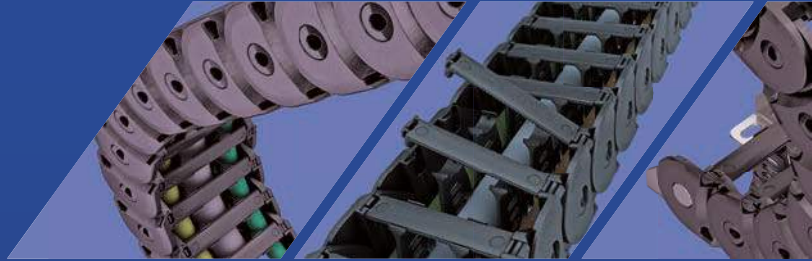


# KABELSCHLEPP

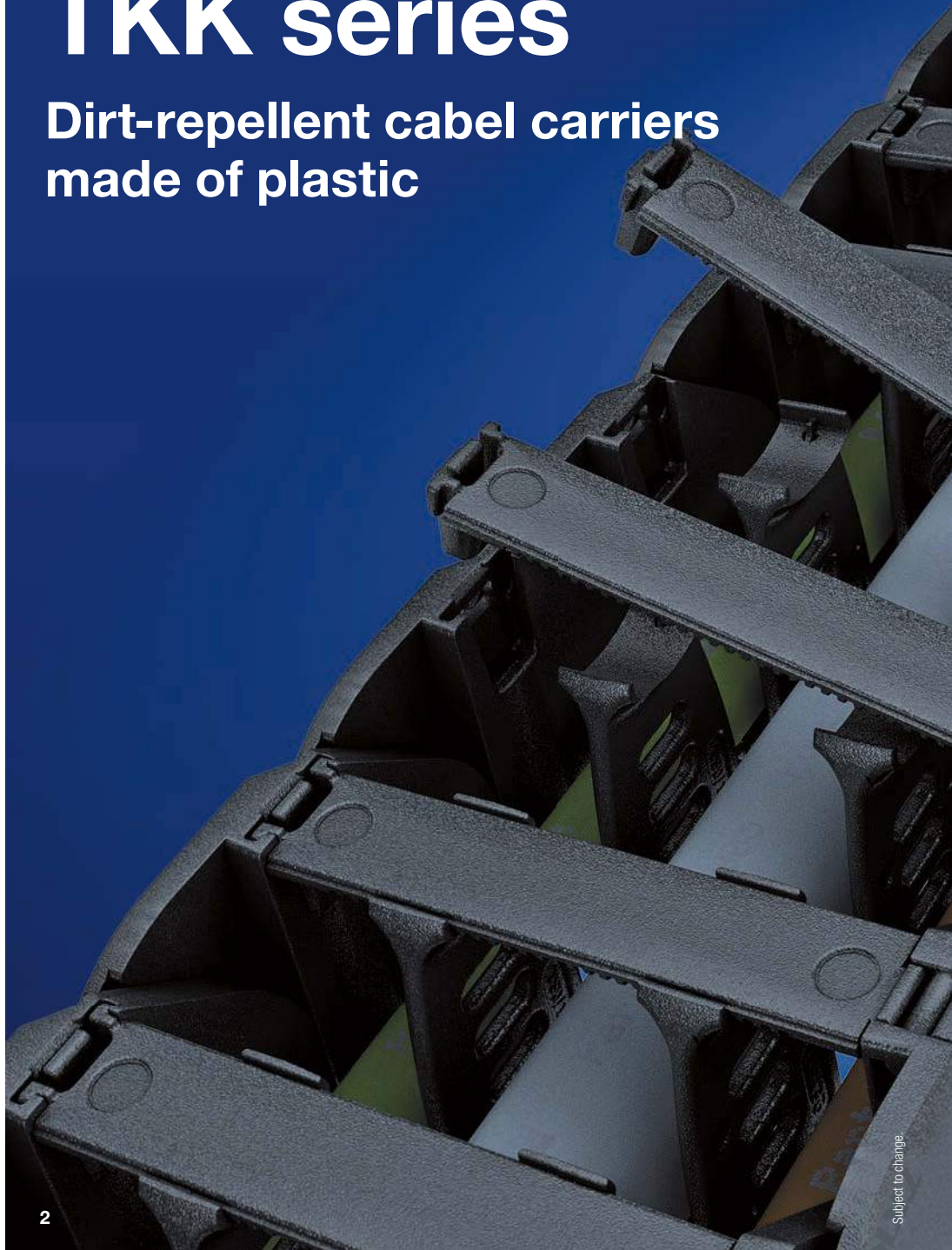
TKK series



CABLE CARRIER MADE OF PLASTIC  
VERY SHORT END CONNECTORS  
DIRT RESISTANT

# TKK series

Dirt-repellent cable carriers  
made of plastic





**Inner height**  
39 mm



**Inner widths**  
74 mm



**Pitch**  
39 mm



**Additional load**  
up to 10 kg/m



**Travel length unsupported**  
up to 5 m



**Travel length gliding**  
up to 80 m



**Travel speed**  
up to 3 m/s



**Travel acceleration**  
up to 9 m/s<sup>2</sup>

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](mailto:technik@kabelschlepp.de)



## Features

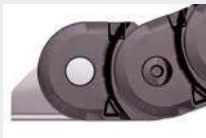
- High torsional rigidity
- Optimized dividers for cable protection: rounded inner and outer profile
- Extensive unsupported lengths
- New dirt-repellent construction of chain links as well as chip protection
- Smooth surface for easy operation due
  - Designs with closed frame and with inward opening crossbars
  - Very short end connectors
  - Fixable dividers
  - Optimized stroke system



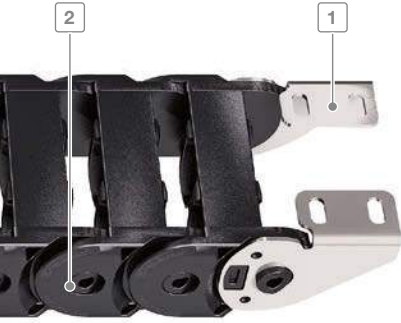
Optimized dividers for cable protection



New construction of chain links. Repellent against dust and chips in the link design, dirt-repellent



Very short end connectors



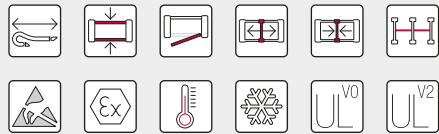
- 1 Very short end connectors made of steel
- 2 Chain links made of plastic
- 3 Extensive unsupported length
- 4 Repellent against dust and chips in the link design
