

SELECTION

BASIC LINE

BASIC LINE PLUS

VARIO LINE

TUBE SERIES

3D LINE

STEEL LINE

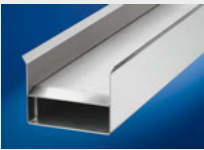


Accessories for cable carriers



Support trays

page 374



Guide channels

page 375



RCC – Rail Cable Carrier

page 379

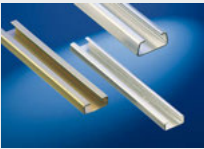
ECC – Emergency Cable Carrier

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Strain relief devices

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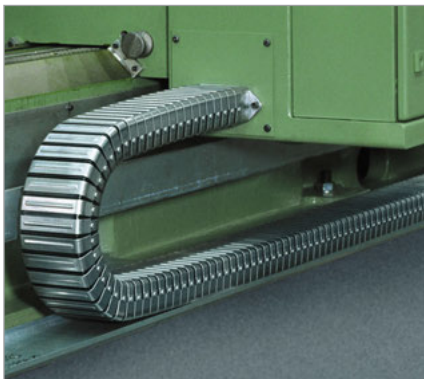
Assembly profile bars

page 387

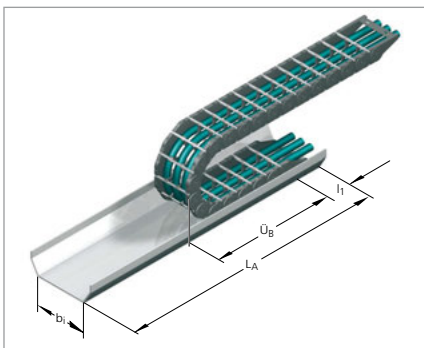
Support trays

A flat surface is required for the safe operation of the cable carrier. If this is not available on site, a support tray must be provided.

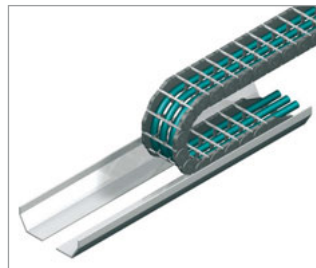
The standard supply length is 2 m. Special lengths are available on request.



Single-part design



Materials: Zinc plated steel plate
Stainless steel plate
Aluminum plate



Should you require a support tray in a split design, please contact us. We would be happy to advise you.

Inside width (with standard connection)

$$b_1 \text{ min} \approx B_k + 15 \text{ mm}$$

Length (with standard connection)

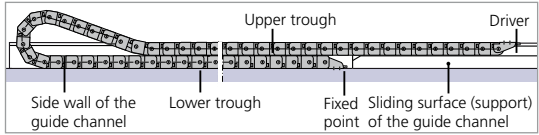
$$L_A = \frac{L_c}{2} + \ddot{U}_B + l_1$$

\ddot{U}_B – loop overhang
 l_1 – connection length

Where there is a strain relief device at the fixed point, the length of the support tray must be increased accordingly.

Guide channels

In the case of long travel lengths the upper trough of the cable carrier **glides** on its lower trough. Beyond the fixed point the cable carrier glides on the sliding surface (support) of the guide channel. The guide channels prevent the upper trough from slipping off the lower trough and ensure quiet, low-wear operation.

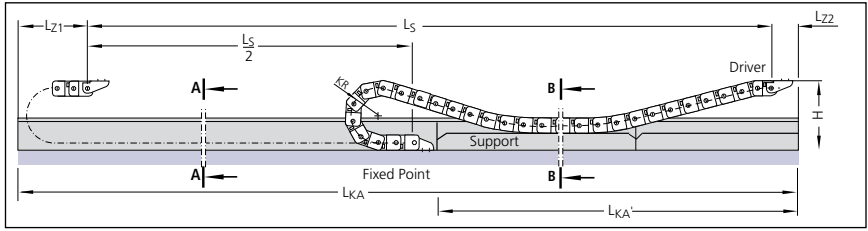


! The economical solution: We recommend that the fixed point be placed in the middle of the travel length (central feed). This will result in the shortest lengths for the cable carrier, cables and guide channel.



