

# TKR series

Extremely quiet and low-vibration  
for highly dynamic applications\*



Fraunhofer

TESTED<sup>®</sup>  
DEVICE  
TSUBAKIMOTO CHAIN CO.  
TKR0200V50R55  
Report No. KA 1006-531



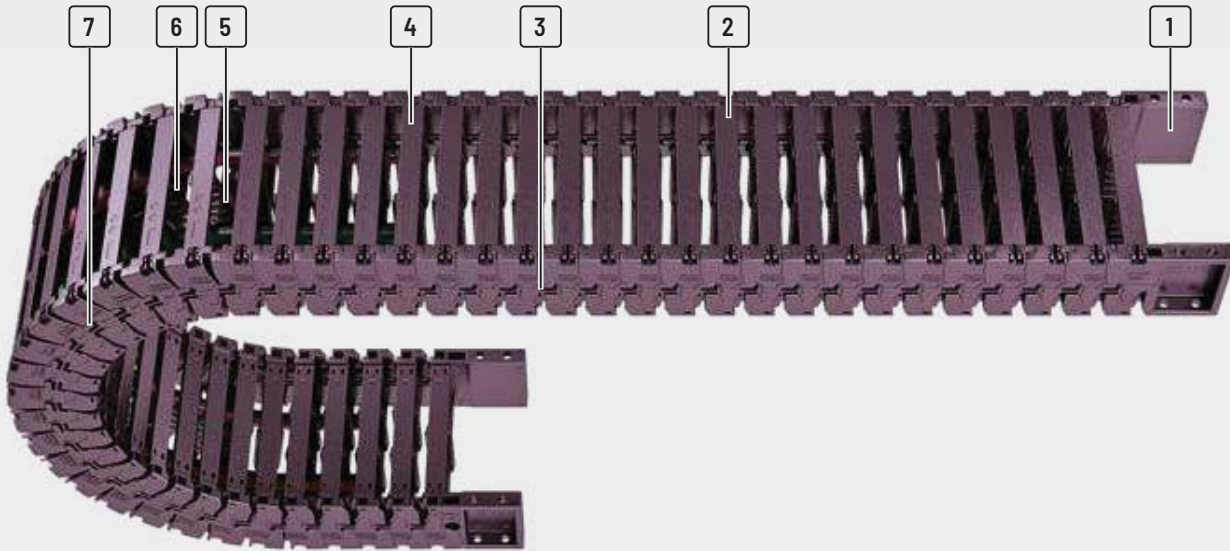
product  
design  
award

2006



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

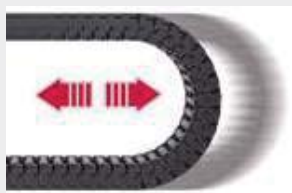
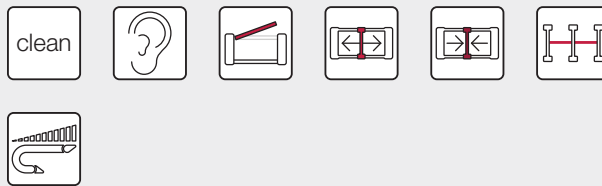
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[tsubaki-kabelschlepp.com/trademarks](http://tsubaki-kabelschlepp.com/trademarks)



- 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**

Subject to change without notice.

PROTUM® series

K series

UNIFLEX Advanced series

M series

TKHD series

XL series

QUANTUM® series

**TKR series**

TKA series

UAT series

Type	Opening variant	Stay variant	$h_i$ [mm]	$h_G$ [mm]	$B_i$ [mm]	$B_k$ [mm]	$B_i$ - grid [mm]	t [mm]	KR [mm]	Additional load $\leq$ [kg/m]	Cable- $d_{max}$ [mm]
PROTUM® series											
K series											
<b>TKR0150</b>											
		030	22	27,5	20 - 60	34 - 74	-	15	40 - 75	2	17,5
UNIFLEX Advanced series											
<b>TKR0200</b>											
		030	28	37	40 - 120	56 - 136	-	20	55 - 150	2,5	22
M series											
<b>TKR0260</b>											
		030	40	54	50 - 200	76 - 226	-	26	75 - 150	8	32
TKHD series											
<b>TKR0280</b>											
		030	52	66	50 - 200	80 - 230	-	28	75 - 200	10	41
XL series											
QUANTUM® series											
<b>TKR0370</b>											
		RE	28	35	40 - 80	59 - 99	-	37	55 - 100	2,4	25
TKR series											

\* For values  $> 20 \text{ m/s}^2$ , please contact us, we are happy to advise you.

### 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.

Unsupported arrangement			Gliding arrangement			Inner Distribution				Movement			Page
Travel length ≤ [m]	$v_{max} \leq [m/s]$	$a_{max} \leq [m/s^2]$	Travel length ≤ [m]	$v_{max} \leq [m/s]$	$a_{max} \leq [m/s^2]$	TS0	TS1	TS2	TS3	vertical hanging or standing	lying on the side	rotating arrangement	

1,75	5	200*	-	-	-	•	•	-	-	•	-	-	546
------	---	------	---	---	---	---	---	---	---	---	---	---	-----

2,75	5	200*	-	-	-	•	•	-	-	•	-	-	552
------	---	------	---	---	---	---	---	---	---	---	---	---	-----

3,9	5	200*	-	-	-	•	•	-	•	•	-	-	558
-----	---	------	---	---	---	---	---	---	---	---	---	---	-----

4,9	5	200*	-	-	-	•	•	-	•	•	-	-	564
-----	---	------	---	---	---	---	---	---	---	---	---	---	-----

2,8	5	200*	-	-	-	•	•	-	-	•	-	-	570
-----	---	------	---	---	---	---	---	---	---	---	---	---	-----

PROTUM® series

K series

UNIFLEX Advanced series

M series

TKHD series

XL series

QUANTUM® series

**TKR series**

TKA series

UAT series

## 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**.

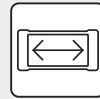
# TKR0150



**Pitch**  
15 mm



**Inner height**  
22 mm

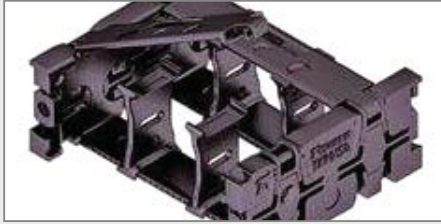


**Inner widths**  
20 – 60 mm



**Bending radii**  
40 – 75 mm

## Stay variants



**Design 030** ..... page 546

### 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](http://tsubaki-kabelschlepp.com/totaltrax)

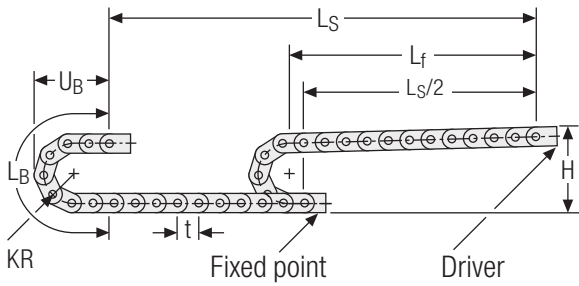


### TRAXLINE® cables for cable carriers

Hi-flex electric cables which were especially developed, optimized and tested for use in cable carriers can be found at [tsubaki-kabelschlepp.com/traxline](http://tsubaki-kabelschlepp.com/traxline)



## Unsupported arrangement

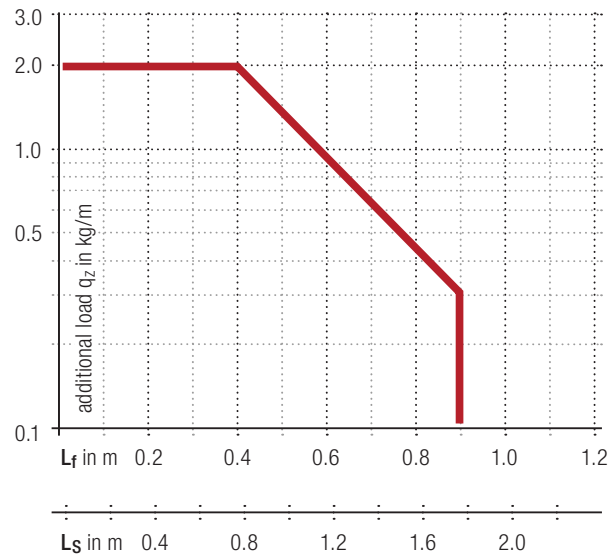






KR [mm]	H [mm]	LB [mm]	UB [mm]
40	120	156	70
50	140	187	80
75	190	266	105

**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  $q_k = 0.3 \text{ kg/m}$  at  $B_i 20 \text{ mm}$ . For other inner widths, the maximum additional load changes.



