UNIFLEX *Advanced* series

Light, quiet all-rounder with a wide range of applications*

Fraunhofer IPA TESTED® DEVICE
KABELSCHLEPP GmbH
1455,030,058,052
Report No. KA 1008-531

Fraunhofer IPA TESTED® DEVICE
KABELSCHLEPP GmbH
1455,030,058,052 ESDn
Report No. KA 1008-531

TSUBAKI ECO LINK

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

Subject to change.

Inner heights
20 – 44 mm

Inner widths
15 – 250 mm

Pitch
32.0 – 66.5 mm

Additional load
up to 15 kg/m

Travel length unsupported
up to 7 m

Travel length gliding
up to 150 m

Travel speed
up to 10 m/s

Travel acceleration
up to 50 m/s²

All technical data and features depend on application and type. Let us know your requirements – we are here to help!

Fon: +49 2762 4003-0 or
E-mail: technik@kabelschlepp.de

UA1455

Pitch 45.5 mm

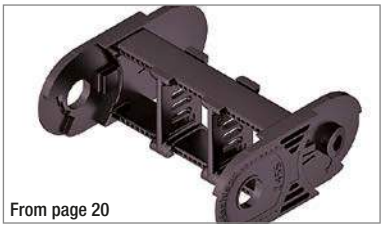
Height 26 mm

Width 25 – 130 mm

Bending radius 52 – 225 mm

Stay variants

Design 020

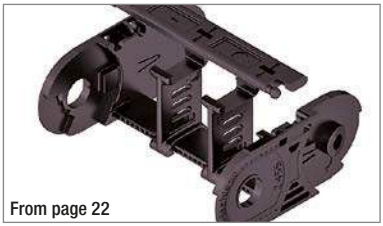


From page 20

Closed frame
- Weight-optimized, closed plastic frame with particularly high torsional rigidity.

Opening options
inside/outside: Cannot be opened.

Design 030

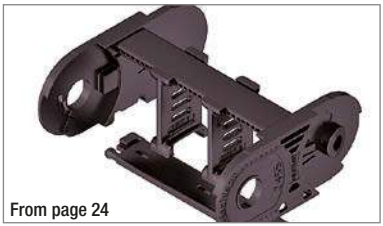


From page 22

Frame with externally detachable crossbars
- Weight-optimized plastic frame with particularly high torsional rigidity.
- Swivable and detachable on both sides in any position.

Opening options
outside: Swivable and detachable.

