Innovation in Motion

TSUBAKI

KABELSCHLEPP

QuickTrax® series

PLASTIC CABLE CARRIER

QUICK OPENING

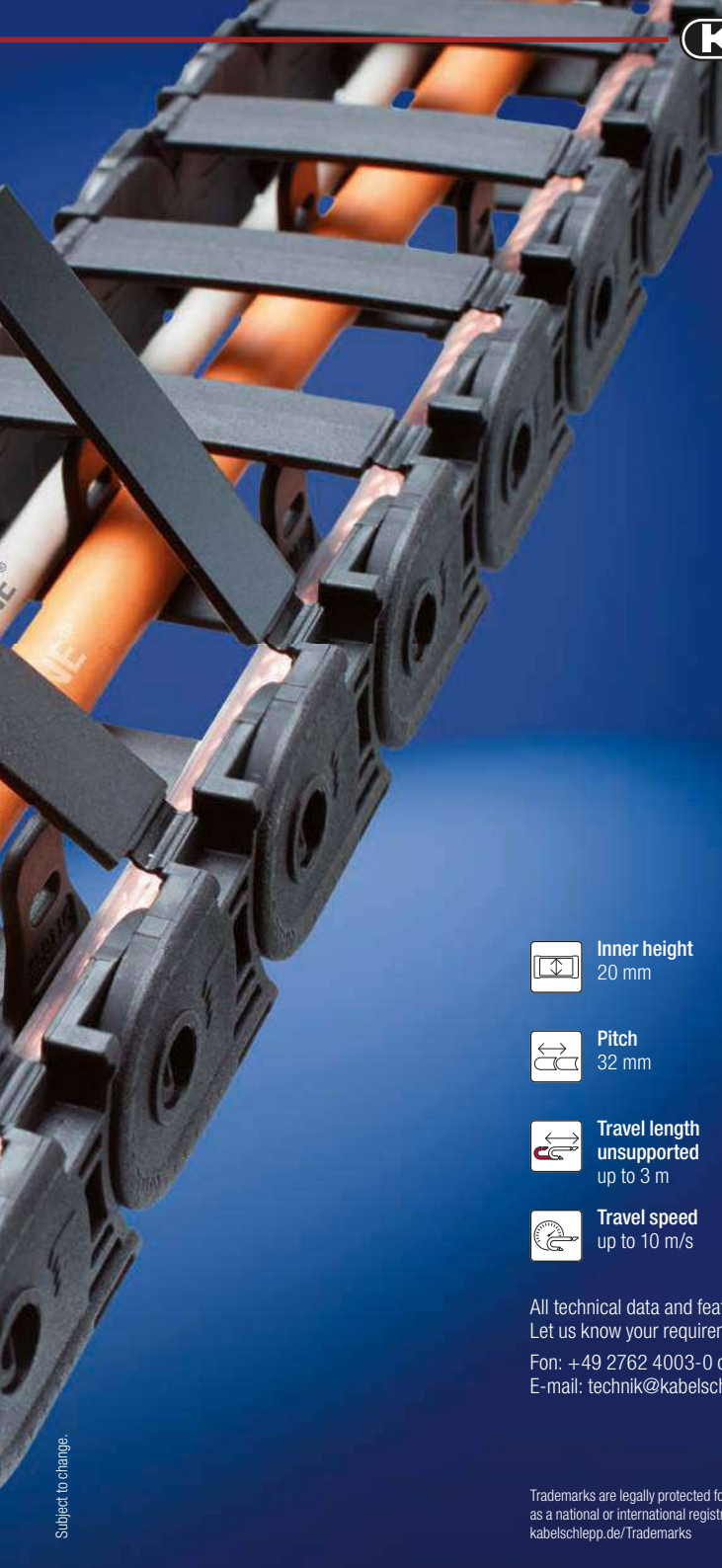
WITH FILM HINGE

TWO-COMPONENT TECHNOLOGY

QuickTrax® series

Compact and cost-effective cable carriers in two-component technology

TSUBAKI ECO LINK



Inner height
20 mm

Inner widths
15 – 65 mm

Pitch
32 mm

Additional load
up to 3 kg/m

Travel length unsupported
up to 3 m

Travel length gliding
up to 80 m

Travel speed
up to 10 m/s

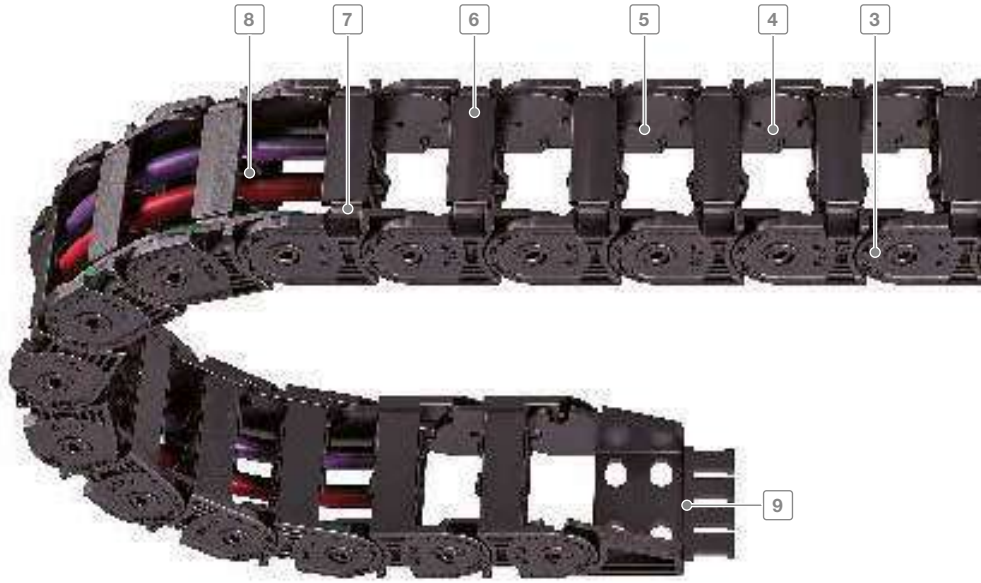
Travel acceleration
up to 50 m/s²

All technical data and features depend on application and type.
Let us know your requirements – we are here to help!

Fon: +49 2762 4003-0 or
E-mail: technik@kabelschlepp.de

Subject to change.

QuickTrax® | Overview



Features

- Extremely fast and easy cable laying thanks to cross-bar with film hinge
- Extremely low noise due to integrated noise damping
- Extensive unsupported length
- Each chain link consists of two different materials:
  - Hard cable carrier body made of glass fiber-reinforced material
  - Crossbar with flexible film hinge made of elastic special plastic
- Sturdy chain design
- High torsional rigidity

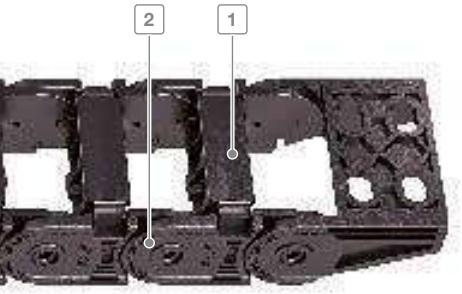
