

# MOBIARM

Original instructions EN  
2019-01-22



**LIFT-O-FLEX**

MOBI-Crane  Voyager

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 the delivered goods 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 not to prevent development of designs, material and manufacturing methods.

The customer is reminded that in the purchase of Movomech's products for application on the job or elsewhere, 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 Movomech's comprehensive product line.

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

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# 1. Safety

Movomech's equipment is manufactured in accordance with the latest technological advances, and according to the latest applicable European standards and directions. The aim of this documentation is to provide the user with practical instructions for safe operation and simple maintenance of the equipment.

Anyone who deals with the installation of the equipment (including related equipment), operational procedure, use, maintenance, and/or repair functions must have read and understood:

- the instruction manual,
- the safety regulations, and
- the safety instructions for each individual section.

In order to avoid misuse and to ensure the reliable operation of the products, we recommend that the instruction manual is always available to the user/operator.

## Intended usage

The equipment is intended exclusively for transportation, lifting and lowering of load. Any other use, including the towing of a load and the transportation of passengers, is prohibited (see below for more examples). Movomech does not accept responsibility for damage caused by such use. All risks are the sole responsibility of the user.

The equipment may only be used in perfect technical condition by trained staff, and in accordance with current safety and work protection regulations. Furthermore, the user must observe operational and maintenance conditions contained in the instruction manual. Severe personal injury and damage to equipment can be caused by:

- removal of covers and casings,
- non-professional installation of equipment,
- incorrect usage, or
- insufficient maintenance.

## Prohibited usage

Certain types of activities and operations are prohibited, as in specific circumstances they can cause personal injury as well as permanent damage to the construction. For example:

- It is prohibited to convey passengers using the equipment.
- Never transport suspended loads above anyone's head.
- Never drop a suspended load, and make sure it is lifted in a straight line.
- Never loosen secured or fastened loads by using the equipment.
- Do not overload.
- Do not leave a suspended load unattended.

## General safety aspects

The instruction manual should always be kept within easy reach of the equipment. It contains important safety information and sections that relate to guidelines, norms, and regulations. Failure to follow the safety regulations in this instruction manual may result in personal injury or death.

In addition to the instruction manual, generally applicable regulations and rules must be followed and adhered to in order to avoid accidents and protect the environment. This also applies to regulations relating to the handling of products dangerous to the environment and the use of personal safety equipment.

As regards all work associated directly or indirectly with the equipment, the user must follow and adhere to all the above regulations as well as current work protection and safety regulations. In spite of this, a life-threatening risk still prevails in cases where the equipment is used and operated by non-trained or non-instructed staff in a non-professional or non-intended way.

The user should supplement the instruction manual with instructions that consider the nature of the operation, e.g. company organisation, work procedures, and number of staff.

The members of staff who are assigned to work with the equipment must have read the instruction manual prior to undertaking any work, and he/she should pay particular attention to the chapters containing safety instructions. It is too late once work has commenced. This applies in particular to members of staff who are working with the equipment on a temporary basis, e.g. for maintenance purposes.

When convenient, the staff should be tested on their knowledge of the manual's contents that relate to safety and accident awareness.

The user is responsible for ensuring that the equipment is used only when it is in perfect condition and that all applicable and relevant safety regulations and requirements are followed.

The equipment should be taken out of operation immediately if functional damage or defects are discovered.

Personal safety equipment should be used as and when necessary, or when required by regulations.

Safety and warning devices, such as signs, stickers and labels must not be removed or made illegible.

All safety and warning devices on or adjacent to the equipment should be complete and maintained in a legible/functional condition.

All changes, extensions or reconstruction that may affect safety are forbidden without written permission from Movomech. This also applies to assembly and adjustment of safety equipment and welding of structural parts.

Spare parts must comply with Movomech's stated technical requirements. This compliance is guaranteed when original spare parts are used. The intervals prescribed or stated in the instruction manual for regular testing/inspection must be adhered to!

## Staff selection and qualifications

Reliable staff must carry out work with/on the equipment. Regulations that apply to under-age persons must be followed.

The user is responsible for supplying necessary training and instructions to those that he/she employs, including professionals and/or apprentices.

It is recommended that the user draws up instructions and guidelines relating to the causes of errors, communicates these to the relevant staff, and posts directions on appropriate and clearly visible places.

It is recommended that the user makes sure that the knowledge of the staff is adequate as regards the following points, prior to the operation of the construction:

- knowledge of the contents of the instruction manual,
- knowledge of the safety and user regulations contained therein,
- and knowledge of applicable work protection regulations.

Only trained and instructed staff should be permitted to work with the equipment. Parameters relating to use, maintenance, and installation should be clarified.

## Safety instructions for usage

The only persons allowed to work on the electrical equipment are competent staff members who work in accordance with regulations and standards for high-voltage equipment.

No persons under the influence of drugs, alcohol or medication which affects their ability to react, are allowed to use, maintain, or repair the construction.

All stated actions and instructions relating to work protection and issues relating to general safety and protection of workers that should be carried out or studied prior to, during or following operation must be followed to the letter. Failure to do so may result in fatal accidents.

The equipment should be stopped or taken out of operation at the time of detection of faults relating to work protection and operational accessibility.



Safety equipment must not be deactivated, altered or used in a way that conflicts with applicable regulations.

Appropriate actions must be taken to ensure safe operation and functional conditions for the user.

The equipment should only be used when all protective and safety equipment, such as detachable guards and emergency stop devices, are in place and in working order.

Any type of modification and alteration of the equipment is prohibited. However, this does not apply to lesser changes that do not affect the strength, operational safety or work protection, or to actions which promote an increased level of safety.

The fundamental responsibility for these changes lies with the user. If in doubt, contact Movomech for written approval of the actions prior to implementation.

The equipment should be stopped and locked immediately when functional faults occur. Faults should be corrected immediately!

Following an "emergency stop" the user has to wait for the cause of the disruption to be repaired and for an assurance that there is no further danger before he/she reconnects the equipment and resumes operation.

The equipment should be disconnected immediately in the following cases:

- in case of damage to the pneumatic / electrical / mechanical equipment, and

- in case of malfunctioning personal protective equipment.

Specific local circumstances or applications may lead to situations that were unknown at the time of writing this document. In such cases, the user must ensure safe operation and disconnect the equipment until measures to maintain safe operation have been carried out in conjunction with Movomech or other authorised party.

Ensure that no one can become injured when they use the equipment prior to connecting/activating the equipment.

If the user notices the presence of persons who may become injured during operation, the operation should be discontinued immediately and must not be resumed until these persons have left the dangerous area.

The user must make sure that the equipment is in a perfect and operationally safe condition prior to all operations using the equipment.

The user should carry out all prescribed safety measures and make sure that automated procedures are completed when the equipment is disconnected (e.g. when there are deficiencies as regards operational and personal safety, an emergency situation exists, repair or maintenance is being carried out, damage is noticed or at the completion of work).

**Work with the equipment is only allowed when the operator has been instructed to do so by his superior, and if the operator has knowledge of the equipment and its function.**



## 2. Description

MobiArm is a folding arm crane to be used together with any lifting equipment. The maximum load is 125kg

The crane unit consists of the tower and the inner and outer arms. The crane can be attached to the floor with expander bolts or mounted on a mobile foot plate

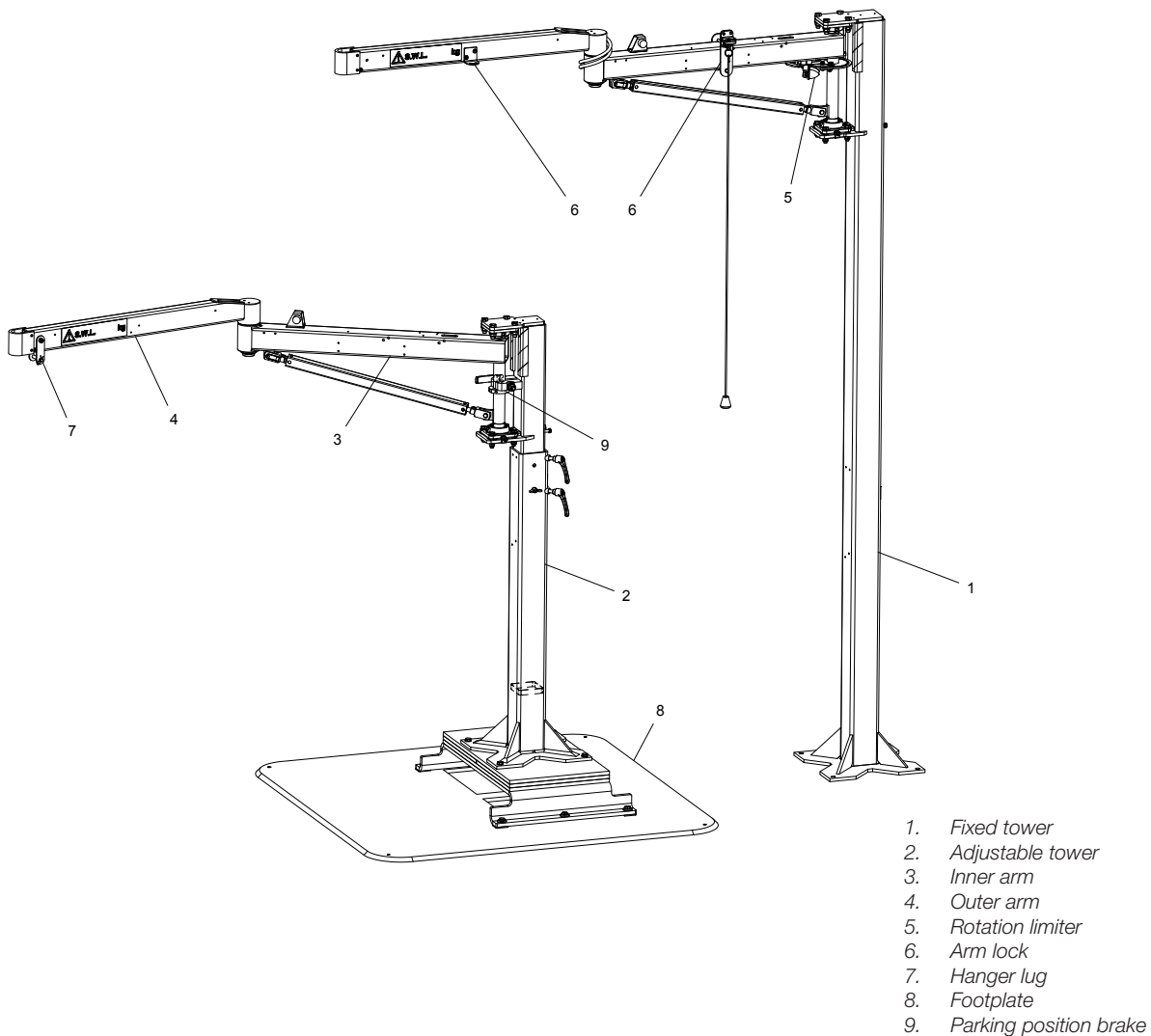
MobiArm has an inner and an outer arm which can be delivered in 3 different sizes.

The inner and an outer arms can be locked relative to each other (optional).

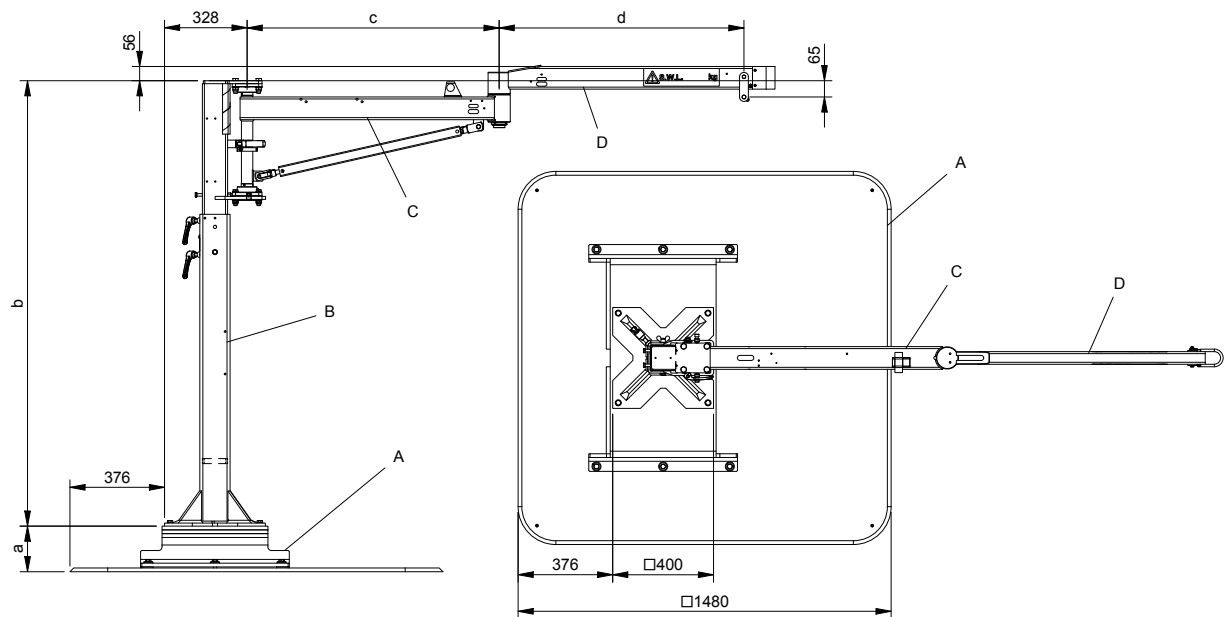
The inner arm can also be locked to the tower (optional).

The shaft in the inner arm is attached to the tower with a bearing mount.

This shaft has an internal brake (optional) which works as a parking brake or a adjustable brake to prevent the inner arm from drifting.



### 3. Technical Data



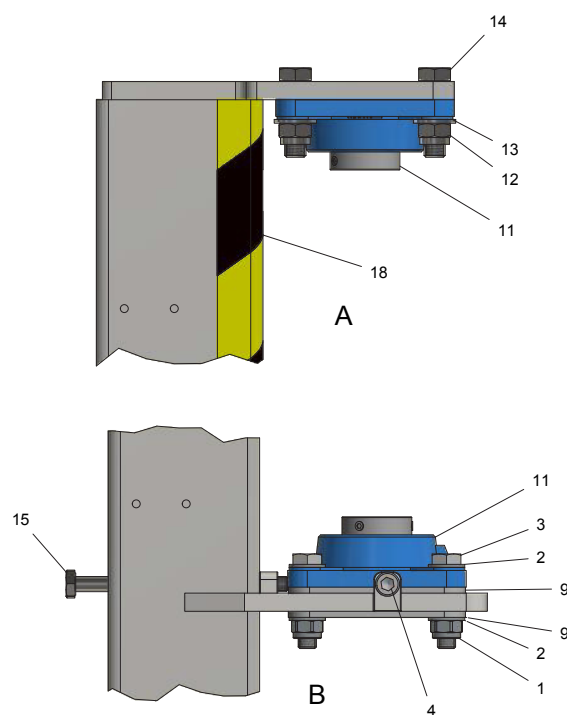
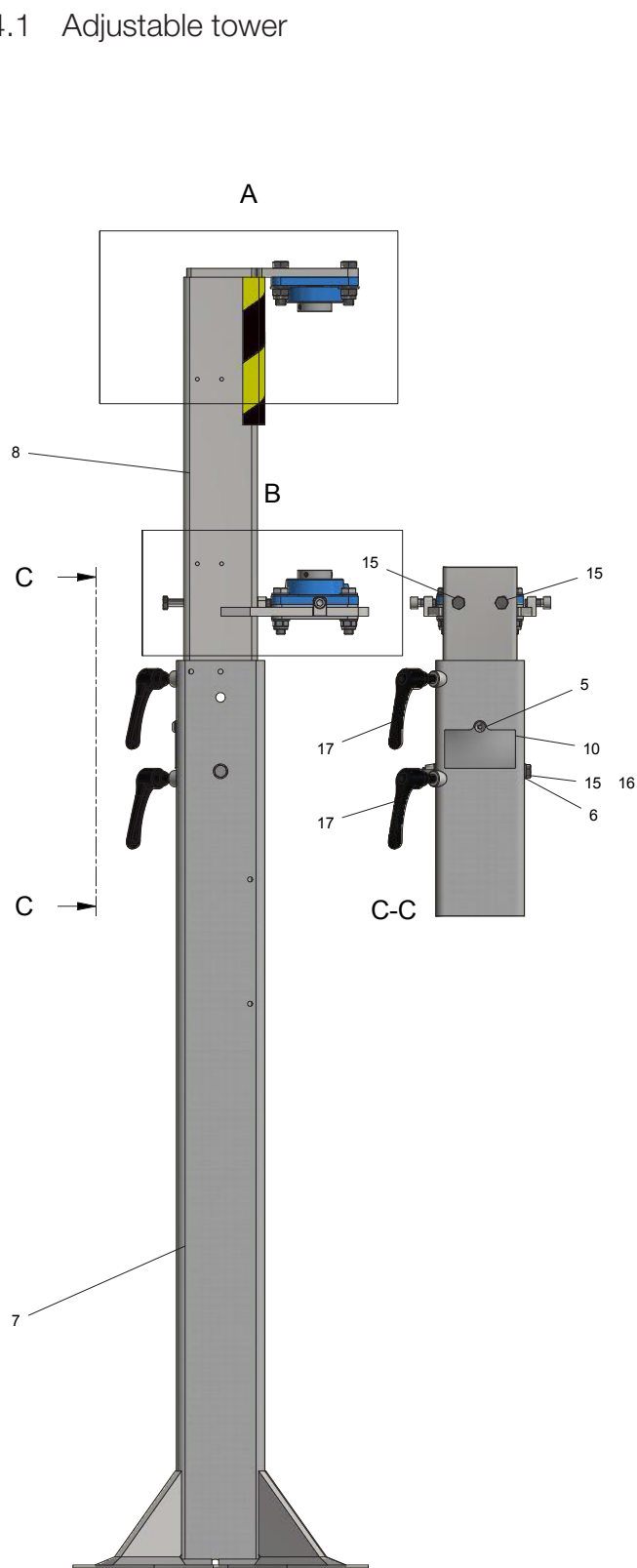
Dimensions and Weights	a [mm]	b [mm]	c [mm]	d [mm]	Weight [kg]
A - Mobile footplate 1	136				271
A - Mobile footplate 1	151				309
A - Mobile footplate 2	166				345
A - Mobile footplate 3	181				381
A - Mobile footplate 4	196				418
A - Mobile footplate 5	211				455
A - Mobile footplate 6	226				491
A - Mobile footplate 7	241				528
A - Mobile footplate 8	256				565
A - Mobile footplate 9	271				601
A - Mobile footplate 10	286				637
A - Mobile footplate 11	301				674
B - Fixed tower		Free Height			20+bx0.028
B - Adjustable tower		1768-2728 <sup>1</sup>			83
B - Adjustable tower +500		2268-3228 <sup>1</sup>			90
C - Inner arm 1			1000		24
C - Inner arm 1.5			1500		32
C - Inner arm 2			2000		38
D - Outer arm 1				970	17
D - Outer arm 1.5				1470	20
D - Outer arm 2				1970	24

<sup>1</sup> The height of the tower may be adjusted within the stated intervals in increments of 100 mm