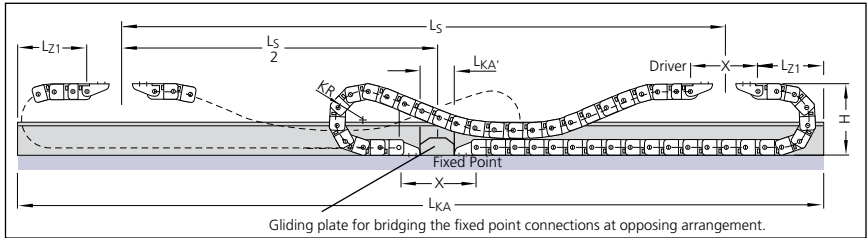
One-sided cable carrier arrangement (standard connection)

$$L_{KA} = L_S + L_{Z1} + L_{Z2}$$



Opposing cable carrier arrangement (standard connections)

$$L_{KA} = L_S + 2 L_{Z1} + X$$



Explanation of terms – guide channels

- L_S = Travel length of cable carrier
- L_{KA} = Channel length
- L_{KA}' = Channel length with support
 - ($\Delta L_S/2$) with one-sided arrangement
 - ($\Delta X - 2 l_1$) with opposing arrangement
- L_{Z1} = Additional measurement for loop overhang
 - ($\Delta \ddot{U}_B + 50$ mm) with standard connection
- L_{Z2} = Additional measurement for connection
 - ($\Delta l_1 + 50$ mm)
- X = Connection distance with an opposing arrangement

Depending on the chain size, the channel inner width is 4-5 mm greater than the width of the guided cable carrier. Depending on the length of travel, the cable carrier connection heights should be reduced.

Do get in touch with us! We would be happy to calculate the dimensions of the guide channel to suit your application.

Guide channels made of steel plate – standard design

We also manufacture guide channels made of steel plate, customized for your application. In so doing, we can accommodate almost any wish as far as the special shape and fastening options are concerned. To reduce the gliding resistance and wear between the cable carrier and support, a special gliding plate can be glued on. We recommend the use of special gliding plates at speeds > 0.5 m/s and with frequent travel cycles.

- very easy and universal assembly – there is no alignment of the channel side walls with each other as there are no loose channel side walls
- large support widths due to stable U construction
- easy fixing options:
 - standard retaining plates
 - direct welding on-site
 - various special solutions with retaining bracket
- optionally as corrosion-resistant, sea water resistant version



Materials: Zinc plated steel plate/
stainless steel

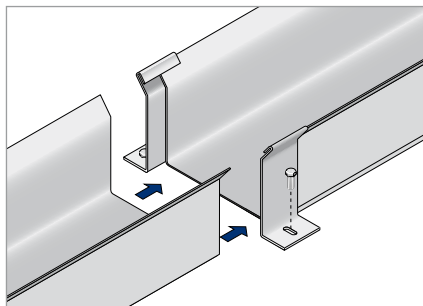
Delivery length: Standard length 2 m/
special lengths on request

Optional standard fixing with retaining plates

A retaining plate is mounted on the adjoining points and as well as fixing the channel to the floor also guarantees an exact connection of the adjoining points.

- optimum alignment of the adjoining points
- reduced installation times
- minimal number of threaded connections
- secure hold, also in harsh conditions

Please state the channel system when ordering if retaining plates will be needed.

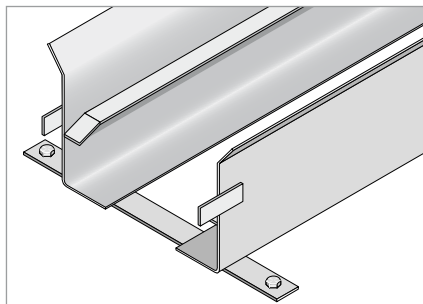


Examples of guide channels special solutions in steel plate design

Bottom open channel

- for fine-grain dirt particles, water, etc. ...
- dust and dirt can drop through the open design below
- application area in washing plants, the woodworking industry, composting plants ...

