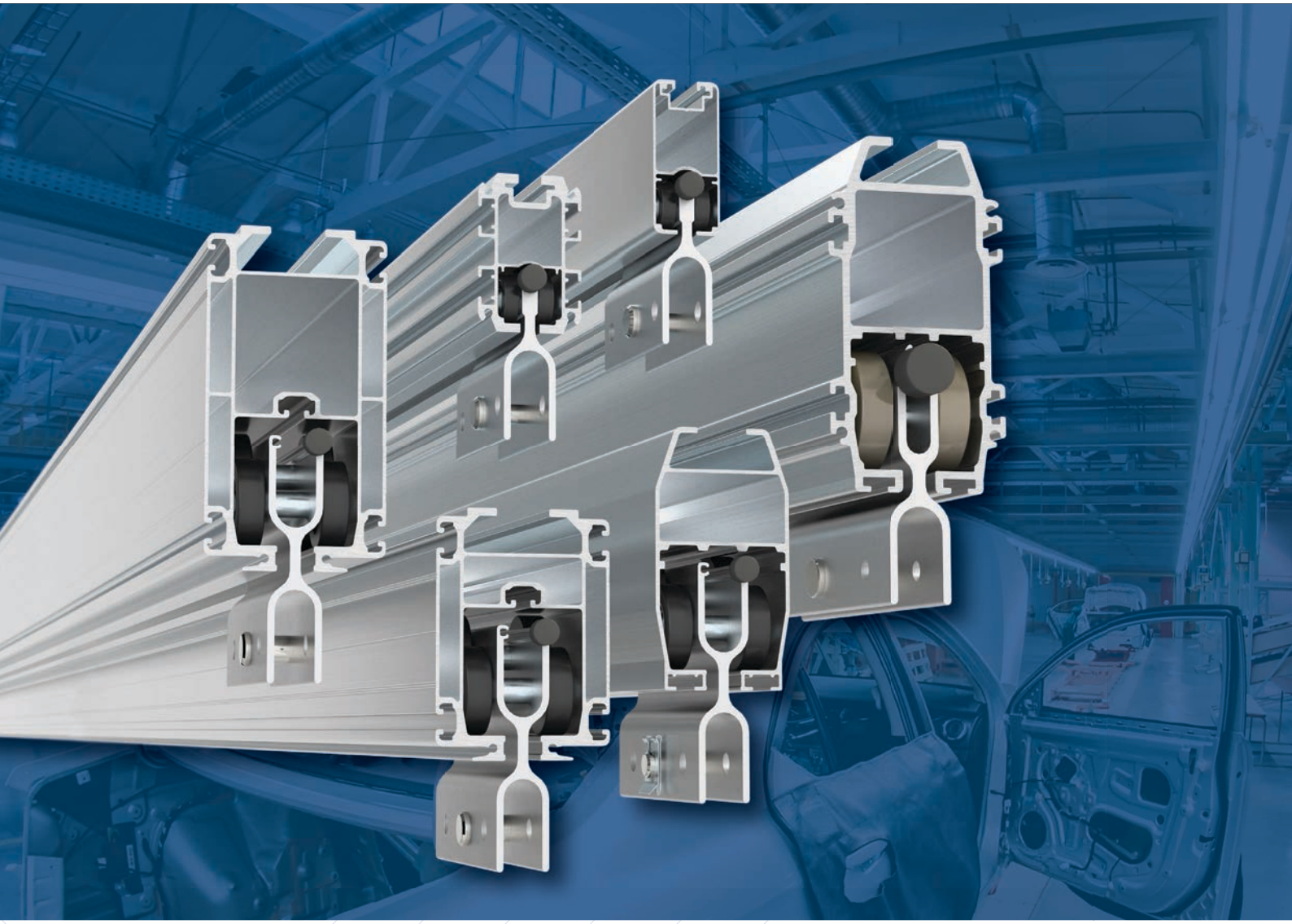
movomech®

WORLD-CLASS LIFTING SOLUTIONS



MECHRAIL™

LIGHTWEIGHT OVERHEAD HOIST SYSTEM IN ALUMINIUM

CATALOGUE 2018

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ABOUT LIGHTWEIGHT OVERHEAD HOIST SYSTEMS IN GENERAL

This product catalogue describes the various components in the Mechrail range of equipment and basic rules for selection. The product catalogue supports other sales tools for a correct selection of products. This document contains standard products available in price lists and sales configurator as well as some special applications that require handling by the Movomech sales support department.

TERMINOLOGY FOR LIGHTWEIGHT OVERHEAD HOIST SYSTEMS

Light-weight overhead hoist systems

A system with aluminium rails in which carriages, supports, lifting equipment and ancillaries are attached in order to provide ergonomic and flexible movement in the X and Y axles when lifting.

Runway

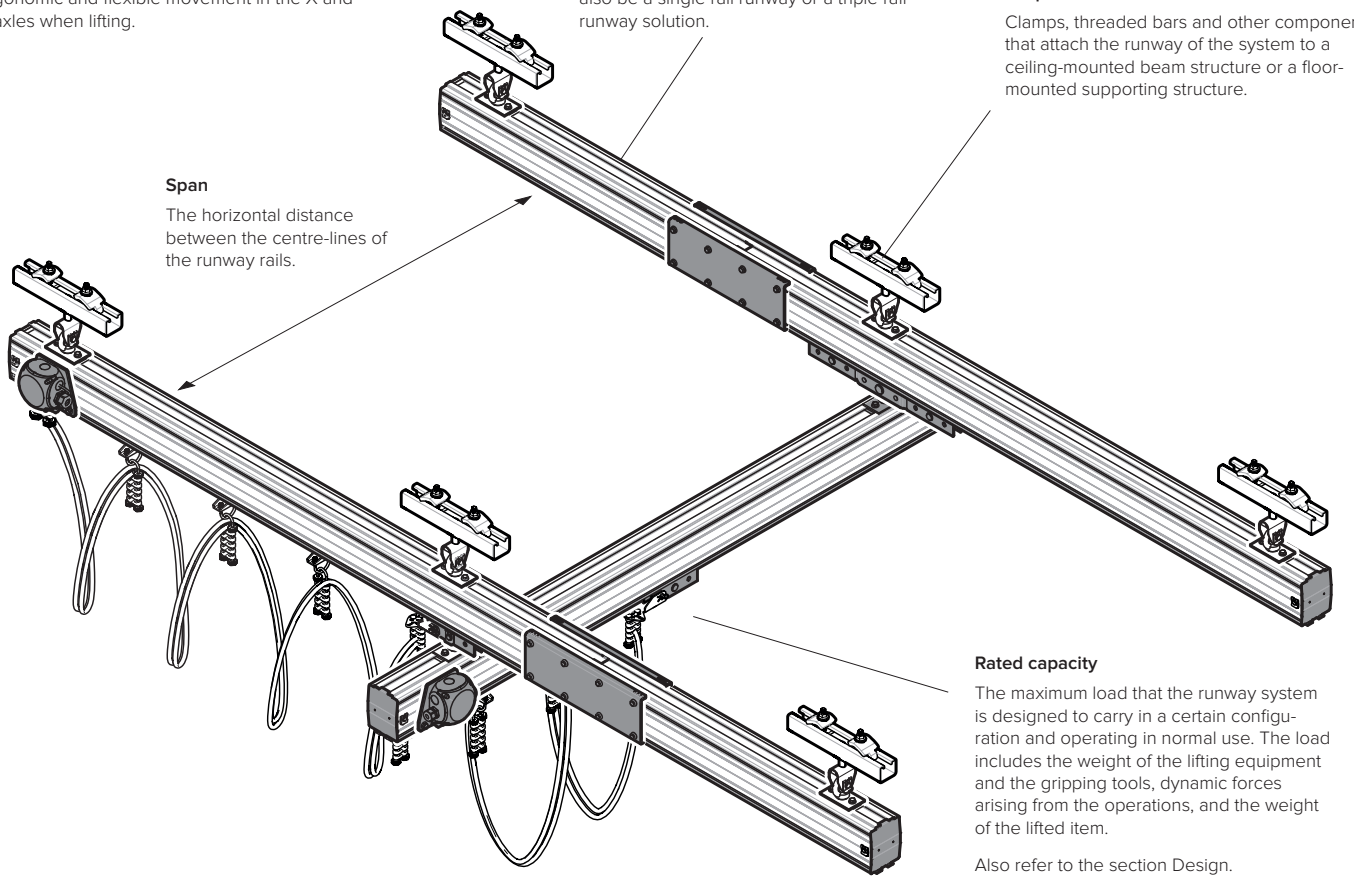
Stationary aluminium rails on which a hoist or other lifting equipment travels. A runway usually consists of two runway rails, but may also be a single rail runway or a triple rail runway solution.

Suspension

Clamps, threaded bars and other components that attach the runway of the system to a ceiling-mounted beam structure or a floor-mounted supporting structure.

Span

The horizontal distance between the centre-lines of the runway rails.

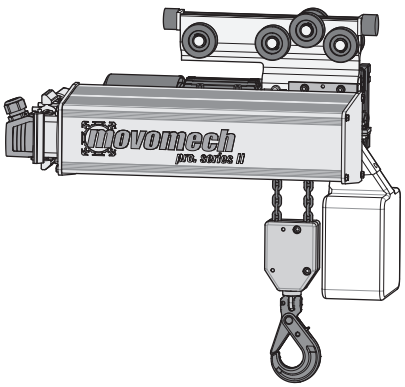


Rated capacity

The maximum load that the runway system is designed to carry in a certain configuration and operating in normal use. The load includes the weight of the lifting equipment and the gripping tools, dynamic forces arising from the operations, and the weight of the lifted item.

Also refer to the section Design.

An example of a simple ceiling-mounted overhead hoist system for e.g. lifting with an electric chain hoist.



Lifting equipment

The equipment needed to lift and lower a load.

GENERAL CHARACTERISTICS

About the Mechrail™ lightweight overhead hoist systems

Mechrail™ is a modular lightweight overhead hoist system of light aluminium rails for manual or powered handling of goods, designed to be used together with a number of different lifting devices.

The lightweight overhead hoist system is designed to be attached to a ceiling-mounted beam structure or a floor-mounted supporting structure. The system must be dimensioned for the forces acting on it when in operation, and this must be verified before commissioning the overhead hoist system.

Because of the hanging design, most cases will only have downward-going forces on the supporting structure. An exception is in case upward-going forces are created, e.g. if a torque absorbing load manipulator is mounted close to a runway.

Technical Regulations

The Movomech range of products are designed according to the state of the art for technical equipment, and meets the requirements in the applicable European Norms and Regulations. The Standards and Directives that apply to the product are stated in the Declaration of Conformity or the Manufacturers declaration supplied with the product.

Safety Precautions

The documentation provides appropriate instructions for the user to ensure safe operation and simple maintenance.

All personnel that transport, install, put into use, operate, maintain and repair the Movomech equipment and attached equipment must have read and understood:

- the Operating Instructions,
- the Safety Instructions, and
- the Safety Precautions in the various sections.

To avoid erroneous use and to ensure uninterrupted operation with our products, these Operating Instructions must always be available for the user/operator.

Installing the Lightweight Overhead Hoist System

The overhead hoist system must be installed using authentic components supplied or approved by Movomech. Components from other sources may carry a risk for the equipment or the personnel and voids any warranty claim.

When installing the equipment all safety and installing instructions in the manual must be observed and the installation work must be documented. During the installation work the work area must be closed for unauthorized persons.

The installation work requires skilled personnel and suitable tools in order to ensure safe and reliable operation. We recommend that the installation work is only performed by authorized personnel or an experienced service technician, authorized by the manufacturer.

Preventive Maintenance

The overhead hoist system is designed using nodular components requiring minimal maintenance. As a general rule, the tightening torques of the screw joints must be check regularly, and also the state of the safety equipment and wear parts. The intervals for preventive maintenance depend on the actual usage of the system, but should be performed at least annually.

See the product manual for further information.

COMPONENT PROPERTIES

Runway rails

The Mechrail runway rails are made of aluminium. They are anodized and require no maintenance. They are manufactured in EN-AW 6063 T6 aluminium alloy according to SS-EN 755-2:2016, anodized colour C0 (natural).

Accessory range

A large part of the components in the Mechrail range are coated by galvanizing or anodizing, which makes them better resistant against wear and tear than painted components.

TEMPERATURE AND ENVIRONMENTAL CONDITIONS

Temperature and environmental limitations

This product is designed to be used indoors in typical industrial environments such as production spaces for the vehicle industry and general manufacturing.

Temperature range +5 to +40 °C.

Atmospheric corrosion category C2.

Noise level < 70dB (A).

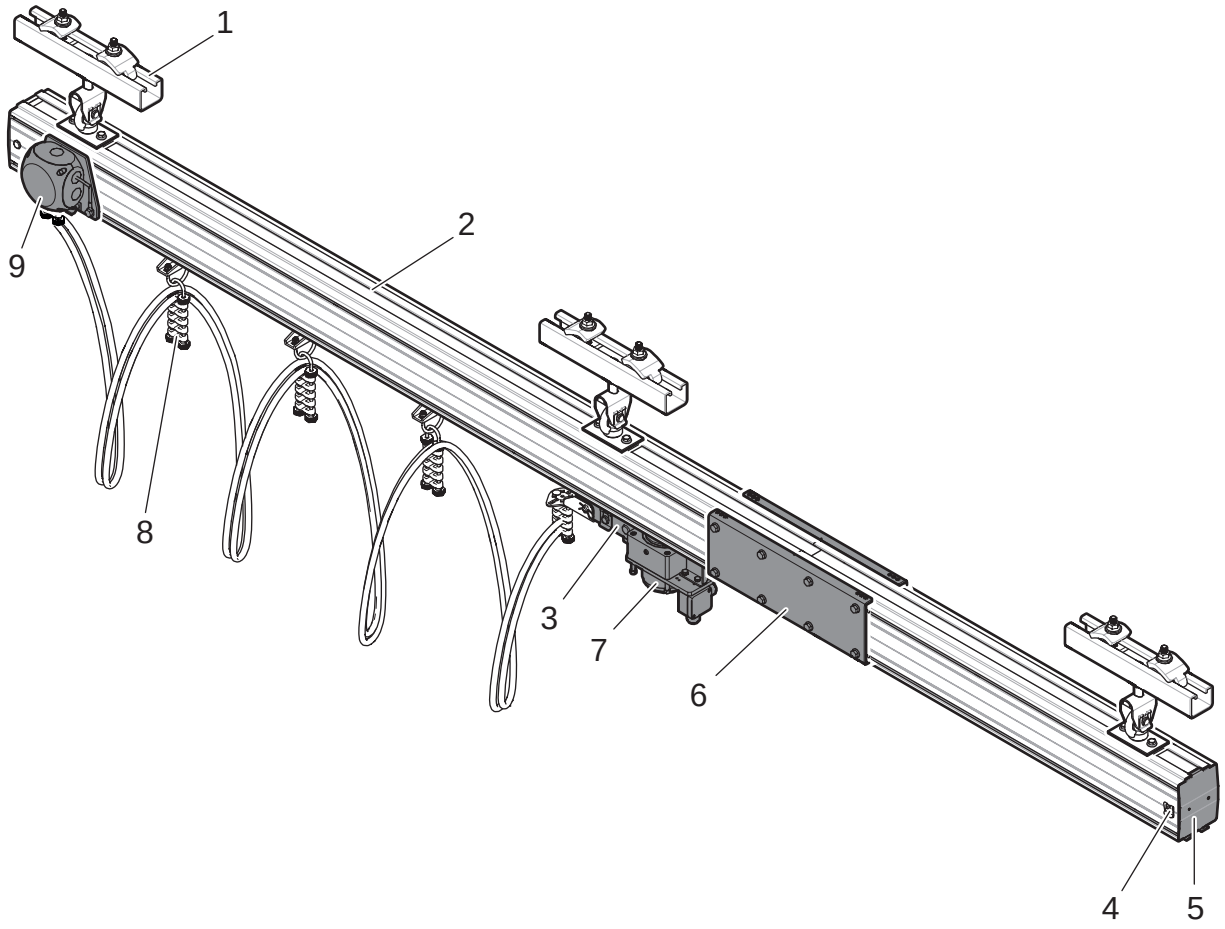
ATEX

This product is not ATEX classified according to the EU directive for equipment in explosive environments.

CONFIGURATION EXAMPLE

Example 1: Single runway

Single runway - flexible suspension
Media supply - cable carriages

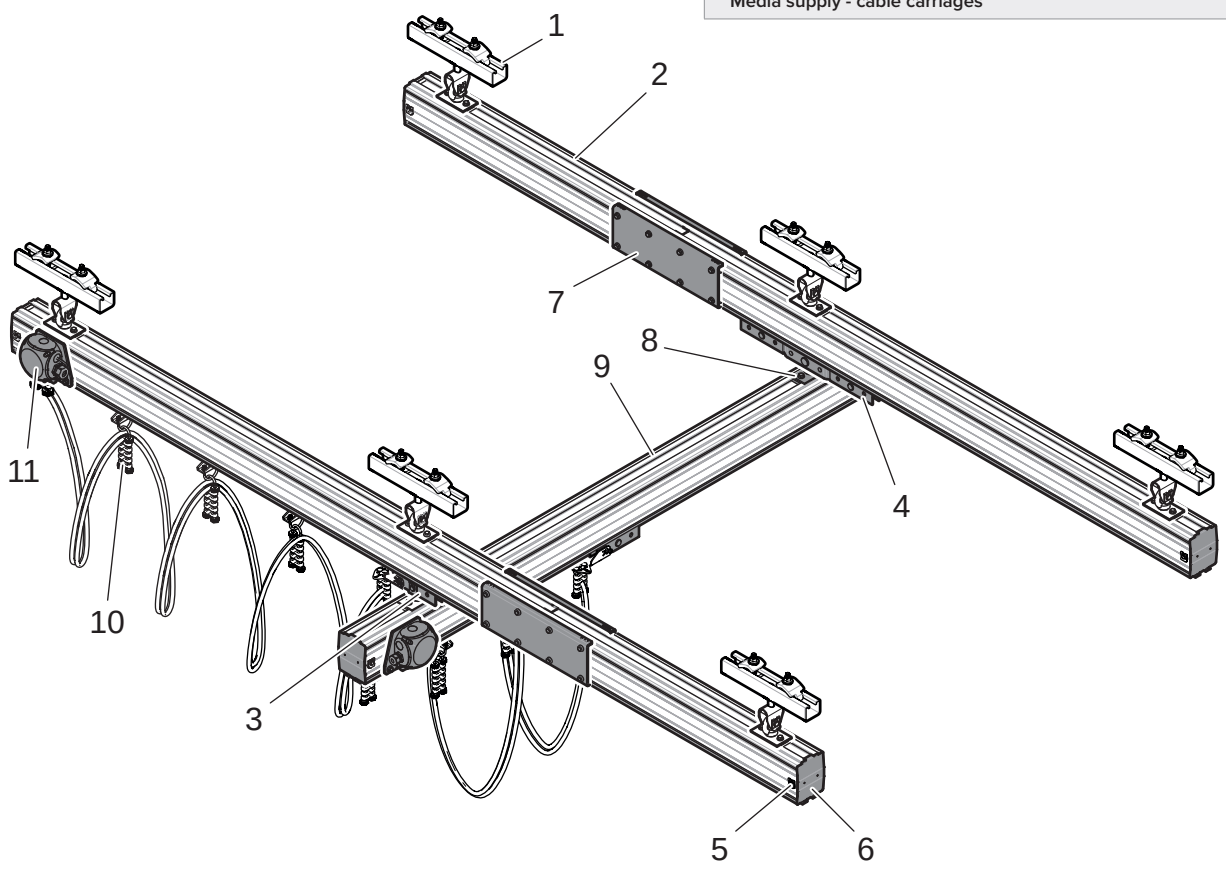


Pos.	Component	Type	Section catalogue page	Note
1	Suspension of runway	(A) Short	page 32	
2	Rail, runway	AHB140	page 28	
3	Trolley	(A) Single trolley	page 38	
4	End stop	AHB140/190	page 40	
5	End cover	AHB140	page 42	
6	Fishplate kit	AHB140	page 43	
7	Brake	(A) Electric 230 V	page 56	
8	Media supply	Cable carriage	page 61	
9	Connecting unit	AHB140/190	page 84	

A single runway is used in applications that only require movement in one direction.

Example 2: Single bridge

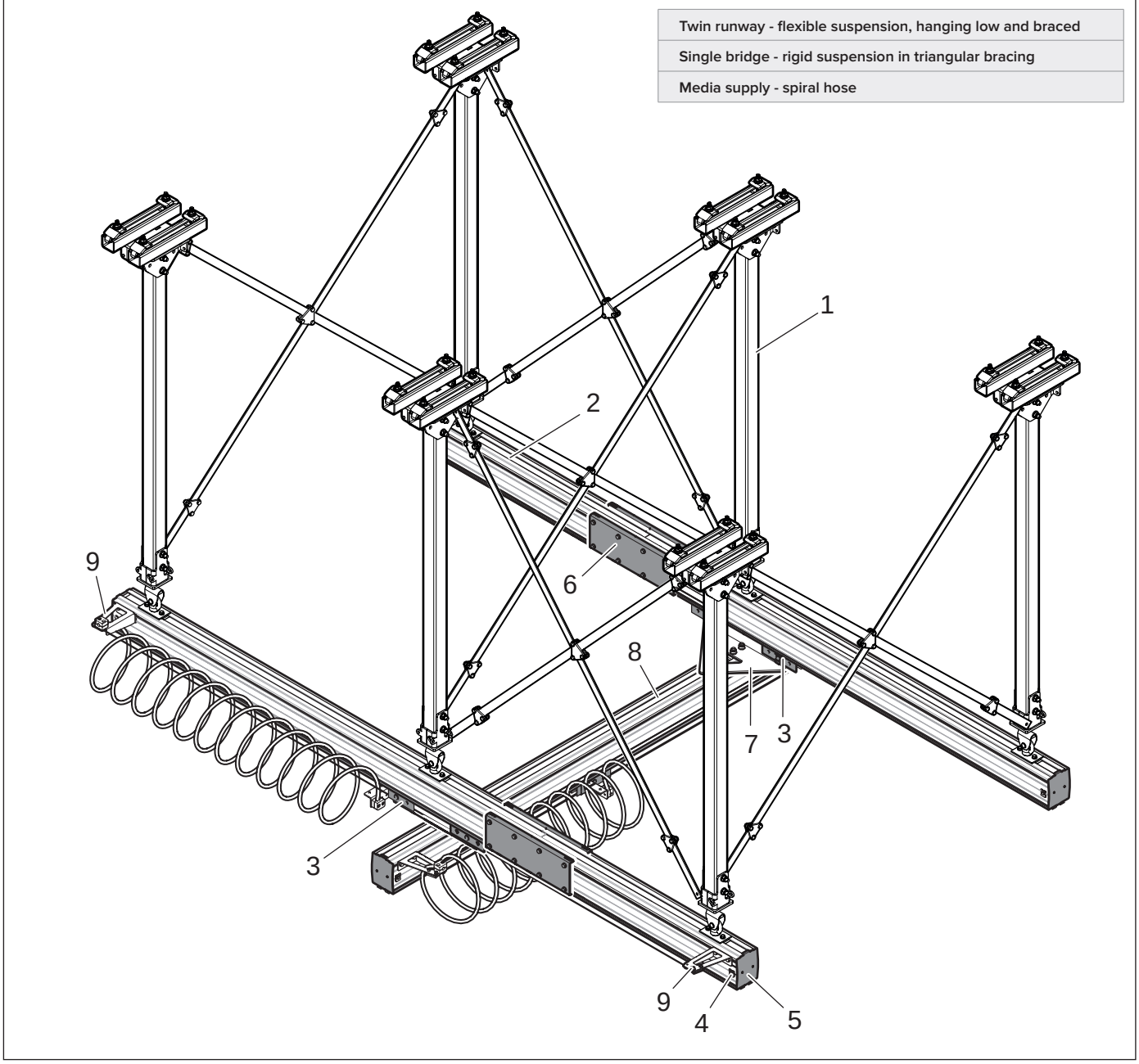
Twin runway - flexible suspension
Single bridge - flexible suspension
Media supply - cable carriages



Pos.	Component	Type	Section catalogue page	Note
1	Suspension of runway	(A) Short	page 32	
2	Rail, runway	AHB140	page 28	
3	Trolley	(A) Single trolley	page 38	
4	Trolley	(B) Twin trolley	page 38	
5	End stop	AHB140/190	page 40	
6	End cover	AHB140	page 42	
7	Fishplate kit	AHB140	page 43	
8	Bridge suspension	Crane beam suspension (A)	page 44	
9	Rail, bridge	AHB140	page 28	
10	Media supply	Cable carriage	page 61	
11	Connecting unit	AHB140/190	page 84	

Twin runway with single bridge suspended in a crane beam suspension (A) is the most common way to configure a rail system when using non-torque absorbing lifters.

Example 3: Long suspensions and triangular bracing

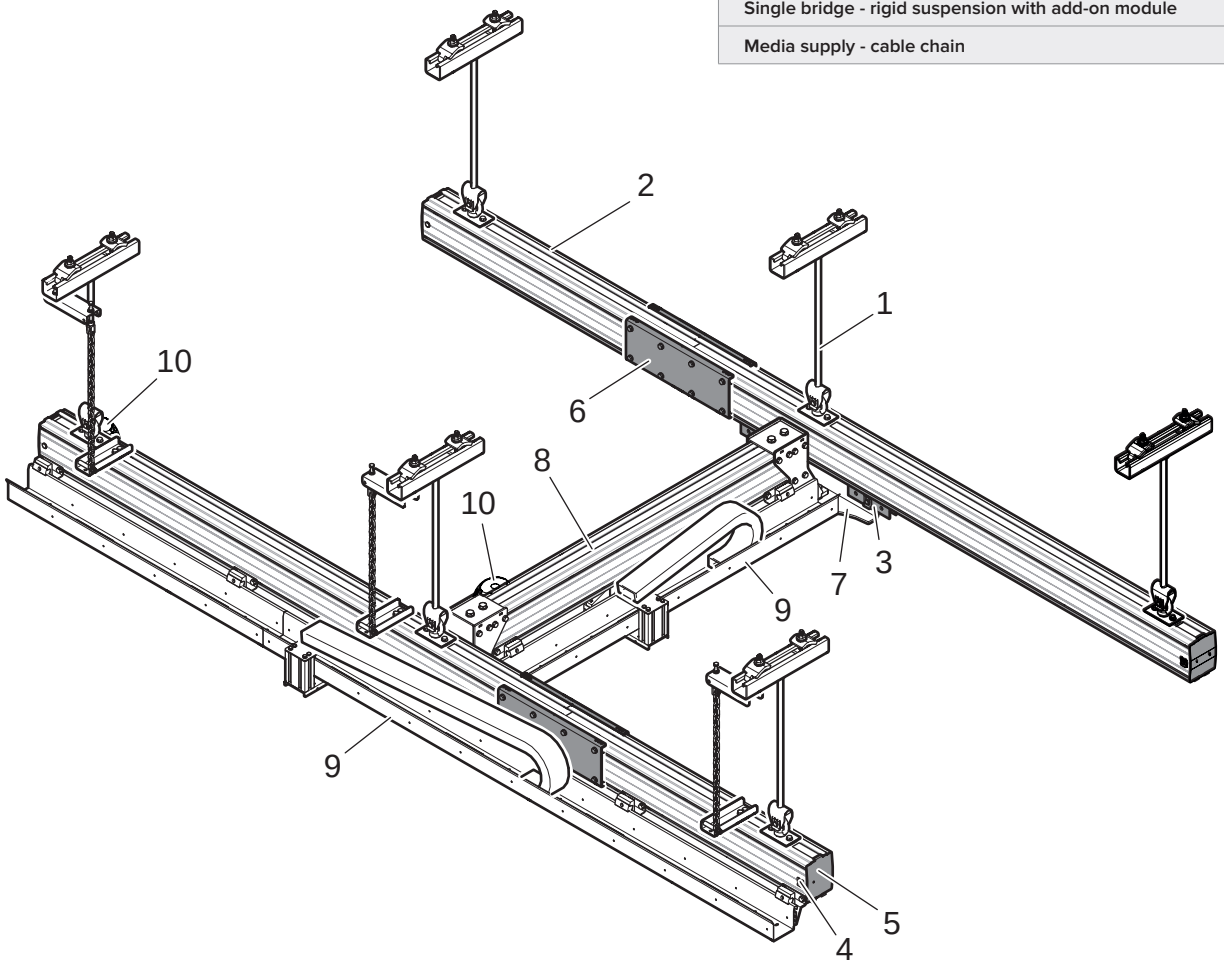


Pos.	Component	Type	Section catalogue page	Note
1	Suspension of runway	(C) Long	page 32	
2	Rail, runway	AHB140	page 28	
3	Trolley	(A) Single trolley	page 38	
4	End stop	AHB140/190	page 40	
5	End cover	AHB140	page 42	
6	Fishplate kit	AHB140	page 43	
7	Bridge suspension	Triangular bracing	page 46	
8	Rail, bridge	AHB140	page 28	
9	Media supply	Spiral hose	page 59	

Hanger (C) Long is used when the overhead beams are higher up than necessary, and the runway system needs to be hanging low.
Triangular bracing provides a rigid mounting that only allows movement in the direction of the runway rail.

