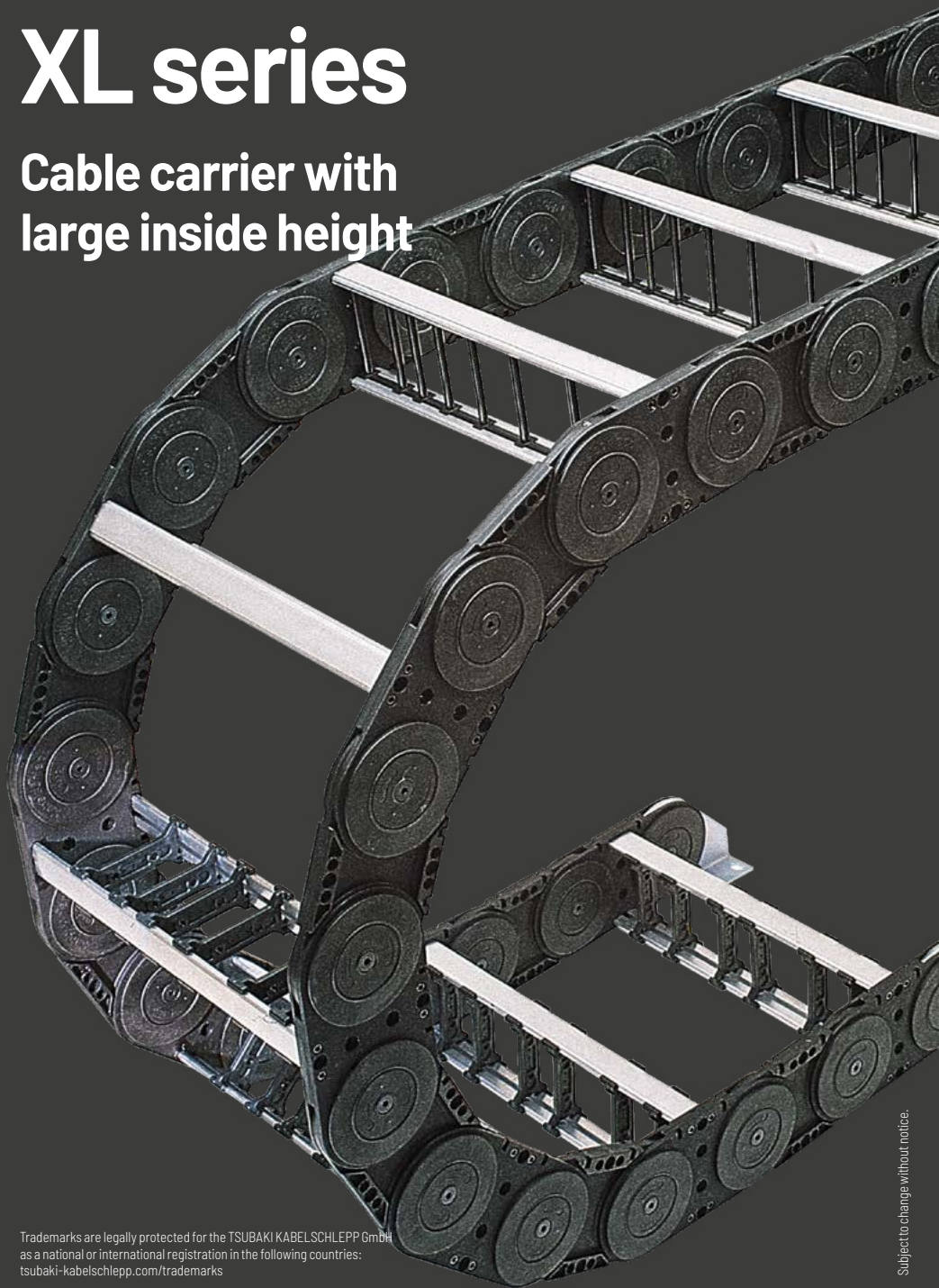


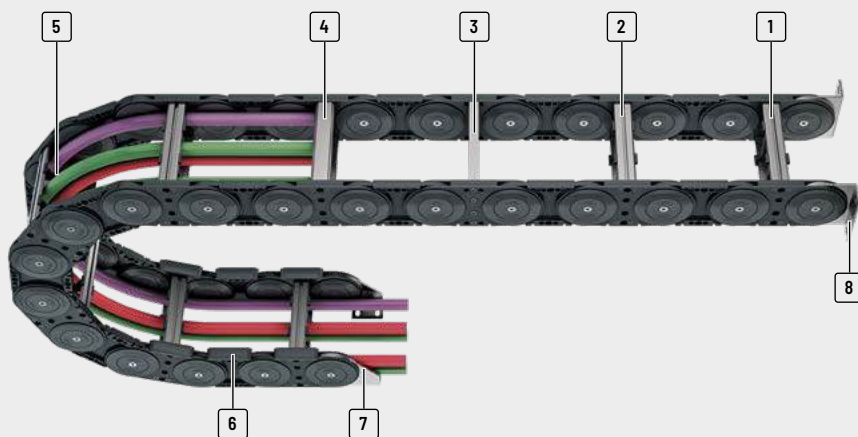
XL series

Cable carrier with
large inside height



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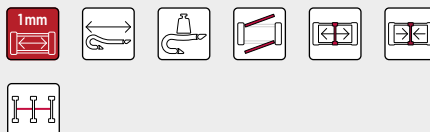
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- | | | |
|---|--|---------------------------------------|
| 1 Aluminum stays available in 1 mm width sections | 4 Plastic rolling stays | 7 Sturdy end connectors made of steel |
| 2 Aluminum stays with 4 screw-fixing points for extreme loads | 5 Can be opened on the inside and the outside for installation of cables and hoses | 8 Flange connection |
| 3 Aluminum hole stays | 6 Replaceable glide shoes | |

Features

- » Sizes/dimensions
- » Low intrinsic weight
- » Optimum force transmission via the large-surface stroke system (2 disc principle)
- » Plastic side bands in combination with aluminum stays
- » Versions with aluminum stays available in 1 mm width sections up to 1000 mm inner width
- » Can be opened on both sides
- » Large selection of stay systems and separating options for cables
- » Optionally with strain relief



Bolted stays for maximum stability even for large cable carrier widths



Replaceable glide shoes for long service life for gliding applications



Sturdy end connectors made of steel (different connection variants)



Many separation options for the cables

	PROTUN® series												
			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 ≤ [kg/m]	Cable- d _{max} [mm]
			XL1650										
	K series			RM	108	140	200 - 1000	268 - 1068	1	165	250 - 550	65	86
				LG	110	140	200 - 1000	268 - 1068	1	165	250 - 550	65	88