- 5 Smooth surface for easy operation due
- 6 For inward opening (design 040)
- 7 Dividers and height separations for cable separation



Example of inner distribution

## Selection criteria for TKK

- Where an extensive unsupported length is required
- Where rigidity is required
- If the installation area is very restricted
- For dirty environmental conditions or dirty environmental conditions (dirt resistant)
- If an optional divider fixing should be available (e.g. for cable carrier laying on its side)
- If a gliding arrangement should be optionally available



Inner heights



Inner widths



Key for abbreviations on page 22

Assembly instructions on [kabelschlepp.de/assembly](http://kabelschlepp.de/assembly)

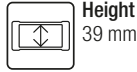
Type	$h_i$ [mm]	$B_i$ [mm]	$t$ [mm]	Page
TKK39	39	74	39	8



# TKK39



**Pitch**  
39 mm



**Height**  
39 mm



**Width**  
74 mm



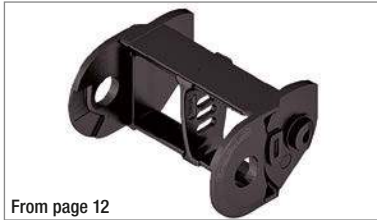
**Bending radius**  
46 – 95 mm

kabelschlepp.de/  
tkk

Configure your cable carrier:  
online-engineer.de

## Stay variants

### Design 020



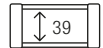
From page 12

#### Closed frame

- Weight-optimized, closed plastic frame with particularly high torsional rigidity.

#### Opening options

outside/inside: Closed.



### Design 040



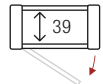
From page 14

#### Frame with inside opening crossbars

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

#### Opening options

inside: Swivable.



