



# **MECHRAIL**

ALUMINIUM JIB CRANES



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Although the greatest care was taken regarding the information in this catalogue, we assume no responsibility for any errors. We reserve the right to make changes. The illustrations in the catalogue represent the described products, but delivered parts may differ in some respects from the illustrations. The right is reserved to make changes in design and dimensions compared with the information in the catalogue in order enable development of designs, material and manufacturing methods.

The customer is reminded that in the purchase of our products for professional use or other, there is supplementary, current information that could not be included in the catalogue in terms of recommendations on each product's suitability regarding different combinations of the comprehensive product line of Movomech.

All relevant information must be provided to the persons who are responsible for the use of the product.

## GENERAL INFORMATION

This product catalogue describes the Mechcrane range of components and a basic guide for selecting among our products. This product catalogue supports other sales tools for the correct choice of product.

### GENERAL PROPERTIES

#### About the Mechcrane™ range of jib cranes

The Movomechs range Mechcrane™ includes a number of ergonomic aluminium jib cranes, including wall-mounted jib cranes, pillar-mounted jib cranes and pillar-mounted articulated jib cranes.

#### Nominal capacity

The nominal capacity is the maximum load that a jib crane of a specific design and configuration is designed to lift and handle in normal operation. The load includes the weight of the lifting device and the tipping tools, the weight of the lifted item, and the dynamic forces caused by the lifting operation.

#### Technical regulations

Movomech's products are manufactured according to latest technical development, as well as according to the latest applicable European standards and regulations. The standards and directives which the product conforms to is stated in the Declaration of Conformity or the Manufacturer's Declaration which is supplied together with the product.

#### Safety precautions

The manual provides the user with practical instructions for safe operation and easy maintenance of the product.

Everybody involved in the transport, assembly, deployment, use, maintenance and repair of Movomech's equipment and accessories must have read and understood:

- the Operating Instructions,
- the Safety Directions, as well as
- the Safety Guidelines in the various chapters.

In order to avoid improper use and to ensure uninterrupted operation with our products, the Operating Instructions must always be available to the user / operator.

### MATERIAL PROPERTIES

#### Aluminium jib crane profiles

The Mechrail aluminium profiles are anodized and thus need no maintenance. They are manufactured in aluminium alloy EN-AW 6063 T6 according to SS-EN 755-2:2016 and anodized with C0 (natural colour).

#### INFORMATION

We recommend that you use soft-starting lifting equipment together with the Mechcrane wall and pillar-mounted jib cranes.

The use of jerk-starting lifting equipment may introduce unwanted movement in the jib crane, which in turn may have a negative impact on the safe handling and product life span of the jib crane.



### ENVIRONMENTAL CONDITIONS

#### Environmental and temperature limitations

This product is designed for use indoors in typical industrial environments, such as production spaces in the automotive industry and general manufacturing.

The approved temperature range is +5 to +40 °C.

Atmospheric corrosion category: C2.

Noise level < 70 dB (A).

#### ATEX

This product has no ATEX-classification according to the EU Directive for equipment in explosive environments.

**CLASSIFICATION OF OPERATIONS**

Permitted operation classes for Mechcrane considering fatigue strength.

		Total number of load changes (life span)			
		N1	N2	N3	N4
		Occasional, irregular use with long periods of rest	Regular use with intermittent operation	Regular use with continuous operation	Regular use with strenuous continuous operation
		< 200,000	200,000 - 600,000	600,000 - 2,000,000	> 2,000,000
Load cases					
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

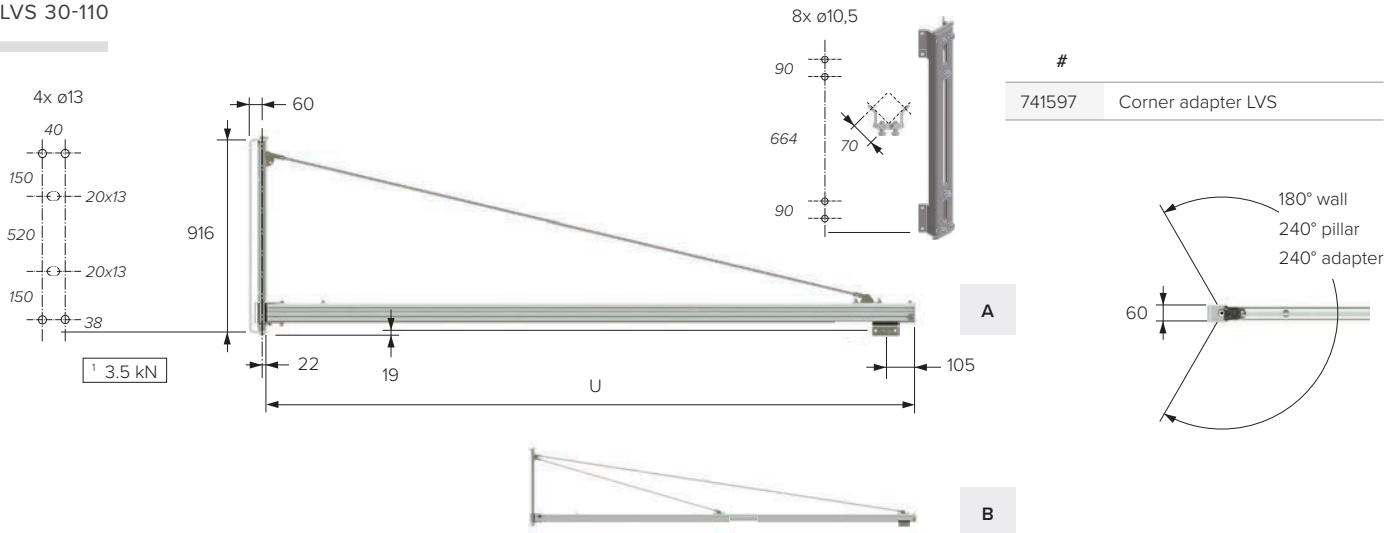
The following reduction factors must be observed when calculating the permitted capacity.