				RMR	108	140	200 - 1000	268 - 1068	1	165	250 - 550	65	84
	UNIFLEX Advanced series												
	M series												
	TKHP series												
	XL series												
	QUANTUM® series												
	TKR series												
	TKA series												
	UAT series												

* Further information on request.



XLT series

Also available as covered versions with covers system. More information can be found in chapter "XLT series" from page 674.

Unsupported arrangement			Gliding arrangement			Inner Distribution				Movement			Page
Travel length ≤ [m]	v_{max} ≤ [m/s]	a_{max} ≤ [m/s ²]	Travel length ≤ [m]	v_{max} ≤ [m/s]	a_{max} ≤ [m/s ²]	TS0	TS1	TS2	TS3	vertical hanging or standing	lying on the side	rotating arrangement	
										vertical hanging or standing	lying on the side	rotating arrangement	
11.75	4	25	350	2	2 – 3	•	–	–	•	•	•	•	498
11.75	4	25	350	2	2 – 3	–	–	–	–	•	•	•	*
11.75	4	25	350	2	2 – 3	•	–	–	–	•	•	•	*

PROTUM®
series

K
series

UNIFLEX
Advanced
series

M
series

TKIP
series

XL
series

QUANTUM®
series

TKR
series

TKA
series

UAT
series

XL1650



Pitch
165 mm



Inner height
108 mm



Inner widths
200 - 1000 mm



Bending radii
250 - 550 mm

Stay variants



Aluminum stay RM..... page 498

Frame stay, solid

» Aluminum profile bars for heavy loads and maximum cable carrier widths. Double threaded joints on both sides
"Heavy Duty".

» **Inside/outside:** Threaded joints easy to release.

Additional stay variants on request



Aluminum stay LG

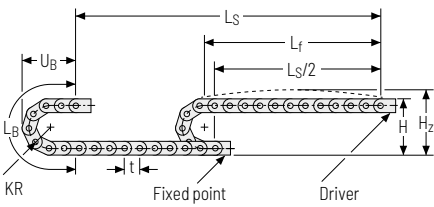
Optimum cable routing in the neutral bending line.



Aluminum stay RMR

Gentle cable guiding with rollers.

