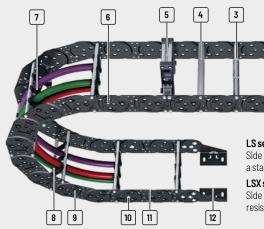


XLT eries



LS series

Side bands made of hardened steel as a standard

1

LSX series

2

Side bands made of steel resistant to rust and acid



- 1 All stavs available in 1 mm width sections
- 2 4-fold bolted aluminum stays for extreme loads
- 3 Rolling stays
- 4 Aluminum hole stays
- 5 Mounting frame stays
- 6 Stops integrated into link plate - no additional bolts required
- 7 Different separation options for the cables
- 8 Plastic or steel dividers
- 9 Weight-optimized side bands made of hardened steel or stainless steel
- 10 Optional center bolt for applications with high loads
- 11 Good ratio of inner to outer width - no end divider required
- 12 End connectors for different connection variants

Features

- » Weight-optimized one-part link plate design
- » Better value than comparable steel cable carriers
- » Significantly higher unsupported lengths compared to plastic cable carriers of a similar size
- » Integrated radius and pre-tension stops in a good value desian
- » Bolted stay systems, solid end connectors
- » Cover with steel band available on request
- » Also possible as a double band solution
- » Good corrosion resistance



consist of only one plate - the stop system is integrated



Lightweight side bands without additional bolts - hardened steel or stainless steel

The design

The weight-optimized link plate design makes the cable carriers very light yet highly sturdy. For the LS series, the unsupported length is significantly higher compared to plastic cable carriers of a similar size.













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Optional: Center bolts and circlip for applications with high loads



Optional: C-rail for strain relief elements attached in the connection



Subject to change without notice.

MT erries

XLT

ROBOTRAX® System

Sturdy and durable, even under extreme conditions

Double-band steel cable carrier LS1050

- » Up to 40% longer unsupported lengths compared to LS1050 with standard side band with the same additional load, as part of the load diagram
- » Very high additional loads: up to 40 kg/m possible
- » Long service life even with high dynamic loads
- » High travel speeds



Addi-

tional

load

 \leq [kg/m]

35

35

35

35

35

35

KR

[mm]

Cable-

 d_{max}

[mm]

46

46

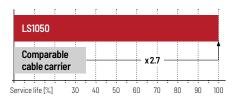
43

38

Longer service life through hardened side bands

The hardened surface significantly increases the service life of the LS1050. Tests were carried out on cable carriers with identical designs.

The LS1050 is therefore ideal for applications with many travel cycles, for example in 3-shift operation.



CLEANVEYOR®

S/SX-Tubes series

Accessories

XLT series

ROBOTRAX® System

CLEANVEYOR®

LS/LSX series

S/SX series

S/SX-Tubes series

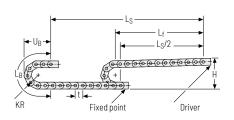
Accessories

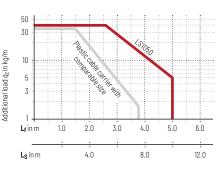
LS/LSX series | Overview

Unsuppo	Unsupported arrangement			Gliding arrangement			Inner Distribution				Movement			
Travel length ≤ [m]	v _{max} ≤[m/s]	a max ≤ [m/s ²]	Travel length ≤ [m]	v _{max} ≤[m/s]	\mathbf{a}_{max} $\leq [\text{m/s}^2]$	TSO	TS1	TS2	TS3	vertical hanging or standing	lying on the side	rotating arrangement	Page	
9.5	5	10	-	-	-	•	•	•	•	•	-	-	722	
9.5	5	10	-	-	-	•	•	•	•	•	-	-	726	
9.5	5	10	-	-	-	•	•	-	-	•	-	-	730	
9.5	5	10	-	-	-	-	-	-	-	•	-	-	732	
9.5	5	10	-	-	-	•	-	-	-	•	-	-	734	
9.5	5	10	-	-	_	•	-	-	-	•	-	-	736	

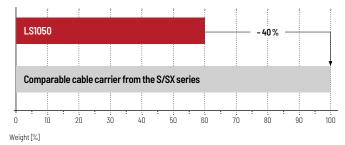
Significantly higher unsupported lengths compared to plastic cable carriers of a similar size

Load diagram for unsupported length depending on the additional load





Weight-optimized through adapted link plate design



LS/LSX1050



Pitch 105 mm





Chain widths 100 - 600 mm



Bending radii 105 - 430 mm

Stay variants



Aluminum stay RS 2 page 722

Frame stay narrow, bolted

- » Ouick to open and close.
- » Aluminum profile bars for light to medium loads. Easy threaded connection.
- » Inside/outside: Threaded joint easy to release.



