TKA series

Chip-tight right to the end

TSUBAKI ECO LINK

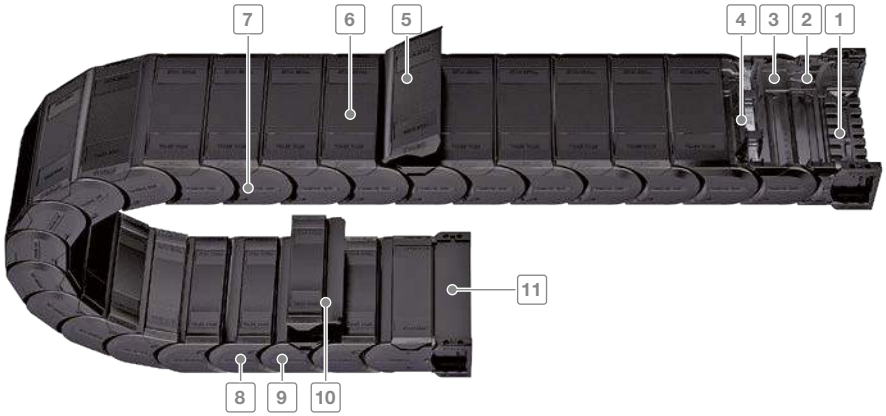
TKA55 if product design award 2013

TKA55* IP54 getestet & bescheinigt tested & attested TÜV NORD

TKA55 German Design Award NOMINEE 2014

* Refers to type TKA55 with B_i 50 – 175. More information on certification can be found at: tsubaki-kabelschlepp.com/tka-ip54

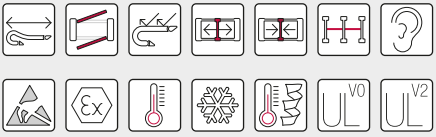
TKA series | Overview



1 End connectors with optional strain relief
2 Interior gentle on the cables without projecting edges
3 Integrated noise damping
4 Dividers and height separations for separating the cables
5 Quick and easy opening from any position
6 Secure cover attachment even under severe stresses (e.g. from hydraulic lines)
7 Chain links made of glass-fiber reinforced plastic
8 Bolt/hole connection and stroke system covered completely
9 Designs with inward or outward opening crossbars
10 Covers completely detachable on one side
11 Cover sheet for universal end connectors

Features

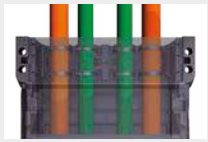
- Excellent cable protection in the connector area
- Chip and dirt resistant due to smooth surfaces
- Extensive unsupported length
- High torsional rigidity
- Low noise emission
- Optional: On request, special material with protection against hot chips up to 850 °C
- Numerous custom material types for custom applications available
- Easy-to-open cover with simultaneously high retention force on the chain link during operation
- Measurement scale for easy alignment of the dividers
- TKA55: IP54 tested and certified*



Optimized utilization of the interior space; vertical and horizontal inner distribution possible

Easy-open covers from any position offer secure fastening

Triple-stroke system for extensive unsupported length



Universal end connector with option for integrating strain relief elements

Inner heights
20.5 – 45

Inner widths
15 – 250

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TKA series | Overview

Key for abbreviations on page 16

Design guidelines from page 62

Technical support:
technik@kabelschlepp.de

Type	Opening variant	Stay variant	h_i [mm]	h_G [mm]	B_i [mm]	B_k [mm]	$B_{i\text{-}grid}$ [mm]	t [mm]	KR [mm]	Additional load ≤ [kg/m]	Cable-d_{max} [mm]
TKA30											
		060	20.5	28.5	15 – 65	28 – 78	–	30.5	55 – 180	3	16
		080	20.5	28.5	15 – 65	28 – 78	–	30.5	55 – 180	3	16
TKA38											
		060	26	36	25 – 130	41 – 146	–	38.5	70 – 230	5	20
		080	26	36	25 – 130	41 – 146	–	38.5	70 – 230	5	20
TKA45											
		060	36	50	50 – 150	66 – 166	–	45.5	82 – 230	6	28,5
		080	36	50	50 – 150	66 – 166	–	45.5	82 – 230	6	28,5
TKA55											
		060	45	64	50 – 250	70 – 270	–	55.5	100 – 300	15	36
		080	45	64	50 – 250	70 – 270	–	55.5	100 – 300	15	36

Technical manual

Do you need additional information on the TKA series?
Our technical manual at **tsubaki-kabelschlepp.com/download** contains all information for selecting your cable carrier.

TKA 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	
3.5	10	50	80	2.5	25	●	●	–	–	●	●	–	492
3.5	10	50	80	2.5	25	●	●	–	–	●	●	–	493
3.9	10	50	120	2.5	20	●	●	–	–	●	●	–	498
3.9	10	50	120	2.5	20	●	●	–	–	●	●	–	499
4.7	9	45	125	3	20	●	●	–	●	●	●	–	504
4.7	9	45	125	3	20	●	●	–	●	●	●	–	505
6.5	8	40	150	3	15	●	●	–	●	●	●	–	512
6.5	8	40	150	3	15	●	●	–	●	●	●	–	513

Inner heights
20.5 – 45
Inner widths
15 – 250
tsubaki-kabelschlepp.com/tka

TKA30

Pitch
30.5 mm

Inner height
20.5 mm

Inner widths
15 – 65 mm

Bending radii
55 – 180 mm

Stay variants

Design 060 ..... page **492**

Covered on both sides with inside detachable cover

- Plastic cover for rough environmental conditions with dirt, chips or spray water.
- Fully detachable on one side in any position.
- **Inside:** very quick release.

Design 080 ..... page **493**

Covered on both sides with outside detachable cover

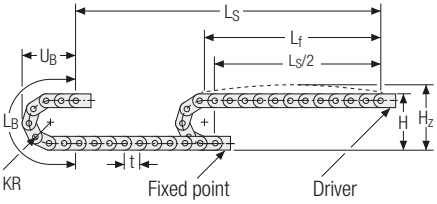
- Plastic cover for rough environmental conditions with dirt, chips or spray water.
- Fully detachable on one side in any position.
- **Outside:** very quick release.

Optional: protection against chips up to 850 °C

On request, we also produce all TKA types in designs for protection against hot chips.
The special material used protects the cables from hot chips up to 850 °C.
This practically excludes downtimes due to hot chips that could destroy the cables.

