TKR series

Extremely quiet and low-vibration for highly dynamic applications*

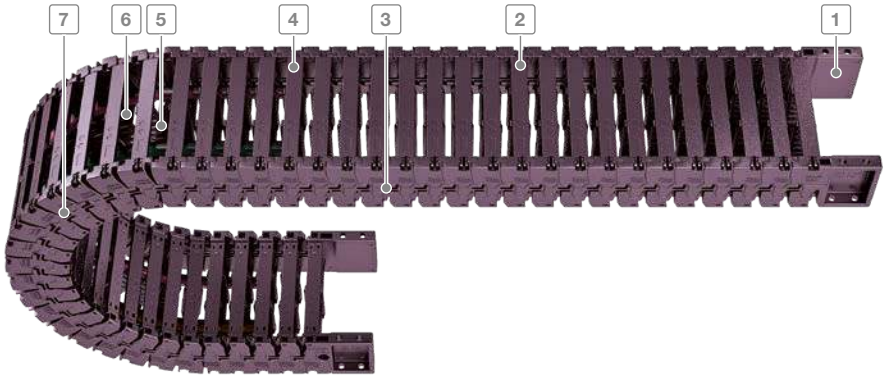
Fraunhofer IPA TESTED DEVICE
TSUBAKIMOTO CHAIN CO.
TKR200WSERIES
Report No. KA 1008-531

product design award 2006

TSUBAKI ECO LINK

* Some features can be different for certain types for design reasons.

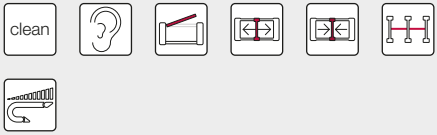
TKR series | Overview

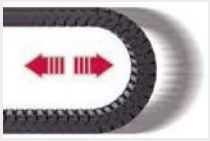


1 Variable connection for quick assembly
2 Easy and quick to open
3 Extremely quiet and low-vibration operation
4 Can be opened at any position
5 Fixable dividers
6 Many separation options for the cables
7 Chain link and joint connection with captive connection

Features

- Long service life
- Ideal for highly dynamic applications
- High side stability
- Cleanroom compatible
- Modular design allows easy shortening and extending





Ideal for highly dynamic applications

UMB end connector to the connection from the face side, from the top or from the bottom

Molded, captive connecting elements

Key for abbreviations on page 12

Design guidelines from page 60

Technical support:
technik@kabelschlepp.de

TKR series | Overview

Type	Opening variant	Stay variant	h_i [mm]	h_G [mm]	B_i [mm]	B_k [mm]	$B_{i\text{-}grid}$ [mm] X mm	t [mm]	KR [mm]	Additional load ≤ [kg/m]	Cable-d_{max} [mm]
TKR0150											
		030	22	27.5	20 – 60	34 – 74	–	15	40 – 75	2	17.5
TKR0200											
		030	28	37	40 – 120	56 – 136	–	20	55 – 150	2.5	22
TKR0260											
		030	40	54	50 – 200	76 – 226	–	26	75 – 150	8	32
TKR0280											
		030	52	66	50 – 200	80 – 230	–	28	75 – 200	10	41

Cleanroom compatible and long service life

The movable connectors are directly molded on the chain links. In contrast to conventional bore-hole bolt connections, hardly any wear occurs (link abrasion), which makes the TKR type excellent for use in clean rooms.

The special design of the connecting elements additionally increases the service life of the system.

Ideal for highly dynamic applications

The TKR features extremely quiet and low-vibration operation. The so-called polygon effect is reduced to a minimum.

Ideal areas of application are in particular in handling and assembly systems, robots, metrology devices, pick-and-place machines, printing and textile machines. Due to the **very quiet running**, the TKR types are ideal for **low-vibration applications with linear drives**.

TKR series | Overview

Unsupported arrangement			Gliding arrangement			Inner distribution				Installation variants			Page
Travel length ≤ [m]	v_{max} ≤ [m/s]	a_{max} ≤ [m/s²]	Travel length ≤ [m]	v_{max} ≤ [m/s]	a_{max} ≤ [m/s²]	TS0	TS1	TS2	TS3	vertical hanging or standing	lying on the side	rotating arrangement	
1.75	5	200*	–	–	–	●	●	–	–	●	–	–	442
2.75	5	200*	–	–	–	●	●	–	–	●	–	–	448
3.9	5	200*	–	–	–	●	●	–	●	●	–	–	454
4.9	5	200*	–	–	–	●	●	–	●	●	–	–	460

* For values > 20 m/s², please contact us, we are happy to advise you.

Technical manual

Do you require additional information on the TKR type?
Our technical manual at **tsubaki-kabelschlepp.com/download** provides all information for configuring your cable carrier.

TKR0150

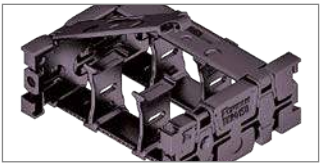
Pitch
15 mm

Inner height
22 mm

Inner widths
20 – 60 mm

Bending radii
40 – 75 mm

Stay variants



Design 030 ..... page **442**

Frame with outside detachable crossbar

- Low-vibration plastic frame with particularly long service life thanks to molded chain links.
- **Outside:** Swivable and detachable.