General		
Max. crane load	[kg]	50
Operating temperature	[° C]	5 - 40

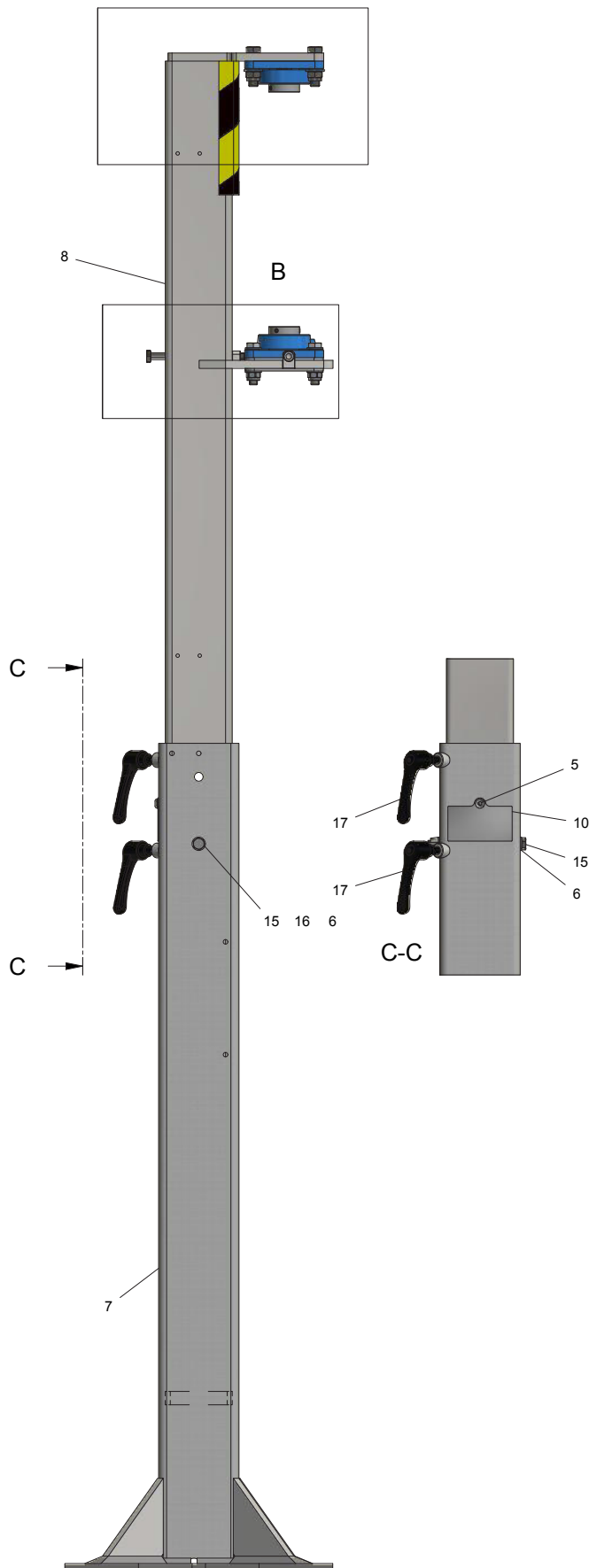
## 4. Components

### 4.1 Adjustable tower



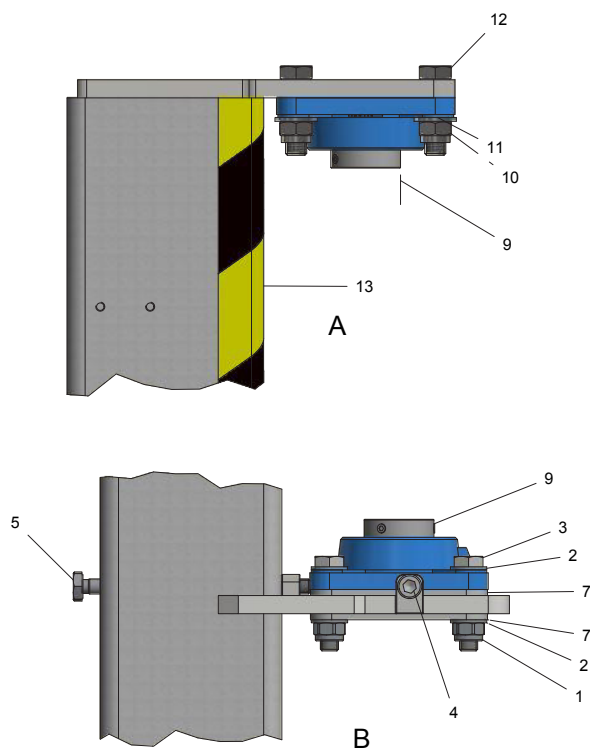
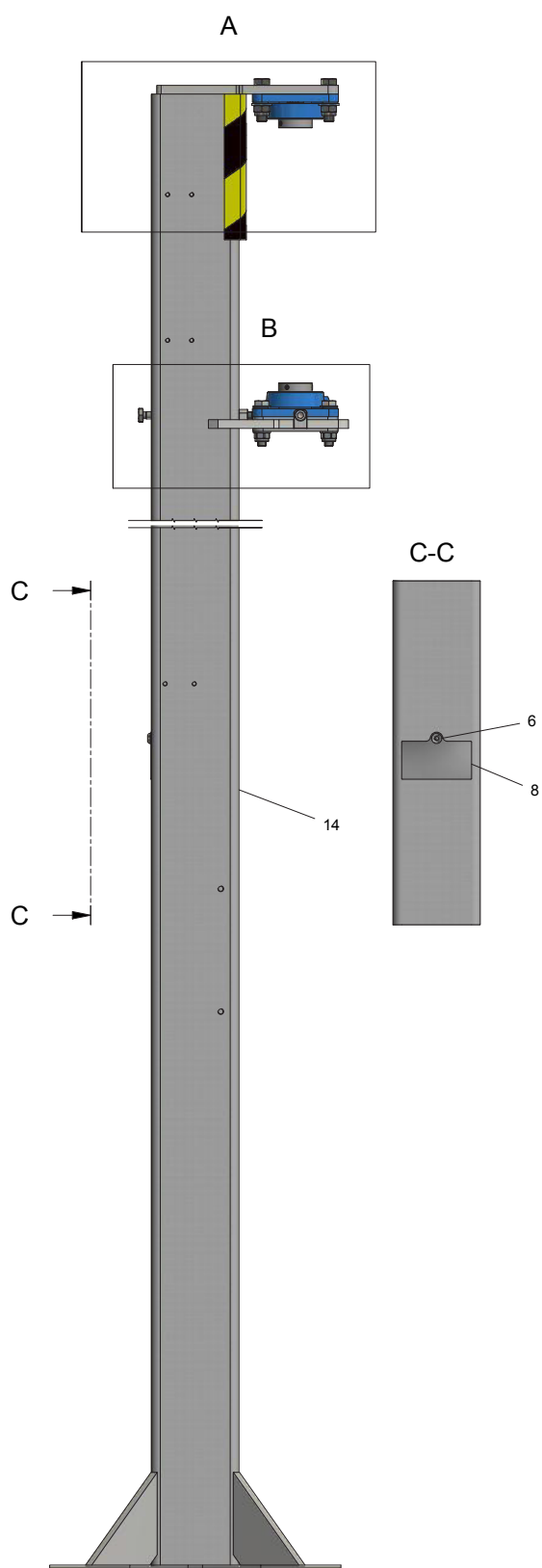
743253 Adjustable tower			
#	Article nr.	Designation	Quantity
1	730243	Locking nut M12	4
2	730244	Washer BRB 13x24x2	8
3	732108	Screw M6S M12x55, half thread	4
4	733481	Screw MC6S M10x25	2
5	735326	Screw K6S M6x8 A2	1
6	737615	Washer BRB 10,5x20x2	2
7	743200	Lower tower-weld	1
8	743201	Upper tower-weld	1
9	743226	Adjustment plate	2
10	743249	Sign plate	1
11	743263	Bearing unit Ø35	S 2
12	743264	Locking nut M14	4
13	743265	Washer BRB 15x28x2,5	4
14	743266	Screw M6S M14x50, full thread	4
15	743267	Screw M6S M10x140, half thread	3
16	743268	Wing nut M10	1
17	743269	Adjustable hand lever M12x40	R 2
18	743417	Edge protection 30x30x10	S 2

## 4.2 Adjustable tower +500



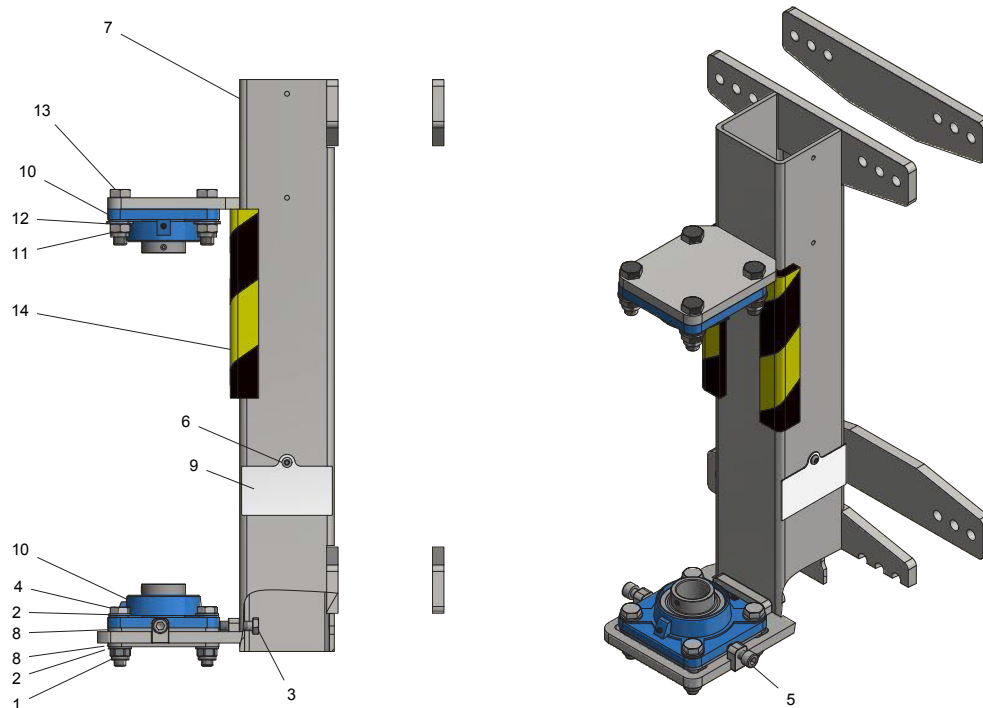
743254 Adjustable tower +500			
#	Article nr.	Designation	Quantity
1	730243	Locking nut M12	4
2	730244	Washer BRB 13x24x2	8
3	732108	Screw M6S M12x55, half thread	4
4	733481	Screw MC6S M10x25	2
5	735326	Screw K6S M6x8 A2	1
6	737615	Washer BRB 10,5x20x2	2
7	743200	Lower tower-weld	1
8	743202	Upper tower +500 -weld	1
9	743226	Adjustment plate	2
10	743249	Sign plate	1
11	743263	Bearing unit Ø35	S 2
12	743264	Locking nut M14	4
13	743265	Washer BRB 15x28x2,5	4
14	743266	Screw M6S M14x50, full thread	4
15	743267	Screw M6S M10x140, half thread	3
16	743268	Wing nut M10	1
17	743269	Adjustable hand lever M12x40	R 2
18	743417	Edge protection 30x30x10	S 2

### 4.3 Fixed tower



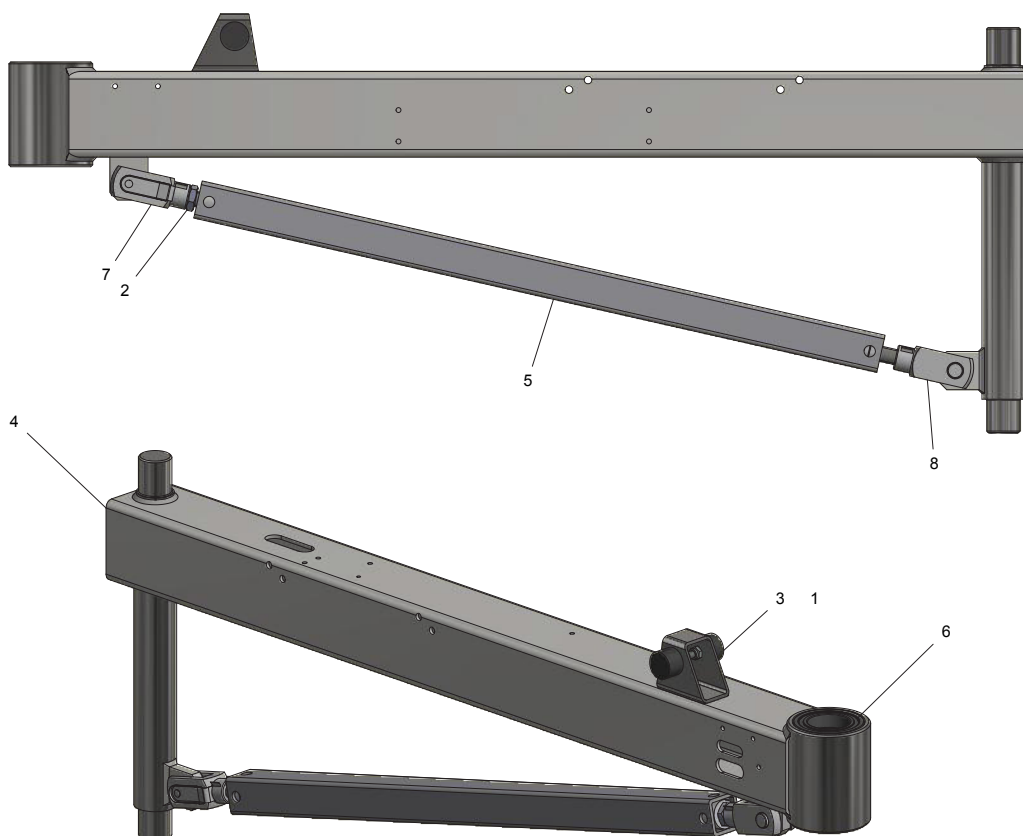
743953		Tower, fixed height	
#	Article nr.	Designation	Quantity
1	730243	Locking nut M12	4
2	730244	Washer BRB 13x24x2	8
3	732108	Screw M6S M12x55, half thread	4
4	733481	Screw MC6S M10x25	2
5	733779	Screw M6S M10x150, half thread	2
6	735564	Screw K6S M8x10 A2	1
7	743226	Adjustment plate	2
8	743249	Sign plate	1
9	743263	Bearing unit Ø35	S 2
10	743264	Locking nut M14	4
11	743265	Washer BRB 15x28x2,5	4
12	743266	Screw M6S M14x50, full thread	4
13	743417	Edge protection 30x30x10	S 2
14	743954	Tower, fixed height-weld	1

## 4.4 Wall bracket



743255		Wall bracket		
#	Part no.	Designation	Quantity	
1	730243	Lock nut M12	4	
2	730244	Washer, 13x24x2	8	
3	731326	Screw M6S M10x35, full thread	2	
4	732108	Screw M6S M12x55, part threaded	4	
5	733481	Screw MC6S M10x25	2	
6	735326	Screw K6S M6x8 A2	1	
7	743203	Wall bracket, welded	1	
8	743226	Spacer	2	
9	743249	Identification plate	1	
10	743263	Bearing unit Ø35	S	2
11	743264	Lock nut M14	4	
12	743265	Washer, 15x28x2.5	4	
13	743266	Screw M6S M14x50, full thread	4	
14	743417	End protector 30x30x10	S	2

## 4.5 Inner arm



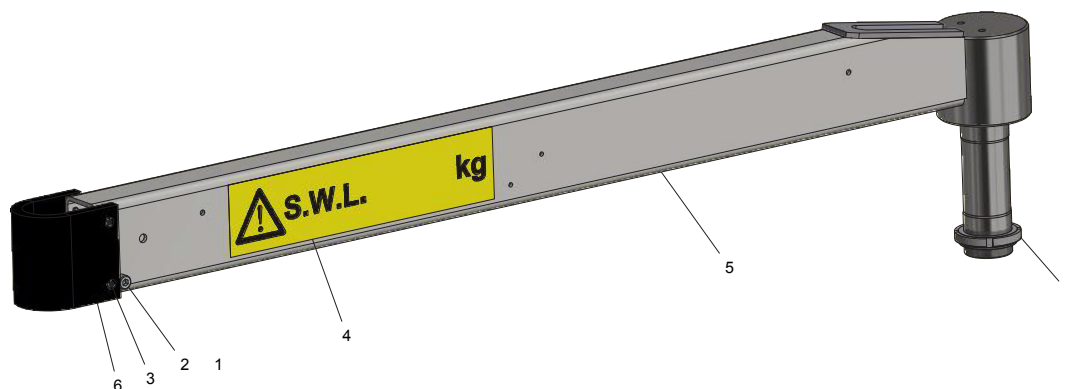
743256 Inner arm 1m			
#	Part no.	Designation	Quantity
1	730117	Lock nut M8	2
2	730237	Nut ML6M M16	1
3	730449	Rubber bumper	2
4	743204	Inner arm 1m, welded	1
5	743207	Lower support, 1m	1
6	743270	Ball bearing	S 2
7	743271	Forked link M16, RH thread	1
8	743272	Forked link M16, LH thread	1

743257 Inner arm 1.5m			
#	Part no.	Designation	Quantity
1	730117	Lock nut M8	2
2	730237	Nut ML6M M16	1
3	730449	Rubber bumper	2
4	743205	Inner arm 1.5m welded	1
5	743208	Lower support, 1.5-2m	1
6	743270	Ball bearing	S 2
7	743271	Forked link M16, RH thread	1
8	743272	Forked link M16, LH thread	1

743258 Inner arm 2m			
#	Part no.	Designation	Quantity
1	730117	Lock nut M8	2
2	730237	Nut ML6M M16	1
3	730449	Rubber bumper	2
4	743206	Inner arm 2m welded	1
5	743208	Lower support, 1.5-2m	1
6	743270	Ball bearing	S 2
7	743271	Forked link M16, RH thread	1
8	743272	Forked link M16, LH thread	1