TKA30 | Installation dim. | Unsupported · Gliding

Unsupported arrangement

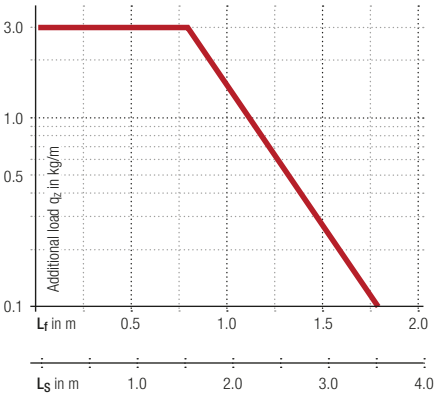


KR [mm]	H [mm]	H_Z [mm]	L_B [mm]	U_B [mm]
55	139	164	234	100
75	179	204	297	120
95	219	244	359	140
125	279	304	454	170
145	319	344	516	190
180	389	414	626	225

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 = 0.67 kg/m at B_i 50 mm. For other inner widths, the maximum additional load changes.



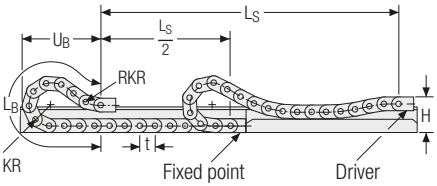
Speed
up to 10 m/s

Acceleration
up to 50 m/s²

Travel length
up to 3.5 m

Additional load
up to 3 kg/m

Gliding arrangement



Speed
up to 2.5 m/s

Acceleration
up to 25 m/s²

Travel length
up to 80 m

Additional load
up to 3 kg/m

The gliding cable carrier has to be routed in a channel. See p. 732.

Key for abbreviations on page 16

Design guidelines from page 62

Technical support:
technik@kabelschlepp.de

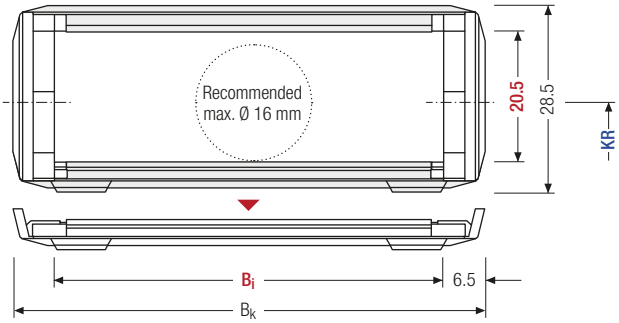
TKA30.060 | Dimensions · Technical data

Stay variant 060 – covered on both sides with inside detachable cover

- Plastic cover for rough environmental conditions with dirt, chips or spray water.
- Fully detachable on one side in any position.
- **Inside:** very quick release.

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

B_i 15 – 65 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

h_i [mm]	h_G [mm]	B_i [mm]						B_k [mm]	KR [mm]						q_k [kg/m]
20.5	29.15	15	20	25	38	50	65	B_i + 13	55	75	95	125	145	180	0.48 – 0.76

Order example

TKA30	.	060	.	50	.	125	-	915		VS
Type		Stay variant		B_i [mm]		KR [mm]		L_k [mm]		Stay arrangement

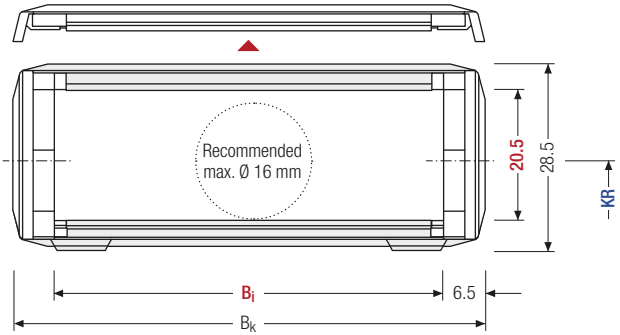
TKA30.080 | Dimensions · Technical data

Stay variant 080 – covered on both sides with outside detachable cover

- Plastic cover for rough environmental conditions with dirt, chips or spray water.
- Fully detachable on one side in any position.
- **Outside:** very quick release.

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

B_i 15 – 65 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

h_i [mm]	h_G [mm]	B_i [mm]						B_k [mm]	KR [mm]						q_k [kg/m]
20.5	29.15	15	20	25	38	50	65	B_i + 13	55	75	95	125	145	180	0.48 – 0.76

Order example

TKA30	.	080	.	50	.	125	-	915	VS
Type		Stay variant		B_i [mm]		KR [mm]		L_k [mm]	Stay arrangement

Key for abbreviations on page 16

Design guidelines from page 62

Technical support:
technik@kabelschlepp.de

TKA30 | Inner distribution | TS0 · TS1

Divider systems

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

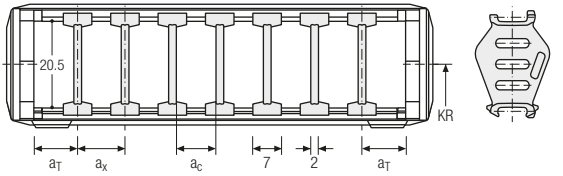
As a standard, dividers or the complete divider system (dividers with height separations) are movable in the cross section **(version A)**.

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 locking cams click into place in the locking grids in the covers **(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	3.5	7	5	–	–
B		8	6	2	–

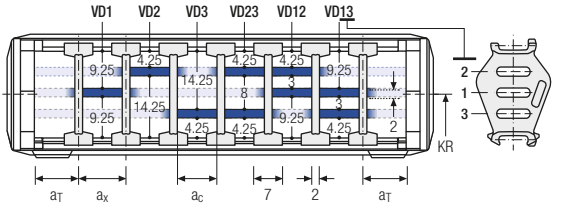
B_i [mm]	15	20	25	38	50	65
$a_{T\,min}$ [mm]	7.5	8	8.5	9	9	8.5



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	3.5	7	5	–	2
B		8	6	2	2

B_i [mm]	15	20	25	38	50	65
$a_{T\,min}$ [mm]	7.5	8	8.5	9	9	8.5



Order example

TS1 . A . 3 - VD0
⋮
- VD1

Divider system | Version | n_T | Height separation

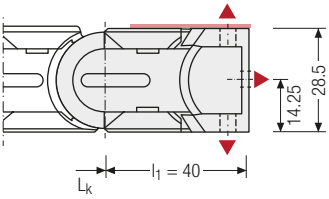
Please state the designation of the divider system **(TS0, TS1 …)**, version and number of dividers per cross section [n_T].

