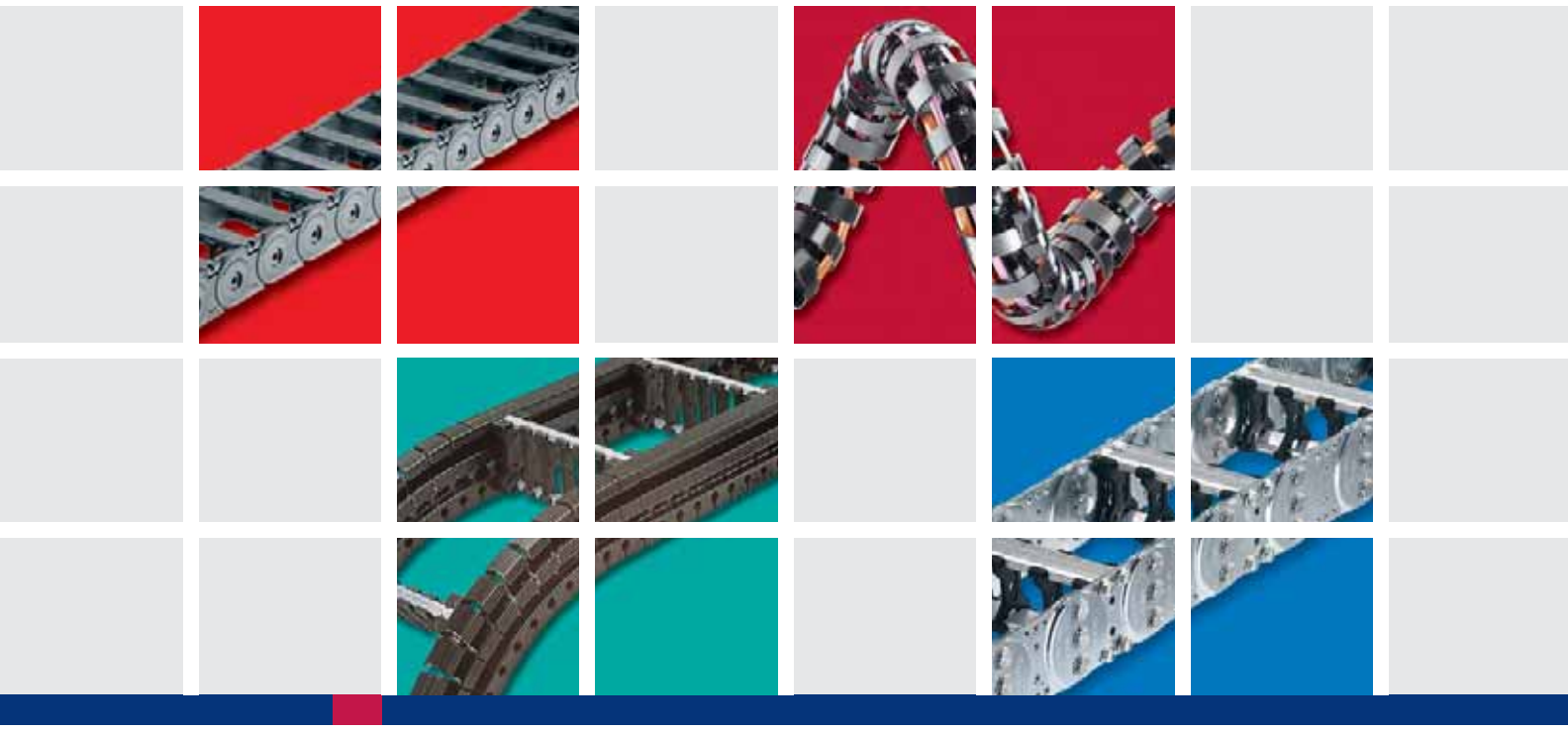
KABELSCHLEPP

the power to innovate

Energy in Motion.

Steel and plastic cable carrier systems



KABELSCHLEPP
the power to innovate

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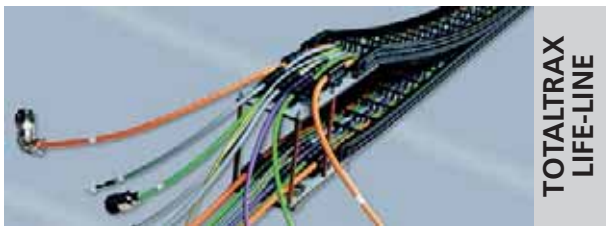


Energy needs guidance:
A suitable solution for every situation

Wherever you look: production industry is accelerating. Shorter production times, higher batch numbers, faster tool changing. All this is resulting in one of our inventions becoming more and more important: **The cable carrier**.

Global Player from Germany

10 subsidiary companies, representations in 40 countries and an unchallenged position as one of the technology leaders make us successful globally. Our global sales network ensures not only fast delivery, but also that we are always close to you and always reachable.

Wherever perfectly working cable carrier systems are involved – regardless of whether proven standard solutions or custom solutions – we are there for you.

You can rely on it!

Jointly successful – across all borders: Experience how KABELSCHLEPP makes this challenge a reality. We would be happy to hear from you.

From standard to customized

If you are looking for a certain installation situation, you will definitely find it on the following pages: Whether steel or plastic, two-dimensionally or three-dimensionally movable, covered or open. Mostly , one standard cable carrier, which you can plan yourself with a few criteria, is enough. Our standard cable and hose carrier systems can be designed quickly and easily, they are cost-effective and generally available ex-warehouse within a short time.

When the planning becomes more difficult, our experienced consultants are happy to help you. Even customized special models are not a problem.

Full function under extreme conditions: KABELSCHLEPP in DASA space projects.

For safely going up and down: KABELSCHLEPP in the Eiffel Tower, Paris.

Reliability on the road: KABELSCHLEPP in the sliding doors of the DaimlerChrysler Minivan.

TOTALTRAX – Everything from a single source

From our expertise in the area of cable carriers, you can also benefit in respect of other related things: Our LIFE-LINEs are cables that satisfy particularly stringent quality requirements.
And our TOTALTRAX system goes one step further: We supply you with complete cable and hose carrier systems, including the chain, cables, plugs and connectors, all ready-to-install. The complete cable carrier system will be supplied to you "just-in-time" and ready to install.

Complete TOTALTRAX 3-axis cable and hose carrier system with chain, cables, plugs and connectors, pre-mounted on a shipping crate.

Service that you can rely on

Our service team takes over the planning and execution of the assembly of cable carrier systems even with difficult assembly conditions.

- Complete mounting with a guide channel
- Coiling and uncoiling of cable carrier systems in case of long travel lengths
- Assembly at significant heights (e. g. crane systems)

The specialists of our service center provide you with the support that you need.

You will see: With KABELSCHLEPP, you make a decision in favour not only of a cable carrier, but of a totally harmonised system.

KABELSCHLEPP

the power to innovate

Do stop by our page on the Internet:

www.kabelschlepp.de

Cut down your construction times with the free CAD library powerPARTS®.

At www.kabelschlepp.de, you can find a link for directly inserting 2D-/3D-CAD-data of the KABELSCHLEPP cable carrier systems.

General abbreviations

a_T = Distance from inside of side chain link up to the middle of the first /last divider

a_x = Divider center-to-center distance

h_{1-4} = Distance of the height division in the divider

B_{EF} = Total width of the cable carrier across the connection

B_{EF}' = Total width of the cable carrier with sliding discs (K Series) and glide shoes (QUANTUM)

B_i = Inside width in the chain/hose cross-section

B_k = Width of the cable carrier

B_{St} = Stay width in case of hole stays

b_A = Distance between the connection holes

c = Distance between the holes in case of hole stays (c_{min} = 4 mm)

d = Cable outer diameter

d_R = Tube diameter in case of plastic-roller stays

D = Hole diameter

q_k = Weight of the cable carrier (without connection)

h_G = Chain link height

h_G' = Chain link height including glide shoe

h_i = Inside height in the chain-/hose cross-section

h_i' = Inside height across the hinge point

H = Connection height

H_i = Inside height in the top-mounted-frame stay

H_z = Mounting height

KR = Bend radius of the cable carrier

l_A = Length of the connector

l_{1-4} = Connection dimensions

L_B = Bend length

L_f = Unsupported length

L_k = Length of the cable carrier

L_{ES} = Length of the cable carrier conduit

L_S = Max. length of the travel path

L_V = Fixed point displacement

n_H = Number of height separations

n_Z = Number of comb teeth(strain relief)

q_z = Additional load

t = Pitch

s_T = Divider thickness

s_H = Thickness of the height division

Selection of the cable carrier

Step by step to the suitable cable carrier

Unsupported arrangements are used in most applications. Here, the driver connection of the cable carrier is fastened to the movable part of the plant and moves with it in a horizontal plane. The upper trough of the cable carrier does not have any sag worth mentioning and moves freely above the feed guide or the lower trough.

The steps necessary for designing a cable carrier for unsupported arrangements are shown in the following points.

Possible other movement sequences and arrangements can be found from page 230 onwards. When designing a cable carrier for these arrangements, other design parameters must be taken into consideration.

Note: Laying service

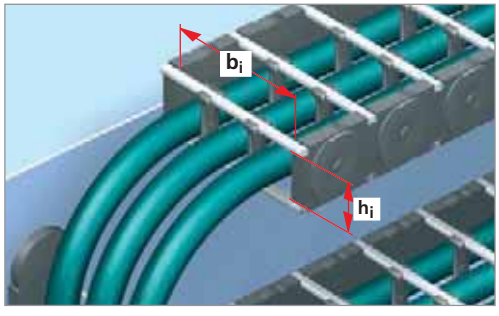
Our system consultants would be happy to carry out, on your behalf, the design of your cable and hose carrier system – free of charge, competently and quickly.

Please do get in touch with us.

An overview of the most important design steps for unsupported applications

Detailed data can be found on the following pages. Depending on the ambient conditions, a decision must first be made as to whether a cable carrier system of steel or plastic should be used.

1



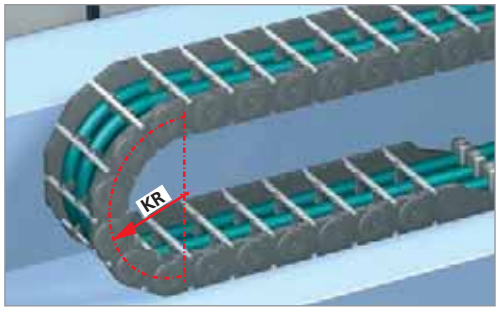
Determining the inner dimensions

taking into account the cables and hoses to be laid and the available installation space.

Covered cable carrier?

Check whether, owing to the ambient influences, a covered cable carrier should be used.

2



Determining the bend radius

The bend radius depends on the cables used. Here, the specifications of the cable manufacturer must be taken into account.

We recommend the use of KABELSCHLEPP LIFE-LINE cables that have been specially designed for use in cable carriers.

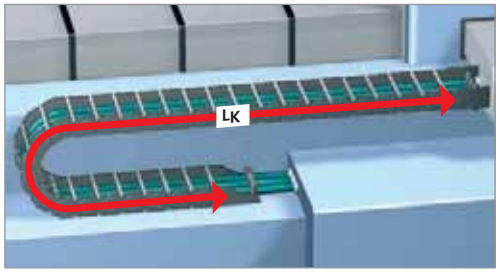
Selection of the cable carrier

3

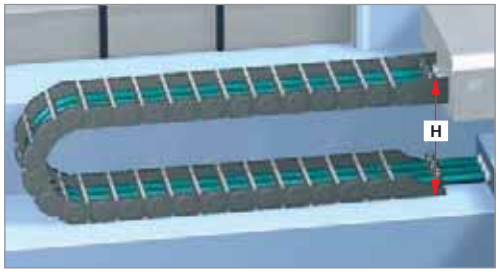
Selection of the product line and type

From our product overview, select the cable carrier suitable for your application, taking the application area, the size and the travel speed into consideration.

4

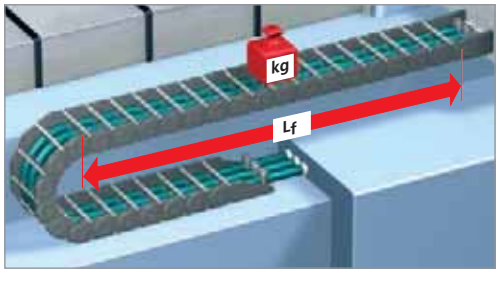


Calculation of the chain length



Calculation of the connection height

5



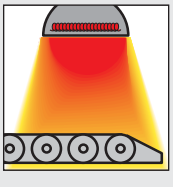
Checking the permissible unsupported length and if applicable, the further procedure

Note:

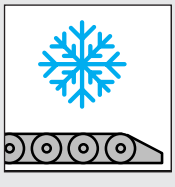
Cable carriers made of special materials

For special ambient conditions, there are cable carriers made of special materials available.
Please do get in touch with us, we would be happy to advise you.

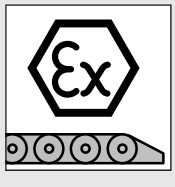
High-temperature-resistant cable carriers



Cold storage resistant cable carriers



Ex-protected cable carriers



ESD Cable carriers

Selection of the cable carrier

1 Determining the inner dimensions

The number, type and diameter of the cables to be laid determine the inner dimensions and the inner distribution of the cable carrier

The space required by the cables and hoses can be calculated taking into consideration the following design instructions. The installation conditions give the required clear height and the inside width of the cable carrier.

The cables and hoses must be able to move freely inside the cable carrier. The following are the guide values for the dimensions of the required free space:

for round cables:	10 % of the cable diameter
for flat cables:	10 % of the cable width/cable thickness
for hoses:	20 % of the hose diameter

Cables lying next to each other with greatly differing diameters should be separated by dividers.

Cables of greatly differing diameters laying immediately next to each other must be avoided.

If laying several cables without separators is unavoidable, care should be taken that the remaining free passage height is lower than the smallest cable diameter. Only thus can the cables be prevented from getting wrapped around one another.

In case of multi-layer laying, we recommend providing a height separation between the individual layers.

Custom-made hole stays or separation by means of dividers prevent cables lying next to each other from rubbing against each other. In many cases, laying every cable in a separate chamber is advantageous.

A height separation must always be provided between flat cables stacked in several layers.

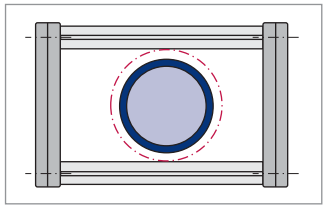
Pressure hoses lengthen or shorten under changing pressure stresses!

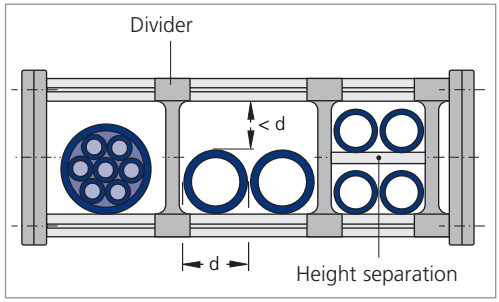
Shortening or lengthening of the hoses can only be compensated in the chain bend. Here, too, the calculated clear space must be retained.

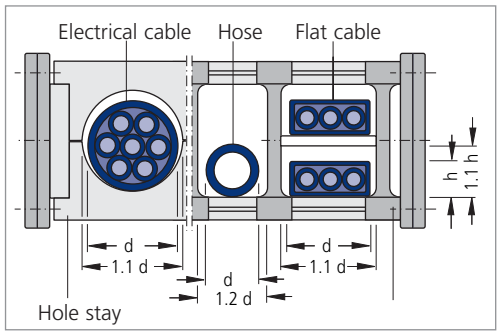
Weight distribution in case of cable laying

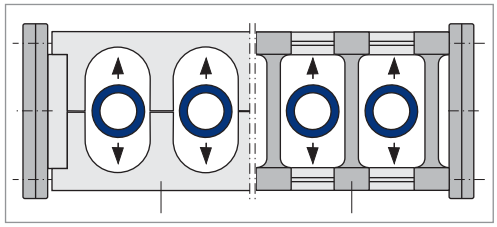
When laying the cables, please ensure that the cable weight is distributed symmetrically across the width of the cable carrier. The maximum life of the cable carrier can be achieved by uniform loading.

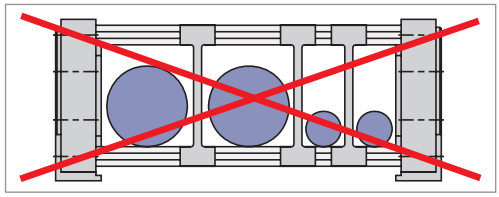
! Basically, only such cables should be used, as are suitable for use in cable carriers, such as e.g. KABELSCHLEPP LIFE-LINE cables.



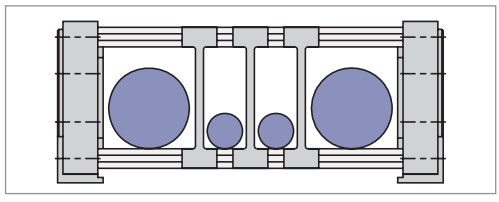








■ Unfavorable weight distribution



■ Favorable weight distribution

Selection of the cable carrier

Is a covered cable carrier (TUBE SERIES) necessary?

In case of applications subject to machining chips or serious contamination, covered or closed cable carriers of the TUBE SERIES should be used.

2 Calculation of the bend radius

The bend radius is determined by two factors:

1. The largest permissible bend radius of the cables gives the smallest permissible bend radius of the cable carrier (in case of a smaller bend radius, the cables would be bent to an impermissible extent).

   Generally, the thickest or the stiffest cable to be carried determines the largest permissible minimum bend radius.

2. The available installation space determines the possible bend radius of the cable carrier. This must be checked with the specifications of the cables.

Note:

Life of cables

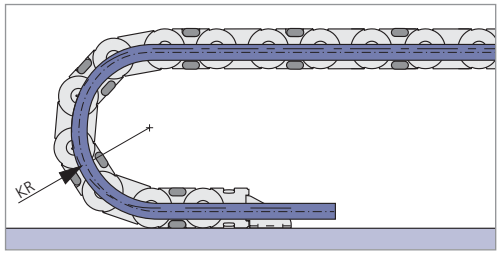
A greater bend radius of the cable carrier and hence a greater bend radius (than the permissible minimum bend radius) of the cables generally increases the life of the cables. Thus, if it is possible, preferably select a somewhat larger bend radius.

When using our LIFE-LINE cables, in many cases, a smaller bend radius can be selected.

Basically, it must be ensured that the cables can take the bend radius KR without any force being necessary.

They must be able to move freely in the longitudinal direction and must not exert any tensile forces on the cable carrier in the bend.

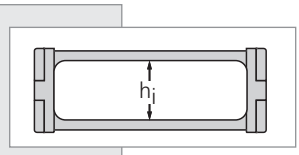
In case of multilayer laying, the cables must be drawn into the cable carrier in such a way that they have a corresponding clearance between one another even in the bend of the chain.

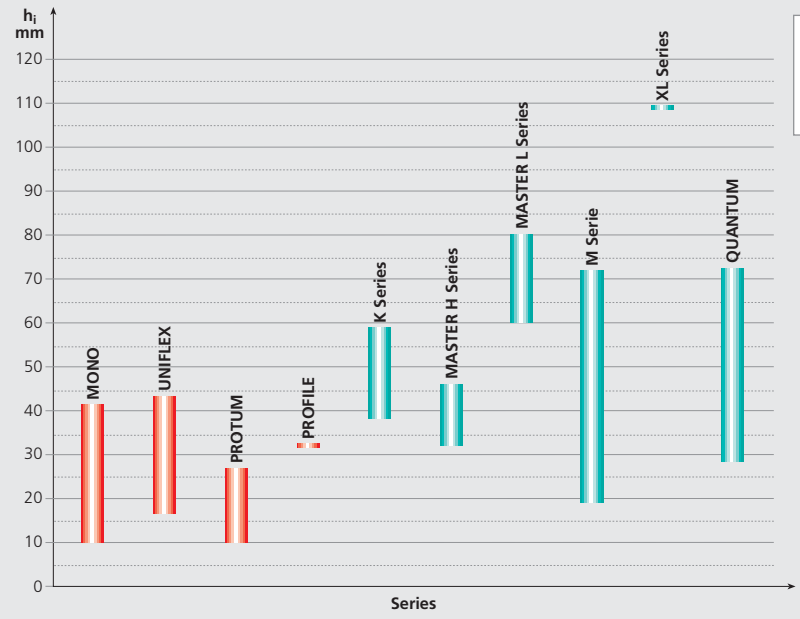


Selection of the cable carrier

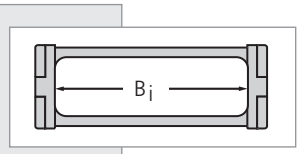
3 Selection of the product line and type

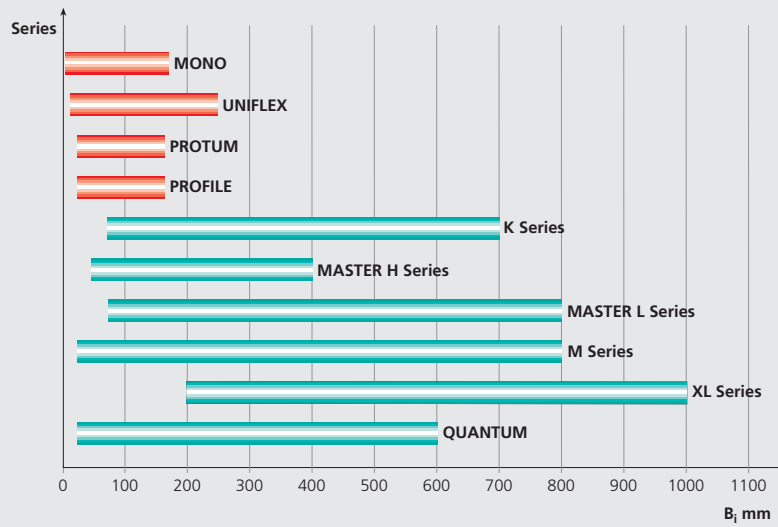
Inside height h_i



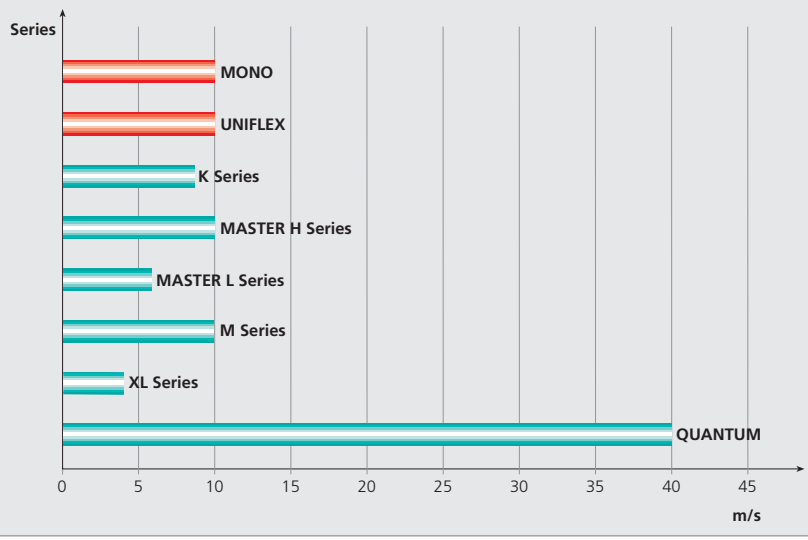


Inside width B_i





Travel speed – unsupported



BASIC-LINE

Solid plastic cable carriers with fixed chain widths

- Solid plastic cable carriers with fixed chain widths
- Cost-effective for standard applications
- Many types available immediately ex-stock worldwide

Series	Inside or outside: Hinged, openable and detachable brackets	Inside/Outside: Not to be opened	Covered variants TUBE SERIES
MONO ■ Single unit chain links with the option of either fixed or openable brackets ■ Simple and quick assembly ■ End connector with integrated strain relief	Types 0130, 0180, 0450*, 0625*	Types 0132, 0182, 0202, 0320*, 0450*, 0625*	
UNIFLEX ■ Openable either inwards or outwards according to design ■ Robust, double stroke system for long unsupported length ■ Particularly high torsional rigidity ■ Open, half-covered and completely covered designs	Designs .030, .040		Designs .050, .060, .080

* Opening possibilities depend on the respective type.

BASIC-LINE*PLUS*

Solid plastic cable carriers with fixed chain widths

- Solid plastic cable carriers
- Fast laying by simply pressing in the cables
- No hinges, no hinge wear
- Fixed widths in case of fixed chamber widths

PROTUM

- Very long life – no hinges and hence no hinge wear
- Small, light cable carrier for unsupported applications
- Very good ratio of usable space to outer dimensions
- Low vibration and quiet operation
- Optimum for short travel lengths and high travel speeds

PROTUM Office: Flexible cable carrier for office and workshop furniture

PRO*file*®

- Optimum for short travel lengths and high travel speeds
- Low vibration and quiet operation
- Very long service life
- Tested for several million travel cycles
- Clean-room compatible owing to low-wear construction and the concomitant minimal particle emission

VARIO-LINE

Cable carriers with variable chain widths

- **Can be opened on both sides**
- **Variable widths available**
- Aluminium or plastic stays
- Light, solid or link-free sidebands according to the application

Aluminium stays – Width sections available 1 mm
Plastic stays – Width sections available 4/8/16 mm
Cover systems – Width sections available 1/8/16 mm

Series	Hybrid (plastic-aluminium)	Solid plastic	Covered variants TUBE SERIES
K Series ■ Robust, simple construction, even with large additional loads	Type KC	Type KE	
MASTER H Series ■ Stable, quiet cable carrier for unsupported and gliding applications ■ Excellent relationship between inside and outside height	Type HC		
MASTER L Series ■ Small, quiet cable carrier for unsupported applications ■ Customized bend radii can be supplied	Type LC		Type LT
M Series ■ The robust all-rounder, various separation options, large selection of stay systems ■ Ideal for fast, gliding applications	Type MC	Types ME/MK	Type MT
XL Series ■ Large dimensions for cables with large cable diameter ■ For unsupported and gliding applications	Type XLC		Type XLT

Aluminium stays – Width sections available 1 mm
Plastic stays – Width sections available 8/16 mm

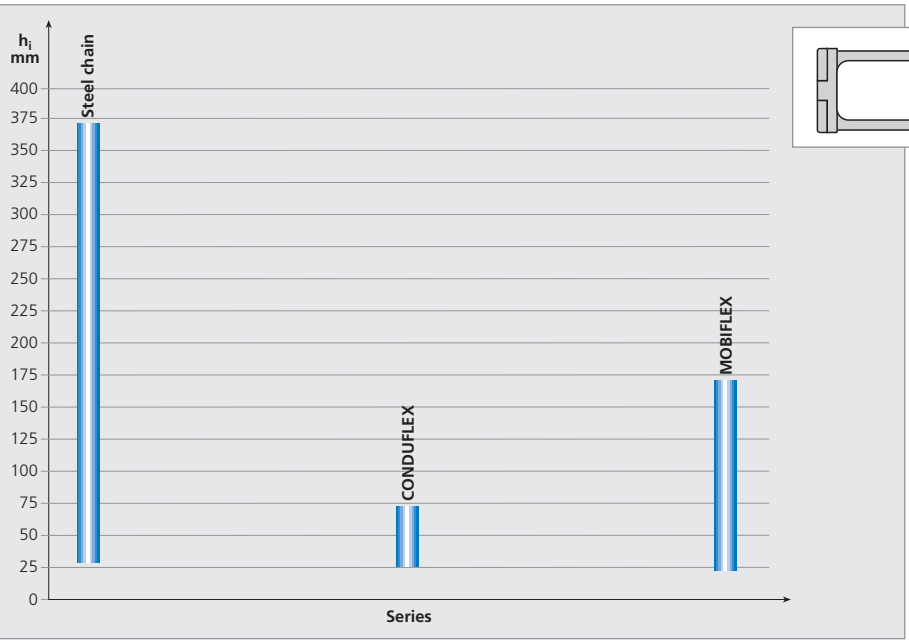
Series	Hybrid (plastic-aluminium)	Solid plastic
QUANTUM ■ For extremely high accelerations (up to 300 m/s²) and operational speeds up to 40 m/s ■ For additional 3D-movements at the driver connection ■ Modular construction with extruded sidebands of plastic, with stays of aluminium or plastic ■ Various separation options for the cables ■ Can be quickly opened on both sides	Q 060 Q 080 Q 100	All types available

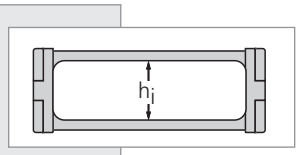
Subject to change.

Selection of the cable carrier

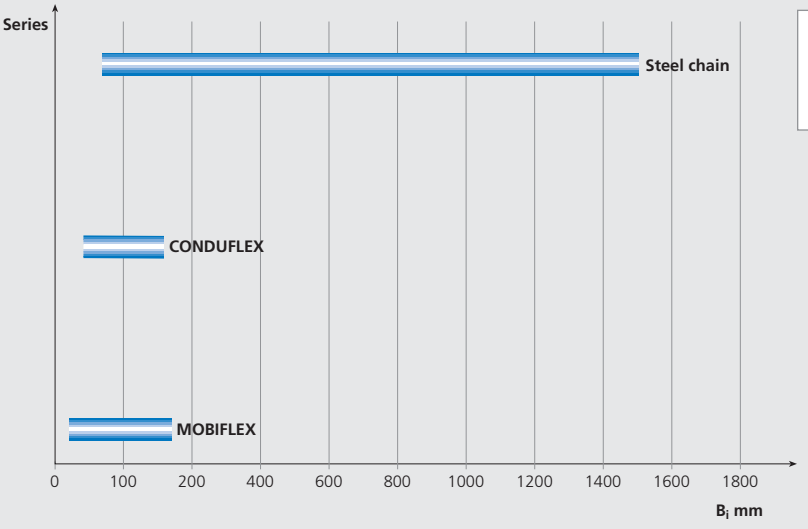
3 Selection of the product line and range

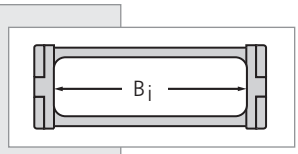
Inside height h_i



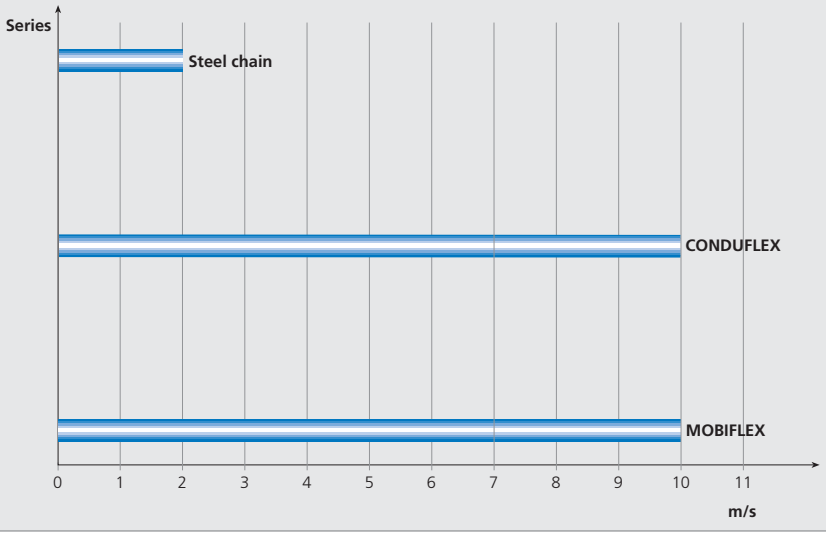


Inside width B_i





Travel speed – unsupported



STEEL-LINE

Steel cable carriers

- For applications with high stresses
- Galvanized steel or high-grade stainless steel
- Maximum unsupported lengths

Series	Aluminium stays Width sections available 1 mm Right-angled side bars	Aluminium stays Width sections available 1 mm Straight side bars	Aluminium cover Width sections available 1 mm Covered variants TUBE SERIES
S/SX ■ Ideal for large, unsupported lengths and low to medium travel speeds ■ Different stay systems for optimum matching to the application	Type S/SX 0650 to 1800 with h_i from 31 mm to 109 mm	From Type S 2500 onwards	Types S/SX 0650 to 1800 Alternatively with steel band cover

CONDUFLEX

- Closed designer cable carrier
- High-grade steel brackets and fiberglass-reinforced polyamide frames
- Easy to shorten or extend at a later date
- Different types can be fitted with machining chip protective brackets
- Can be used for horizontal, vertical and for combined horizontal/vertical movements

MOBIFLEX

- Flexible metal helical tubes combined with special steel band
- Unsupported thanks to the inserted, pre-tensioned steel band
- Ideal for hot metal chips

3D-LINE

Cable carriers for 3D-movements

ROBOTRAX

- For three-dimensional movements
- Open design
  - – Fast cable laying by simple pressing in of the cables– no threading through is necessary
  - – Simple inspection of all the cables
- Can be deployed on robots for swiveling and rotational movements

  The same system for robot feet and arms
- Optimum system for long service life of the cables:
  - – The minimum bend radius can be maintained
  - – The cables are cleanly isolated in three separate chambers
- Special plastic for long service life

Selection of the cable carrier

4 Calculation of the chain length

Definition

In the case of a unsupported arrangement, the driver connection of the cable carrier is fastened to the movable part of the plant and moves with it in the horizontal direction.

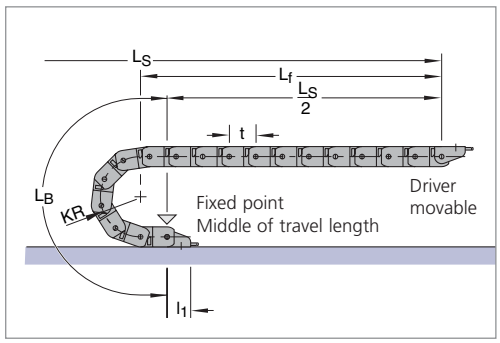
The upper trough of the cable carrier does not have any sag worth mentioning and moves freely above the feed guide or the lower trough.

In the case of a fixed-point arrangement in the middle of the travel length L_S, the following applies:

Chain length L_k

$$L_k \approx \frac{L_S}{2} + L_B$$

Chain length L_k
rounded off to pitch t



Unsupported length L_f

$$L_f \approx \frac{L_S}{2} + (1 \ldots 3) \times t$$

L_S = Maximum travel length of the application

Calculation of the bend length L_B

Plastic cable carriers:	$L_B = KR \times \pi + 2 \times t$
Steel cable carriers:	$LB = KR \times \pi + 4 \times t$
QUANTUM cable carrier system:	$L_B = KR \times \pi + 12 \times t$
PROFILE, CONDUFLEX cable carrier systems:	$L_B = KR \times \pi + 9 \times t$
MOBIFLEX cable carrier system:	$L_B = KR \times \pi + KR$

We recommend placing the fixed-point connection in the middle of the travel length. This gives the shortest connection between the fixed and movable driver point and hence the most economical chain length and cable length!

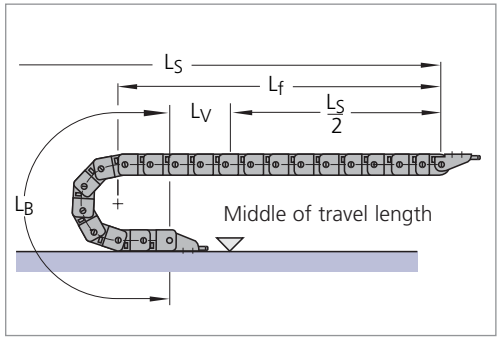
Fixed point outside the middle of the travel path:

Chain length L_k

$$L_k \approx \frac{L_S}{2} + L_B + L_V$$

Length of the cable carrier L_k
rounded off to pitch t

Please take into consideration the greater unsupported length L_f!



L_V = Longitudinal offsets between cable carrier fixed point center of the travel length

L_S = Maximum travel length of the application

Calculation of the connection height

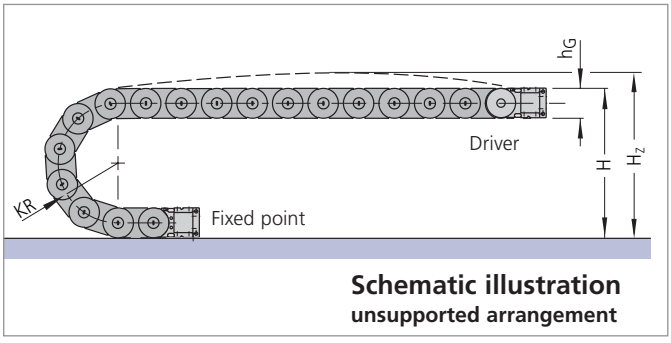
Plastic cable carriers

Connection height H
$H = 2\ KR + h_G$

PROFILE: $h_G = h_M$

QUANTUM cable carrier system

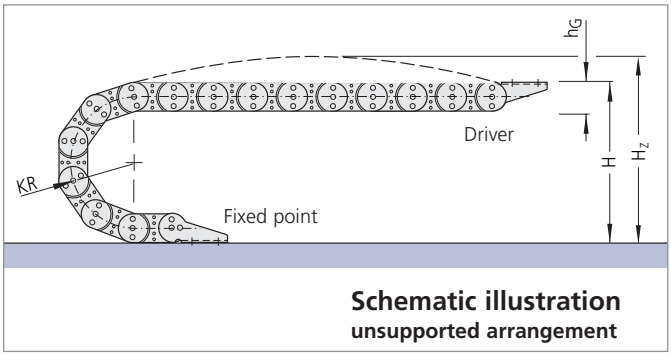
Connection height H
$H = 2\ KR + \frac{4}{3}\ h_G$



Schematic illustration
unsupported arrangement

Calculation of the connection height for steel cable carriers

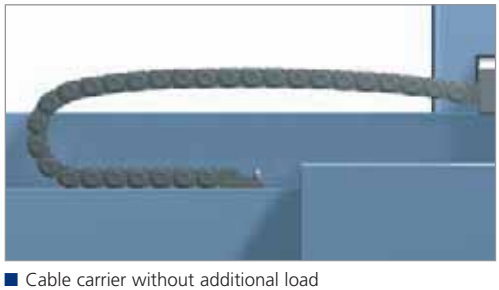
Connection height H
$H = 2\ KR + 1.5\ h_G$



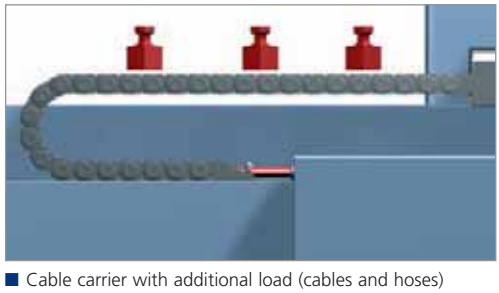
Schematic illustration
unsupported arrangement

Pretension and required installation height H_Z

To achieve a long unsupported length , KABELSCHLEPP cable carriers are made with pre-tensioning in the standard version.
The pre-tensioning effects an elevation of the upper trough in the zone of the unsupported length. Please take the pre-tensioning into consideration when determining the required passage height H_Z.



■ Cable carrier without additional load



■ Cable carrier with additional load (cables and hoses)

UMB (Universal Mounting Brackets)

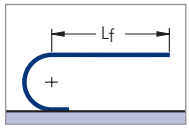
Universal mounting brackets for connecting above, below or at the front.

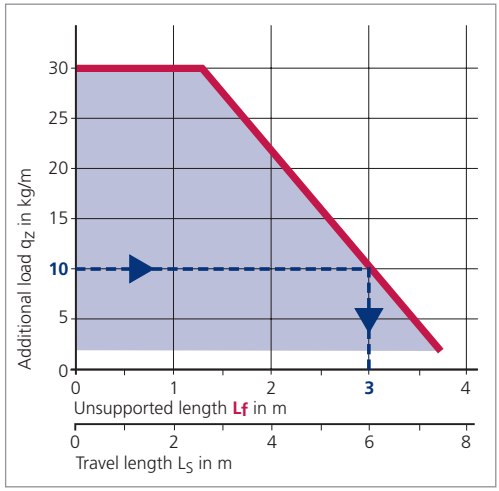
5 Checking the permissible unsupported length

The load diagram marks the area of the unsupported length L_f, in which the cable carrier does not have any sag worth mentioning. If a greater additional load or a longer travel path is selected, the upper trough begins to sag (see below: Horizontal unsupported arrangement with permissible, desired sag)

The specified load diagrams are applicable to an average intrinsic chain weight (average chain width). Please note that with particularly large chain widths or when cover systems are used, a larger intrinsic chain weight and hence a smaller possible additional load is obtained. The following pages show an overview of the load diagrams of our cable carriers.

Detailed specifications can be found under the respective chain type.





Example: With an additional load of **10 kg** the maximum unsupported length **Lf** is **3 m**.

Further procedure, if the unsupported length determined in the load diagram is exceeded

Accept the sag of the upper trough

By definition, the unsupported length L_f is the length at which the upper trough of the cable carrier does not show any sag worth mentioning. In case of a longer arrangement, or greater additional loads, the upper trough of the cable carrier sags. The cause of this is the elasticity of the material. Proper working of the cable carrier system continues to be guaranteed.
Such an arrangement is called a horizontal unsupported arrangement with **permissible sag**.

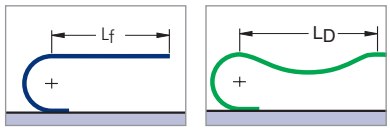
The length with permitted sag is designated as L_D. It is somewhat greater than the unsupported length L_f.

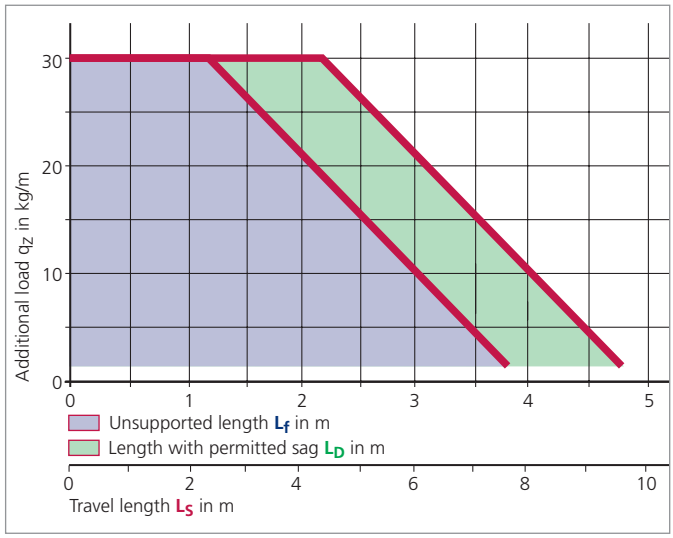
Please ask us about the corresponding values. We would be happy to advise you.

Please note that with this arrangement, no projecting plant parts should get run over. Maximum possible speed and acceleration are somewhat lower than with arrangements without sag.

Alternatively, there is the option:

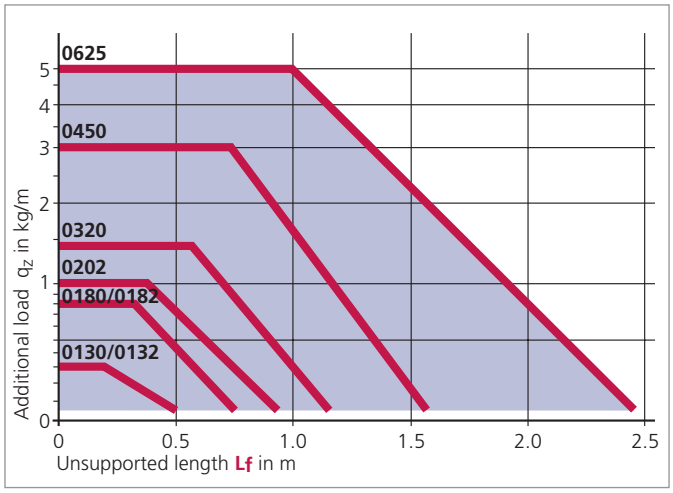
- **To select a bigger cable carrier system**
- **To allow a cable carrier to "slide in a guide channel"** (see guide channels)
- **To use a steel cable carrier**



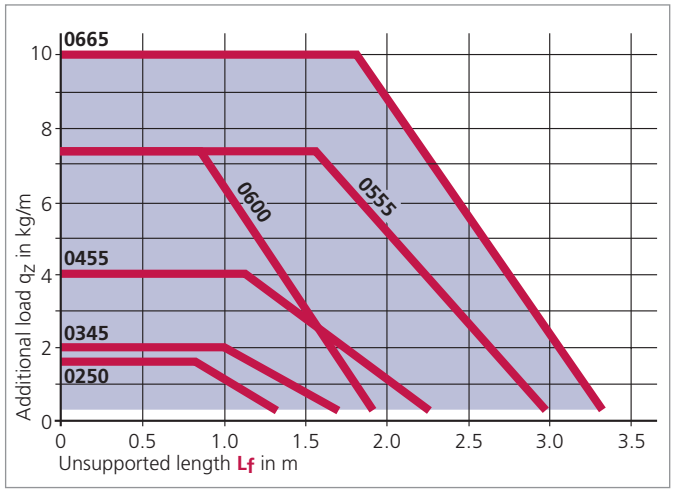


Load diagrams for unsupported applications
BASIC-LINE

MONO Series

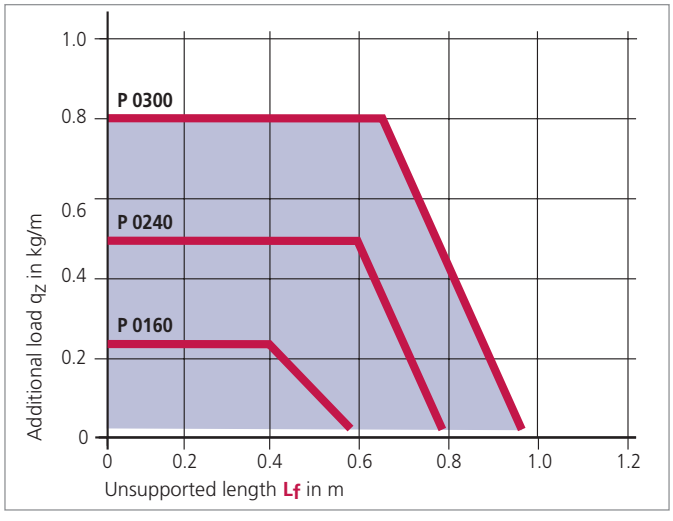


UNIFLEX Series



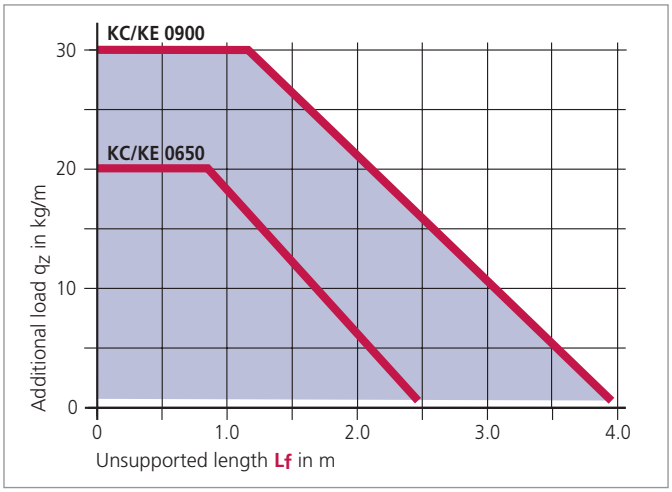
Load diagrams for unsupported applications
BASIC-LINE*PLUS*

PROTUM

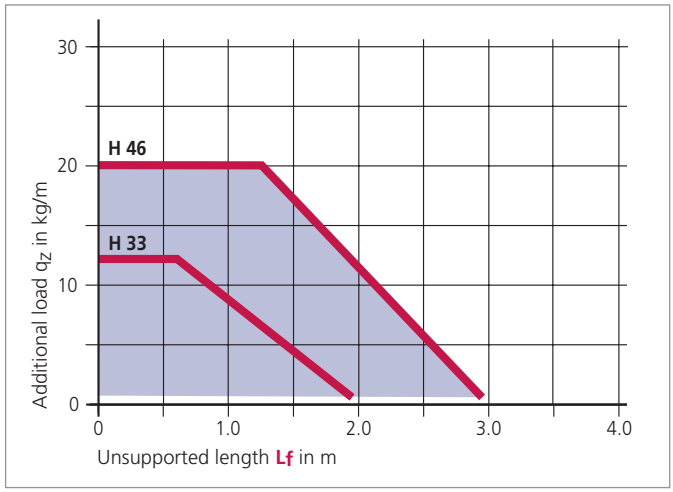


Load diagrams for unsupported applications
VARIO-LINE

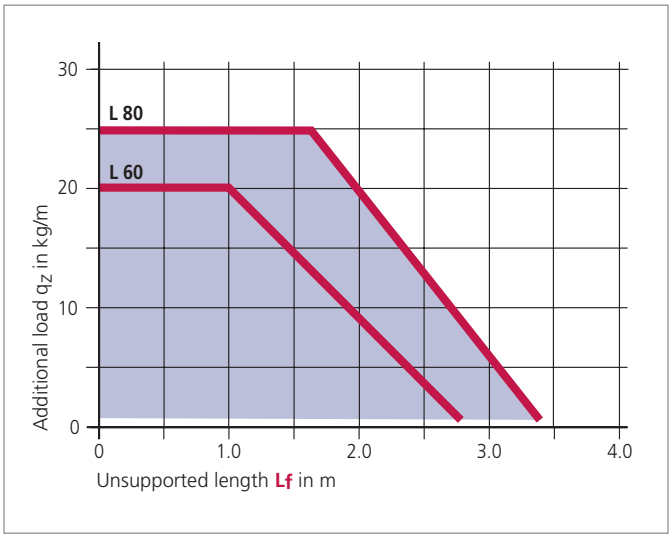
K Series



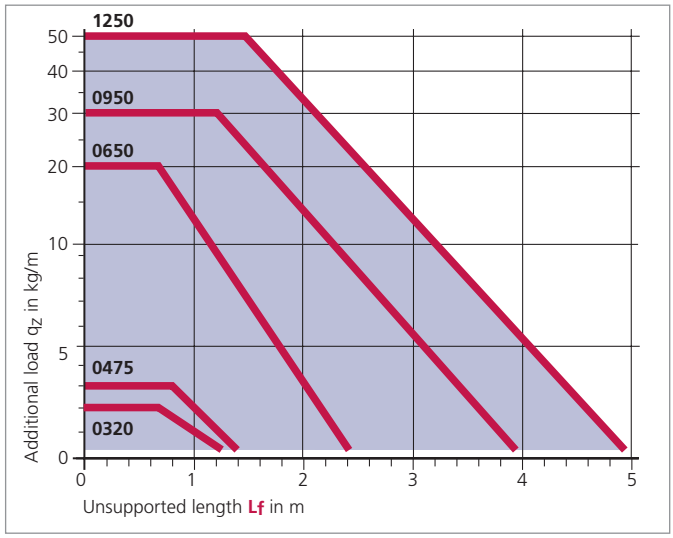
MASTER H Series



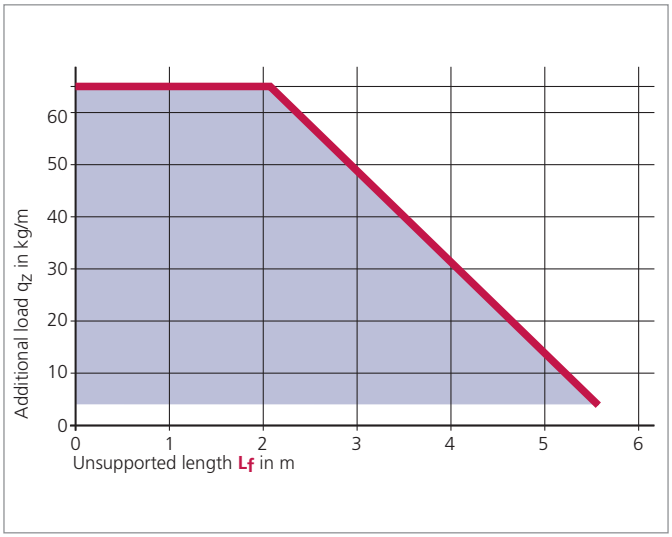
MASTER L Series



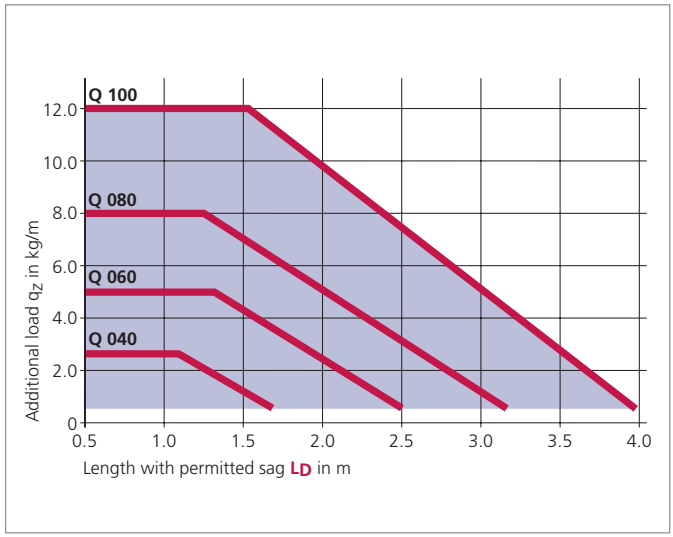
M Series



XL Series



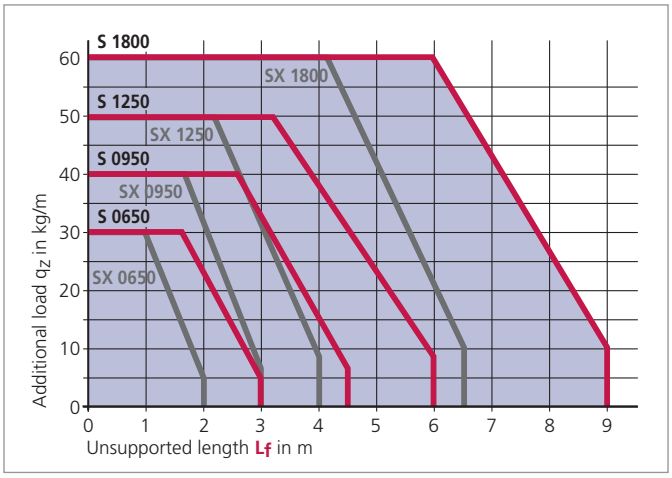
QUANTUM



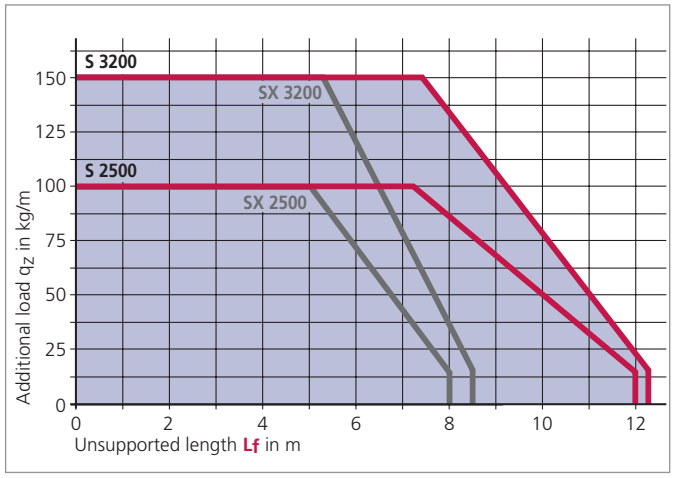
Subject to change.

Load diagrams for unsupported applications
STEEL-LINE

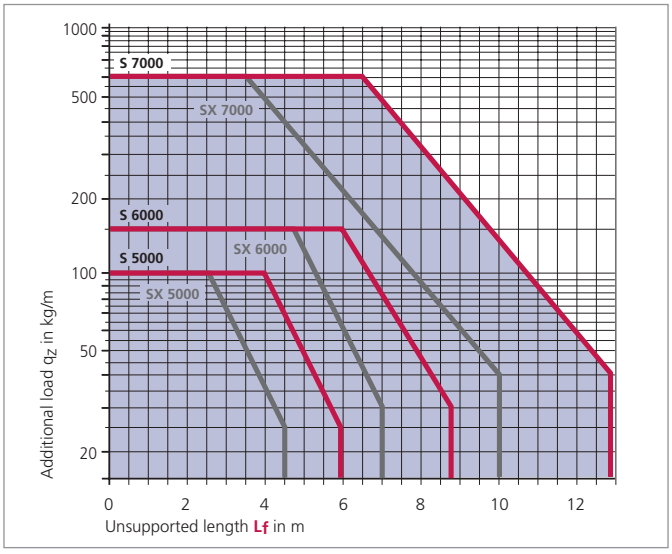
S/SX 0650, 0950, 1250, 1800



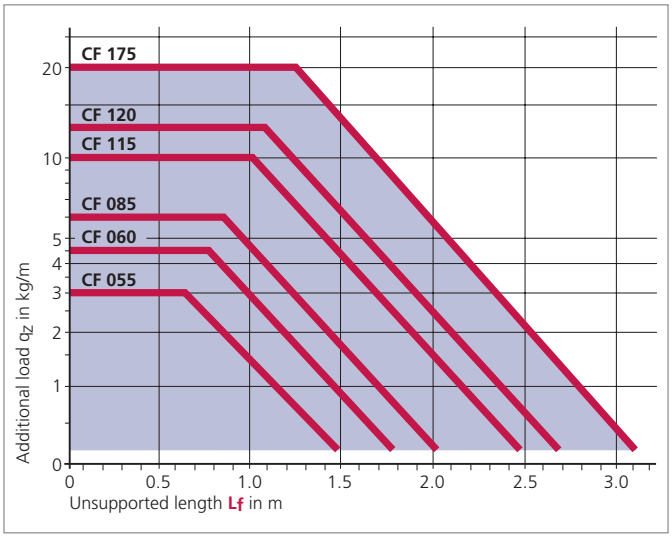
S/SX 2500, 3200



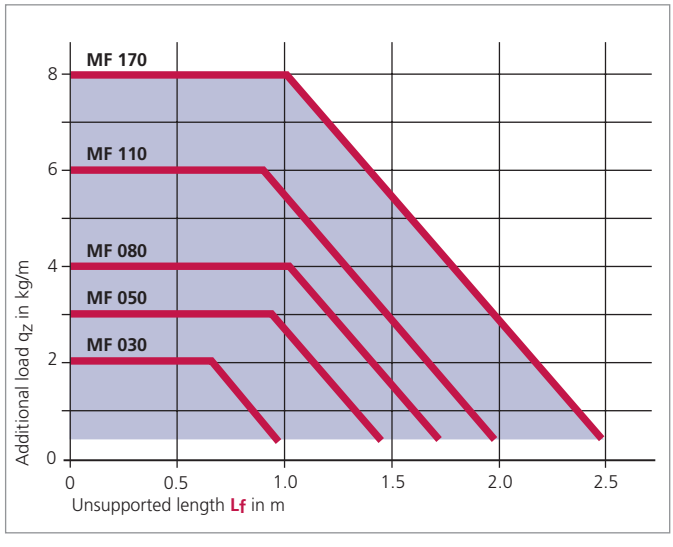
S/SX 5000, 7000



CONDUFLEX



MOBIFLEX



Subject to change.

KABELSCHLEPP

the power to innovate

BASIC-LINE

Cable carriers with fixed chain widths

MONO

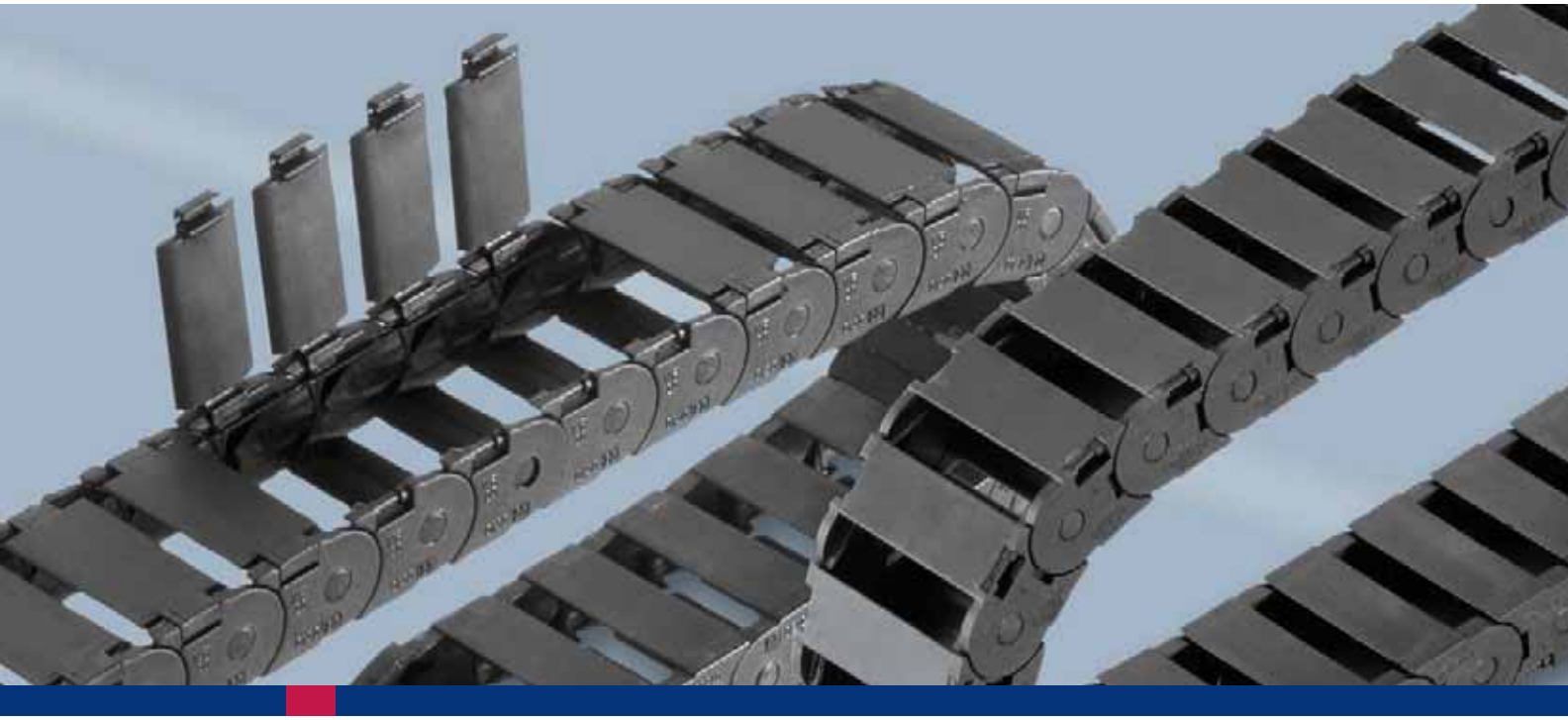
UNIFLEX

KABELSCHLEPP

the power to innovate

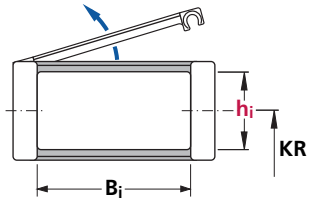
Cable carriers with fixed chain widths

MONO



MONO – Cable carriers with fixed chain widths

- Solid plastic
- Single unit chain links with the option of either fixed or openable brackets
- Simple and quick assembly
- End connectors with integrated strain relief
- Almost all types available immediately ex stock all around the world
- TÜV design approved in accordance with 2PfG 1036/10.97

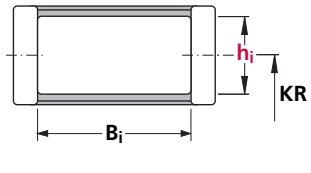


Types 0130, 0180

Cable carriers with **hinged, openable** brackets

Dimensions in mm

Type	h_i	B_i	Maximum travel length in m	Dynamics of unsupported arrangement		Page
				Travel speed v_{max} in m/s	Travel acceleration a_{max} in m/s²	
0130	**10**	6-40	40	10	50	30
0180	**15**	10-40	70	10	50	32



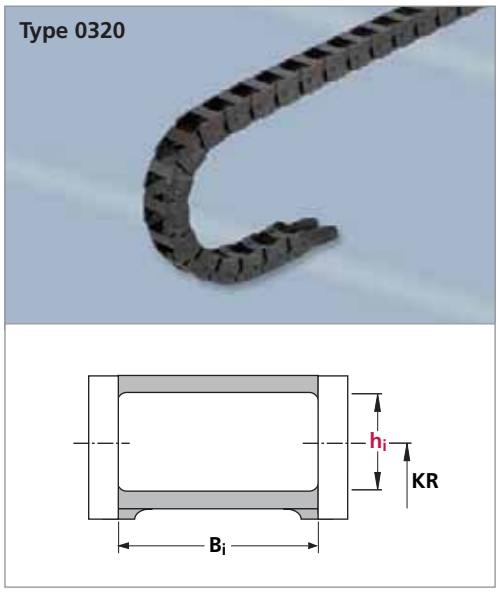
Types 0132, 0202, 0182

Cable carriers with **fixed** brackets

Dimensions in mm

Type	h_i	B_i	Maximum travel length in m	Dynamics of unsupported arrangement		Page
				Travel speed v_{max} in m/s	Travel acceleration a_{max} in m/s²	
0132	**10**	6-40	40	10	50	30
0182	**15**	10-40	70	10	50	32
0202	**11**	6-20	70	10	50	34

MONO – Cable carriers with fixed chain widths

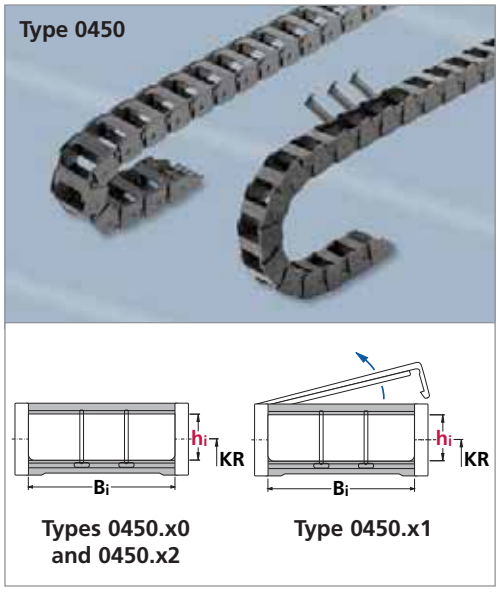


Type 0320

Cable carriers with **fixed** brackets

Dimensions in mm

Type	h_i	B_i	Maximum travel length in m	Dynamics of unsupported arrangement		Page
				Travel speed v_{max} in m/s	Travel acceleration a_{max} in m/s²	
0320	19	13-37	80	10	50	36



Types 0450.x0 and 0450.x2

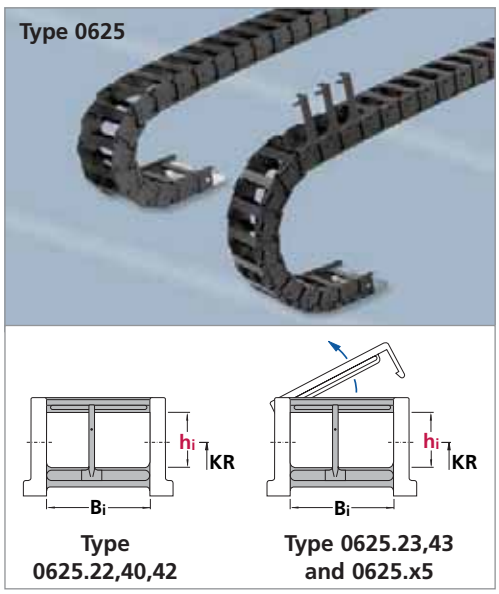
Type 0450.x1

Type 0450

Cable carriers with **hinged, openable or fixed** brackets

Dimensions in mm

Type	h_i	B_i	Maximum travel length in m	Dynamics of unsupported arrangement		Page
				Travel speed v_{max} in m/s	Travel acceleration a_{max} in m/s²	
0450.x0	24	38-103	120	10	50	38
0450.x1	24	38-103	120	10	50	38
0450.x2	28	38-103	120	10	50	38



Type 0625.22,40,42

Type 0625.23,43 and 0625.x5

Type 0625

Cable carriers with **hinged, openable or fixed** brackets

Dimensions in mm

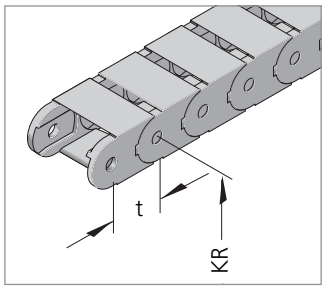
Type	h_i	B_i	Maximum travel length in m	Dynamics of unsupported arrangement		Page
				Travel speed v_{max} in m/s	Travel acceleration a_{max} in m/s²	
0625.22 0625.40 0625.42	34	65-108	130	8	40	42
0625.23 0625.43	34	65-108	130	8	40	42
0625.x5	42	65-169	130	8	40	42

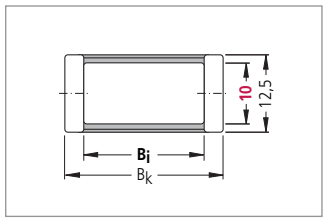
MONO – Types 0132 and 0130

Dimensions and intrinsic chain weight

Type 0132

Inside/Outside: Not to be opened

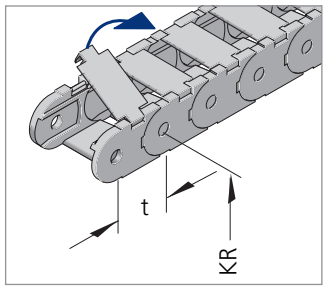


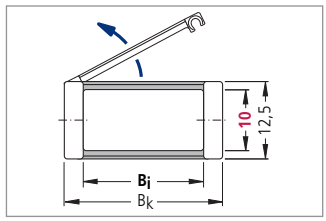


Type	B_i mm	B_k mm	Intrinsic chain weight kg/m
0132.**06**	**6**	12	0.13
0132.**10**	**10**	16	0.14
0132.**15**	**15**	21	0.15
0132.**20**	**20**	26	0.16
0132.**30**	**30**	36	0.18
0132.**40**	**40**	46	0.20

Type 0130

Outside: Hinged, openable brackets





Type	B_i mm	B_k mm	Intrinsic chain weight kg/m
0130.**06**	**6**	12	0.13
0130.**10**	**10**	16	0.14
0130.**15**	**15**	21	0.15
0130.**20**	**20**	26	0.16
0130.**40**	**40**	46	0.20

Bend radius and pitch

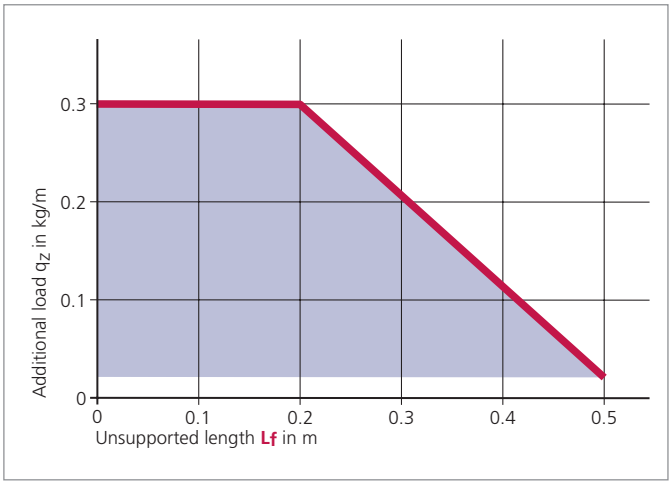
Types 0132 and 0130

Bend radii KR mm		
20	28	37

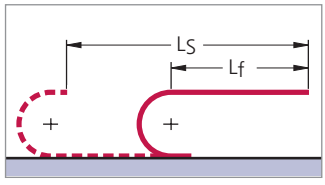
Pitch t = 13.0 mm

Load diagram

for unsupported length L_f depending on the additional load



Unsupported length L_f



In the case of longer travel lengths, sag of the cable carriers is technically permissible depending on the application.

