bracket with strain relief option
- 2 One-piece, non-openable
- 3 Smooth, cable-friendly inner surface
- 4 Multi stops, high stability
- 5 Small pitch, low vibration, low noise



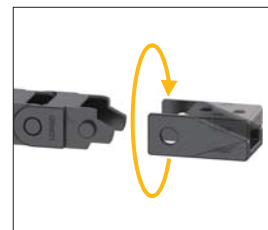
Small installation space required



Lower vibration and noise due to optimized pitch



Small, but torsion resistance



Different mounting positions by rotating brackets easily



With or without tie-wrap plates for different installation spaces



NanoFlue | Overview

Legend	Series	Inner height hi [mm]	Outer height ha [mm]	Inner width Bi [mm]	Outer width Ba [mm]	Bending radii R [mm]	Link pitch P [mm]	Page

One-piece | Non-openable



N07	7	10	7 - 30	12 - 35	015 - 048	13	52
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Travels

Series	Unsupported	Gliding	Vertical hanging	Vertical standing	Side-mounted Unsupported
N07	≤ 1.0 m	—	≤ 3.0 m	≤ 1.0 m	≤ 0.2 m

NanoFlue | Order examples and Options



Order example | Complete cable chains Examples based on series N07

N07.10.015	-	77 pcs	+	N070.10.12.Z
Cable chains No.		Links		Mounting brackets No.

Cable chains

77 pcs (1m)

N07	.	10	.	015	-	77 pcs
Series		Bi		R		Links

Mounting brackets

1 set

N070	.	10	.	12	.	Z
Series		Bi		Type		Tiewrap plates



Order example | Options Examples based on series N07

Part No. Standard	Part No. RBR	Part No. NC	Part No. ESD
Available from stock	Circular movement	No Camber	ESD/ATEX
N07.10.R	N07.10.R1/R2	N07.10.R.NC	N07.10.R.ESD

N07

Links/m
77 pcs/1001 mm



Pitch P
13 mm



Inner height h_i
7 mm



Inner widths B_i
7 – 30 mm



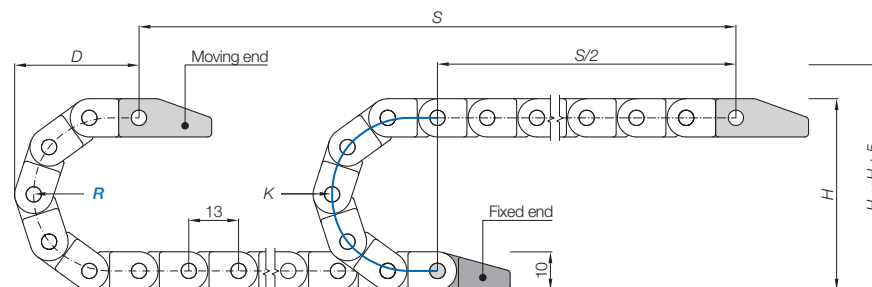
Bending radii R
015 – 048 mm



N07 - One-piece | Non-openable



Unsupported applications | Short travels | $L_k = S/2 + K$



R [mm]	015	018	028	038	048
H [mm]	40	46	66	86	106
H _z [mm]	45	51	71	91	111
D [mm]	40	43	53	63	73
K [mm]	80	85	120	150	180

The required clearance height $H_z = H + 5$ mm



Fill weight
 ≤ 0.35 kg/m



Travel
 ≤ 1.0 m



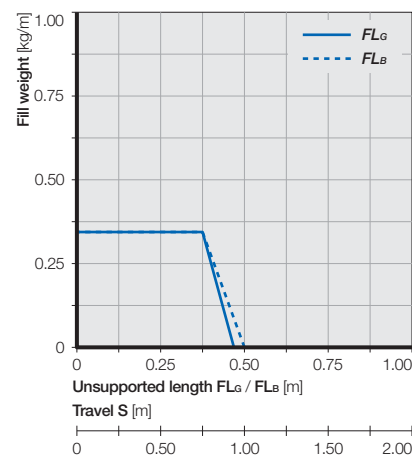
Speed
 ≤ 10 m/s



Acceleration
 ≤ 50 m/s²



Load diagram



Order example | Complete cable chains

N07.10.015

- 77 pcs

+ N070.10.12.Z

Cable chains No.

Links

Mounting brackets No.

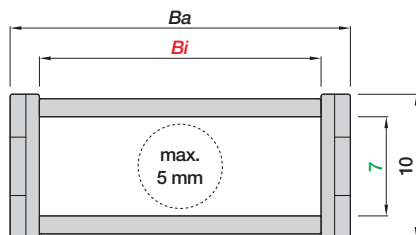
Series N07 | Product range



N07 - One-piece | Non-openable

Part No.	Bi [mm]	Ba [mm]	R [mm]	Weight [kg/m]
Cable chain				
N07.07.R*	7	12	015 018 028 038 048	≈ 0.07
N07.10.R*	10	15	015 018 028 038 048	≈ 0.08
N07.16.R*	16	21	015 018 028 038 048	≈ 0.09
N07.20.R	20	25	015 018 028 038 048	≈ 0.10
N07.30.R	30	35	015 018 028 038 048	≈ 0.11

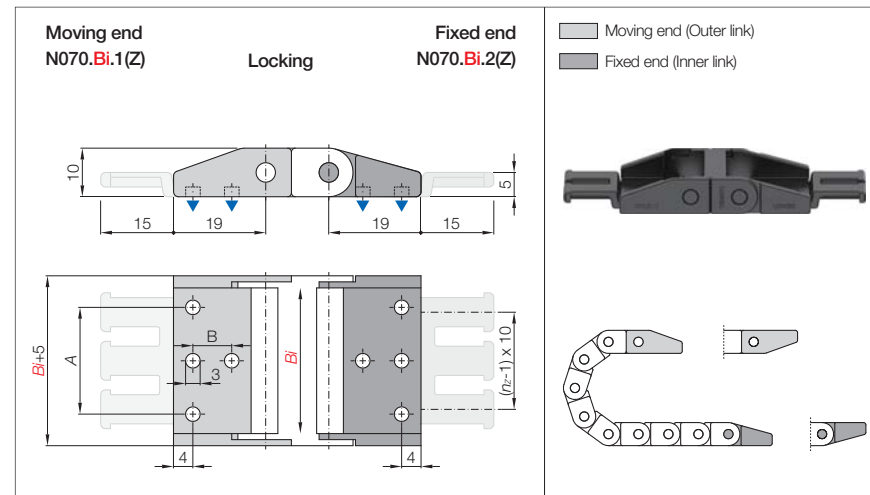
* Available upon request, please consult us for delivery time



Series N07 | ZB mounting brackets

ZB mounting brackets | Locking

M3 ▲ Assembly options



Bi [mm]	Part No. With tiewrap plates	Part No. Without tiewrap plates	A [mm]	B [mm]	Number of teeth nz [1]
7	N070.07.12.Z*	N070.07.12*	—	8	1
10	N070.10.12.Z*	N070.10.12*	—	8	1
16	N070.16.12.Z*	N070.16.12*	—	8	2
20	N070.20.12.Z	N070.20.12	—	8	2
30	N070.30.12.Z	N070.30.12	22	—	3

* Available upon request, please consult us for delivery time

Order example | ZB mounting brackets

N070 . **10** . **12** . **Z** . **A1** Default position: **A1**
 Series Bi Type Tiewrap plates Position

Order example | Cable chains

N07 . **10** . **015** - **77** pcs
 Series Bi R Links

EasyClip mini

EasyClip mini

Small size, easy to assemble



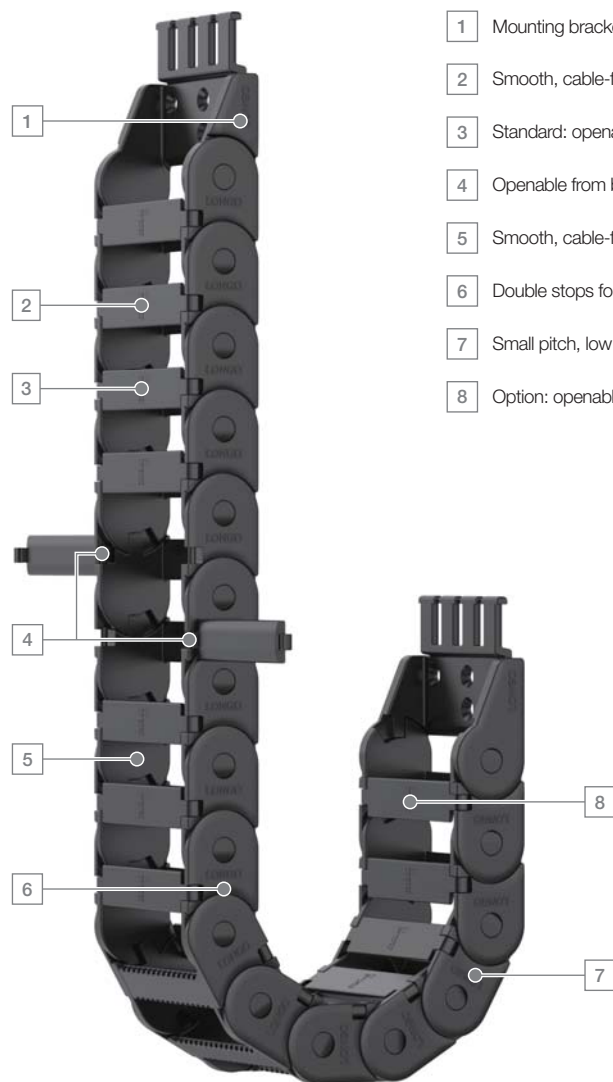
EasyClip mini is suitable for applications with low load or small space. Small pitch, smooth running and low noise. Cables and hoses can be filled easily and quickly with openable hinged crossbars.

- Crossbars openable along the outer or inner radius from both sides
- Small pitch, low vibration, low noise
- Double stops, long service life even for highly dynamic applications
- Separators are available
- Strong mounting brackets with or without tiewrap plates

Typical industries and applications

Inkjet printer | Textile machines | Robots | Linear modules | Electronic equipment | Test equipment | Medical equipment | Automatic doors

Small size, easy to assemble



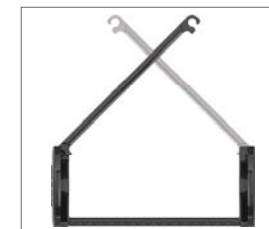
- 1 Mounting bracket with strain relief option
- 2 Smooth, cable-friendly crossbars
- 3 Standard: openable along the outer radius
- 4 Openable from both sides, opening angle > 180°
- 5 Smooth, cable-friendly inner surface
- 6 Double stops for high load-bearing capacity
- 7 Small pitch, low vibration, low noise
- 8 Option: openable along the inner radius



Any interior separation with various separators



Built-in teeth of crossbars for secure grip on locking separators



Easy to assembly with crossbars openable from both sides



Locking or pivoting brackets for different applications



With or without tie-wrap plates for different installation spaces



EasyClip mini | Overview



Legend	Series	Inner height hi [mm]	Outer height ha [mm]	Inner width Bi [mm]	Outer width Ba [mm]	Bending radii R [mm]	Link pitch P [mm]	Page

Open | Crossbars openable along the outer radius from both sides | Standard



E10	10	14.4	10 - 50	18 - 58	018 - 038	20	62
E15	15	19.4	10 - 50	18 - 58	028 - 075	20	70
E17	17	23	15 - 50	27 - 62	028 - 180	30.3	78
E21	21	28	25 - 100	37 - 112	035 - 180	33.3	86

Open | Crossbars openable along the inner radius from both sides | Not for gliding



E10i	10	14.4	10 - 50	18 - 58	018 - 038	20	62
E15i	15	19.4	10 - 50	18 - 58	028 - 075	20	70
E17i	17	23	15 - 50	27 - 62	028 - 180	30.3	78
E21i	21	28	25 - 100	37 - 112	035 - 180	33.3	86

Travels

Series	Unsupported	Gliding	Vertical hanging	Vertical standing	Side-mounted Unsupported
E10 E10i	≤ 1.5 m	≤ 30 m	≤ 20 m	≤ 1.5 m	≤ 0.6 m
E15 E15i	≤ 2.5 m	≤ 40 m	≤ 20 m	≤ 1.5 m	≤ 0.6 m
E17 E17i	≤ 3.0 m	≤ 70 m	≤ 30 m	≤ 1.8 m	≤ 0.8 m
E21 E21i	≤ 3.5 m	≤ 70 m	≤ 30 m	≤ 2.0 m	≤ 0.8 m

EasyClip mini | Order examples and Options



Order example | Complete cable chains Examples based on series E15

E15.20.028	-	50 pcs	+	E150.20.12.Z	+	ST15.1	-	25 pcs
Cable chains No.		Links		Mounting brackets No.		Separators No.		Quantity

Cable chains

50 pcs (1m)

E15	.	20	.	028	-	50 pcs
Series		Bi		R		Links

Mounting brackets

1 set

E150	.	20	.	12	.	Z
Series		Bi		Type		Tiewrap plates

Interior separation

1 separators assembled every 2nd link*

ST15.1	-	25 pcs
Separators No.		Quantity

* Separators are not pre-assembled by default. Please indicate the installation method or provide drawings for pre-assembled.

Examples: ST15.1.A - 25 pcs (1/2)



Order example | Options Examples based on series E15 | E15i

Part No. Standard Available from stock	Part No. RBR Circular movement	Part No. NC No Camber	Part No. ESD ESD/ATEX
E15.20.R	E15.20.R1/R2	E15.20.R.NC	E15.20.R.ESD
E15i.20.R	E15i.20.R1/R2	E15i.20.R.NC	E15i.20.R.ESD





E10

Links/m
50 pcs/1000 mm



Pitch P
20 mm



Inner height hi
10 mm



Inner widths Bi
10 – 50 mm



Bending radii R
018 – 038 mm



E10 - Open | Openable along outer radius

- Openable along the outer radius from both side
- Applied for gliding



E10i - Open | Openable along inner radius

- Openable along the inner radius from both side
- Not for gliding



Order example | Complete cable chains

E10.16.018 - 50 pcs + E100.16.12.Z + ST10.1 - 25 pcs

Cable chains No.

Links

Mounting brackets No.

Separators No.

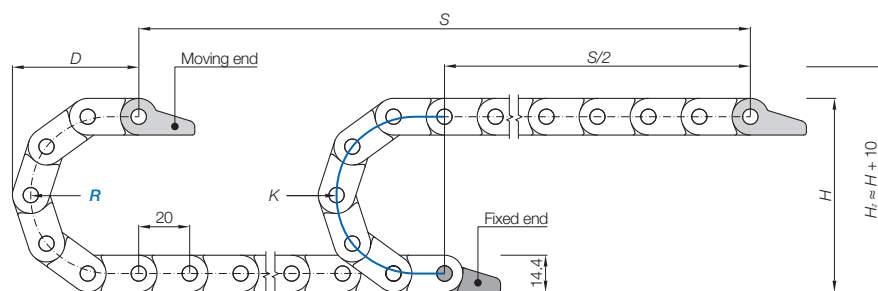
Quantity



Series E10 | Installation dimensions | Unsupported



Unsupported applications | Short travels | $L_K = S/2 + K$



R [mm]	018	028	038
H [mm]	51	71	91
H _z [mm]	61	81	101
D [mm]	56	66	76
K [mm]	100	130	160

The required clearance height $H_z = H + 10$ mm



Fill weight
≤ 0.7 kg/m



Travel
≤ 1.5 m



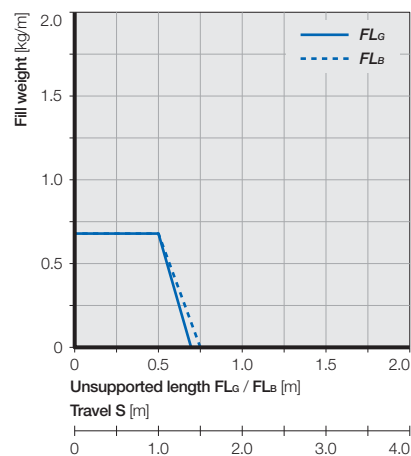
Speed
≤ 10 m/s



Acceleration
≤ 50 m/s²



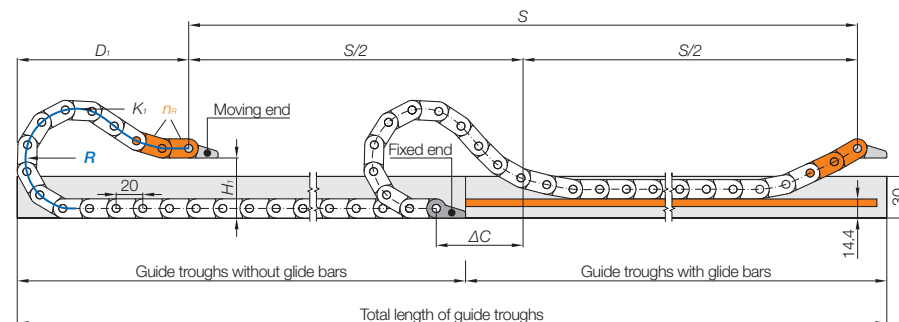
Load diagram



Series E10 | Installation dimensions | Gliding



Gliding applications | Long travels | $L_K = S/2 + K_1$



R [mm]	018	028	038
H ₁ [mm]	36	45	45
D ₁ [mm]	56	110	145
K ₁ [mm]	100	160	220
ΔC [mm]	—	50	75
n _R [1]	—	2	2



Fill weight
≤ 0.5 kg/m



Travel
≤ 30 m



Speed
≤ 4 m/s



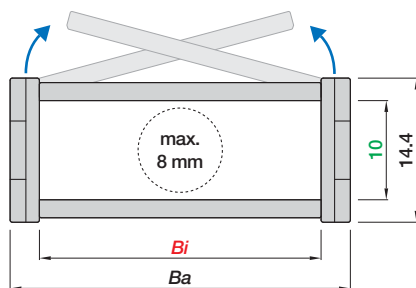
Acceleration
≤ 20 m/s²

Series E10 | Product range | E10



E10 - Open | Openable along the outer radius

Part No.	Bi	Ba	R	Weight
Cable chain	[mm]	[mm]	[mm]	[kg/m]
E10.10.R	10	18	018 028 038	≈ 0.15
E10.16.R	16	24	018 028 038	≈ 0.17
E10.20.R	20	28	018 028 038	≈ 0.18
E10.30.R*	30	38	018 028 038	≈ 0.20
E10.40.R*	40	48	018 028 038	≈ 0.23
E10.50.R*	50	58	018 028 038	≈ 0.25



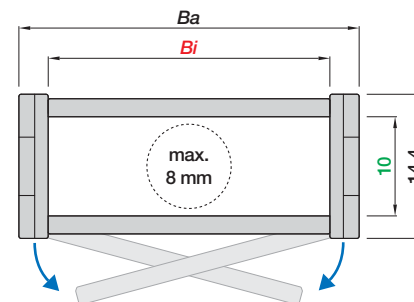
Series E10 | Product range | E10i



E10i - Open | Openable along the inner radius

Part No.	Bi	Ba	R	Weight
Cable chain	[mm]	[mm]	[mm]	[kg/m]
E10i.10.R	10	18	018 028 038	≈ 0.15
E15i.16.R	16	24	018 028 038	≈ 0.17
E10i.20.R	20	28	018 028 038	≈ 0.18
E10i.30.R*	30	38	018 028 038	≈ 0.20
E10i.40.R*	40	48	018 028 038	≈ 0.23
E10i.50.R*	50	58	018 028 038	≈ 0.25

* Available upon request, please consult us for delivery time



Order example | Cable chains

E10	.	16	.	018	-	50 pcs
Series		Bi		R		Links

Series E10 | ZB mounting brackets | E10·E10i

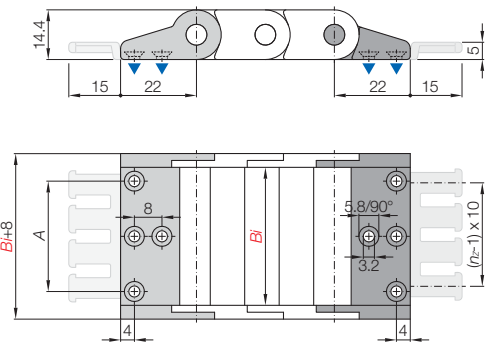
ZB mounting brackets | Open

M3 ▲ Assembly options

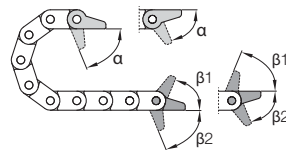
Moving end
E100.Bi.1(Z)
E100.Bi.3(Z)

Locking
Pivoting

Fixed end
E100.Bi.2(Z)
E100.Bi.4(Z)



□ Moving end (Outer link)
■ Fixed end (Inner link)



Type	α	β_1	β_2
Locking	0°	0°	0°
Pivoting	30-67°	67°	67°

ZB Locking ► Recommended for unsupported, vertical hanging and standing applications

ZB Pivoting ► Recommended for gliding applications

Bi [mm]	Part No. Locking with tiewrap plates	without tiewrap plates	Part No. Pivoting with tiewrap plates	without tiewrap plates	A [mm]	Number of teeth n_z [1]
10	E100.10.12.Z	E100.10.12	E100.10.34.Z	E100.10.34	—	1
16	E100.16.12.Z	E100.16.12	E100.16.34.Z	E100.16.34	—	2
20	E100.20.12.Z	E100.20.12	E100.20.34.Z	E100.20.34	—	2
30	E100.30.12.Z*	E100.30.12*	E100.30.34.Z*	E100.30.34*	22	3
40	E100.40.12.Z*	E100.40.12*	E100.40.34.Z*	E100.40.34*	32	4
50	E100.50.12.Z*	E100.50.12*	E100.50.34.Z*	E100.50.34*	42	5

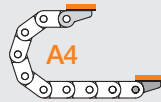
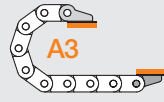
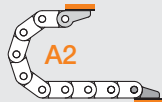
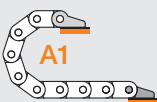
* Available upon request, please consult us for delivery time

Order example | ZB mounting brackets

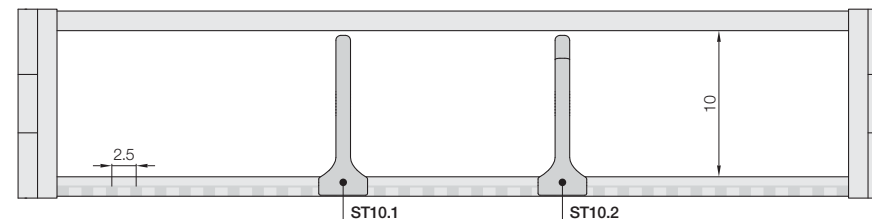
E100 . 16 . 12 . Z . A1

Series Bi Type Tiewrap plates Position

Default position: A1



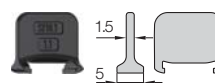
Series E10 | Interior separation | Vertical·Horizontal



No lateral gap to the side links

Standard separation: fitted every 2nd link

Vertical separator | Standard | For almost any application

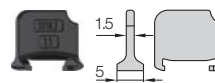


Unassembled: ST10.1

Assembled: ST10.1.A

- Wide base for fitting in cable chains stably
- Movable, easy to adjust the position

Vertical separator | Locking | For side-mounted applications



Unassembled: ST10.2

Assembled: ST10.2.A

- Locking, fitted in a specified position securely
- Preset in 2.5 mm increments

E15

Links/m
50 pcs/1000 mm



Pitch P
20 mm



Inner height hi
15 mm



Inner widths Bi
10 – 50 mm



Bending radii R
028 – 075 mm



E15 - Open | Openable along outer radius

- Openable along the outer radius from both side
- Applied for gliding



E15i - Open | Openable along inner radius

- Openable along the inner radius from both side
- Not for gliding



Order example | Complete cable chains

E15.20.028 - 50 pcs + E150.20.12.Z + ST15.1 - 25 pcs

Cable chains No.

Links

Mounting brackets No.

Separators No.

Quantity

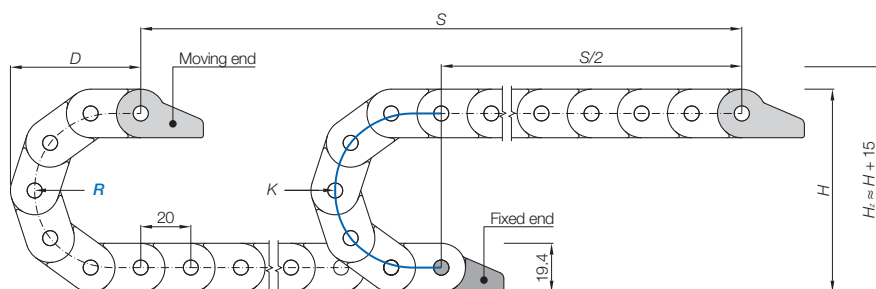


Series E15 | Installation dimensions | Unsupported



Unsupported applications | Short travels | $L_K = S/2 + K$

15



R [mm]	028	038	048	075
H [mm]	75	95	115	170
H _z [mm]	90	110	130	185
D [mm]	68	78	88	115
K [mm]	130	160	195	280

The required clearance height $H_z = H + 15$ mm



Fill weight
≤ 1.25 kg/m



Travel
≤ 2.5 m



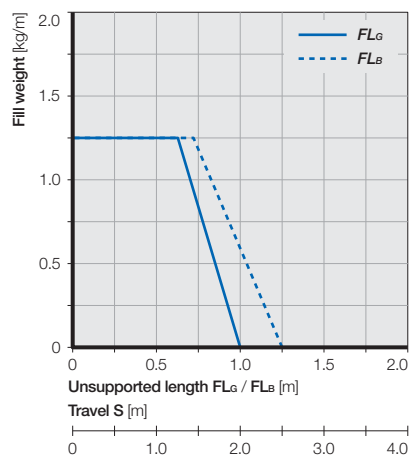
Speed
≤ 10 m/s



Acceleration
≤ 50 m/s²



Load diagram

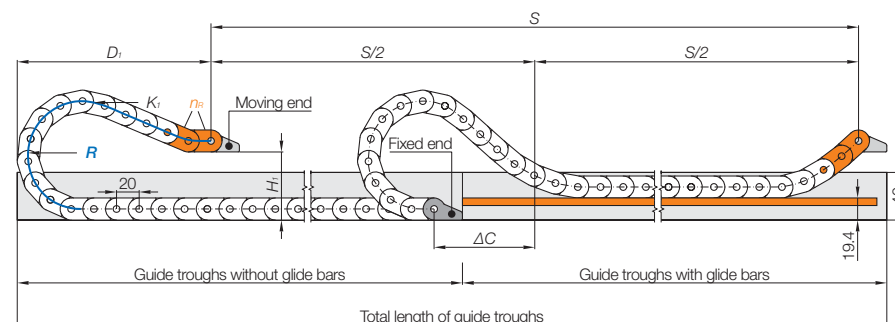


Series E15 | Installation dimensions | Gliding



Gliding applications | Long travels | $L_K = S/2 + K_1$

15



R [mm]	028	038	048	075
H ₁ [mm]	56	60	60	60
D ₁ [mm]	68	125	175	255
K ₁ [mm]	130	200	280	440
ΔC [mm]	—	55	95	150
n _R [1]	—	2	2	4



Fill weight
≤ 0.8 kg/m



Travel
≤ 40 m



Speed
≤ 4 m/s



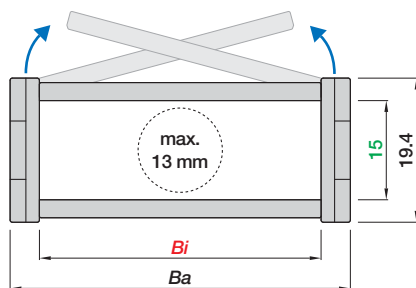
Acceleration
≤ 20 m/s²

Series E15 | Product range | E15



E15 - Open | Openable along the outer radius

Part No. Cable chain	Bi [mm]	Ba [mm]	R [mm]	Weight [kg/m]
E15.10.R*	10	18	028 038 048 075	≈ 0.21
E15.16.R	16	24	028 038 048 075	≈ 0.22
E15.20.R	20	28	028 038 048 075	≈ 0.23
E15.30.R	30	38	028 038 048 075	≈ 0.26
E15.40.R	40	48	028 038 048 075	≈ 0.28
E15.50.R	50	58	028 038 048 075	≈ 0.31



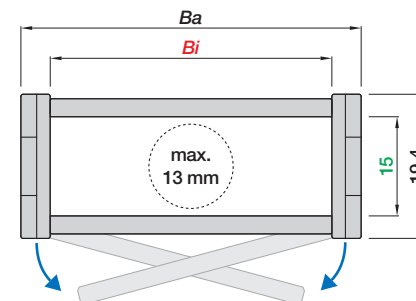
Series E15 | Product range | E15i



E15i - Open | Openable along the inner radius

Part No. Cable chain	Bi [mm]	Ba [mm]	R [mm]	Weight [kg/m]
E15i.10.R*	10	18	028 038 048 075	≈ 0.21
E15i.16.R	16	24	028 038 048 075	≈ 0.22
E15i.20.R	20	28	028 038 048 075	≈ 0.23
E15i.30.R	30	38	028 038 048 075	≈ 0.26
E15i.40.R	40	48	028 038 048 075	≈ 0.28
E15i.50.R	50	58	028 038 048 075	≈ 0.31

* Available upon request, please consult us for delivery time



Order example | Cable chains

E15 . 20 . 028 - 50 pcs
Series Bi R Links

Series E15 | ZB mounting brackets | E15·E15i

ZB mounting brackets | Open

M3 ▲ Assembly options

Moving end
E150.Bi.1(Z)
E150.Bi.3(Z)

Locking
Pivoting

Fixed end
E150.Bi.2(Z)
E150.Bi.4(Z)

Moving end (Outer link)

Fixed end (Inner link)

Type	α	β_1	β_2
Locking	0°	0°	0°
Pivoting	15-42°	42°	42°

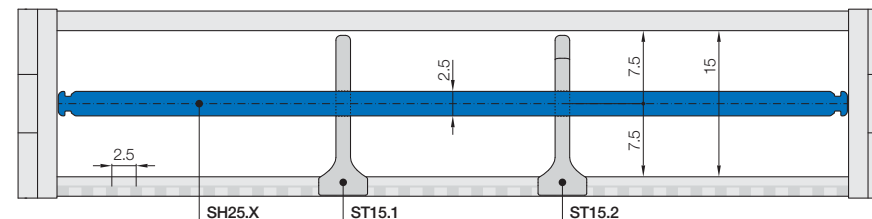
ZB Locking ► Recommended for unsupported, vertical hanging and standing applications

ZB Pivoting ► Recommended for gliding applications

Bi [mm]	Part No. Locking with tiewrap plates	without tiewrap plates	Part No. Pivoting with tiewrap plates	without tiewrap plates	A [mm]	Number of teeth nz [1]
10	E150.10.12.Z*	E150.10.12*	E150.10.34.Z*	E150.10.34*	—	1
16	E150.16.12.Z	E150.16.12	E150.16.34.Z	E150.16.34	—	2
20	E150.20.12.Z	E150.20.12	E150.20.34.Z	E150.20.34	—	2
30	E150.30.12.Z	E150.30.12	E150.30.34.Z	E150.30.34	22	3
40	E150.40.12.Z	E150.40.12	E150.40.34.Z	E150.40.34	32	4
50	E150.50.12.Z	E150.50.12	E150.50.34.Z	E150.50.34	42	5

* Available upon request, please consult us for delivery time

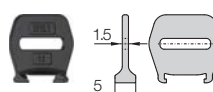
Series E15 | Interior separation | Vertical·Horizontal



No lateral gap to the side links

Standard separation: **fitted every 2nd link**

Vertical separator | Standard | For almost any application

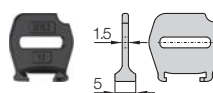


Unassembled: ST15.1

Assembled: ST15.1.A

- Wide base for fitting in cable chains stably
- Movable, easy to adjust the position

Vertical separator | Locking | For side-mounted applications

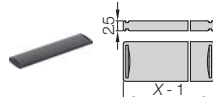


Unassembled: ST15.2

Assembled: ST15.2.A

- Locking, fitted in a specified position securely
- Preset in 2.5 mm increments

Horizontal separator | Locking | For multilayer separation



Unassembled: SH25.X

Assembled: SH25.X.A

- Full-width horizontal separator

X [mm]	Unassembled	Assembled
010	SH25.010*	SH25.010.A*
016	SH25.016*	SH25.016.A*
020	SH25.020*	SH25.020.A*

X [mm]	Unassembled	Assembled
030	SH25.030*	SH25.030.A*
040	SH25.040*	SH25.040.A*
050	SH25.050*	SH25.050.A*

* Available upon request, please consult us for delivery time

Order example | ZB mounting brackets

E150

.

20

.

12

.

Z

.

A1

Series

Bi

Type

Tiewrap plates

Position

Default position: A1



E17

Links/m
33 pcs/999.9 mm



Pitch P
30.3 mm



Inner height hi
17 mm



Inner widths Bi
15 – 50 mm



Bending radii R
028 – 180 mm



E17 - Open | Openable along outer radius

- Openable along the outer radius from both side
- Applied for gliding



E17i - Open | Openable along inner radius

- Openable along the inner radius from both side
- Not for gliding



Order example | Complete cable chains

E17.038.028 - 33 pcs + E170.038.12.Z + ST17.1 - 17 pcs

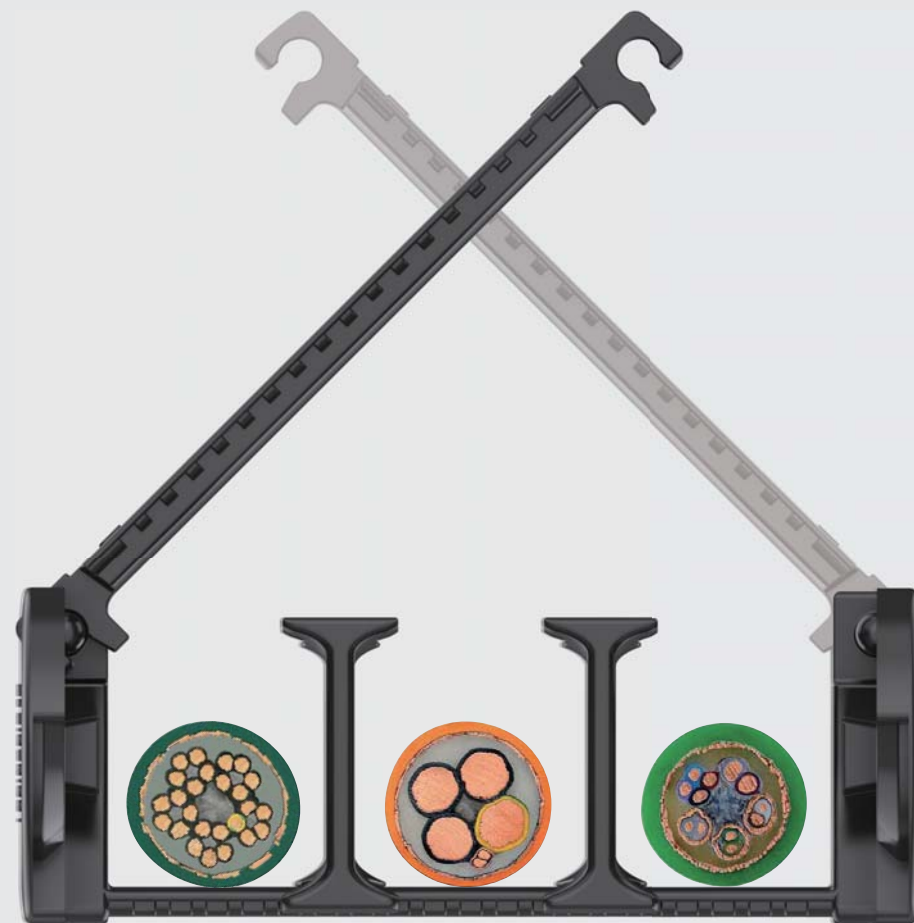
Cable chains No.

Links

Mounting brackets No.

Separators No.

