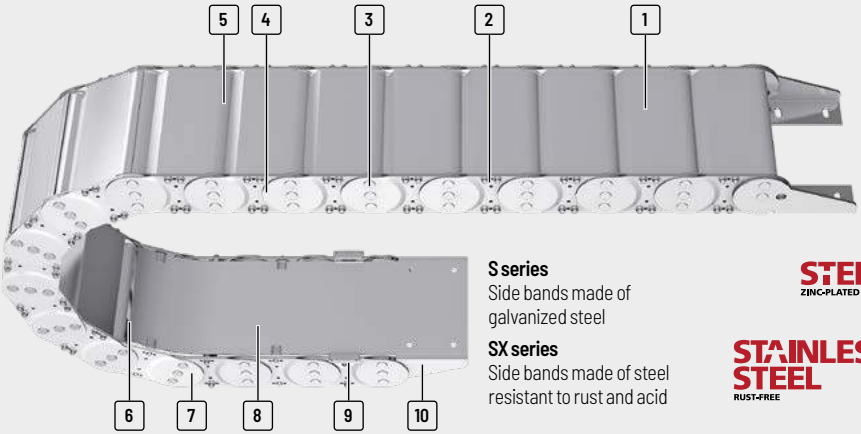
S/SX Tubes series

Extremely robust and sturdy covered steel cable carriers



S series
Side bands made of galvanized steel

SX series
Side bands made of steel resistant to rust and acid

STEEL ZINC-PLATED

STAINLESS STEEL RUST-FREE

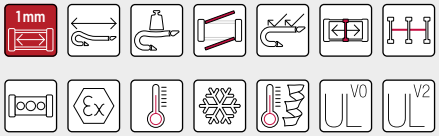
1 Aluminum covers available in **1 mm width sections**
2 4 bolted aluminum covers for extreme loads
3 Joint design with hardened bolts for long service life
4 Cranked link plate design
5 Can be opened on the inside and the outside for cable laying
6 Different separation options for the cables
7 Extremely robust side bands, galvanized or stainless steel
8 Steel band cover available in **1 mm width sections**
9 Replaceable glide shoes
10 End connectors for different connection variants

Features

- » Extremely robust, sturdy steel cable carriers for heavy mechanical loads and rough environmental conditions
- » Side bands made of galvanized steel (S series) or corrosion-resistant and acid-resistant steel (SX series) in three qualities: ER 1 / ER 1S and ER 2
- » Very sturdy link plates, each consisting of two individual plates
- » Very extensive unsupported lengths even with large additional loads
- » Joint design with multi stroke system and hardened bolt
- » Bolted stay systems, solid end connectors
- » Explosion protection with classification EX II 2 GD as per ATEX RL

The design

Proven steel cable carriers with extremely sturdy link plates and dedicated joint design with multi stroke system and hardened bolt. The extremely sturdy design allows extensive unsupported lengths and high possible additional loads.



Sandwich design: Link plates consist of two plates

Glide shoes available for gliding applications

Stroke system with hardened bolt and circlips

Also available as open variants with different stay variants, p. 716

S/SX Tubes series | Overview

Type	Opening variant	Stay variant	h_i [mm]	h_G [mm]	B_i [mm]	B_k [mm]	$B_{i\text{-}grid}$ [mm] X mm	t [mm]	KR [mm]	Additional load ≤ [kg/m]	Cable-d_{max} [mm]
S/SX0650 Tubes											
		RMD	30	50	65 – 465	100 – 500	1	65	115 – 400	30	24
S/SX0950 Tubes											
		RMD	44	68	88 – 563	125 – 600	1	95	170 – 600	45	35
S/SX1250 Tubes											
		RMD	69	94	101 – 751	150 – 800	1	125	200 – 1000	50	55
S/SX1800 Tubes											
		RMD	104	140	188 – 938	250 – 1000	1	180	320 – 1300	60	83

* Depending on the specific application, additional gliding elements or rollers are required.
** Application-specific, values on request.

S/SX Tubes series | Overview

Unsupported arrangement			Gliding arrangement			Inner Distribution				Movement			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	
5.8	2.5	5	**	1	2	•	•	–	–	•	•	–	808
8.8	2.5	5	**	1	2	•	•	–	–	•	•	–	814
13.5	2.5	5	**	1	2	•	•	•	–	•	•	–	820
17.8	2	3	**	0.8	2	•	•	–	•	•	•	–	824

S/SX0650

Pitch
65 mm

Inner height
30 mm

Chain widths
100 – 500 mm

Bending radii
115 – 300 mm

Stay variants

Aluminum stay RMD ..... page **808**

Aluminum cover system

» Bolted aluminum covers for maximum stability.
» For applications generating chips or coarse contamination.
» **Inside/outside:** Threaded joint easy to release.