In a gliding arrangement, even longer travel lengths are possible (see page 219).

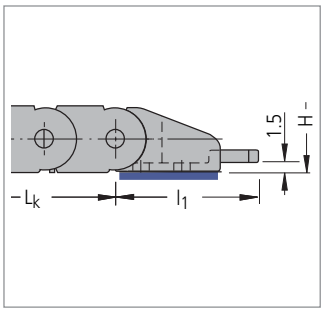
We are at your service to advise on these applications.

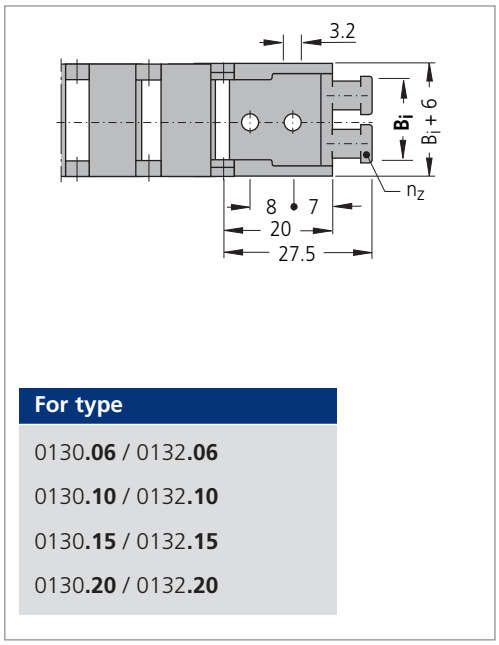
MONO – Types 0132 and 0130

Connection dimensions

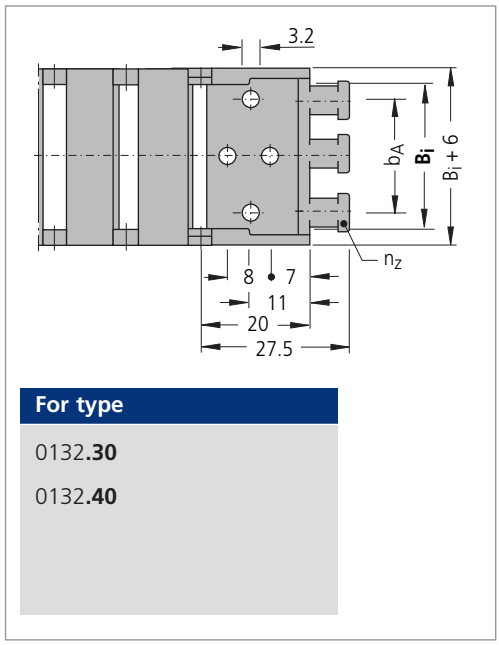
Plastic connectors

with integrated strain relief





For type
0130.**06** / 0132.**06**
0130.**10** / 0132.**10**
0130.**15** / 0132.**15**
0130.**20** / 0132.**20**

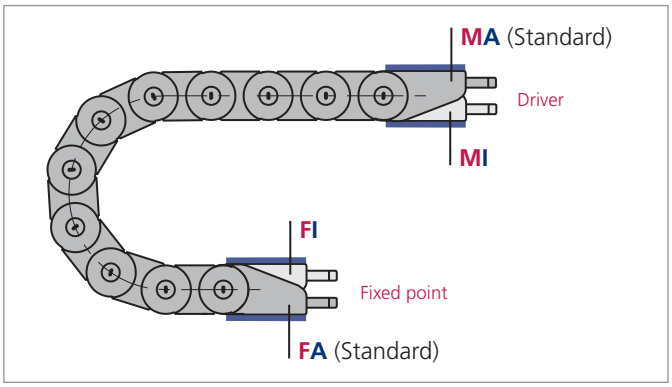


For type
0132.**30**
0132.**40**

Type	B_i mm	B_k mm	b_A mm	n_z
0130.**06** / 0132.**06**	**6**	12	–	1
0130.**10** / 0132.**10**	**10**	16	–	1
0130.**15** / 0132.**15**	**15**	21	–	2
0130.**20** / 0132.**20**	**20**	26	–	2
0132.**30**	**30**	36	22	3
0132.**40**	**40**	46	32	4

The dimensions of the fixed point and driver connections are identical.

Connection variants



Connection point

M – Driver

F – Fixed point

Connection type

A – Threaded joint outside (standard)

I – Threaded joint, inside

In the standard version, the connectors are mounted with the threaded joint outwards (**FA/MA**).

When ordering please specify the desired connection type (see ordering key on page 242).

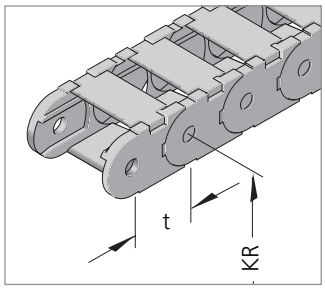
The connection type can subsequently be altered simply by varying the connectors.

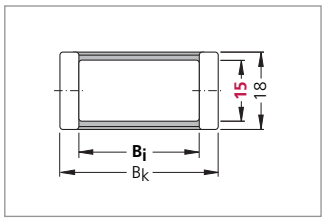
MONO – Types 0182 and 0180

Dimensions and intrinsic chain weight

Type 0182

Inside/Outside: Not to be opened

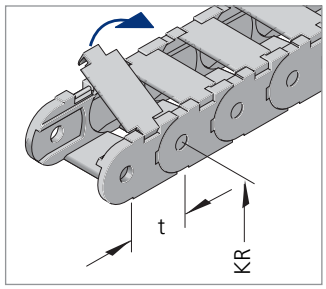


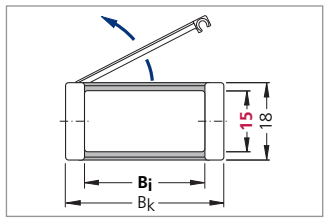


Type	B_i mm	B_k mm	Intrinsic chain weight kg/m
0182.**10**	**10**	18	0.23
0182.**15**	**15**	23	0.24
0182.**20**	**20**	28	0.25
0182.**30**	**30**	38	0.28
0182.**40**	**40**	48	0.30

Type 0180

Outside: Hinged, openable brackets





Type	B_i mm	B_k mm	Intrinsic chain weight kg/m
0180.**10**	**10**	18	0.23
0180.**15**	**15**	23	0.24
0180.**20**	**20**	28	0.25
0180.**30**	**30**	38	0.28
0180.**40**	**40**	48	0.30

Bend radius and pitch

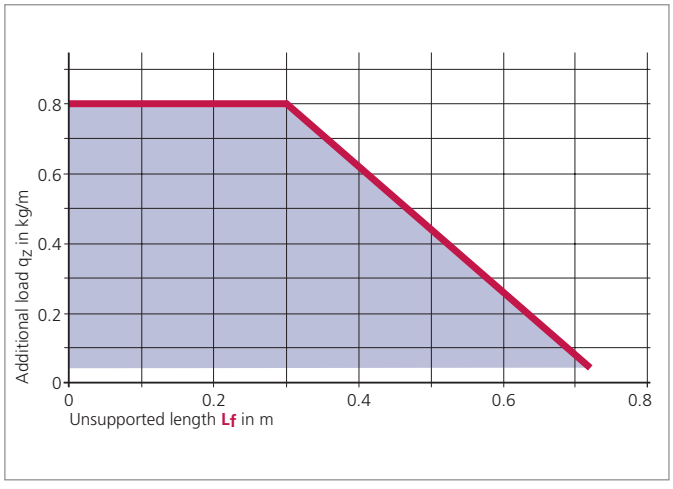
Types 0182 and 0180

Bend radii KR mm		
28	37	50

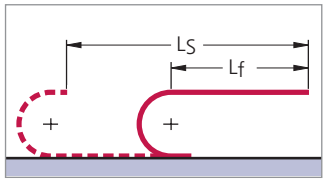
Pitch t = 18.0 mm

Load diagram

for unsupported length L_f depending on the additional load



Unsupported length L_f



In the case of longer travel lengths, sag of the cable carriers is technically permissible depending on the application.

In a gliding arrangement, even longer travel lengths are possible (see page 219).

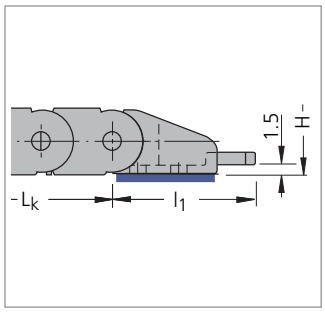
We are at your service to advise on these applications.

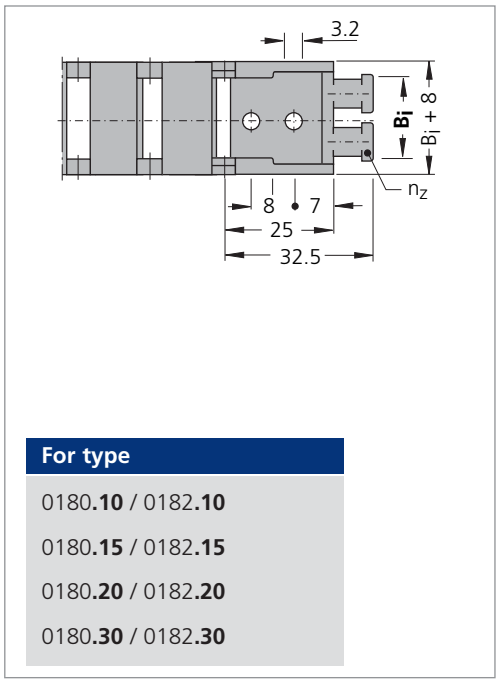
MONO – Types 0182 and 0180

Connection dimensions

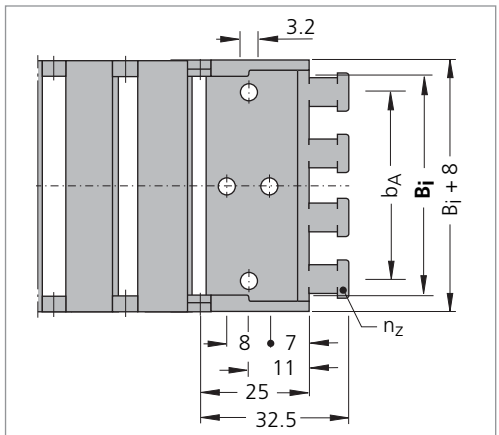
Plastic connectors

with integrated strain relief





For type
0180.**10** / 0182.**10**
0180.**15** / 0182.**15**
0180.**20** / 0182.**20**
0180.**30** / 0182.**30**

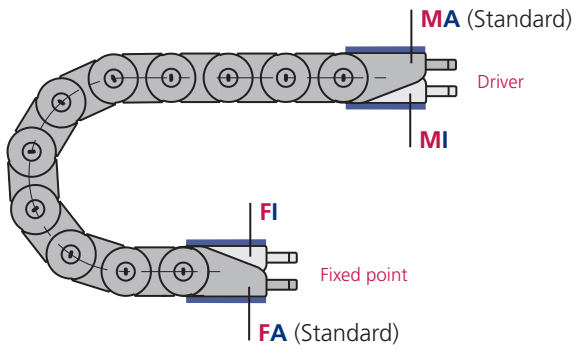


For type
0180.**40**
0182.**40**

Type	B_i mm	B_k mm	b_A mm	n_Z
0180.**10** / 0182.**10**	**10**	18	–	1
0180.**15** / 0182.**15**	**15**	23	–	2
0180.**20** / 0182.**20**	**20**	28	–	2
0180.**30** / 0182.**30**	**30**	38	–	3
0180.**40** / 0182.**40**	**40**	48	32	4

The dimensions of the fixed point and driver connections are identical.

Connection variants



Connection point

M – Driver

F – Fixed point

Connection type

A – Threaded joint outside (standard)

I – Threaded joint, inside

In the standard version, the connectors are mounted with the threaded joint outwards (**FA/MA**).

When ordering please specify the desired connection type (see ordering key on page 242).

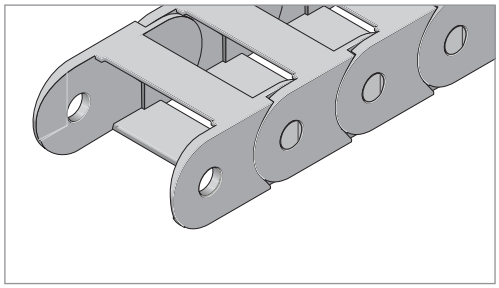
The connection type can subsequently be altered simply by varying the connectors.

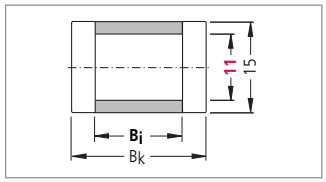
MONO – Type 0202

Dimensions and intrinsic chain weight

Type 0202

Inside/Outside: Not to be opened





Type	B_i mm	B_k mm	Intrinsic chain weight kg/m
0202.**06**	**6**	13	0.14
0202.**10**	**10**	17	0.15
0202.**15**	**15**	22	0.16
0202.**20**	**20**	27	0.17

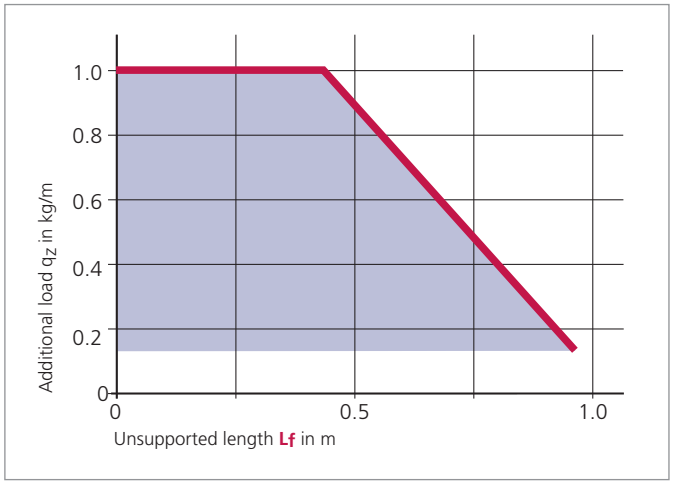
Bend radius and pitch

Bend radii KR mm			
18	28	38	50

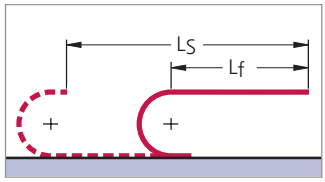
Pitch t = 20.0 mm

Load diagram

for unsupported length L_f depending on the additional load



Unsupported length L_f



In the case of longer travel lengths, sag of the cable carriers is technically permissible depending on the application.

In a gliding arrangement, even longer travel lengths are possible (see page 219).

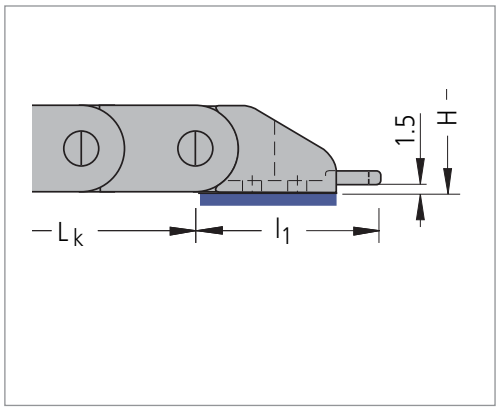
We are at your service to advise on these applications.

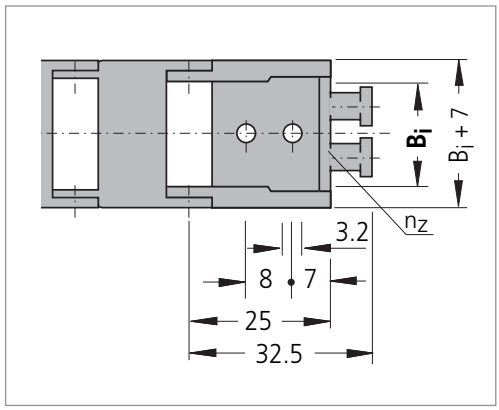
MONO – Type 0202

Connection dimensions

Plastic connectors

with integrated strain relief

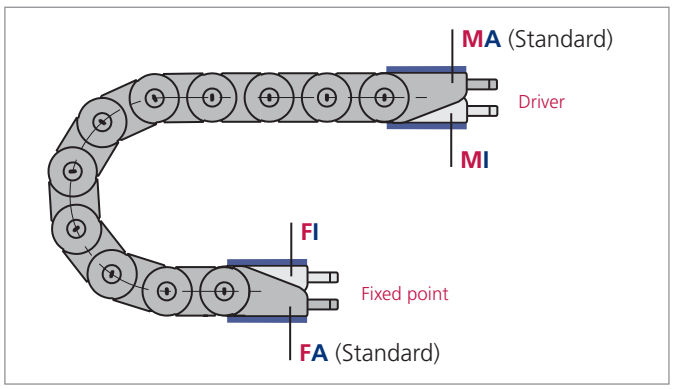




Type	B_i mm	B_k mm	n_z
0202.**06**	**6**	13	1
0202.**10**	**10**	17	1
0202.**15**	**15**	22	2
0202.**20**	**20**	27	2

The dimensions of the fixed point and driver connections are identical.

Connection variants



Connection point

M – Driver

F – Fixed point

Connection type

A – Threaded joint outside (standard)

I – Threaded joint, inside

In the standard version, the connectors are mounted with the threaded joint outwards (**FA/MA**).

When ordering please specify the desired connection type (see ordering key on page 242).

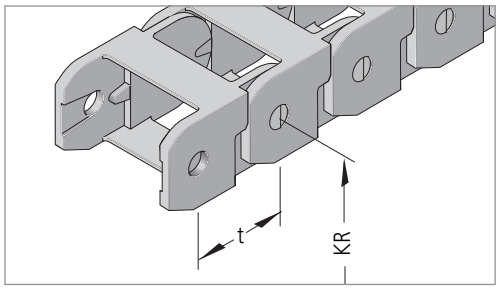
The connection type can subsequently be altered simply by varying the connectors.

MONO – Type 0320

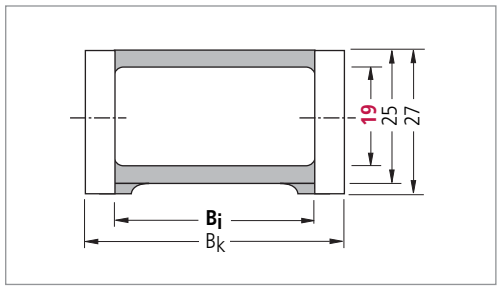
Dimensions and intrinsic chain weight

Type 0320

Inside/Outside: Not to be opened

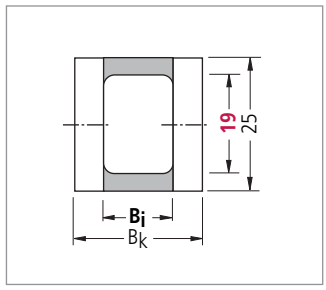


Type 0320 / .42 / .52 / .62
Inside/Outside: Not to be opened



With glide runners

Type 0320.20 / .30
Inside/Outside:
Not to be opened



Type 0320.20 / .30

Type	B_i mm	B_k mm	Intrinsic chain weight kg/m
0320.**20**	**13**	24	0.32
0320.**30**	**19**	30	0.35

Type 0320 / .42 / .52 / .62

Type	B_i mm	B_k mm	Intrinsic chain weight kg/m
0320.**42**	**24**	35	0.39
0320.**52**	**29**	40	0.44
0320.**62**	**37**	48	0.47

Bend radius and pitch

Type 0320.20 / .30

Bend radii KR mm		
37	47	77

Pitch t = 32.0 mm

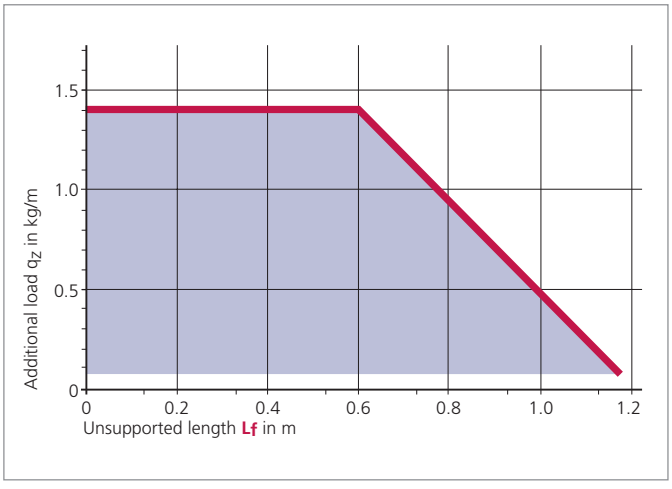
Type 0320 / .42 / .52 / .62

Bend radii KR mm			
37	47	77	100

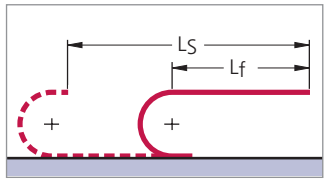
Pitch t = 32.0 mm

Load diagram

for unsupported length L_f depending on the additional load



Unsupported length L_f



In the case of longer travel lengths, sag of the cable carriers is technically permissible depending on the application.

In a gliding arrangement, even longer travel lengths are possible (see page 219).

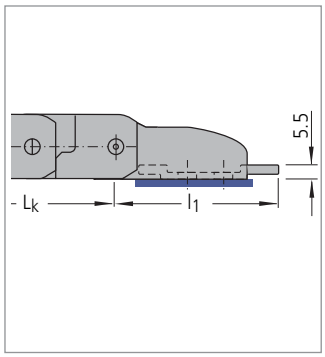
We are at your service to advise on these applications.

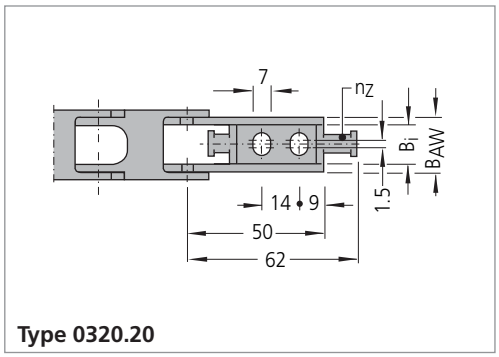
MONO – Type 0320

Connection dimensions

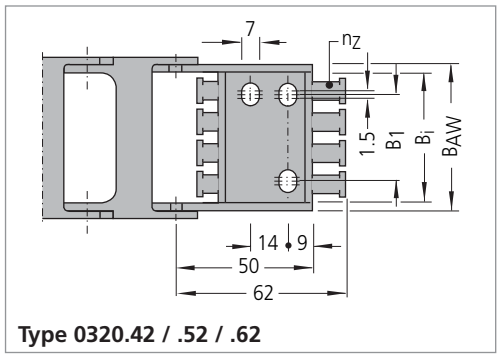
Plastic connectors

with integrated strain relief





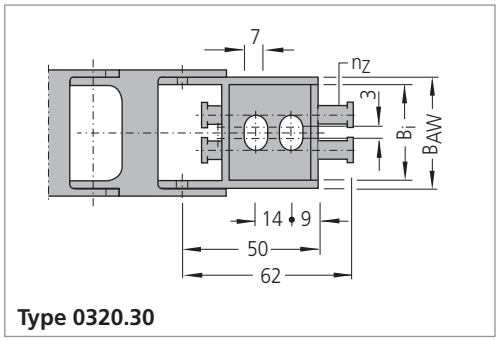
Type 0320.20



Type 0320.42 / .52 / .62

Connection dimensions at fixed-point connection:
B_{AW} = B_i + 5.5
B_1 = B_i – 12.5

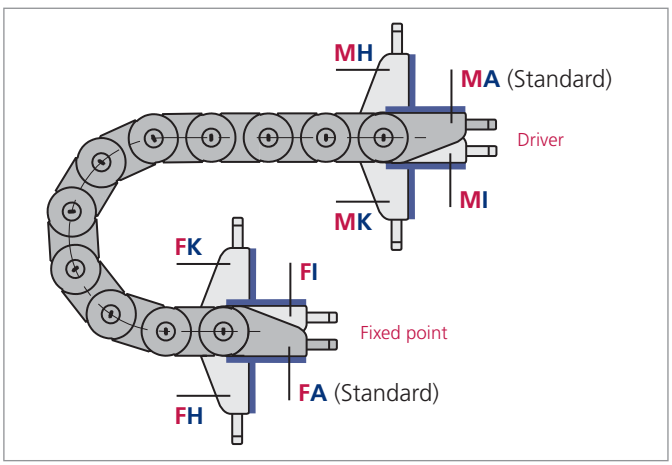
Connection dimensions at driver connection:
B_{AW} = B_i + 11
B_1 = B_i – 10.5



Type 0320.30

Type	B_i mm	B_k mm	n_z
0320.**20**	**13**	24	1
0320.**30**	**19**	30	2
0320.**42**	**24**	35	2
0320.**52**	**29**	40	3
0320.**62**	**37**	48	4

Connection variants



In the standard version, the connectors are mounted with the threaded joint outwards (**FA/MA**).

When ordering please specify the desired connection type (see ordering key on page 242).

The connection type can subsequently be altered simply by varying the connectors.

Connection point

M – Driver

F – Fixed point

Connection type

A – Threaded joint outside (standard)

I – Threaded joint inside

H – Threaded joint, rotated through 90° to the outside

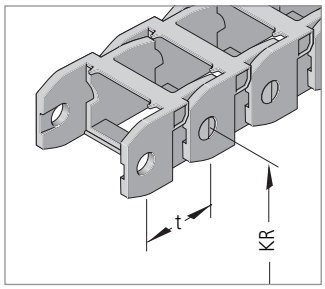
K – Threaded joint, rotated through 90° to the inside

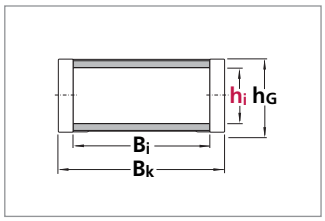
MONO – Type 0450

Dimensions and intrinsic chain weight

Type 0450

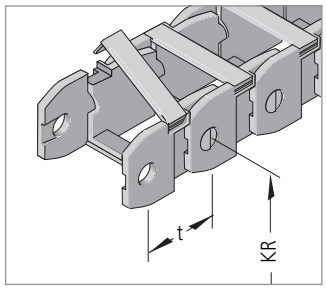
Inside/Outside: Not to be opened

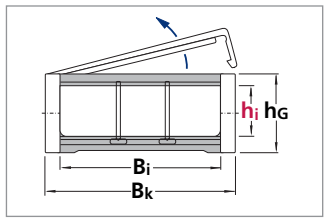




Type 0450

Outside: Hinged, openable and detachable brackets





Type 0450
Inside/Outside: Not to be opened – h_i = 24 mm

Type	h_i mm	h_G mm	B_i mm	B_k mm	Intrinsic chain weight kg/m
0450.**20**	**24**	34	**38**	54	0.65
0450.**40**	**24**	34	**58**	74	0.78
0450.**60**	**24**	34	**78**	94	0.92
0450.**85**	**24**	34	**103**	119	1.20

Type 0450
Outside: Hinged, openable and detachable brackets

Type	h_i mm	h_G mm	B_i mm	B_k mm	Intrinsic chain weight kg/m
0450.**21**	**24**	40	**38**	54	0.75
0450.**41**	**24**	40	**58**	74	0.85
0450.**61**	**24**	40	**78**	94	0.92
0450.**81**	**24**	40	**103**	119	1.20

Type 0450
Inside/Outside: Not to be opened – h_i = 28 mm

Type	h_i mm	h_G mm	B_i mm	B_k mm	Intrinsic chain weight kg/m
0450.**22**	**28**	40	**38**	54	0.75
0450.**32**	**28**	40	**48**	64	0.80
0450.**42**	**28**	40	**58**	74	0.85
0450.**62**	**28**	40	**78**	94	0.95
0450.**82**	**28**	40	**103**	119	1.10

Bend radius and pitch

Type 0450
Inside/Outside: Not to be opened – h_i = 24 mm

Bend radii KR mm				
52	94	125	150	200

Pitch t = 45.0 mm

Type 0450
Outside: Hinged, openable and detachable brackets

Bend radii KR mm				
52	94	125	150	200

For type 0450.41, the KR 110 is also available.

Pitch t = 45.0 mm

Type 0450
Inside/Outside: Not to be opened – h_i = 28 mm

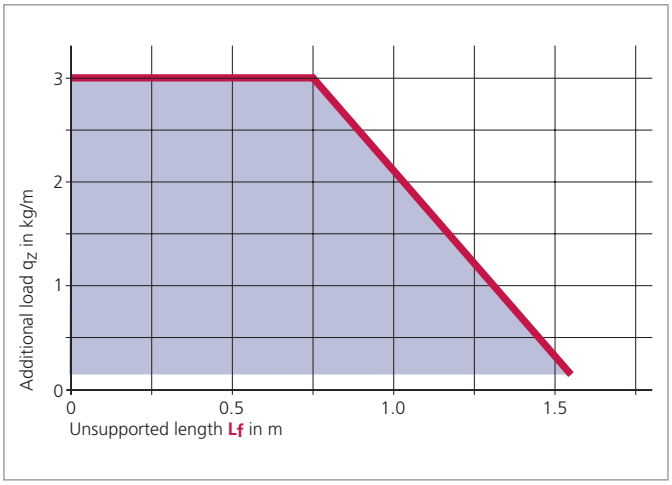
Bend radii KR mm							
52	60	75	94	110	125	150	200

Pitch t = 45.0 mm

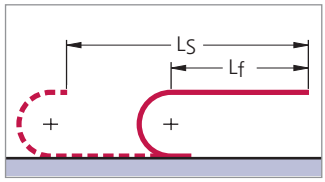
MONO – Type 0450

Load diagram

for unsupported length L_f depending on the additional load



Unsupported length L_f



In the case of longer travel lengths, sag of the cable carriers is technically permissible depending on the application.

In a gliding arrangement, even longer travel lengths are possible (see page 219).

We are at your service to advise on these applications.

MONO – Type 0450

Divider systems

Divider system TS 0

For types not to be opened – h_i = 24 mm

Type	S_T mm	$a_{T\ min}$ mm	$a_{x\ min}$ mm
0450	2.5	13.5	9

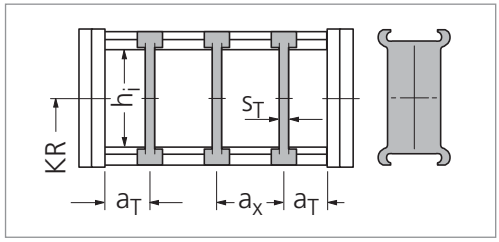
For types not to be opened – h_i = 28 mm

Type	S_T mm	$a_{T\ min}$ mm	$a_{x\ min}$ mm
0450	4.2	4.0	7.8

For types with hinged, openable and detachable brackets

Type	S_T mm	$a_{T\ min}$ mm	$a_{x\ min}$ mm
0450	2.5	4.0	8.0

The dividers can be moved in the cross section.



In the standard version, the divider systems are mounted on every second chain link.

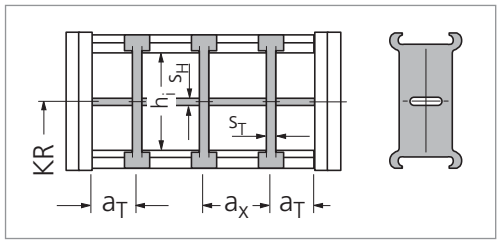
Divider system TS 1

with continuous height subdivision made of plastic

For types not to be opened – h_i = 28 mm

Type	S_T mm	S_H mm	$a_{T\ min}$ mm	$a_{x\ min}$ mm
0450	4.2	4	4.0	7.8

The dividers can be moved in the cross section.



In the standard version, the divider systems are mounted on every second chain link.

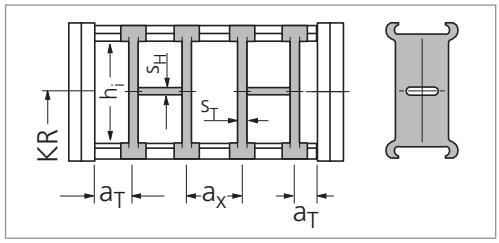
Divider system TS 2

with plastic height subdivision, available in 4 mm section widths

For types not to be opened – h_i = 28 mm

Type	S_T mm	S_H mm	$a_{T\ min}$ mm	$a_{x\ min}$ mm
0450	4.2	4	4.0	7.8

The dividers are fixed by the height separations, the complete divider system is movable.



In the standard version, the divider systems are mounted on every second chain link.

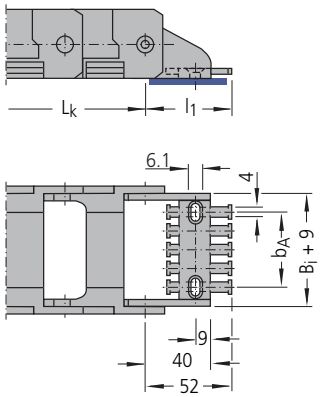
MONO – Type 0450

Connection dimensions

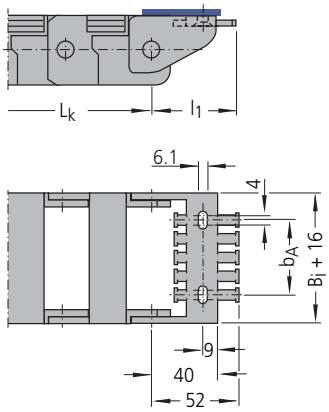
Plastic connectors

with integrated strain relief

Fixed point connection

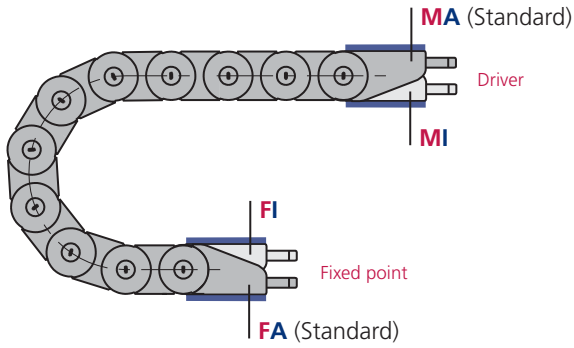


Driver connection



Type	B_i mm	B_k	b_A mm	n_Z
0450.20/.21/.22	38	54	24	3
0450.40/.41/.42	58	74	44	5
0450.60/.61/.62	78	94	64	7
0450.81/.82/.85	103	119	89	9

Connection variants



Connection point

M – Driver

F – Fixed point

Connection type

A – Threaded joint outside (standard)

I – Threaded joint, inside

In the standard version, the connectors are mounted with the threaded joint outwards (**FA/MA**).

When ordering please specify the desired connection type (see ordering key on page 242).

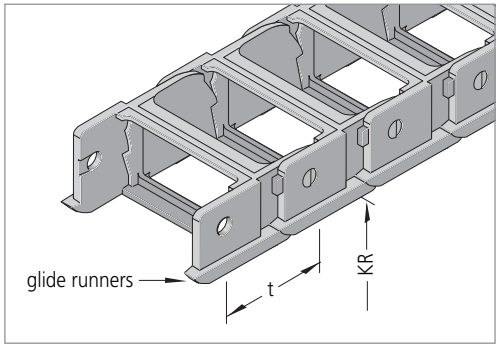
The connection type can subsequently be altered simply by varying the connectors.

MONO – Type 0625

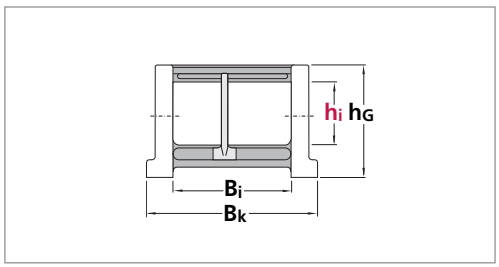
Dimensions and intrinsic chain weight

Type 0625

Inside/Outside: Not to be opened

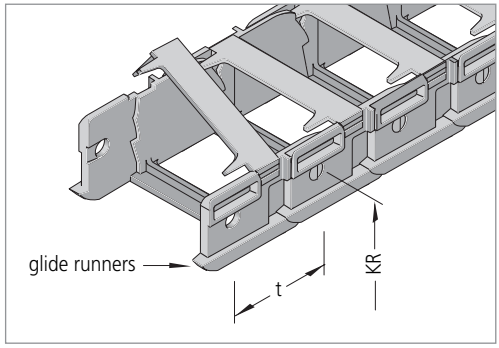


With glide runners

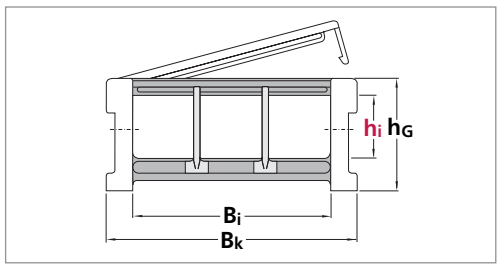


Type 0625

Outside: Hinged, openable and detachable brackets



With glide runners



Type 0625
Inside/Outside: Not to be opened

Type	h_i mm	h_G mm	B_i mm	B_k mm	Intrinsic chain weight kg/m
0625.**22**	**34**	62	65	93	1.55
0625.**40**	**34**	56	108	126	1.40
0625.**42**	**34**	62	108	136	1.70

Injection moulded glide runners not for type 0625.40

Type 0625
Outside: Hinged, openable and detachable brackets

Type	h_i mm	h_G mm	B_i mm	B_k mm	Intrinsic chain weight kg/m
0625.**23**	**34**	62	65	93	1.55
0625.**43**	**34**	62	108	136	1.70
0625.**25**	**42**	62	65	93	1.74
0625.**45**	**42**	62	108	136	2.06
0625.**55**	**42**	62	125	153	2.07
0625.**65**	**42**	62	150	178	2.15
0625.**75**	**42**	62	169	197	2.37

Bend radius and pitch

Type 0625
Inside/Outside: Not to be opened

Bend radii KR mm				
75*	90	125	200	300

* Not for type 0625.22

Pitch t = 62.5 mm

Type 0625
Outside: Hinged, openable and detachable brackets

Bend radii KR mm					
90	125	150	200	250	300

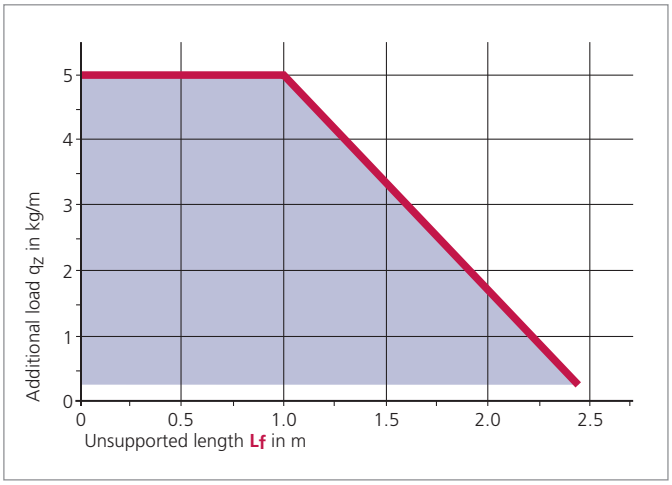
For type 0625.43, KR 75 mm is also available

Pitch t = 62.5 mm

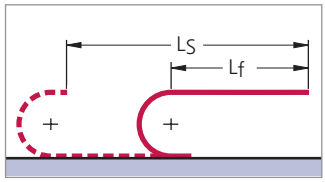
MONO – Type 0625

Load diagram

for unsupported length L_f depending on the additional load



Unsupported length L_f



In the case of longer travel lengths, sag of the cable carriers is technically permissible depending on the application.

In a gliding arrangement, even longer travel lengths are possible (see page 219).

We are at your service to advise on these applications.

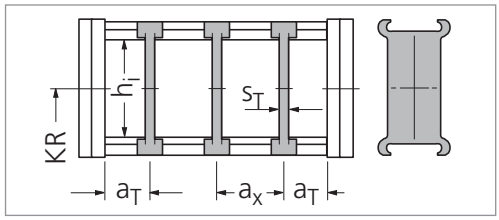
MONO – Type 0625

Divider systems

Divider system TS 0

Type	h_i	S_T mm	$a_{T\ min}$ mm	$a_{x\ min}$ mm
0625.22 0625.40 0625.42	34	3.5	6.0	12
0625.23 0625.43	34	3.5	10.0	12
0625.25 0625.45 0625.55 0625.65 0625.75	42	4.0	11.0	11

The dividers can be moved in the cross section.



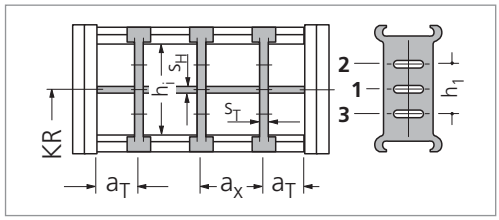
In the standard version, the divider systems are mounted on every second chain link.

Divider system TS 1

with continuous height subdivision made of aluminium

Type	h_i	S_T mm	$a_{T\ min}$ mm	$a_{x\ min}$ mm	S_H mm	h_1
0625.25 0625.45 0625.55 0625.65 0625.75	42	4.0	11.0	11	2	15

The dividers can be moved in the cross section.



In the standard version, the divider systems are mounted on every second chain link.

Height separation in Position 1 – 3 possible.

MONO – Type 0625

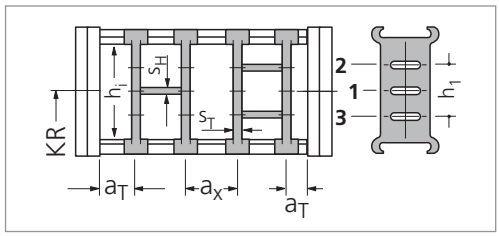
Divider systems

Divider system TS 2

with aluminium height separation, available in 1 mm section widths

Type	h_i	S_T mm	$a_{T\ min}$ mm	$a_{x\ min}$ mm	S_H mm	h_1
0625.25 **0625.45** **0625.55** **0625.65** **0625.75**	**42**	6	12	20	4	15

The dividers are fixed by the height separations, the complete divider system is movable.



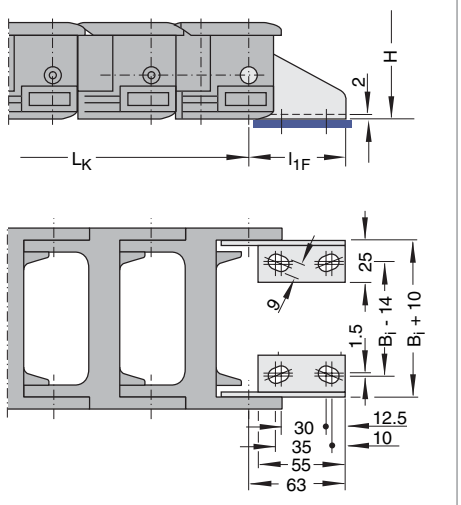
In the standard version, the divider systems are mounted on every second chain link.

MONO – Type 0625

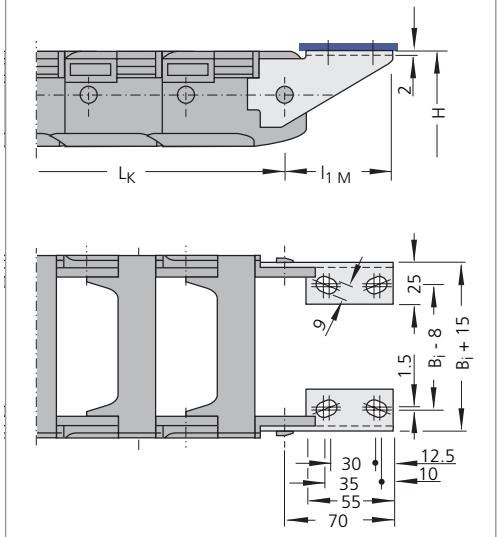
Connection dimensions

Standard end connector made of steel

Fixed point connection



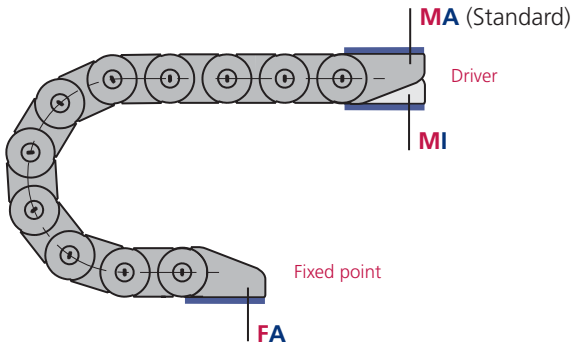
Driver connection



Connecting surface on the outside (not illustrated) possible on request.

Connectors with integrated strain relief are available. Please do get in touch with us.

Connection variants



Connection point

M – Driver

F – Fixed point

Connection type

A – Threaded joint outside (standard)

I – Threaded joint, inside

In the standard version, the end connectors are mounted with the threaded joint outwards (**FA/MA**).

When ordering please specify the desired connection type (see ordering key on page 242).

The connection type can subsequently be altered simply by varying the connectors.

KABELSCHLEPP

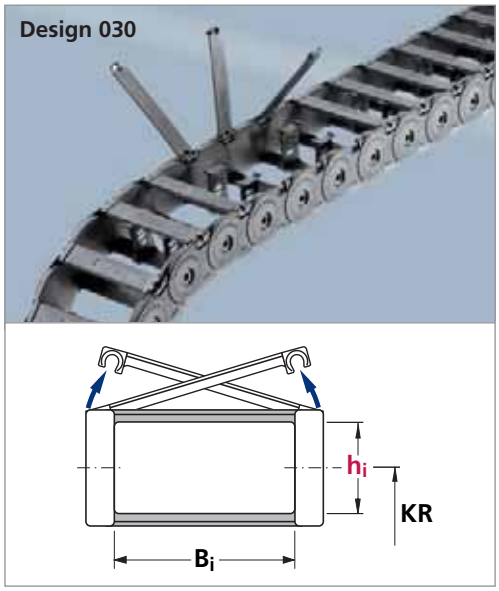
the power to innovate

Cable carriers with fixed chain widths

UNIFLEX

UNIFLEX – Cable carriers with fixed chain widths

- Solid plastic
- Can be opened either inwards or outwards (depending on the design)
- Robust, double stroke system for long unsupported lengths
- Particularly high torsional rigidity
- End connectors with integrated strain relief
- Open, half-covered and completely covered designs
- Economically priced standard types
- TÜV design approved in accordance with 2PfG 1036/10.97

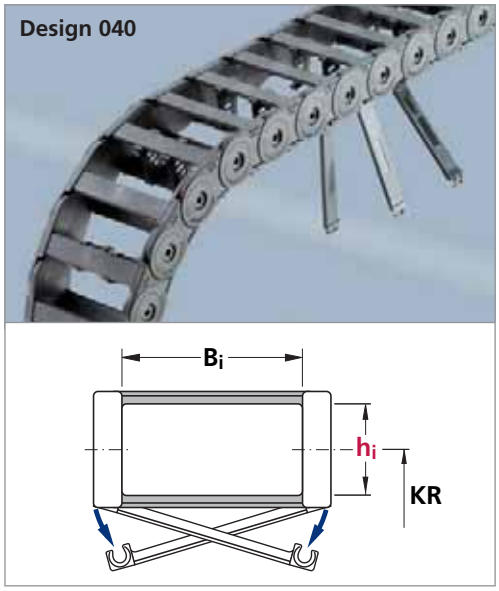


Design 030

Outside: Hinged, openable (on the right/left) and detachable brackets

Dimensions in mm

Type	h_i	B_i	Maximum travel length in m	Dynamics of unsupported arrangement		Page
				Travel speed v_{max} in m/s	Travel acceleration a_{max} in m/s²	
0250.030	17.5	20-80	60	10	50	50
0345.030	20	15-90	80	10	50	52
0455.030	26	25-130	120	10	50	52
0555.030	38	50-150	125	9	45	52
0665.030	44	50-250	150	8	40	52



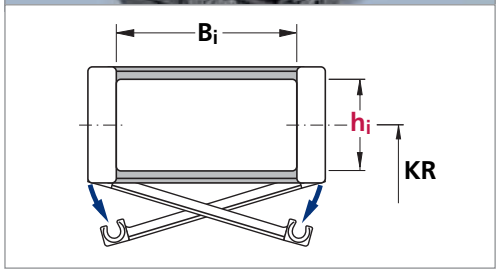
Design 040

Inside: Hinged, openable (on the right/left) and detachable brackets

Dimensions in mm

Type	h_i	B_i	Maximum travel length in m	Dynamics of unsupported arrangement		Page
				Travel speed v_{max} in m/s	Travel acceleration a_{max} in m/s²	
0345.040	20	15-90	80	10	50	52
0455.040	26	25-130	120	10	50	52
0555.040	38	50-150	125	9	45	52
0665.040	44	50-250	150	8	40	52

UNIFLEX – Cable carriers with fixed chain widths



Design 050

Cable carriers covered on one side

Outside: Covered
Inside: Hinged, openable (on the right/left) and detachable brackets

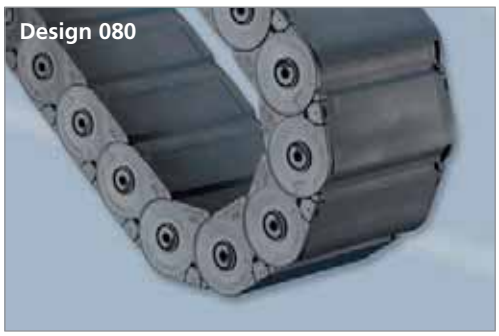
Dimensions in mm

Type	h_i	B_i	Maximum travel length in m	Dynamics of unsupported arrangement		Page
				Travel speed v_{max} in m/s	Travel acceleration a_{max} in m/s²	
0345.050	**20**	15-65	80	10	50	54
0455.050	**26**	25-130	120	10	50	54
0555.050	**38**	50-150	125	9	45	54
0665.050	**44**	50-175	150	8	40	54

Tubes – covered cable carriers
Design 060 with plastic cover system

Outside and inside: Covered
Inside: Hinged, openable (on the right/left) and detachable cover

Detailed information can be found in the chapter Tubes – Covered Cable Carriers from page 134 onwards.



Tubes – covered cable carriers
Design 080 – lightweight – with plastic cover system

Outside: Detachable cover
Inside: Covered

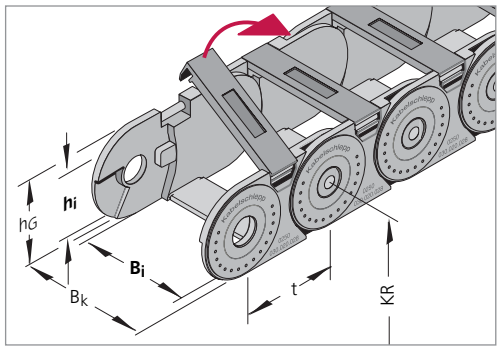
Detailed information can be found in the chapter Tubes – Covered Cable Carriers from page 134 onwards.

UNIFLEX – Type 0250

Dimensions and intrinsic chain weight

Type 0250.030

Outside: Hinged, openable and detachable brackets



Dimensions in mm/Weights in kg/m

Type	h_i	h_G	Inner widths B_i						B_k
			Intrinsic chain weight						
			20	30	40	50	65	80	
0250	17.5	23	0.26	0.31	0.33	0.35	0.38	0.41	B_i + 10

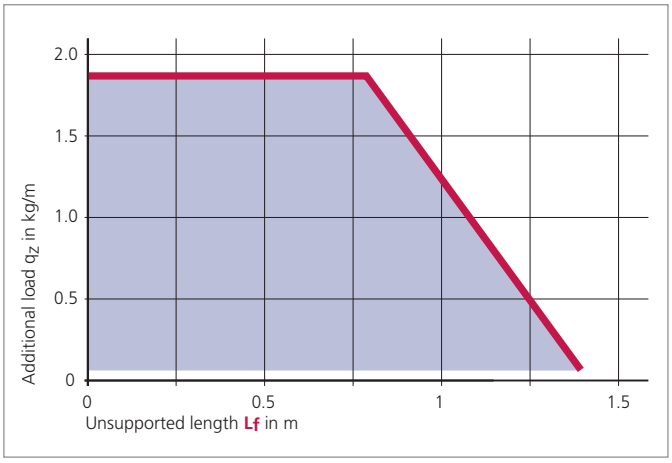
Bend radius and pitch

Bend radii KR mm					
28	38	45	60	75	100

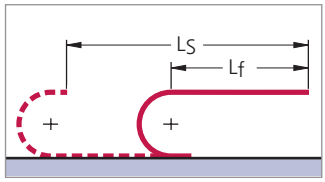
Pitch t = 25.0 mm

Load diagram

for unsupported length L_f depending on the additional load



Unsupported length L_f



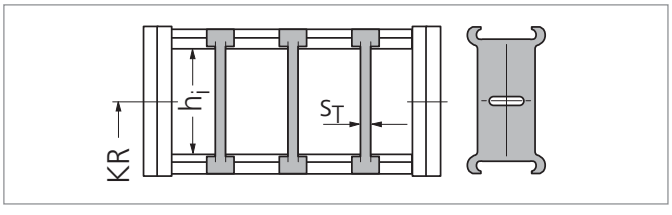
In the case of longer travel lengths, sag of the cable carriers is technically permissible depending on the application.

In a gliding arrangement, even longer travel lengths are possible (see page 219).

We are at your service to advise on these applications.

Divider system

Divider system TS 0



For Type 0250, the divider system TS 1 with a central height subdivision (S_H = 2,4 mm) is also available.

Type	h_i mm	S_T mm
0250	17.5	2

In the standard version, the divider systems are mounted on every second chain link.

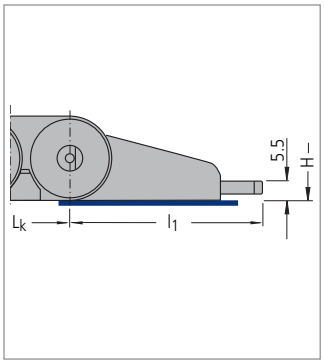
The dividers can be moved in the cross section.

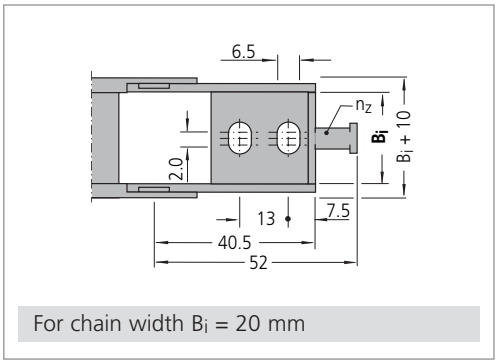
UNIFLEX – Type 0250

Connection dimensions

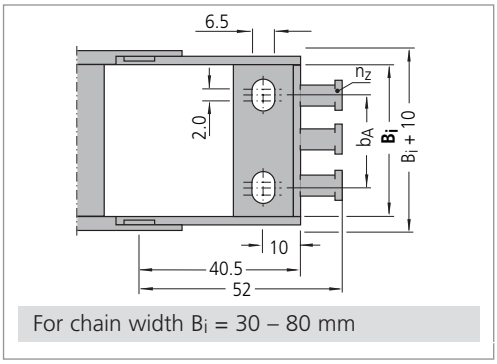
Plastic connectors

with integrated strain relief





For chain width B_i = 20 mm



For chain width B_i = 30 – 80 mm

Table of dimensions

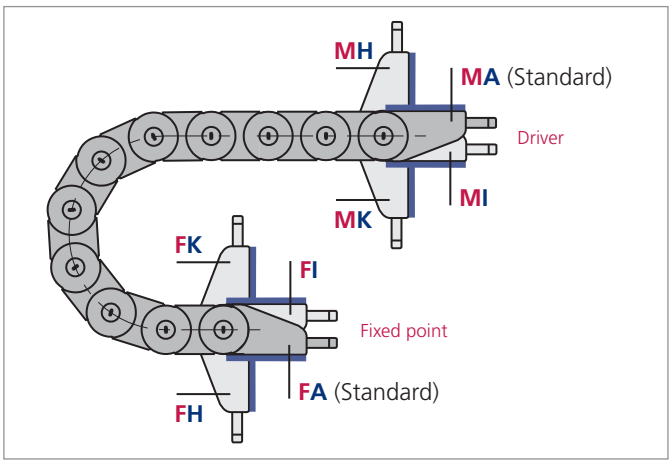
Plastic connecting elements
with strain relief combs

Dimensions in mm

Type	B_i	B_k	b_A	n_Z
0250	20	30	–	1
	30	40	15	2
	40	50	23	3
	50	60	33	4
	65	75	48	5
	80	90	63	6

The dimensions of the fixed point and driver connections are identical.

Connection variants



In the standard version, the connectors are mounted with the threaded joint outwards (**FA/MA**).

When ordering please specify the desired connection type (see ordering key on page 243).

The connection type can subsequently be altered simply by varying the connectors.

Connection point

M – Driver

F – Fixed point

Connection type

A – Threaded joint outside (standard)

I – Threaded joint, inside

H – Threaded joint, rotated through 90° to the outside

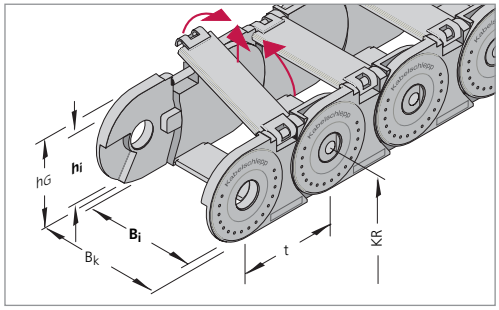
K – Threaded joint, rotated through 90° to the inside

UNIFLEX – Types 0345, 0455, 0555 and 0665

Dimensions and intrinsic chain weight

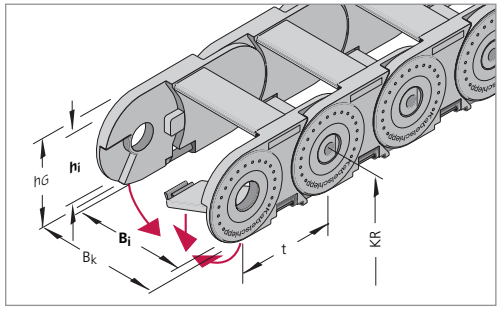
Design 030

Outside: Hinged, openable (on the right/ left) and detachable brackets



Design 040

Inside: Hinged, openable (on the right/ left) and detachable brackets



Designs 035 and 045

When hydraulic hoses are being used, with small bend radii, we recommend the use of lockable brackets – Designs .035 and .045.

Designs 030/035 and 040/045

Dimensions in mm/Weights in kg/m

Type	h_i	h_G	Inner widths B_i / Intrinsic chain weight									B_k
0345	20	28	15	20	25	38	50	65	90	–	–	B_i + 13
			0.43	0.45	0.46	0.50	0.53	0.57	0.71	–	–	
0455	26	36	25	38	58	78	103	130	–	–	–	B_i + 18
			0.81	0.88	0.95	1.02	1.15	1.27	–	–	–	
0555	38	50	50	75	100	125	150	–	–	–	–	B_i + 22
			1.47	1.60	1.72	1.86	1.98	–	–	–	–	
0665	44	60	50	75	100	125	150	175	200	225	250	B_i + 27
			2.06	2.22	2.37	2.53	2.68	2.85	3.00	3.16	3.31	

Bend radius and pitch

Designs 030/035 and 040/045

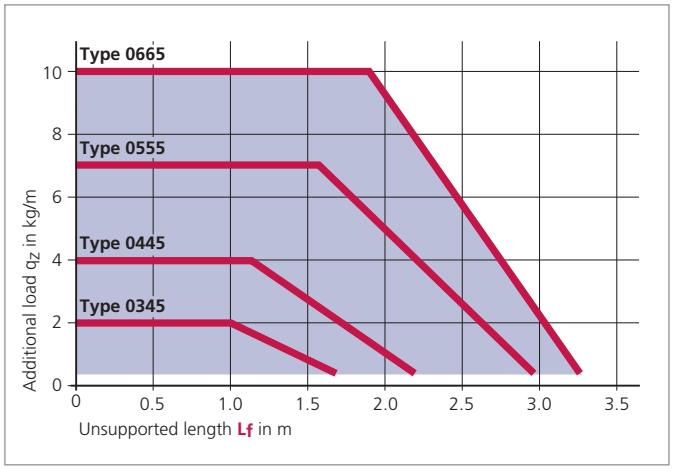
Dimensions in mm

Type	Bend radii KR							
0345	38	50	75	100	125	150	–	–
0455	52	65	95	125	150	180	200	225
0555	63	80	100	125	160	200	230	–
0665	75	100	120	140	200	250	300	–

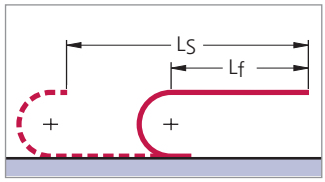
Pitch t:
Type 0345: 34.5 mm
Type 0455: 45.5 mm
Type 0555: 55.5 mm
Type 0665: 66.5 mm

Load diagram

for unsupported length L_f depending on the additional load



Unsupported length L_f



In the case of longer travel lengths, sag of the cable carriers is technically permissible depending on the application.

In a gliding arrangement, even longer travel lengths are possible (see page 219).

We are at your service to advise on these applications.

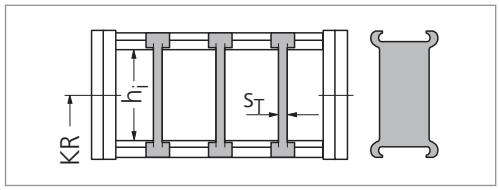
UNIFLEX – Types 0345, 0455, 0555 and 0665

Divider systems for designs 030 and 040

Divider system TS 0

Type	h_i mm	S_T mm
0345	**20**	2
0455	**26**	2.5
0555	**38**	2.5
0665	**44**	3

The dividers can be moved in the cross section.



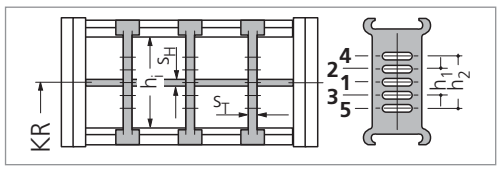
In the standard version, the divider systems are mounted on every second chain link.

Divider system TS 1

with continuous height subdivision made of aluminium

Type	h_i mm	S_T mm	S_H mm	h_1 mm	h_2 mm
0345	**20**	2	2	10	–
0455	**26**	2.5	2	10	–
0555	**38**	2.5	4	14	–
0665	**44**	3	4	14	28

The dividers can be moved in the cross section.



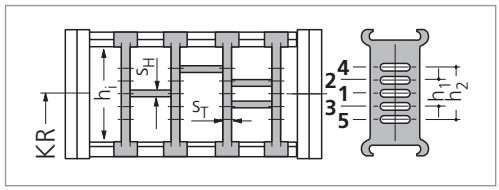
In the standard version, the divider systems are mounted on every second chain link.

Divider system TS 3

with partitioned height subdivision made of plastic

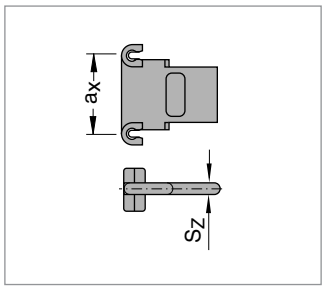
Type	h_i mm	S_T mm	S_H mm	h_1 mm	h_2 mm
0455	**26**	5	2.4	10	–
0555	**38**	5	2.4	12	–
0665	**44**	8	4.0	14	28

The dividers are fixed by the partitions, the complete divider system is movable.



In the standard version, the divider systems are mounted on every second chain link.

Dimensions of the plastic partitions for TS 3



Types 0455 and 0555

Dimensions in mm

S_Z	a_x (center-to-center distance, dividers)									
2.4	15	20	25	30	35	40	45	55	65	75

Type 0665

Dimensions in mm

S_Z	a_x (center-to-center distance, dividers)									
4	16	18	23	28	32	33	38	43	48	58
	64	68	78	80	88	96	112	**128**	**144**	**160**
	176	**192**	**208**							

For type 0665, aluminium partitions in 1 mm width sections are available.

When using **partitions with a_x > 112** mm, there should be an additional central support with a **twin divider** (S_T = 3 mm).

Twin dividers are designed for subsequent fitting in the partition system. You can find further information on this in our main catalog.

UNIFLEX – Types 0345, 0455, 0555 and 0665

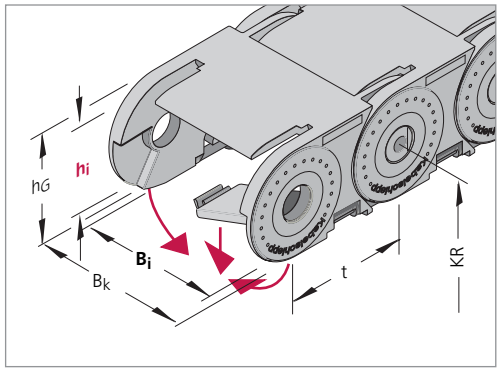
Dimensions and intrinsic chain weight

Design 050

Cable carriers covered on one side

Outside: Covered
Inside: Hinged, openable (on the right/left) and detachable brackets

Design 055:
When hydraulic hoses are being used, with small bend radii, we recommend the use of lockable brackets – Design 055.