Example 4: Single bridge with add-on module

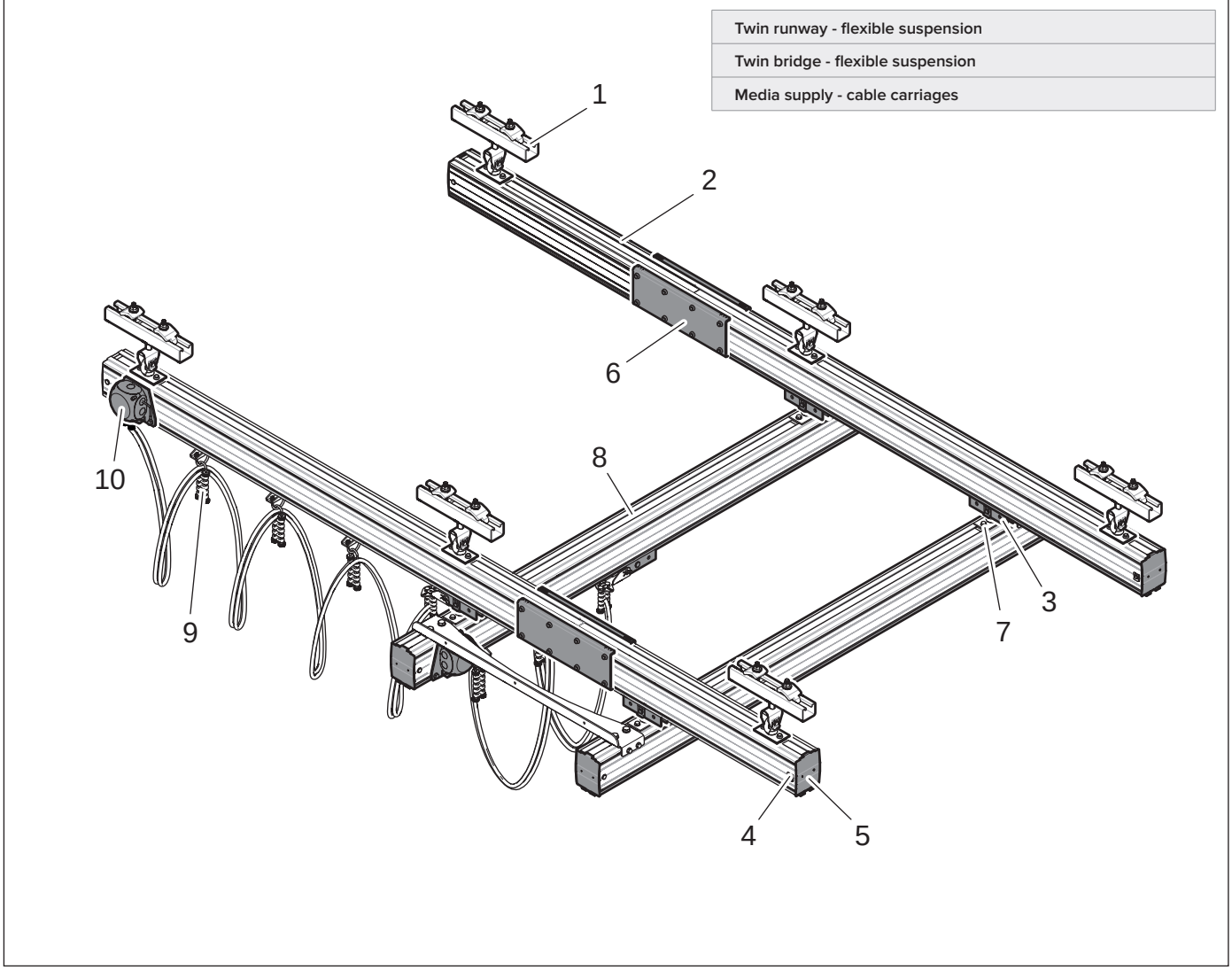
Twin runway - flexible suspension, hanging low
Single bridge - rigid suspension with add-on module
Media supply - cable chain



Pos.	Component	Type	Section catalogue page	Note
1	Suspension of runway	(B) Middle	page 32	
2	Rail, runway	AHB140	page 28	
3	Trolley	(A) Single trolley	page 38	
4	End stop	AHB140/190	page 40	
5	End cover	AHB140	page 42	
6	Fishplate kit	AHB140	page 43	
7	Bridge suspension	Add-on module	page 47	
8	Rail, bridge	AHB140	page 28	
9	Media supply	Cable chain	page 76	
10	Connecting unit	AHB140/190	page 84	

Add-on module in the bridge minimizes the total height of the runway system and is used in buildings with low ceiling height.

Example 5: Twin bridge

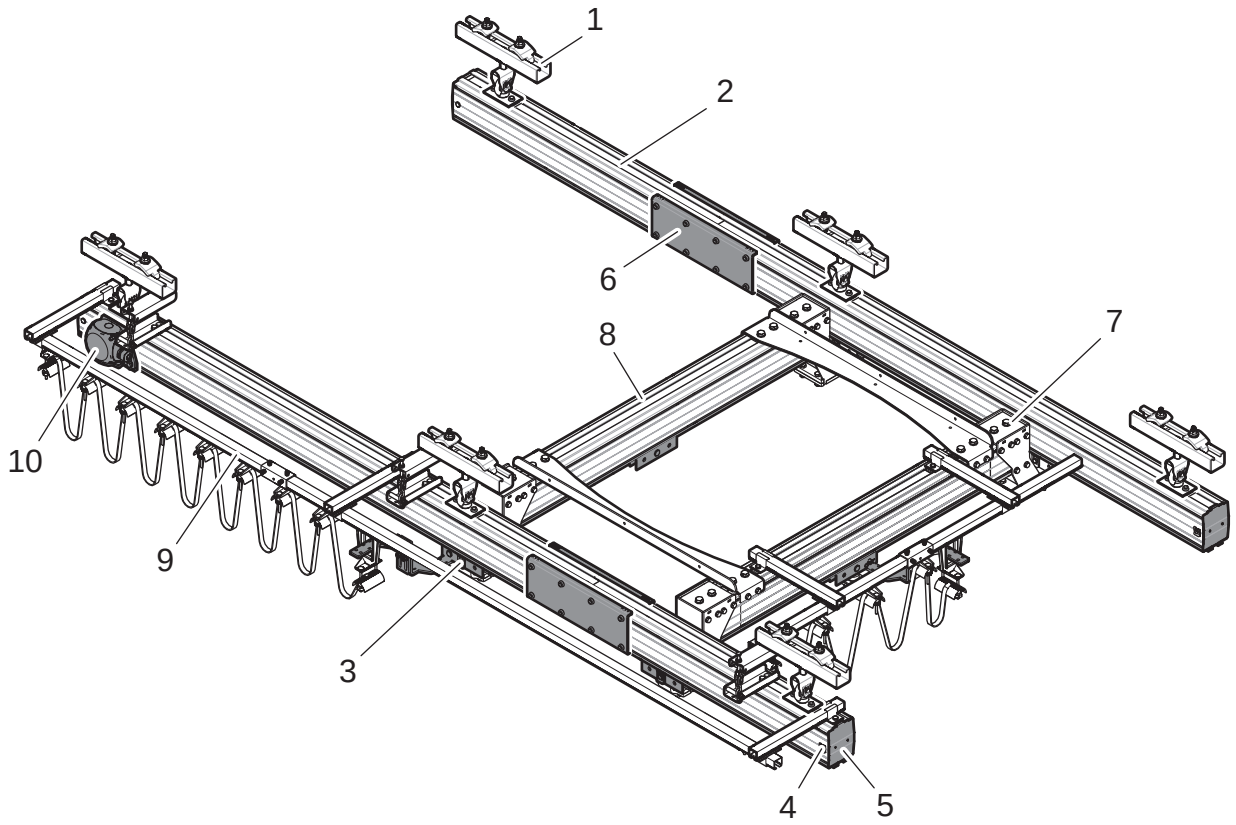


Pos.	Component	Type	Section catalogue page	Note
1	Suspension of runway	(A) Short	page 32	
2	Rail, runway	AHB140	page 28	
3	Trolley	(A) Single trolley	page 38	
4	End stop	AHB140/190	page 40	
5	End cover	AHB140	page 42	
6	Fishplate kit	AHB140	page 43	
7	Bridge suspension	Crane beam suspension (A)	page 44	
8	Rail, bridge	AHB140	page 28	
9	Media supply	Cable carriage	page 61	
10	Connecting unit	AHB140/190	page 84	

Twin runway with twin bridge suspended in crane beam suspension (A) is the most common way to configure a rail system when using torque absorbing lifters.

Example 6: Twin bridge with add-on module

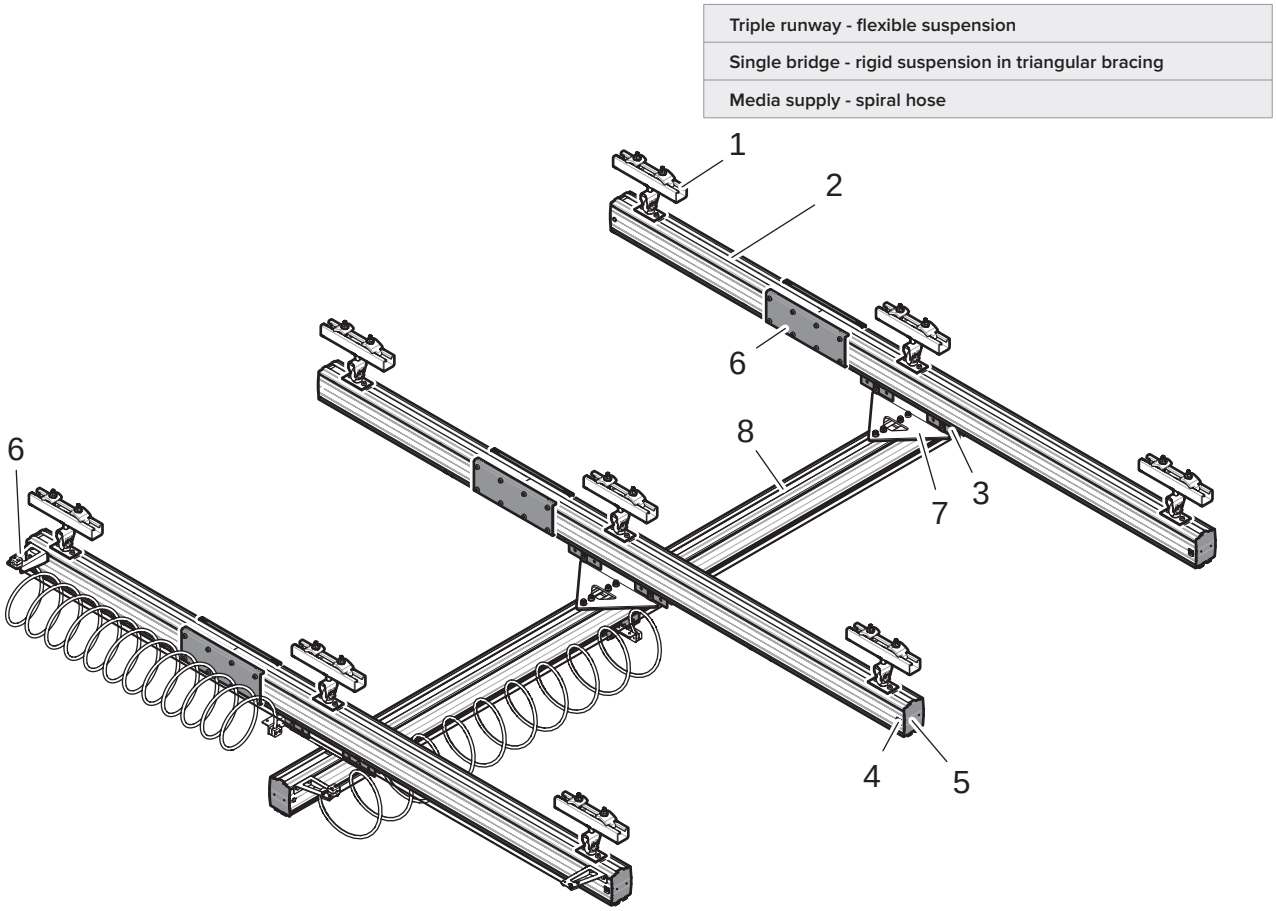
Twin runway - flexible suspension
Twin bridge - rigid suspension with add-on module
Media supply - cable trolleys in C-rail



Pos.	Component	Type	Section catalogue page	Note
1	Suspension of runway	(A) Short	page 32	
2	Rail, runway	AHB140	page 28	
3	Trolley	(A) Single trolley	page 38	
4	End stop	AHB140/190	page 40	
5	End cover	AHB140	page 42	
6	Fishplate kit	AHB140	page 43	
7	Bridge suspension	Add-on module	page 47	
8	Rail, bridge	AHB140	page 28	
9	Media supply	Cable trolley in C-rail	page 68	
10	Connecting unit	AHB140/190	page 84	

A cable trolley in C-rail is used to be able to range over a longer work area, and to avoid cables and hoses hanging down in the work area.

Example 7: Triple runway

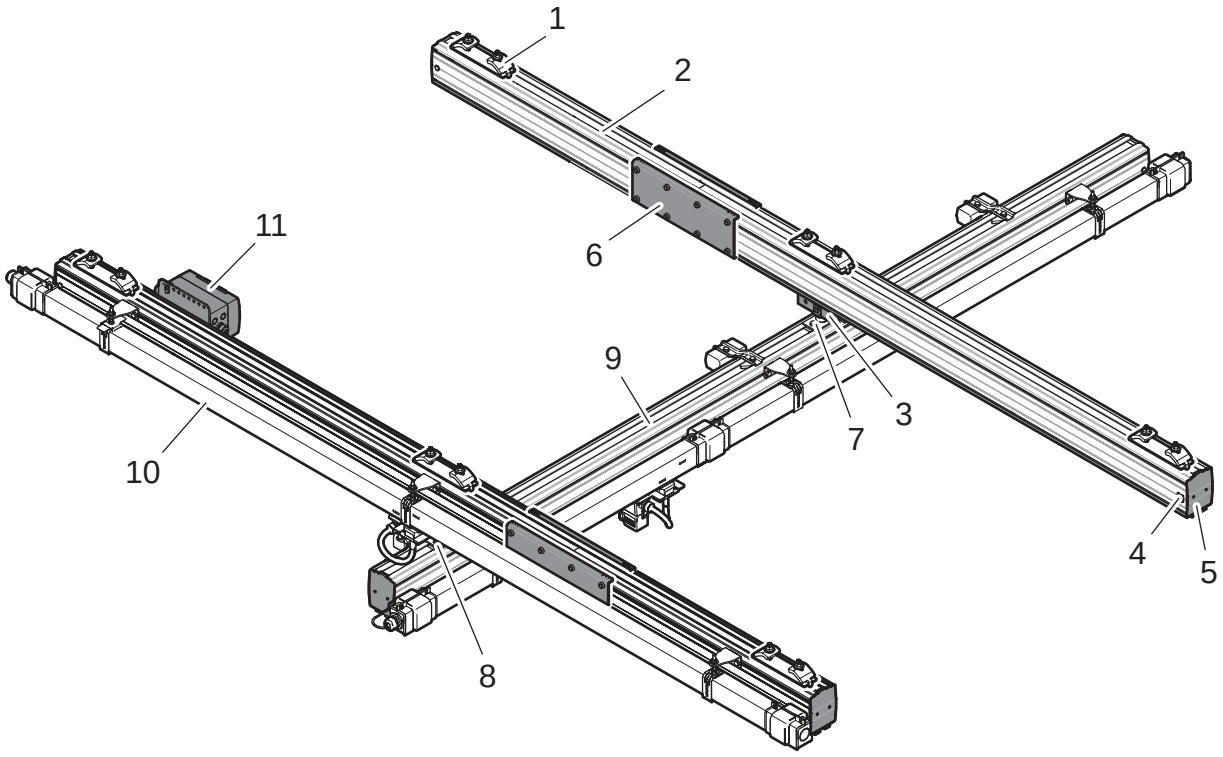


Pos.	Component	Type	Section catalogue page	Note
1	Suspension of runway	(A) Short	page 32	
2	Rail, runway	AHB140	page 28	
3	Trolley	(A) Single trolley	page 38	
4	End stop	AHB140/190	page 40	
5	End cover	AHB140	page 42	
6	Fishplate kit	AHB140	page 43	
7	Bridge suspension	Triangular bracing	page 46	
8	Rail, bridge	AHB140	page 28	
9	Media supply	Spiral hose	page 59	

Triple runway system makes it possible for the bridge to have a larger span.

Example 8: Single bridge with overhang

Twin runway - rigid suspension, closely mounted
Single bridge - flexible suspension
Media supply - power rail

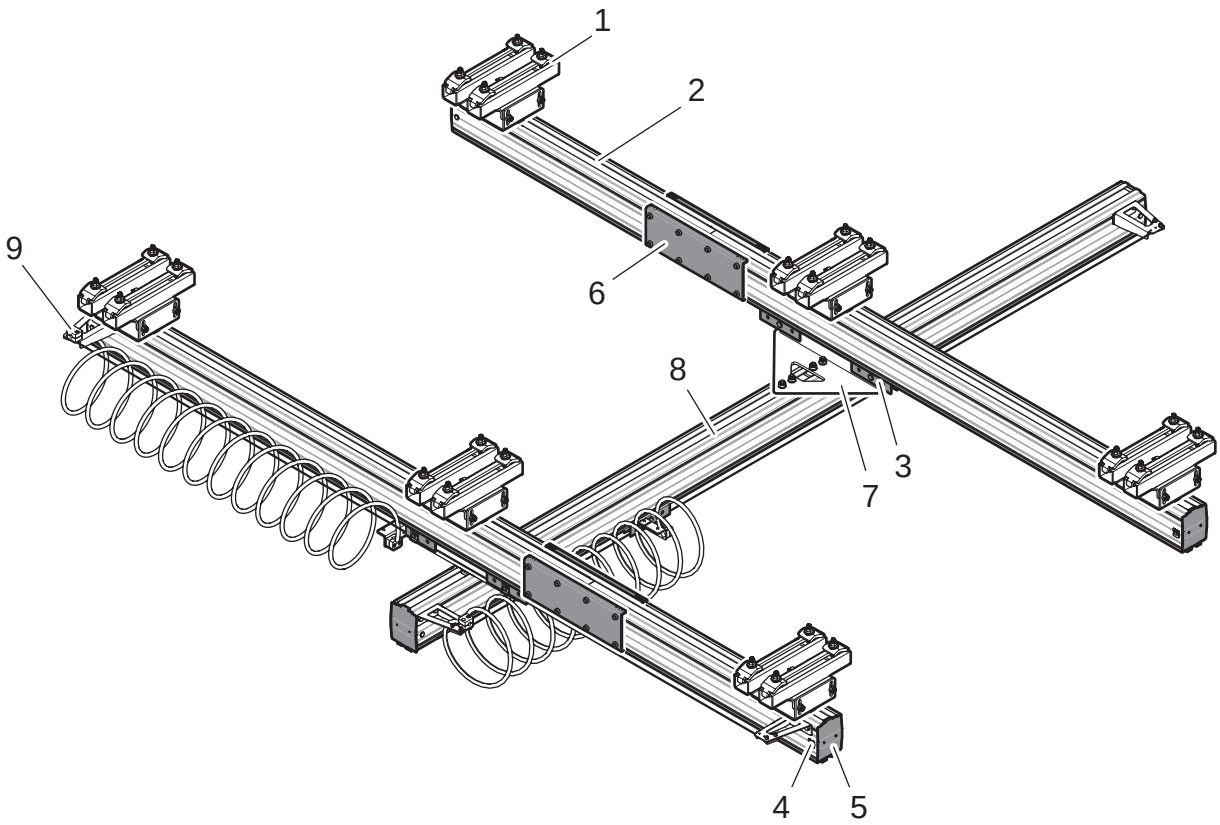


Pos.	Component	Type	Section catalogue page	Note
1	Suspension of runway	(D) Closely mounted	page 32	
2	Rail, runway	AHB140	page 28	
3	Trolley	(A) Single trolley	page 38	
4	End stop	AHB140/190	page 40	
5	End cover	AHB140	page 42	
6	Fishplate kit	AHB140	page 43	
7	Bridge suspension	Crane beam suspension (A)	page 44	
8	Bridge suspension	Crane beam suspension (C) - ball joint	page 44	For forces directed upwards
9	Rail, bridge	AHB140	page 28	
10	Media supply	Power rail	page 79	
11	Connecting unit	Fuse box AHB140/190	page 84	

The preferred solution when supplying power to several bridges.

Example 9: Closely mounted single bridge with overhang and triangular bracing

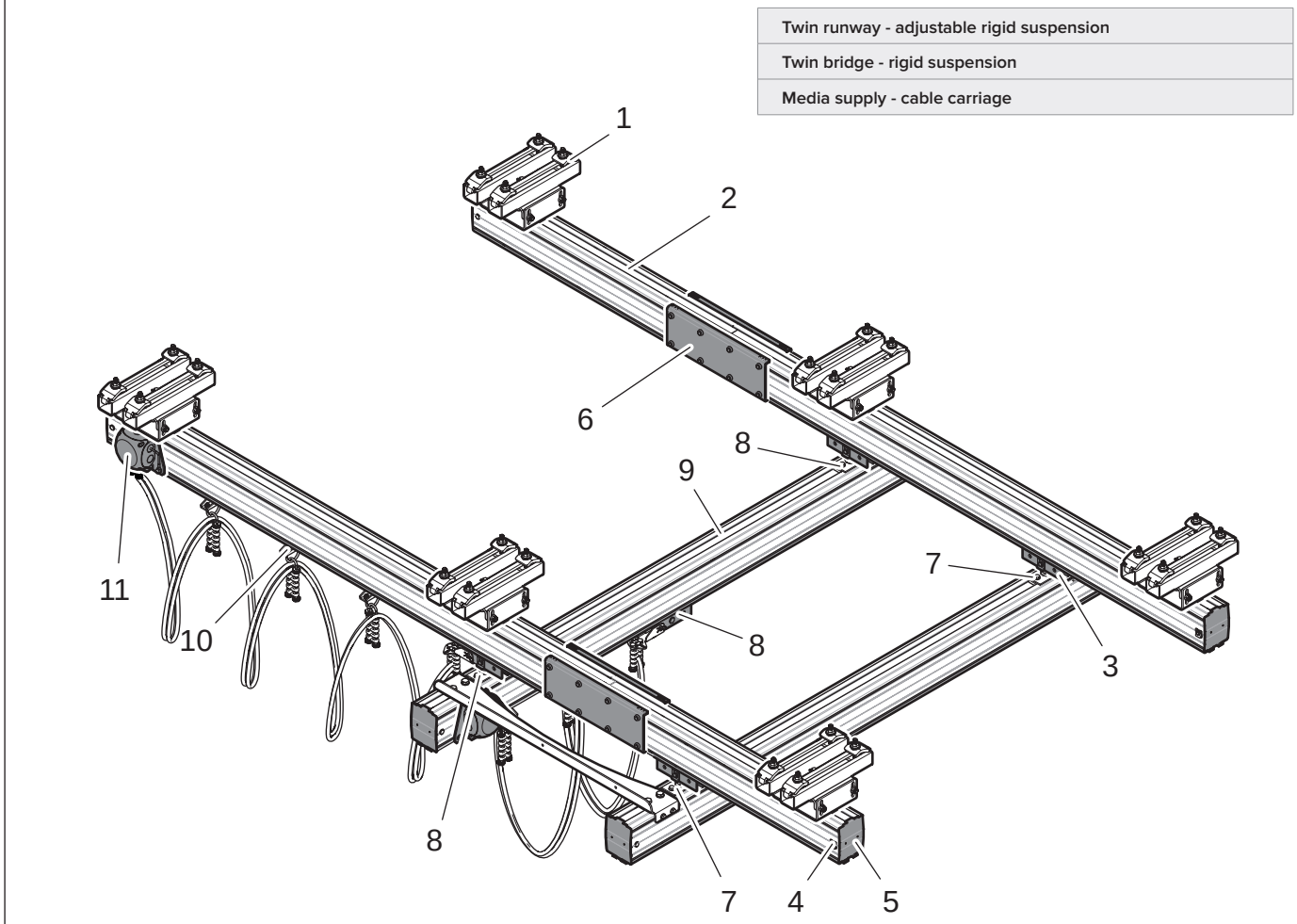
Twin runway - adjustable rigid suspension
Single bridge - rigid suspension in triangular bracing
Media supply - spiral hose



Pos.	Component	Type	Section catalogue page	Note
1	Suspension of runway	(F) Closely mounted, adjustable	page 32	For forces directed upwards
2	Rail, runway	AHB140	page 28	
3	Trolley	(A) Single trolley	page 38	
4	End stop	AHB140/190	page 40	
5	End cover	AHB140	page 42	
6	Fishplate kit	AHB140	page 43	
7	Bridge suspension	Triangular bracing	page 47	For forces directed upwards
8	Rail, bridge	AHB140	page 28	
9	Media supply	Spiral hose	page 59	

Closely mounted, adjustable suspension (F) is used for systems that have a single bridge, subject to forces directed upwards, e.g. when the bridge has a major part hanging outside the runway, or in case of a telescoping bridge.

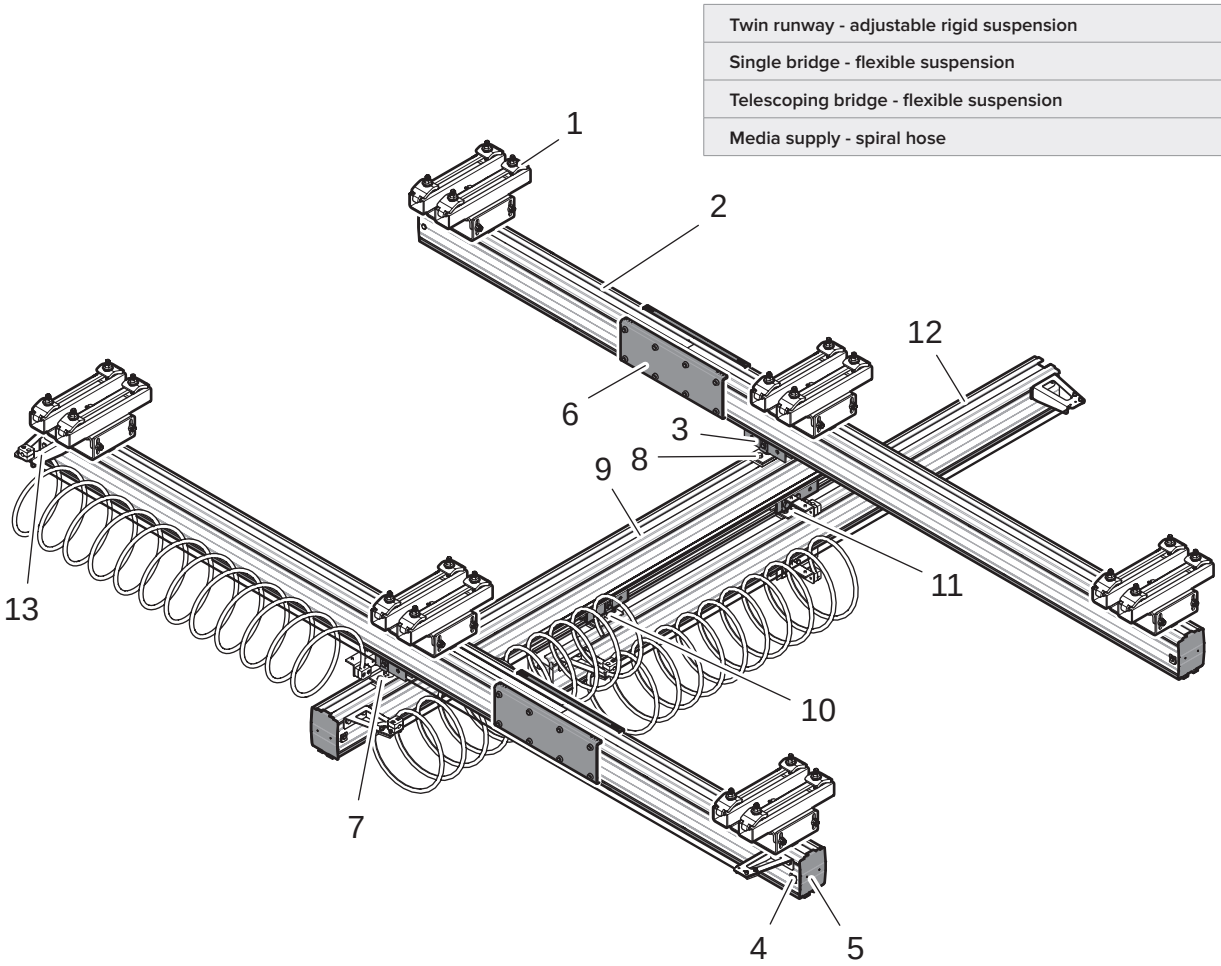
Example 10: Closely mounted twin bridge



Pos.	Component	Type	Section catalogue page	Note
1	Suspension of runway	(F) Closely mounted, adjustable	page 32	For forces directed upwards
2	Rail, runway	AHB140	page 28	
3	Trolley	(A) Single trolley	page 38	
4	End stop	AHB140/190	page 40	
5	End cover	AHB140	page 42	
6	Fishplate kit	AHB140	page 43	
7	Bridge suspension	Crane beam suspension (C)	page 44	For forces directed upwards
8	Bridge suspension	Crane beam suspension (A)	page 44	
9	Rail, bridge	AHB140	page 28	
10	Media supply	Cable carriage	page 61	
11	Connecting unit	(C) Round / round	page 84	

Closely mounted, adjustable suspension (F) is used for systems that have a twin bridge subject to forces directed upwards, e.g. when using torque absorbing lifters, or in case of a telescoping crane.