Unsupported arrangement

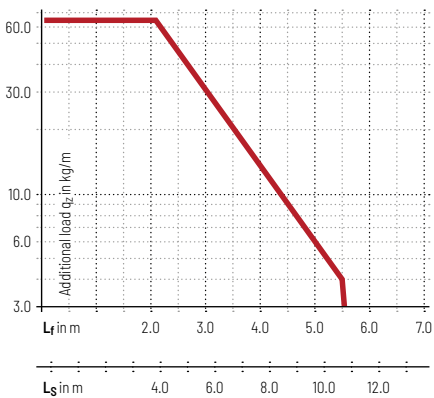


KR [mm]	H [mm]	H _z [mm]	L _B [mm]	U _B [mm]
250	640	740	1115	485
300	740	840	1272	535
350	840	940	1430	585
400	940	1040	1587	635
450	1040	1140	1744	685
500	1140	1240	1901	735
550	1240	1340	2058	785

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 $q_k = 13 \text{ kg/m}$. For other inner widths, the maximum additional load changes.



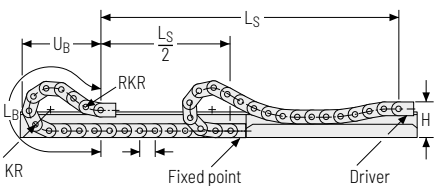
**Speed**
up to 4 m/s

**Acceleration**
up to 25 m/s²

**Travel length**
up to 11.75 m

**Additional load**
up to 65 kg/m

Gliding arrangement



**Speed**
up to 2 m/s

**Acceleration**
up to 2 - 3 m/s²

**Travel length**
up to 350 m

**Additional load**
up to 65 kg/m

 The gliding cable carrier must be guided in a channel. See p. 866.

We recommend the use of glide shoes for gliding applications.

 Our technical support can provide help for gliding arrangements:
technik@kabelschlepp.de

PROTUM® series
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Aluminum stay RM –
Frame stay, solid

- » Aluminum profile bars for heavy loads and maximum cable carrier widths. Double threaded joints on both sides “Heavy Duty”.
- » Available customized in 1 mm grid.
- » **Inside/outside:** Threaded joints easy to release.

HEAVY DUTY
TSUBAKI KABELSCHLEPP



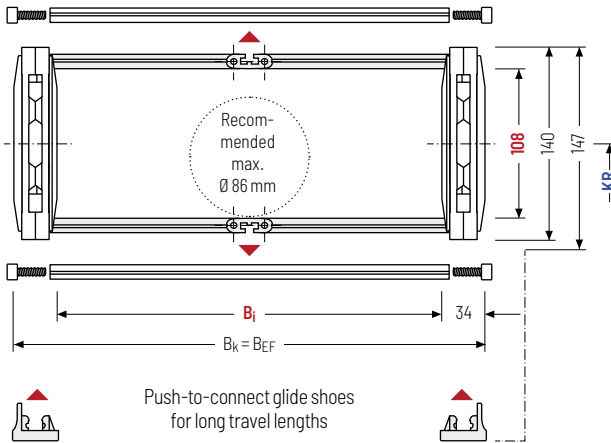
Stay arrangement on every
2nd chain link, **standard**
(HS: half-stayed)



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



1 mm B_i 200 – 1000 mm
in 1 mm width sections



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]	h_g' [mm]	B_i [mm]*	B_k [mm]	B_{EF} [mm]	KR [mm]						q_k [kg/m]	
108	140	147	200 – 1000	$B_i + 68$	$B_i + 68$	250	300	350	400	450	500	550	10.5 – 15.3

* in 1 mm width sections

Order example

XLC1650
Type

600
B_i [mm]

RM
Stay variant

350
KR [mm]

4125
L_k [mm]

HS
Stay arrangement

Divider systems

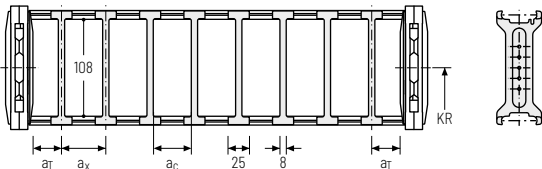
The divider system is mounted on each crossbar as a standard – on every 2nd chain link for stay mounting (HS).

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

Divider system TSO without height separation

Vers.	a _T min [mm]	a _x min [mm]	a _c min [mm]	η _T min
A	6	25	17	–

The dividers can be moved in the cross section.