Dimensions in mm/Weights in kg/m

Type	h_i	h_G	Inner widths B_i / Intrinsic chain weight						B_k
0345	20	28	**15**	**20**	**25**	**38**	**50**	**65**	B_i + 13
			0.46	0.49	0.52	0.59	0.66	0.75	
0455	26	36	**25**	**38**	**58**	**78**	**103**	**130**	B_i + 18
			0.89	0.97	1.10	1.22	1.40	1.58	
0555	38	50	**50**	**75**	**100**	**125**	**150**	–	B_i + 22
			1.64	1.81	1.98	2.16	2.33	–	
0665	44	60	**50**	**75**	**100**	**125**	**150**	**175**	B_i + 27
			2.26	2.53	2.79	3.06	3.33	3.60	

Bend radius and pitch

Dimensions in mm

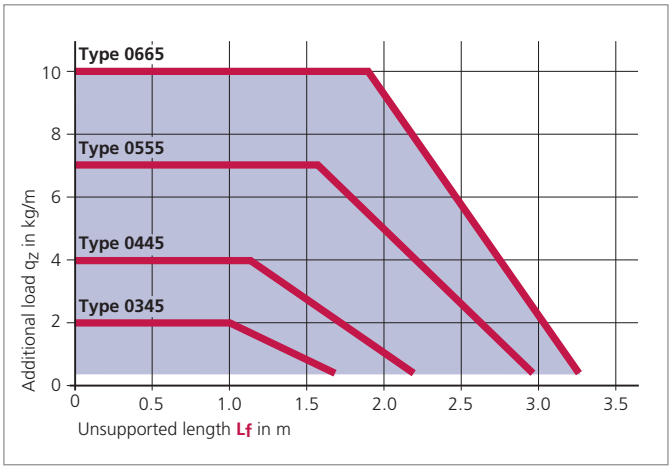
Type	Bend radii KR							
0345	38	50	75	100	125	150	–	–
0455	52	65	95	125	150	180	200	225
0555	63	80	100	125	160	200	230	–
0665	75	100	120	140	200	250	300	–

Pitch t:
Type 0345: 34.5 mm
Type 0455: 45.5 mm
Type 0555: 55.5 mm
Type 0665: 66.5 mm

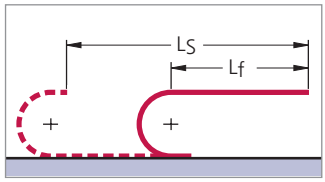
UNIFLEX – Types 0345, 0455, 0555 and 0665

Load diagram

for unsupported length L_f depending on the additional load



Unsupported length L_f



In the case of longer travel lengths, sag of the cable carriers is technically permissible depending on the application.

In a gliding arrangement, even longer travel lengths are possible (see page 219).

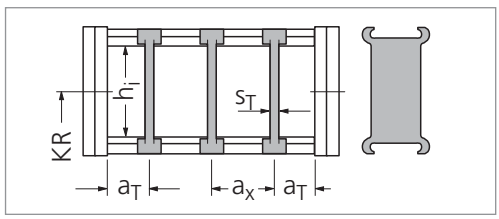
We are at your service to advise on these applications.

Divider system for design 050

Divider system TS 0

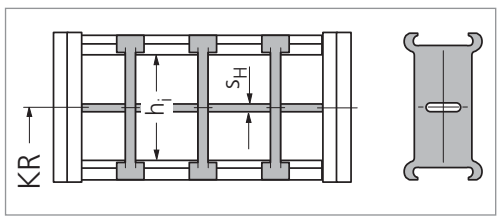
Type	h_i mm	S_T mm	a_x mm	B_i mm	$a_{T\ min}$ mm
0455	**26**	3	20	25	12.5
0455	**26**	3	20	38, 58, 78	19
0455	**26**	3	20	103	21.5
0455	**26**	3	20	130	25
0555	**38**	3	25	50 ... 150	25
0665	**44**	5	25	50 ... 175	25

The dividers are fixed at an interval of a_x.



In the standard version, the divider systems are mounted on every second chain link.

For Type 0665, the divider system TS 1 with a central height subdivision (S_H = 4 mm) is also available.



UNIFLEX – Types 0345, 0455, 0555 and 0665

Strain relief devices for plastic connectors

ZLK – A

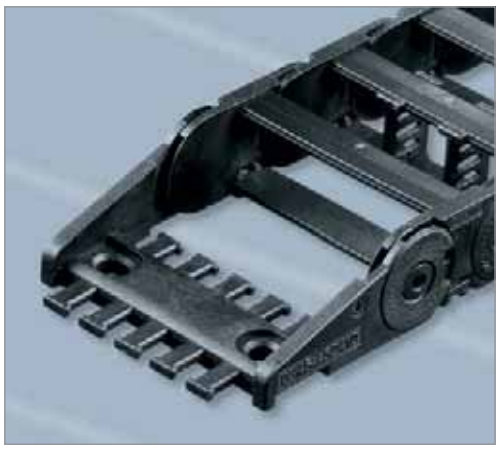
Connecting elements with integrated strain relief combs on both sides (ZLK – A)

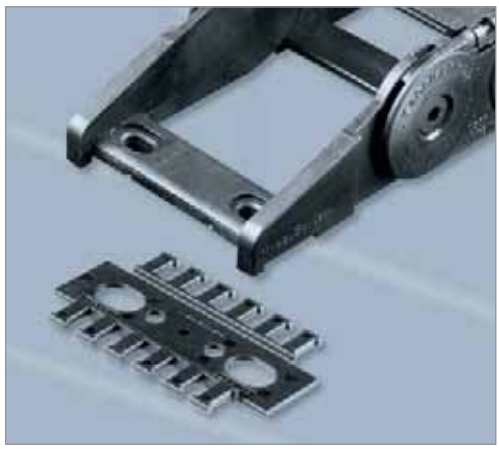
ZLK – L

Connecting elements with screw-on type strain relief combs (ZLK - L)

The strain relief combs are generally supplied with the connecting elements.

The combs are either clipped to the end connectors and bolted together with them, or screwed on at the desired intervals by using additional boreholes, behind the connecting elements.

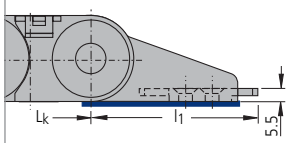


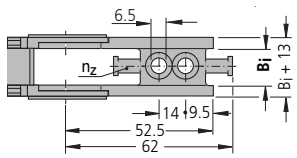


Connection dimensions for Type 0345

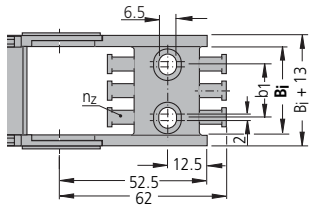
Connecting elements with integrated strain relief combs on both sides

ZLK – A





For chain width B_i = 15 – 20 mm



For chain width B_i = 25 – 65 mm

The dimensions of the fixed point and driver connections are identical.

Dimensions in mm

Type	B_i	B_k	b_1	n_Z
0345. ... .15	15	28	--	1
0345. ... .20	20	33	--	1
0345. ... .25 *	25	38	13	2
0345. ... .38	38	51	24	3
0345. ... .50	50	63	36	4
0345. ... .65	65	78	51	5

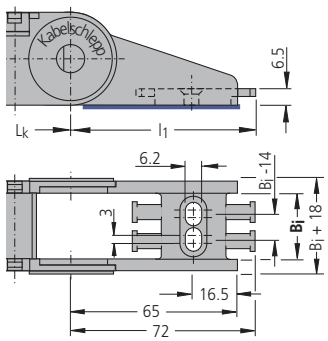
* Type 0345. ... .25 with 6.5 mm hole (not an elongated hole)

UNIFLEX – Types 0345, 0455, 0555 and 0665

Connection dimensions for Type 0455

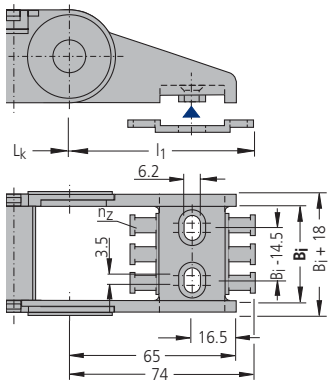
Connecting elements with strain relief combs on both sides

ZLK – A
integrated strain relief combs



For chain width B_i = 25 mm

ZLK – L
screwable strain relief combs



For chain width B_i = 38 – 130 mm

The dimensions of the fixed point and driver connections are identical.

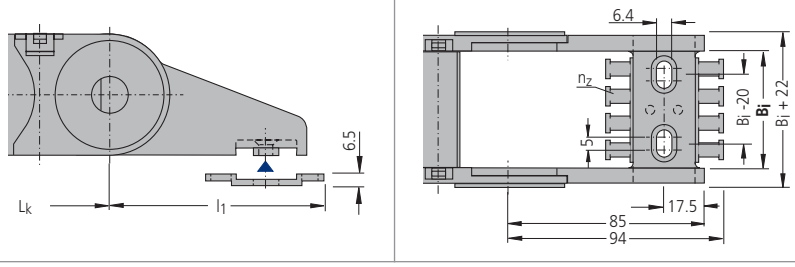
Dimensions in mm

Type	B_i	B_k	n_z
0455. ... .25	25	43	2
0455. ... .38	38	56	3
0455. ... .58	58	76	4
0455. ... .78	78	96	6
0455. ... .103	103	121	8
0455. ... .130	130	148	10

Connection dimensions for Type 0555

Connecting elements with strain relief combs on both sides

ZLK – L screwable strain relief combs



The dimensions of the fixed point and driver connections are identical.

Dimensions in mm

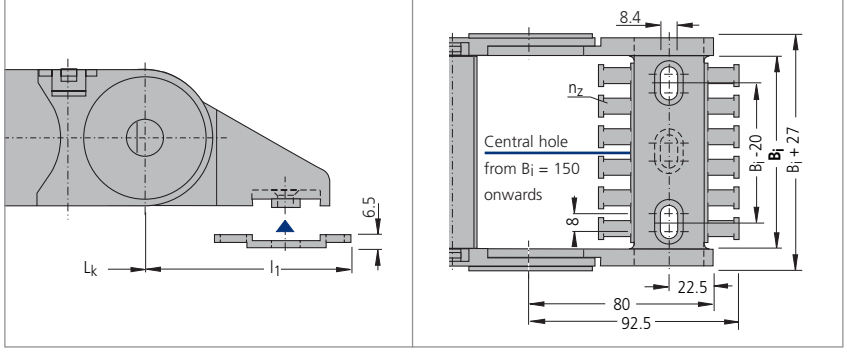
Type	B_i	B_k	n_z
0555. ... .50	50	72	2
0555. ... .75	75	97	3
0555. ... .100	100	122	4
0555. ... .125	125	147	6
0555. ... .150	150	172	8

UNIFLEX – Types 0345, 0455, 0555 and 0665

Connection dimensions for Type 0665

Connecting elements with strain relief combs on both sides

ZLK – L screwable strain relief combs



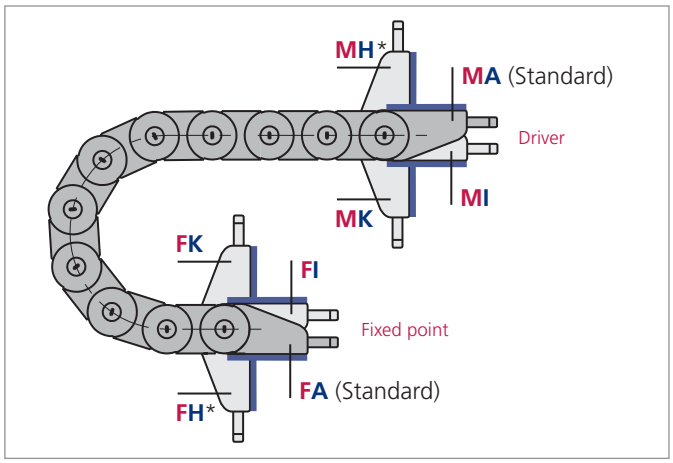
The dimensions of the fixed point and driver connections are identical.

Dimensions in mm

Type	B_i	B_k	n_z
0665. ... .50	50	77	4
0665. ... .75	75	102	6
0665. ... .100	100	127	8
0665. ... .125	125	152	10
0665. ... .150	150	177	12
0665. ... .175	175	202	14
0665. ... .200	200	227	16
0665. ... .225	225	252	18
0665. ... .250	250	277	20

UNIFLEX – Types 0345, 0455, 0555 and 0665

Connection variants



Connection point

M – Driver

F – Fixed point

Connection type

A – Threaded joint outside (standard)

I – Threaded joint inside

H – Threaded joint, rotated through 90° to the outside

K – Threaded joint, rotated through 90° to the inside

In the standard version, the connectors are mounted with the threaded joint outwards (**FA/MA**).

When ordering please specify the desired connection type (see ordering key on page 243).

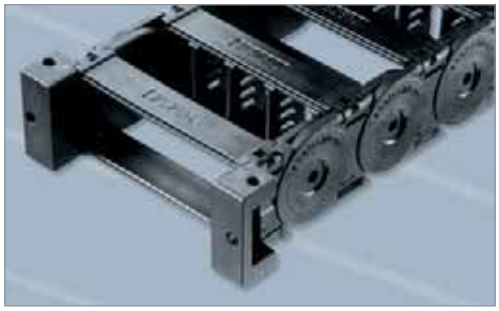
The connection type can subsequently be altered simply by varying the connectors.

* not in the case of UNIFLEX design 060

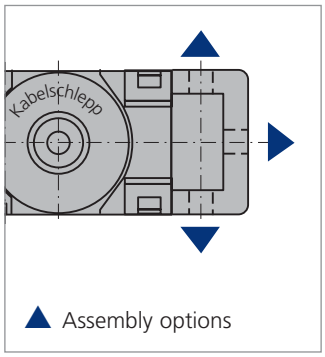
UNIFLEX – Types 0345, 0455, 0555 and 0665

Connection dimensions

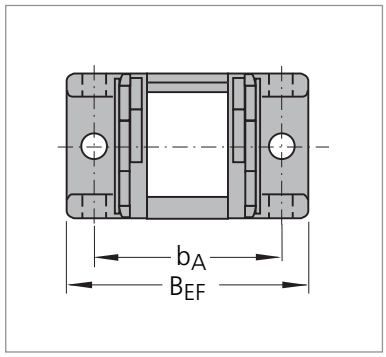
UMB (Universal Mounting Brackets) made of aluminium

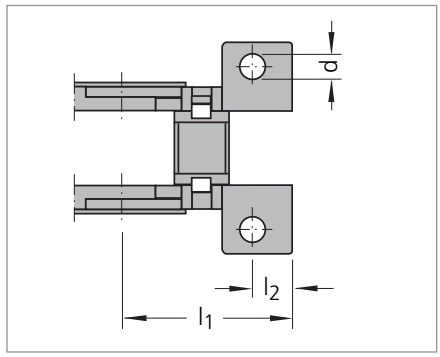


Universal connectors for connection above, below or at the front.



▲ Assembly options





The dimensions of the fixed point and driver connections are identical.

Type	B_{EF}	b_A	l_1	l_2	d
0345	B_i + 30	B_i + 20	36	9	5.5
0455	B_i + 30	B_i + 20	47	10.5	5.5
0555	B_i + 40	B_i + 28	57	13.5	6.5
0665	B_i + 44	B_i + 28	68	14.5	8.5

KABELSCHLEPP

the power to innovate

BASIC-LINE*PLUS*

Cable carriers with extruded plastic profile bars

PROTUM

PROFILE

KABELSCHLEPP

the power to innovate

Cable carriers with extruded plastic profile bars

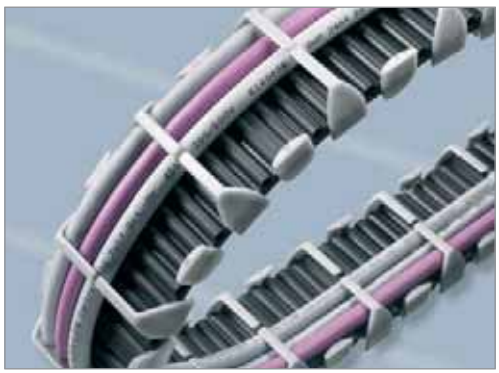
PROTUM

PROTUM – Cable carriers with extruded plastic profile bars

PROTUM 0160, 0240, 0300

- Solid plastic
- Very long life – no hinges and hence no hinge wear
- Small, light cable carrier for unsupported applications
- Very good ratio of useful space to outer dimensions
- Low vibration and quiet operation
- Optimal for short travel lengths and high travel speeds
- Gentle on the cables, since there is almost no polygon effect
- Fast cable laying simply by pressing the cables in – no threading through is necessary

PROTUM OFFICE – P 0240 GS



Based upon the PROTUM cable carrier system, this variant has been adapted for use in office areas.

The inner width and the possibility of double occupancy provide sufficient space for cables in office areas, i.e. for telecommunications. energy and data cables.

The link-free construction also serves as a design feature, with silver-gray, elegant-looking side walls.

Less expense – lower costs thanks to simple cable laying

Even pre-assembled cables can simply be inserted. The cables can easily be changed during service and maintenance work. For you this means lower costs.

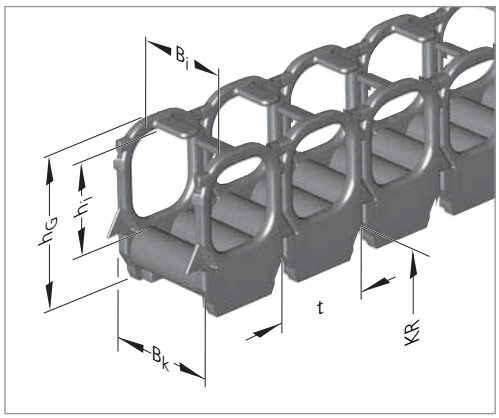
The basic construction

The basis of the PROTUM cable carrier system is an extruded band onto which lightweight side parts are attached.

It can easily be extended by attaching additional bands and corresponding side parts and shortened simply by cutting through the band with a knife.

PROTUM – Types P 0160, P 0240 and P 0300

Dimensions



Dimensions in mm/Weights in kg/m

Type	h_i	h_G	Inner widths B_i			B_k	For cable-Ø
			Intrinsic chain weight				
P 0160	15	25	15	20	30	B_i + 4	10
			0.14	0.16	0.21		
P 0240	20	31	20	30	40	B_i + 5	15
			0.18	0.22	0.27		
P 0300	25	43	25	35	45	B_i + 6	20
			0.32	0.39	0.47		

Bend radius and pitch

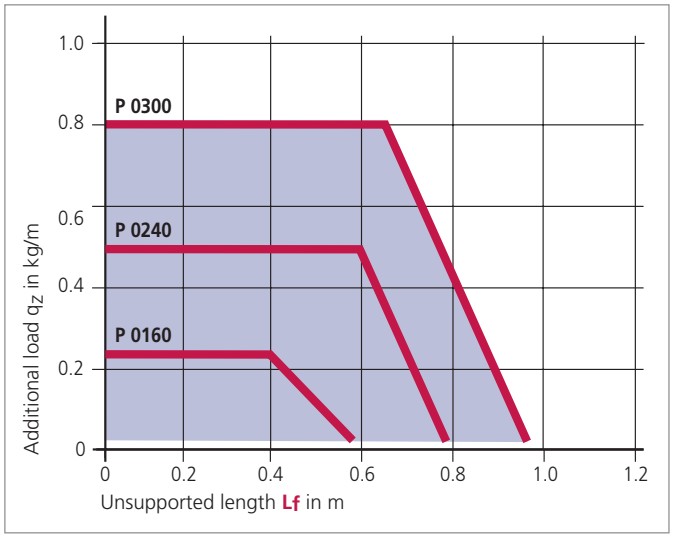
Dimensions in mm

Type	Bend radii KR			
P 0160	18	28	38	48
P 0240	27	42	57	72
P 0300	34	53	72	90

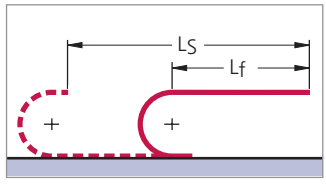
Pitch:
P 0160: t = 16 mm
P 0240: t = 24 mm
P 0300: t = 30 mm

Load diagram

for unsupported length L_f depending on the additional load



Unsupported length L_f



In the case of longer travel lengths, sag of the cable carriers is technically permissible depending on the application.

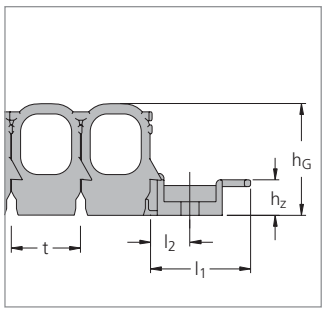
We are at your service to advise on these applications.

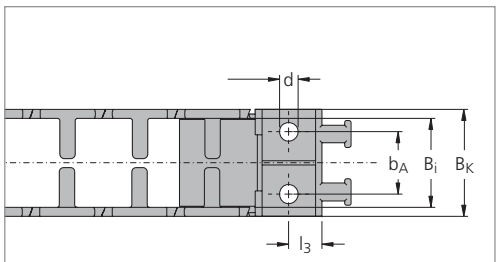
PROTUM – Types P 0160, P 0240 and P 0300

Connection dimensions

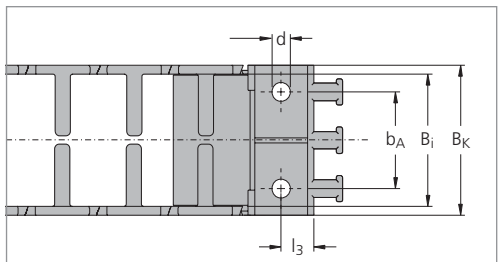
Plastic connectors

with integrated strain relief





For type
P 0160: B_i = 15, 20
P 0240: B_i = 20
P 0300: B_i = 25, 35



For type
P 0160: B_i = 30
P 0240: B_i = 30, 40
P 0300: B_i = 45

The dimensions of the fixed point and driver connections are identical.

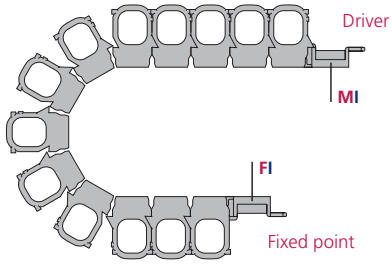
Table of dimensions

Plastic connecting elements with strain relief combs

Dimensions in mm

Type	B_i	B_k	b_A	d	l_1	l_2	l_3	h_z	h_G
P 0160	15 20 30	B_i + 4	11 14 22	4.2	23	7.5	7.5	8	25
P 0240	20 30 40	B_i + 5	14 22 32	4.2	23	7.5	7.5	8	31
P 0300	25 35 45	B_i + 6	14 17 22	6.2	40	16	14	15	43

Connection variant



Connection point

M – Driver

F – Fixed point

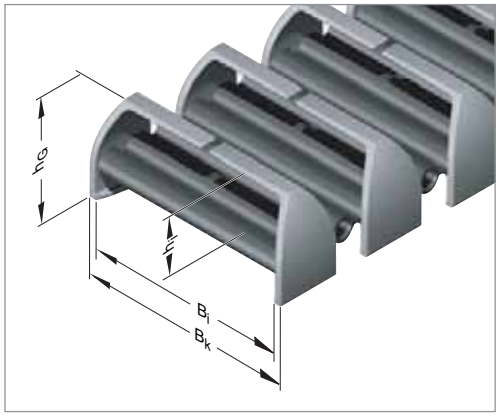
Connection type

I – Threaded joint, inside

PROTUM OFFICE – P 0240 GS

Dimensions

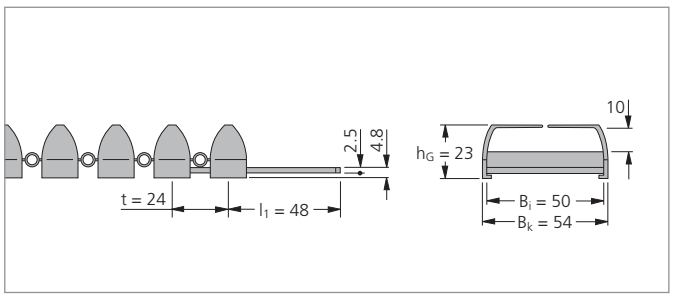
Dimensions in mm

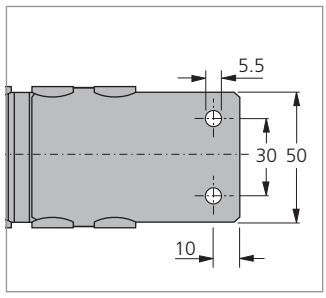


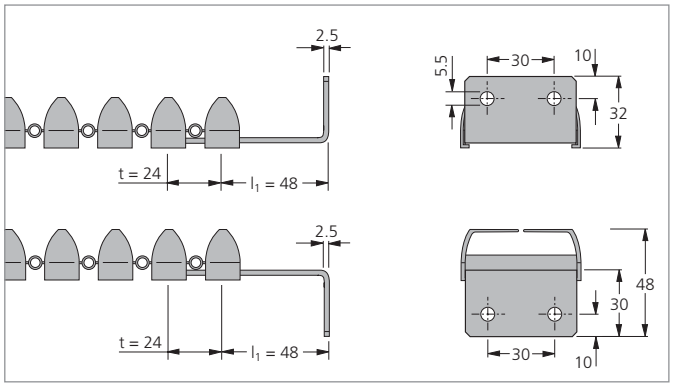
Type	h_i mm	h_G mm	B_i mm	B_k mm	For cable-Ø
P 0240 GS	10	23	50	54	3 – 9

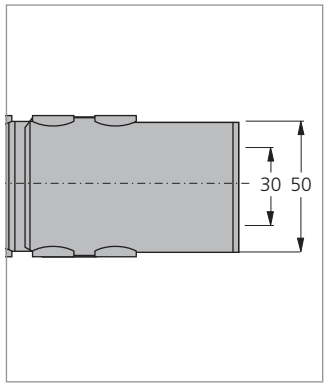
Connection dimensions

Connectors



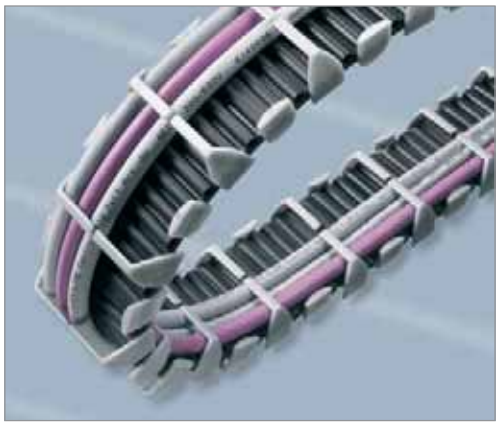






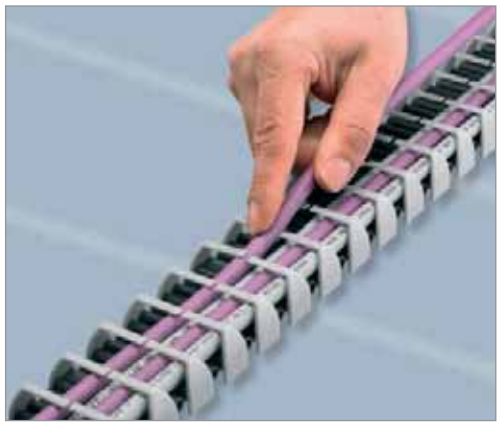
PROTUM OFFICE – P 0240 GS

Laying on both sides



■ Where more of space is needed, the take-up capacity can be doubled by laying the cables on both sides.
In this case every second side-part is simply attached the other way round.

Fast laying



■ Simple insertion of the cables

PROTUM OFFICE – P 0240 GS

Application examples

■ Photos: Haworth Büroeinrichtungen GmbH

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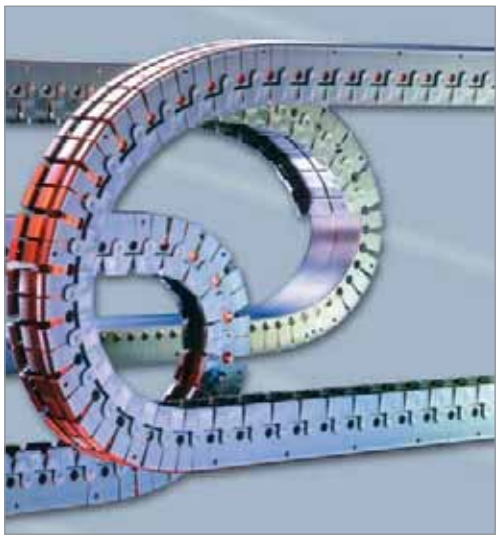
Cable carriers with extruded plastic profile bars

PROfile®

PRO*file*® – Cable carriers of extruded plastic profile bars



- Optimal for short travel lengths and high travel speeds
- Low vibration and quiet operation
- Very long service life
- Tested over several million cycles
- Clean-room compatibility owing to low-wear construction and the concomitant minimal particle emission
- Fast cable laying simply by pressing the cables in – no threading through is necessary
- Standard modules for cable diameters from 6 mm to 30 mm
- Special modules for ribbon cables from 44 mm to 65 mm in width
- Special module for cable diameter up to 5 mm and ribbon cables up to 14 mm in width

Less expense – lower costs thanks to simple cable laying

Even pre-assembled cables can simply be inserted.
For you this means lower costs.

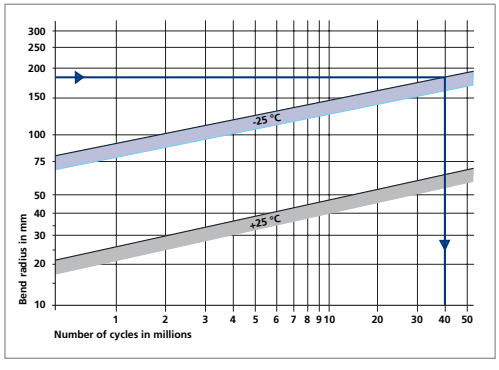
The basic construction

The **PRO*file*®** cable carrier system consists of extruded profile bars. By means of a special process, they become able to bend in one direction and form an almost perfectly round circular shape.

Since there are no hinges, the system is very durable and quiet. Operation is almost vibration-free.

If there is not sufficient space in one module for laying the cables, several modules can be combined into a system.

Plastic end connectors of plastic are available for fastening.



The life of the **PRO*file*®** system is primarily influenced by the ambient temperature and the bend radius.

The diagram shows the extremely long life of **PRO*file*®** systems.

Example:
At a temperature of -25 °C and a bend radius of 175 mm, the **PRO*file*®** system can achieve about 40 million cycles.

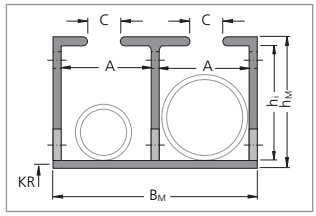
Please ask us about the values for maximum travel length, speed and acceleration.

PRO*file*® – standard modules

Dimensions and module weights

Dimensions in mm

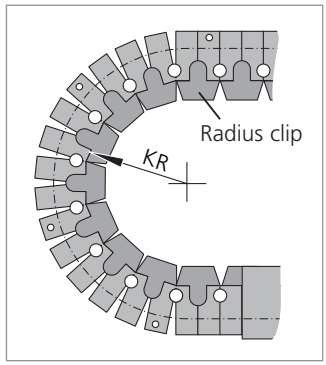
Module	h_i	h_M	B_M	A	C	Cable-Ø min.	Cable-Ø max.	Intrinsic module weight
EM-1212	**34**	40	32	12	4	6	11	0.303 kg/m
EM-1717	**34**	40	42	17	4	8	16	0.353 kg/m
EM-2222	**34**	40	52	22	7	14	21	0.430 kg/m
EM-2727	**34**	40	62	27	10	17	26	0.475 kg/m
EM-3232	**34**	40	72	32	15	20	30	0.521 kg/m



Bend radius and pitch

The minimal bend radius of the extrusion profile bars is determined by their intrinsic rigidity. **PRO*file*®** Standard modules can be fitted with radius clips to limit the minimum bend radius (see table).

In individual modules, the radius clips are placed across the entire length of the module; in module combinations, only on the outer modules.

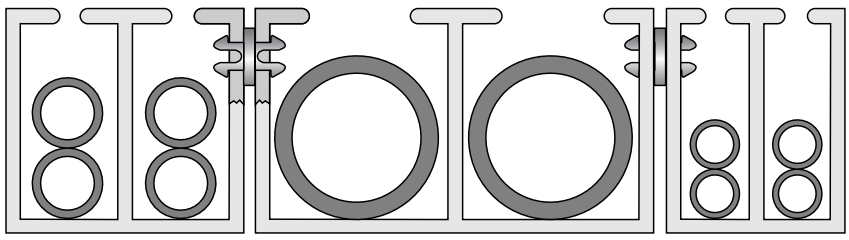


Module	Bend radii KR mm				
EM-1212	75	100	150	200	250
EM-1717	75	100	150	200	250
EM-2222	75	100	150	200	250
EM-2727	–	100	150	200	250
EM-3232	–	100	150	200	250

Pitch t = 20 mm

Module combinations

PRO*file*® Standard modules can be combined with one another as required. For this purpose, the module side walls are connected by joining rivets.



$$B_G = \sum B_M + [(n_M - 1) \times 3] \quad [mm]$$

Total width of the module combinations B_G

B_M = Width of the module (see table above)
n_M = Number of modules
L_k = Length of the module (see page 18)

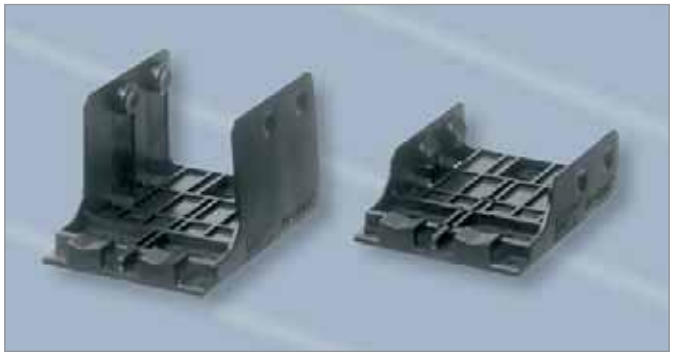
$$n_N = (n_M - 1) \times L_K \, [m] \times 10$$

Number of joining rivets n_N

PROfile® – standard modules

Connection dimensions
EM-1212, EM-1717, EM-2222, EM-2727 and EM-3232

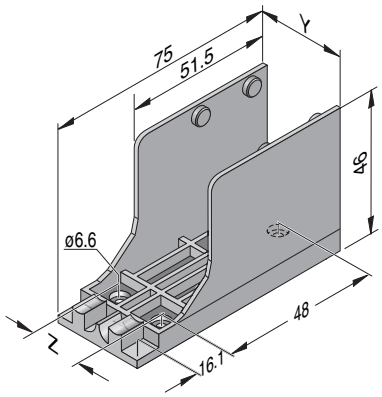
Plastic connectors



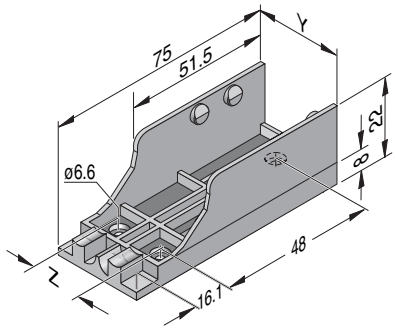
At the driver and the fixed point, the single unit connecting elements are snapped into the boreholes of the module.

The module length taken up by the connecting element is 50 mm.

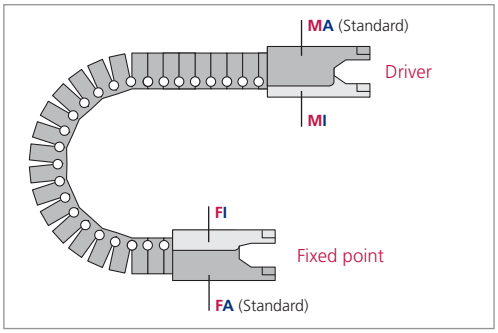
Connecting element for connecting surface, on the outside



Connecting element for connecting surface, on the inside



Connection variants



Connection point

M – Driver

F – Fixed point

Connection type

I – Threaded joint, inside

A – Threaded joint, outside

Please specify the desired connection variant when placing your order.

For modules EM-S15, EM-S45.20 and EM-S45 as well as EM-S67 and QM-45.23, no connecting elements are required. These can be screwed on directly at the driver and the fixed point.

PRO*file*® – special modules

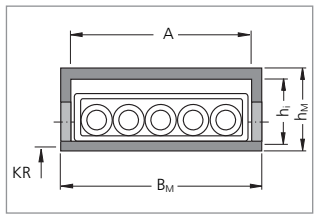
Enclosed special module with small dimensions

EM-S15

Dimensions in mm

Module	h_i	h_M	B_M	A	Cable width max.	Intrinsic module weight
EM-S15	6	7.5	17.5	15	14	0.024 kg/m

Pitch t = 6.75 mm



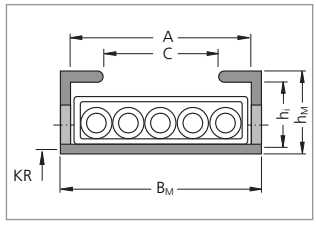
Open special module for ribbon cables

Special module open on the outside

Dimensions in mm

Module	h_i	h_M	B_M	A	C	Cable width max.	Intrinsic module weight
EM-S43.20	20	23.5	48	43	28	42	0.153 kg/m
EM-S45.20	20	23.5	49	45	33	44	0.135 kg/m
EM-S45.16.5	16.5	20	49	45	33	44	0.130 kg/m
EM-S67.11	11	15	72	67	50	65	0.174 kg/m

Pitch t = 13.5 mm

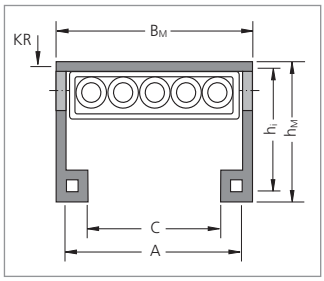


Special module open on the inside

Dimensions in mm

Module	h_i	h_M	B_M	A	C	Cable width max.	Intrinsic module weight
QM-45.23	23.5	38	50	45	30	44	0.320

Pitch t = 15 mm



With all **PRO*file*®** special modules, no module combinations are possible
No connection elements are required; the modules can be screwed on directly to the driver and the fixed point.

KABELSCHLEPP

the power to innovate

VARIO-LINE

Cable carriers with variable chain widths

K Series

MASTER H Series

MASTER L Series

M Series

XL Series

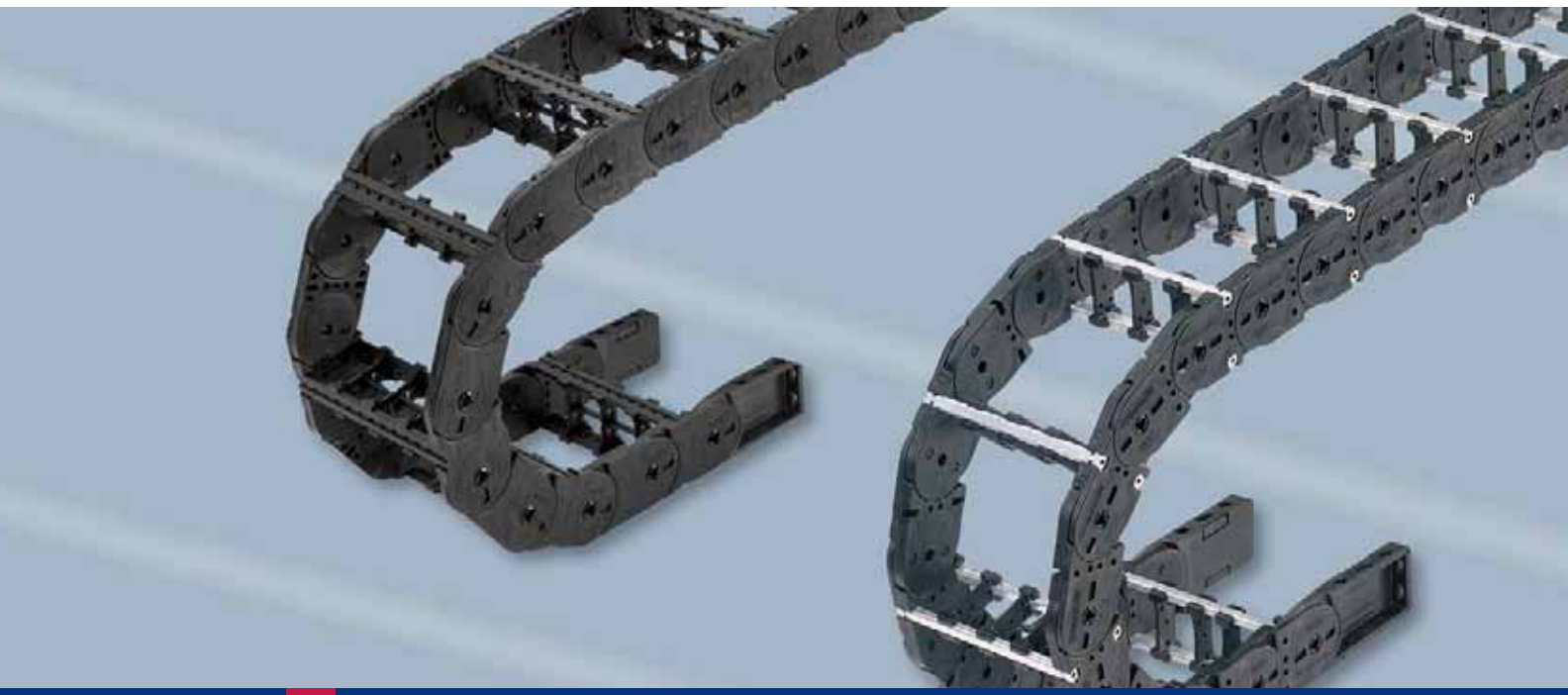
QUANTUM

KABELSCHLEPP

the power to innovate

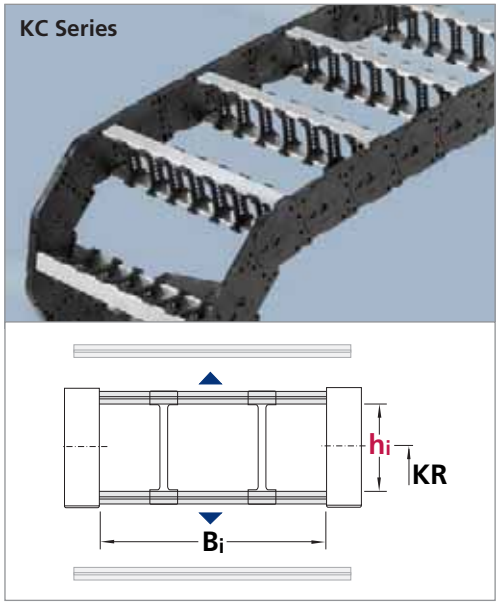
Cable carriers with variable chain widths

K Series



K Series – Cable carriers with variable chain widths

- Available in 1, 8 or 16 mm section widths
- Standard widths can be delivered ex-stock
- Can be opened quickly on the inside and the outside for cable laying
- Solid plastic or in combination with aluminium stays
- Extremely robust owing to strong sideband construction
- Enclosed stroke system not sensitive to dirt/contamination
- Transmission of forces (tensile and shearing forces) over a large surface area via the optimum link design – according to the "life extending 2 disc principle"
- Standard universal mounting brackets (UMBs) suitable for any assembly situation
- Optionally available with different strain relief systems
- TÜV design approved in accordance with 2PfG 1036/10.97



Aluminium stays
Width sections available
1 mm

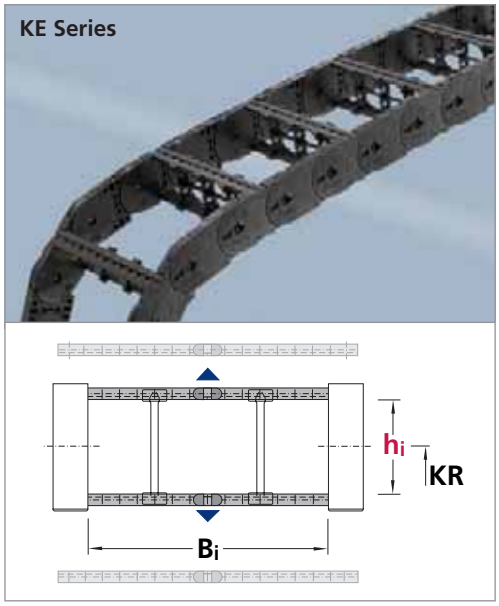
Type KC with aluminium stays

Plastic and aluminium combination

Available in **1 mm width sections**

Dimensions in mm

Type	h_i	B_i	Maximum travel length in m	Dynamics of unsupported arrangement		Page
				Travel speed v_{max} in m/s	Travel acceleration a_{max} in m/s²	
KC 0650	38	75-400	220	8	40	76
KC 0900	58	100-500	260	6	30	76



Type KE with plastic stays

Solid plastic

available in **8 or 16 mm width sections**

Dimensions in mm

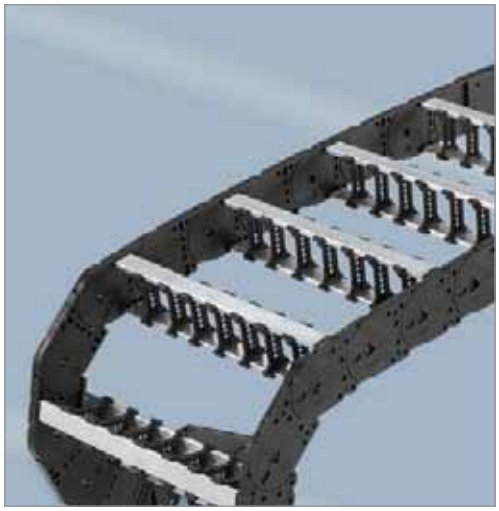
Type	h_i	B_i	Maximum travel length in m	Dynamics of unsupported arrangement		Page
				Travel speed v_{max} in m/s	Travel acceleration a_{max} in m/s²	
KE 0650	42	68-260	220	8	40	76
KE 0900	58	81-561	260	6	30	76

Subject to change.

K Series – Types KC 0650/0900 and KE 0650/0900

Carrier construction

Types KC 0650/0900

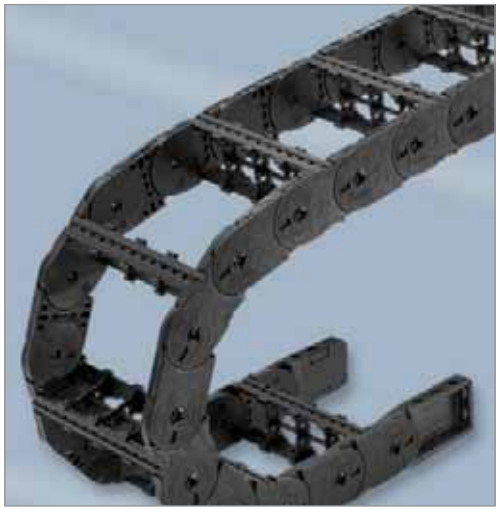


Hybrid cable carriers with plastic chain bands and aluminium stays.
Available in **1 mm width sections**.

Standard stay arrangement:
on every 2nd chain link.

Stays can be fitted on every chain link,
please specify when placing your order.

Types KE 0650/0900



Solid plastic cable carriers.

KE 0650: Available in **8 mm width sections**.

KE 0900: Available in **16 mm width sections**.

Standard stay arrangement:
on every 2nd chain link.

Stays can be fitted on every chain link,
please specify when placing your order

K Series – Types KC 0650/0900 and KE 0650/0900

Stay variants

Stay variants for types KC 0650 and KC 0900

Frame stay RS made of aluminium – Standard design – types KC 0650/0900

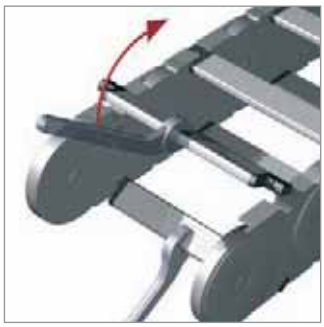
For lightweight to medium loads.

Opening options:
Outside / inside: the cable carrier can be opened quickly and easily simply by rotating the stays through 90°.

Frame stay RV made of aluminium – Reinforced design – type KC 0900

For medium to heavy loads and for large chain widths.

Opening options:
Outside / inside: the cable carrier can be opened quickly and easily simply by rotating the stays through 90°.

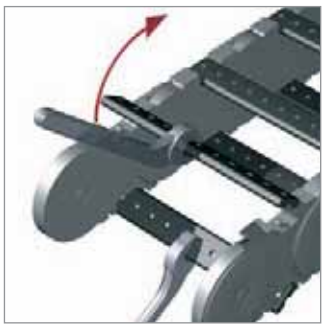


Hole stay LG available on request.

Stay variants for the types KE 0650 and KE 0900

Frame stay RE made of plastic

Opening options:
Outside / inside: the cable carrier can be opened quickly and easily simply by rotating the stays through 90°.



K Series – Types KC 0650/0900 and KE 0650/0900

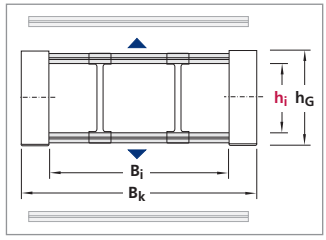
Dimensions and intrinsic chain weight

Types KC 0650/0900

Dimensions in mm/Weights in kg/m

Type	Stay variant	h_i	h_G	$B_{i\ min}$	$q_{k\ min}$	$B_{i\ max}$	$q_{k\ max}$	B_k
KC 0650	RS	38	57.5	75	1.87	400	3.60	B_i + 28
KC 0900	RS	58	78.5	100	2.80	400	5.80	B_i + 31
KC 0900	RV	58	78.5	100	3.20	500	7.00	B_i + 31

Aluminium stays
Width sections available
1 mm



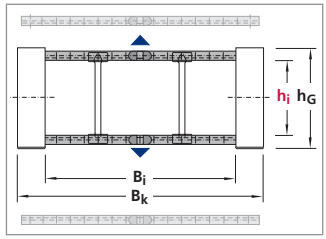
Standard widths in 25 mm steps available **ex-stock**.
Type 0650: B_i = 75, 100, 125, 150 ... 400
Type 0900: B_i = 100, 125, 150, 175 ... 500

Types KE 0650/0900

Dimensions in mm/Weights in kg/m

Type	Stay variant	h_i	h_G	$B_{i\ min}$	$q_{k\ min}$	$B_{i\ max}$	$q_{k\ max}$	B_k
KE 0650	RE	42	57.5	68	1.75	260	2.71	B_i + 28
KE 0900	RE	58	78.5	81	2.95	561	5.95	B_i + 31

Plastic stays
Width sections available
KE 0650 8 mm
KE 0900 16 mm



Bend radius and pitch

Types KC/KE 0650/0900

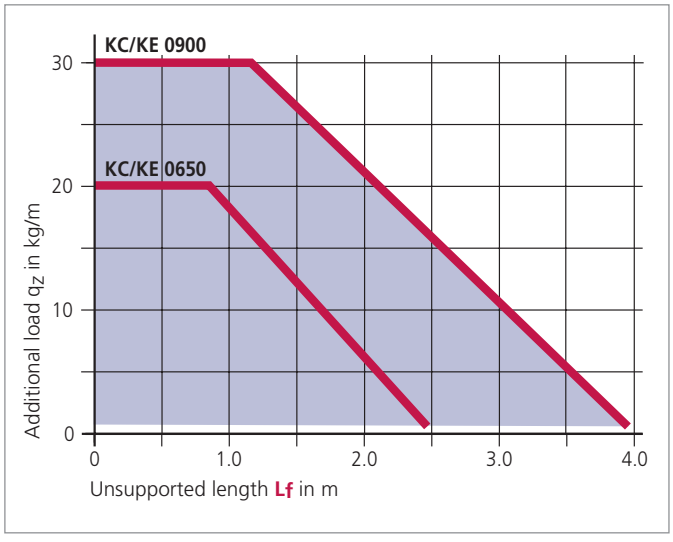
Dimensions in mm

Type	Bend radii KR					
KC/KE 0650	75	115	145	175	220	300
KC/KE 0900	130	150	190	245	300	385

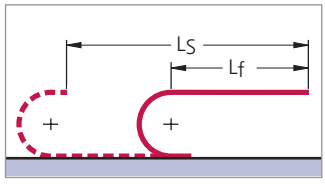
Pitch:
KC/KE 0650: t = 65 mm
KC/KE 0900: t = 90 mm

Load diagram

for unsupported length L_f depending on the additional load



Unsupported length L_f



In the case of longer travel lengths, sag of the cable carriers is technically permissible depending on the application.

In a gliding arrangement, even longer travel lengths are possible (see page 219).

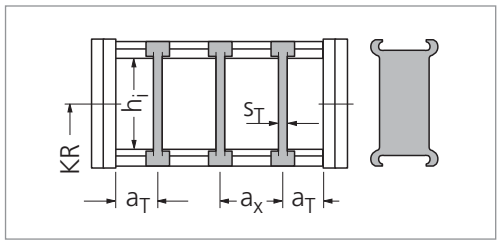
We are at your service to advise on these applications.

K Series – Types KC 0650/0900

Divider systems – Types KC 0650/0900

Divider system TS 0

Type	Stay variant	h_i mm	S_T mm	$a_{T\,min}$ mm	$a_{x\,min}$ mm
KC 0650	RS	38	3	6.5	13
KC 0900	RS	58	4	7	14
KC 0900	RV	58	4	7	14

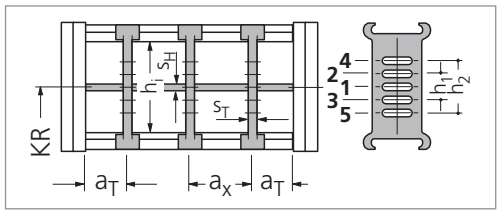


In the standard version, the divider systems are mounted on every second chain link.

Divider system TS 1

with continuous height subdivision made of aluminium

Type	Stay variant	h_i mm	S_T mm	$a_{T\,min}$ mm	$a_{x\,min}$ mm	S_H mm	h_1 mm	h_2 mm
KC 0650	RS	38	3	6.5	13	4	15	–
KC 0900	RS	58	4	7	14	4	30	–
KC 0900	RV	58	4	7	14	4	15	30



In the standard version, the divider systems are mounted on every second chain link.

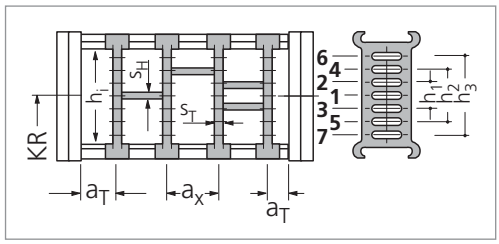
Divider system TS 3

with partitioned height subdivision made of plastic

Type	Stay variant	h_i mm	S_T mm	$a_{T\,min}$ mm	$a_{x\,min}$ mm	S_H mm	h_1 mm	h_2 mm	h_3 mm
KC 0650	RS	38	8	4	16*	4	14	28	–
KC 0900	RV	58	8	4	16*	4	14	28	42

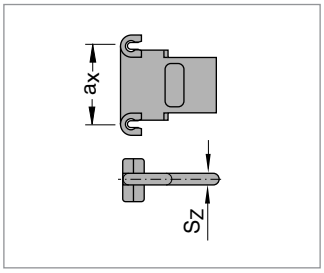
* When using plastic partitions

The dividers are fixed by the partitions, the complete divider system is movable.



In the standard version, the divider systems are mounted on every second chain link.

Dimensions of the plastic partitions for TS 3



Aluminium partitions in1 mm width sections are also available.

Dimensions in mm

S_Z	a_x (center-to-center distance, dividers)									
4	16	18	23	28	32	33	38	43	48	58
	64	68	78	80	88	96	112	**128**	**144**	**160**
	176	**192**	**208**							

When using **partitions with a_x > 112** mm, there should be an additional central support with a **twin divider**.
Thickness of the twin dividers: KC 0650 S_T = 3 mm, KC 0900 S_T = 4 mm

Twin dividers are designed for subsequent fitting in the partition system. You can find further information on this in our main catalog.

K Series – Types KE 0650/0900

Fixing the dividers – Types KE 0650/0900

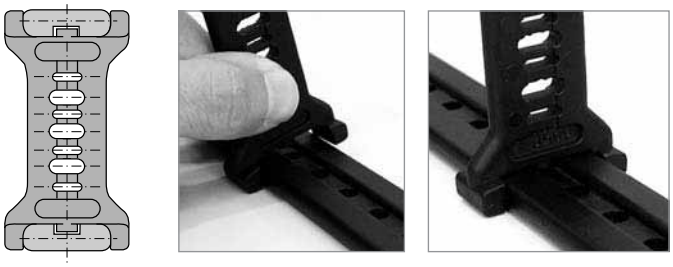
In the standard version, dividers or the complete divider system (dividers with height subdivisions) can be moved in the cross section (**Mounting version A**).

For divider systems TS 0 and TS 1 the dividers or complete divider systems (dividers with height subdivisions) can be fixed by turning the stays (**Mounting version B**).

If the fixed mounting version is desired, please state this when placing your order.

Mounting version A (standard)

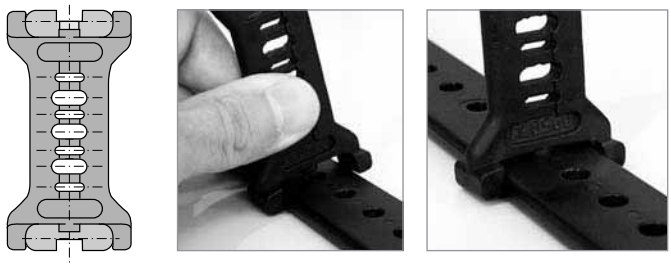
Movable Divider:
The arresting cam of the divider can move in the groove of the stay.



With a movable assembly of the dividers (mounting version A), the holes in the stay do not have any function and hence the dimension a_X-section has is meaningless.

Mounting version B

Fixed Divider:
The arresting cam of the divider is fixed in the hole of the stay.



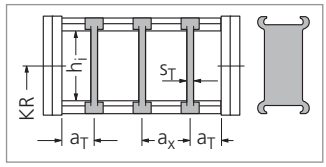
Please note that the dividers can only be fixed in positions at which there is a hole in the stay.
The dimension a_X-section specifies the hole intervals in the stay.

Hole intervals = fixing positions of the dividers (a_X-sections)

Divider system TS 0

			Mounting version A			Mounting version B			
Type	Stay variant	h_i mm	S_T mm	$a_{T\ min}$ mm	$a_{x\ min}$ mm	S_T mm	$a_{T\ min}$ mm	$a_{x\ min}$ mm	$a_{x\ section}$ mm
KE 0650	**RE**	42	4.2	6.5	13.0	4.2	22.0	16	8
KE 0900	**RE**	58	6.0	7.5	14.5	6.0	8.5	16	16

In the standard version, the divider systems are mounted on every second chain link.

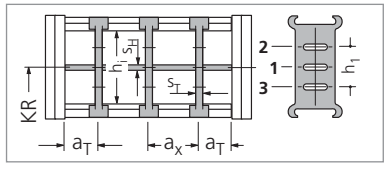


Divider system TS 1

with continuous height subdivision made of aluminium

			Mounting version A			Mounting version B					
Type	Stay variant	h_i mm	S_T mm	$a_{T\ min}$ mm	$a_{x\ min}$ mm	S_T mm	$a_{T\ min}$ mm	$a_{x\ min}$ mm	$a_{x\ section}$ mm	S_H mm	h_1 mm
KE 0650	**RE**	42	4.2	6.5	13.0	4.2	22.0	16	8	4	22
KE 0900	**RE**	58	6.0	7.5	14.5	6.0	24.5	16	16	4	22

In the standard version, the divider systems are mounted on every second chain link.



K Series – Types KE 0650/0900

Divider systems

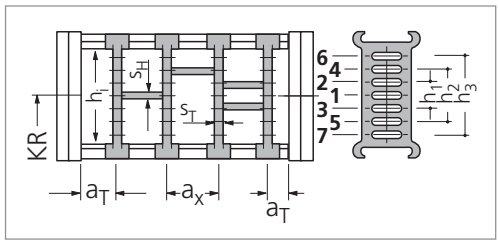
Divider system TS 3

with partitioned height subdivision made of plastic

Type	Stay variant	h_i mm	S_T mm	$a_{T\,min}$ mm	$a_{x\,min}$ mm	S_H mm	h_1 mm	h_2 mm	h_3 mm
KE 0650	RE	42	8	4	16*	4	14	28	–
KE 0900	RE	58	8	4	16*	4	14	28	42

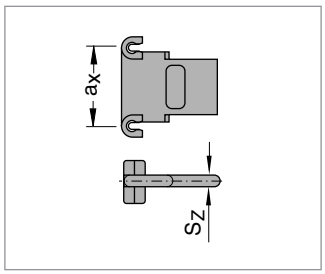
* When using plastic partitions

The dividers are fixed by the partitions, the complete divider system is movable.



In the standard version, the divider systems are mounted on every second chain link.

Dimensions of the plastic partitions for TS 3



Aluminium partitions in1 mm width sections are also available.

Dimensions in mm

S_Z mm	a_x mm (center-to-center distance dividers)									
4	16	18	23	28	32	33	38	43	48	58
	64	68	78	80	88	96	112	**128**	**144**	**160**
	176	**192**	**208**							

When using **partitions with a_x > 112** mm, there should be an additional central support with a **twin divider**.
Thickness of the twin dividers: KE 0650 S_T = 3 mm, KE 0900 S_T = 4 mm

Twin dividers are suitable for retrospective assembly in the partitionsection system. Please see our main catalogue for more information on this.

K Series – Types KC/KE 0650/0900

Gliding elements KC/KE

Glide discs and injection molded glide runners

Glide discs

If the cable carrier is arranged rotated "through 90" (gliding on the outer side of the chain band), the glide discs attached to the side optimize the friction and wear conditions.

Determining the chain width with glide discs on both chain bands:

KC / KE 0650:	B_{EF}'	=	$\mathbf{B_i}$	+	36 mm
KC / KE 0900:	B_{EF}'	=	$\mathbf{B_i}$	+	45 mm

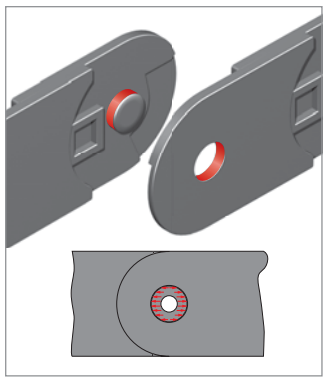
Injection molded glide runners

guarantee the long service life of the cable carrier in the case of long travel lengths and large additional loads.

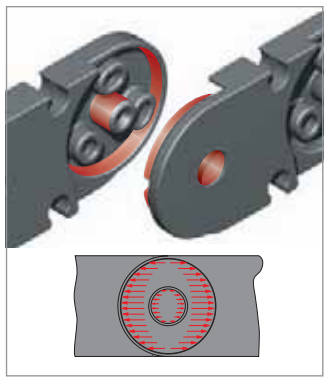
Minimized hinge wear owing to the “life extending 2 disc principle“

In the K Series, the push and pull forces are transmitted via the optimum link design for this purpose.

As a result link wear is reduced to a minimum and the life of the cable carrier is considerably lengthened.



■ Force transmission with a pin-hole joint

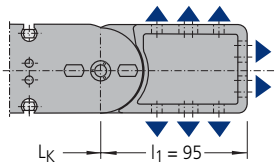


■ Force transmission with the “life extending 2 disc principle“

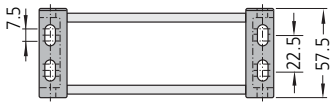
K Series – Types KC/KE 0650/0900

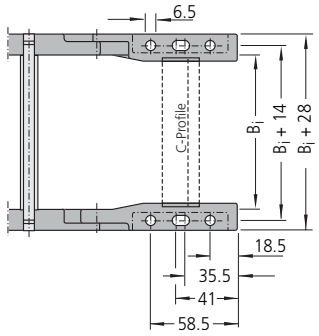
Connection dimensions for types KC/KE 0650

UMB (Universal Mounting Brackets) made of plastic



▲ Assembly options





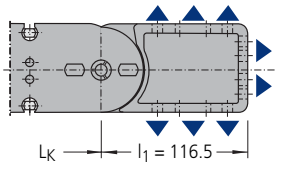
The dimensions of the fixed point and driver connections are identical.

Optionally with C-Profile, slot width 11 – 12 mm,
suitable for KABELSCHLEPP SZL-strain relief devices
and all common commercial bracket clamps with a small base
(see chapter on guide channels and other accessories, from page 218 onwards).

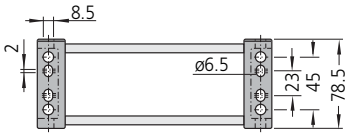
End connectors made of steel plate available on request.

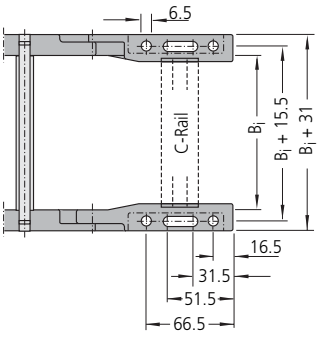
Connection dimensions for types KC/KE 0900

UMB (Universal Mounting Brackets) made of plastic



▲ Assembly options





The dimensions of the fixed point and driver connections are identical.

Optionally with C-Rail, slot width 16 – 17 mm,
suitable for KABELSCHLEPP SZL-strain reliefs devices
and all common commercial bracket clamps with a large base
(see chapter on guide channels and other accessories, from page 218 onwards).

End connectors made of steel plate available on request.

KABELSCHLEPP

the power to innovate

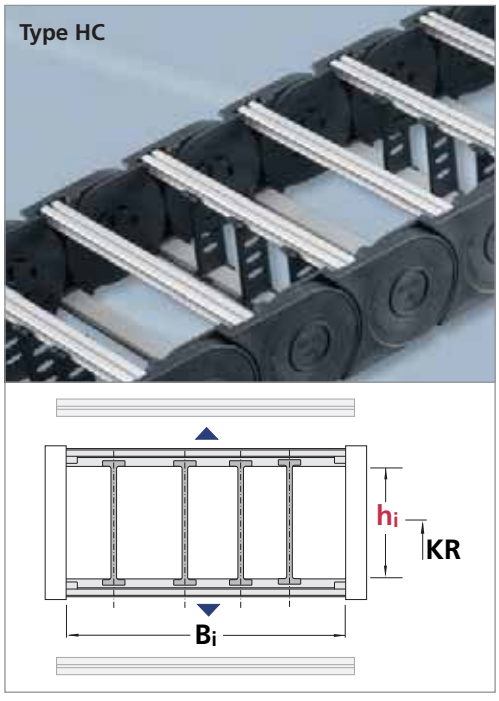
Cable carriers with variable chain widths

MASTER H Series

product design award 2006

MASTER H Series – Cable carriers with variable chain widths

- **Optimized stability for large additional loads**
- Standard widths available ex-stock; individual widths in 1 mm sections on request
- Extremely quiet owing to
  – internal damping system for pre-tension and radius strokes
  – optional damping elements which can be attached to the outer radius
- Low intrinsic weight
- Favorable ratio of inner to outer height
- Standard bend radii, application-specific intermediate radii upon request
- Damper system integrated in the chain links to reduce noise emissions
- Variable pre-tensioning for the most varied applications is possible
- Can be opened quickly on the inside and the outside for cable laying
- Transmission of forces (tensile and shearing forces) over a large surface area via the optimum link design – according to the "life extending 2 disc principle"
- Many possibilities for internal subdivision
- A choice of closed and open universal mounting brackets (UMBs)
- Optionally available with different strain relief systems



Types HC 33 and HC 46 with aluminium stays

Plastic and aluminium combination
Available in **1 mm width sections**

Aluminium stays
Width sections available
1 mm

Dimensions in mm

Type	h_i	B_i	Dynamics of unsupported arrangement		Page
			Travel speed v_{max} in m/s	Travel acceleration a_{max} in m/s²	
HC 33	**33**	50 – 400	10	50	86
HC 46	**46**	50 – 400	8	40	86

MASTER H Series – Types HC 33 and HC 46

Carrier construction and stay variants

Types HC 33 and HC 46

Hybrid cable carriers with plastic chain bands and aluminium stays.
Available in **1 mm width sections**.
Standard widths in 25 mm steps.

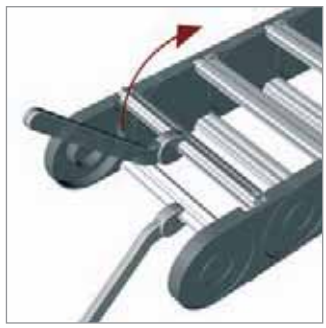
Standard stay arrangement:
on every chain link.

Frame stay RSH for types HC 33 and HC 46

Aluminium frame stay

Opening options:

Outside / Inside: the cable carrier can be opened quickly and easily simply by rotating the stays.



■ Apply the tool, turn it through **15°** and the carrier is open.

■ It is up to you which tool you use to rotate the stay.