-  **Speed**  
up to 5 m/s
-  **Acceleration**  
up to 200 m/s<sup>2</sup>\*
-  **Travel length**  
up to 1.75 m
-  **Additional load**  
up to 2.0 kg/m

\* For values > 20 m/s<sup>2</sup>, please contact us, we are happy to advise you!

PROTUM® series

K series

UNIFLEX Advanced series

M series

TKHD series

XL series

QUANTUM® series

**TKR series**

TKA series

UAT series

### More product information online



Assembly instructions etc.:  
Additional info via your smartphone or check online at [tsubaki-kabelschlepp.com/downloads](http://tsubaki-kabelschlepp.com/downloads)



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

## Stay variant 030 – with outside opening and detachable crossbars

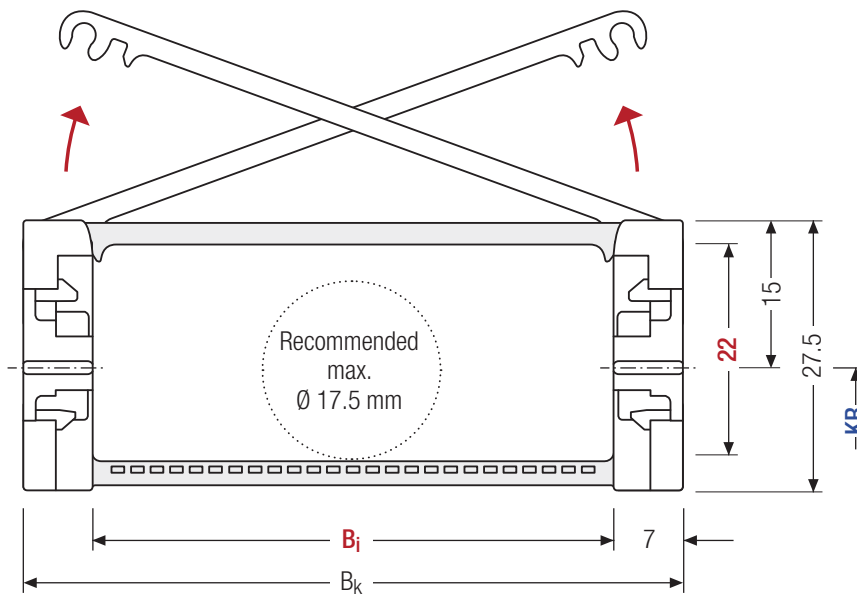
- Low-vibration plastic frame with particularly long service life thanks to molded chain links.
- Swivable and detachable on one side in any position.
- **Outside:** Swivable and detachable.



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 even 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	$B_i + 14$	40	0.3 – 0.5
		40		50	
		60		75	

### Order example



TKR0150  
Type

60  
 $B_i$  [mm]

030  
Stay variant

75  
 $KR$  [mm]

800  
 $L_k$  [mm]

VS  
Stay arrangement

### Divider systems

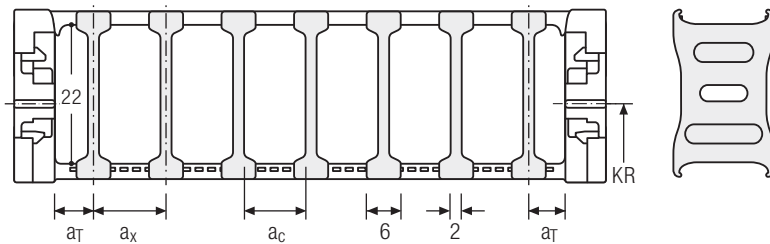
As standard, the divider system is mounted on every 2<sup>nd</sup> chain link

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**).

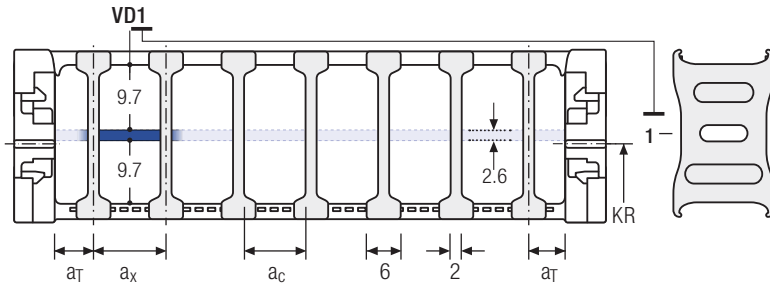
### Divider system TS0 without height separation

Vers.	a <sub>T</sub> min [mm]	a <sub>x</sub> min [mm]	a <sub>c</sub> min [mm]	a <sub>x</sub> grid [mm]	n <sub>T</sub> min
A	5	6	4	—	—
B	6	6	4	2	—



### Divider system TS1 with continuous height separation

Vers.	a <sub>T</sub> min [mm]	a <sub>x</sub> min [mm]	a <sub>c</sub> min [mm]	a <sub>x</sub> grid [mm]	n <sub>T</sub> min
A	5	6	4	—	2
B	6	6	4	2	2



### Order example

TS1

·

A

·

3

-

VD0

⋮

-

VD1

Divider system

Version

n<sub>T</sub>

Height separation

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

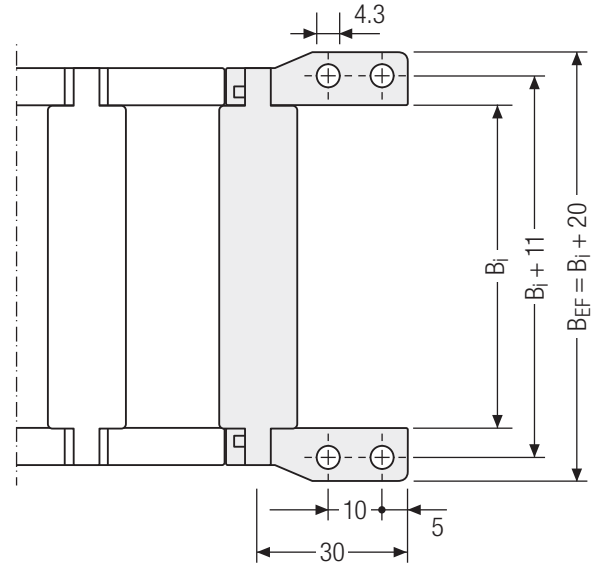
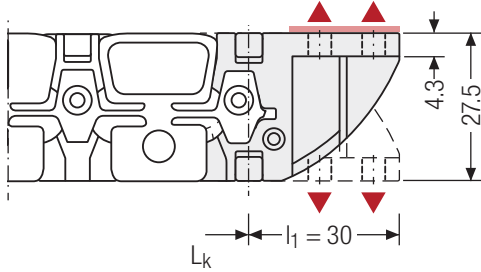
If using divider systems with height separation (**TS1**) please also state the positions [e.g. VD1] viewed from the left driver belt. You are welcome to add a sketch to your order.

PROTUM® series
K series
UNIFLEX Advanced series
M series
TKHD series
XL series
QUANTUM® series
<b>TKR</b> series
TKA series
UAT series




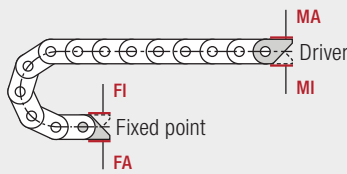
## One-part end connectors – plastic

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 at the driver and fixed point. See from p. 908.