With KABELSCHLEPP guide channels, you have various different options for fixing them to the ground or on a support structure as well as the standard fixing. Also here, no adjoining point offset of the individual channel elements must occur at the connection points, i.e. sidewalls and floor must form a smooth surface.

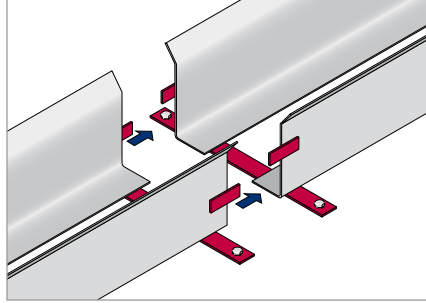


Guide channels made of steel plate – standard design

Examples of guide channels special solutions in steel plate design

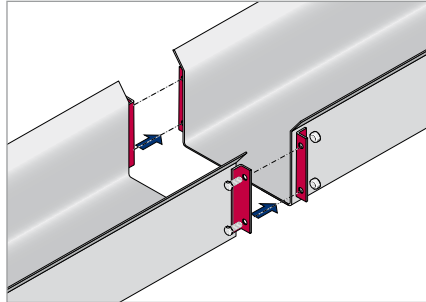
Attachment straps with flat profile

- very easy and universal assembly – there is no alignment of the channel side walls with each other as there are no loose channel side walls
- optimum alignment of the adjoining points
- reduced installation times
- minimal number of threaded connections
- plug-in system



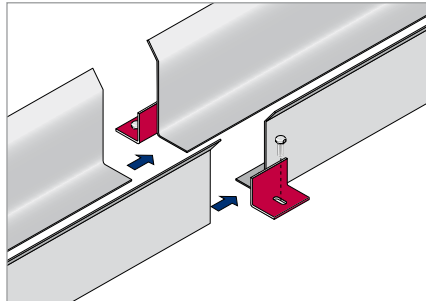
Unsupported connection points

- unsupported adjoining points without support (self-supporting) using flange connections
- secure, fixed connection to adjoining points also for extreme vibrations or in unsupported channel arrangements.



Fixing with fixing brackets

- easy alignment of the adjoining points
- reduced installation times
- minimized number of threaded connections



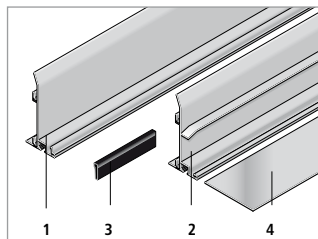
Modular guide channel system made of aluminum profile bars

- Simple installation
- No joint bolting, simple alignment via double clamp connection with plastic clamping profiles.
- Can be supplied with a continuous floor plate if required.
- Easy handling
- Low intrinsic weight
- Single-part channel side walls
- Channel side wall profiles with support with bevels on both sides



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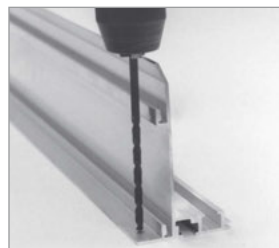
Standard lengths



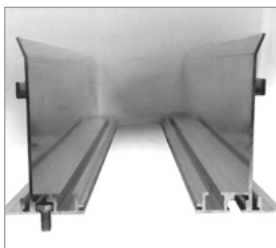
- Part 1** channel side wall profile bar without support 1000 mm + 2000 mm
- Part 2** channel side wall profile bar with support 1000 mm + 2000 mm
- Part 3** plastic clamping profile 130 mm
- Part 4** floor plate – available on request

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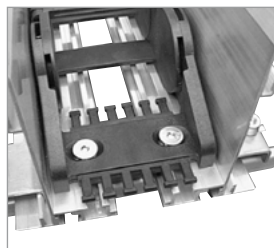
Examples of fastening options



Screwed on from the "outside"
Fastening screws are used for this purpose. A marking groove simplifies the alignment and drilling.



Screwed on from the "inside"
Recesses are provided in the channel profiles to accommodate hexagonal screws. The screws can be pushed along to the required place.



