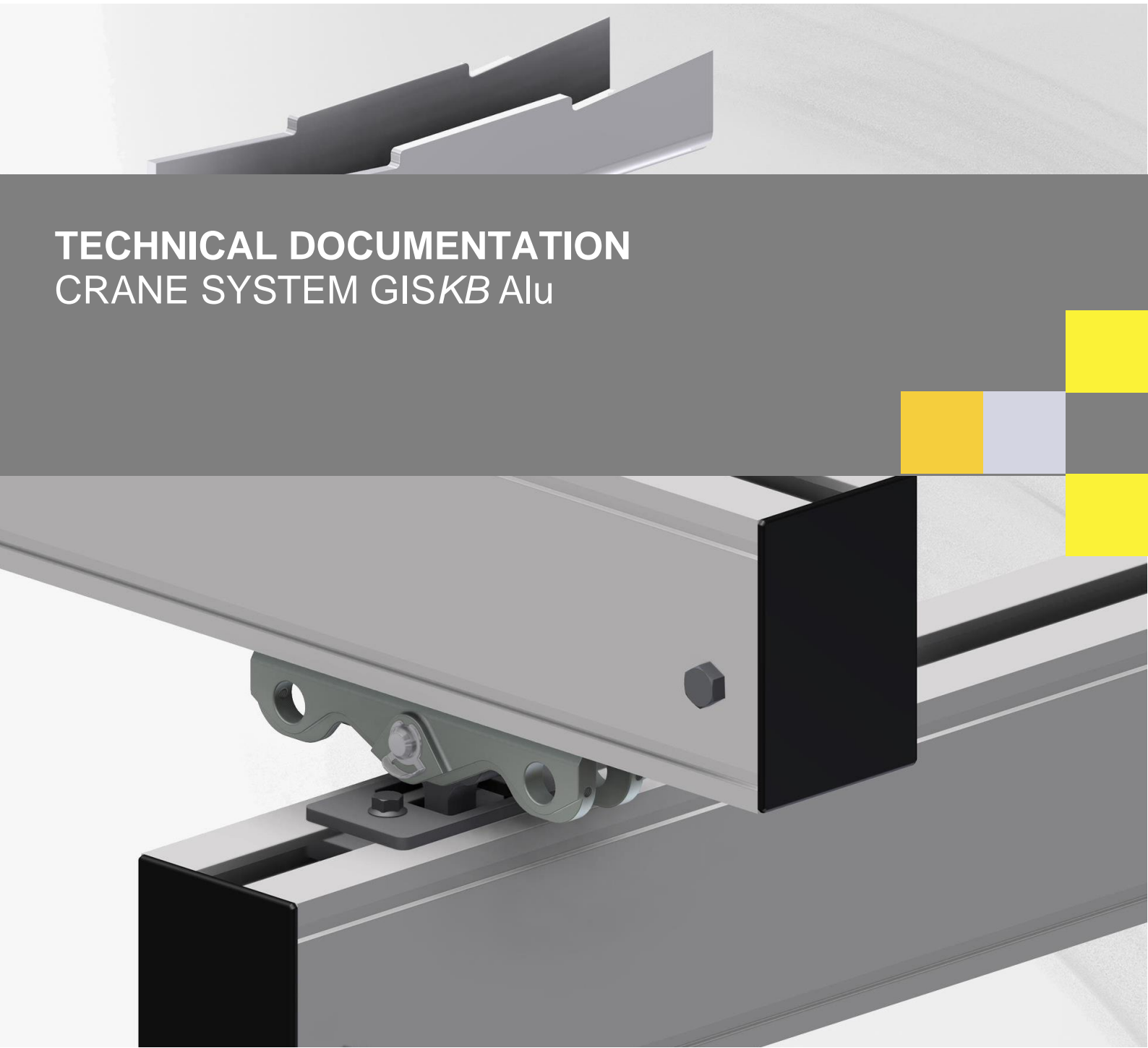


# GIS

swiss lifting solutions

## TECHNICAL DOCUMENTATION CRANE SYSTEM GISKB Alu



[www.gis-ag.ch](http://www.gis-ag.ch)





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## 0 General instructions

This GIS documentation contains information about the lay-out and planning of GISKB suspended crane and monorail up to 630 kg.

1. The documents allow you a fast and efficient dimensioning of the crane equipments.

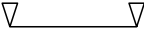





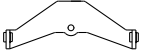

Technical notes:

- The documents for planning are based on the rules of the latest technology.
- Only GIS originally manufactured parts shall be used.
- The customer is responsible for the stability of the ceiling structure.
- Painting: Profiles made of aluminium are natural-coloured anodised, steel parts are galvanised.

2. For the components used, the technical specifications, dimensions and the order numbers are given.

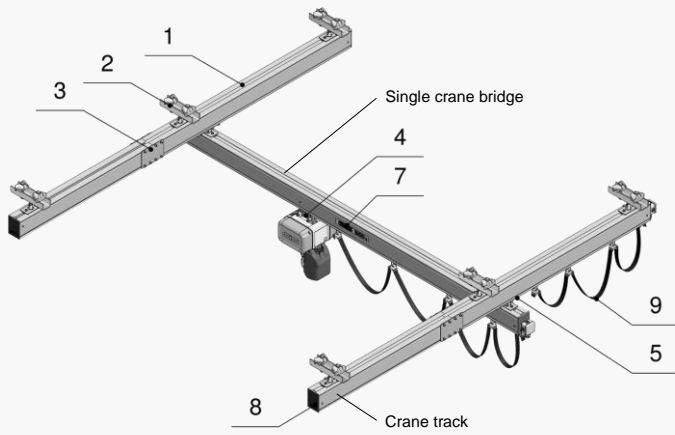
3. In the final pages of this document a questionnaire for the project of GIS light crane systems is added. It should help you to find the necessary data.

### 0.1 Explanation of signs

	Crane bridge		Flange width [mm]
	Profile		Lifting capacity [kg]
	Trolley		Dead weight [kg]
	Saddle		Electric mains for power supply
		<b>N°</b>	Ordering number

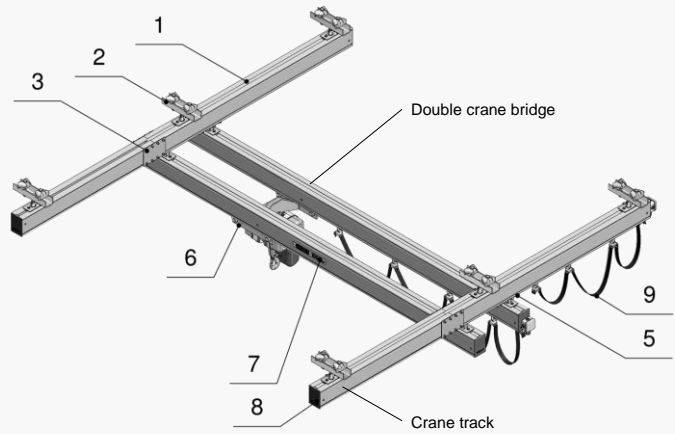
# 1 Overview

Single bridge suspension crane

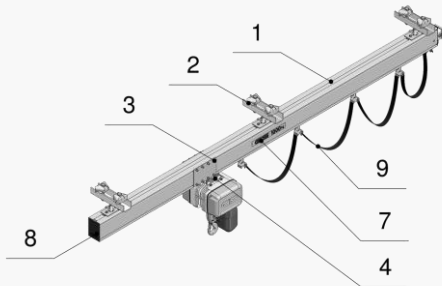


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1 Profile.....	10
2 Suspension .....	16-18
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Double bridge suspension crane



Monorail



## 2 Directives concerning the suspension points of GISKB Alu small crane systems

The distances between the suspension points depend on the profile size and the strain. This dimensioning is made according to the diagrams or the calculation program.

The type of suspension depends on the constructional situation. All suspensions are available pendulating only. Pendulating suspensions are easier to assemble. Inaccurate alignment due to imprecise ceiling structures can be avoided. Care is to be taken that the angle of the suspension does not differ more than 5° from the vertical position.

### 2.1 Distanced monorails

Monorails suspended from rods must not be braced imperatively provided that no side dragging of hoist exists. Practice, however, shows that a side dragging cannot be excluded, wherefore bracings are provided.

For distanced suspensions greater than or equal to  $h_4 = 500$  mm (see page 9) transverse and longitudinal bracings are provided. Longitudinal bracings are to be provided for both track ends and lateral bracings for every second suspension.