Easy to open …

… even without tools

High side stability

Reliable cable separation

QuickTrax® | Overview



Example of inner distribution

1. Sturdy two-component design: Hard cable carrier body, flexible film hinge
2. Chain links made of plastic
3. Extensive unsupported length
4. Inside space is gentle on the cables – no interfering edges
5. Extremely low noise due to integrated noise damping
6. Quick and easy to open
7. For inward/outward opening
8. Dividers and height separations for cable separation
9. Single-part end connectors with and without integratable strain relief

Selection criteria for QuickTrax®

- Where extremely fast cable laying is required
- For high fill levels
- Where an extensive unsupported length is required
- Where rigidity is required
- For low noise applications

Type	h_i [mm]	B_i [mm]	t [mm]	Page
QT0320	20	15 – 65	32	8

QuickTrax® | Overview

Cable carrier design

Solid plastic cable carriers: Side bands and end connectors made of plastic

Each chain link consists of two different materials:

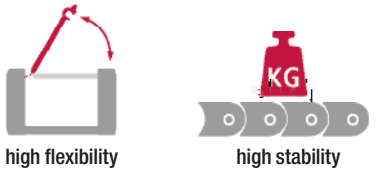
- Hard cable carrier body made of glass fiber-reinforced material
- Crossbar with flexible film hinge made of elastic special plastic