Design 040



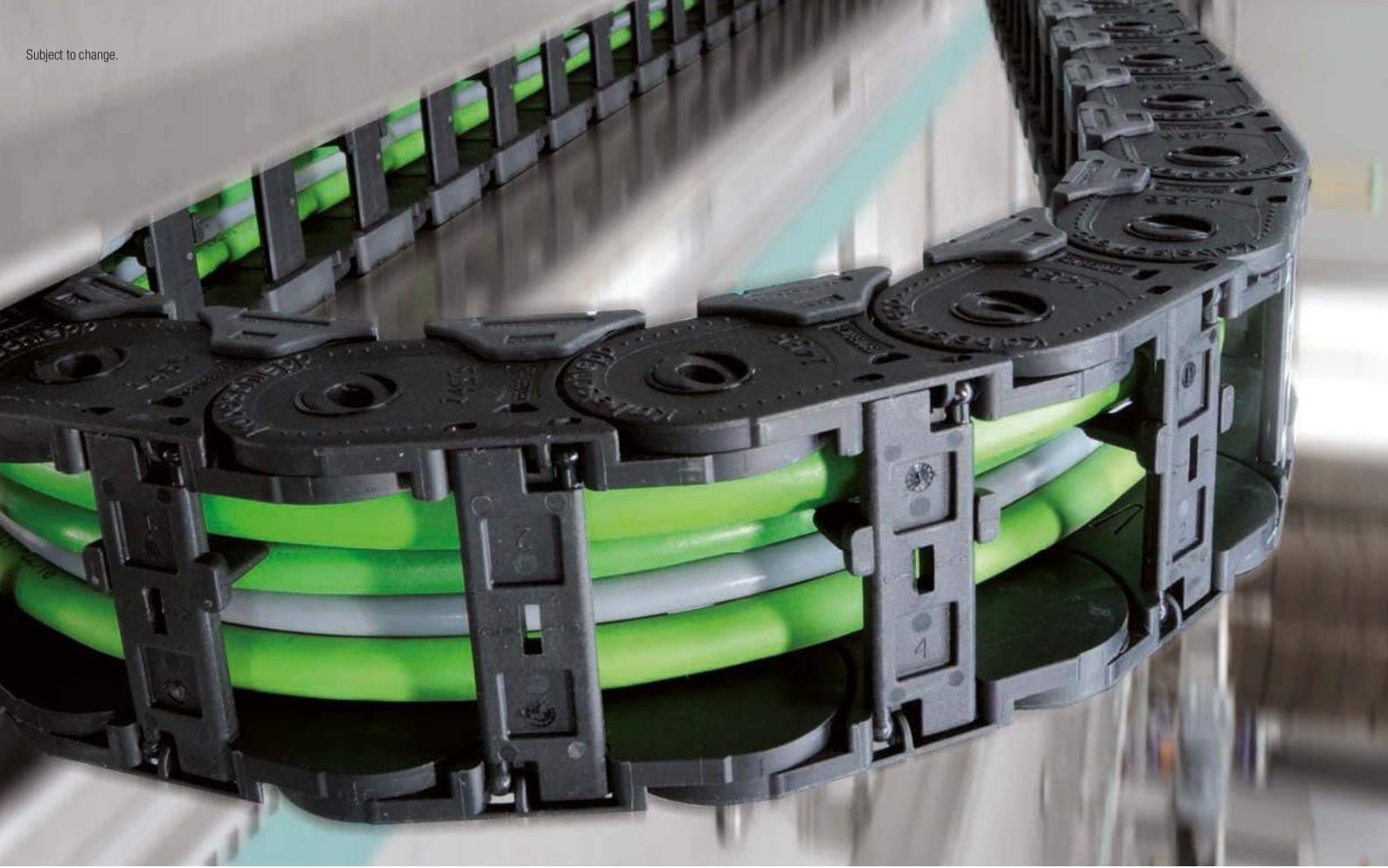
From page 24

Frame with internally detachable crossbars
- Weight-optimized plastic frame with particularly high torsional rigidity.
- Swivable and detachable on both sides in any position.

Opening options
inside: Swivable and detachable.

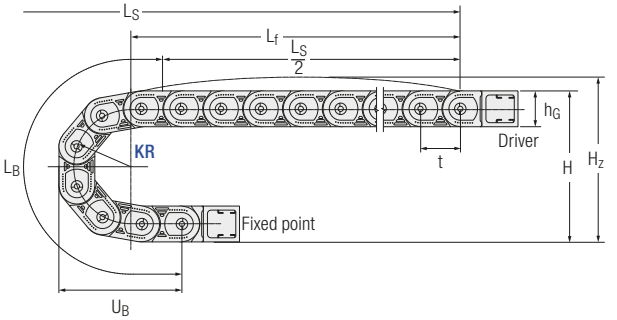
Technical data on p. 18

Subject to change.

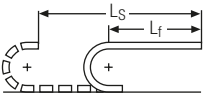


UA1455 | Installation Dimensions | Unsupported

Unsupported arrangement



Unsupported length L_f



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

Dynamics of unsupported arrangement		t
v_{max} [m/s]	a_{max} [m/s²]	[mm]
10	50	45.5

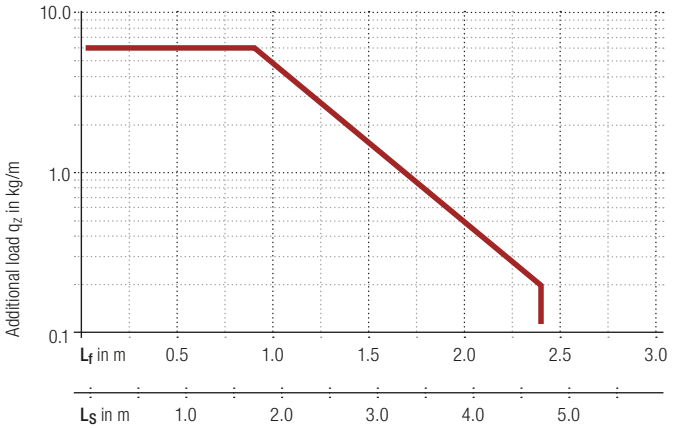
Installation dimensions unsupported

KR [mm]	H [mm]	H_Z [mm]	L_B [mm]	U_B [mm]
52	140	165	255	116
65	166	191	296	129
95	226	251	390	159
125	286	211	484	189

KR [mm]	H [mm]	H_Z [mm]	L_B [mm]	U_B [mm]
150	336	361	563	214
180	396	421	657	244
200	436	461	720	264
225	486	511	798	289

Load diagram

for unsupported length depending on additional load



Intrinsic cable carrier weight q_k = 0.75 kg/m with B_i 38 mm.
For other inner widths the maximum additional load changes.