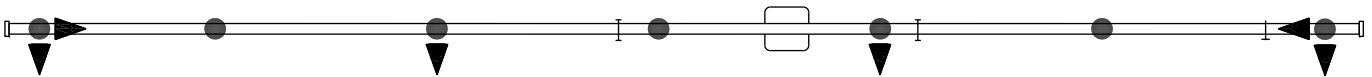
### 2.2 Suspended cranes

From the ceiling hung distanced crane tracks:

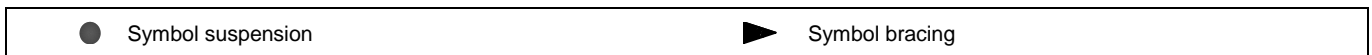
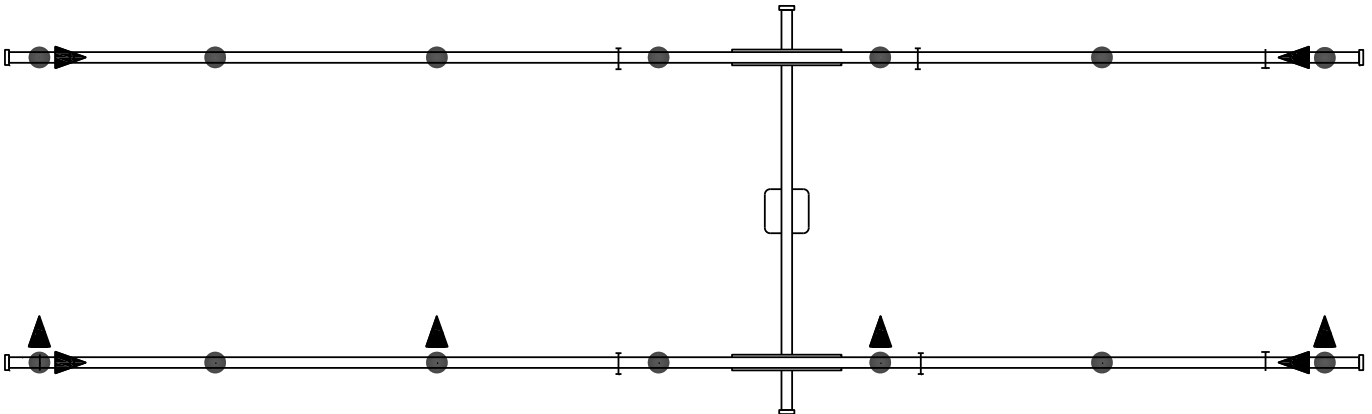
If the suspended cranes are greater than or equal to  $h_4 = 500$  mm (see page 9) suspended from the ceiling, both crane tracks have to be braced longitudinally and a crane track lateral. Longitudinal bracings are to be provided for all track ends. Lateral bracings are to be provided for every second suspension only on one crane track.

### 2.3 Examples of bracings

Monorail (distance greater than or equal to 500 mm)



Suspended crane (distance greater than or equal to 500 mm)



### 3 Dimensioning suspended crane

#### 3.1 Crane bridge

The selection of the profile size depends on the strength (P) and the span (W) of the profile. In tables 3-1 (single crane bridge) and 3-2 (double crane bridge) the adequate profile size can be found.

Load .....: The strength (P) does include the dead weight of the electric chain hoist and the trolley. The max. admissible load is limited according to the table.

Length of span ...: The admissible span is shown in the table, depending on the type of profile. Its maximum is 7800 mm.

The calculations in tables 3-1 and 3-2 are based on a permissible deflection of  $W / 400$ . The classification of cranes is according to EN 13001: HC4; U2-U3; Q0-Q4; S0-S2 and EN 15018: H2/H3; B3/B4. For other deflection factors there is a calculation program at your disposal.

Admissible load overhang (y): In crane bridges load overhang is permitted only when calculated with the calculation program.

▽ \_\_\_\_\_ ▽ without reinforcement

**Table 3-1 Single crane bridge span W [m]**

Lifting capacity	GISKB Alu S	GISKB Alu M	GISKB Alu L
	▽ _____ ▽	▽ _____ ▽	▽ _____ ▽
80 kg	4.1	6.2	7.8
100 kg	3.8	5.8	7.8
125 kg	3.5	5.4	7.3
160 kg	3.2	4.9	6.8
200 kg	2.9	4.5	6.3
250 kg	2.6	4.1	5.8
320 kg	-	3.7	5.2
400 kg	-	3.4	4.7
500 kg	-	2.3	4.3
630 kg	-	-	3.0

**Table 3-2 Double crane bridge span W [m]**

Lifting capacity	GISKB Alu S	GISKB Alu M	GISKB Alu L
	▽ _____ ▽	▽ _____ ▽	▽ _____ ▽
80 kg	5.4	7.7	7.8
100 kg	5.0	7.3	7.8
125 kg	4.7	6.9	7.8
160 kg	4.3	6.5	7.8
200 kg	4.0	6.0	7.8
250 kg	3.7	5.6	7.6
320 kg	3.3	5.1	7.0
400 kg	3.0	4.7	6.4
500 kg	2.7	4.2	5.9
630 kg	-	3.8	5.3

### 3.2 Crane track / Monorail

The span A is based on the diagrams 3-3 (GISKB Alu S), 3-4 (GISKB Alu M) and 3-5 (GISKB Alu L). The maximum spans are different in the end field (EF) or middle field (MF). The 1 field solution (1F) has only 2 suspension points and must be calculated separately. The load of the crane track or monorail is calculated using the following formulas:

Crane track:

$$P_{KB} = 1.29 \times P_H + 1.1 \times (P_1 + 0.5 \times P_{KT})$$

$P_{KB}$  = load crane track [kg]

$P_{HB}$  = load monorail [kg]

$P_H$  = permissible lifting capacity [kg]

$P_1$  = dead weight trolley and electric chain hoist [kg]

$P_{KT}$  = dead weight crane bridge [kg]

Monorail:

$$P_{HB} = 1.29 \times P_H + 1.1 \times P_1$$

The length ratio between two adjacent fields must not exceed the value of 1.5 and not fall below the value of 0.5.

Admissible distance of joints (x): The junction of two track sections shall be at a distance of max. 0.2 x A and a min. of 100 mm from the nearest suspension point.

Admissible load overhang (y).....: In case of crane tracks and monorails the load overhang can only be dimensioned with the calculation program.