## 4.6 Outer arm

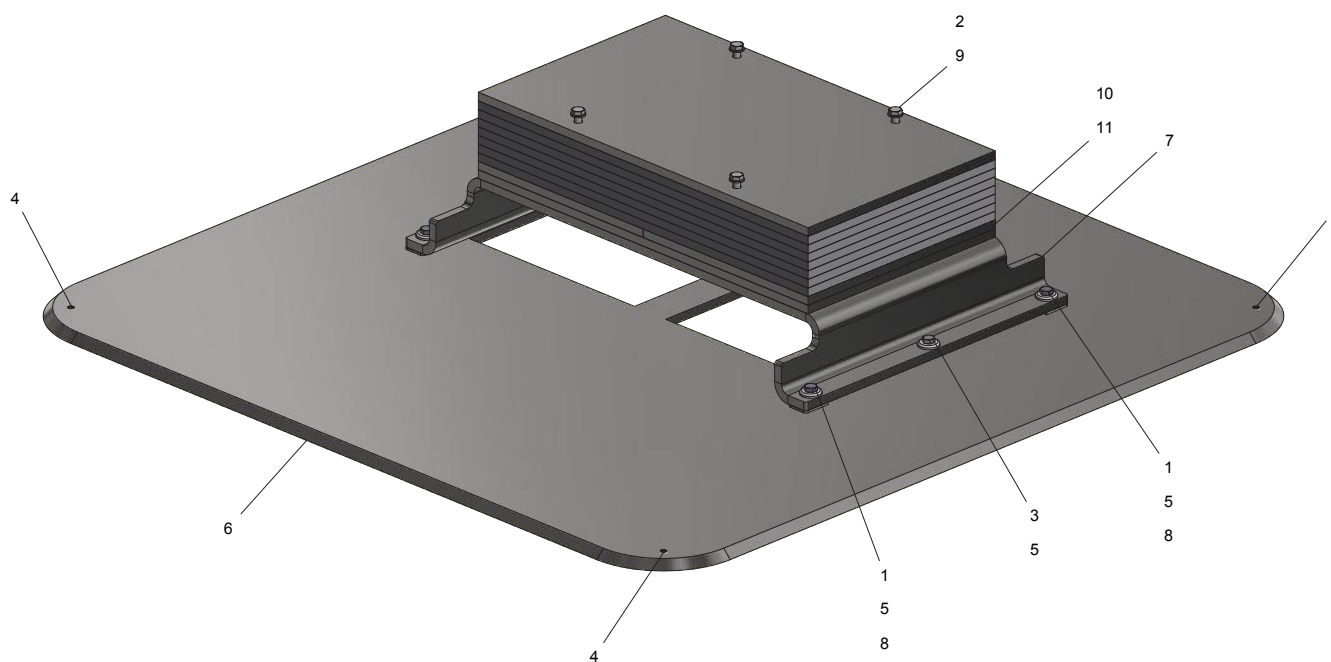


743259 Outer arm 1m			
#	Part no.	Designation	Quantity
1	730117	Lock nut M8	1
2	731831	Screw MC6S M8x60	1
3	732437	Screw MF6S M5x16	4
4	737007	Decal, Max. load (open)	2
5	743209	Outer arm , 1m welded	1
6	743273	Rubber protection	1
7	743274	Shaft nut KM 09 GUK	1

743260 Outer arm 1.5m			
#	Part no.	Designation	Quantity
1	730117	Lock nut M8	1
2	731831	Screw MC6S M8x60	1
3	732437	Screw MF6S M5x16	4
4	737007	Decal, Max. load (open)	2
5	743210	Outer arm , 1.5m welded	1
6	743273	Rubber protection	1
7	743274	Shaft nut KM 09 GUK	1

743261 Outer arm 2m			
#	Part no.	Designation	Quantity
1	730117	Lock nut M8	1
2	731831	Screw MC6S M8x60	1
3	732437	Screw MF6S M5x16	4
4	737007	Decal, Max. load (open)	2
5	743211	Outer arm , 2m welded	1
6	743273	Rubber protection	1
7	743274	Shaft nut KM 09 GUK	1

## 4.7 Mobile footplate



743509 Mobile footplate 0			
#	Part no.	Designation	Quantity
1	730227	Screw M6S M12x40, full thread	4
2	730244	Washer, 13x24x2	4
3	732109	Screw M6S M12x35, full thread	2
4	735556	Screw MSK6SS M12x16	4
5	738115	Washer 13x36x6	6
6	743212	Footplate	1
7	743213	U-profile	1
8	743247	Spacer	4
9	730255	Screw M6S M12x30, full thread	4

743429 Mobile footplate 2			
#	Part no.	Designation	Quantity
1	730227	Screw M6S M12x40, full thread	4
2	730244	Washer, 13x24x2	4
3	732109	Screw M6S M12x35, full thread	2
4	735556	Screw MSK6SS M12x16	4
5	738115	Washer 13x36x6	6
6	743212	Footplate	1
7	743213	U-profile	1
8	743247	Spacer	4
9	730779	Screw M12x60, part threaded	4
10	743214	Weight 1	1
11	743215	Weight 2	2

743510 Mobile footplate 1			
#	Part no.	Designation	Quantity
1	730227	Screw M6S M12x40, full thread	4
2	730244	Washer, 13x24x2	4
3	732109	Screw M6S M12x35, full thread	2
4	735556	Screw MSK6SS M12x16	4
5	738115	Washer 13x36x6	6
6	743212	Footplate	1
7	743213	U-profile	1
8	743247	Spacer	4
9	740678	Screw M6S M12x45	4
10	743214	Weight 1	1

742425 Mobile footplate 3			
#	Part no.	Designation	Quantity
1	730227	Screw M6S M12x40, full thread	4
2	730244	Washer, 13x24x2	4
3	732109	Screw M6S M12x35, full thread	2
4	735556	Screw MSK6SS M12x16	4
5	738115	Washer 13x36x6	6
6	743212	Footplate	1
7	743213	U-profile	1
8	743247	Spacer	4
9	743248	Screw M12x75, part threaded	4
10	743214	Weight 1	2
11	743215	Weight 2	2

743250		Mobile footplate 4	
#	Part no.	Designation	Quantity
1	730227	Screw M6S M12x40, full thread	4
2	730244	Washer, 13x24x2	4
3	735529	Screw M12x90, part threaded	4
4	735556	Screw MSK6SS M12x16	4
5	738115	Washer 13x36x6	6
6	743212	Footplate	1
7	743213	U-profile	1
8	743247	Spacer	4
9	732109	Screw M6S M12x35, full thread	2
10	743214	Weight 1	3
11	743215	Weight 2	2

743252		Mobile footplate 6	
#	Part no.	Designation	Quantity
1	730227	Screw M6S M12x40, full thread	4
2	730244	Washer, 13x24x2	4
3	732109	Screw M6S M12x35, full thread	2
4	735556	Screw MSK6SS M12x16	4
5	738115	Washer 13x36x6	6
6	743212	Footplate	1
7	743213	U-profile	1
8	743247	Spacer	4
9	735532	Screw M12x120, part threaded	4
10	743214	Weight 1	5
11	743215	Weight 2	2

743428		Mobile footplate 8	
#	Part no.	Designation	Quantity
1	730227	Screw M6S M12x40, full thread	4
2	730244	Washer, 13x24x2	4
3	732109	Screw M6S M12x35, full thread	2
4	735556	Screw MSK6SS M12x16	4
5	738115	Washer 13x36x6	6
6	743212	Footplate	1
7	743213	U-profile	1
8	743247	Spacer	4
9	740003	Screw M6S M12x150, part threaded	4
10	743214	Weight 1	7
11	743215	Weight 2	2

743562		Mobile footplate 10	
#	Part no.	Designation	Quantity
1	730227	Screw M6S M12x40, full thread	4
2	730244	Washer, 13x24x2	4
3	732109	Screw M6S M12x35, full thread	2
4	735556	Screw MSK6SS M12x16	4
5	738115	Washer 13x36x6	6
6	743212	Footplate	1
7	743213	U-profile	1
8	743247	Spacer	4
9	733769	Screw M6S M12x180, part threaded	4
10	743214	Weight 1	9
11	743215	Weight 2	2

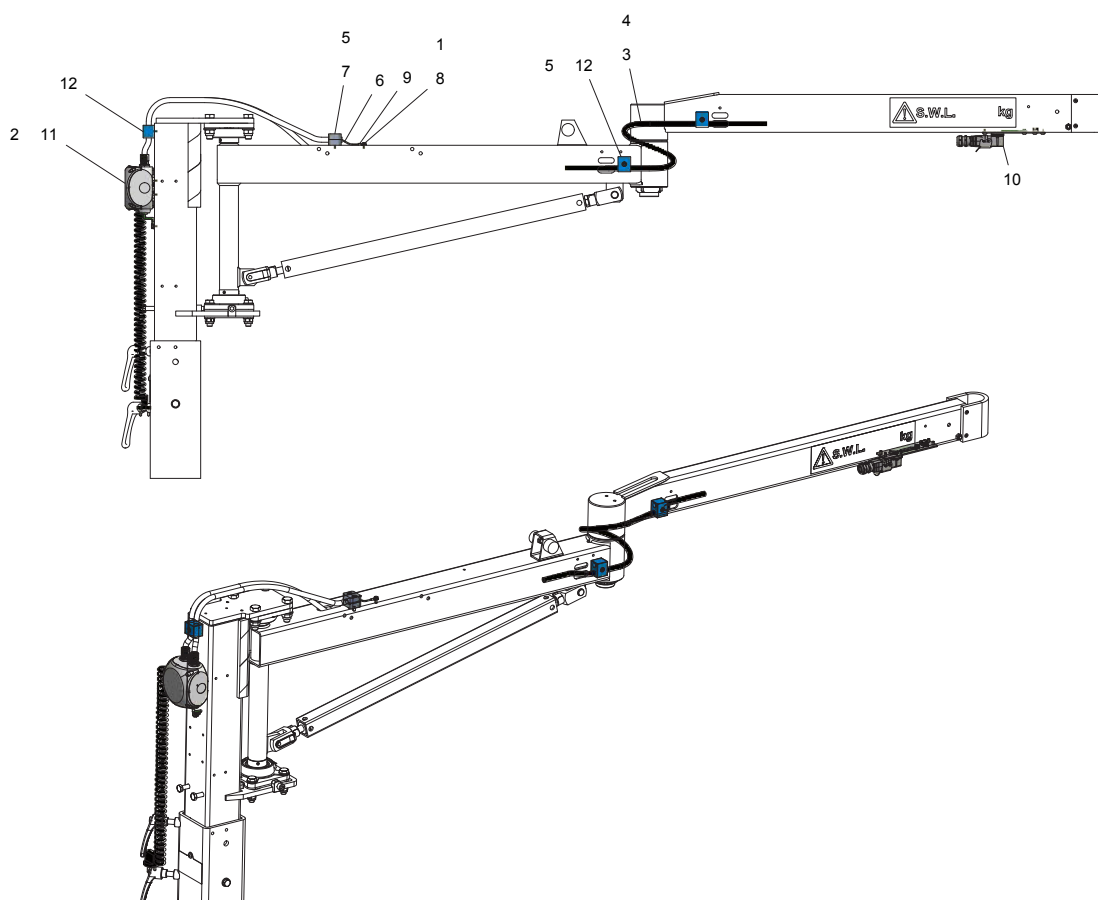
743251		Mobile footplate 5	
#	Part no.	Designation	Quantity
1	730227	Screw M6S M12x40, full thread	4
2	730244	Washer, 13x24x2	4
3	732109	Screw M6S M12x35, full thread	2
4	735556	Screw MSK6SS M12x16	4
5	738115	Washer 13x36x6	10
6	743212	Footplate	1
7	743213	U-profile	1
8	743247	Spacer	4
9	735531	Screw M6S M12x110, part threaded	4
10	743214	Weight 1	4
11	743215	Weight 2	2

743418		Mobile footplate 7	
#	Part no.	Designation	Quantity
1	730227	Screw M6S M12x40, full thread	4
2	730244	Washer, 13x24x2	4
3	732109	Screw M6S M12x35, full thread	2
4	735556	Screw MSK6SS M12x16	4
5	738115	Washer 13x36x6	10
6	743212	Footplate	1
7	743213	U-profile	1
8	743247	Spacer	4
9	743419	Screw M12x140, part threaded	4
10	743214	Weight 1	6
11	743215	Weight 2	2

743535		Mobile footplate 9	
#	Part no.	Designation	Quantity
1	730227	Screw M6S M12x40, full thread	4
2	730244	Washer, 13x24x2	4
3	732109	Screw M6S M12x35, full thread	2
4	735556	Screw MSK6SS M12x16	4
5	738115	Washer 13x36x6	10
6	743212	Footplate	1
7	743213	U-profile	1
8	743247	Spacer	4
9	743537	Screw M6S M12x170, part threaded	4
10	743214	Weight 1	8
11	743215	Weight 2	2

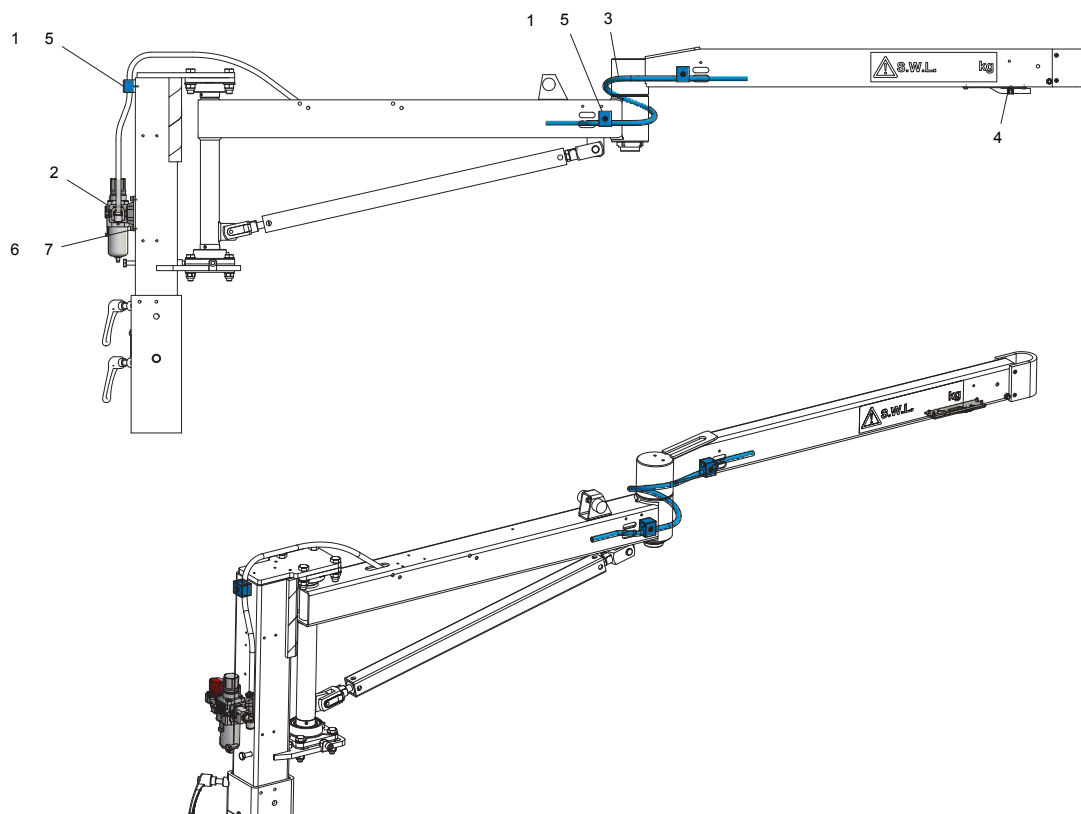
743563		Mobile footplate 11	
#	Part no.	Designation	Quantity
1	730227	Screw M6S M12x40, full thread	4
2	730244	Washer, 13x24x2	4
3	732109	Screw M6S M12x35, full thread	2
4	735556	Screw MSK6SS M12x16	4
5	738115	Washer 13x36x6	10
6	743212	Footplate	1
7	743213	U-profile	1
8	743247	Spacer	4
9	743564	Screw M6S M12x200, part threaded	4
10	743214	Weight 1	10
11	743215	Weight 2	2

## 4.8 Power supply - Electric supply 230V



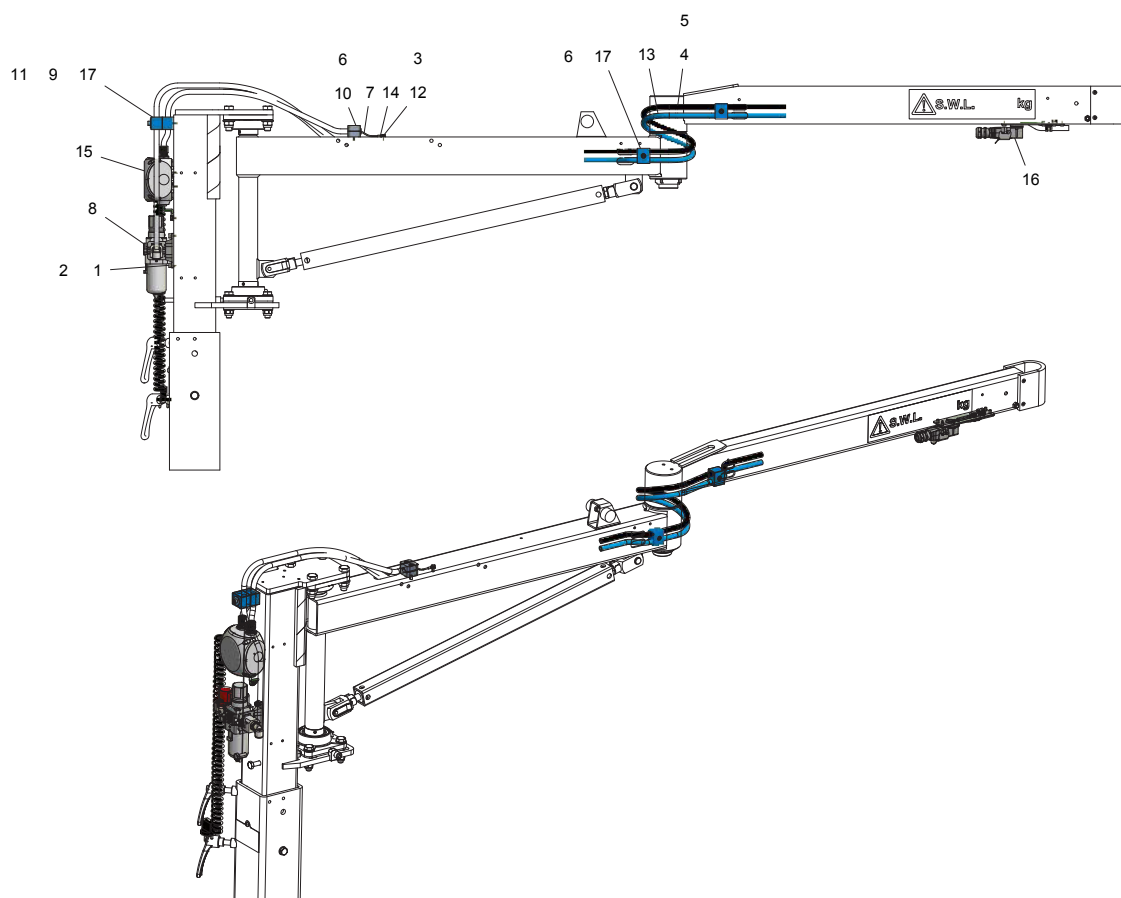
743924 Electric supply 230V			
#	Part no.	Designation	Quantity
1	730307	Washer, 5.3x10x1	1
2	730958	Wiring tube	2
3	730958	Wiring tube	1
4	732814	Wire 3G1.5 Classic 810	1
5	733691	Screw MC6S M6x30	5
6	733992	Cable	1
7	739978	Hose clamp Ø12, two-part	1
8	740671	Screw M6S M5x16, full thread	1
9	743923	Cable lug	1
10	743933	Electric interface, MobiArm	1
11	743934	Connection box, Mobarm	1
12	743932	Pipe bracket	3