Quantity

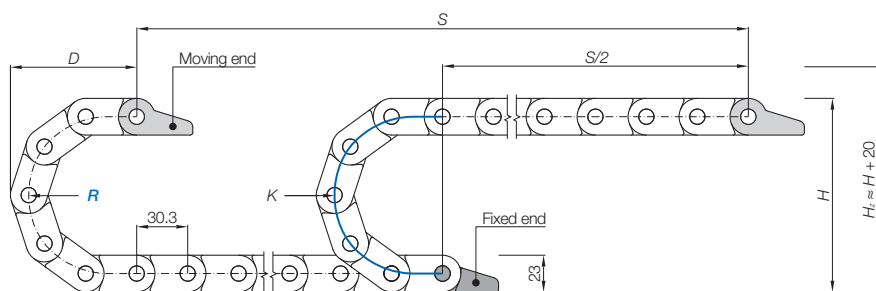


Series E17 | Installation dimensions | Unsupported



Unsupported applications | Short travels | $L_K = S/2 + K$

17



R [mm]	028	038	048	060	075	100	125	150	180
H [mm]	79	99	119	143	173	223	273	323	383
H _z [mm]	99	119	139	163	193	243	293	343	403
D [mm]	85	95	105	117	132	157	182	207	237
K [mm]	150	185	215	255	300	380	455	535	630

The required clearance height $H_z = H + 20$ mm



Fill weight
≤ 1.5 kg/m



Travel
≤ 3.0 m



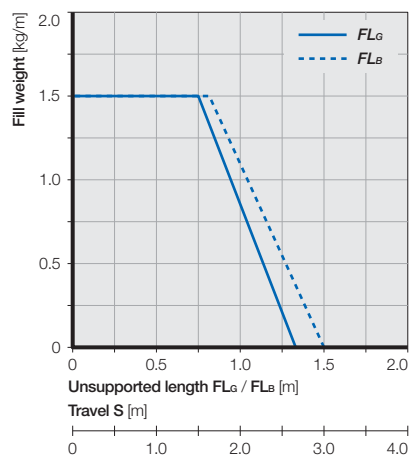
Speed
≤ 10 m/s



Acceleration
≤ 50 m/s²



Load diagram

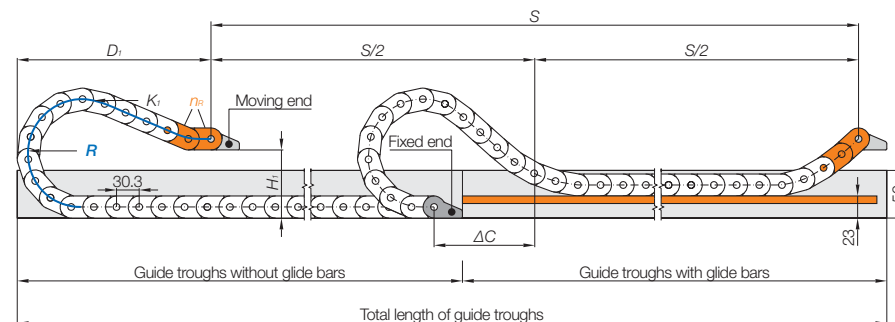


Series E17 | Installation dimensions | Gliding



Gliding applications | Long travels | $L_K = S/2 + K_1$

17



R [mm]	028	038	048	060	075	100	125	150	180
H ₁ [mm]	56	76	69	69	69	69	69	69	69
D ₁ [mm]	85	119	165	215	270	385	510	595	720
K ₁ [mm]	150	185	275	335	460	640	820	975	1185
ΔC [mm]	—	—	70	105	150	235	335	400	490
n _R [1]	—	—	2	2	3	3	4	4	5



Fill weight
≤ 1.0 kg/m



Travel
≤ 70 m



Speed
≤ 4 m/s



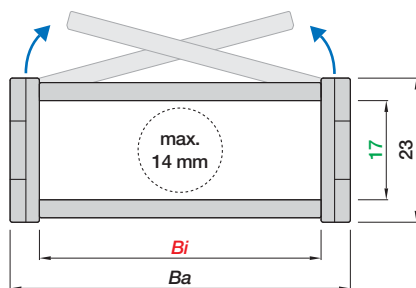
Acceleration
≤ 20 m/s²

Series E17 | Product range | E17



E17 - Open | Openable along the outer radius

Part No. Cable chain	Bi [mm]	Ba [mm]	R [mm]	Weight [kg/m]
E17.015.R*	15	27	028 038 048 060 075 100 125 150 180	≈ 0.36
E17.025.R	25	37	028 038 048 060 075 100 125 150 180	≈ 0.39
E17.038.R	38	50	028 038 048 060 075 100 125 150 180	≈ 0.43
E17.050.R	50	62	028 038 048 060 075 100 125 150 180	≈ 0.46



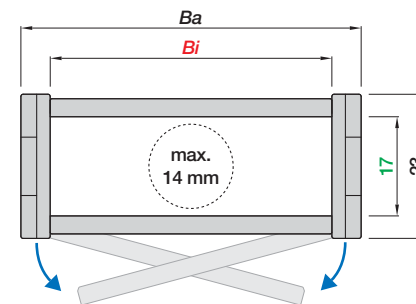
Series E17 | Product range | E17i



E17i - Open | Openable along the inner radius

Part No. Cable chain	Bi [mm]	Ba [mm]	R [mm]	Weight [kg/m]
E17i.015.R*	15	27	028 038 048 060 075 100 125 150 180	≈ 0.36
E17i.025.R	25	37	028 038 048 060 075 100 125 150 180	≈ 0.39
E17i.038.R	38	50	028 038 048 060 075 100 125 150 180	≈ 0.43
E17i.050.R	50	62	028 038 048 060 075 100 125 150 180	≈ 0.46

* Available upon request, please consult us for delivery time



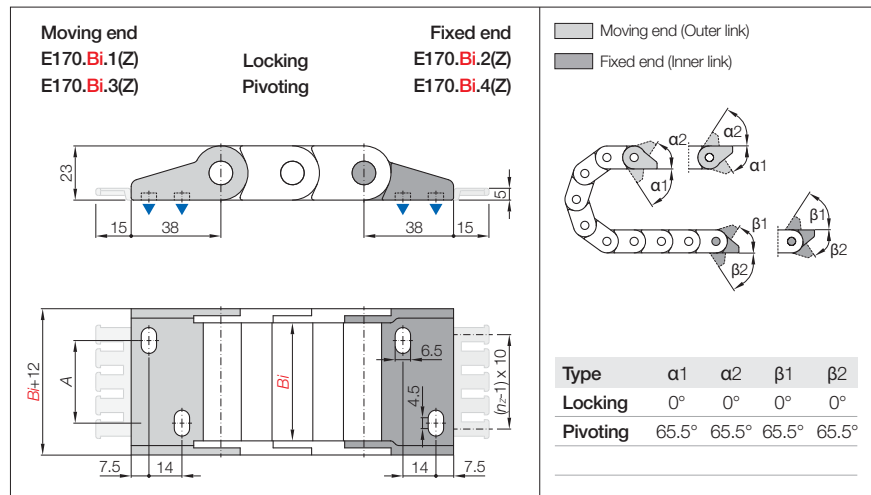
Order example | Cable chains

E17	.	038	.	028	-	33 pcs
Series		Bi		R		Links

Series E17 | ZB mounting brackets | E17·E17i

ZB mounting brackets | Open

M6 ▲ Assembly options



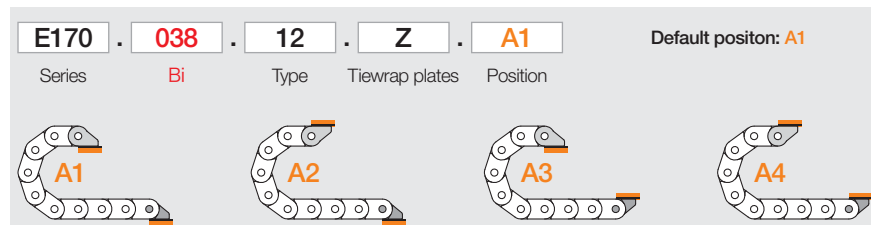
ZB Locking ► Recommended for unsupported, vertical hanging and standing applications

ZB Pivoting ► Recommended for gliding applications

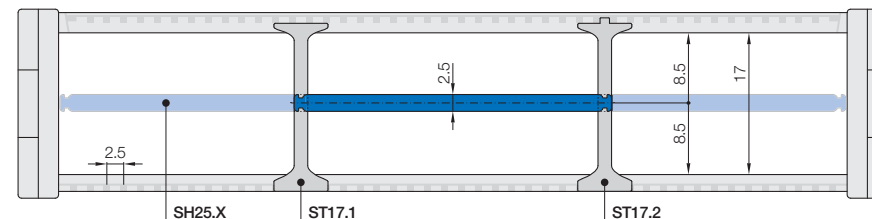
Bi [mm]	Part No. Locking with tiewrap plates	without tiewrap plates	Part No. Pivoting with tiewrap plates	without tiewrap plates	A [mm]	Number of teeth nz [1]
15	E170.015.12.Z*	E170.015.12*	E170.015.34.Z*	E170.015.34*	—	2
25	E170.025.12.Z	E170.025.12	E170.025.34.Z	E170.025.34	10	3
38	E170.038.12.Z	E170.038.12	E170.038.34.Z	E170.038.34	23	4
50	E170.050.12.Z	E170.050.12	E170.050.34.Z	E170.050.34	35	5

* Available upon request, please consult us for delivery time

Order example | ZB mounting brackets



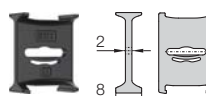
Series E17 | Interior separation | Vertical·Horizontal



No lateral gap to the side links

Standard separation: **fitted every 2nd link**

Vertical separator | Standard | For almost any application

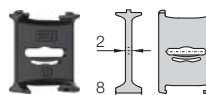


Unassembled: ST17.1

Assembled: ST17.1.A

- Wide base for fitting in cable chains stably
- Movable, easy to adjust the position

Vertical separator | Locking | For side-mounted applications

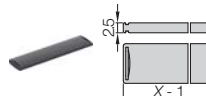


Unassembled: ST17.2

Assembled: ST17.2.A

- Locking, fitted in a specified position securely
- Preset in 2.5 mm increments

Horizontal separator | Locking | For multilayer separation



Unassembled: SH25.X

Assembled: SH25.X.A

- Full or partial width horizontal separator
- Locked securely into vertical separators at both ends

X [mm]	Unassembled	Assembled
010	SH25.010*	SH25.010.A*
016	SH25.016*	SH25.016.A*
020	SH25.020*	SH25.020.A*

X [mm]	Unassembled	Assembled
030	SH25.030*	SH25.030.A*
040	SH25.040*	SH25.040.A*
050	SH25.050*	SH25.050.A*

* Available upon request, please consult us for delivery time

E21

Links/m
30 pcs/999 mm



Pitch P
33.3 mm



Inner height hi
21 mm



Inner widths Bi
25 – 100 mm



Bending radii R
035 – 180 mm



E21 - Open | Openable along outer radius

- Openable along the outer radius from both side
- Applied for gliding



E21i - Open | Openable along inner radius

- Openable along the inner radius from both side
- Not for gliding



Order example | Complete cable chains

E21.050.035 - 30 pcs + E210.050.12.Z + ST21.1 - 15 pcs

Cable chains No.

Links

Mounting brackets No.

Separators No.

Quantity

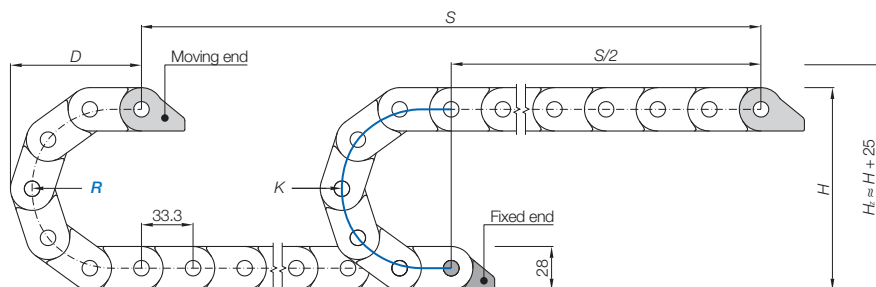


Series E21 | Installation dimensions | Unsupported



Unsupported applications | Short travels | $L_K = S/2 + K$

21



R [mm]	035	038	048	060	075	100	125	150	180
H [mm]	98	104	124	148	178	228	278	328	388
H _z [mm]	123	129	149	173	203	253	303	353	413
D [mm]	99	102	112	124	139	164	189	214	244
K [mm]	180	190	220	260	305	385	460	540	635

The required clearance height $H_z = H + 25$ mm



Fill weight
≤ 1.75 kg/m



Travel
≤ 3.5 m



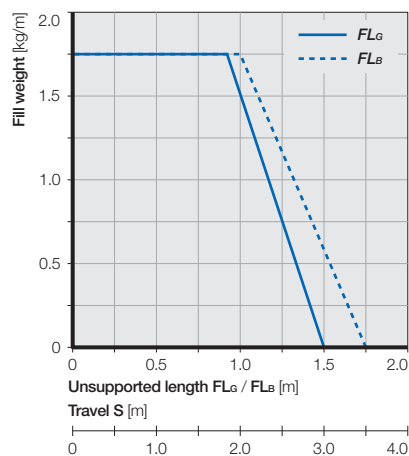
Speed
≤ 10 m/s



Acceleration
≤ 50 m/s²



Load diagram

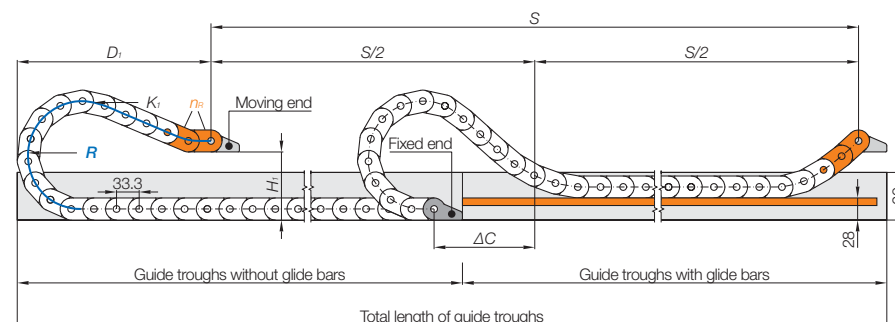


Series E21 | Installation dimensions | Gliding



Gliding applications | Long travels | $L_K = S/2 + K_1$

21



R [mm]	035	038	048	060	075	100	125	150	180
H ₁ [mm]	70	76	96	84	84	84	84	84	84
D ₁ [mm]	99	102	112	195	280	350	510	640	770
K ₁ [mm]	180	190	220	335	435	600	800	1000	1235
ΔC [mm]	—	—	—	85	155	200	335	440	540
n _R [1]	—	—	—	2	2	3	3	4	4



Fill weight
≤ 1.2 kg/m



Travel
≤ 70 m



Speed
≤ 4 m/s



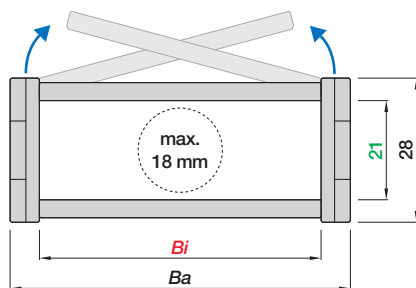
Acceleration
≤ 20 m/s²

Series E21 | Product range | E21



E21 - Open | Openable along the outer radius

Part No.	Bi [mm]	Ba [mm]	R [mm]	Weight [kg/m]
E21.025.R	25	37	035 038 048 060 075 100 125 150 180	≈ 0.45
E21.038.R	38	50	035 038 048 060 075 100 125 150 180	≈ 0.49
E21.050.R	50	62	035 038 048 060 075 100 125 150 180	≈ 0.52
E21.068.R	68	80	035 038 048 060 075 100 125 150 180	≈ 0.57
E21.080.R	80	92	035 038 048 060 075 100 125 150 180	≈ 0.60
E21.100.R*	100	112	035 038 048 060 075 100 125 150 180	≈ 0.66



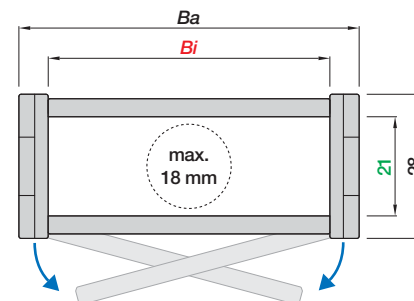
Series E21 | Product range | E21i



E21i - Open | Openable along the inner radius

Part No.	Bi [mm]	Ba [mm]	R [mm]	Weight [kg/m]
E21i.025.R	25	37	035 038 048 060 075 100 125 150 180	≈ 0.45
E21i.038.R	38	50	035 038 048 060 075 100 125 150 180	≈ 0.49
E21i.050.R	50	62	035 038 048 060 075 100 125 150 180	≈ 0.52
E21i.068.R	68	80	035 038 048 060 075 100 125 150 180	≈ 0.57
E21i.080.R	80	92	035 038 048 060 075 100 125 150 180	≈ 0.60
E21i.100.R*	100	112	035 038 048 060 075 100 125 150 180	≈ 0.66

* Available upon request, please consult us for delivery time



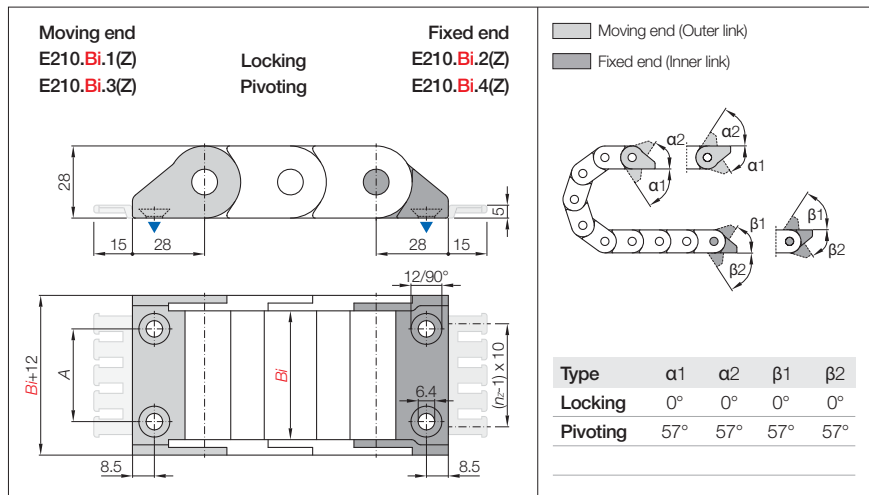
Order example | Cable chains

E21	.	050	.	035	.	30 pcs
Series		Bi		R		Links

Series E21 | ZB mounting brackets | E21·E21i

ZB mounting brackets | Open

M6 ▲ Assembly options



ZB Locking ► Recommended for unsupported, vertical hanging and standing applications

ZB Pivoting ► Recommended for gliding applications

Bi [mm]	Part No. Locking with tiewrap plates	without tiewrap plates	Part No. Pivoting with tiewrap plates	without tiewrap plates	A [mm]	Number of teeth nz [1]
25	E210.025.12.Z	E210.025.12	E210.025.34.Z	E210.025.34	13	3
38	E210.038.12.Z	E210.038.12	E210.038.34.Z	E210.038.34	24	4
50	E210.050.12.Z	E210.050.12	E210.050.34.Z	E210.050.34	36	5
68	E210.068.12.Z	E210.068.12	E210.068.34.Z	E210.068.34	54	7
80	E210.080.12.Z	E210.080.12	E210.080.34.Z	E210.080.34	66	8
100	E210.100.12.Z*	E210.100.12*	E210.100.34.Z*	E210.100.34*	86	10

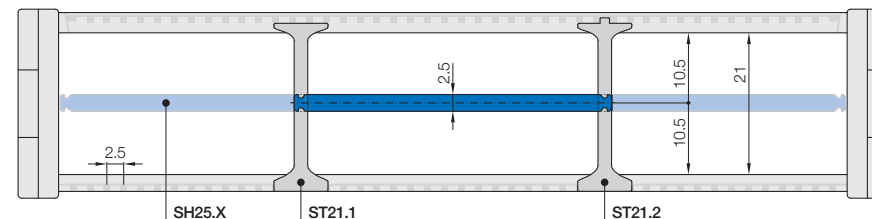
* Available upon request, please consult us for delivery time

Order example | ZB mounting brackets

E210 . 050 . 12 . Z . A1 Default position: A1

Series Bi Type Tiewrap plates Position

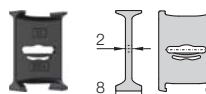
Series E21 | Interior separation | Vertical·Horizontal



No lateral gap to the side links

Standard separation: **fitted every 2nd link**

Vertical separator | Standard | For almost any application

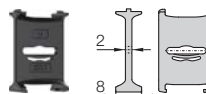


Unassembled: ST21.1

Assembled: ST21.1.A

- Wide base for fitting in cable chains stably
- Movable, easy to adjust the position

Vertical separator | Locking | For side-mounted applications

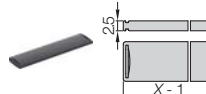


Unassembled: ST21.2

Assembled: ST21.2.A

- Locking, fitted in a specified position securely
- Preset in 2.5 mm increments

Horizontal separator | Locking | For multilayer separation



Unassembled: SH25.X

Assembled: SH25.X.A

- Full or partial width horizontal separator
- Locked securely into vertical separators at both ends

X [mm]	Unassembled	Assembled
010	SH25.010*	SH25.010.A*
016	SH25.016*	SH25.016.A*
020	SH25.020*	SH25.020.A*
025	SH25.025*	SH25.025.A*
030	SH25.030*	SH25.030.A*
038	SH25.038*	SH25.038.A*

X [mm]	Unassembled	Assembled
040	SH25.040*	SH25.040.A*
050	SH25.050*	SH25.050.A*
060	SH25.060*	SH25.060.A*
068	SH25.068*	SH25.068.A*
080	SH25.080*	SH25.080.A*
100	SH25.100*	SH25.100.A*

* Available upon request, please consult us for delivery time

EasyClip

EasyClip

Lightweight, easy and quiet



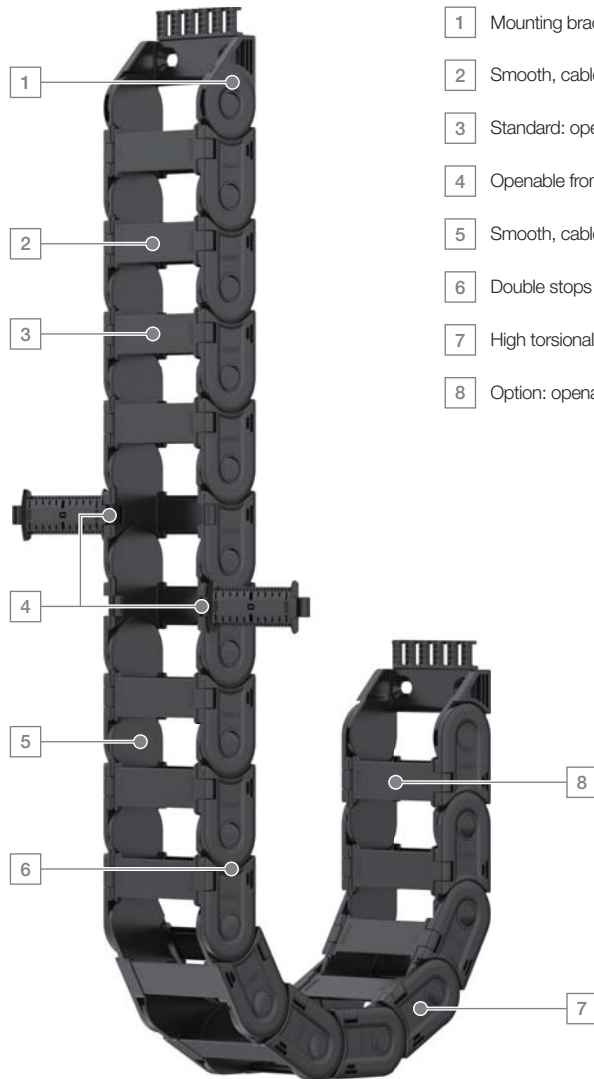
EasyClip is suitable for almost any application, which is rugged, lightweight and cost-effective. Easy to open with openable hinged crossbars and quieter operation with dampers option.

- Crossbars openable along the outer or inner radius from both sides
- High stability for unsupported and gliding applications
- Quieter operation with dampers option
- Smooth, cable-friendly inner surface
- Various fastening options

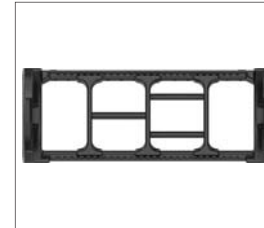
Typical industries and applications

Gantry robots | Robots | Woodworking | logistics equipment | Textile machines | Construction machinery | Machine tools | Indoor cranes

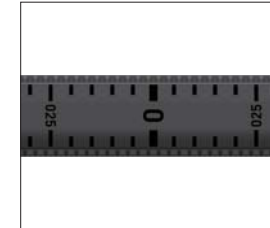
Lightweight, easy and quiet



- 1 Mounting bracket with strain relief option
- 2 Smooth, cable-friendly crossbars
- 3 Standard: openable along the outer radius
- 4 Openable from both sides, opening angle > 180°
- 5 Smooth, cable-friendly inner surface
- 6 Double stops for high load-bearing capacity
- 7 High torsional strength and high stability
- 8 Option: openable along the inner radius



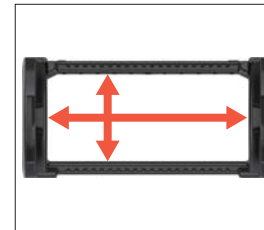
Any interior separation with various separators



Crossbars/lids with visual scale for precise separation



Built-in teeth of crossbars for secure grip on locking separators



More useable interior space at the same external dimensions



Easy to assembly with crossbars openable from both sides



Integrated gliding surfaces ensure a long service life for long travels



Locking or pivoting brackets for different applications



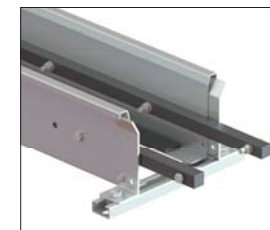
With or without tie-wrap plates for different installation spaces



Wings of crossbars cover the side links, increases stability



Quieter operation with dampers option



Standard steel guide trough for gliding applications





Legend	Series	Inner height	Outer height	Inner width	Outer width	Bending radii	Link pitch	Page
		hi	ha	Bi	Ba	R	P	
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	

Open | Crossbars openable along the outer radius from both sides | Standard



E26	26	36	25 - 100	40 - 115	048 - 250	46	100
E36	36	50	50 - 175	67 - 192	063 - 300	56	108

Open | Crossbars openable along the inner radius from both sides | Not for gliding



E26i	26	36	25 - 100	40 - 115	048 - 250	46	100
E36i	36	50	50 - 175	67 - 192	063 - 300	56	108

Travels

Series	Unsupported	Gliding	Vertical hanging	Vertical standing	Side-mounted Unsupported
E26 E26i	≤ 4.0 m	≤ 100 m	≤ 40 m	≤ 2.5 m	≤ 1.0 m
E36 E36i	≤ 5.5 m	≤ 125 m	≤ 60 m	≤ 3.0 m	≤ 1.2 m



Order example | Complete cable chains

Examples based on series E26

E26.060.048	-	44 pcs	+	E260.060.12.Z	+	ST26.1	-	66 pcs
Cable chains No.		Links		Mounting brackets No.		Separators No.		Quantity

Cable chains

44 pcs (2m)

E26	.	060	.	048	-	44 pcs
Series		Bi		R		Links

Mounting brackets

1 set

E260	.	060	.	12	.	Z
Series		Bi		Type		Tiewrap plates

Interior separation

3 separators assembled every 2nd link*

ST26.1	-	66 pcs
Separators No.		Quantity

* Separators are not pre-assembled by default. Please indicate the installation method or provide drawings for pre-assembled.

Examples: ST26.1.A - 66 片(3/2)



Order example | Options

Examples based on series E26 | E26i

Part No. Standard	Part No. Low noise	Part No. RBR	Part No. NC	Part No. ESD
Available from stock	With noise dampers	Circular movement	No Camber	ESD/ATEX
E26.060.R	ED26.060.R	E26.060.R1/R2	E26.060.R.NC	E26.060.R.ESD
E26i.060.R	ED26i.060.R	E26i.060.R1/R2	E26i.060.R.NC	E26i.060.R.ESD



26

E26

Links/m
22 pcs/1012 mmPitch P
46 mmInner height hi
26 mmInner widths Bi
25 – 100 mmBending radii R
048 – 250 mm**E26 - Open | Openable along outer radius**

- Openable along the outer radius from both side
- Dampers option ► ED26
- Applied for gliding

**E26i - Open | Openable along inner radius**

- Openable along the inner radius from both side
- Dampers option ► ED26i
- Not for gliding

**Order example | Complete cable chains**

E26.060.048 - 44 pcs + E260.060.12.Z + ST26.1 - 66 pcs

Cable chains No.

Links

Mounting brackets No.

Separators No.

Quantity



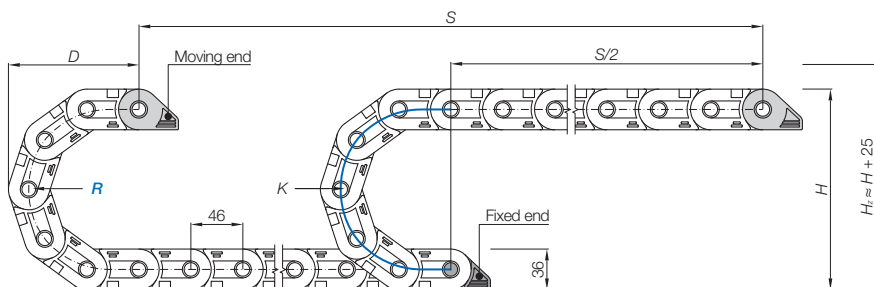
26

Series E26 | Installation dimensions | Unsupported



Unsupported applications | Short travels | $L_K = S/2 + K$

26



R [mm]	048	055	075	100	125	150	175	200	225	250
H [mm]	132	146	186	236	286	336	386	436	486	536
H _z [mm]	157	171	211	261	311	361	411	461	511	561
D [mm]	135	142	162	187	212	237	262	287	312	337
K [mm]	245	265	330	410	485	565	645	725	800	880

The required clearance height $H_z = H + 25$ mm



Fill weight
≤ 5 kg/m



Travel
≤ 4 m



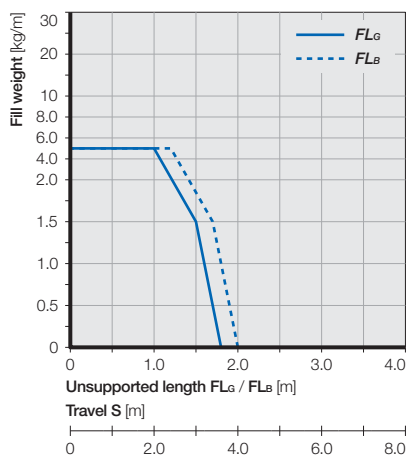
Speed
≤ 10 m/s



Acceleration
≤ 50 m/s²



Load diagram

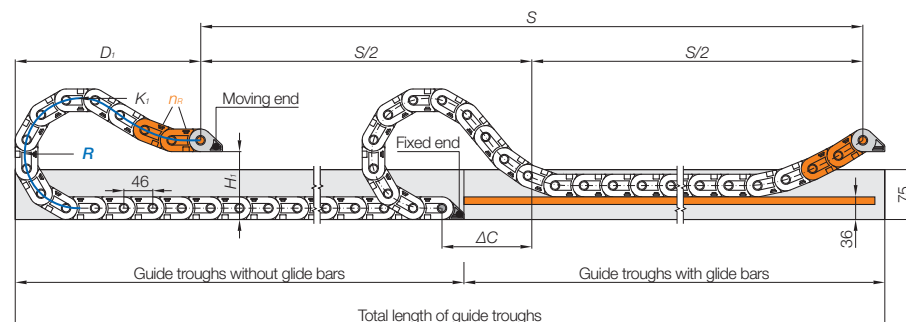


Series E26 | Installation dimensions | Gliding



Gliding applications | Long travels | $L_K = S/2 + K_1$

26



R [mm]	048	055	075	100	125	150	175	200	225	250
H ₁ [mm]	96	110	108	108	108	108	108	108	108	108
D ₁ [mm]	135	142	260	380	425	580	730	770	930	1090
K ₁ [mm]	245	265	414	598	736	920	1150	1242	1472	1702
ΔC [mm]	—	—	115	210	230	360	490	500	630	770
n _R [1]	—	—	2	2	3	3	3	4	4	4



Fill weight
≤ 2 kg/m



Travel
≤ 100 m



Speed
≤ 4 m/s



Acceleration
≤ 25 m/s²



GuidEasy guide trough systems

Guide trough systems are necessary for sliding applications. GuidEasy guide trough systems designed by standard module are recommended in general. Please consult our engineers if you have any question.

Standard guide trough systems for series E26 ► Page 226

Series E26 | Product range | E26·ED26



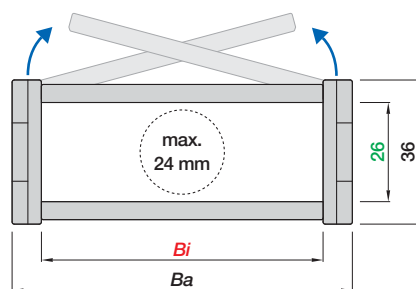
E26 - Open | Openable along the outer radius

Part No.	Bi	Ba	R	Weight
Cable chain	[mm]	[mm]	[mm]	[kg/m]
E26.025.R*	25	40	048 055 075 100 125 150 175 200 225 250	≈ 0.74
E26.040.R	40	55	048 055 075 100 125 150 175 200 225 250	≈ 0.80
E26.060.R	60	75	048 055 075 100 125 150 175 200 225 250	≈ 0.88
E26.080.R	80	95	048 055 075 100 125 150 175 200 225 250	≈ 0.95
E26.100.R	100	115	048 055 075 100 125 150 175 200 225 250	≈ 1.03



ED26 - E26 with dampers

ED26.025.R*	25	40	048 055 075 100 125 150 175 200 225 250	≈ 0.74
ED26.040.R	40	55	048 055 075 100 125 150 175 200 225 250	≈ 0.80
ED26.060.R	60	75	048 055 075 100 125 150 175 200 225 250	≈ 0.88
ED26.080.R	80	95	048 055 075 100 125 150 175 200 225 250	≈ 0.95
ED26.100.R	100	115	048 055 075 100 125 150 175 200 225 250	≈ 1.03



Series E26 | Product range | E26i·ED26i



E26i - Open | Openable along the inner radius

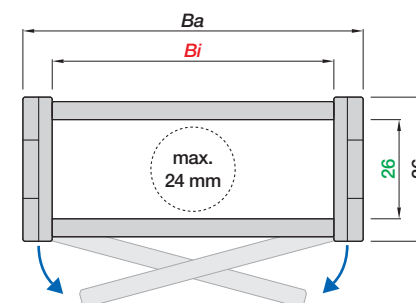
Part No.	Bi	Ba	R	Weight
Cable chain	[mm]	[mm]	[mm]	[kg/m]
E26i.025.R*	25	40	048 055 075 100 125 150 175 200 225 250	≈ 0.74
E26i.040.R	40	55	048 055 075 100 125 150 175 200 225 250	≈ 0.80
E26i.060.R	60	75	048 055 075 100 125 150 175 200 225 250	≈ 0.88
E26i.080.R	80	95	048 055 075 100 125 150 175 200 225 250	≈ 0.95
E26i.100.R	100	115	048 055 075 100 125 150 175 200 225 250	≈ 1.03



ED26i - E26i with dampers

ED26i.025.R*	25	40	048 055 075 100 125 150 175 200 225 250	≈ 0.74
ED26i.040.R	40	55	048 055 075 100 125 150 175 200 225 250	≈ 0.80
ED26i.060.R	60	75	048 055 075 100 125 150 175 200 225 250	≈ 0.88
ED26i.080.R	80	95	048 055 075 100 125 150 175 200 225 250	≈ 0.95
ED26i.100.R	100	115	048 055 075 100 125 150 175 200 225 250	≈ 1.03

* Available upon request, please consult us for delivery time



Order example | Cable chains

E26	.	040	.	048	-	44 pcs
Series		Bi		R		Links

Series E26 | ZB mounting brackets | E26·E26i

Series E26 | Interior separation | Vertical·Horizontal

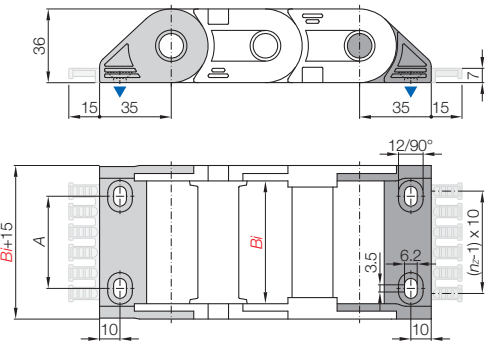
ZB mounting brackets | Open

M6 Assembly options

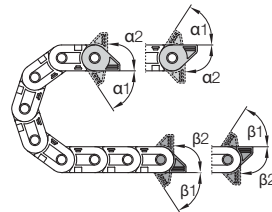
Moving end
E260.Bi.1(Z)
E261.Bi.1(Z)

Locking
Pivoting

Fixed end
E260.Bi.2(Z)
E261.Bi.2(Z)



Moving end (Outer link)
Fixed end (Inner link)



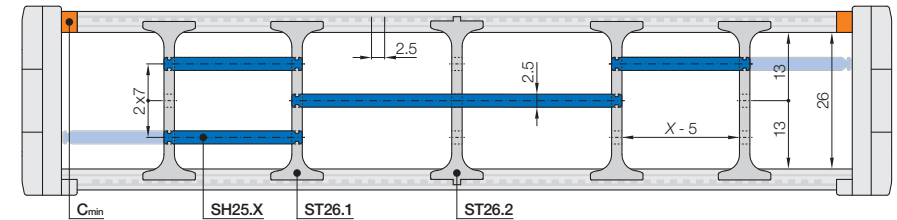
Type	$\alpha 1$	$\alpha 2$	$\beta 1$	$\beta 2$
Pivoting	57°	90°	57°	90°
Locking	0°	0/90°	0°	0/90°

ZB Pivoting ► Recommended for unsupported and gliding applications

ZB Locking ► Recommended for vertical hanging and standing applications

Bi [mm]	Part No. Pivoting with tiewrap plates	without tiewrap plates	Part No. Locking with tiewrap plates	without tiewrap plates	A [mm]	Number of teeth nz [1]
25	E260.025.12.Z*	E260.025.12*	E261.025.12.Z*	E261.025.12*	12	3
40	E260.040.12.Z	E260.040.12	E261.040.12.Z	E261.040.12	25	4
60	E260.060.12.Z	E260.060.12	E261.060.12.Z	E261.060.12	45	6
80	E260.080.12.Z	E260.080.12	E261.080.12.Z	E261.080.12	65	8
100	E260.100.12.Z	E260.100.12	E261.100.12.Z	E261.100.12	85	10

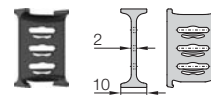
* Available upon request, please consult us for delivery time



The minimum lateral gap to the side links $C_{min} = 3mm$

Standard separation: fitted every 2nd link

Vertical separator | Standard | For almost any application

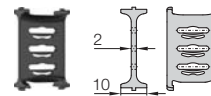


Unassembled: ST26.1

Assembled: ST26.1.A

- Wide base for fitting in cable chains stably
- Movable, easy to adjust the position

Vertical separator | Locking | For side-mounted applications

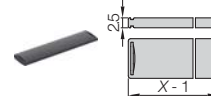


Unassembled: ST26.2

Assembled: ST26.2.A

- Locking, fitted in a specified position securely
- Preset in 2.5 mm increments

Horizontal separator | Locking | For multilayer separation



Unassembled: SH25.X

Assembled: SH25.X.A

- Full or partial width horizontal separator
- Locked securely into vertical separators at both ends

X [mm]	Unassembled	Assembled
010	SH25.010*	SH25.010.A*
016	SH25.016*	SH25.016.A*
020	SH25.020*	SH25.020.A*
025	SH25.025*	SH25.025.A*
030	SH25.030*	SH25.030.A*
038	SH25.038*	SH25.038.A*

X [mm]	Unassembled	Assembled
040	SH25.040*	SH25.040.A*
050	SH25.050*	SH25.050.A*
060	SH25.060*	SH25.060.A*
068	SH25.068*	SH25.068.A*
080	SH25.080*	SH25.080.A*
100	SH25.100*	SH25.100.A*

* Available upon request, please consult us for delivery time

Order example | ZB mounting brackets

E260 . 060 . 12 . Z . A1 Default position: A1

Series Bi Type Tiewrap plates Position

A1 A2 A3 A4

36

E36

Links/m
18 pcs/1008 mmPitch P
56 mmInner height hi
36 mmInner widths Bi
50 – 175 mmBending radii R
063 – 300 mm**E36 - Open | Openable along outer radius**

- Openable along the outer radius from both side
- Dampers option ► ED36
- Applied for gliding

**E36i - Open | Openable along inner radius**

- Openable along the inner radius from both side
- Dampers option ► ED36i
- Not for gliding

**Order example | Complete cable chains**

E36.075.063 - 36 pcs + E3600.075.12 + ST36.1 - 54 pcs

Cable chains No.

Links

Mounting brackets No.

Separators No.