B1	B2	B3	B4	B5	B6
1.0	1.0	1.0	1.0	0.8	0.7

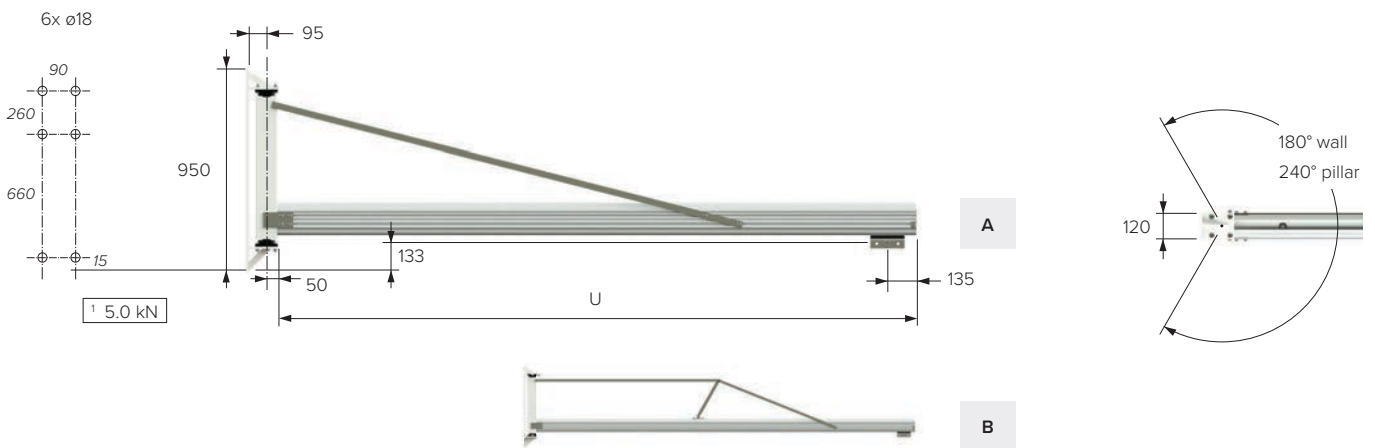
} x capacity

## WALL-MOUNTED JIB CRANES

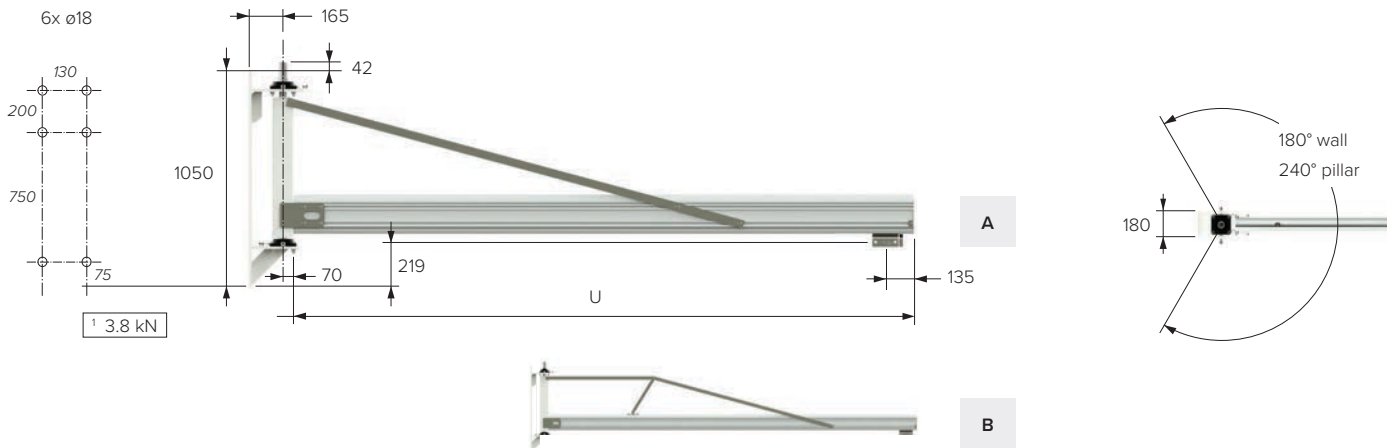
### LVS 30-110



### AVS1 125-150



### AVS2 200-250



#	U [mm]	Max. load [kg]	Version	Load/screw [kN] <sup>1</sup>	Note
<b>LVS 30-110 kg</b>					
741600	2000	110	A	3.5	
741601	2500	110	A	3.5	
741602	3000	110	A	3.5	
741603	3500	110	B	3.5	
741604	4000	110	B	3.5	
741605	4500	63	B	3.5	
741606	5000	50	B	3.5	
741607	5500	40	B	3.5	
741608	6000	30	B	3.5	
741609	2000-6000	30-110	A/B	3.5	State U

#	U [mm]	Max. load [kg]	Version	Load/screw [kN] <sup>1</sup>	Note
<b>AVS1 125-150 kg</b>					
735100	1500	150	A	5	
735101	2000	150	A	5	
735102	2500	150	A	5	
735103	3000	150	A	5	
735104	3500	150	A	5	
735105	4000	150	A	5	
735106	4500	125	B	5	
735107	5000	125	B	5	
735108	1500-4000	150	A	5	State U
735109	4000-5000	125	B	5	State U

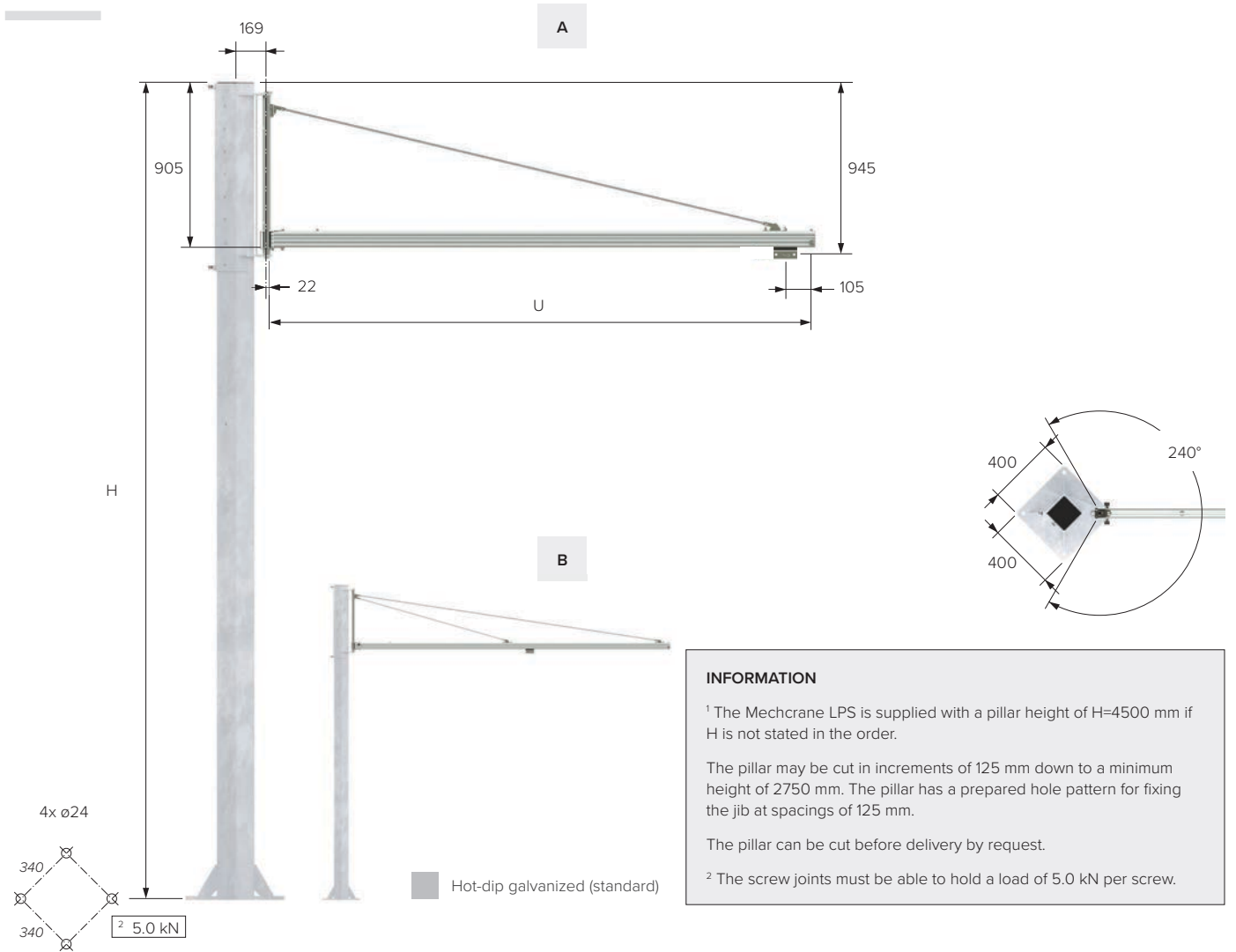
#	U [mm]	Max. load [kg]	Version	Load/screw [kN] <sup>1</sup>	Note
<b>AVS2 200-250 kg</b>					
735200	1500	250	A	3.8	
735201	2000	250	A	3.8	
735202	2500	250	A	3.8	
735203	3000	250	A	3.8	
735204	3500	250	A	3.8	
735205	4000	250	A	3.8	
735206	4500	200	B	3.8	
735207	5000	200	B	3.8	
735208	1500-4000	250	A	3.8	State U
735209	4000-5000	200	B	3.8	State U

**INFORMATION**

All wall swivel cranes have a galvanized wall bracket.