### More product information online



Assembly instructions etc.:  
Additional info via your smartphone or check online at [tsubaki-kabelschlepp.com/downloads](http://tsubaki-kabelschlepp.com/downloads)



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

UAT  
seriesTKA  
series**TKR**  
seriesQUANTUM®  
seriesXL  
seriesTKHD  
seriesM  
seriesUNIFLEX  
Advanced  
seriesK  
seriesPROTUM®  
series

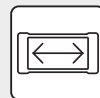
# TKR0200



**Pitch**  
20 mm



**Inner height**  
28 mm

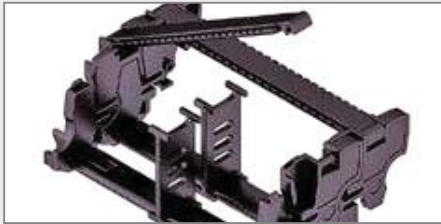


**Inner widths**  
40 – 120 mm



**Bending radii**  
55 – 150 mm

## Stay variants



**Design 030** ..... page 552

### 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

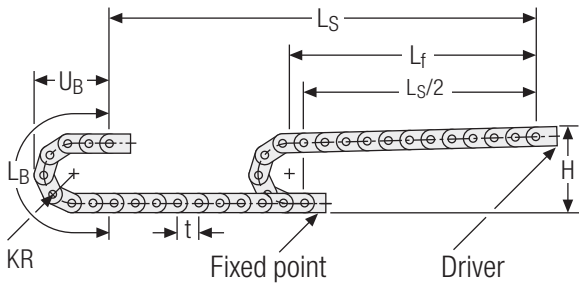
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Unsupported arrangement

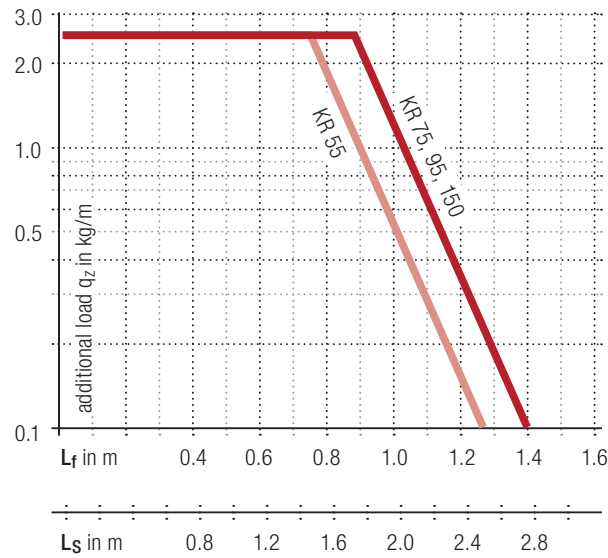


KR [mm]	H [mm]	L <sub>B</sub> [mm]	U <sub>B</sub> [mm]
55	182	253	116
75	222	316	136
95	262	379	156
150	372	552	211

**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  $q_k = 0.6 \text{ kg/m}$  at  $B_i 40 \text{ mm}$ . For other inner widths, the maximum additional load changes.



**Speed**  
up to 5 m/s



**Acceleration**  
up to 200 m/s<sup>2</sup>\*



**Travel length**  
up to 2.75 m



**Additional load**  
up to 2.5 kg/m

\* For values > 20 m/s<sup>2</sup>, please contact us, we are happy to advise you!

PROTUM® series
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More product information online



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## Stay variant 030 – with outside opening and detachable crossbars

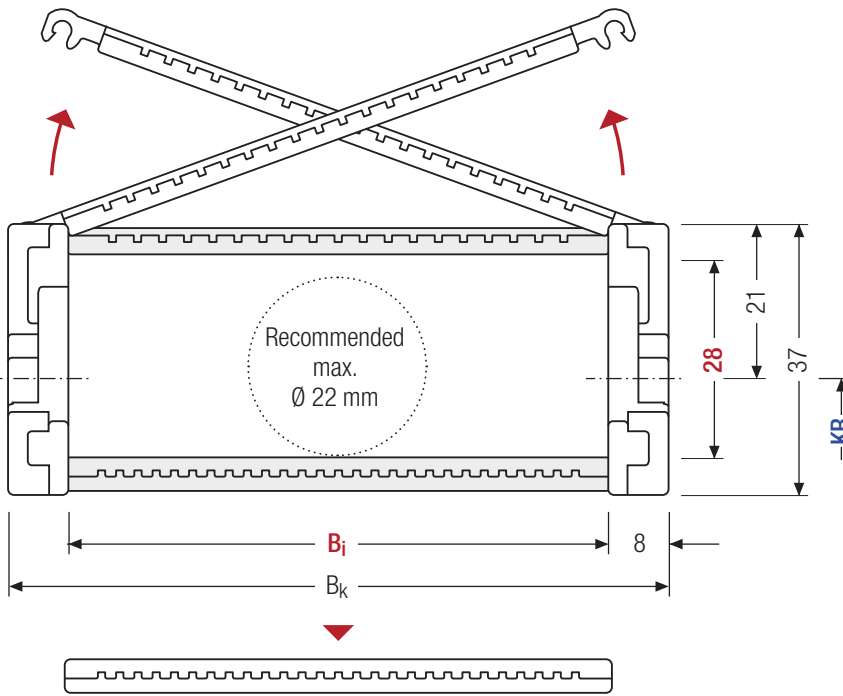
- Low-vibration plastic frame with particularly long service life thanks to molded chain links.
- Swivable and detachable on one side in any position.
- **Outside:** Swivable and detachable
- **Inside:** detachable



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



Bi 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

### Divider systems

As standard, the divider system is mounted on every 2<sup>nd</sup> chain link.

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

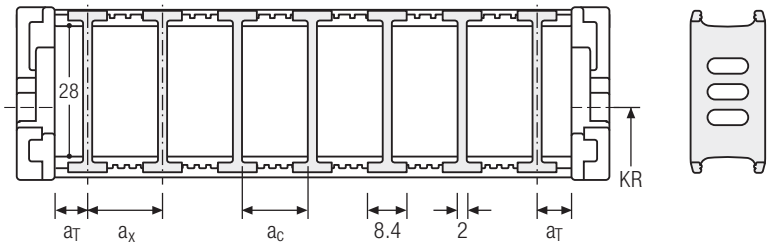
Fixable dividers are available for applications with lateral accelerations and for applications lying on the side. The arresting cams click into place in the locking grids (**version B**).

### Divider system TS0 without height separation

Vers.	a <sub>T</sub> min [mm]	a <sub>x</sub> min [mm]	a <sub>c</sub> min [mm]	a <sub>x</sub> grid [mm]	n <sub>T</sub> min
A	4	8	6	—	—
B	•	8	6	4	—

B <sub>i</sub> [mm]	40	50	60	80	100	120
a <sub>T</sub> min [mm]	4	5	6	4	6	6

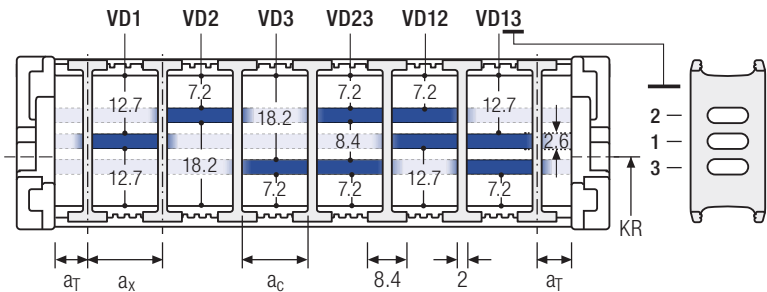


### Divider system TS1 with continuous height separation

Vers.	a <sub>T</sub> min [mm]	a <sub>x</sub> min [mm]	a <sub>c</sub> min [mm]	a <sub>x</sub> grid [mm]	n <sub>T</sub> min
A	4	8	6	—	2
B	•	8	6	4	2