Aluminum stay RVpage 726

Frame stay, reinforced

- » Aluminum profile bars for medium to heavy loads and large cable carrier widths. Double threaded joint on both sides.
- » Inside/outside: Threaded joint easy to release.



Tube stay RR.....page 730

Frame stay, tube version

- » Steel rolling stays with gentle cable support and steel dividers. Ideal for using media hoses with soft sheathing.
- » Inside/outside: Screw connection detachable.



Aluminum stay LG page 732

Frame stay, split

- » Optimum cable routing in the neutral bending line. Split version for easy cable routing. Stays also available unsplit.
- » Inside/outside: Threaded joint easy to release.

Stay variants



Aluminum stay RMAI.....page 734

Mounting frame stay

- » Aluminum profile bars with plastic mounting frame stays for guiding very large cable diameters.
- » Inside: Screw-fixing easy to release.



Aluminum stay RMAO......page 736

Mounting frame stay

- » Aluminum profile bars with plastic mounting frame stays for guiding very large cable diameters.
- » Outside: Screw-fixing easy to release.



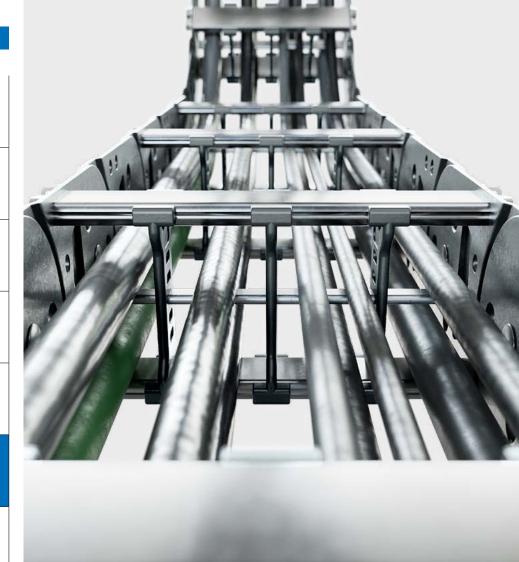
TOTALTRAX® complete systems

Benefit from the advantages of the TOTALTRAX® complete system. A complete delivery from one source - with a warranty certificate on request! Learn more at tsubaki-kabelschlepp.com/totaltrax



TRAXLINE® cables for cable carriers

Hi-flex electric cables which were specially developed, optimised and tested for use in cable carriers can be found at tsubaki-kabelschlepp.com/traxline.



MT erries

XLT eries

ROBOTRAX® System

CLEANVEYOR®

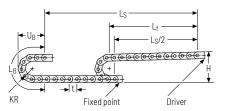
LS/LSX series

S/SX-Tubes series

Accessories

LS/LSX1050 | Installation Dim. | Unsupported

Unsupported arrangement



KR [mm]	H [mm]	L _B [mm]	U _B [mm]
105	330	540	250
125	370	603	270
155	430	697	300
195	510	823	340
260	640	1027	405
295	710	1137	440
325	770	1231	470
365	850	1357	510
430	980	1561	575

Installation height Hz

 $H_7 = H + 10 \text{ mm/m}$

Load diagram for unsupported length depending on the additional load.

Intrinsic cable carrier weight $q_k = 3.8 \text{ kg/m}$. For other inner widths, the maximum additional load changes.