## PILLAR-MOUNTED JIB CRANES

LPS 30-110



### INFORMATION

<sup>1</sup> The Mechcrane LPS is supplied with a pillar height of H=4500 mm if H is not stated in the order.

The pillar may be cut in increments of 125 mm down to a minimum height of 2750 mm. The pillar has a prepared hole pattern for fixing the jib at spacings of 125 mm.

The pillar can be cut before delivery by request.

<sup>2</sup> The screw joints must be able to hold a load of 5.0 kN per screw.

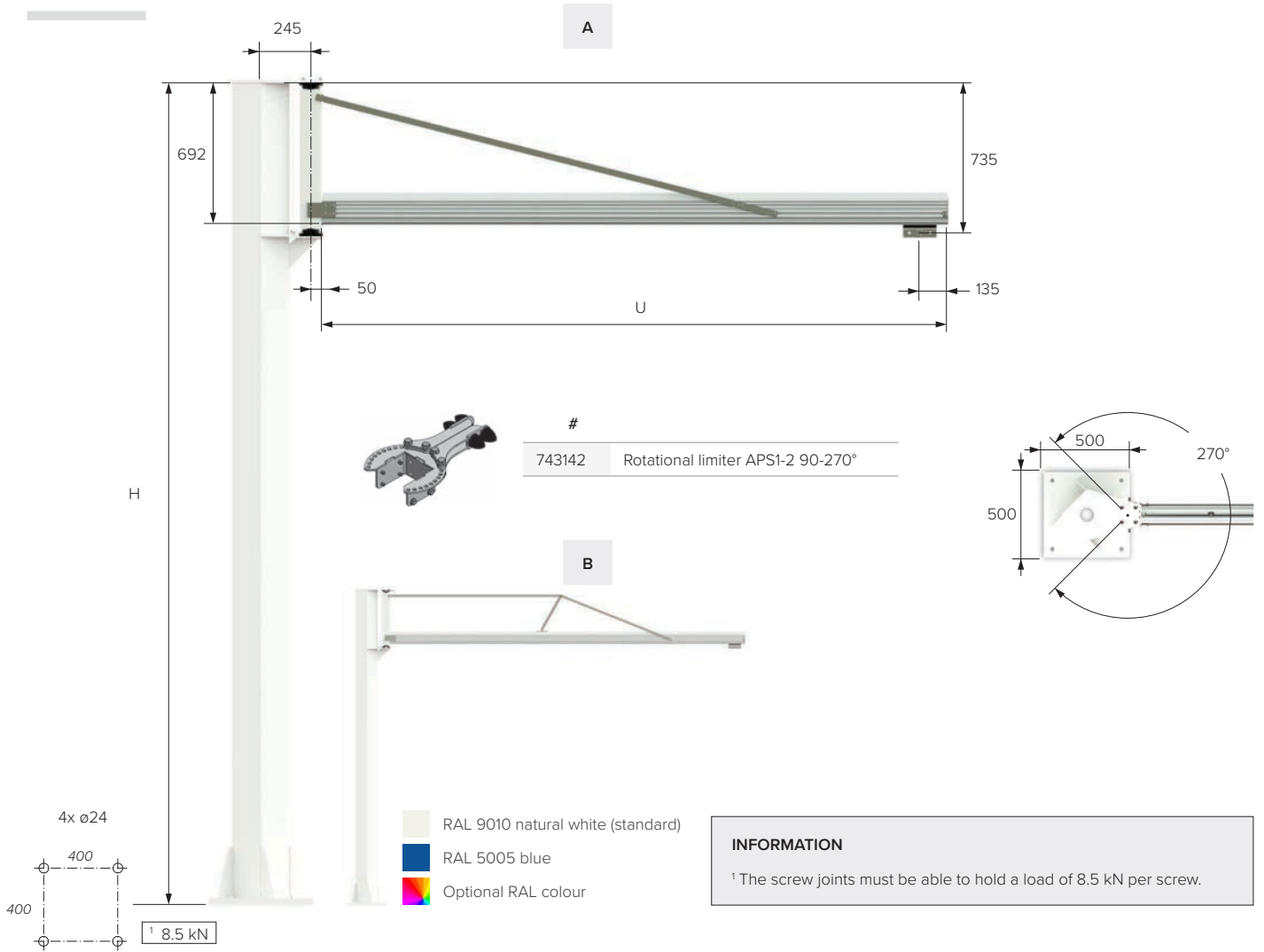
#	U [mm]	Max. load [kg]	Version	Note
<b>LPS 30-110 kg</b>				
741510	2000	110	A	
741511	2500	110	A	
741512	3000	110	A	
741513	3500	110	B	
741514	4000	110	B	
741515	4500	63	B	
741516	5000	50	B	
741517	5500	40	B	
741518	6000	30	B	
741519	2000-6000	30-110	A/B	State U

#	Note
<b>Optional equipment</b>	
740599	Cutting of pillar Enter H

Height H [mm]	Below profile H-905 [mm]	Trolley H-945 [mm]
2750	1845	1805
2875	1970	1930
3000	2095	2055
3125	2220	2180
3250	2345	2305
3375	2470	2430
3500	2595	2555
3625	2720	2680
3750	2845	2805
3875	2970	2930
4000	3095	3055
4125	3220	3180
4250	3345	3305
4375	3470	3430
4500 <sup>1</sup>	3595	3555