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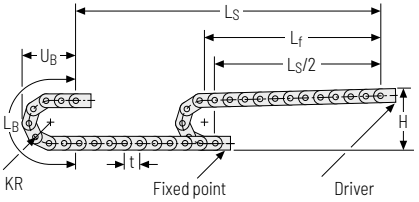
S/SX0650 | Installation dim. | Unsupported · Gliding

Unsupported arrangement



KR [mm]	H [mm]	L_B [mm]	U_B [mm]
115	305	621	270
125	325	653	280
135	345	684	290
145	365	716	300
155	385	747	310
175	425	810	330
200	475	888	355
250	575	1045	405
300	675	1202	455
400	875	1516	555

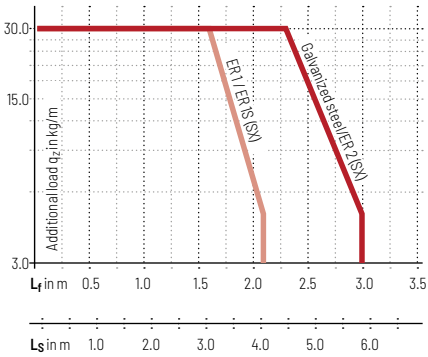
Installation height H_Z

$H_Z = H + 10$ mm/m

Load diagram for unsupported length depending on the additional load.

Intrinsic cable carrier weight $q_k = 4.5$ kg/m. For other inner widths, the maximum additional load changes.

For cable carriers with a aluminum cover system, a higher intrinsic cable carrier weight is to note.



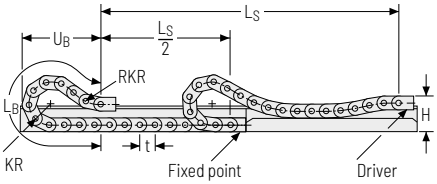
Speed
up to 2.5 m/s

Acceleration
up to 5 m/s²

Travel length
up to 5.8 m

Additional load
up to 30 kg/m

Gliding arrangement



Speed
up to 1 m/s

Acceleration
up to 2 m/s²

Travel length
on request

Additional load
up to 30 kg/m

The gliding cable carrier must be guided in a channel. See p. 842.

Glide shoes have to be used for gliding applications.

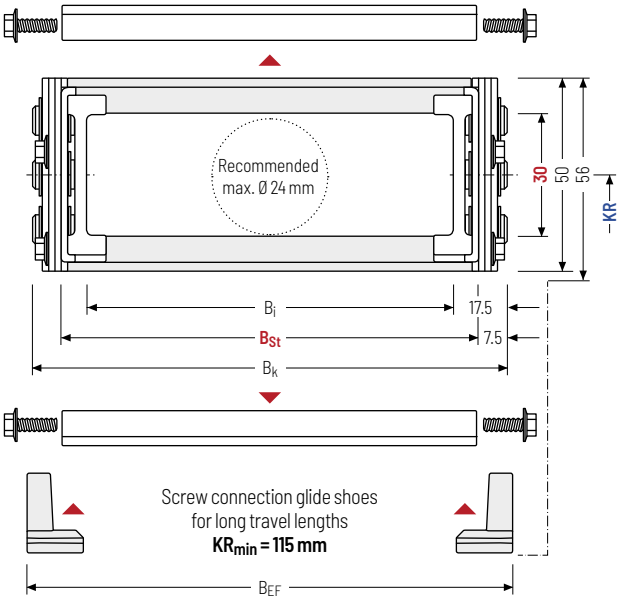
S/SX0650 RMD | Dimensions · Technical data

Aluminum stay RMD – aluminum cover system

» Bolted aluminum covers for maximum stability.
» For applications generating chips or coarse contamination.
» Available customized in **1 mm grid**.
» **Inside/outside:** Threaded joint easy to release.

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

1 mm B_k 100 – 500 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_{St} [mm]*	B_k [mm]	B_{EF} [mm]	KR [mm]					q_k [kg/m]
30	50	56	65 – 465	**85 – 485**	B_{St} + 15	B_{St} + 20	**115**	**125**	**135**	**145**	**155**	4.84 – 10.50
							175	**200**	**250**	**300**	**400**	

* in 1 mm width sections

Order example

SX0650	.	180	.	RMD	.	135	.	St	-	1430		VS
Type		B_{St} [mm]		Stay variant		KR [mm]		Material		L_k [mm]		Stay arrangement

Divider systems

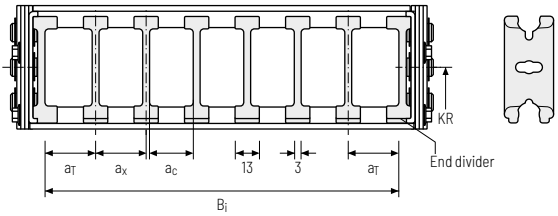
As a standard, the divider system is mounted on every 2nd cover/chain link (HS).

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

Divider system TS0 without height separation

Vers.	$a_{T\,min}$ [mm]	$a_{x\,min}$ [mm]	$a_{c\,min}$ [mm]	$n_{T\,min}$
A	11.5	13	10	–

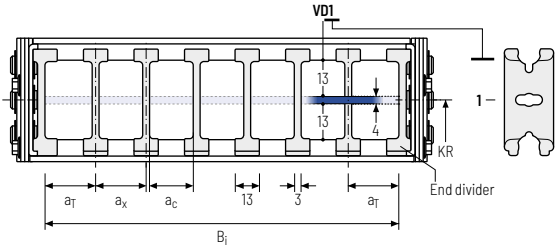
The dividers can be moved in the cross section.