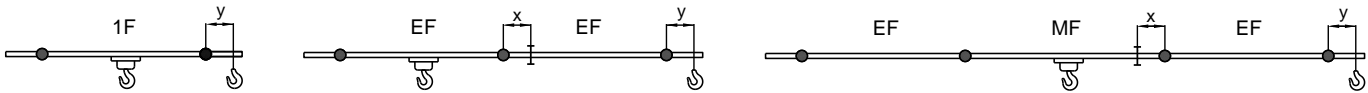


Diagram 3-3 GISKB Alu S

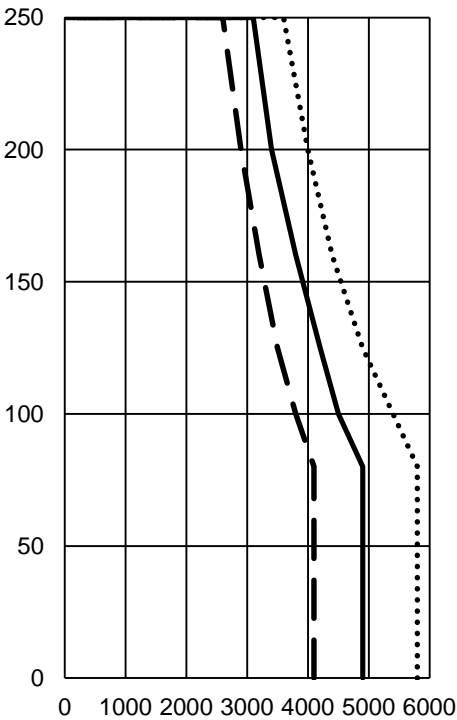


Diagram 3-4 GISKB Alu M

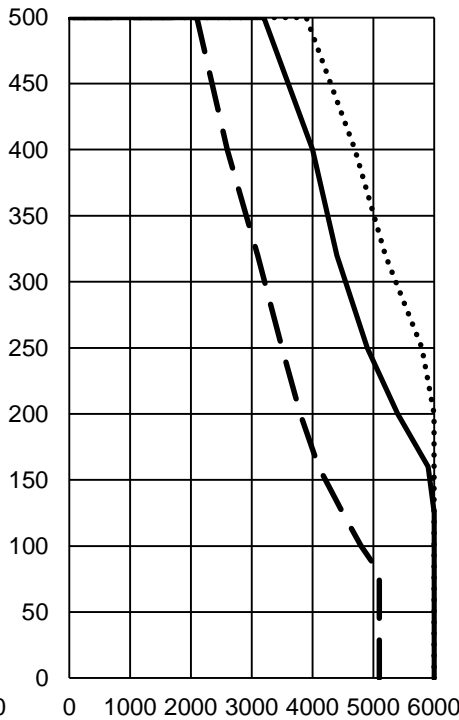
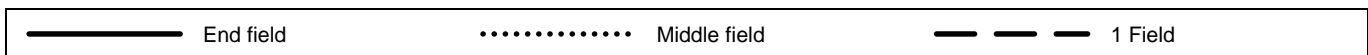
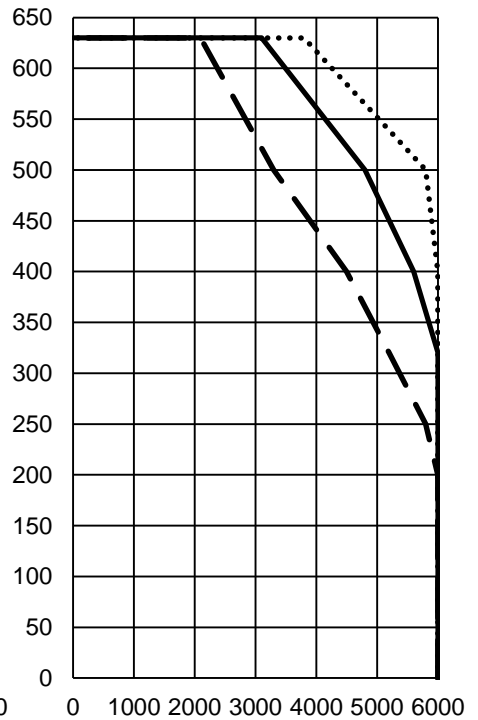
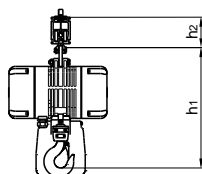
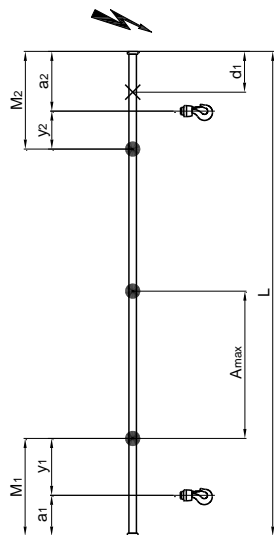
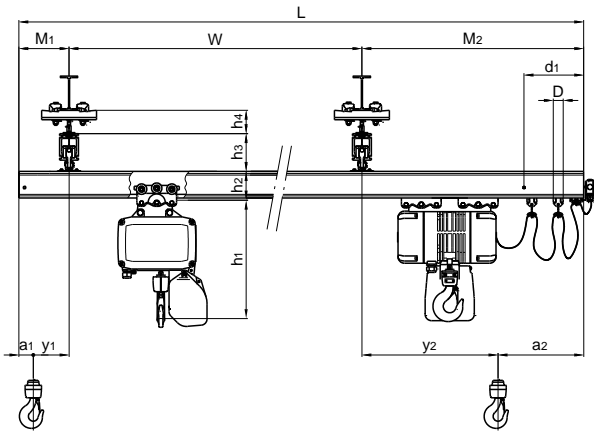
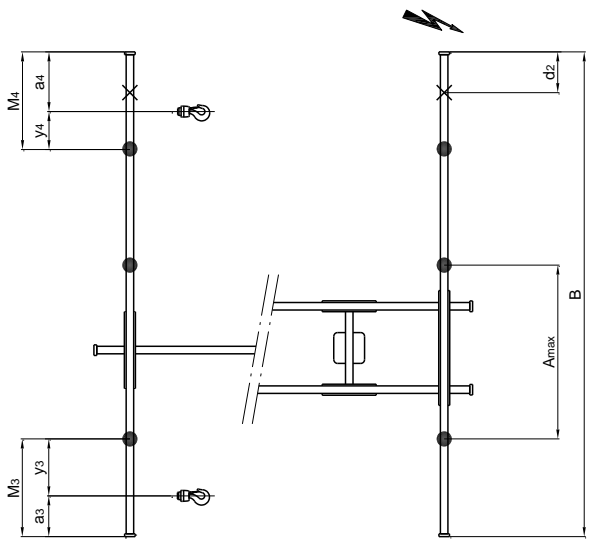


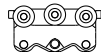
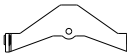
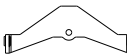
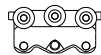

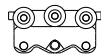
Diagram 3-5 GISKB Alu L





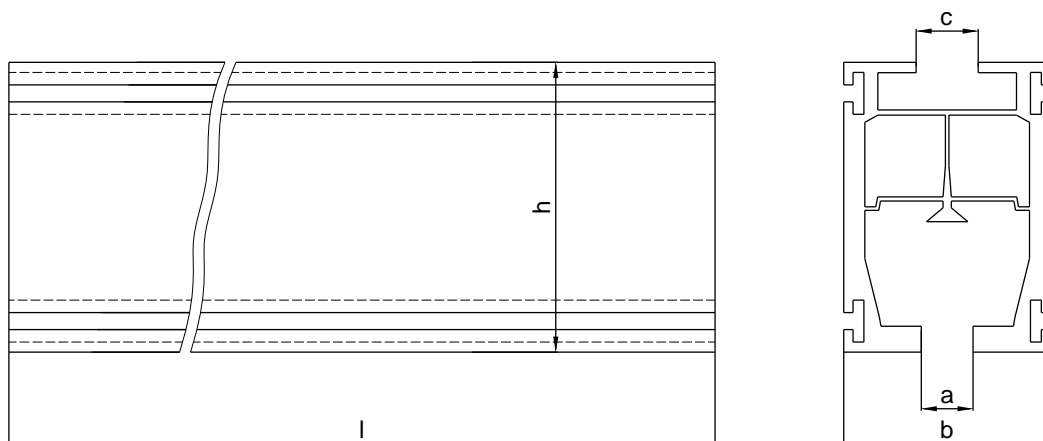
### 4 Dimensions and approach dimensions



	GISKB Alu S	GISKB Alu M	GISKB Alu L	
a <sub>1</sub> a <sub>3</sub>		155 mm	155 mm	155 mm
a <sub>1</sub>		305 mm	305 mm	305 mm
a <sub>3</sub>		355 mm	355 mm	355 mm
h <sub>1</sub>	[mm]	see dimensions of electric chain hoist		
h <sub>2</sub>		126 mm	161 mm	201 mm
h <sub>2</sub>		99 mm	134 mm	174 mm
h <sub>3</sub>		173 mm	208 mm	248 mm
h <sub>4</sub> pendulating, short		120 ±7.5 mm	120 ±7.5 mm	120 ±7.5 mm
a <sub>2</sub>	[mm]	a <sub>1</sub> + d <sub>1</sub>		
a <sub>4</sub>	[mm]	a <sub>3</sub> + d <sub>2</sub>		
M <sub>1</sub>	[mm]	a <sub>1</sub> + y <sub>1</sub>		
M <sub>2</sub>	[mm]	a <sub>2</sub> + y <sub>2</sub>		
M <sub>3</sub>	[mm]	a <sub>3</sub> + y <sub>3</sub>		
M <sub>4</sub>	[mm]	a <sub>4</sub> + y <sub>4</sub>		
d <sub>1</sub> / d <sub>2</sub>	[mm]	15 + (x <sub>1(2)</sub> · D) + 70		
y <sub>max</sub>	[mm]	see page 7 - 8		
A <sub>max</sub>	[mm]	see page 8		
W	[mm]	see table 3-1 and table 3-2 page 7		
x <sub>1</sub>	[piece]	Cable carriages crane bridge (L:1250)-1		
x <sub>2</sub>	[piece]	Cable carriages crane track (B:1250)-1		
D	[mm]	Cable carriage = 50		

## 5 Crane-system components


### 5.1 Profile



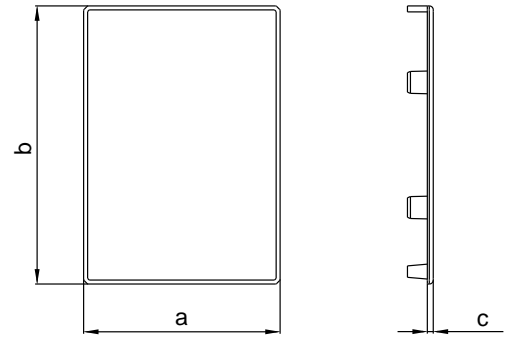
Version.....: GISKB aluminium profiles (ALMgSi0.5 F25) are produced using the extrusion process.