## 4.9 Power supply - Pneumatics Ø12



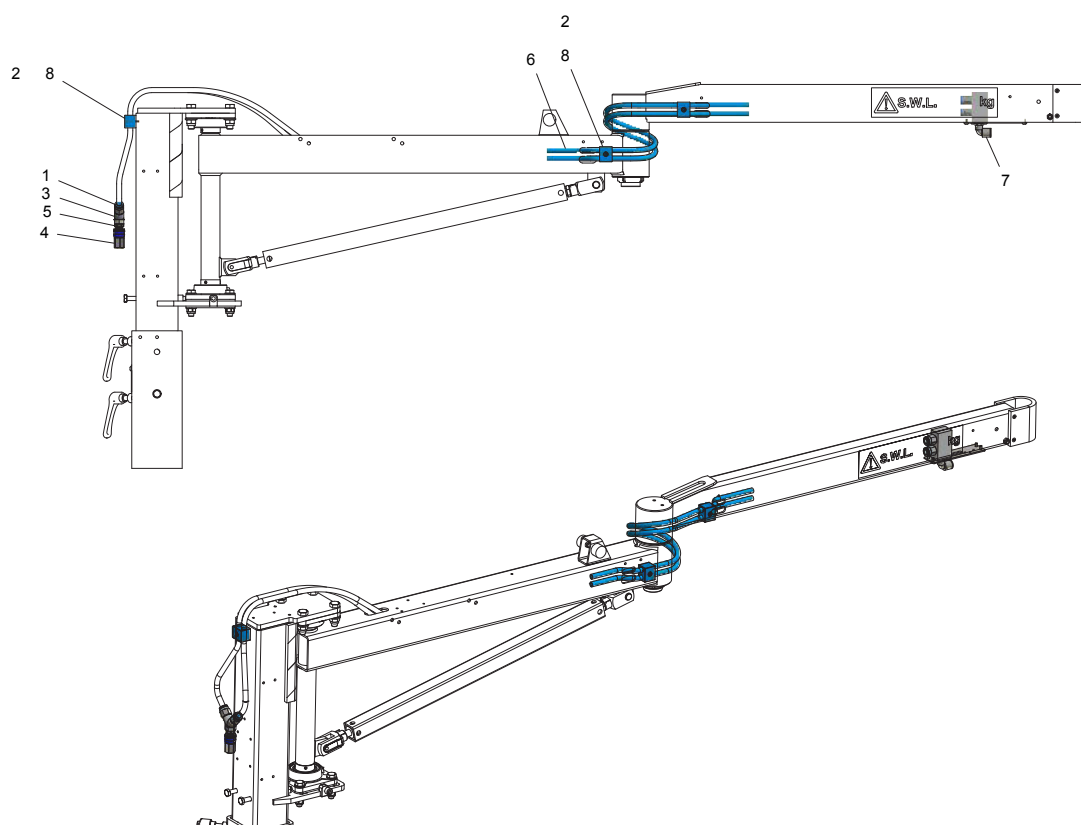
		743925 Pneumatic connector Ø12	
#	Part no.	Designation	Quantity
1	733691	Screw MC6S M6x30	3
2	735349	FRL unit (A)	1
3	743104	Hose Ø12x8	1
4	743940	Pneumatic connection, MobiArm	1
5	743932	Pipe bracket	3
6	730268	Washer, 6.4x12x1.5	4
7	730249	Screw MC6S M6x12	4

## 4.10 Power supply - Electric supply 230V + Pneumatics Ø12



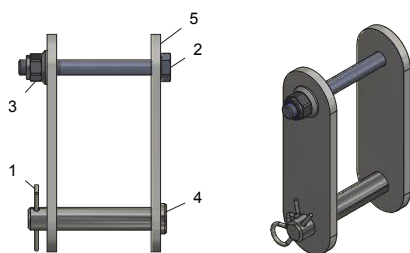
743926 Electro-pneumatic connection				
#	Part no.	Designation	Quantity	
1	730249	Screw MC6S M6x12	4	
2	730268	Washer, 6.4x12x1.5	4	
3	730307	Washer, 5.3x10x1	1	
4	730958	Wiring tube	1	
5	732814	Wire 3G1.5 Classic 810	1	
6	733691	Screw MC6S M6x30	4	
7	733992	Cable	1	
8	735349	FRL unit (A)	1	
9	739784	Flat washer, SRKB 7x22x1.5	1	
10	739978	Hose clamp Ø12, two-part	1	
11	740661	Screw MC6S M6x65	1	
12	740671	Screw M6S M5x16, full thread	1	
13	743104	Hose Ø12x8	1	
14	743923	Cable lug	1	
15	743934	Connection box, Mobarm	1	
16	743942	Electro-pneumatic connection	1	
17	743932	Pipe bracket	4	

## 4.11 Power supply - Pneumatics 2x Ø12

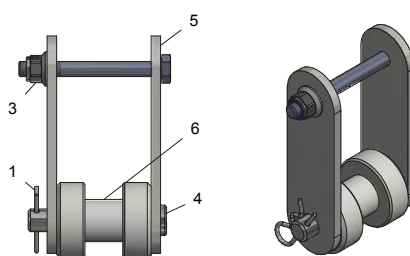


743927 Pneumatic connection 2x Ø12			
#	Part no.	Designation	Quantity
1	732853	Straight coupling, G3/8"-12	2
2	733691	Screw MC6S M6x30	3
3	739213	Y-connector G3/8"	1
4	739317	Quick release coupling, female 3/8	1
5	739319	Quick release coupling, male 3/8	1
6	743104	Hose Ø12x8	2
7	743943	Pneumatic connection	1
8	743932	Pipe bracket	3

## 4.12 Hanger lug

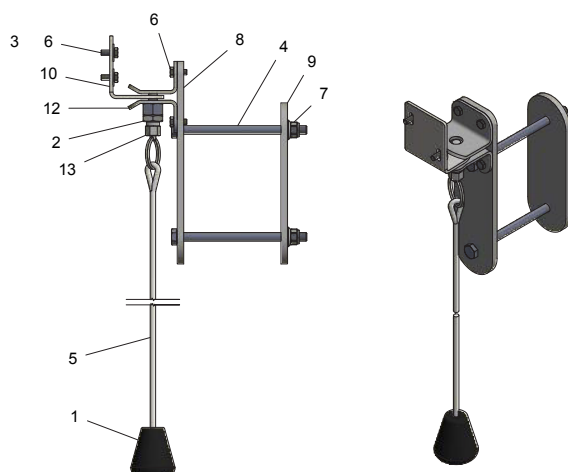


743928		Suspension lug, universal	
#	Part no.	Designation	Quantity
1	730209	Split pin	1
2	732342	Screw M6S M8x70, part threaded	1
3	741071	Nut M6MF M8 Nyloc	1
4	743424	Pin	1
5	743951	Suspension plate	2



743929		Suspension lug, GMC	
#	Part no.	Designation	Quantity
1	730209	Split pin	1
2	732342	Screw M6S M8x70, part threaded	1
3	741071	Nut M6MF M8 Nyloc	1
4	743424	Pin	1
5	743951	Suspension plate	2
6	743952	Adapter	1

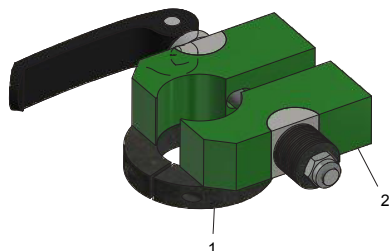
## 4.13 Hanger lug



743931		Arm lock	
#	Part no.	Designation	Quantity
1	6070049	Conical knob	1
2	730222	Thin nut M12	1
3	730782	Rivet washer 5x16x1	2
4	731324	Screw M6S M8x120, part threaded	2
5	731609	Cord D=5	1
6	740671	Screw M6S M5x16, full thread	6
7	741071	Nut M6MF M8 Nyloc	2
8	743945	Clamping plate 1	1
9	743946	Clamping plate 2	1
10	743947	Arm mount	1
11	743948	Upper guide	1
12	743949	Lower guide	1
13	743958	Bolt, adjustment	1



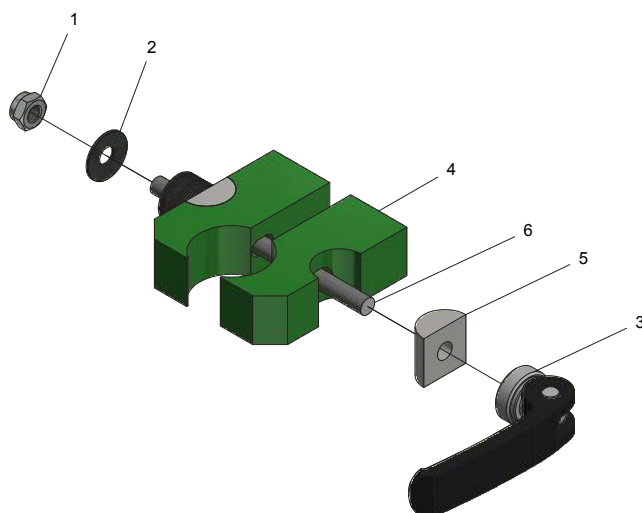
## 4.14 Parking brake - inner



743930 Inner brake, assembly			
#	Part no.	Designation	Quantity
1	743277	Clamping ring Ø45	1
2	743460	Inner brake	1

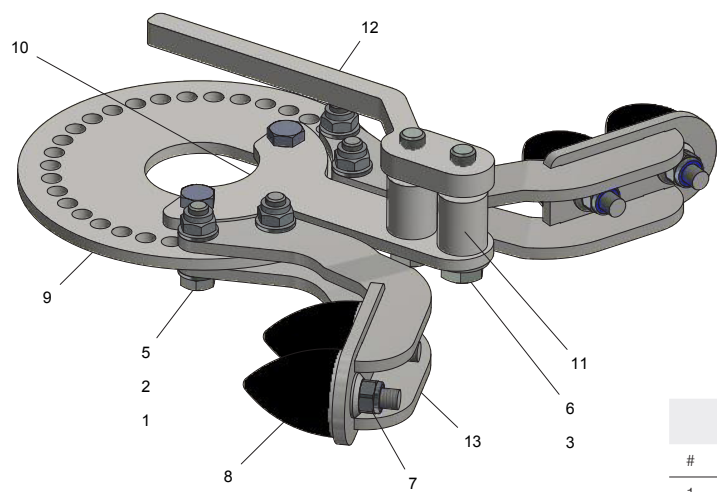
\* See below for details

### Inner brake



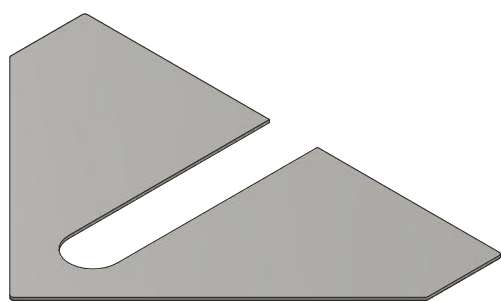
743460 Inner brake			
#	Part no.	Designation	Quantity
1	730904	Lock nut M10	1
2	743279	Disc spring Ø28x10.2x1.5	12
3	743416	Eccentric tensioner M10	R 1
4	743461	Brake pad	S 2
5	743462	Thrust washer	2
6	731793	Threaded rod M10	1

4.16 Rotation limiter



743974    Rotation limiter			
#	Part no.	Designation	Quantity
1	730117	Lock nut M8	4
2	730308	Washer, 8.4x16x1.5	8
3	730549	Washer, 10,5x22x2	2
4	731319	Screw M6S M8x25, full thread	2
5	731348	Screw M6S M8x30, full thread	4
6	733372	Screw M6S M10x50, full thread	2
7	741071	Nut M6MF M8 Nyloc	6
8	743150	Rubber bumper	4
9	743979	Indexing plate	1
10	743980	Bracket	1
11	743981	Spacer	2
12	743982	Captive nut plate	1
13	743985	Limiter arm	2

4.15 Various

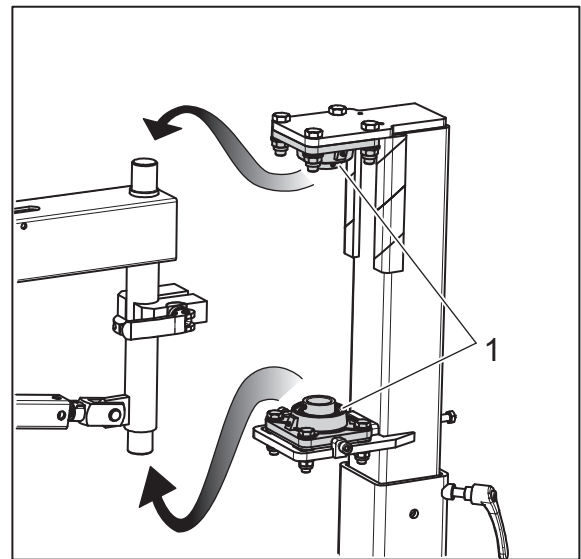


743506			
#	Part no.	Designation	Quantity
1	743506	Shim	1



## Fitting the inner arm to the tower

Remove the flange bearings (1) already fitted to the tower. Place these on the inner arm shaft.

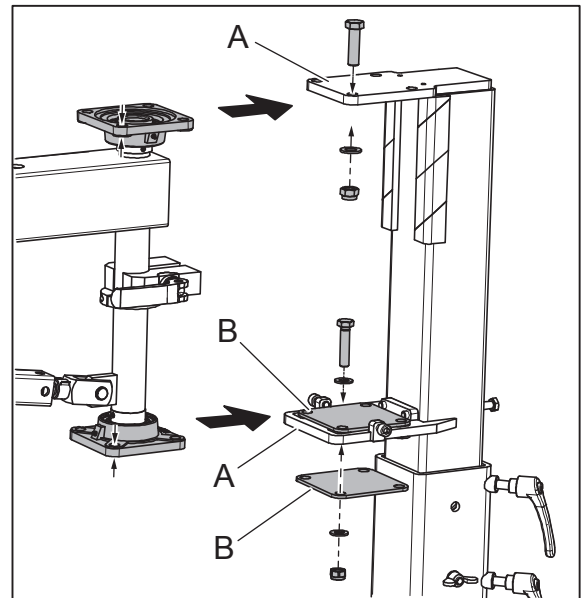


1 Flange bearing

Push the arm and bearings in between the bearing plates (A) on the tower. Insert a spacer (B) between the lower flange bearing and the bearing plate.

Refit screws, washers and nuts (Upper bearing M14, lower bearing M12). Fit a spacer under the lower bearing plate before fitting washers and nuts (M12).

Next, adjust the crane, go to “5.6 Adjusting the arm” on page 26.



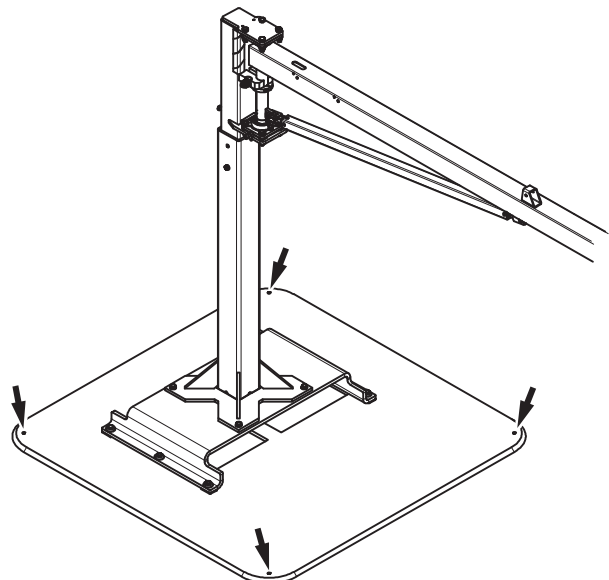
A Bearing plate  
B Spacer

## 5.3 Crane with mobile foot plate and adjustable tower

The crane is delivered assembled.

Place the crane in position on the floor.

Adjust the levelling screws at the corners of the mobile foot plate so that these touch the floor and the crane is standing securely.



# 5.4 Crane with mobile foot plate and fixed tower

This version is delivered in three parts:

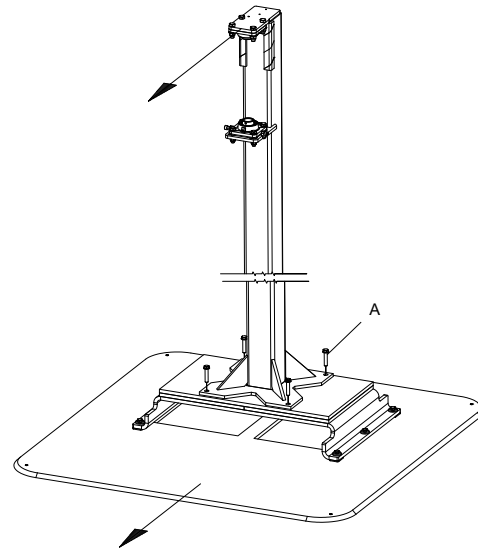
- mobile foot plate
- fixed tower
- inner and outer arms

## Assembling the tower to the mobile foot plate

Place the foot plate on the floor and remove the screws (A)

Place the tower on the foot plate, and make sure that the tower and the foot plate are facing as per the illustration. Refit the screws. Tightening torque: 81Nm

Refit the inner arm according to "Fitting the inner arm to the tower" on page 24.



# 5.5 Wall-mounted crane

The crane is delivered assembled:

For the installation, you will need:

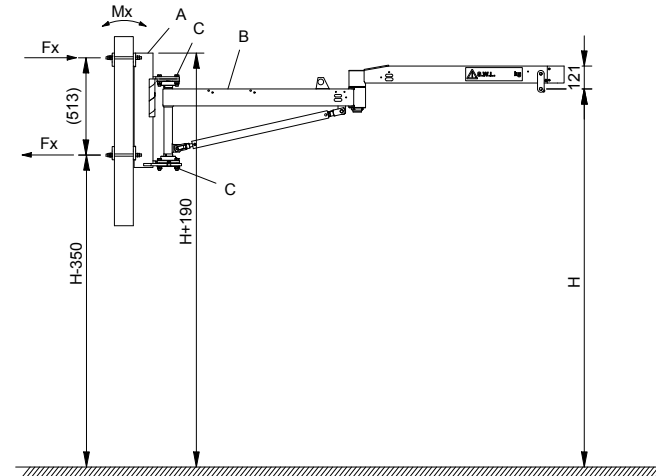
- 16 pcs Nut M12, grade 8.8
- 4 each 8.8 threaded rod M12  
Length = thickness of wall/pillar + 90mm

## Mounting the crane to a wall

Remove the wall bracket (A) from the inner arm (B) by undoing screws (C) holding the flanged bearings  
Mount the wall bracket at a suitable height and use a spirit level to adjust the position

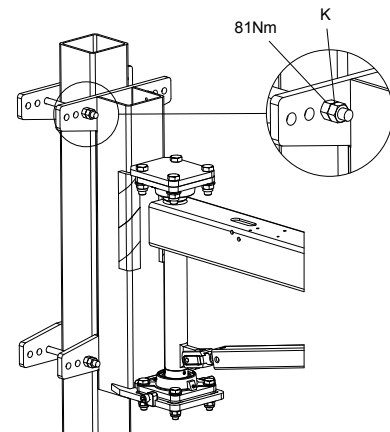
Tighten the nuts to the wall bracket to 81Nm  
Secure each nut with an additional nut (K)

Refit the inner arm according to "Fitting the inner arm to the tower" on page 24.