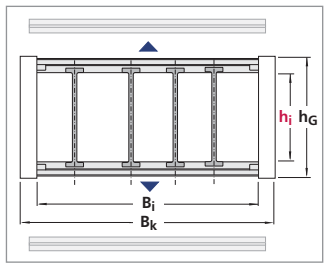
MASTER H Series – Types HC 33 and HC 46

Dimensions and intrinsic chain weight

Dimensions in mm/Weights in kg/m

Type	h_i	h_G	$B_{i\ min}$*	$q_{k\ min}$	$B_{i\ max}$*	$q_{k\ max}$	B_k
HC 33	33	51	50	1,37	400	3,99	B_i + 22
HC 46	46	64	50	1,83	400	4,01	B_i + 26

Standard widths in 25 mm steps.



Bend radius and pitch

Dimensions in mm

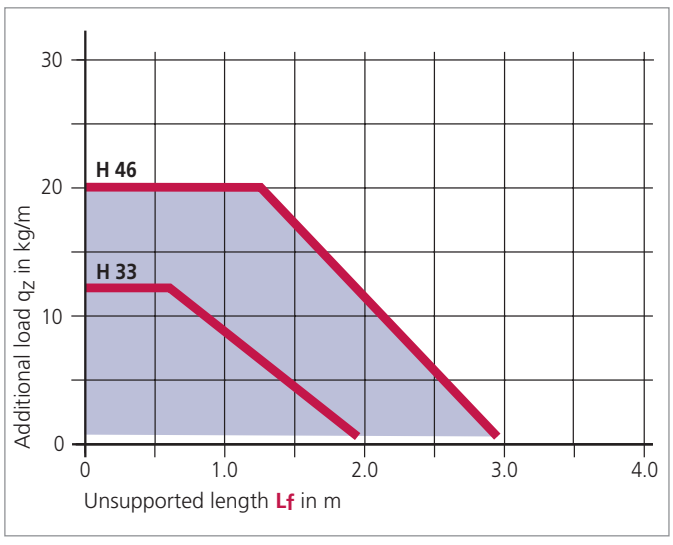
Type	Bend radii KR										
HC 33	60	75	100	125	150	175	200	220	250	300	–
HC 46	75	100	115	125	150	170	200	215	250	300	350

The listed values are standard bend radii.

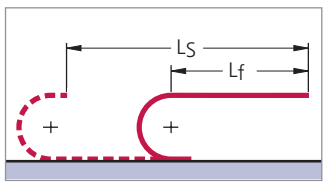
Pitch:
HC 33: t = 56 mm
HC 46: t = 67 mm

Load diagram

for unsupported length L_f depending on the additional load



Unsupported length L_f



In the case of longer travel lengths, sag of the cable carriers is technically permissible depending on the application.

In a gliding arrangement, even longer travel lengths are possible (see page 219).

We are at your service to advise on these applications.

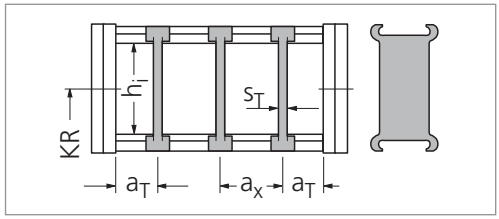
MASTER H Series – Types HC 33 and HC 46

Divider systems

Divider system TS 0

Type	h_i mm	S_T mm	$a_{T\,min}$ mm	$a_{x\,min}$ mm
HC 33	33	3	7	13
HC 46	46	3	7	13

The dividers can be moved in the cross section.



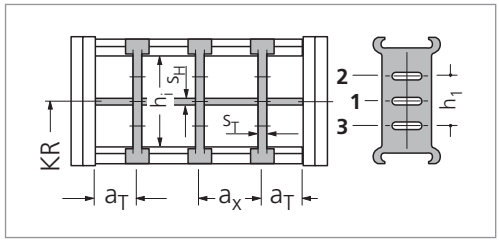
In the standard version, the divider systems are mounted on every second chain link.

Divider system TS 1

with continuous height subdivision made of aluminium

Type	h_i mm	S_T mm	$a_{T\,min}$ mm	$a_{x\,min}$ mm	S_H mm	h_1 mm
HC 33	33	3	7	13	4	18
HC 46	46	3	7	13	4	20

The dividers can be moved in the cross section.



In the standard version, the divider systems are mounted on every second chain link.

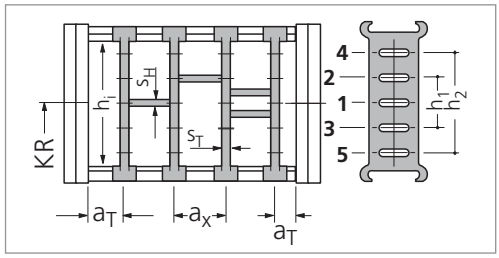
Divider system TS 3

with partitioned height subdivisions made of plastic

Type	h_i mm	S_T mm	$a_{T\,min}$ mm	$a_{x\,min}$ mm	S_H mm	h_1 mm	h_2 mm
HC 33	33	8	6	16*	4	14	-
HC 46	46	8	6	16*	4	14	28

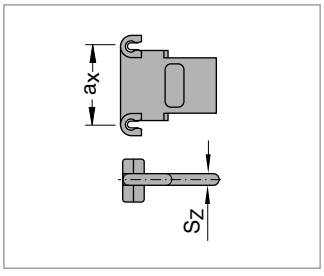
* When using plastic partitions

The dividers are fixed by the partitions, the complete divider system is movable.



In the standard version, the divider systems are mounted on every second chain link.

Dimensions of the plastic partitions for TS 3



Aluminium partitions in 1 mm width sections are also available.

Dimensions in mm

S_Z	a_x (center-to-center dividers)									
4	16	18	23	28	32	33	38	43	48	58
	64	68	78	80	88	96	112	**128**	**144**	**160**
	176	**192**	**208**							

When using **partitions with a_x > 112** mm, there should be an additional central support with a **twin divider** (S_T = 3 mm).

Twin dividers are designed for subsequent fitting in the partition system. You can find further information on this in our main catalog.

MASTER H Series – Types HC 33 and HC 46

Fixing the dividers in 2 mm steps

In the standard version, dividers or the complete divider system (dividers with height subdivisions) can be moved in the cross section.

Fixing profiles can be used to fix the dividers or complete divider systems.

Fixing on both sides ensures that the dividers have a secure hold.

Fixing in 2 mm steps.

The fixing profiles are simply pushed into the stays.

If the fixed mounting version is desired, please state this when placing your order.

Gliding elements – the economical solution for gliding applications

Replaceable glide shoes

! By means of a positive snap connection, the glide shoes sit firmly on the chain link.

Replaceable glide shoes made of plastic

To extend the life of cable carriers in gliding operations KABELSCHLEPP supplies detachable, exchangeable glide shoes.

Replaceable glide shoes are a very economical solution. When wear occurs only the glide shoes are replaced, and not the complete cable carrier.

Glide shoes for the H Series are made of a highly wear-resistant special material.

Chain height with glide shoes: (Dimensions in mm)

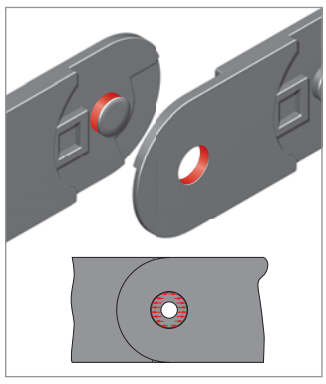
HC 33:	h_G'	=	h_G	+	3.2	= 54.2
HC 46:	h_G'	=	h_G	+	3.2	= 67.2

Minimum bend radii when using glide shoes:
HC 33: KR_{min} = 100 mm
HC 46: KR_{min} = 100 mm

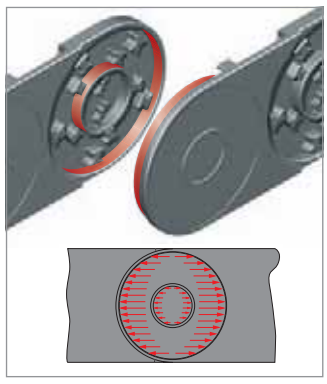
Minimized hinge wear owing to the “life extending 2 disc principle“

In the MASTER Series, the push and pull forces are transmitted via the optimum link design for this purpose.

As a result link wear is reduced to a minimum and the life of the cable carrier is considerably lengthened.



Force transmission with a pin-hole joint



Force transmission with the “life extending 2 disc principle“

The internal stopper and pre-tensioning dampers have a noise-muffling effect. This makes the chain particularly quiet.

Should your application require it, the pre-tensioning (in deviation from the standard pre-tensioning) can be adjusted at the time of production. We can produce a cable carrier with a pre-tension which is exactly suited to the load values of your application.

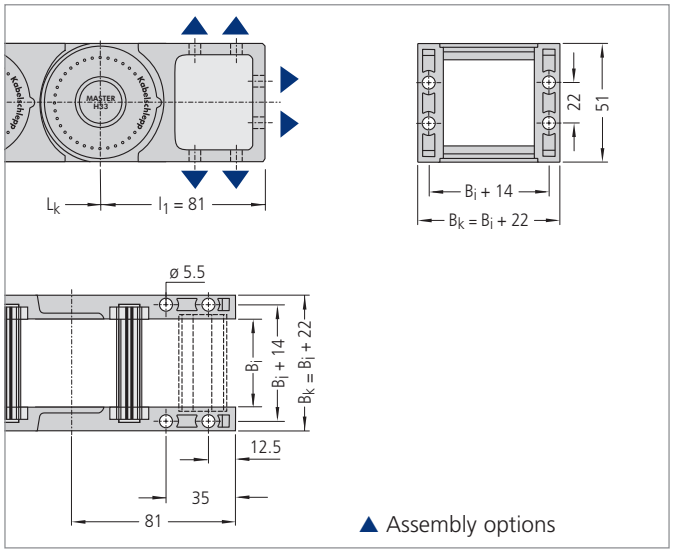
MASTER H Series – Types HC 33 and HC 46

Connection dimensions

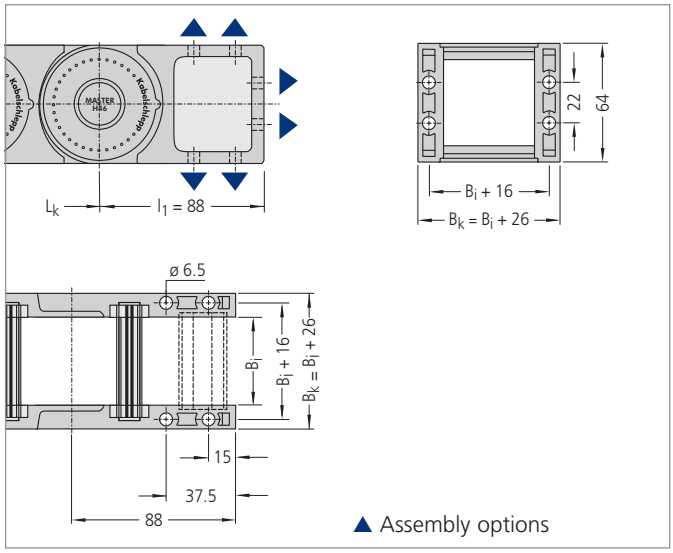
UMB (Universal Mounting Brackets) made of plastic

■ **Standard connector** for many of the hole patterns commercially available (also available in an open design).

Connection dimensions (The connection dimensions for fixed-point and driver are identical)



■ **Connection dimensions for HC 33**



■ **Connection dimensions for HC 46**

MASTER H Series – Types HC 33 and HC 46

Strain Relief Devices

Strain relief

For both types (HC 33 and HC 46) strain relief of the cables can be effected by a **strain relief comb** or with strain relief elements which are fixed to a **C-profile**.

Both the strain relief comb and the C-profile are secured by the universal mounting brackets and so do not need to be screwed on separately.

Our SZL-strain relief devices are best suited for the C-Profile. They guarantee a large surface area for enclosing the cables, and a defined pressure.

(see chapter on guide channels and other accessories from page 218 onwards.)

KABELSCHLEPP

the power to innovate

Cable carriers with variable chain widths

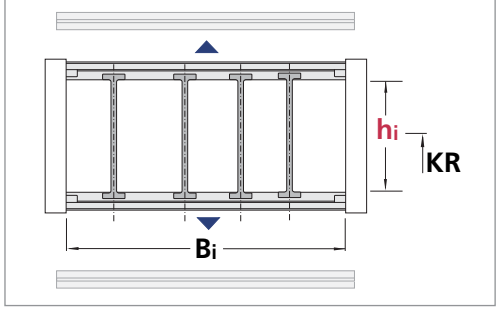
MASTER L Series

product design award 2006

MASTER L Series – Cable carriers with variable chain widths

- **Lightweight design with low intrinsic weight**
- Standard widths available ex-stock; individual widths in 1 mm sections on request
- Very quiet owing to internal damping system for pre-tension and radius strokes
- Favorable ratio of inner to outer width
- Standard bend radii, application-specific intermediate radii upon request
- Damper system integrated in the chain links to reduce noise emissions
- Variable pre-tensioning for the most varied applications is possible
- Can be opened quickly on the inside and the outside for cable laying
- Transmission of forces (tensile and shearing forces) over a large surface area via the optimum link design – according to the "life extending 2 disc principle"
- Many possibilities for internal subdivision
- A choice of up to 3 universal mounting brackets (UMBs) – all three types can be screwed on both from above, below or also as a flange
- Optionally available with different strain relief systems
- Completely enclosed types, see LT-series

Type LC



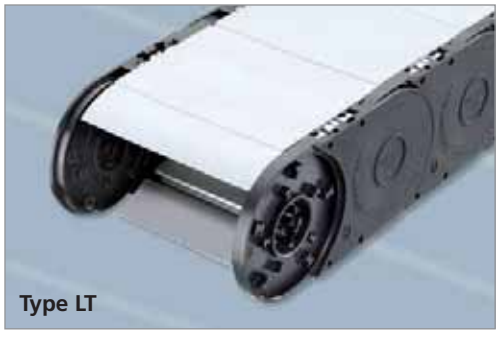
Types LC 60 and LC 80 with aluminium stays

Plastic and aluminium combination
available in **1 mm width sections**

Aluminium stays
Width sections available
1 mm

Dimensions in mm

Type	h_i	B_i	Dynamics of unsupported arrangement		Page
			Travel speed v_{max} in m/s	Travel acceleration a_{max} in m/s²	
LC 60	**60**	75 – 600	6	30	94
LC 80	**80**	100 – 800	5	25	94



Type LT

Tubes – covered cable carriers Types LT 60 and LT 80 with aluminium cover system

Detailed information can be found in the chapter MASTER LT Series from page 144 onwards.

Subject to change.

MASTER L Series – Types LC 60 and LC 80

Carrier construction and stay variants

Types LC 60 and LC 80

Hybrid cable carriers with plastic chain bands and aluminium stays. Available in **1 mm width sections**. **Standard widths** in 25 mm steps.

Standard stay arrangement:
on every chain link.

Frame stay RSL for types LC 60 and LC 80

Frame stay made of aluminium

Opening options:

Outside / Inside: the cable carrier can be opened quickly and easily simply by rotating the stays

The standard stay system is the basis for all cover variants. All cover variants are fixed to the stays.

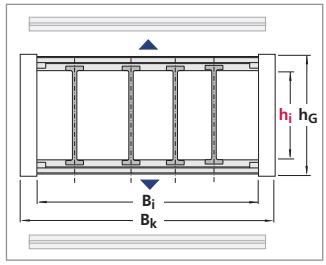
MASTER L Series – Types LC 60 and LC 80

Dimensions and intrinsic chain weight

Dimensions in mm/Weights in kg/m

Type	h_i	h_G	$B_{i\ min}$*	$q_{k\ min}$	$B_{i\ max}$*	$q_{k\ max}$	B_k
LC 60	60	88	75	2,78	600	7.10	B_i + 28
LC 80	80	110	100	3,89	800	10.01	B_i + 32

Standard widths in 25 mm steps.



Bend radius and pitch

Dimensions in mm

Type	Bend radii KR							
LC 60	135	150	200	250	300	350	400	500
LC 80	–	150	200	250	300	350	400	500

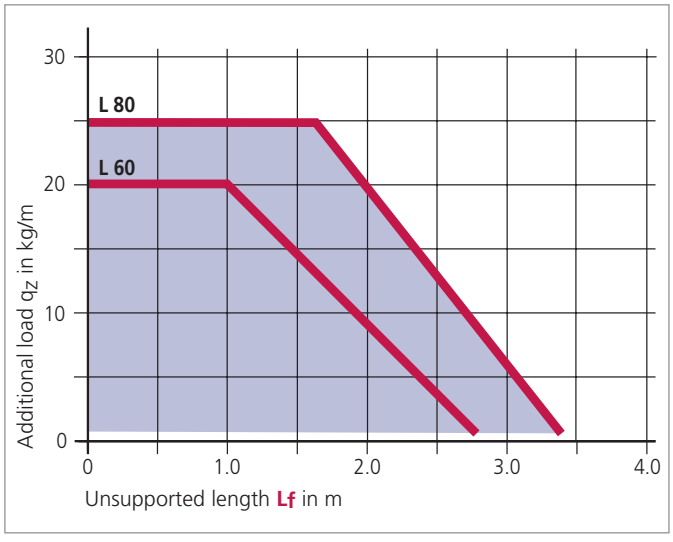
Pitch:
LC 60: t = 91 mm
LC 80: t = 111 mm

The listed values are standard bend radii.
For special applications it is also possible,
to set any desired intermediate radii at the production stage.

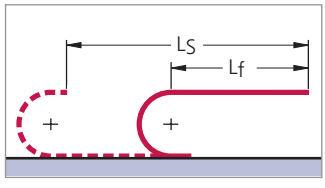
Please do get in touch with us, we would be happy to advise you.

Load diagram

for unsupported length L_f depending on the additional load



Unsupported length L_f



Determining the length of the cable carrier see page 18.

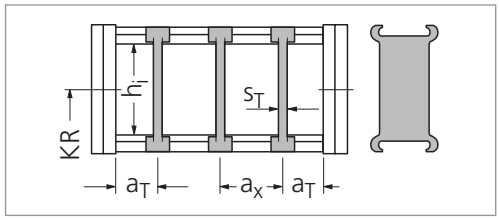
MASTER L Series – Types LC 60 and LC 80

Divider systems

Divider system TS 0

Type	h_i mm	S_T mm	$a_{T\,min}$ mm	$a_{x\,min}$ mm
LC 60	60	4	9	16
LC 80	80	4	9	16

The dividers can be moved in the cross section.



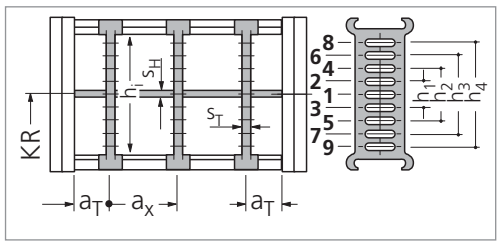
In the standard version, the divider systems are mounted on every second chain link.

Divider system TS 1

with continuous height subdivision made of aluminium

Type	h_i mm	S_T mm	$a_{T\,min}$ mm	$a_{x\,min}$ mm	S_H mm	h_1 mm	h_2 mm	h_3 mm	h_4 mm
LC 60	60	4	9	16	4	15	30	45	–
LC 80	80	4	9	16	4	15	30	45	60

The dividers can be moved in the cross section.



In the standard version, the divider systems are mounted on every second chain link.

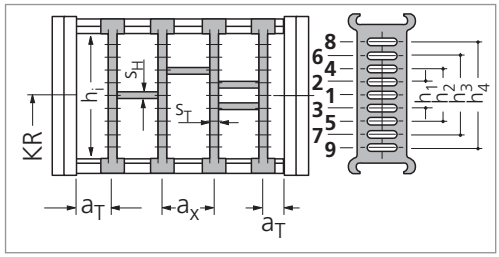
Divider system TS 3

with partitioned height subdivision made of plastic

Type	h_i mm	S_T mm	$a_{T\,min}$ mm	$a_{x\,min}$ mm	S_H mm	h_1 mm	h_2 mm	h_3 mm	h_4 mm
LC 60	60	8	6	16*	4	14	28	–	–
LC 80	80	8	6	16*	4	14	28	42	56

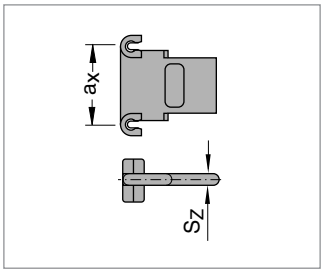
* When using plastic partitions

The dividers are fixed by the partitions, the complete divider system is movable.



In the standard version, the divider systems are mounted on every second chain link.

Dimensions, partitions of plastic for TS 3



Aluminium partitions in 1 mm width sections are also available.

Dimensions in mm

S_Z	a_x (center-to-center dividers)									
4	16	18	23	28	32	33	38	43	48	58
	64	68	78	80	88	96	112	**128**	**144**	**160**
	176	**192**	**208**							

When using **partitions with a_x > 112** mm, there should be an additional central support with a **twin divider** (S_T = 4 mm).

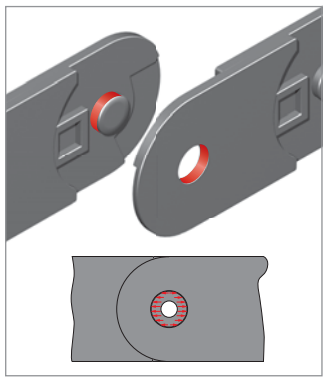
Twin dividers are designed for subsequent fitting in the partition system. You can find further information on this in our main catalog.

MASTER L Series – Types LC 60 and LC 80

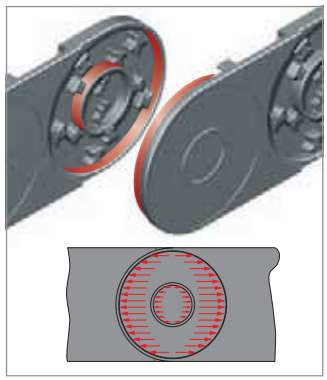
Minimized hinge wear owing to the “life extending 2 disc principle“

In the MASTER Series, the push and pull forces are transmitted via the optimum link design for this purpose.

As a result link wear is reduced to a minimum and the life of the cable carrier is considerably lengthened.



Force transmission with a pin-hole joint



Force transmission with the “life extending 2 disc principle“

The internal stopper and pre-tensioning dampers have a noise-muffling effect. This makes the chain particularly quiet.

Should your application require it, the pre-tensioning (in deviation from the standard pre-tensioning) can be adjusted at the time of production. We can produce a cable carrier with a pre-tension which is exactly suited to the load values of your application.

MASTER L Series – Types LC 60 and LC 80

Connection dimensions

UMB (Universal Mounting Brackets) made of plastic

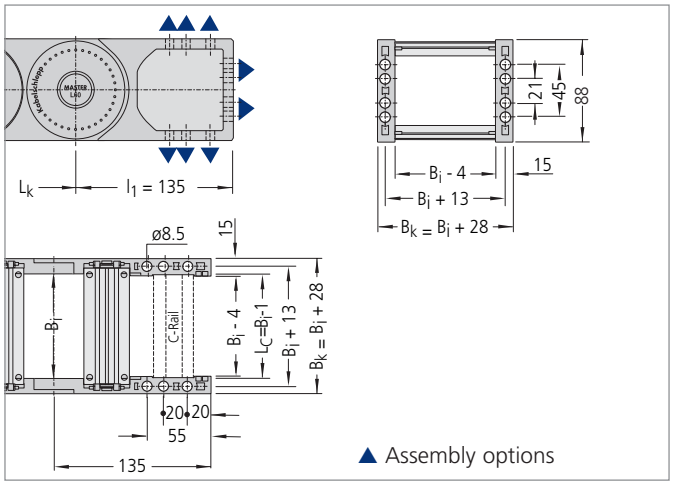
For the MASTER L Series, there are 3 different universal mounting brackets made of plastic i. e. for every assembly situation, there is a suitable connector. Each of the 3 types can, of course, be screwed on from the top, the bottom or as a flange.

■ **Standard connector** for many of the hole patterns commercially available with **short hole intervals**

■ **Long, closed connector** for many of the hole patterns commercially available with **large hole intervals**

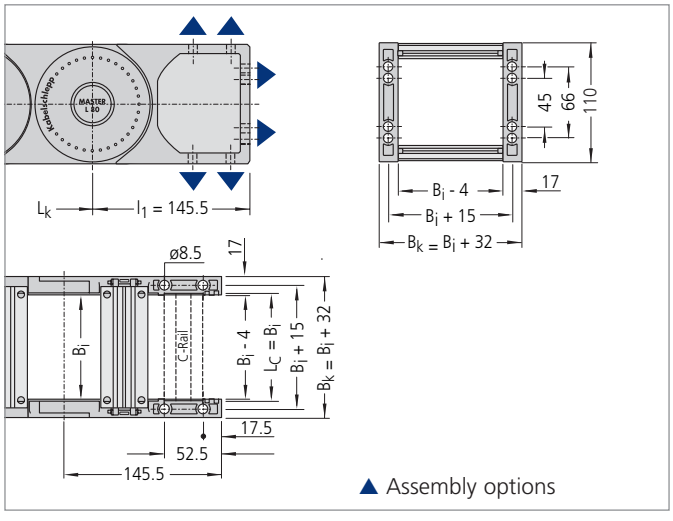
■ **Short, open connector ,** easy assembly owing to optimal accessibility of the holes in **restricted installation conditions**

Connection dimensions (The dimensions of the fixed point and driver connections are identical)



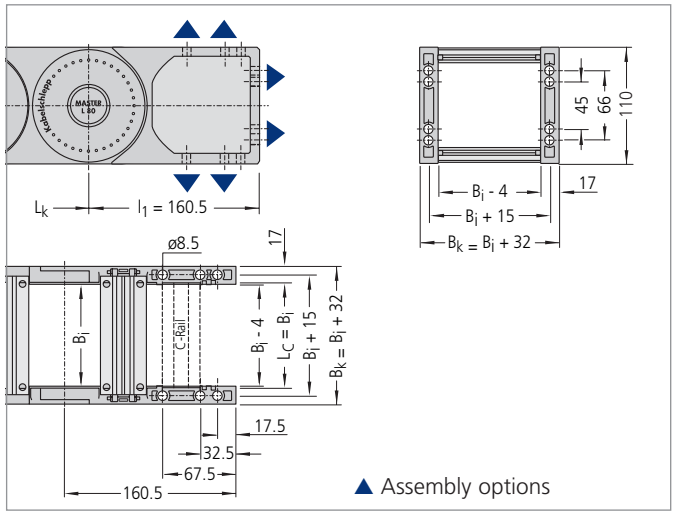
▲ Assembly options

■ **Connection dimensions for LC 60**
standard connector and short, open connector



▲ Assembly options

■ **Connection dimensions for LC 80**
standard connector and short, open connector



▲ Assembly options

■ **Connection dimensions for LC 80**
long, closed connector

All connectors optionally with C-rail for KABELSCHLEPP SZL-strain relief devices
as well as brackets and clamps with a small or large base (see the chapter on guide channels and other accessories, from page 218 onwards).

KABELSCHLEPP

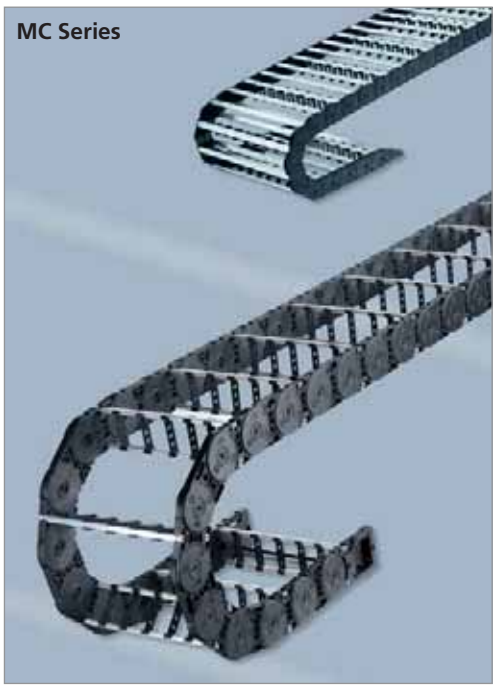
the power to innovate

Cable carriers with variable chain widths

M Series

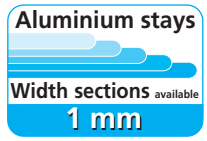
M Series – Cable carriers with variable chain widths

- Available in 1, 4, 8 or 16 mm width sections
- Can be opened quickly on the inside and the outside for cable laying
- Solid plastic or in combination with aluminium stays
- Enclosed stroke system not sensitive to dirt/contamination
- Transmission of forces (tensile and shearing forces) over a large surface area via the optimum link design – according to the "life extending 2 disc principle" (Not for type 0320)
- Standard universal mounting brackets (UMBs), suitable for any assembly situation
- Maximum choice of stay systems and ways of separating the cables
- Highly wear-resistant, replaceable glide shoes available – resulting in minimal wear at high speeds, sliding in the guide channel
- Optionally available with different strain relief systems
- Minimal noise emissions with types MCL 0650 and MCL 0950
- Completely enclosed types with aluminium or plastic cover systems (See MT series)
- TÜV design approved in accordance with 2PfG 1036/10.97



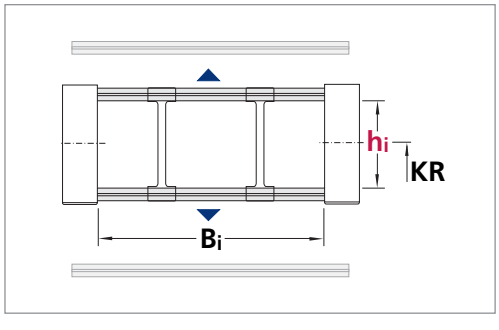
Types MC 0320, 0650, 0950 and 1250 with aluminium stays

Plastic and aluminium combination
available in **1 mm width sections**

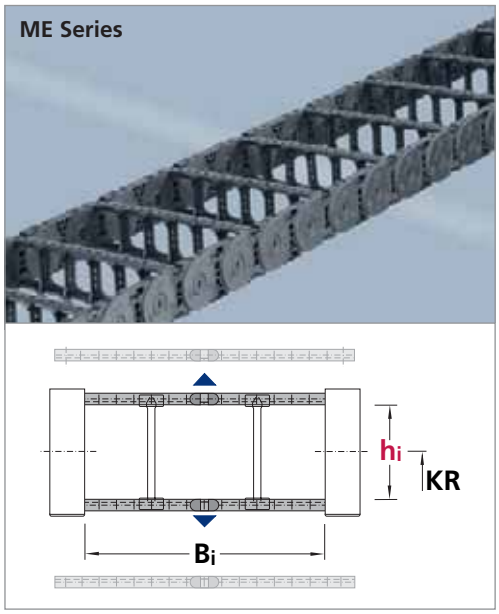


Dimensions in mm

Type	h_i	B_i	Maximum travel length in m	Dynamics of unsupported arrangement		Page
				Travel-speed v_{max} in m/s	Travel-acceleration a_{max} in m/s²	
MC 0320	**19**	25-280	80	10	50	102
MC 0650	**38**	75-500	220	8	40	102
MC 0950	**58**	100-600	260	6	30	102
MC 1250	**72**	100-800	320	5	25	102



M Series – Cable carriers with variable chain widths

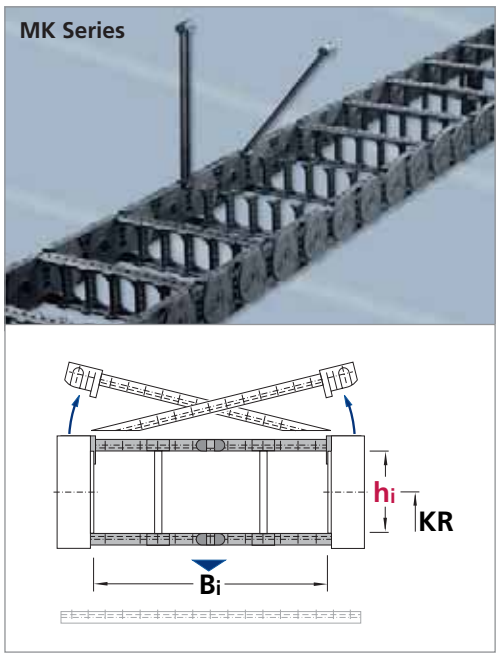


Types ME 0320, 0650, 0950 and 1250 with plastic stays

Solid plastic
available in **4, 8 or 16 mm width sections**

Dimensions in mm

Type	h_i	B_i	Maximum travel length in m	Dynamics of unsupported arrangement		Page
				Travel speed v_{max} in m/s	Travel acceleration a_{max} in m/s²	
ME 0320	**19**	25-149	80	10	50	110
ME 0650	**42**	50-266	220	8	40	111
ME 0950	**58**	45-557	260	6	30	111
ME 1250	**72**	71-551	320	5	25	111

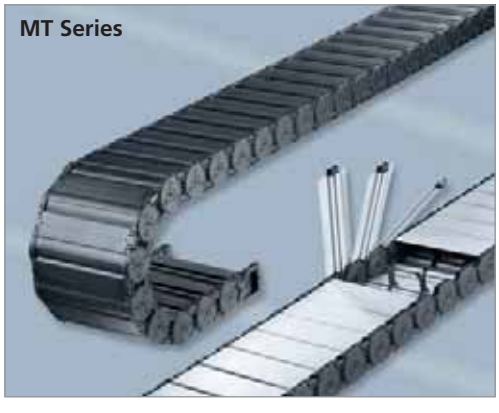


Types MK 0475, 0650, 0950 and 1250 with plastic stays

Solid plastic
available in **8 or 16 mm width sections**

Dimensions in mm

Type	h_i	B_i	Maximum travel length in m	Dynamics of unsupported arrangement		Page
				Travel speed v_{max} in m/s	Travel acceleration a_{max} in m/s²	
MK 0475	**28**	24-280	120	10	50	110
MK 0650	**42**	50-258	220	8	40	111
MK 0950	**58**	45-557	260	6	30	111
MK 1250	**72**	71-551	320	5	25	111



Tubes – covered cable carriers Types MT 0475, 0650, 0950 and 1250 with plastic or aluminium cover system

Detailed information can be found in the chapter MT Series from page 150 onwards.

M Series – Types MC 0320, 0650, 0950 and 1250

Carrier construction

Type MC 0320

Hybrid cable carriers with plastic chain bands and aluminium stays.
Available in 1 mm width sections.

Stay arrangement:
Stays mounted on every chain link.

Opening variant 02 (Standard):
Frame stays can be detached on the outside

Opening variant 01:
Frame stays can be detached on the inside
If you require opening variant 01
please state when placing your order.

Types MC 0650, 0950 and 1250

Hybrid cable carriers with chain bands of plastic and stays of aluminium.
Available in 1 mm width sections.

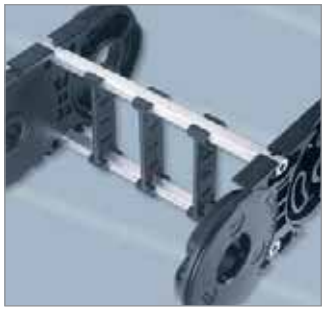
Standard stay arrangement:
on every 2nd chain link.

Stays can be fitted on every chain link,
please specify when placing your order.

M Series – Types MC 0320, 0650, 0950 and 1250

Stay variants

Stay variants for types MC 0650, 0950 and 1250



Frame stay RS made of aluminium – Standard design – types 0650 and 0950

For lightweight to medium loads.

Opening options:
Outside / Inside: the cable carrier can be opened quickly and easily simply by rotating the stays through 90°.

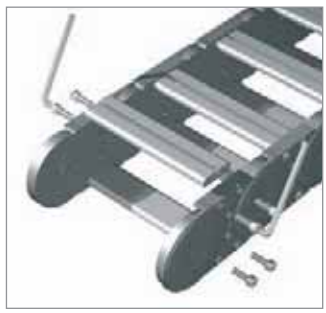
Frame stay RV made of aluminium – Reinforced design – types 0950 and 1250

For medium to heavy loads and for large chain widths.

Opening options:
Outside / Inside: the cable carrier can be opened quickly and easily simply by rotating the stays through 90°.

Frame stay RM made of aluminium – Solid design – types 0950 and 1250

Bolted, maximum stability, maximum chain widths possible.



Additional stay variants for types MC 0650, 0950 and 1250

Stay variant LG made of aluminium:
Optimum cable guidance in the neutral bending line

Stay variant RMR:
Gentle cable laying by means of rollers. Ideal when using hydraulic hoses with "soft" sheaths

Stay variant RMA:
For very large cable diameters, such as e.g. with air hoses

For M Series solid plastic cable carriers see page 110.
For M Series covered types see page 150.

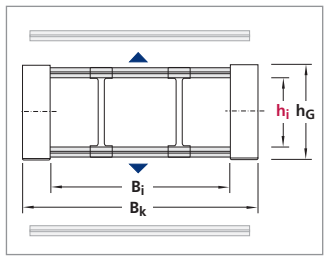
M Series – Types MC 0320, 0650, 0950 and 1250

Dimensions and intrinsic chain weight

Dimensions in mm/Weights in kg/m

Type	Stay variant	h_i	h_G	$B_{i\ min}$	$q_{k\ min}$	$B_{i\ max}$	$q_{k\ max}$	B_k
MC 0320	**RS**	**19**	27.5	25	0.42	280	1.65	B_i + 11
MC 0650	**RS**	**38**	57	75	2.00	400	3.80	B_i + 34
MC 0950	**RS**	**58**	80	100	3.20	400	4.70	B_i + 39
MC 0950	**RV**	**58**	80	100	3.50	500	5.90	B_i + 39
MC 0950	**RM**	**54**	80	100	3.40	600	6.60	B_i + 39
MC 1250	**RV**	**72**	96	100	4.40	600	6.30	B_i + 45
MC 1250	**RM**	**69**	96	100	4.50	800	8.40	B_i + 45

Aluminium stays
Width sections available
1 mm



Bend radius and pitch

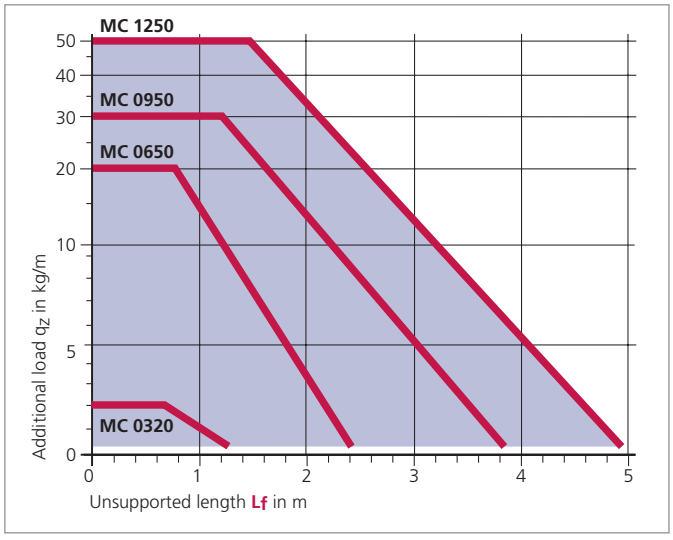
Dimensions in mm

Type	Bend radii KR								
MC 0320	37	47	77	100	200	–	–	–	–
MC 0650	75	95	115	145	175	220	275	300	350
MC 0950	140	170	200	260	290	320	380	–	–
MC 1250	180	220	260	300	340	380	500	–	–

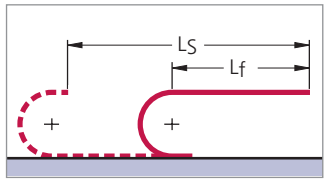
Pitch:
MC 0320: t = 32 mm
MC 0650: t = 65 mm
MC 0900: t = 95 mm
MC 1250: t = 125 mm

Load diagram

for unsupported length L_f depending on the additional load



Unsupported length L_f



In the case of longer travel lengths, sag of the cable carriers is technically permissible depending on the application.

In a gliding arrangement, even longer travel lengths are possible (see page 219).

We are at your service to advise on these applications.

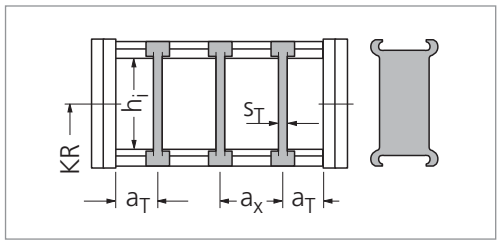
M series – Types MC 0320, 0650, 0950 and 1250

Divider systems

Divider system TS 0

Type	Stay variant	h_i mm	S_T mm	$a_{T\,min}$ mm	$a_{x\,min}$ mm
MC 0320	RS	19	2	3	6
MC 0650	RS	38	3	4.5	13
MC 0950	RS	58	4	4.5	14
MC 0950	RV	58	4	4.5	14
MC 0950	RM	54	4	7	14
MC 1250	RV	72	6	8	16
MC 1250	RM	69	5	10	20

The dividers can be moved in the cross section.



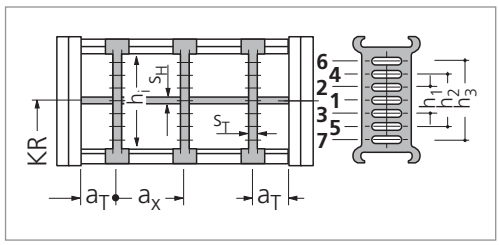
In the standard version, the divider systems are mounted on every second chain link.

Divider system TS 1

with continuous height subdivision made of aluminium

Type	Stay variant	h_i mm	S_T mm	$a_{T\,min}$ mm	$a_{x\,min}$ mm	S_H mm	h_1 mm	h_2 mm	h_3 mm
MC 0320	RS	19	2	3	6	2	10	–	–
MC 0650	RS	38	3	4.5	13	4	15	–	–
MC 0950	RS	58	4	4.5	14	4	30	–	–
MC 0950	RV	58	4	4.5	14	4	15	30	–
MC 1250	RV	72	6	8	16	4	15	30	45

The dividers can be moved in the cross section.



In the standard version, the divider systems are mounted on every second chain link.

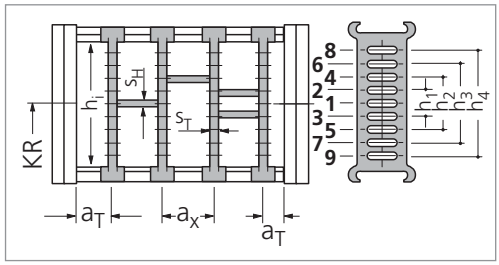
Divider system TS 3

MC 0650, 0950 and 1250 with plastic partition divider system TS 3
For these types, divider system TS 2 with aluminium height subdivisions (in 1 mm width sections) is also available.

Type	Stay variant	h_i mm	S_T mm	$a_{T\,min}$ mm	$a_{x\,min}$ mm	S_H mm	h_1 mm	h_2 mm	h_3 mm	h_4 mm
MC 0650	RS	38	8	4	16*	4	14	28	–	–
MC 0950	RV	58	8	4	16*	4	14	28	42	–
MC 1250	RV	72	8	4	16*	4	14	28	42	56

* When using plastic partitions

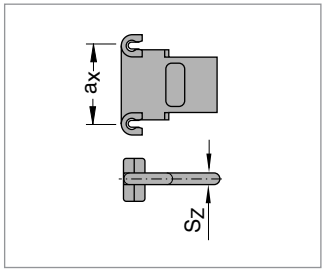
The dividers are fixed by the partitions, the complete divider system is movable.



In the standard version, the divider systems are mounted on every second chain link.

M Series – Types MC 0320, 0650, 0950 and 1250

Dimensions of the plastic partitions for TS 3



There are also aluminium partitions in 1 mm width sections available.

Dimensions in mm

S_Z	a_x (center-to-center distance, dividers)									
4	16	18	23	28	32	33	38	43	48	58
	64	68	78	80	88	96	112	**128**	**144**	**160**
	176	**192**	**208**							

When using **partitions with a_x > 112** mm, there should be an additional central support with a **twin divider**.
Thickness of the twin dividers: MC 0650 S_T = 3 mm, MC 0950, 1250 S_T = 4 mm

Twin dividers are designed for subsequent fitting in the partition system.
You can find further information on this in our main catalog.

Gliding elements – the economical solution for gliding applications

Replaceable glide shoes

Replaceable glide shoes made of plastic*

To extend the life of cable carriers in gliding operations KABELSCHLEPP supplies detachable, exchangeable glide shoes.
Replaceable glide shoes are a very economical solution. When wear occurs only the glide shoes are replaced, and not the complete cable carrier.
For travel speeds > 2.5 m/s and large additional loads, a highly wear-resistant special material is used.

For type MC 0950 **OFFROAD glide shoes** with 70 % greater wear volumes are also available. We recommend their use in extreme environmental conditions (with particularly abrasive materials such as e. g. sand, dust, corundum).

* not for MC 0320

! By means of a positive snap connection, the glide shoes sit firmly on the chain link.

Chain height with glide shoes: (Dimensions in mm)

MC 0650:	h_G'	=	h_G	+ 3,2	=	60.2
MC 0950:	h_G'	=	h_G	+ 3,5	=	83.5
MC 1250:	h_G'	=	h_G	+ 3,5	=	99.5

Minimum bend radii when using glide shoes:

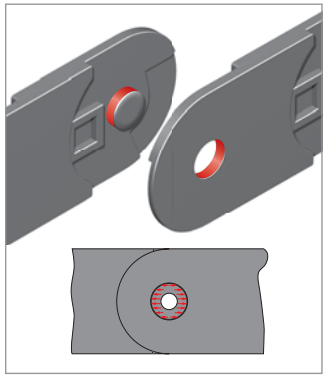
MC 0650: KR_{min} = 95 mm
MC 0950: KR_{min} = 140 mm
MC 1250: KR_{min} = 180 mm

Minimized hinge wear owing to the “life extending 2 disc principle“

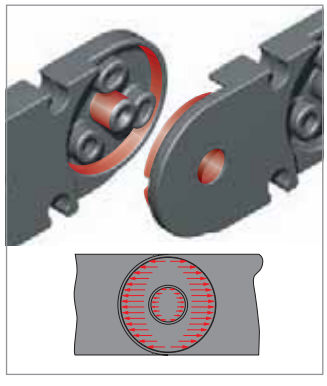
In the M Series*, the push and pull forces are transmitted via the optimum link design for this purpose.

As a result link wear is reduced to a minimum and the life of the cable carrier is considerably lengthened.

* not for type 0320



Force transmission with a pin-hole joint



Force transmission with the “life extending 2 disc principle“

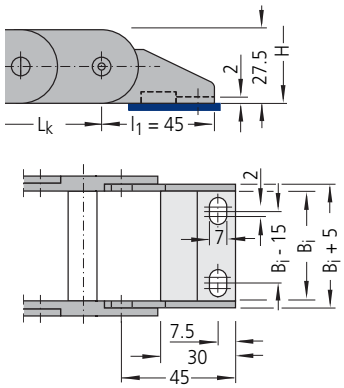
M Series – Types MC 0320, 0650, 0950 and 1250

Connection dimensions for type MC 0320

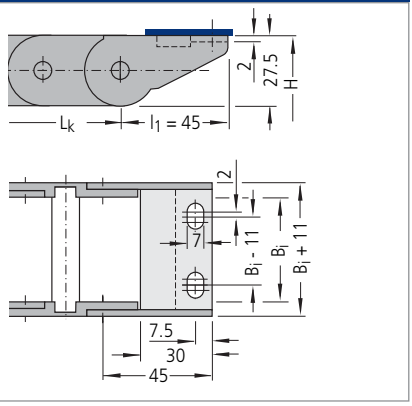
Connectors made of plastic/aluminium

Standard connectors without strain relief.
Connectors with strain relief available on request.

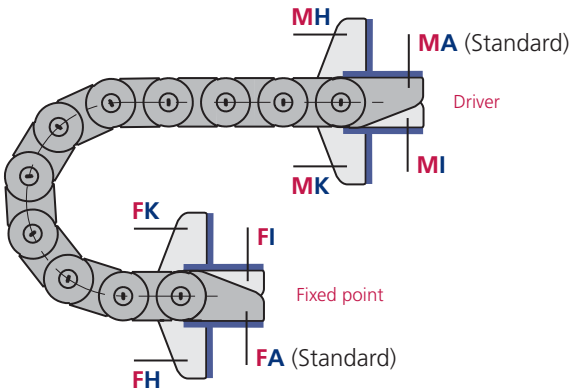
Fixed point connection



Driver connection



Connection variants for type MC 0320



Connection point

M – Driver

F – Fixed point

Connection type

A – Threaded joint outside (standard)

I – Threaded joint, inside

H – Threaded joint, rotated through 90° to the outside

K – Threaded joint, rotated through 90° to the inside

In the standard version, the connectors are mounted with the threaded joint outwards (**FA/MA**).

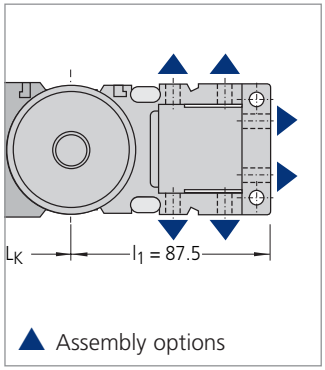
When ordering please specify the desired connection type (see ordering key on page 245).

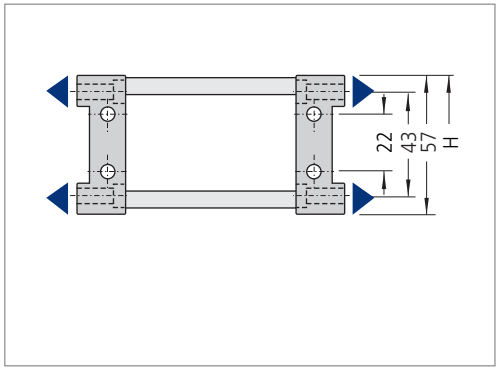
The connection type can subsequently be altered simply by changing the connectors.

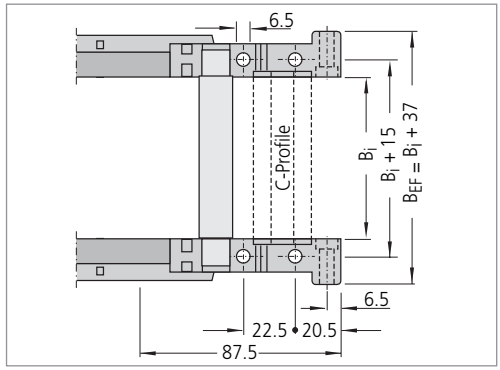
M Series – Types MC 0320, 0650, 0950 and 1250

Connection dimensions for type MC 0650

UMB (Universal Mounting Brackets) made of aluminium







The dimensions of the fixed point and drive connections are identical.

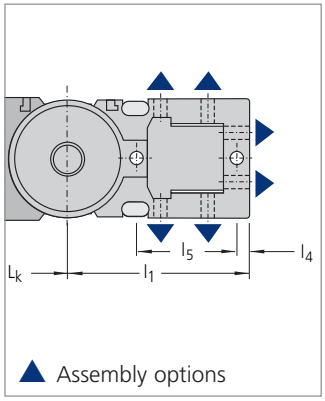
Optionally with C-Profile, slot width 11 – 12 mm,
suitable for KABELSCHLEPP SZL-strain relief devices
and all common commercial bracket clamps with a small base
(see chapter on guide channels and other accessories, from page 218 onwards).

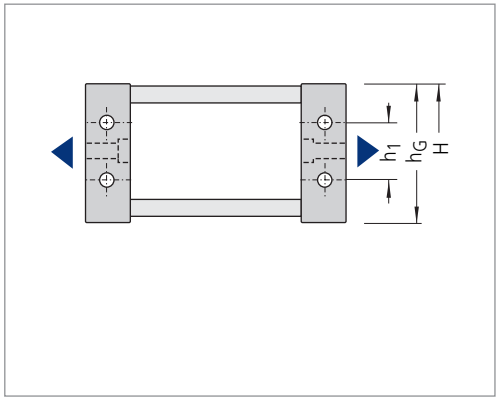
End connectors made of steel plate available on request.

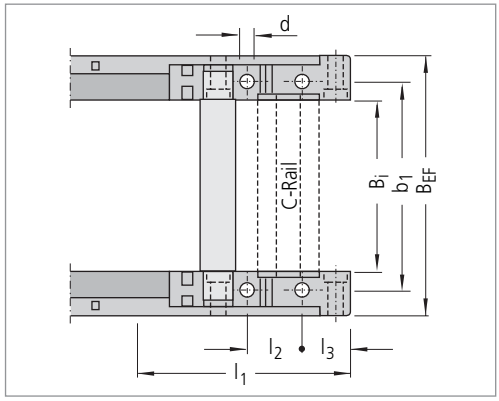
M Series – Types MC 0320, 0650, 0950 and 1250

Connection dimensions for types MC 0950 and 1250

UMB (Universal Mounting Brackets) made of aluminium







The dimensions of the fixed point and driver connections are identical.

Optionally with C-Rail, slot width 16 – 17 mm,
suitable for KABELSCHLEPP SZL-strain relief devices
and all common commercial bracket clamps with a large base
(see chapter on guide channels and other accessories, from page 218 onwards).

End connectors made of steel plate available on request.

Dimensions in mm

Type	B_{EF}	b_1	d	l_1	l_2	l_3	l_4	l_5	h_1	h_G
MC 0950	**B_i + 44**	**B_i + 24.5**	8.5	136	35	24.5	8.5	80	45	80
MC 1250	**B_i + 51**	**B_i + 28**	11	168	35	31	10.5	94.5	45	96

B_{EF} = Width of the cable carrier over connector

M Series – Types ME and MK

Carrier construction and stay variants

Type ME 0320

Plate design and plastic stay variant RE

Opening options:
Outside / Inside: simply by turning

Available in **4 mm width sections**.

Stay arrangement:
Stays mounted on every chain link.

Type MK 0475

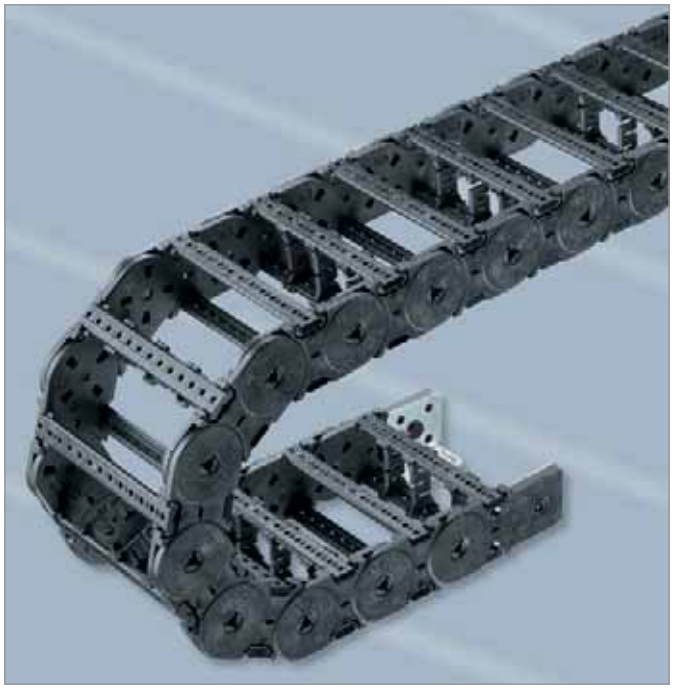


Plate design and plastic stay variant RD

Opening options for opening variant 02 (Standard)
Outside: simply by levering open (on the right or left)
Inside: simply by turning

Opening possibilities in case of opening variant 01
Outside: simply by turning
Inside: simply by levering open (on the right or left)
If you require opening variant 01, please state when placing your order.

Available in **8 mm width sections**.

Stay arrangement:
Stays mounted on every chain link.

M Series – Types ME and MK

Carrier construction and stay variants

Types ME 0650, 0950 and 1250

Plate design and plastic stay variant RE

Opening options:
Outside / Inside: simply by turning

ME 0650: Available in **8 mm width sections**.

ME 0950, 1250: Available in **16 mm width sections**.

Standard stay arrangement:
on every 2nd chain link.

Stays can be fitted on every chain link, please specify when placing your order.

Types MK 0650, 0950 and 1250

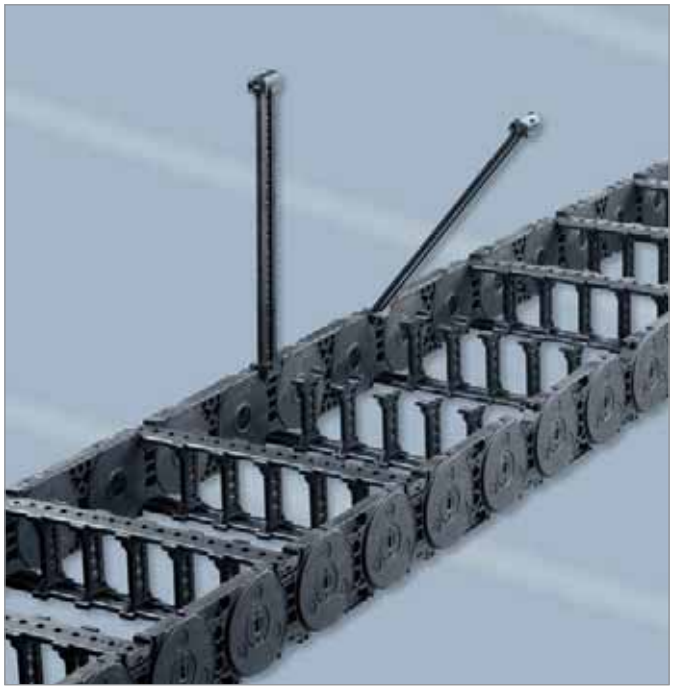


Plate design and plastic stay variant RD

Opening options:
Outside: simply by levering open (on the right or left)
Inside: simply by turning

MK 0650: Available in **8 mm width sections**.

MK 0950, 1250: Available in **16 mm width sections**.

Standard stay arrangement:
on every 2nd chain link.

Stays can be fitted on every chain link, please specify when placing your order.

For M Series hybrid cable carriers see page 102.
For M Series covered types see page 150.

Types ME 0320, MK 0475, ME/MK 0650, 0950 and 1250

Dimensions and intrinsic chain weight

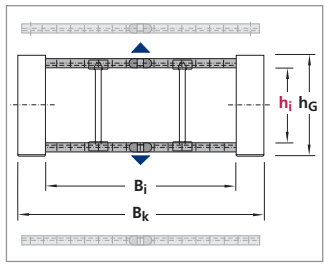
Dimensions in mm/Weights in kg/m

Type	Stay variant	h_i	h_G	$B_{i\ min}$	$q_{k\ min}$	$B_{i\ max}$	$q_{k\ max}$	B_k
ME 0320	**RE**	**19**	27.5	25	0.46	149	0.85	B_i + 11
MK 0475	**RD**	**28**	39	24	0.79	280	3.03	B_i + 17
ME 0650	**RE**	**42**	57	50	2.00	266	2.84	B_i + 34
MK 0650	**RD**	**42**	57	50	2.00	258	2.81	B_i + 34
ME/MK 0950	**RE/RD**	**58**	80	45	3.00	557	6.20	B_i + 39
ME/MK 1250	**RE/RD**	**72**	96	71	4.30	551	5.80	B_i + 45

Plastic stays

Width sections available

ME 0320	4 mm
MK 0475 ME/MK 0650	8 mm
ME/MK 0950/1250	16 mm



Bend radius and pitch

Dimensions in mm

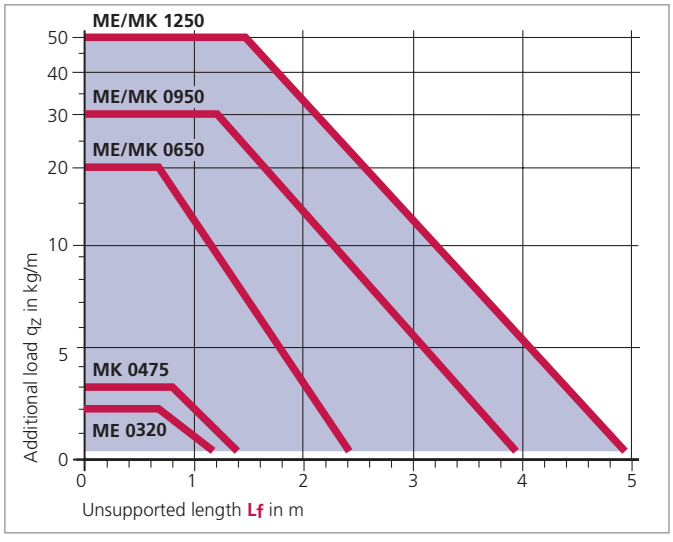
Type	Bend radii KR								
ME 0320	37	47	77	100	200	–	–	–	–
MK 0475	55	75	100	130	160	200	250	300	–
ME/MK 0650	75	95	115	145	175	220	275	300	350
ME/MK 0950	140	170	200	260	290	320	380	–	–
ME/MK 1250	180	220	260	300	340	380	500	–	–

Pitch:

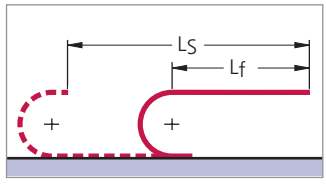
ME 0320:	**t = 32 mm**
MK 0475:	**t = 47.5 mm**
ME/MK 0650:	**t = 65 mm**
ME/MK 0950:	**t = 95 mm**
ME/MK 1250:	**t = 125 mm**

Load diagram

for unsupported length L_f depending on the additional load



Unsupported length L_f



In the case of longer travel lengths, sag of the cable carriers is technically permissible depending on the application.

In a gliding arrangement, even longer travel lengths are possible (see page 219).

We are at your service to advise on these applications.

Types ME 0320, MK 0475, ME/MK 0650, 0950 and 1250

Fixing the dividers

In the standard version, dividers or the complete divider system (dividers with heightseparation) can be moved in the cross section.
(**Mounting version A**)

However, it is often also possible to fix dividers or complete divider systems (dividers with height separation) by turning the stays.
(**Mounting version B**)

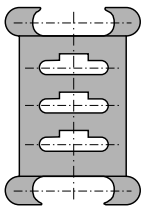
If the fixed mounting version is desired, please state this when placing your order

Type ME 0320

Mounting versions A and B for divider systems

Mounting version A (standard)

Movable divider:
Divider without arresting cams

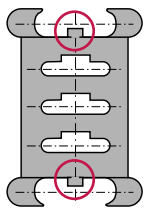


Caution: With type ME 0320, the stay does not have a groove. Different dividers are required for mounting versions A and B:

Version A: Dividers **without** arresting cams
Version B: Dividers **with** arresting cams

Mounting version B

Fixed divider:
Divider with arresting cams



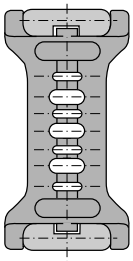
Thus, with type ME 0320, the mounting version A **cannot** be changed into mounting version B simply by turning the stay.

Types MK 0475, ME/MK 0650, 0950 and 1250

Mounting versions A and B for divider systems

Mounting version A (standard)

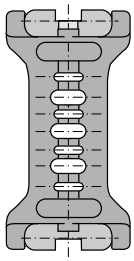
Movable divider:
The arresting cam of the divider can move in the groove of the stay.



With a movable assembly of the dividers (mounting version A), the holes in the stay do not have any function and hence the dimension a_X-section is meaningless.

Mounting version B

Fixed divider:
The arresting cam of the divider is fixed in the borehole of the stay.



Please note that the dividers can only be fixed in positions at which there is a hole in the stay.
The dimension a_X-section specifies the hole intervals in the stay.

Hole intervals = fixing positions of the dividers (a_X-sections)

By simply turning the stays, it is also possible at any subsequent time to switch between movable and fixed assembly of the dividers (not in case of ME 0320).

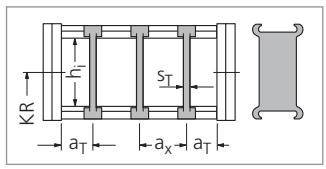
Types ME 0320, MK 0475, ME/MK 0650, 0950 and 1250

Divider systems

Divider system TS 0

			Mounting version A			Mounting version B			
Type	Stay variant	h_i mm	S_T mm	$a_{T\ min}$ mm	$a_{x\ min}$ mm	S_T mm	$a_{T\ min}$ mm	$a_{x\ min}$ mm	$a_{x\ section}$ mm
ME 0320	RE	19	2	3	6	2	4.5	8	4
MK 0475	RD	28	2.8	6	7.8	2.8	12	8	8
ME/MK 0650	RE/RD	42	4.2	6.5	13	4.2	13	16	8
ME/MK 0950	RE/RD	58	6	7.5	14.5	6	22.5	16	16
ME/MK 1250	RE/RD	72	8	5	14.5	8	19.5	16	16

In the standard version, the divider systems are mounted on every second chain link.

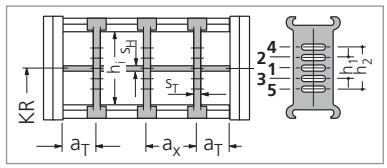


Divider system TS 1

with continuous height separation made of aluminium

			Mounting version A			Mounting version B						
Type	Stay variant	h_i mm	S_T mm	$a_{T\ min}$ mm	$a_{x\ min}$ mm	S_T mm	$a_{T\ min}$ mm	$a_{x\ min}$ mm	$a_{x\ section}$ mm	S_H mm	h_1 mm	h_2 mm
ME 0320	RE	19	2	3	6	2	4.5	8	4	2	10	–
MK 0475	RD	28	2.8	6	7.8	2.8	12	8	8	2.4	15	–
ME/MK 0650	RE/RD	42	4.2	6.5	13	–	–	–	–	4	10	22
ME/MK 0950	RE/RD	58	6	7.25	14.5	6	22.5	16	16	4	22	–
ME/MK 1250	RE/RD	72	8	5	14.5	8	19.5	16	16	4	32	–

In the standard version, the divider systems are mounted on every second chain link.



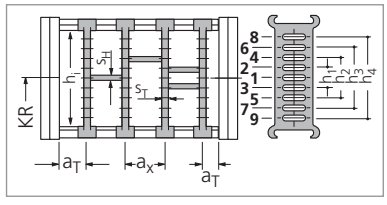
Divider system TS 3

ME/MK 0650, 0950 and 1250 with plastic partition divider system TS 3
The dividers for divider system **TS 3** do not have any arresting cams.
Thus, no mounting version B (fixed mounting) is possible.

Type	Stay variant	h_i mm	S_T mm	$a_{T\ min}$ mm	$a_{x\ min}$ mm	S_H mm	h_1 mm	h_2 mm	h_3 mm	h_4 mm
MC 0650	RE/RD	42	8	4	16*	4	14	28	–	–
MC 0950	RE/RD	58	8	4	16*	4	14	28	42	–
MC 1250	RE/RD	72	8	4	16*	4	14	28	42	56

* When using plastic partitions

The dividers are fixed by the partitions, the complete divider system is movable.



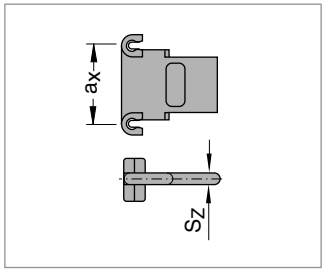
In the standard version, the divider systems are mounted on every second chain link.

Divider system **TS 2** with fixable dividers (mounting version B) and aluminium height subdivisions in 1 mm width sections is available. Please do get in touch with us.

Types ME 0320, MK 0475, ME/MK 0650, 0950 and 1250

Partitions

Dimensions of the plastic partitions for TS 3



There are also aluminium partitions in 1 mm width sections available.

Dimensions in mm

s_z	a_x (center-to-center distance, dividers)									
4	16	18	23	28	32	33	38	43	48	58
	64	68	78	80	88	96	112	**128**	**144**	**160**
	176	**192**	**208**							

When using **partitions with a_x > 112** mm, there should be an additional central support with a **twin divider**.
Thickness of the twin dividers: ME/MK 0650 S_T = 3 mm, ME/MK 0950, 1250 S_T = 4 mm

Twin dividers are designed for subsequent fitting in the partition system.
You can find further information on this in our main catalog.

Gliding elements – the economical solution for gliding applications

Replaceable glide shoes

! By means of a positive snap connection, the glide shoes sit firmly on the chain link.

Replaceable glide shoes made of plastic*

To extend the life of cable carriers in gliding operations KABELSCHLEPP supplies detachable, exchangeable glide shoes.
Replaceable glide shoes are a very economical solution. When wear occurs only the glide shoes are replaced, and not the complete cable carrier.
For travel speeds > 2.5 m/s and large additional loads, a highly wear-resistant special material is used.

For type ME/MK 0950 **OFFROAD glide shoes** with 70 % greater wear volumes are also available. We recommend their use in extreme environmental conditions (with particularly abrasive materials such as e. g. sand, dust, corundum).

