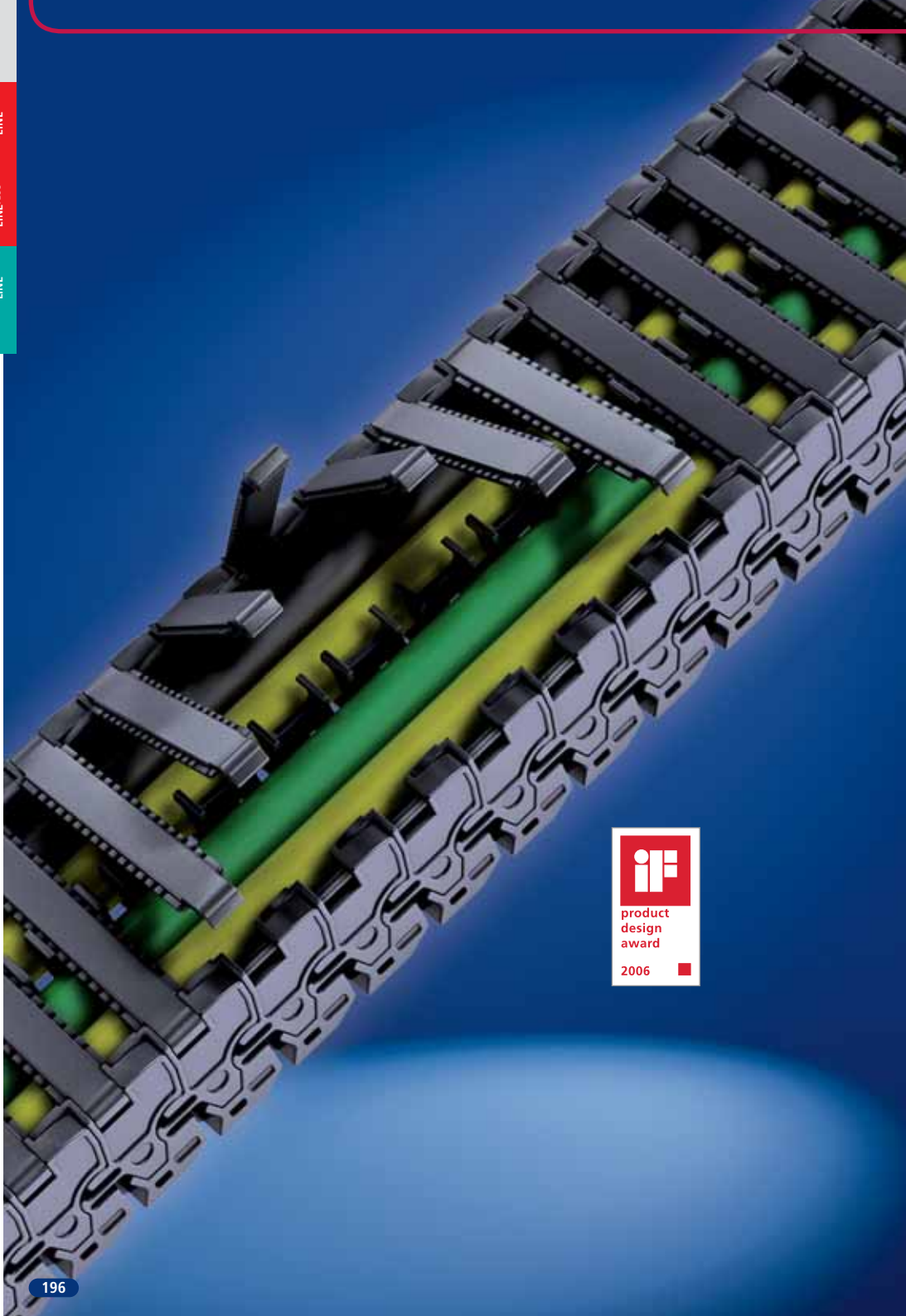
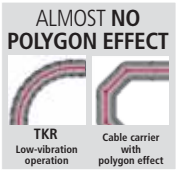

product
design
award
2006

TKR

Extremely quiet and low-vibration for highly dynamic applications*

- Long service life
- Ideal for highly dynamic applications
- High lateral stability
- Suitable for clean rooms
- Simple shortening and extension due to modular design



Ideal for highly dynamic applications

The operation of the TKR is extremely low-noise and low-vibration. The so-called polygon effect is minimized.

Optimum uses are especially handling and installation systems, robots, measuring equipment, automatic pick and place systems, printing and textile machines.

Due to their **low noise** during operation, the TKR types are optimally suitable for applications with **low-vibration linear drives**.

Suitable for clean rooms and long service life

The movable connecting elements are injection molded on the chain links. In contrast to conventional pin-hole joints, there is almost no wear (link wear), whereby the TKR types are excellent for use in clean rooms.