The two-component technology of the QT0320

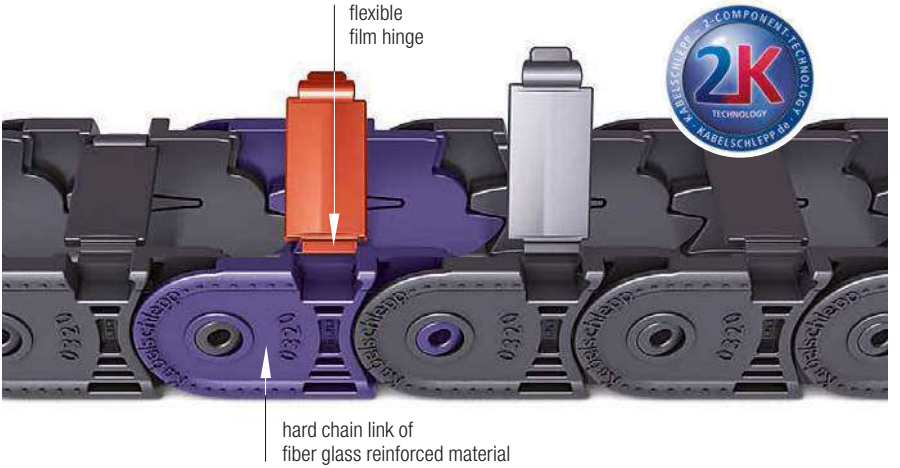
The two-component technology of the **QT0320** combines two seemingly incompatible features: **Stability and flexibility**.

Cable carriers need to be extremely sturdy, with extensive unsupported length. At the same time, cables need to be inserted easily for fast cable laying.

The **QT0320** meets these requirements thanks to its innovative design and material combination of a hard cable carrier body made from glass fiber-reinforced material and crossbars with a film hinge made from rigid special plastic.



high flexibility | high stability

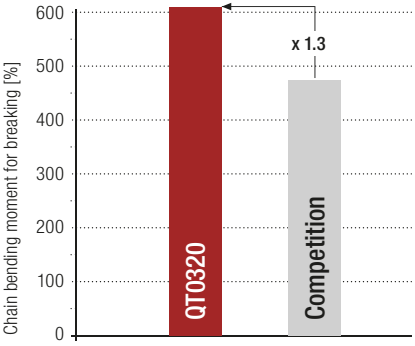


QuickTrax® | Comparison test

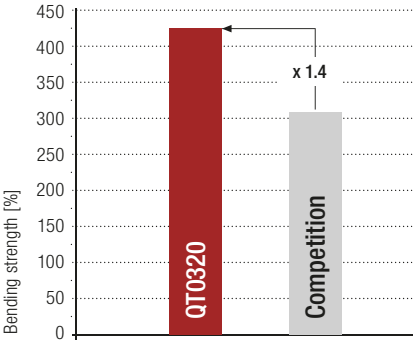
Comparison of dimensions

Manufacturer	h_i [mm]	h_G [mm]	t [mm]	Identical connection hole pattern
QT0320	20.0	25.5	32.0	yes
Competitive product	17.5	23.0	30.5	yes

Comparison of bending moment

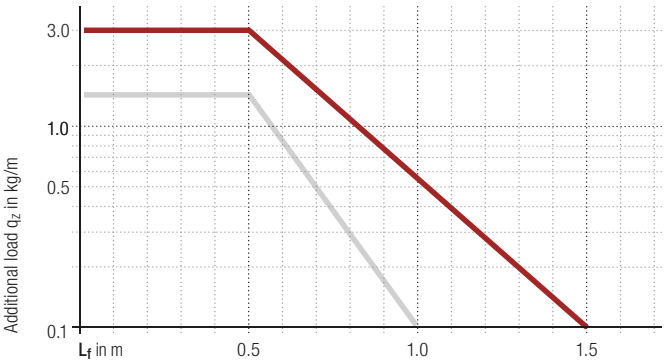


Comparison of bending strength

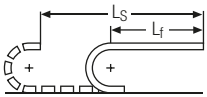


Load diagram

for unsupported length depending on additional load



Unsupported length L_f



QT0320
Competitive product

Advantages over competitive product

- 20 % longer unsupported length compared to competitive product
- 33 % greater additional load through use of fiber glass reinforced plastic
- Greater inner height
- Low noise operation due to internal damping system
- High side stability through locking in the stroke system
- Dividers can be used for cable separation

QT0320

Pitch
32 mm

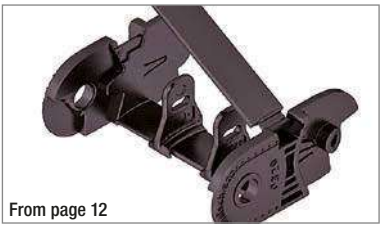
Height
20 mm

Width
15 – 65 mm

Bending radius
28 – 125 mm

Stay variants

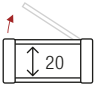
Design 030



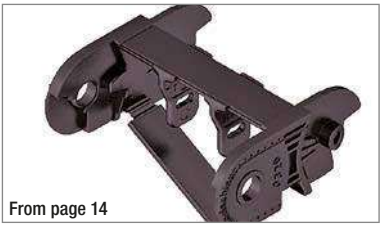
From page 12

Frame with outside opening crossbars
- Weight-optimized plastic frame with particularly high torsional rigidity.
- Swivable slats on one side in any position.