APS1 125-150

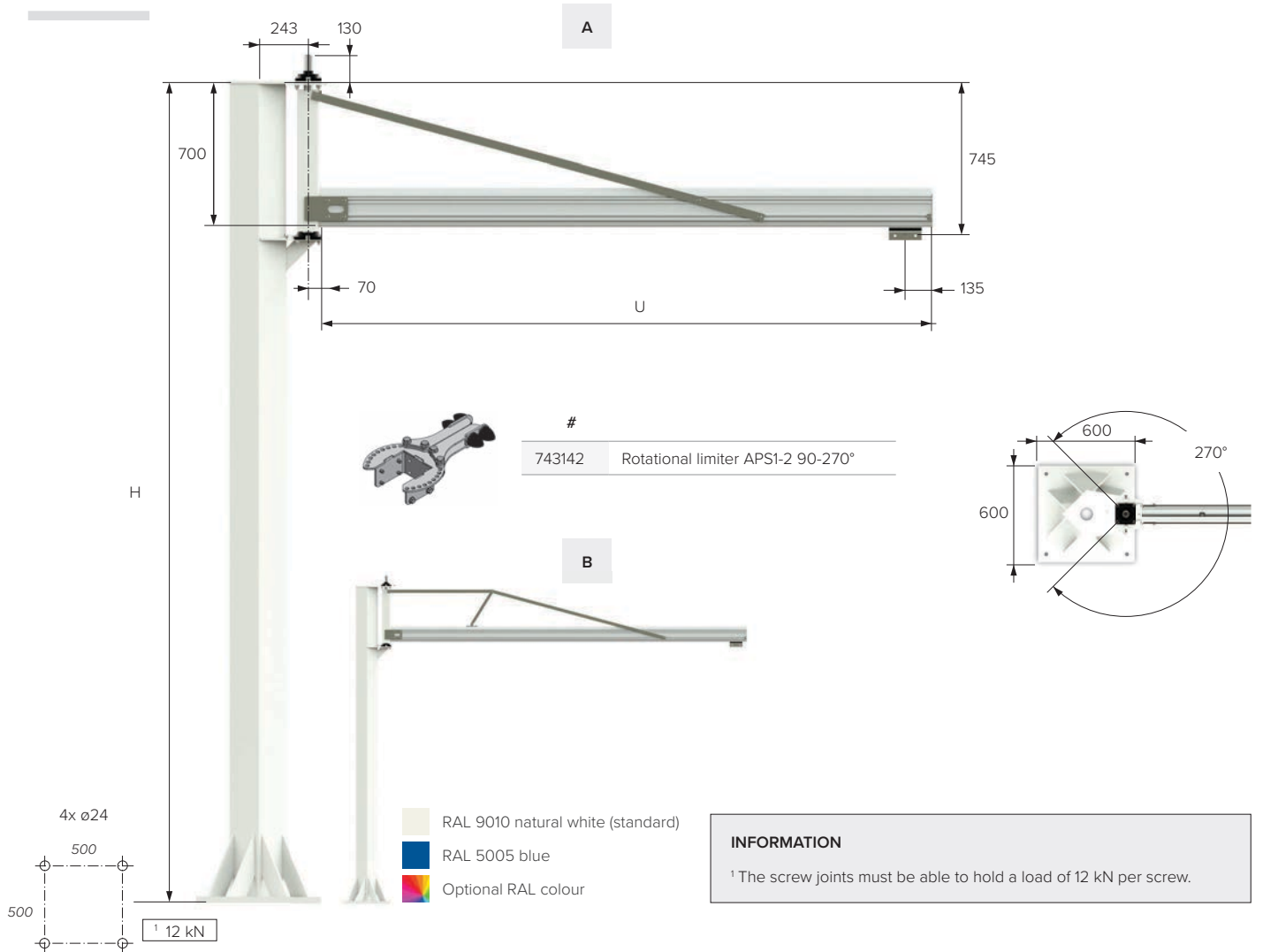


#  
743142 Rotational limiter APS1-2 90-270°

**INFORMATION**  
¹ The screw joints must be able to hold a load of 8.5 kN per screw.

Height H [mm]	Below profile H-692 [mm]	Trolley H-735 [mm]	#										State U	State U	Note
APS1 125-150 kg													2000-4000	>4000-5000	
			U [mm]	1500	2000	2500	3000	3500	4000	4500	5000				
2750	2058	2015	735110	735111	735112	735113	735114	735115	735116	735117	735118	735119			
3000	2308	2265	735120	735121	735122	735123	735124	735125	735126	735127	735128	735129			
3250	2558	2515	735130	735131	735132	735133	735134	735135	735136	735137	735138	735139			
3500	2808	2765	735140	735141	735142	735143	735144	735145	735146	735147	735148	735149			
3750	3058	3015	735150	735151	735152	735153	735154	735155	735156	735157	735158	735159			
4000	3308	3265	735160	735161	735162	735163	735164	735165	735166	735167	735168	735169			
4250	3558	3515	735170	735171	735172	735173	735174	735175	735176	735177	735178	735179			
4500	3808	3765	735180	735181	735182	735183	735184	735185	735186	735187	735188	735189			
<4500	H-692	H-735	735190	735191	735192	735193	735194	735195	735196	735197	735198	735199	Enter H		
		<b>Max. load [kg]</b>	150	150	150	150	150	150	125	125	150	125			
		<b>Version</b>	A	A	A	A	A	A	B	B	A	B			

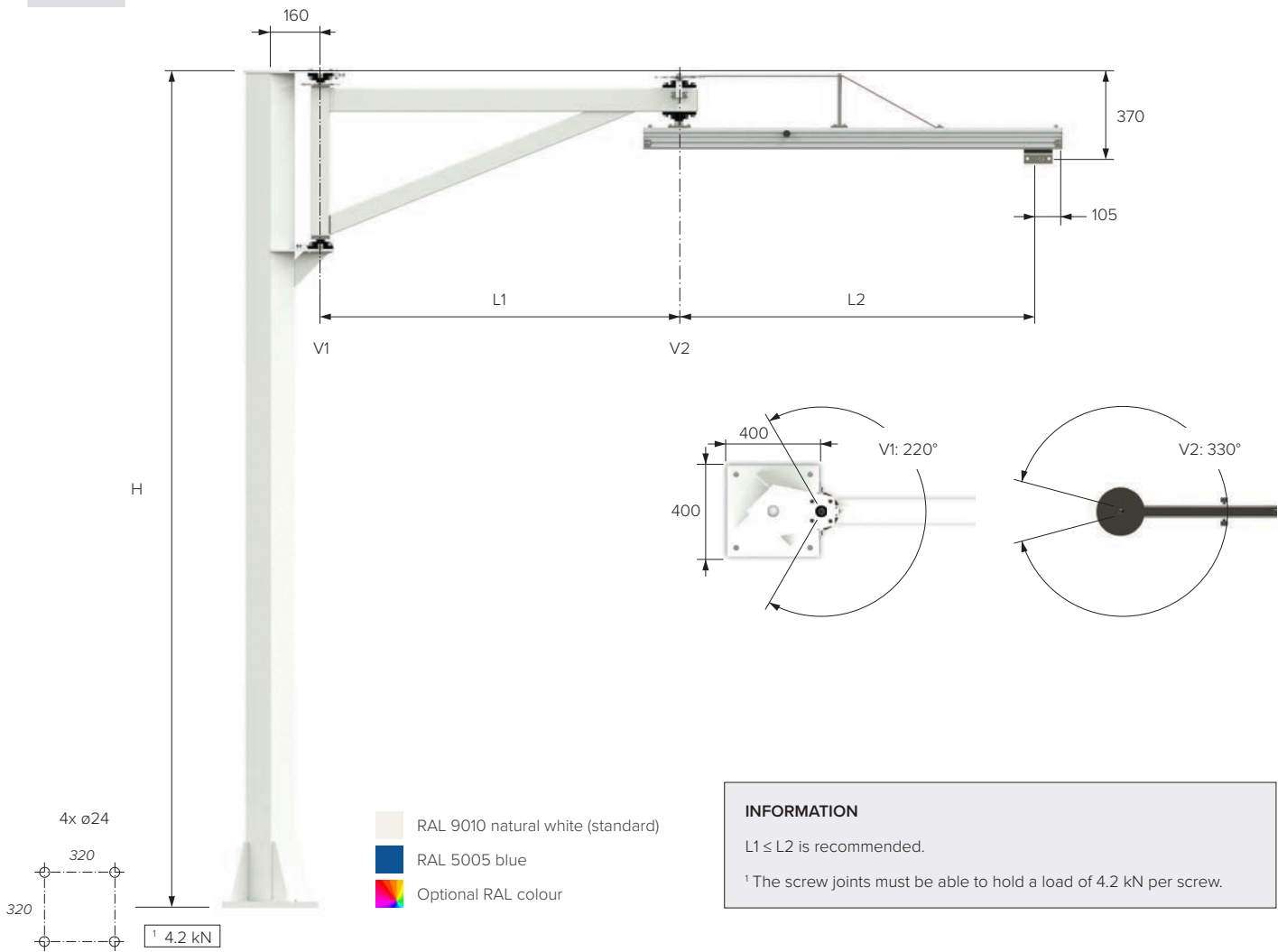
APS 200-250



Height H [mm]	Below profile H-700 [mm]	Trolley H-745 [mm]	#										State U	State U	Note
APS2 200-250 kg													2000-4000	>4000-5000	
			U [mm]	1500	2000	2500	3000	3500	4000	4500	5000				
2750	2058	2015	735210	735211	735212	735213	735214	735215	735216	735217	735218	735219			
3000	2308	2265	735220	735221	735222	735223	735224	735225	735226	735227	735228	735229			
3250	2558	2515	735230	735231	735232	735233	735234	735235	735236	735237	735238	735239			
3500	2808	2765	735240	735241	735242	735243	735244	735245	735246	735247	735248	735249			
3750	3058	3015	735250	735251	735252	735253	735254	735255	735256	735257	735258	735259			
4000	3308	3265	735260	735261	735262	735263	735264	735265	735266	735267	735268	735269			
4250	3558	3515	735270	735271	735272	735273	735274	735275	735276	735277	735278	735279			
4500	3808	3765	735280	735281	735282	735283	735284	735285	735286	735287	735288	735289			
<4500	H-692	H-735	735290	735291	735292	735293	735294	735295	735296	735297	735298	735299	Enter H		
			Max. load [kg]	250	250	250	250	250	200	200	250	200			
			Version	A	A	A	A	A	B	B	A	B			