Example 11: Telescoping single bridge



Pos.	Component	Type	Section catalogue page	Note
1	Suspension of runway	(F) Closely mounted, adjustable	page 32	For forces directed upwards
2	Rail, runway	AHB140	page 28	
3	Trolley	(A) Single trolley	page 38	
4	End stop	AHB140/190	page 40	
5	End cover	AHB140	page 42	
6	Fishplate kit	AHB140	page 43	
7	Bridge suspension	Crane beam suspension (C) - ball joint	page 44	For forces directed upwards
8	Bridge suspension	Crane beam suspension (A)	page 44	
9	Rail, bridge	AHB140	page 28	
10	Suspension of telescoping bridge	Crane beam suspension (C)	page 44	For forces directed upwards
11	Suspension of telescoping bridge	Crane beam suspension (A)	page 44	
12	Rail, telescoping bridge	AHB140	page 28	
13	Media supply	Spiral hose	page 59	

A telescoping bridge is used e.g. when the crane rail needs to extend over an assembly line but to be out of the way as items move along the assembly line.

PLANT DESIGN

Plant Design – EConfig

The Mechrail aluminium lightweight overhead hoist system is a modern and modular system for loads up to 1000 kg.

It is vital that the plant design is done correctly. Therefore it is necessary to read and understand the section Plant Design.

When deciding the size of the Mechrail lightweight overhead hoist system, we recommend that you use the Movomech web based configuring tool - EConfig, at http://www.movomech.se.

Rated capacity

The rated capacity is the maximum load that the runway system is designed to carry in a certain configuration and in normal operation. The load includes the weight of the lifting equipment and the gripping tools, the weight of the lifted item, and dynamic forces arising from the operations.

When operating with torque absorbing lifting tools, telescoping bridges, etc., the toughest load case will be used for calculating the design.

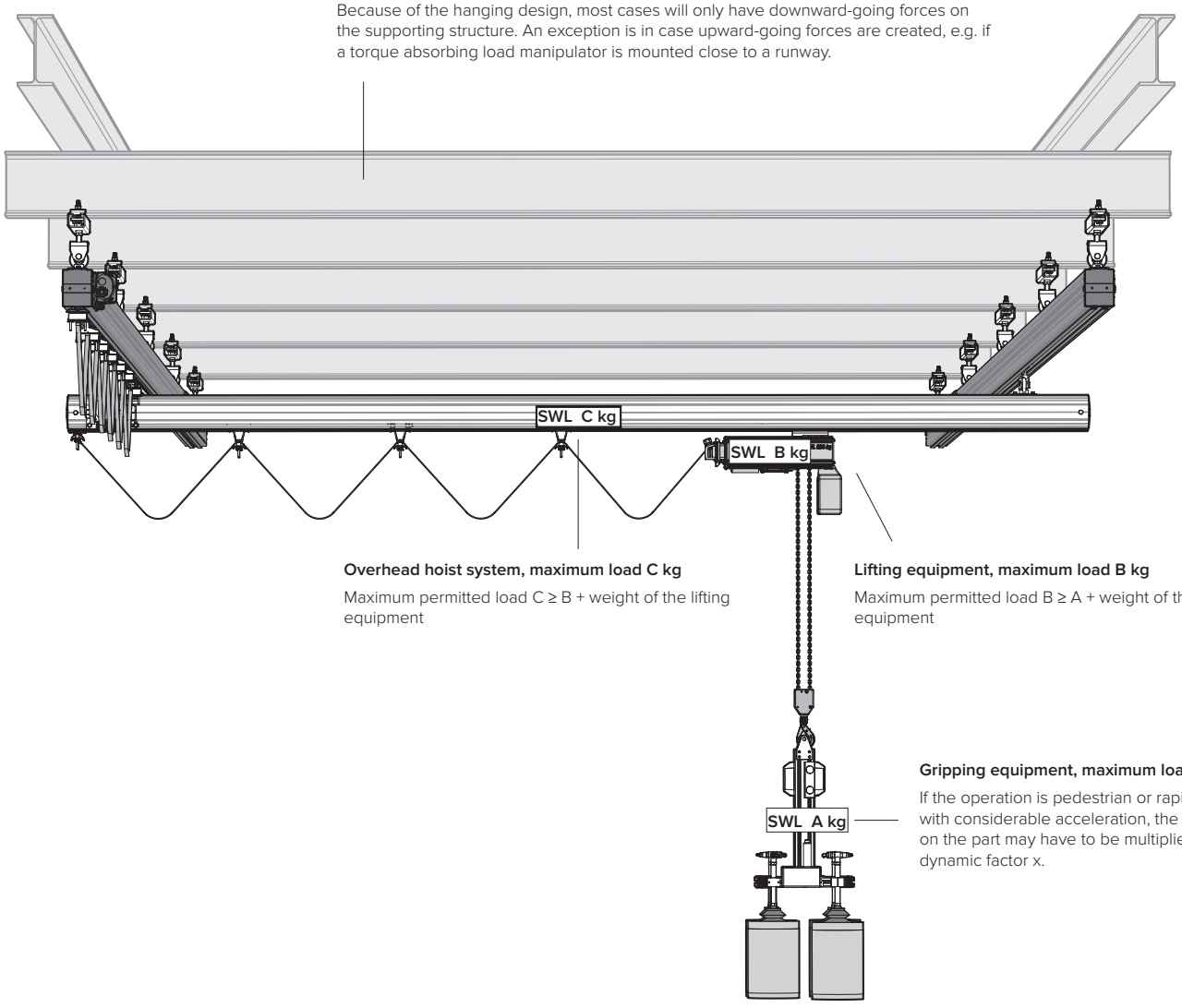
Marking with the Maximum Permitted Load

The overhead hoist system has a modular design and may be equipped with various types of lifting equipment. The main rule is that any part of the handling solution must be clearly marked with its respective maximum permitted load, see example below.

Ceiling-mounted steel structure

This design must be dimensioned for the forces acting on it when in operation, and this must be verified before commissioning the overhead hoist system.

Because of the hanging design, most cases will only have downward-going forces on the supporting structure. An exception is in case upward-going forces are created, e.g. if a torque absorbing load manipulator is mounted close to a runway.



Overhead hoist system, maximum load C kg

Maximum permitted load C ≥ B + weight of the lifting equipment

Lifting equipment, maximum load B kg

Maximum permitted load B ≥ A + weight of the lifting equipment

Gripping equipment, maximum load A kg

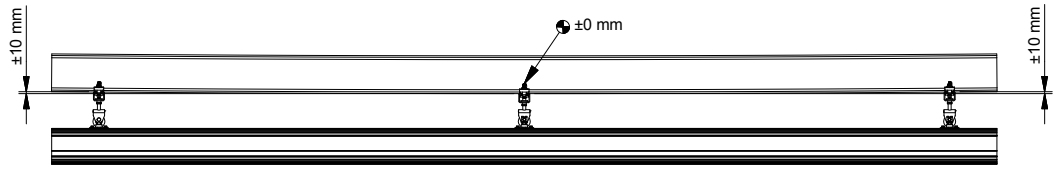
If the operation is pedestrian or rapid and with considerable acceleration, the loading on the part may have to be multiplied by a dynamic factor x.

Example of marking for maximum permitted load for each level respectively in a simple ceiling-mounted overhead hoist system.

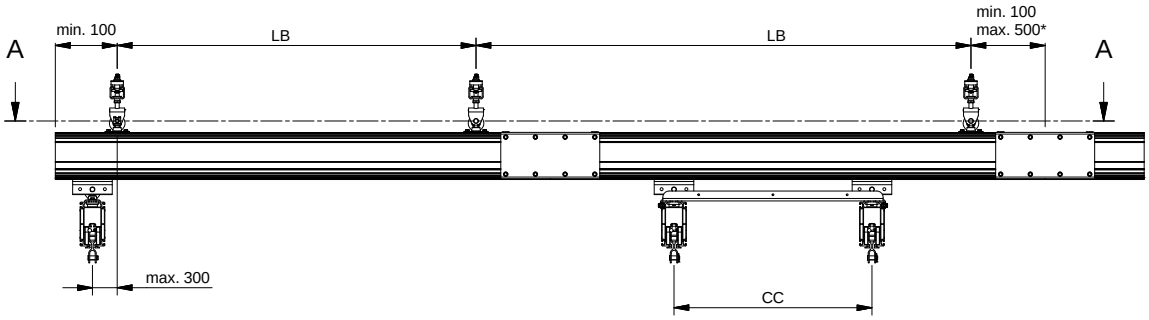
TOLERANCE REQUIREMENTS AND INSTALLATION DIMENSIONS

Horizontal level - overhead beams

The overhead beams mustn't exceed the tolerance ±10 mm in the horizontal level



Installation Dimensions



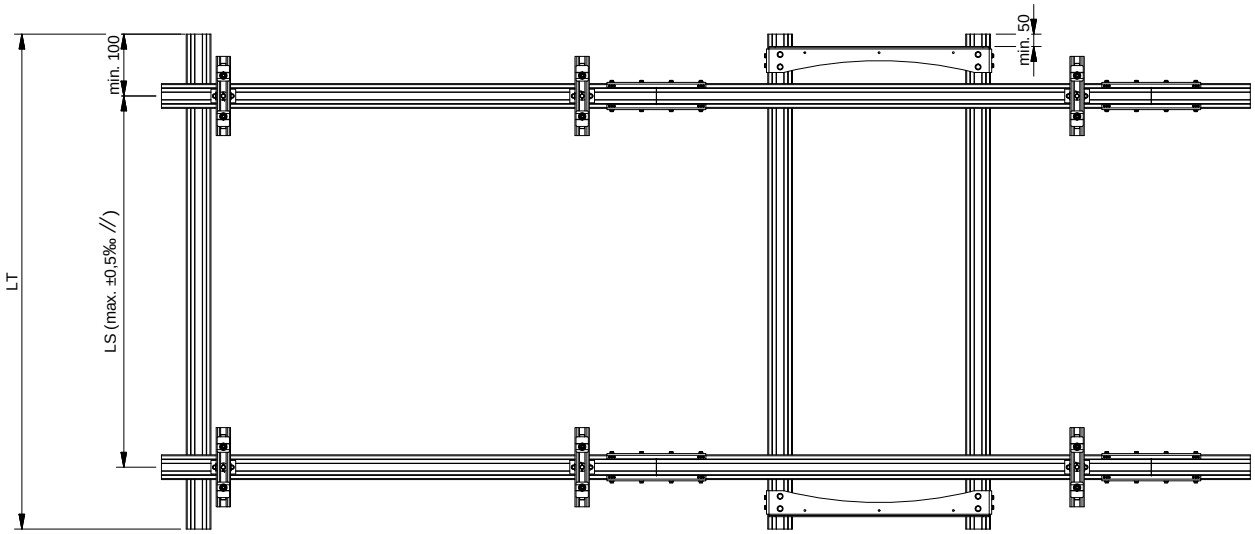
LB = runway hanging distance
LT = bridge length
LS = bridge span
CC = distance centre to centre, twin bridge
X = component-dependant distance

INFORMATION

Only one fishplate may be fitted within the hanging distance LB and the distance from the hanger to the fishplate may not exceed 500 mm. A fishplate may only be used for bridges in three-string overhead hoist systems. The above does not apply for AHB140/190 where the joint may be placed anywhere, but **the minimum distance from hanger to joint must always be 100 mm.**

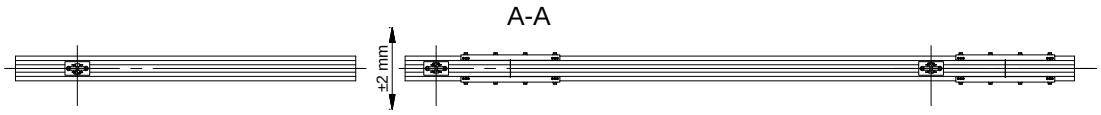
Parallelism - twin runway

The hangers for a twin runway cannot exceed the tolerance ±0.5 ‰ for parallelism

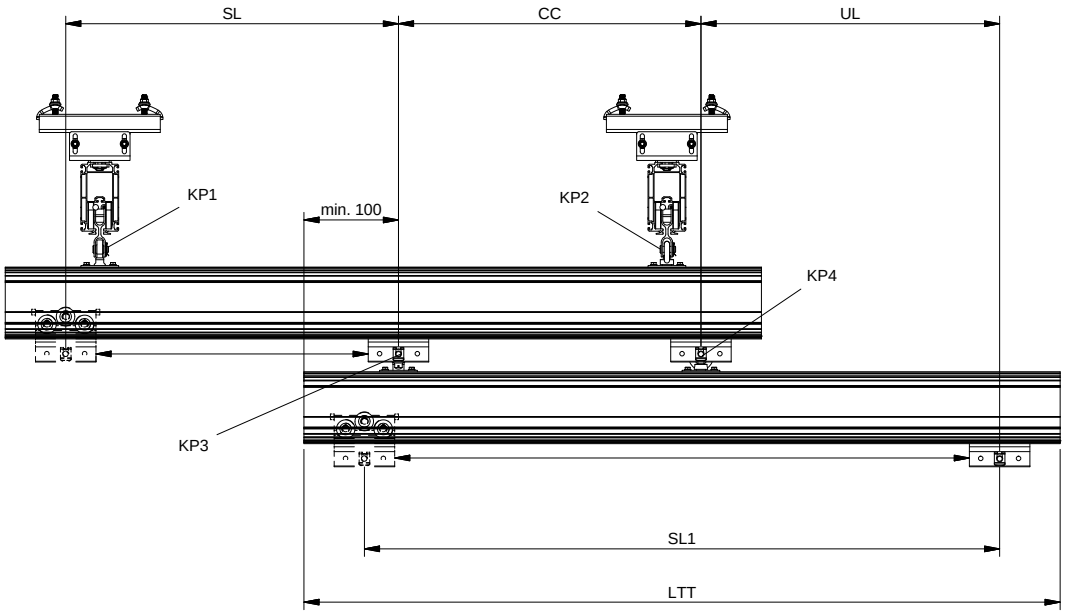


Straightness - runways

Hangers for a runway must be placed with less deviation than ±2 mm from the intended path of the runway.



Telescoping bridges



INFORMATION

Get in touch with Movomech if your application requires a telescoping bridge.

Hangers D or F (see page 32) to be used with runway rails.

Crane beam suspension C - Ball joint to be used for KP1 single bridge.

Crane beam suspension C to be used for KP1 twin bridge.

Crane beam suspension A to be used for KP2.

Crane beam suspension C to be used for KP3

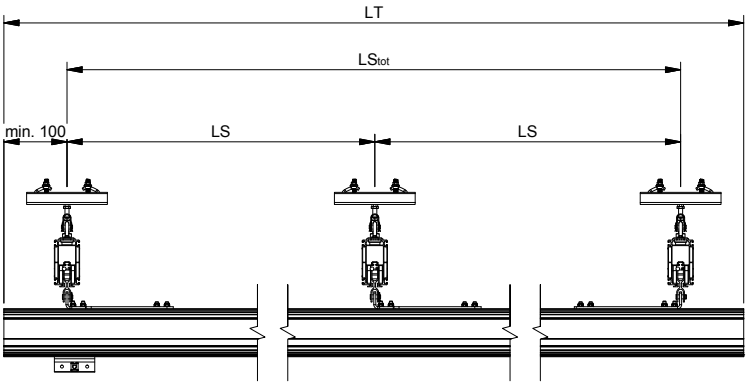
Crane beam suspension A to be used for KP4.

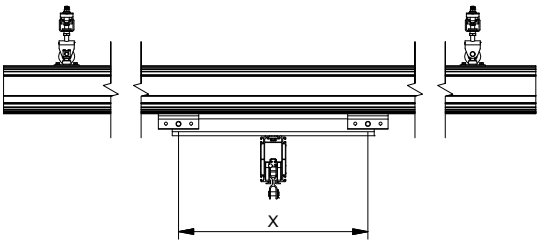
An inverted trolley may be required for KP1 and/or KP3.

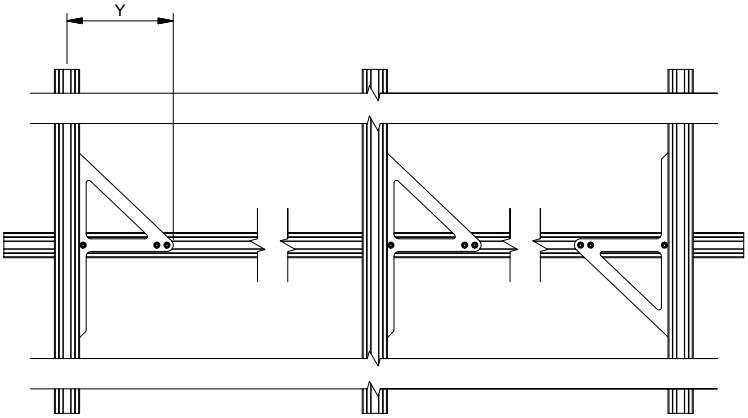
A twin trolley may be required for KP4.

SL = bridge stroke
SL1 = telescoping hoist stroke
CC = distance between hangers
UL = overhang
LTT = length telescoping bridge
KP = connection point

Three-stringed system



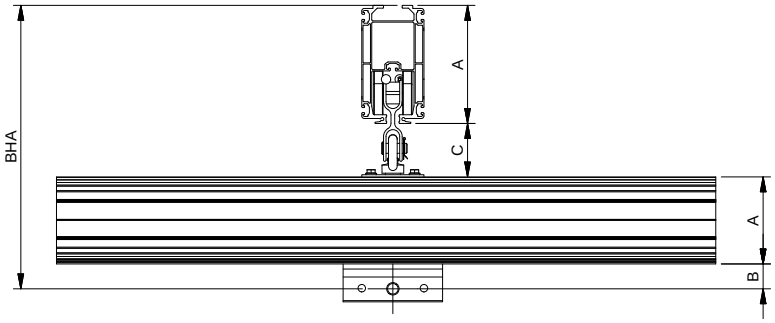




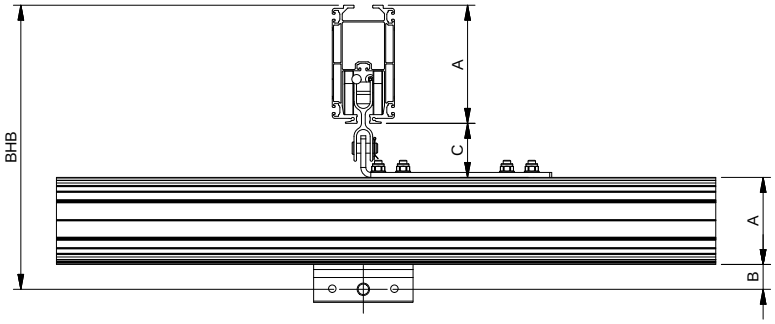
LS = bridge span
LS_{tot} = bridge total span
LT = bridge length
X = see "Triangular bracing" on page 46
Y = see "Triangular bracing" on page 46

TOTAL INSTALLED HEIGHT

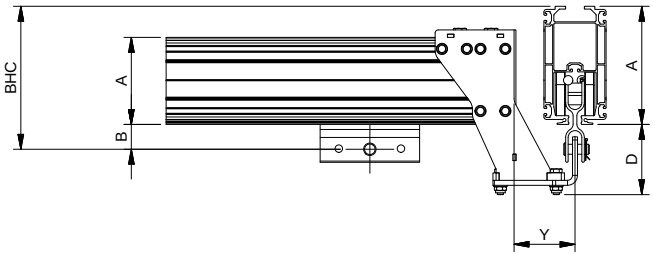
Crane beam suspension



Triangular bracing



Add-on module



	A [mm]	B [mm]	C [mm]	D [mm]	Y [mm]
30s					
PHB	90	41.5	90	N/A	N/A
LHB	90	39	87.5	139	95
50s					
PHB1	150	42.5	89	115.5	100
AHB140	140	40	86	113	100
AHB190	190	40	86	113	100
75s					
AHB3	210	43	95.5	109.5	147

Chart: Total installed height

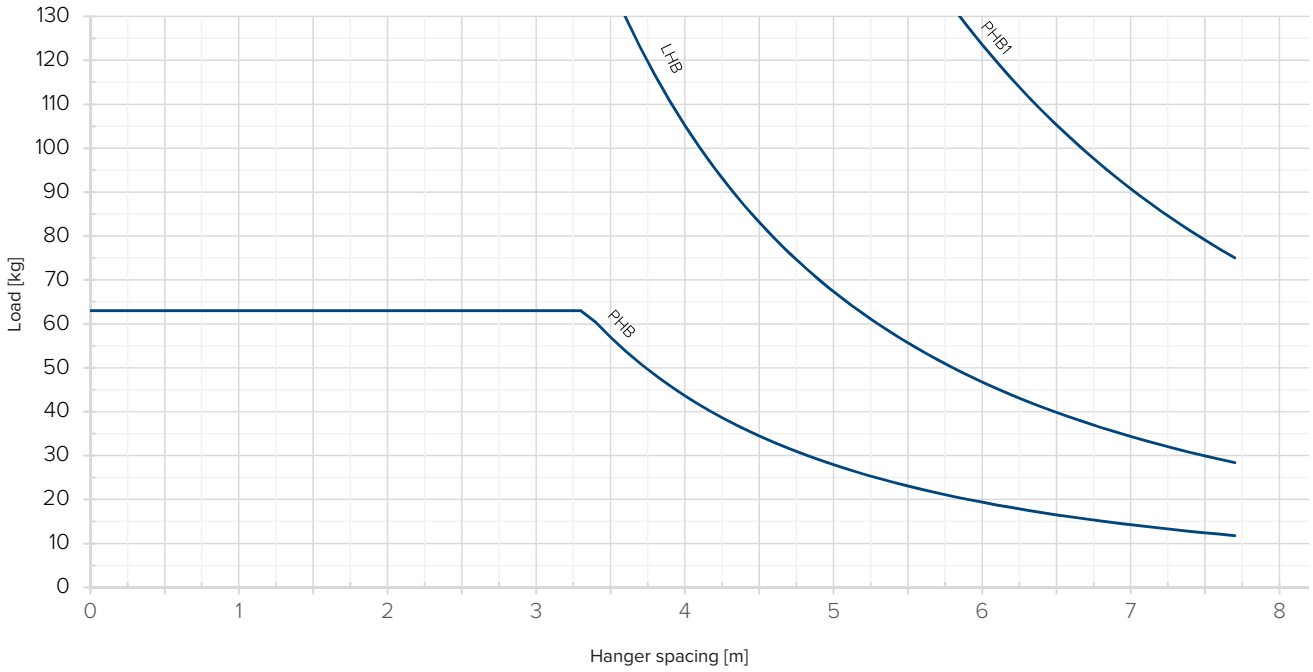
Rail, runway	Rail, bridge	BHA	BHB	BHC
30s				
PHB	PHB	312	N/A	N/A
	LHB	309	N/A	N/A
	PHB1	N/A	N/A	N/A
	AHB140	N/A	N/A	N/A
	AHB190	N/A	N/A	N/A
	AHB3	N/A	N/A	N/A
LHB	PHB	309	N/A	N/A
	LHB	307	307	129
	PHB1	370	N/A	N/A
	AHB140	358	N/A	N/A
	AHB190	N/A	N/A	N/A
	AHB3	N/A	N/A	N/A
50s				
PHB1	PHB	371	N/A	N/A
	LHB	368	N/A	N/A
	PHB1	432	432	205
	AHB140	419	419	193
	AHB190	469	469	193
	AHB3	500	N/A	N/A
AHB140	PHB	358	N/A	N/A
	LHB	355	N/A	N/A
	PHB1	419	419	193
	AHB140	406	406	180
	AHB190	456	456	180
	AHB3	487	N/A	N/A
AHB190	PHB	408	N/A	N/A
	LHB	405	N/A	N/A
	PHB1	469	469	243
	AHB140	456	456	230
	AHB190	506	506	230
	AHB3	537	N/A	N/A
75s				
AHB3	PHB	426	N/A	N/A
	LHB	423	N/A	N/A
	PHB1	490	N/A	N/A
	AHB140	478	N/A	N/A
	AHB190	528	N/A	N/A
	AHB3	559	559	253

LOADING CHART

The loading charts show the maximum spacing for the hangers in a runway or bridge for a given load.

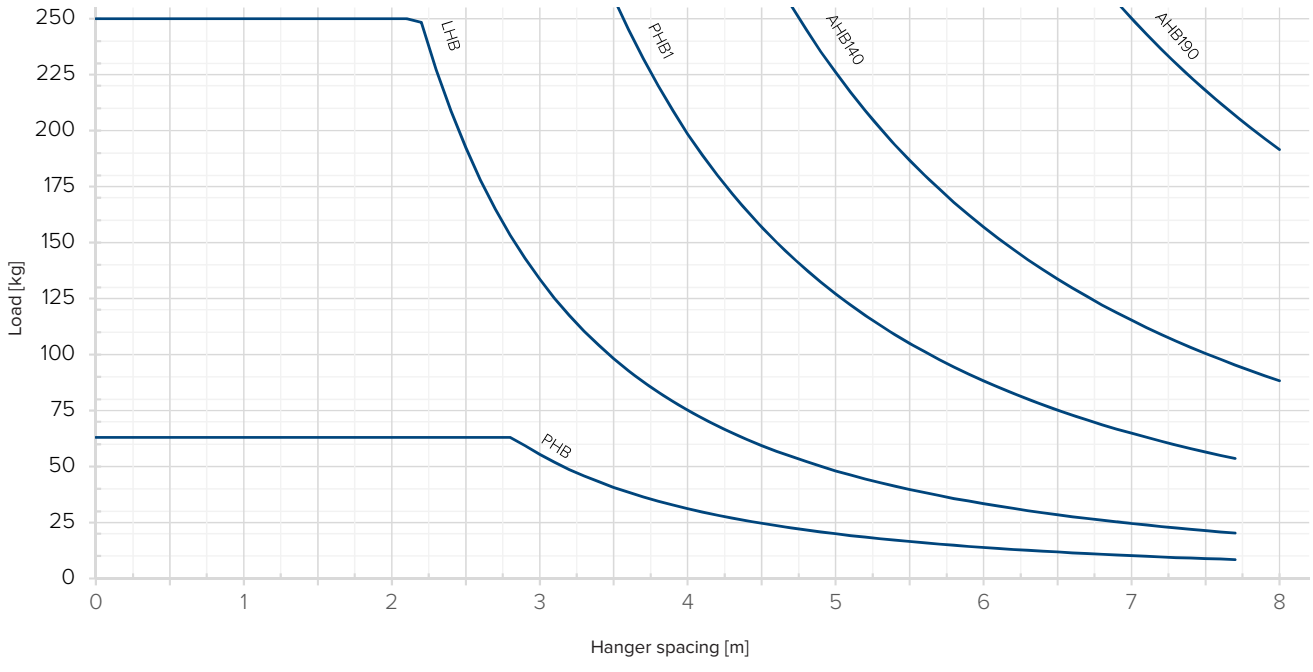
Permitted deflection 1/250

Only permitted when using vacuum lifting tools with small dynamic forces. Loads up to 125 kg.