TOTALTRAX® complete systems

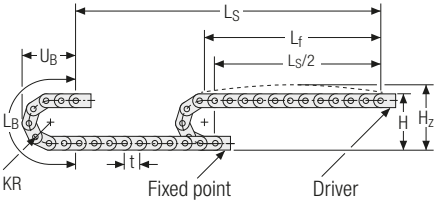
Benefit from the advantages of the TOTALTRAX® complete system. A complete delivery from one source – with a warranty certificate on request! Learn more at **tsubaki-kabelschlepp.com/totaltrax**

TRAXLINE® cables for cable carriers

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

TKR0150 | Installation dim. | Unsupported

Unsupported arrangement

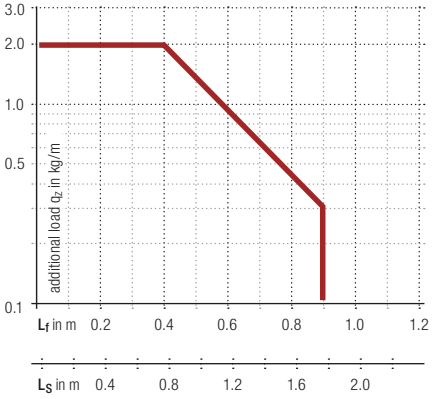


KR [mm]	H [mm]	H_Z [mm]	L_B [mm]	U_B [mm]
40	110	140	156	70
50	130	160	187	80
75	180	210	266	105

Load diagram for unsupported length depending on the additional load.

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

Intrinsic cable carrier weight q_k = 0.3 kg/m at B_i 20 mm. For other inner widths, the maximum additional load changes.



Speed
up to 5 m/s

Acceleration
up to 200 m/s²*

Travel length
up to 1.75 m

Additional load
up to 2.0 kg/m

* For values > 20 m/s², please contact us, we are happy to advise you!

More product information online

Assembly instructions etc.: Additional info via your smartphone or check online at **tsubaki-kabelschlepp.com/support**

Configure your custom cable carrier here: **online-engineer.de**

Key for abbreviations on page 12

Design guidelines from page 60

Technical support:
technik@kabelschlepp.de

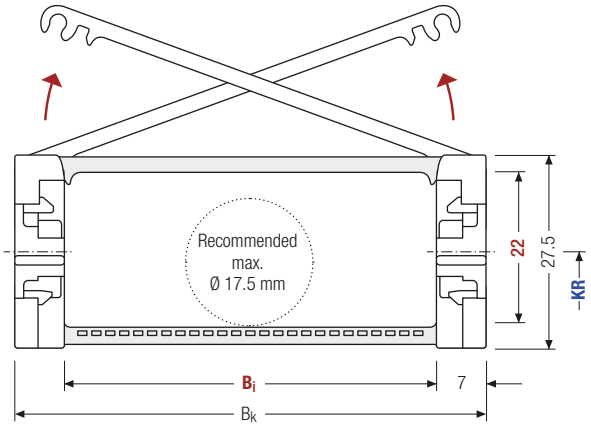
TKR0150.030 | Dimensions · Technical data

Stay variant 030 – with outside opening and detachable crossbars

- Low-vibration plastic frame with particularly long service life thanks to molded chain links.
- Swivable and detachable on one side in any position.
- **Outside:** Swivable and detachable.

Stay arrangement on each chain link **(VS: fully-stayed)**

B_i 20 – 60 mm



The maximum cable diameter strongly depends on the bending radius and the desired cable type. 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 for odd number of chain links

h_i [mm]	h_G [mm]	B_i [mm]			B_k [mm]	KR [mm]			q_k [kg/m]
22	27.5	20	40	60	B_i + 14	40	50	75	0.3 – 0.5

Order example

TKR0150	.	60	.	030	.	75	-	800	VS
Type		B_i [mm]		Stay variant		KR [mm]		L_k [mm]	Stay arrangement

TKR0150.030 | Inner distribution | TS0 · TS1

Divider systems

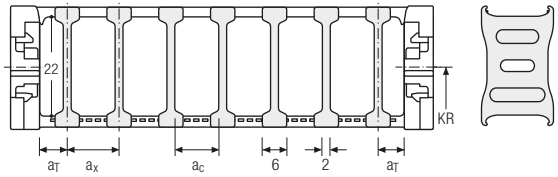
As standard, the divider system is mounted on every 2nd chain link

As a 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 accelerations and for applications laying on the side by simply turning them.
The arresting cams click into place in the locking grids in the crossbars **(version B)**.