* not for ME 0320

Chain height with glide shoes: (Dimensions in mm)

MK 0475:	h_G'	=	h_G	+	2.5	= 41.5
ME/MK 0650:	h_G'	=	h_G	+	3.2	= 60.2
ME/MK 0950:	h_G'	=	h_G	+	3.5	= 83.5
ME/MK 1250:	h_G'	=	h_G	+	3.5	= 99.5

Minimum bend radii when using glide shoes:

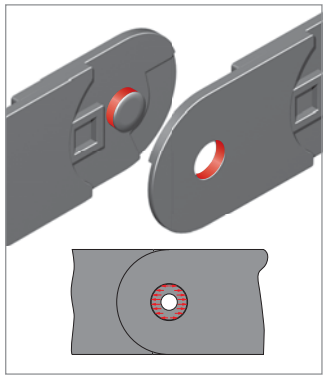
MK 0475:	KR_{min} = 100 mm
ME/MK 0650:	KR_{min} = 95 mm
ME/MK 0950:	KR_{min} = 140 mm
ME/MK 1250:	KR_{min} = 180 mm

Minimized hinge wear owing to the “life extending 2 disc principle“

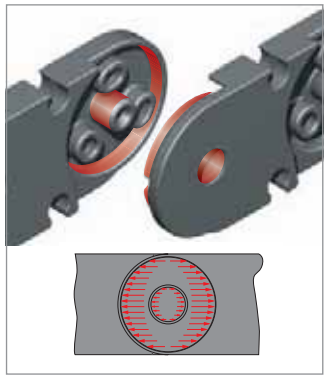
In the M Series*, the push and pull forces are transmitted via the optimum link design for this purpose.

As a result link wear is reduced to a minimum and the life of the cable carrier is considerably lengthened.

* not for type 0320



■ Force transmission with a pin-hole joint



■ Force transmission with the “life extending 2 disc principle“

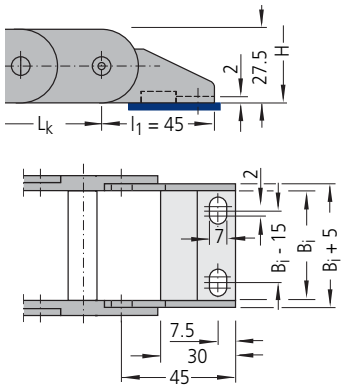
Types ME 0320, MK 0475, ME/MK 0650, 0950 and 1250

Connection dimensions for type ME 0320

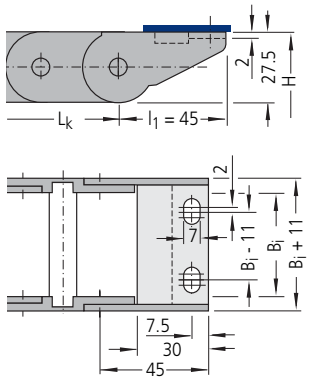
Connectors made of plastic/aluminium

Standard connectors without strain relief.
Connectors with strain relief available on request.

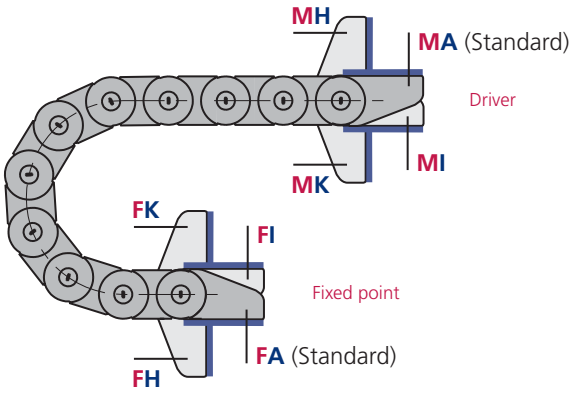
Fixed point connection



Driver connection



Connection variants for type ME 0320



Connection point

M – Driver

F – Fixed point

Connection type

A – Threaded joint (standard)

I – Threaded joint, inside

H – Threaded joint, rotated through 90° to the outside

K – Threaded joint, rotated through 90° to the inside

In the standard version, the connectors are mounted with the threaded joint outwards (**FA/MA**).

When ordering please specify the desired connection type (see ordering key on page 246).

The connection type can subsequently be altered simply by changing the connectors.

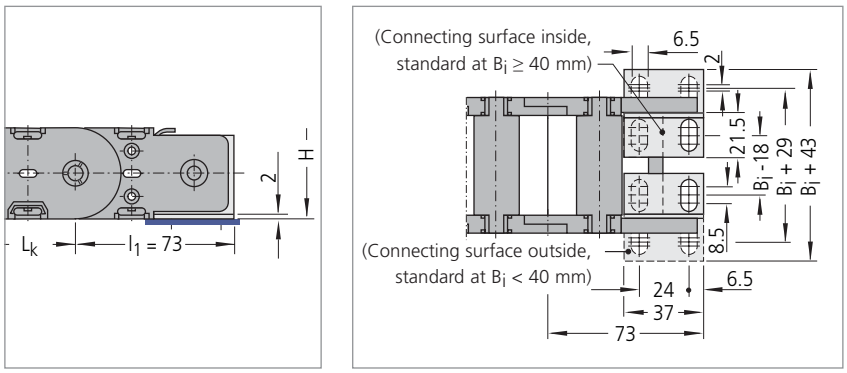
Types ME 0320, MK 0475, ME/MK 0650, 0950 and 1250

Connection dimensions for type MK 0475

Connectors made of plastic/steel

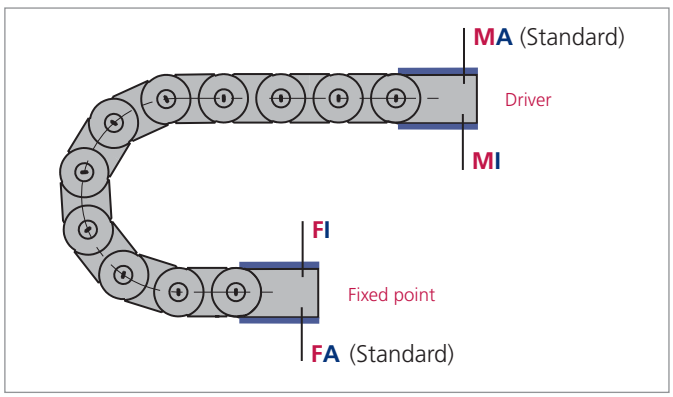
End connector made of steel plate.

Screwable strain relief made of aluminium on request.



The dimensions of the fixed point and driver connections are identical.

Connection variants for type MK 0475



Connection point

M – Driver

F – Fixed point

Connection type

A – Threaded joint (standard)

I – Threaded joint, inside

In the standard version, the end connectors are mounted with the threaded joint outwards (**FA/MA**).

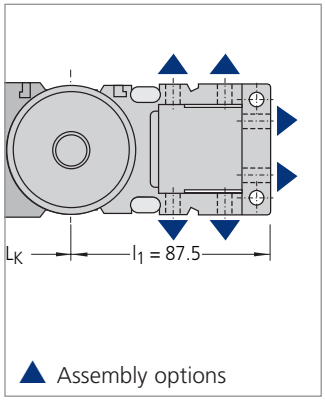
When ordering please specify the desired connection type (see ordering key on page 246).

The connection type can subsequently be altered simply by changing the connectors.

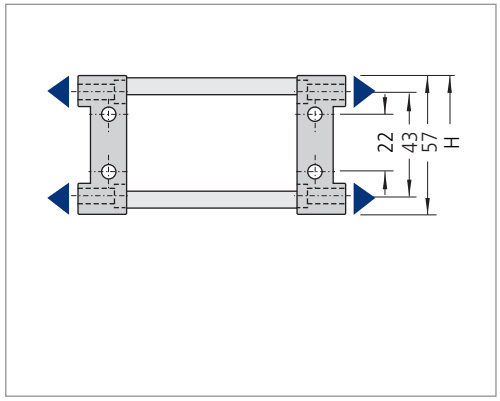
Types ME 0320, MK 0475, ME/MK 0650, 0950 and 1250

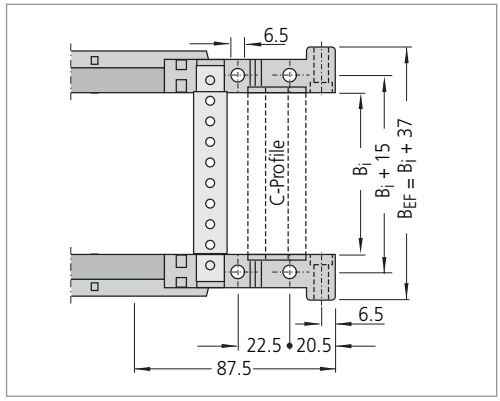
Connection dimensions for types ME/MK 0650

UMB (Universal Mounting Brackets) made of aluminium



▲ Assembly options





The dimensions of the fixed point and driver connections are identical.

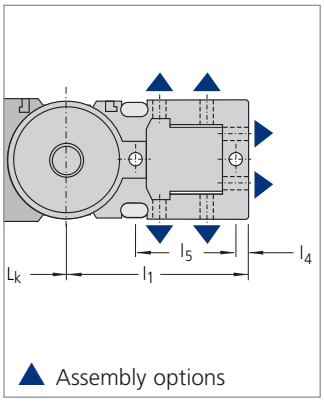
Optionally with C-Profile, slot width 11 – 12 mm,
suitable for KABELSCHLEPP SZL-strain relief devices
and all common commercial bracket clamps with a small base
(see chapter guide channels and other accessories, from page 218 onwards).

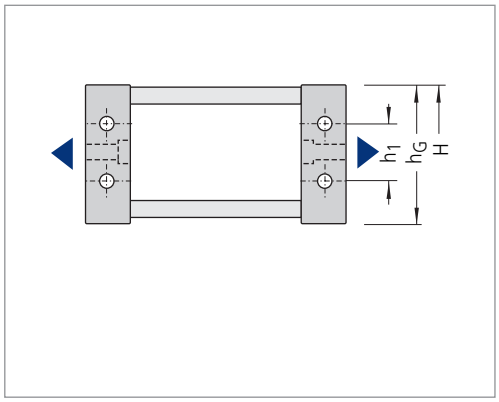
End connectors made of steel plate available on request.

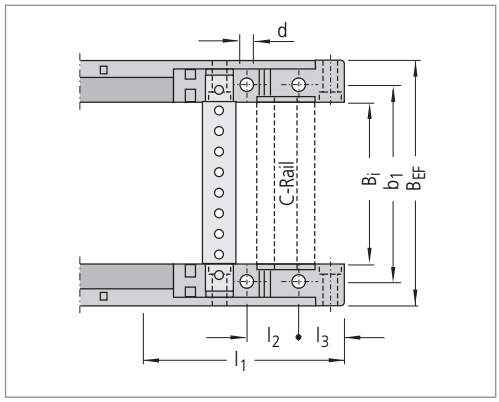
Types ME 0320, MK 0475, ME/MK 0650, 0950 and 1250

Connection dimensions for types ME/MK 950 and 1250

UMB (Universal Mounting Brackets) made of aluminium







The dimensions of the fixed point and driver connections are identical.

Optionally with C-Rail, slot width 16 – 17 mm,
suitable for KABELSCHLEPP SZL-strain relief devices
and all common commercial bracket clamps with a large base
(see chapter on guide channels and other accessories, from page 218 onwards).

End connectors made of steel plate available on request.

Dimensions in mm

Type	B_{EF}	b_1	d	l_1	l_2	l_3	l_4	l_5	h_1	h_G
MC 0950	**B_i + 44**	**B_i + 24.5**	8.5	136	35	24.5	8.5	80	45	80
MC 1250	**B_i + 51**	**B_i + 28**	11	168	35	31	10.5	94.5	45	96

B_{EF} = Chain width over connector

KABELSCHLEPP

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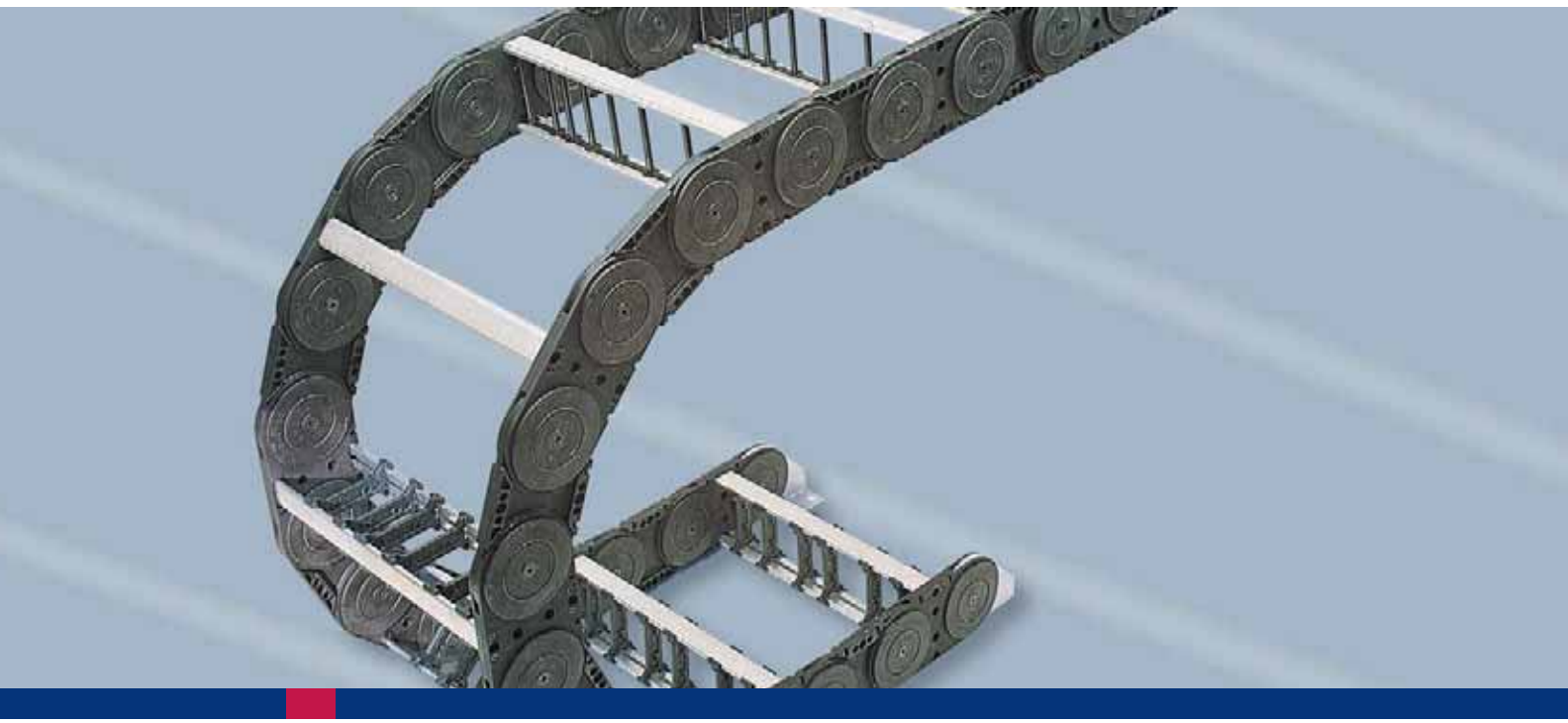
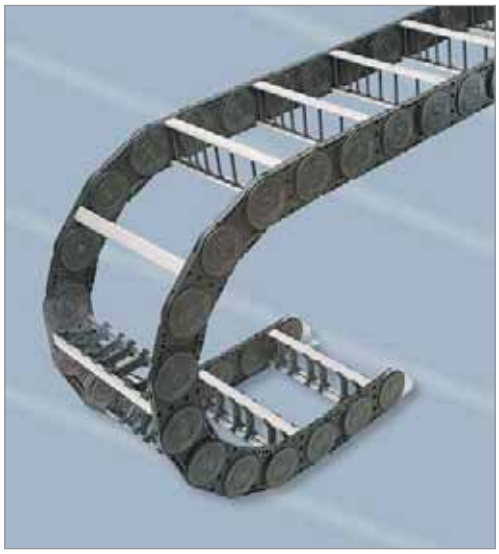
Cable carriers with variable chain widths

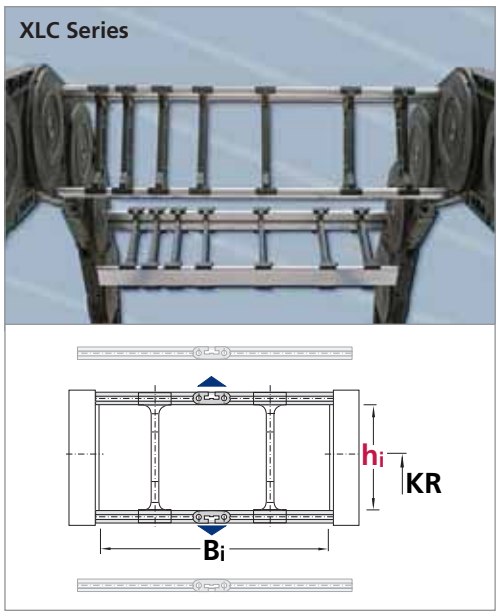
XL Series



XL Series – Cable carriers with variable chain widths



- Available in 1 mm width sections
- Large dimensions
- Low intrinsic weight
- Can be quickly opened on the inside and outside for cable laying
- Highly wear-resistant, replaceable glide shoes available – resulting in minimal wear at high speeds, sliding in the guide channel
- Chain bands with plastic links in combination with aluminilum stays
- Different connection variants
- Large choice of stay systems and ways of separating the cables
- Optionally with strain relief
- Completely enclosed types with aluminium covering system, see Chapter XLT
- TÜV design approved in accordance with 2PfG 1036/10.97



Type XLC 1650 with aluminium stays

Plastic and aluminium combination
Available in **1 mm width sections**

Aluminium stays
Width sections available
1 mm

Dimensions in mm

Type	h_i	B_i	Maximum travel length in m	Dynamics of unsupported arrangement		Page
				Travel speed v_{max} in m/s	Travel acceleration a_{max} in m/s²	
XLC 1650	108	200-1000	350	4	25	122

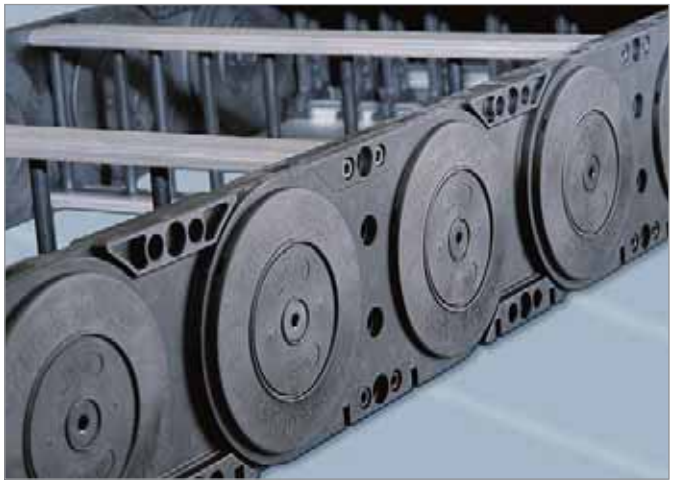
Tubes – covered cable carriers
Type XLT 1650 with aluminium cover system

Detailed information can be found in the chapter XLT Series from page 157 onwards.

XL Series – Type XLC 1650

Carrier construction and stay variants

Hybrid cable carriers with plastic chain bands and aluminium stays.
Available in **1 mm width sections**.



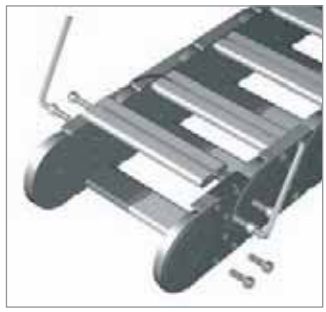
Standard stay arrangement:
on every 2nd chain link.

The stays can be mounted on every chain link, please specify when placing your order.

Stay variant RM

Frame stay RM made of aluminium – Solid design

Bolted, high stability even with large carrier widths



Additional stay variants

Stay variant LG made of aluminium:
Optimum cable guidance in the neutral bending line

Stay variant RMR:
Gentle cable laying by means of rollers. Ideal when using hydraulic hoses with "soft" sheaths

For XL Series covered types see page 157.

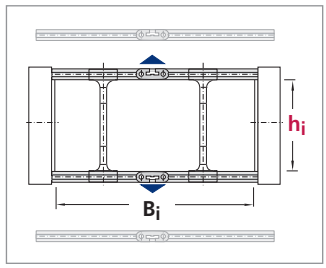
XL Series – Type XLC 1650

Dimensions and intrinsic chain weight

Dimensions in mm/Weights in kg/m

Type	Stay variant	h_i	h_G	$B_{i\ min}$	$q_{k\ min}$	$B_{i\ max}$	$q_{k\ max}$	B_k
XLC 1650	RM	108	140	200	10.5	1000	15.3	B_i + 68

Aluminium stays
Width sections available
1 mm



Bend radius and pitch

Dimensions in mm

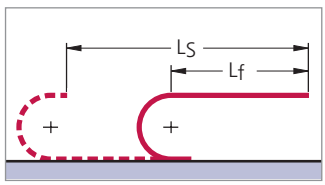
Type	Bend radii KR						
XLC 1650	250	300	350	400	450	500	550

Pitch t = 165 mm

Load diagram

for unsupported length L_f depending on the additional load

Unsupported length L_f



In the case of longer travel lengths, sag of the cable carriers is technically permissible depending on the application.

In a gliding arrangement, even longer travel lengths are possible (see page 219).

We are at your service to advise on these applications.

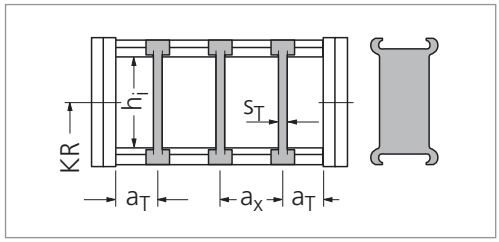
XL Series – Type XLC 1650

Divider systems

Divider system TS 0

Type	Stay variant	h_i mm	S_T mm	$a_{T\ min}$ mm	$a_{x\ min}$ mm
XLC 1650	RM	108	8	6	25

The dividers can be moved in the cross section.



In the standard version, the divider systems are mounted on every second chain link.

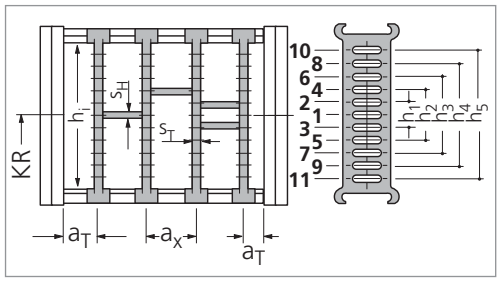
Divider system TS 3

with partitioned height subdivision made of plastic

Type	Stay variant	h_i mm	S_T mm	$a_{T\ min}$ mm	$a_{x\ min}$ mm	S_H mm	h_1 mm	h_2 mm	h_3 mm	h_4 mm	h_5 mm
XLC 1650	RM	108	8	1	16*	4	14	28	42	56	70

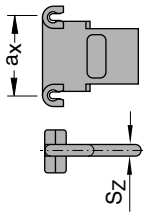
* When using plastic partitions

The dividers are fixed by the partitions, the complete divider system is movable.



In the standard version, the divider systems are mounted on every second chain link.

Dimensions of the plastic partitions for TS 3



There are also aluminium partitions in 1 mm width sections available.

Dimensions in mm

S_Z	a_x (center-to-center distance, dividers)									
4	16	18	23	28	32	33	38	43	48	58
	64	68	78	80	88	96	112	**128**	**144**	**160**
	176	**192**	**208**							

When using **partitions with a_x > 112** mm there should be an additional central support with a **twin divider** (S_T = 5 mm).

Twin dividers are designed for subsequent fitting in the partition system. You can find further information on this in our main catalog.

XL Series – Type XLC 1650

Gliding elements – the economical solution for gliding applications

Replaceable glide shoes

Replaceable glide shoes made of plastic

To extend the life of cable carriers in gliding operations KABELSCHLEPP supplies detachable, exchangeable glide shoes.
Replaceable glide shoes are a very economical solution. When wear occurs only the glide shoes are replaced, and not the complete cable carrier.

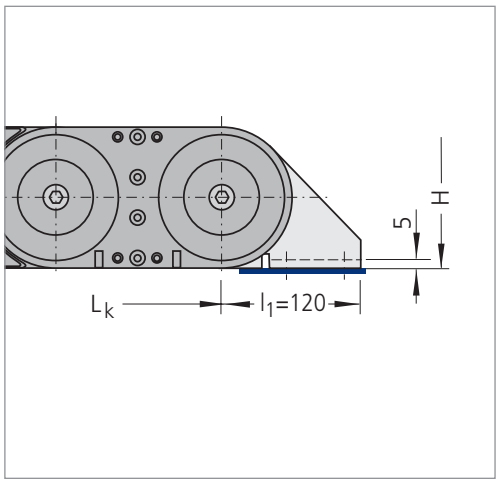
Chain height with glide shoes:

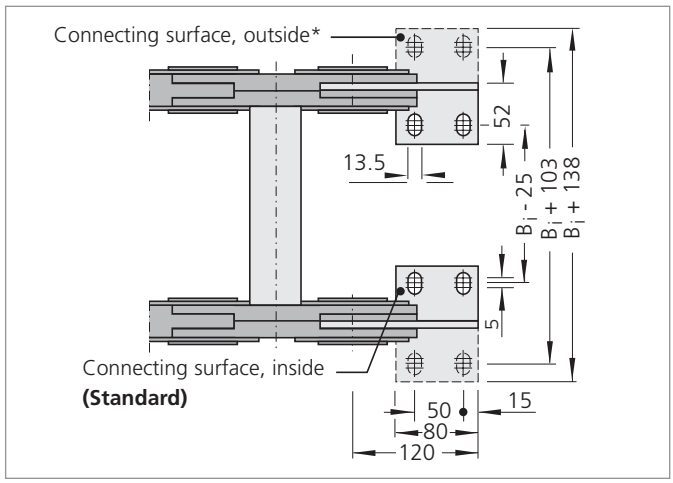
h_G' = 147 mm

! By means of a positive snap connection, the glide shoes sit firmly on the chain link.

Connection dimensions

End connector made of steel plate

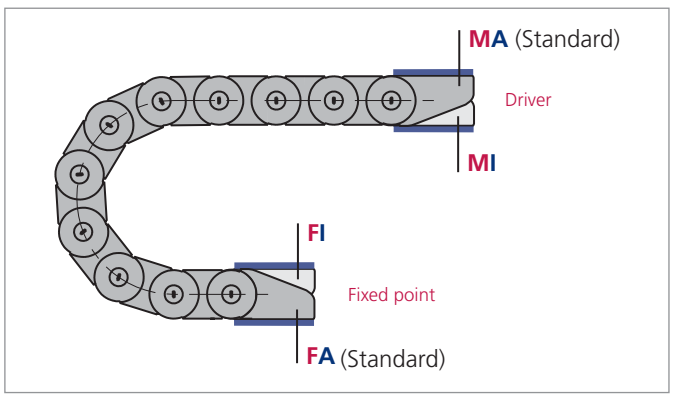




The dimensions of the fixed point and driver connections are identical.

* Please specify when ordering.

Connection variants



Connection point

M – Driver

F – Fixed point

Connection type

A – Threaded joint (standard)

I – Threaded joint, inside

In the standard version, the end connectors are mounted with the threaded joint outwards (**FA/MA**).

When ordering please specify the desired connection type (see ordering key on page 246).

The connection type can subsequently be altered simply by changing the connectors.

KABELSCHLEPP

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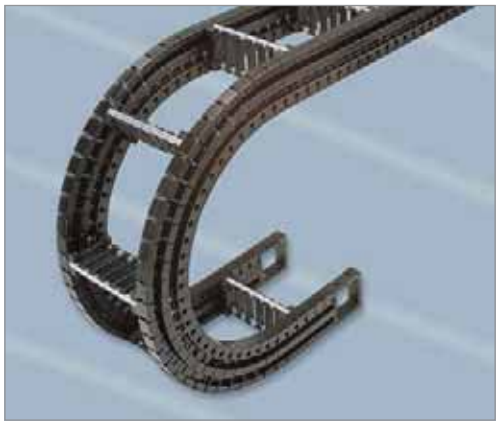
Cable carriers with variable chain widths

QUANTUM

QUANTUM – Link-free cable carriers

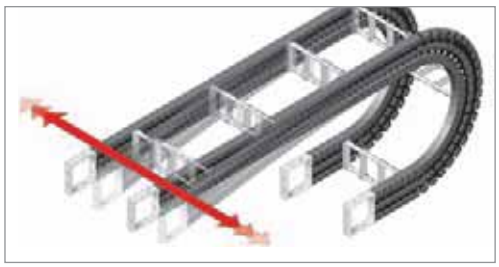


- Aluminium stays in 1 mm width sections
- Plastic stays in 8 or 16 mm width sections
- Extremely quiet < 40 dB (A)
- Low-vibration operation – almost no polygon effect = low-oscillation operation
- No hinges, no hinge wear = clean room-compatible
- Extremely lightweight
- Very long service life: 25 million cycles = unsurpassed service life
- For additional 3D movements
- Flexible construction: Driver connection is flexible in the lateral direction and can be turned through up to ± 30 degrees
- Gentle on the cables, since there is almost no polygon effect
- Standard universal mounting brackets (UMBs), suitable for any assembly situation
- Large choice of stay systems and ways of separating the cables
- Highly wear-resistant, replaceable glide shoes available – resulting in minimal wear at high speeds, sliding in the guide channel
- Optionally available with different strain relief systems
- TÜV design approved in accordance with 2PfG 1036/10.97

High-speed applications

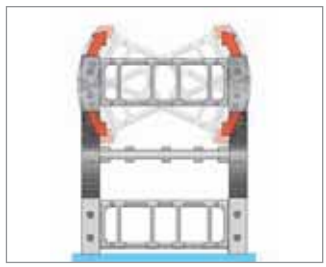
Owing to the low intrinsic weight and the absence of hinge friction, the force required for moving the cable carrier is minimal.
Optimum conditions for:

- high accelerations up to max. 300 m/s^2
- high operating speeds up to max. 40 m/s



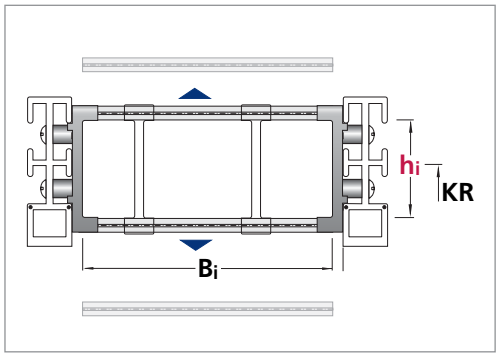
3D-movements

The driver connection can move sideways and can be turned through up to ± 30 degrees.



Types Q 040, Q 060, Q 080 and Q 100

Available in 1, 8 or 16 mm width sections



Dimensions in mm

Type	h_i	B_i	Maximum travel length in m	Dynamics of unsupported arrangement		Page
				Travel speed v_{max} in m/s	Travel acceleration a_{max} in m/s^2	
Q 040	28	28-284	100	40	300	128
Q 060	42*	38-500	150	30	160	128
Q 080	58	50-600	180	25	100	128
Q 100	72	70-600	200	20	70	128

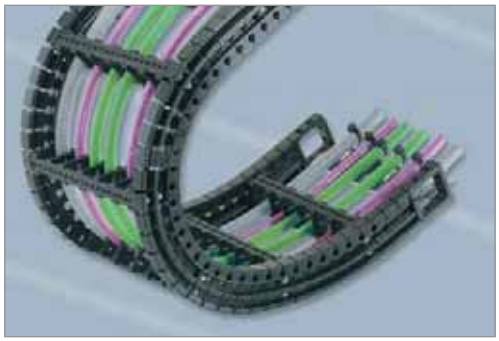
* with stay variant RE

Subject to change.

Quantum – Types Q 040, Q 060, Q 080, and Q 100

The design

Extruded sidebands



With the QUANTUM cable carrier system, sidebands made of extruded special plastic are used.

Owing to the link-free design, there is no more noise resulting from the impact of the chain links on the radius limits. Even the "striking" of individual chain links on the floor is eliminated. This reduces the noise level and vibrations almost to zero.
The low-vibration operation minimizes the wear of the outer sheaths of the cables.

Two steel wires in the supporting base of the profile bars increase the service life as well as the tensile and bending strength of the entire cable carrier system.

The sidebands are connected, as is the case with our variable chain width cable carriers, with stay systems that have proved themselves over many years.

Stay variants for the types Q 040, Q 060, Q 080 and Q 100

Frame stay RS made of aluminium – Standard design – types Q 060, Q 080, Q 100

For lightweight to medium loads.

Opening options:
Outside / Inside: the cable carrier can be opened quickly and easily simply by rotating the stays through 90°.

Frame stay RV made of aluminium – Reinforced design – types Q 080, Q 100

For medium to heavy loads and for large chain widths

Opening options:
Outside / Inside: the cable carrier can be opened quickly and easily simply by rotating the stays through 90°.

Frame stay RE made of plastic – types Q 040, Q 060, Q 080, Q 100

Opening options:
Outside / Inside: simply by turning

Quantum – Types Q 040, Q 060, Q 080, and Q 100

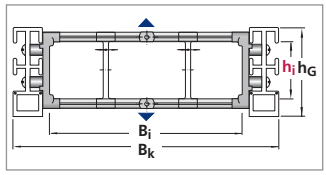
Dimensions and intrinsic weight

"Hybrid designs" with aluminium stay systems

Dimensions in mm/Weights in kg/m

Type	Stay variant	h_i	h_G	$B_{i\ min}$	$q_{k\ min}$	$B_{i\ max}$	$q_{k\ max}$	B_k
Q 060	RS	38	60	38	1.25	500	2.40	B_i + 52
Q 080	RS	58	80	50	1.90	600	2.25	B_i + 72
Q 080	RV	58	80	50	2.10	600	2.90	B_i + 72
Q 100	RS	72	98	70	2.60	600	3.40	B_i + 82
Q 100	RV	72	98	70	2.80	600	4.60	B_i + 82

Aluminium stays
Width sections available
1 mm



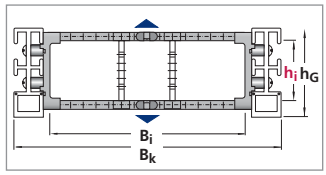
"Solid plastic designs"

Dimensions in mm/Weights in kg/m

Type	Stay variant	h_i	h_G	$B_{i\ min}$	$q_{k\ min}$	$B_{i\ max}$	$q_{k\ max}$	B_k
Q 040	RE	28	40	28	0.63	284	0.98	B_i + 40
Q 060	RE	42	60	68	1.16	276	1.54	B_i + 52
Q 080	RE	58	80	58	1.93	570	2.70	B_i + 72
Q 100	RE	72	98	74	2.74	570	3.67	B_i + 82

* Widths without glide shoes

Plastic stays
Width sections available
Q 040/060 8 mm
Q 080/100 16 mm



Bend radius and pitch

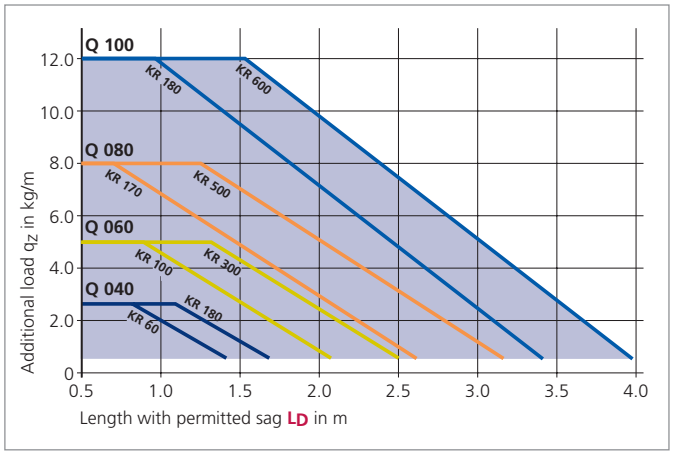
Dimensions in mm

Type	Bend radii KR					
Q 040	60	75	90	110	150	180
Q 060	100	120	150	190	250	300
Q 080	170	200	250	320	420	500
Q 100	180	250	300	370	460	600

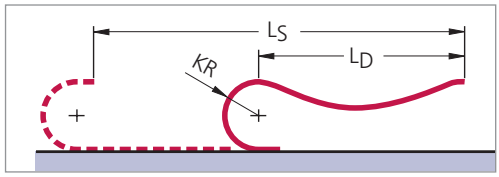
Pitch:
Q 040: t = 15 mm
Q 060: t = 20 mm
Q 080: t = 25 mm
Q 100: t = 30 mm

Load diagram

for length with permissible (desired) sag L_D
depending on the additional load



Length with permissible sag L_D and travel length L_S



In the case of long travel lengths, the cable carriers are placed in a guide channel with the upper trough gliding on the lower trough. (see page 219).

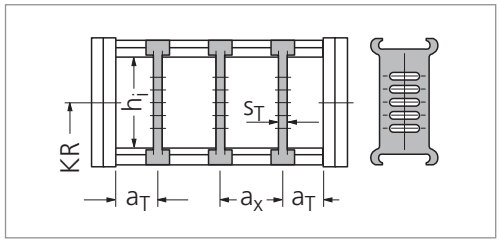
We are at your service to advise on these applications.

Quantum – Types Q 040, Q 060, Q 080, and Q 100

Divider systems

Divider system TS 0

Type	Stay variant	h_i mm	S_T mm	$a_{T\ min}$ mm	$a_{x\ min}$ mm
Q 040	RE	28	2.8	8	8
Q 060	RS	38	3	13.5	13
Q 060	RE	42	4.2	14	13
Q 080	RS	58	4	11	14
Q 080	RV	58	4	11	14
Q 080	RE	58	6	12	14.5
Q 100	RS	72	5	11	14
Q 100	RV	72	6	13	16
Q 100	RE	72	8	12	14.5



Standard mounting distances of the divider systems:
Q 040, Q 060: on every **6th** pitch division
Q 080, Q 100: on every **8th** pitch division

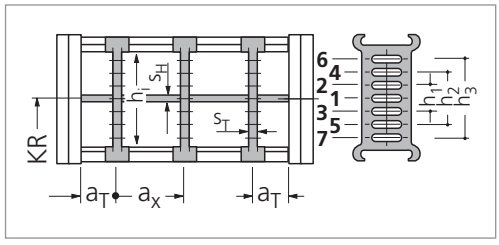
In the standard version, the dividers are movable.

In the case of plastic stays (stay variant RE), the dividers can also be mounted fixed (note the mounting distances).

Divider system TS 1

with continuous height separation made of aluminium

Type	Stay variant	h_i mm	S_T mm	$a_{T\ min}$ mm	$a_{x\ min}$ mm	S_H mm	h_1 mm	h_2 mm	h_3 mm
Q 040	RE	28	2.8	8	8	2.4	15	-	-
Q 060	RS	38	3	13.5	13	4	15	-	-
Q 060	RE	42	4.2	14	13	2	10	-	-
Q 080	RS	58	4	11	14	4	30	-	-
Q 080	RV	58	4	11	14	4	15	30	-
Q 080	RE	58	6	12	14.5	4	22	-	-
Q 100	RV	72	6	13	16	4	15	30	45
Q 100	RE	72	8	12	14.5	4	32	-	-



Standard mounting distances of the divider systems:
Q 040, Q 060: on every **6th** pitch division
Q 080, Q 100: on every **8th** pitch division

In the standard version, the dividers are movable.

In the case of plastic stays (stay variant RE), the dividers can also be mounted fixed (note the mounting distances).

Quantum – Types Q 040, Q 060, Q 080, and Q 100

Divider systems

Divider systems TS 2 and TS 3

Q 040 with divider system TS 2 with aluminium height subdivision
available in 8 mm section widths.

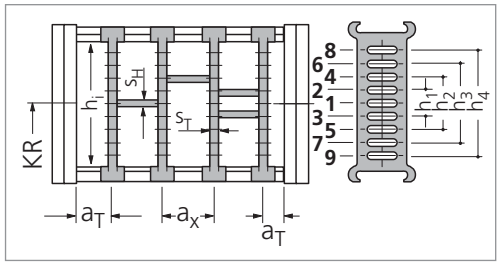
Q 060, Q 080 and Q 100 with divider system TS 3 with plastic partitions
For these types, divider system TS 2 with aluminium height subdivisions (in 1 mm width sections) is also available.

Type	Stay variant	h_i mm	S_T mm	$a_{T\,min}$ mm	$a_{x\,min}$ mm	S_H mm	h_1 mm	h_2 mm	h_3 mm	h_4 mm
Q 040 A)	RE	28	2.8	14	8	2.4	15	–	–	–
Q 060 B)	RS	38	8	11	16*	4	14	–	–	–
Q 060 B)	RE	42	8	11	16*	4	14	28	–	–
Q 080 B)	RV	58	8	8	16*	4	14	28	42	–
Q 080 B)	RE	58	8	8	16*	4	14	28	42	–
Q 100 B)	RV	72	8	8	16*	4	14	28	42	56

* When using plastic partitions

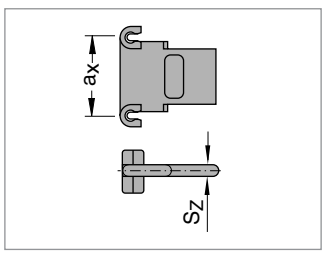
A) Only fixed mounting of the divider is possible, and at 8 mm intervals (also see mounting version B in Chapter ME/MK).

B) The dividers are fixed by the partitions, the complete divider system is movable.



Standard mounting distances of the divider systems:
Q 040, Q 060: on every **6th** pitch division
Q 080, Q 100: on every **8th** pitch division

Dimensions of the plastic partitions for TS 3



Aluminium partitions in 1 mm width sections are also available.

Dimensions in mm

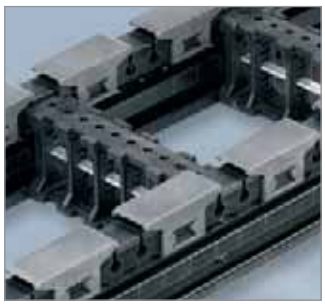
S_Z	a_x (center-to-center distance, dividers)									
4	16	18	23	28	32	33	38	43	48	58
	64	68	78	80	88	96	112	**128**	**144**	**160**
	176	**192**	**208**							

When using **partitions with a_x > 112** mm, there should be an additional central support with a **twin divider**.

Twin dividers are designed for subsequent fitting in the partition system. You can find further information on this in our main catalog.

Gliding elements – the economical solution for gliding applications

Replaceable glide shoes



Replaceable glide shoes made of plastic*

To extend the life of cable carriers in gliding operations KABELSCHLEPP supplies detachable, exchangeable glide shoes.

Replaceable glide shoes are a very economical solution. When wear occurs only the glide shoes are replaced, and not the complete cable carrier.

* not for Q 040

Dimensions with glide shoes

Dimensions in mm

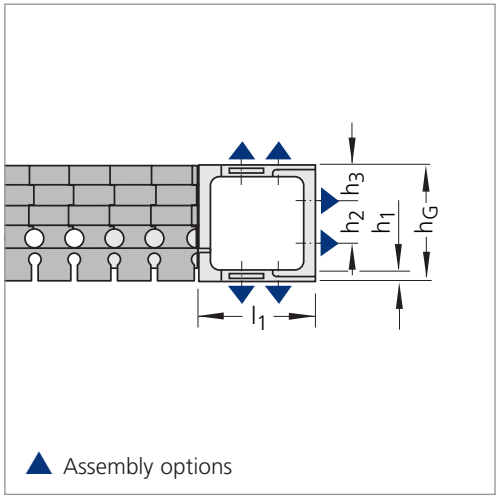
Type	Height $h_{G'}$	Width $B_{EF'}$
Q 060	$h_{G'} = h_G + 6 = 66$	$B_i + 56.0$
Q 080	$h_{G'} = h_G + 8 = 88$	$B_i + 79.5$
Q 100	$h_{G'} = h_G + 10 = 108$	$B_i + 89.5$

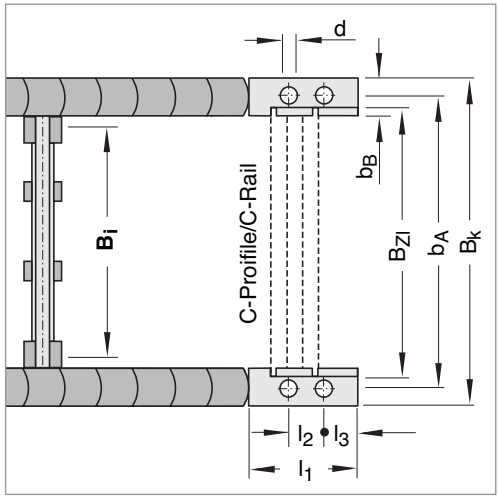
! By means of a positive snap connection, the glide shoes sit firmly on the chain link.

Quantum – Types Q 040, Q 060, Q 080, and Q 100

Connection dimensions

UMB (Universal Mounting Brackets) made of aluminium





The dimensions of the fixed point and driver connections are identical.

The connecting elements make the the last 3 pitch divisions at both ends of each sideband immobile.

Connection dimensions:

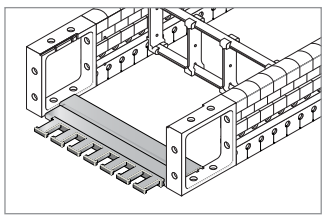
Dimensions in mm

Type	B_{ZL}	b_a	B_k	d	l_2	l_3	l_1	h_1	h_2	h_3	h_G	b_B
Q 040	B_i + 16	B_i + 26	B_i + 40	7	14	13.0	40	5	14	13.0	40	14
Q 060	B_i + 18	B_i + 32	B_i + 52	7	25	17.5	60	5	25	17.5	60	20
Q 080	B_i + 30	B_i + 47	B_i + 72	9	35	22.5	80	8	35	22.5	80	25
Q 100	B_i + 30	B_i + 52	B_i + 82	11	35	32.5	100	10	35	31.5	98	30

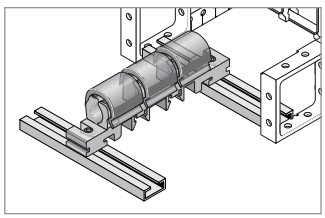
Strain relief devices

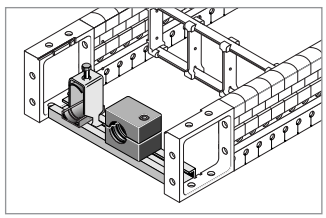
KABELSCHLEPP SZL-strain relief devices can be fastened on the C-profile and C-rail.

Strain relief comb
(Q 040, Q 060)



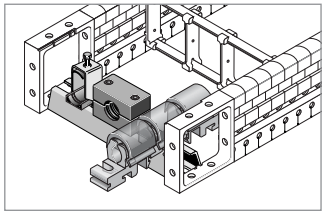
C-profile bar, slot width 11 – 12 mm (Q 060)
suitable for KABELSCHLEPP SZL-strain relief devices





(also for all common commercial bracket clamps with **a small base**)

C rail, slot width 16 – 17 mm (Q 080Q, Q 100)
suitable for KABELSCHLEPP SZL-strain relief devices



(also for all common commercial bracket clamps with **a large base**)

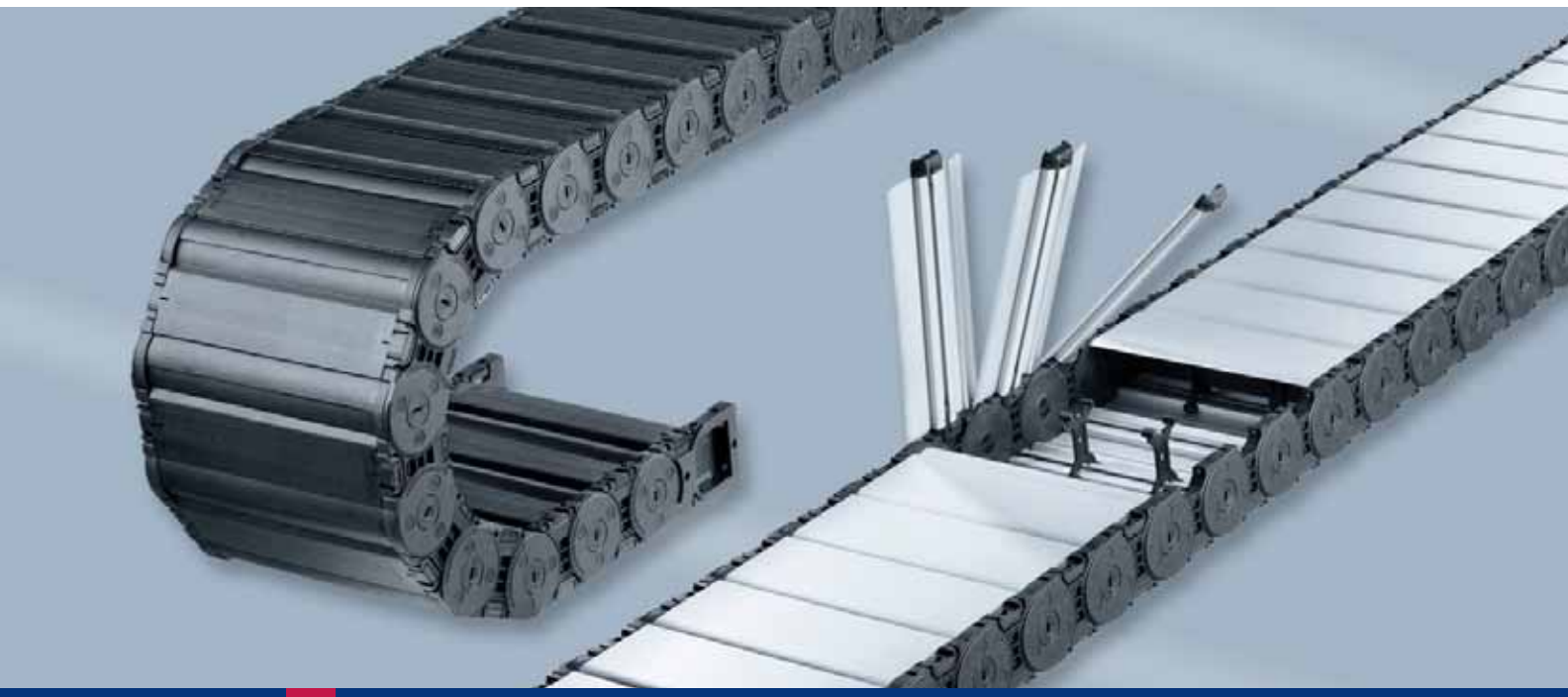
You can find further information in the chapter guide channels and other accessories, from page 218 onwards.

KABELSCHLEPP

the power to innovate

TUBE SERIES

Covered Cable Carriers



UNIFLEX

MASTER LT Series

MT Series

XLT Series

Steel cable carriers

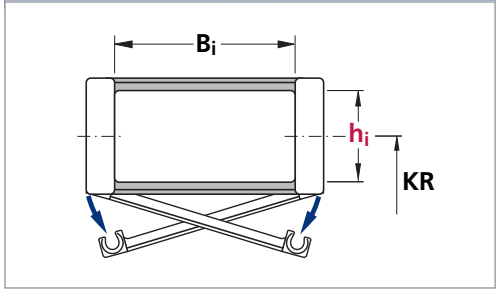
CONDUFLEX

MOBIFLEX

Subject to change.

UNIFLEX – Tubes with fixed chain widths

- Solid plastic
- Easy to open
- Robust, double stroke system for long unsupported lengths
- Particularly high torsional rigidity
- End connectors with integrated strain relief
- Economically priced standard types
- TÜV design approved in accordance with 2PfG 1036/10.97



Design 050

Cable carriers covered on one side

Outside: Covered

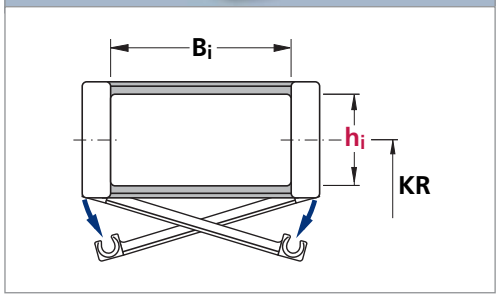
Inside: Hinged, openable (on the right/left) and detachable brackets

Dimensions in mm

Type	h_i	B_i	Maximum travel length in m	Dynamics of unsupported arrangement		Page
				Travel speed v_{max} in m/s	Travel acceleration a_{max} in m/s²	
0345.050	**20**	15-65	80	10	50	49
0455.050	**26**	25-130	120	10	50	49
0555.050	**38**	50-150	125	9	45	49
0665.050	**44**	50-175	150	8	40	49

For further information on design 050, see page 54.

UNIFLEX – Tubes with fixed chain widths



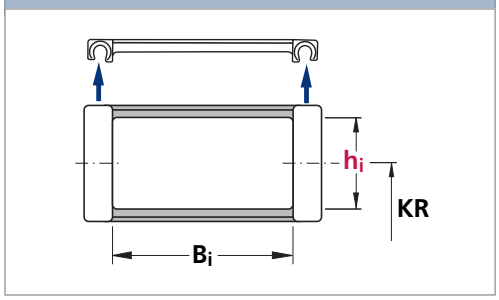
Design 060

Cable carriers covered on both sides

Outside and inside: Covered
Inside: Hinged, openable (on the right/left) and detachable cover

Dimensions in mm

Type	h_i	B_i	Maximum travel length in m	Dynamics of unsupported arrangement		Page
				Travel speed v_{max} in m/s	Travel acceleration a_{max} in m/s²	
0345.060	**19,5**	15-65	80	10	50	126
0455.060	**25**	25-130	120	10	50	126
0555.060	**36**	50-150	125	9	45	126
0665.060	**42**	50-175	150	8	40	126



Design 080

Cable carriers covered on both sides

Outside: Detachable cover
Inside: Covered

Dimensions in mm

Type	h_i	B_i	Maximum travel length in m	Dynamics of unsupported arrangement		Page
				Travel speed v_{max} in m/s	Travel acceleration a_{max} in m/s²	
0600.080	**44**	50-125	100	6	35	142

UNIFLEX – Types 0345, 0455, 0555 and 0665

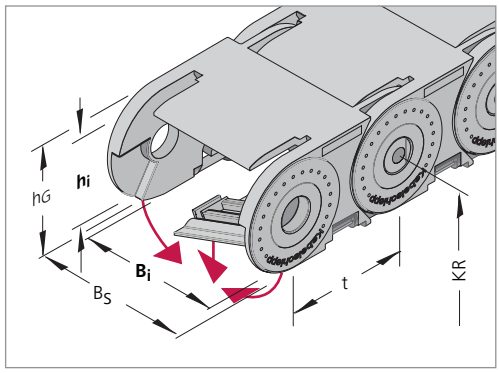
Dimensions and intrinsic chain weight

Design 060

Cable carriers covered on both sides

Outside and inside: Covered

Inside: Hinged, openable (on the right/ left) and detachable covers



Dimensions in mm/Weights in kg/m

Type	h_i	h_G	Inner widths B_i / Intrinsic chain weight						B_k
0345	19.5	28	**15**	**20**	**25**	**38**	**50**	**65**	B_i + 13
			0.48	0.52	0.56	0.65	0.74	0.85	
0455	25	36	**25**	**38**	**58**	**78**	**103**	**130**	B_i + 18
			0.92	1.01	1.16	1.31	1.51	1.72	
0555	36	50	**50**	**75**	**100**	**125**	**150**	–	B_i + 22
			1.72	1.95	2.17	2.39	2.61	–	
0665	42	60	**50**	**75**	**100**	**125**	**150**	**175**	B_i + 27
			2.36	2.69	3.00	3.32	3.64	3.95	

Bend radius and pitch

Dimensions in mm

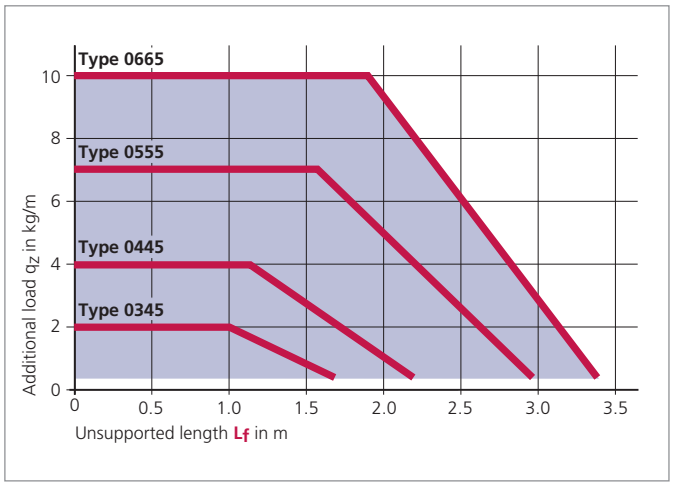
Type	Bend radii KR					
0345	75	100	125	150	–	–
0455	95	125	150	180	200	225
0555	100	125	160	200	230	–
0665	120	140	200	250	300	–

Pitch t:
Type 0345: 34.5 mm
Type 0455: 45.5 mm
Type 0555: 55.5 mm
Type 0665: 66.5 mm

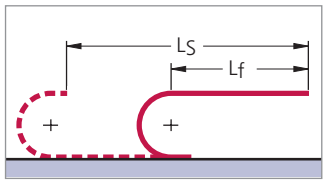
UNIFLEX – Types 0345, 0455, 0555 and 0665

Load diagram

for unsupported length L_f depending on the additional load



Unsupported length L_f



In the case of longer travel lengths, sag of the cable carriers is technically permissible depending on the application.

In a gliding arrangement, even longer travel lengths are possible (see page 219).

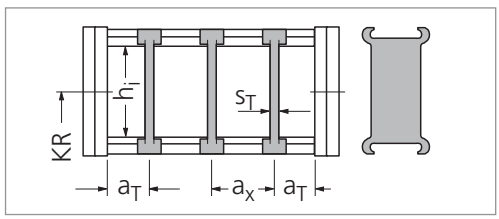
We are at your service to advise on these applications.

Divider system for design 060

Divider system TS 0

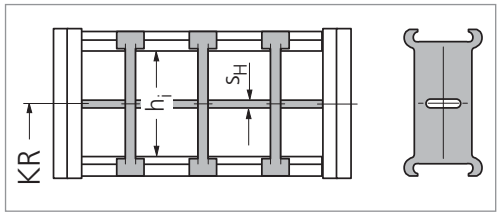
Type	h_i mm	S_T mm	a_x mm	B_i mm	$a_{T\ min}$ mm
0455	25	3	20	25	12.5
0455	25	3	20	38, 58, 78	19
0455	25	3	20	103	21.5
0455	25	3	20	130	25
0555	36	3	25	50 ... 150	25
0665	42	5	25	50 ... 175	25

The dividers are fixed at an interval of a_x.



In the standard version, the divider systems are mounted on every second chain link.

For type 0665, the divider system TS 1 with a central height subdivision (S_H = 4 mm) is also available.



UNIFLEX – Types 0345, 0455, 0555 and 0665

Strain relief devices for plastic connectors

ZLK – A

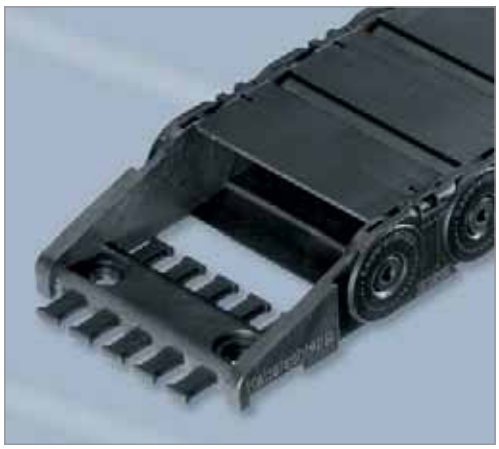
Connecting elements with integrated, strain relief combs on both sides (ZLK – A)

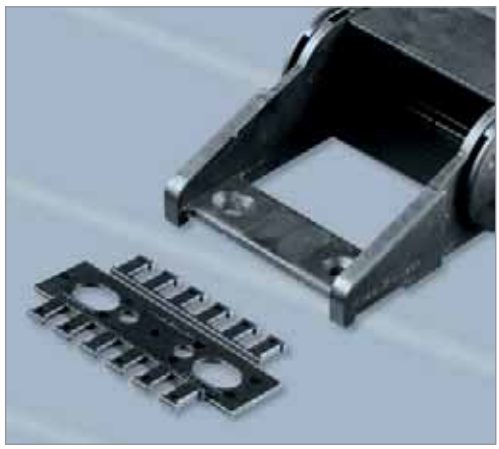
ZLK – L

Connecting elements with screw-on type strain relief combs (ZLK - L)

The strain relief combs are generally supplied with the connecting elements.

The combs are either clipped to the end connectors and bolted together with them, or screwed on at the desired intervals by using additional boreholes, behind the connecting elements.

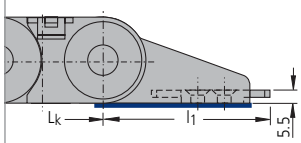


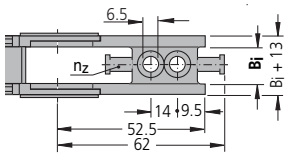


Connection dimensions for type 0345

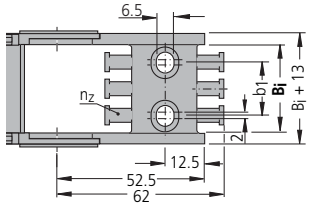
Connecting elements with integrated strain relief combs on both sides

ZLK – A





For chain width B_i = 15 – 20 mm



For chain width B_i = 25 – 65 mm

The dimensions of the fixed point and driver connections are identical.

Dimensions in mm

Type	B_i	B_k	b_1	n_z
0345. ... .15	15	28	--	1
0345. ... .20	20	33	--	1
0345. ... .25 *	25	38	13	2
0345. ... .38	38	51	24	3
0345. ... .50	50	63	36	4
0345. ... .65	65	78	51	5

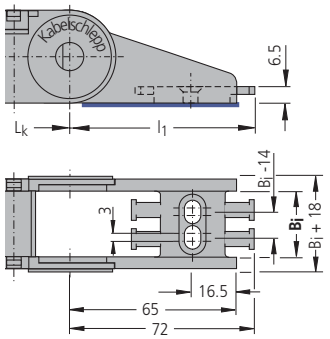
* Type 0345. ... .25 with 6.5 mm hole (not an elongated hole)

UNIFLEX – Types 0345, 0455, 0555 and 0665

Connection dimensions for type 0455

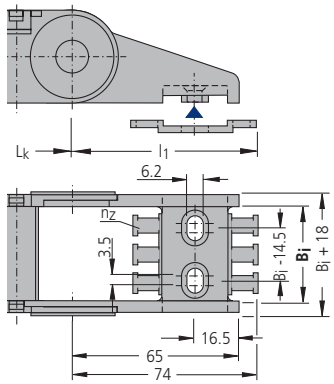
Connecting elements with strain relief combs on both sides

ZLK – A
integrated strain relief combs



For chain width B_i = 25 mm

ZLK – L
screwable strain relief combs



For chain width B_i = 38 – 130 mm

The dimensions of the fixed point and driver connections are identical.

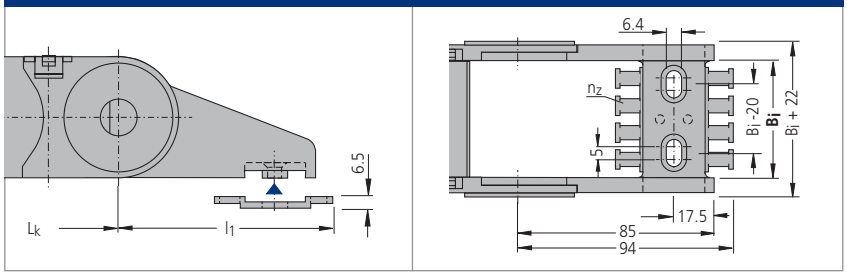
Dimensions in mm

Type	B_i	B_k	n_Z
0455. ... .25	25	43	2
0455. ... .38	38	56	3
0455. ... .58	58	76	4
0455. ... .78	78	96	6
0455. ... .103	103	121	8
0455. ... .130	130	148	10

Connection dimensions for type 0555

Connecting elements with strain relief combs on both sides

ZLK – L screwable strain relief combs



The dimensions of the fixed point and driver connections are identical.

Dimensions in mm

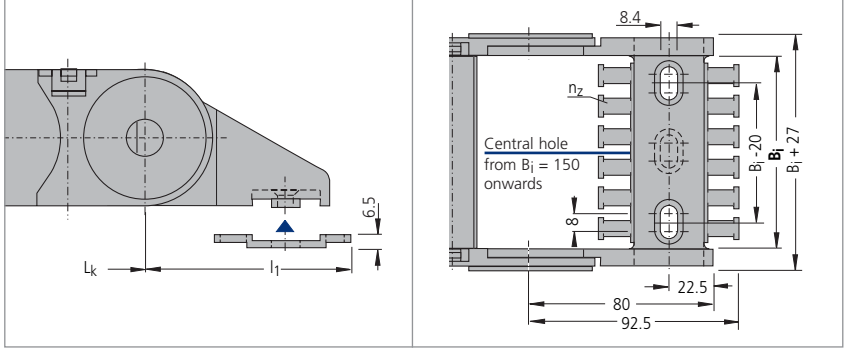
Type	B_i	B_k	n_Z
0555. ... .50	50	72	2
0555. ... .75	75	97	3
0555. ... .100	100	122	4
0555. ... .125	125	147	6
0555. ... .150	150	172	8

UNIFLEX – Types 0345, 0455, 0555 and 0665

Connection dimensions for type 0665

Connecting elements with strain relief combs on both sides

ZLK – L screwable strain relief combs

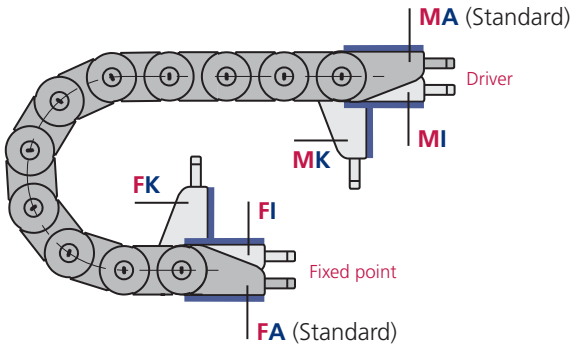


The dimensions of the fixed point and driver connections are identical.

Dimensions in mm

Type	B_i	B_k	n_z
0665. ... .50	50	77	4
0665. ... .75	75	102	6
0665. ... .100	100	127	8
0665. ... .125	125	152	10
0665. ... .150	150	177	12
0665. ... .175	175	202	14
0665. ... .200	200	227	16
0665. ... .225	225	252	18
0665. ... .250	250	277	20

Connection variants for design 060



Connection point

M – Driver

F – Fixed point

Connection type

A – Threaded joint outside (standard)

I – Threaded joint inside

H – Threaded joint, rotated through 90° to the outside

K – Threaded joint, rotated through 90° to the inside

In the standard version, the connectors are mounted with the threaded joint outwards (**FA/MA**).

When ordering please specify the desired connection type (see ordering key on page 243).

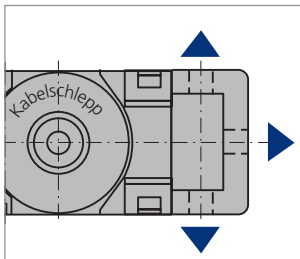
The connection type can subsequently be altered simply by changing the connectors.

UNIFLEX – Types 0345, 0455, 0555 and 0665

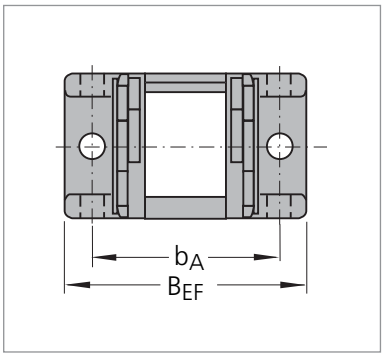
Connection dimensions

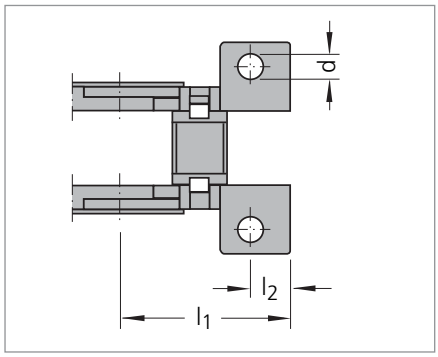
UMB (Universal Mounting Brackets) made of aluminium

Universal connectors for connection above, below or at the front.