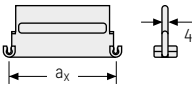
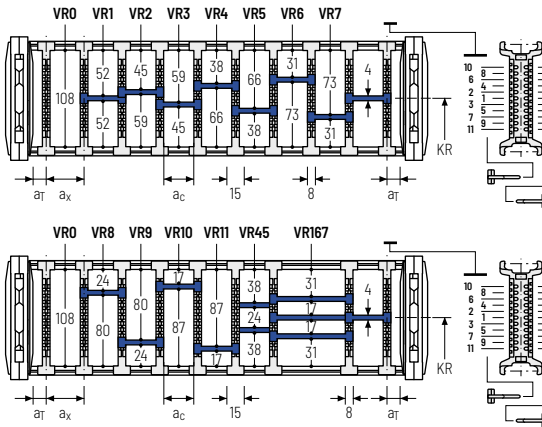


Divider system TS3 with height separation consisting of plastic partitions

Vers.	a _T min [mm]	a _x min [mm]	a _c min [mm]	η _T min
A	1	16 / 42*	8	2

* For aluminum partitions

The dividers are fixed with the partitions. The entire divider system can be moved in the cross section.



Aluminum partitions in 1 mm increments with a_x > 42 mm are also available.

a _x (center distance of dividers) [mm]											
a _c (nominal width of inner chamber) [mm]											
16	18	23	28	32	33	38	43	48	58	64	68
8	10	15	20	24	25	30	35	40	50	56	60
78	80	88	96	112	128	144	160	176	192	208	
70	72	80	88	104	120	136	152	168	184	200	

When using **plastic partitions with a_x > 112 mm**, we recommend an additional center support with a **twin divider** (S_T = 5 mm). Twin dividers are also suitable for retrofitting in the partition system.

Order example

TS3

A

3

K1

34

VR1

⋮

⋮

⋮

Divider system

Version

η_T

Chamber

a_x

Height separation

K4

38

VR3

Please state the designation of the divider system (**TS0, TS3**), the version, and the number of dividers per cross section [η_T]. In addition, please also enter the chambers [K] from left to right, as well as the assembly distances [a_T/a_x].

PROTUM® series

K series

UNIFLEX Advanced series

M series

TKiP series

XL series

QUANTUM® series

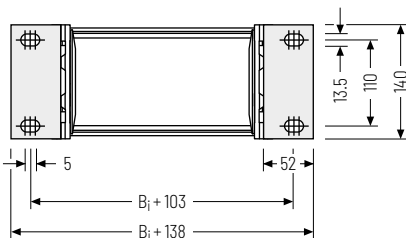
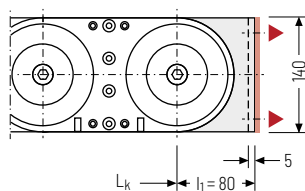
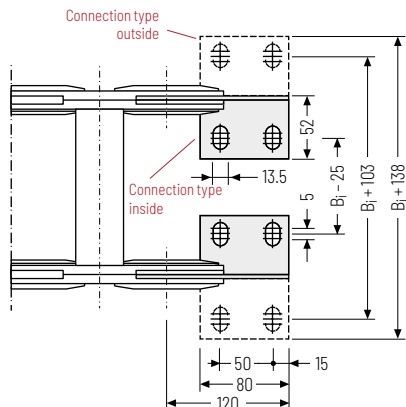
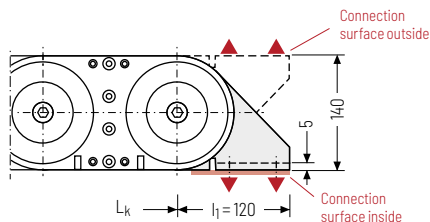
TKR series

TKA series

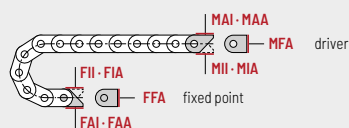
UAT series

End connectors – steel

End connectors made of steel. The connection variants on the fixed point and on the driver can be combined and changed later on, if necessary.



▲ Assembly options



Connection point

F – fixed point
M – driver

Connecting surface

A – connecting surface outside
I – connecting surface inside

Connection type

A – threaded joint outside (standard)
I – threaded joint inside
F – flange connection

Order example



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



We recommend the use of strain reliefs at the driver and fixed point. See from p. 926.



Subject to change without notice.

PROTUM®
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K
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Advanced
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M
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TKIP
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**XL
series**

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