Paint.....: Natural-coloured anodised aluminium.

Note.....: The dimensioning is made according to the appropriate documents (see page 7 - 8).


		GISKB Alu S	GISKB Alu M	GISKB Alu L
	[kg/m]	9.820	11.530	15.290
a	[mm]	25	25	25
b	[mm]	96	99	100
c	[mm]	30	30	30
h	[mm]	105	140	180
$W_x$	[mm <sup>3</sup> x 10 <sup>3</sup> ]	42.60	84.90	133.05
$I_x$	[mm <sup>4</sup> x 10 <sup>6</sup> ]	2.368	5.994	12.067
l = 2 m		9306.3006.4	9307.3006.4	9307.5006.4
l = 3 m		9306.3007.4	9307.3007.4	9307.5007.4
l = 4 m		9306.3008.4	9307.3008.4	9307.5008.4
l = 5 m		9306.3009.4	9307.3009.4	9307.5009.4
l = 6 m		9306.3010.4	9307.3010.4	9307.5010.4
l = 7 m		9306.3011.4	9307.3011.4	9307.5011.4
l = 8 m		9306.3012.4	9307.3012.4	9307.5012.4
l = 0.001 - 0.999 m		9306.3020.4	9307.3020.4	9307.5020.4
l = 1.001 - 1.999 m		9306.3021.4	9307.3021.4	9307.5021.4
l = 2.001 - 2.999 m		9306.3022.4	9307.3022.4	9307.5022.4
l = 3.001 - 3.999 m		9306.3023.4	9307.3023.4	9307.5023.4
l = 4.001 - 4.999 m		9306.3024.4	9307.3024.4	9307.5024.4
l = 5.001 - 5.999 m		9306.3025.4	9307.3025.4	9307.5025.4
l = 6.001 - 6.999 m		9306.3026.4	9307.3026.4	9307.5026.4
l = 7.001 - 7.999 m		9306.3027.4	9307.3027.4	9307.5027.4

5.2 Cover

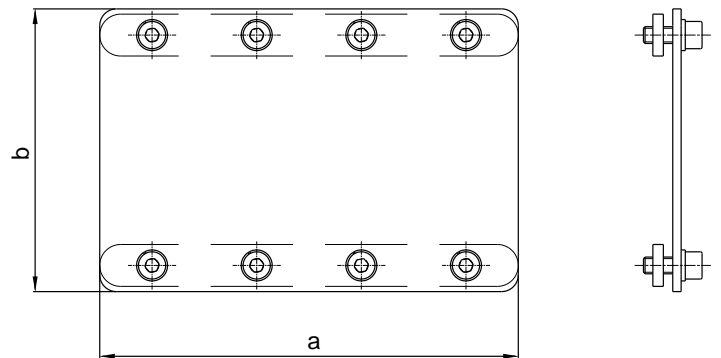


Version.....: Plastic black.

Use.....: The cover serves as a profile closure.


Profile	 [kg]	a [mm]	b [mm]	c [mm]		N°
GISKB Alu S	0.100	96	105	3		9306.3015.4
GISKB Alu M	0.100	99	140	3		9307.3015.4
GISKB Alu L	0.100	100	180	3		9307.5015.4

5.3 Butt junction

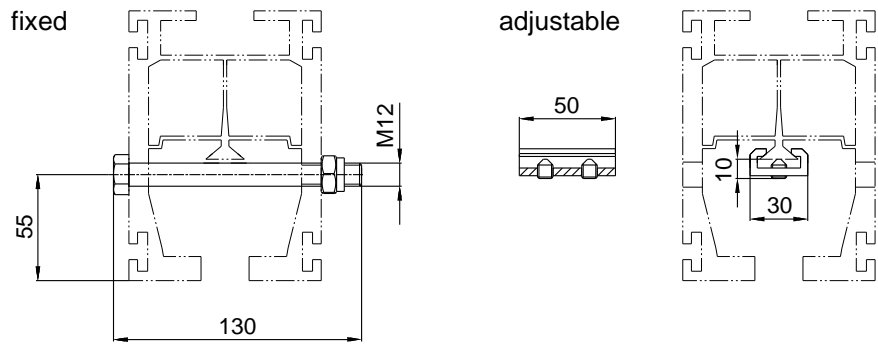


Version.....: Steel, galvanised.

Use.....: The junction of two profiles is force-fitted as well as interlocking. The slot nuts are slid into lateral slots of the profiles and the screws are tightened.


Profile	 [kg]	a [mm]	b [mm]		N°
GISKB Alu S	2.000	200	100		9306.3002.4
GISKB Alu M	2.600	200	135		9307.3002.4
GISKB Alu L	3.000	200	175		9307.5002.4

5.4 Limit stop

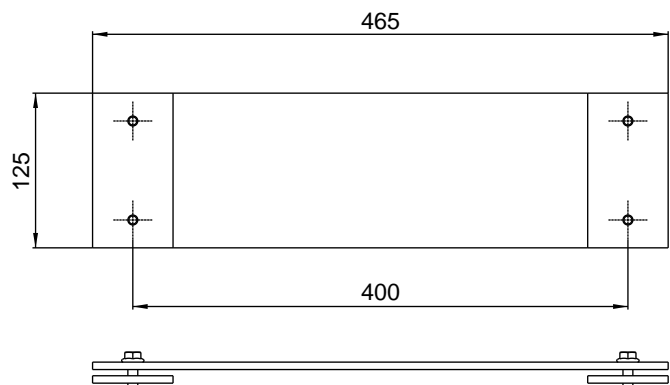


Version.....: Steel, galvanised and aluminium.

Use.....: Fixed limit stops are necessary on each profile end! These are mounted through a hole in the profile, fixed with a safety catch and, thus, prevent the retraction of the trolley in any case. Adjustable limit stops can be mounted at any given position and, thus, they limit the travel path of the trolley. Adjustable limit stops are universally applicable for all profiles.


Profile	 [kg]	Designation	N°
GISKB Alu S/M/L	0.100	Fixed limit stop	9309.5019.4
GISKB Alu S/M/L	0.040	Adjustable limit stop	9309.5031.4

5.5 Distancing double crane bridge

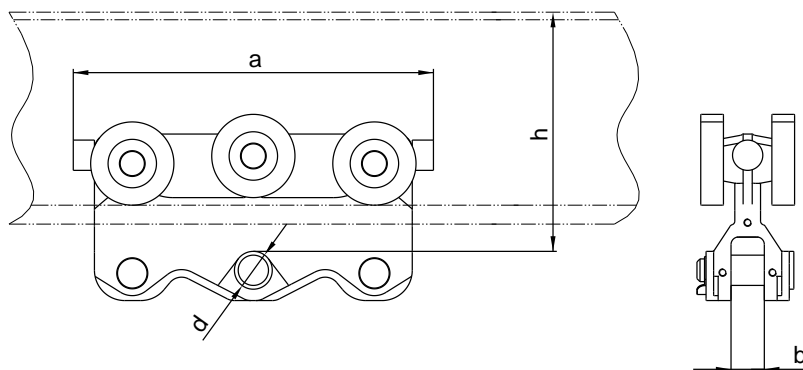


Version.....: Steel, galvanised.

Use.....: While using the distancing, double crane bridges of all profile sizes can be joined. The standard track dimension is 400 mm.