Opening options
outside: Swivable.



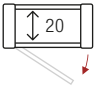
Design 040



From page 14

Frame with inside opening crossbars
- Weight-optimized plastic frame with particularly high torsional rigidity.
- Swivable slats on one side in any position.

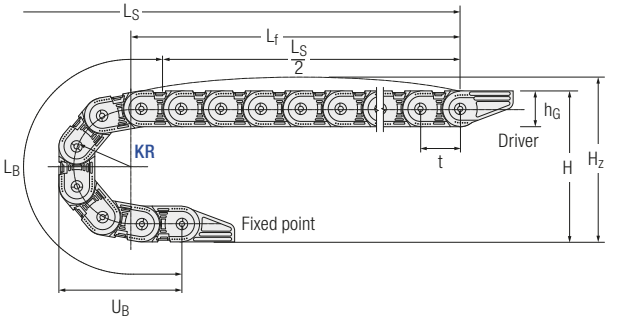
Opening options
inside: Swivable.



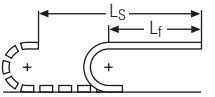
Technical data on p. 10

QT0320 | Installation Dimensions | Unsupported

Unsupported arrangement



Unsupported length L_f



A sagging of the cable carrier is technically permitted for extended travel lengths, depending on the specific application.

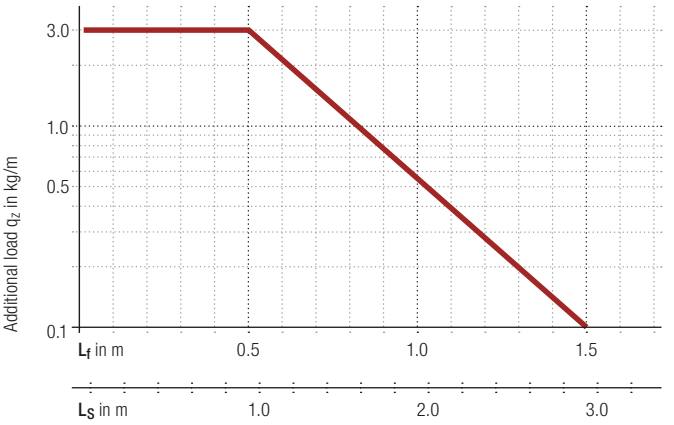
Dynamics of unsupported arrangement		t
v_{max} [m/s]	a_{max} [m/s²]	[mm]
10	50	32

Installation dimensions unsupported

KR [mm]	H [mm]	H_Z [mm]	L_B [mm]	U_B [mm]
28	81,5	101,5	152	73
38	101,5	121,5	184	83
48	121,5	141,5	215	93
75	175,5	195,5	300	120
100	225,5	245,5	379	145
125	275,5	295,5	457	170

Load diagram

for unsupported length depending on additional load



Intrinsic cable carrier weight q_k = 0.40 kg/m with B_i 38 mm.
For other inner widths the maximum additional load changes.

Calculating the cable carrier length

Cable carrier length L_k

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

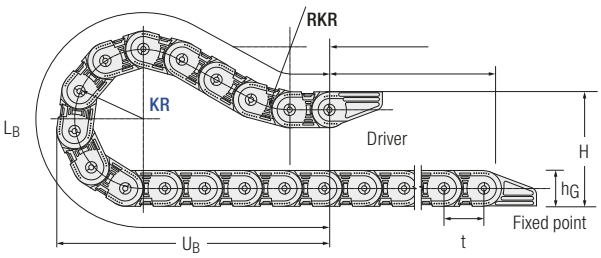
Cable carrier length L_k rounded to pitch t

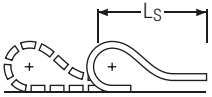
Unsupported length L_f

$$L_f = \frac{L_S}{2} + t$$

Fixed point offset L_v:
For off-center fixed point connections please contact us.