Attached with a clamp
Simple alignment with assembly on a C-Rail.

Use our free project planning service.

Rail Cable Carrier – RCC

500 m travel length and more without sag



■ Rail Cable Carrier with proven cable and hose carrier MC 1250.

90%

less push/pull forces
in comparison with
gliding arrangement

For extremely long travel lengths

Rolling instead of gliding – the proven principle for less friction.

Due to the substantial friction, it is nearly impossible to realise travel lengths greater than 200 m. With the rail cable carrier, the upper trough does not glide on the bottom trough, it glides on guide rails. Rollers are mounted on ball bearings at the side of the carrier. The guide rails come in the standard connection height. The carrier does not sag. The **tension and thrust is 90% less** in comparison to gliding arrangements.

Quiet and low-vibration operation

The rollers run on the guide rail and do not contact other rollers. Ball bearings and a polyurethane roller surface additionally contribute to quite and smooth operation.

Rail Cable Carrier

- suitable for very long travel lengths
- 90 % less tension and thrust than with a gliding arrangement, thus requiring substantially less driving power
- low-noise and low-vibration operation
- less space required and cost-optimised with a shorter loop overhang – minimum turnaround length
- no impacting of the rollers against one another
- long service life – low maintenance
- minimum stress on the cable and hose carrier and cables
- less push/pull forces
- high travel speeds up to 10 m/s possible
- possible additional load (cable weight) of more than 50 kg/m
- use of proven standard cable carriers
- the carrier cannot climb



Subject to change.

Accessories

Selection

BASIC LINE

BASIC LINE PLUS

VARIO LINE

TUBE SERIES

3D LINE

STEEL LINE

Accessories

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TSUBAKI KABELSCHLEPP
 Rail Cable Carrier Configurator

ECC – Emergency Cable Carrier



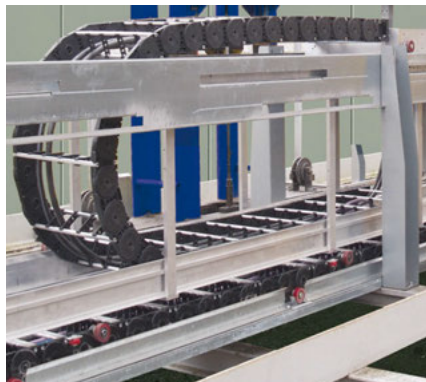
Safety for long travel lengths

Blockages in the travel lengths of cable carriers in large systems can destroy the entire cable carrier system. This results in high costs and downtime for the entire system. The **ECC – Emergency Cable Carrier minimizes downtimes and avoids repair costs.**

The **Emergency Cable Carrier System with additional emergency stop system** has been developed especially for systems with long travel lengths.

In applications in harsh environmental conditions it often happens that an object gets into the travel length of the carrier and blocks it. What is needed here is a system that detects such blockages and switches the system off. However, in large systems the moving mass is very large, which means that the moving unit continues to move for several meters even after braking is initiated. This leads to defects in the carrier, a complete failure of the system and extensive repair work. Our decoupling system for cable carriers offers, in addition to the emergency stop function, also a **bridging safeguard for the braking distance.**

Possible areas of application: all applications with long travel lengths, e.g.: crane, port, compost or coal conveyor systems, steel works and raw materials systems.

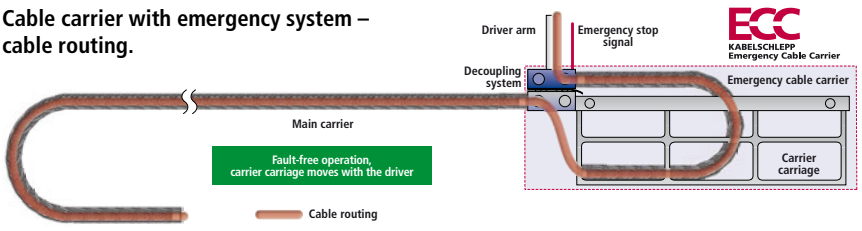


■ Emergency Cable Carrier on a Rail Cable Carrier. The system can also be adapted for gliding arrangements.