Quantity

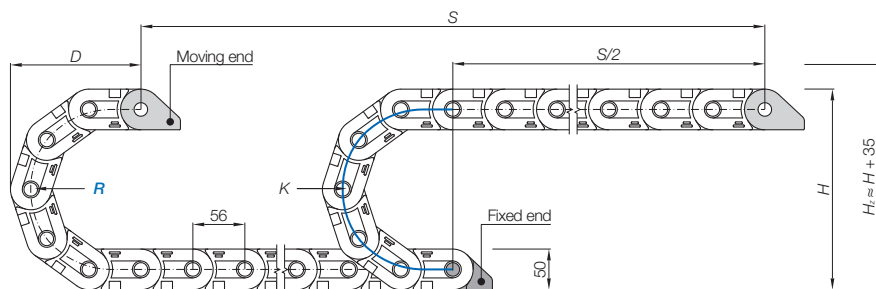
36

Series E36 | Installation dimensions | Unsupported



Unsupported applications | Short travels | $L_K = S/2 + K$

36



R [mm]	063	075	100	125	150	175	200	225	250	300
H [mm]	176	200	250	300	350	400	450	500	550	650
H _t [mm]	211	235	285	335	385	435	485	535	585	685
D [mm]	172	184	209	234	259	284	309	334	359	409
K [mm]	310	350	430	505	585	665	745	820	900	1055

The required clearance height $H_t = H + 35$ mm



Fill weight
≤ 10 kg/m



Travel
≤ 5.5 m



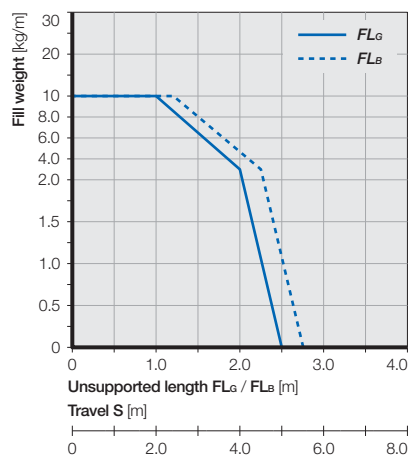
Speed
≤ 10 m/s



Acceleration
≤ 50 m/s²



Load diagram

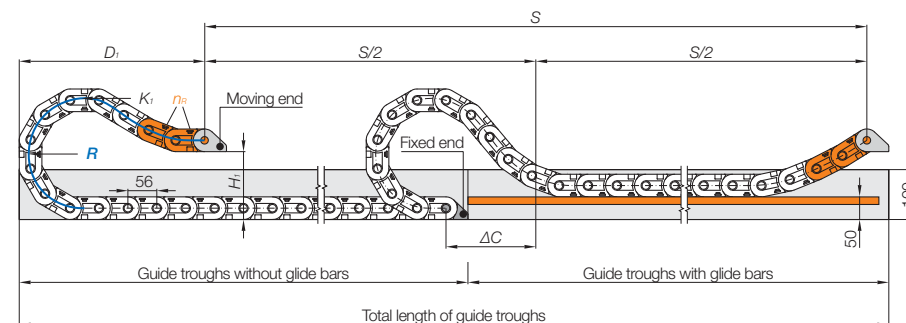


Series E36 | Installation dimensions | Gliding



Gliding applications | Long travels | $L_K = S/2 + K_1$

36



R [mm]	063	075	100	125	150	175	200	225	250	300
H ₁ [mm]	126	150	150	150	150	150	150	150	150	150
D ₁ [mm]	172	184	325	465	510	595	775	910	950	1270
K ₁ [mm]	310	350	504	728	840	1008	1232	1456	1568	2016
ΔC [mm]	—	—	140	255	275	335	490	600	615	885
n _R [1]	—	—	2	2	3	3	3	3	4	4



Fill weight
≤ 4 kg/m



Travel
≤ 125 m



Speed
≤ 4 m/s



Acceleration
≤ 25 m/s²



GuidEasy guide trough systems

Guide trough systems are necessary for sliding applications. GuidEasy guide trough systems designed by standard module are recommended in general. Please consult our engineers if you have any question.

Standard guide trough systems for series E36 ► Page 226

Series E36 | Product range | E36-ED36



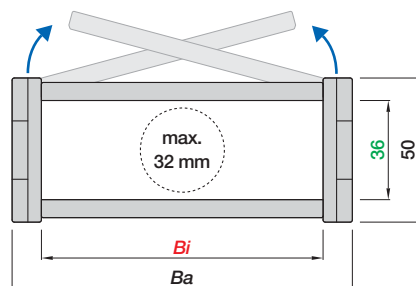
E36 - Open | Openable along the outer radius

Part No. Cable chain	Bi [mm]	Ba [mm]	R [mm]	Weight [kg/m]
E36.050.R	50	67	063 075 100 125 150 175 200 225 250 300	≈ 1.30
E36.065.R*	65	82	063 075 100 125 150 175 200 225 250 300	≈ 1.38
E36.075.R	75	92	063 075 100 125 150 175 200 225 250 300	≈ 1.43
E36.090.R*	90	107	063 075 100 125 150 175 200 225 250 300	≈ 1.51
E36.100.R	100	117	063 075 100 125 150 175 200 225 250 300	≈ 1.56
E36.125.R*	125	142	063 075 100 125 150 175 200 225 250 300	≈ 1.69
E36.150.R*	150	167	063 075 100 125 150 175 200 225 250 300	≈ 1.82
E36.175.R*	175	192	063 075 100 125 150 175 200 225 250 300	≈ 1.95



ED36 - E36 with dampers

ED36.050.R	50	67	063 075 100 125 150 175 200 225 250 300	≈ 1.30
ED36.065.R*	65	82	063 075 100 125 150 175 200 225 250 300	≈ 1.38
ED36.075.R	75	92	063 075 100 125 150 175 200 225 250 300	≈ 1.43
ED36.090.R*	90	107	063 075 100 125 150 175 200 225 250 300	≈ 1.51
ED36.100.R	100	117	063 075 100 125 150 175 200 225 250 300	≈ 1.56
ED36.125.R*	125	142	063 075 100 125 150 175 200 225 250 300	≈ 1.69
ED36.150.R*	150	167	063 075 100 125 150 175 200 225 250 300	≈ 1.82
ED36.175.R*	175	192	063 075 100 125 150 175 200 225 250 300	≈ 1.95



Series E36 | Product range | E36i-ED36i



E36i - Open | Openable along the inner radius

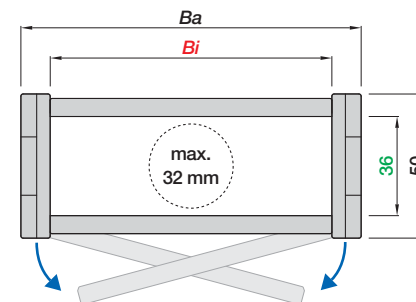
Part No. Cable chain	Bi [mm]	Ba [mm]	R [mm]	Weight [kg/m]
E36i.050.R	50	67	063 075 100 125 150 175 200 225 250 300	≈ 1.30
E36i.065.R*	65	82	063 075 100 125 150 175 200 225 250 300	≈ 1.38
E36i.075.R	75	92	063 075 100 125 150 175 200 225 250 300	≈ 1.43
E36i.090.R*	90	107	063 075 100 125 150 175 200 225 250 300	≈ 1.51
E36i.100.R	100	117	063 075 100 125 150 175 200 225 250 300	≈ 1.56
E36i.125.R*	125	142	063 075 100 125 150 175 200 225 250 300	≈ 1.69
E36i.150.R*	150	167	063 075 100 125 150 175 200 225 250 300	≈ 1.82
E36i.175.R*	175	192	063 075 100 125 150 175 200 225 250 300	≈ 1.95



ED36i - E36i with dampers

ED36i.050.R	50	67	063 075 100 125 150 175 200 225 250 300	≈ 1.30
ED36i.065.R*	65	82	063 075 100 125 150 175 200 225 250 300	≈ 1.38
ED36i.075.R	75	92	063 075 100 125 150 175 200 225 250 300	≈ 1.43
ED36i.090.R*	90	107	063 075 100 125 150 175 200 225 250 300	≈ 1.51
ED36i.100.R	100	117	063 075 100 125 150 175 200 225 250 300	≈ 1.56
ED36i.125.R*	125	142	063 075 100 125 150 175 200 225 250 300	≈ 1.69
ED36i.150.R*	150	167	063 075 100 125 150 175 200 225 250 300	≈ 1.82
ED36i.175.R*	175	192	063 075 100 125 150 175 200 225 250 300	≈ 1.95

* Available upon request, please consult us for delivery time



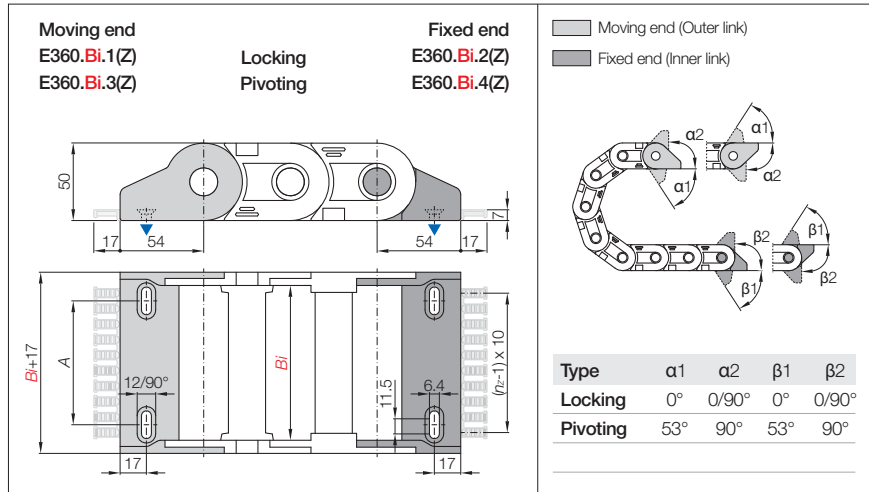
Order example | Cable chains

E36 . 075 . 063 - 36 pcs
Series Bi R Links

Series E36 | ZB mounting brackets | E36·E36i

ZB mounting brackets | Open

M6 ▲ Assembly options



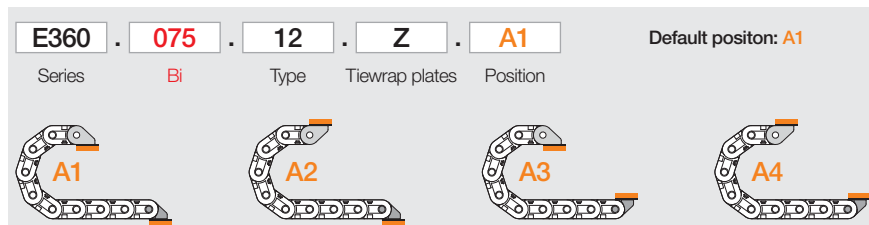
ZB Locking ► Recommended for vertical hanging and standing applications

ZB Pivoting ► Recommended for unsupported and gliding applications

Bi [mm]	Part No. Locking with tiewrap plates	without tiewrap plates	Part No. Pivoting with tiewrap plates	without tiewrap plates	A [mm]	Number of teeth nz [1]
50	E360.050.12.Z*	E360.050.12*	E360.050.34.Z*	E360.050.34*	30	5
65	E360.065.12.Z*	E360.065.12*	E360.065.34.Z*	E360.065.34*	45	6
75	E360.075.12.Z*	E360.075.12*	E360.075.34.Z*	E360.075.34*	55	7
90	E360.090.12.Z*	E360.090.12*	E360.090.34.Z*	E360.090.34*	70	9
100	E360.100.12.Z*	E360.100.12*	E360.100.34.Z*	E360.100.34*	80	10
125	E360.125.12.Z*	E360.125.12*	E360.125.34.Z*	E360.125.34*	105	12
150	E360.150.12.Z*	E360.150.12*	E360.150.34.Z*	E360.150.34*	130	15
175	E360.175.12.Z*	E360.175.12*	E360.175.34.Z*	E360.175.34*	155	17

* Available upon request, please consult us for delivery time

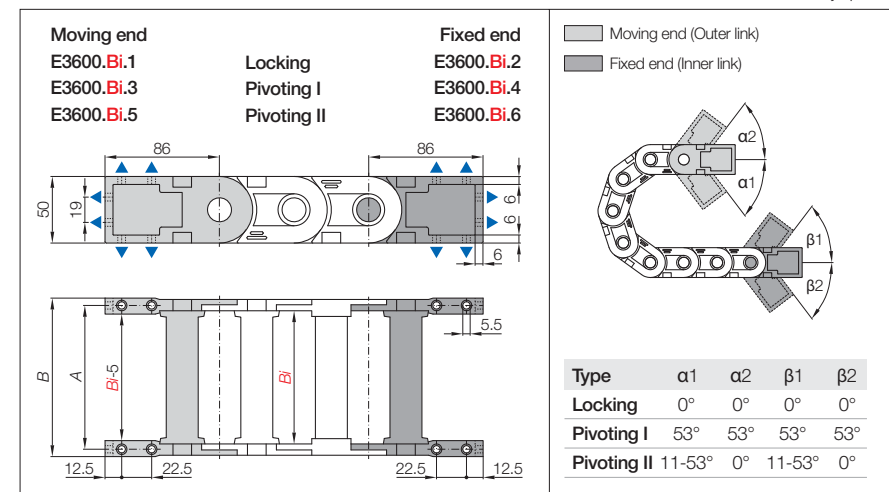
Order example | ZB mounting brackets



Series E36 | MFB mounting brackets | E36·E36i

MFB mounting brackets | Open

M5 ▲ Assembly options



MFB Locking ► Recommended for vertical hanging and standing applications

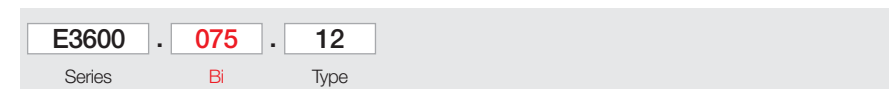
MFB Pivoting I ► Recommended for unsupported and gliding applications

MFB Pivoting II ► Recommended for extremely small space applications

Bi [mm]	Part No. MFB locking	Part No. MFB pivoting I	Part No. MFB pivoting II	A [mm]	B [mm]
50	E3600.050.12	E3600.050.34	E3600.050.56	58	69
65	E3600.065.12*	E3600.065.34*	E3600.065.56*	73	84
75	E3600.075.12	E3600.075.34	E3600.075.56	83	94
90	E3600.090.12*	E3600.090.34*	E3600.090.56*	98	109
100	E3600.100.12	E3600.100.34	E3600.100.56	108	119
125	E3600.125.12*	E3600.125.34*	E3600.125.56*	133	144
150	E3600.150.12*	E3600.150.34*	E3600.150.56*	158	169
175	E3600.175.12*	E3600.175.34*	E3600.175.56*	183	194

* Available upon request, please consult us for delivery time

Order example | MFB mounting brackets



Series E36 | MFB accessories | C-rails·Tiewrap plates

C-rails

- Standard material of C-rails: galvanized steel
- The tolerance of C-rail length: $\pm 1\text{mm}$
- Fixed to MFB mounting brackets without any other accessories
- Integrated CableFix strain relief with C-rails: clamps and tiewrap plates



Bi [mm]	Part No. MFB with C-rails*	Part No. MFB with ZA*	Part No. ZA	Part No. C-rail, individual	C-rail length [mm]	Number of teeth n _z [1]
50	□.C	—	—	CR.049	49	—
65	□.C	□.CZ	ZA050	CR.064	64	5
75	□.C	□.CZ	ZA050	CR.074	74	5
90	□.C	□.CZ	ZA075	CR.089	89	7
100	□.C	□.CZ	ZA075	CR.099	99	7
125	□.C	□.CZ	ZA100	CR.124	124	10
150	□.C	□.CZ	ZA125	CR.149	149	12
175	□.C	□.CZ	ZA150	CR.174	174	15

* Standard: both MFB ends with one C-rail or tiewrap plate(ZA)

Option: both MFB ends with two C-rails or tiewrap plates - please add index "2", example: E3600.075.12.C2 or E3600.075.12.C22

Please specify standard MFB mounting brackets Part No. into □ ▶ Page 115



CableFix clamps

Strain relief with high holding force for one, two or three cables stacked
More information ▶ Page 222

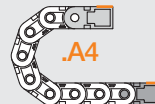
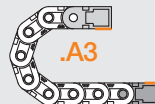
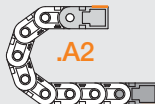
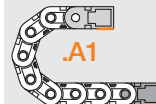


CableFix tiewrap plates

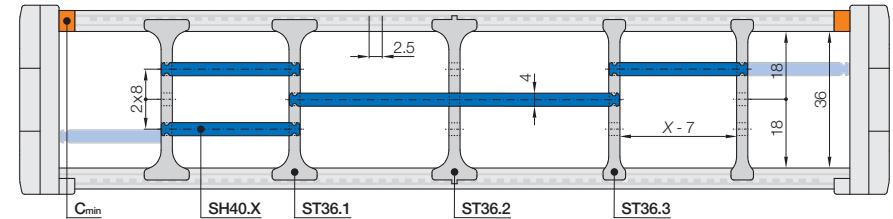
Simple and economical strain relief for multiple cables
More information ▶ Page 223

Default installation position of C-rails and tiewrap plates: **.A1**

To indicate the installation position, please add index **.A1**, **.A2**, **.A3** or **.A4**, example: E3600.075.12.C.A2



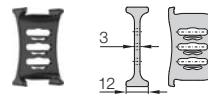
Series E36 | Interior separation | Vertical·Horizontal



The minimum lateral gap to the side links $C_{\min} = 5\text{mm}$

Standard separation: fitted every 2nd link

Vertical separator | Standard | For almost any application

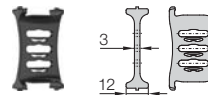


Unassembled: ST36.1

Assembled: ST36.1.A

- Wide base for fitting in cable chains stably
- Movable, easy to adjust the position

Vertical separator | Locking | For side-mounted applications

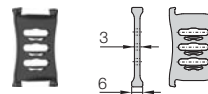


Unassembled: ST36.2

Assembled: ST36.2.A

- Locking, fitted in a specified position securely
- Preset in 2.5 mm increments

Vertical separator | Narrow | For small cables

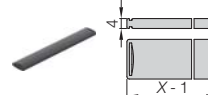


Unassembled: ST36.3

Assembled: ST36.3.A

- Narrow base for small cables
- Movable, easy to adjust the position

Horizontal separator | Locking | For multilayer separation



Unassembled: SH40.X

Assembled: SH40.X.A

- Full or partial width horizontal separator
- Locked securely into vertical separators at both ends

X [mm]	Unassembled	Assembled
050	SH40.050	SH40.050.A
065	SH40.065	SH40.065.A
075	SH40.075	SH40.075.A
100	SH40.100	SH40.100.A
125	SH40.125	SH40.125.A

X [mm]	Unassembled	Assembled
150	SH40.150	SH40.150.A
175	SH40.175	SH40.175.A

GeMotion

GeMotion

Stability, high load and long travel



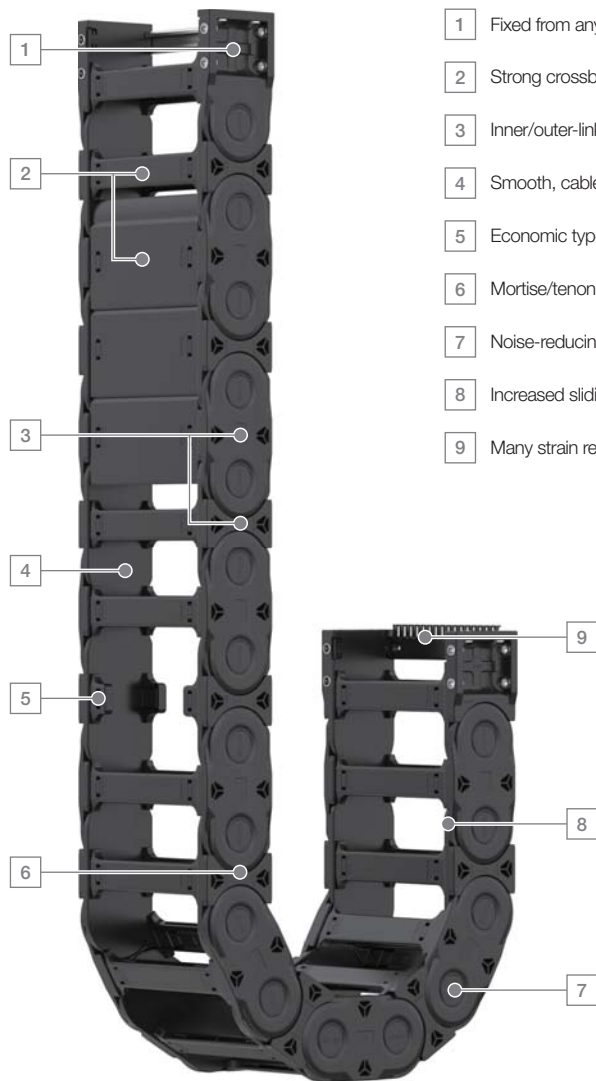
GeMotion is especially suitable for applications with high requirements of high load and long travel. GeMotion has remarkable performance and long service life even in terrible conditions.

- Mortise/tenon design for high lateral stability and torsion resistance
- Inner/outer-link design for straight run
- Noise-reducing brake and optional noise dampers
- Smooth, cable-friendly inner surface
- Many modular options and accessories available

Typical industries and applications

Machine tools | Laser cutting | Material handling | Truss robot | Ground rail | Casting equipment | Construction machinery | Crane

Stability, high load and long travel



- 1 Fixed from any side with MFB mounting brackets
- 2 Strong crossbars/lids with double locking
- 3 Inner/outer-link design for straight run
- 4 Smooth, cable-friendly inner surface
- 5 Economic type: crossbars every 2nd link
- 6 Mortise/tenon design for high stability
- 7 Noise-reducing brake for quiet operation
- 8 Increased sliding surface with special chain links
- 9 Many strain relief accessories available



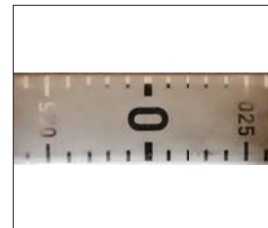
Any interior separation with various separators



Built-in teeth of crossbars/lids for secure grip on locking separators



Horizontal separators locked into vertical separators securely



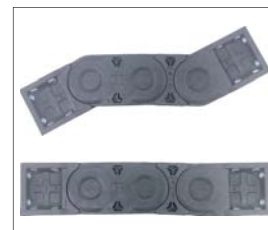
Crossbars/lids with visual scale for precise separation



High stability due to mortise/tenon design



High wear resistance for gliding due to special chain link contour



Pivoting or locking brackets for different applications



Metal bushing for avoiding damage when assembling brackets



Quickly guiding conduits or cables with optional clip extension



Optional noise dampers for lower noise



Integrated strain relief e.g. clamps, tie-wrap plates, etc.



Standard steel guide trough for gliding applications





Legend	Series	Inner height hi [mm]	Outer height ha [mm]	Inner width Bi [mm]	Outer width Ba [mm]	Bending radii R [mm]	Link pitch P [mm]	Page

Open | Crossbars every link | For high technical applications



G34	34	54	50 - 400	72 - 422	063 - 300	56	124
G44	44	64	50 - 400	76 - 426	075 - 350	67	136
G60	60	88	75 - 500	109 - 534	135 - 500	91	148
G80	80	108	75 - 500	125 - 550	150 - 600	111	160
GS80	80	108	75 - 500	105 - 530	150 - 600	91	176

Open | Crossbars every 2nd link | For almost any application



G34H	34	54	50 - 400	72 - 422	063 - 300	56	124
G44H	44	64	50 - 400	76 - 426	075 - 350	67	136
G60H	60	88	75 - 500	109 - 534	135 - 500	91	148
G80H	80	108	75 - 500	125 - 550	150 - 600	111	160
GS80H	80	108	75 - 500	105 - 530	150 - 600	91	176

Closed | Swarf protection | For applications with swarf



G34T	34	54	50 - 300	72 - 322	125 - 300	56	124
G44T	44	64	50 - 300	76 - 326	125 - 350	67	136
G60T	60	88	100 - 400	134 - 434	150 - 500	91	148
G80T	80	108	100 - 400	150 - 450	200 - 600	111	160
GS80T	80	108	100 - 400	130 - 430	200 - 600	91	176

Travels

Series	Unsupported	Gliding	Vertical hanging	Vertical standing	Side-mounted Unsupported
G34 G34H G34T	≤ 7.0 m	≤ 200 m	≤ 80 m	≤ 5.0 m	≤ 1.5 m
G44 G44H G44T	≤ 8.0 m	≤ 250 m	≤ 80 m	≤ 6.0 m	≤ 2.0 m
G60 G60H G60T	≤ 10.0 m	≤ 350 m	≤ 100 m	≤ 6.0 m	≤ 2.5 m
G80 G80H G80T	≤ 12.0 m	≤ 350 m	≤ 100 m	≤ 6.0 m	≤ 3.0 m
GS80 GS80H GS80T	≤ 10.0 m	≤ 350 m	≤ 100 m	≤ 6.0 m	≤ 2.7 m



Order example | Complete cable chains

Examples based on series G60

G60.200.250	-	22 pcs	+	G600.200.2.12	+	ST60.1	-	33 pcs
Cable chains No.		Links		Mounting brackets No.		Separators No.		Quantity

Cable chains

22 pcs (2m)

G60	.	200	.	250	-	22 pcs
Series		Bi		R		Links

Mounting brackets

1 set

G600	.	200	.	2	.	12
Series		Bi		Odd/even		Type

Interior separation

3 separators assembled every 2nd link*

ST60.1	-	33 pcs
Separators No.		Quantity

* Separators are not pre-assembled by default. Please indicate the installation method or provide drawings for pre-assembled.

Examples: ST60.1.A - 33 片(3/2)



Order example | Options

Examples based on series G60 | G60H | G60T

Part No. Standard	Part No. Low noise	Part No. RBR	Part No. NC	Part No. ESD
Available from stock	With noise dampers	Circular movement	No Camber	ESD/ATEX
G60.200.R	GD60.200.R	G60.200.R1/R2	G60.200.R.NC	G60.200.R.ESD
G60H.200.R	GD60H.200.R	G60H.200.R1/R2	G60H.200.R.NC	G60H.200.R.ESD
G60T.200.R	GD60T.200.R	—	G60T.200.R.NC	G60T.200.R.ESD



G34

Links/m
18 pcs/1008 mm



Pitch P
56 mm



Inner height hi
34 mm



Inner widths Bi
50 – 400 mm



Bending radii R
063 – 300 mm



G34 - Open | Crossbars every link

- Crossbars openable along inner and outer radius
- For high technical applications



G34H - Open | Crossbars every 2nd link

- Crossbars openable along inner and outer radius
- For almost any application
- Easy to assembly and economic



G34T - Closed | Swarf protection

- Lids openable along inner and outer radius
- For applications with swarf



Order example | Complete cable chains

G34.100.125 - 36 pcs + G340.100.2.12 + ST34.1 - 54 pcs

Cable chains No.

Links

Mounting brackets No.

Separators No.

Quantity

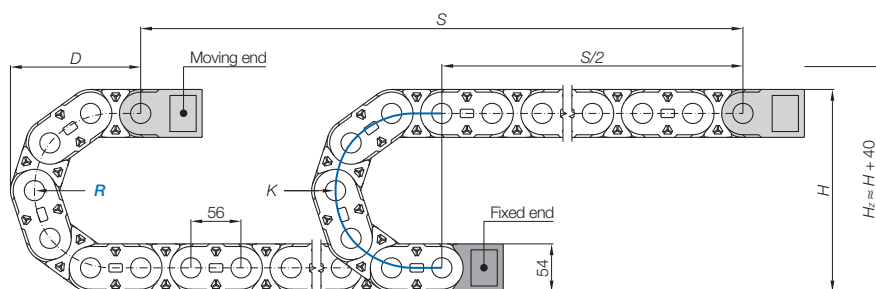


Series G34 | Installation dimensions | Unsupported



Unsupported applications | Short travels | $L_K = S/2 + K$

34



R [mm]	063*	075*	100*	125	150	175	200	225	250	300
H [mm]	180	204	254	304	354	404	454	504	554	654
H _z [mm]	220	244	294	344	394	444	494	544	594	694
D [mm]	174	186	211	236	261	286	311	336	361	411
K [mm]	310	350	430	505	585	665	745	820	900	1055

The required clearance height $H_z = H + 40$ mm

* Radius not available for G34T tubes



Fill weight
≤ 27 kg/m



Travel
≤ 7 m



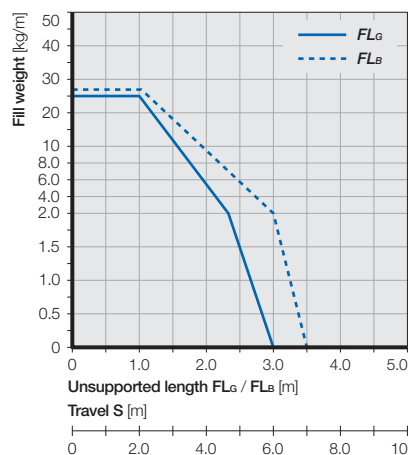
Speed
≤ 10 m/s



Acceleration
≤ 50 m/s²



Load diagram

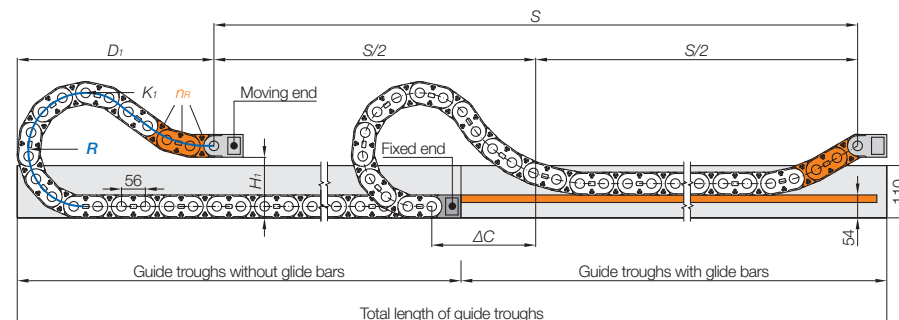


Series G34 | Installation dimensions | Gliding



Gliding applications | Long travels | $L_K = S/2 + K_1$

34



R [mm]	063*	075*	100*	125	150	175	200	225	250	300
H ₁ [mm]	126	150	162	162	162	162	162	162	162	162
D ₁ [mm]	174	186	325	465	510	600	780	920	950	1270
K ₁ [mm]	310	350	504	728	840	1008	1232	1456	1568	2016
ΔC [mm]	—	—	140	255	280	340	490	610	620	890
n _R [1]	—	—	2	2	3	3	3	3	4	4

* Radius not available for G34T tubes



Fill weight
≤ 8 kg/m



Travel
≤ 200 m



Speed
≤ 5 m/s



Acceleration
≤ 30 m/s²



GuidEasy guide trough systems

Guide trough systems are necessary for sliding applications. GuidEasy guide trough systems designed by standard module are recommended in general. Please consult our engineers if you have any question.

Standard guide trough systems for series G34 ► Page 226

Series G34 | Product range | G34·G34H



G34 - Open | Crossbars every link

Part No. Cable chain	Bi [mm]	Ba [mm]	R [mm]	Weight [kg/m]
G34.050.R	50	72	063 075 100 125 150 175 200 225 250 300	≈ 1.65
G34.075.R	75	97	063 075 100 125 150 175 200 225 250 300	≈ 1.79
G34.100.R	100	122	063 075 100 125 150 175 200 225 250 300	≈ 1.94
G34.125.R	125	147	063 075 100 125 150 175 200 225 250 300	≈ 2.08
G34.150.R	150	172	063 075 100 125 150 175 200 225 250 300	≈ 2.24
G34.175.R	175	197	063 075 100 125 150 175 200 225 250 300	≈ 2.38
G34.200.R	200	222	063 075 100 125 150 175 200 225 250 300	≈ 2.52
G34.225.R*	225	247	063 075 100 125 150 175 200 225 250 300	≈ 2.67
G34.250.R	250	272	063 075 100 125 150 175 200 225 250 300	≈ 2.82
G34.275.R*	275	297	063 075 100 125 150 175 200 225 250 300	≈ 2.96
G34.300.R*	300	322	063 075 100 125 150 175 200 225 250 300	≈ 3.11
G34.350.R*	350	372	063 075 100 125 150 175 200 225 250 300	≈ 3.40
G34.400.R*	400	422	063 075 100 125 150 175 200 225 250 300	≈ 3.69

G34H - Open | Crossbars every 2nd link

Part No. Cable chain	Bi [mm]	Ba [mm]	R [mm]	Weight [kg/m]
G34H.050.R	50	72	063 075 100 125 150 175 200 225 250 300	≈ 1.52
G34H.075.R	75	97	063 075 100 125 150 175 200 225 250 300	≈ 1.60
G34H.100.R	100	122	063 075 100 125 150 175 200 225 250 300	≈ 1.67
G34H.125.R	125	147	063 075 100 125 150 175 200 225 250 300	≈ 1.74
G34H.150.R	150	172	063 075 100 125 150 175 200 225 250 300	≈ 1.82
G34H.175.R	175	197	063 075 100 125 150 175 200 225 250 300	≈ 1.89
G34H.200.R	200	222	063 075 100 125 150 175 200 225 250 300	≈ 1.96
G34H.225.R*	225	247	063 075 100 125 150 175 200 225 250 300	≈ 2.04
G34H.250.R	250	272	063 075 100 125 150 175 200 225 250 300	≈ 2.11
G34H.275.R*	275	297	063 075 100 125 150 175 200 225 250 300	≈ 2.18
G34H.300.R*	300	322	063 075 100 125 150 175 200 225 250 300	≈ 2.26
G34H.350.R*	350	372	063 075 100 125 150 175 200 225 250 300	≈ 2.40
G34H.400.R*	400	422	063 075 100 125 150 175 200 225 250 300	≈ 2.55

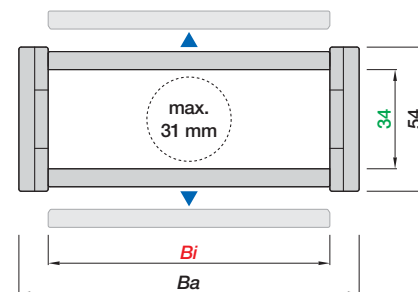
Series G34 | Product range | G34T



G34T - Closed | Swarf protection

Part No. Cable chain	Bi [mm]	Ba [mm]	R [mm]	Weight [kg/m]
G34T.050.R	50	72	— — — 125 150 175 200 225 250 300	≈ 1.80
G34T.075.R	75	97	— — — 125 150 175 200 225 250 300	≈ 2.03
G34T.100.R	100	122	— — — 125 150 175 200 225 250 300	≈ 2.26
G34T.125.R*	125	147	— — — 125 150 175 200 225 250 300	≈ 2.48
G34T.150.R*	150	172	— — — 125 150 175 200 225 250 300	≈ 2.71
G34T.175.R*	175	197	— — — 125 150 175 200 225 250 300	≈ 2.93
G34T.200.R*	200	222	— — — 125 150 175 200 225 250 300	≈ 3.15
G34T.250.R*	250	272	— — — 125 150 175 200 225 250 300	≈ 3.61
G34T.300.R*	300	322	— — — 125 150 175 200 225 250 300	≈ 4.06

* Available upon request, please consult us for delivery time



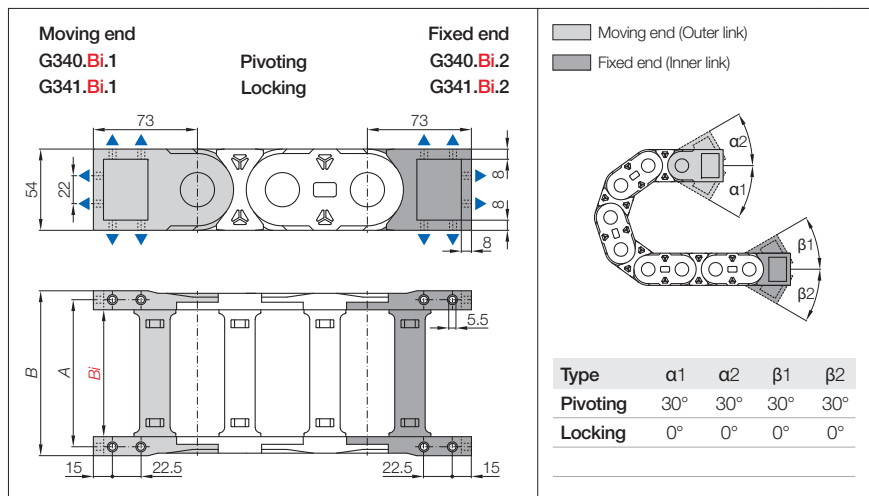
Order example | Cable chains

G34 . 100 . 125 - 36 pcs
Series Bi R Links

Series G34 | MFB mounting brackets | G34·G34H

MFB mounting brackets | Open

M5 ▲ Assembly options



MFB Pivoting ► Recommended for unsupported and gliding applications

MFB Locking ► Recommended for vertical hanging and standing applications

Bi [mm]	Part No. MFB pivoting	Part No. MFB locking	A [mm]	B [mm]
50 ►	G340.050.12	G341.050.12	64	76
75 ►	G340.075.12	G341.075.12	89	101
100 ►	G340.100.12	G341.100.12	114	126
125 ►	G340.125.12	G341.125.12	139	151
150 ►	G340.150.12	G341.150.12	164	176
175 ►	G340.175.12	G341.175.12	189	201
200 ►	G340.200.12	G341.200.12	214	226
225 ►	G340.225.12*	G341.225.12*	239	251
250 ►	G340.250.12	G341.250.12	264	276
275 ►	G340.275.12*	G341.275.12*	289	301
300 ►	G340.300.12*	G341.300.12*	314	326
350 ►	G340.350.12*	G341.350.12*	364	376
400 ►	G340.400.12*	G341.400.12*	414	426



For the complete Part NO. of MFB mounting brackets, please specify index 1 or 2 into □

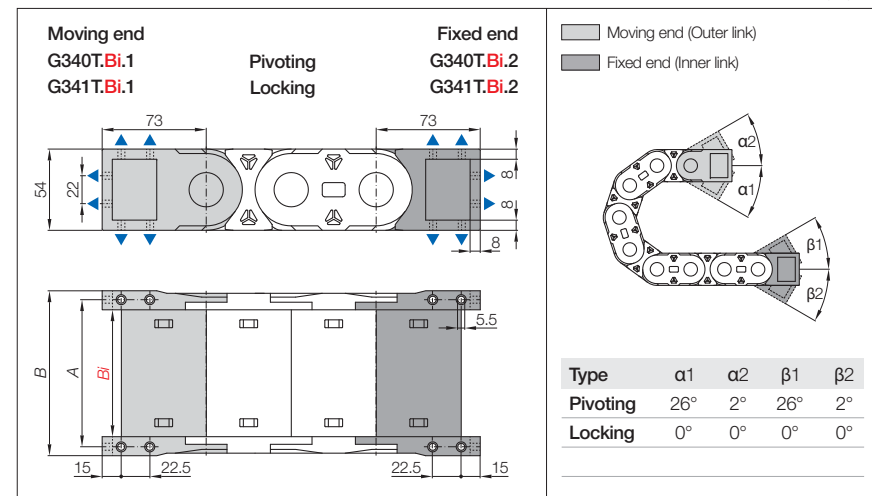
1 = Links for odd

2 = Links for even

Series G34 | MFB mounting brackets | G34T

MFB mounting brackets | Closed

M5 ▲ Assembly options



MFB Pivoting ► Recommended for unsupported and gliding applications

MFB Locking ► Recommended for vertical hanging and standing applications

Bi [mm]	Part No. MFB pivoting	Part No. MFB locking	A [mm]	B [mm]
50 ►	G340T.050.12	G341T.050.12	64	76
75 ►	G340T.075.12	G341T.075.12	89	101
100 ►	G340T.100.12	G341T.100.12	114	126
125 ►	G340T.125.12*	G341T.125.12*	139	151
150 ►	G340T.150.12*	G341T.150.12*	164	176
175 ►	G340T.175.12*	G341T.175.12*	189	201
200 ►	G340T.200.12*	G341T.200.12*	214	226
250 ►	G340T.250.12*	G341T.250.12*	264	276
300 ►	G340T.300.12*	G341T.300.12*	314	326

* Available upon request, please consult us for delivery time



Order example | MFB mounting brackets

G340 . 100 . 2 . 12

Series Bi Odd/even Type

Series G34 | MFB accessories | C-rails

C-rails

- Standard material of C-rails: galvanized steel
- The tolerance of C-rail length: $\pm 1\text{mm}$
- Fixed to MFB mounting brackets without any other accessories
- Integrated CableFix strain relief with C-rails: clamps and tiewrap plates



Bi [mm]	Part No. MFB with C-rails*	Part No. C-rail, individual	C-rail length [mm]
50 ▶	□.C	CR.055	55
75 ▶	□.C	CR.080	80
100 ▶	□.C	CR.105	105
125 ▶	□.C	CR.130	130
150 ▶	□.C	CR.155	155
175 ▶	□.C	CR.180	180
200 ▶	□.C	CR.205	205
225 ▶	□.C	CR.230	230
250 ▶	□.C	CR.255	255
275 ▶	□.C	CR.280	280
300 ▶	□.C	CR.305	305
350 ▶	□.C	CR.355	355
400 ▶	□.C	CR.405	405