The crane loading on the pillar/wall

Inner and outer arms combined	Weight (kg)	Max. load (kg)	Mx (Nm)	Fx (N)
Inner arm 1 - Outer arm 1	60	125	3425	6676
Inner arm 1 - Outer arm 1.5	65	90	3225	6286
Inner arm 1.5 - Outer arm 1.5	73	95	3804	7415
Inner arm 1.5 - Outer arm 2.0	77	65	3606	7028
Inner arm 2 - Outer arm 2.0	82	50	3486	6796



## 5.6 Adjusting the arm

When the arm is adjusted, the lifting equipment must be attached but no load is to be carried (empty).

Commence by setting the crane height.

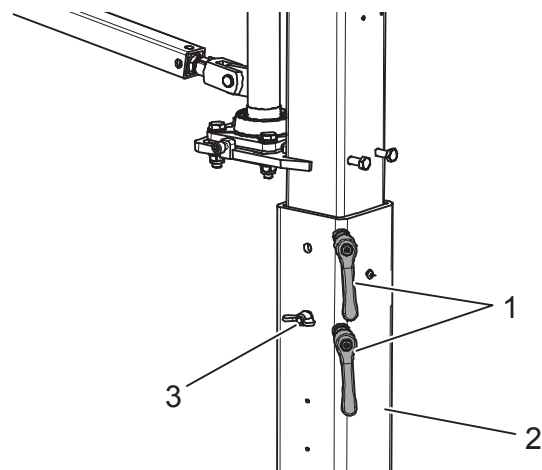
Undo the tension screws (1), remove the wing nut (3), and remove the screw.

Lift the upper half of the tower to the desired height.

**NB!** The upper part of the tower must not be lifted so high that the red marks are visible.

Refit the screw and the wing nut.

Tighten the tension screws.



1. Tensioning screws
2. Tower
3. Wing nut and screw

Move the arm (inner and outer sections) to 90° compared to the normal position (B), as per the image.

Place a spirit-level on top of the inner arm. Observe the spirit-level.

Move the arm 180° to a position exactly opposite (C), as per the image

Place the spirit-level on top of the inner arm in the same way as before. Observe the spirit-level.

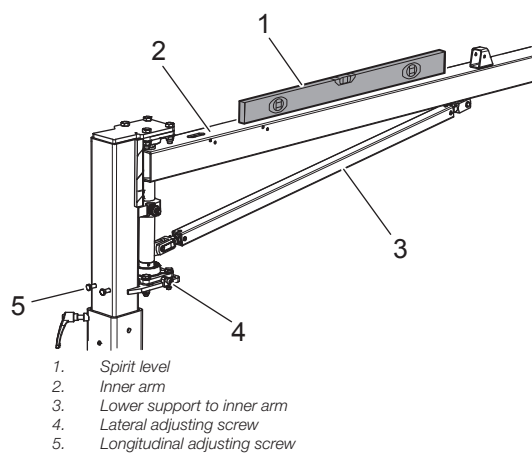
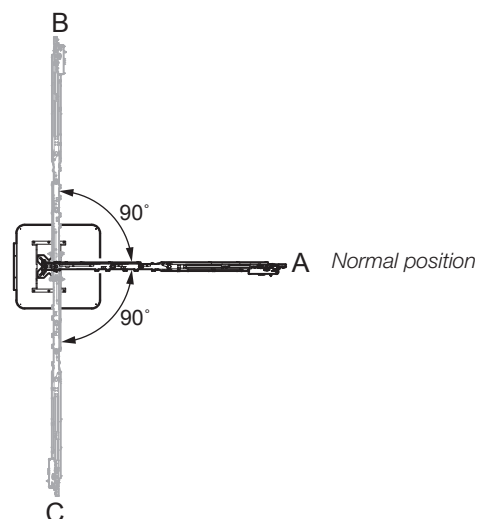
Undo the screws holding the lower flange bearing somewhat and adjust sideways using the adjusting screws (see image) until the spirit level shows the same for both positions (B and C).

Turn the arm to position C. Adjust the lower support to the inner arm so that the arm is perfectly level.

Turn the arm to position B. Check that the arm is still perfectly level.

Turn the arm to position A (normal position). Adjust the lower bearing using the adjusting screw for lateral adjustment (see image) to level the inner arm.

Tighten the screws that hold the inner bearing of the inner arm when the arm is correctly adjusted as per above.



1. Spirit level
2. Inner arm
3. Lower support to inner arm
4. Lateral adjusting screw
5. Longitudinal adjusting screw

## 5.7 Adjusting the inner brake (option)

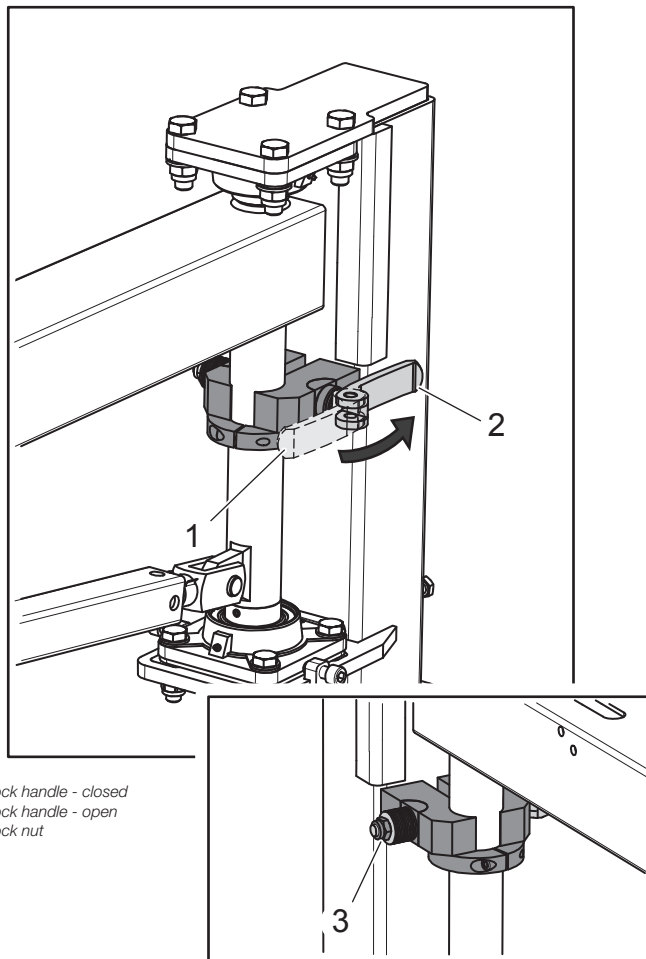
The inner brake (see image) is adjusted so that the crane arm does not turn.

Set the lock handle of the inner brake in the open position.

Adjust the brake by tightening or releasing the lock nut (see image).

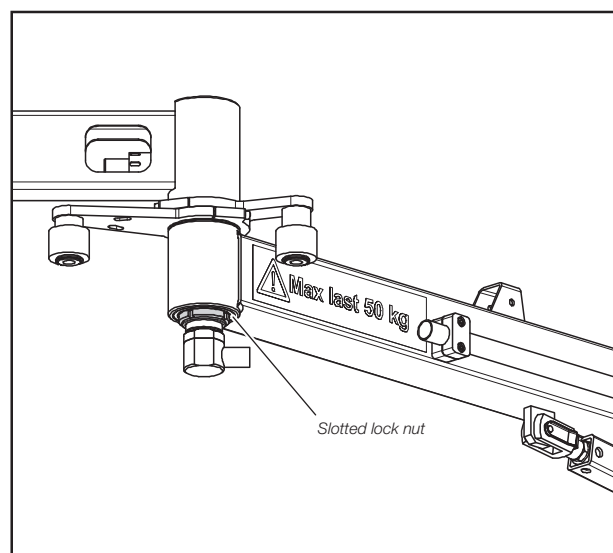
(The parked position of the inner brake (locked position) is described at "Parking position, crane arms" on page 29).

1. Lock handle - closed
2. Lock handle - open
3. Lock nut

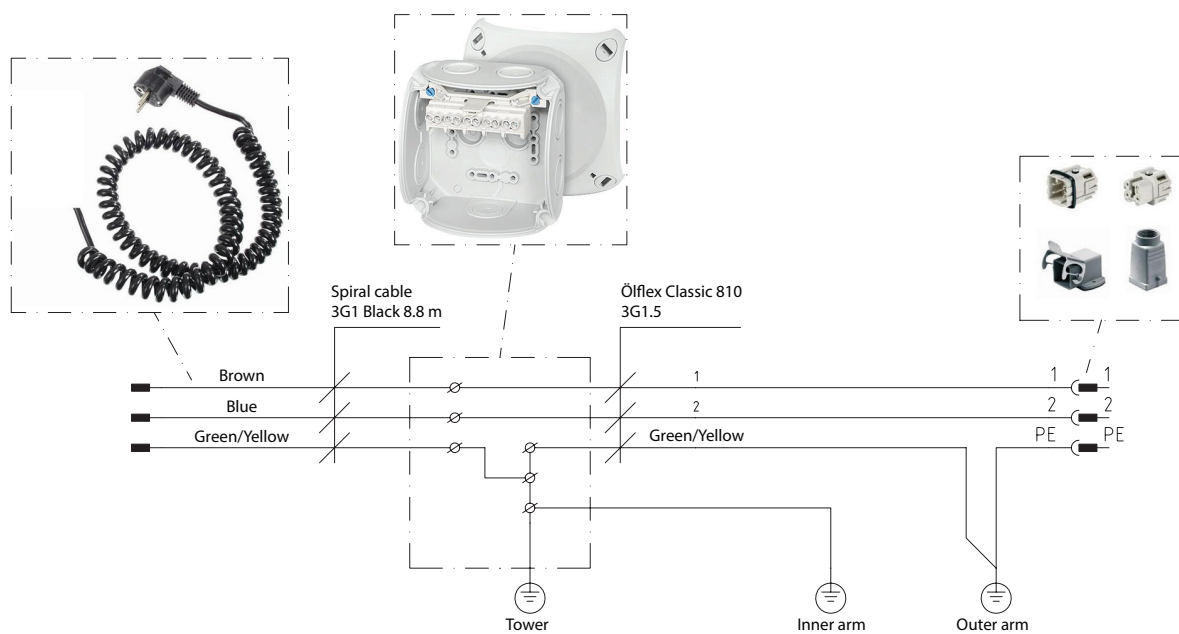


## 5.8 Adjusting the outer brake

If the outer arm keeps turning, this is remedied by carefully tightening the slotted lock nut on the shaft that joins the inner and the outer arms (see image).



## 5.9 Electrical connection





## 6. Operating the crane

**NB!** Before any kind of work is performed on or with the MobiArm, the chapter "1. Safety" must have been carefully read.

A complete work station that includes a MobiArm, must have a specific description of the work to be performed which considers all the points indicated below.

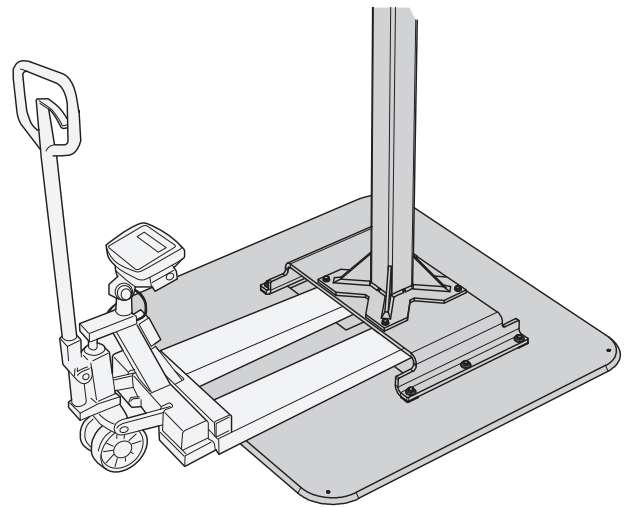
- the configuration
- the design and the function of the attached lifting equipment
- the characteristics and any variation in the lifted objects
- the work environment
- the selected working pace and work frequency

### 6.1 The crane

#### Moving a crane mounted on the mobile footplate

When moving a crane mounted on the mobile footplate, the crane arm must be placed in the parked position (see below) before performing the move. This will prevent the arm from moving about uncontrollably during the move.

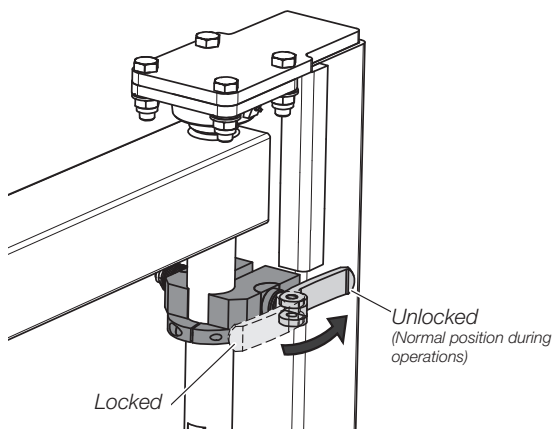
The crane is moved by using a hand pallet truck. The forks of the truck are inserted between the foot plate and the raised section where the tower is mounted.



#### Parking position, crane arms

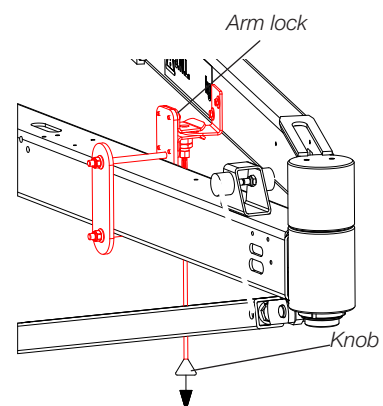
##### Locking the inner arm

The inner arm is locked in position by moving the eccentric tensioner of the inner brake into the locked position.



##### Locking the outer arm

The outer arm may be locked up against the inner arm. Pull down on the knob to release the catch, and fold the outer arm against the inner arm. Release the spring loaded knob to lock the outer arm in position.



## 7. Service, maintenance & care

General checks and function tests are performed regularly when commissioned.

A record must be kept of all service and maintenance. The user must ensure that all the required items for the jobs are available.

NB! In order to avoid any injury to personnel or damage to equipment, make sure to immediately replace any component that is damaged.

Keep the equipment and the area surrounding it and the work area properly cleaned. This will promote well-being and promotes all service and maintenance. Uncleanliness is a clear indication that the equipment is not handled in the required manner, which in turn may affect any remaining warranty on the equipment.

### Safety instructions when performing maintenance

The instructions concerning adjustment, maintenance, inspection measures and their intervals, including instructions for replacing parts / components must be observed! These activities may be performed by skilled personnel only.

Mechanical, electrical and pneumatic repair and maintenance work as well as renovation work may only be carried out by personnel with the necessary skills and competences.

Unauthorized persons shall be prohibited from working with machinery and equipment in the facility.

For all repairs and maintenance work, disconnect, switch off and secure against accidental or unauthorized use.

Ensure that:

- moving parts have come to a stand-still, and
- moving parts cannot accidentally start moving during the performance of the work.

Use safe and environmentally friendly operating and maintenance products as well as replacement parts!

### Instructions for work with the equipment in operation

The user or the "authorized person" employed by him must, for each particular case, check that the specified work, because of special local conditions, can be carried out without risk of personal injury.

To avoid accidents during maintenance, adjustment and repair work, only permitted and appropriate lifting tools and aids may be used.

Do not touch any rotating parts, and maintain sufficient safety distances to these so that clothing, body parts or hair can not get caught.

Avoid open flames, extreme heat (e.g. welding), and do not create any sparks when handling detergents or near combustible or heat sensitive parts (e.g. wood, plastic components, lubricants and electrical equipment) - negligence may lead to a risk of fire, harmful gases or damage to insulation materials.

### Instructions for working with pneumatic equipment

Stop all work at once with the equipment if there is any problem with the compressed air.

Work with pneumatic equipment and pneumatic components shall be carried out by trained personnel.

The parts of the equipment on which inspection, maintenance and repair work is to be carried out must, when so directed, be disconnected off from compressed air supply.



*Keep the equipment and the area surrounding it and the work area properly cleaned.*

## 7.1 Recommended spare parts / wear parts

743253 Adjustable tower				
#	Part no.	Designation	Quantity	
11	743263	Bearing unit Ø35	S	2
17	743269	Lock arm M12x40	R	2
18	743417	End protector 30x30x10	S	2

743254 Adjustable tower +500				
#	Part no.	Designation	Quantity	
11	743263	Bearing unit Ø35	S	2
17	743269	Lock arm M12x40	R	2
18	743417	End protector 30x30x10	S	2

743953 Fixed tower				
#	Part no.	Designation	Quantity	
9	743263	Bearing unit Ø35	S	2
13	743417	End protector 30x30x10	S	2

743255 Wall bracket				
#	Part no.	Designation	Quantity	
10	743263	Bearing unit Ø35	S	2
14	743417	End protector 30x30x10	S	2

743256 Inner arm 1m				
#	Part no.	Designation	Quantity	
6	743270	Ball bearing	S	2

743257 Inner arm 1.5m				
#	Part no.	Designation	Quantity	
6	743270	Ball bearing	S	2

743258 Inner arm 2m				
#	Part no.	Designation	Quantity	
6	743270	Ball bearing	S	2

743460 Inner brake				
#	Part no.	Designation	Quantity	
3	743416	Eccentric tensioner M10	R	1
4	743461	Brake pad	S	2

## 7.2 Checks and maintenance

The crane and the arms are to be checked every 3-4 months depending on how much the equipment is used. Check things such as:

- fastening elements  
check that these are not damaged and that nuts and bolts are properly tightened
- the bearings between crane - inner arm and between inner arm - outer arm  
make sure the bearings aren't seized, that there is no noise when the arm is turned, and that there is no visible damage.  
Action; lubricate the bearings, replace them if so required
- 

See the respective documentation for any attached equipment.

## 8. CE certificate

### EC declaration of conformity of the machinery

TRANSLATION  
(according to 2006/42/EG, annex 2A)

RonI  
8001 Tower Point Drive  
Charlotte, NC 28227

Tel: 866-543-8635  
Fax: 866-543-9532  
E-mail: Info@RonI.com  
Web: www.RonI.com

hereby declares that the machinery

**Designation**  
MobiArm

**Machine type**  
Knucle boom crane

**Version**

and that standards and/or technical specifications as described below are applied

- ☒ **Machinery Directive 2006/42/EC**
- ☒ **EMC Directive 2014/30/EU**
- ☒ **Low Voltage Directive 2014/35/EU**

and that standards and/or technical specifications as described below are applied.