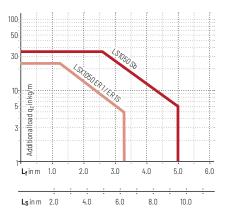


Speed up to 5 m/s









Information on selecting center bolts and stay arrangement

- » Cable carrier length < 4 m: half-stayed arrangement as a standard
- Cable carrier length > 4 m: fully-stayed arrangement required
- » Stay width B_{St} > 400 mm: fully-stayed arrangement required
- » Travel speed > 2.5 m/s: fully-stayed arrangement required
- » Use of support rollers: Center bolt and fully-stayed arrangement required

Subject to change without notice.

XLT

ROBOTRAX® System

FLATVEYOR®

CLEANVEYOR®

LS/LSX1050 RS 2 | Dimensions · Technical Data

Aluminum stay RS 2 -

frame stay narrow, threaded joint

- » Quick to open and close
- » Aluminum profile bars for light to medium loads. Simple threaded joint.
- » Available customized in 1 mm grid.
- Inside/outside: Threaded joint easy to release.

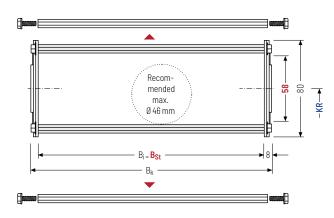


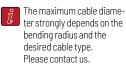


Stay arrangement on every 2nd chain link, **standard** (HS: half-stayed)









Calculating the cable carrier length

Cable carrier length Lk

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

KR

[mm]

155

365

195

430

125

325

Cable carrier length Lk rounded to pitch t

260

[kg/m]

3.63

4.11

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S/SX-Tubes series

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* in 1 mm width sections

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hG

[mm]

80

 B_{i}

[mm]

84

384

B_{St}

[mm]*

384

 B_k

[mm]

 $B_{St} + 16$



105

295

Divider systems

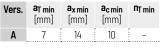
As a standard, the divider system is mounted on each crossbar – for stay mounting on every 2nd chain link (HS).

As a standard, dividers and the complete divider system (dividers with height separations) can be moved in the cross section **(version A)**.

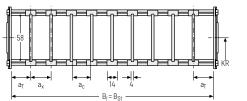
For applications with lateral acceleration and rotated by 90° , the dividers can be attached by simply clipping on a socket (available as an accessory).

The socket additionally serves as a spacer between the dividers and is available in 1 mm sections between 3 – 50 mm as well as 16.5 and 21.5 mm (version B).

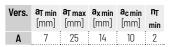
Divider system TSO without height separation



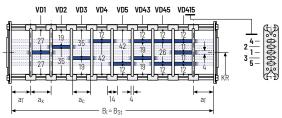
The dividers can be moved in the cross section.



Divider system TS1 with continuous height separation



The dividers can be moved in the cross section.



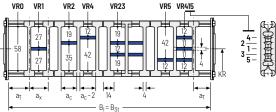
Divider system TS2 with partial height separation



With grid distribution (1 mm grid).

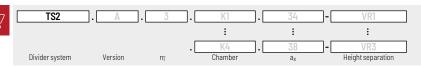
The dividers are attached by the height separation, the grid can be moved in the cross section.

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



Please note that the real dimensions may deviate slightly from the values indicated here.

Order example



W.asas%

TDAYI INE®

LS/LSX1050 RS 2 | Inner distribution | TS3

Divider system TS3 with height separation consisting of plastic partitions

As a standard, the divider version A is used for vertical partitioning within the cable carrier. The complete divider system can be moved within the cross section.

MT eries

XLT

R0B0TRAX® System

FLATVEYOR®

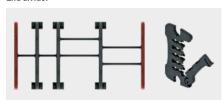
CLEANVEYOR®

S/SX-Tubes

Accessories



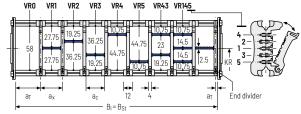
End divider

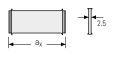


Vers.	a_{T min} [mm]	a_{x min} [mm]	a _{c min} [mm]	n T min
Α	6/2*	14	10	2
*	at tale	•	•	•

* 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



Please state the designation of the divider system (TSO, TS1,...), version and number of dividers per cross section $[n_{\overline{1}}]$. In addition, please also enter the chambers [K] from left to right, as well as the assembly distances $[a_{\overline{1}}/a_{x}]$ (as seen from the driver).