▲ Assembly options





The dimensions of the fixed point and driver connections are identical.

Type	B_{EF}	b_A	l_1	l_2	d
0345	B_i + 30	B_i + 20	36	9	5.5
0455	B_i + 30	B_i + 20	47	10.5	5.5
0555	B_i + 40	B_i + 28	57	13.5	6.5
0665	B_i + 44	B_i + 28	68	14.5	8.5

UNIFLEX – Type 0600 Tube, lightweight construction

Dimensions and intrinsic chain weight

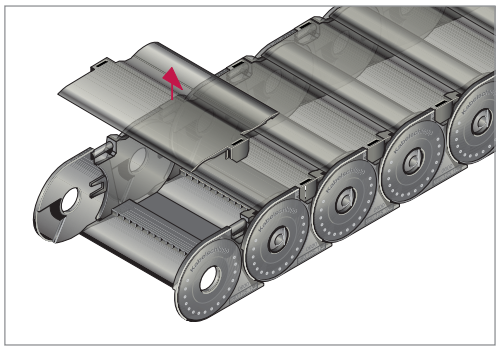
Design 080

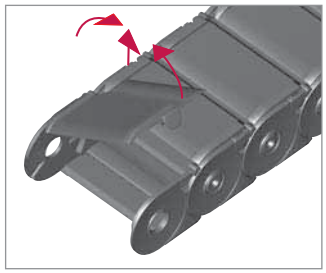
Cable carriers covered on both sides

Outside: Detachable cover
Inside: Covered

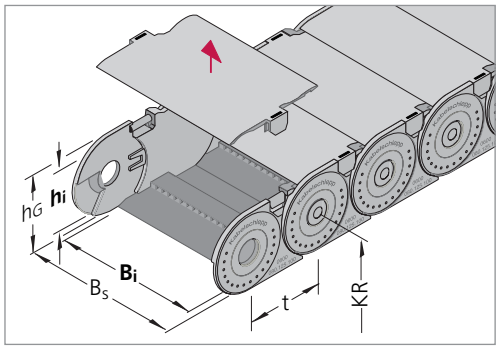
Cable carrier covered on both sides in a **lightweight design**. Can be opened on the outside for fast cable laying.

Provides particularly good protection for the cables from all types of contamination, machining chips and moisture.





Also available with hinged cover.



Dimensions in mm/Weights in kg/m

Type	h_i	h_G	Inner widths B_i				B_k
			Intrinsic chain weight				
0600	44	61	50	75	100	125	B_i + 18
			1.60	1.88	2.15	2.42	

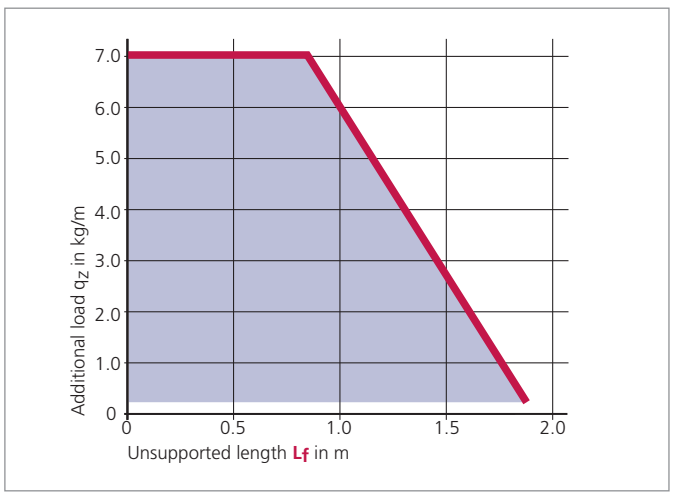
Bend radius and pitch

Bend radii KR mm				
100	125	150	175	200

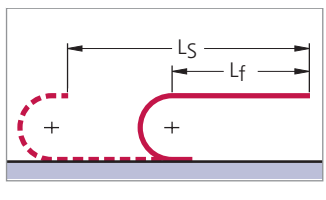
Pitch t = 60.0 mm

Load diagram

for unsupported length L_f depending on the additional load



Unsupported length L_f



In the case of longer travel lengths, sag of the cable carriers is technically permissible depending on the application.

In a gliding arrangement, even longer travel lengths are possible (see page 219).

We are at your service to advise on these applications.

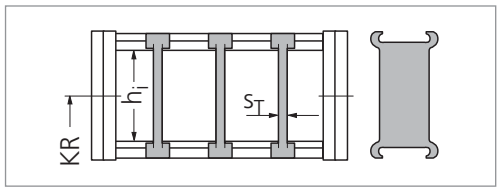
UNIFLEX – Type 0600 Tube, lightweight construction

Divider systems for design 080

Divider system TS 0

Type	h_i mm	S_T mm
0600	44	3

In the standard version, the dividers can be moved in the cross section. The dividers can be fixed in 10 mm sections simply by re-attaching.



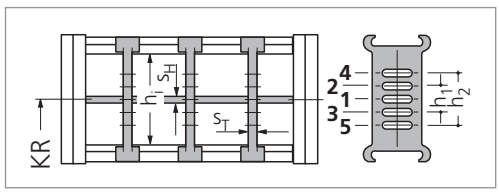
In the standard version, the divider systems are mounted on every second chain link.

Divider system TS 1

with continuous height subdivision

Type	h_i mm	S_T mm	S_H mm	h_1 mm	h_2 mm
0600	44	3	4	14	28

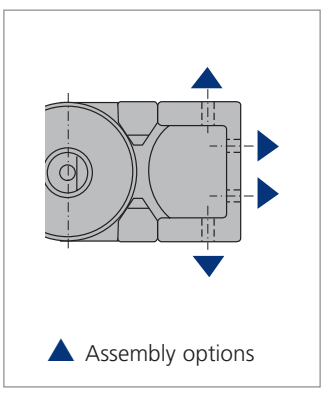
In the standard version, the dividers can be moved in the cross section. The dividers can be fixed in 10 mm sections simply by re-attaching.

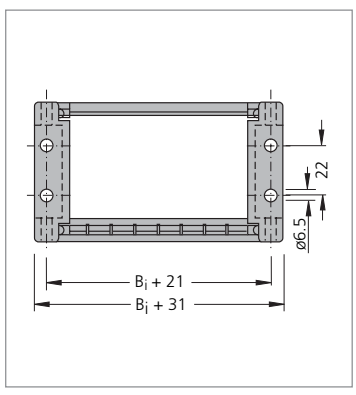


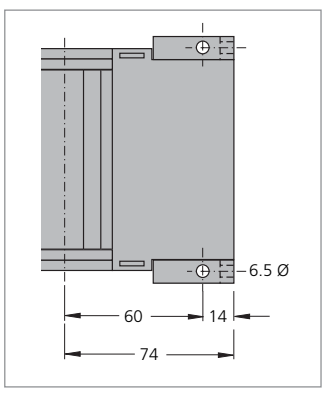
In the standard version, the divider systems are mounted on every second chain link.

Connection dimensions

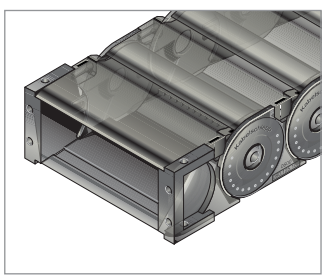
UMB (Universal Mounting Brackets) made of aluminium





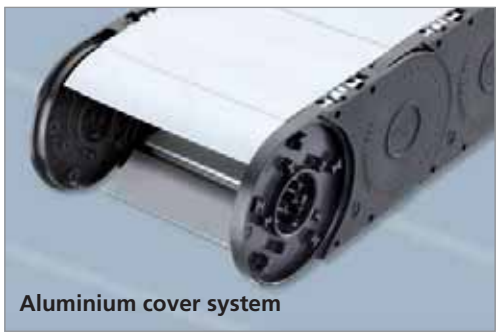


The dimensions of the fixed point and driver connections are identical.

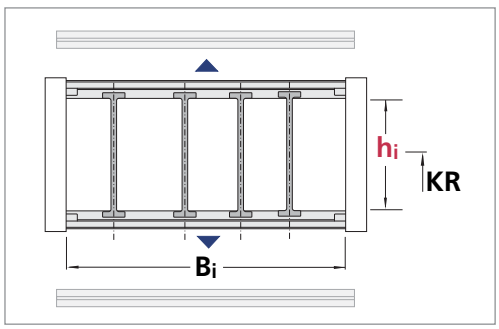


MASTER L Series – Tubes with variable chain widths

- **Lightweight design with low intrinsic weight**
- Standard widths available ex-stock; individual widths in 1 mm sections on request
- Very quiet owing to internal damping system for pre-tension and radius strokes
- Favorable ratio of inner to outer width
- Standard bend radii, application-specific intermediate radii upon request
- Damper system integrated in the chain links to reduce noise emissions
- Variable pre-tensioning for the most varied applications is possible
- Can be opened quickly on the inside and the outside for cable laying
- Transmission of forces (tensile and shearing forces) over a large surface area via the optimum link design – according to the "life extending 2 disc principle"
- Many possibilities for internal subdivision
- A choice of universal mounting brackets (UMBs) – all types can be screwed on both from above, below or also as a flange
- Optionally available with different strain relief systems



Aluminium cover system



Types LT 60 and LT 80

Available in **1 mm width sections**.

Aluminium cover
Width sections available
1 mm

Dimensions in mm

Type	h_i	B_i	Dynamics of unsupported arrangement		Page
			Travel speed v_{max} in m/s	Travel acceleration a_{max} in m/s²	
LT 60	**60**	75 – 600	6	30	145
LT 80	**80**	100 – 800	5	25	145

MASTER L Series – Types LT 60 and LT 80

Carrier construction and cover variants

Types LT 60 and LT 80

Hybrid cable carriers with plastic chain bands, aluminium stays and different covering options.

Available in **1 mm width sections**.
Standard widths in 25 mm steps.

Opening options:

Outside / Inside: Detachable clip-on covers

Aluminium cover system

For subsequent fittng at any time.
Partial covering is possible (only in areas in which machining chips are present).
The cable carrier can easily be opened at any point for inspection of the cables.

Aluminium cover
(Catalog designation: stay variant RML)
Standard cover suitable for protection from all types of dirt, also for hot machining chips or more intense mechanical stresses.
The **aluminium covers** are **reduced in weight** by a special design.

MASTER L Series – Types LT 60 and LT 80

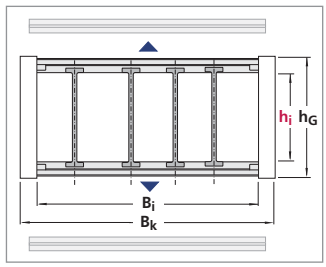
Dimensions and intrinsic chain weight

Dimensions in mm/Weights in kg/m

Type	h_i	h_G	$B_{i\ min}$	$q_{k\ min}$*	$B_{i\ max}$*	$q_{k\ max}$	B_k
LT 60	60	88	75	3.76	600	15.00	B_i + 28
LT 80	80	110	100	5.10	800	19.71	B_i + 32

Standard widths in 25 mm steps.

Aluminium cover
Width sections available
1 mm



Bend radius and pitch

Dimensions in mm

Type	Bend radii KR						
LT 60	150	200	250	300	350	400	500
LT 80	–	200	250	300	350	400	500

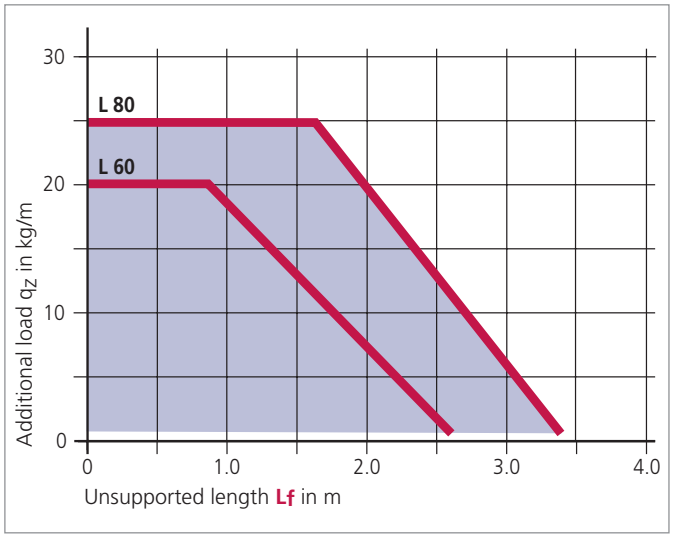
Pitch:
LT 60: t = 91 mm
LT 80: t = 111 mm

The listed values are standard bend radii.
For special applications it is also possible,
to set any desired intermediate radii at the production stage.

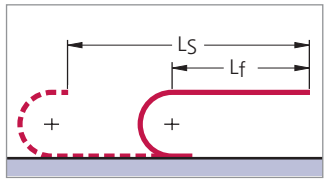
Please do get in touch with us, we would be happy to advise you.

Load diagram

for unsupported length L_f depending on the additional load



Unsupported length L_f



Determining the length of the cable carrier see page 18.

Load diagram for cable carrier without cover system.

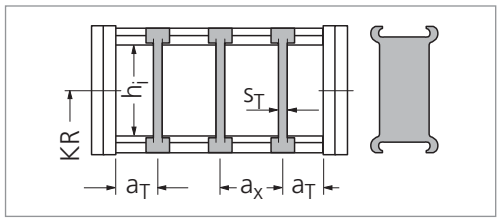
MASTER L Series – Types LT 60 and LT 80

Divider systems

Divider system TS 0

Type	h_i mm	S_T mm	$a_{T\,min}$ mm	$a_{x\,min}$ mm
LT 60	60	4	9	16
LT 80	80	4	9	16

The dividers can be moved in the cross section.



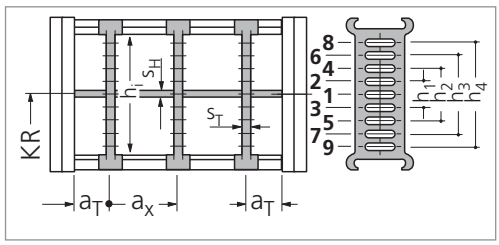
In the standard version, the divider systems are mounted on every second chain link.

Divider system TS 1

with continuous height subdivision made of aluminium

Type	h_i mm	S_T mm	$a_{T\,min}$ mm	$a_{x\,min}$ mm	S_H mm	h_1 mm	h_2 mm	h_3 mm	h_4 mm
LT 60	60	4	9	16	4	15	30	45	–
LT 80	80	4	9	16	4	15	30	45	60

The dividers can be moved in the cross section.



In the standard version, the divider systems are mounted on every second chain link.

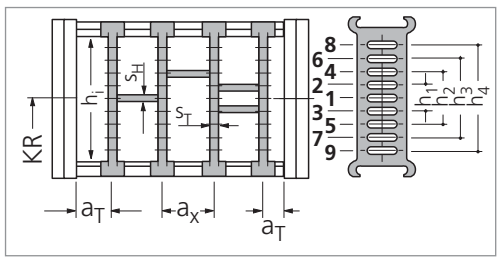
Divider system TS 3

with partitioned height subdivision made of plastic

Type	h_i mm	S_T mm	$a_{T\,min}$ mm	$a_{x\,min}$ mm	S_H mm	h_1 mm	h_2 mm	h_3 mm	h_4 mm
LT 60	60	8	6	16*	4	14	28	–	–
LT 80	80	8	6	16*	4	14	28	42	56

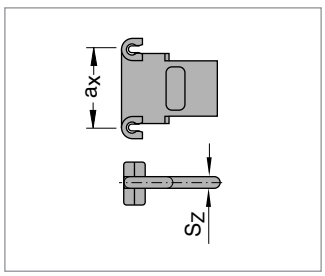
* When using plastic partitions

The dividers are fixed by the partitions, the complete divider system is movable.



In the standard version, the divider systems are mounted on every second chain link.

Dimensions, partitions of plastic for TS 3



Aluminium partitions in 1 mm width sections are also available.

Dimensions in mm

S_Z	a_x (center-to-center distance, dividers)									
4	16	18	23	28	32	33	38	43	48	58
	64	68	78	80	88	96	112	**128**	**144**	**160**
	176	**192**	**208**							

When using **partitions with a_x > 112** mm, there should be an additional central support with a **twin divider** (S_T = 4 mm).

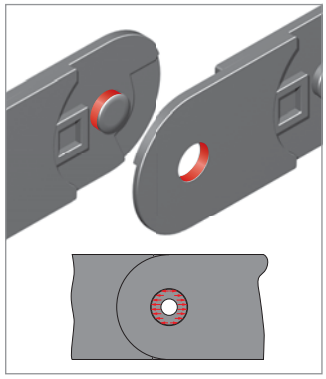
Twin dividers are designed for subsequent fitting in the partition system. You can find further information on this in our main catalog.

MASTER L Series – Types LT 60 and LT 80

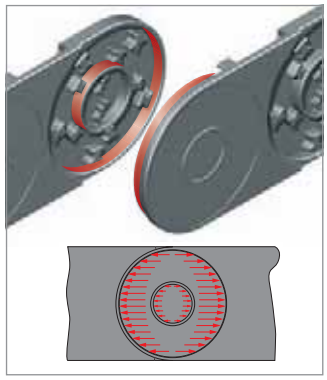
Minimized hinge wear owing to the “life extending 2 disc principle“

In the MASTER Series, the push and pull forces are transmitted via the optimum link design for this purpose.

As a result link wear is reduced to a minimum and the life of the cable carrier is considerably lengthened.



Force transmission with a pin-hole joint



Force transmission with the “life extending 2 disc principle“

The internal stopper and pre-tensioning dampers have a noise-muffling effect. This makes the chain particularly quiet.

Should your application require it, the pre-tensioning (in deviation from the standard pre-tensioning) can be adjusted at the time of production. We can produce a cable carrier with a pre-tension which is exactly suited to the load values of your application.

MASTER L Series – Types LT 60 and LT 80

Connection dimensions

UMB (Universal Mounting Brackets) made of plastic

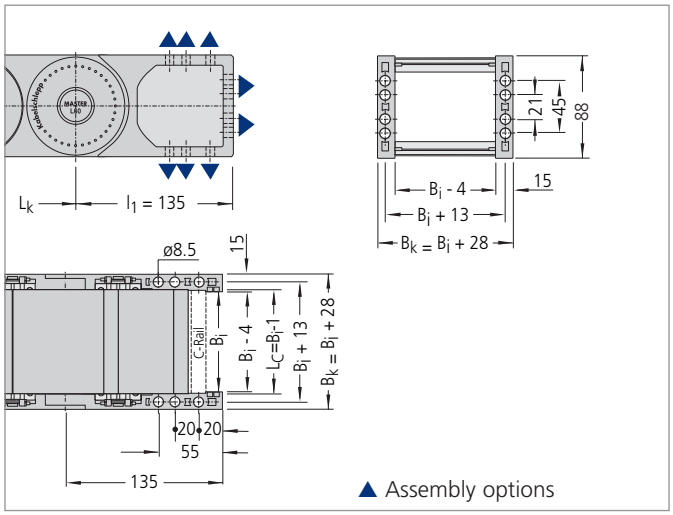
For the MASTER L Series, there are different universal mounting brackets made of plastic i. e. for every assembly situation, there is a suitable connector.

Each of the types can, of course, be screwed on from the top, the bottom or as a flange.

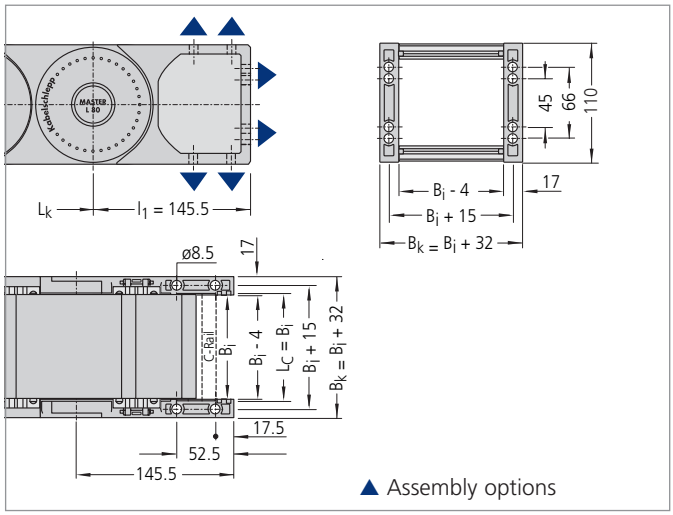
■ **Standard connector** for many of the hole patterns commercially available

■ **Short, open connector ,** easy assembly owing to optimal accessibility of the holes in **restricted installation conditions**

Connection dimensions (The dimensions of the fixed point and driver connections are identical)



■ **Connection dimensions for LT 60**
standard connector and short, open connector

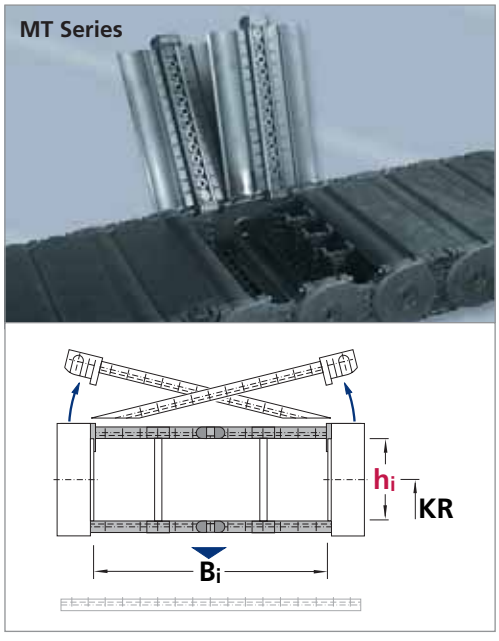


■ **Connection dimensions for LT 80**
standard connector and short, open connector

All connectors optionally with C-rail for KABELSCHLEPP SZL-strain relief devices as well as brackets and clamps with a small or large base (see the chapter on guide channels and other accessories, from page 218 onwards).

MT Series – Tubes with variable chain widths

- Available in 1, 8 or 16 mm width sections
- Can be opened quickly on the inside and the outside for cable laying
- Solid plastic or in combination with aluminium cover system
- Enclosed stroke system not sensitive to dirt/contamination
- Transmission of forces (tensile and shearing forces) over a large surface area via the optimum link design – according to the "life extending 2 disc principle"
- Standard universal mounting brackets (UMBs), suitable for any assembly situation
- Numerous ways of separating the cables
- Highly wear-resistant, replaceable glide shoes available – resulting in minimal wear at high speeds, sliding in the guide channel
- Optionally available with different strain relief systems
- TÜV design approved in accordance with 2PfG 1036/10.97



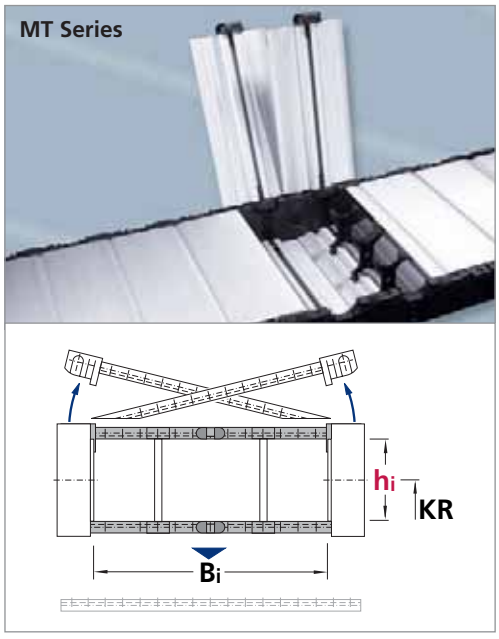
Types MT 0475, 0650, 0950 and 1250 with plastic cover system (stay variant RDD)

Solid plastic

Available in **8 or 16 mm width sections**

Dimensions in mm

Type	h_i	B_i	Maximum travel length in m	Dynamics of unsupported arrangement		Page
				Travel speed v_{max} in m/s	Travel acceleration a_{max} in m/s²	
MT 0475	26	24-280	100	10	40	151
MT 0650	38,5	50-258	170	8	35	151
MT 0950	54,5	77-349	230	6	25	151
MT 1250	68,5	103-359	270	5	20	151



Types MT 0475, 0650, 0950 and 1250 with aluminium cover system (stay variant RMD)

Aluminium cover
Width sections available
1 mm

Plastic and aluminium combination

Available in **1 mm width sections**

Dimensions in mm

Type	h_i	B_i	Maximum travel length in m	Dynamics of unsupported arrangement		Page
				Travel speed v_{max} in m/s	Travel acceleration a_{max} in m/s²	
MT 0475	26	24-180	100	10	40	151
MT 0650	38.5	100-500	170	8	35	151
MT 0950	54.5	100-600	230	6	25	151
MT 1250	68.5	150-800	270	5	20	151

Subject to change.

Types MT 0475, 0650, 0950 and 1250

Carrier construction and cover systems

Plastic cover system (stay variant RDD)

Covered solid plastic cable carriers

MT 0475, 0650:
Available in **8 mm width sections**.

MT 0950, 1250:
Available in **16 mm width sections**.

Opening options:

Outside: Simply by levering the cover open (on the right or left). Cover can also be removed

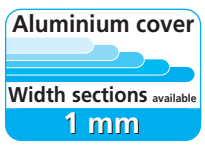
Inside: Simply by turning the cover

MT 0475 is available with a cover that can be levered open to the inside.
Please specify when ordering.

Aluminium cover system (stay variant RMD)

Covered hybrid cable carriers

MT 0475, 0650, 0950 and 1250
Available in **1 mm width sections**.



Opening options:

Outside: Simply by levering the cover open (on the right or left). Cover can also be removed

Inside: Simply by turning the cover

MT 0475 is available with a cover that can be levered open to the inside.
Please specify when ordering.

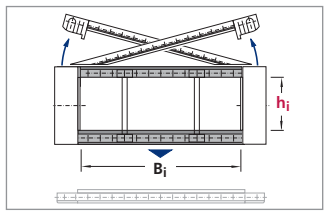
Types MT 0475, 0650, 0950 and 1250

Dimensions and intrinsic chain weight

Plastic cover systems (stay variant RDD)

Dimensions in mm/Weights in kg/m

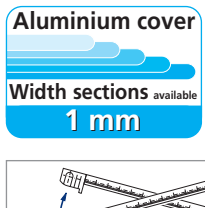
Type	Stay variant	h_i	h_G	$B_{i\ min}$	$q_{k\ min}$	$B_{i\ max}$	$q_{k\ max}$	B_k
MT 0475	RDD	26	39	24	0.9	280	4.4	B_i + 17
MT 0650	RDD	38.5	57	50	2.4	258	3.7	B_i + 34
MT 0950	RDD	54.5	80	77	4.3	349	7.7	B_i + 39
MC 1250	RDD	68.5	96	103	5.7	359	8.9	B_i + 45

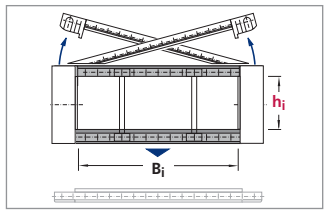


Aluminium cover systems (stay variant RMD)

Dimensions in mm/Weights in kg/m

Type	Stay variant	h_i	h_G	$B_{i\ min}$	$q_{k\ min}$	$B_{i\ max}$	$q_{k\ max}$	B_k
MT 0475	RMD	26	39	24	0.9	180	4.5	B_i + 17
MT 0650	RMD	38.5	57	100	3.3	500	9.7	B_i + 34
MT 0950	RMD	54.5	80	100	5.5	600	16.2	B_i + 39
MC 1250	RMD	68.5	96	150	9.0	800	26.0	B_i + 45





Bend radius and pitch

Dimensions in mm

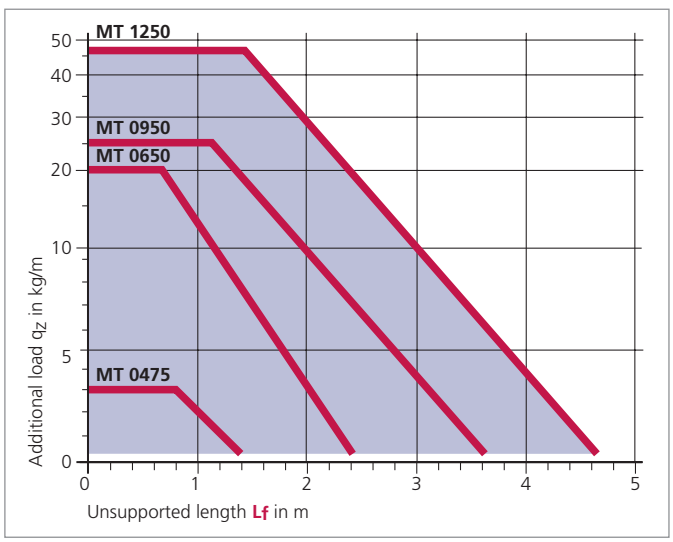
Type	Bend radii KR							
MT 0475	75	100	130	160	200	250	300	
MT 0650	95*	115	145	175	220	275	300	350
MT 0950	140*	170*	200	260	290	320	380	
MT 1250	220*	260	300	340	380	500		

* not with aluminium cover system RMD.

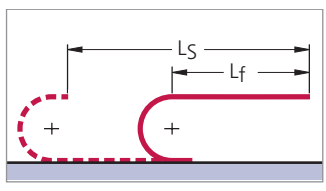
Pitch:
MT 0475: t = 47.5 mm
MT 0650: t = 65 mm
MT 0950: t = 95 mm
MT 1250: t = 125 mm

Load diagram

for unsupported length L_f depending on the additional load



Unsupported length L_f



In the case of longer travel lengths, sag of the cable carriers is technically permissible depending on the application.

In a gliding arrangement, even longer travel lengths are possible (see page 219).

We are at your service to advise on these applications.

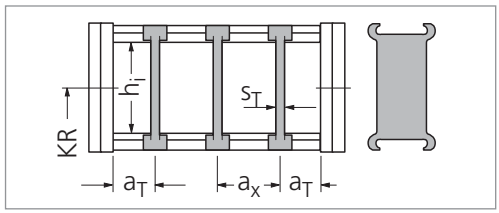
Types MT 0475, 0650, 0950 and 1250

Divider systems

Divider system TS 0

Type	Stay variant	h_i mm	S_T mm	$a_{T\,min}$ mm	$a_{x\,min}$ mm	$a_{x\,section}$ mm
MT 0475	RDD	26	2.8	12	8	8
MT 0475	RMD	26	2.8	6	8	–
MT 0650	RDD	38.5	4.2	13	16	8
MT 0650	RMD	38.5	3	16	13	–
MT 0950	RDD	54.5	6	22.5	16	16
MT 0950	RMD	54.5	4	7	14	–
MT 1250	RDD	68.5	8	19.5	16	16
MT 1250	RMD	68.5	5	10	20	–

With plastic cover systems (RDD), the dividers are fixed in the cross-section at intervals of a_X-section. With aluminium cover systems (RMD), the dividers can be moved.



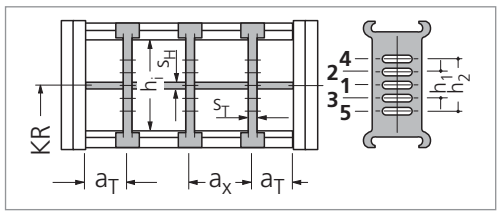
In the standard version, the divider systems are mounted on every second chain link.

Divider system TS 1

with continuous height subdivision made of aluminium

Type	Stay variant	h_i mm	S_T mm	$a_{T\,min}$ mm	$a_{x\,min}$ mm	$a_{x\,section}$ mm	S_H mm	h_1 mm	h_2 mm
MT 0475	RDD	26	2.8	12	8	8	2.4	15	–
MT 0475	RMD	26	2.8	6	8	–	2.4	15	–
MT 0650	RDD	38.5	4.2	13	16	8	4	10	22
MT 0650	RMD	38.5	3	16	13	–	4	–	–
MT 0950	RDD	54.5	6	22.5	16	16	4	22	–
MT 1250	RDD	68.5	8	19.5	32	16	4	32	–

With plastic cover systems (RDD), the dividers are fixed in the cross-section at intervals of a_X-section. With aluminium cover systems (RMD), the dividers can be moved.



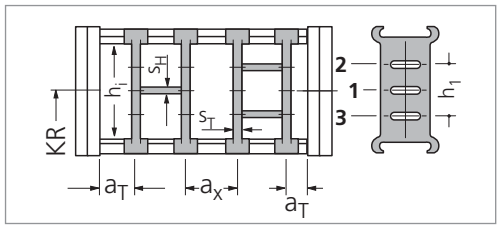
In the standard version, the divider systems are mounted on every second chain link.

Divider system TS 2

with aluminium height subdivision. Available in 1 mm width sections.

Type	Stay variant	h_i mm	S_T mm	$a_{T\,min}$ mm	$a_{x\,min}$ mm	$a_{x\,section}$ mm	S_H mm	h_1 mm
MT 0475	RDD	26	2.8	12	8	8	2.4	15
MT 0650	RDD	38.5	4.2	13	16	8	4	10

With plastic cover systems (RDD), the dividers are fixed in the cross-section at intervals of a_X-section.



In the standard version, the divider systems are mounted on every second chain link.

Types MT 0475, 0650, 0950 and 1250

Divider systems

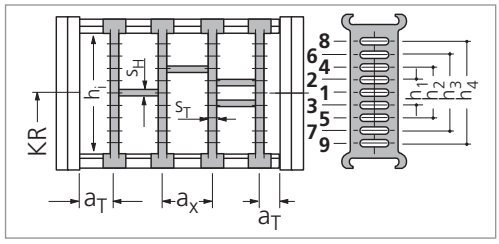
Divider system TS 3

with partitioned height subdivision made of plastic

Type	Stay variant	h_i mm	S_T mm	$a_{T\,min}$ mm	$a_{x\,min}$ mm	S_H mm	h_1 mm	h_2 mm	h_3 mm	h_4 mm
MT 0950	**RDD**	**54.5**	8	6.5	16*	4	14	28	42	–
MT 1250	**RDD**	**68.5**	8	4	16*	4	14	28	42	56

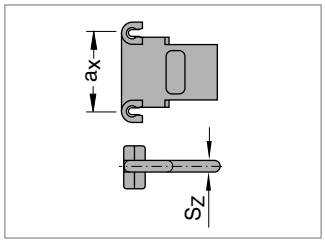
* When using plastic partitions

With plastic cover systems (RDD), the dividers are fixed in the cross-section.



In the standard version, the divider systems are mounted on every second chain link.

Dimensions of plastic partitions for TS 3



Aluminium partitions in1 mm width sections are also available.

Dimensions in mm

S_Z	a_x (center-to-center distance, dividers)									
4	16	32	48	64	80	96	112	**128**	**144**	**160**
	176	**192**	**208**							

When using **partitions with a_x > 112** mm, there should be an additional central support with a **twin divider** (S_T = 4 mm).
Twin dividers are designed for subsequent fitting in the partition system.
You can find further information on this in our main catalog.

Gliding elements – the economical solution for gliding applications

Replaceable glide shoes

Replaceable glide shoes made of plastic

To extend the life of cable carriers in gliding operations KABELSCHLEPP supplies detachable, exchangeable glide shoes.
Replaceable glide shoes are a very economical solution. When wear occurs only the glide shoes are replaced, and not the complete cable carrier.
For travel speeds > 2.5 m/s and large additional loads, a highly wear-resistant special material is used.

For type MT 0950 **OFFROAD glide shoes** with 70 % greater wear volumes are also available. We recommend their use in extreme environmental conditions (with particularly abrasive materials such as e. g. sand, dust, corundum).

! By means of a positive snap connection, the glide shoes sit firmly on the chain link.

Chain height with glide shoes: (Dimensions in mm)

MT 0475:	h_G'	=	h_G	+	2.5	= 41.5
MT 0650:	h_G'	=	h_G	+	3.2	= 60.2
MT 0950:	h_G'	=	h_G	+	3.5	= 83.5
MT 1250:	h_G'	=	h_G	+	3.5	= 99.5

In the case of the type MT 0475, with the bend radius KR = 75 mm no glide shoes can be used.

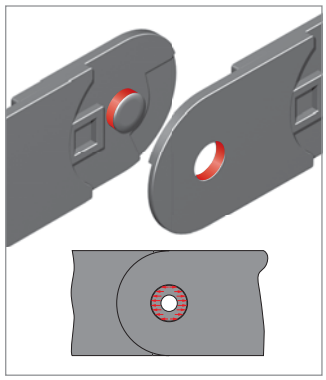
Types MT 0475, 0650, 0950 and 1250

Minimized hinge wear owing to the “life extending 2 disc principle“

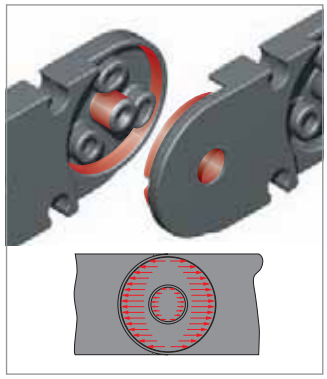
In the M Series*, the push and pull forces are transmitted via the optimum link design for this purpose.

As a result link wear is reduced to a minimum and the life of the cable carrier is considerably lengthened.

* not for type 0320



Force transmission with a pin-hole joint



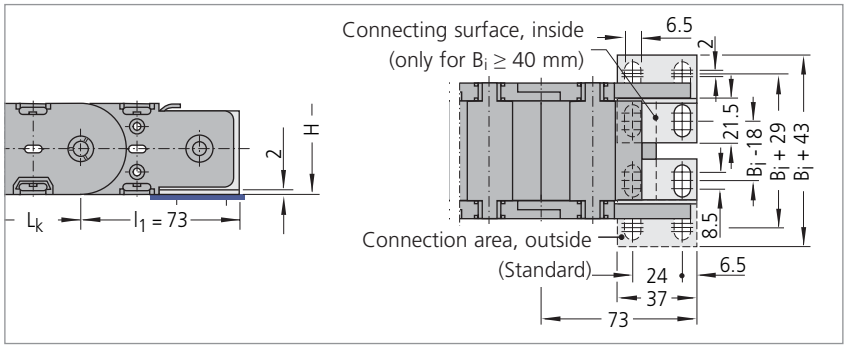
Force transmission with the “life extending 2 disc principle“

Connection dimensions type MT 0475

Connectors of plastic/steel

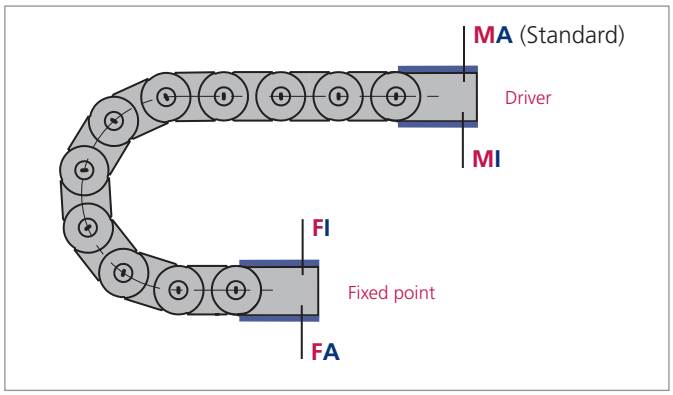
End connector of steel plate.

Screwable strain relief of aluminium on inquiry.



The dimensions of the fixed point and drive connections are identical.

Connection variants type MT 0475



Connection point

M – Driver

F – Fixed point

Connection type

A – Threaded joint (standard)

I – Threaded joint, inside

In the standard version, the end connectors are mounted with the threaded joint outwards (**FA/MA**).

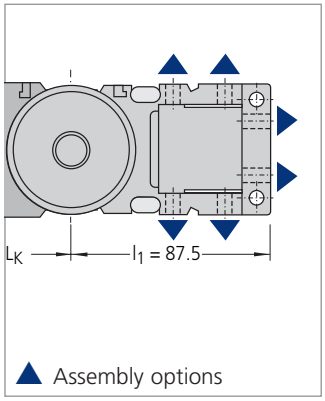
When ordering please specify the desired connection type (see ordering key on page 246).

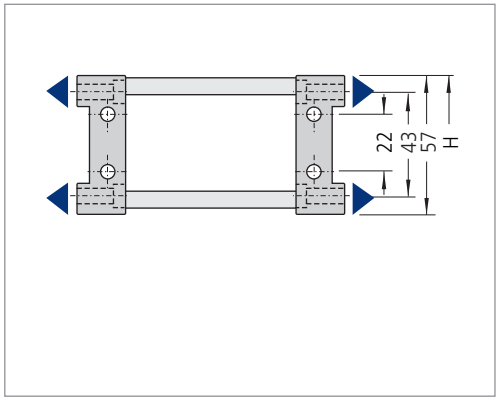
The connection type can subsequently be altered simply by changing the connectors.

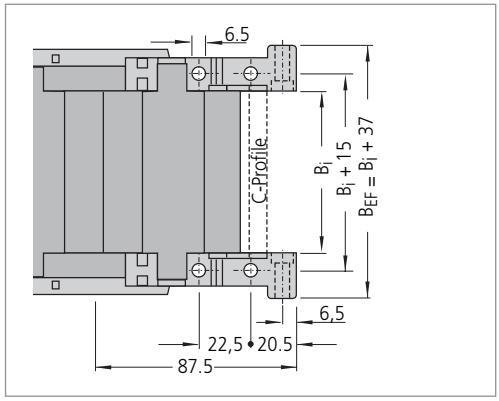
Types MT 0475, 0650, 0950 and 1250

Connection dimensions type MT 0650

UMB-connectors of aluminium







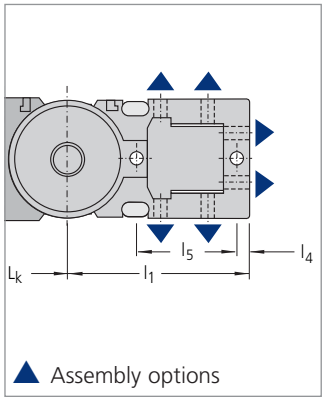
The dimensions of the fixed point and drive connections are identical.

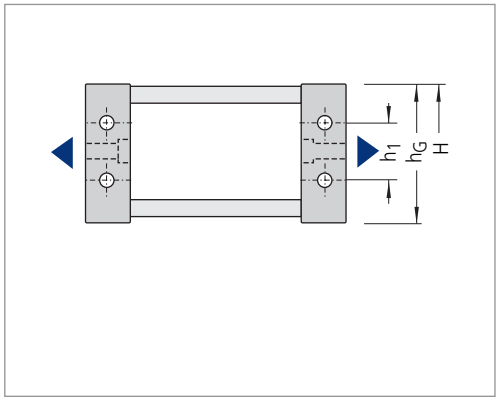
Optionally with C-Profile, slot width 11 – 12 mm,
suitable for KABELSCHLEPP SZL strain reliefs
and all common commercial shackle straps with small foot
(see chapter guide channels and other accessories, from page 219 onwards).

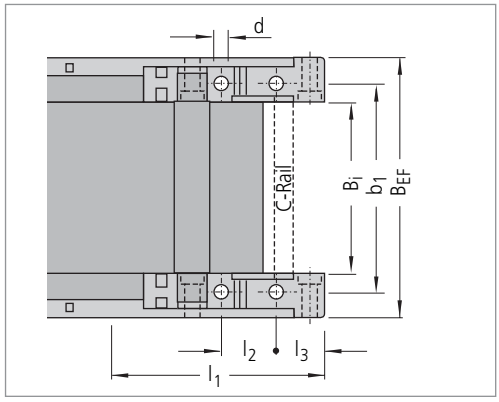
End connectors of steel plate available on inquiry.

Connection dimensions types MT 0950 and 1250

UMB-connectors of aluminium







The dimensions of the fixed point and drive connections are identical.

Optionally with C-Rail, slot width 16 – 17 mm,
suitable for KABELSCHLEPP SZL-strain reliefs
and all common commercial shackle straps with large foot
(see chapter guide channels and other accessories, from page 219 onwards).

End connectors of steel plate available on inquiry.

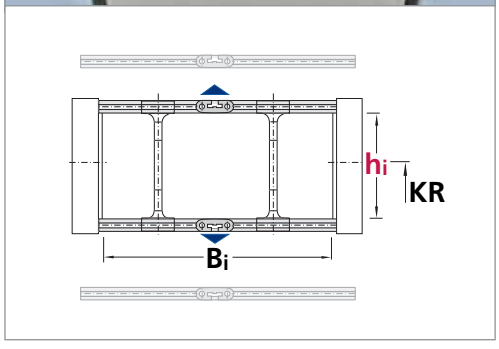
Dimensions in mm

Type	B_{EF}	b_1	d	l_1	l_2	l_3	l_4	l_5	h_1	h_G
MT 0950	**B_i + 44**	**B_i + 24.5**	8.5	136	35	24.5	8.5	80	45	80
MT 1250	**B_i + 51**	**B_i + 28**	11	168	35	31	10.5	94.5	45	96

B_{EF} = Chain width over connector

XLT Series – Tubes with variable chain widths

- Available in 1 mm width sections
- Large dimensions
- Low intrinsic weight
- Can be quickly opened on the inside and outside for cable laying
- Highly wear-resistant, replaceable glide shoes available – resulting in minimal wear at high speeds, sliding in the guide channel
- Chain bands with plastic links in combination with aluminium cover system
- Different connection variants
- Different ways of separating the cables
- Optionally with strain relief
- TÜV design approved in accordance with 2PfG 1036/10.97



Type XLT 1650
with aluminium cover system

Plastic and aluminium combination
Available in **1 mm width sections**

Aluminium cover
Width sections available
1 mm

Dimensions in mm

Type	h_i	B_i	Maximum travel length in m	Dynamics of unsupported arrangement		Page
				Travel speed v_{max} in m/s	Travel acceleration a_{max} in m/s²	
XLT 1650	**105**	200-1000	300	4	20	158

Type XLT 1650

Carrier construction and cover system

Hybrid cable carriers with plastic chain bands and aluminium cover system.
Available in **1 mm width sections**.

Aluminium cover
Width sections available
1 mm

RMD cover system made of aluminium solid design

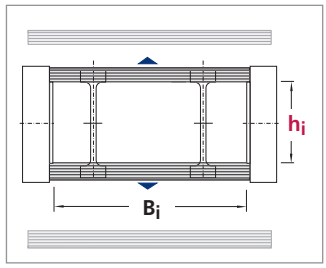
Bolted, high stability even with large carrier widths

Dimensions and intrinsic chain weight

Dimensions in mm/Weights in kg/m

Type	Stay variant	h_i	h_G	$B_{i\ min}$	$q_{k\ min}$	$B_{i\ max}$	$q_{k\ max}$	B_k
XLT 1650	RMD	105	140	200	17	1000	50	B_i + 68

Aluminium cover
Width sections available
1 mm



Bend radius and pitch

Dimensions in mm

Type	Bend radii KR						
XLT 1650	250	300	350	400	450	500	550

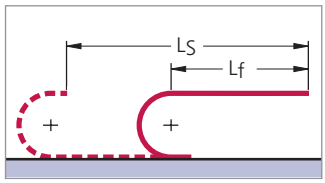
Pitch t = 165 mm

Type XLT 1650

Load diagram

for unsupported length L_f depending on the additional load

Unsupported length L_f



In the case of longer travel lengths, sag of the cable carriers is technically permissible depending on the application.

In a gliding arrangement, even longer travel lengths are possible (see page 219).

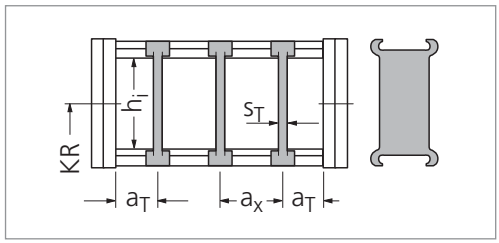
We are at your service to advise on these applications.

Divider systems

Divider system TS 0

Type	Stay variant	h_i mm	S_T mm	$a_{T\ min}$ mm	$a_{x\ min}$ mm
XLT 1650	RMD	105	8	6	25

The dividers can be moved in the cross section.



In the standard version, the divider systems are mounted on every second chain link.

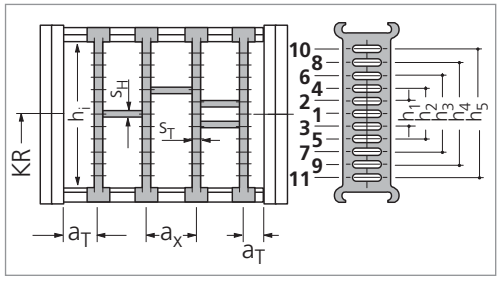
Divider system TS 3

with partitioned height subdivision made of plastic

Type	Stay variant	h_i mm	S_T mm	$a_{T\ min}$ mm	$a_{x\ min}$ mm	S_H mm	h_1 mm	h_2 mm	h_3 mm	h_4 mm	h_5 mm
XLT 1650	RMD	105	8	1	16*	4	14	28	42	56	70

* When using plastic partitions

The dividers are fixed by the partitions, the complete divider system is movable.

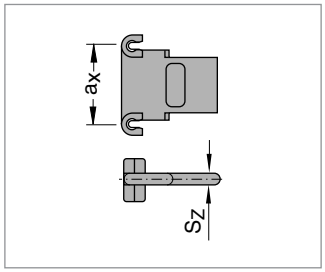


In the standard version, the divider systems are mounted on every second chain link.

Type XLT 1650

Divider systems

Dimensions, partitions of plastic for TS 3



There are also aluminium partitions in 1 mm width sections available.

Dimensions in mm

s_z	a_x (center-to-center distance, dividers)									
4	16	18	23	28	32	33	38	43	48	58
	64	68	78	80	88	96	112	**128**	**144**	**160**
	176	**192**	**208**							

When using **partitions with a_x > 112** mm there should be an additional central support with a **twin divider** (S_T = 5 mm).

Twin dividers are designed for subsequent fitting in the partition system. You can find further information on this in our main catalog.

Gliding elements – the economical solution for gliding applications

Replaceable glide shoes

Replaceable glide shoes made of plastic

To extend the life of cable carriers in gliding operations KABELSCHLEPP supplies detachable, exchangeable glide shoes.

Replaceable glide shoes are a very economical solution. When wear occurs only the glide shoes are replaced, and not the complete cable carrier.

Chain height with glide shoes:

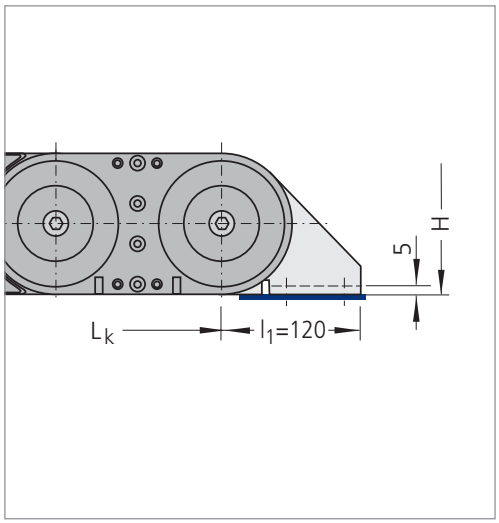
h_G' = 147 mm

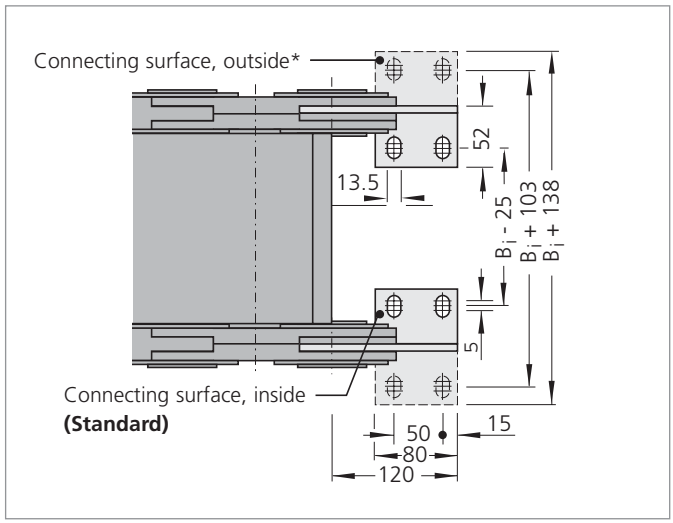
! By means of a positive snap connection, the glide shoes sit firmly on the chain link.

Type XLT 1650

Connection dimensions

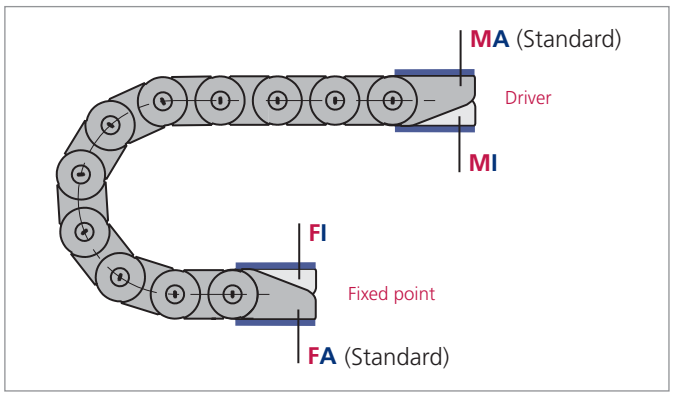
End connector made of steel plate





The dimensions of the fixed point and driver connections are identical.

Connection variants



Connection point

M – Driver

F – Fixed point

Connection type

A – Threaded joint (standard)

I – Threaded joint, inside

In the standard version, the end connectors are mounted with the threaded joint outwards (**FA/MA**).

When ordering please specify the desired connection type (see ordering key on page 246).

The connection type can subsequently be altered simply by changing the connectors.

Steel Cable Carriers – Steel-Tubes

Aluminium cover
Width sections available
1 mm

The solution for extreme applications. Cable carriers with chainbands made of galvanized steel and of high-grade stainless steel

- Maximum unsupported lengths
- Available in exact-fit 1 mm section widths, for your application
- Aluminium or steel stay systems
- Completely covered types with aluminium cover system
- Heat-resistant
- Multi-band chains for larger widths are possible

- **S Types – galvanized steel chainbands**

Stahl verzinkt

- **SX Types – high-grade stainless steel chainbands**

EDELSTAHL® Rostfrei

Dimensions in mm

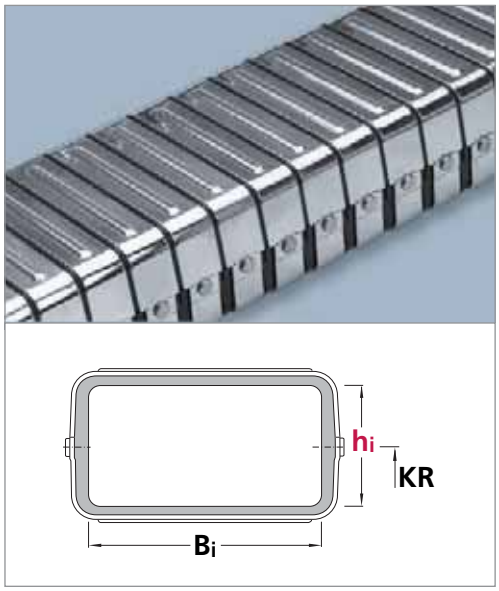
Model series	Type	h_i	B_i	Bend radii in mm		Travel length L_S in m	
				min.	max.	Unsupported arrangement*	Maximum travel length
0600	**S/SX 0650**	**30**	70- 400	75	300	6	60
0900	**S/SX 0950**	**44**	125- 600	125	410	9	60
1200	**S/SX 1250**	**69**	130- 800	145	1000	12	150
1800	**S/SX 1800**	**104**	250-1000	265	1405	18	200

* Max. value for type S

Detailed information on steel tubes can be found on page 183 onwards.

CONDUFLEX – Designer Tubes

- Completely enclosed cable carriers in a sophisticated design
- Attractive appearance owing to high-grade steel brackets and fiberglass reinforced polyamide frame
- Easy replacement of the brackets where external damage has occurred
- Optimum protection for cables and hoses
- Easy to shorten or extend at a later date
- TÜV type tested in accordance with 2 PfG 1036/10.97



Types CF 055, CF 060, CF 085, CF 115, CF 120, CF 175

Enclosed cable carriers

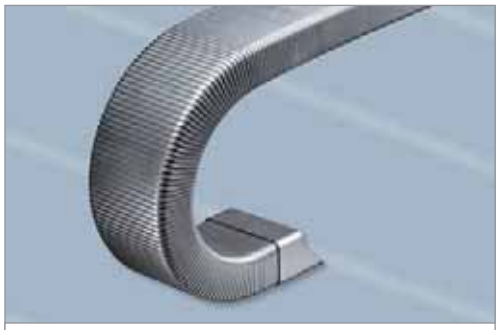
Dimensions in mm

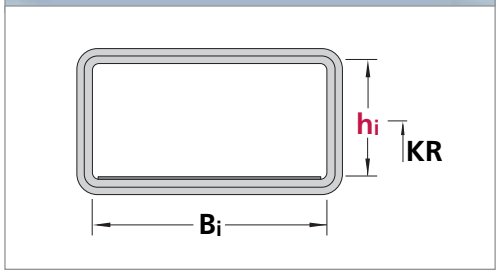
Type	h_i	B_i	Maximum Travel length in m	Dynamics with unsupported arrangement	
				Travel speed v_{max} in m/s	Travel acceleration a_{max} in m/s²
CF 055	25	45	3.0	10	20
CF 060	40	36	3.5	10	20
CF 085	38	73	4.0	8	18
CF 115	52	102	5.0	8	16
CF 120	70	100	5.5	6	15
CF 175	72	162	6.0	6	12

Detailed information on designer tubes CONDUFLEX can be found on page 200 onwards.

MOBIFLEX – Tubes

- Flexible metal helical tubes combined with special steel band
- Unsupported thanks to the inserted, pre-tensioned steel band
- Ideal in case of hot metal chips





Types MF 030, MF 050, MF 080, MF 110, MF 170

Enclosed cable carrier

Dimensions in mm

Type	h_i	B_i	Maximum travel length in m	Dynamics with unsupported arrangement	
				Travel speed v_{max} in m/s	Travel acceleration a_{max} in m/s²
MF 030.1	24	26	2.0	10	20
MF 050.1	24	45	3.0	10	20
MF 050.2	44	45	3.0	10	20
MF 080.1	40	80	3.5	10	18
MF 080.2	54	80	3.5	10	18
MF 080.3	78	80	3.5	10	18
MF 110.1	53	109	4.0	6	15
MF 110.2	73	109	4.0	6	15
MF 110.3	108	109	4.0	6	15
MF 170.1	72	170	5.0	6	12
MF 170.2	102	170	5.0	6	12
MF 170.3	167	170	5.0	6	12

Detailed information on enclosed solid metal tubes MOBIFLEX can be found on page 205 onwards.

KABELSCHLEPP

the power to innovate

3D-LINE

Cable carriers for 3D movements

ROBOTRAX

KABELSCHLEPP

the power to innovate

Cable carriers for 3D movements

ROBOTRAX

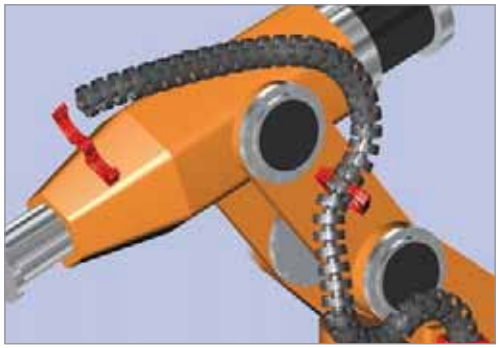
product design award 2006

ROBOTRAX – Cable carrier for 3D movements

- For three-dimensional movements
- Open design
  - – Fast cable laying by simple pressing in of the cables – no threading through is necessary
  - – Simple inspection of all the cables
- Can be deployed on robots for swiveling and rotational movements
- The same system for robot feet and arms
- Optimum system for long service life of the cables:
  - – The minimum bend radius can be maintained
  - – The cables are cleanly isolated in three separate chambers
- Special plastic for long service life

Less expense – lower costs owing to simple cable laying

Even pre-assembled cables can simpy be pressed in,
and a lightning-quick exchange of the cable is possible,
giving you the added advantage of lower costs..



Simple fastening

Fast-clamping holders are available for individual fastening.

Protection from flying sparks and dirt

For different environmental conditions, protective covers or heat shields made of different materials can be supplied.

ROBOTRAX – Cable carrier for 3D movements

Design principle

Chain links

The basic structure of ROBOTRAX consists of plastic links.
These have ball and socket style snap-together connectors on both sides.
The individual links can thus be snapped together to form a cable carrier.

Internal bend radius stoppers ensure that the minimum
bend radius is maintained in all directions.

Radial link rotation movement is also possible (see table).

Steel wire and shim bolts

When the robot arms are moving quickly, high accelerations
occur, exerting high pulling forces on the cable carrier.

To be able to transmit these pulling forces ROBOTRAX has a hole in the middle of every chain link, through which a steel wire is drawn. This steel wire adopts the role of force transmission. The steel wire has a shim bolt attached to each end. As a result ROBOTRAX can achieve accelerations up to 10 g and higher.

Long service life of the cables and hoses:
The forces are transmitted by the cable carrier and not
by the cables and hoses.

Quick-opening mounting brackets

The fixing and further guidance of the ROBOTRAX (on the arms of the robot)
is achieved by means of quick-opening mounting brackets, fastened with two screws.

The quick-opening mounting brackets fit any chain link. The fastening points can
therefore be individually matched to the movement sequence of the robot.

Quickly opened:
Simply unlock the lynch pin, pull it out and open the quick-opening mounting bracket.

ROBOTRAX Accessories

A suitable accessory for every application

Impact protection

When a robot is moving, a striking of the ROBOTRAX against machine components often cannot be avoided.

An impact protective device made of elastomer plastic can easily be attached to each link using a cable tie.

Heat shield/Protective sleeve

Heat shield: The heat shield, made of aluminium-coated textile fiber, protects the cable carrier and the cables within from flying sparks.
A heat shield is recommended where there are flying sparks.

Protective sleeve: The protective sleeve made of layered polyester offers protection against aggressive cutting and hydraulic oils as well as from fine dusts and paint sprays (not illustrated).

Chucking device

This can be used to set the steel wire to the desired tension quickly and easily, and can be readjusted at any time.

Strain relief

For securing the cables and hoses.

(A strain relief device cannot be used on the same end of the ROBOTRAX as a chucking device.)

ROBOTRAX Accessories

A suitable accessory for every application.

Bend radius determiner

This is used to achieve larger bend radii than the standard bend radius, e.g. in order to maintain the minimum bend radius of the cables.

Quick-opening bracket mounted on a rotary plate

Yet one more degree of freedom on the fastening points.

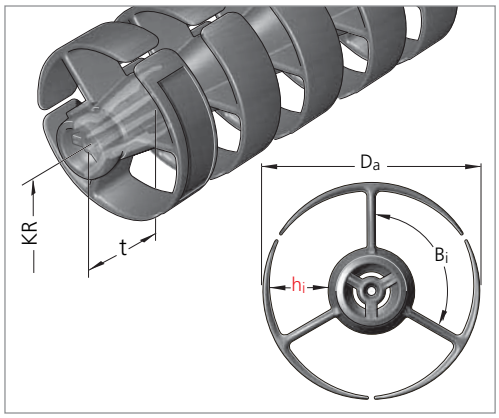
The quick-opening mounting bracket can also rotate on a rotary plate, thus providing greater flexibility when the robot is performing complex movements.

Quick-opening bracket on a helical spring

If the bracket is mounted on a helical spring, it can give elastically in all directions, swivel, swing out in 3 dimensions and spring back ito place again.

ROBOTRAX – Cable carrier for 3D movements

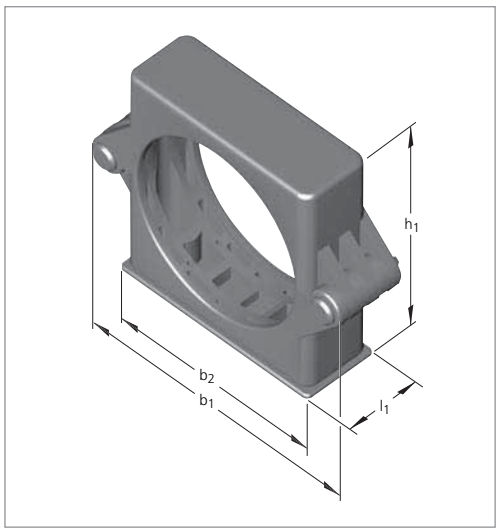
Dimensions



Dimensions of ROBOTRAX cable carrier

Dimensions in mm

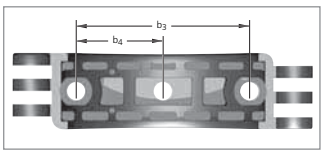
Type	R 040	R 056	R 075	R 085	R 100
For cable-Ø	2 – 8.5	2 – 11	3 – 18	3 – 20	3 – 27
Bend radius	80	115	145	175	195
Radial link rotation over 1 m length	± 450°	± 300°	± 215°	± 215°	± 215°
D_a	40	56	75	85	100
B_i	27	39	52	54	64
h_i	10	14	22	24	31
t	21.5	32	40	40	40



Dimensions of ROBOTRAX quick-opening bracket

Dimensions in mm

Type	R 040	R 056	R 075	R 085	R 100
h_1	54	70	86	105	120
l_1	15	22	28	30	32
b_1	82	86	110	133	150
b_2	50	63	82	96	112
b_3	36	48	64	72	70
b_4	18	24	32	36	35



Screwing of the quick-opening bracket:

R 040, R 056 with **M4** hexagonal screws
R 075 with **M6** hexagonal screws
R 085, R 100 with **M8** hexagonal screws

ROBOTRAX – Cable carrier for 3D movements

Part numbers for ordering

Mounted chain links

Type	R 040	R 056	R 075	R 085	R 100
Bend radius	80	115	145	175	195
Number of links	47	31	25	25	25
Part no.	60301	60401	60501	60601	60701

Quick-opening bracket for ROBOTRAX

Type	R 040	R 056	R 075	R 085	R 100
Part no.	260410	260510	260110	260210	260310

Shim bolts – 2 pieces (one pair)

Type	R 040	R 056	R 075	R 085	R 100
Part no.	260420	260520	260220	260220	260320

Steel wire – Please specify total length or partial lengths.

Dimensions in mm

Type	R 040	R 056	R 075	R 085	R 100
Ø	1,8	2,5	3,0	3,0	4,0
Part no.	60583	60584	60580	60580	60581

Strain relief – 1 piece

Type	R 040	R 056	R 075	R 085	R 100
Part no.	60658	60657	60659	60659	60659

Chucking device set – 1 chucking device and 1 shim bolt

Type	R 040	R 056	R 075	R 085	R 100
Part no.	260430	260530	260230	260230	260330

Impact protection

Type	R 075	R 085	R 100
Part no.	260120	260240	260340

Packing unit: 5 complete items
consisting of: 10 semi-circular shells and 5 cable ties

ROBOTRAX – Cable carrier for 3D movements

Part numbers for ordering

Heat shield/Protective sleeve

Type	R 040	R 056	R 075	R 085	R 100
Part no. A	60801	60802	60803	60804	60805
Part no. B	60806	60807	60808	60809	60810

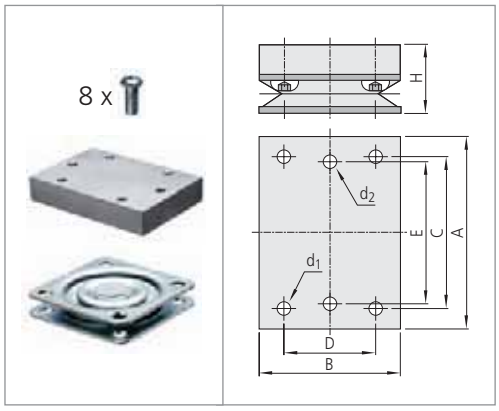
Heat shield see Part no. A
Protective sleeve see Part no. B (not illustrated)
Please specify total length or partial lengths.

Standard bend radius:

R 075: 145 mm
R 085: 175 mm
R 100: 195 mm

Bend radius determiner

Type	R 075	R 085	R 100
Part no. 60830	160	230	280
Part no. 60831	190	265	310
Part no. 60832	220	300	340
Part no. 60833	250	335	370
Part no. 60834	280	370	400
Part no. 60835	310	405	430
Part no. 60836	340	440	460
Part no. 60837	370	475	490
Part no. 60838	400	510	520
Part no. 60839	430	545	550

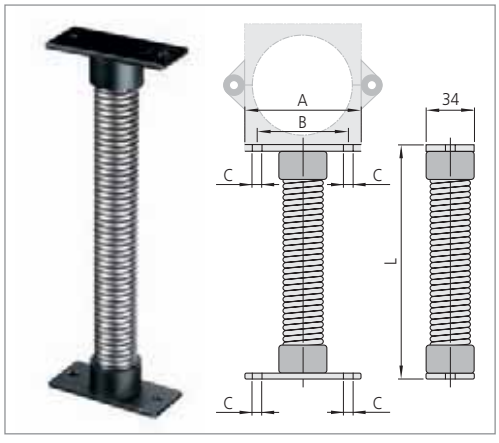


Rotary plate for quick-opening bracket

Dimensions in mm

Type	R 075	R 085	R 100
A	82	96	112
B	57	70	70
C	43	75	75
D	43	45	45
E	64	72	70
H	25	34	34
d_1	M6	M6	M6
d_2	M6	M8	M8
Part no.	260550	260560	260570

Appropriate screws are supplied with the rotary plate.