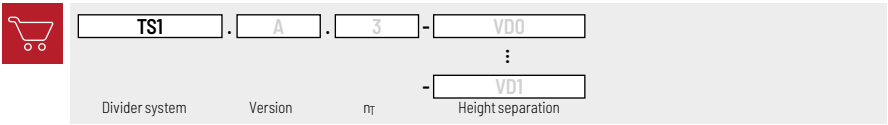
Divider system TS1 with continuous height separation

Vers.	$a_{T\,min}$ [mm]	$a_{x\,min}$ [mm]	$a_{c\,min}$ [mm]	$n_{T\,min}$
A	11.5	13	10	2

The dividers can be moved in the cross section.



Order example



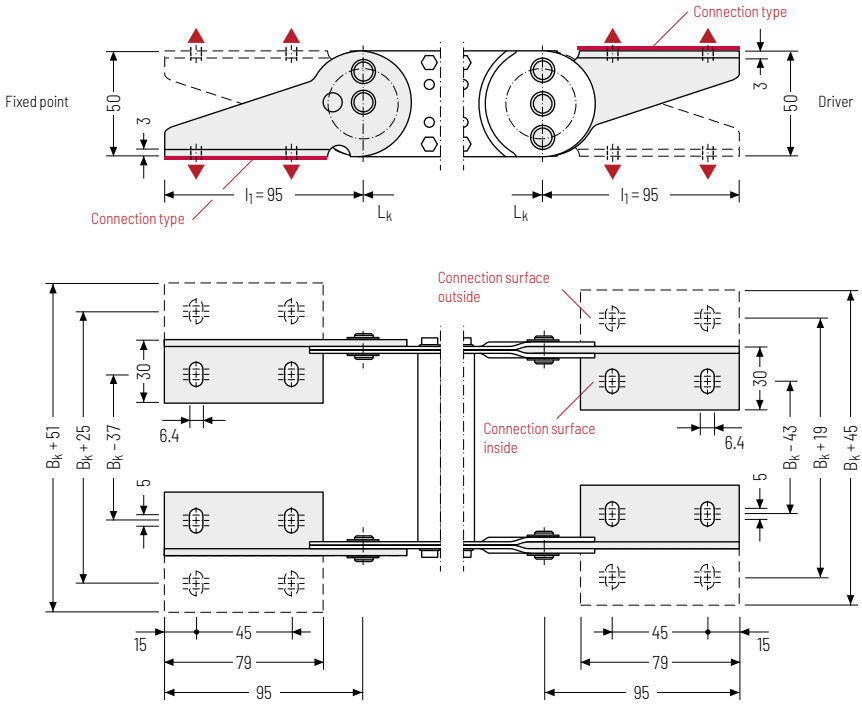
Please state the designation of the divider system **(TS0, TS1 ...)**, version and number of dividers per cross section [n_T].

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.

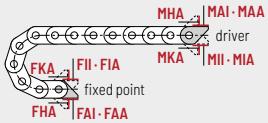
The end dividers are part of the divider system and don't have to be ordered separately.

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

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

Caution: The standard connection variant FAI/MAI is only possible from B_k of 70 mm.

Connection surface
- **A** – connection surface inside (standard)
- **I** – connection surface outside

Order example

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

We recommend the use of strain reliefs at the driver and fixed point. See from p. 902.

S/SX0950

Pitch
95 mm

Inner height
44 mm

Chain widths
125 – 600 mm

Bending radii
170 – 600 mm

Stay variants

Aluminum stay RMD ..... page **814**

Aluminum cover system

» Bolted aluminum covers for maximum stability.
» For applications generating chips or coarse contamination.
» **Inside/outside:** Threaded joint easy to release.

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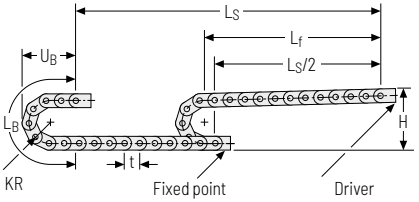
Unsupported arrangement



KR [mm]	H [mm]	L_B [mm]	U_B [mm]
170	442	914	395
200	502	1008	425
260	622	1197	485
290	682	1291	515
320	742	1385	545
350	802	1480	575
410	922	1668	635
600	1302	2264	825

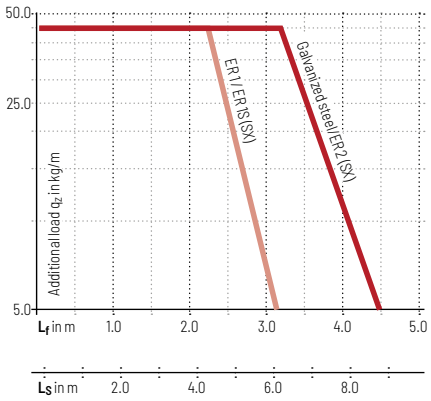
Installation height H_Z

$H_Z = H + 10$ mm/m

Load diagram for unsupported length depending on the additional load.

Intrinsic cable carrier weight $q_k = 7.6$ kg/m. For other inner widths, the maximum additional load changes.

For cable carriers with a aluminum cover system, a higher intrinsic cable carrier weight is to note.



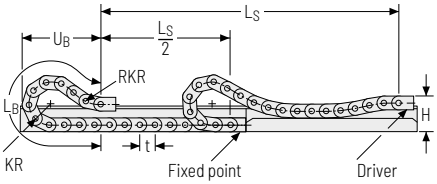
Speed
up to 2.5 m/s

Acceleration
up to 5 m/s²

Travel length
up to 8.8 m

Additional load
up to 45 kg/m

Gliding arrangement



Speed
up to 1 m/s

Acceleration
up to 2 m/s²

Travel length
on request

Additional load
up to 45 kg/m

The gliding cable carrier must be guided in a channel. See p. 842.