The special shaping of the connecting elements also increases the service life of the system.

Ideal for highly dynamic applications

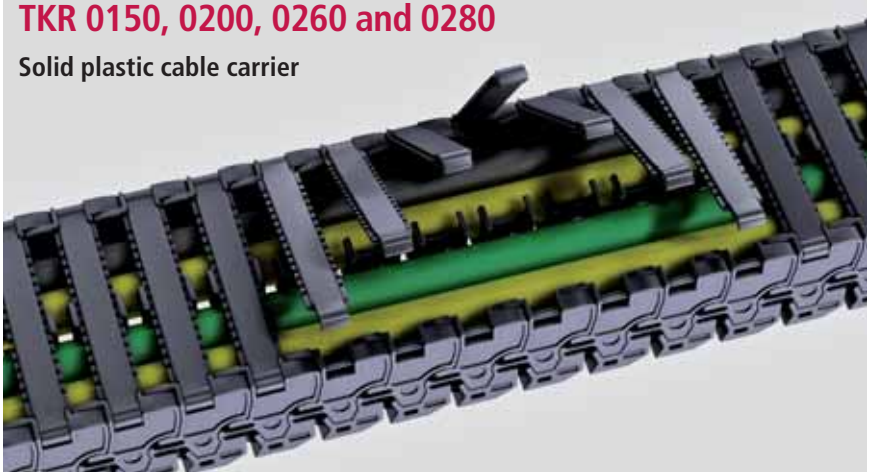
Universal connectors (UMB) for connection above, below or at the front

Injection molded connecting elements

* Some features can be different for certain types for design reasons. Our specialists are happy to advise you.

TKR 0150, 0200, 0260 and 0280

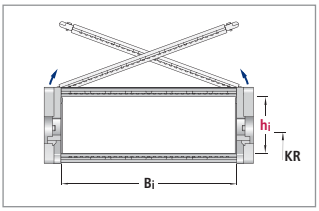
Solid plastic cable carrier

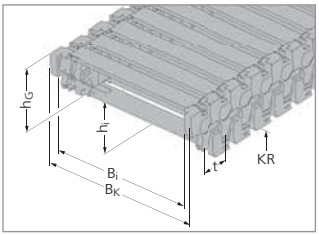


Type	h_i	B_i	Maximum travel length unsupported in m	Dynamics of unsupported arrangement		Page
				Travel speed* v_{max} in m/s	Travel acceleration* a_{max} in m/s²	
TKR 0150	22	20-60	1.77	5	200**	199
TKR 0200	28	40-120	2.76	5	200**	199
TKR 0260	40	50-200	3.95	5	200**	199
TKR 0280	52	50-200	4.94	5	200**	199

* Possible maximum values: Please contact us.
** At values > 20 m/s² please contact us – we are happy to advise you.

Dimensions in mm





Dimensions and intrinsic weight

Type	h_i	h_G	Inside width B_i / Intrinsic chain weight						B_k
TKR 0150	22	27,5	20	40	60	–	–	–	B_i + 14
			0,3	0,4	0,5	–	–	–	
TKR 0200	28	37,0	40	50	60	80	100	120	B_i + 16
			0,6	0,6	0,7	0,8	0,9	1,0	
TKR 0260	40	54,0	50	75	100	125	150	200	B_i + 26
			1,5	1,7	1,9	2,1	2,3	2,7	
TKR 0280	52	66,0	50	75	100	125	150	200	B_i + 30
			2,0	2,2	2,4	2,6	2,8	3,2	

Dimensions in mm/Weights in kg/m

TKR 0150, 0200, 0260 and 0280

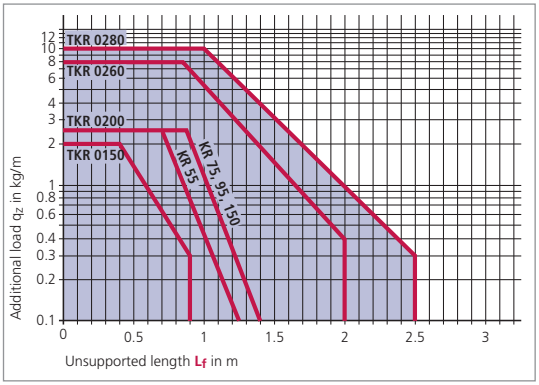
Bend radius and pitch

Type	Bend radii KR mm			
TKR 0150	40	50	75	–
TKR 0200	55	75	95	150
TKR 0260	75	100	125	150
TKR 0280	75	100	150	200

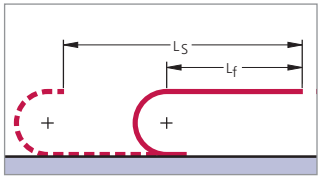
Pitch:
TKR 0150: t = 15 mm
TKR 0200: t = 20 mm
TKR 0260: t = 26 mm
TKR 0280: t = 28 mm

Load diagram

for unsupported length L_f depending on the additional load



Unsupported length L_f



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

We are at your service to advise on these applications.