* Standard: both MFB ends with one C-rail

Option: both MFB ends with two C-rails - please add index "2", example: G340.100.2.12.C2

Please specify standard MFB mounting brackets Part No. into □ ▶ Page 130/131



CableFix clamps

Strain relief with high holding force for one, two or three cables stacked
More information ▶ Page 222

Series G34 | MFB accessories | Tiewrap plates

Tiewrap plates

- Inner width **Bi** $\leq 175\text{ mm}$
Fixed to MFB mounting brackets without any other accessories
- Inner width **Bi** $> 175\text{ mm}$
Fixed to C-rails of MFB mounting brackets with screws and nuts M6

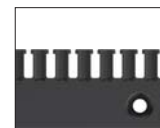


Bi [mm]	Part No. MFB with ZA*	Part No. ZA, standard	Part No. C-rail, individual	Number of teeth n _z [1]
50 ▶	□.Z	ZA050	—	5
75 ▶	□.Z	ZA075	—	7
100 ▶	□.Z	ZA100	—	10
125 ▶	□.Z	ZA125	—	12
150 ▶	□.Z	ZA150	—	15
175 ▶	□.Z	ZA175	—	17
200 ▶	□.CZ	ZA175	CR.205	17
225 ▶	□.CZ	ZA100 + ZA100	CR.230	20
250 ▶	□.CZ	ZA100 + ZA125	CR.255	22
275 ▶	□.CZ	ZA125 + ZA125	CR.280	24
300 ▶	□.CZ	ZA125 + ZA150	CR.305	27
350 ▶	□.CZ	ZA150 + ZA175	CR.355	32
400 ▶	□.CZ	ZA125 + ZA125 + ZA125	CR.405	36

* Standard: both MFB ends with one tiewrap plate(ZA)

Option: both MFB ends with two tiewrap plates - please add index "2", example: G340.100.2.12.Z2

Please specify standard MFB mounting brackets Part No. into □ ▶ Page 130/131



CableFix tiewrap plates

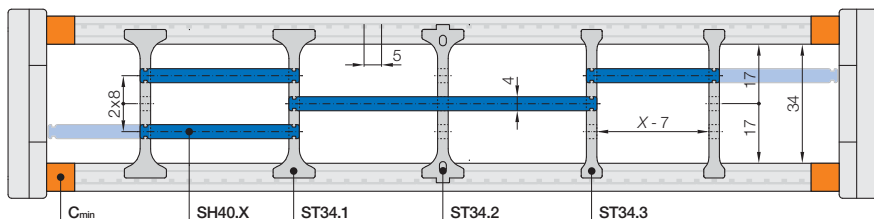
Simple and economical strain relief for multiple cables
More information ▶ Page 223

Default installation position of C-rails and tiewrap plates: **.A1**

To indicate the installation position, please add index **.A1**, **.A2**, **.A3** or **.A4**, example: G340.100.2.12.C.A2



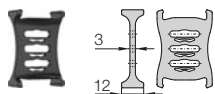
Series G34 | Interior separation | Vertical-Horizontal



The minimum lateral gap to the side links $C_{min} = \text{G34: 8mm} \mid \text{G34H: 8mm} \mid \text{G34T: 0mm}$

Standard separation: fitted every 2nd link

Vertical separator | Standard | For almost any application

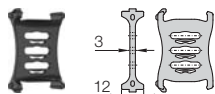


Unassembled: ST34.1

Assembled: ST34.1.A

- Wide base for fitting in cable chains stably
- Movable, easy to adjust the position

Vertical separator | Locking | For side-mounted applications

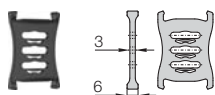


Unassembled: ST34.2

Assembled: ST34.2.A

- Locking, fitted in a specified position securely
- Preset in 5 mm increments

Vertical separator | Narrow | For small cables

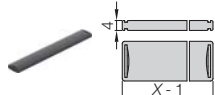


Unassembled: ST34.3

Assembled: ST34.3.A

- Narrow base for small cables
- Movable, easy to adjust the position

Horizontal separator | Locking | For multilayer separation



Unassembled: SH40.X

Assembled: SH40.X.A

- Full or partial width horizontal separator
- Locked securely into vertical separators at both ends

X [mm]	Unassembled	Assembled
050	SH40.050	SH40.050.A
065	SH40.065	SH40.065.A
075	SH40.075	SH40.075.A
100	SH40.100	SH40.100.A
125	SH40.125	SH40.125.A

X [mm]	Unassembled	Assembled
150	SH40.150	SH40.150.A
175	SH40.175	SH40.175.A
200	SH40.200	SH40.200.A
225	SH40.225	SH40.225.A
250	SH40.250	SH40.250.A

Series G34 | Accessories | Clip extension

Clip extension

- For series G34, G34H and G34T
- Quickly fill or replace conduits and cables, reducing assembly time and cost
- Clip can be configured to the left, the right, both ends or inner sides of the cable chains
- Clip fits to conduits with NW 07, 10, 12, 17, 23, 29, (36, 48) mm
- Standard configuration: 1 clip every 2nd link
- The Part NO. includes clips; the conduits are ordered separately upon request
- For the best use and appearance, make sure the chain links with odd number whenever possible

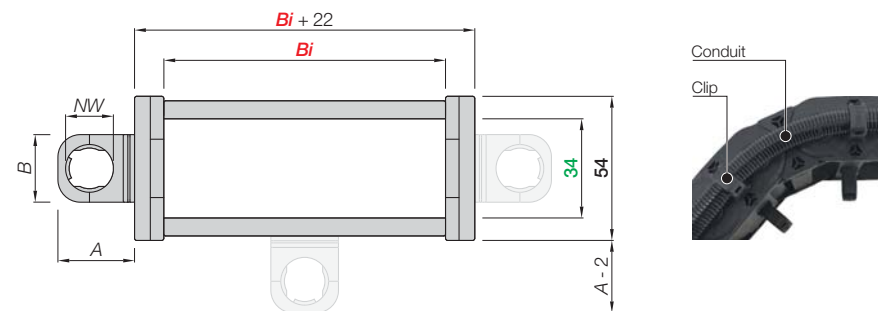
Part No. Left*	Part No. Right*	Part No. Both ends	Part No. Inner sides**	NW Φ[mm]	A [mm]	B [mm]
G34.BiEL07.R	G34.BiER07.R	G34.BiEB07.R	G34.BiEN07.R	07	21.5	17.0
G34.BiEL10.R	G34.BiER10.R	G34.BiEB10.R	G34.BiEN10.R	10	24.5	20.5
G34.BiEL12.R	G34.BiER12.R	G34.BiEB12.R	G34.BiEN12.R	12	27.0	24.0
G34.BiEL17.R	G34.BiER17.R	G34.BiEB17.R	G34.BiEN17.R	17	34.0	30.0
G34.BiEL23.R	G34.BiER23.R	G34.BiEB23.R	G34.BiEN23.R	23	42.0	38.5
G34.BiEL29.R	G34.BiER29.R	G34.BiEB29.R	G34.BiEN29.R	29	48.0	45.5
—	—	—	G34.BiEN36.R	36	56.0	55.5
—	—	—	G34.BiEN48.R	48	68.0	67.5

Bi = 050 | 075 | 100 | 125 | 150 | 175 | 200 | 225 | 250 | 275 | 300 | 350 | 400

R = 063 | 075 | 100 | 125 | 150 | 175 | 200 | 225 | 250 | 300

* As viewed from the fixed end

** Cable chains with specific widths or bending radii are not suitable for clip configured to inner sides, please consult us



NW Φ[mm]	Part No. Clip	Part No. Conduit
07	FH07	PAE07
10	FH10	PAE10
12	FH12	PAE12
17	FH17	PAE17

NW Φ[mm]	Part No. Clip	Part No. Conduit
23	FH23	PAE23
29	FH29	PAE29
36	FH36	PAE36
48	FH48	PAE48

G44

Links/m
15 pcs/1005 mm



Pitch P
67 mm



Inner height hi
44 mm



Inner widths Bi
50 – 400 mm



Bending radii R
075 – 350 mm



G44 - Open | Crossbars every link

- Crossbars openable along inner and outer radius
- For high technical applications



G44H - Open | Crossbars every 2nd link

- Crossbars openable along inner and outer radius
- For almost any application
- Easy to assembly and economic



G44T - Closed | Swarf protection

- Lids openable along inner and outer radius
- For applications with swarf



Order example | Complete cable chains

G44.125.150 - 30 pcs + G440.125.2.12 + ST44.1 - 45 pcs

Cable chains No.

Links

Mounting brackets No.

Separators No.

Quantity

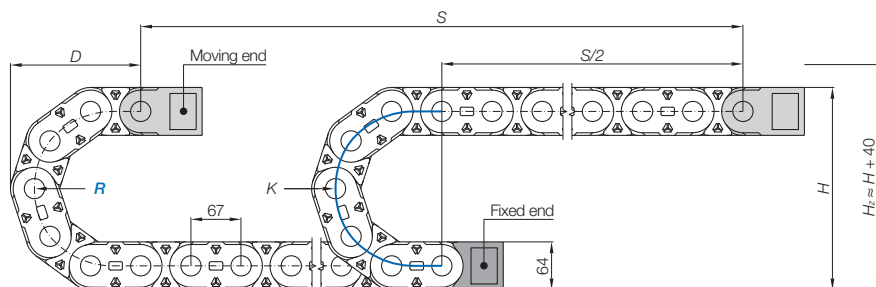


Series G44 | Installation dimensions | Unsupported



Unsupported applications | Short travels | $L_K = S/2 + K$

44



R [mm]	075*	100*	125	150	175	200	225	250	300	350
H [mm]	214	264	314	364	414	464	514	564	664	764
H _z [mm]	254	304	354	404	454	504	554	604	704	804
D [mm]	208	233	258	283	308	333	358	383	433	483
K [mm]	370	450	530	610	685	765	845	920	1080	1235

The required clearance height $H_z = H + 40$ mm

* Radius not available for G44T tubes



Fill weight
≤ 40 kg/m



Travel
≤ 8 m



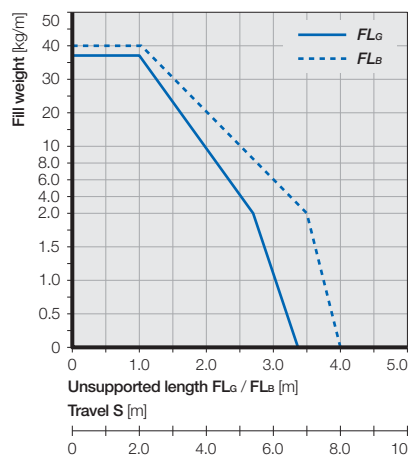
Speed
≤ 10 m/s



Acceleration
≤ 50 m/s²



Load diagram

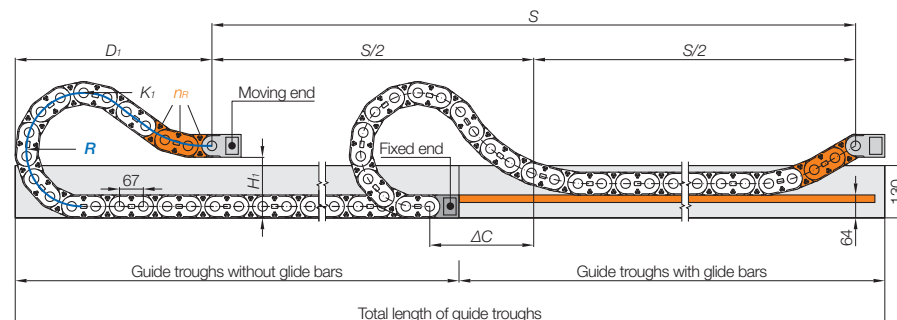


Series G44 | Installation dimensions | Gliding



Gliding applications | Long travels | $L_K = S/2 + K_1$

44



R [mm]	075*	100*	125	150	175	200	225	250	300	350
H ₁ [mm]	150	200	192	192	192	192	192	192	192	192
D ₁ [mm]	208	233	400	560	710	760	850	1010	1140	1450
K ₁ [mm]	370	450	603	871	1072	1206	1340	1541	1876	2278
ΔC [mm]	—	—	170	305	440	450	520	650	730	990
n _R [1]	—	—	2	2	2	3	3	3	4	4

* Radius not available for G44T tubes



Fill weight
≤ 12 kg/m



Travel
≤ 250 m



Speed
≤ 5 m/s



Acceleration
≤ 30 m/s²



GuidEasy guide trough systems

Guide trough systems are necessary for sliding applications. GuidEasy guide trough systems designed by standard module are recommended in general. Please consult our engineers if you have any question.

Standard guide trough systems for series G44 ► Page 226

Series G44 | Product range | G44·G44H

44



G44 - Open | Crossbars every link

Part No. Cable chain	Bi [mm]	Ba [mm]	R [mm]	Weight [kg/m]
G44.050.R	50	76	075 100 125 150 175 200 225 250 300 350	≈ 2.08
G44.075.R	75	101	075 100 125 150 175 200 225 250 300 350	≈ 2.20
G44.100.R	100	126	075 100 125 150 175 200 225 250 300 350	≈ 2.32
G44.125.R	125	151	075 100 125 150 175 200 225 250 300 350	≈ 2.44
G44.150.R	150	176	075 100 125 150 175 200 225 250 300 350	≈ 2.57
G44.175.R	175	201	075 100 125 150 175 200 225 250 300 350	≈ 2.69
G44.200.R	200	226	075 100 125 150 175 200 225 250 300 350	≈ 2.81
G44.225.R*	225	251	075 100 125 150 175 200 225 250 300 350	≈ 2.93
G44.250.R	250	276	075 100 125 150 175 200 225 250 300 350	≈ 3.05
G44.275.R*	275	301	075 100 125 150 175 200 225 250 300 350	≈ 3.17
G44.300.R*	300	326	075 100 125 150 175 200 225 250 300 350	≈ 3.30
G44.350.R*	350	376	075 100 125 150 175 200 225 250 300 350	≈ 3.54
G44.400.R*	400	426	075 100 125 150 175 200 225 250 300 350	≈ 3.78

G44H - Open | Crossbars every 2nd link

Part No. Cable chain	Bi [mm]	Ba [mm]	R [mm]	Weight [kg/m]
G44H.050.R	50	76	075 100 125 150 175 200 225 250 300 350	≈ 1.97
G44H.075.R	75	101	075 100 125 150 175 200 225 250 300 350	≈ 2.03
G44H.100.R	100	126	075 100 125 150 175 200 225 250 300 350	≈ 2.10
G44H.125.R	125	151	075 100 125 150 175 200 225 250 300 350	≈ 2.15
G44H.150.R	150	176	075 100 125 150 175 200 225 250 300 350	≈ 2.22
G44H.175.R	175	201	075 100 125 150 175 200 225 250 300 350	≈ 2.28
G44H.200.R	200	226	075 100 125 150 175 200 225 250 300 350	≈ 2.34
G44H.225.R*	225	251	075 100 125 150 175 200 225 250 300 350	≈ 2.40
G44H.250.R	250	276	075 100 125 150 175 200 225 250 300 350	≈ 2.46
G44H.275.R*	275	301	075 100 125 150 175 200 225 250 300 350	≈ 2.52
G44H.300.R*	300	326	075 100 125 150 175 200 225 250 300 350	≈ 2.58
G44H.350.R*	350	376	075 100 125 150 175 200 225 250 300 350	≈ 2.70
G44H.400.R*	400	426	075 100 125 150 175 200 225 250 300 350	≈ 2.83

Series G44 | Product range | G44T

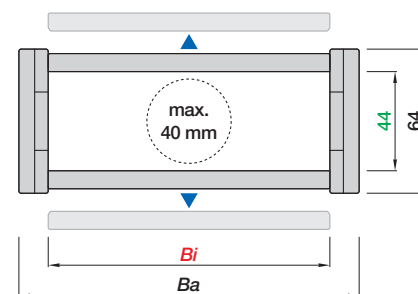
44



G44T - Closed | Swarf protection

Part No. Cable chain	Bi [mm]	Ba [mm]	R [mm]	Weight [kg/m]
G44T.050.R*	50	76	— — 125 150 175 200 225 250 300 350	≈ 2.26
G44T.075.R	75	101	— — 125 150 175 200 225 250 300 350	≈ 2.48
G44T.100.R	100	126	— — 125 150 175 200 225 250 300 350	≈ 2.70
G44T.125.R	125	151	— — 125 150 175 200 225 250 300 350	≈ 2.91
G44T.150.R	150	176	— — 125 150 175 200 225 250 300 350	≈ 3.13
G44T.175.R*	175	201	— — 125 150 175 200 225 250 300 350	≈ 3.34
G44T.200.R	200	226	— — 125 150 175 200 225 250 300 350	≈ 3.55
G44T.250.R	250	276	— — 125 150 175 200 225 250 300 350	≈ 3.99
G44T.300.R*	300	326	— — 125 150 175 200 225 250 300 350	≈ 4.42

* Available upon request, please consult us for delivery time



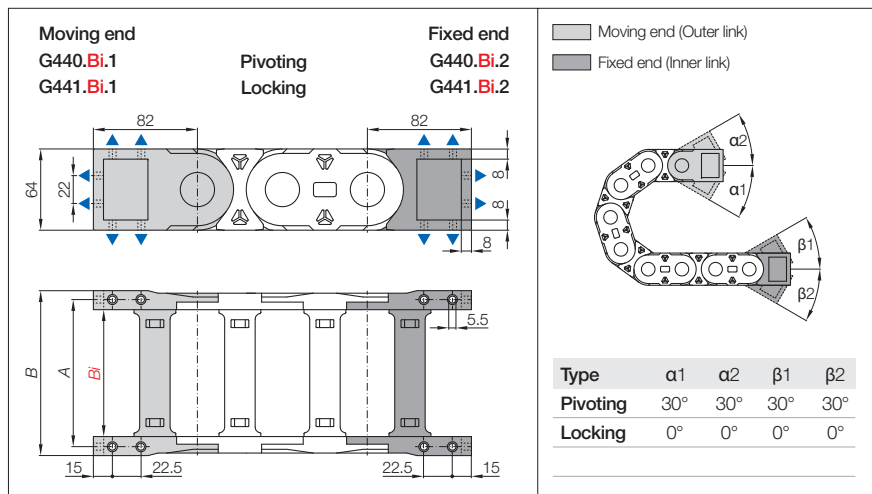
Order example | Cable chains

G44 . 125 . 150 - 30 pcs
 Series Bi R Links

Series G44 | MFB mounting brackets | G44·G44H

MFB mounting brackets | Open

M5 ▲ Assembly options



MFB Pivoting ► Recommended for unsupported and gliding applications

MFB Locking ► Recommended for vertical hanging and standing applications

Bi [mm]	Part No. MFB pivoting	Part No. MFB locking	A [mm]	B [mm]
50 ►	G440.050.12	G441.050.12	66	80
75 ►	G440.075.12	G441.075.12	91	105
100 ►	G440.100.12	G441.100.12	116	130
125 ►	G440.125.12	G441.125.12	141	155
150 ►	G440.150.12	G441.150.12	166	180
175 ►	G440.175.12	G441.175.12	191	205
200 ►	G440.200.12	G441.200.12	216	230
225 ►	G440.225.12*	G441.225.12*	241	255
250 ►	G440.250.12	G441.250.12	266	280
275 ►	G440.275.12*	G441.275.12*	291	305
300 ►	G440.300.12*	G441.300.12*	316	330
350 ►	G440.350.12*	G441.350.12*	366	380
400 ►	G440.400.12*	G441.400.12*	416	430



For the complete Part NO. of MFB mounting brackets, please specify index 1 or 2 into

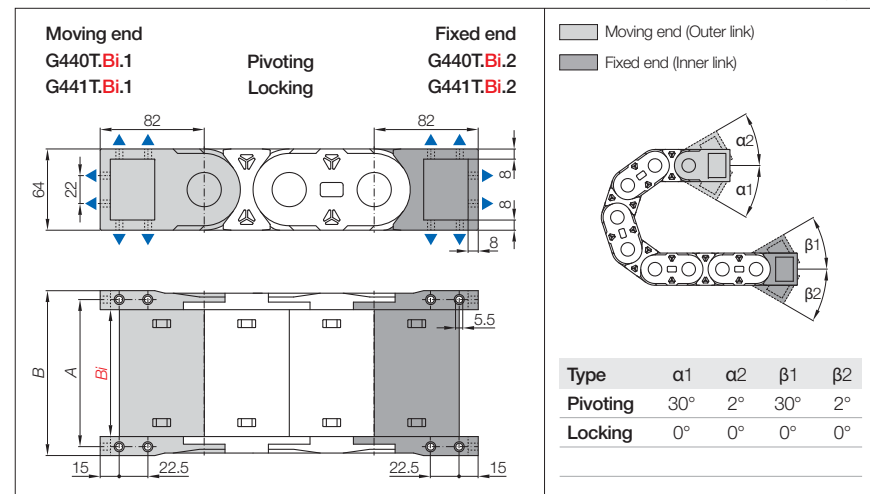
1 = Links for odd

2 = Links for even

Series G44 | MFB mounting brackets | G44T

MFB mounting brackets | Closed

M5 ▲ Assembly options



MFB Pivoting ► Recommended for unsupported and gliding applications

MFB Locking ► Recommended for vertical hanging and standing applications

Bi [mm]	Part No. MFB pivoting	Part No. MFB locking	A [mm]	B [mm]
50 ►	G440T.050.12	G441T.050.12	66	80
75 ►	G440T.075.12	G441T.075.12	91	105
100 ►	G440T.100.12	G441T.100.12	116	130
125 ►	G440T.125.12	G441T.125.12	141	155
150 ►	G440T.150.12	G441T.150.12	166	180
175 ►	G440T.175.12*	G441T.175.12*	191	205
200 ►	G440T.200.12	G441T.200.12	216	230
250 ►	G440T.250.12	G441T.250.12	266	280
300 ►	G440T.300.12*	G441T.300.12*	316	330

* Available upon request, please consult us for delivery time



Order example | MFB mounting brackets

G440 . 125 . 2 . 12

Series Bi Odd/even Type

Series G44 | MFB accessories | C-rails

C-rails

- Standard material of C-rails: galvanized steel
- The tolerance of C-rail length: $\pm 1\text{mm}$
- Fixed to MFB mounting brackets without any other accessories
- Integrated CableFix strain relief with C-rails: clamps and tiewrap plates



Bi [mm]	Part No. MFB with C-rails*	Part No. C-rail, individual	C-rail length [mm]
50 ▶	□.C	CR.055	55
75 ▶	□.C	CR.080	80
100 ▶	□.C	CR.105	105
125 ▶	□.C	CR.130	130
150 ▶	□.C	CR.155	155
175 ▶	□.C	CR.180	180
200 ▶	□.C	CR.205	205
225 ▶	□.C	CR.230	230
250 ▶	□.C	CR.255	255
275 ▶	□.C	CR.280	280
300 ▶	□.C	CR.305	305
350 ▶	□.C	CR.355	355
400 ▶	□.C	CR.405	405

* Standard: both MFB ends with one C-rail

Option: both MFB ends with two C-rails - please add index "2", example: G440.125.2.12.C2

Please specify standard MFB mounting brackets Part No. into □ ▶ Page 142/143



CableFix clamps

Strain relief with high holding force for one, two or three cables stacked
More information ▶ Page 222

Series G44 | MFB accessories | Tiewrap plates

Tiewrap plates

- Inner width **Bi** $\leq 175\text{ mm}$
Fixed to MFB mounting brackets without any other accessories
- Inner width **Bi** $> 175\text{ mm}$
Fixed to C-rails of MFB mounting brackets with screws and nuts M6

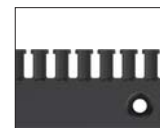


Bi [mm]	Part No. MFB with ZA*	Part No. ZA, standard	Part No. C-rail, individual	Number of teeth n _z [1]
50 ▶	□.Z	ZA050	—	5
75 ▶	□.Z	ZA075	—	7
100 ▶	□.Z	ZA100	—	10
125 ▶	□.Z	ZA125	—	12
150 ▶	□.Z	ZA150	—	15
175 ▶	□.Z	ZA175	—	17
200 ▶	□.CZ	ZA175	CR.205	17
225 ▶	□.CZ	ZA100 + ZA100	CR.230	20
250 ▶	□.CZ	ZA100 + ZA125	CR.255	22
275 ▶	□.CZ	ZA125 + ZA125	CR.280	24
300 ▶	□.CZ	ZA125 + ZA150	CR.305	27
350 ▶	□.CZ	ZA150 + ZA175	CR.355	32
400 ▶	□.CZ	ZA125 + ZA125 + ZA125	CR.405	36

* Standard: both MFB ends with one tiewrap plate(ZA)

Option: both MFB ends with two tiewrap plates - please add index "2", example: G440.125.2.12.Z2

Please specify standard MFB mounting brackets Part No. into □ ▶ Page 142/143



CableFix tiewrap plates

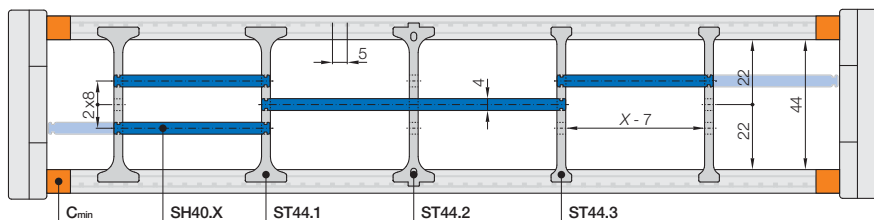
Simple and economical strain relief for multiple cables
More information ▶ Page 223

Default installation position of C-rails and tiewrap plates: **.A1**

To indicate the installation position, please add index **.A1**, **.A2**, **.A3** or **.A4**, example: G440.125.2.12.C.A2

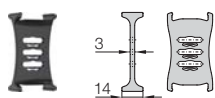


Series G44 | Interior separation | Vertical-Horizontal



The minimum lateral gap to the side links $C_{min} = \text{G44: 8mm} \mid \text{G44H: 8mm} \mid \text{G44T: 0mm}$
 Standard separation: **fitted every 2nd link**

Vertical separator | Standard | For almost any application

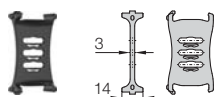


Unassembled: ST44.1

Assembled: ST44.1.A

- Wide base for fitting in cable chains stably
- Movable, easy to adjust the position

Vertical separator | Locking | For side-mounted applications

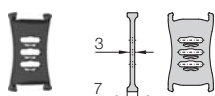


Unassembled: ST44.2

Assembled: ST44.2.A

- Locking, fitted in a specified position securely
- Preset in 5 mm increments

Vertical separator | Narrow | For small cables

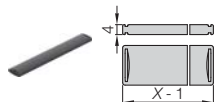


Unassembled: ST44.3

Assembled: ST44.3.A

- Narrow base for small cables
- Movable, easy to adjust the position

Horizontal separator | Locking | For multilayer separation



Unassembled: SH40.X

Assembled: SH40.X.A

- Full or partial width horizontal separator
- Locked securely into vertical separators at both ends

X [mm]	Unassembled	Assembled
050	SH40.050	SH40.050.A
065	SH40.065	SH40.065.A
075	SH40.075	SH40.075.A
100	SH40.100	SH40.100.A
125	SH40.125	SH40.125.A

X [mm]	Unassembled	Assembled
150	SH40.150	SH40.150.A
175	SH40.175	SH40.175.A
200	SH40.200	SH40.200.A
225	SH40.225	SH40.225.A
250	SH40.250	SH40.250.A

Series G44 | Accessories | Clip extension



Clip extension

- For series G44, G44H and G44T
- Quickly fill or replace conduits and cables, reducing assembly time and cost
- Clip can be configured to the left, the right, both ends or inner sides of the cable chains
- Clip fits to conduits with NW 07, 10, 12, 17, 23, 29, 36, (48) mm
- Standard configuration: 1 clip every 2nd link
- The Part NO. includes clips; the conduits are ordered separately upon request
- For the best use and appearance, make sure the chain links with odd number whenever possible

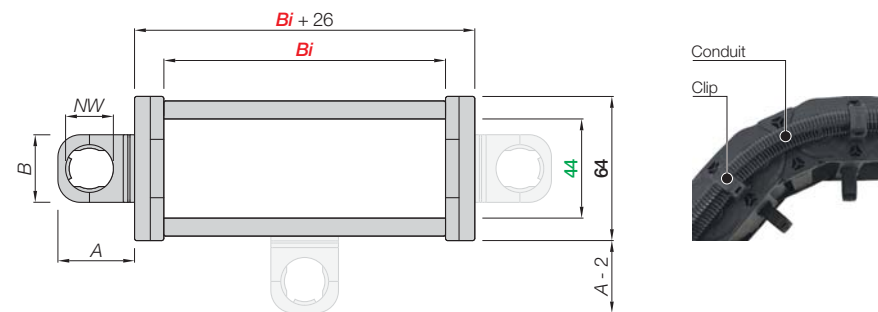
Part No. Left*	Part No. Right*	Part No. Both ends	Part No. Inner sides**	NW Φ[mm]	A [mm]	B [mm]
G44.BiEL07.R	G44.BiER07.R	G44.BiEB07.R	G44.BiEN07.R	07	21.5	17.0
G44.BiEL10.R	G44.BiER10.R	G44.BiEB10.R	G44.BiEN10.R	10	24.5	20.5
G44.BiEL12.R	G44.BiER12.R	G44.BiEB12.R	G44.BiEN12.R	12	27.0	24.0
G44.BiEL17.R	G44.BiER17.R	G44.BiEB17.R	G44.BiEN17.R	17	34.0	30.0
G44.BiEL23.R	G44.BiER23.R	G44.BiEB23.R	G44.BiEN23.R	23	42.0	38.5
G44.BiEL29.R	G44.BiER29.R	G44.BiEB29.R	G44.BiEN29.R	29	48.0	45.5
G44.BiEL36.R	G44.BiER36.R	G44.BiEB36.R	G44.BiEN36.R	36	56.0	55.5
—	—	—	G44.BiEN48.R	48	68.0	67.5

Bi = 050 | 075 | 100 | 125 | 150 | 175 | 200 | 225 | 250 | 275 | 300 | 350 | 400

R = 075 | 100 | 125 | 150 | 175 | 200 | 225 | 250 | 300 | 350

* As viewed from the fixed end

** Cable chains with specific widths or bending radii are not suitable for clip configured to inner sides, please consult us



NW Φ[mm]	Part No. Clip	Part No. Conduit	NW Φ[mm]	Part No. Clip	Part No. Conduit
07	FH07	PAE07	23	FH23	PAE23
10	FH10	PAE10	29	FH29	PAE29
12	FH12	PAE12	36	FH36	PAE36
17	FH17	PAE17	48	FH48	PAE48



G60

Links/m
11 pcs/1001 mm



Pitch P
91 mm



Inner height hi
60 mm



Inner widths Bi
75 – 500 mm



Bending radii R
135 – 500 mm



G60 - Open | Crossbars every link

- Crossbars openable along inner and outer radius
- For high technical applications



G60H - Open | Crossbars every 2nd link

- Crossbars openable along inner and outer radius
- For almost any application
- Easy to assembly and economic



G60T - Closed | Swarf protection

- Lids openable along inner and outer radius
- For applications with swarf



Order example | Complete cable chains

G60.200.250 - 22 pcs + G600.200.2.12 + ST60.1 - 33 pcs

Cable chains No.

Links

Mounting brackets No.

Separators No.

Quantity

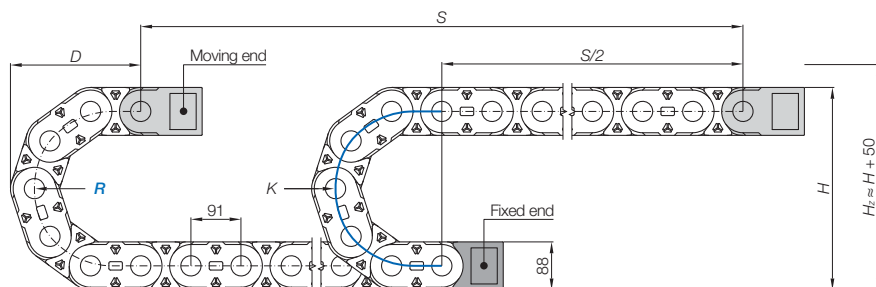


Series G60 | Installation dimensions | Unsupported



Unsupported applications | Short travels | $L_K = S/2 + K$

60



R [mm]	135*	150	175	200	250	300	350	400	450	500
H [mm]	358	388	438	488	588	688	788	888	988	1088
H _z [mm]	408	438	488	538	638	738	838	938	1038	1138
D [mm]	316	331	356	381	431	481	531	581	631	681
K [mm]	610	655	735	815	970	1125	1285	1440	1600	1755

The required clearance height $H_z = H + 50$ mm

* Radius not available for G60T tubes



Fill weight
≤ 67 kg/m



Travel
≤ 10 m



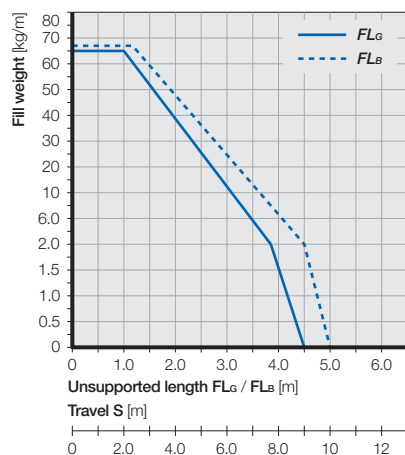
Speed
≤ 10 m/s



Acceleration
≤ 50 m/s²



Load diagram

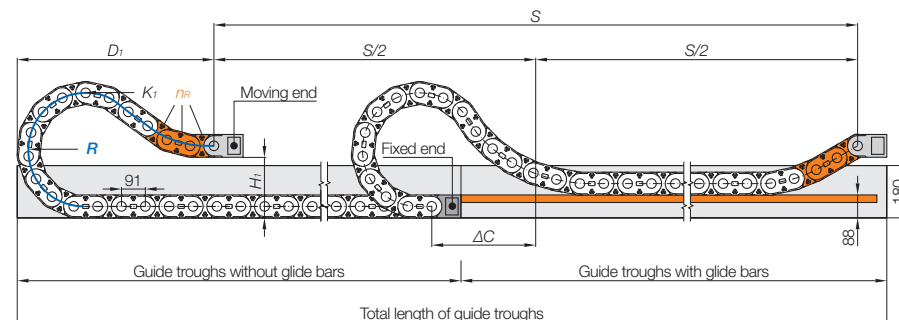


Series G60 | Installation dimensions | Gliding



Gliding applications | Long travels | $L_K = S/2 + K_1$

60



R [mm]	135*	150	175	200	250	300	350	400	450	500
H ₁ [mm]	270	264	264	264	264	264	264	264	264	264
D ₁ [mm]	316	500	560	690	850	1080	1390	1460	1770	2090
K ₁ [mm]	610	819	910	1092	1365	1729	2184	2457	2912	3276
ΔC [mm]	—	210	240	335	455	630	890	920	1180	1450
n _R [1]	—	2	2	2	3	3	3	4	4	4

* Radius not available for G60T tubes



Fill weight
≤ 15 kg/m



Travel
≤ 350 m



Speed
≤ 5 m/s



Acceleration
≤ 30 m/s²



GuidEasy guide trough systems

Guide trough systems are necessary for sliding applications. GuidEasy guide trough systems designed by standard module are recommended in general. Please consult our engineers if you have any question.