Calculating the cable carrier length

Cable carrier length L_k

$$L_k \approx \frac{L_S}{2} + L_B$$

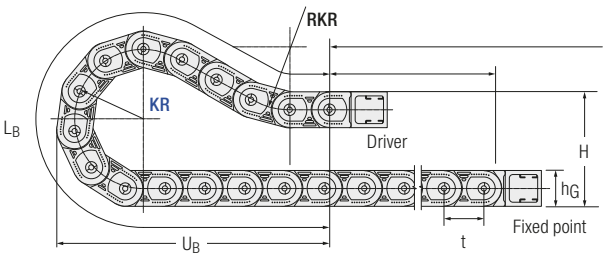
Cable carrier length L_k rounded to pitch t

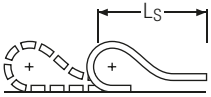
Unsupported length L_f

$$L_f = \frac{L_S}{2} + t$$

Fixed point offset L_v:
For off-center fixed point connections please contact us.

Gliding arrangement





For more information on gliding arrangement please contact us.

Only designs 020 and 030 may be used for gliding arrangements.

Dynamics of gliding arrangement		t
v_{max} [m/s]	a_{max} [m/s²]	[mm]
2.5	20	45.5

The gliding cable carrier has to be routed in a channel.
Our engineers will be happy to help with project planning – 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

TSUBAKI KABELSCHLEPP Technical Support

If you have any questions about determining gliding cable carriers or other technical details please contact our technical support service at technik@kabelschlepp.de. We will be happy to help you.

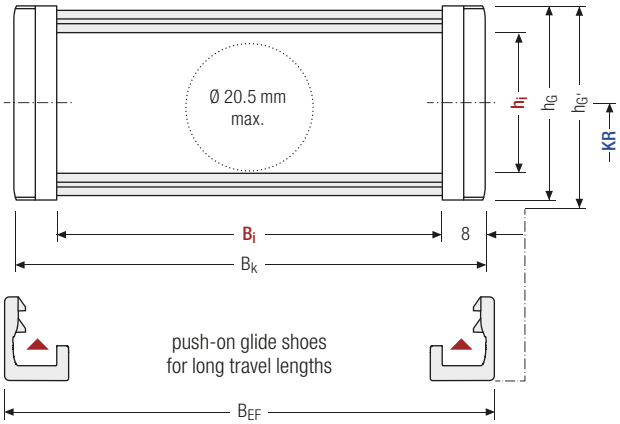
UA1455.020 | Overview

Stay variant 020 – closed frame

- Weight-optimized, closed plastic frame with particularly high torsional rigidity.
- **Opening options outside/inside:** Cannot be opened.

Stay arrangement on every chain link **(VS)**

B_i from 25 – 130 mm



Calculating the cable carrier width

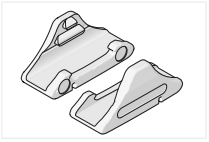
Outer width B_k

$B_k = B_i + 16$ mm

Total width B_{EF}

$B_{EF} = B_i + 19$ mm

The maximum cable diameter strongly depends on the bending radius and the desired cable type. Please contact us.



Replaceable glide shoes

Information on the inner distribution of the cable carrier can be found on page 26.

UA1455.020 | Dimensions · Technical Data

Pitch, inner height and chain link height

t [mm]	h_i [mm]	h_G [mm]	$h_{G'}$ [mm]
45.5	26	36	38.5

Bend radii

KR [mm]							
52	65	95	125	150	180	200	225*

Inner/outer width and intrinsic cable carrier weight

B_i [mm]	B_k [mm]	B_{EF} [mm]	q_k [kg/m]
25	41	44	0.71
38	54	57	0.75
58	74	77	0.80
78	94	97	0.88
103	119	122	1.00
130*	146	147	1.12

Order example

UA1455	.	020	.	78	.	150	-	1,456
Type		Stay variant		B_i [mm]		KR [mm]		L_K [mm]

* on request

Subject to change.

Key for abbreviations on page 72
Assembly instructions on kabelschlepp.de/assembly
Order key on page 32

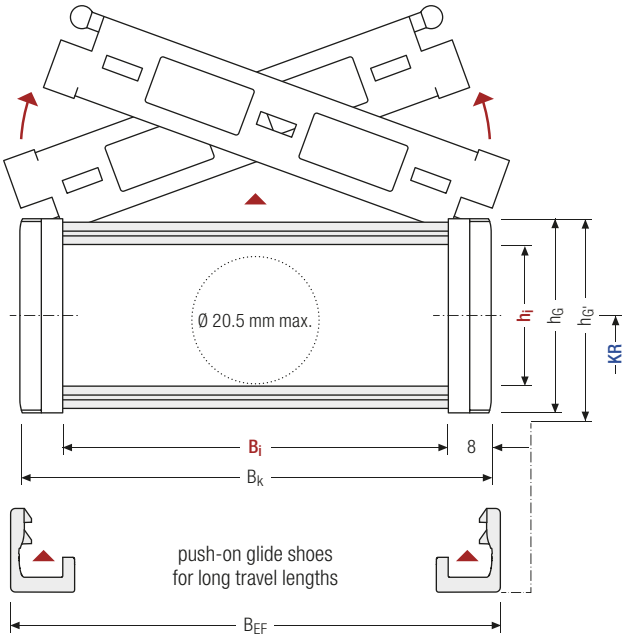
UA1455.030 | Overview

Stay variant 030 – with outside opening and detachable crossbars

- Weight-optimized plastic frame with particularly high torsional rigidity.
- Swivable and detachable on one side in any position.
- **Opening options**
  outside: Swivable and detachable.