B <sub>i</sub> [mm]	40	50	60	80	100	120
a <sub>T</sub> min [mm]	4	5	6	4	6	6



### Order example

🛒

TS1

·

A

·

3

-

VD0

⋮

-

VD1

Divider system
Version
n<sub>T</sub>
Height separation

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

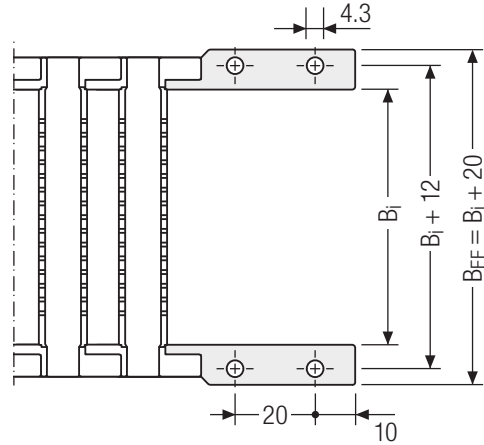
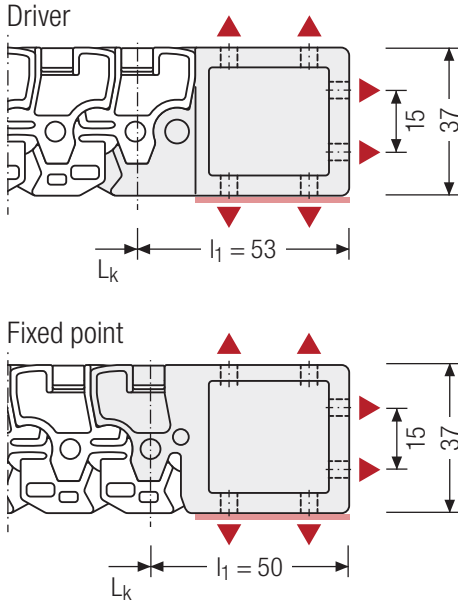
If using divider systems with height separation (**TS1**) please also state the positions [e.g. VD1] viewed from the left driver belt. You are welcome to add a sketch to your order.

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K series
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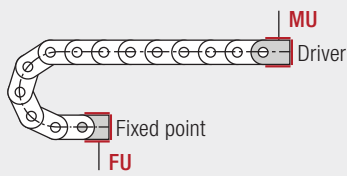
UMB end connectors UMB – plastic

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



▲ Assembly options

**i** Recommended tightening torque: 0,6 Nm for screws M4



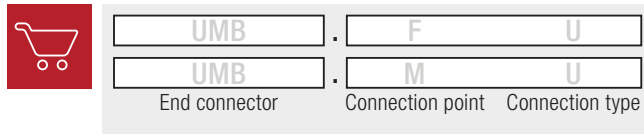
Connection point

- F – fixed point
- M – driver

Connection type

- U – universal mounting bracket

Order example



**i** We recommend the use of strain reliefs at the driver and fixed point. See from p. 908.

More product information online



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Subject to terms and conditions

PROTUM®  
series

K  
series

UNIFLEX  
Advanced  
series

M  
series

TKHD  
series

XL  
series

QUANTUM®  
series

**TKR  
series**

TKA  
series

UAT  
series

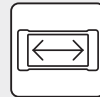
# TKR0260



**Pitch**  
26 mm



**Inner height**  
40 mm

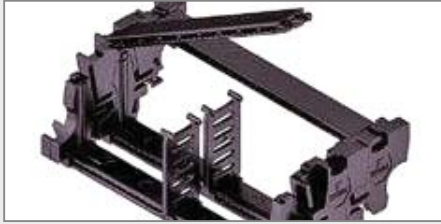


**Inner widths**  
50 – 200 mm



**Bend radii**  
75 – 150 mm

## Stay variants



**Design 030** ..... page 558

### 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

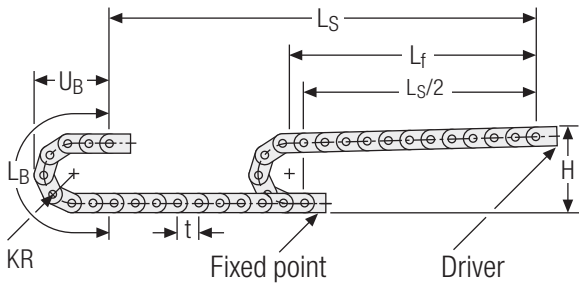
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Unsupported arrangement



KR [mm]	H [mm]	L <sub>B</sub> [mm]	U <sub>B</sub> [mm]
75	238	340	156
100	288	418	181
125	338	497	206
150	388	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  $q_k = 1.5 \text{ kg/m}$  at  $B_i 50 \text{ mm}$ . For other inner widths, the maximum additional load changes.



**Speed**  
up to 5 m/s



**Acceleration**  
up to 200 m/s<sup>2</sup>\*

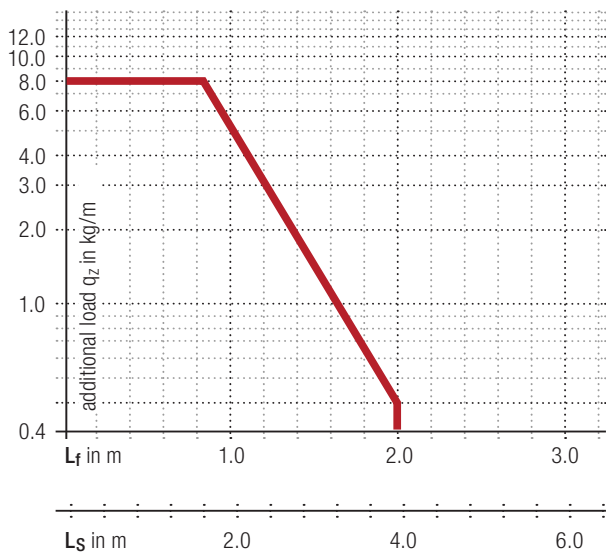


**Travel length**  
up to 3.9 m



**Additional load**  
up to 8.0 kg/m

\* For values > 20 m/s<sup>2</sup>, please contact us, we are happy to advise you!



PROTUM® series

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UNIFLEX Advanced series

M series

TKHD series

XL series

QUANTUM® series

TKR series

TKA series

UAT series

More product information online



Assembly instructions etc.:  
Additional info via your smartphone or check online at [tsubaki-kabelschlepp.com/downloads](http://tsubaki-kabelschlepp.com/downloads)



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



## Stay variant 030 – with outside opening and detachable crossbars

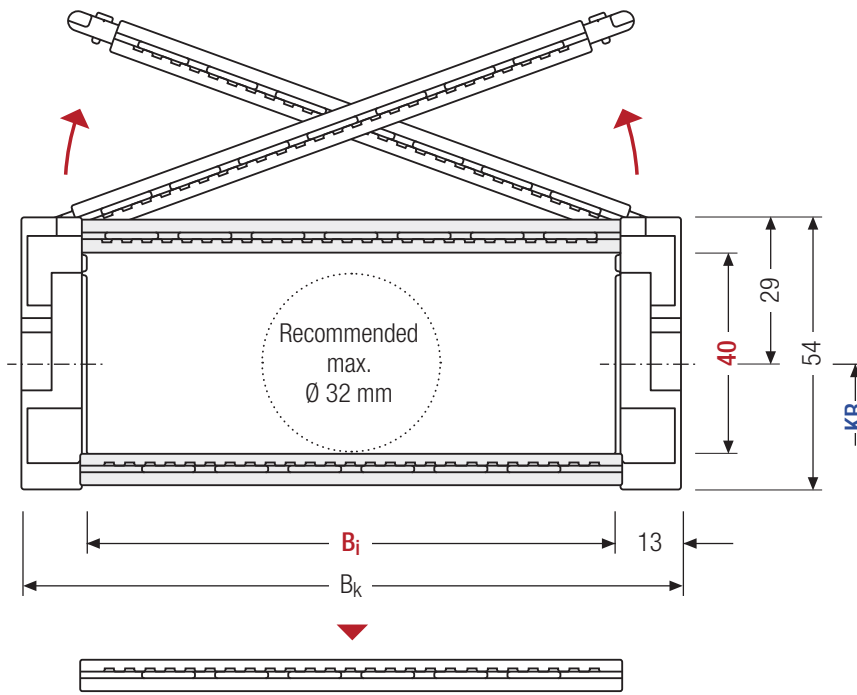
- Low-vibration plastic frame with particularly long service life thanks to molded chain links.
- Swivable and detachable on one side in any position.
- **Outside:** Swivable and detachable
- **Inside:** detachable



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



$B_i$  50 – 200 mm



**i** 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	62	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

## Divider systems

As standard, the divider system is mounted on every 2<sup>nd</sup> chain link.