Standard guide trough systems for series G60 ► Page 226

Series G60 | Product range | G60·G60H

Series G60 | Product range | G60T



G60 - Open | Crossbars every link

Part No. Cable chain	Bi [mm]	Ba [mm]	R [mm]	Weight [kg/m]
G60.075.R	75	109	135 150 175 200 250 300 350 400 450 500	≈ 3.87
G60.100.R	100	134	135 150 175 200 250 300 350 400 450 500	≈ 4.05
G60.125.R	125	159	135 150 175 200 250 300 350 400 450 500	≈ 4.22
G60.150.R	150	184	135 150 175 200 250 300 350 400 450 500	≈ 4.40
G60.175.R	175	209	135 150 175 200 250 300 350 400 450 500	≈ 4.58
G60.200.R	200	234	135 150 175 200 250 300 350 400 450 500	≈ 4.76
G60.225.R	225	259	135 150 175 200 250 300 350 400 450 500	≈ 4.95
G60.250.R	250	284	135 150 175 200 250 300 350 400 450 500	≈ 5.12
G60.275.R	275	309	135 150 175 200 250 300 350 400 450 500	≈ 5.31
G60.300.R	300	334	135 150 175 200 250 300 350 400 450 500	≈ 5.49
G60.325.R	325	359	135 150 175 200 250 300 350 400 450 500	≈ 5.67
G60.350.R	350	384	135 150 175 200 250 300 350 400 450 500	≈ 5.83
G60.400.R	400	434	135 150 175 200 250 300 350 400 450 500	≈ 6.19
G60.450.R*	450	484	135 150 175 200 250 300 350 400 450 500	≈ 6.54
G60.500.R*	500	534	135 150 175 200 250 300 350 400 450 500	≈ 6.90

G60H - Open | Crossbars every 2nd link

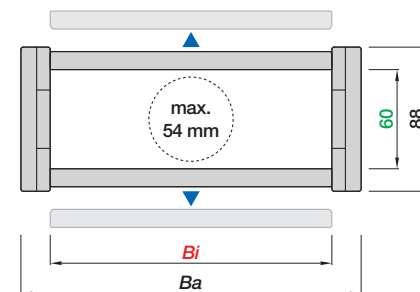
Part No. Cable chain	Bi [mm]	Ba [mm]	R [mm]	Weight [kg/m]
G60H.075.R	75	109	135 150 175 200 250 300 350 400 450 500	≈ 3.62
G60H.100.R	100	134	135 150 175 200 250 300 350 400 450 500	≈ 3.71
G60H.125.R	125	159	135 150 175 200 250 300 350 400 450 500	≈ 3.79
G60H.150.R	150	184	135 150 175 200 250 300 350 400 450 500	≈ 3.89
G60H.175.R	175	209	135 150 175 200 250 300 350 400 450 500	≈ 3.97
G60H.200.R	200	234	135 150 175 200 250 300 350 400 450 500	≈ 4.06
G60H.225.R	225	259	135 150 175 200 250 300 350 400 450 500	≈ 4.16
G60H.250.R	250	284	135 150 175 200 250 300 350 400 450 500	≈ 4.24
G60H.275.R	275	309	135 150 175 200 250 300 350 400 450 500	≈ 4.34
G60H.300.R	300	334	135 150 175 200 250 300 350 400 450 500	≈ 4.43
G60H.325.R	325	359	135 150 175 200 250 300 350 400 450 500	≈ 4.52
G60H.350.R	350	384	135 150 175 200 250 300 350 400 450 500	≈ 4.60
G60H.400.R	400	434	135 150 175 200 250 300 350 400 450 500	≈ 4.78
G60H.450.R*	450	484	135 150 175 200 250 300 350 400 450 500	≈ 4.95
G60H.500.R*	500	534	135 150 175 200 250 300 350 400 450 500	≈ 5.13



G60T - Closed | Swarf protection

Part No. Cable chain	Bi [mm]	Ba [mm]	R [mm]	Weight [kg/m]
G60T.100.R*	100	134	— 150 175 200 250 300 350 400 450 500	≈ 4.68
G60T.125.R	125	159	— 150 175 200 250 300 350 400 450 500	≈ 5.02
G60T.150.R	150	184	— 150 175 200 250 300 350 400 450 500	≈ 5.38
G60T.175.R	175	209	— 150 175 200 250 300 350 400 450 500	≈ 5.72
G60T.200.R	200	234	— 150 175 200 250 300 350 400 450 500	≈ 6.08
G60T.250.R	250	284	— 150 175 200 250 300 350 400 450 500	≈ 6.76
G60T.300.R	300	334	— 150 175 200 250 300 350 400 450 500	≈ 7.46
G60T.350.R	350	384	— 150 175 200 250 300 350 400 450 500	≈ 8.14
G60T.400.R*	400	434	— 150 175 200 250 300 350 400 450 500	≈ 8.84

* Available upon request, please consult us for delivery time



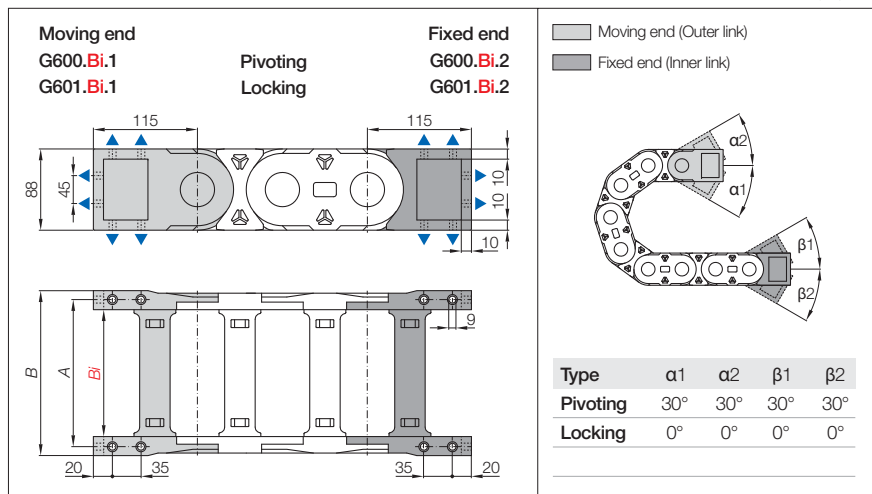
Order example | Cable chains

G60 . 200 . 250 - 22 pcs
Series Bi R Links

Series G60 | MFB mounting brackets | G60·G60H

MFB mounting brackets | Open

M8 ▲ Assembly options



MFB Pivoting ► Recommended for unsupported and gliding applications

MFB Locking ► Recommended for vertical hanging and standing applications

Bi [mm]	Part No. MFB pivoting	Part No. MFB locking	A [mm]	B [mm]
75 ►	G600.075.12	G601.075.12	98	116
100 ►	G600.100.12	G601.100.12	123	141
125 ►	G600.125.12	G601.125.12	148	166
150 ►	G600.150.12	G601.150.12	173	191
175 ►	G600.175.12	G601.175.12	198	216
200 ►	G600.200.12	G601.200.12	223	241
225 ►	G600.225.12	G601.225.12	248	266
250 ►	G600.250.12	G601.250.12	273	291
275 ►	G600.275.12	G601.275.12	298	316
300 ►	G600.300.12	G601.300.12	323	341
325 ►	G600.325.12	G601.325.12	348	366
350 ►	G600.350.12	G601.350.12	373	391
400 ►	G600.400.12	G601.400.12	423	441
450 ►	G600.450.12*	G601.450.12*	473	491
500 ►	G600.500.12*	G601.500.12*	523	541



For the complete Part NO. of MFB mounting brackets, please specify index 1 or 2 into

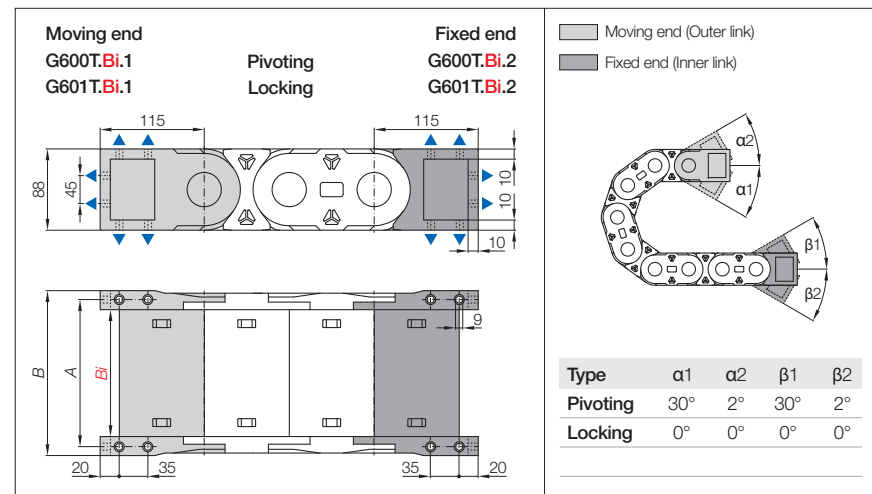
1 = Links for odd

2 = Links for even

Series G60 | MFB mounting brackets | G60T

MFB mounting brackets | Closed

M8 ▲ Assembly options



MFB Pivoting ► Recommended for unsupported and gliding applications

MFB Locking ► Recommended for vertical hanging and standing applications

Bi [mm]	Part No. MFB pivoting	Part No. MFB locking	A [mm]	B [mm]
100 ►	G600T.100.12*	G601T.100.12*	123	141
125 ►	G600T.125.12	G601T.125.12	148	166
150 ►	G600T.150.12	G601T.150.12	173	191
175 ►	G600T.175.12	G601T.175.12	198	216
200 ►	G600T.200.12	G601T.200.12	223	241
250 ►	G600T.250.12	G601T.250.12	273	291
300 ►	G600T.300.12	G601T.300.12	323	341
350 ►	G600T.350.12	G601T.350.12	373	391
400 ►	G600T.400.12*	G601T.400.12*	423	441

* Available upon request, please consult us for delivery time



Order example | MFB mounting brackets

G600 . 200 . 2 . 12

Series Bi Odd/even Type

Series G60 | MFB accessories | C-rails

C-rails

- Standard material of C-rails: galvanized steel
- The tolerance of C-rail length: $\pm 1\text{mm}$
- Fixed to MFB mounting brackets without any other accessories
- Integrated CableFix strain relief with C-rails: clamps and tiewrap plates



Bi [mm]	Part No. MFB with C-rails*	Part No. C-rail, individual	C-rail length [mm]
75 ▶	□.C	CR.083	83
100 ▶	□.C	CR.108	108
125 ▶	□.C	CR.133	133
150 ▶	□.C	CR.158	158
175 ▶	□.C	CR.183	183
200 ▶	□.C	CR.208	208
225 ▶	□.C	CR.233	233
250 ▶	□.C	CR.258	258
275 ▶	□.C	CR.283	283
300 ▶	□.C	CR.308	308
325 ▶	□.C	CR.333	333
350 ▶	□.C	CR.358	358
400 ▶	□.C	CR.408	408
450 ▶	□.C	CR.458	458
500 ▶	□.C	CR.508	508

* Standard: both MFB ends with one C-rail

Option: both MFB ends with two C-rails - please add index "2", example: G600.200.2.12.C2

Please specify standard MFB mounting brackets Part No. into □ ▶ Page 154/155



CableFix clamps

Strain relief with high holding force for one, two or three cables stacked
More information ▶ Page 222

Series G60 | MFB accessories | Tiewrap plates

Tiewrap plates

- Inner width **Bi** $\leq 175\text{ mm}$
Fixed to MFB mounting brackets without any other accessories
- Inner width **Bi** $> 175\text{ mm}$
Fixed to C-rails of MFB mounting brackets with screws and nuts M6

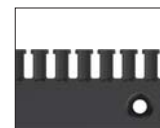


Bi [mm]	Part No. MFB with ZA*	Part No. ZA, standard	Part No. C-rail, individual	Number of teeth n _z [1]
75 ▶	□.Z	ZA075	—	7
100 ▶	□.Z	ZA100	—	10
125 ▶	□.Z	ZA125	—	12
150 ▶	□.Z	ZA150	—	15
175 ▶	□.Z	ZA175	—	17
200 ▶	□.CZ	ZA175	CR.208	17
225 ▶	□.CZ	ZA100 + ZA100	CR.233	20
250 ▶	□.CZ	ZA100 + ZA125	CR.258	22
275 ▶	□.CZ	ZA125 + ZA125	CR.283	24
300 ▶	□.CZ	ZA125 + ZA150	CR.308	27
325 ▶	□.CZ	ZA150 + ZA150	CR.333	30
350 ▶	□.CZ	ZA150 + ZA175	CR.358	32
400 ▶	□.CZ	ZA125 + ZA125 + ZA125	CR.408	36
450 ▶	□.CZ	ZA125 + ZA150 + ZA150	CR.458	42
500 ▶	□.CZ	ZA150 + ZA150 + ZA175	CR.508	47

* Standard: both MFB ends with one tiewrap plate(ZA)

Option: both MFB ends with two tiewrap plates - please add index "2", example: G600.200.2.12.C22

Please specify standard MFB mounting brackets Part No. into □ ▶ Page 154/155



CableFix tiewrap plates

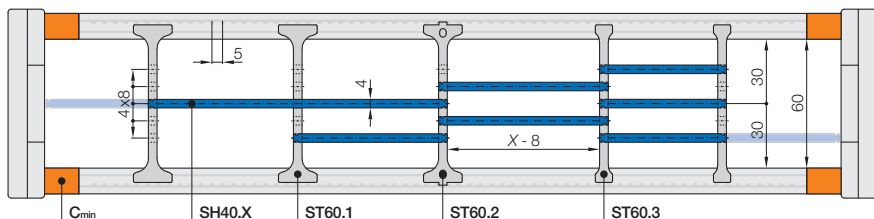
Simple and economical strain relief for multiple cables
More information ▶ Page 223

Default installation position of C-rails and tiewrap plates: **.A1**

To indicate the installation position, please add index **.A1**, **.A2**, **.A3** or **.A4**, example: G600.200.2.12.C.A2

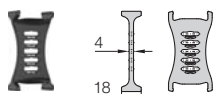


Series G60 | Interior separation | Vertical-Horizontal



The minimum lateral gap to the side links $C_{min} = \text{G60: 16mm} \mid \text{G60H: 16mm} \mid \text{G60T: 0mm}$
 Standard separation: **fitted every 2nd link**

Vertical separator | Standard | For almost any application

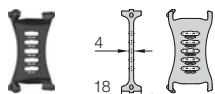


Unassembled: ST60.1

Assembled: ST60.1.A

- Wide base for fitting in cable chains stably
- Movable, easy to adjust the position

Vertical separator | Locking | For side-mounted applications

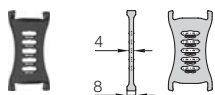


Unassembled: ST60.2

Assembled: ST60.2.A

- Locking, fitted in a specified position securely
- Preset in 5 mm increments

Vertical separator | Narrow | For small cables

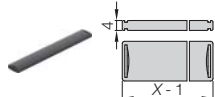


Unassembled: ST60.3

Assembled: ST60.3.A

- Narrow base for small cables
- Movable, easy to adjust the position

Horizontal separator | Locking | For multilayer separation



Unassembled: SH40.X

Assembled: SH40.X.A

- Full or partial width horizontal separator
- Locked securely into vertical separators at both ends

X [mm]	Unassembled	Assembled
050	SH40.050	SH40.050.A
065	SH40.065	SH40.065.A
075	SH40.075	SH40.075.A
100	SH40.100	SH40.100.A
125	SH40.125	SH40.125.A

X [mm]	Unassembled	Assembled
150	SH40.150	SH40.150.A
175	SH40.175	SH40.175.A
200	SH40.200	SH40.200.A
225	SH40.225	SH40.225.A
250	SH40.250	SH40.250.A

Series G60 | Accessories | Clip extension



Clip extension

- For series G60, G60H and G60T
- Quickly fill or replace conduits and cables, reducing assembly time and cost
- Clip can be configured to the left, the right, both ends or inner sides of the cable chains
- Clip fits to conduits with NW 07, 10, 12, 17, 23, 29, 36, 48 mm
- Standard configuration: 1 clip every 2nd link
- The Part NO. includes clips; the conduits are ordered separately upon request
- For the best use and appearance, make sure the chain links with odd number whenever possible

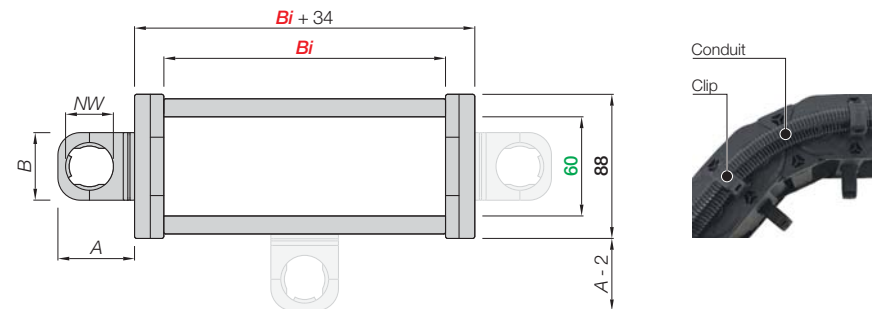
Part No. Left*	Part No. Right*	Part No. Both ends	Part No. Inner sides**	NW Φ[mm]	A [mm]	B [mm]
G60.BiEL07.R	G60.BiER07.R	G60.BiEB07.R	G60.BiEN07.R	07	21.5	17.0
G60.BiEL10.R	G60.BiER10.R	G60.BiEB10.R	G60.BiEN10.R	10	24.5	20.5
G60.BiEL12.R	G60.BiER12.R	G60.BiEB12.R	G60.BiEN12.R	12	27.0	24.0
G60.BiEL17.R	G60.BiER17.R	G60.BiEB17.R	G60.BiEN17.R	17	34.0	30.0
G60.BiEL23.R	G60.BiER23.R	G60.BiEB23.R	G60.BiEN23.R	23	42.0	38.5
G60.BiEL29.R	G60.BiER29.R	G60.BiEB29.R	G60.BiEN29.R	29	48.0	45.5
G60.BiEL36.R	G60.BiER36.R	G60.BiEB36.R	G60.BiEN36.R	36	56.0	55.5
G60.BiEL48.R	G60.BiER48.R	G60.BiEB48.R	G60.BiEN48.R	48	68.0	67.5

Bi = 075 | 100 | 125 | 150 | 175 | 200 | 225 | 250 | 275 | 300 | 325 | 350 | 400 | 450 | 500

R = 135 | 150 | 175 | 200 | 250 | 300 | 350 | 400 | 450 | 500

* As viewed from the fixed end

** Cable chains with specific widths or bending radii are not suitable for clip configured to inner sides, please consult us



NW Φ[mm]	Part No. Clip	Part No. Conduit
07	FH07	PAE07
10	FH10	PAE10
12	FH12	PAE12
17	FH17	PAE17

NW Φ[mm]	Part No. Clip	Part No. Conduit
23	FH23	PAE23
29	FH29	PAE29
36	FH36	PAE36
48	FH48	PAE48



G80

Links/m
9 pcs/999 mm



Pitch P
111 mm



Inner height hi
80 mm



Inner widths Bi
75 – 500 mm



Bending radii R
150 – 600 mm



G80 - Open | Crossbars every link

- Crossbars openable along inner and outer radius
- For high technical applications



G80H - Open | Crossbars every 2nd link

- Crossbars openable along inner and outer radius
- For almost any application
- Easy to assembly and economic



G80T - Closed | Swarf protection

- Lids openable along inner and outer radius
- For applications with swarf



Order example | Complete cable chains

G80.250.300 - 18 pcs + G800.250.2.12 + ST80.1 - 27 pcs

Cable chains No.

Links

Mounting brackets No.

Separators No.

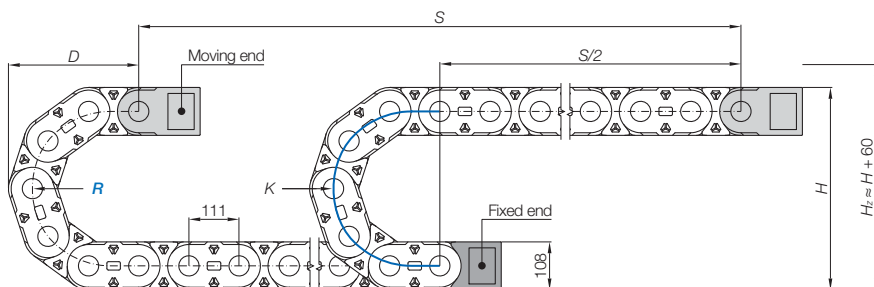
Quantity



Series G80 | Installation dimensions | Unsupported



Unsupported applications | Short travels | $L_K = S/2 + K$



R [mm]	150*	175*	200	250	300	350	400	450	500	600
H [mm]	408	458	508	608	708	808	908	1008	1108	1308
H _t [mm]	468	518	568	668	768	868	968	1068	1168	1368
D [mm]	371	396	421	471	521	571	621	671	721	821
K [mm]	695	775	855	1010	1165	1325	1480	1640	1795	2110

The required clearance height $H_t = H + 60$ mm

* Radius not available for G80T tubes



Fill weight
≤ 75 kg/m



Travel
≤ 12 m



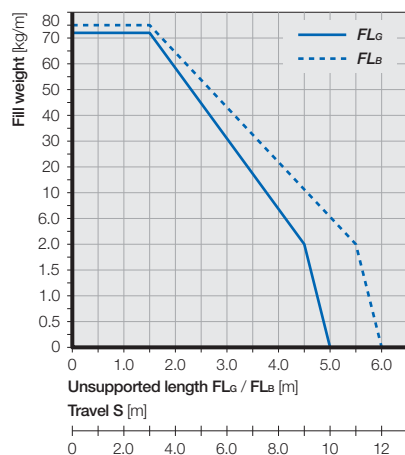
Speed
≤ 10 m/s



Acceleration
≤ 50 m/s²



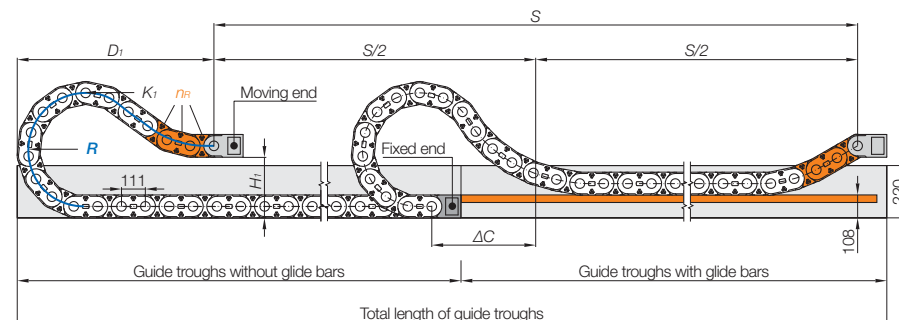
Load diagram



Series G80 | Installation dimensions | Gliding



Gliding applications | Long travels | $L_K = S/2 + K_1$



R [mm]	150*	175*	200	250	300	350	400	450	500	600
H ₁ [mm]	300	350	324	324	324	324	324	324	324	324
D ₁ [mm]	371	396	650	840	1020	1290	1550	1630	1890	2530
K ₁ [mm]	695	775	999	1332	1665	1998	2442	2664	3108	3996
ΔC [mm]	—	—	275	415	550	760	980	1010	1220	1760
n _R [1]	—	—	2	2	3	3	3	4	4	4

* Radius not available for G80T tubes



Fill weight
≤ 30 kg/m



Travel
≤ 350 m



Speed
≤ 5 m/s



Acceleration
≤ 30 m/s²



GuidEasy guide trough systems

Guide trough systems are necessary for sliding applications. GuidEasy guide trough systems designed by standard module are recommended in general. Please consult our engineers if you have any question.

Standard guide trough systems for series G80 ► Page 226

Series G80 | Product range | G80·G80H



G80 - Open | Crossbars every link

Part No. Cable chain	Bi [mm]	Ba [mm]	R [mm]	Weight [kg/m]
G80.075.R	75	125	150 175 200 250 300 350 400 450 500 600	≈ 6.30
G80.100.R	100	150	150 175 200 250 300 350 400 450 500 600	≈ 6.45
G80.125.R	125	175	150 175 200 250 300 350 400 450 500 600	≈ 6.59
G80.150.R	150	200	150 175 200 250 300 350 400 450 500 600	≈ 6.74
G80.175.R	175	225	150 175 200 250 300 350 400 450 500 600	≈ 6.88
G80.200.R	200	250	150 175 200 250 300 350 400 450 500 600	≈ 7.03
G80.225.R	225	275	150 175 200 250 300 350 400 450 500 600	≈ 7.18
G80.250.R	250	300	150 175 200 250 300 350 400 450 500 600	≈ 7.32
G80.275.R	275	325	150 175 200 250 300 350 400 450 500 600	≈ 7.48
G80.300.R	300	350	150 175 200 250 300 350 400 450 500 600	≈ 7.62
G80.325.R	325	375	150 175 200 250 300 350 400 450 500 600	≈ 7.76
G80.350.R	350	400	150 175 200 250 300 350 400 450 500 600	≈ 7.90
G80.400.R	400	450	150 175 200 250 300 350 400 450 500 600	≈ 8.20
G80.450.R*	450	500	150 175 200 250 300 350 400 450 500 600	≈ 8.48
G80.500.R*	500	550	150 175 200 250 300 350 400 450 500 600	≈ 8.78

G80H - Open | Crossbars every 2nd link

Part No. Cable chain	Bi [mm]	Ba [mm]	R [mm]	Weight [kg/m]
G80H.075.R	75	125	150 175 200 250 300 350 400 450 500 600	≈ 6.10
G80H.100.R	100	150	150 175 200 250 300 350 400 450 500 600	≈ 6.17
G80H.125.R	125	175	150 175 200 250 300 350 400 450 500 600	≈ 6.24
G80H.150.R	150	200	150 175 200 250 300 350 400 450 500 600	≈ 6.31
G80H.175.R	175	225	150 175 200 250 300 350 400 450 500 600	≈ 6.38
G80H.200.R	200	250	150 175 200 250 300 350 400 450 500 600	≈ 6.46
G80H.225.R	225	275	150 175 200 250 300 350 400 450 500 600	≈ 6.54
G80H.250.R	250	300	150 175 200 250 300 350 400 450 500 600	≈ 6.61
G80H.275.R	275	325	150 175 200 250 300 350 400 450 500 600	≈ 6.68
G80H.300.R	300	350	150 175 200 250 300 350 400 450 500 600	≈ 6.76
G80H.325.R	325	375	150 175 200 250 300 350 400 450 500 600	≈ 6.82
G80H.350.R	350	400	150 175 200 250 300 350 400 450 500 600	≈ 6.89
G80H.400.R	400	450	150 175 200 250 300 350 400 450 500 600	≈ 7.04
G80H.450.R*	450	500	150 175 200 250 300 350 400 450 500 600	≈ 7.18
G80H.500.R*	500	550	150 175 200 250 300 350 400 450 500 600	≈ 7.33

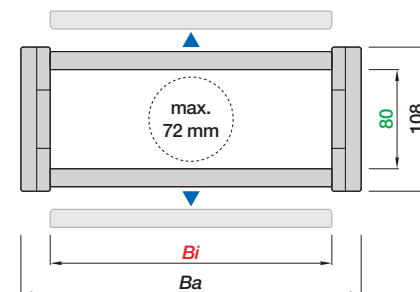
Series G80 | Product range | G80T



G80T - Closed | Swarf protection

Part No. Cable chain	Bi [mm]	Ba [mm]	R [mm]	Weight [kg/m]
G80T.100.R*	100	150	— — 200 250 300 350 400 450 500 600	≈ 6.82
G80T.125.R*	125	175	— — 200 250 300 350 400 450 500 600	≈ 7.17
G80T.150.R	150	200	— — 200 250 300 350 400 450 500 600	≈ 7.47
G80T.175.R*	175	225	— — 200 250 300 350 400 450 500 600	≈ 7.77
G80T.200.R	200	250	— — 200 250 300 350 400 450 500 600	≈ 8.12
G80T.250.R*	250	300	— — 200 250 300 350 400 450 500 600	≈ 8.77
G80T.300.R	300	350	— — 200 250 300 350 400 450 500 600	≈ 9.42
G80T.350.R*	350	400	— — 200 250 300 350 400 450 500 600	≈ 10.07
G80T.400.R*	400	450	— — 200 250 300 350 400 450 500 600	≈ 10.72

* Available upon request, please consult us for delivery time



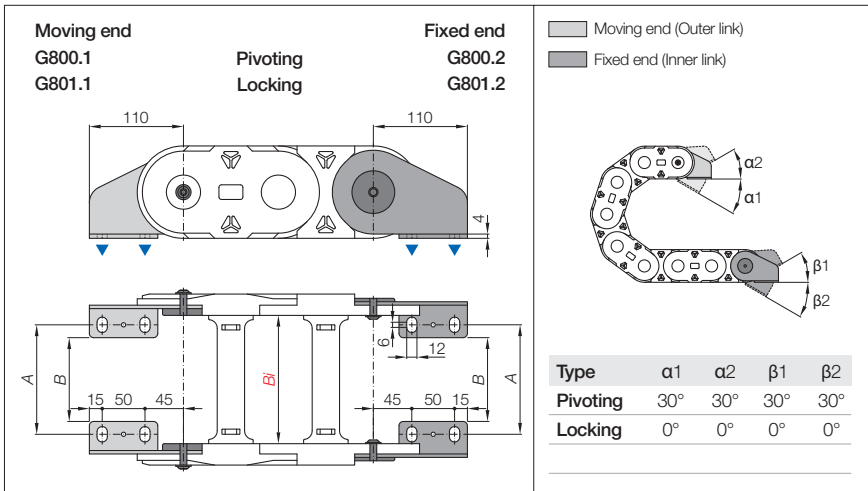
Order example | Cable chains

G80 . 250 . 300 - 18 pcs
Series Bi R Links

Series G80 | Steel mounting brackets | G80·G80H·G80T

Steel mounting brackets | Standard

M10 ▲ Assembly options



Steel Pivoting ► Recommended for unsupported and gliding applications

Steel Locking ► Recommended for vertical hanging and standing applications

Bi [mm]	Part No. Steel pivoting**	Part No. Steel locking**	A [mm]	B [mm]
75	G800.12	G801.12	53	23
100	G800.12	G801.12	78	48
125	G800.12	G801.12	103	73
150	G800.12	G801.12	128	98
175	G800.12	G801.12	153	123
200	G800.12	G801.12	178	148
225	G800.12	G801.12	203	173
250	G800.12	G801.12	228	198
275	G800.12	G801.12	253	223
300	G800.12	G801.12	278	248
325	G800.12	G801.12	303	273
350	G800.12	G801.12	328	298
400	G800.12	G801.12	378	348
450	G800.12*	G801.12*	428	398
500	G800.12*	G801.12*	478	448



For the complete Part NO. of steel mounting brackets, please specify index 1 or 2 into □

1 = Links for odd

2 = Links for even

Series G80 | Accessories | C-rails·Tiewrap plates



C-rails



Tiewrap plates

- Standard material of C-rails: galvanized steel
- The tolerance of C-rail length: ±1mm
- Fixed to steel mounting brackets with screws
- Integrated CableFix starin relief with C-rails: clamps and tiewrap plates



Bi [mm]	Part No. with C-rail**	Part No. with ZA**	Part No. ZA, standard	Part No. C-rail, individual	C-rail length [mm]	nz [1]
75	□.C075	□.CZ075	ZA075	CR.075	75	7
100	□.C100	□.CZ100	ZA100	CR.100	100	10
125	□.C125	□.CZ125	ZA125	CR.125	125	12
150	□.C150	□.CZ150	ZA150	CR.150	150	15
175	□.C175	□.CZ175	ZA175	CR.175	175	17
200	□.C200	□.CZ200	ZA100 + ZA100	CR.200	200	20
225	□.C225	□.CZ225	ZA100 + ZA125	CR.225	225	22
250	□.C250	□.CZ250	ZA125 + ZA125	CR.250	250	24
275	□.C275	□.CZ275	ZA125 + ZA150	CR.275	275	27
300	□.C300	□.CZ300	ZA150 + ZA150	CR.300	300	30
325	□.C325	□.CZ325	ZA150 + ZA175	CR.325	325	32
350	□.C350	□.CZ350	ZA100 + ZA125 + ZA125	CR.350	350	34
400	□.C400	□.CZ400	ZA125 + ZA125 + ZA150	CR.400	400	39
450	□.C450*	□.CZ450*	ZA150 + ZA150 + ZA150	CR.450	450	45
500	□.C500*	□.CZ500*	ZA150 + ZA175 + ZA175	CR.500	500	49

* Available upon request, please consult us for delivery time

** Standard version is galvanized steel. Stainless steel version available. Please add index "S". Example: G800.1.12.S



Please specify standard steel mounting brackets Part No. into □ ► Page 166



Order example | Steel mounting brackets

G800 . 2 . 12 . A1

Series Odd/even Type Position

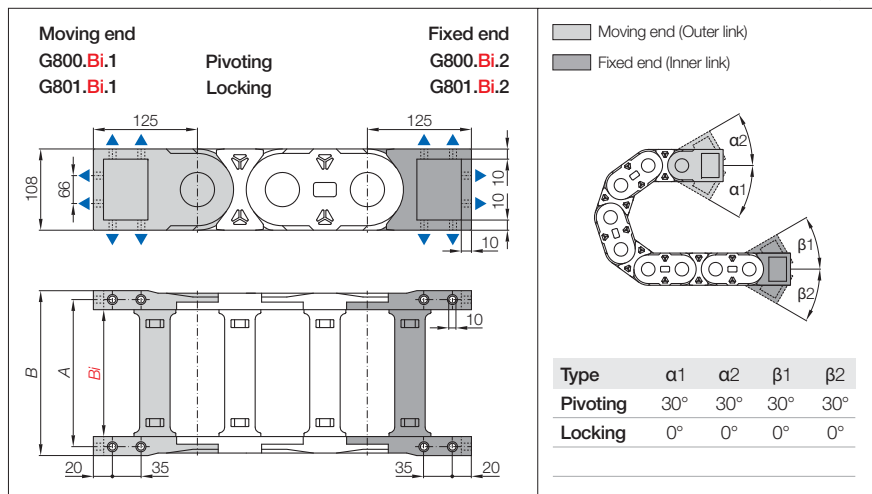
Default position: A1

.A1 .A2 .A3 .A4

Series G80 | MFB mounting brackets | G80·G80H

MFB mounting brackets | Open

M10 ▲ Assembly options



MFB Pivoting ► Recommended for unsupported and gliding applications

MFB Locking ► Recommended for vertical hanging and standing applications

Bi [mm]	Part No. MFB pivoting	Part No. MFB locking	A [mm]	B [mm]
75 ►	G800.075.12*	G801.075.12*	103	125
100 ►	G800.100.12*	G801.100.12*	128	150
125 ►	G800.125.12*	G801.125.12*	153	175
150 ►	G800.150.12*	G801.150.12*	178	200
175 ►	G800.175.12*	G801.175.12*	203	225
200 ►	G800.200.12*	G801.200.12*	228	250
225 ►	G800.225.12*	G801.225.12*	253	275
250 ►	G800.250.12*	G801.250.12*	278	300
275 ►	G800.275.12*	G801.275.12*	303	325
300 ►	G800.300.12*	G801.300.12*	328	350
325 ►	G800.325.12*	G801.325.12*	353	375
350 ►	G800.350.12*	G801.350.12*	378	400
400 ►	G800.400.12*	G801.400.12*	428	450
450 ►	G800.450.12*	G801.450.12*	478	500
500 ►	G800.500.12*	G801.500.12*	528	550



For the complete Part NO. of MFB mounting brackets, please specify index 1 or 2 into

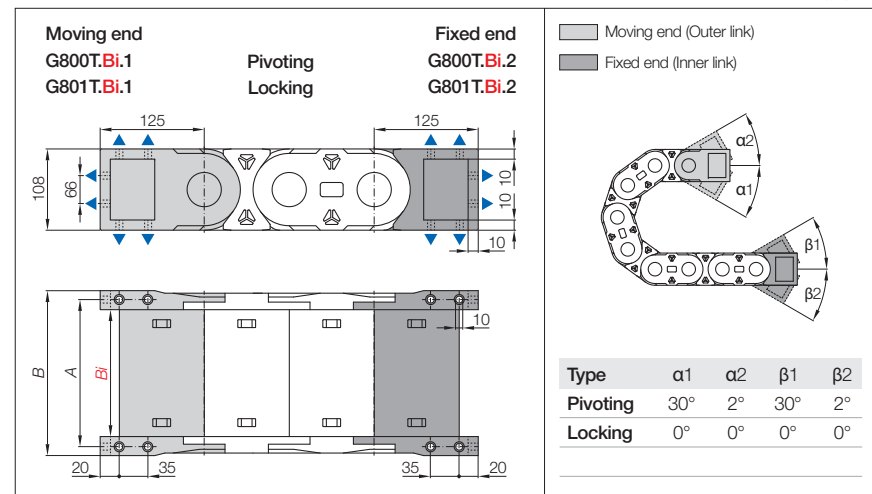
1 = Links for odd

2 = Links for even

Series G80 | MFB mounting brackets | G80T

MFB mounting brackets | Closed

M10 ▲ Assembly options



MFB Pivoting ► Recommended for unsupported and gliding applications

MFB Locking ► Recommended for vertical hanging and standing applications

Bi [mm]	Part No. MFB pivoting	Part No. MFB locking	A [mm]	B [mm]
100 ►	G800T.100.12*	G801T.100.12*	128	150
125 ►	G800T.125.12*	G801T.125.12*	153	175
150 ►	G800T.150.12*	G801T.150.12*	178	200
175 ►	G800T.175.12*	G801T.175.12*	203	225
200 ►	G800T.200.12*	G801T.200.12*	228	250
250 ►	G800T.250.12*	G801T.250.12*	278	300
300 ►	G800T.300.12*	G801T.300.12*	328	350
350 ►	G800T.350.12*	G801T.350.12*	378	400
400 ►	G800T.400.12*	G801T.400.12*	428	450

* Available upon request, please consult us for delivery time



Order example | MFB mounting brackets

G800 . 250 . 2 . 12

Series Bi Odd/even Type

Series G80 | MFB accessories | C-rails

 C-rails

- Standard material of C-rails: galvanized steel
- The tolerance of C-rail length: $\pm 1\text{mm}$
- Fixed to MFB mounting brackets without any other accessories
- Integrated CableFix strain relief with C-rails: clamps and tiewrap plates



Bi [mm]	Part No. MFB with C-rails*	Part No. C-rail, individual	C-rail length [mm]
75 ▶	□.C	CR.083	83
100 ▶	□.C	CR.108	108
125 ▶	□.C	CR.133	133
150 ▶	□.C	CR.158	158
175 ▶	□.C	CR.183	183
200 ▶	□.C	CR.208	208
225 ▶	□.C	CR.233	233
250 ▶	□.C	CR.258	258
275 ▶	□.C	CR.283	283
300 ▶	□.C	CR.308	308
325 ▶	□.C	CR.333	333
350 ▶	□.C	CR.358	358
400 ▶	□.C	CR.408	408
450 ▶	□.C	CR.458	458
500 ▶	□.C	CR.508	508

* Standard: both MFB ends with one C-rail

Option: both MFB ends with two C-rails - please add index "2", example: G800.250.2.12.C2

 Please specify standard MFB mounting brackets Part No. into □ ▶ Page 168/169



CableFix clamps

Strain relief with high holding force for one, two or three cables stacked
More information ▶ Page 222

Series G80 | MFB accessories | Tiewrap plates

 Tiewrap plates

- Inner width **Bi** $\leq 175\text{ mm}$
Fixed to MFB mounting brackets without any other accessories
- Inner width **Bi** $> 175\text{ mm}$
Fixed to C-rails of MFB mounting brackets with screws and nuts M6



Bi [mm]	Part No. MFB with ZA*	Part No. ZA, standard	Part No. C-rail, individual	Number of teeth nz [1]
75 ▶	□.Z	ZA075	—	7
100 ▶	□.Z	ZA100	—	10
125 ▶	□.Z	ZA125	—	12
150 ▶	□.Z	ZA150	—	15
175 ▶	□.Z	ZA175	—	17
200 ▶	□.CZ	ZA175	CR.208	17
225 ▶	□.CZ	ZA100 + ZA100	CR.233	20
250 ▶	□.CZ	ZA100 + ZA125	CR.258	22
275 ▶	□.CZ	ZA125 + ZA125	CR.283	24
300 ▶	□.CZ	ZA125 + ZA150	CR.308	27
325 ▶	□.CZ	ZA150 + ZA150	CR.333	30
350 ▶	□.CZ	ZA150 + ZA175	CR.358	32
400 ▶	□.CZ	ZA125 + ZA125 + ZA125	CR.408	36
450 ▶	□.CZ	ZA125 + ZA150 + ZA150	CR.458	42
500 ▶	□.CZ	ZA150 + ZA150 + ZA175	CR.508	47

* Standard: both MFB ends with one tiewrap plate(ZA)

Option: both MFB ends with two tiewrap plates - please add index "2", example: G800.250.2.12.C22

 Please specify standard MFB mounting brackets Part No. into □ ▶ Page 168/169



CableFix tiewrap plates

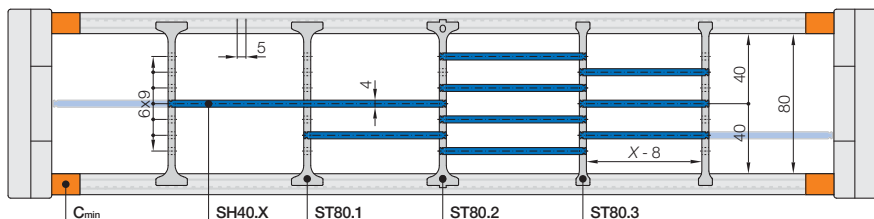
Simple and economical strain relief for multiple cables
More information ▶ Page 223

Default installation position of C-rails and tiewrap plates: **.A1**

To indicate the installation position, please add index **.A1**, **.A2**, **.A3** or **.A4**, example: G800.250.2.12.C.A2

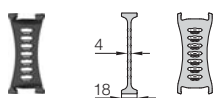


Series G80 | Interior separation | Vertical-Horizontal



The minimum lateral gap to the side links $C_{min} = \text{G80: 16mm} \mid \text{G80H: 16mm} \mid \text{G80T: 0mm}$
 Standard separation: **fitted every 2nd link**

Vertical separator | Standard | For almost any application

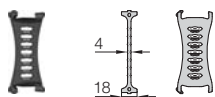


Unassembled: ST80.1

Assembled: ST80.1.A

- Wide base for fitting in cable chains stably
- Movable, easy to adjust the position

Vertical separator | Locking | For side-mounted applications

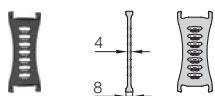


Unassembled: ST80.2

Assembled: ST80.2.A

- Locking, fitted in a specified position securely
- Preset in 5 mm increments

Vertical separator | Narrow | For small cables

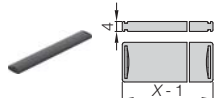


Unassembled: ST80.3

Assembled: ST80.3.A

- Narrow base for small cables
- Movable, easy to adjust the position

Horizontal separator | Locking | For multilayer separation



Unassembled: SH40.X

Assembled: SH40.X.A

- Full or partial width horizontal separator
- Locked securely into vertical separators at both ends

X [mm]	Unassembled	Assembled
050	SH40.050	SH40.050.A
065	SH40.065	SH40.065.A
075	SH40.075	SH40.075.A
100	SH40.100	SH40.100.A
125	SH40.125	SH40.125.A

X [mm]	Unassembled	Assembled
150	SH40.150	SH40.150.A
175	SH40.175	SH40.175.A
200	SH40.200	SH40.200.A
225	SH40.225	SH40.225.A
250	SH40.250	SH40.250.A

Series G80 | Accessories | Clip extension

Clip extension

- For series G80, G80H and G80T
- Quickly fill or replace conduits and cables, reducing assembly time and cost
- Clip can be configured to the left, the right, both ends or inner sides of the cable chains
- Clip fits to conduits with NW 07, 10, 12, 17, 23, 29, 36, 48 mm
- Standard configuration: 1 clip every 2nd link
- The Part NO. includes clips; the conduits are ordered separately upon request
- For the best use and appearance, make sure the chain links with odd number whenever possible

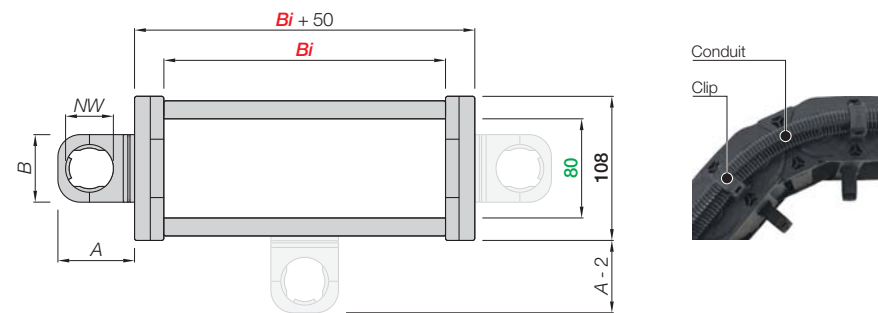
Part No. Left*	Part No. Right*	Part No. Both ends	Part No. Inner sides**	NW Φ[mm]	A [mm]	B [mm]
G80.BiEL07.R	G80.BiER07.R	G80.BiEB07.R	G80.BiEN07.R	07	21.5	17.0
G80.BiEL10.R	G80.BiER10.R	G80.BiEB10.R	G80.BiEN10.R	10	24.5	20.5
G80.BiEL12.R	G80.BiER12.R	G80.BiEB12.R	G80.BiEN12.R	12	27.0	24.0
G80.BiEL17.R	G80.BiER17.R	G80.BiEB17.R	G80.BiEN17.R	17	34.0	30.0
G80.BiEL23.R	G80.BiER23.R	G80.BiEB23.R	G80.BiEN23.R	23	42.0	38.5
G80.BiEL29.R	G80.BiER29.R	G80.BiEB29.R	G80.BiEN29.R	29	48.0	45.5
G80.BiEL36.R	G80.BiER36.R	G80.BiEB36.R	G80.BiEN36.R	36	56.0	55.5
G80.BiEL48.R	G80.BiER48.R	G80.BiEB48.R	G80.BiEN48.R	48	68.0	67.5

Bi = 075 | 100 | 125 | 150 | 175 | 200 | 225 | 250 | 275 | 300 | 325 | 350 | 400 | 450 | 500

R = 150 | 175 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 600

* As viewed from the fixed end

** Cable chains with specific widths or bending radii are not suitable for clip configured to inner sides, please consult us



NW Φ[mm]	Part No. Clip	Part No. Conduit
07	FH07	PAE07
10	FH10	PAE10
12	FH12	PAE12
17	FH17	PAE17

NW Φ[mm]	Part No. Clip	Part No. Conduit
23	FH23	PAE23
29	FH29	PAE29
36	FH36	PAE36
48	FH48	PAE48

Series G80 | Further accessories | Links extension

Links extension

- For series G80, G80H and G80T
- Virtually unlimited side-by-side extension
- For applications required extremely wide chain
- For applications with long unsupported length and high load by increased unsupported fill weight

Part No. Links extension chain	Part No. Steel pivoting**	Part No. Steel locking**	Number of links-ex M
G80.Bi1/Bi2/Bi3/.../BiM.R	G800.12.(M+1)/2	G801.12.(M+1)/2	2/3/...
G80H.Bi1/Bi2/Bi3/.../BiM.R	G800.12.(M+1)/2	G801.12.(M+1)/2	2/3/...
G80T.Bi1/Bi2/Bi3/.../BiM.R	G800.12.(M+1)/2	G801.12.(M+1)/2	2/3/...