Stay arrangement on every chain link **(VS)**

B_i from 25 – 130 mm



Calculating the cable carrier width

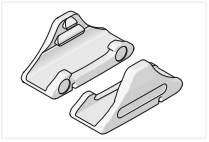
Outer width B_k

$B_k = B_i + 16$ mm

Total width B_{EF}

$B_{EF} = B_i + 19$ mm

The maximum cable diameter strongly depends on the bending radius and the desired cable type. Please contact us.



Replaceable glide shoes

Information on the inner distribution of the cable carrier can be found on page 26.

UA1455.020 | Dimensions · Technical Data

Pitch, inner height and chain link height

t [mm]	h_i [mm]	h_G [mm]	$h_{G'}$ [mm]
45.5	26	36	38.5

Bend radii

KR [mm]							
52	65	95	125	150	180	200	225*

Inner/outer width and intrinsic cable carrier weight

B_i [mm]	B_k [mm]	B_{EF} [mm]	q_k [kg/m]
25	41	44	0.73
38	54	57	0.75
58	74	77	0.80
78	94	97	0.88
103	119	122	0.98
130*	146	147	1.10

Order example

UA1455	.	030	.	78	.	150	-	1,456
Type		Stay variant		B_i [mm]		KR [mm]		L_K [mm]

* on request

Subject to change.

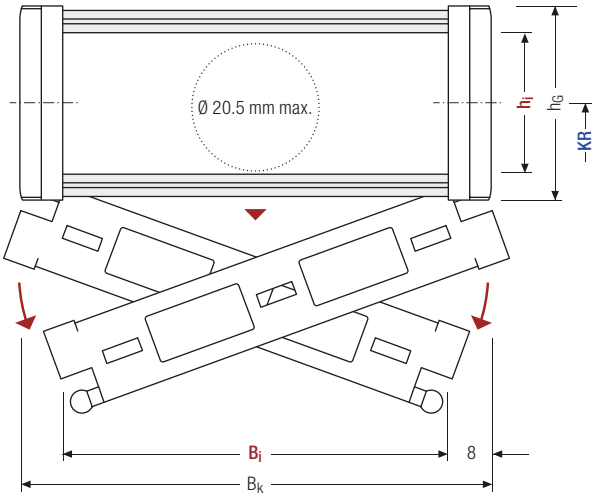
UA1455.040 | Overview

Stay variant 040 – with inside opening and detachable crossbars

- Weight-optimized plastic frame with particularly high torsional rigidity.
- Swivable and detachable on one side in any position.
- **Opening options inside:** Swivable and detachable.

Stay arrangement on every chain link **(VS)**

B_i from 25 – 130 mm



Calculating the cable carrier width

Outer width B_k

$B_k = B_i + 16$ mm

The maximum cable diameter strongly depends on the bending radius and the desired cable type. Please contact us.

Design 040 is not suitable for gliding arrangement.

Information on the inner distribution of the cable carrier can be found on page 26.

UA1455.040 | Dimensions · Technical Data

Pitch, inner height and chain link height

t [mm]	h_i [mm]	h_G [mm]
45.5	26	36

Bend radii

KR [mm]							
52	65	95	125	150	180	200	225*

Inner/outer width and intrinsic cable carrier weight

B_i [mm]	B_K [mm]	q_K [kg/m]
25	41	0.73
38	54	0.75
58	74	0.80
78	94	0.88
103	119	0.98
130*	146	1.10

Order example

UA1455	.	040	.	78	.	150	-	1,456
Type		Stay variant		B_i [mm]		KR [mm]		L_K [mm]

* on request

UA1455 | Inner Distribution | TS0

Divider systems

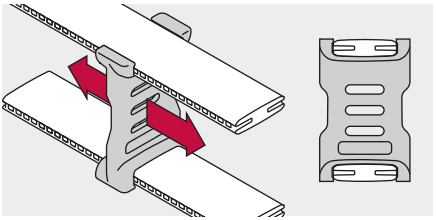
As standard, the divider system is assembled at each 2nd chain link.

As 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 acceleration and for laterally recumbent applications by simply turning them.
The locking cams click into place in the locking grids in the crossbars **(version B)**.