Gliding arrangement





For more information on gliding arrangement please contact us.

Dynamics of gliding arrangement		t
v_{max} [m/s]	a_{max} [m/s²]	[mm]
2.5	25	32

The gliding cable carrier has to be routed in a channel. Our engineers will be happy to help with project planning – please contact us.

Calculating the cable carrier length

Cable carrier length L_k

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

Cable carrier length L_k rounded to pitch t

TSUBAKI KABELSCHLEPP Technical Support

If you have any questions about determining gliding cable carriers or other technical details please contact our technical support service at technik@kabelschlepp.de. We will be happy to help you.

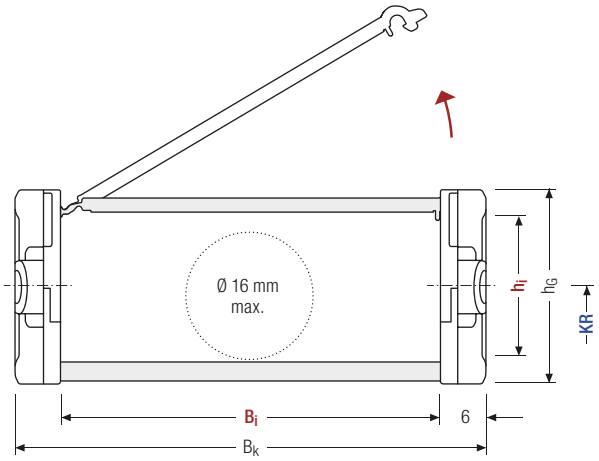
QT0320.030 | Overview

Stay variant 030 – with outside opening crossbars

- Weight-optimized plastic frame with particularly high torsional rigidity.
- Swivable slats on one side in any position.
- **Opening options outside:** Swivable.

Stay arrangement on every chain link **(VS)**

B_i from 15 – 65 mm



Calculating the cable carrier width

Outer width B_k

$B_k = B_i + 12$ mm

The maximum cable diameter strongly depends on the bending radius and the desired cable type. Please contact us.

Information on the inner distribution of the cable carrier can be found on page 16 f.

QT0320.030 | Dimensions · Technical Data

Pitch, inner height and chain link height

t [mm]	h_i [mm]	h_G [mm]
32	20	25.5

Bend radii

KR [mm]					
28	38	48	75	100	125

Inner/outer width and intrinsic cable carrier weight

B_i [mm]	B_K [mm]	q_K [kg/m]
15	27	0.35
25	37	0.38
38	50	0.40
50	62	0.43
65	77	0.45

Order example

QT0320	.	030	.	50	.	100	-	1,280
Type		Stay variant		B_i [mm]		KR [mm]		L_K [mm]

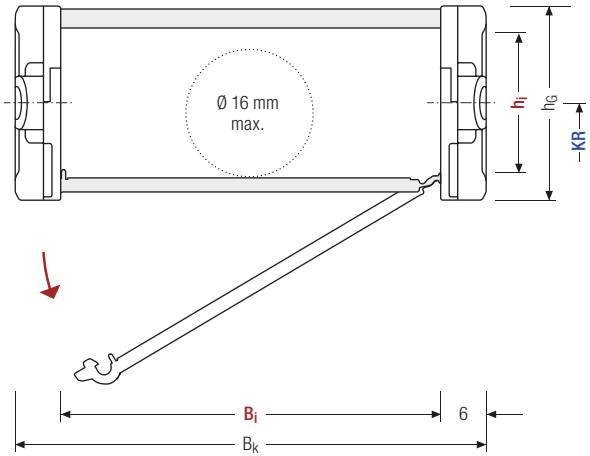
QT0320.040 | Overview

Stay variant 040 – with inside opening crossbars

- Weight-optimized plastic frame with particularly high torsional rigidity.
- Swivable slats on one side in any position.
- **Opening options inside:** Swivable.

Stay arrangement on every chain link **(VS)**

B_i from 15 – 65 mm



Calculating the cable carrier width

Outer width B_k

$B_k = B_i + 12$ mm

The maximum cable diameter strongly depends on the bending radius and the desired cable type. Please contact us.

Information on the inner distribution of the cable carrier can be found on page 16 f.