Helical spring for quick-opening bracket

Dimensions in mm

Type	R 075	R 085	R 100
A	82	96	112
B	64	72	70
C	6.5	8.5	8.5
Length L = 165 mm Part no.	60816	60820	60824
Length L = 230 mm Part no.	60817	60821	60825
Length L = 315 mm Part no.	60818	60822	60826
Length L = 465 mm Part no.	60819	60823	60827

Subject to change.

KABELSCHLEPP

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STEEL-LINE

Cable carriers made of steel

Steel cable carriers

CONDUFLEX

MOBIFLEX

KABELSCHLEPP

the power to innovate

Steel cable carriers

Steel cable carriers

The solution for extreme applications. Cable carriers with chainbands made of galvanized steel or of high-grade stainless steel

- Maximum unsupported lengths
- Available in 1 mm section widths to fit your application exactly
- Aluminium or steel stay systems
- Completely covered types with aluminium cover system
- Heat-resistant
- Multi-band chains are available for larger widths

- **Types – S**
  galvanized steel chainbands

Stahl verzinkt

- **Types – SX**
  high-grade stainless steel chainbands

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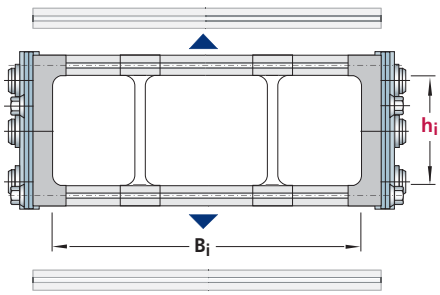


Types S/SX 0650, 0950, 1250, 1800

Available in **1 mm width sections**.

Aluminium stays
Width sections available
1 mm

Dimensions in mm

Model	Type	h_i	B_i	Bend radii in mm		Travel length L_S in m	
				min.	max.	Unsupported arrangement*	Maximum travel length
0600	S/SX 0650	31	70- 400	75	300	6	60
0900	S/SX 0950	46	125- 600	125	410	9	60
1200	S/SX 1250	72	130- 800	145	1000	12	150
1800	S/SX 1800	109A)	180-1000	265	1405	18	200

* Maximum values for type S
A) Stay variant RM

Steel-Tubes
Types 0600 – 1800
with aluminium cover system

Detailed information can be found from page 183 onwards.

Aluminium cover
Width sections available
1 mm

Steel cable carriers

Types S/SX 2500 and 3200

Available in **1 mm width sections**.

Aluminium stays
Width sections available
1 mm

Dimensions in mm

Model	Type	h_i	B_i	Bend radii in mm		Travel length l_S in m
				min.	max.	unsupported arrangement*
2500	S/SX 2500	180[A)]	250-1200	365	1395	24
3200	S/SX 3200	220	250-1500	470	1785	25

* Maximum values for type S
A) Stay variant RM

Types S/SX 5000 to 7000 for maximum dimensions and loads such as e.g. for offshore use

Available in **1 mm width sections**.

Steel stays
Width sections available
1 mm

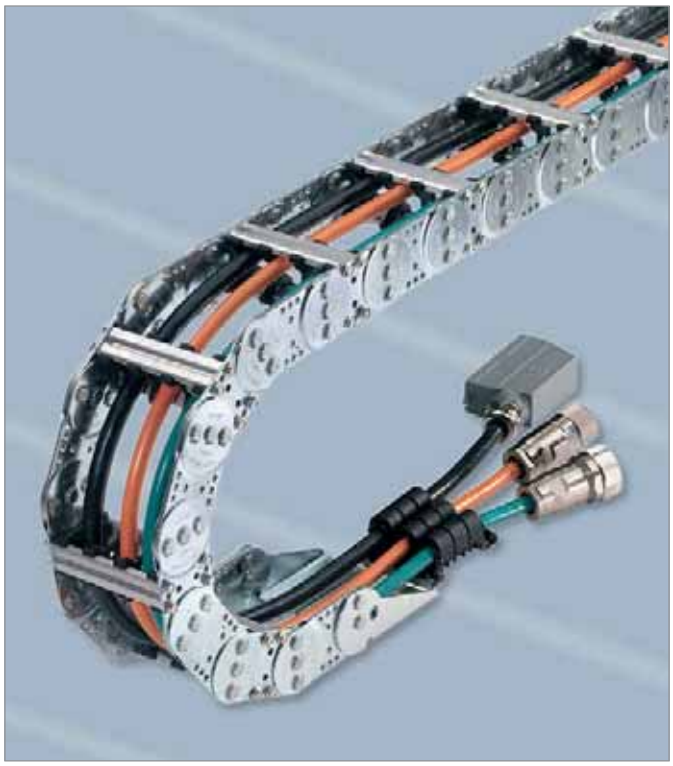
Dimensions in mm

Model	Type	h_i	B_i	Bend radii in mm		Travel length l_S in m
				min.	max.	unsupported arrangement*
5000	S/SX 5000	150	150-1000	500	1200	12
6000	S/SX 6000	240	200-1200	700	1500	18
7000	S/SX 7000	370	300-1500	1100	2400	25

* Maximum values for type S

Types S/SX 0650, 0950, 1250 and 1800

Carrier construction and stay variants



Aluminium stays

Width sections available 1 mm

Types S

With chainbands made of galvanized steel

Stahl verzinkt

Types SX

With chainbands made of high-grade stainless steel

EDELSTAHL® Rost frei

Bend radius and pitch

Types S/SX 0650, 0950, 1250 and 1800

Dimensions in mm

Type	Bend radii KR												
S/SX 0650	75	95	115	125	135	145	155	175	200	250	300	–	–
S/SX 0950	125	140	170	200	260	290	320	350	410	–	–	–	–
S/SX 1250	145	200	220	260	300	340	380	420	460	500	540	600	1000
S/SX 1800	265	320	375	435	490	605	720	890	1175	1405	–	–	–

Intermediate radii on inquiry.

Pitch:
S/SX 0650: t = 65 mm
S/SX 0950: t = 95 mm
S/SX 1250: t = 125 mm
S/SX 1800: t = 180 mm

Types S/SX 0650, 0950 and 1250

Stay variant RS

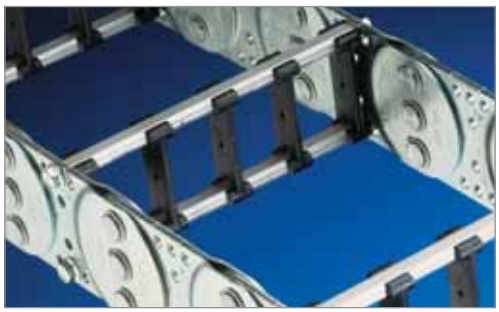
Aluminium frame stay RS – standard design

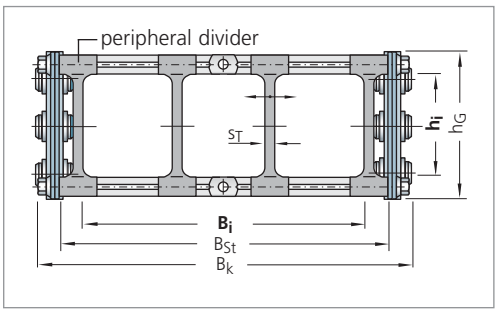
For lightweight to medium loads

Stay variant RS 2

Screwed stays for maximum stability
even with large chain widths

Aluminium stays
Width sections available
1 mm

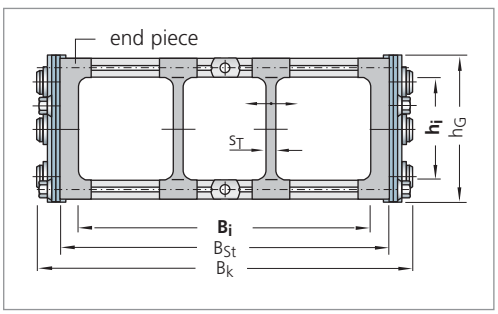


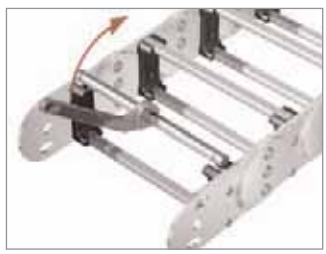


Stay variant RS 1

Opening options:
Outside: the cable carrier can be opened quickly and easily simply by rotating the stays through 90°
Inside: screwed stays

Aluminium stays
Width sections available
1 mm





Dimensions and intrinsic chain weight

Types S/SX 0650, 0950 and 1250

Dimensions in mm/Weights in kg/m

Type	Stay variant	h_i	h_G	$B_{k\ min}$	$q_{k\ min}$	$B_{k\ max}$	$q_{k\ max}$	B_i	B_{St}
S/SX 0650	RS 2	31	50	100	3.9	400	5.2	$B_k - 31$	$B_i + 16$
S/SX 0650	RS 1	31	50	100	3.9	300	4.8	$B_k - 35$	$B_i + 20$
S/SX 0950	RS 2	46	68	150	7.5	400	9.0	$B_k - 37$	$B_i + 18$
S/SX 0950	RS 1	46	68	150	7.5	300	8.0	$B_k - 43$	$B_i + 24$
S/SX 1250	RS 2	72	94	200	12.9	500	13.8	$B_k - 44$	$B_i + 20$
S/SX 1250	RS 1	72	94	200	12.9	400	13.5	$B_k - 48$	$B_i + 24$

Subject to change.

Types S/SX 0650, 0950, 1250 and 1800

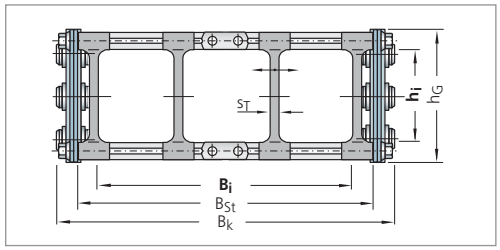
Stay variant RV for types S/SX 1250

Stay variant RV

Frame stay – reinforced design

For lightweight to medium loads

Aluminium stays
Width sections available
1 mm



Screwed stays for maximum stability even with large chain widths

Dimensions and intrinsic chain weight

Types S/SX 1250

Dimensions in mm/Weights in kg/m

Type	Stay variant	h_i	h_G	$B_{k\ min}$	$q_{k\ min}$	$B_{k\ max}$	$q_{k\ max}$	B_i	B_{St}
S/SX 1250	RV	72	94	200	13.6	600	17.0	B_k – 46	B_i + 22

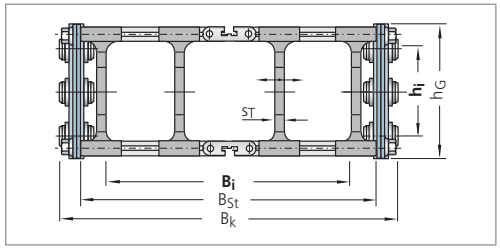
Stay variant RM for types S/SX 0950, 1250, 1800

Stay variant RM

Frame stays – solid design

For maximum stability, maximum chain widths possible

Aluminium stays
Width sections available
1 mm



Screwed stays for maximum stability even with large chain widths

Dimensions and intrinsic chain weight

Types S/SX 0950, 1250 and 1800

Dimensions in mm/Weights in kg/m

Type	Stay variant	h_i	h_G	$B_{k\ min}$	$q_{k\ min}$	$B_{k\ max}$	$q_{k\ max}$	B_i	B_{St}
S/SX 0950	RM	43	68	125	7.9	600	10.7	B_k – 37	B_i + 18
S/SX 1250	RM	69	94	200	13.4	800	17.0	B_k – 49	B_i + 25
S/SX 1800	RM	109	140	250	24.0	1000	28.5	B_k – 62	B_i + 33

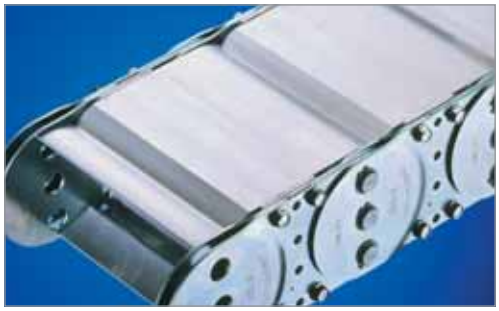
Types S/SX 0650, 0950, 1250 and 1800

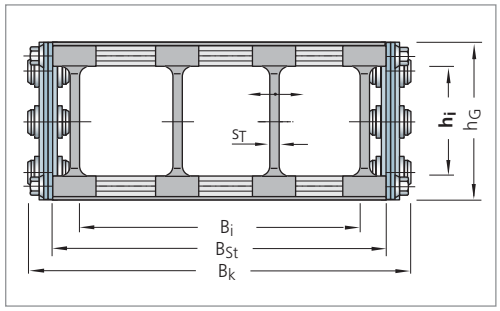
Stay variant RMD for types S/SX 0650, 0950, 1250, 1800

Stay variant RMD

Aluminium cover system

Aluminium cover
Width sections available
1 mm





Screwed stays for maximum stability even with large chain widths

Dimensions and intrinsic chain weight

Types S/SX 0650, 0950, 1250 and 1800

Dimensions in mm/Weights in kg/m

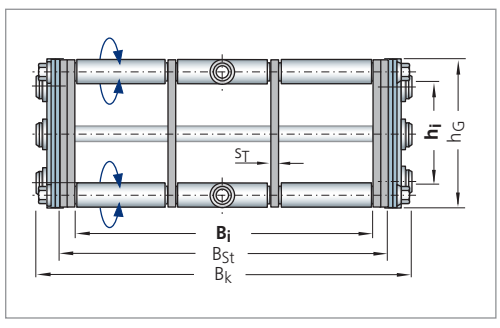
Type	Stay variant	h_i	h_G	$B_{k\ min}$	$q_{k\ min}$	$B_{k\ max}$	$q_{k\ max}$	B_i	BSt
S/SX 0650	RMD	30	50	100	4.8	500	10.5	$B_k - 35$	$B_i + 20$
S/SX 0950	RMD	44	68	125	10.2	600	22	$B_k - 37$	$B_i + 18$
S/SX 1250	RMD	69	94	150	15.4	800	32.4	$B_k - 49$	$B_i + 25$
S/SX 1800	RMD	104	140	250	26.5	1000	46.5	$B_k - 49$	$B_i + 24$

Stay variant RR for types S/SX 0650, 0950, 1250, 1800

Stay variant RR

Frame stay – tubular design, steel

Gentle cable laying by means of rollers. Ideal when using hydraulic hoses with "soft" sheaths



Screwed stays for maximum stability even with large chain widths

Dimensions and intrinsic chain weight

Types S/SX 0650, 0950, 1250 and 1800

Dimensions in mm/Weights in kg/m

Type	Stay variant	h_i	h_G	$B_{k\ min}$	$q_{k\ min}$	$B_{k\ max}$	$q_{k\ max}$	B_i	BSt
S/SX 0650	RR	26	50	100	4.8	400	8.7	$B_k - 31$	$B_i + 16$
S/SX 0950	RR	42	68	150	8.4	500	11.8	$B_k - 35$	$B_i + 16$
S/SX 1250	RR	66	94	200	13.8	600	17.3	$B_k - 40$	$B_i + 16$
S/SX 1800	RR	104	140	250	26.5	800	36.0	$B_k - 49$	$B_i + 20$

Subject to change.

Types S/SX 0650, 0950, 1250 and 1800

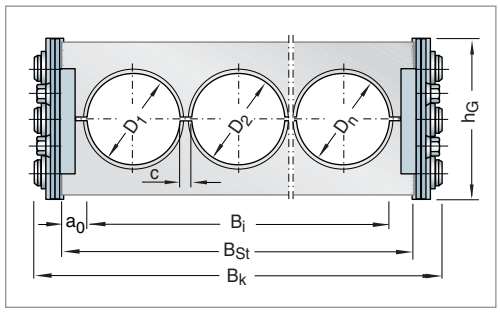
Stay variant LG for types S/SX 0650, 0950, 1250, 1800

Stay variant LG

Hole stay – split design

Optimum cable guidance in the neutral bending line.

Aluminium stays
Width sections available
1 mm



Screwed stays for maximum stability even with large chain widths

Dimensions and intrinsic chain weight

Types S/SX 0650, 0950, 1250 and 1800

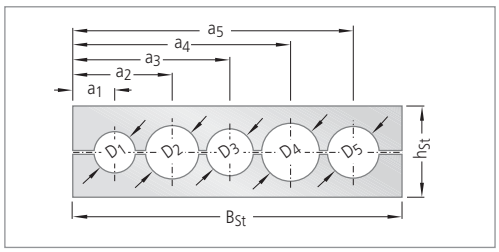
Dimensions in mm/Weights in kg/m

Type	Stay variant	D_{max}	h_G	$B_{k\ min}$	$q_{k\ min}$*	$B_{k\ max}$	$q_{k\ max}$*	$a_{0\ min}$	B_i	B_{St}
S/SX 0650	**LG**	**40**	50	70	4.0	500	6.4	9.0	B_{St} – 18	B_k – 17
S/SX 0950	**LG**	**48**	68	125	8.1	600	11.8	11.0	B_{St} – 22	B_k – 21
S/SX 1250	**LG**	**74**	94	130	13.2	800	18.2	11.0	B_{St} – 22	B_k – 26
S/SX 1800	**LG**	**110**	140	180	24.8	1000	33.0	13.5	B_{St} – 27	B_k – 32

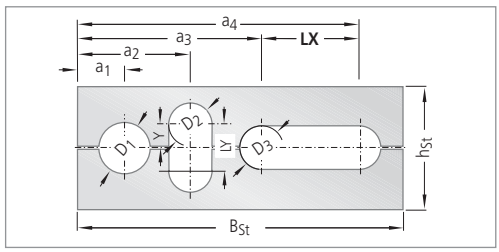
* Listed weights assume that the hole area is approx. 50% of the stay.

Selection of some hole patterns:

Split hole stay with individual holes



Split hole stay with horizontal and vertical elongated holes*



*) With an off-center arrangement of the holes, the cables are subject to a relative movement when the carrier is in motion.

Stay variant LG with the modular hole stay system

Modular hole stay system – split design

The plastic modular hole stay system enables you to create your own customized hole stay quickly and easily.

Hole stay inserts are available for Series S 1250 and SX 1250.

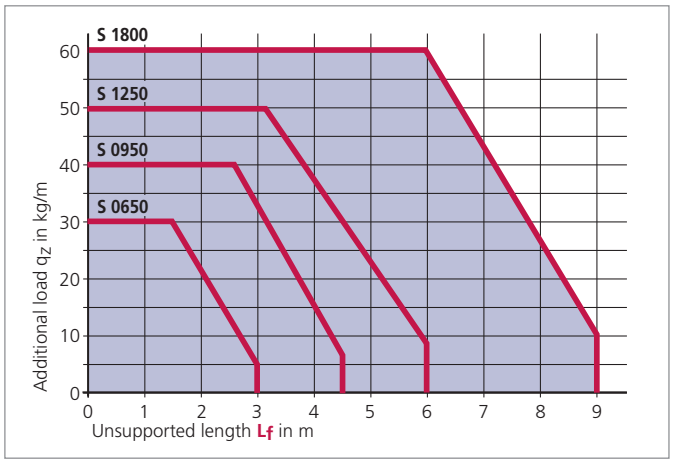
Available hole diameters: 10, 15, 20, 25, 30, 40 and 50 mm.

Please do get in touch with us, we would be happy to advise you.

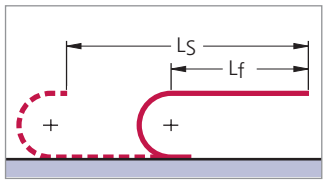
Types S 0650, 0950, 1250 and 1800

Load diagram

for unsupported length L_f depending on the additional load



Unsupported length L_f

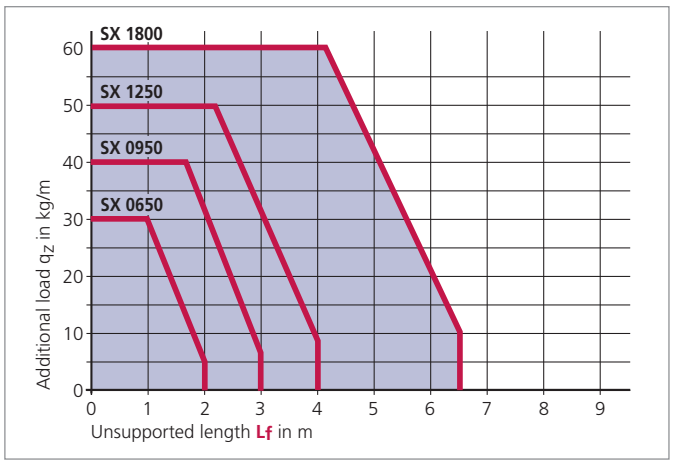


Determining the length of the cable carrier see page 18.

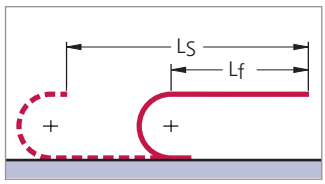
Types SX 0650, 0950, 1250 and 1800

Load diagram

for unsupported length L_f depending on the additional load



Unsupported length L_f



Determining the length of the cable carrier see page 18.

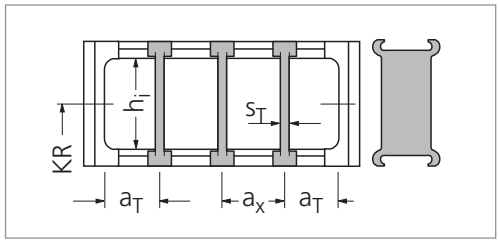
Types S/SX 0650, 0950, 1250 and 1800

Divider systems

Divider system TS 0

without height subdivision

Type	Stay variant	h_i mm	S_T mm	$a_{T\ min}$ mm	$a_{x\ min}$ mm
S/SX 0650	RS 1/2	31	3	11.5	13
S/SX 0650	RMD	30	3	11.5	13
S/SX 0650	RR	26	4	20.0	25
S/SX 0950	RS 1/2	46	4	12.0	14
S/SX 0950	RM	43	4	10.0	14
S/SX 0950	RMD	44	4	12.0	14
S/SX 0950	RR	42	4	20.0	20
S/SX 1250	RS 1/2	72	5	12.5	15
S/SX 1250	RV	72	6	13.0	16
S/SX 1250	RM	69	5	17.5	20
S/SX 1250	RMD	69	5	17.5	20
S/SX 1250	RR	66	4	30.0	30
S/SX 1800	RM	109	7.5	21.5	25
S/SX 1800	RMD	104	6	13	16
S/SX 1800	RR	104	4	45.0	45



In the standard version, the divider systems are mounted on every second chain link.

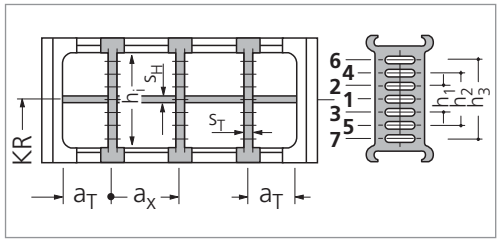
The dividers can be moved in the cross section.

Divider system TS 1

with continuous height subdivision made of aluminium

Type	Stay variant	h_i mm	S_T mm	$a_{T\ min}$ mm	$a_{x\ min}$ mm	S_H mm	h_1 mm	h_2 mm	h_3 mm
S/SX 1250	RV	72	6	13	16	4	15	30	45

The dividers can be moved in the cross section.



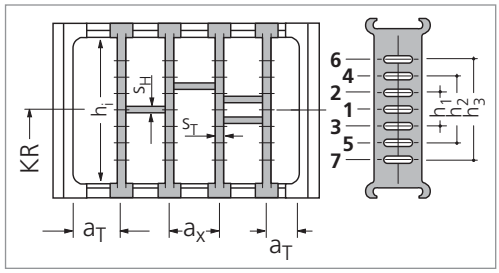
In the standard version, the divider systems are mounted on every second chain link.

Divider system TS 2

with aluminium height subdivision, available in 1 mm section widths

Type	Stay variant	h_i mm	S_T mm	$a_{T\ min}$ mm	$a_{x\ min}$ mm	S_H mm	h_1 mm	h_2 mm	h_3 mm
S/SX 1250	RV	72	6	13	20	4	15	30	45

The dividers can be moved in the cross section.



In the standard version, the divider systems are mounted on every second chain link.

Types S/SX 0650, 0950, 1250 and 1800

Divider systems

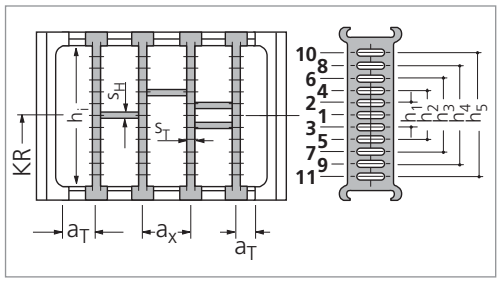
Divider system TS 3

with partitioned height subdivision made of plastic

Type	Stay variant	h_i mm	S_T mm	$a_{T\ min}$ mm	$a_{x\ min}$ mm	S_H mm	h_1 mm	h_2 mm	h_3 mm	h_4 mm	h_5 mm
S/SX 1800	RM	109	8	11,5	16*	4	14	28	42	56	70

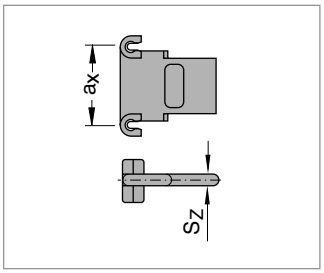
* When using plastic partitions

The dividers are fixed by the partitions, the complete divider system is movable.



In the standard version, the divider systems are mounted on every second chain link.

Dimensions of the plastic partitions for TS 3



Aluminium partitions in 1 mm width sections are also available.

Dimensions in mm

S_Z	a_x (center-to-center distance, dividers)									
4	16	18	23	28	32	33	38	43	48	58
	64	68	78	80	88	96	112	**128**	**144**	**160**
	176	**192**	**208**							

When using **partitions with a_x > 112** mm, there should be an additional central support with a **twin divider** (S_T = 4 mm).

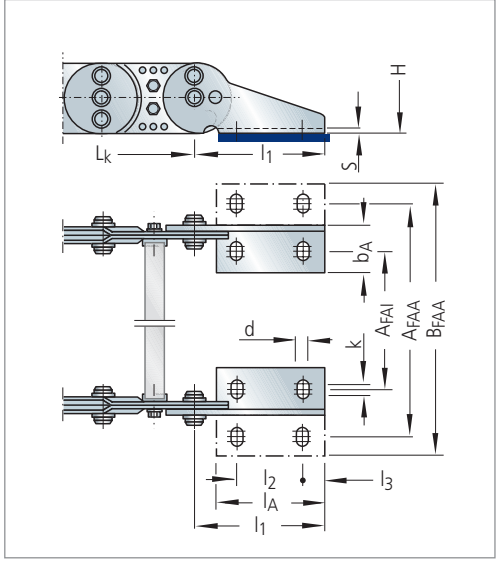
Twin dividers are designed for subsequent fitting in the partition system. You can find further information on this in our main catalog.

Types S/SX 0650, 0950, 1250 and 1800

Connection dimensions

End connectors made of steel (S types) or high-grade steel (SX types)

Fixed point connection



Driver connection

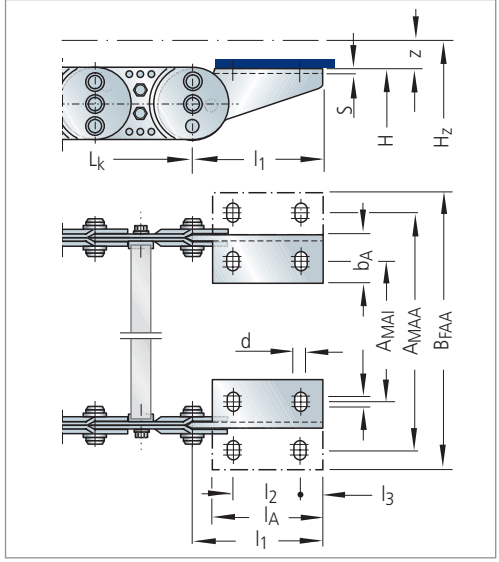


Table of dimensions:

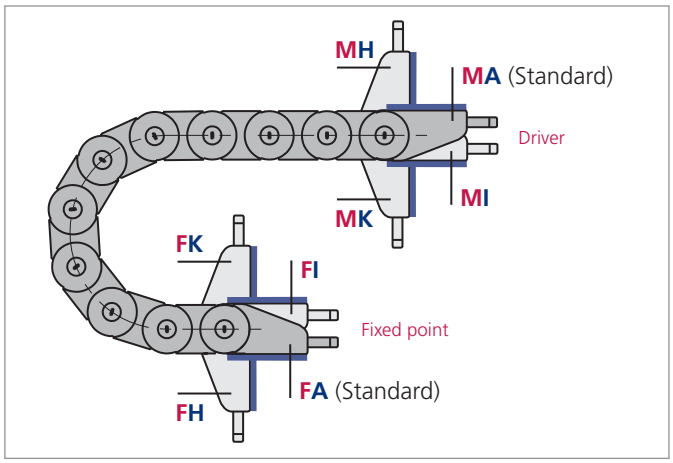
Dimensions in mm

Type	l_1	l_2	l_3	l_A	b_A	d	k	s	A_{FAI}	A_{FAA}	B_{FAA}	A_{MAI}	A_{MAA}	B_{MAA}
S/SX 0650	95	45	15	75	30	6.4	5	3	B_k-37	B_k+25	B_k+51	B_k-43	B_k+19	B_k+45
S/SX 0950	125	65	20	105	55	8.4	10	4	B_k-63	B_k+49	B_k+99	B_k-71	B_k+41	B_k+91
S/SX 1250	155	80	25	130	55	10.5	10	5	B_k-64	B_k+46	B_k+96	B_k-74	B_k+36	B_k+86
S/SX 1800	210	115	30	175	60	13	10	5	B_k-77	B_k+53	B_k+103	B_k-88	B_k+41	B_k+91

* Connection has 3 boreholes

Types S/SX 0650, 0950, 1250 and 1800

Connection variants



Connection point

M – Driver

F – Fixed point

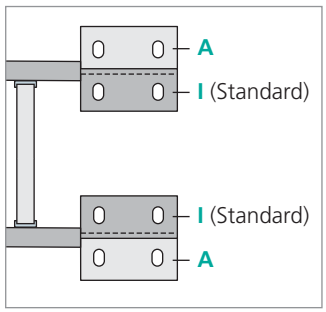
Connection type

A – Threaded joint (standard)

I – Threaded joint, inside

H – Threaded joint, rotated through 90° to the outside

K – Threaded joint, rotated through 90° to the inside



Connecting surface

On the driver and the fixed point, the connecting surfaces can be be mounted on the outside or the inside according to preference.

I – Connecting surface inside (< B_k)

A – Connecting surface (> B_k)

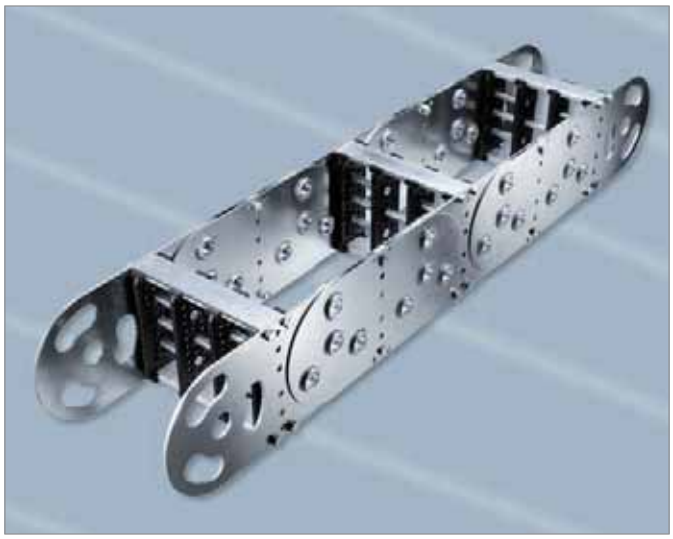
In the standard version, the connectors are mounted with the bolting to the outside and the connecting surface to the inside (**FAI**/**MAI**).

When ordering please specify the desired connection type (see ordering key on page 247).

The connection type can easily be altered at a later date.

Types S/SX 2500 and 3200

Carrier construction and stay variants



Aluminium stays

Width sections available 1 mm

Types – S

With chainbands made of galvanized steel

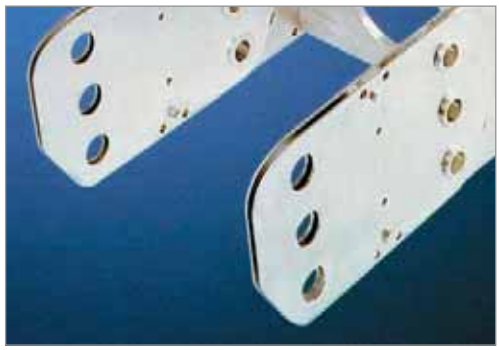
Stahl verzinkt

Types – SX

With chainbands made of high-grade stainless steel

EDELSTAHL® Rost frei

Side plate construction for types S/SX 2500



Side plate construction for types S/SX 3200

Bend radius and pitch

Types S/SX 0650, 0950, 1250 and 1800

Dimensions in mm

Type	Bend radii KR							
S/SX 2500	365	445	600	760	920	1075	1235	1395
S/SX 3200	–	470	670	870	1075	1275	1480	1785

Pitch:
S/SX 2500: t = 250 mm
S/SX 3200: t = 320 mm

Types S/SX 2500

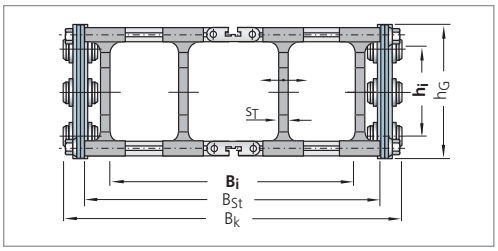
Stay variant RM for types S/SX 2500

Stay variant RM

Frame stays – solid design

For maximum stability,
maximum chain widths possible.

Aluminium stays
Width sections available
1 mm



Screwed stays for maximum stability even with large chain widths

Dimensions and intrinsic chain weight

Types S/SX 2500

Dimensions in mm/Weights in kg/m

Type	Stay variant	h_i	h_G	$B_{k\ min}$	$q_{k\ min}$	$B_{k\ max}$	$q_{k\ max}$	B_k	BSt
S/SX 2500	RM	183	220	250	36	1500	50	B_i + 69	B_i + 37

Divider system

Standard divider for different separation options

Dividers are available for stay variant RM which enable different height subdivisions of the steel tube to be achieved.

Please do get in touch with us.
We would be happy to advise you.

Types S/SX 2500 and 3200

Stay variants LG for types S/SX 2500 and 3200

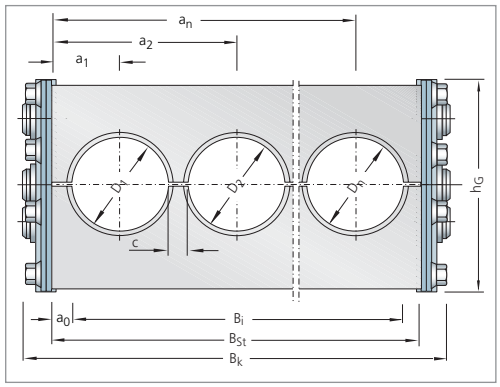
Stay variant LG

Hole stay – split design

Optimum cable guidance in the neutral bending line.

Aluminium stays

Width sections available 1 mm



Screwed stays for maximum stability even with large chain widths

Dimensions and intrinsic chain weight

Types S/SX 2500 and 3200

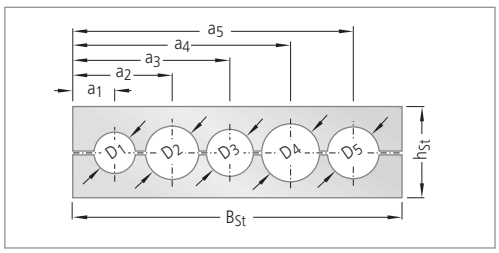
Dimensions in mm/Weights in kg/m

Type	Stay variant	D_{max}	h_G	$B_{k\ min}$	$q_{k\ min}$*	$B_{k\ max}$	$q_{k\ max}$*	$a_{0\ min}$	B_i	B_{St}
S/SX 2500	**LG**	**180**	220	250	36.5	1200	48.5	22	B_{St} – 44	B_k – 32
S/SX 3200	**LG**	**220**	300	250	57.5	1500	72.5	22	B_{St} – 44	B_k – 40

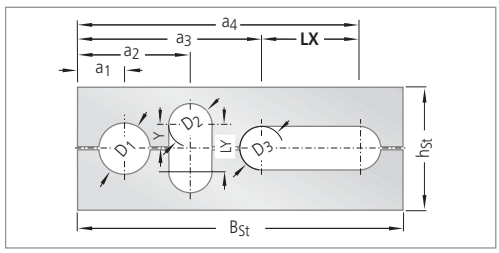
* Listed weights assume that the hole area is approx. 50% of the stay.

Selection of some hole patterns:

Split hole stay with individual holes



Split hole stay with horizontal and vertical elongated holes*

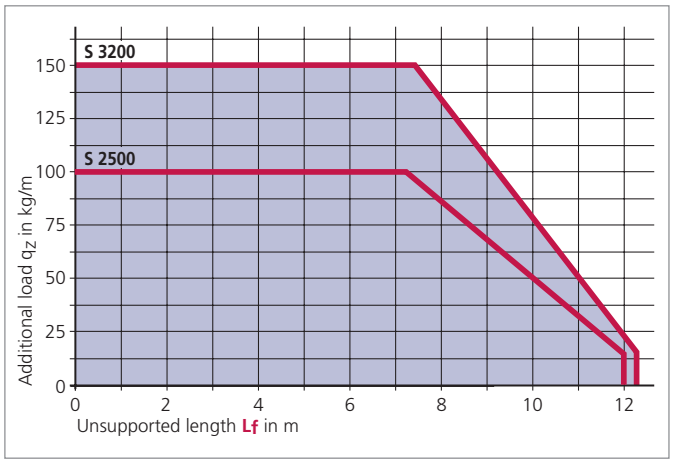


*) With an off-center arrangement of the holes, the cables are subject to a relative movement when the carrier is in motion.

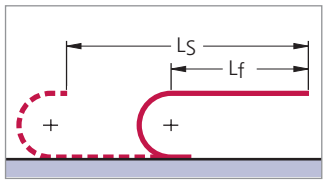
Types S 2500 and 3200

Load diagram

for unsupported length L_f depending on the additional load



Unsupported length L_f

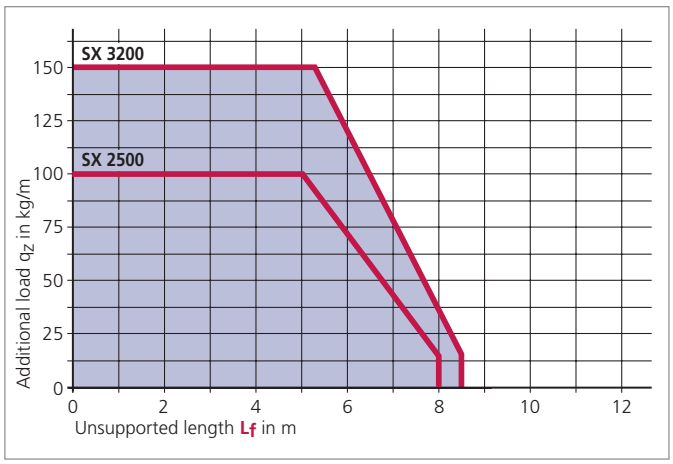


Determining the length of the cable carrier see page 18.

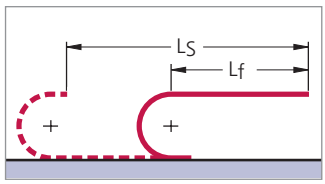
Types SX 2500 and 3200

Load diagram

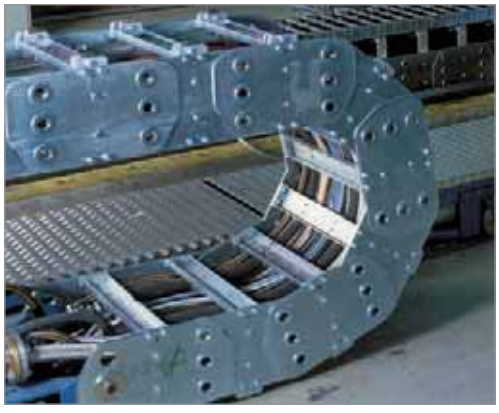
for unsupported length L_f depending on the additional load



Unsupported length L_f



Determining the length of the cable carrier see page 18.



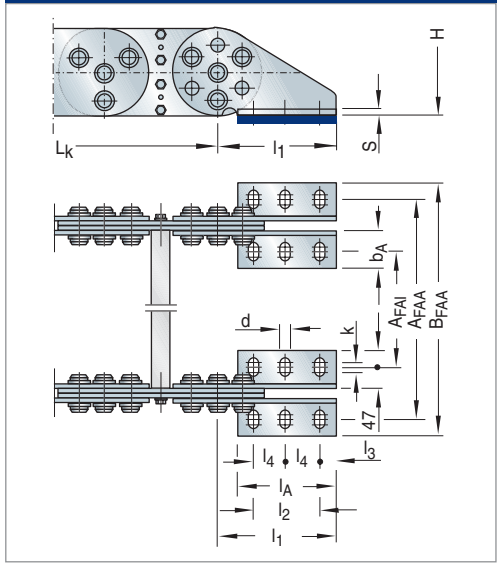
■ Type S 3200 with special stays made of steel

Types S/SX 2500 and 3200

Connection dimensions

End connectors made of steel (S types) or high-grade steel (SX types)

Fixed point connection



Driver connection

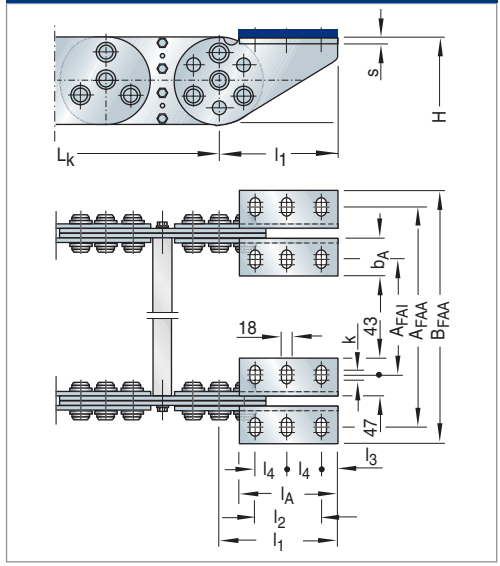


Table of dimensions:

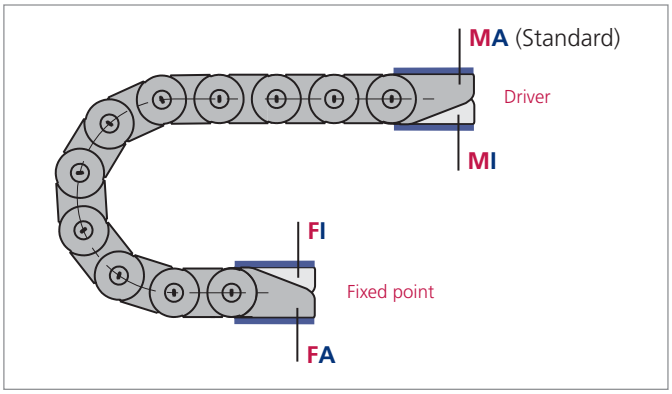
Dimensions in mm

Type	l_1	l_2	l_3	l_4	l_A	b_A	d	k	s	A_{FAI}	A_{FAA}	B_{FAA}	A_{MAI}	A_{MAA}	B_{MAA}
S/SX 2500*	300	170	40	85	250	90	18	15	6	B_k-126	B_k+74	B_k+160	B_k-126	B_k+74	B_k+160
S/SX 3200*	350	200	50	100	300	110	22	20	6	B_k-154	B_k+90	B_k+196	B_k-154	B_k+90	B_k+196

* Connection has 3 boreholes

Types S/SX 2500 and 3200

Connection variants



Connection point

M – Driver

F – Fixed point

Connection type

A – Threaded joint outside (standard)

I – Threaded joint, inside

In the standard version, the end connectors are mounted with the threaded joint outwards (**FA/MA**).

When ordering please specify the desired connection type (see ordering key on page 247).

Types S/SX 5000, 6000 and 7000

Carrier construction and stay variants

Steel stays

Width sections available

1 mm

Types – S

With chainbands made of galvanized steel

Stahl verzinkt

Types – SX

With chainbands of high-grade stainless steel

EDELSTAHL® Rost frei

Dimensions and intrinsic chain weight

Dimensions in mm

Type	$h_{i\ max}$	h_G	$B_{k\ min}$	$B_{k\ max}$
S/SX 5000	150	200	250	1200
S/SX 6000	240	300	300	1500
S/SX 7000	370	450	350	1800

Larger dimensions and special designs are available on request.

Bend radius and pitch

Types S/SX 5000, 6000, 7000

Dimensions in mm

Type	Bend radii KR				
S/SX 5000	500	600	800	1000	1200
S/SX 6000	700	900	1100	1300	1500
S/SX 7000	1100	1250	1500	1800	2400

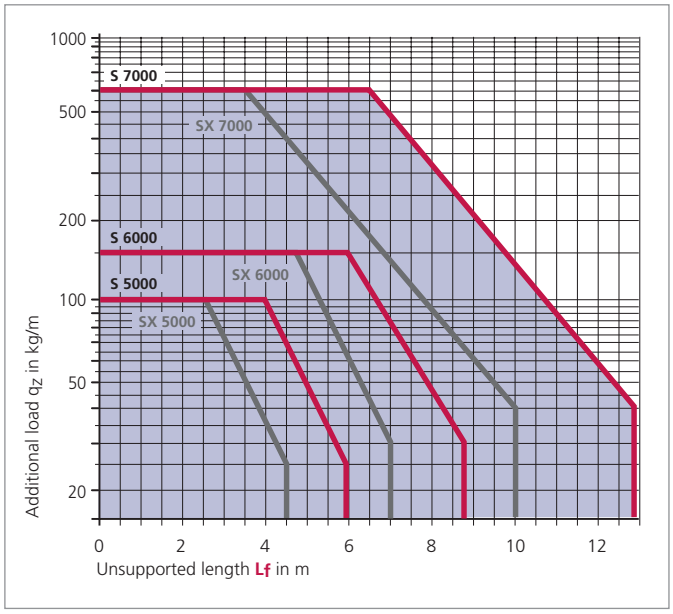
Pitch:
S/SX 5000: t = 200 mm
S/SX 6000: t = 320 mm
S/SX 7000: t = 450 mm

■ Steel cable carrier on a "Turret Transfer System" (TTS).

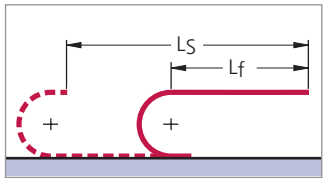
Types S/SX 5000, 6000 and 7000

Load diagram

for unsupported length L_f depending on the additional load



Unsupported length L_f



Determining the length of the cable carrier see page 18.

■ Steel cable carriers – types 5000 to 7000 for use in offshore areas.

Steel cable carriers

Accessories and system components

Steel band covers

To protect the cables from hot machining chips and from large amounts of dirt, the steel cable carriers can be supplied with a rust- and acid-resistant cover made of spring band steel.

- **Guidance of the steel band:**
  by means of steel band holders on the inner side of the chain band
- **Fastening the steel band** (with standard connections):
  Inner steel band: by means of steel band holders on the end connectors
  Outer steel band: with the fastening screws of the end connectors
- Maximum steel band width: 500 mm

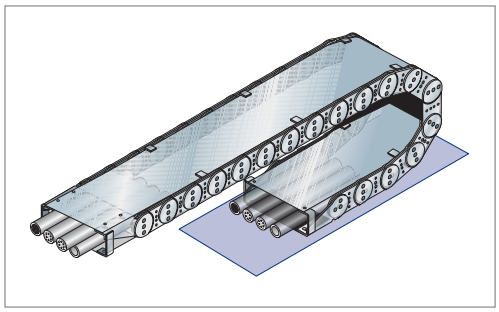
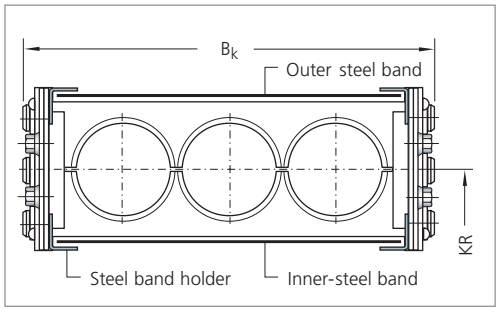


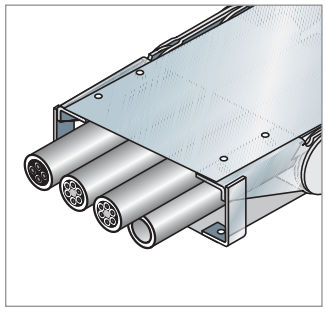
Table of dimensions:

Dimensions in mm

Model	Steel band length		Steel band width
	Outside steel band	Inside steel band	
0600	L_k + 280	L_k + 130	B_k - 22
0900	L_k + 360	L_k + 150	B_k - 27
1200	L_k + 470	L_k + 170	B_k - 34
1800	L_k + 640	L_k + 200	B_k - 40
2500	L_k + 945	L_k + 255	B_k - 48

Steel band covers for the other series are available on request!





■ Steel band fastening at the connection

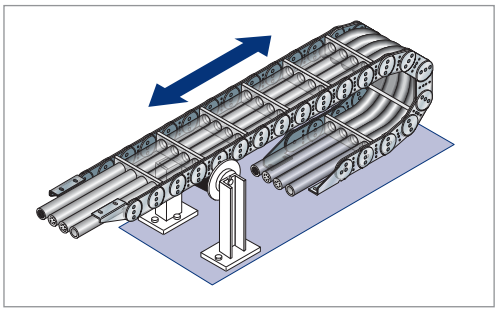
Steel cable carriers

Accessories and system components

Support rollers

Horizontal arrangement "with support"

- If the unsupported length of the cable carrier is exceeded, the upper trough can be supported by rollers.
- Instead of using a KABELSCHLEPP cable carrier with supports, we recommend that you use the next size up, provided that the installation conditions allow this.

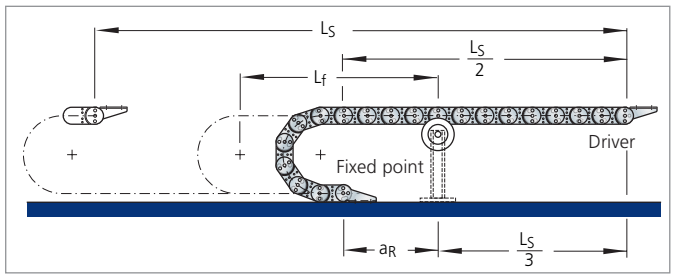


Arrangement of the support

Arrangement with a support roller: when $L_S < 3\ L_f$ $a_R = \frac{L_S}{6}$

The distance of the support to the fixed point in this arrangement is approx 1/6 of the total travel length!

Schematic illustration



Support rollers
DR 90 for series **0600**
DR 120 for series **0900 / 1200 / 1800**
DR 220 for series **2500**
Please enquire about our other series!

Abbreviations:

D_R = Diameter of the support roller
D_S = Diameter of wheel flange
B_k = Chain width
b_1 = Clearance width of the roller
B_G = Total width of the support
B_R = Width of the roller
B_E = Contact width of the roller
B_P = Width of the base plate
H_A = Axle height of the support roller
L_P = Length of the base plate
U = Width of the U-profile
a_{1-3} = Hole distances
d = Diameter of the fixing holes
s = Thickness of the base plate

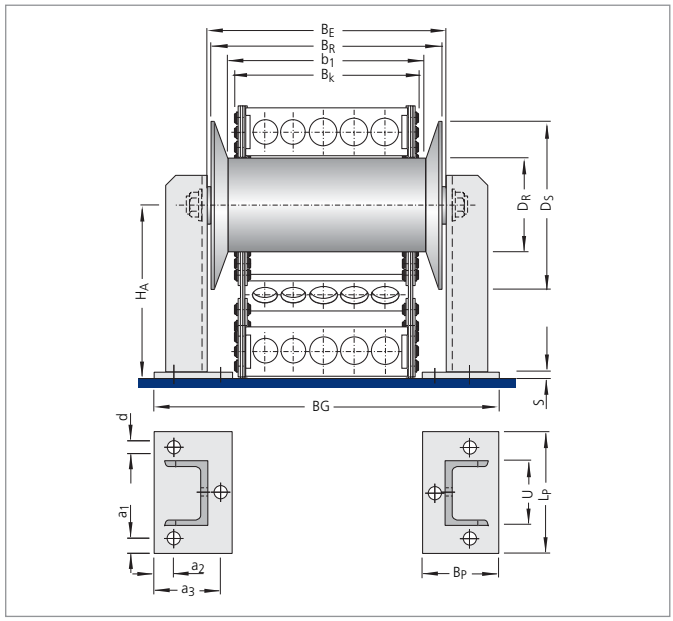


Table of dimensions for support rollers and support blocks:

Dimensions in mm

for roller	b1	BR	BE	BG	DS	HA	BP	LP	U	a1	a2	a3	d	s
DR 90	Bk+15	Bk+45	Bk+59	Bk+169	Ø 170	2KR-45	80	180	80	20	40	–	Ø 14	8
DR 120	Bk+20	Bk+50	Bk+64	Bk+174	Ø 200	2KR-60	100	180	80	20	20	80	Ø 18	8
DR 220	Bk+30	Bk+60	Bk+74	Bk+184	Ø 300	2KR-110	100	180	80	20	20	80	Ø 18	8

KABELSCHLEPP

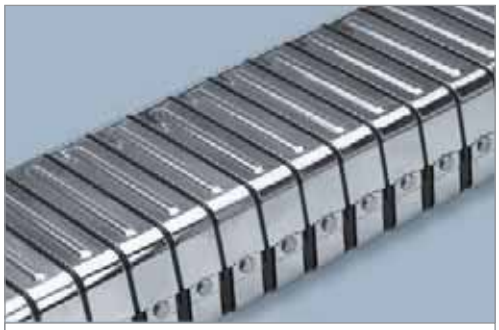
the power to innovate

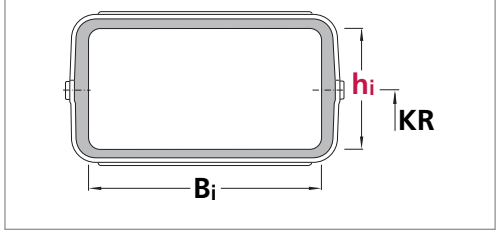
Cable carriers made of steel

CONDUFLEX

CONDUFLEX – Designer-Tube

- Completely enclosed cable carriers in a sophisticated design
- Attractive appearance owing to high-grade steel brackets and fiberglass reinforced polyamide frame
- Easy replacement of the brackets where external damage has occurred
- Optimum protection for cables and hoses
- Easy to shorten or extend at a later date
- TÜV type tested in accordance with 2 PfG 1036/10.97





Types CF 055, CF 060, CF 085, CF 115, CF 120, CF 175

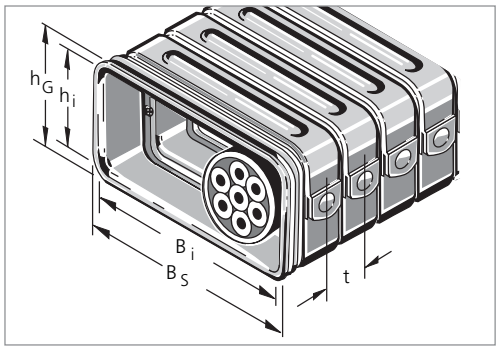
Closed cable carriers (tubes)

Dimensions in mm

Type	h_i	B_i	Maximum travel length in m	Dynamics of unsupported arrangement		Page
				Travel speed v_{max} in m/s	Travel acceleration a_{max} in m/s²	
CF 055	**25**	45	3,0	10	20	202
CF 060	**40**	36	3,5	10	20	202
CF 085	**38**	73	4,0	8	18	202
CF 115	**52**	102	5,0	8	16	202
CF 120	**70**	100	5,5	6	15	202
CF 175	**72**	162	6,0	6	12	202

CONDUFLEX – Types CF 055, 060, 085, 115, 120, 175

Dimensions and intrinsic weight



Type	h_i mm	h_G mm	B_i mm	B_s mm	Intrinsic hose weight kg/m
CF 055*	**25**	38	45	62	1.25
CF 060	**40**	52	36	60	1.60
CF 085*	**38**	52	73	92	1.90
CF 115*	**52**	67	102	123	2.60
CF 120	**70**	86	100	127	3.80
CF 175*	**72**	94	162	190	5.20

*) KABELSCHLEPP CONDUFLEX tubes CF 055, CF 085, CF 115 and CF 175 can be fitted with **protective straps**, to shield the impact slots of the plastic frame from contamination.

Bend radius and pitch

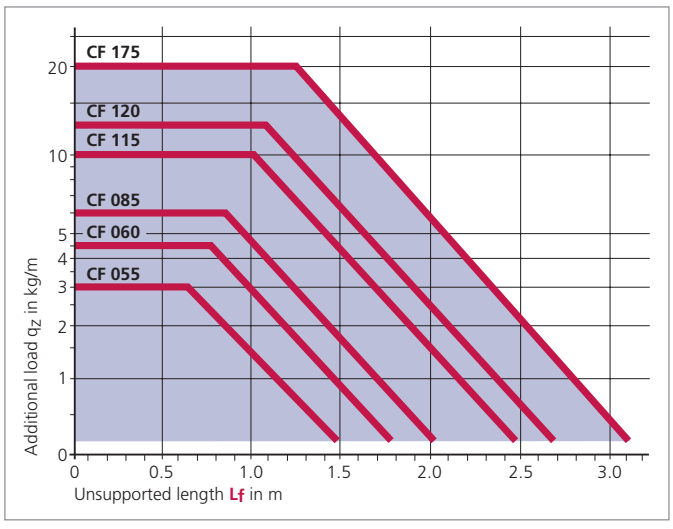
Dimensions in mm

Type	Bend radii KR			
CF 055	65	100	150	–
CF 060	100	–	–	–
CF 085	100	150	200	250
CF 115	140	225	300	–
CF 120	155	200	–	–
CF 175	185	250	350	–

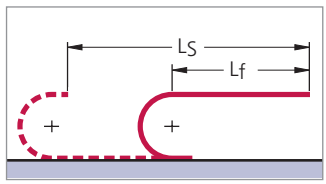
Pitch t:
Type CF 055: 20 mm
Type CF 060: 20 mm
Type CF 085: 20 mm
Type CF 115: 25 mm
Type CF 120: 25 mm
Type CF 175: 30 mm

Load diagram

for unsupported length L_f depending on the additional load



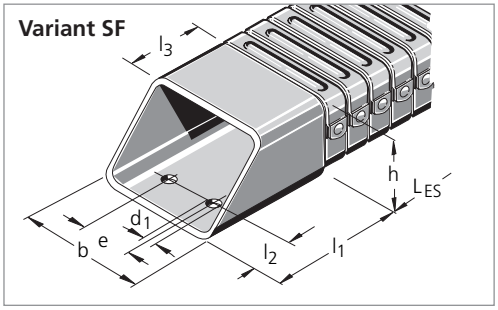
Unsupported length L_f



CONDUFLEX – Types CF 055, 060, 085, 115, 120, 175

Connection dimensions

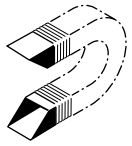
Diagonal flange connector bracket made of aluminium – Variant SF



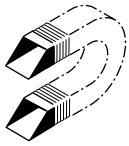
Dimensions in mm

Type	b	h	e	d_1	l_1	l_2	l_3
CF 055	55	36	22	6.5	44	12.5	20
CF 060	55	52	22	6.5	44	12.5	20
CF 085	85	50	50	6.5	70	15.0	32
CF 115	117	66	70	8.5	84	17.5	34
CF 120	120	84	70	8.5	82	17.5	48
CF 175	182	92	100	10.5	100	22.5	45

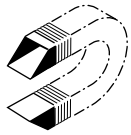
Connection variants for diagonal flange connectors



1
Connecting surface outside/outside



2
Connecting surface inside/outside



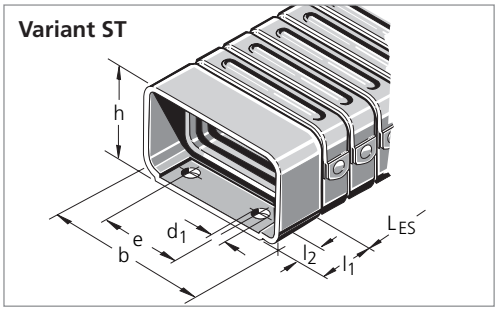
3
Connecting surface inside/inside

The connectors SF, ST, QF and HF can be combined.

Please state the desired connection type when placing your order.

Example:
Driver SF: Diagonal flange connector bracket with the connecting surface outside
Fixed point QF: Cross flange connector

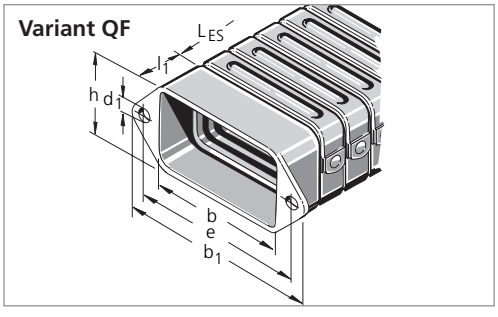
Standard connector bracket made of aluminium – Variant ST



Dimensions in mm

Type	b	h	e	d_1	l_1	l_2
CF 055	**55**	36	22	6.5	20	8.5
CF 060	–	–	–	–	–	–
CF 085	**85**	52	50	6.5	25	10.0
CF 115	**116**	68	65-70	8.5	35	10.0
CF 120	**120**	84	70	8.5	35	12.5
CF 175	**182**	92	100	10.5	40	15.0

Cross flange connector bracket made of aluminium – Variant QF



Dimensions in mm

Type	b	h	b_1	e	d_1	l_1
CF 055	55	35	90	75	6.5	20
CF 060	–	–	–	–	–	–
CF 085	85	50	120	105	6.5	25
CF 115	116	64	160	140	8.5	35
CF 120	–	–	–	–	–	–
CF 175	182	90	226	200	10.5	40

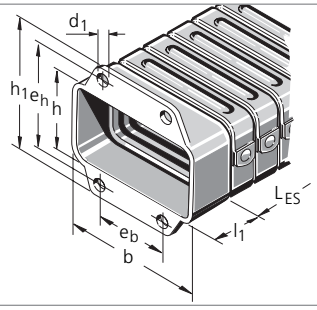
Subject to change.

CONDUFLEX – Types CF 055, 060, 085, 115, 120, 175

Connection dimensions

High flange bracket made of aluminium – Variant HF

Variant HF



Dimensions in mm

Type	b	h	h_1	e_b	e_h	d_1	l_1
CF 055	55	35	70	18	55	6.5	20
CF 060	–	–	–	–	–	–	–
CF 085	85	50	85	45	70	6.5	25
CF 115	116	64	110	60	90	8.5	35
CF 120	–	–	–	–	–	–	–
CF 175	182	90	136	95	110	10.5	40

KABELSCHLEPP

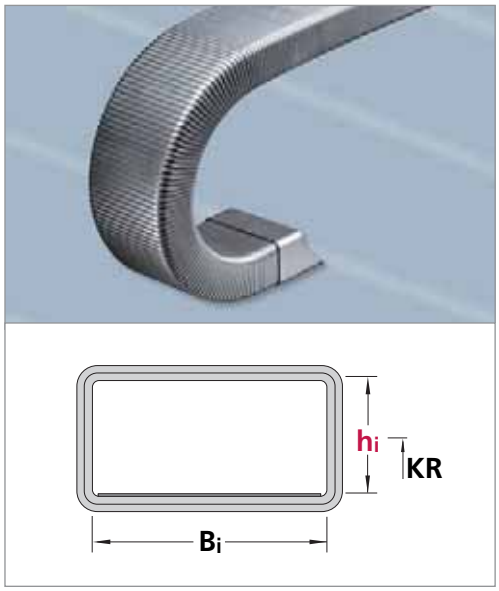
the power to innovate

Cable carriers made of steel

MOBIFLEX

MOBIFLEX – Tubes

- Flexible metal helical tubes combined with special steel band
- Unsupported thanks to the inserted, pre-tensioned steel band
- Ideal in case of hot metal chips



Types MF 030, MF 050, MF 080, MF 110, MF 170

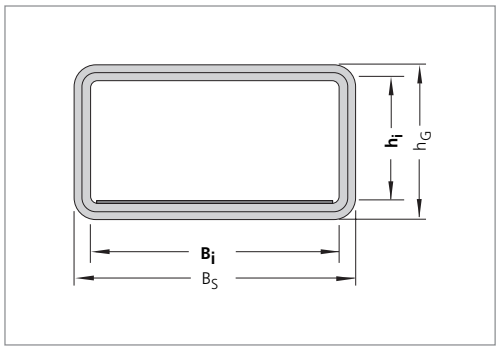
Enclosed cable carrier

Dimensions in mm

Type	h_i	B_i	Maximum travel length in m	Dynamics of unsupported arrangement		Page
				Travel speed v_{max} in m/s	Travel acceleration a_{max} in m/s²	
MF 030.1	**24**	26	2.0	10	20	207
MF 050.1	**24**	45	3.0	10	20	207
MF 050.2	**44**	45	3.0	10	20	207
MF 080.1	**40**	80	3.5	10	18	207
MF 080.2	**54**	80	3.5	10	18	207
MF 080.3	**78**	80	3.5	10	18	207
MF 110.1	**53**	109	4.0	6	15	207
MF 110.2	**73**	109	4.0	6	15	207
MF 110.3	**108**	109	4.0	6	15	207
MF 170.1	**72**	170	5.0	6	12	207
MF 170.2	**102**	170	5.0	6	12	207
MF 170.3	**167**	170	5.0	6	12	207

MOBIFLEX – Types CF 030, 050, 080, 110, 170

Dimensions and intrinsic weight



Type	h_i mm	h_G mm	B_i mm	B_s mm	Intrinsic weight kg/m
MF 030.1	**24**	30	26	30	1.2
MF 050.1	**24**	30	45	50	2.0
MF 050.2	**44**	50	45	50	2.5
MF 080.1	**40**	45	80	85	3.0
MF 080.2	**54**	60	80	85	3.5
MF 080.3	**78**	85	80	85	5.1
MF 110.1	**53**	60	109	115	4.8
MF 110.2	**73**	80	109	115	5.3
MF 110.3	**108**	115	109	115	6.6
MF 170.1	**72**	80	170	175	7.2
MF 170.2	**102**	110	170	175	8.2
MF 170.3	**167**	175	170	175	9.2

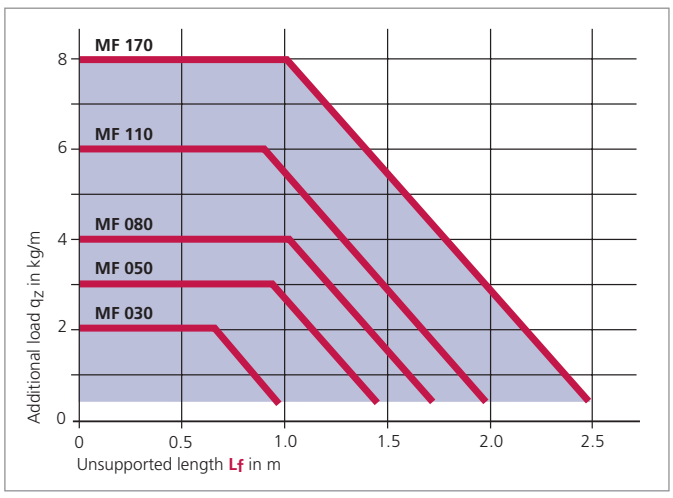
Bend radius

Dimensions in mm

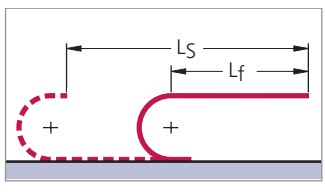
Type	Bend radii KR			
MF 030.1	80	–	–	–
MF 050.1	75	100	150	–
MF 050.2	110	150	200	–
MF 080.1	100	150	200	–
MF 080.2	150	200	250	–
MF 080.3	200	–	–	–
MF 110.1	150	200	250	–
MF 110.2	200	250	350	–
MF 110.3	300	–	–	–
MF 170.1	190	250	300	350
MF 170.2	250	300	400	–
MF 170.3	365	–	–	–

Load diagram

for unsupported length L_f depending on the additional load



Unsupported length L_f

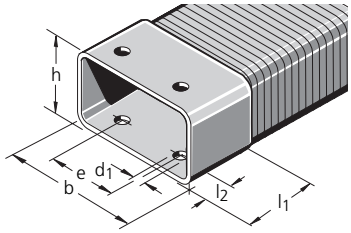


MOBIFLEX – Types CF 030, 050, 080, 110, 170

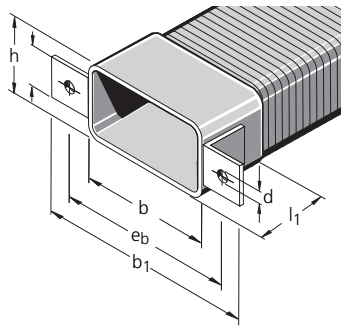
Connection dimensions

Standard, cross flange and high flange brackets made of steel

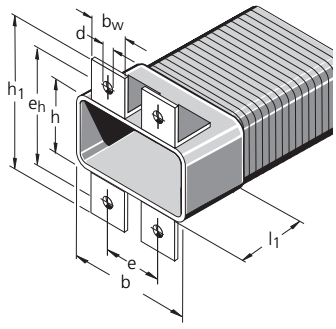
Standard connector ST



Cross flange connector QF



High flange connector HF



Dimensions in mm

Type	b	h	e	e_b	e_h	d	l_1	l_2	b_W	b_1	h_1
MF 030.1	34	34	–	56	56	9	60	20	20	74	74
MF 050.1	54	34	20	76	56	9	60	20	20	94	74
MF 050.2	54	54	20	76	76	9	60	20	20	94	94
MF 080.1	89	49	50	111	71	9	75	20	20	129	89
MF 080.2	89	64	50	111	86	9	75	20	20	129	104
MF 080.3	89	89	50	111	111	9	75	20	20	129	129
MF 110.1	119	64	80	141	86	9	95	20	20	159	104
MF 110.2	119	84	80	141	106	9	95	20	20	159	124
MF 110.3	119	119	80	141	141	9	95	20	20	159	159
MF 170.1	179	84	140	201	106	9	95	20	20	219	124
MF 170.2	179	114	140	201	136	9	95	20	20	219	154
MF 170.3	179	179	140	201	201	9	95	20	20	219	219

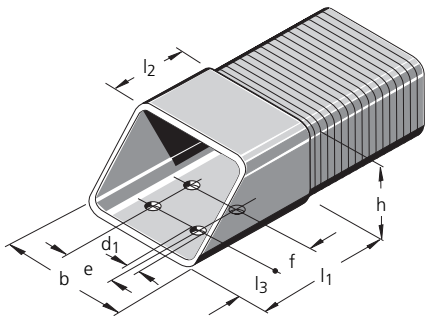
Front flange connectors can be supplied in accordance with customer drawings!