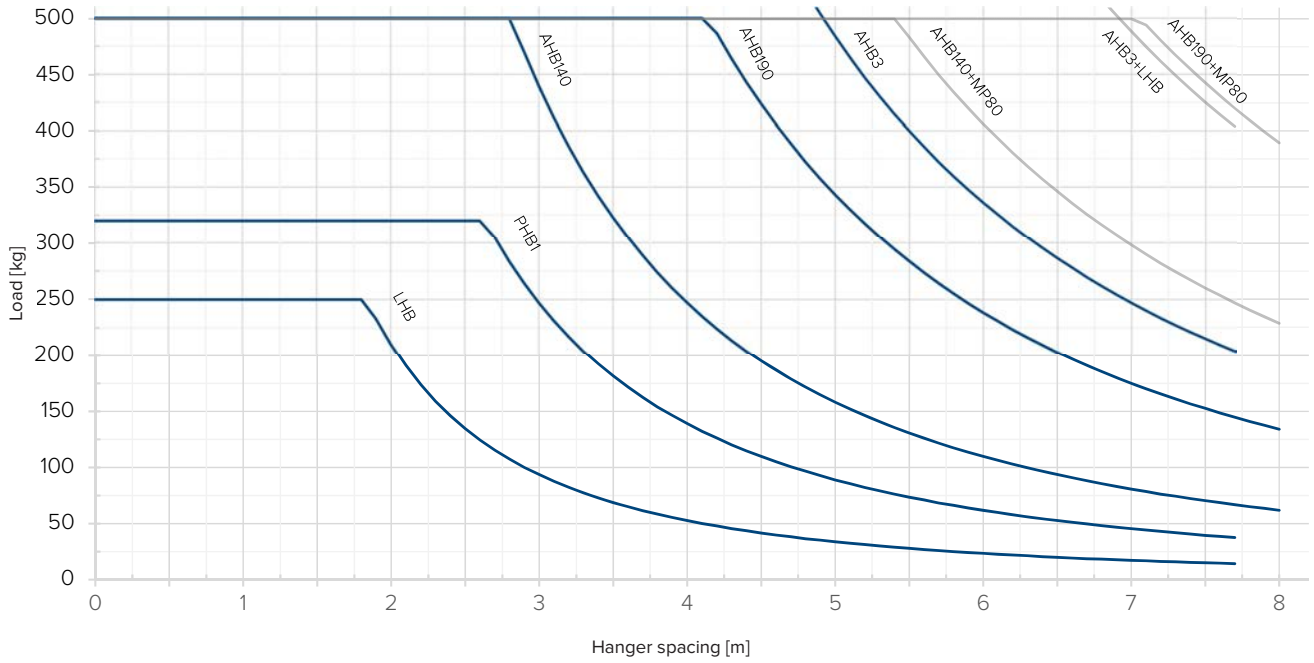
Permitted deflection 1/350

Used with pneumatic lifting tools with small to medium dynamic forces. Loads up to 250 kg.



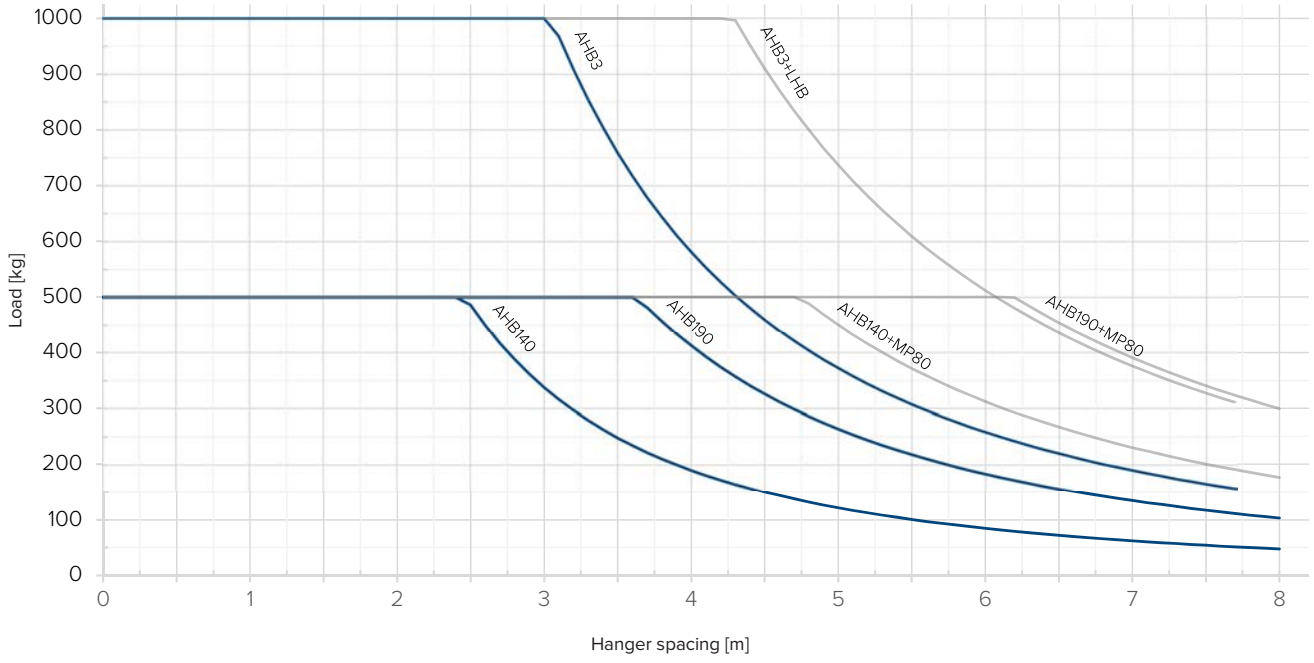
Permitted deflection 1/500

General use with all lifting applications with small to medium dynamic forces. Loads up to 500 kg.



Permitted deflection 1/650

General use with all lifting applications with large dynamic forces. Loads up to 1000 kg.



CLASSIFICATION OF OPERATIONS

Permitted operation classes for Mechrail considering fatigue strength.

		Total number for cyclic stress (fatigue life)			
		N1	N2	N3	N4
		Intermittent, non-regular operations with long periods of non-activity	Regular operations with intermittent use	Regular operations with continuous use	Regular operations with heavy continuous use
Loadings		< 200 000	200 000 - 600 000	600 000 - 2 000 000	> 2 000 000
S0	Very small changes of loads. Gentle operational use.	B1	B2	B3	B4
S1	Small changes of loads. Careful operational use.	B2	B3	B4	B5
S2	Average change of loads.	B3	B4	B5	B6
S3	Large changes of loads. Heavy operational use.	B4	B5	B6	B6

The following reduction factor must be observed when calculating the permitted capacity for trolleys and suspension components:

Trolley	B1	B2	B3	B4	B5	B6	
without any rail joints	1.0	1.0	1.0	1.0	0.8	0.7	} x the capacity
with rail joints	1.0	1.0	0.9	0.75	0.65	0.55	

Suspension component	B1	B2	B3	B4	B5	B6	
	1.0	1.0	1.0	1.0	0.8	0.7	x the capacity

SAFETY WIRE

For the suspension

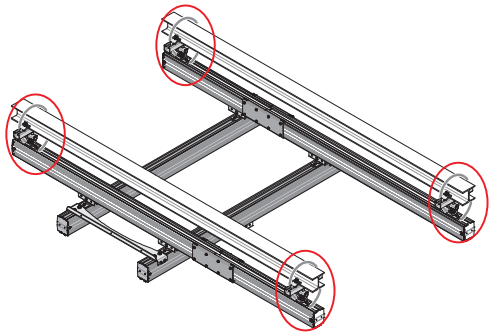
INFORMATION

Safety wires are used to secure the runway to the overhead beams.

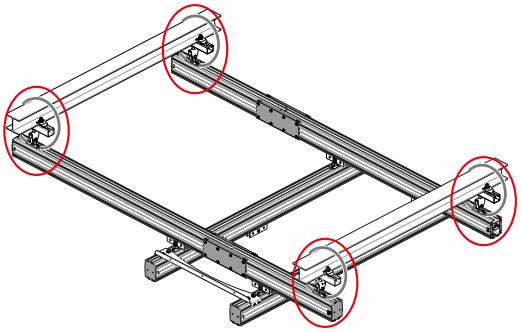
This is recommended when only two hangers are holding a runway length, e.g. with a transverse steel beam where an added hanger cannot be fitted, as well as for cases with critical loads.

The length of the wire is to be adapted to each case.

Sea also "Safety wire for hngers" on page 36.



Longitudinal steel beam, suspension safety wire fitted



Transverse steel beam, suspension safety wire fitted

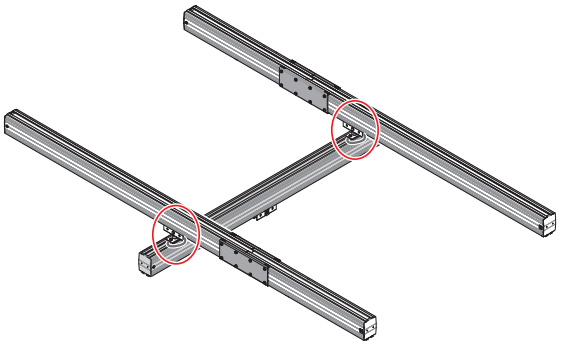
For bridge

INFORMATION

A safety wire is used for a bridge to secure the crane beam suspension to the trolley.

Movomech recommends that these are used with single bridges.

See also the section "Safety wire for bridges" on page 49.



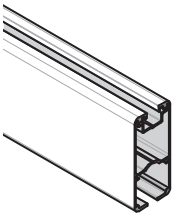
Safety wire for bridge fitted

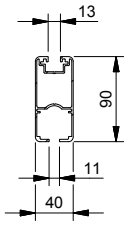
COMPONENTS

TRACK RAILS

30s

PHB

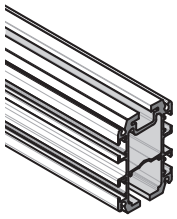


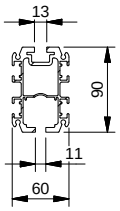


m: 1,6 kg/m
I_x: 56 cm⁴
I_y: 14 cm⁴
W_x: 11 cm³
W_y: 3 cm³

#	L [m]
742161	1
742162	2
746163	3
742164	4
742165	5
742166	6

LHB



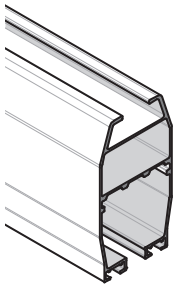


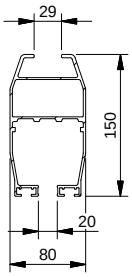
m: 3,7 kg/m
I_x: 123 cm⁴
I_y: 51 cm⁴
W_x: 25 cm³
W_y: 17 cm³

#	L [m]
730192	1
730193	2
730194	3
730195	4
730196	5
730197	6
730198	7
737218	7.7

50s

PHB1

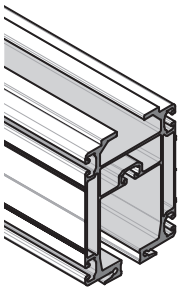


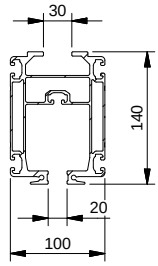


m: 4.0 kg/m
I_x: 325 cm⁴
I_y: 137 cm⁴
W_x: 43 cm³
W_y: 27 cm³

#	L [m]
737510	1
737511	2
737512	3
737513	4
737514	5
737515	6
738829	7

AHB140

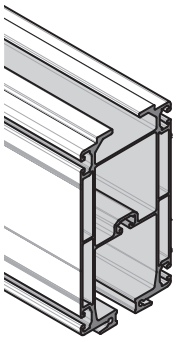


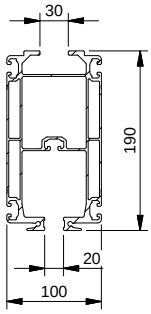


m: 7,0 kg/m
I_x: 578 cm⁴
I_y: 313 cm⁴
W_x: 83 cm³
W_y: 63 cm³

#	L [m]
743171	1
743172	2
743173	3
743174	4
743175	5
743176	6
743177	7
743178	8

AHB190



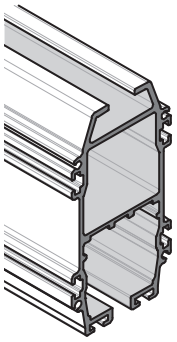


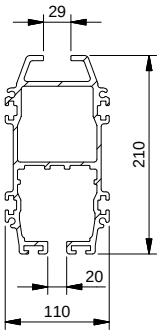
m: 8,2 kg/m
I_x: 1254 cm⁴
I_y: 394 cm⁴
W_x: 128 cm³
W_y: 79 cm³

#	L [m]
743181	1
743182	2
743183	3
743184	4
743185	5
743186	6
743187	7
743188	8

75s

AHB3

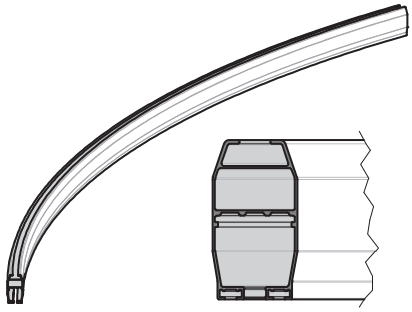


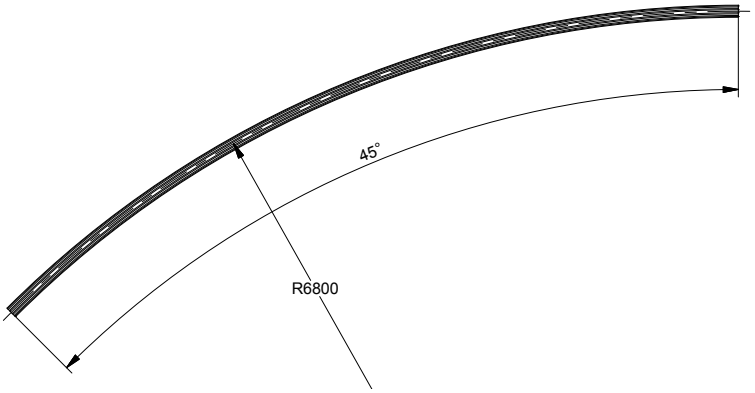


m: 11,2 kg/m
I_x: 1767 cm⁴
I_y: 598 cm⁴
W_x: 168 cm³
W_y: 108 cm³

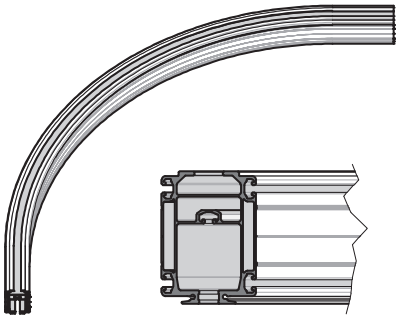
#	L [m]
730408	1
730409	2
730410	3
730411	4
730412	5
730413	6
730414	7
737217	7.7

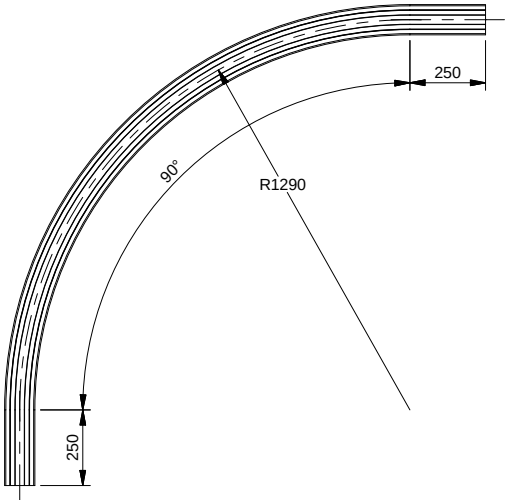
Curved section PHB1





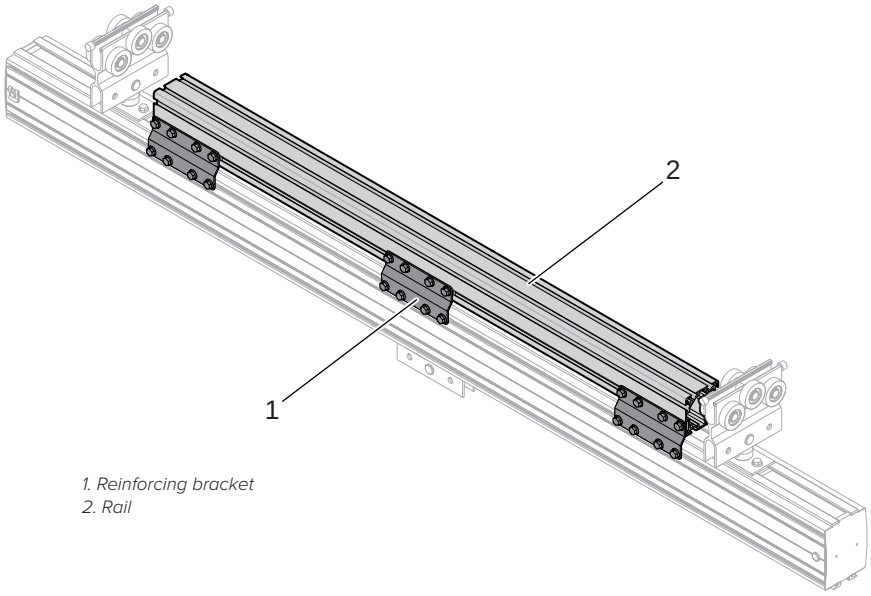
Curved section AHB140



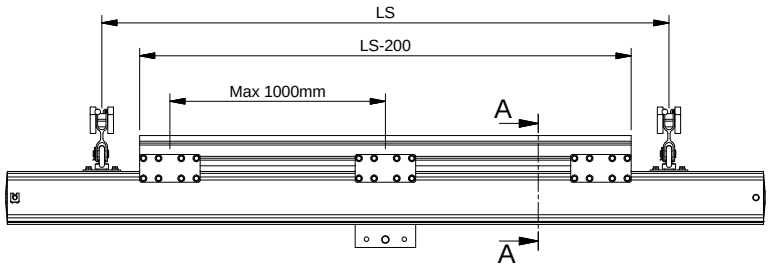


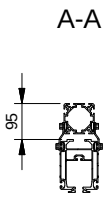
#		m [kg]	I_x [cm^4]	I_y [cm^4]	W_x [cm^3]	W_y [cm^3]	Note
50s							
740407	PHB1	21.3	325	137	43	27	
743168	AHB140	17.7	578	313	82.5	62.6	

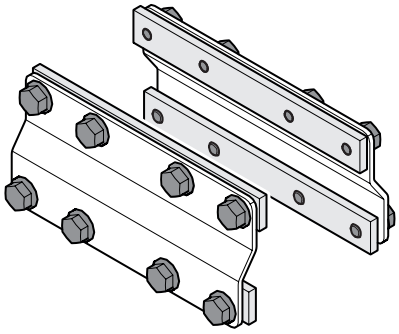
Reinforcing rail - combination AHB140/190 + MP80



1. Reinforcing bracket
2. Rail





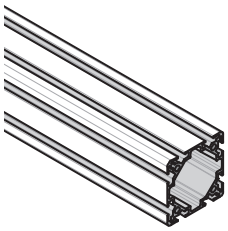


Reinforcing bracket

Combination	I_x [cm⁴]	m [kg/m]	Note
AHB140 + MP80	2137	10.6	
AHB190 + MP80	3642	11.8	

INFORMATION

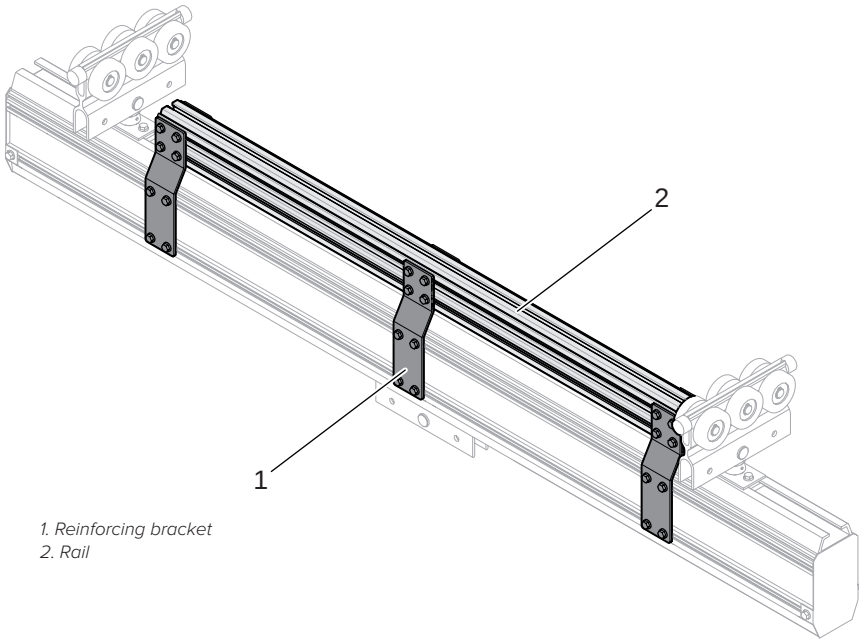
A reinforcing rail is used to reduce the deflection of long spans.



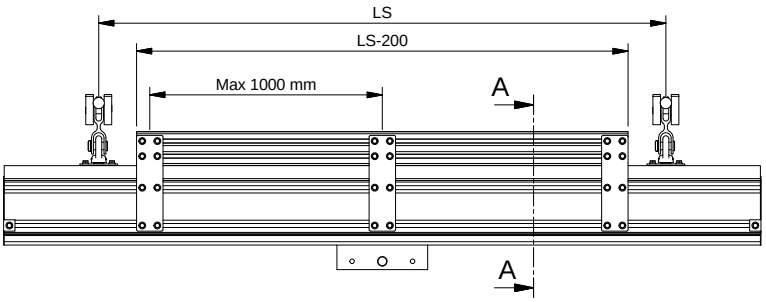
Rail MP80

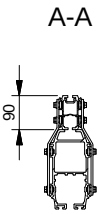
#		Note
50s		
743685	Reinforcing bracket	
730188	Rail MP80	Sold by length (Lmax=6 m)

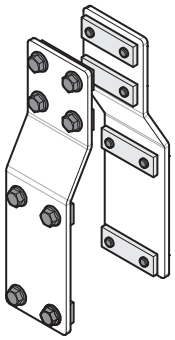
Reinforcing rail - combination AHB3 + LHB



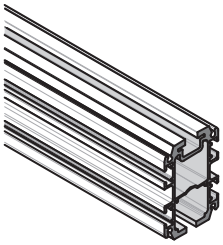
1. Reinforcing bracket
2. Rail







Reinforcing bracket



Rail LHB

Combination	I_x [cm⁴]	m [kg/m]	Note
AHB3 + LHB	3500	15.3	

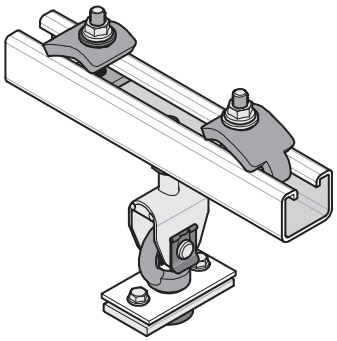
INFORMATION

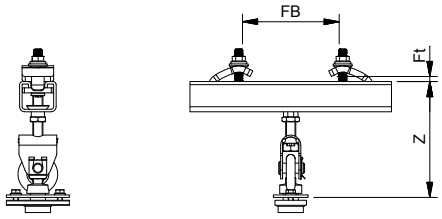
A reinforcing rail is used to reduce the deflection of long spans.

#		L [m]	Note
75s			
743871	Reinforcing bracket		
730192	Rail LHB	1	
730193	Rail LHB	2	
730194	Rail LHB	3	
730195	Rail LHB	4	
730196	Rail LHB	5	
730197	Rail LHB	6	
730198	Rail LHB	7	
737218	Rail LHB	7.7	

HANGERS

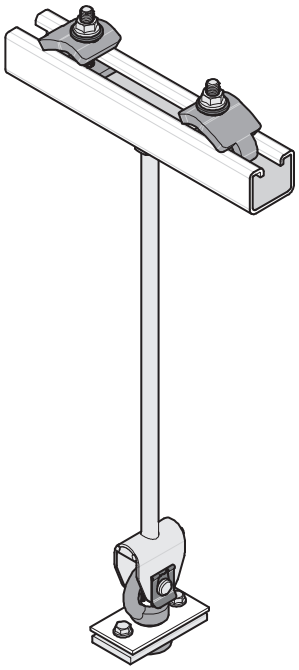
(A) Short

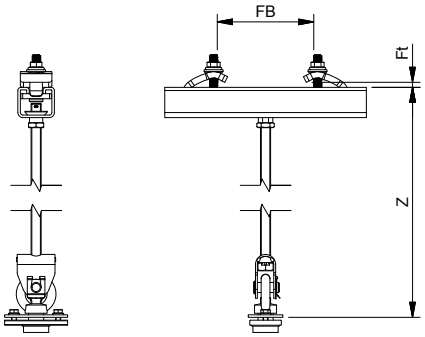




#	Load [kg] ↓	FB [mm]	$F_{t\,max}$ [mm]	Z [mm]	m [kg]	Note
30s						
733203	300	55 - 220	15	184 ±12	3.2	
733204	300	55 - 320	15	184 ±12	3.9	
50s						
732765	600	55 - 220	15	183 ±12	3.8	
733200	600	55 - 320	15	183 ±12	4.5	
75s						
732244	1200	90 - 310	15	200 ±10	5.8	

(B) Middle

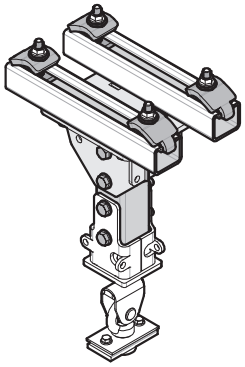


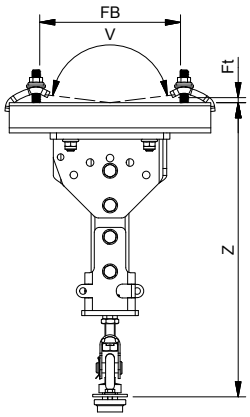


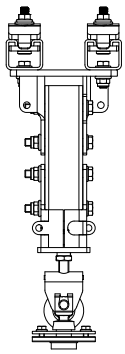
#	Load [kg] ↓	FB [mm]	$F_{t\,max}$ [mm]	Z [mm]	m [kg]	Note
30s						
730245	300	55 - 220	15	173 - 600 ±12*	3.2	
730246	300	55 - 320	15	173 - 600 ±12*	3.9	
50s						
730394	600	55 - 220	15	173 - 600 ±12*	3.8	
730395	600	55 - 320	15	173 - 600 ±12*	4.5	
75s						
730452			15	273 - 600 ±10*	5.8	

* to be stated when ordering

(C) Long



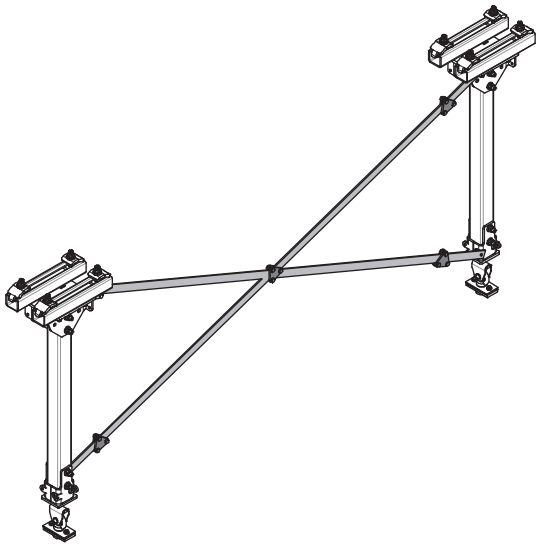


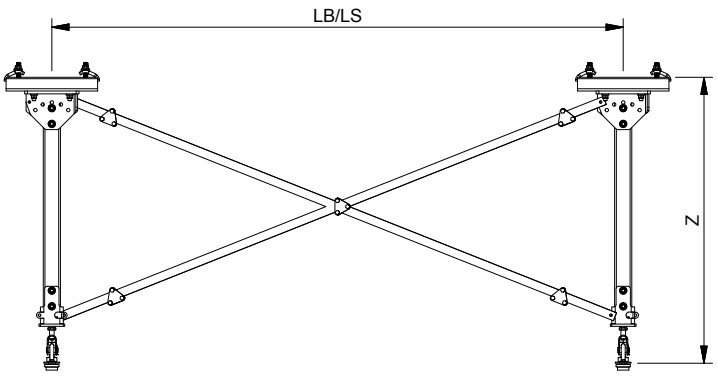


#	Load [kg] ↓	FB [mm]	$F_{t\,max}$ [mm]	Z [mm]	V [°]	m [kg]	Note
30s							
743873	300	45 - 220	15	470 - 2000 ±12*	±45	13.1	
743874	300	45 - 320	15	470 - 2000 ±12*	±45	13.7	
50s							
743600	600	45 - 220	15	470 - 2000 ±12*	±45	13.7	
743601	600	45 - 320	15	470 - 2000 ±12*	±45	14.3	
75s							
743875	1200	45 - 220	15	490 - 2000 ±12*	±45	13.9	
743876	1200	45 - 320	15	490 - 2000 ±12*	±45	14.5	

* to be stated when ordering

Suspension cross brace (C)





#	m [kg]	Note
743918	21	

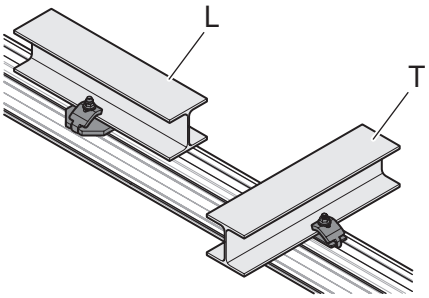
INFORMATION

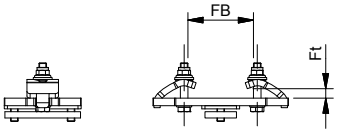
A cross brace is recommended at Z > 1000 mm and/or in case of large dynamic forces in the rail system.