Technical support:  
technik@kabelschlepp.de



TKK

Inner heights



Inner widths



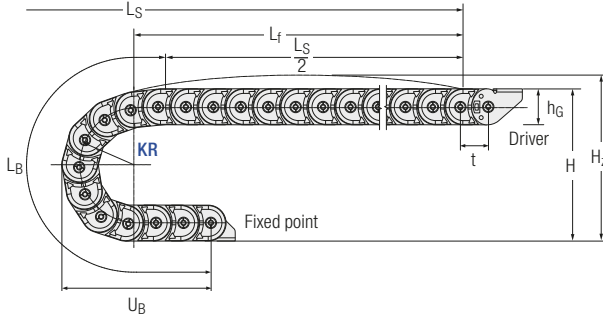
Key for abbreviations  
on page 20

Assembly instructions on  
[kabelschlepp.de/assembly](http://kabelschlepp.de/assembly)

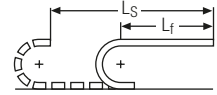
Order key  
on page 19



## 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

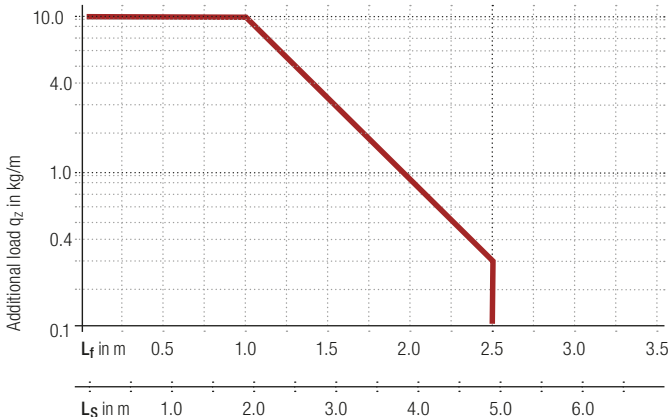
$v_{\max}$ [m/s]	$a_{\max}$ [m/s <sup>2</sup> ]	t [mm]
3	9	39

## Installation dimensions unsupported

KR [mm]	H [mm]	H <sub>z</sub> [mm]	L <sub>B</sub> [mm]	U <sub>B</sub> [mm]
46	142	172	222	149
58	166	196	260	161
70	190	220	298	173
95	240	270	376	198

## Load diagram

for unsupported length depending on additional load



### 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 $L_f$ :

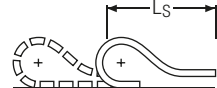
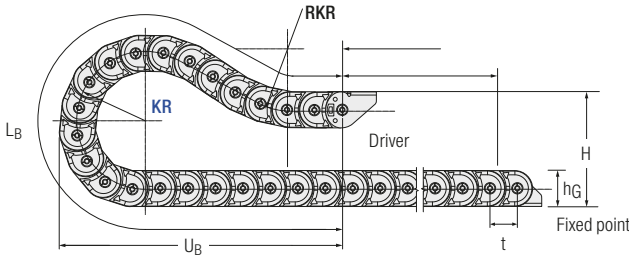
For off-center fixed point connections please contact us.



Intrinsic cable carrier weight  $q_k = 1.56 \text{ kg/m}$   
For other inner widths the maximum additional load changes.



## Gliding arrangement



For more information on gliding arrangement please contact us.

Inner heights  
**39**

Inner widths  
**74**

Dynamics of gliding arrangement		t
v <sub>max</sub> [m/s]	a <sub>max</sub> [m/s <sup>2</sup> ]	[mm]
2.5	9	39

## Installation dimensions gliding with RKR links

KR [mm]	H [mm]	n <sub>RKR</sub>	L <sub>B</sub> [mm]	U <sub>B</sub> [mm]
46	142	0	222	149
58	150	2	405	196
70	150	3	551	257
95	150	4	770	341

Connection height H is standard. Please contact us if you require other connection heights H. We will be happy to advise you. Optionally, the Online Engineer is always available for the calculation.

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

Key for abbreviations on page 20

Assembly instructions on [kabelschlepp.de/assembly](http://kabelschlepp.de/assembly)

Order key on page 19



### 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](mailto:technik@kabelschlepp.de). We will be happy to help you.

## Stay variant 020 – closed frame

- Weight-optimized plastic frame with particularly high torsional rigidity.
- Opening options  
outside/inside: Closed.

kabelschlepp.de/  
tkk

Configure your cable carrier:  
online-engineer.de

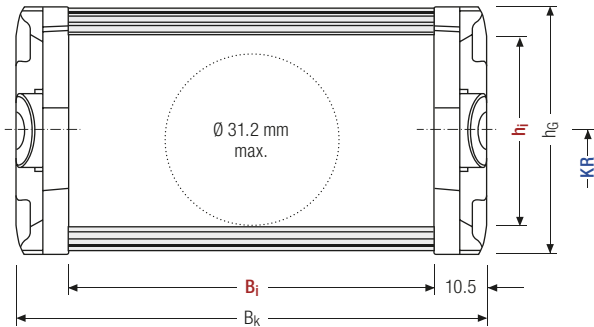


Stay arrangement on every chain link (VS)