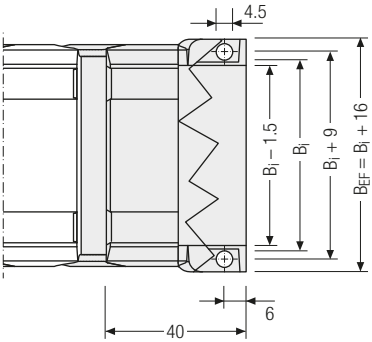
If using divider systems with height separation **(TS1)** please also state the positions [e.g. VD1] viewed from the left driver belt. You are welcome to add a sketch to your order.

TKA30 | End connectors | UMB

Universal end connectors UMB – plastic (standard)

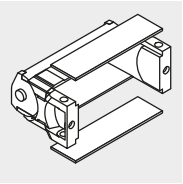
The universal end connectors (UMB) are made from plastic and can **be mounted from the top, from the bottom, or face on**.



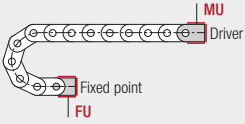


▲ Assembly options

Recommended tightening torque: 3 Nm for cheese-head screws ISO 4762 - M4 x 12



The end connectors are also available as an option **without** cover sheets. Please state when ordering.



Connection point
F – fixed point
M – driver

Connection type
U – universal end connector

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. 794.

TKA38

Pitch
38.5 mm

Inner height
26 mm

Inner widths
25 – 130 mm

Bending radii
70 – 230 mm

Stay variants

Design 060 ..... page **498**

Covered on both sides with inside detachable cover

- Plastic cover for rough environmental conditions with dirt, chips or spray water.
- Fully detachable on one side in any position.
- **Inside:** very quick release.

Design 080 ..... page **499**

Covered on both sides with outside detachable cover

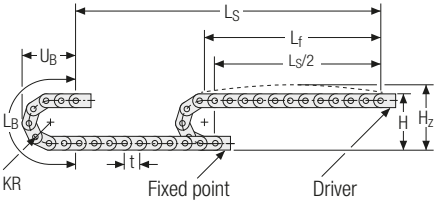
- Plastic cover for rough environmental conditions with dirt, chips or spray water.
- Fully detachable on one side in any position.
- **Outside:** very quick release.

Optional: protection against chips up to 850 °C

On request, we also produce all TKA types in designs for protection against hot chips. The special material used protects the cables from hot chips up to 850 °C. This practically excludes downtimes due to hot chips that could destroy the cables.

TKA38 | Installation dim. | Unsupported · Gliding

Unsupported arrangement

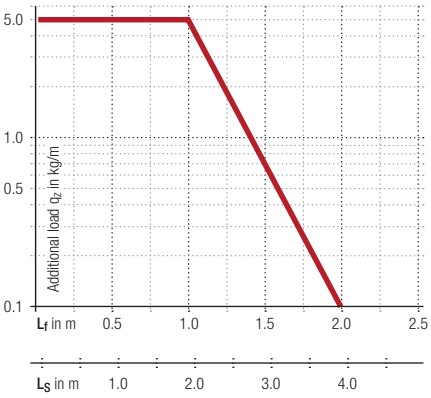


KR [mm]	H [mm]	H_z [mm]	L_B [mm]	U_B [mm]
70	176	201	297	127
95	226	251	375	152
120	276	301	454	177
145	326	351	532	202
170	376	401	611	227
195	426	451	689	252
230	496	521	799	287

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 = 1.13 kg/m at B_i 78 mm. For other inner widths, the maximum additional load changes.



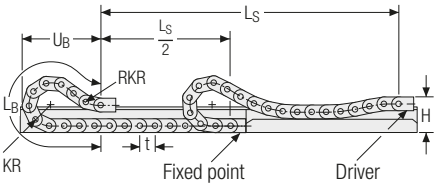
Speed
up to 10 m/s

Acceleration
up to 50 m/s²

Travel length
up to 3.9 m

Additional load
up to 5 kg/m

Gliding arrangement



Speed
up to 2.5 m/s

Acceleration
up to 20 m/s²

Travel length
up to 120 m

Additional load
up to 5 kg/m

The gliding cable carrier has to be routed in a channel. See p. 732.

Key for abbreviations on page 16

Design guidelines from page 62

Technical support:
technik@kabelschlepp.de

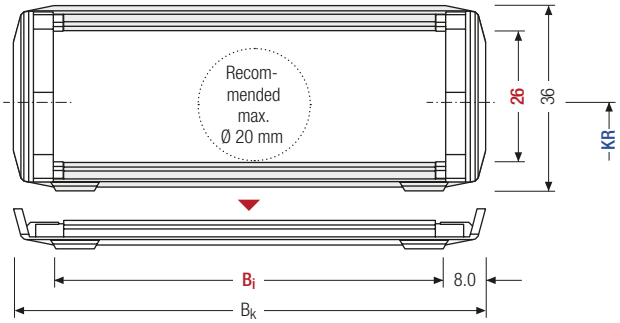
TKA38.060 | Dimensions · Technical data

Stay variant 060 – covered on both sides with inside detachable cover

- Plastic cover for rough environmental conditions with dirt, chips or spray water.
- Fully detachable on one side in any position.
- **Inside:** very quick release.

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

B_i 25 – 130 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

h_i [mm]	h_G [mm]	B_i [mm]						B_k [mm]	KR [mm]						q_k [kg/m]
26	36.75	25	38	58	78	103	130	B_i + 16	70	95	120	145	170	195	230	0.77 – 1.47

Order example

TKA38	.	060	.	78	.	145	-	1155		VS
Type		Stay variant		B_i [mm]		KR [mm]		L_k [mm]		Stay arrangement

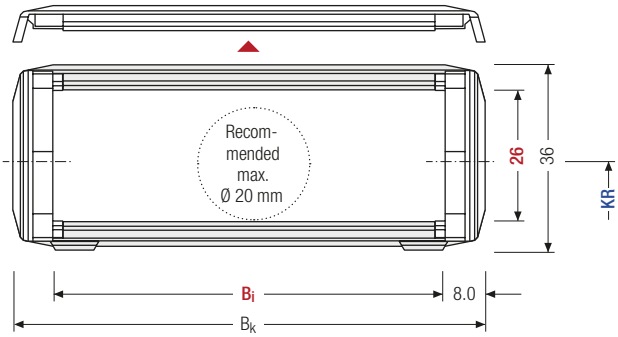
TKA38.080 | Dimensions · Technical data

Stay variant 080 – covered on both sides with outside detachable cover

- Plastic cover for rough environmental conditions with dirt, chips or spray water.
- Fully detachable on one side in any position.
- **Outside:** very quick release.