Glide shoes have to be used for gliding applications.

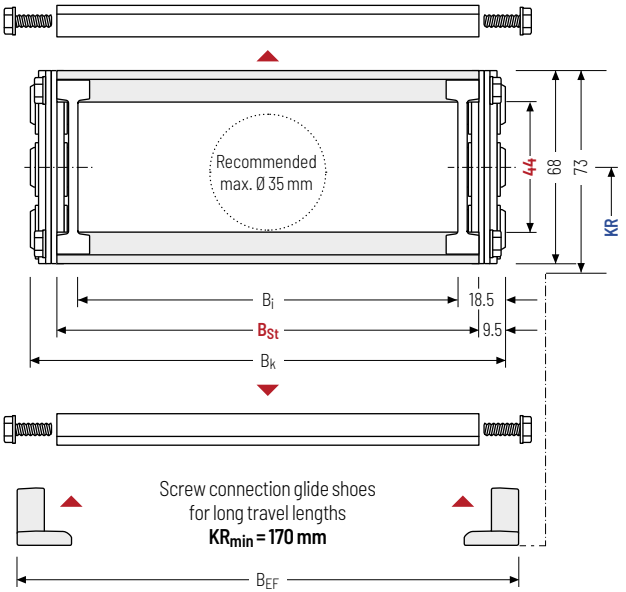
S/SX0950 RMD | Dimensions · Technical data

Aluminum stay RMD –
aluminum cover system

- Bolted aluminum covers for maximum stability.
- For applications generating chips or coarse contamination.
- Available customized in **1 mm grid**.
- **Inside/outside:** Threaded joint easy to release.

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

1 mm B_k 125 – 600 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_{St} [mm]*	B_k [mm]	B_{EF} [mm]	KR [mm]				q_k [kg/m]
44	68	73	88 – 563	106 – 581	B_{St} + 19	B_{St} + 28	170	200	260	290	9.97 – 21.95
							320	350	410	600	

* in 1 mm width sections

Order example

SX0950	.	107	.	RMD	.	200	.	St	-	2375	VS
Type		B_{St} [mm]		Stay variant		KR [mm]		Material		L_k [mm]	Stay arrangement

Divider systems

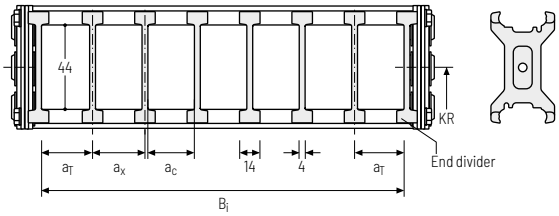
As a standard, the divider system is mounted on every 2nd cover/chain link (HS).

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

Divider system TS0 without height separation

Vers.	$a_{T\,min}$ [mm]	$a_{x\,min}$ [mm]	$a_{c\,min}$ [mm]	$n_{T\,min}$
A	12	14	10	–

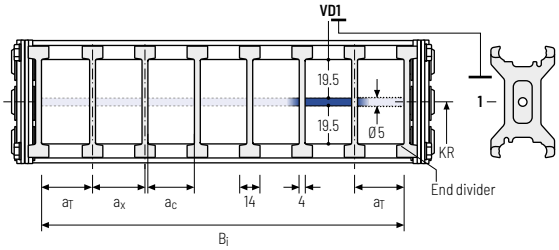
The dividers can be moved in the cross section.



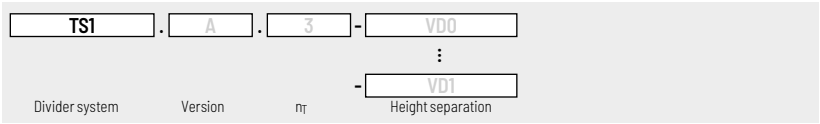
Divider system TS1 with continuous height separation

Vers.	$a_{T\,min}$ [mm]	$a_{x\,min}$ [mm]	$a_{c\,min}$ [mm]	$n_{T\,min}$
A	12	14	10	2

The dividers can be moved in the cross section.



Order example



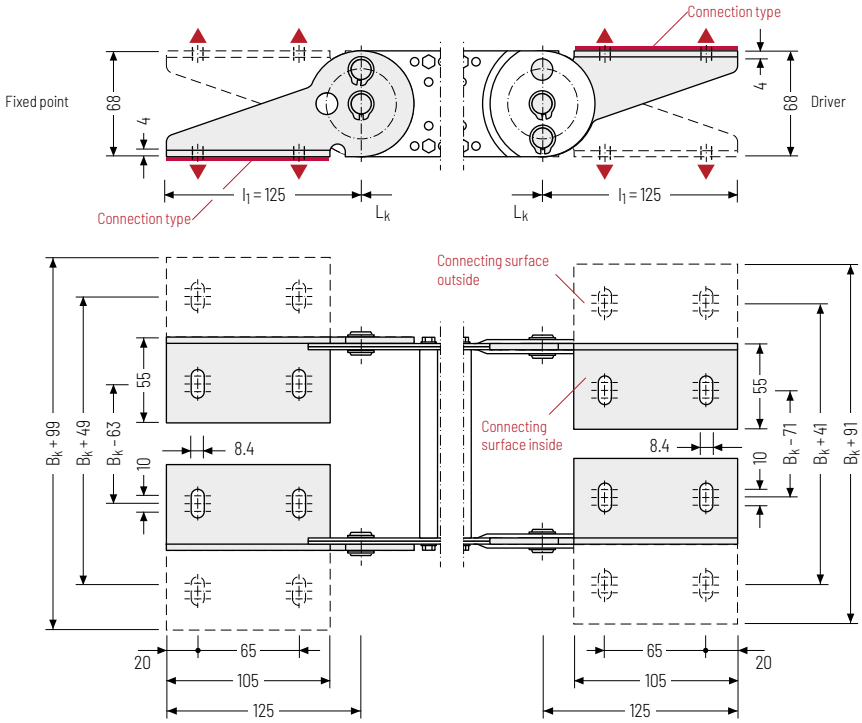
Please state the designation of the divider system **(TS0, TS1 ...)**, version and number of dividers per cross section [n_T].