MOBIFLEX – Types CF 030, 050, 080, 110, 170

Connection dimensions

Diagonal flange connector bracket made of steel

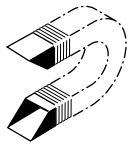
Diagonal flange connector SF



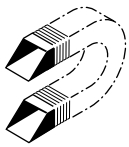
Dimensions in mm

Type	b	h	e	f	d	l_1	l_2	l_3
MF 030.1	34	34	–	40	9	120	60	10
MF 050.1	54	34	20	40	9	120	60	10
MF 050.2	54	54	20	40	9	120	60	10
MF 080.1	90	50	50	40	9	120	60	10
MF 080.2	90	65	50	40	9	120	60	10
MF 080.3	90	90	50	40	9	120	60	10
MF 110.1	120	65	80	40	9	120	60	10
MF 110.2	120	85	80	40	9	120	60	10
MF 110.3	120	120	80	40	9	120	60	10
MF 170.1	180	85	140	40	9	120	60	10
MF 170.2	180	115	140	40	9	120	60	10
MF 170.3	180	180	140	40	9	120	60	10

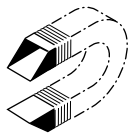
Connection variants for diagonal flange connectors



1
Connecting surface outside/outside



2
Connecting surface inside/outside



3
Connecting surface inside/inside

The connectors SF, ST, QF and HF can be combined.
Please specify the desired connection type when placing your order.

Example:
Driver SF : Diagonal flange connector bracket with the connecting surface outside

Fixed point QF: Cross flange connector

KABELSCHLEPP

the power to innovate

Fully harnessed cable carrier systems

TOTALTRAX

TOTALTRAX complete cable & hose carrier systems (Turn-Key Systems)

Fully harnessed cable carrier systems – Designed to fit your individual application

You know what product you need – We supply it to you fully harnessed.

One supplier and contact person for the complete system

We develop, design and supply all components required for your individual cable & hose carrier system.

■ Ready-to-connect assembled carrier systems

Everything from a single source

- Consulting
- Planning
- Design
- Cable carriers
- Electrical cables
- Complete guarantee
- Hydraulic hoses
- Pneumatic hoses
- Plug-and-socket connectors
- Assembly plates
- Complete assembly of all components

+ One contact person
+ One order
+ One delivery
+ Guaranteed quality

= **TOTALTRAX Complete System**

TOTALTRAX – from the design phase to the complete system

Note:

We also manufacture cables according to SIEMENS and INDRAMAT specifications

KABELSCHLEPP LIFE-LINE cables are harnessed according to SIEMENS-/ INDRAMAT specifications, suitable for SIEMENS or INDRAMAT drive controls consisting of signal and power cables and/or extension cables.

- any cable length available
- minimum delivery: 1 unit

Cut costs with TOTALTRAX complete cable carrier systems

We help you . . .

- Support in the design phase
- Only one contact person for the complete system including all the individual components
- Complete delivery from a single source
- Only one supplier – one purchase order and one item number
- All components match each other perfectly
- Guarantee certificate upon request

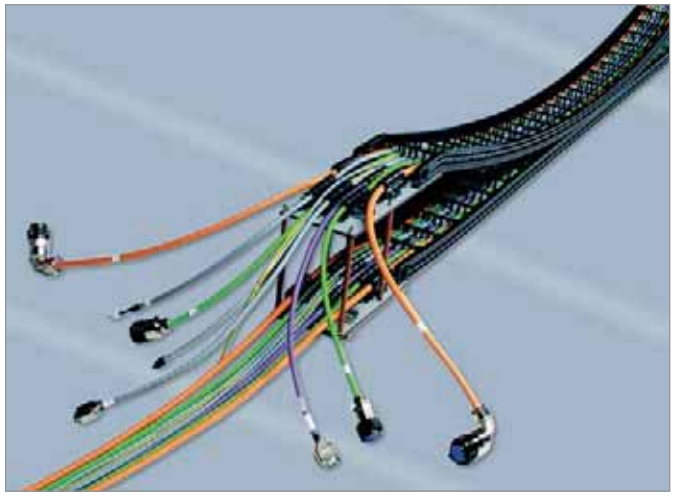
. . . to cut your costs!

- Goods received inspections for all individual components are no longer required
- Expensive technical personnel and special tools are not required
- Shorter assembly times
- No hidden costs, such as e.g. cables being cut to excessive lengths etc.
- Less tied-up capital with almost no stock
- Just-in-time delivery directly to your production site

Complete systems on a transport frame

No storage costs for individual components like cables and connectors

Our warehouses offer cables, plug-and-socket connectors and many other individual components.



Ready-to-connect assembled QUANTUM cable and hose carrier system

Complete service – even for applications in extreme assembly conditions

Our service team can design and assemble your cable carrier system even for applications in extreme assembly conditions.

Our service center experts provide you with the support you need.

- Complete assembly with guide channels
- Uncoiling of harnessed cable carrier systems with long travel lengths
- Assembly at great heights (e. g. crane systems)

Fully harnessed cable carrier system in shipping crate

Assembly of the fully harnessed cable carrier system

KABELSCHLEPP

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Continuous bending hi-flex electrical cables

LIFE-LINE

LIFE-LINE – Continuous bending hi-flex electrical cables

Cost-effective – safe – reliable: Cables designed by the experts for the experts

The LIFE-LINE Series cables were specially developed, optimized and tested for use in cable carrier systems. Even in the most exacting application conditions, they provide the reliability that matters – and at reasonable prices.

Commissioning in the KABELSCHLEPP cable stores.

We cut our KABELSCHLEPP LIFE-LINE electrical cables according to your individual order in our cable warehouse. Our vast inventory range offers cables for almost every application.

Product advantages

- Outer jacket made of special, continuous bending hi-flex and abrasion-resistant compounds
- Great stability and service life thanks to valley-sealed filling extrusion technology (subject to cable type)
- Requirement-optimized cabling (position cabling, low-torsion in short lengths / bundle cabling / hybrid constructions for optimum electrical properties)
- Valley-sealed filling extruded inner jacket (subject to cable type)
- Continuous bending hi-flex special shielding with outstanding electrical properties for the shielded types
- Use of high-quality and application-optimized core elements
- Small bending radii for compact cable carriers
- UL/CSA approvals (subject to cable type)

Overview of cable types

- control cables
- power cables
- single-core cables
- data cables
- bus cables
- coaxial cables
- fiber optic cables
- system cables according to SIEMENS specifications
- system cables according to INDRAMAT specifications

Note:

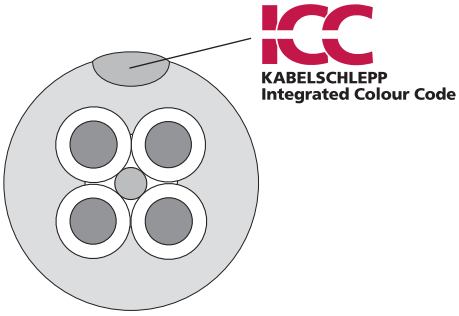
Cable carriers and cables from a single source = system guarantee

Further information can be found in our LIFE-LINE electrical cables catalog.

Product Overview LIFE-LINE Safety Cables 200/400

LIFE-LINE Control 200 Standard
LIFE-LINE Control 200 C Standard

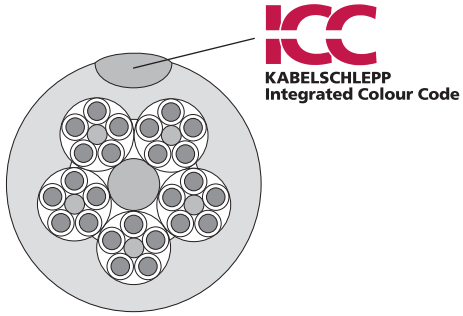
- ICC Integrated Color Code System
- Continuous bending hi-flex and cost-effective standard cables for a wide range of applications
- Unsupported and gliding applications with normal loads for average bend radii and speeds
- Black outer jacket for high UV-resistance, also suitable for outdoor applications; co-extruded ICC Color Code Identification based on DESINA color code simplifies the correct cable installation into the carrier



- Example of layered stranding

LIFE-LINE Control 400 Standard *PLUS*
LIFE-LINE Control 400 C Standard *PLUS*

- ICC Integrated Color Code System
- Standard cable *PLUS* for more challenging applications
- Unsupported and gliding applications with small bend radii and high speeds
- Black outer jacket for high UV-resistance, also suitable for outdoor applications; co-extruded ICC Color Code Identification based on DESINA color code simplifies the correct cable installation into the carrier



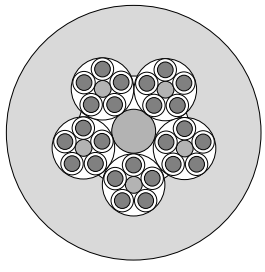
- Example of bundled stranding for more than 8 cores

KABELSCHLEPP Integrated Colour Code – ICC

- Co-extruded ICC Color Identification based on DESINA color code. Power, control and BUS cables etc. have different color codes to facilitate easy identification. The resulting shorter assembly times for new installations or maintenance translate into lower costs.
- The ICC Color Code System also serves as helpful tool when installing the cables into the carrier.
- UV-resistant black outer jacket for outdoor and indoor applications.

LIFE-LINE Power 400

- High-quality, robust PVC power cables for challenging applications
- Unsupported and gliding applications for small bend radii and high speeds
- Particularly suitable for long travel lengths
- Suitable for indoor and outdoor applications
- Highly wear-resistant and robust outer jacket

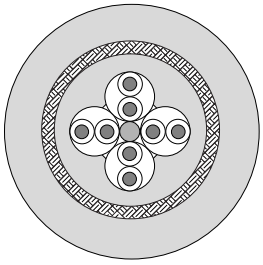


- Example of bundled stranding

Product Overview LIFE-LINE Safety Cables 700/800/900

LIFE-LINE Data 700 C
LIFE-LINE Data 700, system-specific

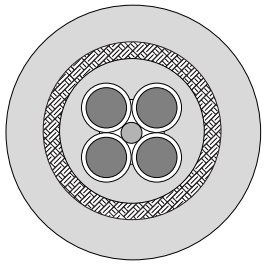
- Super-flexible, continuous bending hi-flex and robust PUR data cables
- Pair-stranded cabling and complete shielding (fiber optic cables, unshielded) make the cable suitable for critical EMC environments
- For universal and extremely challenging cable carrier applications
- For unsupported and long gliding applications with small bend radii
- Particularly suitable for high speeds and accelerations



- Example of pair-stranded shielded design

LIFE-LINE Power 700/Power ONE 700
LIFE-LINE Power 700 C/Power ONE 700 C

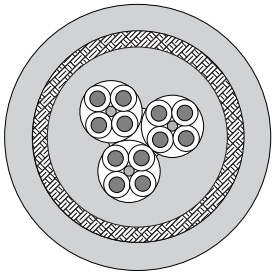
- High-quality, robust PUR power cables for even the most challenging applications
- Unsupported and gliding applications for very small bend radii and very high speeds
- Particularly suitable for long travel lengths
- For indoor and outdoor applications
- Highly wear-resistant and nick-resistant outer jacket
- Individual cores with double jacket
- Shielded design with continuous bending hi-flex braided shield



- Example of layer-stranded shielded design

LIFE-LINE Control 700
LIFE-LINE Control 700 C

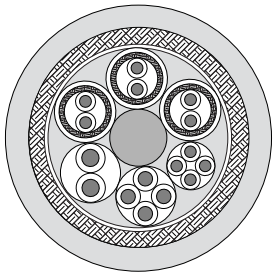
- High-quality PUR control cables for even the most challenging applications
- Unsupported and gliding applications for the smallest bend radii and very high speeds; particularly suitable for long travel lengths
- For indoor and outdoor applications
- Optimized bundle-stranding > 8 cores for highest availability
- Shielded design with continuous bending hi-flex braided shield



- Example of bundled stranding shielded design

LIFE-LINE System S 800 C/System M 800 C
LIFE-LINE System S 900 C/System M 900 C

- High-quality PUR combi-cables for challenging system applications
- Unsupported and gliding applications for small bend radii and high speeds
- Suitable for long travel lengths
- For indoor and outdoor applications
- Reliable transmission in accordance with SIEMENS- or INDRAMAT specifications



- Example of hybrid stranding shielded design

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Guide channels and other accessories

Guide channels

Support trays

Strain relief devices

Assembly profile bars

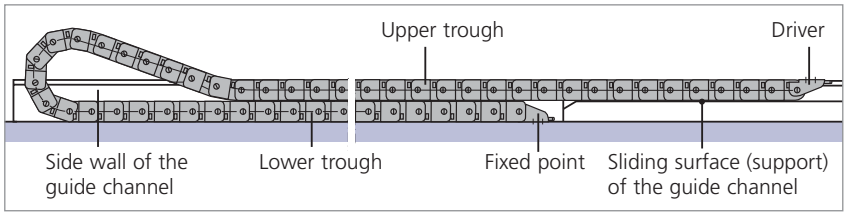
Accessories

Guide channels

In the case of long travel lengths the upper trough of the cable carrier **glides** on its lower trough. Beyond the fixed point the cable carrier glides on the sliding surface (support) of the guide channel.

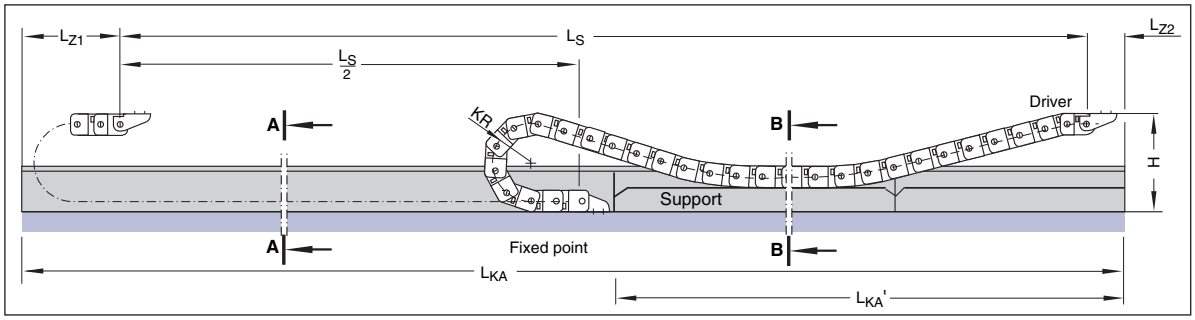
The guide channels prevent the upper trough from slipping off the lower trough and ensure quiet, low-wear operation.

The economical solution:
We recommend that the fixed point be placed in the middle of the travel length (central feed). This will result in the shortest lengths for the cable carrier, cables and guide channel.



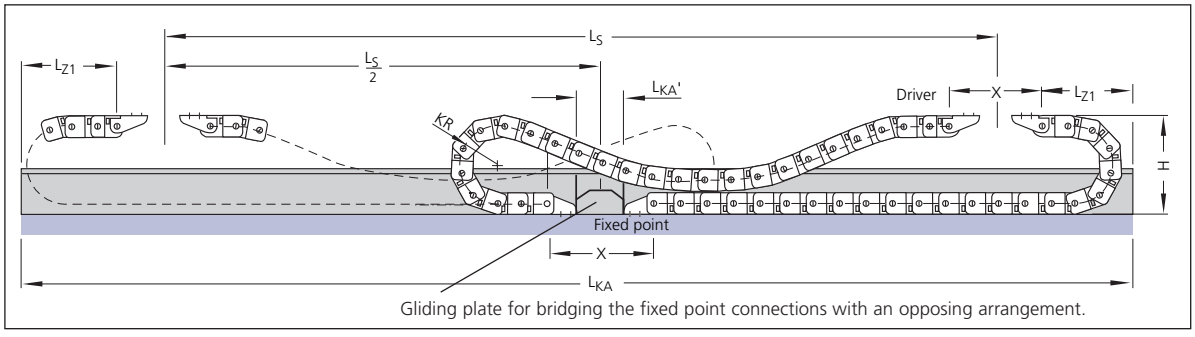
One-sided cable carrier arrangement (standard connection)

$L_{KA} = L_S + L_{Z1} + L_{Z2}$



Opposing cable carrier arrangement (standard connection

$L_{KA} = L_S + 2\ L_{Z1} + X$



Explanation of Terms - Guide Channels

L_S = Travel length of cable carrier

L_{KA} = Channel length

L_{KA}' = Channel length with support
($\triangleq$ $L_S/2$) with one-sided arrangement
($\triangleq$ X - 2 l_1) with opposing arrangement

L_{Z1} = Additional measurement for loop overhang
($\triangleq$ $Ü_B$ + 50 mm) with standard connection

L_{Z2} = Additional measurement for connection
($\triangleq$ l_1 + 50 mm)

X = Connection distance with an opposing arrangement

Depending on the chain size, the channel inner width is 4-5 mm greater than the width of the guided cable carrier.
Depending on the length of trave, the cable carrier connection heights should be reduced.

Do get in touch with us! We would be happy to calculate the dimensions of the guide channel to suit your application.

Accessories

Guide channels made of steel plate – standard design

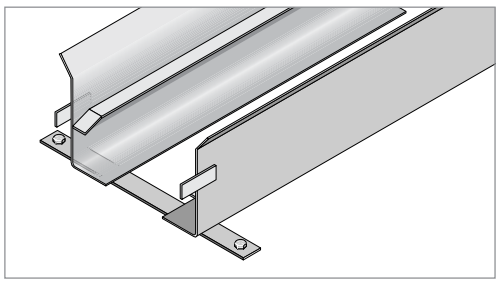
We also manufacture guide channels made of steel plate, customized for your application. In so doing, we can accommodate almost any wish as far as the special shape and fastening options are concerned.

To reduce the gliding resistance and wear between the cable carrier and support, a special gliding plate can be glued on. We recommend the use of special gliding plates at speeds > 0.5 m/s and with frequent travel cycles.

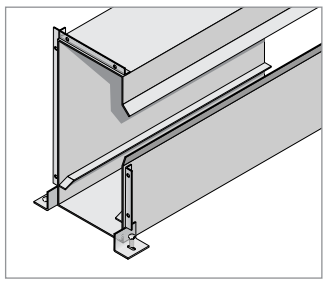
Materials:	Galvanized steel plate stainless steel
Delivery length:	Standard length 2 m special lengths on request

Standard design for customized fastening, e. g. by welding directly on site.

Examples of special models



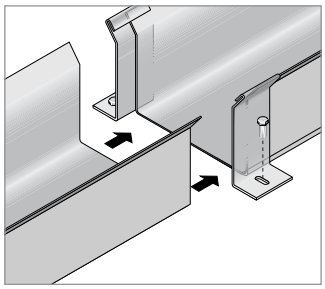
- IFor fine-grain dirt particles, water, etc.
- Dust and dirt can fall through the gap below in this design
- Application areas include washing plants, the woodworking industry, composting plants



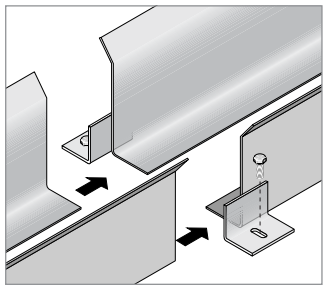
- For heavy and course contamination (covered)

Examples of fastening options

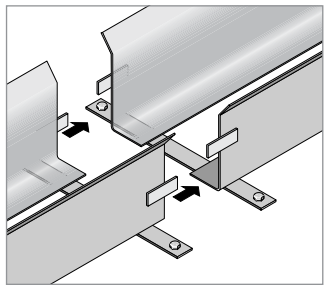
With KABELSCHLEPP guide channels, you have various different options for fixing them to the ground or on a support structure.



- Retaining plate



- Fastening bracket



- Fastening by means of welded-on flat bar steel

Accessories

Modular guide channels made of steel or aluminium

- Simple exchange of individual channel segments even in channel systems which are already installed
- Torsion-resistant channel side walls owing to optimized shaping
- U-shaped profiled beveling (steel)
- Hollow profile bars (aluminium)
- Fastening on C-rails or directly on the mounting surface
- Fixators for balancing the height-tolerances of the mounting-surface
- Both systems with anti-climbing protection as an option
- Can be supplied with a continuous floor plate if required.
- Highly resistant to sea-water and corrosion (aluminium and high-grade steel
- Level, smooth, inner surface
- High-quality design

- Simple exchange of individual channel segments with an installed channel system

Simple fixing and alignment of the channel side walls with channel holders: For this purpose, the channel side walls are simply inserted into the channel holder and fixed.

Examples of fastening options

Direct bolting to the floor

Fastening on C-rails

- Simple horizontal alignment

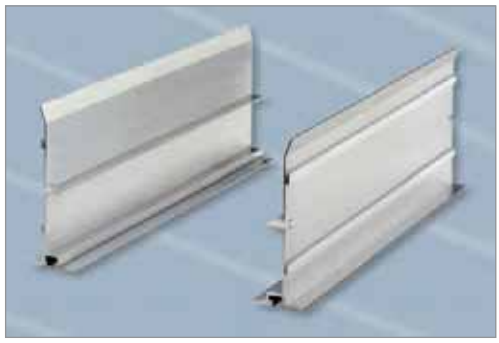
Fastening by means of fixators

- PA (plastic) fixators as an alignment aid
- Height-balancing is possible thanks to the wedge shape
- Elongated holes in the fixators for balancing horizontal tolerances of mounting-holes

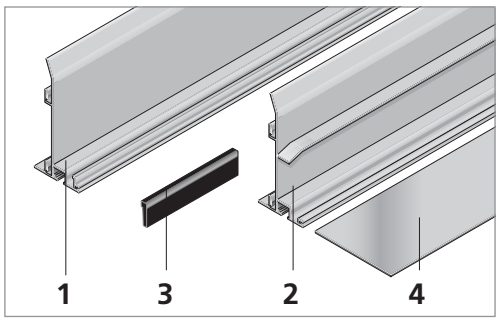
Accessories

Modular guide channel system made of aluminium profile bars

- Simple installation
- No joint bolting, simple alignment via double clamp connection with plastic clamping profiles.
- Can be supplied with a continuous floor plate if required.
- Easy handling
- Low intrinsic weight
- Single-part channel side walls
- Channel side wall profiles with support with bevels on both sides



Standard lengths



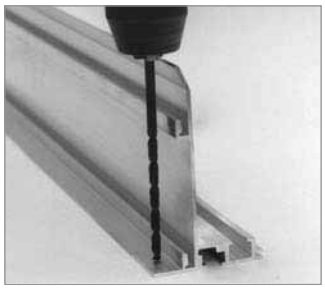
Part 1 channel side wall profile bar without support 1000 mm + 2000 mm

Part 2 channel side wall profile bar with support 1000 mm + 2000 mm

Part 3 plastic clamping profile 130 mm

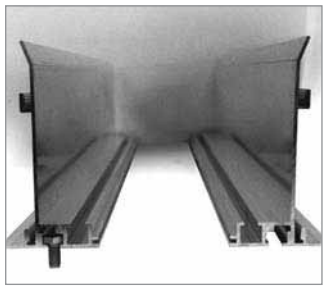
Part 4 floor plate – available on request

Examples of fastening options



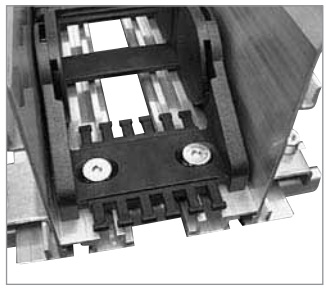
Screwed on from the "outside"

Fastening screws are used for this purpose.
A marking groove simplifies the alignment and drilling.



Screwed on from the "inside"

Recesses are provided in the channel profiles to accommodate hexagonal screws. The screws can be pushed along to the required place.



Attached with a clamp

Simple alignment with assembly on a C-rail.

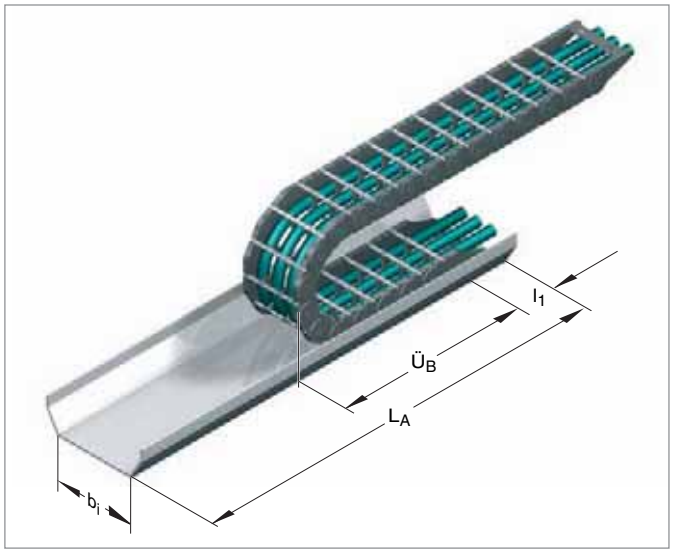
Accessories

Support trays

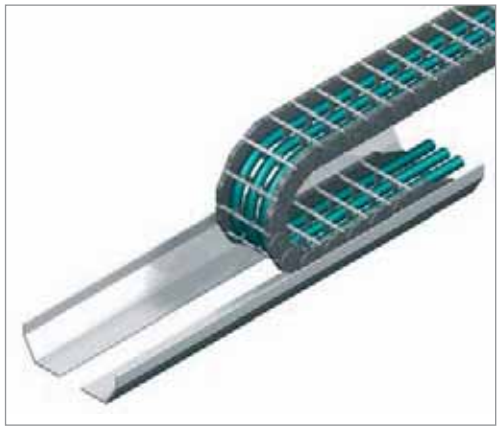
A flat surface is required for the safe operation of the cable carrier. If this is not available on site, a support tray must be provided.

The standard supply length is 2 m.
Special lengths are available on request.

Single-part design



Materials: Galvanized steel plate
stainless steel plate
aluminium plate



Should you require a support tray in a split design, please contact us.
We would be happy to advise you.

Inner width (with standard connection)
$b_{1\ min} \approx B_k + 15$ mm

Length (with standard connection)
$L_A = \frac{L_S}{2} + Ü_B + l_1$

$Ü_B$ – loop overhang
l_1 – connection length

Where there is a strain relief device at the fixed point, the length of the support tray must be increased accordingly.

Strain Relief Devices

SZL-Strain relief devices

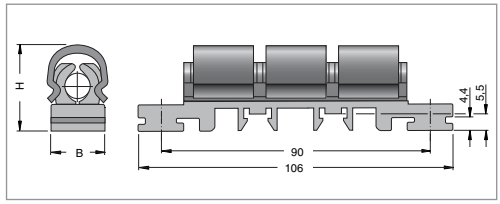
Effective strain relief device - smooth and gentle, for cables in cable carriers

- No screws or cable ties
- Large surface area in contact with the cables
- Defined contact pressure exerted by spring clamps
- Immune to vibration
- Simple, and fast assembly - no tools required
- Suitable for common commercial support rails
- Can also be used for strain relief in control panels.

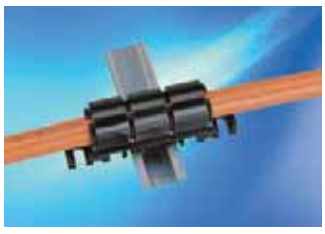
Available sizes

Dimensions in mm

Type	Ident-No.	For cable-Ø	Width B at Ø min	Width B at Ø max	Height H
SZL 8	24989	> 5.0 - 8.0 mm	16	16	28
SZL 10	24990	> 8.0 - 10.5 mm	20	20	30
SZL 14	24991	>10.5 - 14.5 mm	23	26	35
SZL 18	24992	>14.5 - 18.0 mm	25	32	40
SZL 22	24993	>18.0 - 22.0 mm	30	36	44
SZL 27	24994	>22.0 - 27.0 mm	34	39	50
SZL 32	24995	>27.0 - 32.0 mm	39	44	56



Fastening options



1.1 By clipping on to a C-rail

1.2 By clipping onto a cap bar

1.3 By pushing into two C-profile bars
Fastening of the basic elements via slotted screw bolt connection

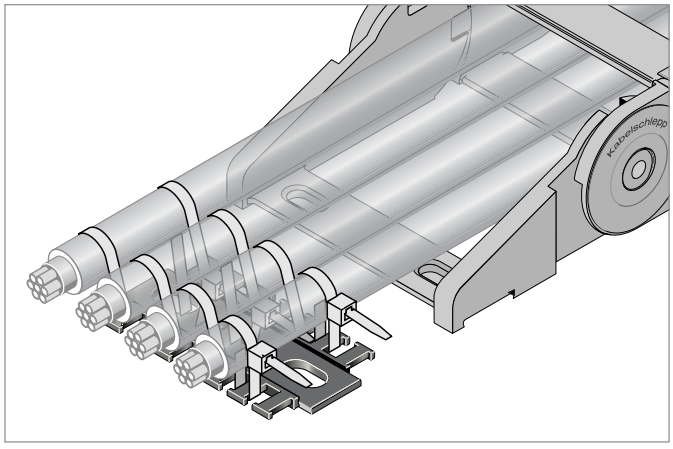
1.4 By directly screwing on

Solutions 1.3 and 1.4 permit the transmission of large tensile forces possible and are therefore recommended as standard solutions.

2D and 3D-CAD data can be found on the Internet at www.kabelschlepp.de.

Strain relief devices

Strain relief comb strips



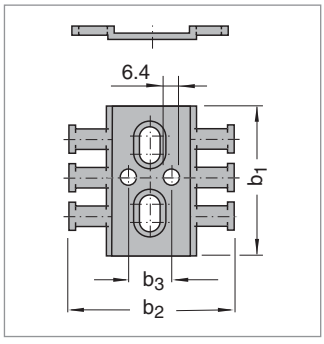
Individual solution for strain relief of different cables, for all cable carriers

For separate strain relief or fastening the cables outside the cable carrier.

The strain relief comb strips are equipped with teeth on both sides. Every cable can thus be securely fixed with two cable ties.

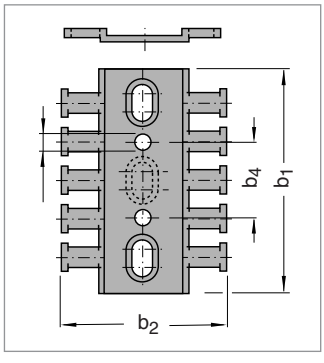
Dimensions

Ident-No.	b_1 mm	b_2 mm	b_3 mm	b_4 mm	No. of teeth
52480	50	53	14	–	3
52485	65	53	14	–	4
52490	70	70	20	–	4



Dimensions

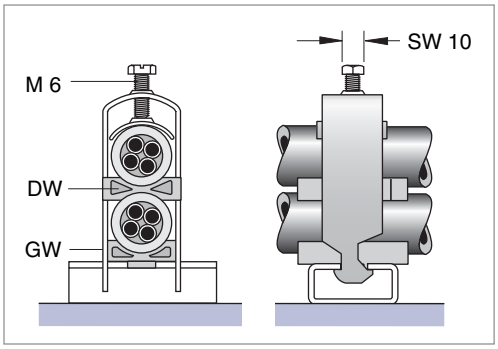
Ident-No.	b_1 mm	b_2 mm	b_3 mm	b_4 mm	No. of teeth
52481	70	53	–	15	4
52482	90	53	–	35	6
52483	115	53	–	60	8
52484	142	53	–	87	10
52486	90	53	–	25	6
52487	115	53	–	50	7
52488	140	53	–	75	10
52489	165	53	–	10	12
52491	95	70	–	20	6
52492	120	70	–	40	8
52493	145	70	–	65	10
52494	170	70	–	90	12
52495	195	70	–	115	14
52496	220	70	–	140	16
52497	245	70	–	165	18
52498	270	70	–	190	20



Strain relief devices

Saddle-type clamps with a small base

For all common commercial C profiles
with a slot width of 11 - 12 mm



Single clamps for one cable

Dimensions in mm

Type	Cable-Ø	Opposite sleeve GW	Double sleeve DW
BA 12	6 – 12	GW 12	–
BA 14	10 – 14	GW 14	–
BA 16	12 – 16	GW 16	–
BA 18	14 – 18	GW 18	–
BA 22	18 – 22	GW 22	–
BA 26	22 – 26	GW 26	–
BA 30	26 – 30	GW 30	–
BA 34	30 – 34	GW 34	–
BA 38	34 – 38	GW 38	–
BA 42	38 – 42	GW 42	–

Double clamps for two cables, one above the other

Dimensions in mm

Type	Cable-Ø	Opposite sleeve GW	Double sleeve DW
BA 12/2	6 – 12	GW 12	DW 12
BA 14/2	10 – 14	GW 14	DW 14
BA 16/2	12 – 16	GW 16	DW 16
BA 18/2	14 – 18	GW 18	DW 18
BA 22/2	18 – 22	GW 22	DW 22

Triple clamps for three cables one above another

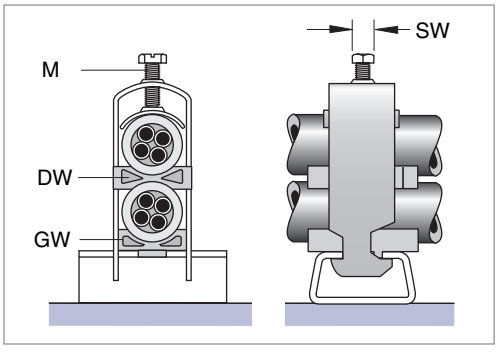
Dimensions in mm

Type	Cable-Ø	Opposite sleeve GW	Double sleeve DW
BA 12/3	6 – 12	GW 12	DW 12
BA 14/3	10 – 14	GW 14	DW 14

Strain relief devices

Saddle-type clamps with a large base

For all common commercial C rails
with a slot width of 16 - 17 mm



Single clamps for one cable

Dimensions in mm

Type	Cable-Ø	Opposite sleeve GW	Double sleeve DW
B 12	6 – 12	GW 12	–
B 14	10 – 14	GW 14	–
B 16	12 – 16	GW 16	–
B 18	14 – 18	GW 18	–
B 22	18 – 22	GW 22	–
B 26	22 – 26	GW 26	–
B 30	26 – 30	GW 30	–
B 34	30 – 34	GW 34	–
B 38	34 – 38	GW 38	–
B 42	38 – 42	GW 42	–
B 46	42 – 46	GW 46	–
B 50	46 – 50	GW 45	–

Double clamps for two cables, one above the other

Dimensions in mm

Type	Cable-Ø	Opposite sleeve GW	Double sleeve DW
B 12/2	6 – 12	GW 12	DW 12
B 14/2	10 – 14	GW 14	DW 14
B 16/2	12 – 16	GW 16	DW 16
B 18/2	14 – 18	GW 18	DW 18
B 22/2	18 – 22	GW 22	DW 22
B 26/2	24 – 26	GW 22	DW 26
B 30/2	28 – 30	GW 22	DW 30
B 34/2	32 – 34	GW 22	DW 34
B 38/2	36 – 38	GW 22	DW 38
B 42/2	40 – 42	GW 22	DW 42

Triple clamps for three cables one above another

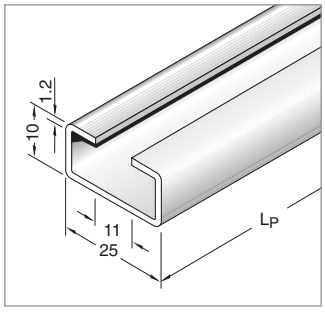
Dimensions in mm

Type	Cable-Ø	Opposite sleeve GW	Double sleeve DW
B 12/3	12	GW 12	DW 12
B 14/3	14	GW 14	DW 14
B 16/3	16	GW 16	DW 16
B 18/3	18	GW 18	DW 18
B 22/3	22	GW 22	DW 22
B 26/3	26	GW 26	DW 26
B 30/3	30	GW 30	DW 30

Strain relief devices

Assembly profile bars

C-profile bars

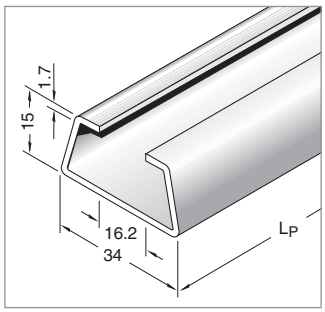


Suitable for all common commercial brackets
(slot width 11 - 12 mm), types BA, see page 216.

Material	Item no.
Steel	3931

Fasten the profile bars with cylindrical screws M 6 - DIN 6912

C rail

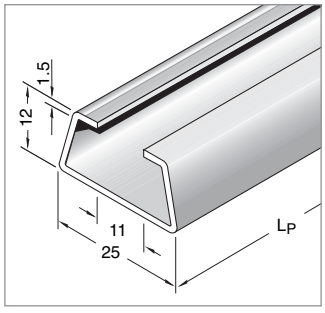


Suitable for all common commercial brackets
(slot width 16 - 17 mm), types B, see page 216.

Material	Item no.
Aluminium	3926
Steel	3932

Fasten the profile bars with cylindrical screws M 10 - DIN 6912.

C-rail (only for MASTER L 60, L 80)



Suitable for all common commercial brackets
(slot width 16 - 17 mm), types BA, see page 216.

Material	Item no.
Steel	3934

Fasten the profile bars with cylindrical screws M 6 - DIN 6912.

KABELSCHLEPP

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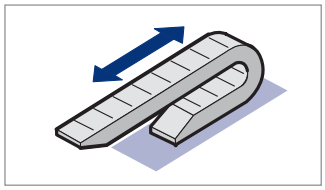
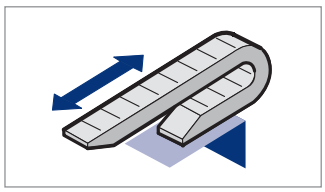
Installation variants

Examples of different installation variants of KABELSCHLEPP cable carriers

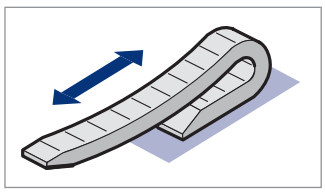
Horizontal arrangement "unsupported"



Horizontal arrangement "unsupported – overhanging"

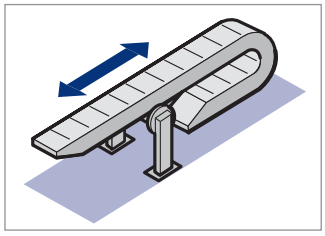
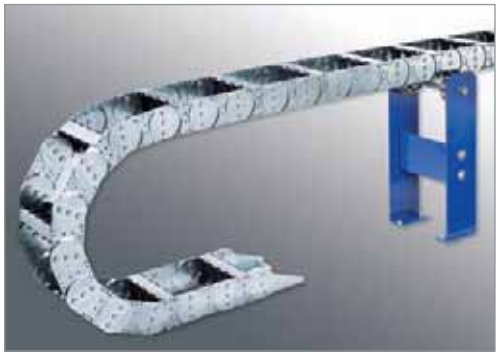
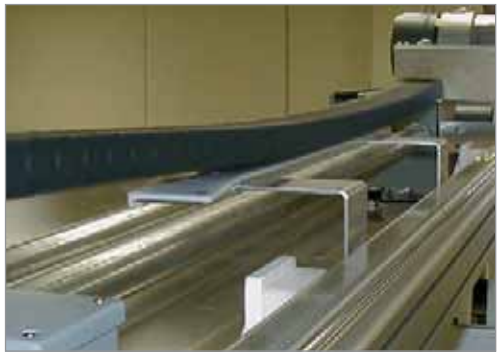


Horizontal arrangement "with permissible sag"

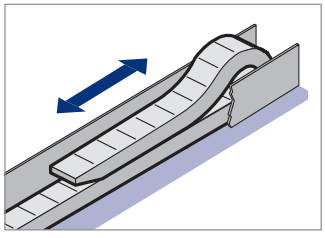


Installation variants

Horizontal arrangement "with support"

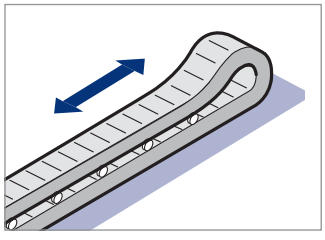




Horizontal arrangement "sliding in a guide channel"

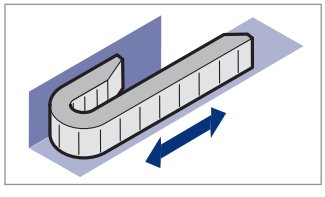
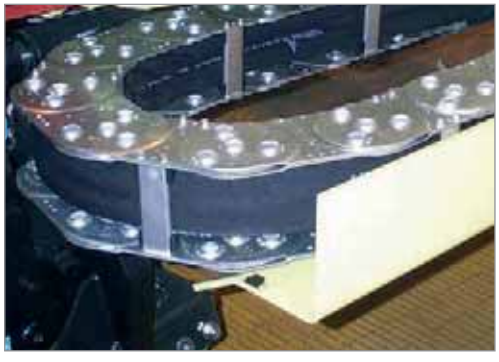


Horizontal arrangement "KabelSkate"

Roller system for very long travel lengths

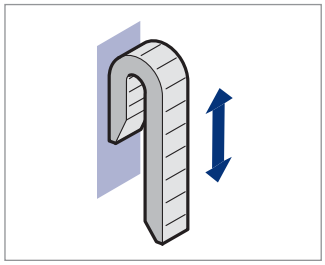


Horizontal arrangement "rotated through 90° – straight"

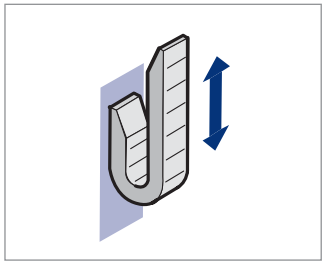



Installation variants

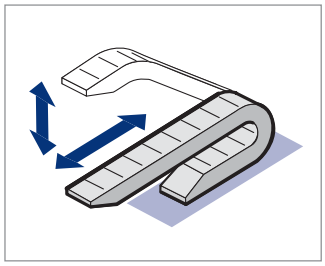
Vertical arrangement "standing"

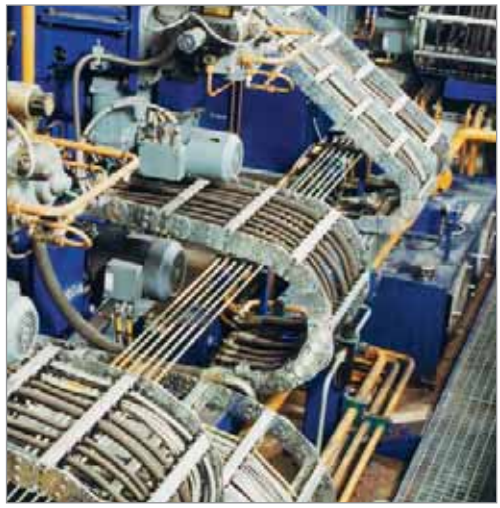


Vertical arrangement "hanging"



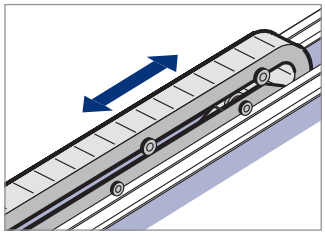
Horizontal/vertical arrangement "combined"



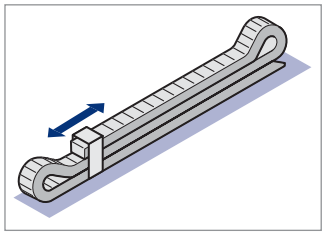


Installation variants

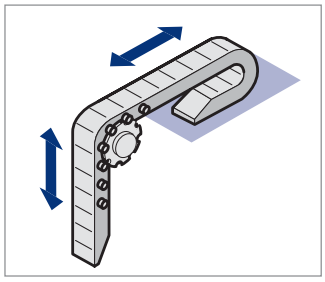
Horizontal arrangement – "with continuous support structure"



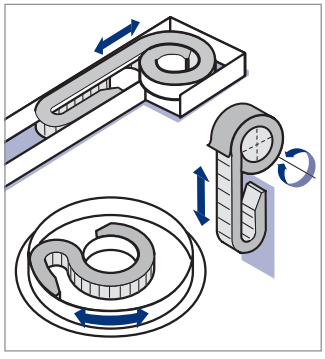
Arrangement DYNAGLIDE



Vertical arrangement – "hanging with load-bearing bolts"



Rotating arrangements




KABELSCHLEPP

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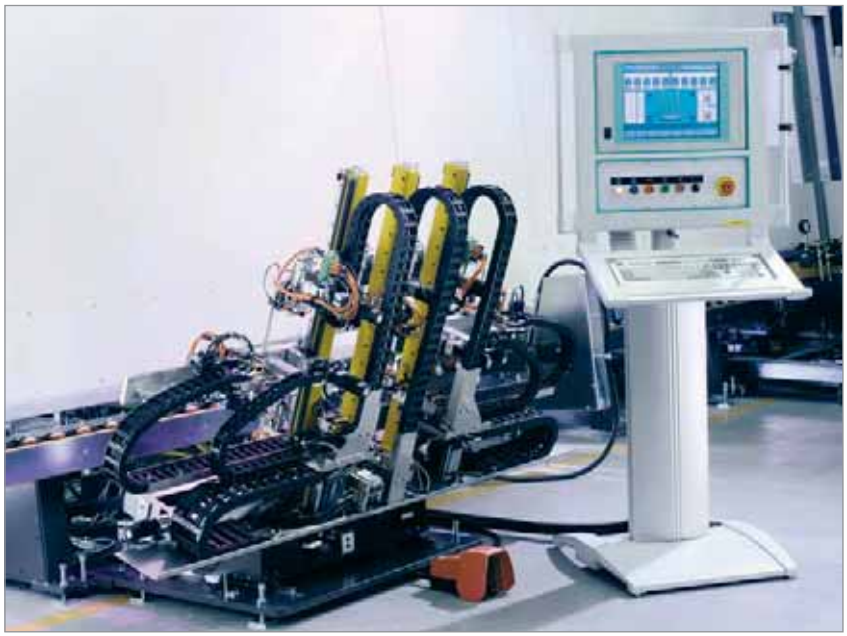
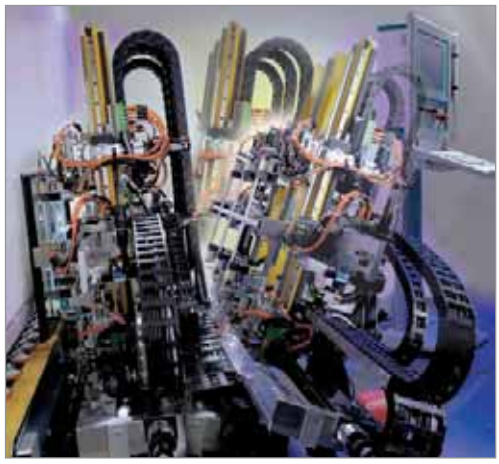
Application examples

Application examples





UNIFLEX Series cable carriers on an automatic stave setting station

Photograph: Lenhard Maschinenbau GmbH

UNIFLEX Series cable carrier on a CNC-machining center

Photograph: Reichenbacher GmbH

Application examples

ROBOTRAX cable carrier system and steel cable carriers on a manipulator for handling crankcase core stackings

Photographs:
Hottinger Maschinenbau GmbH

UNIFLEX Series cable carrier and KABELSCHLEPP telescopic cover on a highspeed machining center

Photograph:
EiMa Maschinenbau GmbH

Application examples



ROBOTRAX cable carrier system: Angle of rotation about 180° without channel system on a buckling arm robot application

Photographs: Reis Robotics – Arthur Bräuer GmbH & Co. KG

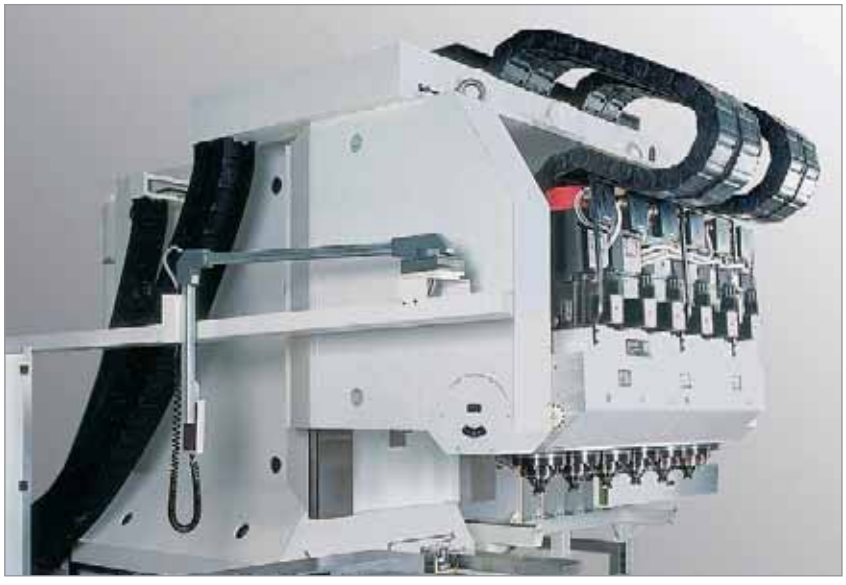
ROBOTRAX cable carrier system on a combined portal and buckling arm robot application

Photographs: Güdel AG, Langenthal

Application examples

Steel and plastic cable carriers and KABELSCHLEPP telescopic covers on a portal milling machine

Photograph: Waldrich Siegen Werkzeugmaschinen GmbH



M Series cable carrier on a high-performance machining center

Photograph: Liechti Engineering AG

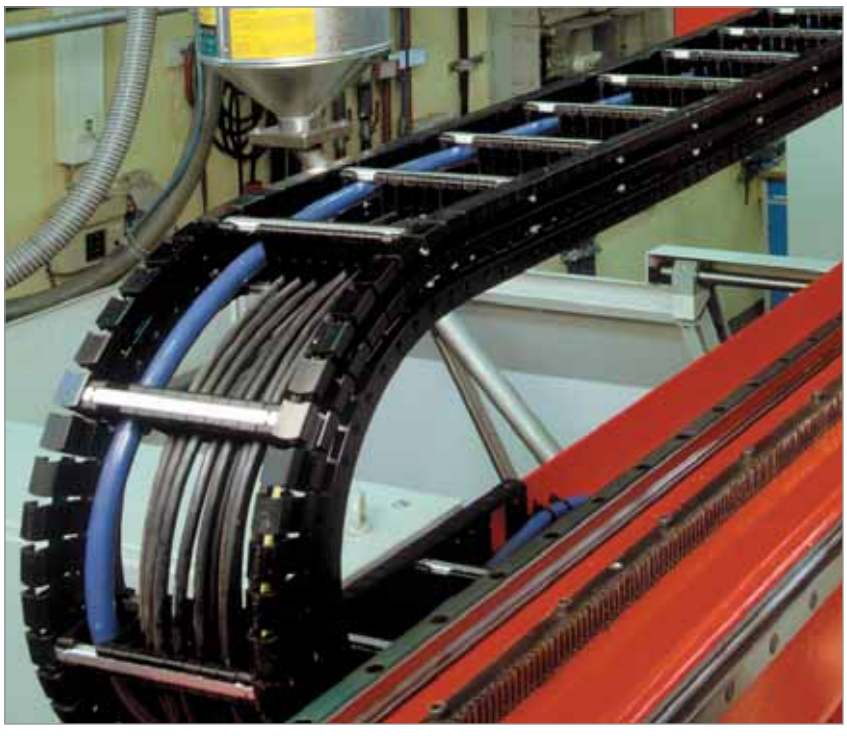
Application examples

Type 0161 cable carrier system in an automobile sliding door

MONO Series cable carrier systems, type 0450

Installation variants:
horizontal "unsupported" –
and vertical "standing"

Photograph: Reis Robotics



QUANTUM cable carrier system on a handling system

Application examples

UNIFLEX cable carrier system in a zig-zag system on a lowerable multimedia cube in the Nuremberg Arena

Type **MT 0950** cable carrier on a roll grinding machine
Installation variant: horizontal – "unsupported"

Photograph: Waldrich Siegen Werkzeugmaschinen GmbH

Type MK 0475 cable carrier
for separating the cables in a **steel** cable carrier system, **type 3200** on the ZEUS detector

Photograph: Deutsches Elektronen-Synchrotron, Hamburg

Steel cable carriers on a drilling system

Photograph: Prime Drilling GmbH

KABELSCHLEPP

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Ordering key
Sample orders

Ordering key and sample orders

BASIC-LINE

MONO Series

Ordering key, **cable carrier**:

0130.10 - 28 - 390

- Chain type
- Bend radius KR in mm
- Chain length L_k in mm

Ordering key, **connection**:

F X / M X

- **Fixed point**
- **Connection type**
  - A - Threaded joint outside (standard)
  - I – Threaded joint inside
  - H – Threaded joint, rotated through 90° to the outside
  - K – Threaded joint, rotated through 90° to the inside
- **Driver**
- **Connection type**
  - A - Threaded joint outside (standard)
  - I – Threaded joint inside
  - H – Threaded joint rotated through 90° to the outside
  - K – Threaded joint, rotated through 90° to the inside

Sample order: **FA/MA** (standard) or **FA/MI**

For possible connection variants see the respective product description.

To order a divider system: see page 248.

Ordering key and sample orders

BASIC-LINE

UNIFLEX Series

Ordering key, **cable carrier**:

0345.040.038.050 - 1380

- Type
- Design
- Inside width B_i in mm
- Bend radius KR in mm
- Chain length L_k in mm (without connection)

Ordering key, **plastic connectors**

F X / M X

- **Fixed point**
- **Connection type**
  A - Threaded joint outside (standard)
  I – Threaded joint inside
  H – Threaded joint, rotated through 90° to the outside
  K – Threaded joint, rotated through 90° to the inside
- **Driver**
- **Connection type**
  A - Threaded joint outside (standard)
  I – Threaded joint inside
  H – Threaded joint, rotated through 90° to the outside
  K – Threaded joint, rotated through 90° to the inside

Sample order: **FA/MA** (standard) or **FA/MK**

Possible connection variants: see the respective product description.

UNIFLEX Series

Ordering key, **Universal Mounting Brackets (UMBs)**

F U / M U

- **Fixed point**
- **Connection type**
  UMB
- **Driver**
- **Connection type**
  UMB

Sample order: **FU/MU**

Possible connection variants: see the respective product description.

To order a divider system: see page 248.

Ordering key and sample orders

BASIC-LINE*PLUS*

PROTUM

Ordering key, **cable carrier**:

P 0240.10 - 30 - 42 - 380

- Chain type
- Open design, for simple pressing in of the cables
- Inside width B_i in mm
- Bend radius KR in mm
- Chain length L_k in mm

Ordering key, **connection**:

F I / M I

- **Fixed point** I – threaded joint inside
- **Driver** I – threaded joint inside

When ordering **PROTUM OFFICE**, please specify connection. Specification of the bend radius is not necessary.

PROFILE

Ordering key, **modular cable carrier with connection**

3 pieces EM-2727 - 820 - AV 1

- Number of modules
- Module designation (e.g. EM-2727)
- Module length L_k in mm
- Connection variant (e.g. 1; see page 5)

Ordering key, **radius clip**

100 pieces EC - xxx - xxx

- Number of radius clips
- Cable carrier radius clip
- Bend radius KR
- Module width

Part numbers for ordering **radius clips**

Dimensions in mm

Bend radius	Module-EM-1212	Module EM-1717	Module EM-2222	Module EM-2727	Module EM-3232
75	EC-075032	EC-075042	EC-075052	–	–
100	EC-100032	EC-100042	EC-100052	EC-100062	EC-100072
150	EC-150032	EC-150042	EC-150052	EC-150062	EC-150072
200	EC-200032	EC-200042	EC-200052	EC-200062	EC-200072
250	EC-250032	EC-250042	EC-250052	EC-250062	EC-250072

Number of radius clips required

Single module: 25 pieces/m
Module combination: 2 x 25 pieces/m

Ordering key, **joining rivet**

18 pieces EN

- Number of joining rivets
- Cable carrier rivet (connecting rivet)

Ordering key, **special module**

3 pieces EM - S67 - 500

- Number of modules
- Module designation (e.g. EM-S67)
- Module length L_k in mm

Ordering key and sample orders

VARIO-LINE

K Series / M Series / XL Series

Ordering key, **cable carrier**:

KC 0650.176 - RS - 115 - 1430

- Type
- Inside width B_i in mm (with frame stays)
- Stay width B_{St} in mm ((with hole stays)
- Stay variant
- Bend radius KR in mm
- Chain length L_k in mm (without connection)

For types 0320 and 0475, please specify the desired opening variant.

MASTER Series

Ordering key, **cable carrier**:

LC 80.200 - RSL - 115 - 1430

- Type
- Inside width B_i in mm
- Stay variant
- Bend radius KR in mm
- Chain length L_k in mm (without connection)

QUANTUM

Ordering key, **cable carrier**:

Q 040.108 - RE - 150 - 1365

- Type
- Inside width B_i in mm
- Stay variant
- Bend radius KR in mm
- Chain length L_k in mm (without connection)

K Series / M 0650, M 0950, M 1250 / MASTER / QUANTUM

Ordering key, **Universal Mounting Brackets (UMBs)**

F U / M U

- **Fixed point**
- **Connection type**
  UMB
- **Driver**
- **Connection type**
  UMB

Sample order: **FU/MU**
For possible connection variants: see the relevant chapter.

To order a divider system: see page 248.

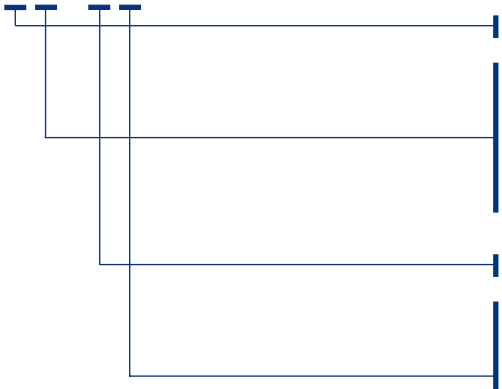
Ordering key and sample orders

VARIO-LINE

M 0320, M 0475, XL Series

Ordering key, **connection**

F X / M X



Fixed point

Connection type
A - Threaded joint outside (standard)
I – Threaded joint inside
H – Threaded joint, rotated through 90° to the outside
K – Threaded joint, rotated through 90° to the inside

Driver

Connection type
A - Threaded joint outside (standard)
I – Threaded joint inside
H – Threaded joint, rotated through 90° to the outside
K – Threaded joint, rotated through 90° to the inside

Sample order: **FA/MA** (standard) or **FA/MK**

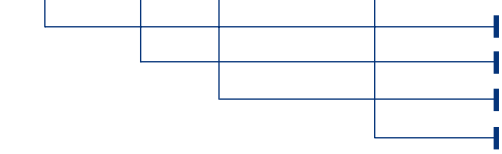
For possible connection variants see the respective product description.

3D-LINE

ROBOTRAX

Ordering key for the **cable carrier**:

R 075.010.145 – 1000



Type
Design (010 = open)
Bend radius KR in mm
Chain length L_K in mm (without connection)

To order individual parts see ROBOTRAX chapter.

Example:
ROBOTRAX cable carrier assembled
complete with clamps and steel wire.
Type R 075, design 010 (open),
for simple pressing in of the cables
bend radius 145 mm, length 1000 mm

Ordering key and sample orders

STEEL-LINE

Steel cable carriers

Ordering key for the **cable carrier**:

S 0950.300 - RS 1 - 200 - St - 2375

- Material and type
- Stay width B_{St} in mm
- Stay variant
- Bend radius KR in mm
- Chain band material (galvanized steel/high-grade steel)
- Chain length L_k in mm (without connection)

Ordering key, **connection**

F X X / M X X

- **Fixed point**
- **Connection type**
  A - Threaded joint outside (standard)
  I – Threaded joint inside
  H – Threaded joint, rotated through 90° to the outside
  K – Threaded joint, rotated through 90° to the inside
- **Driver**
- **Connection type**
  A - Threaded joint outside (standard)
  I – Threaded joint inside
  H – Threaded joint, rotated through 90° to the outside
  K – Threaded joint, rotated through 90° to the inside
- **Connecting surface**
  I – Connecting surface inside (< B_k)
  A – Connecting surface outside (standard) (> B_k)
- **Connecting surface**
  I – Connecting surface inside (< B_k)
  A – Connecting surface outside (standard) (> B_k)

Sample order: **FAI/MAI** (standard) or **FAA/MKA**

CONDUFLEX and MOBIFLEX cable carriers

Ordering key for the **cable carrier**:

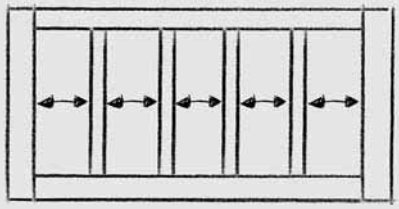
CF 115 - 140 - 1200 - SF/QF

- Conduit type
- Bend radius KR in mm
- Conduit length L_{ES} in mm (without connection)
- Conduit connection

To order connectors see the CONDUFLEX/MOBIFLEX chapter from page 200 onwards.

Ordering divider systems – sample drawings

Divider system TS 0

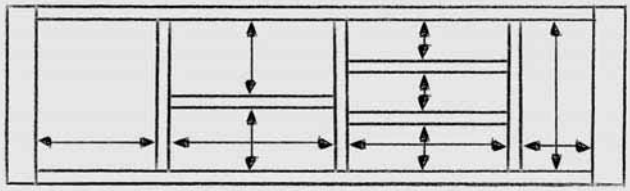


Divider system TS 1

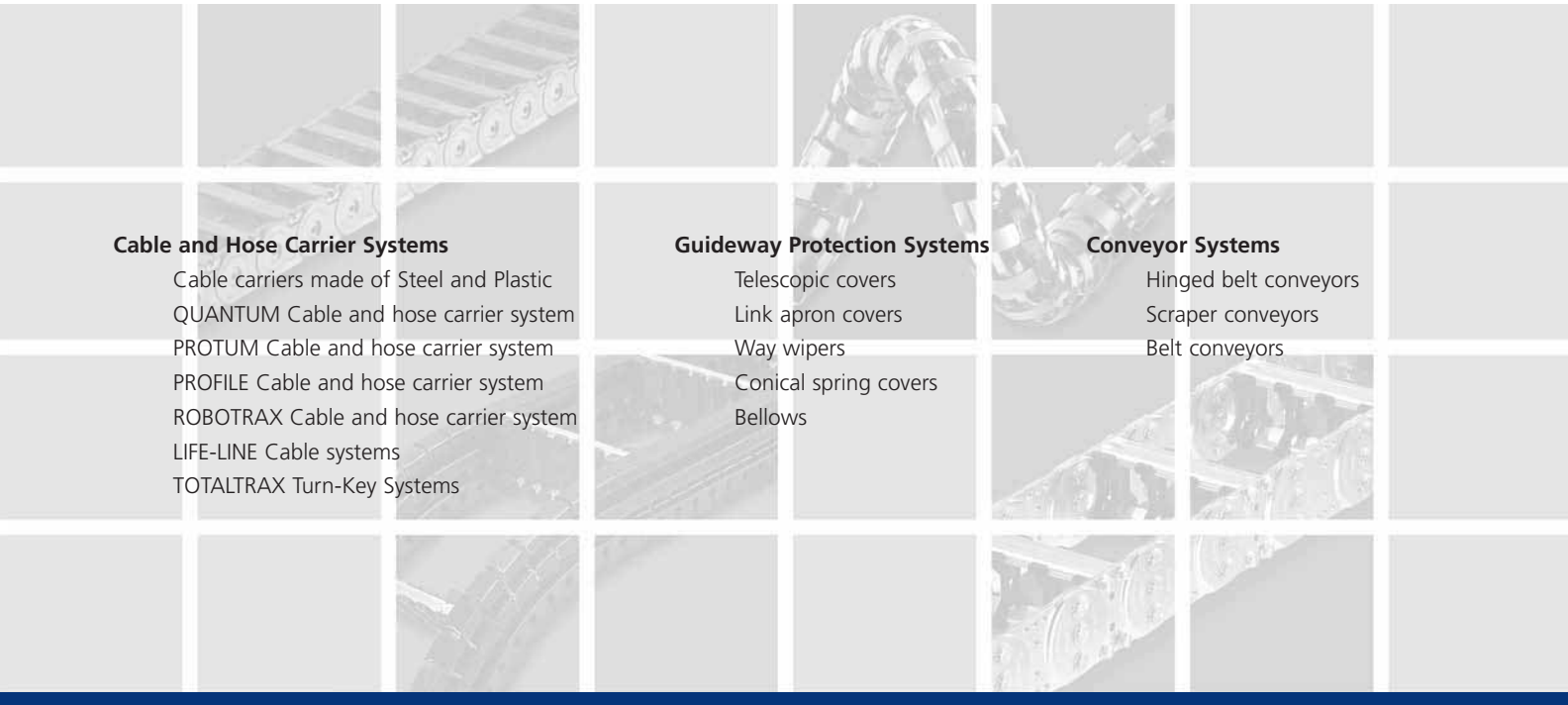
with continuous height subdivision made of aluminium

Divider systems TS 2 and TS 3

with partitioned height subdivision made of plastic or aluminium



When ordering the divider system, please attach a sketch with the dimensions.



Cable and Hose Carrier Systems

- Cable carriers made of Steel and Plastic
- QUANTUM Cable and hose carrier system
- PROTUM Cable and hose carrier system
- PROFILE Cable and hose carrier system
- ROBOTRAX Cable and hose carrier system
- LIFE-LINE Cable systems
- TOTALTRAX Turn-Key Systems

Guideway Protection Systems

- Telescopic covers
- Link apron covers
- Way wipers
- Conical spring covers
- Bellows

Conveyor Systems

- Hinged belt conveyors
- Scraper conveyors
- Belt conveyors

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