Cross braces are supplied as kits to fit in between two hangers. Max LB/LS = 7.5 m.

The cross braces may have to be cut to length when used together with a combination of a short LB/LS and a Z.

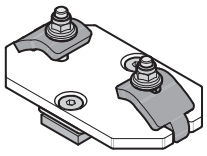
(D) Closely mounted



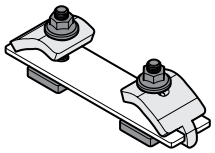


INFORMATION

Cannot be used together with an add-on module for bridge.



L

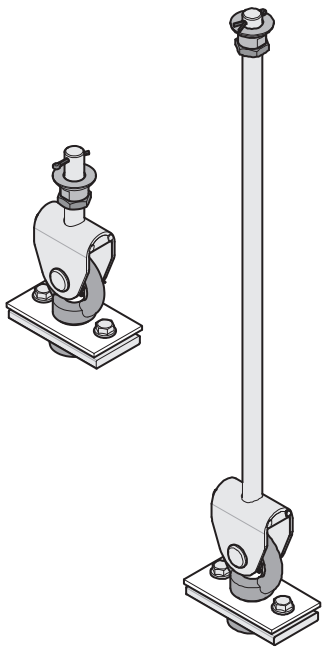


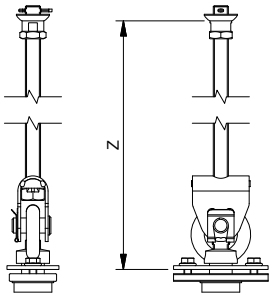
T

#		Load [kg] ↓	FB [mm]	$F_{t\,max}$ [mm]	Z [mm]	m [kg]	Note
30s							
743841	L	300	70 - 220*	15	12	2.7	
743842	T	300	45 - 300*	15	5	1	
50s							
743843	L	600	70 - 220*	15	17	3.4	
743844	T	600	45 - 300*	15	5	1.3	
75s							
743845	L	1200	90 - 220*	15	15	4.7	
743846	T	1200	55 - 300*	15	5	1.9	

* to be stated when ordering

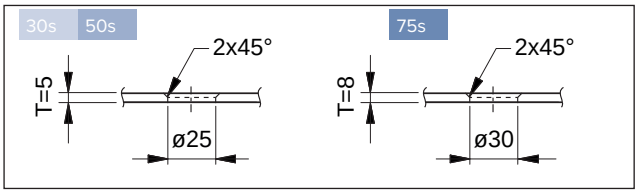
(E) With ball nut





INFORMATION

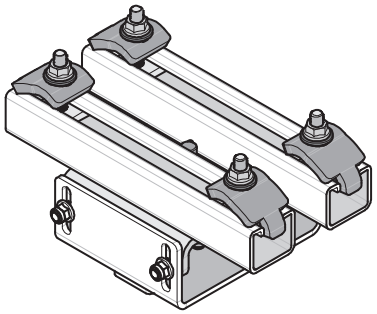
When fitting a ball nut a hole must be drilled and countersunk as per the image below.

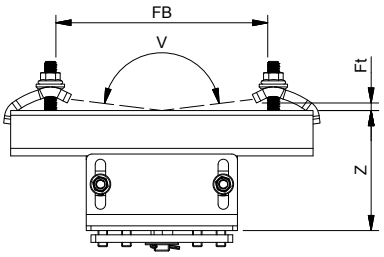


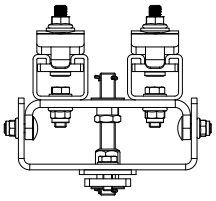
#	Load [kg] ↓	Ø	Z [mm]	m [kg]	Note
30s					
733829	300	25	138 ±12	1	
732035	300	25	130 - 560*	2	
50s					
733830	600	25	137 ±12	1	
731374	600	25	130 - 560*	2	
75s					
733831	1200	30	161 ±12	1	
732562	1200	30	170 - 560*	2	

* to be stated when ordering

(F) Closely mounted, adjustable







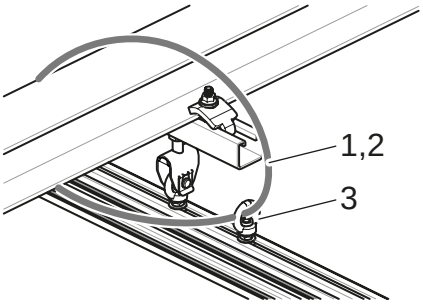
#	Load [kg] ↓ / ↑	FB [mm]	$F_{t\,max}$ [mm]	Z [mm]	V [°]	m [kg]	Note
30s							
743884	300 / 150	45 - 220	15	153 ±12	±7	10.7	
743885	300 / 150	45 - 320	15	153 ±12	±7	11.3	
50s							
743604	600 / 300	45 - 220	15	127 ±12	±7	11.2	
743605	600 / 300	45 - 320	15	127 ±12	±7	12.3	
75s							
743886	1200 / 600	45 - 220	15	129 ±12	±7	11.4	
743887	1200 / 600	45 - 320	15	129 ±12	±7	12	

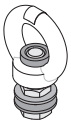
INFORMATION

Cannot be used together with an add-on module for bridge.

SAFETY WIRE FOR HNGERS

30s



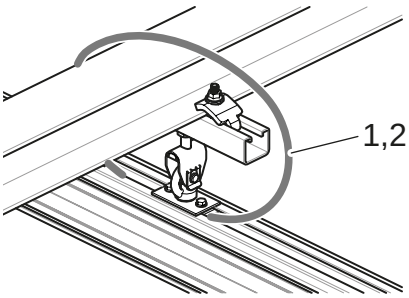


Crane beam suspension

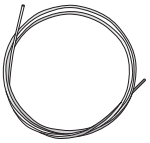
Wire lock (2x)

Wire

50s

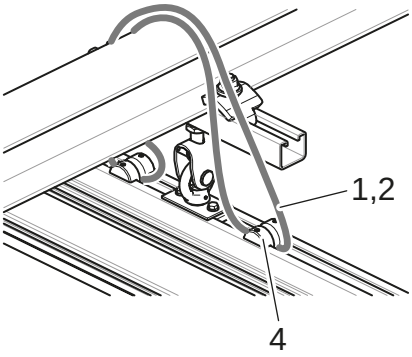


Wire lock (2x)



Wire

75s



Roll of wire (2x)

Wire lock (2x)

Wire

1. Wire
2. Wire lock
3. Crane beam suspension
4. Roll of wire

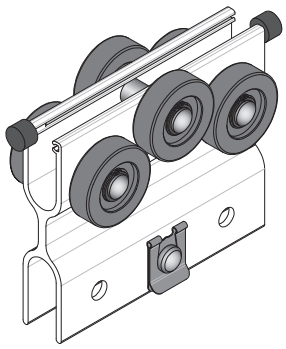
INFORMATION

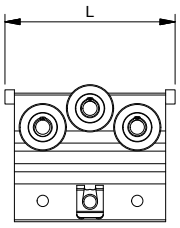
See also the section "Safety wire" on page 27.

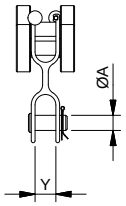
#	Quantity	Description	Ø	Note
30s				
740571	L	Wire	5	State length when ordering
740569	2	Wire lock		
730224	1	Crane beam suspension		
50s				
740858	L	Wire	7	State length when ordering
740859	2	Wire lock		
75s				
740858	L	Wire	7	State length when ordering
740859	2	Wire lock		
740872	2	Roll of wire		

TROLLEYS

(A) Single trolley

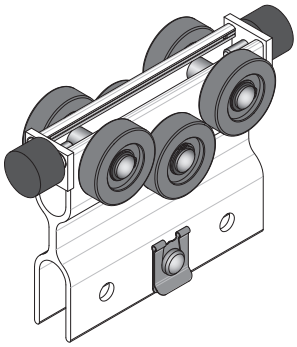


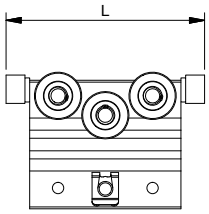


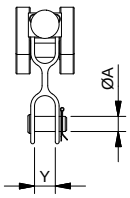


#	Load [kg] ↓ / ↑		L	Y	ØA	m [kg]	Note
30s	PHB	LHB					
730200	63 / 32	125 / 63	140	22	12	0.5	
50s	PHB1	AHB140/190					
730323	160 / 80	250 / 125	180	22	16	1.2	Ø15 mm rubber bumper
730364	160 / 80	250 / 125	210	22	16	2.2	Ø30 mm rubber bumper
75s	AHB3						
730442	500 / 250		250	28	20	2.8	

(B) Inverted trolley

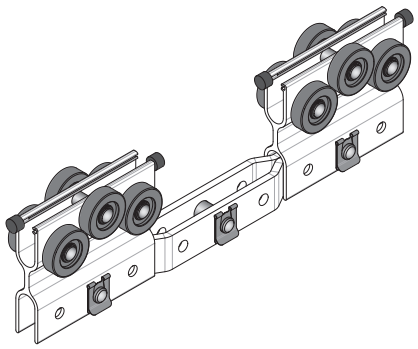


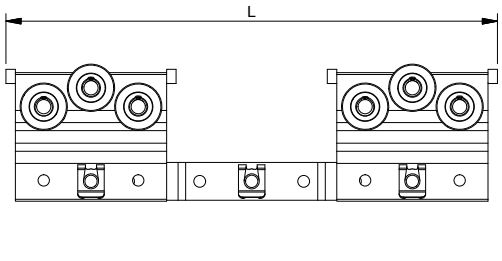




#	Load [kg] ↓ / ↑		L	Y	$Ø_a$	m [kg]	Note
30s	PHB	LHB					
733655	32 / 63	63 / 125	140	22	12	0.5	
50s	PHB1	AHB140/190					
732155	80 / 160	125 / 250	210	22	16	1.2	
75s	AHB3						
735823	250 / 500		250	28	20	2.8	

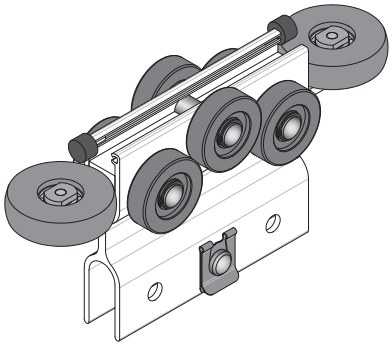
(C) Twin trolley

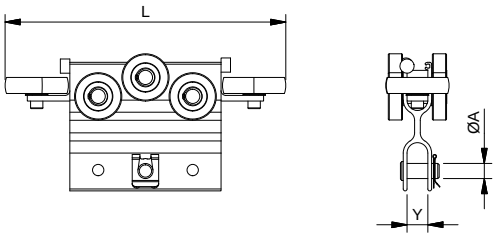




#	Load [kg] ↓ / ↑		L	Y	ØA	M_v [Nm]	m [kg]	Note
30s	LHB							
743048	250 / 125		480	22	20		2.7	
50s	PHB1	AHB140/190						
743039	320 / 160	500 / 250	520	22	20		3.8	
743040	320 / 160	500 / 250	637	22	20	55	4.5	With nose wheel
75s	AHB3							
743041	1000 / 500		700	22	20		6.6	

(E) Trolley with nose wheel

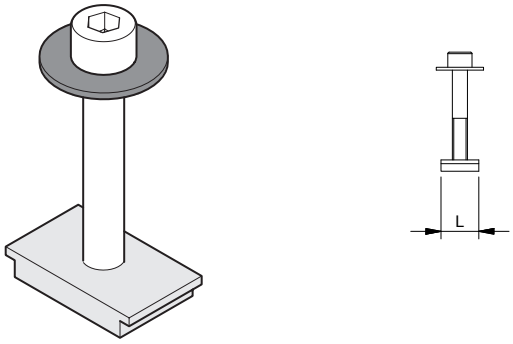




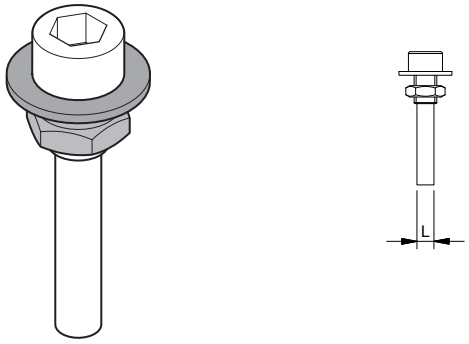
#	Load [kg] ↓ / ↑		L	Y	ØA	M_v [Nm]		m [kg]	Note
30s	LHB								
730582	125 / 63		390	22	12	40		1.3	
730583	125 / 63		590	22	12	70		1.7	
50s	PHB1	AHB140/190				PHB1	AHB140/190		
737285		250 / 125	294	22	16		60	1.4	
740230	160 / 80		294	22	16	30	60	1.4	For curved sections
737284		250 / 125	294	22	16	30	60	1.4	For curved sections
737522		125 / 250	294	22	16		60	1.4	Inverted
75s	AHB3								
737199	500 / 250		468	28	20	85		3	

END STOPS

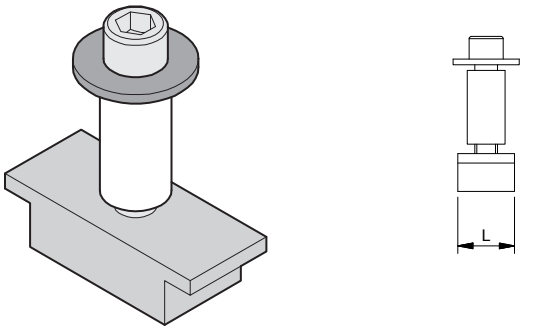
(A) Standard



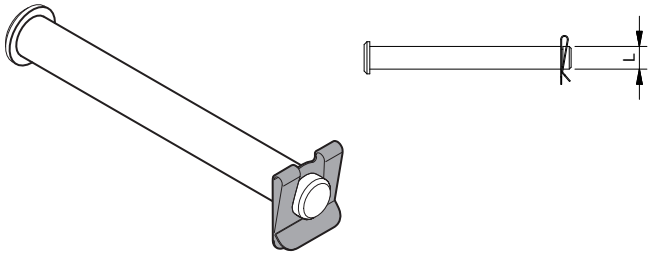
PHB



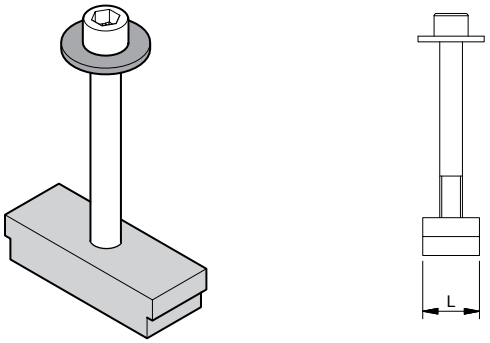
LHB



PHB1



AHB140/190



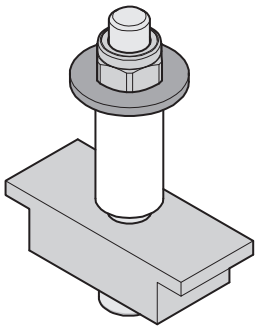
AHB3

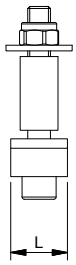
#		L	m [kg]	Note
30s				
742168	PHB	20	0.2	
730220	LHB	9	0.1	
50s				
737605	PHB1	30	0.25	
743606	AHB140/190	12	0.1	
75s				
730421	AHB3	30	0.5	

INFORMATION

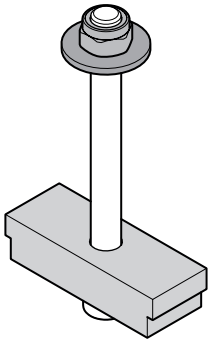
ATTENTION! Perforated end stops are always fitted in the runway and in the bridge.

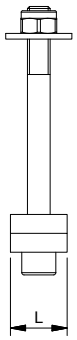
(B) Fitted from below





PHB1





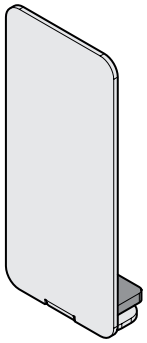
AHB3

INFORMATION

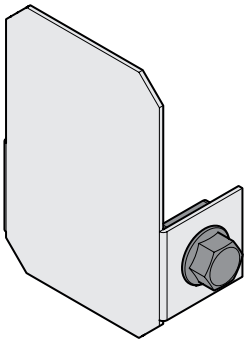
ATTENTION! Perforated end stops are always fitted in the runway and in the bridge.

#		L	m [kg]	Note
50s				
737606	PHB1	30	0.3	
75s				
730641	AHB3	30	0.5	

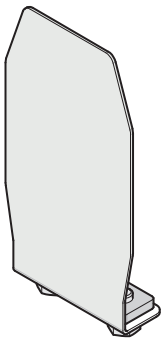
END COVER



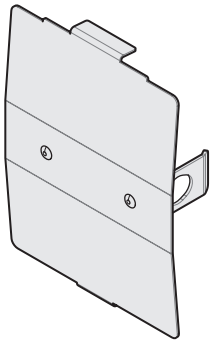
PHB



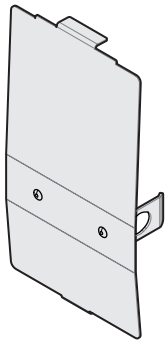
LHB



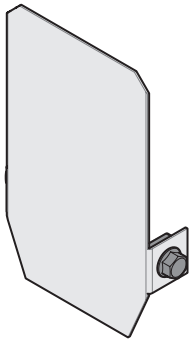
PHB1



AHB140



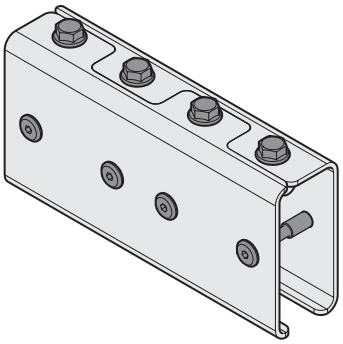
AHB190

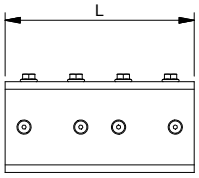


AHB3

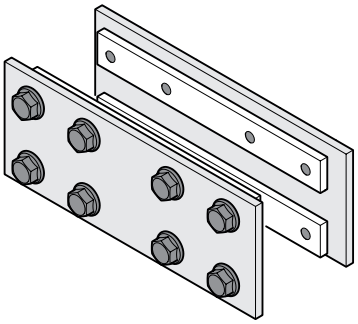
#		m [kg]	Note
30s			
736699	PHB	0.15	
730211	LHB	0.15	
50s			
737569	PHB1	0.2	
743607	AHB140	0.1	
743608	AHB190	0.2	
75s			
730416	AHB3	0.3	

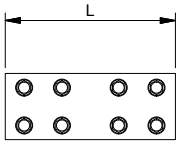
FISHPLATE KITS



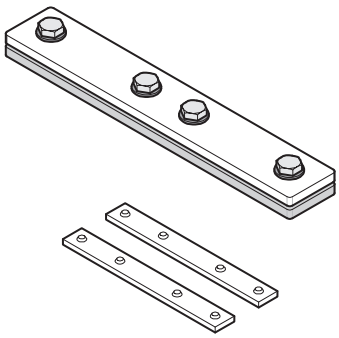


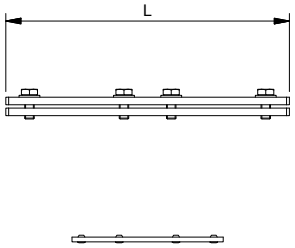
PHB



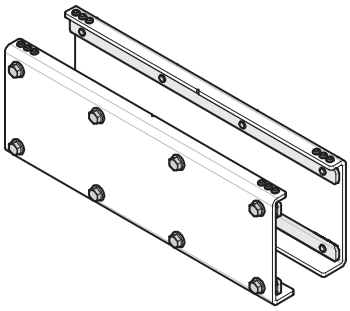


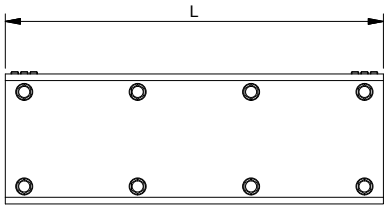
LHB



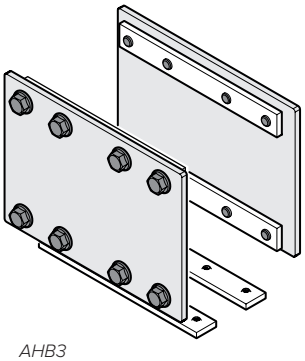


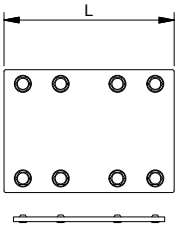
PHB1





AHB140, AHB190



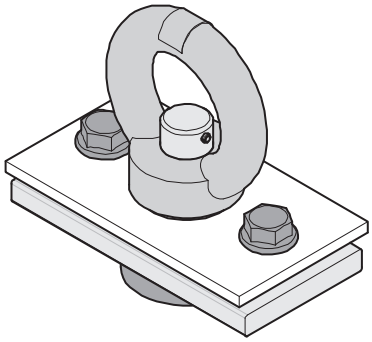


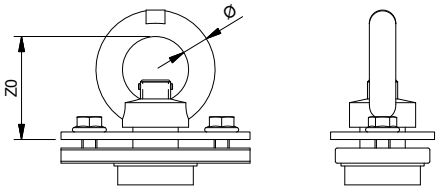
AHB3

#		L [mm]	m [kg]	Note
30s				
742617	PHB	200	1.6	
730212	LHB	180	1.7	
50s				
737609	PHB1	300	1.7	
739999	PHB1	300	1.7	For curved sections
743657	AHB140	400	7.1	
743658	AHB190	400	8.6	
75s				
730418	AHB3	180	2.5	

CRANE BEAM SUSPENSION

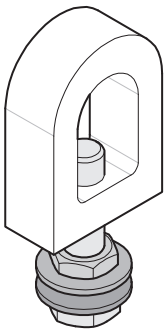
(A)

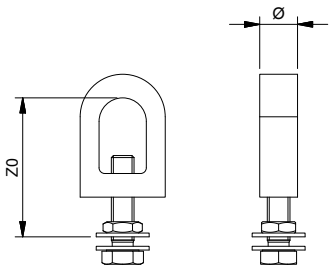




#	Load [kg] ↓	Z0	Ø	m [kg]	Note
30s					
730224	300	55	12	0.25	
50s					
730379	600	55	12	0.85	
75s					
730424	1200	62	16	1.2	

(B)



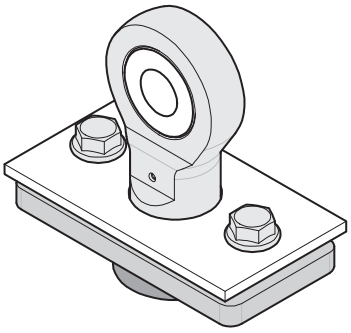


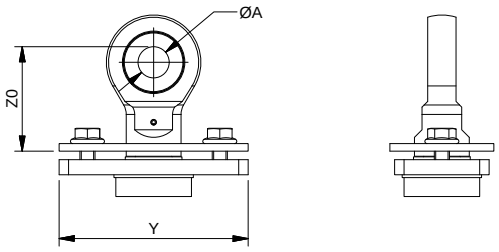
INFORMATION

(B) fits the AHB3 trolley and various trolleys with pins Ø20 mm (e.g. ABUS and DEMAG).

#	Load [kg] ↓	Z0	Ø	m [kg]	Note
30s					
730540	300	69	20	0.3	

(C)



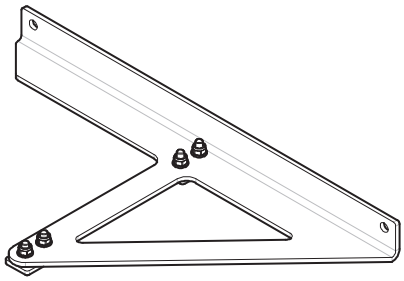


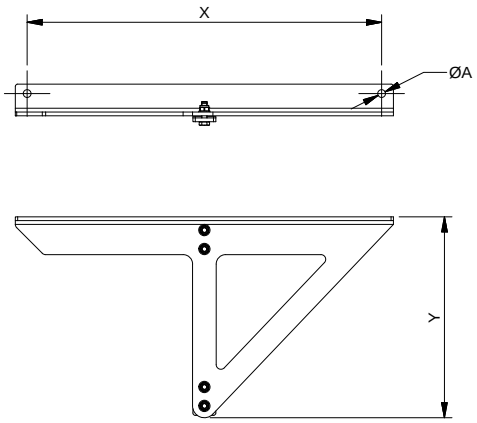
INFORMATION

(C) does not have any play, and is used in case of upwards-directed forces.

#	Load [kg] ↓ / ↑	Z0	Y	ØA	m [kg]	Note
50s						
743609	600 / 300	55	15	16	0.9	
743610	600 / 300	55	21	16	0.9	Ball joint
743659	600 / 300	55	15	20	0.8	

TRIANGULAR BRACING





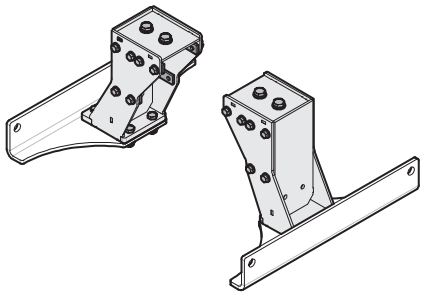
#		Load [kg] ↓ / ↑	LS	ØA	X	Y	m [kg]	Note
30s								
740434	LHB	300 / 150	- 2000	12	250	157	1.3	
740435	LHB	300 / 150	(2000) - 4000	12	500	288	3	
740436	LHB	300 / 150	(4000) - 6000	12	750	418	4.5	
740437	LHB	300 / 150	(6000) - 8000	12	1000	538	6	
50s								
743617		600 / 300	- 3000	16	375	221	5	
740438		600 / 300	(3000) - 4000	16	500	303	6.5	
740439		600 / 300	(4000) - 6000	16	750	421	9.3	
740440		600 / 300	(6000) - 8000	16	1000	552	12.9	
740441		600 / 300	(8000) - 10000	16	1250	667	16	
75s								
740442		1200 / 600	- 4000	20	500	310	8.3	
740443		1200 / 600	(4000) - 6000	20	750	448	13.6	
740444		1200 / 600	(6000) - 8000	20	1000	573	18.3	
740445		1200 / 600	(8000) - 10000	20	1250	696	23.1	

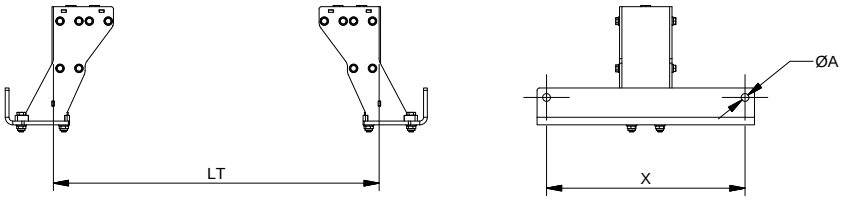
INFORMATION

Recommended for triple rail runways.
ATTENTION! Sold individually.