$B_i$  74 mm

Technical support:  
technik@kabelschlepp.de



### Calculating the cable carrier width

#### Outer width $B_k$

$$B_k = B_i + 21 \text{ mm}$$



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

online-engineer.de  
Cable Carrier Configurator



## Pitch, inner height and chain link height

t [mm]	h <sub>i</sub> [mm]	h <sub>G</sub> [mm]
39	39	50

Inner heights



## Bend radii

KR [mm]			
46	58	70	95

Inner widths



## Inner/outer width and intrinsic cable carrier weight

B <sub>i</sub> [mm]	B <sub>k</sub> [mm]	q <sub>k</sub> [kg/m]
74	95	1.56

Key for abbreviations on page 20

## Order example


TKK39 · 020 · 74 · 70 · 1950  
Type      Stay variant      B<sub>i</sub> [mm]      KR [mm]      L<sub>k</sub> [mm]

Assembly instructions on [kabelschlepp.de/assembly](http://kabelschlepp.de/assembly)



### 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](http://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](http://traxline.de)

Order key on page 19



## Stay variant 040 – with inside opening crossbar

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

kabelschlepp.de/  
tkk

Configure your cable carrier:  
online-engineer.de

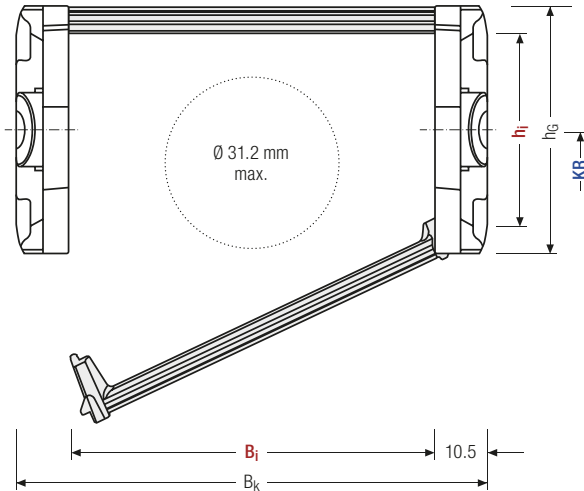


Stay arrangement on every chain link (VS)



$B_i$  74 mm

Technical support:  
technik@kabelschlepp.de



### Calculating the cable carrier width

#### Outer width $B_k$

$$B_k = B_i + 21 \text{ mm}$$



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

online-engineer.de  
Cable Carrier Configurator



## Pitch, inner height and chain link height

t [mm]	h <sub>i</sub> [mm]	h <sub>G</sub> [mm]
39	39	50

Inner heights

## Bend radii

KR [mm]			
46	58	70	95

Inner widths

## Inner/outer width and intrinsic cable carrier weight

B <sub>i</sub> [mm]	B <sub>k</sub> [mm]	q <sub>k</sub> [kg/m]
74	95	1.56

Key for abbreviations on page 20

## Order example



TKK39	040	74	70	1950
Type	Stay variant	B <sub>i</sub> [mm]	KR [mm]	L <sub>k</sub> [mm]

Assembly instructions on [kabelschlepp.de/assembly](http://kabelschlepp.de/assembly)

Order key on page 19





## Divider systems

As standard, the divider system is assembled at each 2<sup>nd</sup> chain link.

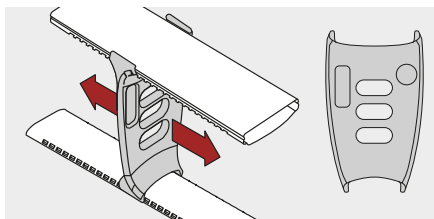
As standard, dividers and the complete divider system (dividers with height separations) can be moved in the cross section (**version A**).

The dividers are easily attached to the stay for applications with transverse acceleration and for laterally recumbent applications.

The locking cams click into place in the locking grids in the crossbars (**version B**).