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



MT series

XLT series

ROBOTRAX® System

FLATVEYOR®

CLEANVEYOR®

LS/LSX series

S/SX series

S/SX-Tubes series

Accessories

TRAXLINE®

XLT

ROBOTRAX® System

FLATVEYOR®

CLEANVEYOR®

LS/LSX1050 RV | Dimensions · Technical Data

Aluminum stay RV -

frame stay reinforced

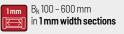
- » Aluminum profile bars for medium to heavy loads and large cable carrier widths. Double threaded joint on both sides.
- » Available customized in 1 mm grid.
- » Inside/outside: Threaded joint easy to release.

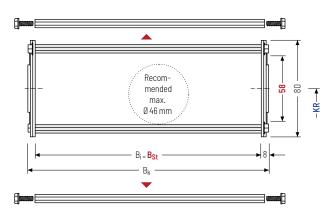




Stay arrangement on every 2nd chain link, standard (HS: half-stayed)







Bet

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 Lk

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

Cable carrier length Lk rounded to pitch t

> [kg/m] 4.00 5.95

		ı	
		ı	
		ı	

S/SX series

S/SX-Tubes series

Accessories

	[mm]	[mm]	[mm]	[mm]*	[mm]	[mm]					[
58	80	84	84	D_ 110	105	125	155	195	260		
	00	584	584	B _{St} + 16	295	325	365	430			
*	* in 1 mm width sections										

Order example

Type $B_{St}[mm]$ Stay variant KR [mm] Material L_K [mm] Stay arrangement

Divider systems

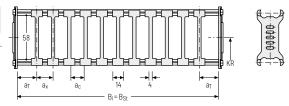
As a standard, the divider system is mounted on each crossbar – for stay mounting on every 2nd chain link (HS).

As a standard, dividers and the complete divider system (dividers with height separations) can be moved 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]	n _{T min}
Α	7	14	10	-

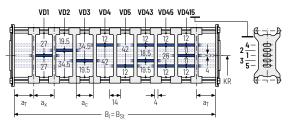
The dividers can be moved in the cross section.



Divider system TS1 with continuous height separation

Vers.		a _{T max} [mm]			
Α	7	25	14	10	2

The dividers can be moved in the cross section.

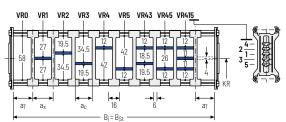


Divider system TS2 with partial height separation

Vers.	a_{T min} [mm]	a_{x min} [mm]	a _{c min} [mm]	n _{T min}
Α	8	21	15	2

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).



TRAXLINE® cables for cable carriers

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

MT eries

XLT

R0B0TRAX® System

CLEANVEYOR®

S/SX-Tubes

Accessories

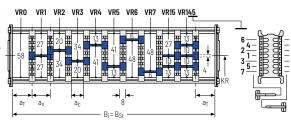
LS/LSX1050 RV | Inner Distribution | TS3

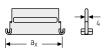
Divider system TS3 with height separation made of plastic partitions



* For aluminum partitions

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



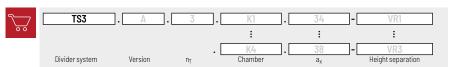


Aluminum partitions in 1mm increments with ax > 42 mm are also available.

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 ax > 112 mm, we recommend an additional center support with a **twin divider** (S_T = 4 mm). Twin dividers are also suitable for retrofitting in the partition system.

Order example



Please state the designation of the divider system (TS0, TS1...), version and number of dividers per cross section $[n_{\overline{1}}]$. In addition, please also enter the chambers [K] from left to right, as well as the assembly distances $[a_{\overline{1}}/a_{x}]$ (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 carrier belt. You are welcome to add a sketch to your order.