Emergency Cable Carrier System – a possible installation situation



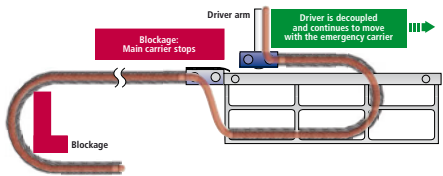
Cable carrier with emergency system – cable routing.



Decoupling system with automatic emergency cutout

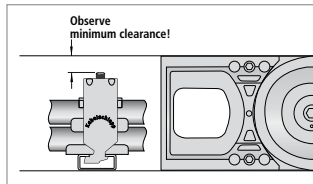
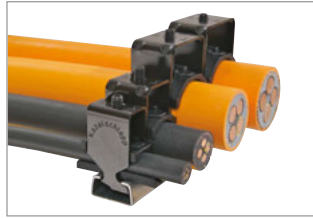
Our Emergency Cable Carrier System offers, in addition to a bridging safeguard for the braking distance with an emergency carrier also an integrated emergency stop system.

The system is switched off if the preset maximum force on the driver of the main cable carrier is exceeded.



Strain relief devices

The strain relief of the cables depends on the type of cable, the length of the cable carrier and the installation position.



In the case of cable carriers with upper and lower trough sliding on each other (installation variant EBV 05), the installation height of the strain relief must not be higher than the chain link height.

Overview strain relief elements

LineFix saddle-type clamps

- optimized base geometry for secure seating in C-rail
- for one cable and two or three cables on top of each other
- for C-rails with a slot width of 11 mm

See page 382.



Saddle-type clamps Type B

- for C-rails with a slot width of 16 – 17 mm

See page 383.



Strain relief comb strips

- higher fixing force than with a one-sided strain relief comb
- equal power transmission for both pulling and pushing

See page 384.



SZL strain relief devices

- gentle on the cable due to large surface area for enclosing the cables
- simple installation without tools

See page 385.



Block clamps




- for strain relief of hoses

See page 386.

LineFix saddle-type clamps

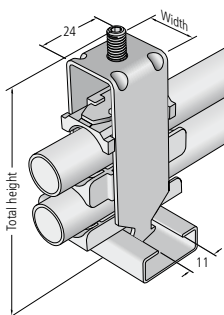
- for C-rails with a slot width of 11 mm
- for one, two or three cables on top of each other
- optimized base geometry for secure seating in the C-profile
- high quality corrosion protection of the coated housing through cathode immersion painting
- pan design with retaining ribs for secure fixing of the cables
- rounded design of the pan elements is gentle on the cables
- also available in stainless steel version



LineFix Type	Designation	Material no. for a complete LineFix	Material no. for a complete LineFix stainless steel	Min. cable Ø	Max. cable Ø	Number of cables	Width	Total height with max. cable Ø incl. C-rail*
Single clamps 	LF 12-1	13630	13731	6	12	1	16	55
	LF 14-1	13631	13732	12	14	1	18	52
	LF 16-1	13632	13733	14	16	1	20	54
	LF 18-1	13633	13734	16	18	1	22	56
	LF 20-1	13634	13735	18	20	1	24	59
	LF 22-1	13635	13736	20	22	1	26	61
	LF 26-1	13636	13737	22	26	1	30	70
	LF 30-1	13637	13738	26	30	1	34	74
	LF 34-1	13638	13739	30	34	1	38	78
	LF 38-1	13639	13740	34	38	1	42	82
LF 42-1	13640	13741	38	42	1	46	91	
Double clamps 	LF 12-2	13641	13742	6	12	2	16	73
	LF 14-2	13642	13743	12	14	2	18	74
	LF 16-2	13643	13744	14	16	2	20	82
	LF 18-2	13644	13745	16	18	2	22	86
	LF 20-2	13645	13746	18	20	2	24	91
	LF 22-2	13646	13747	20	22	2	26	95
	LF 26-2	13647	13748	22	26	2	30	108
	LF 30-2	13648	13749	26	30	2	34	121
LF 34-2	13649	13750	30	34	2	38	129	
Triple clamps 	LF 12-3	13650	13751	6	12	3	16	98
	LF 14-3	13651	13752	12	14	3	18	98
	LF 16-3	13652	13753	14	16	3	20	105
	LF 18-3	13653	13754	16	18	3	22	111
	LF 20-3	13654	13755	18	20	3	24	118
	LF 22-3	13655	13756	20	22	3	26	130