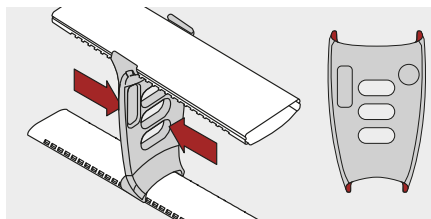
### Movable divider

#### Version A (Standard)



### Fixable divider (2 mm grid)

#### Version B

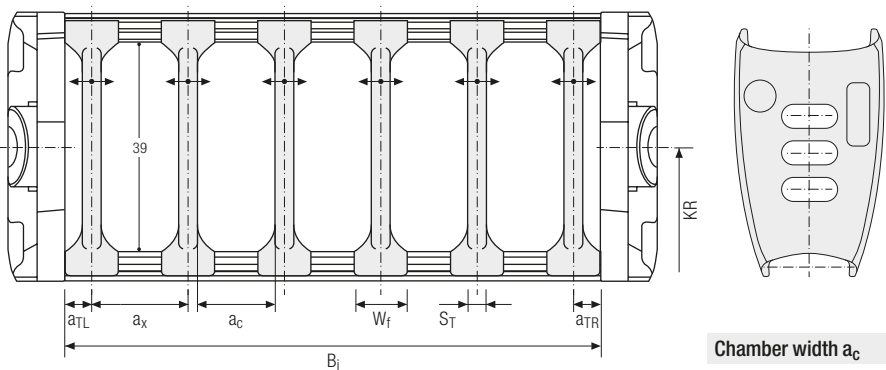


Configure your cable carrier:  
online-engineer.de

Technical support:  
technik@kabelschlepp.de

## Divider system TS0 without height separation

S <sub>T</sub> [mm]	W <sub>f</sub> [mm]	Version A			Version B			
		a <sub>TL</sub> /a <sub>TR</sub> min [mm]	a <sub>x</sub> min [mm]	a <sub>c</sub> min [mm]	a <sub>TL</sub> /a <sub>TR</sub> min [mm]	a <sub>x</sub> min [mm]	a <sub>c</sub> min [mm]	a <sub>x</sub> Raster [mm]
3	10	5	10	7	5	10	7	2



Chamber width  $a_c$

$$a_c = a_x - S_T$$



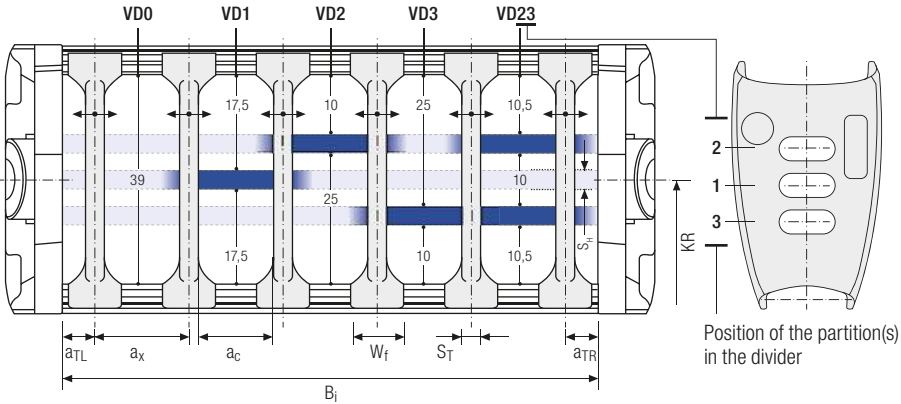
For design 020, only version A can be used.



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

## Divider system TS1 with continuous height separation

$S_T$ [mm]	$W_f$ [mm]	$S_H$ [mm]	$n_T$ min	Version A			Version B			
				$a_T$ min [mm]	$a_x$ min [mm]	$a_c$ min [mm]	$a_T$ min [mm]	$a_x$ min [mm]	$a_c$ min [mm]	$a_x$ Raster [mm]
3	10	4	2	5	10	7	5	10	7	2



Inner heights



Inner widths



Key for abbreviations on page 20

Standard height separation with aluminum profile 11 × 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](http://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](http://traxline.de)

### More product information online



Assembly instructions etc.: Receive additional info via your smartphone or check online at [kabelschlepp.de/support](http://kabelschlepp.de/support)



Configure your custom cable carrier: [online-engineer.de](http://online-engineer.de)

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

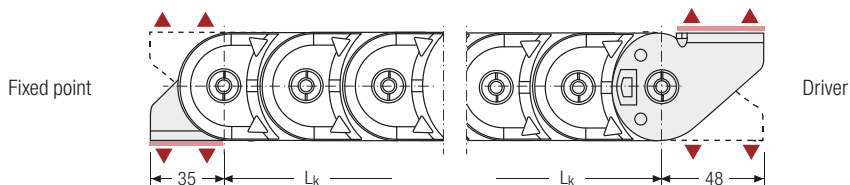
Assembly instructions on [kabelschlepp.de/assembly](http://kabelschlepp.de/assembly)