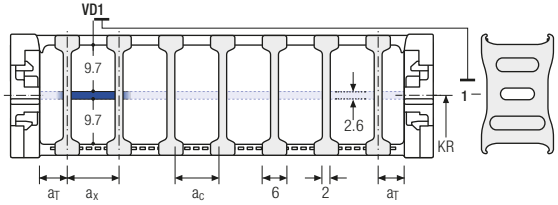
Divider system TS0 without height separation

Vers.	$a_{T\ min}$ [mm]	$a_{x\ min}$ [mm]	$a_{C\ min}$ [mm]	$a_{x\ grid}$ [mm]	$n_{T\ min}$
A	5	6	4	–	–
B	6	6	4	2	–

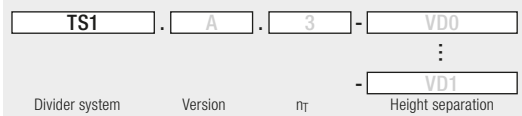


Divider system TS1 with continuous height separation

Vers.	$a_{T\ min}$ [mm]	$a_{x\ min}$ [mm]	$a_{C\ min}$ [mm]	$a_{x\ grid}$ [mm]	$n_{T\ min}$
A	5	6	4	–	2
B	6	6	4	2	2



Order example



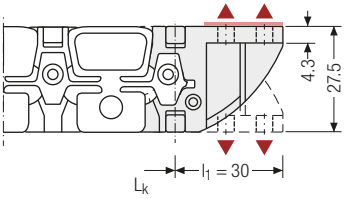
Please state the designation of the divider system **(TS0, TS1 …)**, version and number of dividers per cross section [n_T].

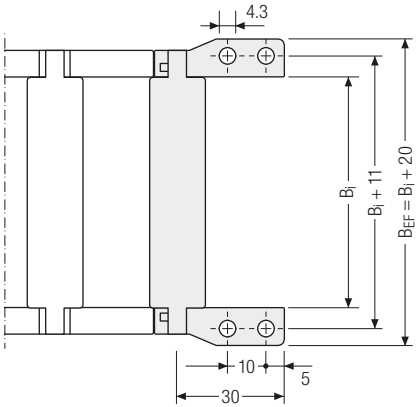
If using divider systems with height separation **(TS1)** please also state the positions [e.g. VD1] viewed from the left driver belt. You are welcome to add a sketch to your order.

TKR0150 | End connectors

One-part end connectors – plastic

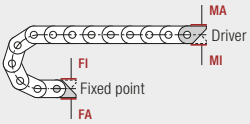
The plastic end connectors can be **connected from above or from below**. The connection type can be changed by changing the orientation of the end connector.





▲ Assembly options

Recommended tightening torque: 0,6 Nm for screws M4



Connection point
F – fixed point
M – driver

Connection type
A – threaded joint outside (standard)
I – threaded joint inside

Order example

Plastic	.	F	A
Plastic	.	M	A
End connector		Connection point	Connection type

We recommend the use of strain reliefs before driver and fixed point. See from p. 756.

More product information online

Assembly instructions etc.: Additional info via your smartphone or check online at **tsubaki-kabelschlepp.com/support**

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

Key for abbreviations on page 12
Design guidelines from page 60

Technical support: **technik@kabelschlepp.de**

Subject to change.

TKR0200

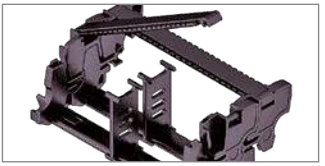
Pitch
20 mm

Inner height
28 mm

Inner widths
40 – 120 mm

Bending radii
55 – 150 mm

Stay variants



Design 030 ..... page **448**

Frame with outside detachable crossbar

- Low-vibration plastic frame with particularly long service life thanks to molded chain links.
- **Outside:** Swivable and detachable
- **Inside:** detachable

Fraunhofer IPA TESTED® DEVICE TSUBAKIMOTO CHAIN CO. TKR0200W50RSS Report No. KA 1008-531

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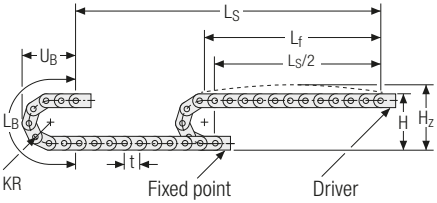
TKR0200 | Installation dim. | Unsupported

Unsupported arrangement

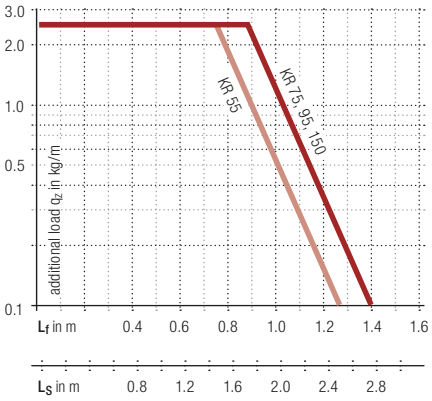


KR [mm]	H [mm]	H_Z [mm]	L_B [mm]	U_B [mm]
55	182	252	213	96
75	222	292	276	116
95	262	332	339	136
150	372	442	512	191

Load diagram for unsupported length depending on the additional load.