* Material No.: 3934

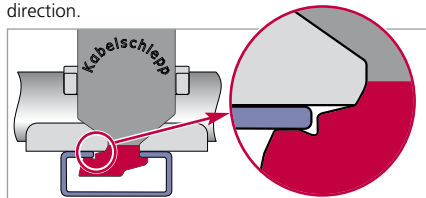
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The total height specification is an approximate value. The actual height depends on the diameter and characteristics of the cables, among other things.

Secure seating and easy assembly.

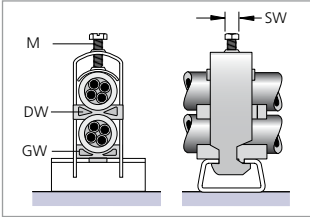
The retaining lug fixes the base securely in the C-profile in the screwed-on state and prevents the clamp from rocking out in case of tensile and compressive loads, regardless of the installation direction.



Saddle-type clamps Type B

Saddle-type clamps with a large base

For all common commercial C-Profiles with a slot width of 16 – 17 mm



Single clamps for one cable

Type	Cable-Ø	Opposite sleeve GW	Double sleeve DW
B 12	6 – 12	GW 12	–
B 14	10 – 14	GW 14	–
B 16	12 – 16	GW 16	–
B 18	14 – 18	GW 18	–
B 22	18 – 22	GW 22	–
B 26	22 – 26	GW 26	–
B 30	26 – 30	GW 30	–
B 34	30 – 34	GW 34	–
B 38	34 – 38	GW 38	–
B 42	38 – 42	GW 42	–
B 46	42 – 46	GW 46	–
B 50	46 – 50	GW 45	–

Dimensions in mm

Double clamps for two cables, one above the other

Type	Cable-Ø	Opposite sleeve GW	Double sleeve DW
B 12/2	6 – 12	GW 12	DW 12
B 14/2	10 – 14	GW 14	DW 14
B 16/2	12 – 16	GW 16	DW 16
B 18/2	14 – 18	GW 18	DW 18
B 22/2	18 – 22	GW 22	DW 22
B 26/2	24 – 26	GW 22	DW 26
B 30/2	28 – 30	GW 22	DW 30
B 34/2	32 – 34	GW 22	DW 34
B 38/2	36 – 38	GW 22	DW 38
B 42/2	40 – 42	GW 22	DW 42

Dimensions in mm

Triple clamps for three cables one above another

Type	Cable-Ø	Opposite sleeve GW	Double sleeve DW
B 12/3	12	GW 12	DW 12
B 14/3	14	GW 14	DW 14
B 16/3	16	GW 16	DW 16
B 18/3	18	GW 18	DW 18
B 22/3	22	GW 22	DW 22
B 26/3	26	GW 26	DW 26
B 30/3	30	GW 30	DW 30

Dimensions in mm

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 Cable Carrier Engineering

Strain relief comb strips

For separate strain relief or fastening the cables outside the cable carrier – suitable for all cable and hose carriers.

The strain relief combs have rows of teeth on both sides. So every cable can be fixed securely with two cable binders.