Order key on page 19

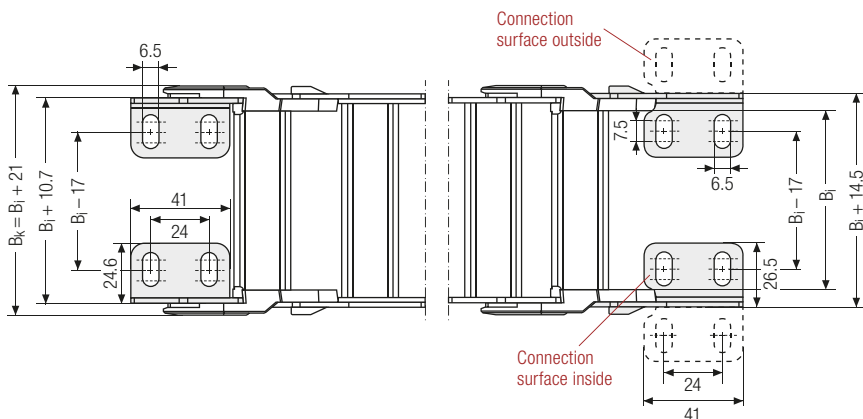


## One part end connectors – steel

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



Configure your cable carrier:  
online-engineer.de



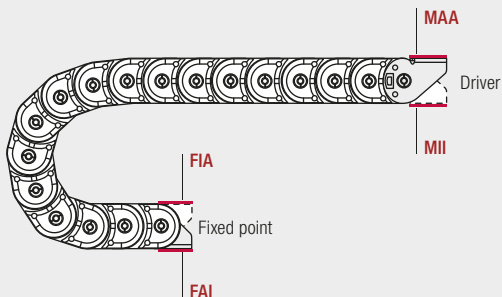
Technical support:  
technik@kabelschlepp.de



## 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](mailto:technik@kabelschlepp.de). We will be happy to help you.

## Connection variants



## Connection point

**F** – fixed point  
**M** – driver

## Connection type

**A** – threaded joint outside (standard)  
**I** – threaded joint inside

## Connection surface

**I** – connection surface inside  
**A** – connection surface outside

## Order

### Cable carrier

Type	Stay variant	B <sub>i</sub> [mm]	KR [mm]	L <sub>K</sub> [mm]
			46	
			58	
	020		70	
TKK39	040	74	95	

TKK39	020	74	70	1950
Type	Stay variant	B <sub>i</sub> [mm]	KR [mm]	L <sub>K</sub> [mm]

Inner heights



Inner widths



### Divider system

Divider system	Version	n <sub>T</sub>	Height separation (not for TSO)
TS0		min. 2	V D0
TS1	A	...	...

TS1	A	2	V D0
			⋮
			V D1
Divider system	Version	n <sub>T</sub>	Height separation

Key for abbreviations on page 20

Please state the designation of the divider system (TS0, TS1), version and number of dividers per cross section [n<sub>T</sub>].

### Connection variant

End connector	Connection point	Connection type	Connection surface
End connector	F	A	I
End connector	M	I	A

End connector	F	I	A
End connector	M	A	I

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

Assembly instructions on [kabelschlepp.de/assembly](http://kabelschlepp.de/assembly)

Order key on page 19



## General abbreviations







































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

## Definitions

**Driver view** = view into the driver connection



## Pictographs

	inner height		stay arrangement on every 2 <sup>nd</sup> chain link		clean room suitable
	inner width		stay arrangement on every chain link		quiet running/low noise
	inner width (B <sub>i</sub> ) in x mm increments		cannot be opened		sold by the meter
	pitch		opens outward		ESD material
	bending radius		opens inward		suitable for explosive atmospheres
	long travel length		opens inward/outward		heat-resistant
	travel length unsupported		covered cable carrier		cold-resistant
	travel length gliding		sliding dividers		resistant to hot chips
	high additional load		fixable dividers		flame-resistant V0 (UL94)
	high travel acceleration		fixable dividers in x mm grid		flame-resistant V2 (UL94)
	high travel velocity		height separation possible		order code
			height separation in 1 mm increments		important information
			hole stay available		
			guide channel required		
			strain relief		

Inner heights

39

Inner widths

74

Key for abbreviations on page 20

Assembly instructions on [kabelschlepp.de/assembly](http://kabelschlepp.de/assembly)