## ARTICULATED JIB CRANES

VKL 50-80



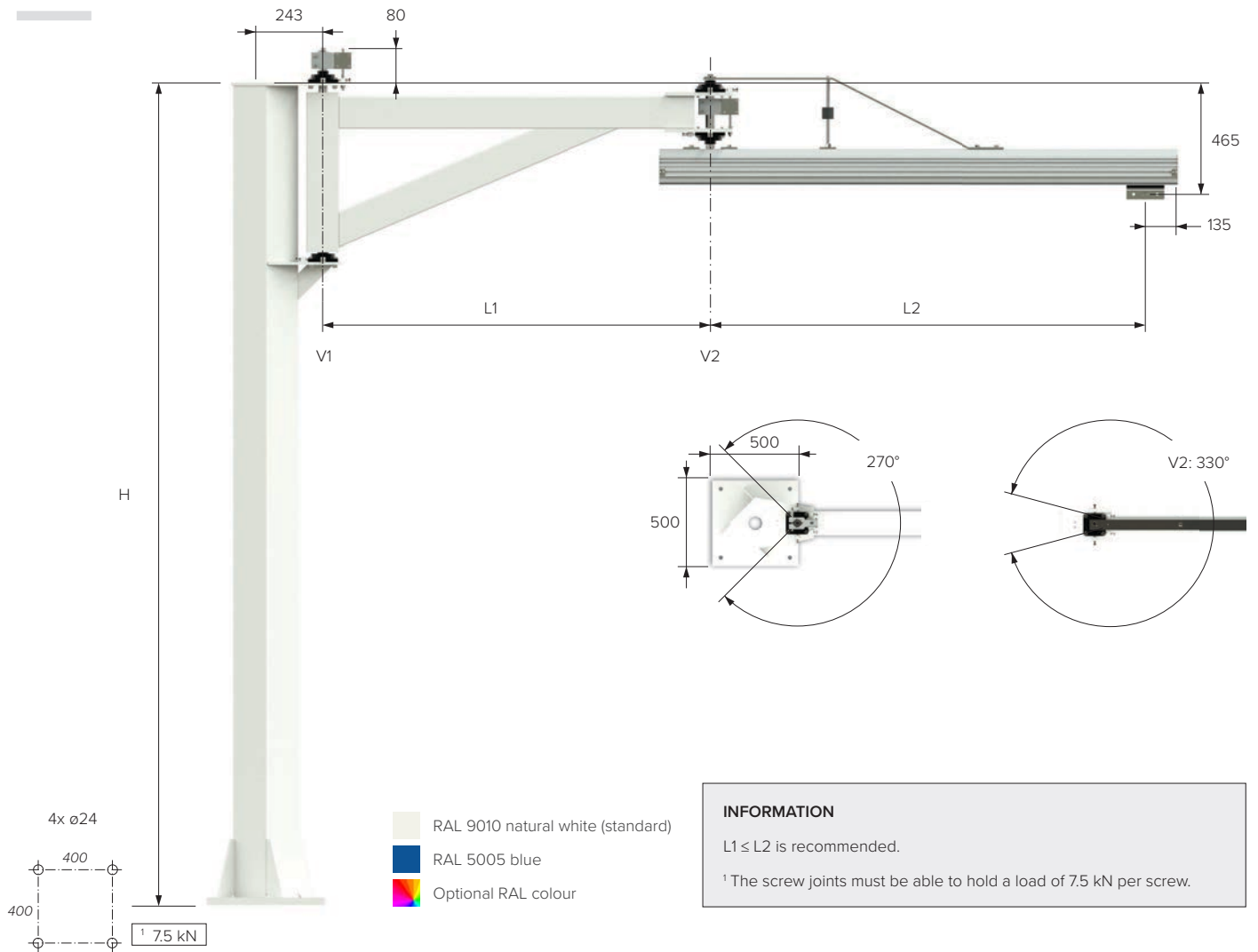
**INFORMATION**  
 L1 ≤ L2 is recommended.  
 † The screw joints must be able to hold a load of 4.2 kN per screw.

#	Height H [mm]	Trolley H-370 [mm]
<b>Pillar VKL</b>		
743135	2500	2170
743136	2750	2380
743137	3000	2630
743138	3250	2880
743139	3500	3130
743140	3750	3380