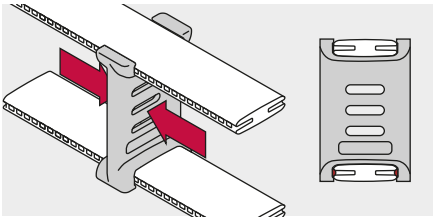
Movable divider

Version A (Standard)



Fixable divider (2.5 mm grid)

Version B

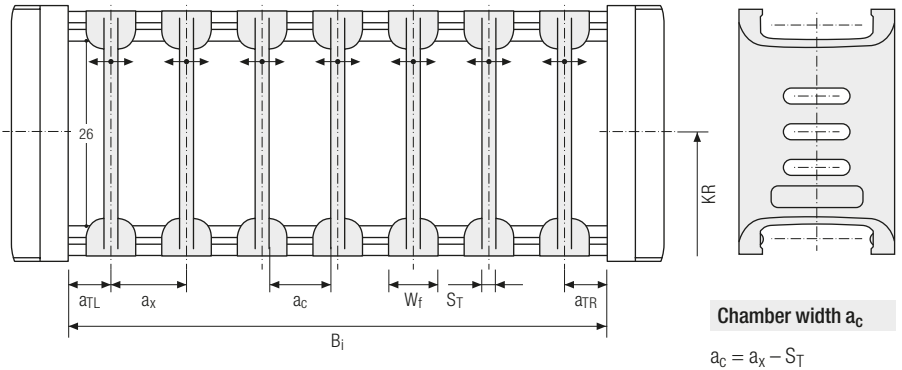


Divider system TS0 without height separation

S_T [mm]	W_f [mm]	$n_{T\,max}$ design 020	Version A: $a_{TL}/a_{TR\,min}$ [mm]	Version A: $a_{x\,min}$ [mm]	Version A: $a_{c\,min}$ [mm]	Version B*: $a_{TL}/a_{TR\,min}$ [mm]	Version B*: $a_{x\,min}$ [mm]	Version B*: $a_{c\,min}$ [mm]	Version B*: $a_{x\,grid}$ [mm]
2	7		3.5	7	5		7.5	5.5	2.5

B_i [mm]	25	38	58	78	103	130
$a_{TL}/a_{TR\,min}$ [mm]	5	4	4	4	4	5
$n_{T\,max}$ design 020	0	2	5	7	11	15

* not design 020



Chamber width a_c

$a_c = a_x - S_T$

Information on the connection dimensions for the cable carrier can be found on page 29.

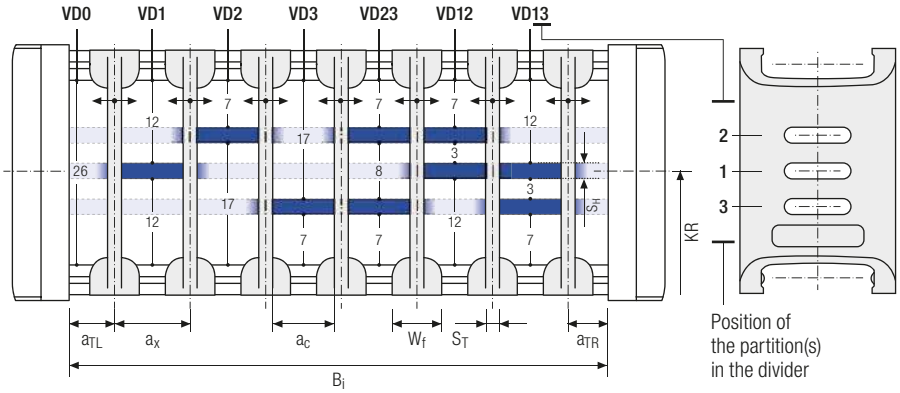
UA1455 | Inner Distribution | TS1

Divider system TS1 with continuous height separation*

S_T [mm]	W_f [mm]	S_H [mm]	$n_{T\ min}$	$a_{T\ max}$ [mm]	Version A: $a_{T\ min}$ [mm]	Version A: $a_{x\ min}$ [mm]	Version A: $a_{c\ min}$ [mm]	Version B: $a_{T\ min}$ [mm]	Version B: $a_{x\ min}$ [mm]	Version B: $a_{c\ min}$ [mm]	Version B: $a_{x\ grid}$ [mm]
2	7	2	2	20	3.5	7	5		7.5	5.5	2.5

B_i [mm]	25	38	58	78	103	130
$a_{TL}/a_{TR\ min}$ [mm]	5	4	4	4	4	5

* not design 020



Position of the partition(s) in the divider

Standard height separation with **aluminum profile 9 × 2 mm**.

Chamber width a_c

$a_c = a_x - S_T$

TRAXLINE® cables in motion

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

More product information online

Assembly instructions etc.: Receive additional info via your smartphone or check online at **kabelschlepp.de/support**

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

Information on the connection dimensions for the cable carrier can be found on page 29.