CONSTRUCTION MODULES

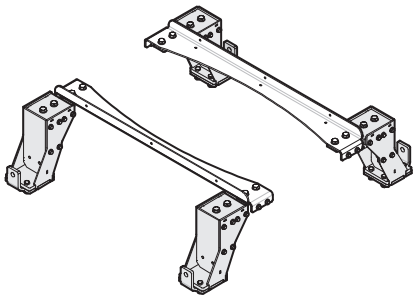
(A) Single bridge

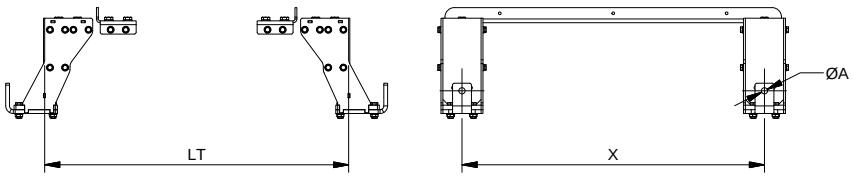




#		Load [kg] ↓ / ↑	LS	ØA	X	LT	m [kg]	Note
30s								
740156	LHB	300 / 150	- 3000	12	330	LS-210	13	
740158	LHB	300 / 150	(3000) - 6000	12	690	LS-210	22	
740160	LHB	300 / 150	(6000) - 7910	12	930	LS-210	27	
50s								
743189	PHB1	600 / 300	- 3000	16	420	LS-200	18	
743190	PHB1	600 / 300	(3000) - 6000	16	670	LS-200	22.5	
743191	PHB1	600 / 300	(6000) - 6800	16	920	LS-200	26.5	
743618	AHB140	600 / 300	- 3000	16	420	LS-200	18.5	
743619	AHB140	600 / 300	(3000) - 6000	16	670	LS-200	23	
743620	AHB140	600 / 300	(6000) - 8000	16	920	LS-200	27	
743621	AHB190	600 / 300	- 3000	16	420	LS-200	19.5	
743622	AHB190	600 / 300	(3000) - 6000	16	670	LS-200	23.5	
743623	AHB190	600 / 300	(6000) - 8000	16	920	LS-200	28	
75s								
740138	AHB3	1200 / 600	- 3000	20	500	LS-294	20	
740140	AHB3	1200 / 600	(3000) - 6000	20	671	LS-294	24	
740142	AHB3	1200 / 600	(6000) - 7700	20	910	LS-294	30	

(B) Twin bridge



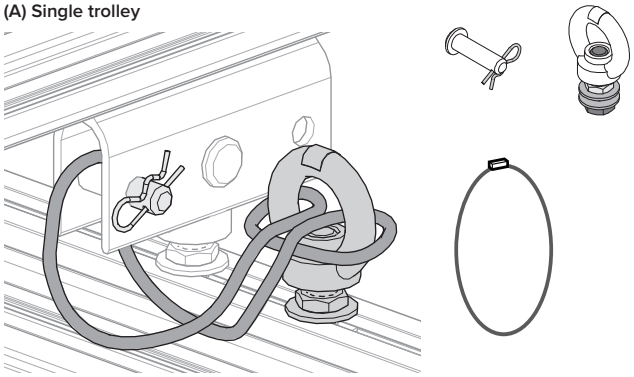


#		Load [kg] ↓ / ↑	LS	ØA	X	LT	m [kg]	Note
30s								
740146	LHB	300 / 150	250 - 7890	12	800	LS-95	23	
740155	LHB	300 / 150	250 - 7890	12	1000	LS-95	25	
50s								
743192	PHB1	600 / 300	250 - 6800	16	800	LS-200	31	
743624	AHB140	600 / 300	660 - 8000	16	800	LS-200	36	
743625	AHB140	600 / 300	660 - 8000	16	1000	LS-200	37.5	
743626	AHB140	600 / 300	660 - 8000	20	800	LS-200	36	
743627	AHB140	600 / 300	660 - 8000	20	1000	LS-200	37.5	
743628	AHB190	600 / 300	660 - 8000	16	800	LS-200	37.5	
743629	AHB190	600 / 300	660 - 8000	16	1000	LS-200	39	
743630	AHB190	600 / 300	660 - 8000	20	800	LS-200	37.5	
743631	AHB190	600 / 300	660 - 8000	20	1000	LS-200	39	
75s								
740130	AHB3	1200 / 600	250 - 7970	20	800	LS-294	20	
740137	AHB3	1200 / 600	250 - 7970	20	1000	LS-294	24	

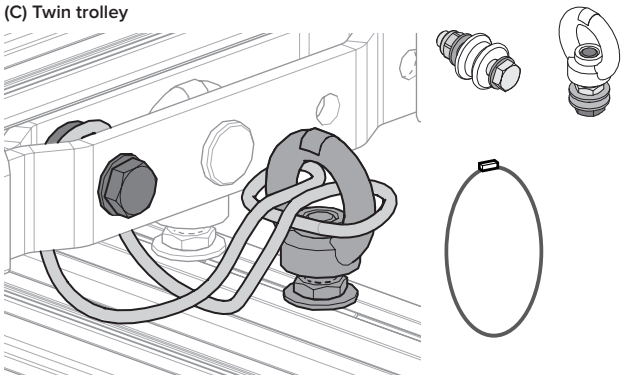
SAFETY WIRE FOR BRIDGES

30s

(A) Single trolley



(C) Twin trolley



INFORMATION

A safety wire is used for a bridge to secure the crane beam suspension to the trolley. Movomech recommends that these are used with single bridges.

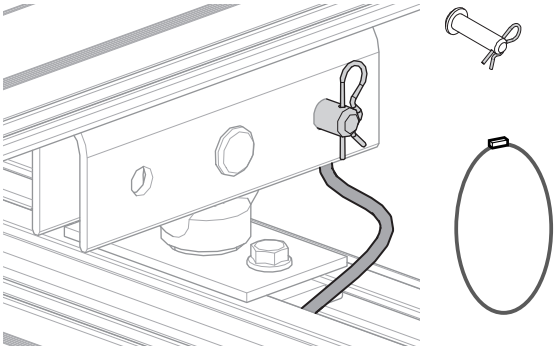
Supplied as a kit. Secures one crane beam suspension.

See also the section "Safety wire" on page 27.

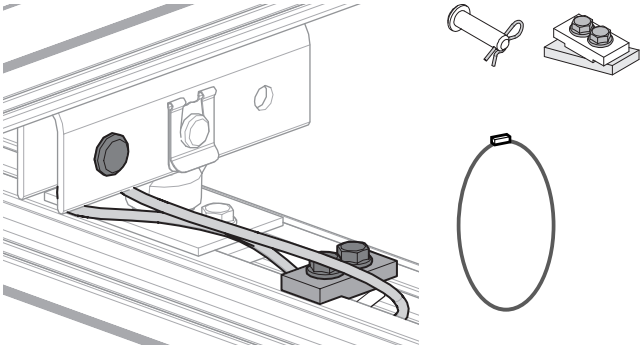
#		Ø	Note
30s			
740855	(A) Single trolley	145	
743051	(C) Twin trolley	145	

50s

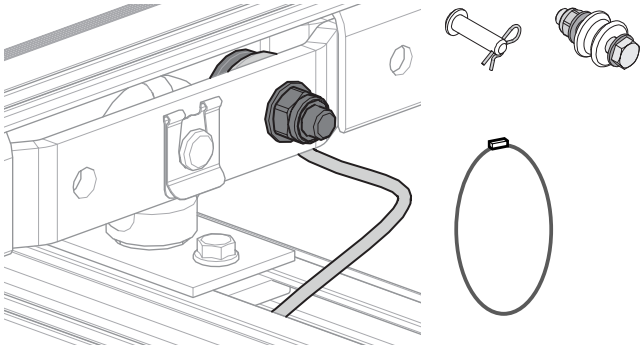
(A) Single trolley



(B) Single trolley, to be installed post commissioning



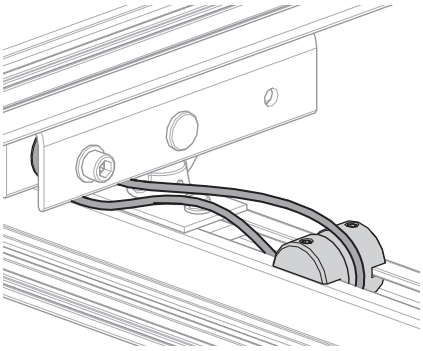
(C) Twin trolley

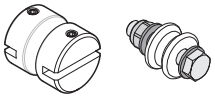


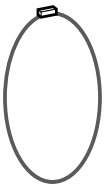
#		Ø	Note
50s			
740852	(A) Single trolley	145	
740856	(B) Single trolley	145	To be installed post commissioning
743052	(C) Twin trolley	145	

75s

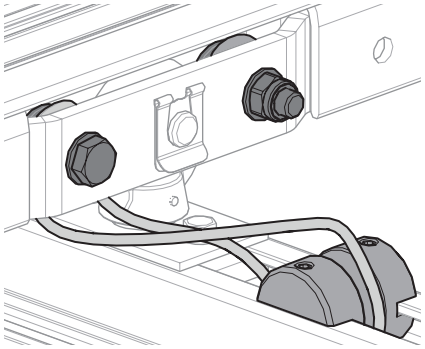
(A) Single trolley

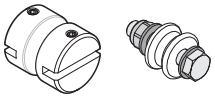




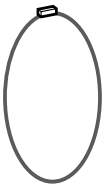


(C) Twin trolley





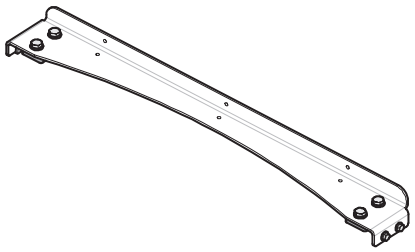
(2x) *(2x)*

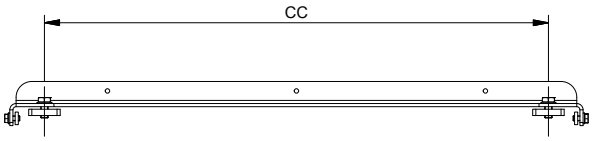


(2x)

#		Ø	Note
75s			
740563	(A) Single trolley	145	
743056	(C) Twin trolley	145	

SPACERS FOR TWIN BRIDGES



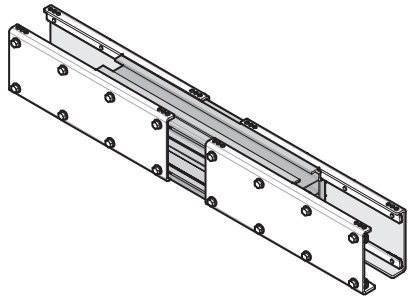


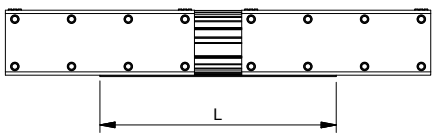
INFORMATION

Used in pairs as spacers between the rails of twin bridges. The measure CC is the length between the two track rails centre-lines.
ATTENTION! Sold individually.

#		CC	m [kg]	Note
30s				
741673	LHB	800	2.6	
741674	LHB	1000	3	
50s				
740525	PHB1	800	3.5	
743613	AHB140/190	800	4	
743614	AHB140/190	1000	4.8	
75s				
741671	AHB3	800	5.2	
741672	AHB3	1000	6	

SERVICE HATCHES





INFORMATION

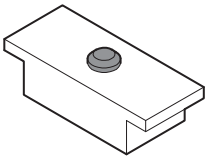
Service hatches are used with long runways, and permit the introduction/removal of trolleys and accessories at the middle of the runway instead at the ends.

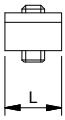
At least one hanger must be used above the service hatch.

#		L	m [kg]	Note
50s				
743611	AHB140	500	17.5	
743612	AHB190	500	21.5	

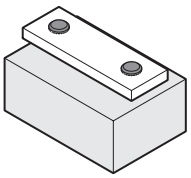
TRAVEL LIMITER

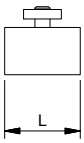
(A)





PHB, PHB1, AHB3





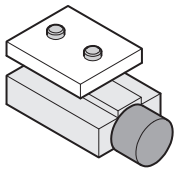
AHB140/190

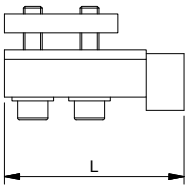
INFORMATION

Mechanical stop. Are used for e.g. protecting cable trolleys from collisions.

#		L	m [kg]	Note
30s				
736834	PHB	20	0.1	
50s				
730354	PHB1	30	0.2	
743615	AHB140/190	60	0.2	
75s				
730465	AHB3	30	0.2	

(B)



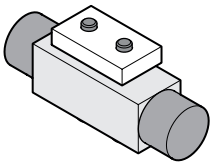


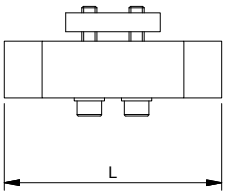
INFORMATION

Rummer bumper, may be fitted after commissioning.
ATTENTION! Cable trolleys cannot pass!

#	L	m [kg]	Note
30s			
730542	80	0.1	
50s			
730545	30	0.2	

(B) Twinned



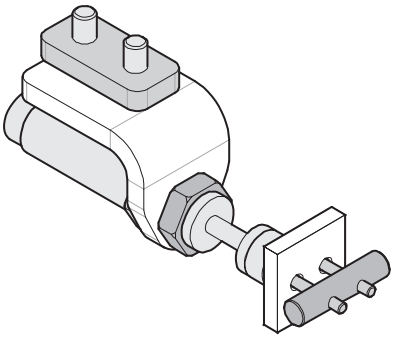


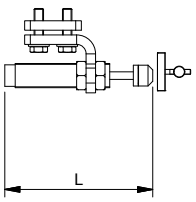
INFORMATION

Rummer bumper, may be fitted after commissioning.
ATTENTION! Cable trolleys cannot pass!

#	L	m [kg]	Note
30s			
742263	115	0.3	
50s			
737618	60	0.2	

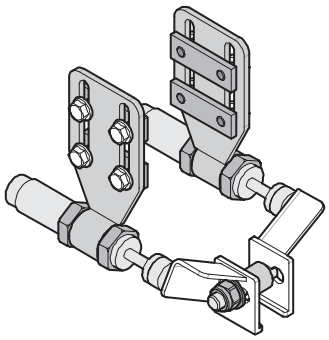
(C)

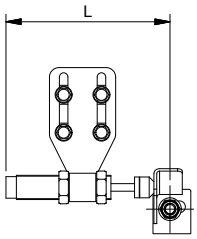




#	L [mm]	SL	E_{max}	E_{max}/h	v_{max}	F_{max}	m [kg]	Note
30s								
740220	152	25	80	60000	1	15000	1.1	
50s								
740217	157	25	80	60000	1	15000	1.2	
75s								
740218	157	25	80	60000	1	15000	1.2	

(D)





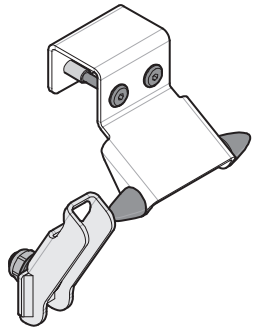
#		L [mm]	SL	E_{max}	E_{max}/h	v_{max}	F_{max}	m [kg]	Note
30s									
736603	LHB	174	25	160	120000	1	30000	1.7	
50s									
743616	AHB140/190	174	25	160	120000	1	30000	1.3	
75s									
736607		184	25	160	120000	1	30000	2.5	

INFORMATION

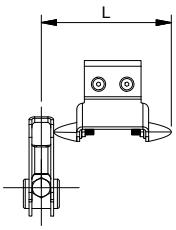
Travel limiters (C) and (D) are hydraulically dampened.
These are used for rail systems with large moving forces and in case there is a lot of operations at the end sections of the work area.
ATTENTION! Cable trolleys cannot pass (C)!

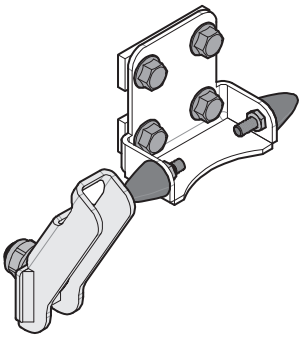
SL = stroke [mm]
E_{max} = maximum energy consumption per cycle [Nm]
E_{max}/h = maximum energy consumption per hour [Nm/h]
V_{max} = maximum impact velocity [m/s]
F_{max} = maximum impact force [N]

(E)

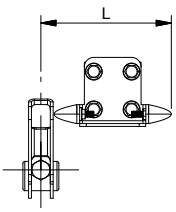


PHB





LHB

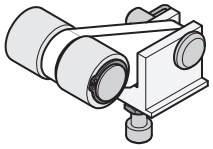


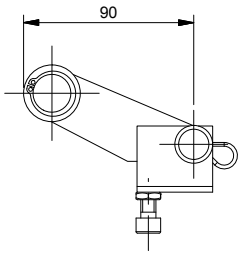
INFORMATION

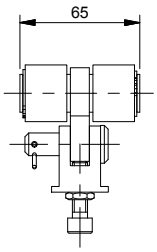
Mechanical stop. Are used for e.g. protecting cable trolleys from collisions.

#		L	m [kg]	Note
30s				
741692	PHB	115	0.3	Requires some drilling in the rail
741684	LHB	125	0.8	

FRICTION ROLLERS





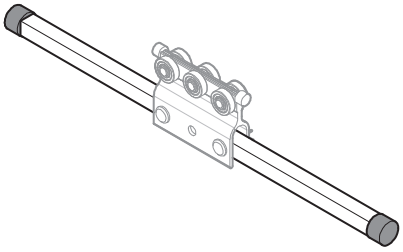


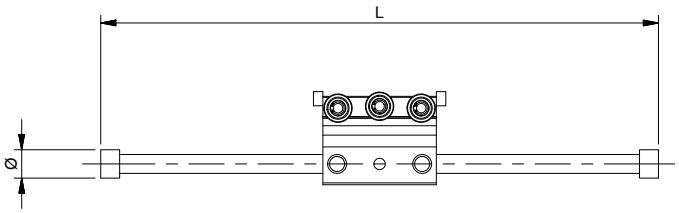
INFORMATION

Used to prevent autonomous system movements

#	m [kg]	Note
30s		
736176	0.5	
50s		
736176	0.5	
75s		
736177	0.5	

SPACER BRACE



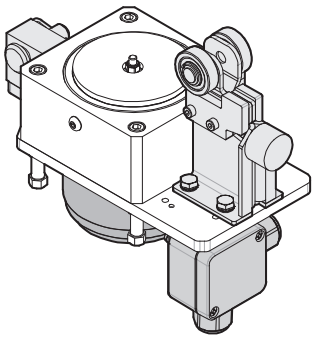


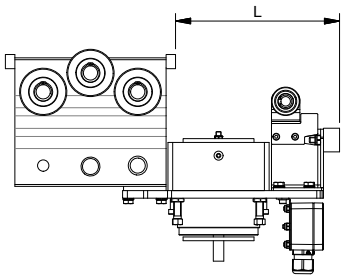
INFORMATION

Stand-alone unit to be fitted in a runway to maintain the separation of the bridges. Trolley included.

#	L	Ø	m [kg]	Note
30s				
738200	600	40	1.2	
738203	1000	40	1.6	
50s				
738201	600	40	1.9	
738204	1000	40	2.3	
75s				
738202	600	50	3.9	
738205	1000	50	4.5	

PARKING BRAKES





INFORMATION

The support wheel unit can be divided for fitting on a rail.

A reverse brake is spring actuated when it is not energized.

A: Electric 230 V / 82 W

B: Reverse electric 230 V / 82 W

C: Pneumatic

D: Reverse pneumatic

E: Pneumatic with solenoid valve 24 VDC / 4.5 W

F: Reverse pneumatic with solenoid valve 24 VDC / 4.5 W

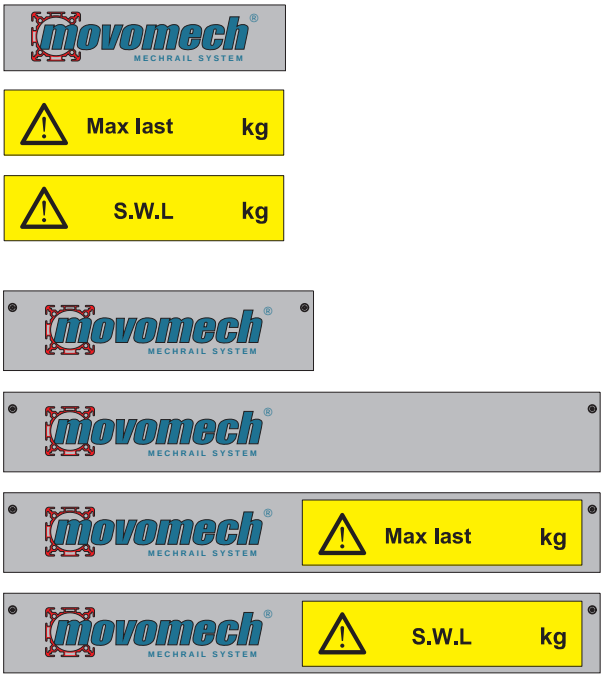
G: Pneumatic with solenoid valve 230 VAC / 9

R: Reverse pneumatic with solenoid valve 230 V / 9 W

ATTENTION! Electrical work is only permitted to be performed by a trained electrician.

#	Type	Brake force [N]	L [mm]	m [kg]	Note
30s					
743800	A	200	189	5.2	IP 54
743801	B	280	189	5.4	IP 54
743802	C	0 - 500	189	3.4	
743803	D	280	189	3.5	
743804	E	0 - 500	189	3.7	IP 65
743805	F	280	189	3.8	IP 65
743806	G	0 - 500	189	3.7	IP 65
743807	H	280	189	3.8	IP 65
50s					
743808	A	200	174	5.2	IP 54
743809	B	280	174	5.4	IP 54
743810	C	0 - 500	174	3.4	
743811	D	280	174	3.5	
743812	E	0 - 500	174	3.7	IP 65
743813	F	280	174	3.8	IP 65
743814	G	0 - 500	174	3.7	IP 65
743815	H	280	174	3.8	IP 65
75s					
743816	A	200	164	5.3	IP 54
743817	B	280	164	5.5	IP 54
743818	C	0 - 500	164	3.5	
743819	D	280	164	3.6	
743820	E	0 - 500	164	3.8	IP 65
743821	F	280	164	3.9	IP 65
743822	G	0 - 500	164	3.8	IP 65
743823	H	280	164	3.9	IP 65

SIGNS

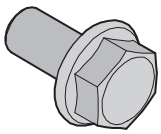


#		Text	Max load/S.W.L	Dim.	Note
30s					
744008	PHB	Movomech		240 x 55	Sticker
744009	PHB	Max. load	1 - 1000*	300 x 70	Sticker
744010	PHB	S.W.L.	1 - 1000*	300 x 70	Sticker
744000	LHB	Movomech		330 x 87	
744001	LHB	Movomech		635 x 87	
744002	LHB	Movomech + Max load	1 - 1000*	635 x 87	
744003	LHB	Movomech + S.W.L.	1 - 1000*	635 x 87	
50s					
744008	PHB1	Movomech		240 x 55	Sticker
744009	PHB1	Max. load	1 - 1000*	300 x 70	Sticker
744010	PHB1	S.W.L.	1 - 1000*	300 x 70	Sticker
744004	AHB140/190	Movomech		300 x 87	
744005	AHB140/190	Movomech		635 x 87	
744006	AHB140/190	Movomech + Max load	1 - 1000*	635 x 87	
744007	AHB140/190	Movomech + S.W.L.	1 - 1000*	635 x 87	
75s					
744000		Movomech		330 x 87	
744001		Movomech		635 x 87	
744002		Movomech + Max load	1 - 1000*	635 x 87	
744003		Movomech + S.W.L.	1 - 1000*	635 x 87	

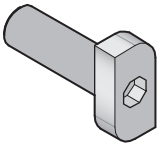
* to be stated when ordering

FASTENERS AND TOOLS

Screws

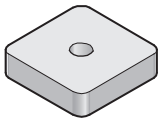


#	Note
730215	M8 x 10
730216	M8 x 12
730217	M8 x 14
730218	M8 x 16
730219	M8 x 20
730297	M8 x 40



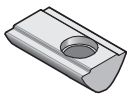
#	Note
730114	M8 x 17
730113	M8 x 24
732239	M8 x 35

Nuts

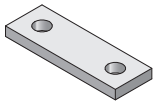


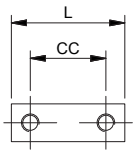
#	Note
730132	M4
730131	M5
730130	M6
730115	M8

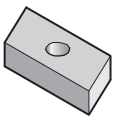
#	CC / L [mm]	Note
730278	M6	30 / 40
730116	M8	40 / 60
730659	M8	80 / 100
731379	M8	120 / 140



#	Note
744018	M4
744019	M5
744020	M6
734764	M8

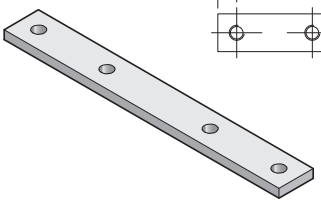


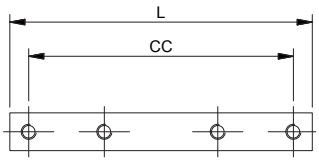




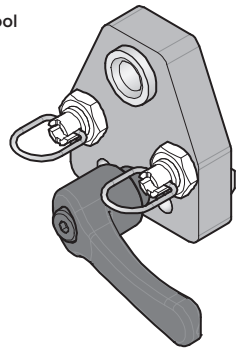
#	Note
730139	M4
730138	M5
730137	M6
730136	M8

#	CC / L [mm]	Note
730214	M8	140 / 160





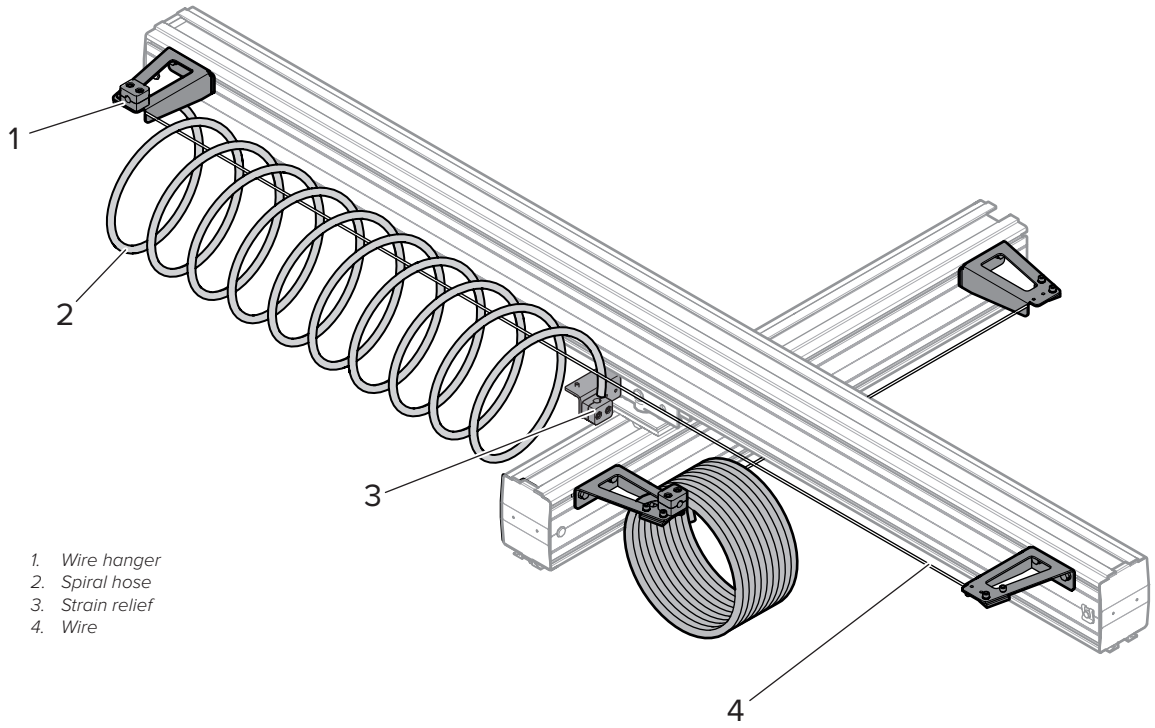
Drill guide tool



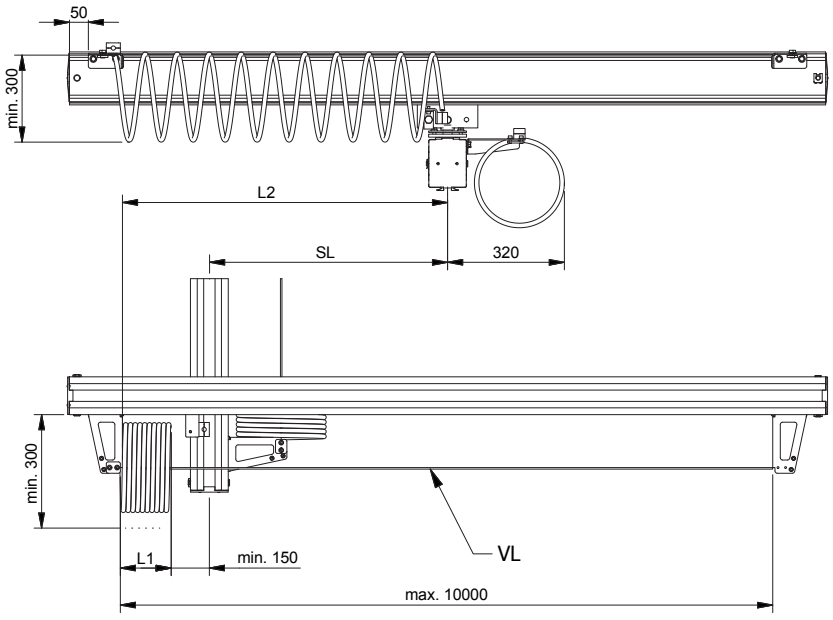
#		Note
744025	AHB140/190	Used when drilling holes for end stops