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

Intrinsic cable carrier weight q_k = 0.6 kg/m at B_i 40 mm. For other inner widths, the maximum additional load changes.



Speed
up to 5 m/s

Acceleration
up to 200 m/s²*

Travel length
up to 2.75 m

Additional load
up to 2.5 kg/m

* For values > 20 m/s², please contact us, we are happy to advise you!

More product information online

Assembly instructions etc.: Additional info via your smartphone or check online at **tsubaki-kabelschlepp.com/support**

Configure your custom cable carrier here: **online-engineer.de**

Key for abbreviations on page 12

Design guidelines from page 60

Technical support:
technik@kabelschlepp.de

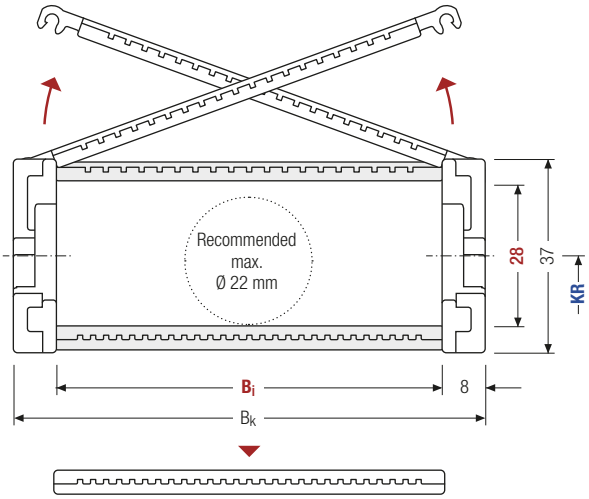
TKR0200.030 | Dimensions · Technical data

Stay variant 030 – with outside opening and detachable crossbars

- Low-vibration plastic frame with particularly long service life thanks to molded chain links.
- Swivable and detachable on one side in any position.
- **Outside:** Swivable and detachable
- **Inside:** detachable

Stay arrangement on each chain link **(VS: fully-stayed)**

B_i 40 – 120 mm



The maximum cable diameter strongly depends on the bending radius and the desired cable type.
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 for odd number of chain links

h_i [mm]	h_G [mm]	B_i [mm]						B_k [mm]	KR [mm]				q_k [kg/m]
28	37	40	50	60	80	100	120	B_i + 16	55	75	95	150	0.6 – 1.0

Order example

TKR0200	.	80	.	030	.	95	-	800	VS
Type		B_i [mm]		Stay variant		KR [mm]		L_k [mm]	Stay arrangement

TKR0200.030 | Inner distribution | TS0 · TS1

Divider systems

As standard, the divider system is mounted on every 2nd chain link.

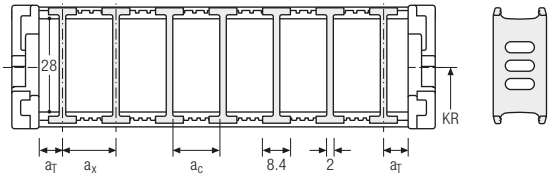
As a standard, dividers and the complete divider system (dividers with height separations) can be moved in the cross section **(version A).**

Fixable dividers are available for applications with lateral accelerations and for applications lying on the side. The arresting cams click into place in the locking grids in the crossbars **(version B)**.

Divider system TS0 without height separation

Vers.	$a_{T\ min}$ [mm]	$a_{x\ min}$ [mm]	$a_{c\ min}$ [mm]	$a_{x\ grid}$ [mm]	$n_{T\ min}$
A	4	8	6	–	–
B		8	6	4	–

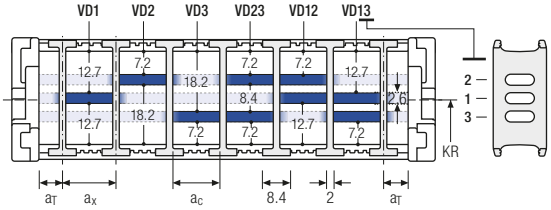
B_i [mm]	40	50	60	80	100	120
$a_{T\ min}$ [mm]	4	5	6	4	6	6



Divider system TS1 with continuous height separation

Vers.	$a_{T\ min}$ [mm]	$a_{x\ min}$ [mm]	$a_{c\ min}$ [mm]	$a_{x\ grid}$ [mm]	$n_{T\ min}$
A	4	8	6	–	2
B		8	6	4	2

B_i [mm]	40	50	60	80	100	120
$a_{T\ min}$ [mm]	4	5	6	4	6	6



Order example

TS1 . A . 3 - 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].

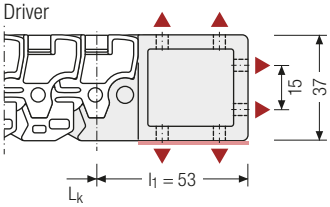
If using divider systems with height separation **(TS1)** please also state the positions [e.g. VD1] viewed from the left driver belt. You are welcome to add a sketch to your order.