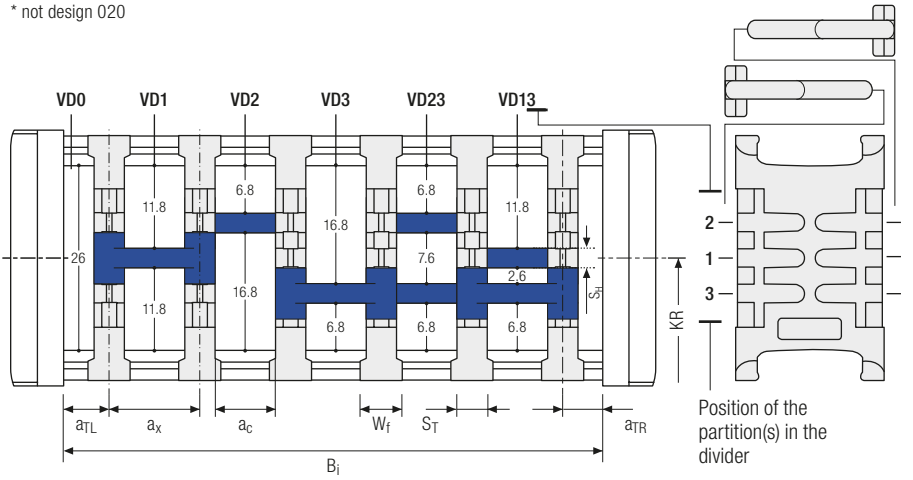
Inner heights 26
Inner widths 25 – 130
Key for abbreviations on page 72
Assembly instructions on kabelschlepp.de/assembly
Order key on page 32

UA1455 | Inner Distribution | TS3

Divider system TS3 with height separation made of plastic section subdivisions*

Version A						
S_T [mm]	W_f [mm]	S_H [mm]	$a_{TL}/a_{TR\ min}$ [mm]	$a_{x\ min}$ [mm]	$a_{c\ min}$ [mm]	$n_{T\ min}$
5	7	2.4	3.5	15	10	2

* not design 020



Position of the partition(s) in the divider

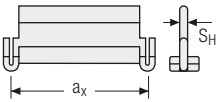
The dividers are fixed by the partitions, the complete divider system is movable in the cross section.

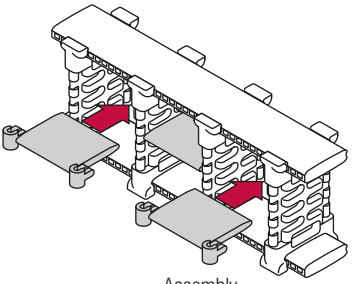
Chamber width a_c

$a_c = a_x - S_T$

a_x (center distance of dividers) [mm]									
a_c (nominal width of inner chamber) [mm]									
15	**20**	**25**	**30**	**35**	**40**	**45**	**55**	**65**	**75**
10	15	20	25	30	35	40	50	60	70

Plastic section subdivisions in a_x increments



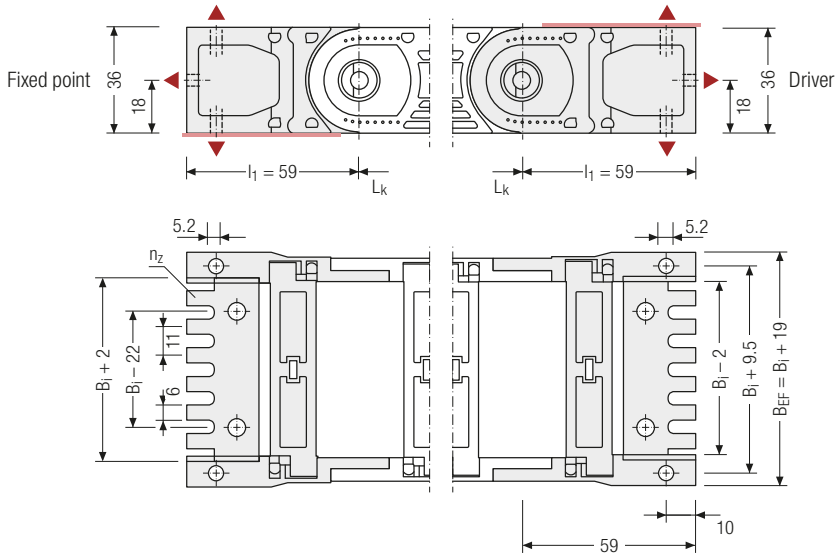


Assembly section subdivision

Information on the connection dimensions for the cable carrier can be found on page 29.

Universal end connectors UMB – plastic (standard)

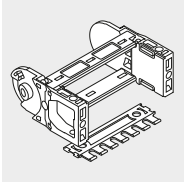
The universal mounting brackets (UMB) are made from plastic and can **be mounted from the top, from the bottom, or face on**.