Example of ordering

Cable Carrier					Divider system		Connection
TKR 0200	. 100	- 95	- 800		TS 0	/ 3	FA/MA
Type	Inside width B_i in mm	Bend radius KR in mm	Chain length L_k in mm (without connection)		Divider system	Number of dividers n_T	Connection Fixed point/ Driver

Ordering divider systems:
Please state the designation of the divider system (TS 0, TS 1 ...) and the number of dividers. Possibly attach a sketch with the dimensions.

TKR 0150, 0200, 0260 and 0280

Fixing the dividers

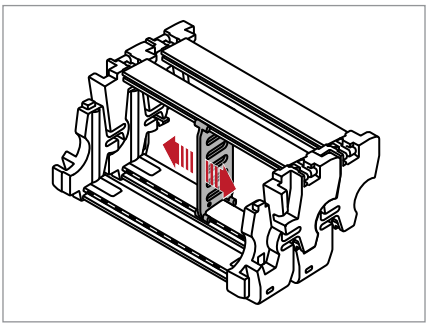
In the standard version, dividers or the complete divider system (dividers with height separation) can be moved in the cross section.
(**Mounting version A**)

Fixed dividers are available for applications with transverse accelerations and where the carrier is rotated through 90° **(Version B)**.

If the fixed installation version is desired, please state this on the order.

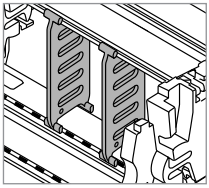
Version A (Standard)

Movable divider

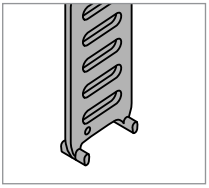


Version B

Fixed divider



■ Locking profile in the crossbar



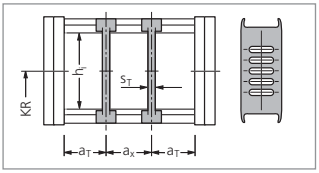
■ Divider with arresting cams

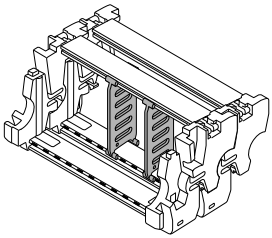
Divider system TS 0

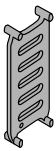
		Version A			Version B			
Type	h_i mm	S_T mm	$a_{T\ min}$ mm	$a_{x\ min}$ mm	S_T mm	$a_{T\ min}$ mm	$a_{x\ min}$ mm	$a_{x\ section}$ mm
0150	22	2.0	5.0	6.0	2.0	6.0	6.0	2.0
0200	28	2.0	4.0	8.0	2.0	4.0/5.0/6.0*	8.0	4.0
0260	40	2.4	3.0	8.0	2.4	5.5/6.0/7.0**	8.0	4.0
0280	52	2.4	3.0	8.0	2.4	5.5/6.0/7.0**	8.0	4.0

* $a_{T\ min}$ = 4.0 mm for B_i = 40, 80
$a_{T\ min}$ = 5.0 mm for B_i = 50
$a_{T\ min}$ = 6.0 mm for B_i = 60, 100, 120

** $a_{T\ min}$ = 5.5 mm for B_i = 75
$a_{T\ min}$ = 6.0 mm for B_i = 100
$a_{T\ min}$ = 7.0 mm for B_i = 150







TKR 0150, 0200, 0260 and 0280

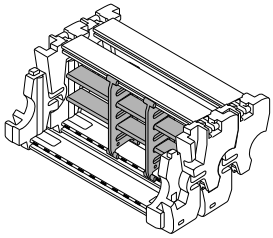
Divider system TS 1

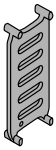
with continuous height subdivision made of aluminium (TKR 0150, 0260, 0280) or plastic (TKR 0200)

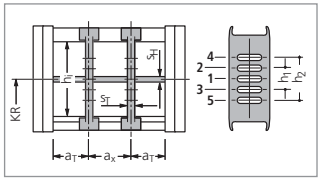
Type	h_i mm	Version A S_T mm	Version A $a_{T\,min}$ mm	Version A $a_{x\,min}$ mm	Version B S_T mm	Version B $a_{T\,min}$ mm	Version B $a_{x\,min}$ mm	Version B $a_{x\,section}$ mm	S_H mm	h_1 mm	h_2 mm
0260	40	2.4	3.0	8.0	2.4	5.5/6.0/7.0**	8.0	4.0	2.6	14	28
0200	28	2,0	4.0	8.0	2.0	4.0/5.0/6.0*	8,0	4,0	2.6	11	–
0280	52	2.4	3.0	8.0	2.4	5.5/6.0/7.0**	8.0	4.0	2.6	18	36