TKR0200 | End connectors | UMB

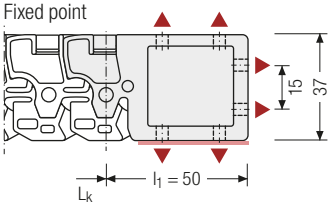
UMB end connectors UMB – plastic

The universal mounting brackets (UMB) are made from plastic and can **be mounted from the top, from the bottom or face on**.

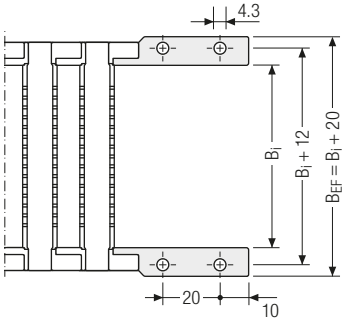
Driver



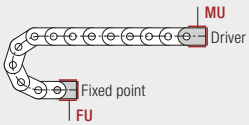
Fixed point



▲ Assembly options



Recommended tightening torque: 0,6 Nm for screws M4



Connection point
F – fixed point
M – driver

Connection type
U – universal mounting bracket

Order example

UMB	.	F	U
UMB	.	M	U
End connector		Connection point	Connection type

We recommend the use of strain reliefs before driver and fixed point. See from p. 756.

More product information online

Assembly instructions etc.: Additional info via your smartphone or check online at **tsubaki-kabelschlepp.com/support**

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

Inner heights

28

Inner widths

40 – 120

TKR0260

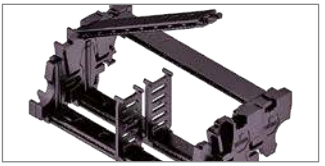
Pitch
26 mm

Inner height
40 mm

Inner widths
50 – 200 mm

Bend radii
75 – 150 mm

Stay variants



Design 030 ..... page **454**

Frame with outside detachable crossbar

- Low-vibration plastic frame with particularly long service life thanks to molded chain links.
- **Outside:** Swivable and detachable
- **Inside:** detachable

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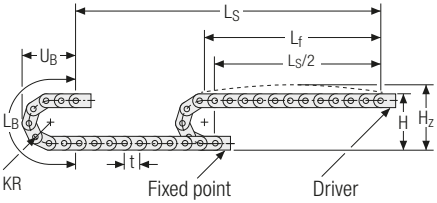
TKR0260 | Installation dim | Unsupported

Unsupported arrangement

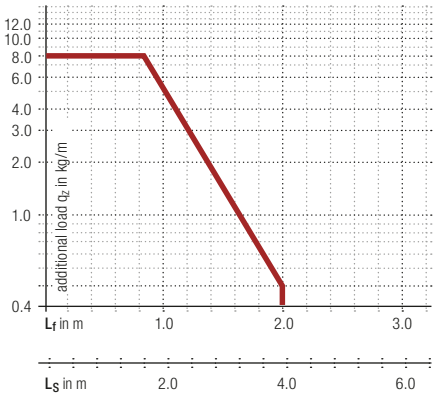


KR [mm]	H [mm]	H_Z [mm]	L_B [mm]	U_B [mm]
75	238	308	340	156
100	288	358	418	181
125	338	408	497	206
150	388	458	575	231

Load diagram for unsupported length depending on the additional load.

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

Intrinsic cable carrier weight q_k = 1.5 kg/m at B_i 50 mm. For other inner widths, the maximum additional load changes.



Speed
up to 5 m/s

Acceleration
up to 200 m/s²*

Travel length
up to 3.9 m

Additional load
up to 8.0 kg/m

* For values > 20 m/s², please contact us, we are happy to advise you!

More product information online

Assembly instructions etc.: Additional info via your smartphone or check online at **tsubaki-kabelschlepp.com/support**

Configure your custom cable carrier here: **online-engineer.de**

Key for abbreviations on page 12

Design guidelines from page 60

Technical support:
technik@kabelschlepp.de

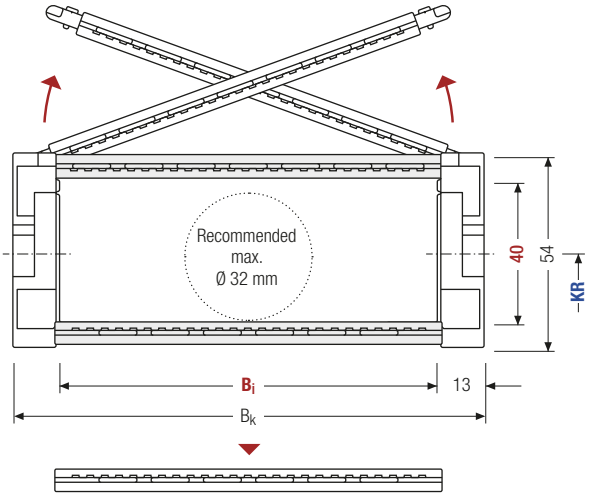
TKR0260.030 | Dimensions · Technical data