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

B_i 25 – 130 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

h_i [mm]	h_G [mm]	B_i [mm]						B_k [mm]	KR [mm]							q_k [kg/m]
26	36.75	25	38	58	78	103	130	B_i + 16	70	95	120	145	170	195	230	0.77 – 1.47

Order example

TKA38	.	080	.	78	.	145	-	1155		VS
Type		Stay variant		B_i [mm]		KR [mm]		L_k [mm]		Stay arrangement

TKA38 | Inner distribution | TS0 · TS1

Key for abbreviations on page 16

Design guidelines from page 62

Technical support:
technik@kabelschlepp.de

Divider systems

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

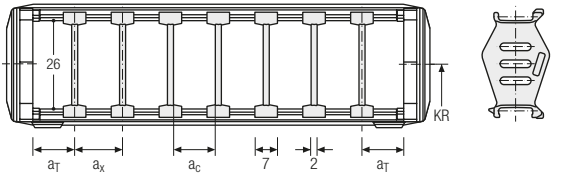
As a standard, dividers or the complete divider system (dividers with height separations) are movable in the cross section **(version A)**.

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 locking cams click into place in the locking grids in the covers **(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	3.5	7	5	–	–
B		8	6	2	–

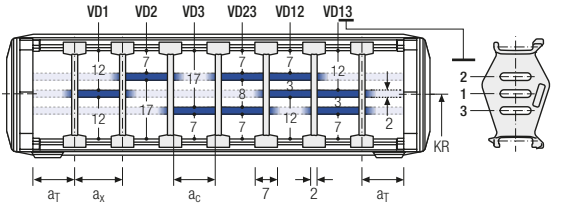
B_i [mm]	25	38	58	78	103	130
$a_{T\,min}$ [mm]	8.5	9	9	9	7.5	9



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	3.5	7	5	–	2
B		8	6	2	2

B_i [mm]	25	38	58	78	103	130
$a_{T\,min}$ [mm]	8.5	9	9	9	7.5	9



Order example

TS1 . A . 3 - VD0
⋮
- VD1

Divider system | Version | n_T | Height separation

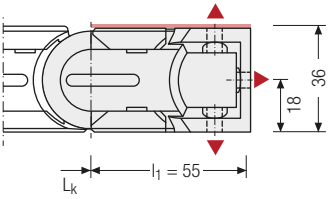
Please state the designation of the divider system **(TS0, TS1 …)**, version and number of dividers per cross section [n_T].

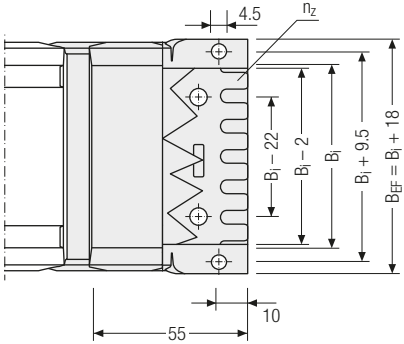
If using divider systems with height separation **(TS1)** please also state the positions [e.g. VD1] viewed from the left driver belt. You are welcome to add a sketch to your order.

TKA38 | End connectors | UMB

Universal end connectors UMB – plastic (standard)

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

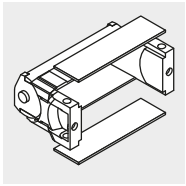




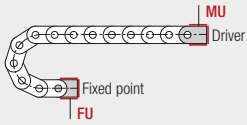
▲ Assembly options

Recommended tightening torque: 3 Nm for cheese-head screws ISO 4762 - M4 x 20

B_i [mm]	B_{EF} [mm]	n_z
25	43	2
38	56	3
58	76	5
78	96	7
103	121	9
130	148	13



The end connectors are also available as an option **without** cover sheets. Please state when ordering.



Connection point
F – fixed point
M – driver

Connection type
U – universal end connector

Order example

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

TKA45

Pitch
45.5 mm

Inner height
36 mm

Inner widths
50 – 150 mm

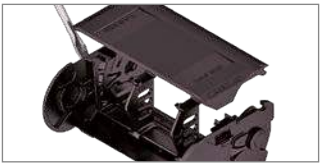
Bending radii
82 – 230 mm

Stay variants

Design 060 ..... page **504**

Covered on both sides with inside detachable cover

- Plastic cover for rough environmental conditions with dirt, chips or spray water.
- Fully detachable on one side in any position.
- **Inside:** very quick release.



Design 080 ..... page **505**

Covered on both sides with outside detachable cover

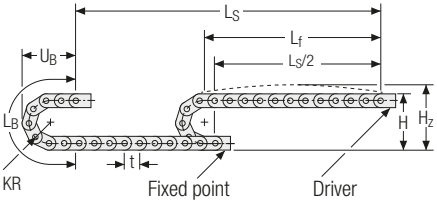
- Plastic cover for rough environmental conditions with dirt, chips or spray water.
- Fully detachable on one side in any position.
- **Outside:** very quick release.

Optional: protection against chips up to 850 °C

On request, we also produce all TKA types in designs for protection against hot chips. The special material used protects the cables from hot chips up to 850 °C. This practically excludes downtimes due to hot chips that could destroy the cables.

TKA45 | Installation dim. | Unsupported · Gliding

Unsupported arrangement

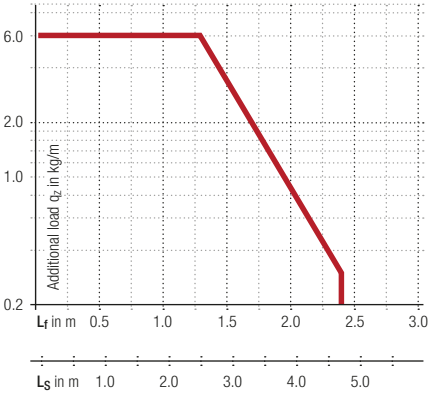


KR [mm]	H [mm]	Hz [mm]	LB [mm]	UB [mm]
82	214	249	348	153
95	240	275	389	166
125	300	335	483	196
145	340	375	546	216
170	390	425	625	241
200	450	485	719	271
230	520	555	814	301

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 = 2.29 kg/m at B_i 150 mm. For other inner widths, the maximum additional load changes.