#	L1 [mm]
<b>Inner arm VK</b>	
736520	1000
736521	1250
736522	1500
736523	1750

#	L2 [mm]	Max. load [kg]	Note
<b>Outer arm VKL 50-80 kg</b>			
737175	1250	80	
737176	1500	63	
737177	1750	50	

VKA 125

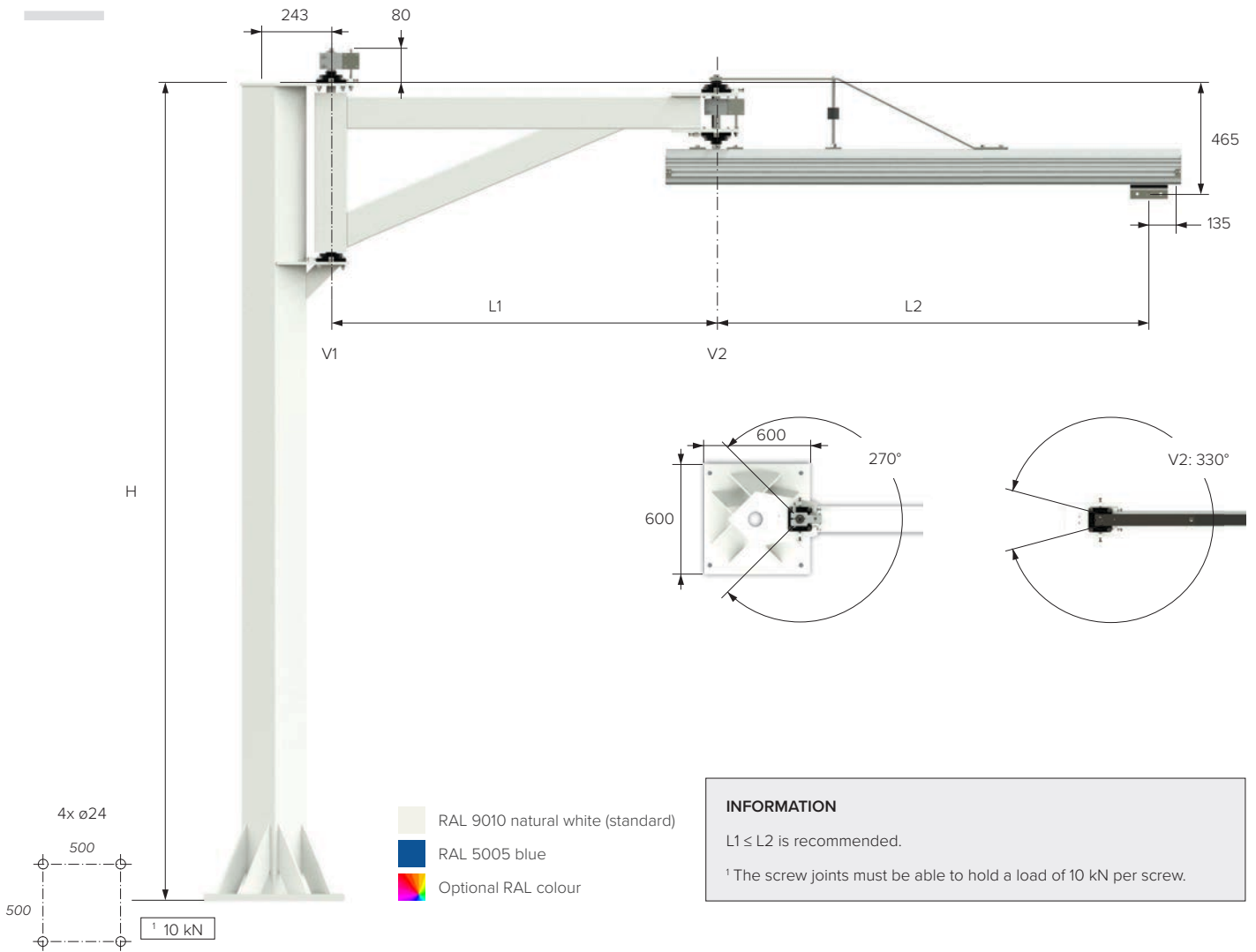


#	Height H [mm]	Trolley H-465 [mm]
<b>Pillar VKA</b>		
737144	2750	2285
737145	3000	2535
737146	3250	2785
737147	3500	3035
737148	3750	3285
737149	4000	3535

#	L1 [mm]
<b>Inner arm VKA</b>	
737130	1200
737131	1400
737132	1650
737133	1900

#	L2 [mm]	Max. load [kg]	Note
<b>Outer arm VKA 125 kg</b>			
737190	1300	125	
737191	1600	125	
737192	1850	125	
737193	2100	125	

VKA 200



**INFORMATION**  
 $L1 \leq L2$  is recommended.  
 † The screw joints must be able to hold a load of 10 kN per screw.

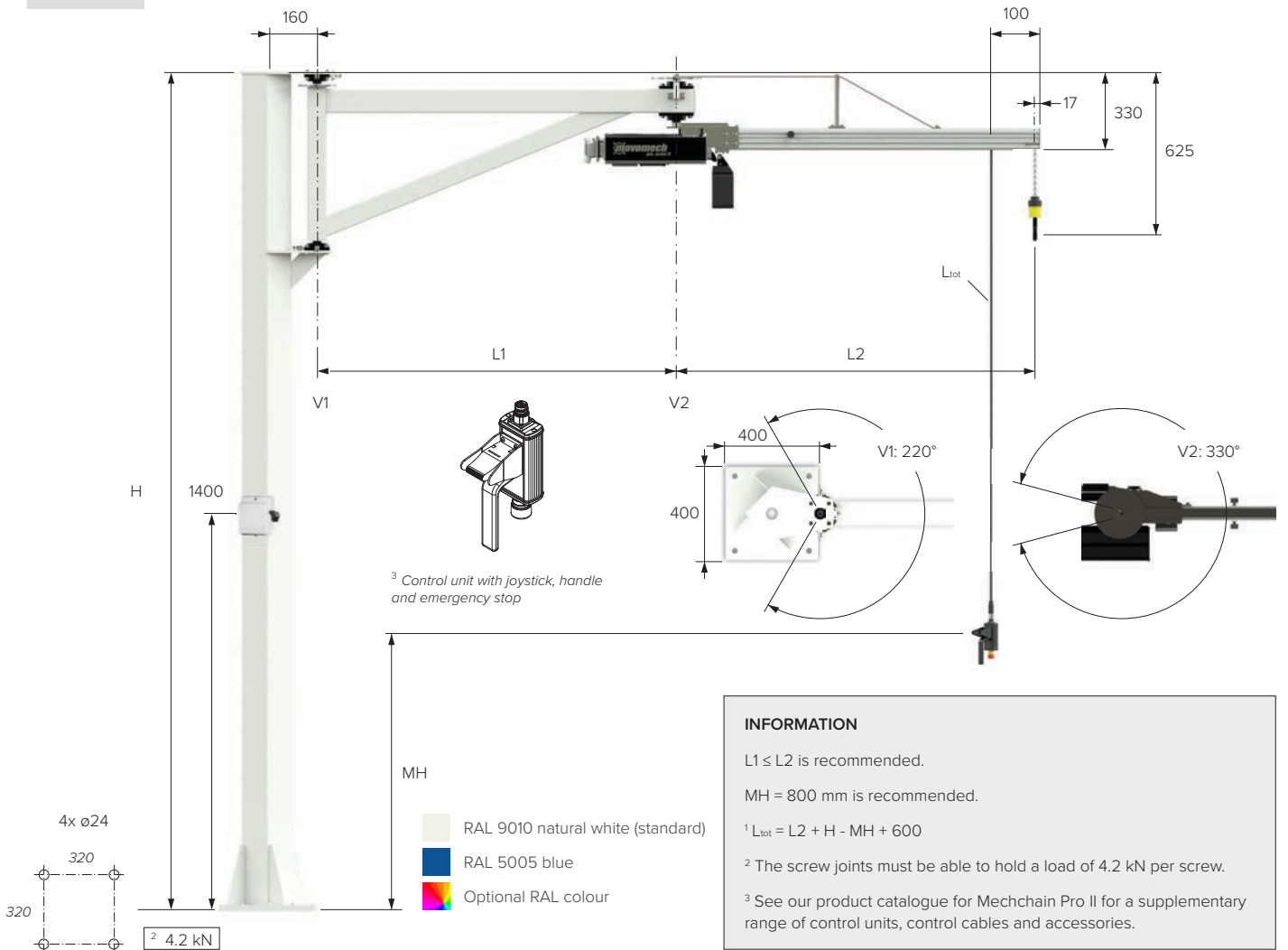
#	Height H [mm]	Trolley H-465 [mm]
<b>Pillar VKA</b>		
734231	2750	2285
734232	3000	2535
734233	3250	2785
734234	3500	3035
734235	3750	3285
734236	4000	3535

#	L1 [mm]
<b>Inner arm VKA</b>	
737130	1200
737131	1400
737132	1650
737133	1900

#	L2 [mm]	Max. load [kg]	Note
<b>Outer arm VKA 200 kg</b>			
737140	1300	200	
737141	1600	200	
737142	1850	200	
737143	2100	200	

## ARTICULATED JIB CRANES WITH HOISTS

### VKL-H 50-80



#	Height H [mm]	Highest pos. H-625 [mm]	#	L1 [mm]	#	L2 [mm]	Max. load [kg]	#	Length L <sub>tot</sub> [mm]
Pillar VKL-H			Inner arm VKL-H		Outer arm VKL-H 50-80 kg			Control cable <sup>1</sup>	
743136	2750	2125	736520	1000	742884	1250	80	742955	2500
743137	3000	2375	736521	1250	742885	1500	63	742956	3000
743138	3250	2625	736522	1500	742886	1750	50	742957	3500
743139	3500	2875	736523	1750				742958	4000
743140	3750	3125						742959	4500
					#			-	>4500 <sup>3</sup>
					742197	Control unit			