MEDIA SUPPLY

SPIRAL HOSE



1. *Wire hanger*
2. *Spiral hose*
3. *Strain relief*
4. *Wire*



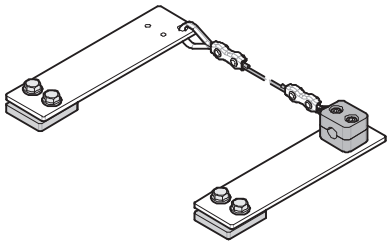
SL = stroke [m]
L1 = hose compressed [m]
L2 = hose extended [m]
VL = wire length [m]

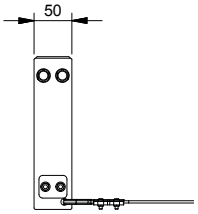
L2 = (1.05 x SL) + 0.15
L1 = SL / 20
VL = L2 + 0.3

Sample calculation for SL = 8 m:

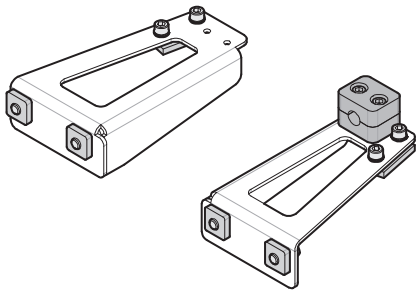
L2 = (1.05 x 8) + 0.15	*8.55 m*
L1 = 8 / 20	*0.4 m*
VL = 8.55 + 0.3	*8.85 m*

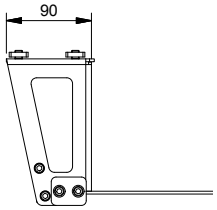
Wire hanger





PHB, PHB1

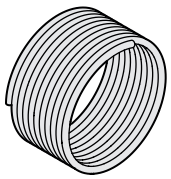


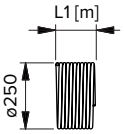


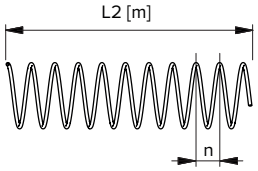
LHB, AHB140/190, AHB3

#		m [kg]	Note
30s			
742169	PHB	1.1	
743646	LHB	0.9	
50s			
738226	PHB1	1.1	
743645	AHB140/190	0.9	
75s			
743645	AHB3	0.9	

Spiral hose

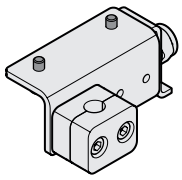






#	Ø	Note
741151	12 x 10	

Strain relief

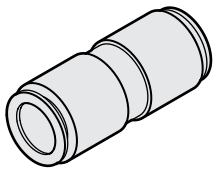


#	Note
739976	

Cable ties

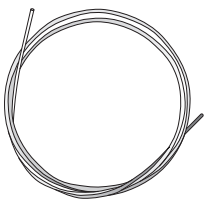
#	[mm]	Note
732509	145 x 25	

Wire splicers



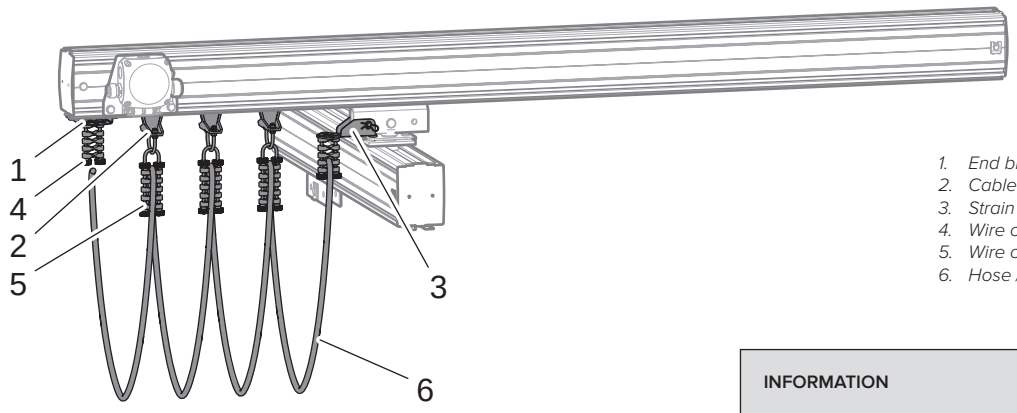
#	Note
741168	

Wire



#	Ø	Note
730693	3	

CABLE TROLLEY FOR TRACK RAIL



1. *End bracket*
2. *Cable carriage*
3. *Strain relief*
4. *Wire clamp, fixed*
5. *Wire clamp, shackle*
6. *Hose / round cable*

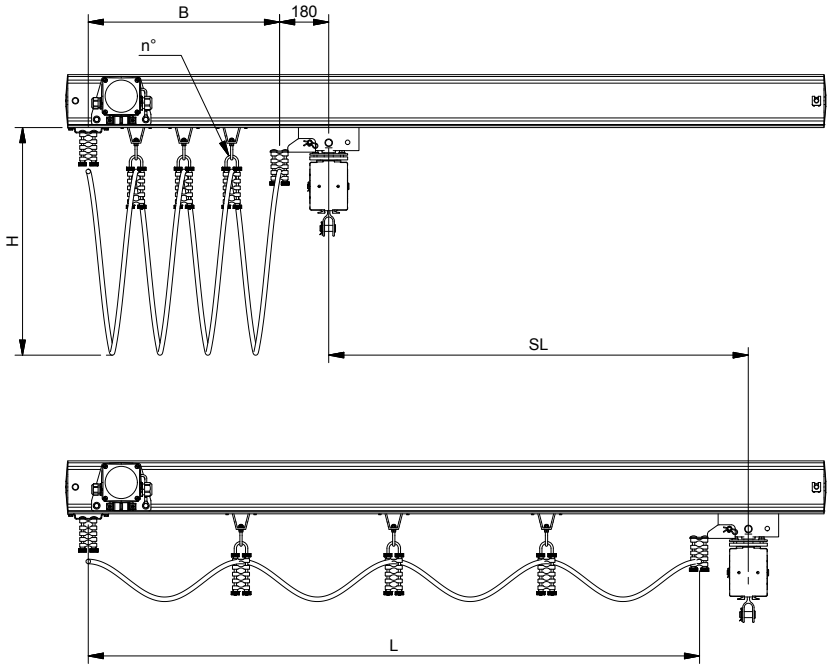
INFORMATION

Cable trolleys should have travel limiters to prevent the hoist trolley colliding with the cable trolleys and creating unnecessary wear.

Cables and hoses are available by the meter.

There are four types of cable trolleys:
(A) flat cable channel, maximum width 15 mm
(B) link chain for hose and / or round cable Ø10 - 36 mm
(C) strap for vacuum hose, max Ø90 mm
(B) shackle for hose and / or round cable Ø8 - 22 mm

Wire clamps for (B) can rotate 360° in end fittings, cable trolleys and strain reliefs.
Wire clamps for (D) cannot rotate in end fittings and strain reliefs and is limited to 90° in cable trolleys which has the advantage of neither hose nor cable twisting.



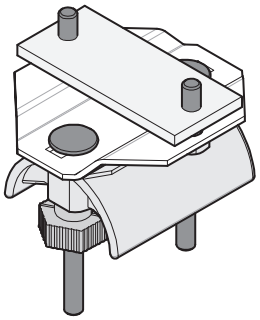
SL = stroke [m]
B = buffer [m]
L = minimum length of cable/hose [m]
H = pendant [m]
n° = number of cable trolleys

$L = SL_{max} \times 1.2$
$n° = (L / 2H) - 1$
$B_{min} = (n° + 1) \times 0.1$
$H_{max} = 0.6$

Sample calculation for SL = 12 m, H = 0.4 m:

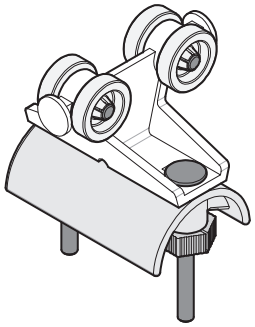
L2	*= 12 x 1.2*	*14.4 m*
n°	*= (14.4 / 0.8) - 1*	*qty 17*
B	*= (17 + 1) x 0.1*	*1.8 m*

(A) Channel



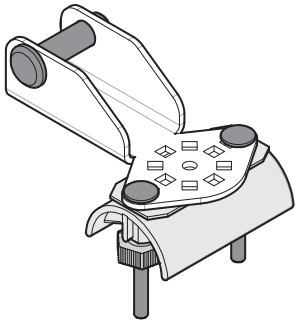
End bracket

#	Note
30s	
730485	End bracket
50s	
730488	End bracket
75s	
730488	End bracket



Cable carriage

#		Max load [kg]	Note
30s			
730467	Cable carriage	6.3	
50s			
730470	Cable carriage	10	
75s			
730470	Cable carriage	10	



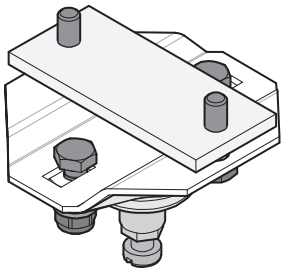
Strain relief

#	Note
30s	
743660	Strain relief
50s	
743660	Strain relief
75s	
743683	Strain relief

Flat cable

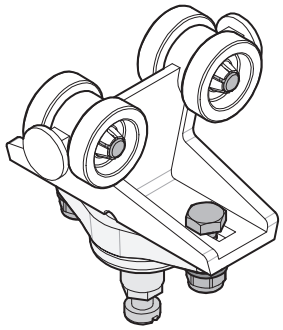
#		[mm]	m [kg/m]	Note
730648	4G1.5	15 x 5	0.14	
730649	5G1.5	18 x 5	0.19	

(B) Link chain



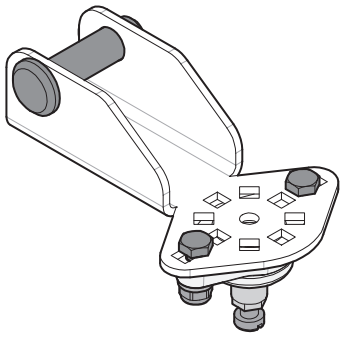
End bracket

#	Note
30s	
730491	End bracket
50s	
730492	End bracket
75s	
730492	End bracket



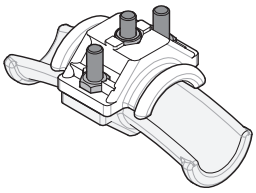
Cable carriage

#		Max load [kg]	Note
30s			
730469	Cable carriage	6.3	
50s			
730472	Cable carriage	10	
75s			
730472	Cable carriage	10	



Strain relief

#	Note
30s	
743688	Strain relief
50s	
743688	Strain relief
75s	
743689	Strain relief



Wire clamp för cable / hose Ø10 - 36 mm

#		Note
730473	Cable clamp	Ø10 - 16 mm
730474		Ø17 - 25 mm
730475		Ø26 - 36 mm

INFORMATION

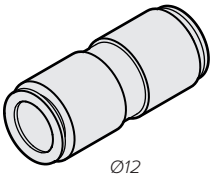
If you are using different sizes of cable clamps, the largest must be used closest to the trolley.

Round cable

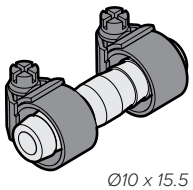
#		Ø	m [kg/m]	Note
730650	3G1.5	10	0.14	
730652	5G1.5	12	0.19	

Pneumatic hose

#		Ø	m [kg/m]	Note
730646	PVC	15.5 x 10	0.14	Standard
743104	PUR	12 x 8	0.08	Highly flexible



Ø12

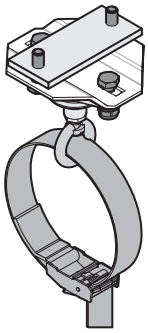


Ø10 x 15.5

Wire splicers

#	Ø	Note
741168	12	For PUR hose
730680	10 x 15.5	

(C) Strap

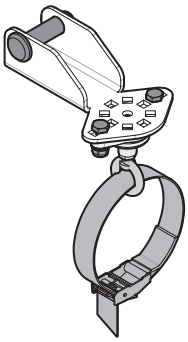


End bracket

#	Note
30s	
730494	End bracket
50s	
730496	End bracket
75s	
730496	End bracket

Cable carriage

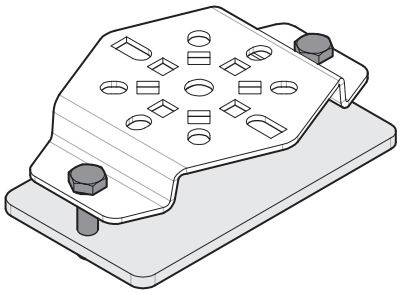
#	Max load [kg]	Note
30s		
730497	Cable carriage	6.3
50s		
730498	Cable carriage	10
75s		
730498	Cable carriage	10



Strain relief

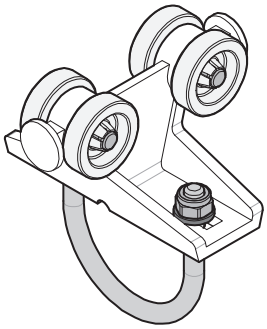
#	Note
30s	
743639	Strain relief
50s	
743639	Strain relief
75s	
743684	Strain relief

(D) Shackle



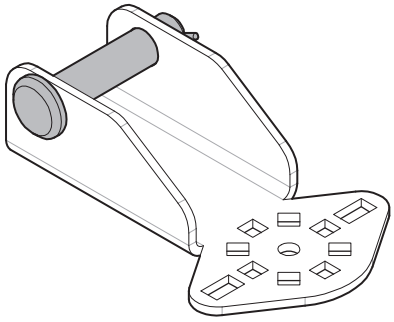
End bracket

#		Note
30s		
743661	End bracket	Fort cable clamp, fixed
50s		
743640	End bracket	Fort cable clamp, fixed
75s		
743640	End bracket	Fort cable clamp, fixed



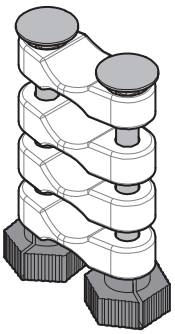
Cable carriage

#		Max load [kg]	Note
30s			
743065	Cable carriage	6.3	For cable clamp, shackle
50s			
743066	Cable carriage	10	For cable clamp, shackle
75s			
743066	Cable carriage	10	For cable clamp, shackle



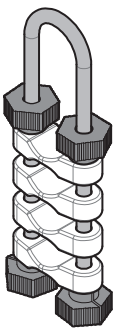
Strain relief

#		Note
30s		
743641	Strain relief	Fort cable clamp, fixed
50s		
743641	Strain relief	Fort cable clamp, fixed
75s		
743682	Strain relief	Fort cable clamp, fixed



Cable clamp, fixed, for cable Ø8 - 22 mm

#		Note
743642	Cable clamp	2 x Ø8-22, fixed
743643		3 x Ø8-22, fixed
743644		4 x Ø8-22, fixed



Cable clamp, shackle, for cable Ø8 - 22 mm

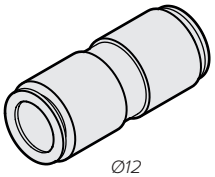
#		Note
743060	Cable clamp	2 x Ø8-22, shackle
743061		3 x Ø8-22, shackle
743062		4 x Ø8-22, shackle

Round cable

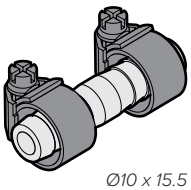
#		Ø	m [kg/m]	Note
730650	3G1.5	10	0.14	
730652	5G1.5	12	0.19	

Pneumatic hose

#		Ø	m [kg/m]	Note
730646	PVC	15.5 x 10	0.14	Standard
743104	PUR	12 x 8	0.08	Highly flexible



Ø12

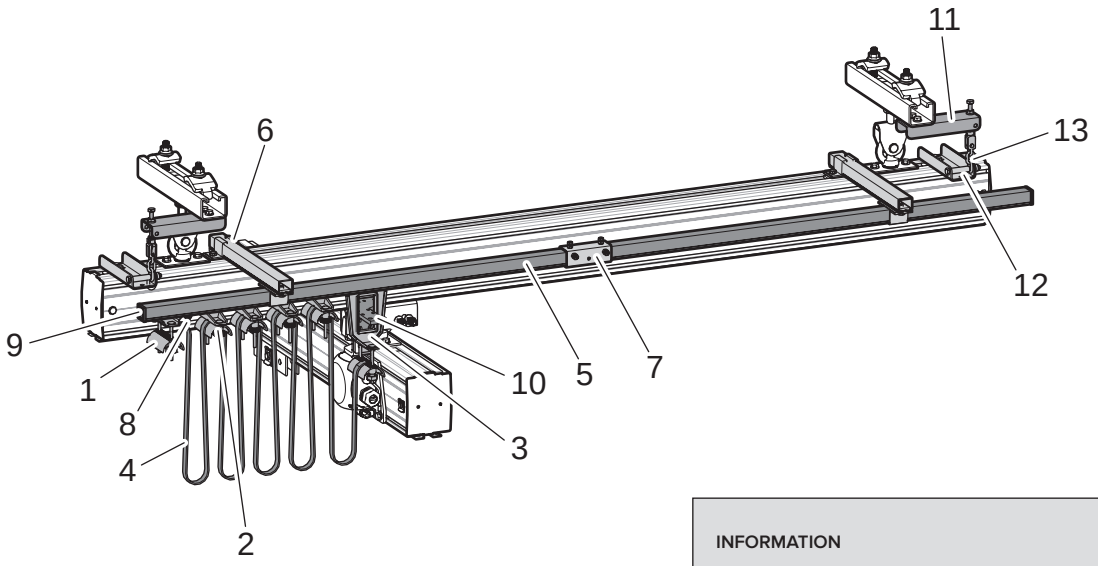


Ø10 x 15.5

Wire splicers

#	Ø	Note
741168	12	For PUR hose
730680	10 x 15.5	

CABLE TROLLEY FOR C-RAIL



1. *End bracket*
2. *Cable carriage*
3. *Follower trolley*
4. *Cable / hose*
5. *C-rail*
6. *Bracket*
7. *Splicing kit with lock screws*
8. *End stop*
9. *End cover*
10. *Follower arm*
11. *Cable trough support - upper*
12. *Cable trough support - lower*
13. *Chain*

INFORMATION

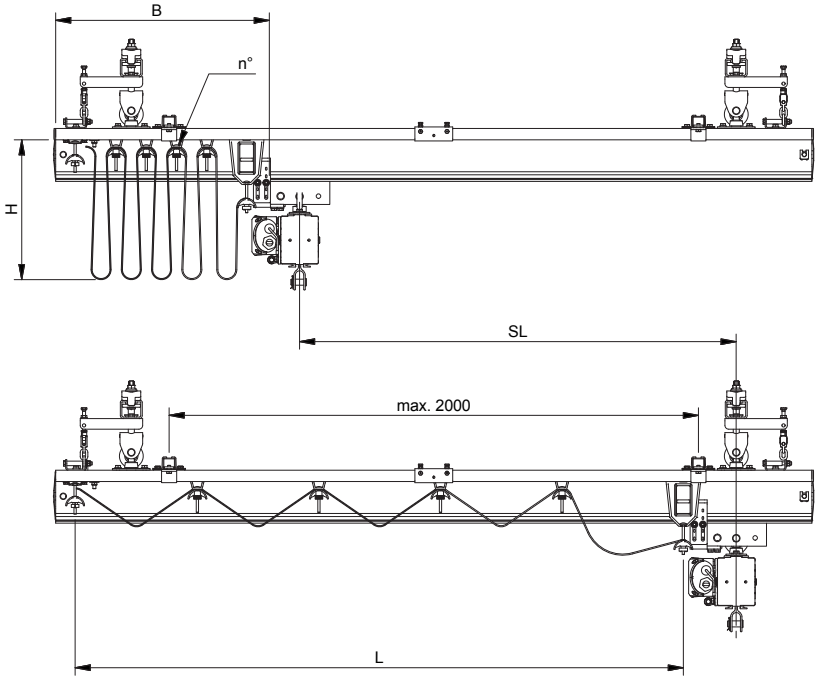
Cable trolleys should have travel limiters to prevent the hoist trolley colliding with the cable trolleys and creating unnecessary wear.

Cables and hoses are available by the meter.

There are four types of cable trolleys:
(A) flat cable channel, maximum width 15 mm
(B) link chain for hose and / or round cableØ10 - 36 mm
(C) strap for vacuum hose, max Ø90 mm
(B) shackle for hose and / or round cable Ø8 - 22 mm

Wire clamps for (B) can rotate 360° in end fittings, cable trolleys and strain reliefs.
Wire clamps for (D) cannot rotate in end fittings and strain reliefs and is limited to 90° in cable trolleys which has the advantage of neither hose nor cable twisting.

Cable trolley for C-rail is only applicable for 50s and 75s.



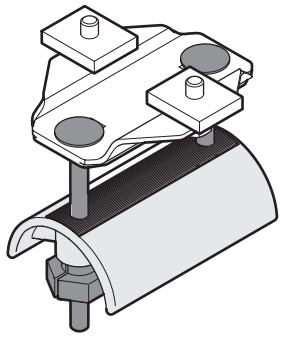
SL = stroke [m]
B = buffer [m]
L = minimum length of cable/hose [m]
H = pendant [m]
n° = number of cable trolleys

$L = SL_{max} \times 1.2$
$n° = (L / 2H) - 1$
$B_{min} = (n° + 1) \times 0.1$
$H_{max} = 0.6$

Sample calculation for SL = 12 m, H = 0.4 m:

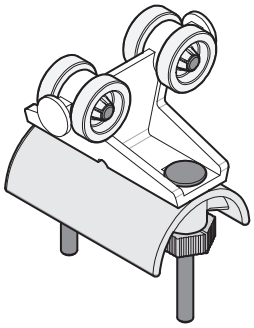
L2	*= 12 x 1.2*	*14.4 m*
n°	*= (14.4 / 0.8) - 1*	*qty 17*
B	*= (17 + 1) x 0.1*	*1.8 m*

(A) Channel



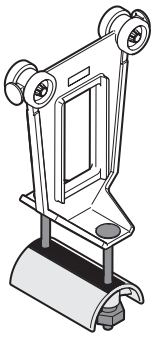
End bracket

#	Note
743856	End bracket



Cable carriage

#	Note
730467	Cable carriage



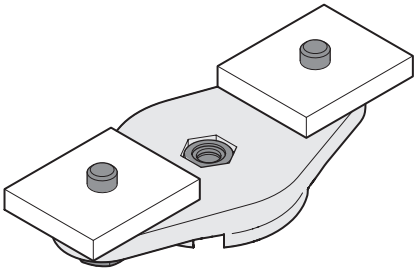
Follower trolley

#	Note
743857	Follower trolley

Flat cable

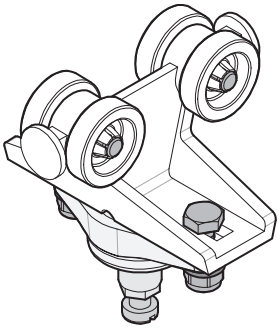
#		[mm]	m [kg/m]	Note
730648	4G1.5	15 x 5	0.14	
730649	5G1.5	18 x 5	0.19	

(B) Link chain



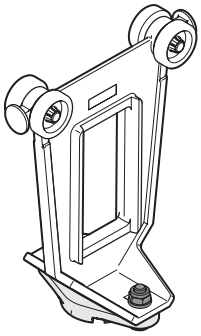
End bracket

#	Note
74385	End bracket



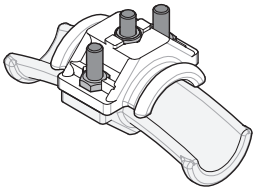
Cable carriage

#	Note
730469	Cable carriage



Follower trolley

#	Note
743859	Follower trolley



Wire clamp för cable/hose Ø10 - 36 mm

INFORMATION

If you are using different sizes of cable clamps, the largest must be used closest to the trolley.