More product information online

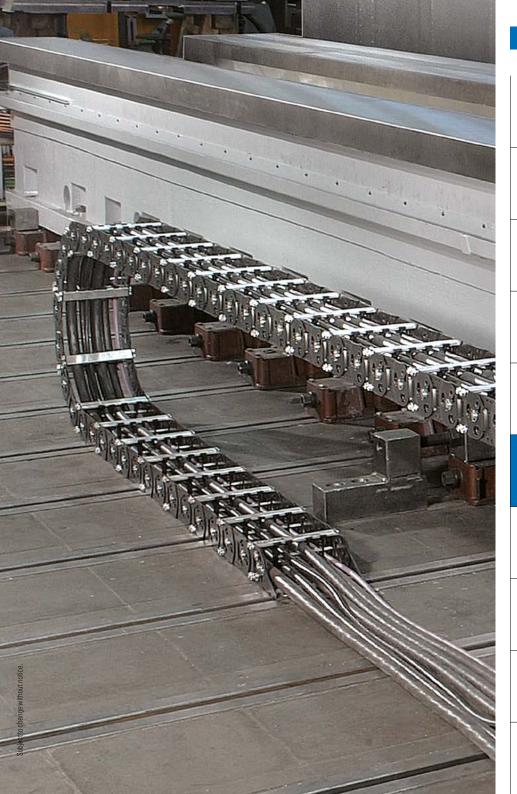


Assembly instructions etc.: Additional info via your smartphone or check online at

tsubaki-kabelschlepp.com/ downloads



Configure your cable carrier here: online-engineer.de



ROBOTRAX® System

CLEANVEYOR®

LS/LSX1050 RR | Dimensions · Technical data

Tube stay RR -

frame stay, tube version

- » Steel rolling stays with gentle cable support and steel dividers. Ideal for using media hoses with soft sheathing Easy screw connection.
- » Available customized in 1 mm width sections.
- Inside/outside: Screw connection detachable
- » Option: Divider systems made from steel and stainless steel ER1, ER1S.

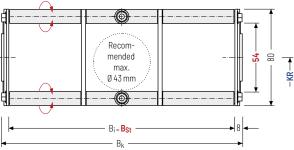




Stay arrangement on every 2nd chain link, **standard** (HS: half-stayed)









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 Lk

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

Cable carrier length Lk rounded to pitch t

Recommended max. Ø 43 mm	75
Bi= Bst	8

B_{St} [mm]*

84

-484

[mm]

84

484

S/S	serie	

SX-Tubes	series
S/S	

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92
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[mm]

54

* in 1 mm width sections

LS1050 .	1
Туре	Bst

hG

[mm]

80



 B_k

[mm]

B_{St} + 16



105

295



KR

[mm]

155

365

195

430

125

325



260

[kg/m]

4.25

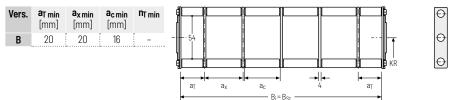
7.80

Divider systems

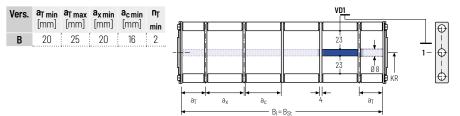
As a standard, the divider system is mounted on each crossbar – for stay mounting on every 2^{nd} chain link (HS).

The dividers are fixed through the tubes.
The tube additionally serves as a spacer between the dividers (version B).

Divider system TSO without height separation



Divider system TS1 with continuous height separation



Order example



Please state the designation of the divider system **(TS0, TS1...)**, version and number of dividers per cross section $[n_{\overline{1}}]$. In addition, please also enter the chambers [K] from left to right, as well as the assembly distances $[a_{\overline{1}}/a_{x}]$ (as seen from the driver).



TRAXLINE® cables for cable carriers

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

tsubaki-kabelschlepp.com/traxline

ROBOTRAX® System

CLEANVEYOR®

LS/LSX1050 LG | Dimensions · Technical data

Aluminum stay LG -

hole stay, split version

- » Optimum cable routing in the neutral bending line. Split version for easy cable routing. Stays also available unsplit.
- » Available customized in 1 mm grid.
- » Inside/outside: Threaded joint easy to release.