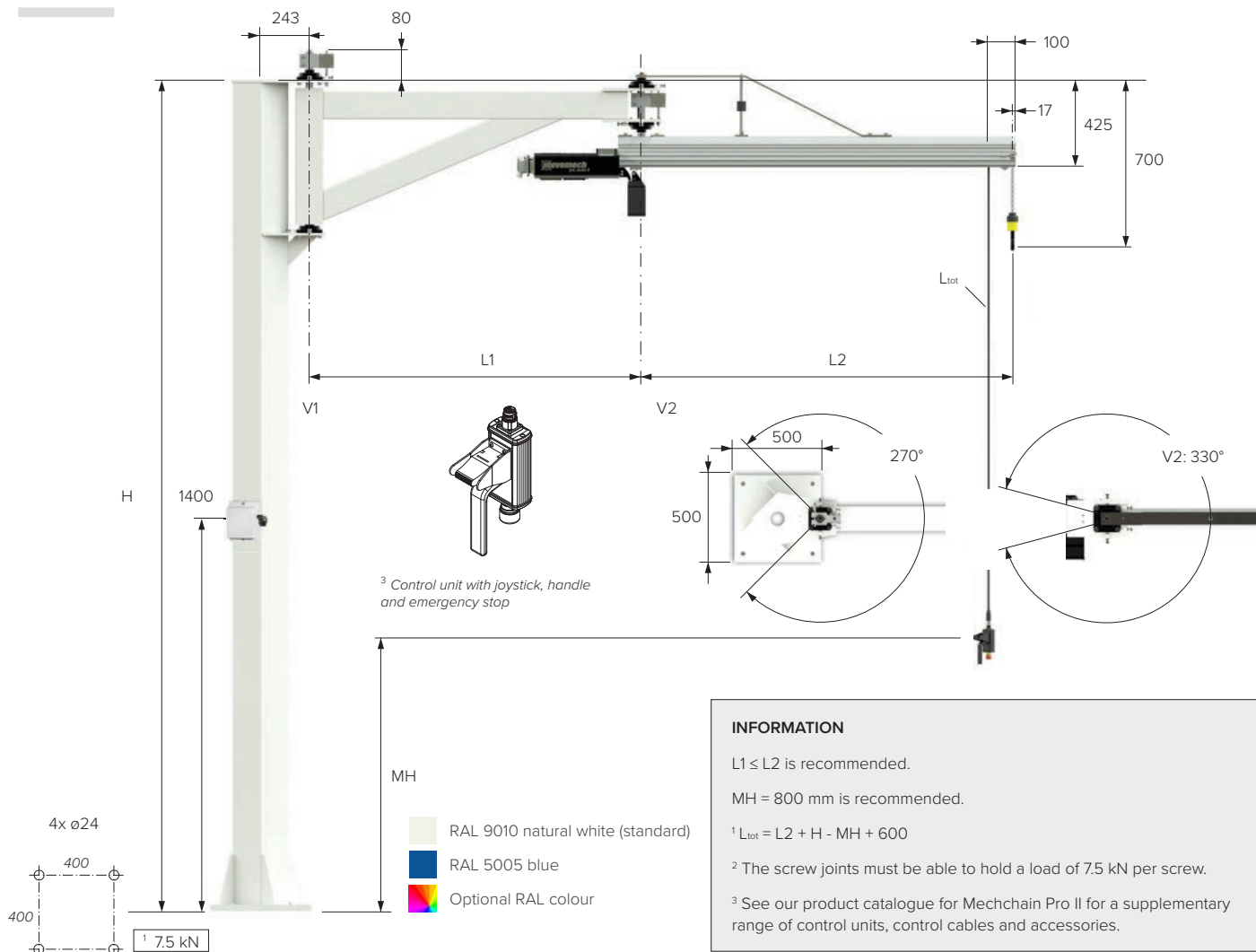
<sup>3</sup> L<sub>tot</sub> > 4500: contact Movomech

#	Version	Max. load [kg]	Lifting speed [m/min]	Note
Configuration VKL-H 50-80 kg				
743007	A	80	0-15	Safety hook
743008	B	80	0-15	Standard hook
743009	A	63	0-16	Safety hook
743010	B	63	0-16	Standard hook
742419	A	50	0-16	Safety hook
742420	B	50	0-16	Standard hook

#### Technical Data

Stroke	4000 mm	Protection class	IP54
Power supply	1x230V, N, PE	Machine group	3m/M6
Engine power	0.37 kW	Noise level	<70 dB (A)
Fuses	10AT	Chains	Ø4x12

VKA-H 125



#	Height H [mm]	Highest pos. H-700 [mm]
<b>Pillar VKA-H</b>		
737144	2750	2050
737145	3000	2300
737146	3250	2550
737147	3500	2800
737148	3750	3050
737149	4000	3300

#	L1 [mm]
<b>Inner arm VKA- H</b>	
737130	1200
737131	1400
737132	1650
737133	1900

#	L2 [mm]	Max. load [kg]
<b>Outer arm VKA-H 125 kg</b>		
742887	1300	125
742888	1600	125
742889	1850	125
742890	2100	125

#	Length L <sub>tot</sub> [mm]
<b>Control cable <sup>1</sup></b>	
742955	2500
742956	3000
742957	3500
742958	4000
742959	4500
-	>4500 <sup>3</sup>

#	
742197	Control unit

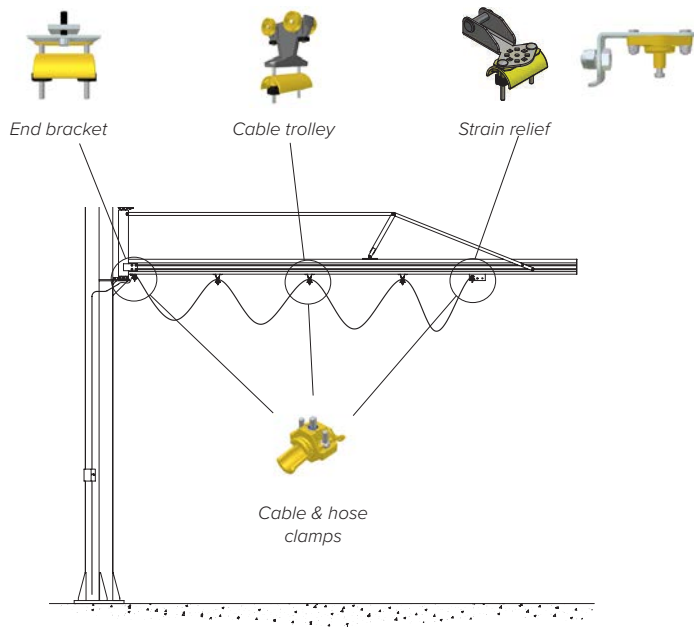
<sup>3</sup> L<sub>tot</sub> > 4500: contact Movomech

#	Version	Max. load [kg]	Lifting speed [m/min]	Note
<b>Configuration VKL-H 125 kg</b>				
743005	A	125	0-12	Safety hook
743006	B	125	0-12	Standard hook

<b>Technical Data</b>			
Stroke	4000 mm	Protection class	IP54
Power supply	1x230V, N, PE	Machine group	3m/M6
Engine power	0.37 kW	Noise level	<70 dB (A)
Fuses	10AT	Chains	Ø4x12

## MEDIA SUPPLY

### CABLE TROLLEYS



$SL$  = stroke [m]  
 $B$  = buffer [m]  
 $L$  = minimum cable/hose length [m]  
 $H$  = sag [m]  
 $n^\circ$  = number of cable trolleys

$$L = SL_{max} \times 1.2$$

$$n^\circ = (L / 2H) - 1$$

$$B_{min} = (n^\circ + 1) \times 0.1$$

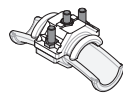
$$H_{max} = 0.6$$

U [mm]	2000 - 2500	3000 - 3500	4000 - 4500	5000 - 5500	6000
Recommended number of cable trolleys	1	2	3	4	5

Ribbon cable	Type	End bracket	Strain relief	Cable trolley	Load [kg] ↓	Note
LVS / LPS / VKL	A	730485	743660	730467	6.3	
AVS / APS / VKA	A	730488	743660	730470	10	

Round cable / hose	Type	End bracket	Strain relief	Cable trolley	Cable clamp	Load [kg] ↓	Note
LVS / LPS / VKL	B	730491	743688	730469	B	6.3	
LVS / LPS / VKL	D	743661	743641		D fixed	6.3	
LVS / LPS / VKL	D			743065	D shackle	6.3	
AVS / APS / VKA	B	730492	743688	730472	B	10	
AVS / APS / VKA	D fixed	743640	743641		D fixed	10	
AVS / APS / VKA	D shackle			743066	D shackle	10	

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

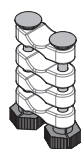


Cable clamp, type B, for cable / hose Ø10 - 36 mm

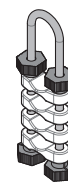
#### INFORMATION

If different sizes of cable clamp B is used, the largest must be placed nearest to the trolley.