- |  |  |   |
|--|--|---|
| <input checked="" type="checkbox"/> <b>Machinery Directive</b><br>SS-EN-ISO 12100:2010<br>SS-EN 14238:2004 + A1:2009 | <input checked="" type="checkbox"/> <b>EMC Directive</b> | <input checked="" type="checkbox"/> <b>Low Voltage Directive</b><br>IEC 60204-32<br>IEC 60204-1 |
|--|--|---|

Date:2019-02-28



# LIFT-O-FLEX

MOBI-Crane Voyager

Reviser			
Issue	#	Designation	Sides
April 2018	0	First issue	-

RonI  
8001 Tower Point Drive  
Charlotte, NC 28227

866-543-8635  
866-543-9532  
Info@RonI.com  
www.RonI.com



**LIFT-O-FLEX**

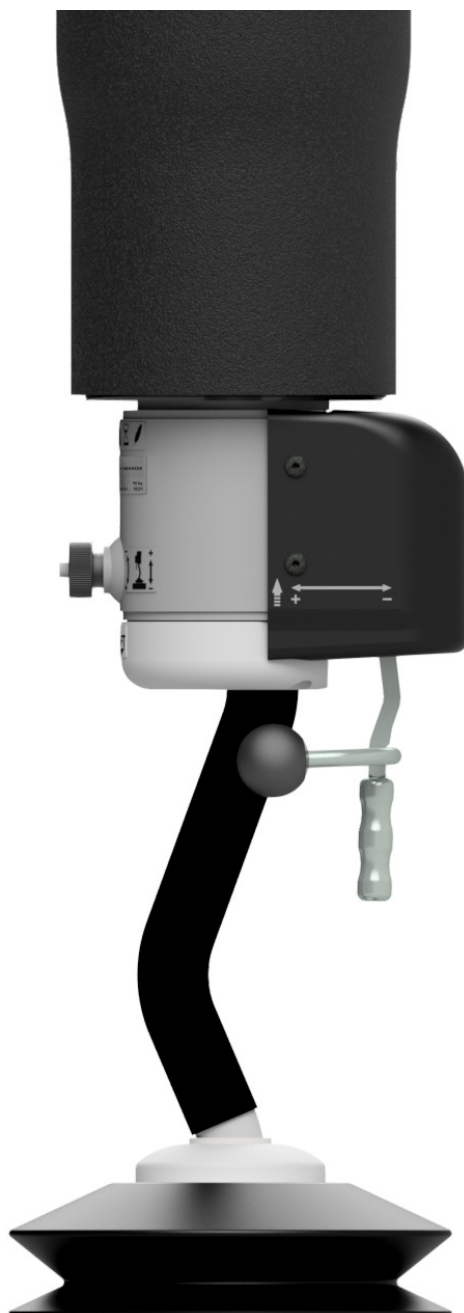
MOBI-Crane |  **inovomech** |  **Voyager**

# EASYHAND PRO

60/80/100/120

Original instructions  
2021-09-01

EN  
CE



## LIFT-O-FLEX

MOBI-Crane

 **Movomech**

 **Voyager**

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## Symbol legend



### Warning!

Warning! This indicates a risk of serious injury or death if instructions are not followed. This includes a risk of serious damage to the machine or injury to third parties.



### Caution!

Caution! This indicates a risk of minor injury and equipment damage if instructions are not followed.



### Attention!

Attention! This indicates a risk of equipment damage or considerable reduction in equipment service life if instructions are not followed.

The equipment complies with EU Machinery Directive 2006/42/EG, Annex 21A, as well as EN ISO 12100:2010 and SS-EN 14238 2004+A1 2009.



# Introduction

Easyhand Pro is a Swedish-manufactured lifting device (tube lifter) based on vacuum technology. See the Safety Instructions below for additional important information about how to evaluate objects before they are lifted to determine whether Easyhand Pro may be used safely. Additionally, while Easyhand Pro itself is capable of lifting many types of objects, the operator must also read and understand the specific manual for the equipment to which Easyhand Pro is attached for additional restrictions on what may be safely lifted by any given "System". I.e. there may be additional limitations or requirements that may exist beyond those specifically listed in this manual. It is the operator's responsibility to ensure that they are aware of and obey all such limitations, as well as all safety rules. For further information, contact your supplier.

Easyhand Pro is intended to facilitate lifting work with an emphasis on ergonomics, efficiency and safety. Movomech AB will assist with repair through authorised dealers and our support organisation.

This manual addresses standard use of safety, installation, use, maintenance and troubleshooting. Special Easyhand Pro versions are not covered. Information about special modifications to installations can be provided by your supplier. The equipment as supplied may only be used to lift objects for which it is intended according to specifications from the supplier. If you need to use the lifter for other purposes, please contact your supplier. The peripheral equipment into which Easyhand Pro is installed is not described in this manual. Refer to the separate descriptions of the equipment concerned for additional important information.

Movomech's goal is to continually develop and improve the user-friendliness and design of our equipment. Accordingly, we reserve the right to make future design changes.

## Description of symbols on control levers

Users must read and understand the manuals before operating the machine.

Never stand or place any part of the body under a suspended load. Falling loads can cause serious injury or death.



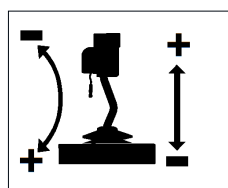
Part no.: 670037-04

Always use soft, light controlled movements to avoid jerky operations.



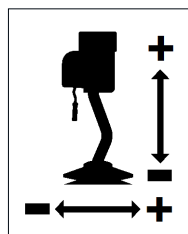
Part no.: 670037-01

CE plate with machinery model, serial number and year of manufacture.



Part no.: 670037-02

Adjustment with load.  
Turn clockwise - Raise the load.  
Turn counterclockwise - Lower the load.

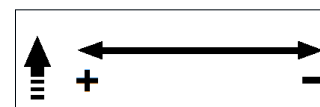


Part no.: 670037-03

Adjustment without load.  
Turn left - Lower the load.  
Turn right - Raise the load.



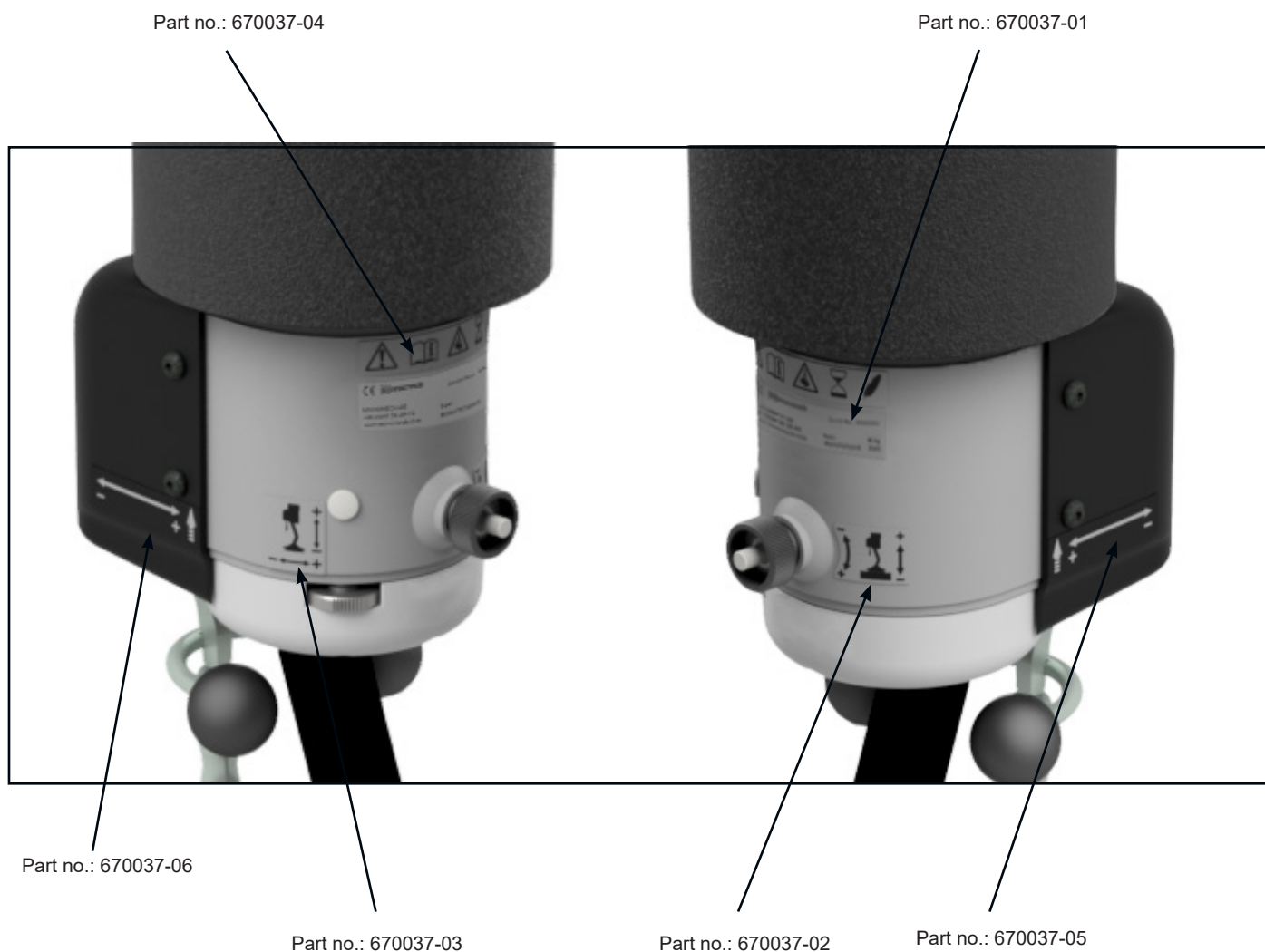
Part no.: 670037-06



Part no.: 670037-05

Operating: Up – Down – Release.  
Always use soft, light controlled movements when operating the lift. When releasing the load, open the control bar fully and tilt the lifter a little to release the suction foot.

## Placement of labels on the control unit.



## Technical data

Easyhand M / Pro / Pro Rapid		Ejector A	Ejector B	Pump C	Pump D	Pump K	Pump I
Min work pressure	bar	6	6				
Flow	l <sub>n</sub> /min	400	600	410	660	1000	1500
Work temperature	°C	5-40 (indoors)					
Noise level <sup>1</sup> excl. silencing hood	dB(A)	69	72	62	67	70	72
Noise level <sup>1</sup> incl. silencing hood	dB(A)			<52	<57	<60	<62
Motor output	kW			0,9	1,5	1,5	2,6
Voltage	V			400	400	400	400
Fuse	A			10	10	10	10
Weight pump	kg			26	39	66	69
Weight pump incl. silencing hood	kg			59	81	96	99
LxWxH pump excl. silencing hood	mm			505x260x290	572x280x290	702x353x328	702x353x328
LxWxH pump incl. silencing hood	mm			808x448x348	808x448x348	856x504x567	856x504x567
Min lifting height Z (hose L 2500 / 4000) <sup>2</sup>	mm	ca 1700 / 3000					

<sup>1</sup> It is recommended for operators and service personnel to wear hearing protection when the manipulator is used in a noisy environment or the emission sound pressure level at the operator position due to the manipulator exceeds 80 dB(A).

<sup>2</sup> The stroke generally constitutes 1/3 of the length of the lifting hose and varies slightly depending on the combination of pump, hose diameter, the weight of the accessories and the weight of the lifting object.

## Safety precautions

Read through the safety instructions below as well as manual(s) for the equipment on which Easyhand Pro is mounted before using Easyhand Pro. Note that these other manuals may include instructions, warnings, or limitations for use of Easyhand Pro beyond those listed below.

Easyhand Pro may only be used by personnel and who have read and understood this manual, any manuals for related equipment as mentioned above, and any applicable standards and regulations. Movomech AB is not liable for any damage or injury caused by use or actions which are inconsistent with the training, manuals and any applicable standards and regulations. Such use is entirely at the user's risk.

### General

#### **Warning!**

- Easyhand Pro generates very strong suction/negative pressure (vacuum). Do not attempt to seal the suction pad with any part of the body. Keep all body parts, clothing, and hair away from the suction pad and suction opening while the vacuum pump is operating.

#### **Caution!**

- Easyhand Pro may only be used as intended for the materials and application described in this manual as well as any relevant equipment manuals and in accordance with the relevant safety regulations. Any other use is not as intended and is prohibited!
- The condition and serviceability of Easyhand Pro must be inspected and tested prior to each use.
- Maintenance, servicing, lubrication and troubleshooting may only be performed by qualified persons who have read and understood all relevant manuals and who are trained and/or approved by Movomech AB or their authorised distributor.
- If a hazardous condition is identified during operation or servicing, Easyhand Pro must not be used until the hazardous condition has been corrected.
- In the event of crack formation or other damage to Easyhand Pro or its associated lifting tool(s), all use of the machine must immediately cease.
- Persons under the influence of drugs, alcohol or medications that affect their judgement and physical abilities must not be allowed to use, maintain nor repair Easyhand Pro.
- Appropriate personal protective equipment should be used when operating the vacuum lifter including steel toed boots, safety glasses and hearing protection as required by your employer and applicable regulations.
- The load is lifted and held using negative pressure. If there is a leak or power failure (interruption of power supply, blocked filter), the negative pressure is reduced and the load will be lowered to the ground. In the event of media outage, the operator should close the control handle and allow the load to be lowered in controlled fashion to the ground. Easyhand Pro must not be used before the fault/cause of the outage has been rectified.
- The vacuum pump is the heart of the equipment – handle it carefully as it is sensitive to shocks and bumps.
- Never test run the vacuum pump without a connected air filter.

## Load

### **Caution!**

- The maximum allowable loads may be dependent on the equipment on which Easyhand Pro is mounted. Never handle loads heavier than approved for the equipment. See the relevant manual(s).
- Lifting tools are to be selected as dictated by the shape and weight of the load.
- Only use Easyhand Pro to handle loads that are sufficiently solid to avoid the risk of them coming apart when lifted.
- Never attach the suction foot to surfaces that are loose or could come loose. Examples include but are not limited to address labels, taped objects, thin paper, etc.
- Never attach the suction foot to surfaces that are so slippery, oily, or wet that there is a risk of the load sliding in relation to the suction foot.
- Never lift objects that are sharp and that could damage the vacuum seal strip.
- Never lift hazardous or explosive materials without first ensuring that proper safety procedures, as designated by your employer, are in place.
- During operation of Easyhand Pro, the ambient temperature must be in the range of +37.5°F (3°C) to +104°F (40°C). Below +37.5°F (3°C) there is a danger of the load slipping due to ice formation.

## Lifting

### **Warning!**

- A suspended load must not be allowed above any part of a person's body.
- Easyhand Pro with loads may not be range-finder such that a falling load would risk personal injury or material damage.
- Never try to lift people or animals.
- Never leave an electric Easyhand Pro with the last hanging, (max. 60 seconds) or the vacuum pump may overheat.
- The area of the suction foot must be at least 2.5 times greater than the cross-sectional area of the lifter tube to avoid unintentional release of the load.

### **Caution!**

- Never leave a suspended load unattended.
- Never suspend a load for more than 60 seconds or the vacuum pump may overheat.
- Never try to manually assist the up or down movement of an Easyhand Pro when it has a load attached. All lift movement must take place using the control unit.
- Always adjust the balance height in relation to the load to allow for convenient and safe handling. A load which is fixed or jammed in position must not be pulled free with Easyhand Pro.
- Always use smooth controlled movements when working with Easyhand Pro. Jerky operation can result in the load working loose and is therefore prohibited.
- The CE plate attached to Easyhand Pro must not be removed.



## **Important information**

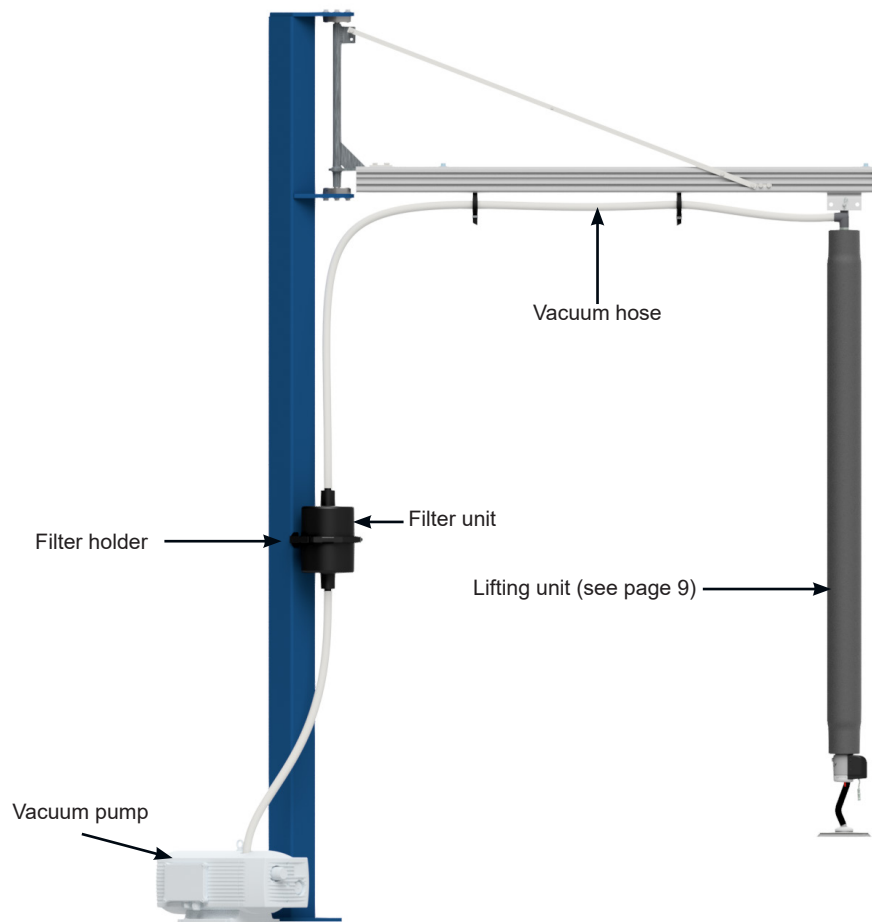
- Read through the entire manual and get to know the equipment before it is assembled and put to use.
- Operate Easyhand Pro gently and carefully using the control levers in order to avoid jerky movements when lifting.
- The area of the suction foot must be at least 2.5 times greater than the cross-sectional area of the lifter tube to avoid unintentional release of the load (see examples of calculation on page 9 and 10 ).
- The equipment must be switched off during maintenance and cleaning.
- The vacuum pump is the heart of the equipment – handle it carefully as it is sensitive to shocks and bumps. Never test run the vacuum pump without a connected air filter.
- Loads may not be raised before Easyhand Pro and its gantry or turntable crane are positioned vertically above the load.