Profile	 [kg]	Designation	N°
GISKB Alu S/M/L	3.200	Distancing	9309.5026.4

### 5.6 Trolley

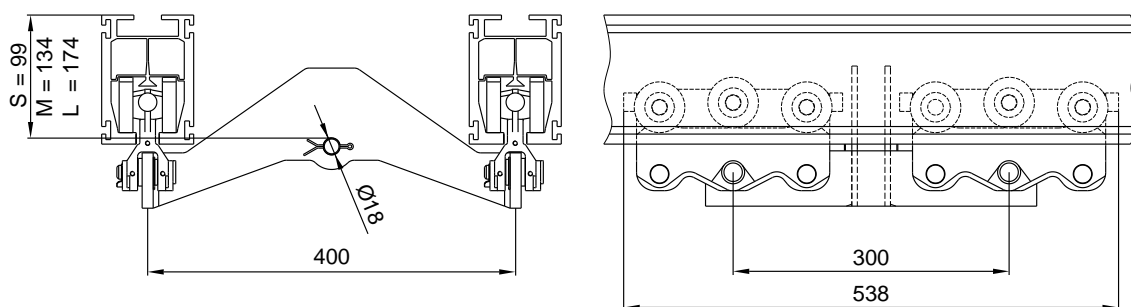


Version.....: The trolley is made of aluminium and glass-fibre reinforced plastic and it is tested with more than 4-fold safety.


Use.....: The trolley is used as a trailer of the electric chain hoist and can also be used as a longitudinal trolley for the crane bridge.

Profile	 [kg]	 [kg]	a [mm]	b [mm]	d [mm]	h [mm]	N°
GISKB Alu S	1.600	250	238	25	20	126	9309.5030.3
GISKB Alu M	1.600	500	238	25	20	161	9309.5030.3
GISKB Alu L	1.600	630	238	25	20	201	9309.5030.3

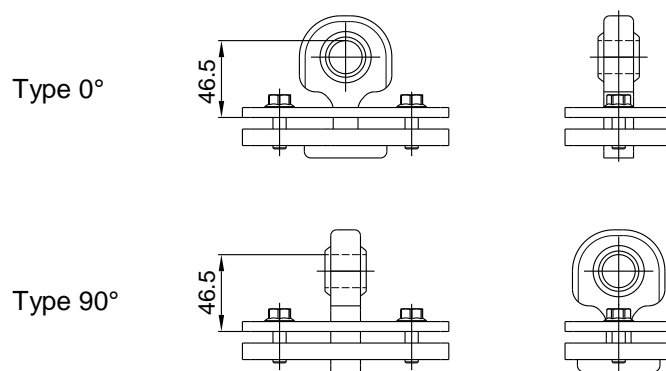
### 5.7 Saddle



Version.....: Steel, galvanised.

Profile	 [kg]	Designation	N°
GISKB Alu S/M/L	3.200	Saddle	9309.5025.4



## 5.8 Crane-bridge suspension pendulating



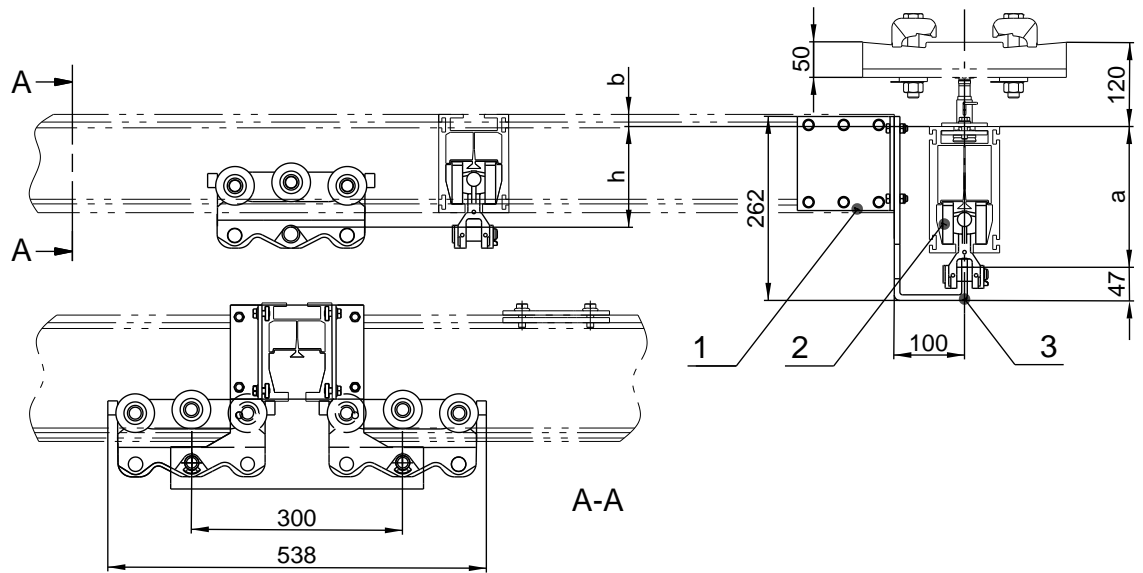
Version .....: Steel, galvanised.

Use .....: For pendulating suspension of the crane bridge.

Note .....: Crane-bridge suspension 0° (Art. No. 9309.5033.4) serves as a suspension for telescopic jibs.

Profile	 [kg]	 [kg]	Designation	N°
GISKB Alu S/M/L	1.250	750	Crane bridge suspension 0°	9309.5033.4
GISKB Alu S/M/L	1.250	750	Crane bridge suspension 90°	9309.5032.4


5.9 Breaker



Version.....: Steel, galvanised.

Use.....: Junction of trolley and crane bridge. The crane bridge is installed between the crane tracks. This reduces the construction height significantly.



Profile retainer (Item 1)

Profile	 [kg]		N°
GISKB Alu S	2.440		9306.3054.3
GISKB Alu M	2.930		9307.3054.3
GISKB Alu L	3.630		9307.5054.3

Trolley (Item 2)

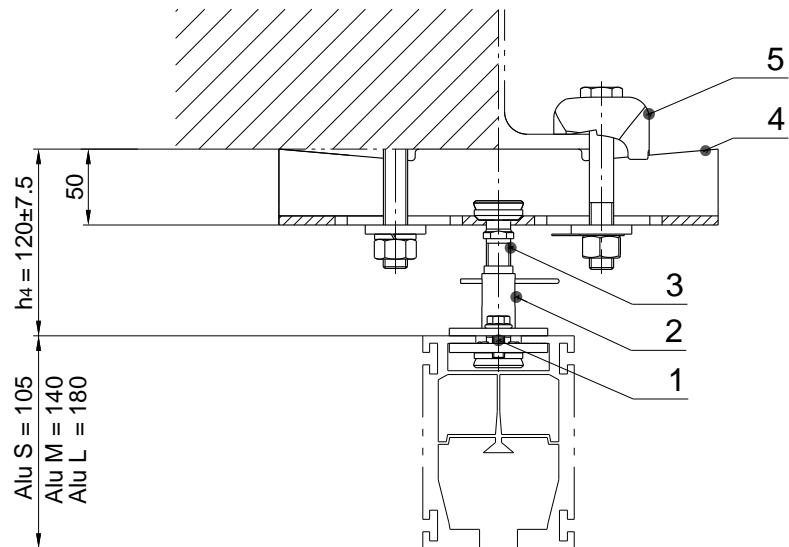
Profile	 [kg]		N°
GISKB Alu S/M/L	1.600		9309.5030.3

Bracket (Item 3)

Crane track	Crane bridge	 [kg]	 [kg]	a [mm]	b [mm]	h [mm]		N°
GISKB Alu S	GISKB Alu S <sup>1</sup>	6.860	250	126	89	37		9306.3052.3
	GISKB Alu M <sup>1</sup>	6.860	500	126	89	72		9306.3052.3
	GISKB Alu L <sup>1</sup>	6.860	630	126	89	112		9306.3052.3
GISKB Alu M	GISKB Alu S <sup>1</sup>	6.860	250	161	57	71		9306.3052.3
	GISKB Alu M <sup>1</sup>	6.860	500	161	57	106		9306.3052.3
	GISKB Alu L <sup>1</sup>	6.860	630	161	57	146		9306.3052.3
GISKB Alu L	GISKB Alu S	6.860	250	201	17	112		9306.3052.3
	GISKB Alu M	6.860	500	201	17	146		9306.3052.3
	GISKB Alu L	6.860	630	201	17	184		9306.3052.3



<sup>1</sup> With this combination, in case of a short suspension, the ceiling clip has to be turned by 90°.