QT0320.040 | Dimensions · Technical Data

Pitch, inner height and chain link height

t [mm]	h_i [mm]	h_G [mm]
32	20	25.5

Bend radii

KR [mm]					
28	38	48	75	100	125

Inner/outer width and intrinsic cable carrier weight

B_i [mm]	B_K [mm]	q_K [kg/m]
15	27	0.35
25	37	0.38
38	50	0.40
50	62	0.43
65	77	0.45

Order example

QT0320	.	040	.	50	.	100	-	1,280
Type		Stay variant		B_i [mm]		KR [mm]		L_K [mm]

QT0320 | Inner Distribution | TS0

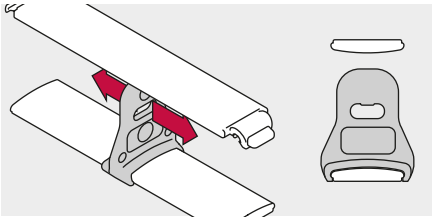
Divider systems

As standard, the divider system is assembled at each 2nd chain link.

As standard, dividers and the complete divider system (dividers with height separations) can be moved in the cross section **(version A).**

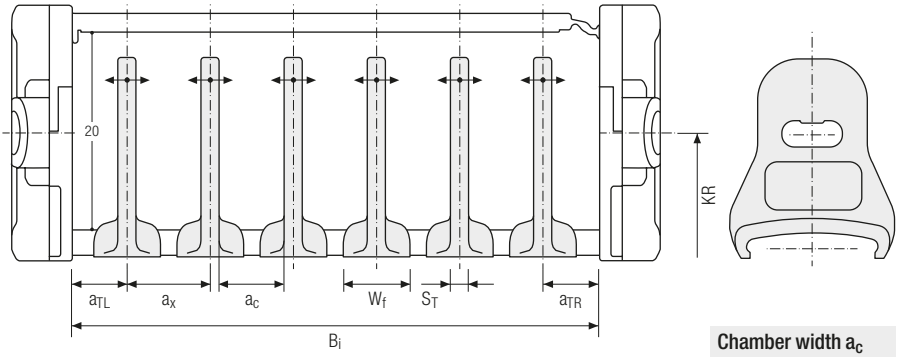
Movable divider

Version A



Divider system TS0 without height separation

Version A				
S_T [mm]	W_f [mm]	$a_{TL}/a_{TR\ min}$ [mm]	$a_{x\ min}$ [mm]	$a_{c\ min}$ [mm]
2	8	4	8	6



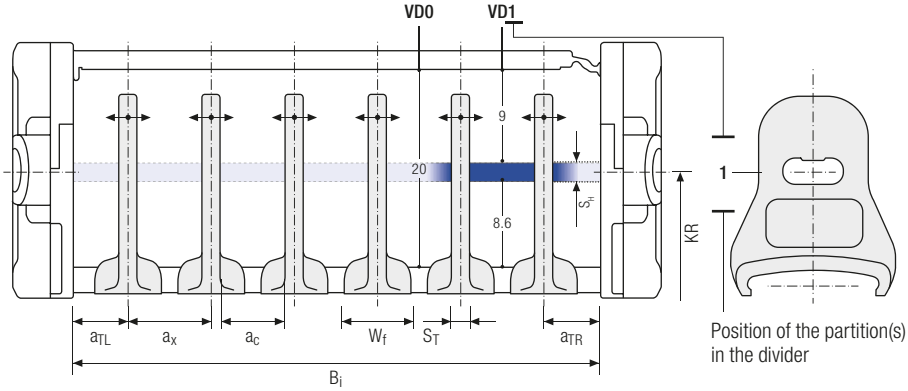
Chamber width a_c

$a_c = a_x - S_T$

Information on the connection dimensions for the cable carrier can be found on page 18 f.

Divider system TS1 with continuous height separation

Version A						
S_T [mm]	W_f [mm]	S_H [mm]	$a_{TL}/a_{TR\ min}$ [mm]	$a_{x\ min}$ [mm]	$a_{c\ min}$ [mm]	$n_{T\ min}$
2	8	2.4	4	8	6	2



Position of the partition(s) in the divider

Standard height separation with **aluminum profile 6 × 2.4 mm**.
The dividers can be moved in the cross section.