Stay variant 030 – with outside opening and detachable crossbars

- Low-vibration plastic frame with particularly long service life thanks to molded chain links.
- Swivable and detachable on one side in any position.
- **Outside:** Swivable and detachable
- **Inside:** detachable

Stay arrangement on each chain link **(VS: fully-stayed)**

B_i 50 – 200 mm



The maximum cable diameter strongly depends on the bending radius and the desired cable type. 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 for odd number of chain links

h_i [mm]	h_G [mm]	B_i [mm]							B_k [mm]	KR [mm]				q_k [kg/m]
40	54	50	75	87	100	125	150	200	B_i + 26	75	100	125	150	1.5 – 2.7

Order example

TKR0260	.	100	.	030	.	125	-	800	VS
Type		B_i [mm]		Stay variant		KR [mm]		L_k [mm]	Stay arrangement

TKR0260.030 | Inner distribution | TS0 · TS1 · TS3

Divider systems

As standard, the divider system is mounted on every 2nd chain link.

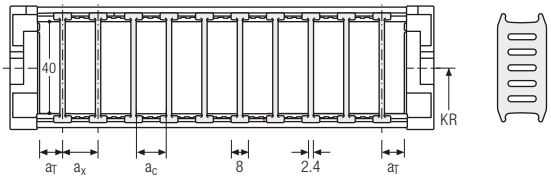
As a standard, dividers and the complete divider system (dividers with height separations) can be moved in the cross section **(version A).**

Fixable dividers are available for applications with lateral accelerations and for applications lying on the side. The arresting cams click into place in the locking grids in the crossbars **(version B)**.

Divider system TS0 without height separation

Vers.	$a_{T\ min}$ [mm]	$a_{x\ min}$ [mm]	$a_{C\ min}$ [mm]	$a_{x\ grid}$ [mm]	$n_{T\ min}$
A	3	8	5.6	–	–
B		8	5.6	4	–

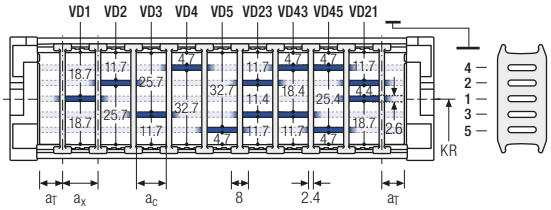
B_i [mm]	50	75	87	100	125	150	200
$a_{T\ min}$ [mm]	5	5.5	3.5	6	6.5	7	4



Divider system TS1 with continuous height separation

Vers.	$a_{T\ min}$ [mm]	$a_{x\ min}$ [mm]	$a_{C\ min}$ [mm]	$a_{x\ grid}$ [mm]	$n_{T\ min}$
A	3	8	5.6	–	2
B		8	5.6	4	2

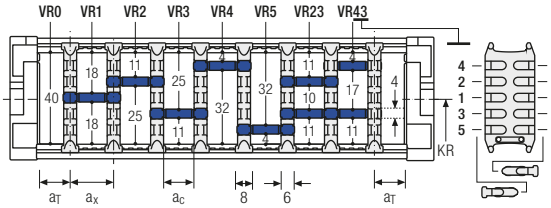
B_i [mm]	50	75	87	100	125	150	200
$a_{T\ min}$ [mm]	5	5.5	3.5	6	6.5	7	4



Divider system TS3 with height separation made of aluminum partitions

Vers.	$a_{T\ min}$ [mm]	$a_{x\ min}$ [mm]	$a_{C\ min}$ [mm]	$a_{x\ grid}$ [mm]	$n_{T\ min}$
A	3	26	20	–	2
B		28	22	4	2

B_i [mm]	50	75	87	100	125	150	200
$a_{T\ min}$ [mm]	5	5.5	3.5	6	6.5	7	4



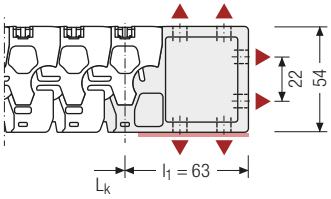
The dividers are fixed by the partitions, the complete divider system is movable in the cross section.

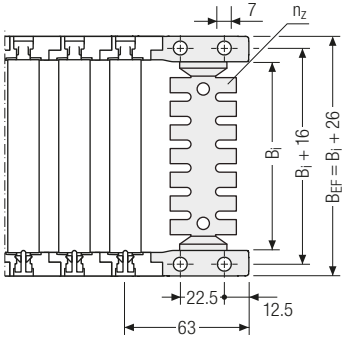
Aluminum section subdivisions are only available with $a_x > 26$ mm .

TKR0260 | End connectors | UMB

UMB end connectors UMB – plastic

The universal mounting brackets (UMB) are made from plastic and can **be mounted from the top, from the bottom or face on**.