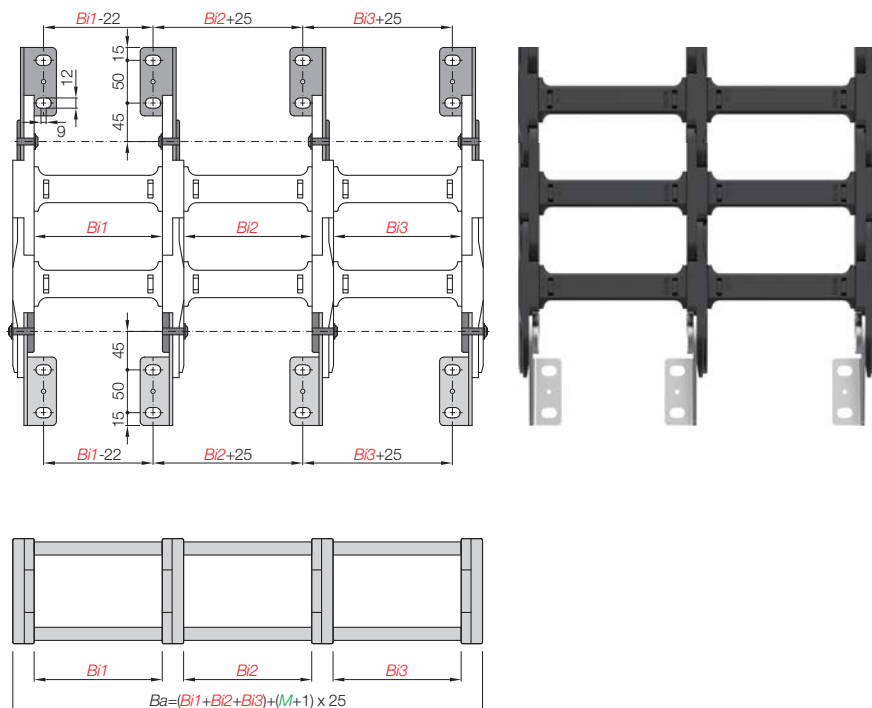
Bi = 075 | 100 | 125 | 150 | 175 | 200 | 225 | 250 | 275 | 300 | 325 | 350 | 400 | 450 | 500

R = 150 | 175 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 600

Example: 3 links extension chain, M=3 Cable chain: G80.150/100/150.250 Steel mounting brackets: G800.1.12.4/2

* Please specify index 1 or 2 based on the odd-even links

** Standard version is galvanized steel. Stainless steel version available. Please add index "S". Example: G800.1.12.4/2.S



Series G80 | Further accessories | Rol chain

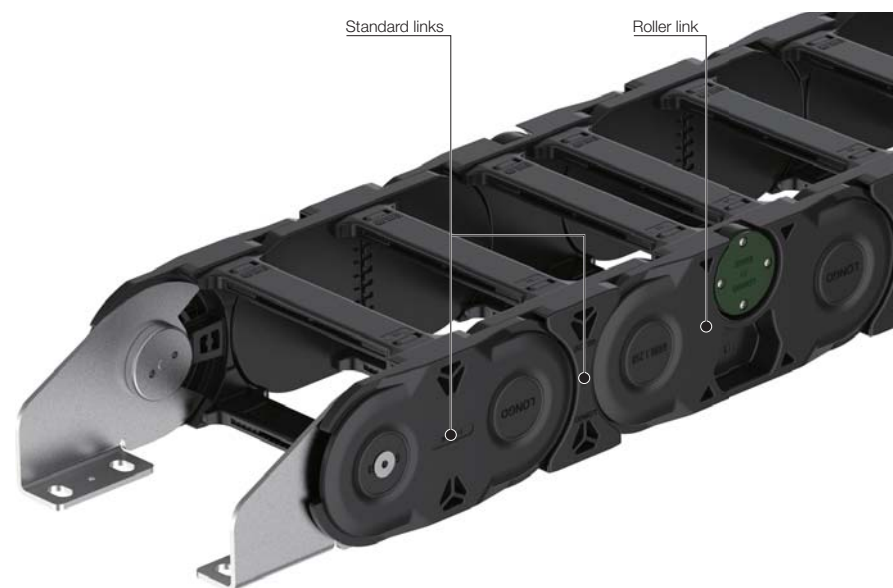
Rol chain

- Rolling instead of gliding greatly reduces push-pull forces for long travels
- For applications with high load or very long travels over 500 m
- High wear-resistant and silent roller with stainless steel ball bearings can be used in dirty environments
- Open or closed rol chains available

Part No. Rol chain	Part No. Standard link	Part No. Roller link	Standard link Pitch	Roller link Pitch
G80R.Bi.R.NC	G80.Bi.R	GR80.Bi.R	111	170
G80TR.Bi.R.NC	G80T.Bi.R	GR80T.Bi.R	111	170

Bi = 075 | 100 | 125 | 150 | 175 | 200 | 225 | 250 | 275 | 300 | 325 | 350 | 400 | 450 | 500

R = 250 | 300 | 350 | 400 | 500



GS80

Links/m
11 pcs/1001 mm



Pitch P
91 mm



Inner height hi
80 mm



Inner widths Bi
75 – 500 mm



Bending radii R
150 – 600 mm



GS80 - Open | Crossbars every link

- Crossbars openable along inner and outer radius
- For high technical applications



GS80H - Open | Crossbars every 2nd link

- Crossbars openable along inner and outer radius
- For almost any application
- Easy to assembly and economic



GS80T - Closed | Swarf protection

- Lids openable along inner and outer radius
- For applications with swarf



Order example | Complete cable chains

GS80.250.250 - 22 pcs + GS800.200.45 + ST80.1 - 33 pcs

Cable chains No.

Links

Mounting brackets No.

Separators No.

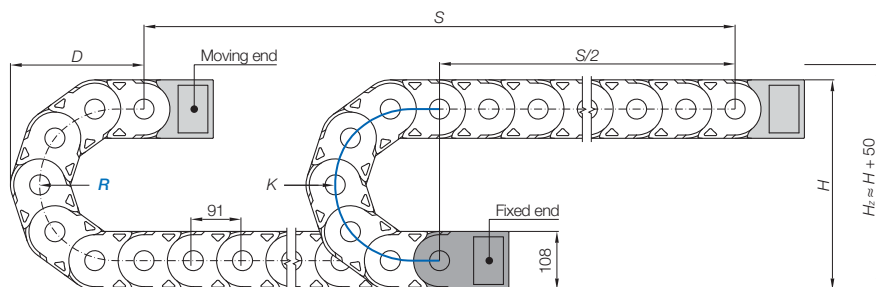
Quantity

Series GS80 | Installation dimensions | Unsupported



Unsupported applications | Short travels | $L_K = S/2 + K$

80



R [mm]	150*	175*	200	250	300	350	400	450	500	600
H [mm]	408	458	508	608	708	808	908	1008	1108	1308
H _z [mm]	458	508	558	658	758	858	958	1058	1158	1358
D [mm]	341	366	391	441	491	541	591	641	691	791
K [mm]	655	735	815	970	1125	1285	1440	1600	1755	2070

The required clearance height $H_z = H + 50$ mm

* Radius not available for GS80T tubes



Fill weight
≤ 65 kg/m



Travel
≤ 10 m



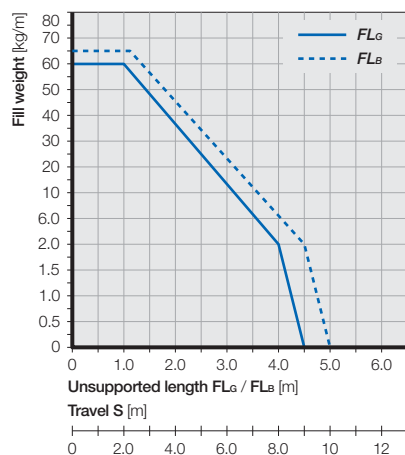
Speed
≤ 10 m/s



Acceleration
≤ 50 m/s²



Load diagram

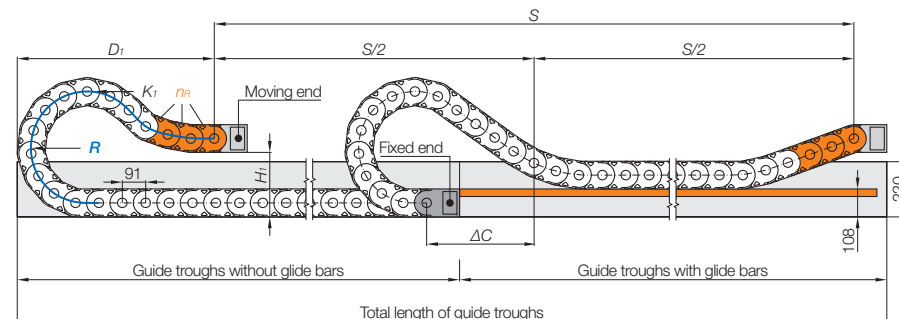


Series GS80 | Installation dimensions | Gliding



Gliding applications | Long travels | $L_K = S/2 + K_1$

80



R [mm]	150*	175*	200	250	300	350	400	450	500	600
H ₁ [mm]	300	350	324	324	324	324	324	324	324	324
D ₁ [mm]	341	366	590	845	1080	1395	1475	1785	2100	2400
K ₁ [mm]	655	735	1001	1365	1729	2184	2457	2821	3276	3913
ΔC [mm]	—	—	245	450	635	900	930	1190	1455	1655
n _R [1]	—	—	2	3	3	3	4	4	4	5

* Radius not available for GS80T tubes



Fill weight
≤ 15 kg/m



Travel
≤ 350 m



Speed
≤ 5 m/s



Acceleration
≤ 30 m/s²



GuidEasy guide trough systems

Guide trough systems are necessary for sliding applications. GuidEasy guide trough systems designed by standard module are recommended in general. Please consult our engineers if you have any question.

Standard guide trough systems for series GS80 ► Page 226

Series GS80 | Product range | GS80·GS80H

Series GS80 | Product range | GS80T



GS80 - Open | Crossbars every link

Part No. Cable chain	Bi [mm]	Ba [mm]	R [mm]	Weight [kg/m]
GS80.075.R	75	105	150 175 200 250 300 350 400 450 500 600	≈ 4.18
GS80.100.R	100	130	150 175 200 250 300 350 400 450 500 600	≈ 4.36
GS80.125.R	125	155	150 175 200 250 300 350 400 450 500 600	≈ 4.53
GS80.150.R	150	180	150 175 200 250 300 350 400 450 500 600	≈ 4.71
GS80.175.R	175	205	150 175 200 250 300 350 400 450 500 600	≈ 4.89
GS80.200.R	200	230	150 175 200 250 300 350 400 450 500 600	≈ 5.07
GS80.225.R	225	255	150 175 200 250 300 350 400 450 500 600	≈ 5.26
GS80.250.R	250	280	150 175 200 250 300 350 400 450 500 600	≈ 5.43
GS80.275.R	275	305	150 175 200 250 300 350 400 450 500 600	≈ 5.62
GS80.300.R	300	330	150 175 200 250 300 350 400 450 500 600	≈ 5.80
GS80.325.R	325	355	150 175 200 250 300 350 400 450 500 600	≈ 5.98
GS80.350.R	350	380	150 175 200 250 300 350 400 450 500 600	≈ 6.14
GS80.400.R	400	430	150 175 200 250 300 350 400 450 500 600	≈ 6.50
GS80.450.R*	450	480	150 175 200 250 300 350 400 450 500 600	≈ 6.85
GS80.500.R*	500	530	150 175 200 250 300 350 400 450 500 600	≈ 7.21

GS80H - Open | Crossbars every 2nd link

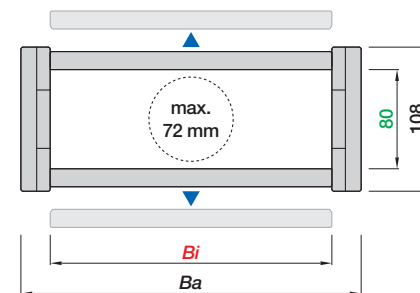
Part No. Cable chain	Bi [mm]	Ba [mm]	R [mm]	Weight [kg/m]
GS80H.075.R	75	105	150 175 200 250 300 350 400 450 500 600	≈ 3.93
GS80H.100.R	100	130	150 175 200 250 300 350 400 450 500 600	≈ 4.02
GS80H.125.R	125	155	150 175 200 250 300 350 400 450 500 600	≈ 4.10
GS80H.150.R	150	180	150 175 200 250 300 350 400 450 500 600	≈ 4.20
GS80H.175.R	175	205	150 175 200 250 300 350 400 450 500 600	≈ 4.28
GS80H.200.R	200	230	150 175 200 250 300 350 400 450 500 600	≈ 4.37
GS80H.225.R	225	255	150 175 200 250 300 350 400 450 500 600	≈ 4.47
GS80H.250.R	250	280	150 175 200 250 300 350 400 450 500 600	≈ 4.55
GS80H.275.R	275	305	150 175 200 250 300 350 400 450 500 600	≈ 4.65
GS80H.300.R	300	330	150 175 200 250 300 350 400 450 500 600	≈ 4.74
GS80H.325.R	325	355	150 175 200 250 300 350 400 450 500 600	≈ 4.83
GS80H.350.R	350	380	150 175 200 250 300 350 400 450 500 600	≈ 4.91
GS80H.400.R	400	430	150 175 200 250 300 350 400 450 500 600	≈ 5.09
GS80H.450.R*	450	480	150 175 200 250 300 350 400 450 500 600	≈ 5.26
GS80H.500.R*	500	530	150 175 200 250 300 350 400 450 500 600	≈ 5.44



GS80T - Closed | Swarf protection

Part No. Cable chain	Bi [mm]	Ba [mm]	R [mm]	Weight [kg/m]
GS80T.100.R*	100	130	— — 200 250 300 350 400 450 500 600	≈ 4.99
GS80T.125.R	125	155	— — 200 250 300 350 400 450 500 600	≈ 5.33
GS80T.150.R	150	180	— — 200 250 300 350 400 450 500 600	≈ 5.69
GS80T.175.R	175	205	— — 200 250 300 350 400 450 500 600	≈ 6.03
GS80T.200.R	200	230	— — 200 250 300 350 400 450 500 600	≈ 6.39
GS80T.250.R	250	280	— — 200 250 300 350 400 450 500 600	≈ 7.07
GS80T.300.R	300	330	— — 200 250 300 350 400 450 500 600	≈ 7.77
GS80T.350.R	350	380	— — 200 250 300 350 400 450 500 600	≈ 8.45
GS80T.400.R*	400	430	— — 200 250 300 350 400 450 500 600	≈ 9.15

* Available upon request, please consult us for delivery time



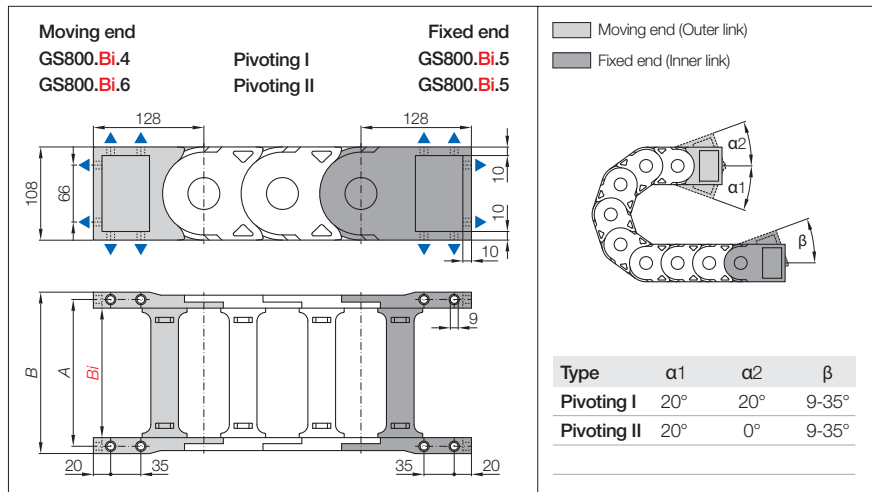
Order example | Cable chains

GS80 . 250 . 250 - 22 pcs
Series Bi R Links

Series GS80 | MFB mounting brackets | GS80·GS80H

MFB mounting brackets | Open

M8 ▲ Assembly options



MFB Pivoting I ► Recommended for unsupported and gliding applications

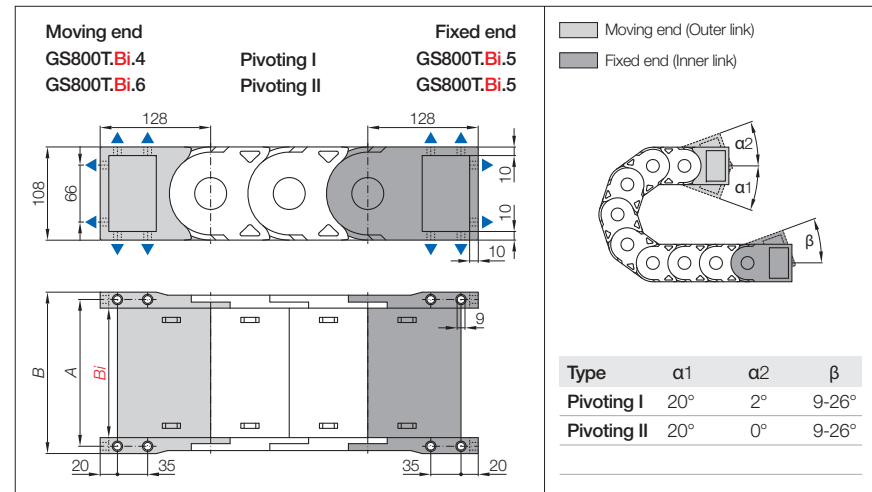
MFB Pivoting II ► Recommended for vertical hanging and standing applications

Bi [mm]	Part No. MFB pivoting I	Part No. MFB pivoting II	A [mm]	B [mm]
75 ►	GS800.075.45	GS800.075.65	95	112
100 ►	GS800.100.45	GS800.100.65	120	137
125 ►	GS800.125.45	GS800.125.65	145	162
150 ►	GS800.150.45	GS800.150.65	170	187
175 ►	GS800.175.45	GS800.175.65	195	212
200 ►	GS800.200.45	GS800.200.65	220	237
225 ►	GS800.225.45	GS800.225.65	245	262
250 ►	GS800.250.45	GS800.250.65	270	287
275 ►	GS800.275.45	GS800.275.65	295	312
300 ►	GS800.300.45	GS800.300.65	320	337
325 ►	GS800.325.45	GS800.325.65	345	362
350 ►	GS800.350.45	GS800.350.65	370	387
400 ►	GS800.400.45	GS800.400.65	420	437
450 ►	GS800.450.45*	GS800.450.65*	470	487
500 ►	GS800.500.45*	GS800.500.65*	520	537

Series GS80 | MFB mounting brackets | GS80T

MFB mounting brackets | Closed

M8 ▲ Assembly options



MFB Pivoting I ► Recommended for unsupported and gliding applications

MFB Pivoting II ► Recommended for vertical hanging and standing applications

Bi [mm]	Part No. MFB pivoting I	Part No. MFB pivoting II	A [mm]	B [mm]
100 ►	GS800T.100.45*	GS800T.100.65*	120	137
125 ►	GS800T.125.45	GS800T.125.65	145	162
150 ►	GS800T.150.45	GS800T.150.65	170	187
175 ►	GS800T.175.45	GS800T.175.65	195	212
200 ►	GS800T.200.45	GS800T.200.65	220	237
250 ►	GS800T.250.45	GS800T.250.65	270	287
300 ►	GS800T.300.45	GS800T.300.65	320	337
350 ►	GS800T.350.45	GS800T.350.65	370	387
400 ►	GS800T.400.45*	GS800T.400.65*	420	437

* Available upon request, please consult us for delivery time

Order example | MFB mounting brackets

GS800 . 250 . 45

Series Bi Type

Series GS80 | MFB accessories | C-rails

C-rails

- Standard material of C-rails: galvanized steel
- The tolerance of C-rail length: $\pm 1\text{mm}$
- Fixed to MFB mounting brackets without any other accessories
- Integrated CableFix strain relief with C-rails: clamps and tiewrap plates



Bi [mm]	Part No. MFB with C-rails*	Part No. C-rail, individual	C-rail length [mm]
75 ▶	□.C	CR.081	81
100 ▶	□.C	CR.106	106
125 ▶	□.C	CR.131	131
150 ▶	□.C	CR.156	156
175 ▶	□.C	CR.181	181
200 ▶	□.C	CR.206	206
225 ▶	□.C	CR.231	231
250 ▶	□.C	CR.256	256
275 ▶	□.C	CR.281	281
300 ▶	□.C	CR.306	306
325 ▶	□.C	CR.331	331
350 ▶	□.C	CR.356	356
400 ▶	□.C	CR.406	406
450 ▶	□.C	CR.456	456
500 ▶	□.C	CR.506	506

* Standard: both MFB ends with one C-rail

Option: both MFB ends with two C-rails - please add index "2", example: GS800.200.45.C2

Please specify standard MFB mounting brackets Part No. into □ ▶ Page 182/183



CableFix clamps

Strain relief with high holding force for one, two or three cables stacked
More information ▶ Page 222

Series GS80 | MFB accessories | Tiewrap plates

Tiewrap plates

- Inner width **Bi** ≤ 175 mm
Fixed to MFB mounting brackets without any other accessories
- Inner width **Bi** > 175 mm
Fixed to C-rails of MFB mounting brackets with screws and nuts M6

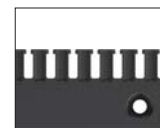


Bi [mm]	Part No. MFB with ZA*	Part No. ZA, standard	Part No. C-rail, individual	Number of teeth nz [1]
75 ▶	□.Z	ZA075	—	7
100 ▶	□.Z	ZA100	—	10
125 ▶	□.Z	ZA125	—	12
150 ▶	□.Z	ZA150	—	15
175 ▶	□.Z	ZA175	—	17
200 ▶	□.CZ	ZA175	CR.206	17
225 ▶	□.CZ	ZA100 + ZA100	CR.231	20
250 ▶	□.CZ	ZA100 + ZA125	CR.256	22
275 ▶	□.CZ	ZA125 + ZA125	CR.281	24
300 ▶	□.CZ	ZA125 + ZA150	CR.306	27
325 ▶	□.CZ	ZA150 + ZA150	CR.331	30
350 ▶	□.CZ	ZA150 + ZA175	CR.356	32
400 ▶	□.CZ	ZA125 + ZA125 + ZA125	CR.406	36
450 ▶	□.CZ	ZA125 + ZA150 + ZA150	CR.456	42
500 ▶	□.CZ	ZA150 + ZA150 + ZA175	CR.506	47

* Standard: both MFB ends with one tiewrap plate(ZA)

Option: both MFB ends with two tiewrap plates - please add index "2", example: GS800.200.45.CZ2

Please specify standard MFB mounting brackets Part No. into □ ▶ Page 182/183

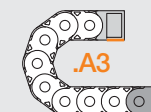
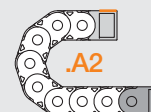
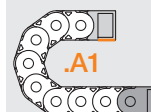


CableFix tiewrap plates

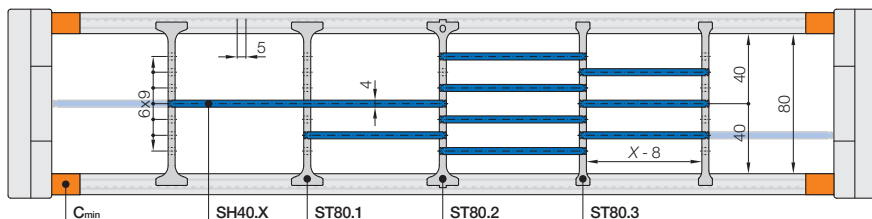
Simple and economical strain relief for multiple cables
More information ▶ Page 223

Default installation position of C-rails and tiewrap plates: **.A1**

To indicate the installation position, please add index **.A1**, **.A2**, **.A3** or **.A4**, example: GS800.200.45.C.A2

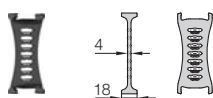


Series GS80 | Interior separation | Vertical-Horizontal



The minimum lateral gap to the side links $C_{min} = \text{GS80: 16mm} \mid \text{GS80H: 16mm} \mid \text{GS80T: 0mm}$
 Standard separation: **fitted every 2nd link**

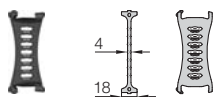
Vertical separator | Standard | For almost any application



Unassembled: ST80.1 **Assembled: ST80.1.A**

- Wide base for fitting in cable chains stably
- Movable, easy to adjust the position

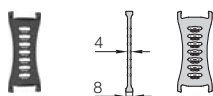
Vertical separator | Locking | For side-mounted applications



Unassembled: ST80.2 **Assembled: ST80.2.A**

- Locking, fitted in a specified position securely
- Preset in 5 mm increments

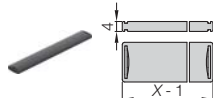
Vertical separator | Narrow | For small cables



Unassembled: ST80.3 **Assembled: ST80.3.A**

- Narrow base for small cables
- Movable, easy to adjust the position

Horizontal separator | Locking | For multilayer separation



Unassembled: SH40.X **Assembled: SH40.X.A**

- Full or partial width horizontal separator
- Locked securely into vertical separators at both ends

X [mm]	Unassembled	Assembled
050	SH40.050	SH40.050.A
065	SH40.065	SH40.065.A
075	SH40.075	SH40.075.A
100	SH40.100	SH40.100.A
125	SH40.125	SH40.125.A

X [mm]	Unassembled	Assembled
150	SH40.150	SH40.150.A
175	SH40.175	SH40.175.A
200	SH40.200	SH40.200.A
225	SH40.225	SH40.225.A
250	SH40.250	SH40.250.A

Series GS80 | Accessories | Clip extension



Clip extension

- For series GS80, GS80H and GS80T
- Quickly fill or replace conduits and cables, reducing assembly time and cost
- Clip can be configured to the left, the right, both ends or inner sides of the cable chains
- Clip fits to conduits with NW 07, 10, 12, 17, 23, 29, 36, 48 mm
- Standard configuration: 1 clip every 2nd link
- The Part NO. includes clips; the conduits are ordered separately upon request
- For the best use and appearance, make sure the chain links with odd number whenever possible

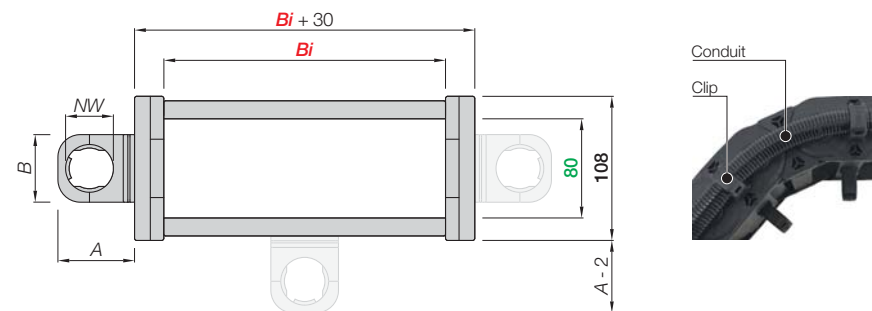
Part No. Left*	Part No. Right*	Part No. Both ends	Part No. Inner sides**	NW Φ[mm]	A [mm]	B [mm]
GS80.BiEL07.R	GS80.BiER07.R	GS80.BiEB07.R	GS80.BiEN07.R	07	21.5	17.0
GS80.BiEL10.R	GS80.BiER10.R	GS80.BiEB10.R	GS80.BiEN10.R	10	24.5	20.5
GS80.BiEL12.R	GS80.BiER12.R	GS80.BiEB12.R	GS80.BiEN12.R	12	27.0	24.0
GS80.BiEL17.R	GS80.BiER17.R	GS80.BiEB17.R	GS80.BiEN17.R	17	34.0	30.0
GS80.BiEL23.R	GS80.BiER23.R	GS80.BiEB23.R	GS80.BiEN23.R	23	42.0	38.5
GS80.BiEL29.R	GS80.BiER29.R	GS80.BiEB29.R	GS80.BiEN29.R	29	48.0	45.5
GS80.BiEL36.R	GS80.BiER36.R	GS80.BiEB36.R	GS80.BiEN36.R	36	56.0	55.5
GS80.BiEL48.R	GS80.BiER48.R	GS80.BiEB48.R	GS80.BiEN48.R	48	68.0	67.5

Bi = 075 | 100 | 125 | 150 | 175 | 200 | 225 | 250 | 275 | 300 | 325 | 350 | 400 | 450 | 500

R = 150 | 175 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 600

* As viewed from the fixed end

** Cable chains with specific widths or bending radii are not suitable for clip configured to inner sides, please consult us



NW Φ[mm]	Part No. Clip	Part No. Conduit
07	FH07	PAE07
10	FH10	PAE10
12	FH12	PAE12
17	FH17	PAE17

NW Φ[mm]	Part No. Clip	Part No. Conduit
23	FH23	PAE23
29	FH29	PAE29
36	FH36	PAE36
48	FH48	PAE48

TriCross

TriCross

Lightweight, easy and stability



TriCross has both high load and lightweight due to triple-cross stops design. It also has smooth surface and hinged crossbars opened or closed quickly. TriCross is a cost-effective system.

- Innovative triple-cross stops for high load
- Weight reduced by 23% compared to GeMotion
- Crossbars openable along the inner/outer radius from both sides
- Smooth, cable-friendly inner and outer surface
- Many modular options and accessories available

Typical industries and applications

Machine tools | Laser cutting | Material handling | General automation |

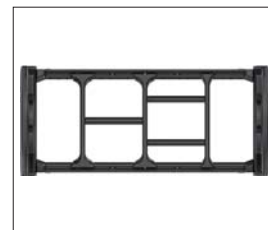
Woodworking | Construction machinery | Robots

Lightweight, easy and stability

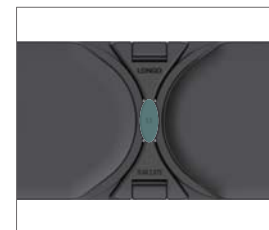
48



48



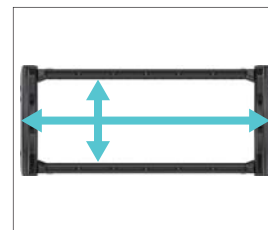
Any interior separation with various separators



High stability due to mortise/tenon design



Quickly guiding conduits or cables with optional clip extension



Larger internal space and smaller installation space

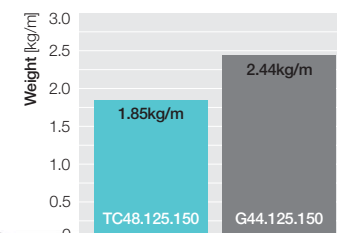


Integrated strain relief e.g. clamps, tie-wrap plates, etc.



Easy to assembly with crossbars openable from both sides

Innovation!
Triple-cross stops design in chain links
Less material and thinner links at the same strength



The weight of TriCross reduced by 23% compared to GelMotion



TriCross | Overview

Legend	Series	Inner height hi [mm]	Outer height ha [mm]	Inner width Bi [mm]	Outer width Ba [mm]	Bending radii R [mm]	Link pitch P [mm]	Page

Open | Crossbars every link | For high technical applications



Series	Inner height	Outer height	Inner width	Outer width	Bending radii	Link pitch	Page
TC48	48	64	50 - 200	70 - 220	075 - 350	67	194

Travels

Series	Unsupported	Gliding	Vertical hanging	Vertical standing	Side-mounted Unsupported
TC48	≤ 8.0 m	—	≤ 80 m	≤ 6.0 m	≤ 2.0 m

TriCross | Order examples and Options

Order example | Complete cable chains Examples based on series TC48

TC48.125.150	-	30 pcs	+	TC480.125.2.12	+	ST48.1	-	45 pcs
Cable chains No.		Links		Mounting brackets No.		Separators No.		Quantity

Cable chains

30 pcs (2m)

TC48	.	125	.	150	-	30 pcs
Series		Bi		R		Links

Mounting brackets

1 set

TC480	.	125	.	2	.	12
Series		Bi		Odd/even		Type

Interior separation

3 separators assembled every 2nd link*

ST48.1	-	45 pcs
Separators No.		Quantity

* Separators are not pre-assembled by default. Please indicate the installation method or provide drawings for pre-assembled.
Examples: ST48.1.A - 45 片(3/2)

Order example | Options Examples based on series TC48

Part No. Standard Available from stock	Part No. RBR Circular movement	Part No. NC No Camber	Part No. ESD ESD/ATEX
TC48.125.R	TC48.125.R1/R2	TC48.125.R.NC	TC48.125.R.ESD

TC48

Links/m
15 pcs/1005 mm



Pitch P
67 mm



Inner height h_i
48 mm



Inner widths B_i
50 – 200 mm



Bending radii R
075 – 350 mm

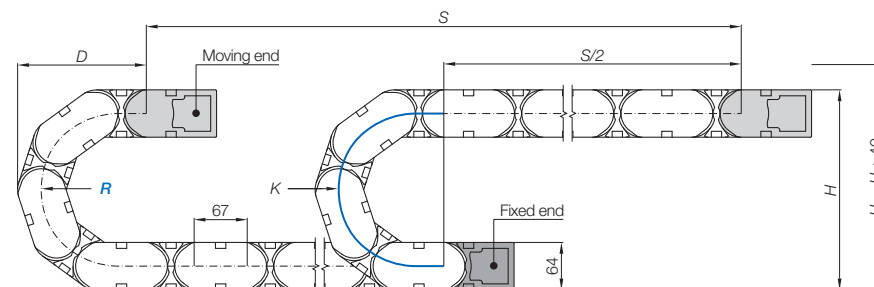


TC48 - Open | Crossbars every link

- Crossbars openable along inner and outer radius
- For high technical applications



Unsupported applications | Short travels | $L_k = S/2 + K$



R [mm]	075	100	125	150	175	200	225	250	300	350
H [mm]	214	264	314	364	414	464	514	564	664	764
Hz [mm]	254	304	354	404	454	504	554	604	704	804
D [mm]	208	233	258	283	308	333	358	383	433	483
K [mm]	370	450	530	610	685	765	845	920	1080	1235

The required clearance height $H_z = H + 40$ mm



Fill weight
 ≤ 40 kg/m



Travel
 ≤ 8 m



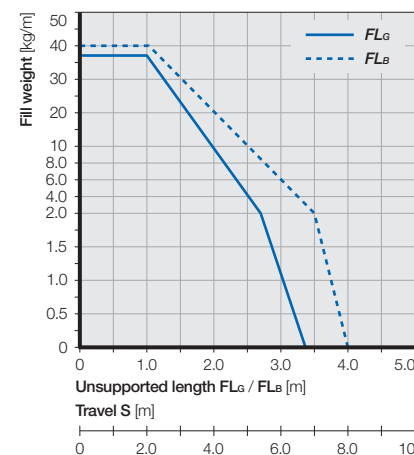
Speed
 ≤ 10 m/s



Acceleration
 ≤ 50 m/s²



Load diagram



Order example | Complete cable chains

TC48.125.150 - 30 pcs + TC480.125.2.12 + ST48.1 - 45 pcs

Cable chains No.

Links

Mounting brackets No.

Separators No.