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.

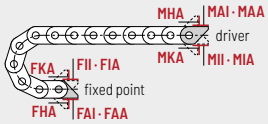
The end dividers are part of the divider system and don't have to be ordered separately.

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

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

Caution: The standard connection variant FAI/MAI is only possible from B_k of 122 mm.

Connection surface
- **A** – connection surface inside (standard)
- **I** – connection surface outside

Order example

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

We recommend the use of strain reliefs at the driver and fixed point. See from p. 902.


KABELSCHLEPP
S 0950
KR 170

S/SX1250

Pitch
125 mm

Inner height
69 mm

Chain widths
150 – 800 mm

Bending radii
200 – 1000 mm

Stay variants

Aluminum stay RMD ..... page **820**

Aluminum cover system

» Bolted aluminum covers for maximum stability.
» For applications generating chips or coarse contamination.
» **Inside/outside:** Threaded joint easy to release.

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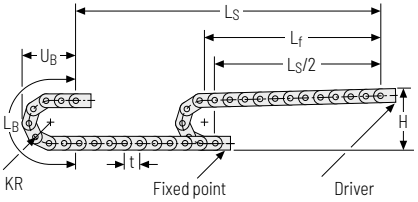
Unsupported arrangement



KR [mm]	H [mm]	L_B [mm]	U_B [mm]
200	541	1128	497
220	581	1191	517
260	661	1317	557
300	741	1442	597
340	821	1568	637
380	901	1694	677
420	981	1820	717
460	1061	1945	757
500	1141	2071	797
540	1221	2196	837
600	1341	2385	897
1000	2141	3640	1297

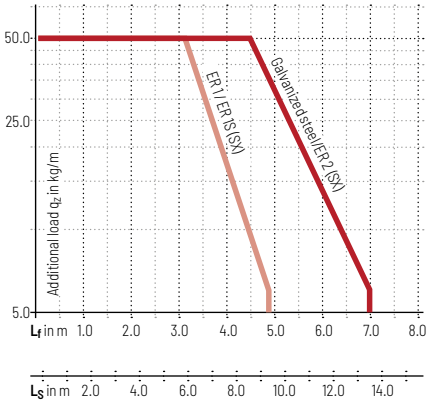
Installation height H_Z

$H_Z = H + 10$ mm/m

Load diagram for unsupported length depending on the additional load.

Intrinsic cable carrier weight q_k = 13 kg/m. For other inner widths, the maximum additional load changes.

For cable carriers with a aluminum cover system, a higher intrinsic cable carrier weight is to note.



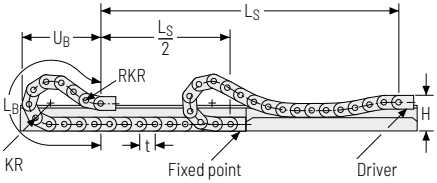
Speed
up to 2.5 m/s

Acceleration
up to 5 m/s²

Travel length
up to 13.5 m

Additional load
up to 50 kg/m

Gliding arrangement



The gliding cable carrier must be guided in a channel. See p. 842.

Glide shoes have to be used for gliding applications.

Speed
up to 1 m/s

Acceleration
up to 2 m/s²

Travel length
on request

Additional load
up to 50 kg/m

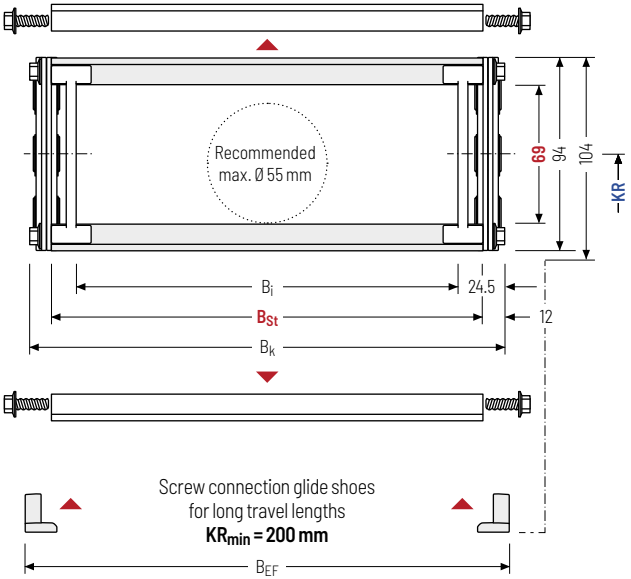
S/SX1250 RMD | Dimensions · Technical data

Aluminum stay RMD –
aluminum cover system

- Bolted aluminum covers for maximum stability.
- For applications generating chips or coarse contamination.
- Available customized in **1 mm grid**.
- **Inside/outside:** Threaded joint easy to release.