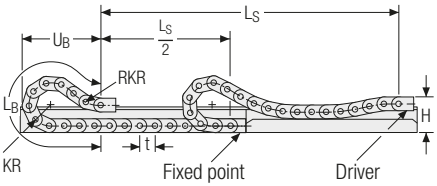
Speed
up to 9 m/s

Acceleration
up to 45 m/s²

Travel length
up to 4.7 m

Additional load
up to 6 kg/m

Gliding arrangement



Speed
up to 3 m/s

Acceleration
up to 20 m/s²

Travel length
up to 125 m

Additional load
up to 6 kg/m

The gliding cable carrier has to be routed in a channel. See p. 732.

Key for abbreviations on page 16

Design guidelines from page 62

Technical support:
technik@kabelschlepp.de

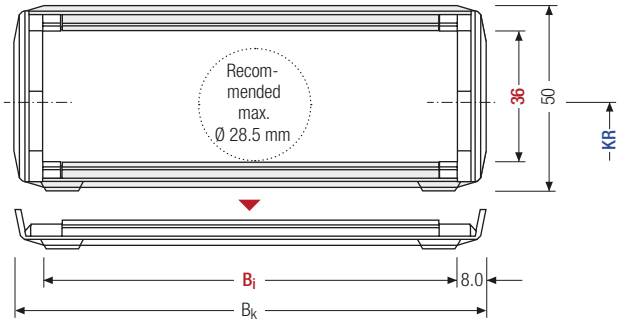
TKA45.060 | Dimensions · Technical data

Stay variant 060 – covered on both sides with inside detachable cover

- Plastic cover for rough environmental conditions with dirt, chips or spray water.
- Fully detachable on one side in any position.
- **Inside:** very quick release.

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

B_i 50 – 150 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

h_i [mm]	h_G [mm]	B_i [mm]					B_k [mm]	KR [mm]							q_k [kg/m]
36	51	50	75	100	125	150	B_i + 16	82	95	125	145	170	200	230	1.34 – 2.29

Order example

TKA45	.	060	.	125	.	170	-	1456		VS
Type		Stay variant		B_i [mm]		KR [mm]		L_k [mm]		Stay arrangement

Subject to change.

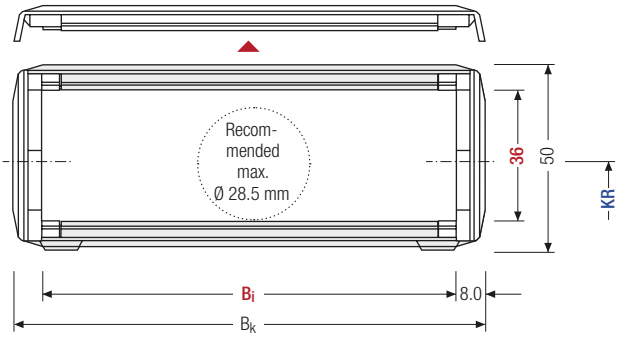
TKA45.080 | Dimensions · Technical data

Stay variant 080 – covered on both sides with outside detachable cover

- Plastic cover for rough environmental conditions with dirt, chips or spray water.
- Fully detachable on one side in any position.
- **Outside:** very quick release.

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

B_i 50 – 150 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

h_i [mm]	h_G [mm]	B_i [mm]					B_k [mm]	KR [mm]							q_k [kg/m]
36	51	50	75	100	125	150	B_i + 16	82	95	125	145	170	200	230	1.34 – 2.29

Order example

TKA45	.	080	.	125	.	170	-	1456		VS
Type		Stay variant		B_i [mm]		KR [mm]		L_k [mm]		Stay arrangement

TKA45 | Inner distribution | TS0 · TS1

Divider systems

The divider system is mounted on every 2nd chain link as a standard.

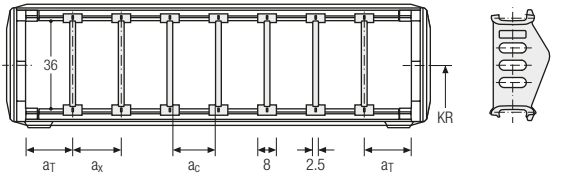
As a standard, dividers or the complete divider system (dividers with height separations) are movable in the cross section **(version A)**.

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 locking cams click into place in the locking grids in the covers **(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	5.5	–	–
B		8	5.5	2	–

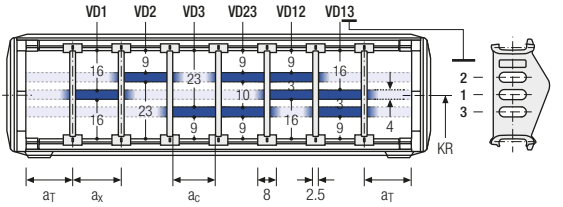
B_i [mm]	50	75	100	125	150
$a_{T\,min}$ [mm]	11	11.5	12	12.5	11



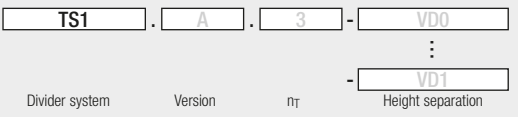
Divider system TS1 with continuous height separation

Vers.	$a_{T\,min}$ [mm]	$a_{x\,min}$ [mm]	$a_{c\,min}$ [mm]	$a_{x\,grid}$ [mm]	$n_{T\,min}$
A	4	8	5.5	–	2
B		8	5.5	2	2

B_i [mm]	50	75	100	125	150
$a_{T\,min}$ [mm]	11	11.5	12	12.5	11



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.

Key for abbreviations on page 16

Design guidelines from page 62

Technical support:
technik@kabelschlepp.de

TKA45 | Inner distribution | TS3

Divider system TS3 with height separation consisting of plastic partitions

As a standard. the divider **A** is used for vertical partitioning within the cable carrier. The complete divider system can be moved within 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 locking cams click into place in the locking grids in the covers **(version B)**.