## **Prohibited use**



**Under no circumstances may the tube lifter's design or structure be modified without permission from the manufacturer. Only ever use accessories or spare parts from Movomech AB. Modifications that are not approved by Movomech AB and/or the use of non-approved accessories or spare parts can cause serious injury during lifting operations. The maximum load may never be exceeded.**

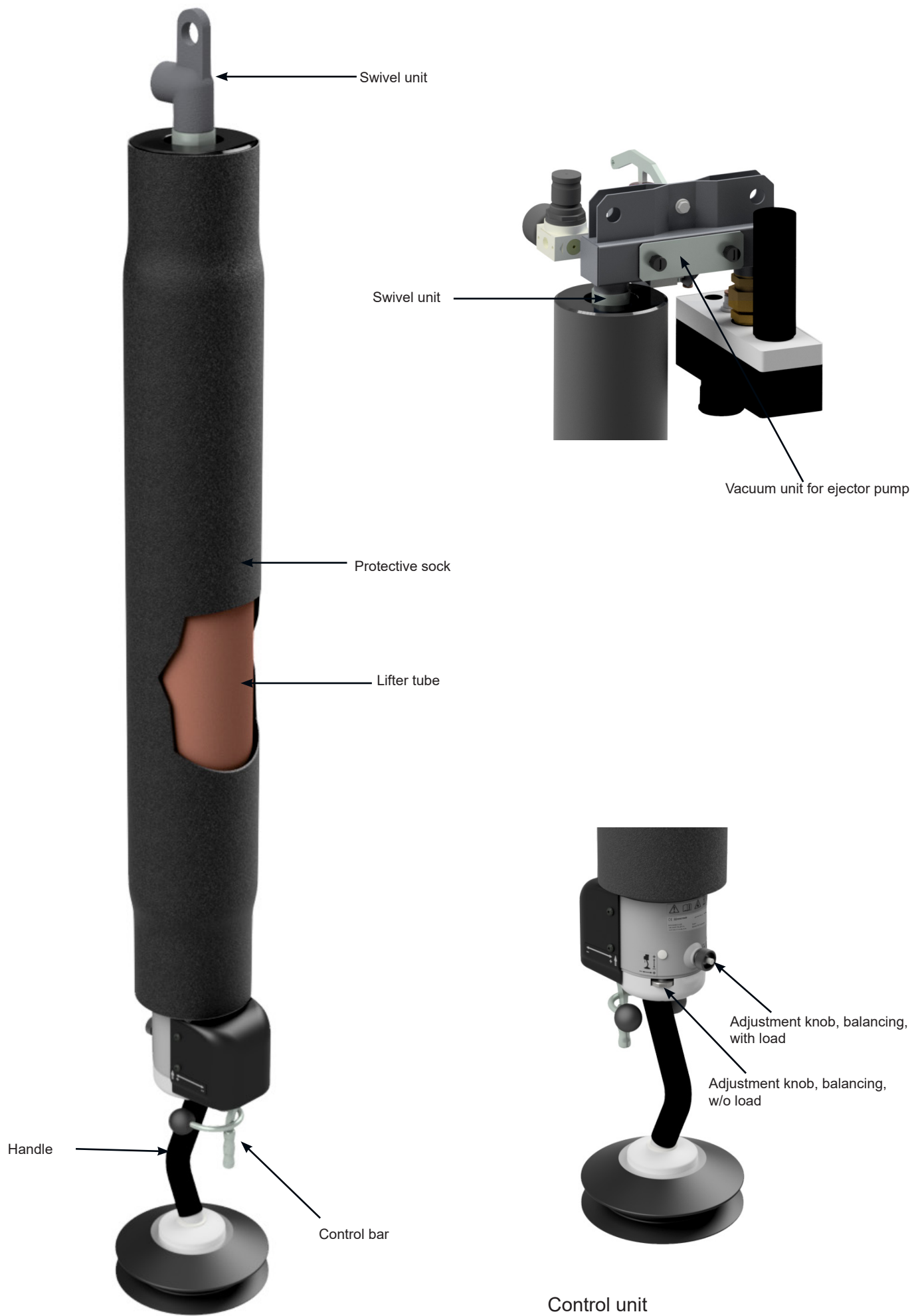
## Product description



An example showing installation on a jib crane



An example showing gantry installation



## Installation



Make sure the correct components have been delivered and that they correspond to the delivery note/shipping documentation. If anything is missing, contact your supplier.



Read through the manual carefully before installation in order to avoid problems during assembly and commissioning.



From a safety standpoint, it is necessary to have a good understanding of the equipment. Easyhand Pro is supplied with an electric or pneumatic vacuum pump. Carefully follow the directions and/or manual during installation.

## Safety regulations for installation

- The person in charge of installation is responsible for making sure that the entire lifting system (e.g. gantry) is designed to safely handle the sum total of Easyhand Pro's own weight plus the maximum allowable load, including all necessary safety factors.
- Electrical installation must be carried out by an authorised electrician.
- In the case of jib crane installation, follow Movomech's installation instructions for cranes which are available from Movomech AB.
- In the case of crane system installation, follow the supplier's assembly instructions.
- The lifting unit is hung from a suspension lug. Make sure that other suspension devices are sufficiently dimensioned and that they are secured against falls where necessary.
- Once the lifting unit is suspended, the suction foot should be around 3.9 in (10 cm) above the floor. If the suction foot is closer to the floor, the tube must be cut (refer to Cutting the lifter tube) or the suspension system raised.
- If the suction foot is higher than 3.9 in (10 cm), it must be lowered by lowering the lifting unit or installing a longer lifter tube.



**Check that the suction foot to be used with the lifting unit concerned has a safety factor of at least 2.5. The area of the suction foot must be at least 2.5 times greater than the cross-sectional area of the lifter tube to avoid the load coming loose unintentionally.**

## Is the safety factor for the suction foot sufficient?

*Sample calculation:*

Lifter tube cross-section: Radius x Radius x 3.14 ( $\pi$ ) = Area

Suction foot area, rectangular: Length x Width x Number of suction feet = Total area

Suction foot area, round: Radius x Radius x 3.14 ( $\pi$ ) x Number of cups = Total area

*Example 1*

**Single rectangular suction foot 200x140mm**

Lifter tube:  $100 \text{ mm} \times 50 \times 50 \times 3.14 \times 1 = 7,850 \text{ mm}^2$

Suction foot:  $200 \times 140 = 28,000 \text{ mm}^2$

$28,000 / 7,850 = 3.57$

In this case, the safety factor is approximately 3.57, which is sufficient by a good margin.



### Example 2

#### Lifting yoke with 4 pcs round Ø 75 mm (2.95 in) suction cups

Lifter tube:  $80 \text{ mm} \times 40 \times 40 \times 3.14 = 5,024 \text{ mm}^2$

Suction cup round Ø 75 mm:  $37.5 \times 37.5 \times 3.14 = 4,416 \text{ mm}^2$      $4,416 \text{ mm}^2 \times 4 \text{ pcs} = 17,664 \text{ mm}^2$

$17,664 / 5,024 = 3.52$

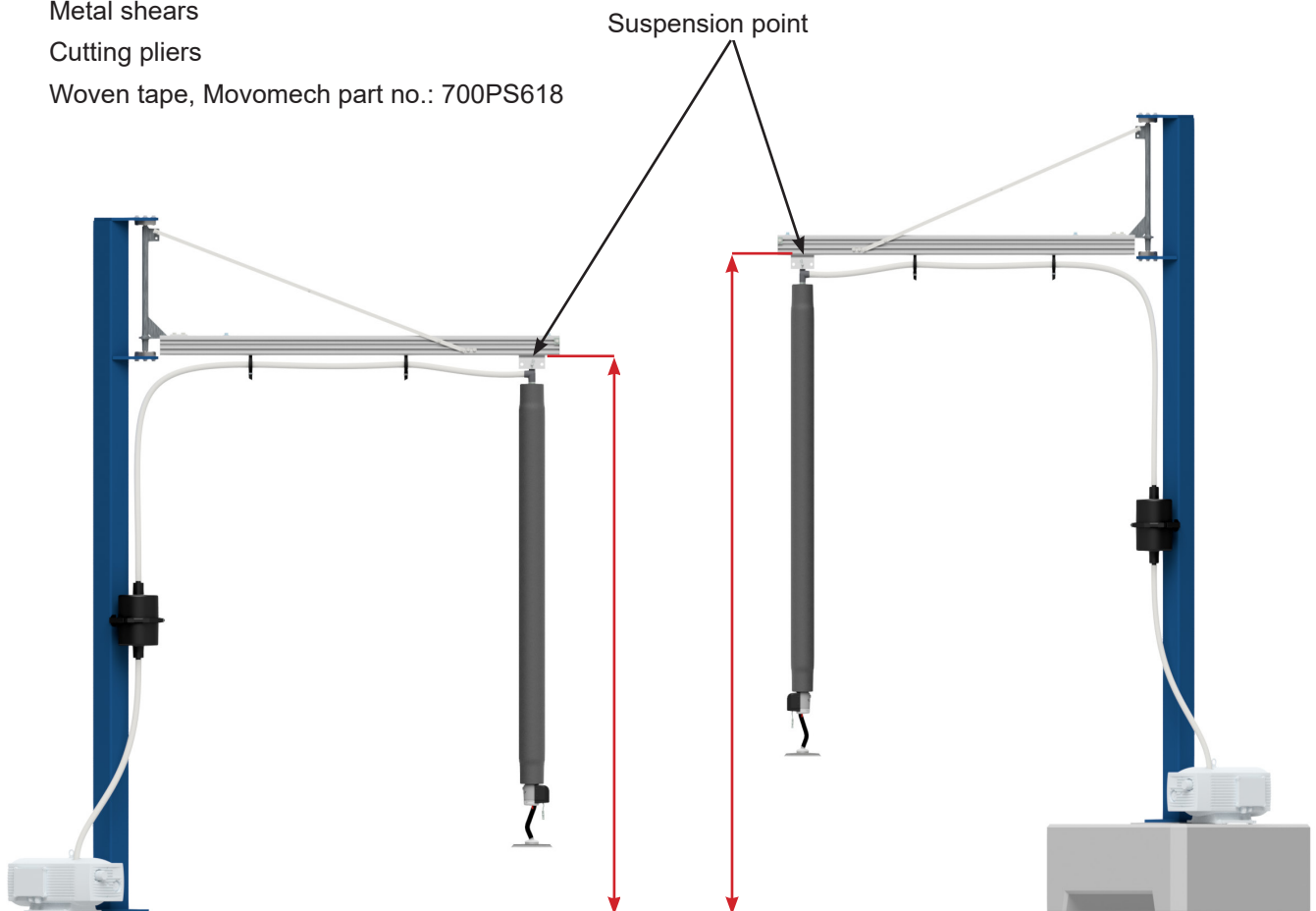
In this case, the safety factor is approximately 3.52, which is sufficient by a good margin.

#### Cutting the lifter tube

**In some cases, the lifter tube must be cut if the suspension height (the measure between the ground till the suspension point (see figure below) is lower than 9.5 ft (2,9 m).**

The following is required:

- Knife
- Scissors
- Metal shears
- Cutting pliers
- Woven tape, Movomech part no.: 700PS618



- Remove the protective sock, the woven tape and unscrew the lifter tube from the plastic adapter. Measure how much of the lifter tube must be removed to achieve the intended height above the floor.
- Cut the lifter tube (figure 1) and clip the steel wire (figure 2).
- Cut away the surplus fabric from the lifter tube (figure 3).
- Carefully bend in the end of the steel spiral so that it follows the external diameter of the tube (figure 4).

## Installing/re-installing the lifter tube

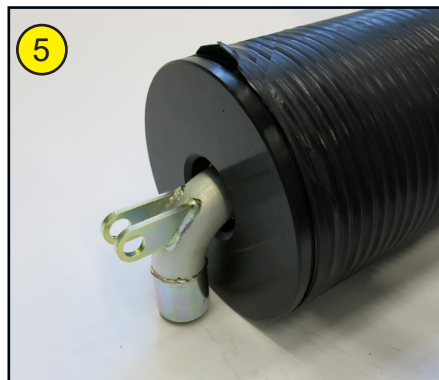
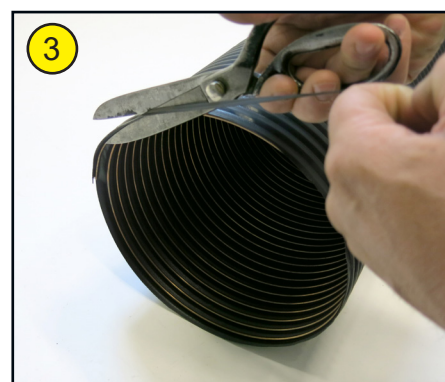
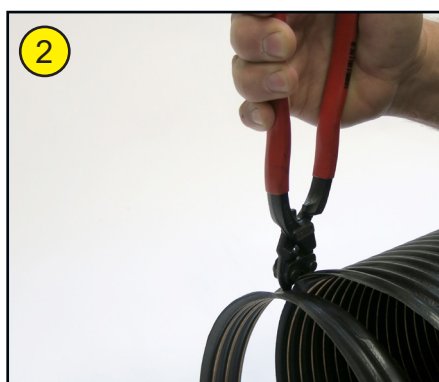
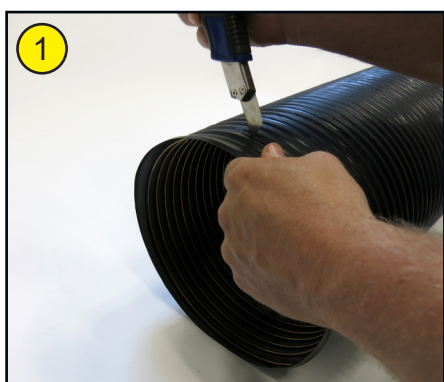
The installation instructions apply to both ends of the tube.

- Unscrew the lifter tube from the tube adapter. Leave 3/8 in. (1 cm) of the tube adapter visible (figure 5).

### **Attention!**

Next, wind 3 or 4 turns of woven tape, Movomech part no. 700PS618, around the tube adapter and tube (figure 6). Do not use any other type of tape! Begin tape coverage around 3/16 in. (5 mm) above the edge of the tube adapter. The tape must be tightly wound.

- Fold down the tape and secure it against the tube adapter (figure 7).
- Fit the protective sock.



## Installing the electric vacuum pump

To keep the vacuum tube short, always locate the vacuum pump as close to the lifting unit as possible.

In order to enjoy the highest possible Easyhand Pro speed during lifts, it is important that the vacuum tube between the vacuum pump and the lifting unit not be too long. A long vacuum tube reduces the ability of the lifting unit to use all of the vacuum pump's capacity. We recommend that the tube length between the vacuum pump and the lifting unit should not exceed 82 ft. (25 m). In the case of greater distances, contact the supplier.

### **Attention!**

With regard to its heat generation, install the pump in a well-ventilated space. Make sure the pump is positioned such that it is surrounded by a free area of at least 11.8 in. (30cm) on all sides and that there is no risk of objects blocking the pump's ventilation holes.

### **Attention!**

Make sure the pump stands firmly. If it is not placed on the floor, it must be secured so that it does not fall or tip over.

### **Caution!**

Check that the belt guard is installed.

### **Caution!**

Electrical installation must be performed by an authorized electrician.

### **Caution!**

**Always remove the protective plug from the pump suction pipe before start.**

### **Caution!**

**Caution! Note! Never test run the pump without a connected air filter.**

The electrician must check that air blows out of the silencer to confirm the correct direction of rotation for the electric vacuum pump motor. The pump can be damaged if it runs backwards.

If multiple Easyhand Pro's are installed, vacuum pumps must be marked to clearly indicate which Easyhand Pro they are connected to.

### **Warning!**

**The installation may not be put to use before an authorized electrician has installed suitable circuit breaker. Failure to install a circuit breaker is a fire risk!**

## Installing the vacuum tube and air filter for the electric vacuum pump

### **Attention!**

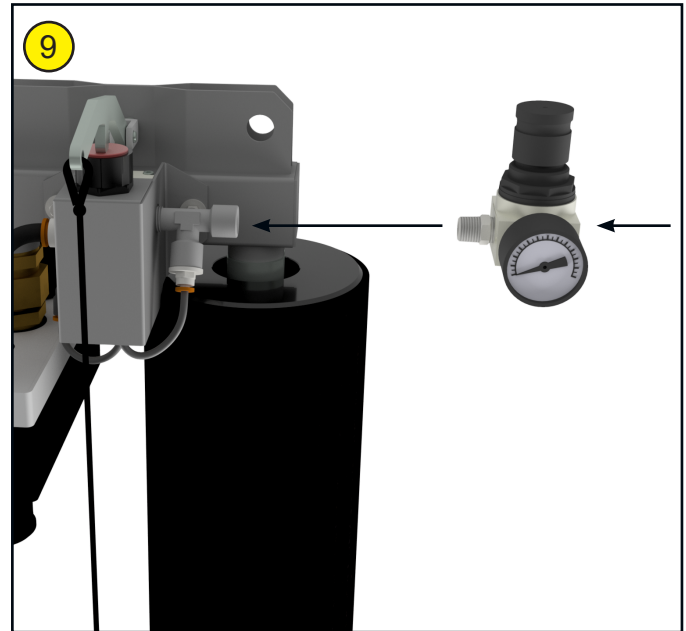
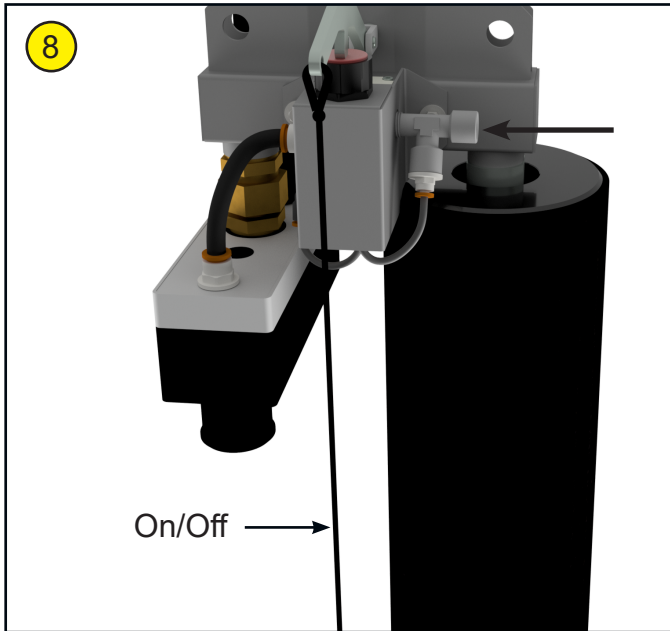
- The air filter must be located so that it is easy to access for replacement; it must be clear which lifting unit it is connected to. Begin by hanging the vacuum tube from the suspension system to which the lifting unit is attached (e.g. in a gantry, turntable crane, etc.). Connect the vacuum tube to the lifting unit's top swivel and to the air filter.
- Connect the other vacuum tube between the air filter and the vacuum pump.

### **Attention!**

- **Caution! Note!** The arrow on the air filter must point towards the tube that goes to the vacuum pump.
- Make sure the vacuum tube is not exposed to crush risk anywhere along its length or can come into contact with objects that might damage it.

## Installation of compressed air-powered vacuum pump (ejector)

When selecting compressed air-powered vacuum pump, the pump unit is integrated on the lifting unit. All that is needed is a feed hose at least 10 mm (3/8" inside) for a hose feed of up to 25 m. For a longer hose feed, a 12.5 mm (1/2") feed hose is recommended. The connected air must be free from oil, water and dirt. The supply hose is connected to the pump unit according to Fig. 8. The connection is a 1/4"R thread. As an option, there is also a regulator for adjusting the lifting speed (Fig. 9). The pump unit has an on / off function that works by pulling lightly on the cord attached to the shut-off lever, see figure 8. The cord should be cut to a length so that it cannot get caught in the lifting unit or things within the lifting area, preferably as short as possible. The cord activates an alternating on/off function. The lifting unit is started the first time and then stopped the next time.