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

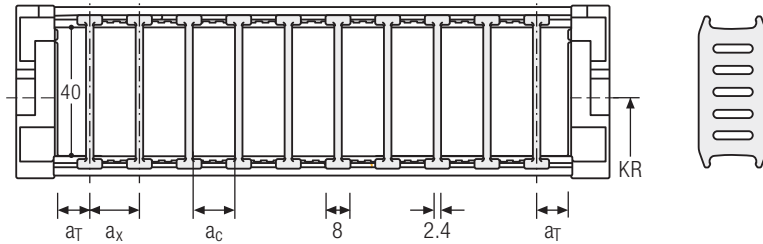
Fixable dividers are available for applications with lateral accelerations and for applications lying on the side. The arresting cams click into place in the locking grids in the crossbars (**version B**).

### Divider system TS0 without height separation

Vers.	a <sub>T</sub> min [mm]	a <sub>x</sub> min [mm]	a <sub>c</sub> min [mm]	a <sub>x</sub> grid [mm]	n <sub>T</sub> min
A	3	8	5.6	—	—
B	•	8	5.6	4	—

B <sub>i</sub> [mm]	50	62	75	87	100	125	150	200
a <sub>T</sub> min [mm]	5	7	5.5	3.5	6	6.5	7	4

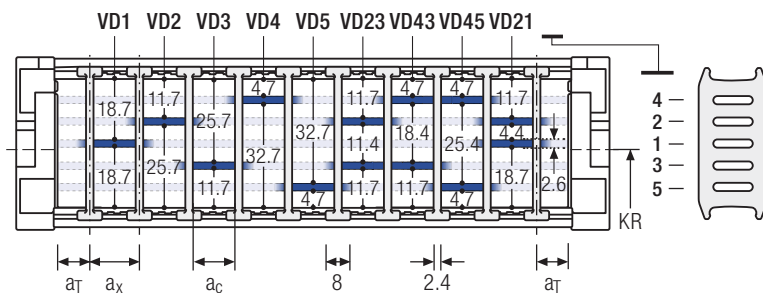


### Divider system TS1 with continuous height separation

Vers.	a <sub>T</sub> min [mm]	a <sub>x</sub> min [mm]	a <sub>c</sub> min [mm]	a <sub>x</sub> grid [mm]	n <sub>T</sub> min
A	3	8	5.6	—	2
B	•	8	5.6	4	2

B <sub>i</sub> [mm]	50	62	75	87	100	125	150	200
a <sub>T</sub> min [mm]	5	7	5.5	3.5	6	6.5	7	4

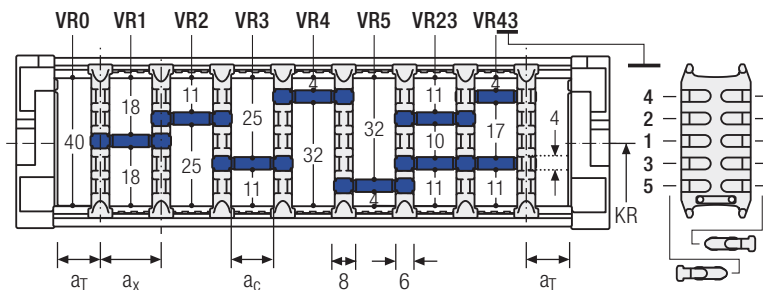


### Divider system TS3 with height separation made of aluminum partitions

Vers.	a <sub>T</sub> min [mm]	a <sub>x</sub> min [mm]	a <sub>c</sub> min [mm]	a <sub>x</sub> grid [mm]	n <sub>T</sub> min
A	3	26	20	—	2
B	•	28	22	4	2

B <sub>i</sub> [mm]	50	62	75	87	100	125	150	200
a <sub>T</sub> min [mm]	5	7	5.5	3.5	6	6.5	7	4



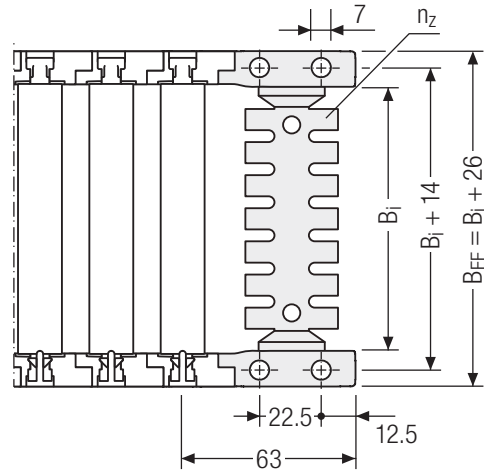
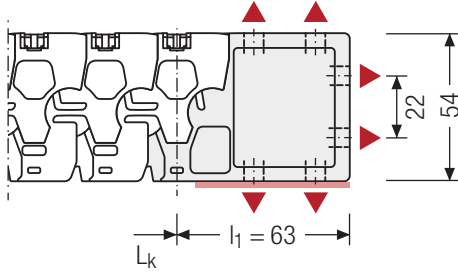
The dividers are fixed by the partitions, the complete divider system is movable in the cross section.

 Aluminum section subdivisions are only available with a<sub>x</sub> > 26 mm.



UMB end connectors UMB – plastic

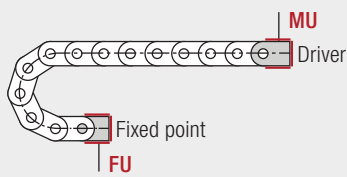
The universal mounting brackets (UMB) are made from plastic and can be mounted from the top, from the bottom or face on.



▲ Assembly options

$B_i$ [mm]	$B_{EF}$ [mm]	$n_z$
50	76	2 x 3
62	88	–
75	101	2 x 5
87	113	–
100	126	2 x 7
125	151	2 x 9
150	176	2 x 11
200	226	–

**i** Recommended tightening torque:  
0.6 Nm for screws M4



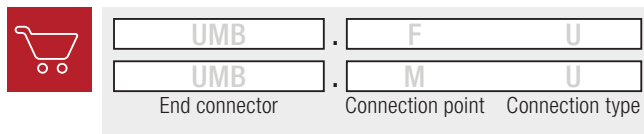
Connection point

**F** – fixed point  
**M** – driver

Connection type

**U** – universal mounting bracket

Order example



**i** We recommend the use of strain reliefs at the driver and fixed point. See from p. 908.



Subject to change without notice.  
Subject to change.