HEAVY DUTY

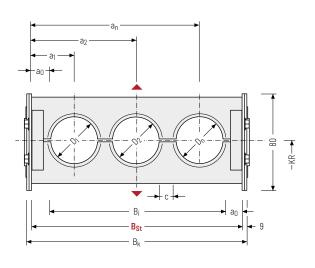


Stay arrangement on every 2nd chain link, **standard** (HS: half-stayed)



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





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

in 1 mm width sections

Calculating the cable carrier length

Cable carrier length Lk

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

Cable carrier length L_k rounded to pitch t

Calculating the stay width

Stay width B_{St}

$$B_{St} = \sum D + \sum c + 2a_0$$

D _{max} [mm]	D _{min} [mm]	h _G [mm]	B _i [mm]	B _{St} [mm]*	B _k [mm]	c _{min} [mm]	a _{0 min} [mm]			KR [mm]			q_k 50 %** [kg/m]
/ 0	10	80	54	82	B _{St} + 18	,	1/	105	125	155	195	260	4.00
48	IΖ	OU	554	582	BSt + 18	. 4	14	295	325	365	430		7.99

^{*} in 1 mm width sections ** Hole ratio of the hole stay approx. 50 %













Accessories



733

MT series

XLT series

ROBOTRAX® System

FLATVEY0R®

CLEANVEYOR®

LS/LSX series

S/SX series

S/SX-Tubes series

Accessories

TRAXLINE®

XLT

ROBOTRAX® System

FLATVEY0R®

CLEANVEYOR®

S/SX-Tubes series

Accessories

LS/LSX1050 RMAI | Dimensions · Technical Data

Aluminum stay RMAI – mounting frame stay

- » Aluminum profile bars with plastic mounting frame stays for guiding very large cable diameters.
- » The mounting frame stay is mounted on the inside in the bending radius.
- » Available customized in 1 mm width sections.
- » Inside: Screw-fixing easy to release.

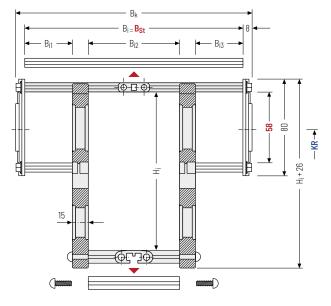




Stay arrangement on every 2nd chain link, **standard** (HS: half-stayed)







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 Lk

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

 $\begin{array}{c} \text{Cable carrier length } L_k \\ \text{rounded to pitch } t \end{array}$

Intrinsic cable carrier weight

Determining the intrinsic cable carrier weight strongly depends on the selected stay arrangement.
Please contact us.

h _i [mm]	H _i [mm]	h _G [mm]	B _i [mm]	B _{i1 min} [mm]	B _{i2 min} [mm]	B _{i3 min} [mm]	B _{St} [mm]*	B_k [mm]	KR [mm]		
 130 58 160 200	;;	80 = -	184	35	84	35	184 384	B _{St} + 16	195	260	295
			384	33					325	365	430

^{*} in 1 mm width sections

Order example

0.00.0	pio						
	LS1050 Type	. 280 B _{St} [mm]	RMAI . Stay variant	195 KR [mm]	Sb Material	2415 L _k [mm]	HS Stay arrangement

LS/LSX1050 RMAI | Dimensions · Technical Data

RMAI - assembly to the inside:

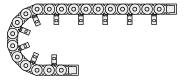
Gliding application is not possible when using assembly version RMAI.

Observe minimum KR:

 $H_i = 130 \text{ mm}$: $KR_{min} = 195 \text{ mm}$

 $H_i = 160 \text{ mm}: KR_{min} = 260 \text{ mm}$

 $H_i = 200 \text{ mm}$: $KR_{min} = 260 \text{ mm}$





TOTALTRAX® complete systems

Benefit from the advantages of the TOTALTRAX® complete system. A complete delivery from one source - with a warranty certificate on request! Learn more at tsubaki-kabelschlepp.com/totaltrax



TRAXLINE® cables for cable carriers

Hi-flex electric cables which were specially developed, optimised and tested for use in cable carriers can be found at tsubaki-kabelschlepp.com/traxline.

MT

XLT

R0B0TRAX® System

CLEANVEYOR®

LS/LSX series

S/SX series

S/SX-Tubes series

Accessories

MT eries

XLT

ROBOTRAX® System

CLEANVEYOR®

Accessories

LS/LSX1050 RMA0 | Dimensions · Technical Data

Aluminum stay RMAO mounting frame stay

- » Aluminum profile bars with plastic mounting frame stays for guiding very large cable diameters.
- » The mounting frame stay is mounted on the outside in the bending radius.
- » Available customized in 1 mm width sections.
- » Outside: Screw-fixing easy to release.