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

1 mm B_k 150 – 800 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_{St} [mm]*	B_k [mm]	B_{EF} [mm]	KR [mm]						q_k [kg/m]
69	94	104	101 – 751	126 – 776	B_{St} + 24	B_{St} + 30	200**	220**	260	300	340	380	15.48 – 32.38
							420	460	500	540	600	1000	

* in 1 mm width sections ** geometrically reduced inner height

Order example

S1250	.	352	.	RMD	.	260	.	St	-	4750		VS
Type		B_{St} [mm]		Stay variant		KR [mm]		Material		L_k [mm]		Stay arrangement

Divider systems

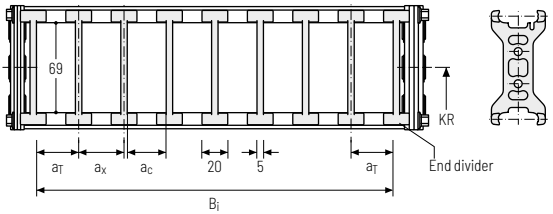
As a standard, the divider system is mounted on every 2nd cover/chain link (HS).

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

Divider system TS0 without height separation

Vers.	$a_{T\,min}$ [mm]	$a_{x\,min}$ [mm]	$a_{C\,min}$ [mm]	$n_{T\,min}$
A	17.5	20	15	–

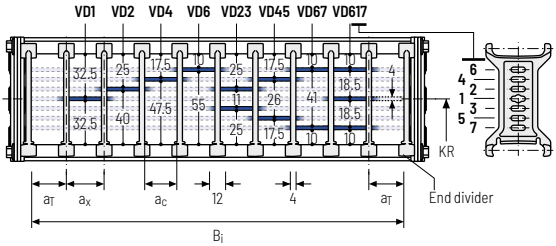
The dividers can be moved in the cross section.



Divider system TS1 with continuous height separation

Vers.	$a_{T\,min}$ [mm]	$a_{x\,min}$ [mm]	$a_{C\,min}$ [mm]	$n_{T\,min}$
A	10	12	8	2

The dividers can be moved in the cross section.



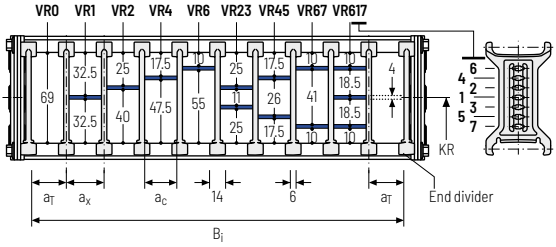
Divider system TS2 with partial height separation

Vers.	$a_{T\,min}$ [mm]	$a_{x\,min}$ [mm]	$a_{C\,min}$ [mm]	$n_{T\,min}$
A	11*/17**	14*/21	8*/15	2

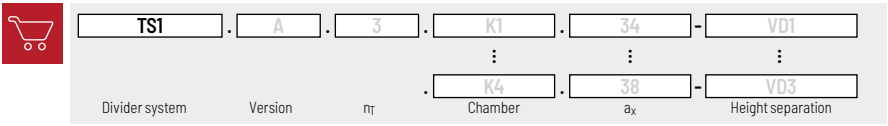
* For VR0 ** For version with height separation to the end divider

With grid distribution **(1 mm grid)**.
The dividers are attached by the height separation, the grid can be moved in the cross section.

Sliding dividers are optionally available (thickness of divider = 4 mm).

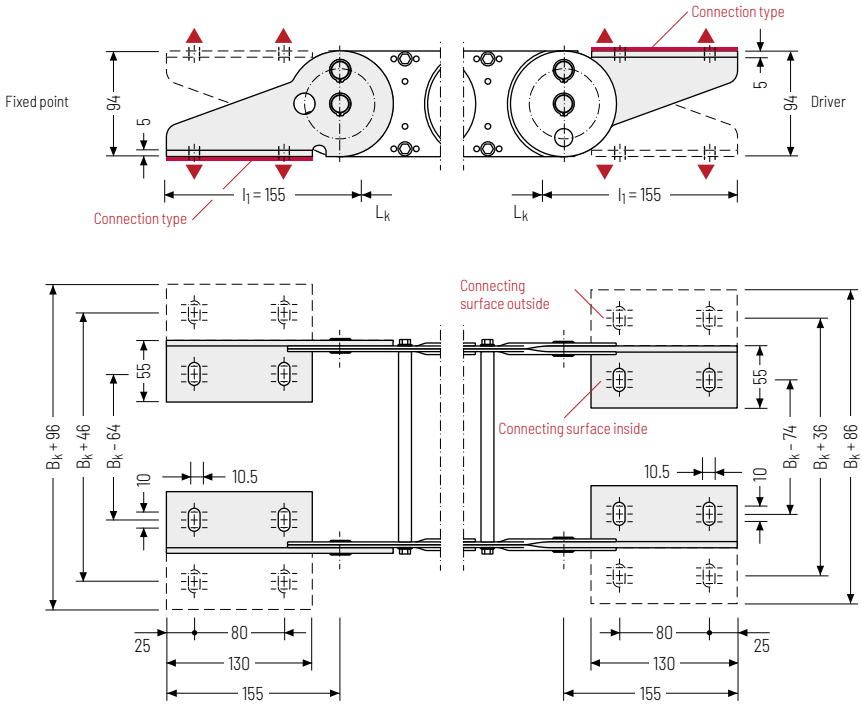


Order example

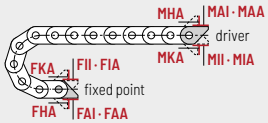


End connectors – steel

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

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

Caution: The standard connection variant FAI/MAI is only possible from B_k of 125 mm.