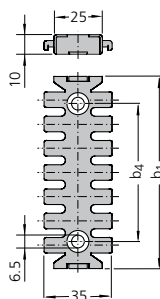
Rows of teeth on both sides for fixing cables

- secure fixing with two or four cable binders
- higher fixing force than for strain relief comb on one side
- even tensile and thrust force transmission
- minimized cable movement

Strain relief comb with C-profile connectors



Ident-No.	b ₁ mm	b ₄ mm	No. of teeth
53654	49	21	3
53655	74	46	5
53656	99	71	7
53657	124	96	9
53658	149	121	11
53659	174	146	13
76550	54	21	3
76551	79	46	5
76552	104	71	7
76553	129	96	9
76554	154	121	11
76555	179	146	13

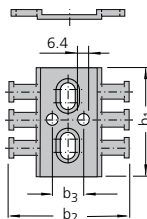


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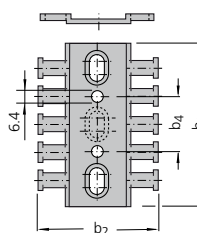
Strain relief comb



Ident-No.	b ₁ mm	b ₂ mm	b ₃ mm	No. of teeth
53983	50	53	14	3
53684	65	53	14	4
52490	70	70	20	4



Ident-No.	b ₁ mm	b ₂ mm	b ₄ mm	No. of teeth
53984	70	53	15	4
53985	90	53	35	6
53986	115	53	60	8
53987	142	53	87	10
53685	90	53	25	6
53686	115	53	50	8
53687	140	53	75	10
53688	165	53	100	12
52491	95	70	20	6
52492	120	70	40	8
52493	145	70	65	10
52494	170	70	90	12
52495	195	70	115	14
52496	220	70	140	16
52497	245	70	165	18
52498	270	70	190	20

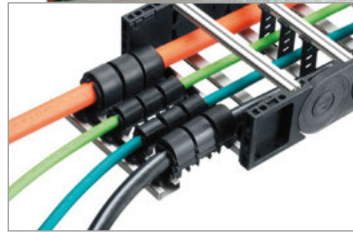


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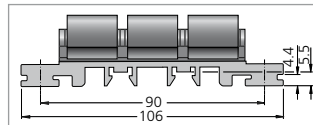
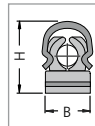
SZL strain relief devices

- economically priced
- installation – easy, fast and without tools
- gentle on cables due to large surface area contact with the cables
- small installation height
- without screws and cable binders
- defined contact pressure exerted by spring clamps
- suitable for common commercially available support rails
- immune to vibration
- long service life for dynamic applications
- can also be used as strain relief in switch cabinets



Available sizes

Type	Ident-No.	For cable-Ø	Width B at		Height H
			Ø min	Ø max	
SZL 8	24989	> 5.0 - 8.0 mm	16	16	28
SZL 10	24990	> 8.0 - 10.5 mm	20	20	30
SZL 14	24991	>10.5 - 14.5 mm	23	26	35
SZL 18	24992	>14.5 - 18.0 mm	25	32	40
SZL 22	24993	>18.0 - 22.0 mm	30	36	44
SZL 27	24994	>22.0 - 27.0 mm	34	39	50
SZL 32	24995	>27.0 - 32.0 mm	39	44	56



Dimensions in mm

Fixing options



1. By clipping into C-Profiles.



2. By clipping onto cap bar.



3. By pushing into two C-Profile bars.



4. By directly screwing.

Solutions 3 and 4 make the transmission of large tensile forces possible and are therefore recommended as standard solutions.

Installation of the SZL strain relief device



Block clamps

- for strain relief of hoses
- with clamping bolt(s) and mounting rail nut(s)



Single clamps – one cable

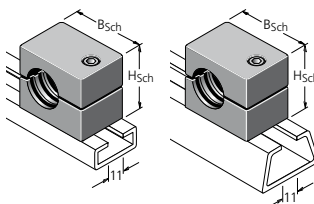
Type BS 0

Type	For cable Ø	Height H _{Sch}	Width B _{Sch}	Bolts M6 – DIN 6912		Item-No.
				Number	Length	
BS 0.06	6 mm	26	28	1	35	16701
BS 0.07	6.5 mm	26	28	1	35	16702
BS 0.08	8 mm	26	28	1	35	16703
BS 0.09	9.5 mm	26	28	1	35	16704
BS 0.10	10 mm	26	28	1	35	16705

Other sizes and designs available on request!

Dimensions in mm

Type BS 0...