### 5.10 Suspension pendulating short adjustable



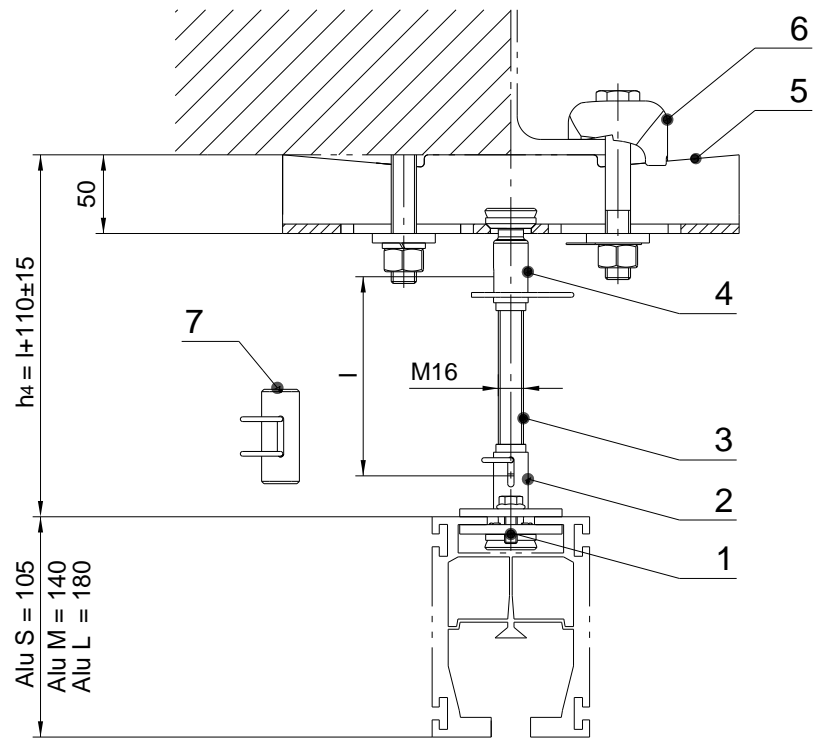
Version.....: Steel, galvanised. The shortest possible pendulating suspension is given by the ball pin (3) and ball nut (2) screwed together directly. Pendulating movements of max. 10° are permissible. The suspension can be adjusted by  $\pm 7.5$  mm.

Note.....: The supporting width of the suspensions have to taken into account according to the crane-bridge diagram on page 8.

Item	 [kg]	 [kg]	Designation	N°
1	0.400	750	Profile retainer complete	9309.5002.4
2	0.160		Ball nut complete	9309.3011.4
3	0.120		Ball pin complete	9309.3010.4
4	2.000		Ceiling clip, flange width: 65 - 200 mm	9309.3003.3
	4.000		Ceiling clip, flange width: 200 - 300 mm	9309.3112.3
5	0.600	Binding clip complete, flange width: 65 - 200 mm	9309.3005.4	
	0.650	Binding clip complete, flange width: 200 - 300 mm	9309.3113.4	





**5.11 Suspension pendulating distanced adjustable**

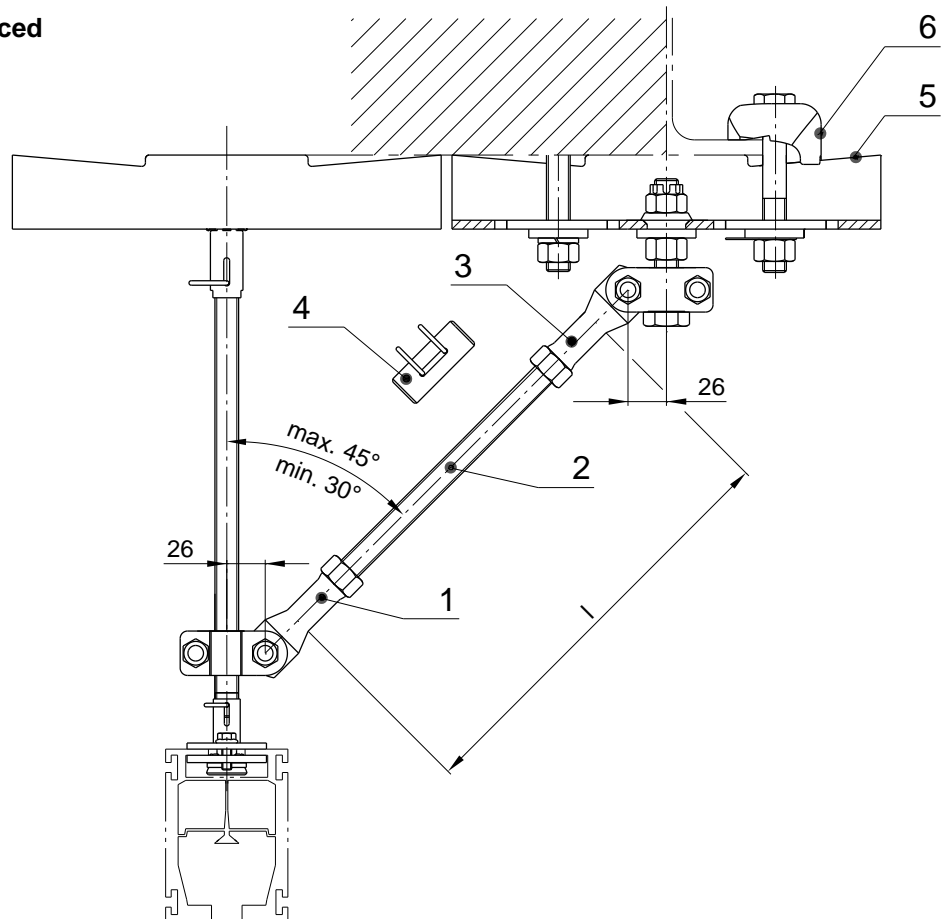


Version.....: Steel, galvanised. The threaded rod (3) with its varying length and the two ball nuts (2, 4), duly screwed-on, form the distanced suspension. The suspension can compensate for height differences of  $\pm 15$  mm. The coupling (7) can join two threaded rods.

Note .....: The supporting widths of the suspensions have to taken into account according to the crane-bridge diagram on page 8.



Item	 [kg]	 [kg]	Designation	N°
1	0.400	750	Profile retainer complete	9309.5002.4
2	0.160		Ball nut complete	9309.3011.4
3	0.100		Threaded rod, l = 100 mm	9309.3024.4
	0.200		Threaded rod, l = 200 mm	9309.3025.4
	0.400		Threaded rod, l = 300 mm	9309.3026.4
	0.650		Threaded rod, l = 500 mm	9309.3027.4
	1.200		Threaded rod, l = 1000 mm	9309.3028.4
4	0.160		Ball nut complete	9309.3011.4
5	2.000		Ceiling clip, flange width: 65 - 200 mm	9309.3003.3
	4.000		Ceiling clip, flange width: 200 - 300 mm	9309.3112.3
6	0.600		Binding clip complete, flange width: 65 - 200 mm	9309.3005.4
	0.650		Binding clip complete, flange width: 200 - 300 mm	9309.3113.4
7	0.150		Coupling complete	9309.3033.4

5.12 Bracing pendulating distanced adjustable

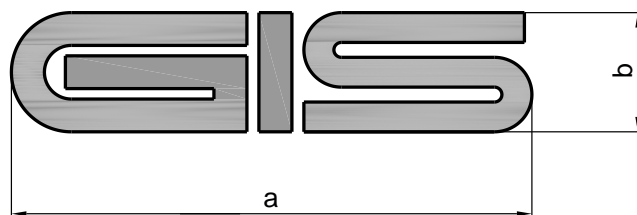


Version.....: Steel, galvanised. The bracing consists of the lower knots (1) and the upper knots (3) joined with a threaded rod (2). The length of the threaded rod is the same as for the suspension.

Note.....: The supporting width of the suspensions have to taken into account according to the crane-bridge diagram on page 8.

Pos.	 [kg]	 [kg]	Designation	N°
1	0.300	750	Lower knots	9309.3015.4
2	0.100		Threaded rod, l = 100 mm	9309.3024.4
	0.200		Threaded rod, l = 200 mm	9309.3025.4
	0.400		Threaded rod, l = 300 mm	9309.3026.4
	0.650		Threaded rod, l = 500 mm	9309.3027.4
	1.200		Threaded rod, l = 1000 mm	9309.3028.4
3	0.600		Upper knots	9309.3016.4
4	0.150	Coupling complete	9309.3033.4	
5	2.000	Ceiling clip, flange width: 65 - 200 mm	9309.3003.3	
	4.000	Ceiling clip, flange width: 200 - 300 mm	9309.3112.3	
6	0.600	Binding clip complete, flange width: 65 - 200 mm	9309.3005.4	
	0.650	Binding clip complete, flange width: 200 - 300 mm	9309.3113.4	

### 5.13 GIS adhesive

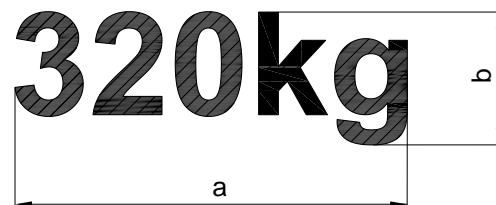


Version.....: Grey, self-adhesive.