#	Note
743642	2x Ø8 - 22 mm, fixed
743643	3x Ø8 - 22 mm, fixed
743644	Cable clamp, type D 4x Ø8 - 22 mm, fixed
743060	2x Ø8 - 22 mm, shackle
743061	3x Ø8 - 22 mm, shackle
743062	4x Ø8 - 22 mm, shackle



Cable clamp, type D, fixed, for cable / hose Ø8 - 22 mm



Cable clamp, type D, shackle, for cable / hose Ø8 - 22 mm





Round cable

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



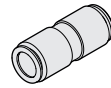
Pneumatic hose

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

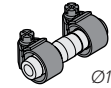


Ribbon cable

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



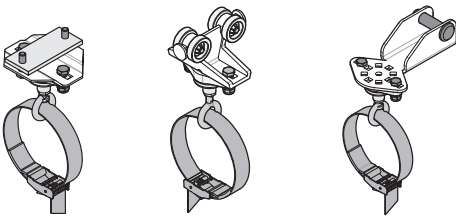
Ø12



Ø10 x 15.5

Connectors

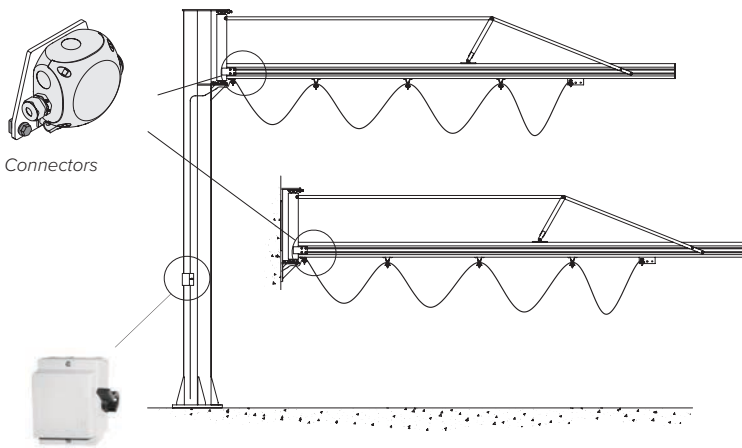
#	Ø	Note
741168	12	For PUR hose
730680	10 x 15.5	



End bracket, cable trolley and strain relief type C for vacuum hose Ø0 - 100 mm  
For vacuum hose; please see our range of vacuum lifting equipment.

Vacuum hose	Type	End bracket	Strain relief	Cable trolley	Load [kg]	Note
LVS / LPS / VKL	C	730494	743639	730497	6.3	
AVS / APS / VKA	C	730496	743639	730498	10	

## CONNECTORS AND SAFETY SWITCHES



Connectors

Safety switch

#	m [kg]	Note
744017	1	IP66, max. 10 A

### INFORMATION

Connectors must be used on the supply side of jib cranes when using electrical equipment. They must be suitable for both round cables Ø8 - 17 mm and ribbon cables 15 - 18 x 5 mm.

**NB!** Only trained electricians are permitted to install electrical equipment..

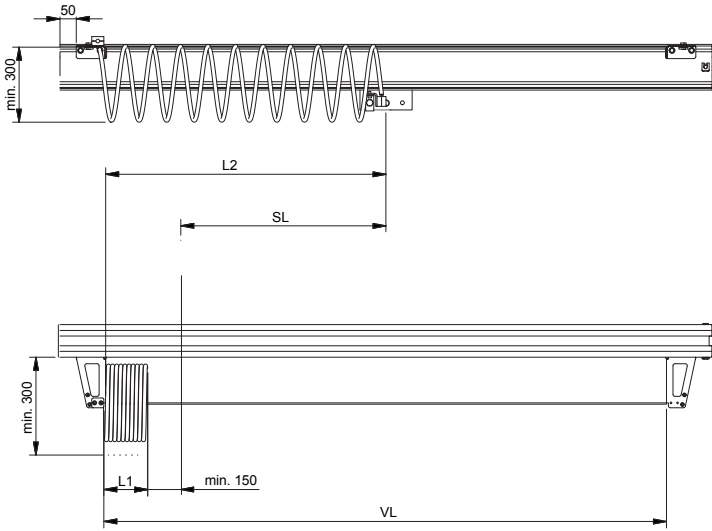
#	Note
731530	IP54

### INFORMATION

Lockable. Fitting screws and connectors are not included with the jib crane.

**NB!** Only trained electricians are permitted to install electrical equipment..

SPIRAL HOSE

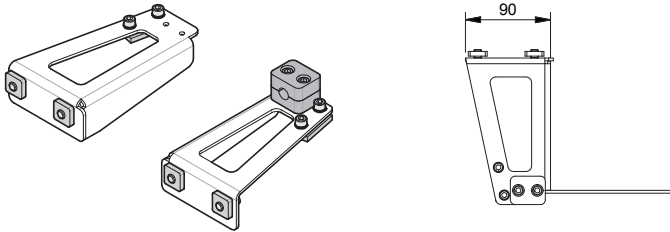


$SL = \text{stroke [m]}$   
 $L1 = \text{hose compressed [m]}$   
 $L2 = \text{hose extended [m]}$   
 $VL = \text{wire length [m]}$   
 $L2 = (1.05 \times SL) + 0.15$   
 $L1 = SL / 20$   
 $VL = L2 + 0.3$

Sample calculation if  $SL = 4 \text{ m}$ :

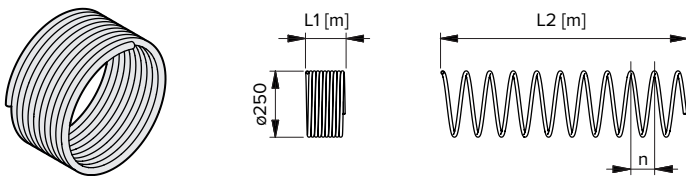
$L2 = (1.05 \times 4) + 0.15 = 4.35 \text{ m}$   
 $L1 = 4 / 20 = 0.2 \text{ m}$   
 $VL = 8.55 + 0.3 = 4.65 \text{ m}$

Wire console



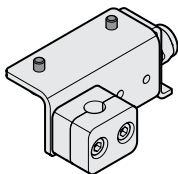
#	m [kg]	Note
<b>LVS / LPS</b>		
743646	0.9	
<b>AVS / APS</b>		
743645	0.9	

Spiral hose



#	Ø	Note
741151	12 x 10	

Strain relief



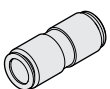
#	Note
739976	

Cable tie



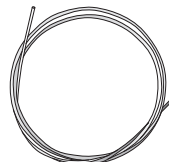
#	[mm]	Note
732509	145 x 25	

Connectors



#	Note
741168	

Wire rope



#	Ø	Note
730693	3	



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