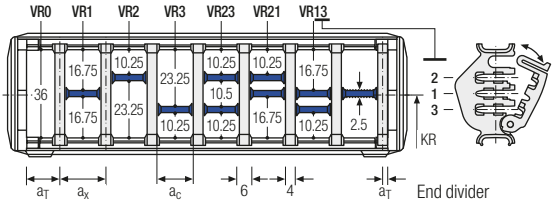
Divider version A

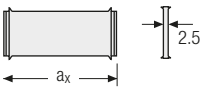
End divider

Vers.	$a_{T\ min}$ [mm]	$a_{x\ min}$ [mm]	$a_{C\ min}$ [mm]	n_T min
A	4 / 2*	14	10	2

* For End divider

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





a_x (center distance of dividers) [mm]
a_C (nominal width of inner chamber) [mm]

14	**16**	**19**	**23**	**24**	**28**	**29**	**32**	**33**	**34**	**38**	**39**	**43**	**44**	**48**	**49**	**54**
10	12	15	19	20	24	25	28	29	30	34	35	39	40	44	45	50
58	**59**	**64**	**68**	**69**	**74**	**78**	**79**	**80**	**84**	**88**	**89**	**94**	**96**	**99**	**112**	
54	55	60	64	65	70	74	75	76	80	84	85	90	92	95	108	

When using **partitions with a_x > 49 mm** we recommended an additional preferential central support.

Order example

TS3	.	A	.	3	.	K1	.	34	-	VR1
						⋮		⋮		⋮
					.	K4	.	38	-	VR3
Divider system		Version		n_T		Chamber		a_x		Height separation

Please state the designation of the divider system **(TS0. TS1....)**. version and number of dividers per cross section [n_T]. In addition. please also enter the chambers [K] from left to right. as well as the assembly distances [a_T/a_x] (as seen from the driver).

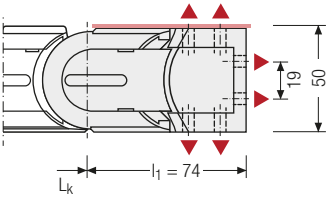
If using divider systems with height separation **(TS1. TS3)** please also state the positions [e.g. VD23] viewed from the left driver belt. You are welcome to add a sketch to your order.

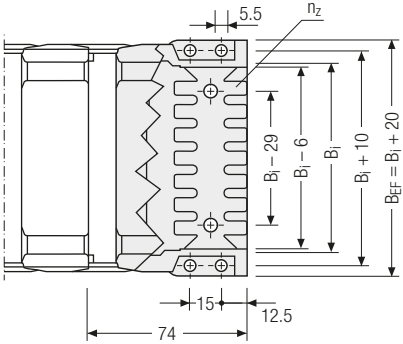
Subject to change

TKA45 | End connectors | UMB

Universal end connectors UMB – plastic (standard)

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

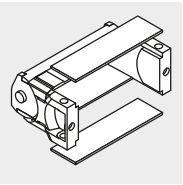




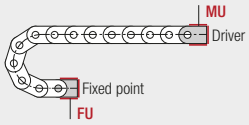
▲ Assembly options

Recommended tightening torque: 5 Nm for cheese-head screws ISO 4762 - M5 x 8.8

B_i [mm]	B_{EF} [mm]	n_z
50	70	2 x 3
75	95	2 x 5
100	120	2 x 7
125	145	2 x 9
150	170	2 x 11



The end connectors are also available as an option **without** cover sheets. Please state when ordering.



Connection point
F – fixed point
M – driver

Connection type
U – universal end connector

Order example

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

TKA55

Pitch
55.5 mm

Inner height
45 mm

Inner widths
50 – 250 mm

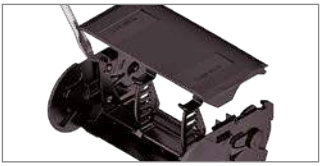
Bending radii
100 – 300 mm

Stay variants

Design 060 page 512

Covered on both sides with inside detachable cover

- Plastic cover for rough environmental conditions with dirt, chips or spray water.
- Fully detachable on one side in any position.
- **Inside:** very quick release.



Design 080 page 513

Covered on both sides with outside detachable cover

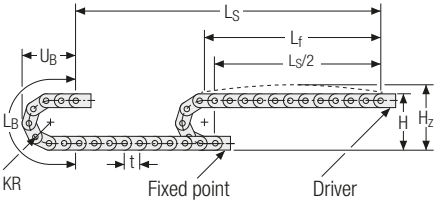
- Plastic cover for rough environmental conditions with dirt, chips or spray water.
- Fully detachable on one side in any position.
- **Outside:** very quick release.

Optional: protection against chips up to 850 °C

On request, we also produce all TKA types in designs for protection against hot chips. The special material used protects the cables from hot chips up to 850 °C. This practically excludes downtimes due to hot chips that could destroy the cables.

TKA55 | Installation dim. | Unsupported · Gliding

Unsupported arrangement

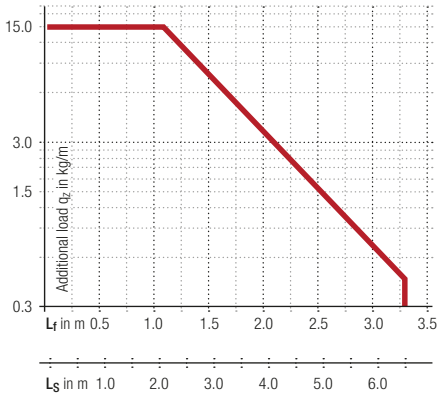


KR [mm]	H [mm]	H_z [mm]	L_B [mm]	U_B [mm]
100	264	304	425	188
120	304	344	488	208
140	344	384	551	228
170	414	454	645	258
195	454	494	725	283
225	514	554	818	313
250	564	604	896	338
300	664	704	1211	388

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 = 1.95 kg/m at B_i 50 mm. For other inner widths, the maximum additional load changes.



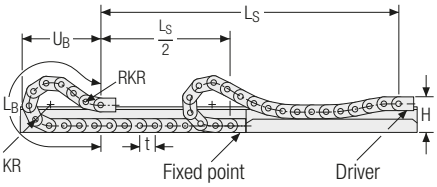
Speed
up to 8 m/s

Acceleration
up to 40 m/s²

Travel length
up to 6.5 m

Additional load
up to 15 kg/m

Gliding arrangement



Speed
up to 3 m/s

Acceleration
up to 15 m/s²

Travel length
up to 150 m

Additional load
up to 15 kg/m

The gliding cable carrier has to be routed in a channel. See p. 732.