* $a_{T\,min}$ = 4.0 mm for B_i = 40, 80
$a_{T\,min}$ = 5.0 mm for B_i = 50
$a_{T\,min}$ = 6.0 mm for B_i = 60, 100, 120

** $a_{T\,min}$ = 5.5 mm for B_i = 75
$a_{T\,min}$ = 6.0 mm for B_i = 100
$a_{T\,min}$ = 7.0 mm for B_i = 150







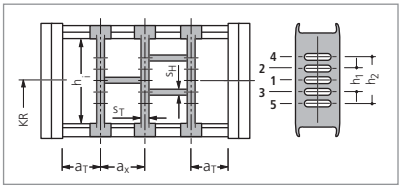
Divider system TS 3

with section subdivision, partitions made of aluminium

Type	h_i mm	Version A S_T mm	Version A $a_{T\,min}$ mm	Version A $a_{x\,min}$ mm	Version B S_T mm	Version B $a_{T\,min}$ mm	Version B $a_{x\,min}$ mm	Version B $a_{x\,section}$ mm	S_H mm	h_1 mm	h_2 mm
0260	40	6.0	3.0	26.0	6.0	5.5/6.0/7.0*	28.0	4.0	4.0	14	28
0280	52	6.0	3.0	26.0	6.0	5.5/6.0/7.0*	28.0	4.0	4.0	18	36

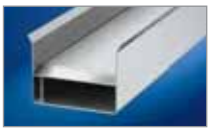
* $a_{T\,min}$ = 5.5 mm for B_i = 75
$a_{T\,min}$ = 7.0 mm for B_i = 150

$a_{T\,min}$ = 6.0 mm for B_i = 100



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

Guide channels
➤ from page 305

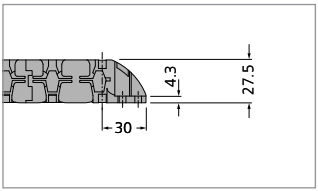


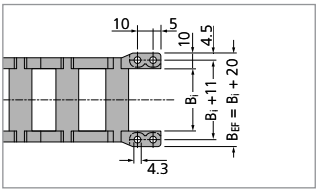
Strain relief devices
➤ from page 311

Cables for cable carrier systems
➤ from page 354

TKR 0150, 0200, 0260 and 0280

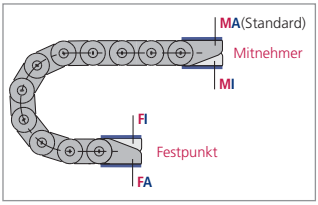
Plastic connectors (Type TKR 0150)





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

Connection variants (Type TKR 0150)



Connection point

M – Driver

F – Fixed point

Connection type

A – Threaded joint outside (standard)

I – Threaded joint, inside

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

When ordering please specify the desired connection type (see ordering key on page 348).

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

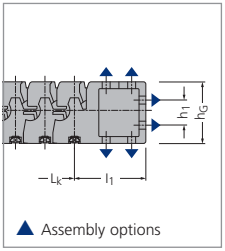
Inside height
22 – 52

Inside widths
20 – 200

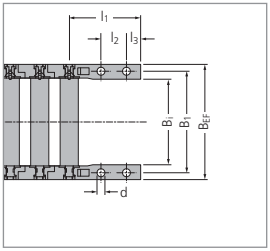
TKR 0150, 0200, 0260 and 0280

UMB (Universal Mounting Brackets) made of plastic (Types TKR 0200, 0260 and 0280)

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



▲ Assembly options



The dimensions of the fixed point and driver connections are identical.
End connectors made of steel plate available on request.
Optional C-rails and strain relief elements for cables can be found on the following pages.
When ordering please specify the connection type FU/MU (see ordering key on page 348).

Type	B_{EF}	b_1	d	l_1	l_2	l_3	h_1	h_G
TKR 0200	**B_i + 20**	**B_i + 12**	4.3	50/53*	20.0	10.0	15	37
TKR 0260	**B_i + 26**	**B_i + 16**	7.0	63	22.5	12.5	22	54
TKR 0280	**B_i + 30**	**B_i + 16**	7.0	66/70**	22.5	15.0	22	66

B_{EF} = chain width over connecting piece

Dimensions in mm

* Fixed point = 50 mm, driver = 53 mm
** Fixed point = 66 mm, driver = 70 mm