Connection surface
- **A** – connection surface inside (standard)
- **I** – connection surface outside

Order example

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

We recommend the use of strain reliefs at the driver and fixed point. See from p. 902.

S/SX1800

Pitch
180 mm

Inner height
104 mm

Chain widths
250 – 1000 mm

Bending radii
320 – 1300 mm

Stay variants

Aluminum stay RMD ..... page **826**

Aluminum cover system

» Bolted aluminum covers for maximum stability.
» For applications generating chips or coarse contamination.
» **Inside/outside:** Threaded joint easy to release.

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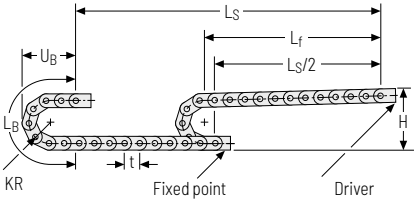
Unsupported arrangement



KR [mm]	H [mm]	L_B [mm]	U_B [mm]
320	850	1725	750
375	960	1898	805
435	1080	2087	865
490	1190	2259	920
605	1420	2620	1035
720	1650	2982	1150
890	1990	3516	1320
1175	2560	4411	1605
1300	2810	4804	1730

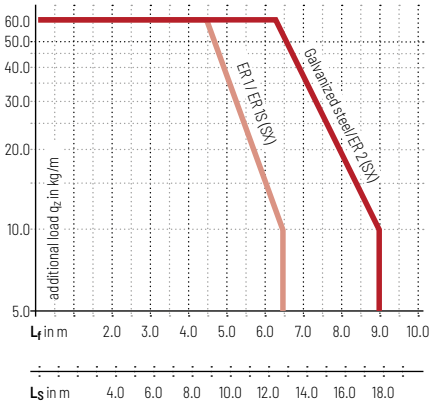
Installation height H_Z

$H_Z = H + 10$ mm/m

Load diagram for unsupported length depending on the additional load.

Intrinsic cable carrier weight $q_k = 26$ kg/m. For other inner widths, the maximum additional load changes.

For cable carriers with a aluminum cover system, a higher intrinsic cable carrier weight is to note.



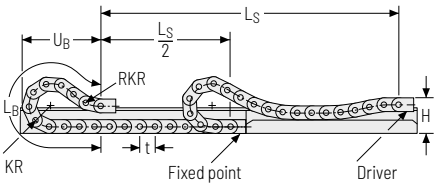
Speed
up to 2 m/s

Acceleration
up to 3 m/s²

Travel length
up to 17.8 m

Additional load
up to 60 kg/m

Gliding arrangement



The gliding cable carrier must be guided in a channel. See p. 842.

Glide shoes have to be used for gliding applications.

Speed
up to 0.8 m/s

Acceleration
up to 2 m/s²

Travel length
on request

Additional load
up to 60 kg/m

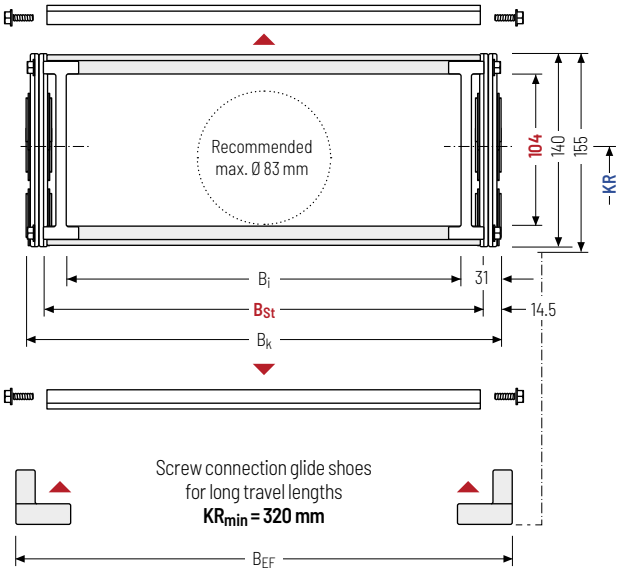
S/SX1800 RMD | Dimensions · Technical data

Aluminum stay RMD –
aluminum cover system

- Bolted aluminum covers for maximum stability.
- For applications generating chips or coarse contamination.
- Available customized in **1 mm grid**.
- **Inside/outside:** Threaded joint easy to release.