Key for abbreviations on page 16

Design guidelines from page 62

Technical support:
technik@kabelschlepp.de

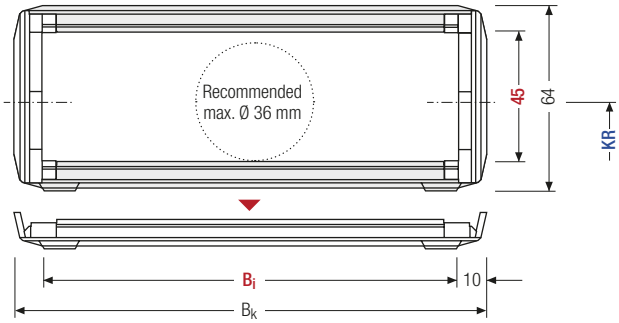
TKA55.060 | Dimensions · Technical data

Stay variant 060 – covered on both sides with inside detachable cover

- Plastic cover for rough environmental conditions with dirt, chips or spray water.
- Fully detachable on one side in any position.
- **Inside:** very quick release.

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

B_i 50 – 250 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

h_i [mm]	h_G [mm]	B_i [mm]					B_k [mm]	KR [mm]				q_k [kg/m]
45	65	50	75	100	125	150	B_i + 20	100	120	140	170	1.95
		175	200	225	250			195	225	250	300	4.28

Order example

TKA55	.	060	.	200	.	225	-	2553	VS
Type		Stay variant		B_i [mm]		KR [mm]		L_k [mm]	Stay arrangement

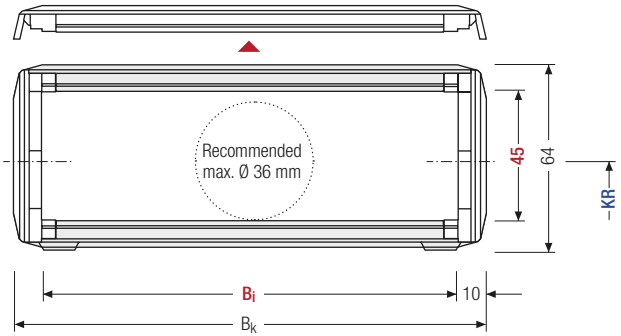
TKA55.080 | Dimensions · Technical data

Stay variant 080 – covered on both sides with outside detachable cover

- Plastic cover for rough environmental conditions with dirt, chips or spray water.
- Fully detachable on one side in any position.
- **Outside:** very quick release.

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

B_i 50 – 150 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

h_i [mm]	h_G [mm]	B_i [mm]					B_k [mm]	KR [mm]				q_k [kg/m]
45	65	50	75	100	125	150	$B_i + 20$	100	120	140	170	1.95 – 4.28
		175	200	225	250			195	225	250	300	

Order example

TKA55	.	080	.	200	.	225	-	2553		VS
Type		Stay variant		B_i [mm]		KR [mm]		L_k [mm]		Stay arrangement

Key for abbreviations on page 16

Design guidelines from page 62

Technical support:
technik@kabelschlepp.de

TKA55 | Inner distribution | TS0 · TS1

Divider systems

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

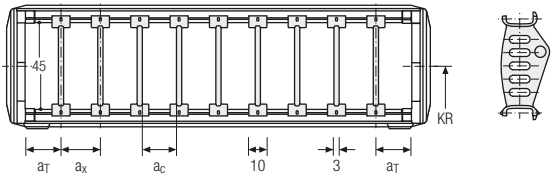
As a standard, dividers or the complete divider system (dividers with height separations) are movable in the cross section **(version A)**.

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 locking cams click into place in the locking grids in the covers **(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	10	7	–	–
B		10	7	2	–

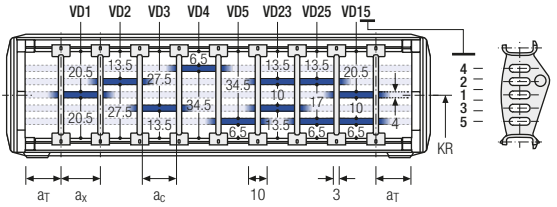
B_i [mm]	50	75	100	125	150
$a_{T\,min}$ [mm]	13	11.5	12	12.5	13
B_i [mm]	175	200	225	250	
$a_{T\,min}$ [mm]	11.5	12	12.5	13	



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	10	7	–	2
B		10	7	2	2

B_i [mm]	50	75	100	125	150
$a_{T\,min}$ [mm]	13	11.5	12	12.5	13
B_i [mm]	175	200	225	250	
$a_{T\,min}$ [mm]	11.5	12	12.5	13	



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.

TKA55 | Inner distribution | TS3

Divider system TS3 with height separation consisting of plastic partitions

As a standard. the divider **A** is used for vertical partitioning within the cable carrier. The complete divider system can be moved within 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 locking cams click into place in the locking grids in the covers **(version B)**.

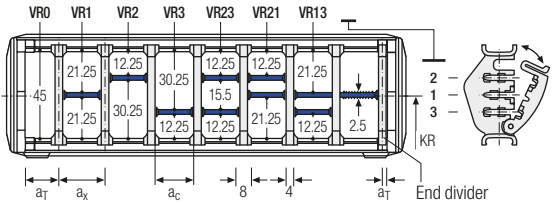
Divider version A

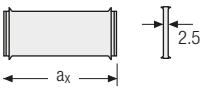
End divider

Vers.	$a_{T\ min}$ [mm]	$a_{x\ min}$ [mm]	$a_{C\ min}$ [mm]	n_T min
A	4 / 2*	14	10	2

* For End divider

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





a_x (center distance of dividers) [mm]

a_C (nominal width of inner chamber) [mm]

14	**16**	**19**	**23**	**24**	**28**	**29**	**32**	**33**	**34**	**38**	**39**	**43**	**44**	**48**	**49**	**54**
10	12	15	19	20	24	25	28	29	30	34	35	39	40	44	45	50
58	**59**	**64**	**68**	**69**	**74**	**78**	**79**	**80**	**84**	**88**	**89**	**94**	**96**	**99**	**112**	
54	55	60	64	65	70	74	75	76	80	84	85	90	92	95	108	