Use.....: Crane bridge, monorail.


Type	Profile	a [mm]	b [mm]		N°
Small	GISKB Alu S	174	40		9309.5075.4
Middle	GISKB Alu M/L	260	60		9309.5076.4

### 5.14 Lifting capacity adhesive



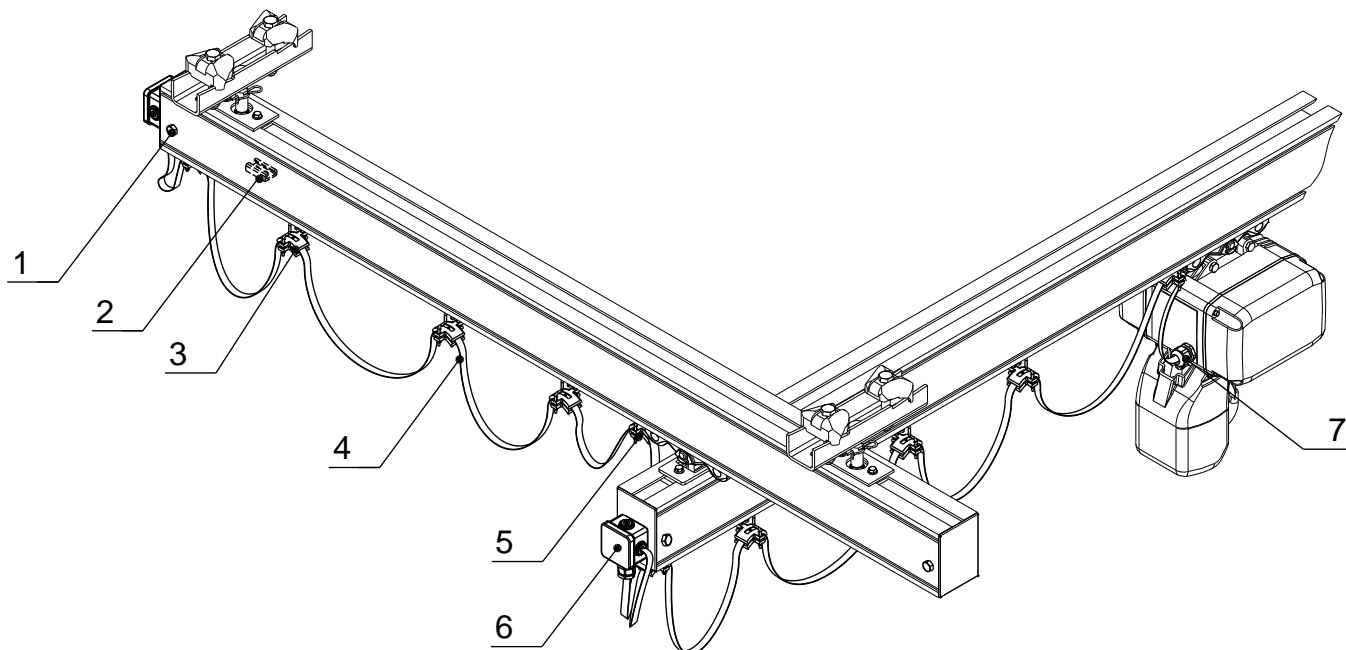
Version.....: Black, self-adhesive.


Use.....: Crane bridge, monorail.

Type	Profile	 [kg]	a [mm]	b [mm]		N°
Small	GISKB Alu S	80	100	40		9309.5080.4
	GISKB Alu S	100	125	40		9309.5081.4
	GISKB Alu S	125	125	40		9309.5082.4
	GISKB Alu S	160	125	40		9309.5083.4
	GISKB Alu S	200	125	40		9309.5084.4
	GISKB Alu S	250	125	40		9309.5085.4
Middle	GISKB Alu M/L	125	180	60		9309.5101.4
	GISKB Alu M/L	160	180	60		9309.5102.4
	GISKB Alu M/L	200	180	60		9309.5103.4
	GISKB Alu M/L	250	180	60		9309.5104.4
	GISKB Alu M/L	320	180	60		9309.5105.4
	GISKB Alu M/L	400	180	60		9309.5106.4
	GISKB Alu M/L	500	180	60		9309.5107.4
	GISKB Alu M/L	630	180	60		9309.5108.4