UAT series	TKA series	<b>TKR series</b>	QUANTUM® series	XL series	TKHD series	M series	UNIFLEX Advanced series	K series	PROTUM® series
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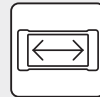
# TKR0280



**Pitch**  
28 mm



**Inner height**  
52 mm



**Inner widths**  
50 – 200 mm



**Bending radii**  
75 – 200 mm

## Stay variants



**Design 030** ..... page 564

### 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

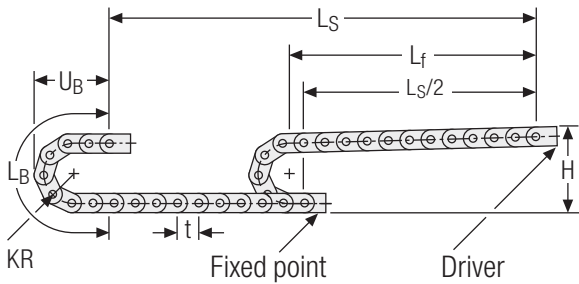
Benefit from the advantages of the TOTALTRAX® complete system. A complete delivery from one source – with a warranty certificate on request! Learn more at [tsubaki-kabelschlepp.com/totaltrax](https://tsubaki-kabelschlepp.com/totaltrax)



### TRAXLINE® cables for cable carriers

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Unsupported arrangement

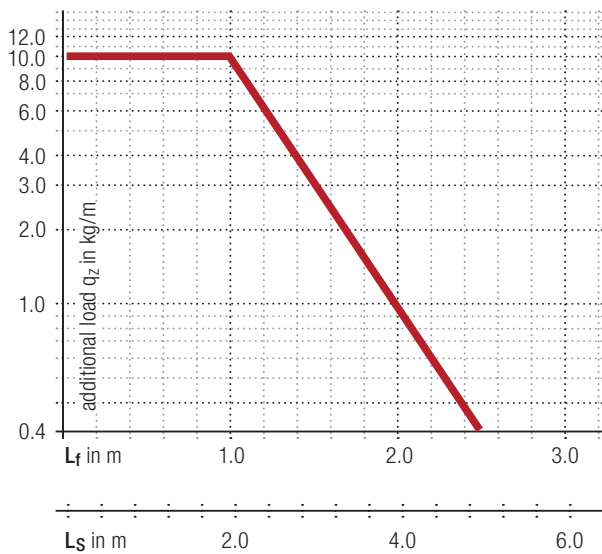


KR [mm]	H [mm]	L <sub>B</sub> [mm]	U <sub>B</sub> [mm]
75	252	348	167
100	302	427	192
150	402	584	242
200	502	741	292

**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  $q_k = 2.0 \text{ kg/m}$  at  $B_i 50 \text{ mm}$ . For other inner widths, the maximum additional load changes.



**Speed**  
up to 5 m/s

**Acceleration**  
up to 200 m/s<sup>2</sup>\*

**Travel length**  
up to 4.9 m

**Additional load**  
up to 10.0 kg/m

\* For values > 20 m/s<sup>2</sup>, please contact us, we are happy to advise you!

PROTUM® series

K series

UNIFLEX Advanced series

M series

TKHD series

XL series

QUANTUM® series

TKR series

TKA series

UAT series

More product information online



Assembly instructions etc.:  
Additional info via your smartphone or check online at [tsubaki-kabelschlepp.com/downloads](http://tsubaki-kabelschlepp.com/downloads)





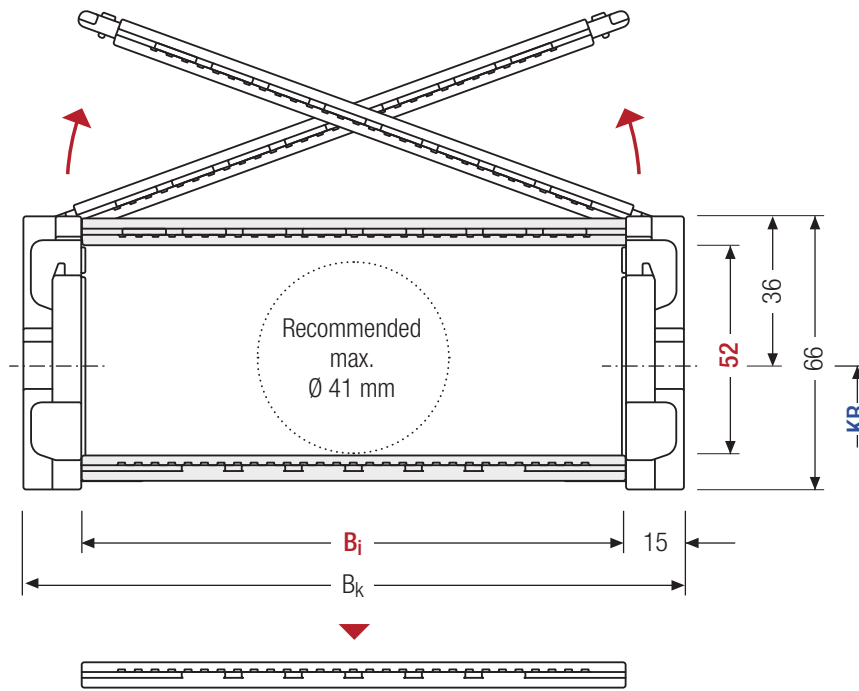
Configure your custom cable carrier here:  
[online-engineer.de](http://online-engineer.de)

## 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



**i** 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	62	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



### Divider systems

As standard, the divider system is mounted on every 2<sup>nd</sup> chain link.

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

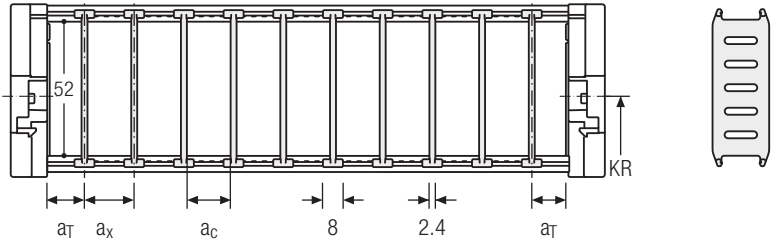
Fixable dividers are available for applications with lateral accelerations and for applications lying on the side. The arresting cams click into place in the locking grids in the crossbars (**version B**).

### Divider system TS0 without height separation

Vers.	a <sub>T</sub> min [mm]	a <sub>x</sub> min [mm]	a <sub>c</sub> min [mm]	a <sub>x</sub> grid [mm]	n <sub>T</sub> min
A	3	8	5.6	—	—
B	•	8	5.6	4	—

B <sub>i</sub> [mm]	50	62	75	87	100	125	150	200
a <sub>T</sub> min [mm]	5	7	5.5	3.5	6	6.5	7	4

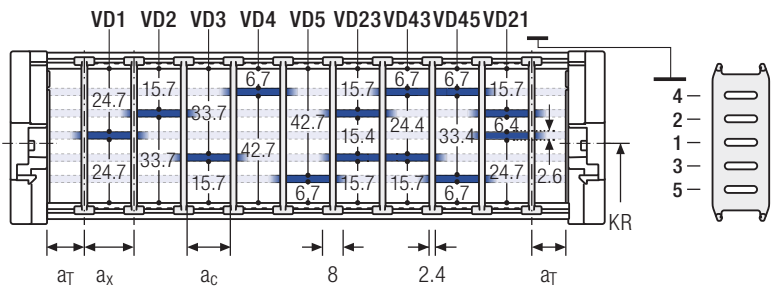


### Divider system TS1 with continuous height separation

Vers.	a <sub>T</sub> min [mm]	a <sub>x</sub> min [mm]	a <sub>c</sub> min [mm]	a <sub>x</sub> grid [mm]	n <sub>T</sub> min
A	3	8	5.6	—	2
B	•	8	5.6	4	2

B <sub>i</sub> [mm]	50	62	75	87	100	125	150	200
a <sub>T</sub> min [mm]	5	7	5.5	3.5	6	6.5	7	4

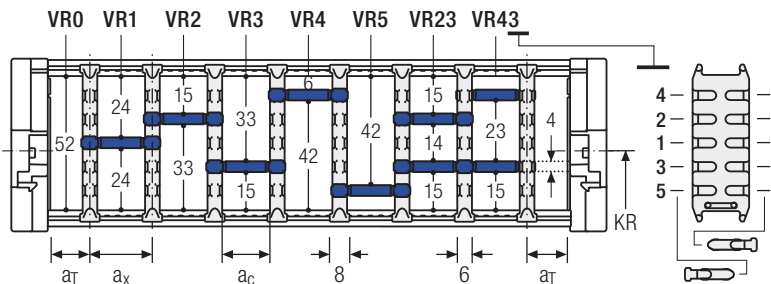


### Divider system TS3 with height separation made of aluminum partitions

Vers.	a <sub>T</sub> min [mm]	a <sub>x</sub> min [mm]	a <sub>c</sub> min [mm]	a <sub>x</sub> grid [mm]	n <sub>T</sub> min
A	3	26	20	—	2
B	•	28	22	4	2

B <sub>i</sub> [mm]	50	62	75	87	100	125	150	200
a <sub>T</sub> min [mm]	5	7	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.