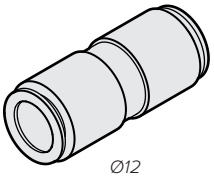
#		Note
730473	Cable clamp	Ø10 - 16 mm
730474		Ø17 - 25 mm
730475		Ø26 - 36 mm

Round cable

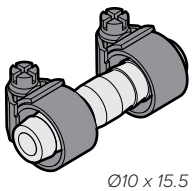
#		Ø	m [kg/m]	Note
730650	3G1.5	10	0.14	
730652	5G1.5	12	0.19	

Pneumatic hose

#		Ø	m [kg/m]	Note
730646	PVC	15.5 x 10	0.14	Standard
743104	PUR	12 x 8	0.08	Highly flexible



Ø12

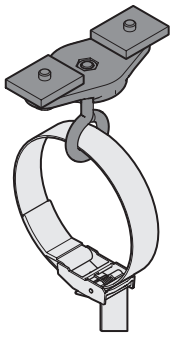


Ø10 x 15.5

Wire splicers

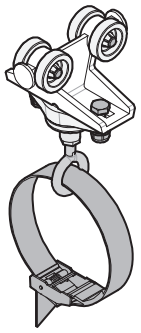
#	Ø	Note
741168	12	For PUR hose
730680	10 x 15.5	

(C) Strap



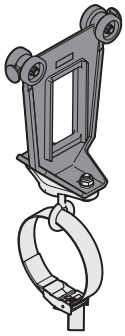
End bracket

#	Note
743860	End bracket



Cable carriage

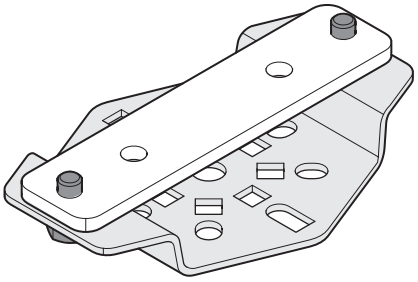
#	Note
730497	Cable carriage



Follower trolley

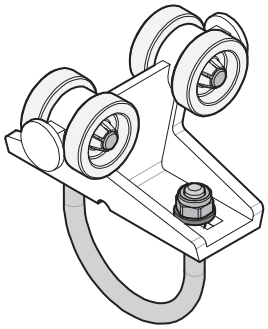
#	Note
743861	Follower trolley

(D) Shackle



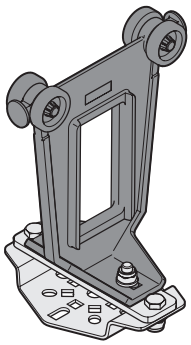
End bracket

#		Note
743862	End bracket	Fort cable clamp, fixed



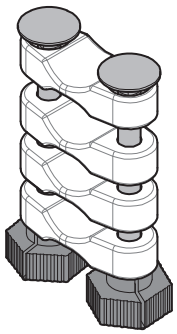
Cable carriage

#		Note
743065	Cable carriage	For cable clamp, shackle



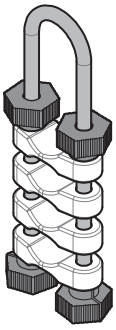
Follower trolley

#		Note
743863	Follower trolley	Fort cable clamp, fixed



Cable clamp, fixed, for cable Ø8 - 22 mm

#		Note
743642	Cable clamp	2 x Ø8-22, fixed
743643		3 x Ø8-22, fixed
743644		4 x Ø8-22, fixed



Cable clamp, shackle, for cable Ø8 - 22 mm

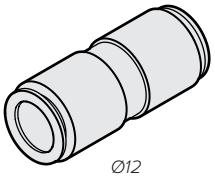
#		Note
743060	Cable clamp	2 x Ø8-22, shackle
743061		3 x Ø8-22, shackle
743062		4 x Ø8-22, shackle

Round cable

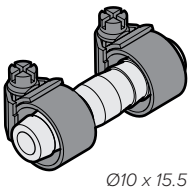
#		Ø	m [kg/m]	Note
730650	3G1.5	10	0.14	
730652	5G1.5	12	0.19	

Pneumatic hose

#		Ø	m [kg/m]	Note
730646	PVC	15.5 x 10	0.14	Standard
743104	PUR	12 x 8	0.08	Highly flexible



Ø12

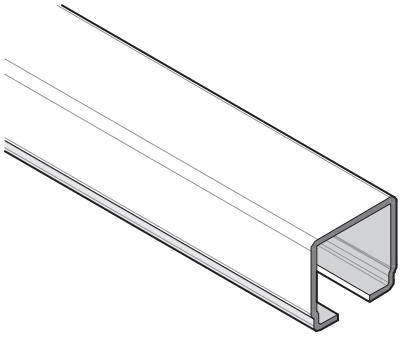


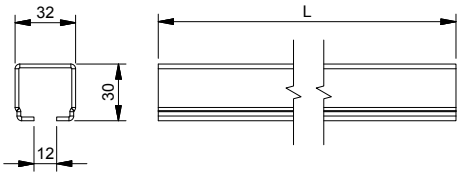
Ø10 x 15.5

Wire splicers

#	Ø	Note
741168	12	For PUR hose
730680	10 x 15.5	

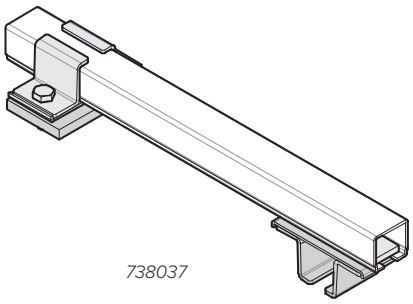
C-rail



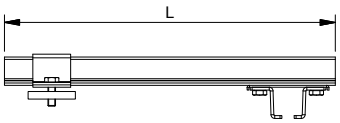


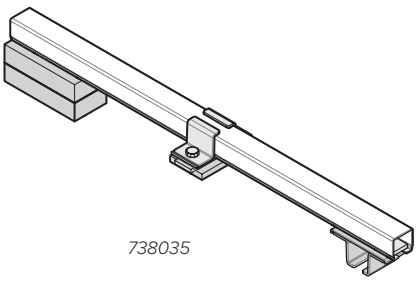
#	L [m]	m [kg/m]	Note
733651	4	0.2	
732572	6	0.2	

Mounting Bracket

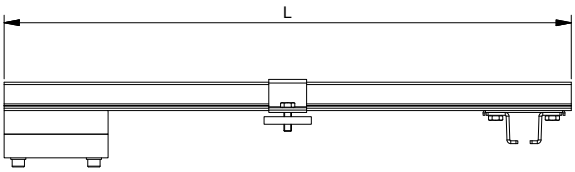


738037



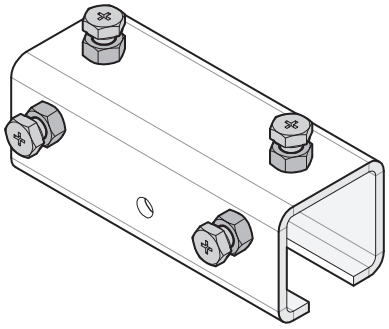


738035



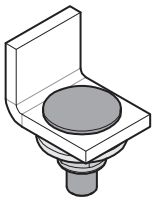
#	L [mm]	m [kg]	Note
738037	350	0.2	
738035	600	0.4	For flexibly suspended bridge

Splice



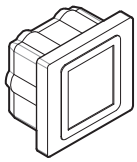
#	Note
732574	

End stop



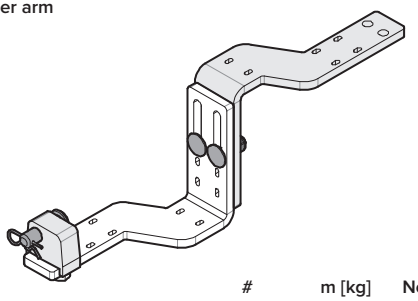
#	Note
732575	

End cover



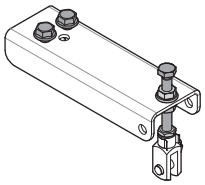
#	Note
732576	

Follower arm



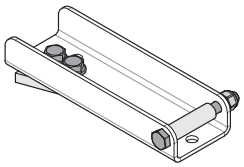
#	m [kg]	Note
743864	1.6	

Cable trough support - upper



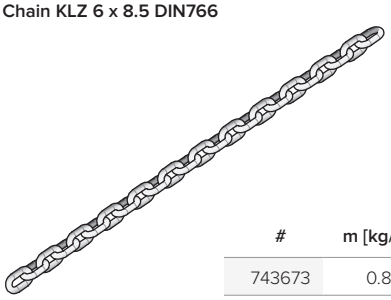
#	m [kg]	Note
743671	0.5	1x / hanger

Cable trough support - lower



#	m [kg]	Note
743672	0.5	1x / hanger

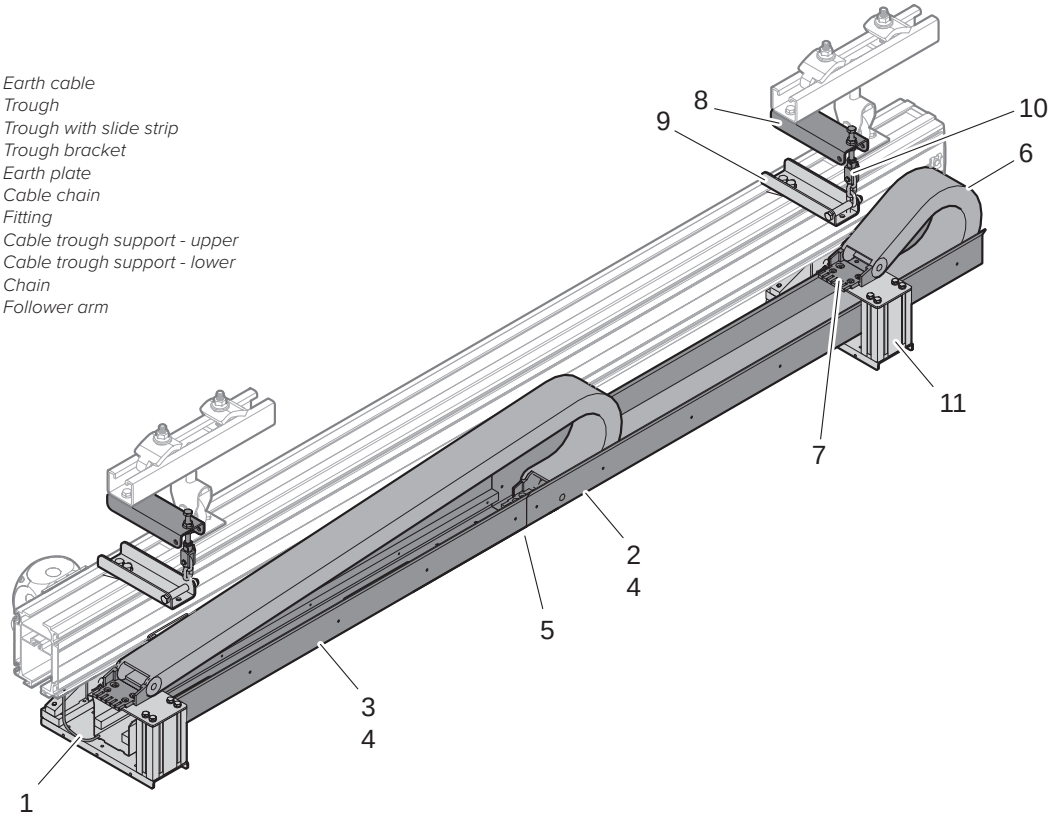
Chain KLZ 6 x 8.5 DIN766



#	m [kg/m]	Note
743673	0.8	L = Z - 90 mm

CABLE CHAIN

1. *Earth cable*
2. *Trough*
3. *Trough with slide strip*
4. *Trough bracket*
5. *Earth plate*
6. *Cable chain*
7. *Fitting*
8. *Cable trough support - upper*
9. *Cable trough support - lower*
10. *Chain*
11. *Follower arm*



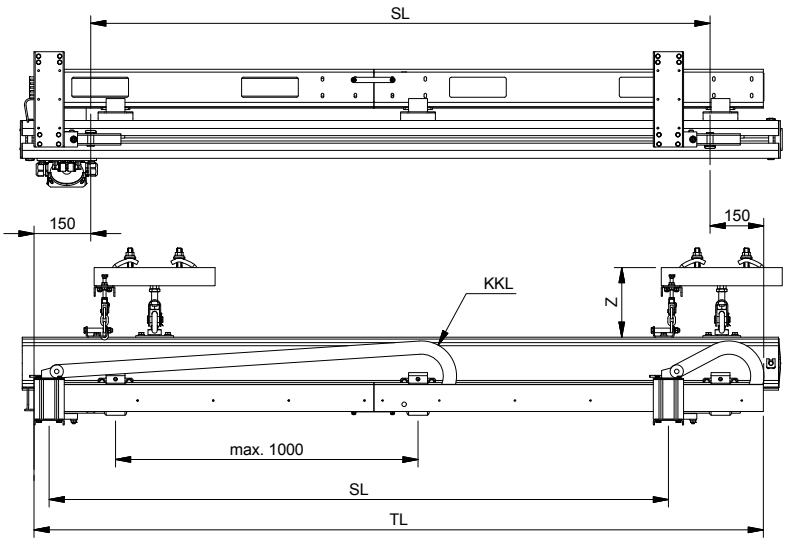
INFORMATION

Fits only AHB 140 / 190.

An earth cable is use for earthing and the equalization of potentials between rails / tracks, or between rail / track and earthed component.

If the connection is painted or coated in any way, the coating must be removed to create a satisfactory connection.

In case of SL >4 m, half of the troughs must be fitted with slide strips.



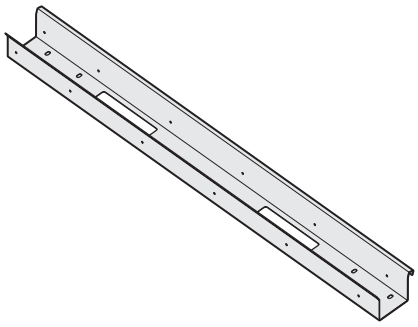
SL = stroke [m]
TL = trough length [m]
KKL = Cable chain length [m]

TL = SL + 0.3
KKL = (SL / 2) + 0.5

Sample calculation for SL = 4 m:

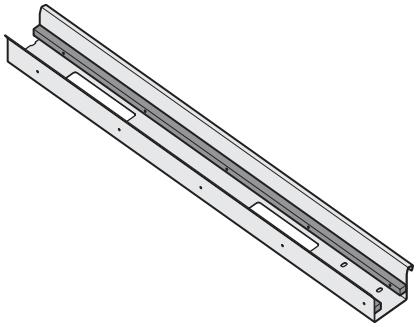
TL = 4 + 0.3	*4.3 m*
KKL = (4 / 2) + 0.5	*2.5 m*

Trough



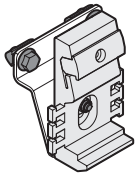
#	L [m]	m [kg]	Note
743666	2	5.4	

Trough with slide strip



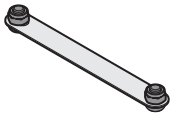
#	L [m]	m [kg]	Note
743667	2	5.4	

Trough bracket



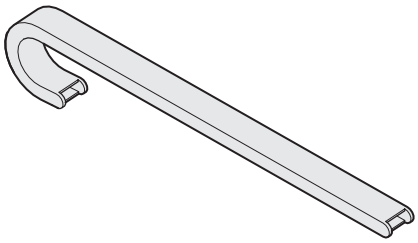
#	m [kg]	Note
743665	0.3	2x / trough

Earth plate



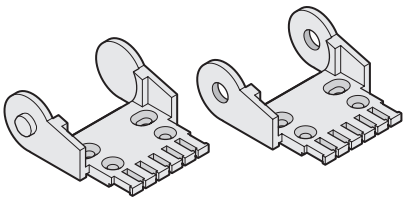
#	Note
743668	1x / trough

Cable chain



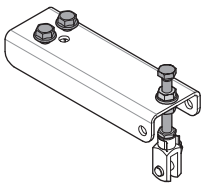
#	m [kg/m]	Note
743669	0.91	Radius = 75 mm. 25 x 57 mm internal

Fitting, assembly



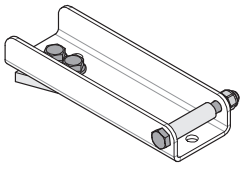
#	m [kg]	Note
743670	0.1	

Cable trough support - upper



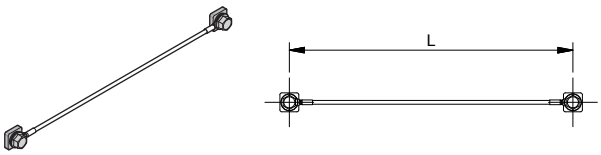
#	m [kg]	Note
743671	0.5	1x / hanger

Cable trough support - lower



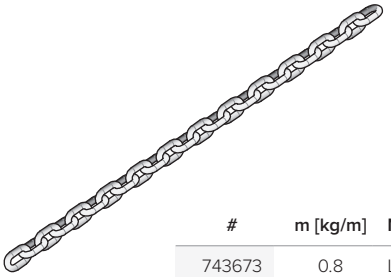
#	m [kg]	Note
743672	0.5	1x / hanger

Earth cable



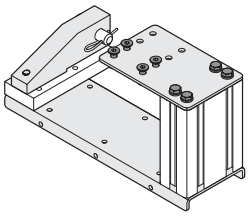
#	L [m]	Note
730692	0.3	

Chain KLZ 6 x 8.5 DIN766



#	m [kg/m]	Note
743673	0.8	L = Z - 90 mm

Follower arm



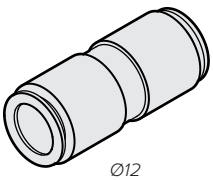
#	m [kg]	Note
743674	1.6	

Round cable

#		Ø	m [kg/m]	Note
732811	4G0.5	7	0.06	Highly flexible
732814	3G1.5	8	0.1	Highly flexible
7315813	5G1.5	9	0.14	Highly flexible

Pneumatic hose

#		Ø	m [kg/m]	Note
743104	PUR	12 x 8	0.08	Highly flexible

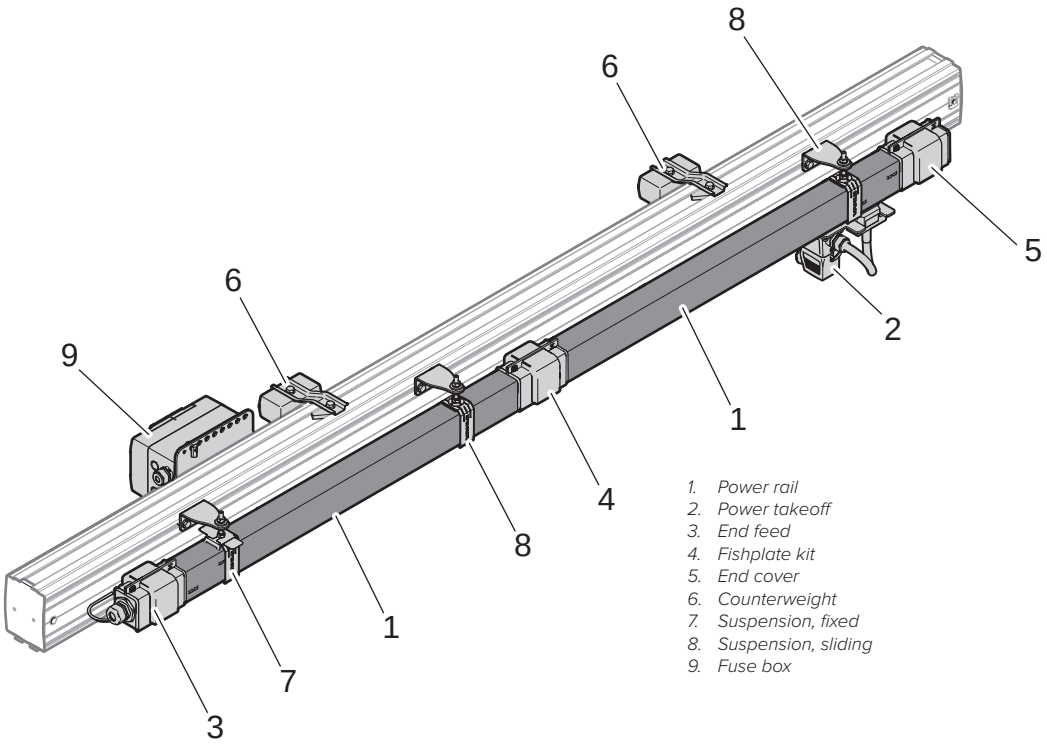


Ø12

Wire splicers

#	Ø	Note
741168	12	For PUR hose

POWER RAIL

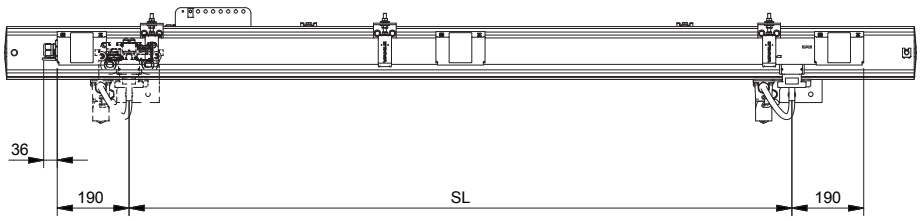


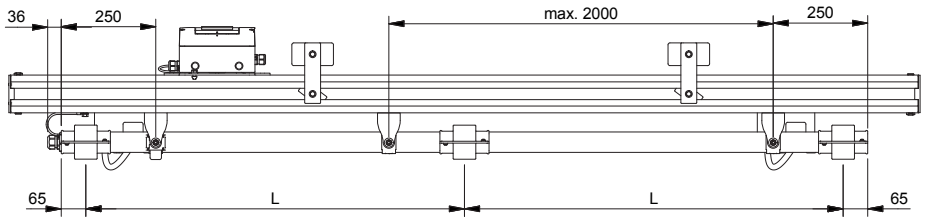
1. *Power rail*
2. *Power takeoff*
3. *End feed*
4. *Fishplate kit*
5. *End cover*
6. *Counterweight*
7. *Suspension, fixed*
8. *Suspension, sliding*
9. *Fuse box*

INFORMATION

The end feed must have a fixed suspension, the rest must be sliding. Each bridge must have its own fuse box if the bridge is supplied with power from a conductor rail in the track. A counterweight is used to prevent the rail from hanging askew.

ATTENTION! Electrical work is only permitted to be performed by a trained electrician.





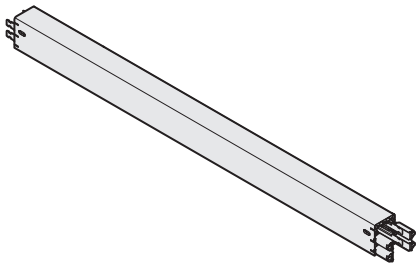
SL = stroke [m]
L = power rail length [m]
L_{tot} *= power rail total length [m]*

$L_{tot} = SL + 0.2$

Sample calculation for SL = 5 m:

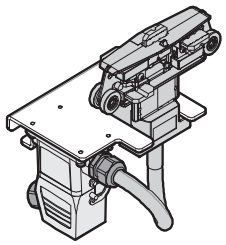
$L_{tot} = 5 + 0.2$ *5.2 m*

Power rail



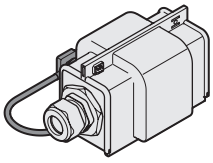
#	L [m]	m [kg]	Note
743015	1	1.7	
742306	3	4.9	
742307	4	6.5	

Power takeoff



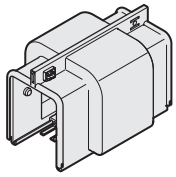
#	m [kg]	Note
742980	1.8	

End feed



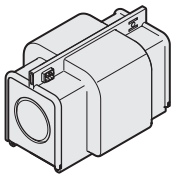
#	m [kg]	Note
742312	0.3	

Fishplate kit



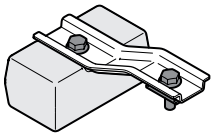
#	m [kg]	Note
742308	0.1	

End cover



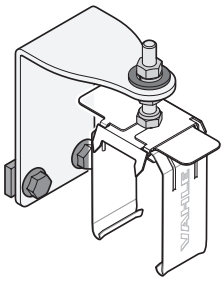
#	m [kg]	Note
742311	0.1	

Counterweight

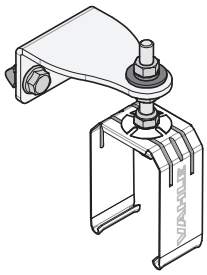


#	m [kg]	Note
743870	2.3	1x / m power rail

Hangers for power rail



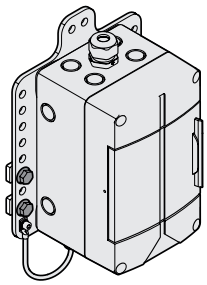
LHB, AHB3



AHB140/190

#		m [kg/m]	Note
30s			
742978	LHB	0.4	Rigid
742979	LHB	0.4	Sliding
50s			
743675	AHB140/190	0.2	Rigid
743676	AHB140/190	0.2	Sliding
75s			
742978	AHB3	0.4	Rigid
742979	AHB3	0.4	Sliding

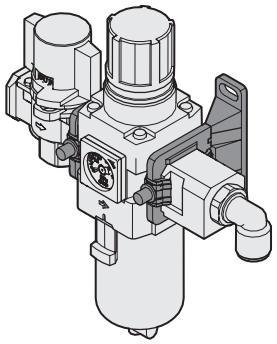
Fuse boxes



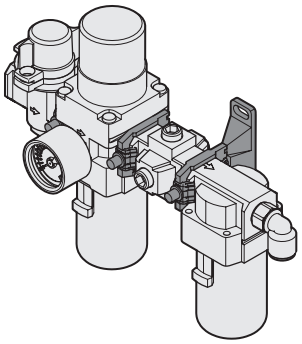
#		I [A]	m [kg/m]	Note
30s				
743078	LHB	1 x 10	3.1	
743079	LHB	3 x 10	3.1	
50s				
743686	AHB140/190	1 x 10	3.1	
743687	AHB140/190	3 x 10	3.1	
75s				
743078	AHB3	1 x 10	3.1	
743079	AHB3	3 x 10	3.1	

AIR CONDITIONING UNITS

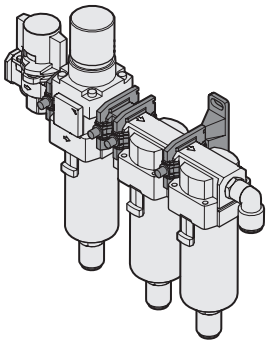
Air conditioning units



(A)



(B)



(C)

#	Type	[µ]	p_{max} [bar]	[l_n/min]	t [°C]	Note
735349	A	5	10	1700	5 - 60	
735350	B	0.3	10	350	5 - 60	
743057	C	0.01	10	240	5 - 60	

INFORMATION

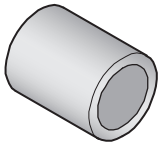
A: purge valve, pressure regulator with manometer and filter (manual purging)

B: purge valve, pressure regulator with manometer and filter (manual purging), pneumatic unit (4 outlets), microfilter.

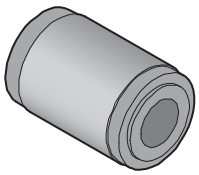
C: purge valve, pressure regulator with manometer and filter [manual purging], pneumatic unit (1 outlets), microfilter, sub-microfilter.
Used for sensitive applications, e.g. for air quality

All pneumatic units are supplied with Ø12 mm outlet connectors.

Filter



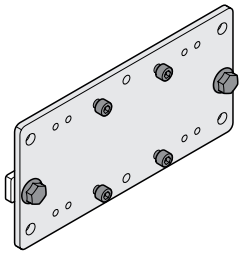
730671, 735351



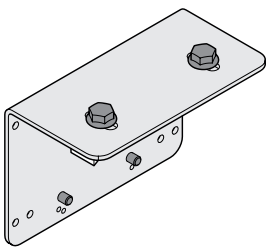
742427

#	[µ]	Note
730671	5	
735351	0.3	
742427	0.01	

Mounting plates



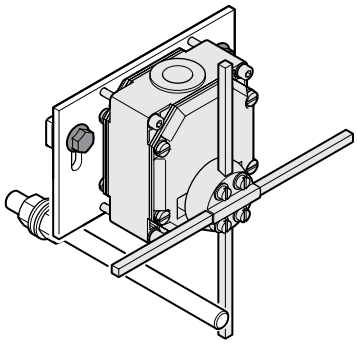
LHB, AHB140/190, AHB3



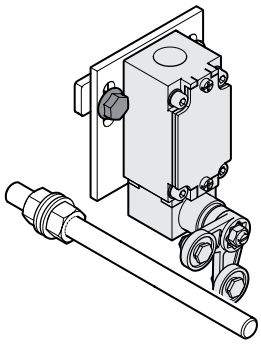
PHB1

#		m [kg/m]	Note
30s			
736168	LHB		
50s			
740831	PHB1		
736168	AHB140/190		
75s			
736168	AHB3		

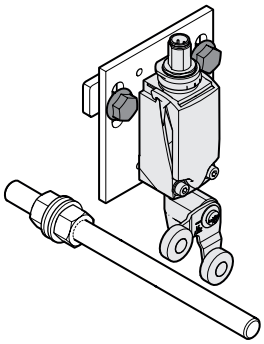
LIMIT SWITCHES



(A)



(C)



(D)

INFORMATION

A: 2 closing + 2 opening, switch with instantaneous switching.

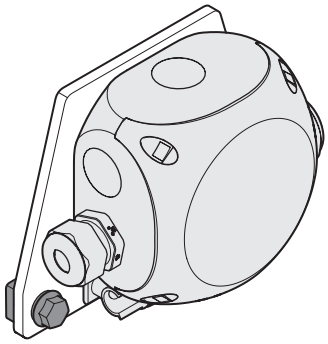
B: 1 closing + 1 opening. switch with instantaneous switching.

D: 1 closing + 1 opening. switch with instantaneous switching.

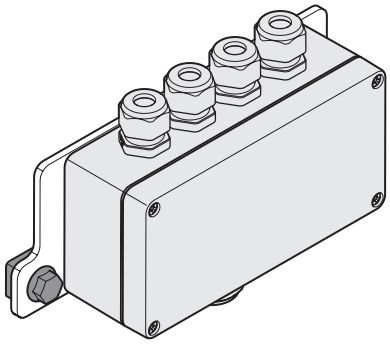
ATTENTION! Electrical work is only permitted to be performed by a trained electrician.

#		Type	m [kg/m]	Note
30s				
730657	LHB	A	1	IP 54, PG13,5
730656		C	0.6	IP 66, PG13,5
743680		D	0.5	IP 66, M12 4-pin
50s				
742413	PHB1	A	1	IP 54, PG13,5
742414		C	1	IP 66, PG13,5
743681		D	1	IP 66, M12 4-pin
743677	AHB140/190	A	1	IP 54, PG13,5
743678		C	0.6	IP 66, PG13,5
743679		D	0.5	IP 66, M12 4-pin
75s				
730657	AHB3	A	1	IP 54, PG13,5
730656		C	0.6	IP 66, PG13,5
7436380		D	0.5	IP 66, M12 4-pin

CONNECTION UNITS



(A)



(D)

INFORMATION

A connection unit (A) must be used at the power supply end of the track system and for each bridge when using electric equipment. Threaded coupling suitable for both Ø8 - 17 mm round and 15 - 18 x 5 mm flat cables.

Connection unit (D) used for e.g. limit switch:
4 x M16 threaded coupling, cable Ø5 - 10 mm
1 x M20 threaded coupling, cable Ø10 - 14 mm
Terminal block for 1.5 mm² wire included.

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#		Type	m [kg]	Note
30s				
744017	LHB	A	1	IP66, max 10 A
742268	LHB	D	1.2	IP66, max 10 A
50s				
744016	PHB1	A	1	IP66, max 10 A
744017	AHB140/190	A	1	IP66, max 10 A
743656	AHB140/190	D		IP66, max 10 A
75s				
744017	AHB3	A	1	IP66, max 10 A
742268	AHB3	D	1.2	IP66, max 10 A

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