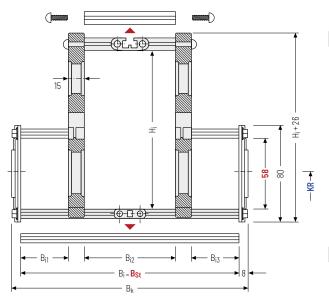




Stay arrangement on every 2nd chain link, **standard** (HS: half-stayed)







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 Lk

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

Cable carrier length Lk rounded to pitch t

Intrinsic cable carrier weight

Determining the intrinsic cable carrier weight strongly depends on the selected stay arrangement. Please contact us.

h _i [mm]	H _i [mm]	h _G [mm]	B _i [mm]	B _{i1min} [mm]	B _{i2 min} [mm]	B _{i3 min} [mm]	B _{St} [mm]*	B_k [mm]	KR [mm]		
	130	80	184 384	35	84	35	184 384	B _{St} + 16	105	125	155
58	160								195	260	295
	200								325	365	430

^{*} in 1 mm width sections

Order example



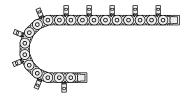
LS/LSX1050 RMA0 | Dimensions · Technical Data

RMAO - assembly to the outside:

The cable carrier has to rest on the side bands and not on the stays.

Guiding in a **channel is required** for support. Please contact our technical support at technik@kabelschlepp.de to find the corresponding guide channel.

Please note the operating and installation height.





MT

XLT series

ROBOTRAX® System

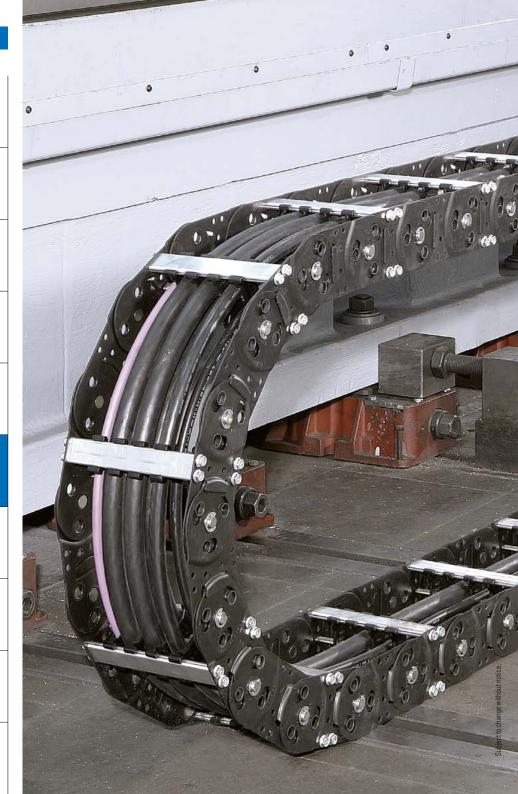
FLATVEYOR®

CLEANVEYOR®

S/SX series

S/SX-Tubes series

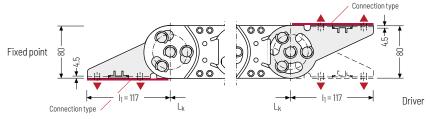
Accessories

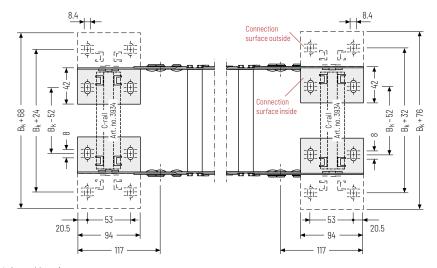


LS/LSX1050 | End Connectors | Steel Connectors

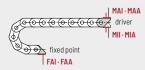
End connectors - steel

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





▲ Assembly options



Connection point

- fixed point

M - driver

Connecting surface

A - connecting surface outside

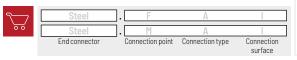
connecting surface inside

Connection type

A - threaded joint outside (standard)

I - threaded joint inside

Order example





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