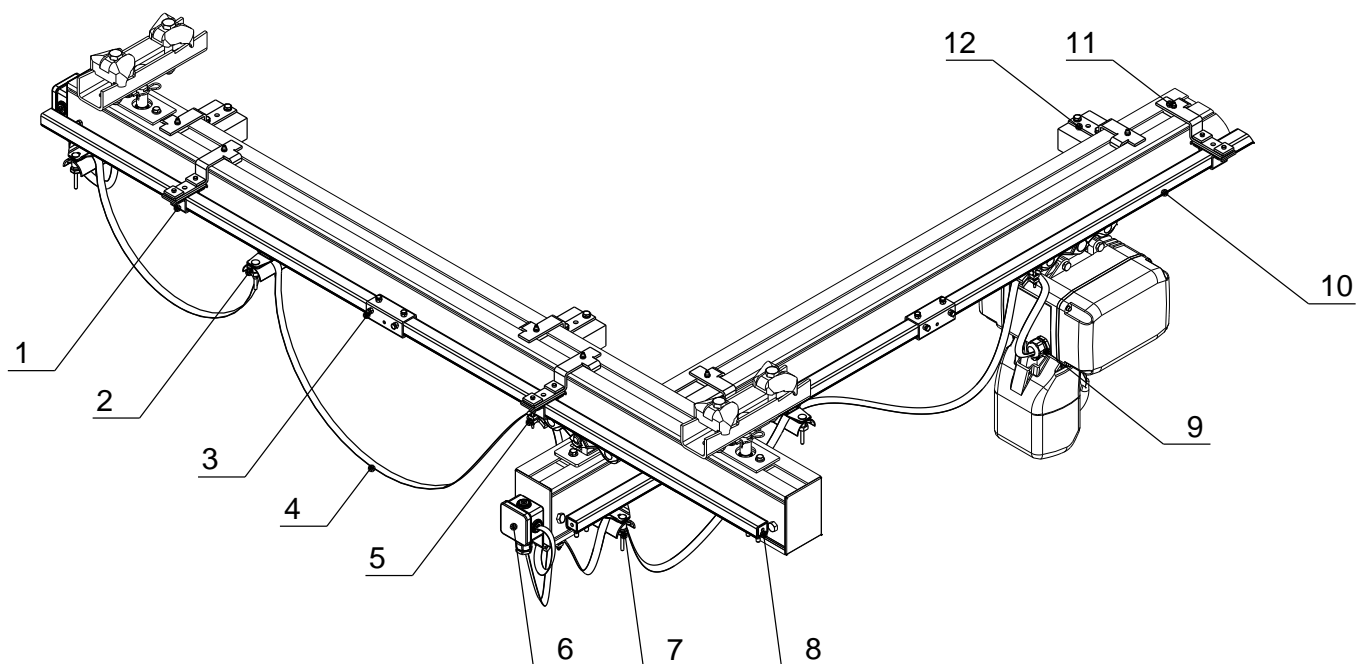
## 6 Power supply


### 6.1 Trailing cable



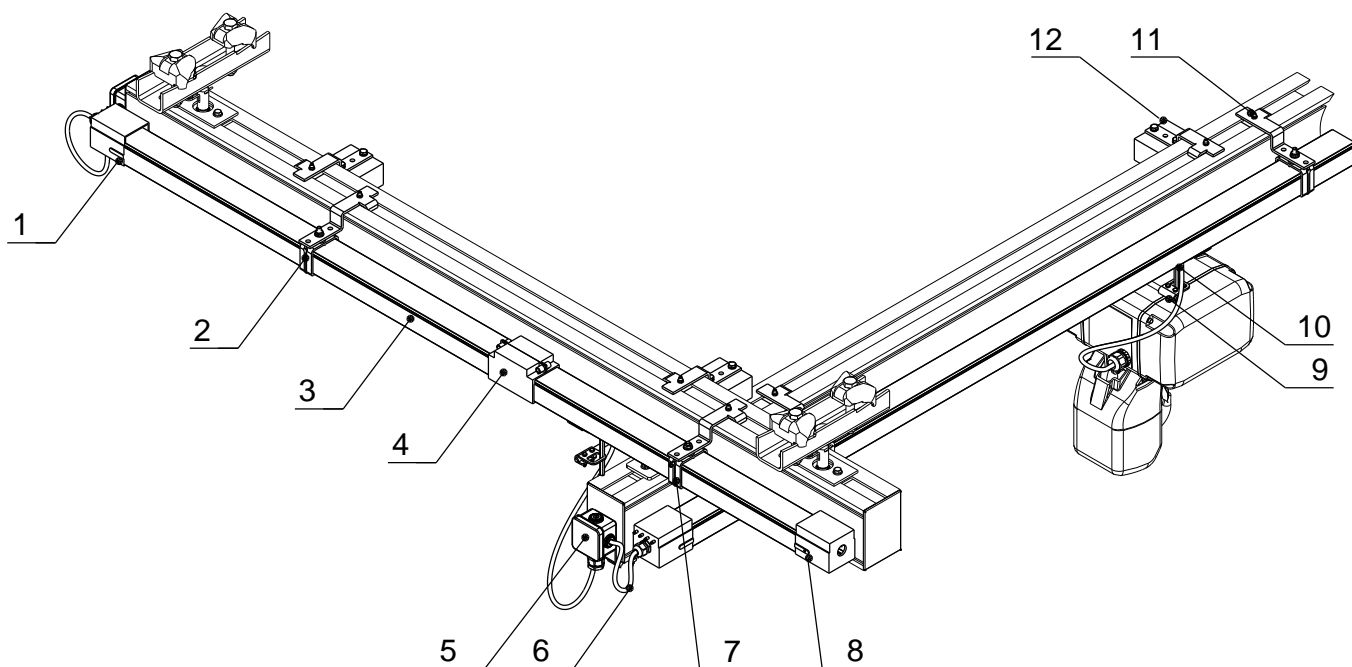
Item	 [kg]	Designation	N°
1	0.100	Fixed limit stop	9309.5019.4
2	0.040	Adjustable limit stop	9309.5031.4
3	0.150	Cable carriage	9309.5007.4
4	0.130	Flat cable, 4 x 1.5 mm <sup>2</sup>	9055.0300
5	0.040	Cable fixing part	9309.5009.4
6	0.300	Terminal box complete	9309.5008.4
7	0.050	Cable gland, M25 x 1.5, FK, PVC	9055.3107


## 6.2 C-rail



Item	 [kg]	Designation	N°
1	0.250	Suspension	9057.4200
2	0.300	Cable carriage	9057.4250
3	0.300	Connector	9057.4150
4	0.130	Flat cable, 4 x 1.5 mm <sup>2</sup>	9055.0300
5	0.040	Cable fixing part	9309.5009.4
6	0.300	Terminal box complete	9309.5008.4
7	0.200	Cable end clamp	9057.4100
8	0.150	C-rail stop	9057.4300
9	0.050	Cable gland, M25 x 1.5, FK, PVC	9055.3107
10	1.500	C-rail, 1 m	9309.3046.4
	3.000	C-rail, 2 m	9309.3047.4
	4.500	C-rail, 3 m	9309.3048.4
	6.000	C-rail, 4 m	9309.3049.4
	7.500	C-rail, 5 m	9309.3050.4
	9.000	C-rail, 6 m	9309.3051.4
11	0.500	Clamping device complete, a = 110	9309.5022.4
12	2.750	Counterweight	9309.5074.3

## 6.3 Conductor line



Item	 [kg]	Designation	N°
1	0.100	Power feed, EVD4	9309.3127.4
2	0.050	Suspension, VA806	9057.0103
3	1.100	Conductor line VA24, 4-pin, 1 m	9309.3058.4
	2.200	Conductor line VA24, 4-pin, 2 m	9309.3059.4
	3.300	Conductor line VA24, 4-pin, 3 m	9309.3060.4
	4.400	Conductor line VA24, 4-pin, 4 m	9309.3061.4
	5.500	Conductor line VA24, 4-pin, 5 m	9309.3062.4
4	0.100	Connection cap, VA804	9057.0552
5	0.300	Terminal box complete	9309.5008.4
6	0.200	Connection cable	9309.3071.4
7	0.050	Fixed suspension, VA850	9057.0104
8	0.100	End cap, VA802	9057.0151
9	0.110	Driving pin	9309.3070.4
10	0.600	Current collector trolley, PM425C, Standard	9057.0400
11	0.500	Clamping device complete, a = 110	9309.5022.4
12	2.750	Counterweight	9309.5074.3



<b>Customer data</b>			
Company _____		Date _____	
Address _____		Customer number _____	
Postal code _____		Phone number _____	
City - Country _____		Fax number _____	
Responsible person _____		Function _____	
<b>Crane system GISKB</b>			
<input type="checkbox"/> Single crane bridge		<input type="checkbox"/> Double crane bridge	<input type="checkbox"/> Suspended track
Load capacity _____ kg			
Length of the girder L _____ mm		Length of the track B _____ mm	
Span W _____ mm		Height of the room _____ mm	
Required lifting height _____ mm		Sketch see on back !	
<b>Suspension</b>			
Kind of suspension		<input type="checkbox"/> pendulating short	<input type="checkbox"/> pendulating from rod _____ mm
			<input type="checkbox"/> rigid
Ceiling construction		<input type="checkbox"/> Concrete ceiling	<input type="checkbox"/> Steel girder _____
			<input type="checkbox"/> Wooden truss _____
Suspension distance		<input type="checkbox"/> variable	<input type="checkbox"/> given _____ mm
<b>Travelling motions</b>			
Movement of the trolley		<input type="checkbox"/> push type	<input type="checkbox"/> electrical type
		<input type="checkbox"/> 1 speed	<input type="checkbox"/> 2 speeds
			<input type="checkbox"/> _____ m/min
Movement of the bridge		<input type="checkbox"/> push type	<input type="checkbox"/> electrical type
		<input type="checkbox"/> 1 speed	<input type="checkbox"/> 2 speeds
			<input type="checkbox"/> _____ m/min
<b>Hoist</b>			
<input type="checkbox"/> GIS Electric chain hoist		<input type="checkbox"/> Hand lifting gear	<input type="checkbox"/> _____
Type _____		Lifting capacity _____ kg	
Lifting speed		<input type="checkbox"/> 1 speed	<input type="checkbox"/> 2 speeds
			<input type="checkbox"/> _____ m/min
Lifting height (standard 3 m) _____ m		Operating time per day _____ hours	
<b>Control / Electricity</b>			
Control		<input type="checkbox"/> Operation from control switch of hoist	<input type="checkbox"/> Ideal control (control switch is movable independently)
Voltage		<input type="checkbox"/> 3 Ph 400V, 50Hz	<input type="checkbox"/> 1 Ph 230V, 50Hz
			<input type="checkbox"/> _____ V _____ Hz
Longitudinal power supply		<input type="checkbox"/> without	<input type="checkbox"/> Trailing cable
		<input type="checkbox"/> Contact line	<input type="checkbox"/> C-rail
Transversal power supply		<input type="checkbox"/> without	<input type="checkbox"/> Trailing cable
		<input type="checkbox"/> Contact line	<input type="checkbox"/> C-rail
<b>Location of the crane</b>			
<input type="checkbox"/> Workshop		<input type="checkbox"/> outdoor	<input type="checkbox"/> near acids/alkaline solutions
<input type="checkbox"/> _____			
<b>Installation</b>			
<input type="checkbox"/> by GIS		<input type="checkbox"/> by customers	<input type="checkbox"/> Stacker truck is available at building site
<b>Additional technical data/Customer requirements</b>			
<b>Required offer</b>			
<input type="checkbox"/> Short offer		<input type="checkbox"/> Approximate price	<input type="checkbox"/> Offer required by _____
<input type="checkbox"/> Detailed offer		<input type="checkbox"/> Date of realisation / desired delivery time _____	
GIS AG swiss lifting solutions CH - 6247 Schötz Phone +41 (0)41 984 11 33 E-mail tel@gis-ag.ch		<b>Enclosures</b> <input type="checkbox"/> Sketch _____ <input type="checkbox"/> Plan/Drawing _____ <input type="checkbox"/> _____	