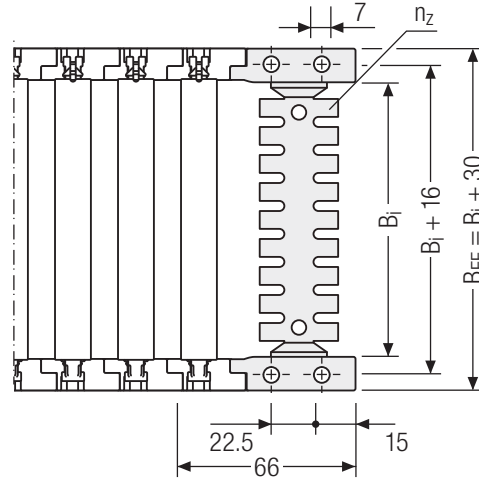
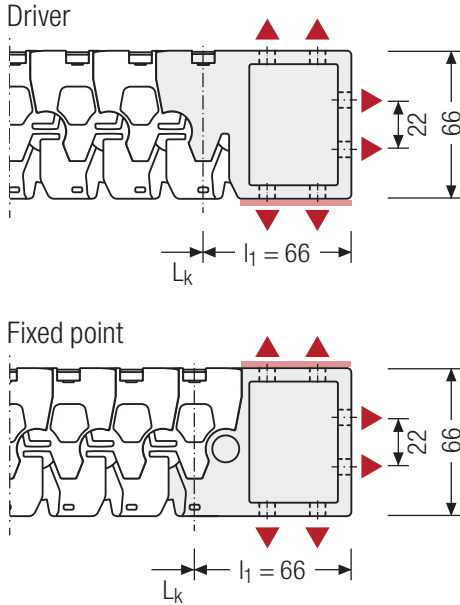
 Aluminum section subdivisions are only available with a<sub>x</sub> > 26 mm.

PROTUM® series
K series
UNIFLEX Advanced series
M series
TKHD series
XL series
QUANTUM® series
<b>TKR series</b>
TKA series
UAT series



UMB end connectors UMB – plastic

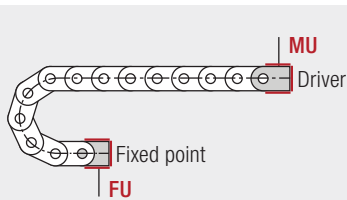
The universal mounting brackets (UMB) are made from plastic and can be mounted from the top, from the bottom or face on.



▲ Assembly options

$B_i$ [mm]	$B_{EF}$ [mm]	$n_z$
50	80	2 x 3
62	92	–
75	105	2 x 5
87	117	–
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



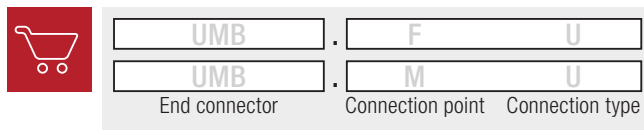
Connection point

- F – fixed point
- M – driver

Connection type

- U – universal mounting bracket

Order example



We recommend the use of strain reliefs at the driver and fixed point. See from p. 908.



PROTUM®  
series

K  
series

UNIFLEX  
Advanced  
series

M  
series

TKHD  
series

XL  
series

QUANTUM®  
series

**TKR  
series**

TKA  
series

UAT  
series

# TKR0370



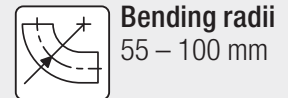
**Pitch**  
37 mm



**Inner height**  
28 mm



**Inner widths**  
40 – 80 mm



**Bending radii**  
55 – 100 mm

## Stay variants



**Plastic stay RE** ..... page 570

### Frame screw-in stay

- Plastic stay for light to medium loads. Assembly without screws.
- **Outside/inside:** to open by rotating.



### TOTALTRAX® complete systems

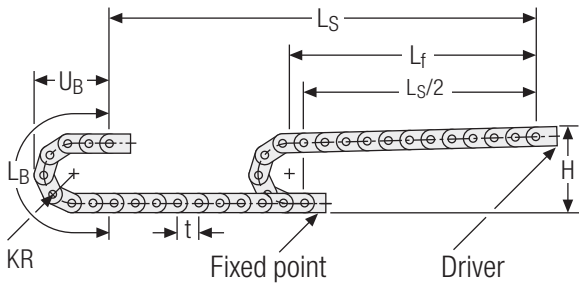
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Unsupported arrangement

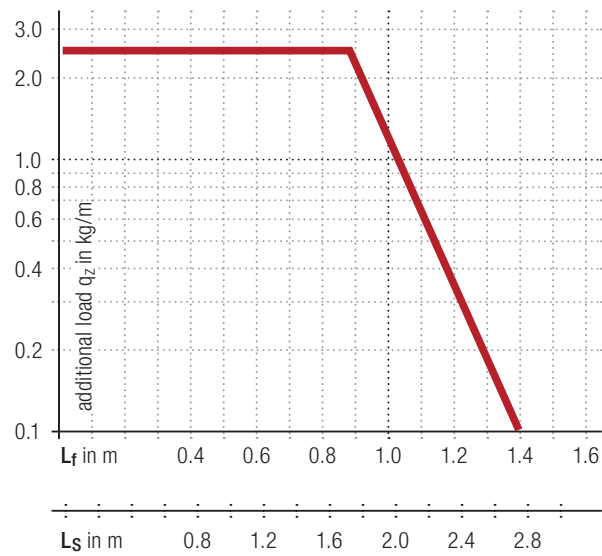


KR [mm]	H [mm]	L <sub>B</sub> [mm]	U <sub>B</sub> [mm]
75	252	348	167
100	302	427	192
150	402	548	242
200	502	741	292

**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  $q_k = 0.55 \text{ kg/m}$  at  $B_i 50 \text{ mm}$ . For other inner widths, the maximum additional load changes.



**Speed**  
up to 5 m/s

**Acceleration**  
up to 200 m/s<sup>2</sup>\*

**Travel length**  
up to 2.8 m

**Additional load**  
up to 2.4 kg/m

\* For values > 20 m/s<sup>2</sup>, please contact us, we are happy to advise you!

PROTUM® series

K series

UNIFLEX Advanced series

M series

TKHD series

XL series

QUANTUM® series

TKR series

TKA series

UAT series

More product information online



Assembly instructions etc.:  
Additional info via your smartphone or check online at [tsubaki-kabelschlepp.com/downloads](http://tsubaki-kabelschlepp.com/downloads)

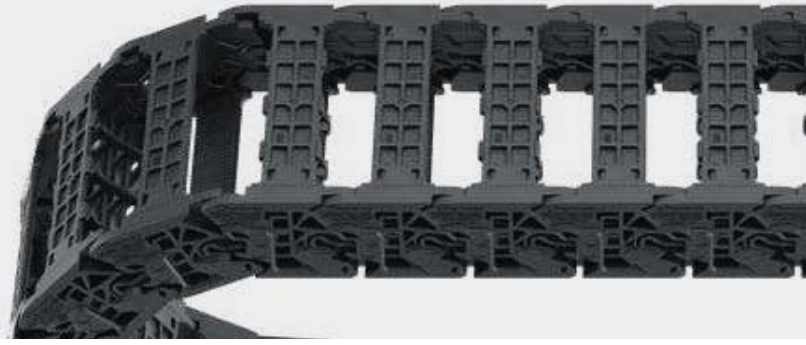


Configure your custom cable carrier here:  
[online-engineer.de](http://online-engineer.de)