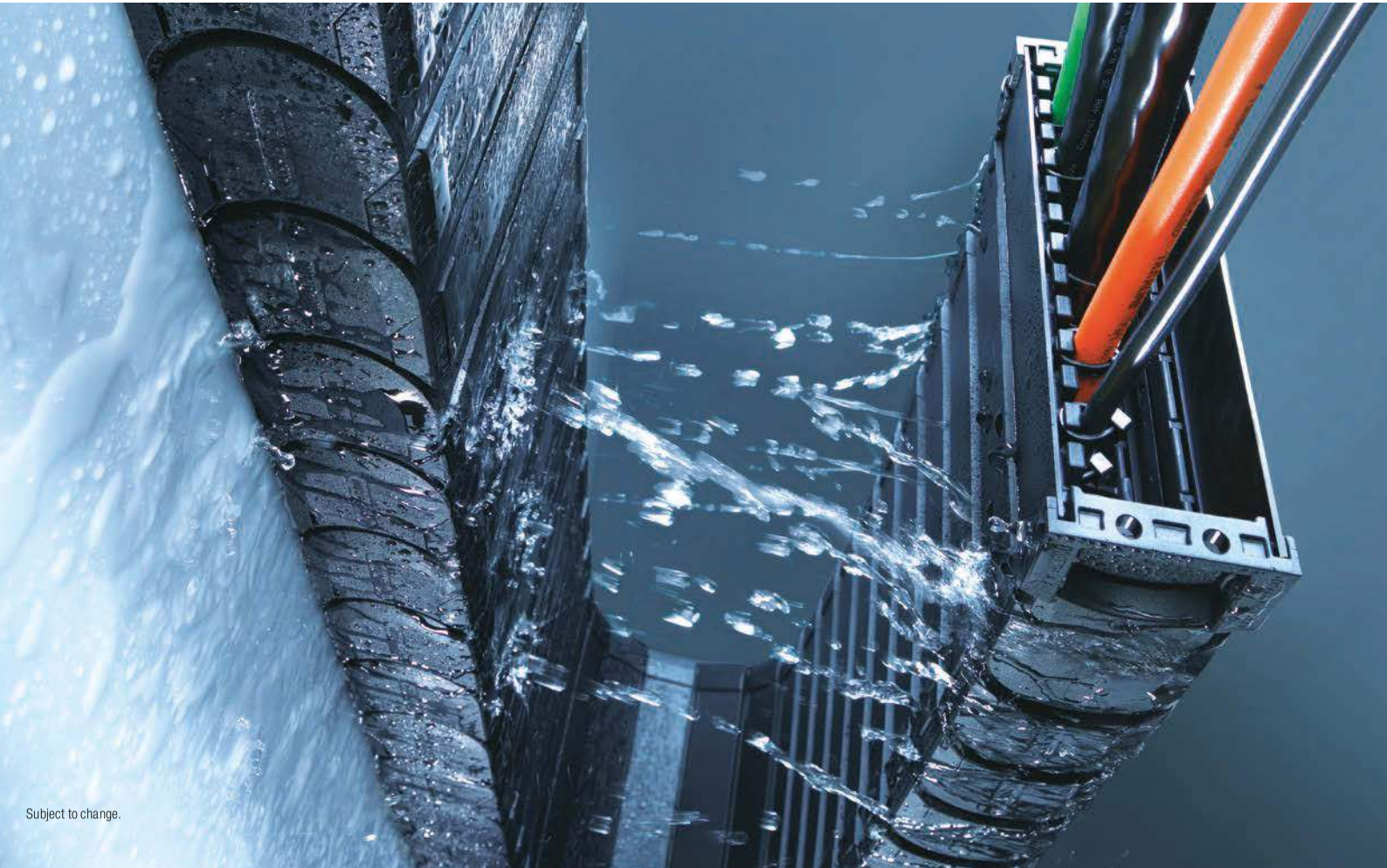
When using **partitions with a_x > 49 mm** we recommended an additional preferential central support.

Order example

TS3	.	A	.	3	.	K1	.	34	-	VR1
						⋮		⋮		⋮
					.	K4	.	38	-	VR3
Divider system		Version		n_T		Chamber		a_x		Height separation

Please state the designation of the divider system **(TS0. TS1....)**. version and number of dividers per cross section [n_T]. In addition. please also enter the chambers [K] from left to right. as well as the assembly distances [a_T/a_x] (as seen from the driver).

If using divider systems with height separation **(TS1. TS3)** please also state the positions [e.g. VD23] viewed from the left driver belt. You are welcome to add a sketch to your order.

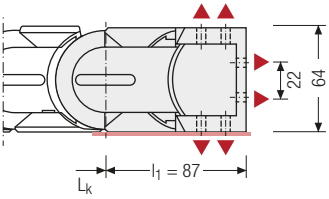


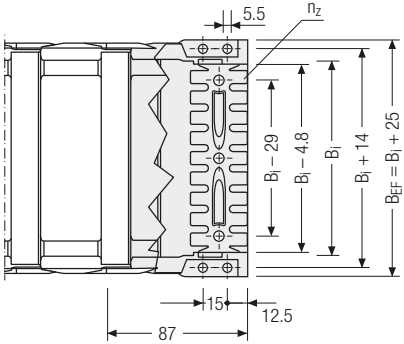
Subject to change.

TKA55 | End connectors | UMB

Universal end connectors UMB – plastic (standard)

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

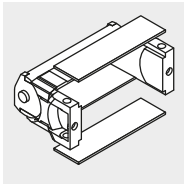




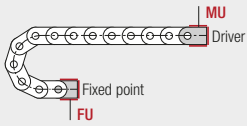
▲ Assembly options

Recommended tightening torque: 5 Nm for cheese-head screws ISO 4762 - M5 x 8.8

B_i [mm]	B_{EF} [mm]	n_z
50	74	2 x 3
75	99	2 x 5
100	124	2 x 7
125	149	2 x 9
150	174	2 x 11
175	199	2 x 13
200	224	–
225	249	–
250	274	–



The end connectors are also available as an option **without** cover sheets. Please state when ordering.



Connection point
F – fixed point
M – driver

Connection type
U – universal end connector

Order example

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