Chamber width a_c

$a_c = a_x - S_T$

TOTALTRAX® complete systems

Benefit from the advantages of a TOTALTRAX® complete system. Complete delivery from a single source – with a guarantee certificate on request! Learn more at **kabelschlepp.de/totaltrax**

TRAXLINE® cables in motion

Hi-flex electric cables which were especially developed, optimized and tested for use in cable carriers can be found at **traxline.de**

More product information online

Assembly instructions etc.: Receive additional info via your smartphone or check online at **kabelschlepp.de/support**

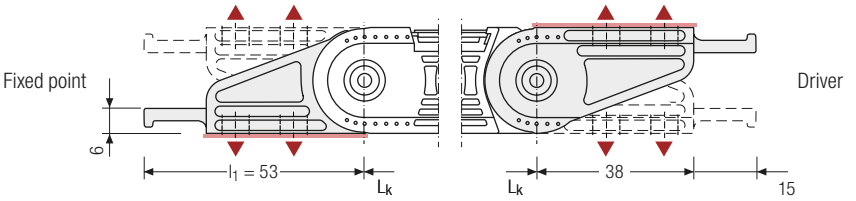
Configure your custom cable carrier: **onlineengineer.de**

Information on the connection dimensions for the cable carrier can be found on page 18.

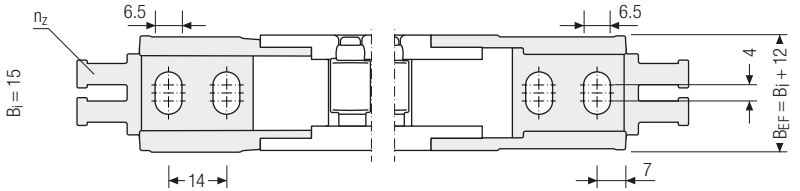
QT0320 | End Connectors | End Connectors

One part end connectors – plastic (with integrated strain relief)

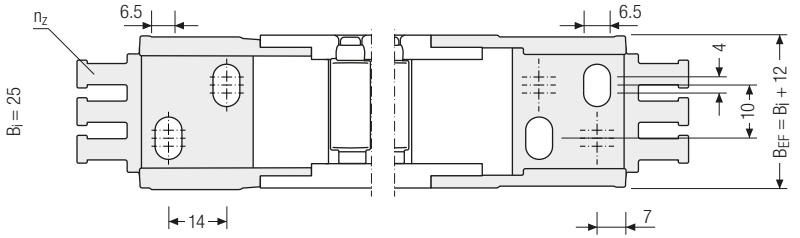
The plastic end connectors can be **connected from above or below**. The connection type can be changed by reconnecting the end connector.



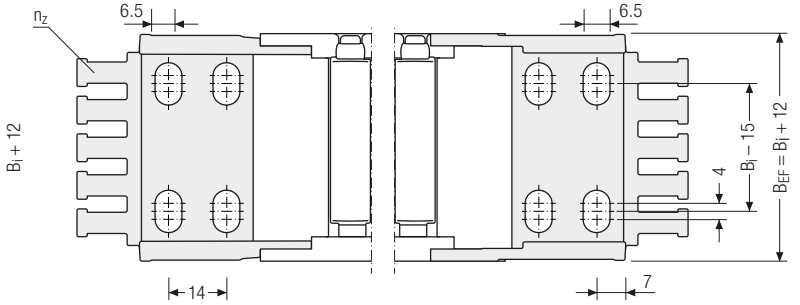
Bi: 15



Bi: 25



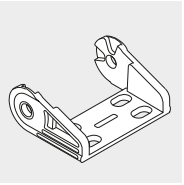
Bi: 38/50/65



▲ Assembly options

One part end connectors – plastic (with integrated strain relief)

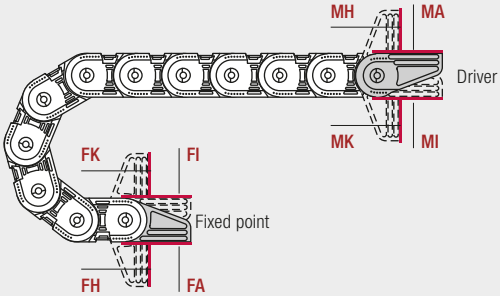
B_i [mm]	B_{EF} [mm]	n_z
15	27	2
25	37	3
38	50	4
50	62	5
65	77	6



The end connectors are also available as an option **without** integrated strain relief. Please state when ordering.

The end connectors cannot be swiveled.

Connection variants



Connection point

F – fixed point
M – 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

QT0320 | Order Key

Order

Cable carrier

Type	Stay variant	B_i [mm]	KR [mm]	L_K [mm]
			28	
		15	38	
		25	48	
		38	75	
	030	50	100	
QT0320	040	65	125	

QT0320	.	030	.	50	.	100	-	960
Type		Stay variant		B_i [mm]		KR [mm]		L_K [mm]

International order specification INTOK:
Information about the International Order Key can be found in the chapter “International Order Key” from page 1.