## Plastic stay RE – screw-in frame stay

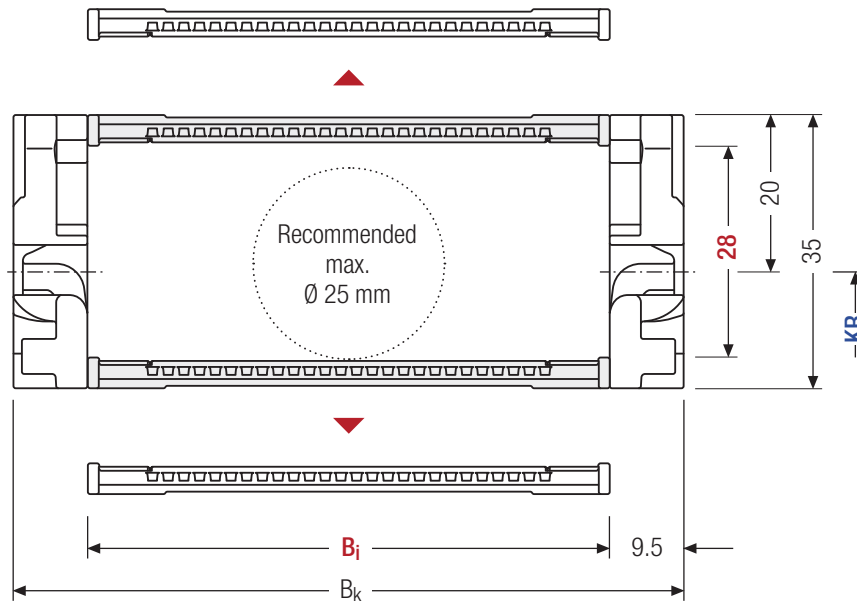
- Plastic stay for light and medium loads. Assembly without screws.
- Available in 5 widths.
- **Outside/inside:** to open by rotating.



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



$B_i$  40 – 80 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	35	40	50	60	70	80	$B_i + 19$	55	75	100	0.53 – 0.61

### Order example


TKR0370 . 
 80 . 
 RE . 
 75 . 
 703 . 
 VS

Type  $B_i$  [mm] Stay variant  $KR$  [mm]  $L_k$  [mm] Stay arrangement



### Divider systems

As standard, the divider system is mounted on every 2<sup>nd</sup> chain link.

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

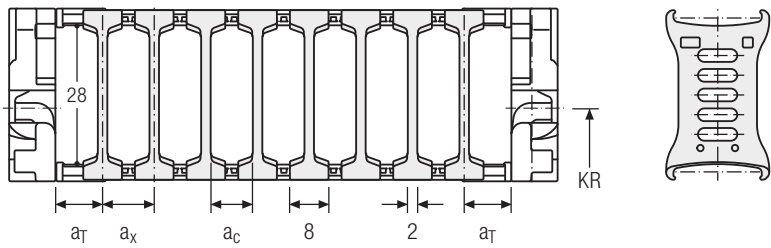
Fixable dividers are available for applications with lateral accelerations and for applications lying on the side. The arresting cams click into place in the locking grids in the crossbars (**version B**).

### Divider system TS0 without height separation

Vers.	a <sub>T</sub> min [mm]	a <sub>x</sub> min [mm]	a <sub>c</sub> min [mm]	a <sub>x</sub> Raster [mm]	n <sub>T</sub> min
A	7.5	8	6	—	—
B	7.5	8	6	2	—

B <sub>i</sub> [mm]	40	50	60	70	80
a <sub>T</sub> min [mm]	8	9	8	9	8

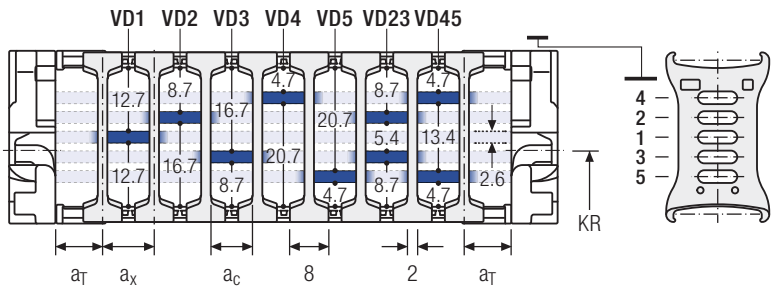


### Divider system TS1 with continuous height separation

Vers.	a <sub>T</sub> min [mm]	a <sub>x</sub> min [mm]	a <sub>c</sub> min [mm]	a <sub>x</sub> Raster [mm]	n <sub>T</sub> min
A	7.5	8	6	—	2
B	7.5	8	6	2	2

B <sub>i</sub> [mm]	40	50	60	70	80
a <sub>T</sub> min [mm]	8	9	8	9	8



### Order example

TS1 · 
 A · 
 3 - 
 VD0  
 ⋮  
 - VD1

Divider system      Version      n<sub>T</sub>      Height separation

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

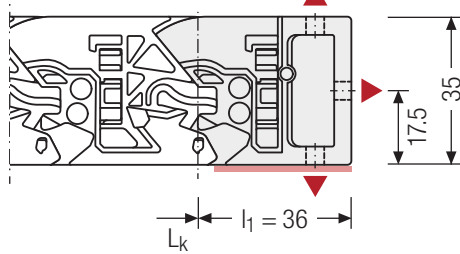
If using divider systems with height separation (**TS1**) please also state the positions [e.g. VD1] viewed from the left driver belt. You are welcome to add a sketch to your order.

PROTUM® series
K series
UNIFLEX Advanced series
M series
TKHD series
XL series
QUANTUM® series
TKR series
TKA series
UAT series

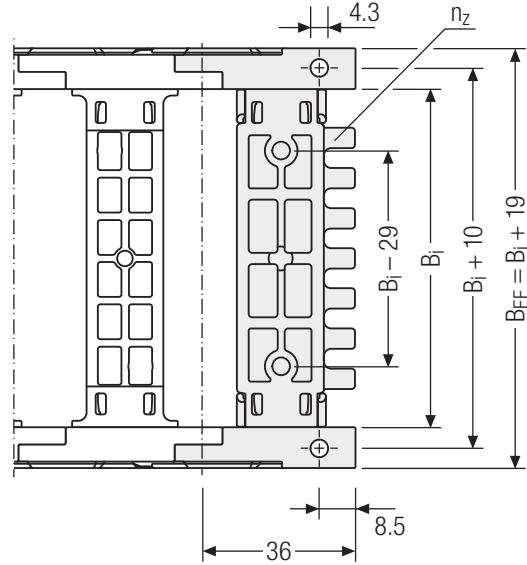
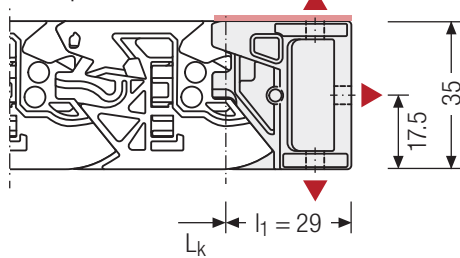
UMB end connectors UMB – plastic

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

Driver




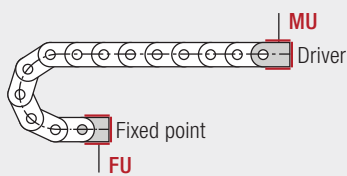
Fixed point



▲ Assembly options

$B_i$ [mm]	$B_{EF}$ [mm]	$n_z$
40	59	3
50	69	4
60	79	5
70	89	6
80	99	7

 Recommended tightening torque:  
0.6 Nm for screws M4



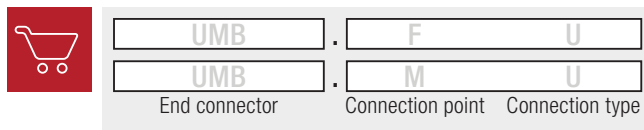
Connection point

- F – fixed point
- M – driver

Connection type

- U – universal mounting bracket

Order example





PROTUM®  
series

K  
series

UNIFLEX  
Advanced  
series

M  
series

TKHD  
series

XL  
series

QUANTUM®  
series

**TKR  
series**

TKA  
series

UAT  
series