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

1 mm B_k 250 – 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_{St} [mm]*	B_k [mm]	B_{EF} [mm]	KR [mm]					q_k [kg/m]
104	140	155	188 – 938	221 – 971	B_{St} + 29	B_{St} + 40	320	375	435	490	605	28.46 – 47.67
							720	890	1175	1300		

* in 1 mm width sections

Order example

S1800 (Type) . 417 (B_{St} [mm]) . RMD (Stay variant) . 375 (KR [mm]) . St (Material) - 5940 (L_k [mm]) | VS (Stay arrangement)

Divider systems

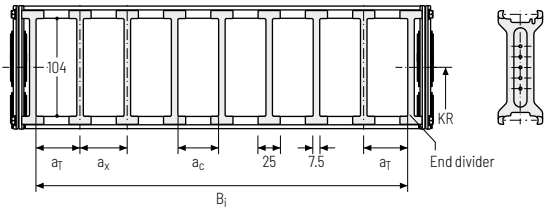
As a standard, the divider system is mounted on every 2nd cover/chain link (HS).

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

Divider system TS0 without height separation

Vers.	$a_{T\,min}$ [mm]	$a_{x\,min}$ [mm]	$a_{c\,min}$ [mm]	$n_{T\,min}$
A	21.5	25	17.5	–

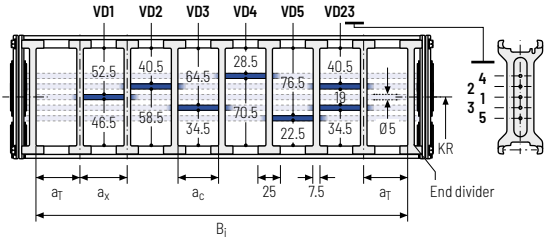
The dividers can be moved in the cross section.



Divider system TS1 with continuous height separation

Vers.	$a_{T\,min}$ [mm]	$a_{x\,min}$ [mm]	$a_{c\,min}$ [mm]	$n_{T\,min}$
A	21.5	25	17.5	2

The dividers can be moved in the cross section.

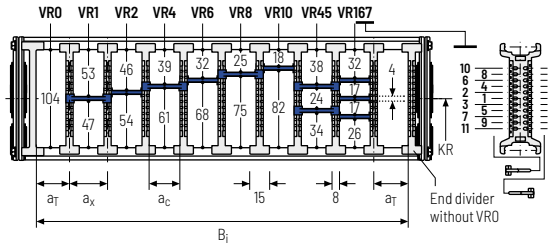


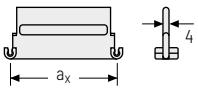
Divider system TS3 with height separation consisting of plastic partitions

Vers.	$a_{T\,min}$ [mm]	$a_{x\,min}$ [mm]	$a_{c\,min}$ [mm]	$n_{T\,min}$
A	38*/16.5**/12***	16/42*	8	2

* For aluminum partitions
** For VR0
*** For version with height separation to the end divider

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





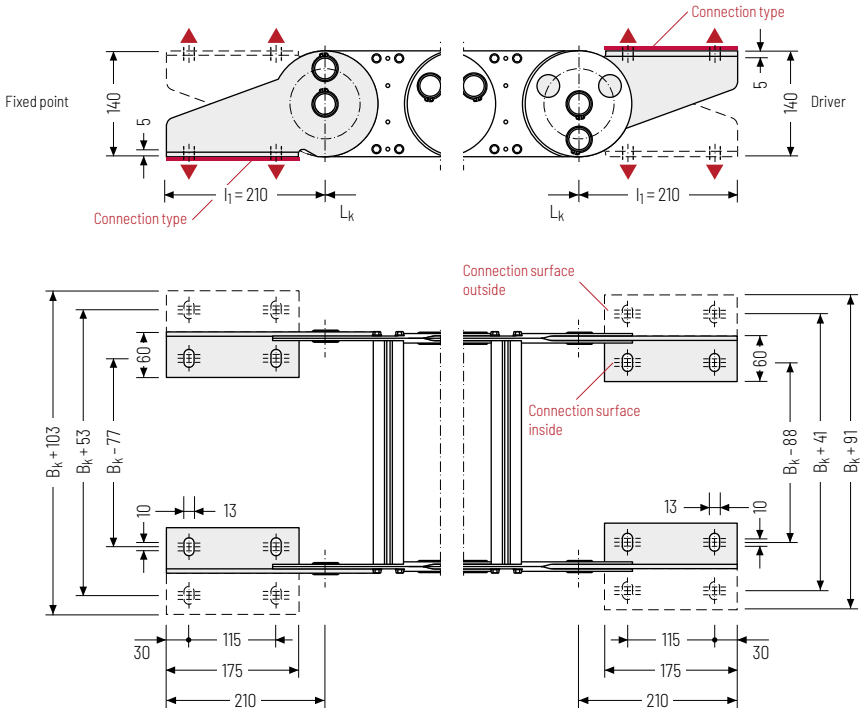
Aluminum partitions in 1 mm increments with **a_x > 42 mm** are also available.

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	

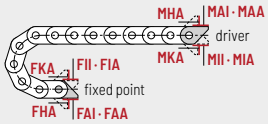
When using **plastic partitions with a_x > 112 mm**, we recommend an additional center support with a **twin divider** (S_T = 5 mm). Twin dividers are also suitable for retrofitting in the partition system.

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

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

Caution: The standard connection variant FAI/MAI is only possible from B_k of 139 mm.

Connection surface
- **A** – connection surface inside (standard)
- **I** – connection surface outside

Order example

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

We recommend the use of strain reliefs at the driver and fixed point. See from p. 902.

Subject to change without notice.