Assembly profile bars:

Material: Steel
Item-No.: 3931

Material: Steel
Item-No.: 3934

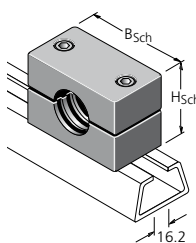
Type BS 1 – BS 5

Type	For cable Ø	Height H _{Sch}	Width B _{Sch}	Bolts M6 – DIN 6912		Item-No.
				Number	Length	
BS 1.06	6 mm	26	34	2	35	16706
BS 1.07	6.5 mm	26	34	2	35	16707
BS 1.08	8 mm	26	34	2	35	16708
BS 1.09	9.5 mm	26	34	2	35	16709
BS 1.10	10 mm	26	34	2	35	16710
BS 1.12	12 mm	26	34	2	35	16711
BS 2.14	14 mm	32	40	2	40	16712
BS 2.16	16 mm	32	40	2	40	16713
BS 2.18	18 mm	32	40	2	40	16714
BS 3.20	20 mm	36	48	2	45	16715
BS 3.22	22 mm	36	48	2	45	16716
BS 3.23	25 mm	36	48	2	45	16717
BS 3.25	25.5 mm	36	48	2	45	16718
BS 3.27	27 mm	36	48	2	45	16719
BS 3.30	30 mm	36	48	2	45	16721
BS 4.32	32 mm	56	69	2	65	16722
BS 4.34	34 mm	56	69	2	65	16723
BS 4.35	35 mm	56	69	2	65	16724
BS 4.38	38 mm	56	69	2	65	16725
BS 4.40	40 mm	56	69	2	65	16726
BS 4.42	42 mm	56	69	2	65	16727
BS 5.45	44.5 mm	65	85	2	75	16728
BS 5.48	48.5 mm	65	85	2	75	16729
BS 5.51	51 mm	65	85	2	75	16731

Other sizes and designs available on request!

Dimensions in mm

Type BS 1... - BS 5...



Assembly profile bars:

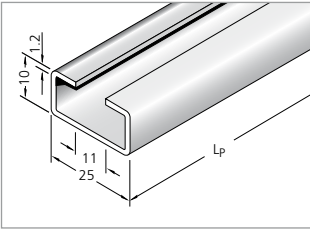
Material: Aluminum
Item-No.: 3926

Material: Steel
Item-No.: 3932

Assembly profile bars for strain relief devices



C-Profile 25 x 10 mm

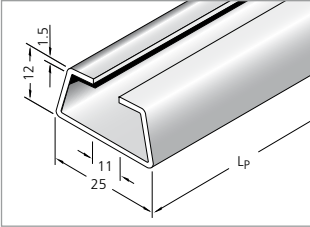


Fits all commercial clamps
(slit width 11 mm),
 Types LineFix see page 382.

Material **Item-No.**
 Steel 3931

Attach profile with M 6 – DIN 6912 sockethead cap screws.

C-Rail 25 x 12 mm

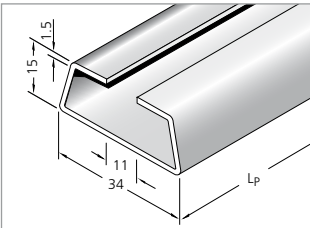


Fits all commercial clamps
(slit width 11 mm),
 Types LineFix see page 382.

Material **Item-No.**
 Steel 3934

Attach profile with M 6 – DIN 6912 sockethead cap screws.

C-Rail 34 x 15 mm

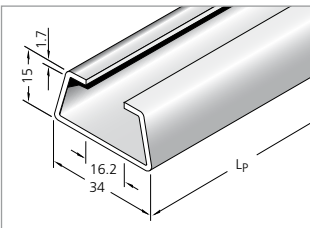


Fits all commercial clamps
(slit width 11 mm),
 Types LineFix see page 382.

Material **Item-No.**
 Steel 3935

Attach profile with M 6 – DIN 6912 sockethead cap screws.

C-Rail 34 x 15 mm



Fits all commercial clamps
(slit width 16 – 17 mm),
 Types B see page 383.

Material **Item-No.**
 Aluminum 3926
 Steel 3932

Attach profile with M 10 – DIN 6912 sockethead cap screws.