Quantity

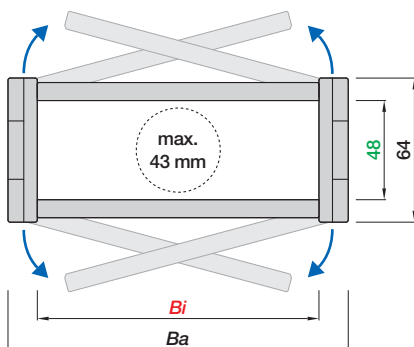
Series TC48 | Product range | TC48



TC48 - Open | Crossbars every link

Part No. Cable chain	Bi [mm]	Ba [mm]	R [mm]	Weight [kg/m]
TC48.050.R*	50	70	075 100 125 150 175 200 225 250 300 350	≈ 1.55
TC48.075.R*	75	95	075 100 125 150 175 200 225 250 300 350	≈ 1.65
TC48.100.R*	100	120	075 100 125 150 175 200 225 250 300 350	≈ 1.75
TC48.125.R	125	145	075 100 125 150 175 200 225 250 300 350	≈ 1.85
TC48.150.R	150	170	075 100 125 150 175 200 225 250 300 350	≈ 1.95
TC48.175.R*	175	195	075 100 125 150 175 200 225 250 300 350	≈ 2.05
TC48.200.R*	200	220	075 100 125 150 175 200 225 250 300 350	≈ 2.15

* Available upon request, please consult us for delivery time



Order example | Cable chains

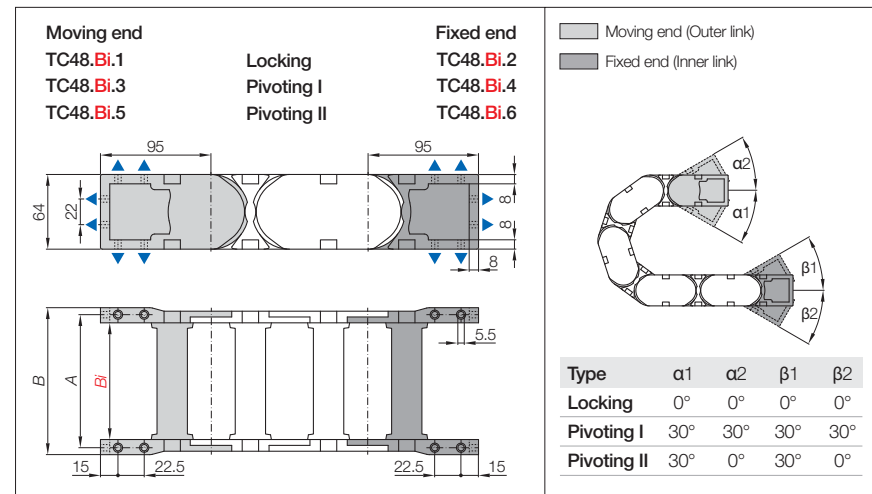
TC48 . 125 . 150 -

Series Bi R Links

Series TC48 | MFB mounting brackets | TC48

MFB mounting brackets | Open

M5 Assembly options



MFB Locking ► Recommended for vertical hanging and standing applications

MFB Pivoting I ► Recommended for unsupported and gliding applications

MFB Pivoting II ► Recommended for extremely small space applications

Bi [mm]	Part No. MFB locking	Part No. MFB pivoting I	Part No. MFB pivoting II	A [mm]	B [mm]
50 ►	TC480.050.□.12*	TC480.050.□.34*	TC480.050.□.56*	64	76
75 ►	TC480.075.□.12*	TC480.075.□.34*	TC480.075.□.56*	89	101
100 ►	TC480.100.□.12*	TC480.100.□.34*	TC480.100.□.56*	114	126
125 ►	TC480.125.□.12	TC480.125.□.34	TC480.125.□.56	139	151
150 ►	TC480.150.□.12	TC480.150.□.34	TC480.150.□.56	164	176
175 ►	TC480.175.□.12*	TC480.175.□.34*	TC480.175.□.56*	189	201
200 ►	TC480.200.□.12*	TC480.200.□.34*	TC480.200.□.56*	214	226

* Available upon request, please consult us for delivery time

Order example | MFB mounting brackets

TC480 . 125 . 2 . 12

Series Bi Odd/even Type

Please specify index 1 or 2 into □
1 = Links for odd
2 = Links for even

Series TC48 | MFB accessories | C-rails

C型槽

- Standard material of C-rails: galvanized steel
- The tolerance of C-rail length: $\pm 1\text{mm}$
- Fixed to MFB mounting brackets without any other accessories
- Integrated CableFix strain relief with C-rails: clamps and tiewrap plates



Bi [mm]	Part No. MFB with C-rails*	Part No. C-rail, individual	C-rail length [mm]
50 ▶	□.C	CR.055	55
75 ▶	□.C	CR.080	80
100 ▶	□.C	CR.105	105
125 ▶	□.C	CR.130	130
150 ▶	□.C	CR.155	155
175 ▶	□.C	CR.180	180
200 ▶	□.C	CR.205	205

* Standard: both MFB ends with one C-rail

Option: both MFB ends with two C-rails - please add index "2", example: TC480.125.2.12.C2

Please specify standard MFB mounting brackets Part No. into □ ▶ Page 197



CableFix clamps

Strain relief with high holding force for one, two or three cables stacked
More information ▶ Page 222

Series TC48 | MFB accessories | Tiewrap plates

Tiewrap plates

- Inner width **Bi** $\leq 175\text{ mm}$
Fixed to MFB mounting brackets without any other accessories
- Inner width **Bi** $> 175\text{ mm}$
Fixed to C-rails of MFB mounting brackets with screws and nuts M6

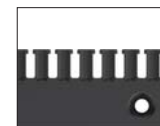


Bi [mm]	Part No. MFB with ZA*	Part No. ZA, standard	Part No. C-rail, individual	Number of teeth nz [1]
50 ▶	□.Z	ZA050	—	5
75 ▶	□.Z	ZA075	—	7
100 ▶	□.Z	ZA100	—	10
125 ▶	□.Z	ZA125	—	12
150 ▶	□.Z	ZA150	—	15
175 ▶	□.Z	ZA175	—	17
200 ▶	□.CZ	ZA175	CR.205	17

* Standard: both MFB ends with one tiewrap plate(ZA)

Option: both MFB ends with two tiewrap plates - please add index "2", example: TC480.125.2.12.Z2

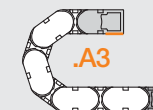
Please specify standard MFB mounting brackets Part No. into □ ▶ Page 197



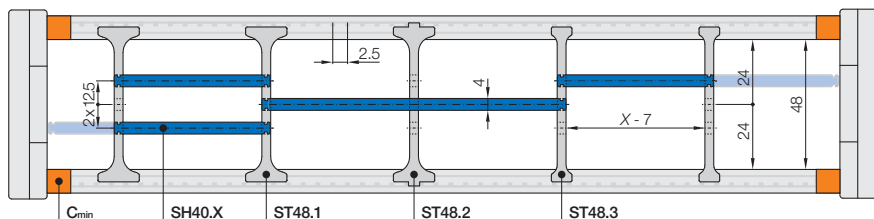
CableFix tiewrap plates

Simple and economical strain relief for multiple cables
More information ▶ Page 223

Default installation position of C-rails and tiewrap plates: **.A1**
To indicate the installation position, please add index **.A1**, **.A2**, **.A3** or **.A4**, example: TC480.125.2.12.C.A2



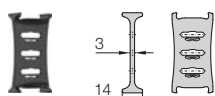
Series TC48 | Interior separation | Vertical·Horizontal



The minimum lateral gap to the side links $C_{min} = \text{TC48: } 5\text{mm}$

Standard separation: **fitted every 2nd link**

Vertical separator | Standard | For almost any application

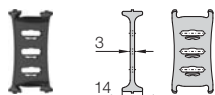


Unassembled: ST48.1

Assembled: ST48.1.A

- Wide base for fitting in cable chains stably
- Movable, easy to adjust the position

Vertical separator | Locking | For side-mounted applications

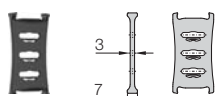


Unassembled: ST48.2

Assembled: ST48.2.A

- Locking, fitted in a specified position securely
- Preset in 5 mm increments

Vertical separator | Narrow | For small cables

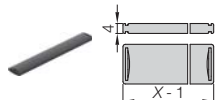


Unassembled: ST48.3

Assembled: ST48.3.A

- Narrow base for small cables
- Movable, easy to adjust the position

Horizontal separator | Locking | For multilayer separation



Unassembled: SH40.X

Assembled: SH40.X.A

- Full or partial width horizontal separator
- Locked securely into vertical separators at both ends

X [mm]	Unassembled	Assembled
050	SH40.050	SH40.050.A
065	SH40.065	SH40.065.A
075	SH40.075	SH40.075.A
100	SH40.100	SH40.100.A
125	SH40.125	SH40.125.A

X [mm]	Unassembled	Assembled
150	SH40.150	SH40.150.A
175	SH40.175	SH40.175.A
200	SH40.200	SH40.200.A

Series TC48 | Accessories | Clip extension



Clip extension

- For series TC48
- Quickly fill or replace conduits and cables, reducing assembly time and cost
- The clips can be inserted directly into the outer chain links E without additional bolts
- Clip can be configured to the left, the right or both ends of the cable chains
- Clip fits to conduits with NW 17 mm
- Standard configuration: 1 clip every 2nd link
- The clips and conduits are ordered separately upon request
- For the best use and appearance, make sure the chain links with odd number whenever possible

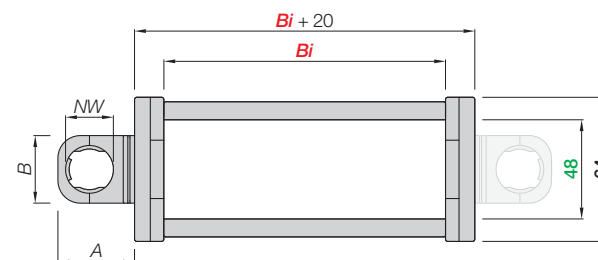
Part No. Left*	Part No. Right*	Part No. Both ends	NW Φ[mm]	A [mm]	B [mm]
TC48.BiEL.R	TC48.BiER.R	TC48.BiEB.R	17**	34.0	30.0

Bi = 050 | 075 | 100 | 125 | 150 | 175 | 200

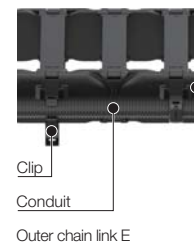
R = 075 | 100 | 125 | 150 | 175 | 200 | 225 | 250 | 300 | 350

* As viewed from the fixed end

** Other conduits available upon request, please consult us for delivery time



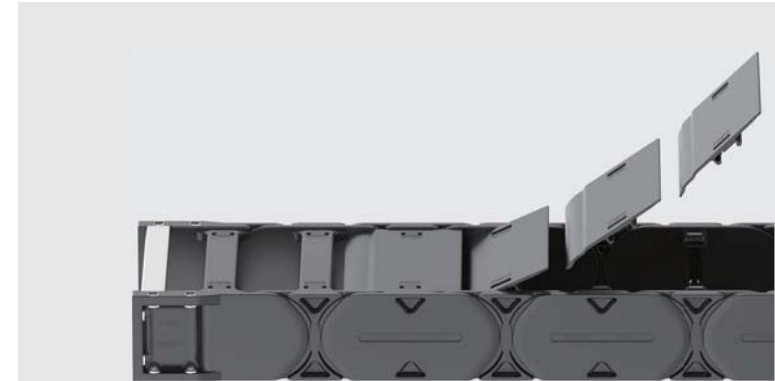
NW Φ[mm]	Part No. Clip	Part No. Conduit
17	FH17	PAE17



TriCross M

TriCross M

The new standard series for high load



TriCross M has all the advantages of GeMotion. Thinner links and lighter self weight, but same load capacity due to the innovative triple-cross stops design.

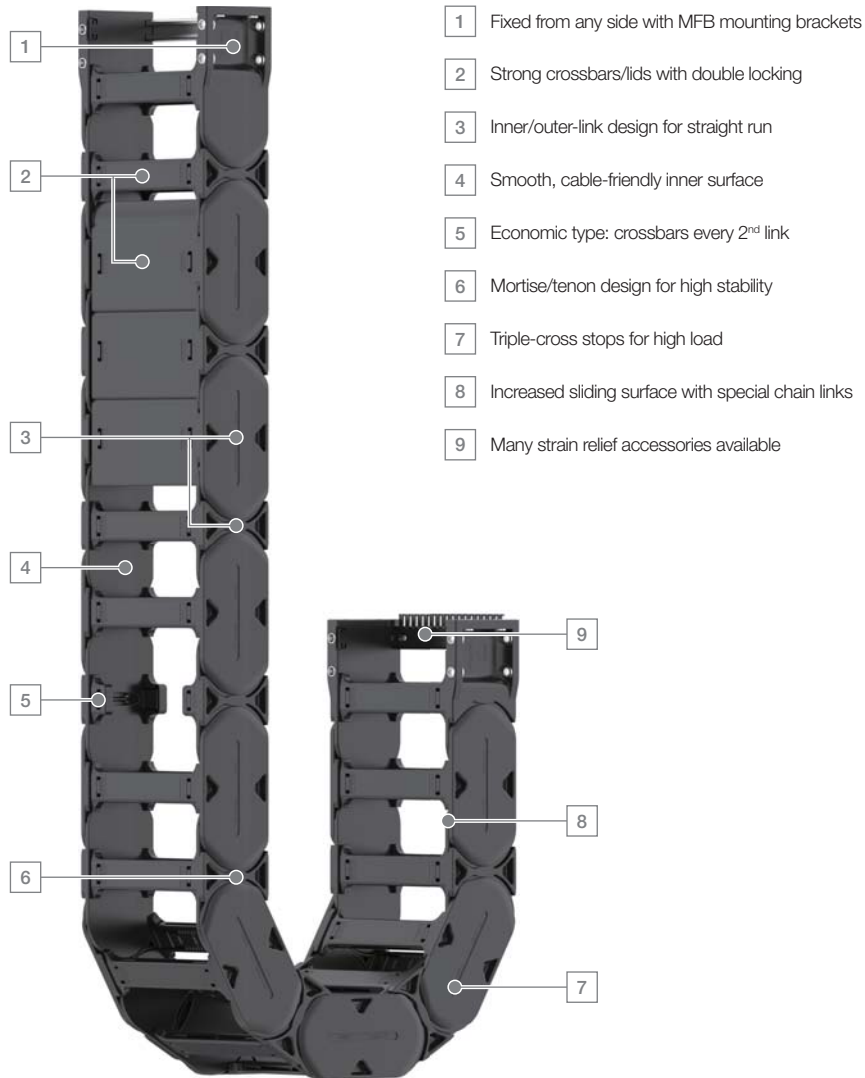
- Innovative triple-cross stops for high load
- Weight reduced by 10%-24% compared to GeMotion
- Simply turn outer side link to NC version
- Smooth, cable-friendly inner and outer surface
- Many modular options and accessories available

Typical industries and applications

Machine tools | Laser cutting | Material handling | Truss robot | Ground rail | Casting equipment | Construction machinery | Crane

The new standard series for high load

60

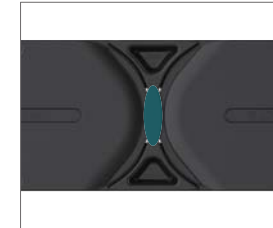


- 1 Fixed from any side with MFB mounting brackets
- 2 Strong crossbars/lids with double locking
- 3 Inner/outer-link design for straight run
- 4 Smooth, cable-friendly inner surface
- 5 Economic type: crossbars every 2nd link
- 6 Mortise/tenon design for high stability
- 7 Triple-cross stops for high load
- 8 Increased sliding surface with special chain links
- 9 Many strain relief accessories available

60



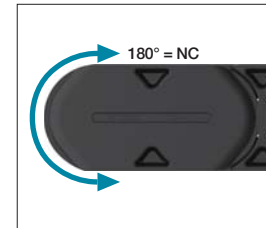
Any interior separation with various separators



High stability due to mortise/tenon design



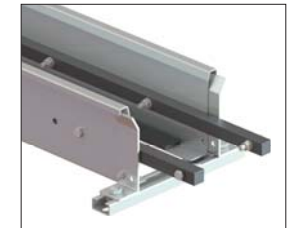
Quickly guiding conduits or cables with optional clip extension



Simply turn outer side link to NC version, no additional rework



Integrated strain relief e.g. clamps, tiewrap plates, etc.

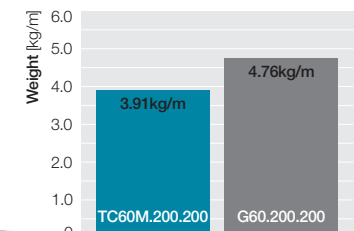


Standard steel guide trough for gliding applications

Innovation!

Triple-cross stops design in chain links

Less material and thinner links at the same strength



The weight of TriCross M reduced by 10%-24% compared to GeMotion



TriCross M | Overview

Legend	Series	Inner height <i>hi</i> [mm]	Outer height <i>ha</i> [mm]	Inner width <i>Bi</i> [mm]	Outer width <i>Ba</i> [mm]	Bending radii <i>R</i> [mm]	Link pitch <i>P</i> [mm]	Page

Open | Crossbars every link | For high technical applications



TC60M	60	88	75 - 500	101 - 526	135 - 500	91	208
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Open | Crossbars every 2nd link | For almost any application

TCH60M	60	88	75 - 500	101 - 526	135 - 500	91	208
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Closed | Swarf protection | For applications with swarf



TCR60M	60	88	100 - 400	126 - 426	150 - 500	91	208
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Travels

Series	Unsupported	Gliding	Vertical hanging	Vertical standing	Side-mounted
TC60M TCH60M TCR60M	≤ 10.0 m	≤ 300 m	≤ 80 m	≤ 5.0 m	≤ 1.5 m

TriCross M | Order examples and Options



Order example | Complete cable chains Examples based on series TC60M

TC60M.200.250	-	22 pcs	+	TC600M.200.2.12	+	ST60.1	-	33 pcs
Cable chains No.		Links		Mounting brackets No.		Separators No.		Quantity

Cable chains

22 pcs (2m)

TC60M	.	200	.	250	-	22 pcs
Series		Bi		R		Links

Mounting brackets

1 set

TC600M	.	200	.	2	.	12
Series		Bi		Odd/even		Type

Interior separation

3 separators assembled every 2nd link*

ST60.1	-	33 pcs
Separators No.		Quantity

* Separators are not pre-assembled by default. Please indicate the installation method or provide drawings for pre-assembled.

Examples: ST60.1.A - 33 片(3/2)



Order example | Options Examples based on series TC60M | TCH60M | TCR60M

Part No. Standard Available from stock	Part No. Low noise With noise dampers	Part No. RBR Circular movement	Part No. NC No Camber	Part No. ESD ESD/ATEX
TC60M.200.R	TC60MD.200.R	TC60M.200.R1/R2	TC60M.200.R.NC	TC60.200.R.ESD
TCH60M.200.R	TCH60MD.200.R	TCH60M.200.R1/R2	TCH60M.200.R.NC	TCH60M.200.R.ESD
TCR60M.200.R	TCR60MD.200.R	—	TCR60M.200.R.NC	TCR60M.200.R.ESD

TC60M

Links/m
11 pcs/1001 mm



Pitch P
91 mm



Inner height hi
60 mm



Inner widths Bi
75 – 500 mm



Bending radii R
135 – 500 mm



TC60M - Open | Crossbars every link

- Crossbars openable along inner and outer radius
- For high technical applications



TCH60M - Open | Crossbars every 2nd link

- Crossbars openable along inner and outer radius
- For almost any application
- Easy to assembly and economic



TCR60M - Closed | Swarf protection

- Lids openable along inner and outer radius
- For applications with swarf



Order example | Complete cable chains

TC60M.200.250 - 22 pcs + TC600M.200.2.12 + ST60.1 - 33 pcs

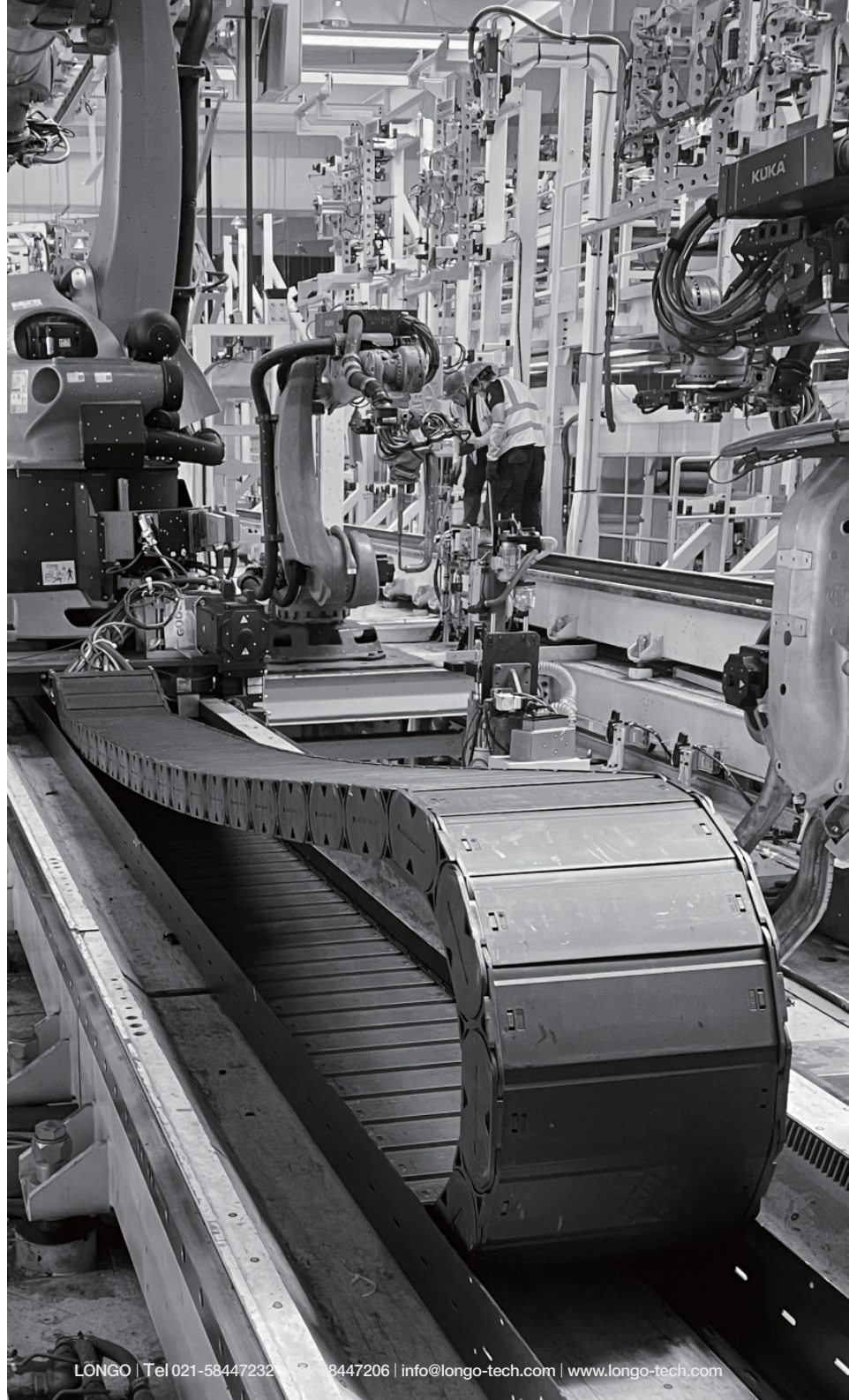
Cable chains No.

Links

Mounting brackets No.

Separators No.

Quantity

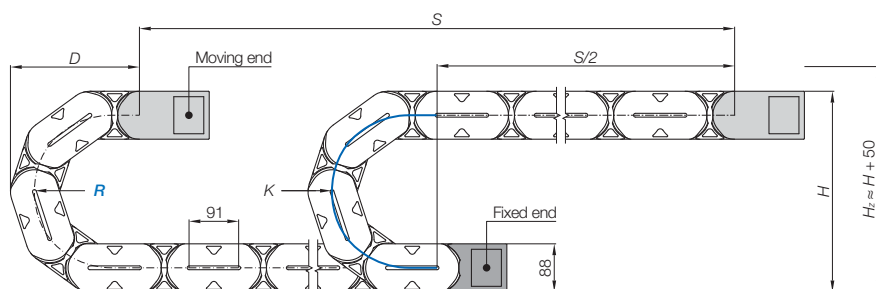


Series TC60M | Installation dimensions | Unsupported



Unsupported applications | Short travels | $L_K = S/2 + K$

60



R [mm]	135*	150	175	200	250	300	350	400	450	500
H [mm]	358	388	438	488	588	688	788	888	988	1088
H _z [mm]	408	438	488	538	638	738	838	938	1038	1138
D [mm]	316	331	356	381	431	481	531	581	631	681
K [mm]	610	655	735	815	970	1125	1285	1440	1600	1755

The required clearance height $H_z = H + 50$ mm

* Radius not available for TCR60M tubes



Fill weight
≤ 67 kg/m



Travel
≤ 10 m



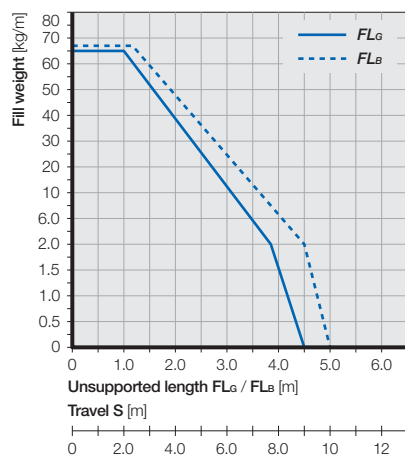
Speed
≤ 10 m/s



Acceleration
≤ 50 m/s²



Load diagram

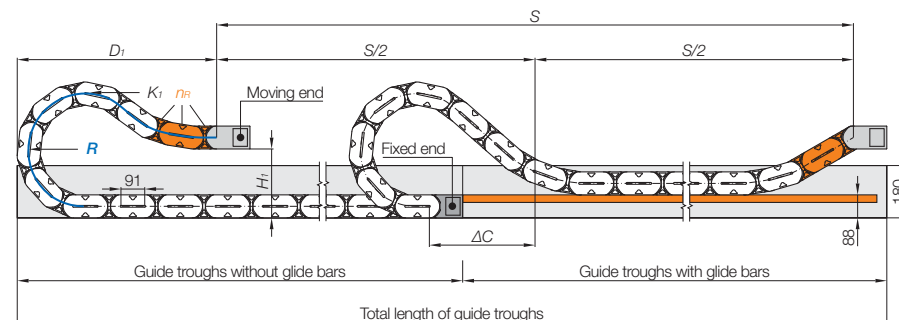


Series TC60M | Installation dimensions | Gliding



Gliding applications | Long travels | $L_K = S/2 + K_1$

60



R [mm]	135*	150	175	200	250	300	350	400	450	500
H ₁ [mm]	270	264	264	264	264	264	264	264	264	264
D ₁ [mm]	316	500	560	690	850	1080	1390	1460	1770	2090
K ₁ [mm]	610	819	910	1092	1365	1729	2184	2457	2912	3276
ΔC [mm]	—	210	240	335	455	630	890	920	1180	1450
n _R [1]	—	2	2	2	3	3	3	4	4	4

* Radius not available for TCR60M tubes



Fill weight
≤ 15 kg/m



Travel
≤ 350 m



Speed
≤ 5 m/s



Acceleration
≤ 30 m/s²



GuidEasy guide trough systems

Guide trough systems are necessary for sliding applications. GuidEasy guide trough systems designed by standard module are recommended in general. Please consult our engineers if you have any question.

Standard guide trough systems for series TC60M ► Page 226

Series TC60M | Product range | TC60M·TCH60M



TC60M - Open | Crossbars every link

Part No. Cable chain	Bi [mm]	Ba [mm]	R [mm]	Weight [kg/m]
TC60M.075.R	75	101	135 150 175 200 250 300 350 400 450 500	≈ 3.02
TC60M.100.R	100	126	135 150 175 200 250 300 350 400 450 500	≈ 3.20
TC60M.125.R	125	151	135 150 175 200 250 300 350 400 450 500	≈ 3.37
TC60M.150.R	150	176	135 150 175 200 250 300 350 400 450 500	≈ 3.55
TC60M.175.R	175	201	135 150 175 200 250 300 350 400 450 500	≈ 3.73
TC60M.200.R	200	226	135 150 175 200 250 300 350 400 450 500	≈ 3.91
TC60M.225.R	225	251	135 150 175 200 250 300 350 400 450 500	≈ 4.10
TC60M.250.R	250	276	135 150 175 200 250 300 350 400 450 500	≈ 4.27
TC60M.275.R	275	301	135 150 175 200 250 300 350 400 450 500	≈ 4.46
TC60M.300.R	300	326	135 150 175 200 250 300 350 400 450 500	≈ 4.64
TC60M.325.R	325	351	135 150 175 200 250 300 350 400 450 500	≈ 4.82
TC60M.350.R	350	376	135 150 175 200 250 300 350 400 450 500	≈ 4.98
TC60M.400.R	400	426	135 150 175 200 250 300 350 400 450 500	≈ 5.34
TC60M.450.R*	450	476	135 150 175 200 250 300 350 400 450 500	≈ 5.69
TC60M.500.R*	500	526	135 150 175 200 250 300 350 400 450 500	≈ 6.05

TCH60M - Open | Crossbars every 2nd link

Part No. Cable chain	Bi [mm]	Ba [mm]	R [mm]	Weight [kg/m]
TCH60M.075.R	75	101	135 150 175 200 250 300 350 400 450 500	≈ 2.77
TCH60M.100.R	100	126	135 150 175 200 250 300 350 400 450 500	≈ 2.86
TCH60M.125.R	125	151	135 150 175 200 250 300 350 400 450 500	≈ 2.94
TCH60M.150.R	150	176	135 150 175 200 250 300 350 400 450 500	≈ 3.04
TCH60M.175.R	175	201	135 150 175 200 250 300 350 400 450 500	≈ 3.12
TCH60M.200.R	200	226	135 150 175 200 250 300 350 400 450 500	≈ 3.21
TCH60M.225.R	225	251	135 150 175 200 250 300 350 400 450 500	≈ 3.31
TCH60M.250.R	250	276	135 150 175 200 250 300 350 400 450 500	≈ 3.39
TCH60M.275.R	275	301	135 150 175 200 250 300 350 400 450 500	≈ 3.49
TCH60M.300.R	300	326	135 150 175 200 250 300 350 400 450 500	≈ 3.58
TCH60M.325.R	325	351	135 150 175 200 250 300 350 400 450 500	≈ 3.67
TCH60M.350.R	350	376	135 150 175 200 250 300 350 400 450 500	≈ 3.75
TCH60M.400.R	400	426	135 150 175 200 250 300 350 400 450 500	≈ 3.93
TCH60M.450.R*	450	476	135 150 175 200 250 300 350 400 450 500	≈ 4.10
TCH60M.500.R*	500	526	135 150 175 200 250 300 350 400 450 500	≈ 4.28

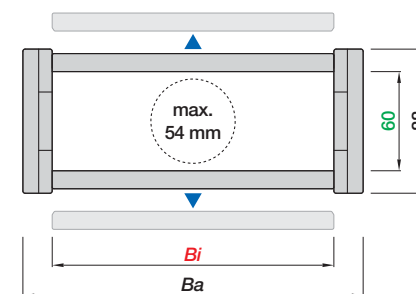
Series TC60M | Product range | TCR60M



TCR60M - Closed | Swarf protection

Part No. Cable chain	Bi [mm]	Ba [mm]	R [mm]	Weight [kg/m]
TCR60M.100.R*	100	126	— 150 175 200 250 300 350 400 450 500	≈ 3.83
TCR60M.125.R	125	151	— 150 175 200 250 300 350 400 450 500	≈ 4.17
TCR60M.150.R	150	176	— 150 175 200 250 300 350 400 450 500	≈ 4.53
TCR60M.175.R	175	201	— 150 175 200 250 300 350 400 450 500	≈ 4.87
TCR60M.200.R	200	226	— 150 175 200 250 300 350 400 450 500	≈ 5.23
TCR60M.250.R	250	276	— 150 175 200 250 300 350 400 450 500	≈ 5.91
TCR60M.300.R	300	326	— 150 175 200 250 300 350 400 450 500	≈ 6.61
TCR60M.350.R	350	376	— 150 175 200 250 300 350 400 450 500	≈ 7.29
TCR60M.400.R*	400	426	— 150 175 200 250 300 350 400 450 500	≈ 7.99

* Available upon request, please consult us for delivery time



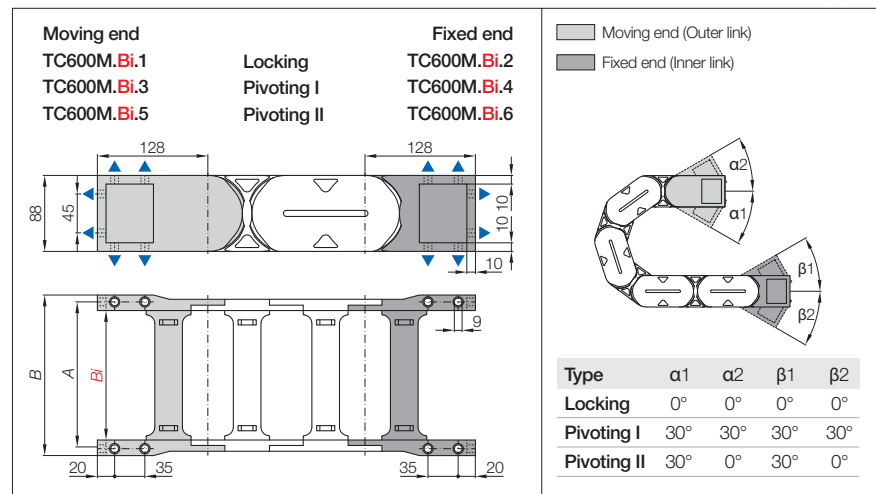
Order example | Cable chains

TC60M . 200 . 250 - 22 pcs
 Series Bi R Links

Series TC60M | MFB mounting brackets | TC60M·TCH60M

MFB mounting brackets | Open

M8 ▲ Assembly options



MFB Locking ► Recommended for vertical hanging and standing applications

MFB Pivoting I ► Recommended for unsupported and gliding applications

MFB Pivoting II ► Recommended for extremely small space applications

Bi [mm]	Part No. MFB locking	Part No. MFB pivoting I	Part No. MFB pivoting II	A [mm]	B [mm]
75 ►	TC600M.075.12	TC600M.075.34	TC600M.075.56	95	111
100 ►	TC600M.100.12	TC600M.100.34	TC600M.100.56	120	136
125 ►	TC600M.125.12	TC600M.125.34	TC600M.125.56	145	161
150 ►	TC600M.150.12	TC600M.150.34	TC600M.150.56	170	186
175 ►	TC600M.175.12	TC600M.175.34	TC600M.175.56	195	211
200 ►	TC600M.200.12	TC600M.200.34	TC600M.200.56	220	236
225 ►	TC600M.225.12	TC600M.225.34	TC600M.225.56	245	261
250 ►	TC600M.250.12	TC600M.250.34	TC600M.250.56	270	286
275 ►	TC600M.275.12	TC600M.275.34	TC600M.275.56	295	311
300 ►	TC600M.300.12	TC600M.300.34	TC600M.300.56	320	336
325 ►	TC600M.325.12	TC600M.325.34	TC600M.325.56	345	361
350 ►	TC600M.350.12	TC600M.350.34	TC600M.350.56	370	386
400 ►	TC600M.400.12	TC600M.400.34	TC600M.400.56	420	436
450 ►	TC600M.450.12*	TC600M.450.34*	TC600M.450.56*	470	486
500 ►	TC600M.500.12*	TC600M.500.34*	TC600M.500.56*	520	536



For the complete Part NO. of MFB mounting brackets, please specify index 1 or 2 into

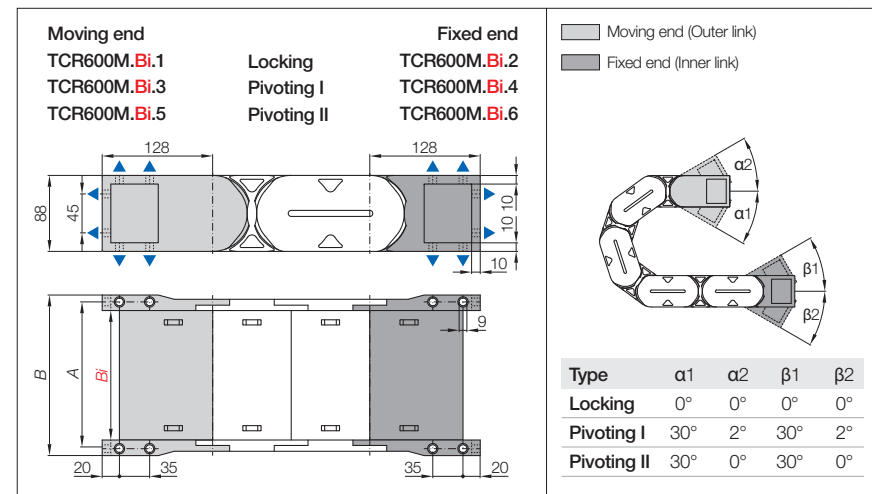
1 = Links for odd

2 = Links for even

Series TC60M | MFB mounting brackets | TCR60M

MFB mounting brackets | Closed

M8 ▲ Assembly options



MFB Locking ► Recommended for vertical hanging and standing applications

MFB Pivoting I ► Recommended for unsupported and gliding applications

MFB Pivoting II ► Recommended for extremely small space applications

Bi [mm]	Part No. MFB locking	Part No. MFB pivoting I	Part No. MFB pivoting II	A [mm]	B [mm]
100 ►	TCR600M.100.12*	TCR600M.100.34*	TCR600M.100.56*	120	136
125 ►	TCR600M.125.12	TCR600M.125.34	TCR600M.125.56	145	161
150 ►	TCR600M.150.12	TCR600M.150.34	TCR600M.150.56	170	186
175 ►	TCR600M.175.12	TCR600M.175.34	TCR600M.175.56	195	211
200 ►	TCR600M.200.12	TCR600M.200.34	TCR600M.200.56	220	236
250 ►	TCR600M.250.12	TCR600M.250.34	TCR600M.250.56	270	286
300 ►	TCR600M.300.12	TCR600M.300.34	TCR600M.300.56	320	336
350 ►	TCR600M.350.12	TCR600M.350.34	TCR600M.350.56	370	386
400 ►	TCR600M.400.12*	TCR600M.400.34*	TCR600M.400.56*	420	436

* Available upon request, please consult us for delivery time



Order example | MFB mounting brackets

TC600M	.	200	.	2	.	12
Series		Bi		Odd/even		Type

Series TC60M | MFB accessories | C-rails

C-rails

- Standard material of C-rails: galvanized steel
- The tolerance of C-rail length: $\pm 1\text{ mm}$
- Fixed to MFB mounting brackets without any other accessories
- Integrated CableFix strain relief with C-rails: clamps and tiewrap plates



Bi [mm]	Part No. MFB with C-rails*	Part No. C-rail, individual	C-rail length [mm]
75 ▶	□.C	CR.081	81
100 ▶	□.C	CR.106	106
125 ▶	□.C	CR.131	131
150 ▶	□.C	CR.156	156
175 ▶	□.C	CR.181	181
200 ▶	□.C	CR.206	206
225 ▶	□.C	CR.231	231
250 ▶	□.C	CR.256	256
275 ▶	□.C	CR.281	281
300 ▶	□.C	CR.306	306
325 ▶	□.C	CR.331	331
350 ▶	□.C	CR.356	356
400 ▶	□.C	CR.406	406
450 ▶	□.C	CR.456	456
500 ▶	□.C	CR.506	506

* Standard: both MFB ends with one C-rail

Option: both MFB ends with two C-rails - please add index "2", example: TC600M.200.2.12.C2