Divider system

Divider system	Version	n_T	Height separation (not for TS0)
TS0		min. 2	VD0
TS1	A	…	VD1

TS1	.	A	.	2	-	VD0
						⋮
					-	VD1
Divider system		Version		n_T		Height separation

Please state the designation of the divider system **(TS0, TS1)**, version and number of dividers per cross section [n_T].

Connection variant

End connector	Connection point	Connection type
		A
		I
	F	H
End connector	M	K

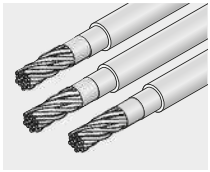
End connector	.	F	A
End connector	.	M	A

Please state the desired connection variant as well as the desired strain relief type for the fixed point and for the driver.

Accessories

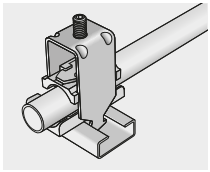
TRAXLINE® cables in motion

Hi-flex electric cables which were especially developed, optimized and tested for use in cable carriers.



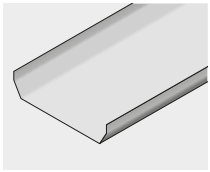
LineFix® clamps

LineFix® clamps are fixed to the C-rail. The serve as a separate strain relief or separate attachment of the cables outside the cable carrier.



Support trays

An even surface is required for safe unrolling of the cable carrier. This is ensured by a support tray.



TOTALTRAX® complete systems

Benefit from the advantages of a TOTALTRAX® complete system. Complete delivery from a single source – with a guarantee certificate on request! Learn more at **kabelschlepp.de/totaltrax**

More product information online

Assembly instructions etc.: Receive additional info via your smartphone or check online at **kabelschlepp.de/support**

Configure your custom cable carrier: **onlineengineer.de**

QuickTrax® | General abbreviations

General abbreviations

a_c = nominal width inner chamber
a_{max} = max. travel acceleration
a_{TL} = distance lateral tabs inside to center of first divider
a_{TR} = distance lateral tabs inside to center of last divider
a_x = divider center to center distance
b_1 = inner width of guide channel
b_A = distance between connection boreholes
B_{EF} = overall width of cable carrier incl. attachments
B_i = inner width
B_k = outer width
B_{KA} = outer width of guide channel
B_p = width of hole stay inserts
B_{St} = stay width
c = distance between hole stay bores
d = diameter
D = bore diameter
d_R = pipe diameter
H = connection height
H' = reduced connection height
h_G = chain link height
$h_{G'}$ = chain link height incl. glide shoe
h_i = inner height
H_i = inner height of frame stay assembly
h_{KA} = outer height of guide channel
HS = half-stayed
H_z = installation height
KR = bending radius
l_1 = connection length
l_{2-5} = connection dimensions
l_A = length of end connector
L_B = length of carrier in bend
L_D = length of permitted sag
L_f = unsupported length
L_{ES} = length of energy conduit
L_k = cable carrier length without connection
L_S = travel length
L_V = fixed point offset
n_p = number of hole stay inserts
n_{RKR} = number of RKR links
n_T = number of dividers
n_Z = number of comb teeth for strain relief
q_k = intrinsic cable carrier weight
q_z = additional load
RKR = reverse bending radius
s = sheet metal thickness
S_H = thickness of height separation
S_T = thickness of divider
t = pitch
U_B = loop overhang
VD = position of continuous height separations in divider
VR = position of partial height separations in divider
v_{max} = max. travel speed
VS = fully-stayed
W_f = base width of divider
z = pretension

Definitions

Driver view = view into the driver connection

Pictographs


inner height


inner width

inner width (B_i)
in x mm increments


pitch


bending radius


long travel length


travel length unsupported


travel length gliding


high additional load


high travel acceleration


high travel velocity


stay arrangement on
every 2nd chain link


stay arrangement on
every chain link


cannot be opened


opens outward


opens inward


opens inward/outward


covered cable carrier


sliding dividers


fixable dividers

fixable dividers
in x mm grid


height separation possible

height separation
in 1 mm increments


hole stay available


guide channel required


strain relief

clean room suitable


quiet running/low noise


sold by the meter


ESD material


suitable for explosive
atmospheres


heat-resistant


cold-resistant


resistant to hot chips

flame-resistant V0
(UL94)

flame-resistant V2
(UL94)


order code


important information