▲ Assembly options

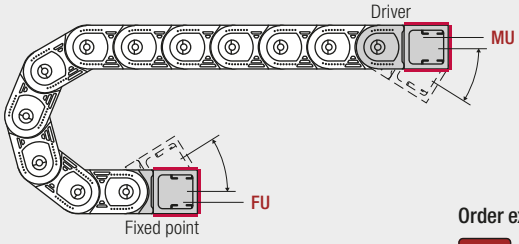
B_i [mm]	B_{EF} [mm]	n_z
25	44	2
38	57	3
58	77	5
78	97	7
103	122	9
130	149	11

Recommended tightening torque:
5 Nm for screws M5 - 8.8



The end connectors are optionally also available **without** strain relief comb (1 per side). Please state when ordering.

Connection variants



Connection point
F – fixed point
M – driver

Connection type
U – universal mounting bracket

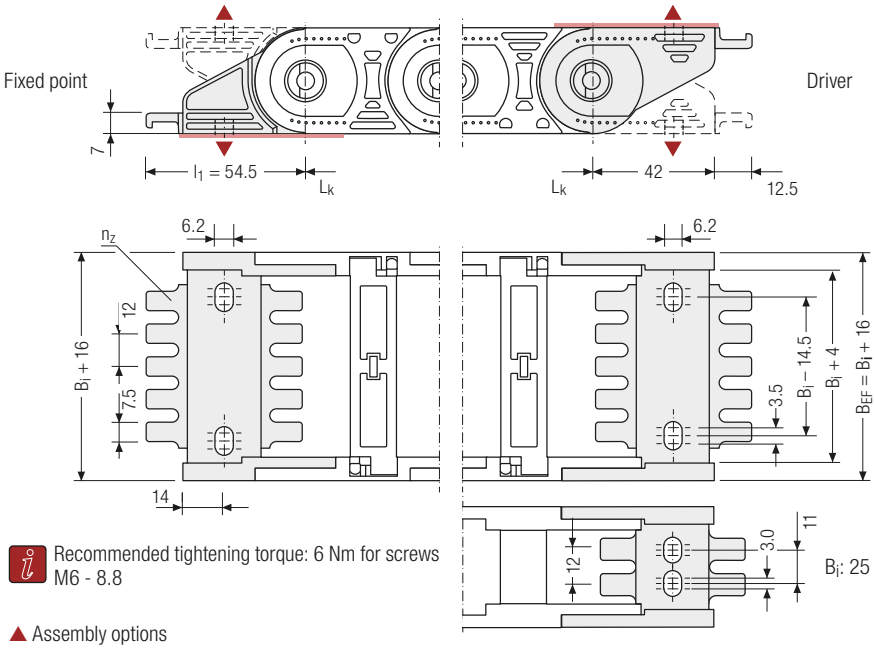
Order example

UMB	.	F U
UMB	.	M U

The universal end connectors UMB can be swiveled in KR direction.

One part end connectors – plastic

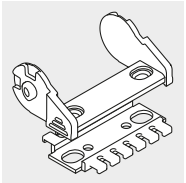
The plastic end connectors can be **connected from above and below**. The connection type can be changed by reconnecting the end connector.



Recommended tightening torque: 6 Nm for screws M6 - 8.8

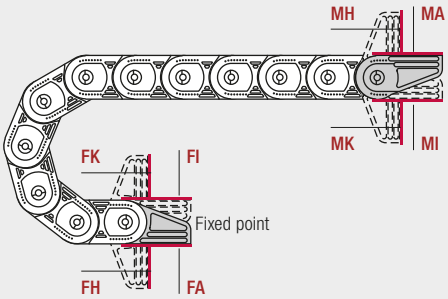
▲ Assembly options

B_i [mm]	B_{EF} [mm]	n_z
25	41	2 x 2
38	54	2 x 3
58	74	2 x 4
78	94	2 x 6
103	117	2 x 8
130	146	2 x 10



The end connectors are optionally also available **without** strain relief comb (except B_i 25). Please state when ordering.