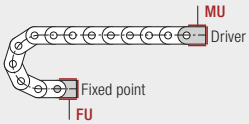




▲ Assembly options

B_i [mm]	B_{EF} [mm]	n_z
50	76	2 x 3
75	101	2 x 5
100	126	2 x 7
125	151	2 x 9
150	176	2 x 11
200	226	–

Recommended tightening torque: 0,6 Nm for screws M4



Connection point
F – fixed point
M – driver

Connection type
U – universal mounting bracket

Order example

UMB	.	F	U
UMB	.	M	U
End connector		Connection point	Connection type

We recommend the use of strain reliefs before driver and fixed point. See from p. 756.

Key for abbreviations on page 12

Design guidelines from page 60

Technical support: technik@kabelschlepp.de

Subject to change.

TKR0280

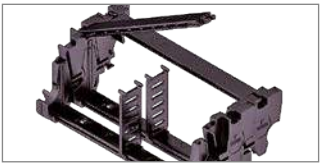
Pitch
28 mm

Inner height
52 mm

Inner widths
50 – 200 mm

Bending radii
75 – 200 mm

Stay variants



Design 030 ..... page **460**

Frame with outside detachable crossbar

- Low-vibration plastic frame with particularly long service life thanks to molded chain links.
- **Outside:** Swivable and detachable
- **Inside:** detachable

TOTALTRAX® complete systems

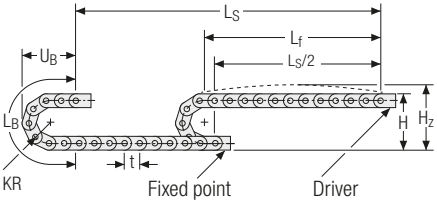
Benefit from the advantages of the TOTALTRAX® complete system. A complete delivery from one source – with a warranty certificate on request! Learn more at **tsubaki-kabelschlepp.com/totaltrax**

TRAXLINE® cables for cable carriers

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

TKR0280 | Installation dim. | Unsupported

Unsupported arrangement

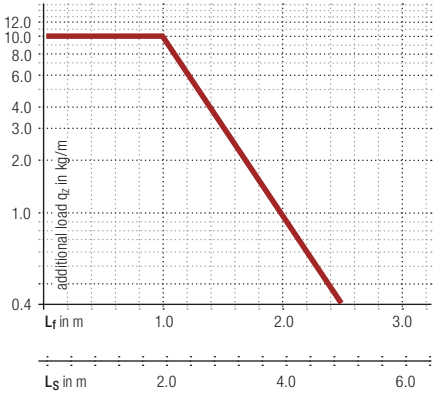


KR [mm]	H [mm]	H_Z [mm]	L_B [mm]	U_B [mm]
75	252	322	292	139
100	302	372	370	164
150	402	472	527	214
200	502	572	684	264

Load diagram for unsupported length depending on the additional load.

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

Intrinsic cable carrier weight q_k = 2.0 kg/m at B_i 50 mm. For other inner widths, the maximum additional load changes.



Speed
up to 5 m/s

Acceleration
up to 200 m/s²*

Travel length
up to 4.9 m

Additional load
up to 10.0 kg/m

* For values > 20 m/s², please contact us, we are happy to advise you!

More product information online

Assembly instructions etc.: Additional info via your smartphone or check online at **tsubaki-kabelschlepp.com/support**

Configure your custom cable carrier here: **online-engineer.de**

Key for abbreviations on page 12

Design guidelines from page 60

Technical support:
technik@kabelschlepp.de

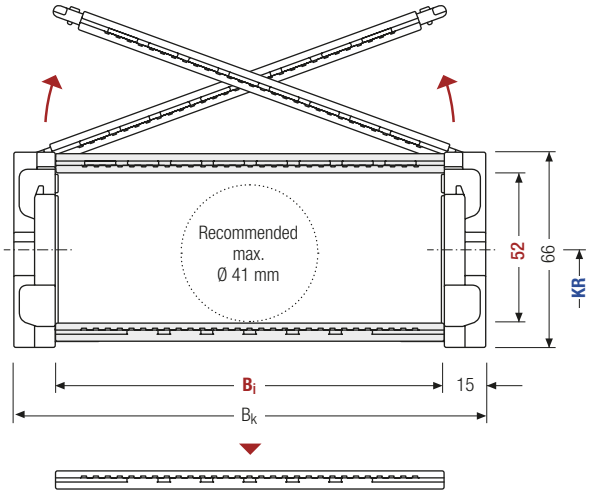
TKR0280.030 | Dimensions · Technical data

Stay variant 030 – with outside opening and detachable crossbars

- Low-vibration plastic frame with particularly long service life thanks to molded chain links.
- Swivable and detachable on one side in any position.
- **Outside:** Swivable and detachable
- **Inside:** detachable

Stay arrangement on each chain link **(VS: fully-stayed)**

B_i 50 – 200 mm



The maximum cable diameter strongly depends on the bending radius and the desired cable type. 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 for odd number of chain links

h_i [mm]	h_G [mm]	B_i [mm]							B_k [mm]	KR [mm]				q_k [kg/m]
52	66	50	75	87	100	125	150	200	B_i + 30	75	100	150	200	2.0 – 3.2

Order example

TKR0280	.	100	.	030	.	150	-	840	VS
Type		B_i [mm]		Stay variant		KR [mm]		L_k [mm]	Stay arrangement

TKR0280.030 | Inner distribution | TS0 · TS1 · TS3

Divider systems

As standard, the divider system is mounted on every 2nd chain link.