Please specify standard MFB mounting brackets Part No. into □ ▶ Page 214/215



CableFix clamps

Strain relief with high holding force for one, two or three cables stacked
More information ▶ Page 222

Series TC60M | MFB accessories | Tiewrap plates

Tiewrap plates

- Inner width **Bi** $\leq 175\text{ mm}$
Fixed to MFB mounting brackets without any other accessories
- Inner width **Bi** $> 175\text{ mm}$
Fixed to C-rails of MFB mounting brackets with screws and nuts M6



Bi [mm]	Part No. MFB with ZA*	Part No. ZA, standard	Part No. C-rail, individual	Number of teeth n _z [1]
75 ▶	□.Z	ZA075	—	7
100 ▶	□.Z	ZA100	—	10
125 ▶	□.Z	ZA125	—	12
150 ▶	□.Z	ZA150	—	15
175 ▶	□.Z	ZA175	—	17
200 ▶	□.CZ	ZA175	CR.206	17
225 ▶	□.CZ	ZA100 + ZA100	CR.231	20
250 ▶	□.CZ	ZA100 + ZA125	CR.256	22
275 ▶	□.CZ	ZA125 + ZA125	CR.281	24
300 ▶	□.CZ	ZA125 + ZA150	CR.306	27
325 ▶	□.CZ	ZA150 + ZA150	CR.331	30
350 ▶	□.CZ	ZA150 + ZA175	CR.356	32
400 ▶	□.CZ	ZA125 + ZA125 + ZA125	CR.406	36
450 ▶	□.CZ	ZA125 + ZA150 + ZA150	CR.456	42
500 ▶	□.CZ	ZA150 + ZA150 + ZA175	CR.506	47

* Standard: both MFB ends with one tiewrap plate(ZA)

Option: both MFB ends with two tiewrap plates - please add index "2", example: TC600M.200.2.12.C22

Please specify standard MFB mounting brackets Part No. into □ ▶ Page 214/215



CableFix tiewrap plates

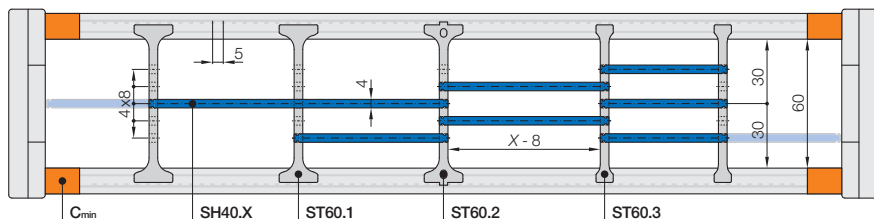
Simple and economical strain relief for multiple cables
More information ▶ Page 223

Default installation position of C-rails and tiewrap plates: **.A1**

To indicate the installation position, please add index **.A1**, **.A2**, **.A3** or **.A4**, example: TC600M.200.2.12.C.A2

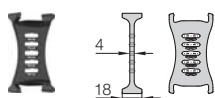


Series TC60M | Interior separation | Vertical-Horizontal



The minimum lateral gap to the side links C_{min} = TC60M: 16mm | TCH60M: 16mm | TCR60M: 0mm
Standard separation: fitted every 2nd link

Vertical separator | Standard | For almost any application

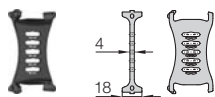


Unassembled: ST60.1

Assembled: ST60.1.A

- Wide base for fitting in cable chains stably
- Movable, easy to adjust the position

Vertical separator | Locking | For side-mounted applications

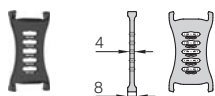


Unassembled: ST60.2

Assembled: ST60.2.A

- Locking, fitted in a specified position securely
- Preset in 5 mm increments

Vertical separator | Narrow | For small cables

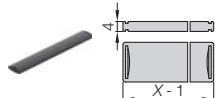


Unassembled: ST60.3

Assembled: ST60.3.A

- Narrow base for small cables
- Movable, easy to adjust the position

Horizontal separator | Locking | For multilayer separation



Unassembled: SH40.X

Assembled: SH40.X.A

- Full or partial width horizontal separator
- Locked securely into vertical separators at both ends

X [mm]	Unassembled	Assembled
050	SH40.050	SH40.050.A
065	SH40.065	SH40.065.A
075	SH40.075	SH40.075.A
100	SH40.100	SH40.100.A
125	SH40.125	SH40.125.A

X [mm]	Unassembled	Assembled
150	SH40.150	SH40.150.A
175	SH40.175	SH40.175.A
200	SH40.200	SH40.200.A
225	SH40.225	SH40.225.A
250	SH40.250	SH40.250.A

Series TC60M | Accessories | Clip extension



Clip extension

- For series TC60M, TCH60M and TCR60M
- Quickly fill or replace conduits and cables, reducing assembly time and cost
- Clip can be configured to the left, the right, both ends or inner sides of the cable chains
- Clip fits to conduits with NW 07, 10, 12, 17, 23, 29, 36, 48 mm
- Standard configuration: 1 clip every 2nd link
- The Part NO. includes clips; the conduits are ordered separately upon request
- For the best use and appearance, make sure the chain links with odd number whenever possible

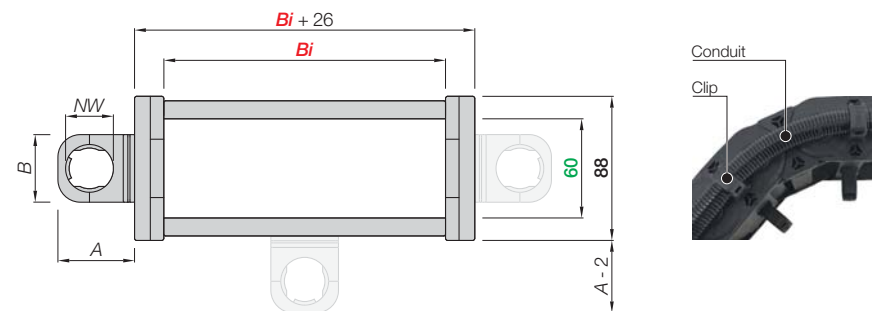
Part No. Left*	Part No. Right*	Part No. Both ends	Part No. Inner sides**	NW Φ[mm]	A [mm]	B [mm]
TC60M.BiEL07.R	TC60M.BiER07.R	TC60M.BiEB07.R	TC60M.BiEN07.R	07	21.5	17.0
TC60M.BiEL10.R	TC60M.BiER10.R	TC60M.BiEB10.R	TC60M.BiEN10.R	10	24.5	20.5
TC60M.BiEL12.R	TC60M.BiER12.R	TC60M.BiEB12.R	TC60M.BiEN12.R	12	27.0	24.0
TC60M.BiEL17.R	TC60M.BiER17.R	TC60M.BiEB17.R	TC60M.BiEN17.R	17	34.0	30.0
TC60M.BiEL23.R	TC60M.BiER23.R	TC60M.BiEB23.R	TC60M.BiEN23.R	23	42.0	38.5
TC60M.BiEL29.R	TC60M.BiER29.R	TC60M.BiEB29.R	TC60M.BiEN29.R	29	48.0	45.5
TC60M.BiEL36.R	TC60M.BiER36.R	TC60M.BiEB36.R	TC60M.BiEN36.R	36	56.0	55.5
TC60M.BiEL48.R	TC60M.BiER48.R	TC60M.BiEB48.R	TC60M.BiEN48.R	48	68.0	67.5

Bi = 075 | 100 | 125 | 150 | 175 | 200 | 225 | 250 | 275 | 300 | 325 | 350 | 400 | 450 | 500

R = 135 | 150 | 175 | 200 | 250 | 300 | 350 | 400 | 450 | 500

* As viewed from the fixed end

** Cable chains with specific widths or bending radii are not suitable for clip configured to inner sides, please consult us



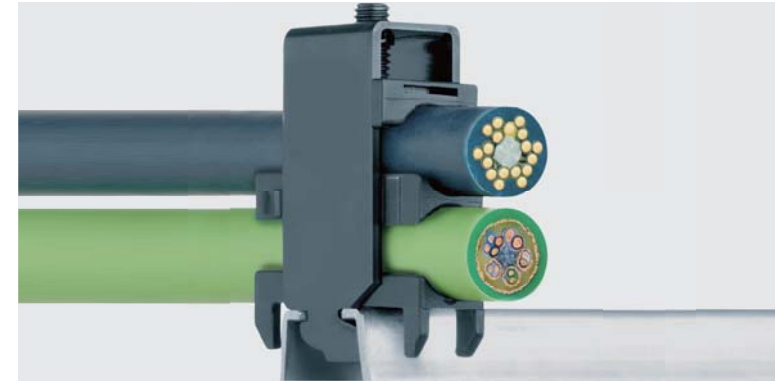
NW Φ[mm]	Part No. Clip	Part No. Conduit
07	FH07	PAE07
10	FH10	PAE10
12	FH12	PAE12
17	FH17	PAE17

NW Φ[mm]	Part No. Clip	Part No. Conduit
23	FH23	PAE23
29	FH29	PAE29
36	FH36	PAE36
48	FH48	PAE48

CableFix

CableFix

Strain relief, fixed securely



CableFix strain relief is specifically designed for use in chains. It offers high holding force to fix cables and hoses securely and long service life. Assembly time is optimised and space is saved.

- Clamps ► Maximum holding force for high dynamic applications
- Tiewrap plates ► Medium holding force for general applications

CableFix | Clamps



Clamps

- For fixing the ends of cables and hoses
- Installed on the C-rails of MFB mounting brackets
- For one, two or three cables stacked
- Tightening torque 1.5Nm
- High holding force for high dynamic applications
- Steel or stainless steel for different applications



Type	Part No. Steel	Part No. Stainless steel	Cable diameter Φ[mm]	B [mm]	H* [mm]
Single clamps					
	CFX12.1	CFX12.1.S	06 - 12	16	54
	CFX14.1	CFX14.1.S	12 - 14	18	50
	CFX16.1	CFX16.1.S	14 - 16	20	52
	CFX18.1	CFX18.1.S	16 - 18	22	54
	CFX20.1	CFX20.1.S	18 - 20	24	56
	CFX22.1	CFX22.1.S	20 - 22	26	58
	CFX26.1	CFX26.1.S	22 - 26	30	67
	CFX30.1	CFX30.1.S	26 - 30	34	71
	CFX34.1	CFX34.1.S	30 - 34	38	75
	CFX38.1	CFX38.1.S	34 - 38	42	79
	CFX42.1	CFX42.1.S	38 - 42	46	83
Double clamps					
	CFX12.2	CFX12.2.S	06 - 12	16	72
	CFX14.2	CFX14.2.S	12 - 14	18	74
	CFX16.2	CFX16.2.S	14 - 16	20	78
	CFX18.2	CFX18.2.S	16 - 18	22	82
	CFX20.2	CFX20.2.S	18 - 20	24	86
	CFX22.2	CFX22.2.S	20 - 22	26	90
	CFX26.2	CFX26.2.S	22 - 26	30	109
	CFX30.2	CFX30.2.S	26 - 30	34	117
	CFX34.2	CFX34.2.S	30 - 34	38	125
Triple clamps					
	CFX12.3	CFX12.3.S	06 - 12	16	100
	CFX14.3	CFX14.3.S	12 - 14	18	96
	CFX16.3	CFX16.3.S	14 - 16	20	102
	CFX18.3	CFX18.3.S	16 - 18	22	108
	CFX20.3	CFX20.3.S	18 - 20	24	114
	CFX22.3	CFX22.3.S	20 - 22	26	120

* H is the approximate value based on the maximum cable diameter

CableFix | Tiewrap plates·C-rails

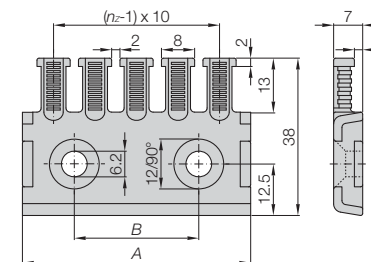


Tiewrap plates

- For fixing the ends of cables and hoses
- Easy to assembly
- Space-saving
- Sturdy and corrosion resistant due to polymer
- Built-in ribs for secure grip on cables and hoses
- Simple and economical, medium holding force



Part No.	Number of teeth nz [1]	A [mm]	B [mm]
Tiewrap plate			
ZA050	5	55	30
ZA075	7	80	55
ZA100	10	105	80
ZA125	12	130	105
ZA150	15	155	130
ZA175	17	180	155



3 installations of tiewrap plates



- Clipped into MFB without any other accessories



- Screwed on MFB with C-rails



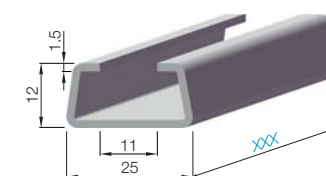
- Screwed outside the chains as an individual part



C-rails

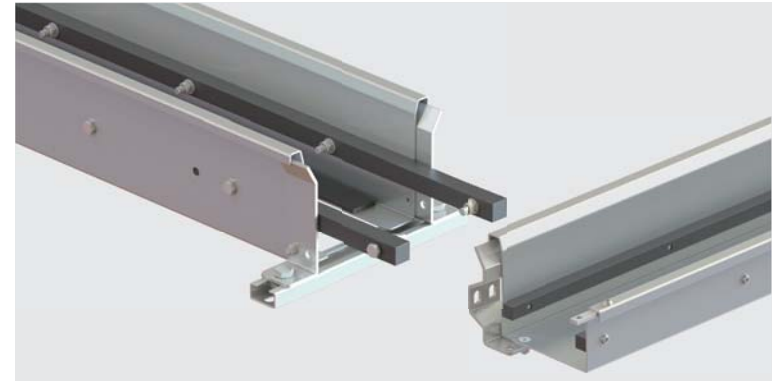
- For installation of clamps and tiewrap plates
- Can be integrated into MFB
- Galvanized steel or stainless steel for different applications
- Length tolerances for C-rails of ±1mm possible

Part No.	Material	Length [mm]
C-rail		
CR.XXX	Galvanized steel	XXX
CR.XXX.S	Stainless steel	XXX



Guide troughs

Safe guide, modular assembly

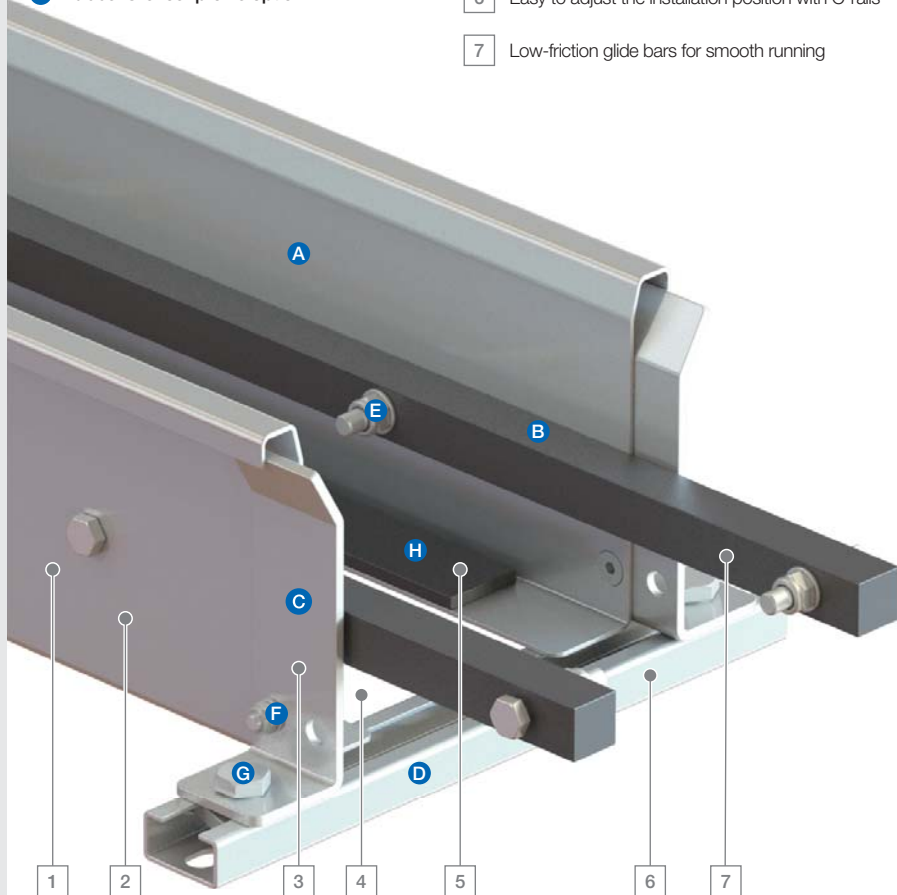


Guide trough systems are necessary for sliding applications. Various modular guide troughs are available for different applications with high stability and long service life.

- GuidEasy ► General and tough for heavy-duty applications
- GuidSide ► Quick assembly for wall-mounted installation

General and tough for heavy-duty applications

- A** Guide trough side part, standard 2m/pcs
 - B** Glide bar, standard 2m/pcs
 - C** Fastening angle
 - D** C-rail
 - E** Bolts for glide bar
 - F** Bolts for fastening angle
 - G** Bolts for C-rail
 - H** Rubber silencer profile option
- 1 Two-piece design, adjustable to the chain width
 - 2 Galvanised steel and stainless steel available
 - 3 Easy and secure installation with no welding
 - 4 Open trough bottom with no dirt accumulation
 - 5 Optional rubber silencer profile for noise-reducing
 - 6 Easy to adjust the installation position with C-rails
 - 7 Low-friction glide bars for smooth running



For chain series	Guide trough set without glide bar	Guide trough set with glide bar	Installation set with C-rail
E26	GE.1.075.S ¹ /S1 ²	GE.2.075.S ¹ /S1 ²	GE.3.075.XXX.S ¹ /S1 ^{2*}
E36	GE.1.100.S ¹ /S1 ²	GE.2.100.S ¹ /S1 ²	GE.3.100.XXX.S ¹ /S1 ^{2*}
G34 G34H G34T	GE.1.110.S ¹ /S1 ²	GE.2.110.S ¹ /S1 ²	GE.3.110.XXX.S ¹ /S1 ^{2*}
G44 G44H G44T	GE.1.130.S ¹ /S1 ²	GE.2.130.S ¹ /S1 ²	GE.3.130.XXX.S ¹ /S1 ^{2*}
G60 G60H G60T	GE.1.180.S ¹ /S1 ²	GE.2.180.S ¹ /S1 ²	GE.3.180.XXX.S ¹ /S1 ^{2*}
G80 G80H G80T	GE.1.220.S ¹ /S1 ²	GE.2.220.S ¹ /S1 ²	GE.3.220.XXX.S ¹ /S1 ^{2*}
GS80 GS80H GS80T	GE.1.220.S ¹ /S1 ²	GE.2.220.S ¹ /S1 ²	GE.3.220.XXX.S ¹ /S1 ^{2*}
TC60M TCH60M TCR60M	GE.1.180.S ¹ /S1 ²	GE.2.180.S ¹ /S1 ²	GE.3.180.XXX.S ¹ /S1 ^{2*}

GuidEasy | Individual components H_{Ga} = 075, 100, 110, 130, 180, 220; T₂ = 20, 30

Guide trough set without glide bar GE.1.H _{Ga} .S ¹ /S1 ²	Part NO.	Quantity
A Guide trough side part, 2m/pcs	GES.H _{Ga} .1998.S ¹ /S1 ²	2
Guide trough set with glide bar GE.2.H _{Ga} .S ¹ /S1 ²	Part NO.	Quantity
A Guide trough side part, 2m/pcs	GES.H _{Ga} .1998.S ¹ /S1 ²	2
B Glide bar, 2m/pcs	GEB.T ₂ .1998.W ³ .ESD ⁴	2
E Bolts for glide bar: 1 M8x35 hexagon-head screw + 1 M8 hexagon nut and washer (T ₂ = 20)	SN.H.M8.35.S ¹ /S1 ²	11
E Bolts for glide bar: 1 M10x50 hexagon-head screw + 1 M10 hexagon nut and washer (T ₂ = 30)	SN.H.M10.50.S ¹ /S1 ²	11
Installation set with C-rail GE.3.H _{Ga} .XXX.S ¹ /S1 ^{2*}	Part NO.	Quantity
C Fastening angle	GEF.H _{Ga} .S ¹	2
D C-rail	GEC.XXX.S ¹ /S1 ^{2*}	1
F Bolts for fastening angle: 1 M6x16 countersunk-head screw + 1 M6 hexagon nut and washer	SN.C.M6.16.S ¹ /S1 ²	4
G Bolts for C-rail: 1 M10x16 hexagon-head screw + 1 M10 square nut and washer	SN.H.M10.16.S ¹ /S1 ²	2

* XXX Depends on C-rail length ► Page 230/231

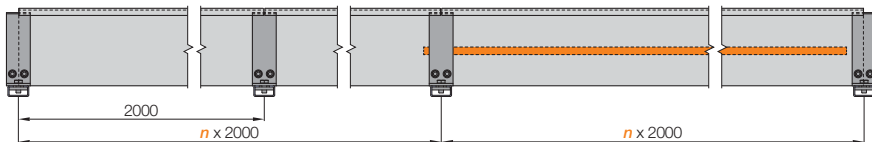
- 1) 304 stainless steel available - please add index "S" to the Part No.
- 2) 316L stainless steel available - please add index "S1" to the Part No.
- 3) Super wear-resistant glide bar available - please add index "W" to the Part No.
- 4) ESD glide bar available - please add index "ESD" to the Part No.

GuidEasy | Order examples

 Calculation

- The fixed end in the centre of the travel
- n = half of the travel rounded to 2m sections

- Guide trough sets without glide bars = n
- Guide trough sets with glide bars = n
- Installation sets = $2n + 1$

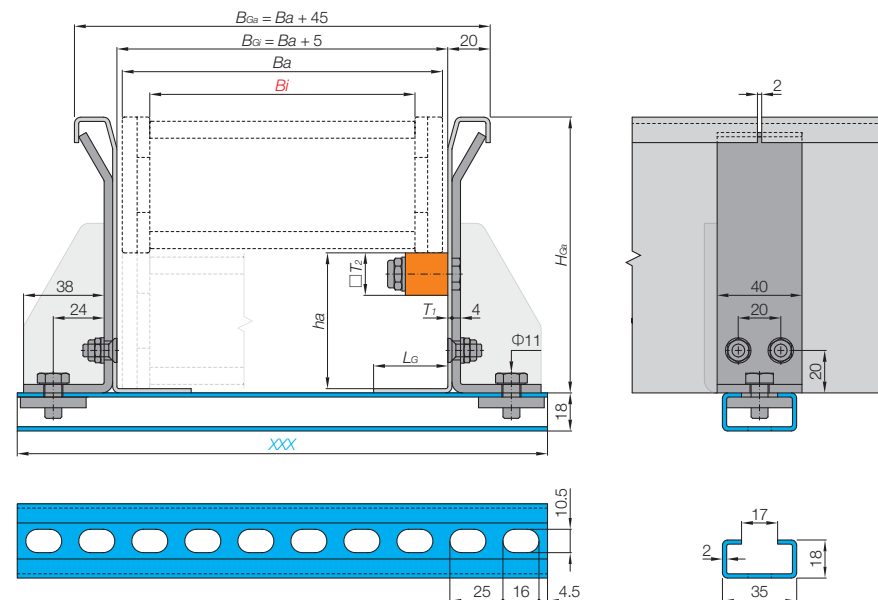

 Order example

Length of travel: 30m, centre fixed
Cable chain series: G44.150.200 ► **XXX = 300**

Complete GuidEasy guide trough systems

- 1) Guide trough sets without glide bars **GE.1.130** - **8 sets**
- 2) Guide trough sets with glide bars **GE.2.130** - **8 sets**
- 3) Installation sets with C-rails **GE.3.130.300** - **17 sets**

GuidEasy | Installation dimensions



- Guide trough side part
- Glide bar
- C-rail
- Fastening angle

Chain series	ha [mm]	H _{Ga} [mm]	Ba [mm]	B _{Gi} [mm]	XXX [mm]	L _G [mm]	T ₁ [mm]	T ₂ [mm]
E26	36	75	Bi + 15	Bi + 20	*	25	2	20
E36	50	100	Bi + 17	Bi + 22	*	35	2	20
G34 G34H G34T	54	110	Bi + 22	Bi + 27	*	35	2	20
G44 G44H G44T	64	130	Bi + 26	Bi + 31	*	35	2	20
G60 G60H G60T	88	180	Bi + 34	Bi + 39	*	50	2	30
G80 G80H G80T	108	220	Bi + 50	Bi + 55	*	50	2.5	30
GS80 GS80H GS80T	108	220	Bi + 30	Bi + 35	*	50	2.5	30
TC60M TCH60M TCR60M	88	180	Bi + 26	Bi + 31	*	50	2	30

* XXX ► Page 230/231

GuidEasy | C-rails

GuidEasy | C-rails

E26

Bi [mm]	XXX [mm]	Part No. Installation set
25	▶ 150	upon request
40	▶ 175	GE.3.075.175
60	▶ 200	GE.3.075.200
80	▶ 225	GE.3.075.225
100	▶ 250	GE.3.075.250

E36

Bi [mm]	XXX [mm]	Part No. Installation set
50	▶ 200	GE.3.100.200
65	▶ 200	GE.3.100.200
75	▶ 225	GE.3.100.225
90	▶ 225	GE.3.100.225
100	▶ 250	GE.3.100.250
125	▶ 275	GE.3.100.275
150	▶ 300	GE.3.100.300
175	▶ 325	GE.3.100.325

G34 | G34H | G34T

Bi [mm]	XXX [mm]	Part No. Installation set
50	▶ 200	GE.3.110.200
75	▶ 225	GE.3.110.225
100	▶ 250	GE.3.110.250
125	▶ 275	GE.3.110.275
150	▶ 300	GE.3.110.300
175	▶ 325	GE.3.110.325
200	▶ 350	GE.3.110.350
225	▶ 375	GE.3.110.375
250	▶ 400	GE.3.110.400
275	▶ 425	GE.3.110.425
300	▶ 450	GE.3.110.450
350	▶ 500	GE.3.110.500
400	▶ 550	GE.3.110.550

G44 | G44H | G44T

Bi [mm]	XXX [mm]	Part No. Installation set
50	▶ 200	GE.3.130.200
75	▶ 225	GE.3.130.225
100	▶ 250	GE.3.130.250
125	▶ 275	GE.3.130.275
150	▶ 300	GE.3.130.300
175	▶ 325	GE.3.130.325
200	▶ 350	GE.3.130.350
225	▶ 375	GE.3.130.375
250	▶ 400	GE.3.130.400
275	▶ 425	GE.3.130.425
300	▶ 450	GE.3.130.450
350	▶ 500	GE.3.130.500
400	▶ 550	GE.3.130.550

G60 | G60H | G60T

Bi [mm]	XXX [mm]	Part No. Installation set
75	▶ 225	GE.3.180.225
100	▶ 250	GE.3.180.250
125	▶ 275	GE.3.180.275
150	▶ 300	GE.3.180.300
175	▶ 325	GE.3.180.325
200	▶ 350	GE.3.180.350
225	▶ 375	GE.3.180.375
250	▶ 400	GE.3.180.400
275	▶ 425	GE.3.180.425
300	▶ 450	GE.3.180.450
325	▶ 475	GE.3.180.475
350	▶ 500	GE.3.180.500
400	▶ 550	GE.3.180.550
450	▶ 600	GE.3.180.600
500	▶ 650	GE.3.180.650

G80 | G80H | G80T

Bi [mm]	XXX [mm]	Part No. Installation set
75	▶ 250	GE.3.220.250
100	▶ 275	GE.3.220.275
125	▶ 300	GE.3.220.300
150	▶ 325	GE.3.220.325
175	▶ 350	GE.3.220.350
200	▶ 375	GE.3.220.375
225	▶ 400	GE.3.220.400
250	▶ 425	GE.3.220.425
275	▶ 450	GE.3.220.450
300	▶ 475	GE.3.220.475
325	▶ 500	GE.3.220.500
350	▶ 525	GE.3.220.525
400	▶ 575	GE.3.220.575
450	▶ 625	GE.3.220.625
500	▶ 675	GE.3.220.675

GS80 | GS80H | GS80T

Bi [mm]	XXX [mm]	Part No. Installation set
75	▶ 225	GE.3.220.225
100	▶ 250	GE.3.220.250
125	▶ 275	GE.3.220.275
150	▶ 300	GE.3.220.300
175	▶ 325	GE.3.220.325
200	▶ 350	GE.3.220.350
225	▶ 375	GE.3.220.375
250	▶ 400	GE.3.220.400
275	▶ 425	GE.3.220.425
300	▶ 450	GE.3.220.450
325	▶ 475	GE.3.220.475
350	▶ 500	GE.3.220.500
400	▶ 550	GE.3.220.550
450	▶ 600	GE.3.220.600
500	▶ 650	GE.3.220.650

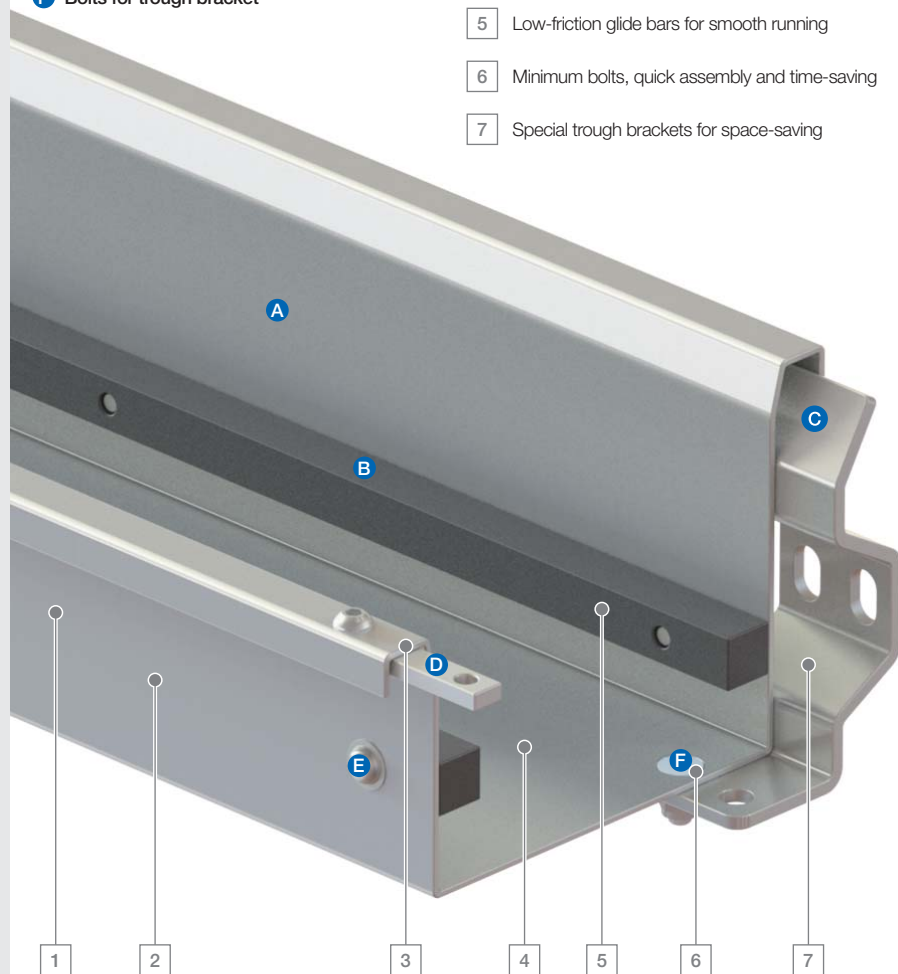
TC60M | TCH60M |
TCR60M

Bi [mm]	XXX [mm]	Part No. Installation set
75	▶ 225	GE.3.180.225
100	▶ 250	GE.3.180.250
125	▶ 275	GE.3.180.275
150	▶ 300	GE.3.180.300
175	▶ 325	GE.3.180.325
200	▶ 350	GE.3.180.350
225	▶ 375	GE.3.180.375
250	▶ 400	GE.3.180.400
275	▶ 425	GE.3.180.425
300	▶ 450	GE.3.180.450
325	▶ 475	GE.3.180.475
350	▶ 500	GE.3.180.500
400	▶ 550	GE.3.180.550
450	▶ 600	GE.3.180.600
500	▶ 650	GE.3.180.650

Quick assembly for wall-mounted installation

- A** U-shaped guide trough, standard 2m/pcs
- B** Glide bar, standard 2m/pcs
- C** Trough bracket
- D** Anti-misalignment nut
- E** Bolts for glide bar
- F** Bolts for trough bracket

- 1 One-piece design, easy to assembly
- 2 Galvanised steel and stainless steel available
- 3 Secure connection without misalignment
- 4 Open(standard) or closed(cleanroom)
- 5 Low-friction glide bars for smooth running
- 6 Minimum bolts, quick assembly and time-saving
- 7 Special trough brackets for space-saving



For chain series	Guide trough set without glide bar	Guide trough set with glide bar	Installation set with nut
			
E26.040.R	GS.1.075.040.S ¹ /S1 ²	GS.2.075.040.S ¹ /S1 ²	GS.3.100.4.S ¹ /S1 ²
E26.060.R	GS.1.075.060.S ¹ /S1 ²	GS.2.075.060.S ¹ /S1 ²	GS.3.100.4.S ¹ /S1 ²
E26.080.R	GS.1.075.080.S ¹ /S1 ²	GS.2.075.080.S ¹ /S1 ²	GS.3.100.4.S ¹ /S1 ²
E26.100.R	GS.1.075.100.S ¹ /S1 ²	GS.2.075.100.S ¹ /S1 ²	GS.3.100.4.S ¹ /S1 ²
E36.050.R	GS.1.100.050.S ¹ /S1 ²	GS.2.100.050.S ¹ /S1 ²	GS.3.100.5.S ¹ /S1 ²
E36.075.R	GS.1.100.075.S ¹ /S1 ²	GS.2.100.075.S ¹ /S1 ²	GS.3.100.5.S ¹ /S1 ²
E36.100.R	GS.1.100.100.S ¹ /S1 ²	GS.2.100.100.S ¹ /S1 ²	GS.3.100.5.S ¹ /S1 ²

GuidSide | Individual components $H_{Ga} = 075, 100; T_1 = 4, 5$

Guide trough set without glide bar GS.1.H _{Ga} .Bi.S ¹ /S1 ²	Part NO.	Quantity
A U-shaped guide trough, 2m/pcs	GSU.H _{Ga} .1998.S ¹ /S1 ²	1
Guide trough set with glide bar GS.2.H _{Ga} .Bi.S ¹ /S1 ²	Part NO.	Quantity
A U-shaped guide trough, 2m/pcs	GSU.H _{Ga} .1998.S ¹ /S1 ²	1
B Glide bar, 2m/pcs	GEB.15.1998.W ³ .ESD ⁴	2
E Bolts for glide bar: 1 M6x16 half-round head screw	SN.B.M6.16.S ¹ /S1 ²	11
Installation set GS.3.100.T ₁ .S ¹ /S1 ²	Part NO.	Quantity
C Trough bracket	GSF.100.T ₁ .S ¹	1
D Anti-misalignment nut: 1 rectangular double hole nut + 2 M6x8 half-round head screws	SN.R.M6.8.S ¹ /S1 ²	1
F Bolts for trough bracket: 1 M6x16 countersunk-head screw + 1 M6 hexagon nut and washer	SN.C.M6.16.S ¹ /S1 ²	2

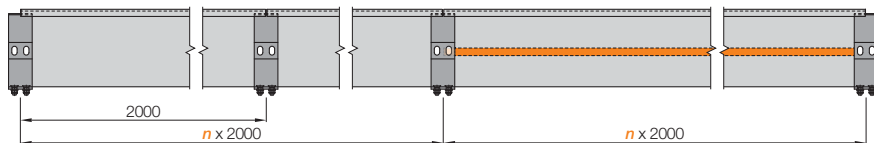
- 1) 304 stainless steel available - please add index "S" to the Part No.
- 2) 316L stainless steel available - please add index "S1" to the Part No.
- 3) Super wear-resistant glide bar available - please add index "W" to the Part No.
- 4) ESD glide bar available - please add index "ESD" to the Part No.

GuidSide | Order examples

Calculation

- The fixed end in the centre of the travel
- n = half of the travel rounded to 2m sections

- Guide trough sets without glide bars = n
- Guide trough sets with glide bars = n
- Installation sets = $2n + 1$



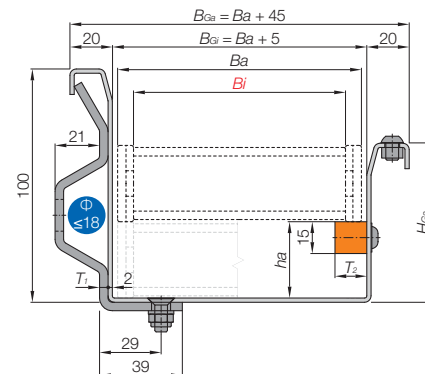
Order example

Length of travel: 15m, centre fixed
Cable chain series: E26.060.100

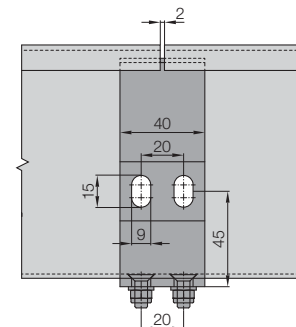
Complete GuidSide guide trough systems

- 1) Guide trough sets without glide bars **GS.1.075.060** - 4 sets
- 2) Guide trough sets with glide bars **GS.2.075.060** - 4 sets
- 3) Installation sets with nuts **GS.3.110.4** - 9 sets

GuidSide | Installation dimensions



- U-shaped guide trough
- Glide bar
- Trough bracket
- Cable



Chain series	ha [mm]	H _{Ga} [mm]	Ba [mm]	B _{Gi} [mm]	B _{Ga} [mm]	T ₁ [mm]	T ₂ [mm]
E26.040.R	36	75	55	60	100	4	15
E26.060.R	36	75	75	80	120	4	15
E26.080.R	36	75	95	100	140	4	15
E26.100.R	36	75	115	120	160	4	15
E36.050.R	50	100	67	72	112	5	15
E36.075.R	50	100	92	97	137	5	15
E36.100.R	50	100	117	122	162	5	15

LONGO guidelines for cable chain systems



■ Application description _____

■ Type of application

						
☐ Unsupported application	☐ Gliding application	☐ Vertical hanging	☐ Vertical standing	☐ Side-mounted straight	☐ Side-mounted rotary	☐ Other application

■ Environment

Indoor/Outdoor _____ Temperature _____ [°C] Humidity _____ [%]
Dust, dirt, chips, chemicals _____ Others _____

■ Dynamics

Travel _____ [m] Fill weight _____ [kg/m] Speed _____ [m/s]
Acceleration _____ [m/s²] Cycles/Day _____ Days/Year _____

■ Installation Space

Max height _____ [mm] Max width _____ [mm] Min bending radius _____ [mm]
Deviation of the centre point _____ [mm] Assembly point _____

■ Cables/Hoses

NO.	Type	Number	Outer diameter [mm]	Weight [kg/m]	Bending Radius [mm]

■ Further requirements

☐ Open ☐ Pivoting bracket ☐ Strain relief ☐ Along outer radius ☐ Separators
☐ Closed ☐ Locking bracket ☐ Opened on both sides ☐ Along inner radius ☐ Guide troughs
Special requests _____

Please scan the QR code on top right corner, fill in the page and send it to us, we will reply as soon as possible

www.longo-tech.com



LONGO Intelligence-tech(Shanghai)Co.,Ltd

Room 1005, Building A, No. 199, Jinwan Road, Pudong, Shanghai

Code: 201206

Tel: 021-58447232

Fax: 021-58447206

Email: info@longo-tech.com