Connection variants



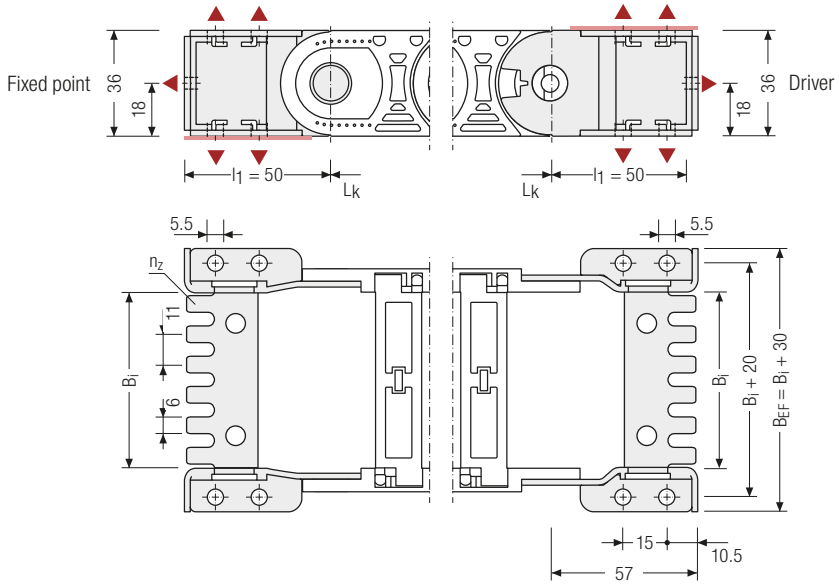
Driver

Connection point
- **F** – fixed point
- **M** – driver

Connection type
- **A** – threaded joint outside (standard)
- **I** – threaded joint inside
- **H** – threaded joint outside rotated by 90°
- **K** – threaded joint inside rotated by 90°

Universal end connectors UMB-St – steel

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



▲ Assembly options

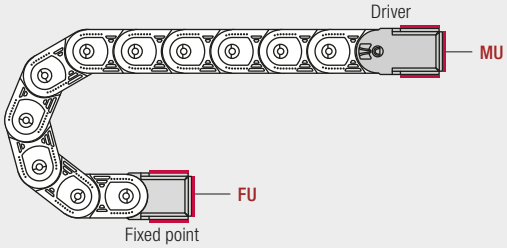
B_i [mm]	B_{EF} [mm]	n_z
25	55	2
38	68	3
58	88	5
78	108	7
103	133	9
130	160	11

The end connectors are also available as an option **without** strain relief comb. Please state when ordering.

Order example

UMB-St	.	F	U
UMB-St	.	M	U

Connection variants



Connection point
F – fixed point
M – driver

Connection type
U – universal mounting bracket

Note: The end connectors UMB-St offer the same connection dimensions as the previous universal end connectors UMB from UNIFLEX 0455.

UA1455 | Order Key

Order

Cable carrier

Type	Stay variant	B_i [mm]	KR [mm]	L_K [mm]
			52	
			65	
		25	95	
		38	125	
		58	150	
	020	78	180	
	030	103	200	
UA1455	040	130	225	

UA1455	.	030	.	78	.	150	-	1,456
Type		Stay variant		B_i [mm]		KR [mm]		L_K [mm]

International order specification INTOK:
Information about the International Order Key can be found in the chapter “International Order Key” from page 1.

Divider system

Divider system	Version	n_T	Chamber	a_x [mm]	Height separation (not for TS0)
TS0			K1		VD0
TS1	A	min. 2	K2	min. 7.0	VD1
TS3	B	…	…	…	…

TS3	.	A	.	3	.	K1	.	35	-	VD1
						⋮		⋮		⋮
					.	K5	.	40	-	VD3
Divider system		Version		n_T		Chamber		Assembly distance		Height separation

Please state the designation of the divider system **(TS0, TS1 …)**, version and number of dividers per cross section [n_T]. Additionally, please enter the chambers [K] from left to right (driver view).

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

Connection variant

End connector	Connection point	Connection type
		U
		A
UMB		I
End connector	F	H
UMB-St	M	K

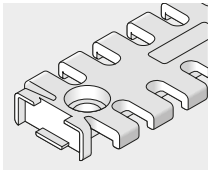
UMB	.	F	U
UMB	.	M	U

Please state the desired connection variant as well as the desired strain relief type for the fixed point and for the driver.

Accessories

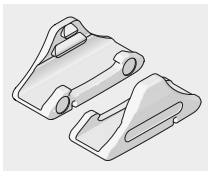
Single-sided strain relief combs

The optional plastic strain relief combs are assembled between the UMB end connectors and require no separate screw fixing.



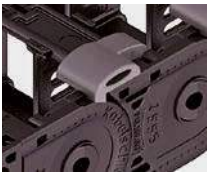
Gliding elements

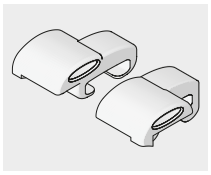
The optional glide shoes ensure a substantially longer service life of the cable carrier in gliding operation.



Outer dampers

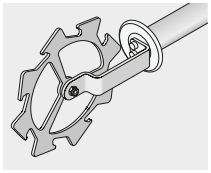
The use of outer dampers effectively reduces uncoiling noise. Particularly recommended for support trays and guide channels.





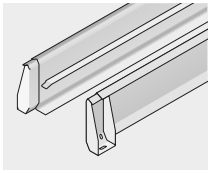
Quick opening tool

Opening tools can be used to open cable carriers quickly and gently for installation and inspection of cables and hoses.



Guide channels

The cable carrier always has to be guided in a channel for gliding applications. This prevents the upper and lower run from slipping.



Support trays

An even surface is required for safe unrolling of the cable carrier. This is ensured by a support tray.