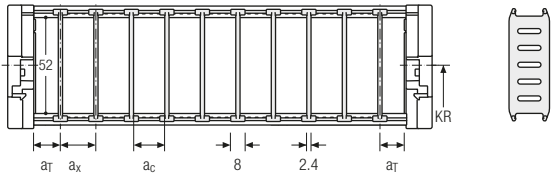
As a standard, dividers and the complete divider system (dividers with height separations) can be moved in the cross section **(version A).**

Fixable dividers are available for applications with lateral accelerations and for applications lying on the side. The arresting cams click into place in the locking grids in the crossbars **(version B)**.

Divider system TS0 without height separation

Vers.	$a_{T\ min}$ [mm]	$a_{x\ min}$ [mm]	$a_{C\ min}$ [mm]	$a_{x\ grid}$ [mm]	$n_{T\ min}$
A	3	8	5.6	–	–
B	•	8	5.6	4	–

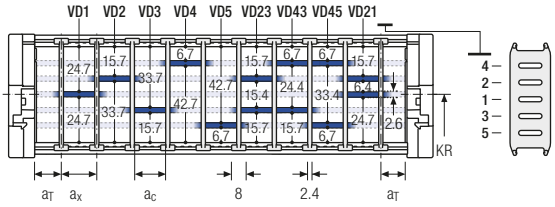
B_i [mm]	50	75	87	100	125	150	200
$a_{T\ min}$ [mm]	5	5.5	3.5	6	6.5	7	4



Divider system TS1 with continuous height separation

Vers.	$a_{T\ min}$ [mm]	$a_{x\ min}$ [mm]	$a_{C\ min}$ [mm]	$a_{x\ grid}$ [mm]	$n_{T\ min}$
A	3	8	5.6	–	2
B	•	8	5.6	4	2

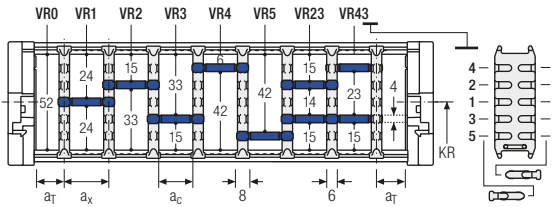
B_i [mm]	50	75	87	100	125	150	200
$a_{T\ min}$ [mm]	5	5.5	3.5	6	6.5	7	4



Divider system TS3 with height separation made of aluminum partitions

Vers.	$a_{T\ min}$ [mm]	$a_{x\ min}$ [mm]	$a_{C\ min}$ [mm]	$a_{x\ grid}$ [mm]	$n_{T\ min}$
A	3	26	20	–	2
B	•	28	22	4	2

B_i [mm]	50	75	87	100	125	150	200
$a_{T\ min}$ [mm]	5	5.5	3.5	6	6.5	7	4



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

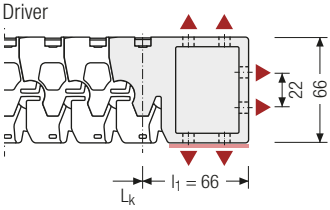
Aluminum section subdivisions are only available with $a_x > 26$ mm .

TKR0280 | End connectors | UMB

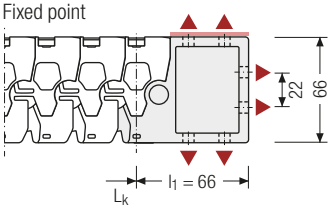
UMB end connectors UMB – plastic

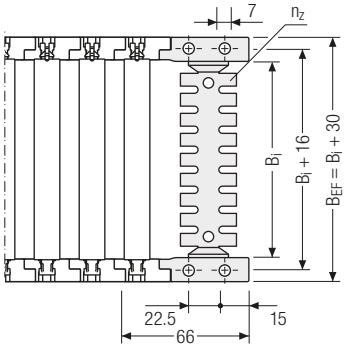
The universal mounting brackets (UMB) are made from plastic and can **be mounted from the top, from the bottom or face on**.

Driver



Fixed point

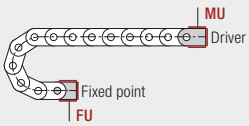




▲ Assembly options

B_i [mm]	B_{EF} [mm]	n_z
50	80	2 x 3
75	105	2 x 5
100	130	2 x 7
125	155	2 x 9
150	180	2 x 11
200	230	–

Recommended tightening torque: 0,6 Nm for screws M4



Connection point
F – fixed point
M – driver

Connection type
U – universal mounting bracket

Order example

UMB	.	F	U
UMB	.	M	U
End connector		Connection point	Connection type

We recommend the use of strain reliefs before driver and fixed point. See from p. 756.

Key for abbreviations on page 12
Design guidelines from page 60

Technical support:
technik@kabelschlepp.de

Subject to change.