### Test runs

#### **Warning!**

- Lift a load with a completely smooth, non-porous surface. Let the load hang suspended in the lifter while listening for hissing sounds to make sure there are no leaks anywhere in the installation.
- Lift a load that weighs 22 lb (10 kg) and has a completely smooth, non-porous surface. Let the load hang suspended in the lifter and then switch off the vacuum pump. The load, together with the lifting unit, should now sink slowly to the floor. When the lifter tube is fully stretched, a greater vacuum is raised in the tube to provide an extra soft sink rate.
- Lift a completely smooth, non-porous load at the installation's maximum permissible weight; refer to Troubleshooting (page 20) if the load is not raised.

#### **Attention!**

### Maximum load label

Affix a maximum load label to the control unit following Easyhand Pro installation in a gantry system. The maximum load must correspond to Easyhand Pro's maximum load together with the gantry system's maximum load. **Note that Easyhand Pro is not marked with a maximum load label as standard.** Max. load marking labels can however be ordered for each respective installation. The next page provides information about Easyhand Pro's maximum loads.

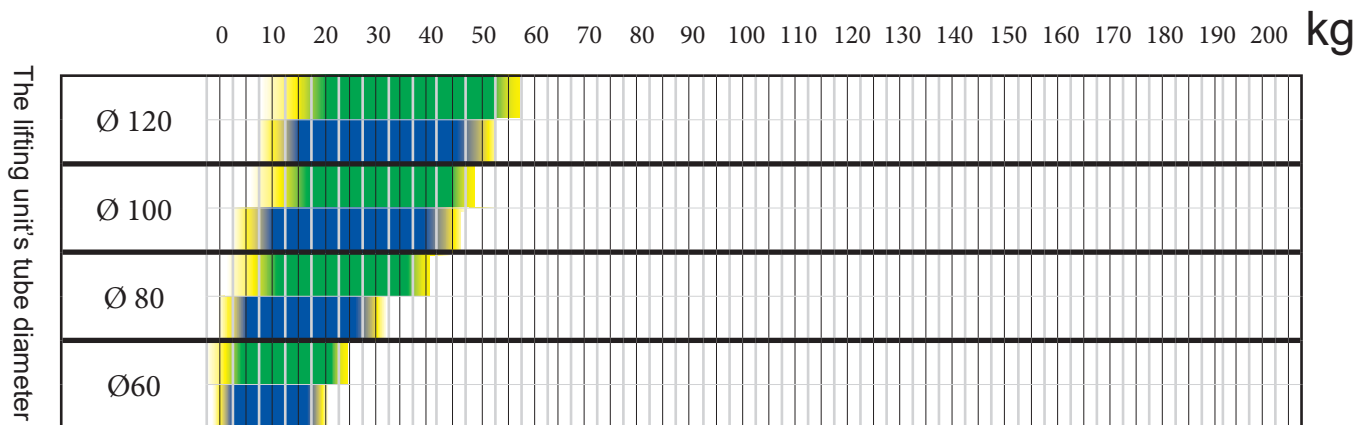
## Lift capacity kg



= Green indicates recommended lifting capacity for loads of a smooth, non-porous material.  
Yellow indicates possible lift range depending on the shape of suction feet etc.



= Blue indicates recommended lifting capacity for objects of porous material.  
Yellow indicates possible lift range depending on the shape of suction feet etc.



The bars in the chart show the recommended load weight for smooth, non-porous/porous material that can be handled by a specific lifting unit. The recommendations are based on appropriate lifting speeds. Light loads are lifted more quickly than heavy loads. Solid material such as sheet-metal is lifted more quickly than porous material such as cardboard. Never use the lifting unit/pump combination for loads heavier than those recommended.

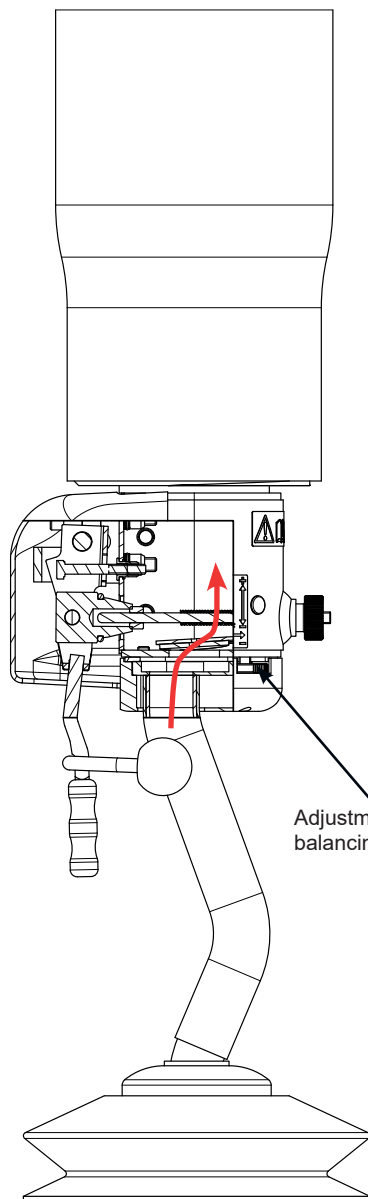
Generally speaking, always try to use the largest possible tube diameter to achieve the gentlest lifting movement.

How to interpret the chart:

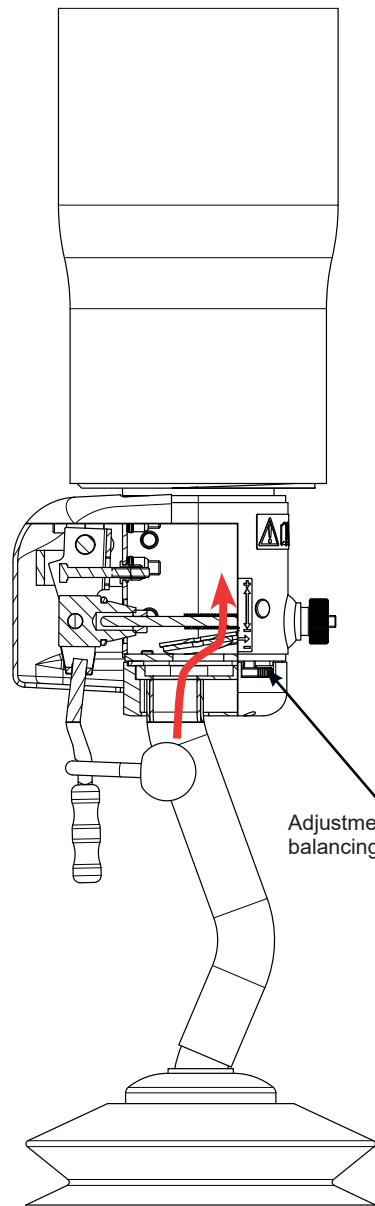
An Easyhand Pro 120/D (lifter tube diameter 4,72 in (120 mm), pump model D) is recommended for lifting solid loads with weights from around 33 lb (15 kg) up to around 110 lb (50 kg), and porous loads with weights from around 22 lb (10 kg) up to around 88 lb (40 kg).

# Function

## Balancing without load



Turning the adjustment knob to the right. The bottom valve opens. The lifter is lowered.



Turning the adjustment knob to the left. The bottom valve opens. The lifter is raised.

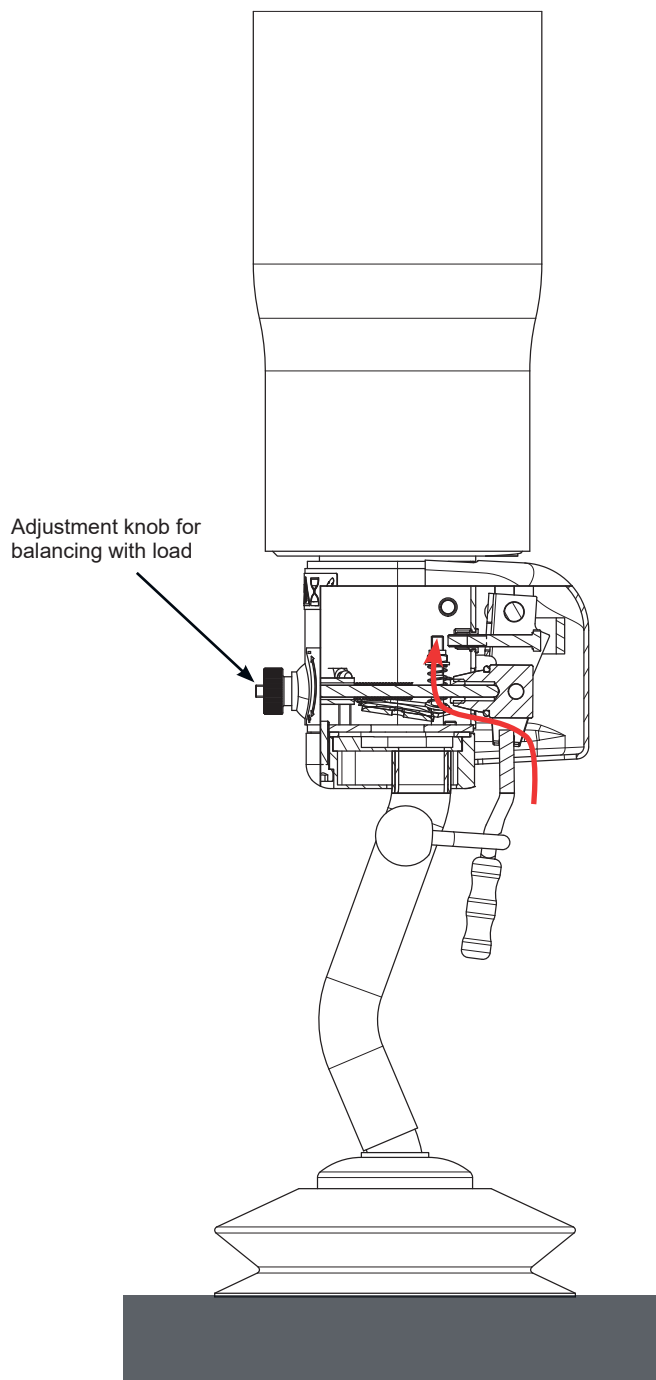
When the vacuum pump is running, a negative pressure is formed inside the lifting unit. In order to prevent the lifter tube from collapsing, air is bled in through a bottom valve. This air reduces the negative pressure in the lifter tube. The amount of bleed air is regulated by the knob for balancing without load.



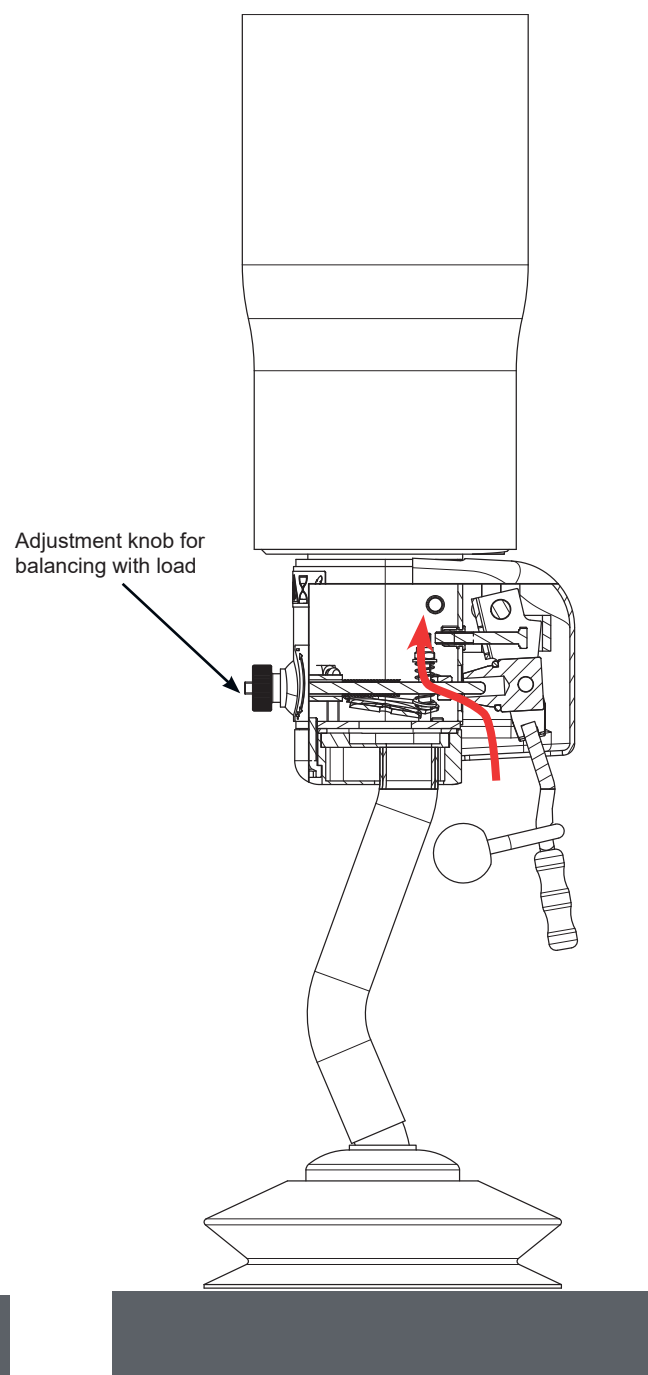
### Warning!

**Never fully close the bottom valve adjustment knob when lifting porous materials. This can cause insufficient flow in the suction foot and there is a risk of its dropping or not being able to grip the load.**

## Balancing with load



Turning the adjustment knob to the counterclockwise. The control bar is closed and thus the lift is raised and the load is suspended higher.



The adjusting knob is turned clockwise. The control bar opens and thus the lift drops and the load is suspended lower.

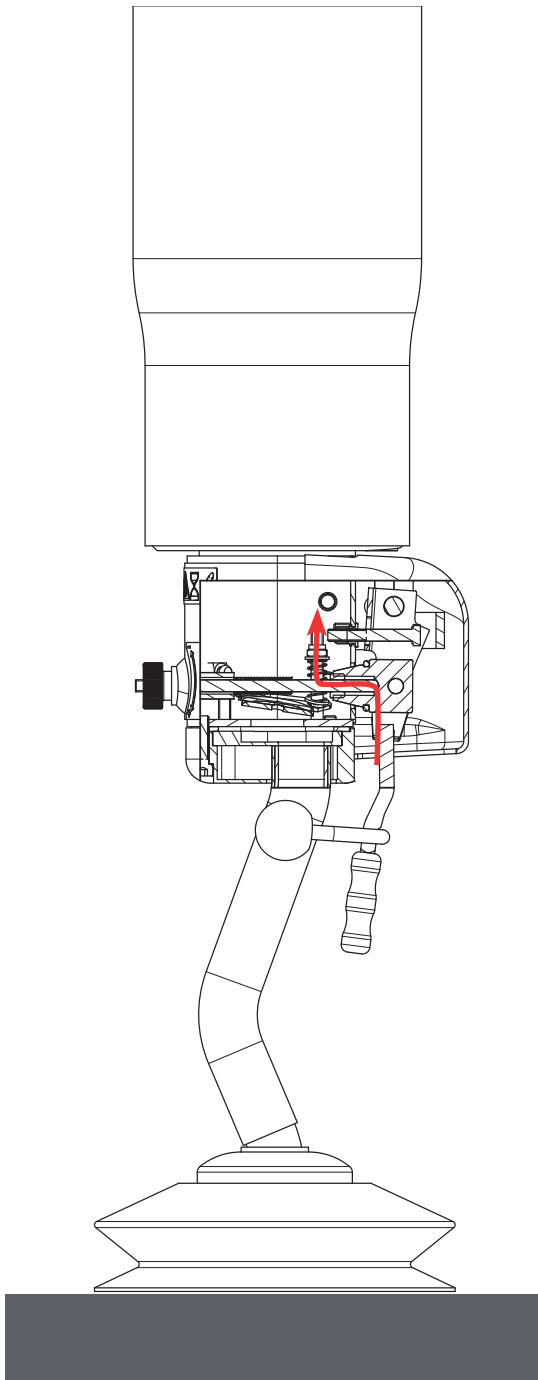
The load is adjusted to the preferred working height using the balance knob.

Correct set balancing also provides an opportunity to release the control handle and with both hands handle the load and Easyhand Pro sideways.

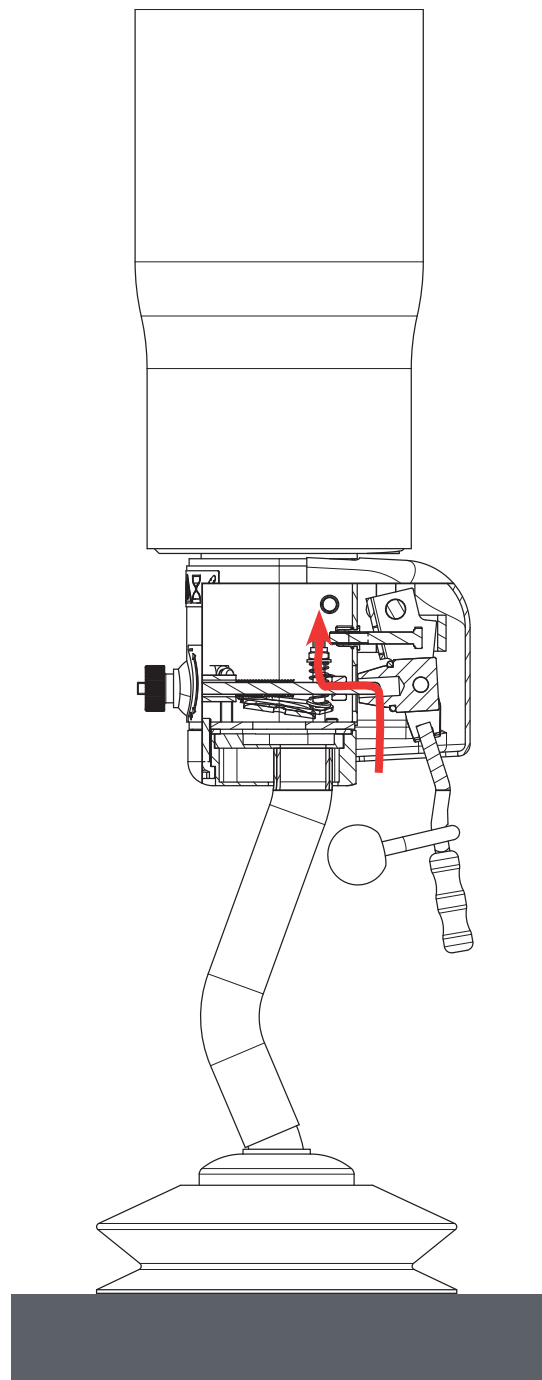
Set Easyhand Pro balance to the average weight when lifting loads of varying weights.

## Operating with load

Positions 1 & 3



Position 2



**When a load seals against the suction foot, air only enters Easyhand Pro via the control valve.**

### **Control bar in position 1:**

The handle valve is partially open and the amount of air allowed into the lifting tube is controlled by the load balancing adjustment knob as described previously.

Used when moving a suspended load. With the handle in this position and the load balancing adjustment knob set properly the load should not move up and down on its own.

Note that the position of the control bar varies continuously between these three positions and small movements of the bar can be used to change the vacuum level to raise and lower the load in a controlled manner.



### Control bar in position 2:

The handle valve is wide open. In this position, so much air flows in through the valve that the negative pressure is alleviated and a lowering movement takes place. Used to lower the suction foot to the object to begin a lift and to release the suction foot from the object after placement.

### Control bar in position 3:

The handle valve is fully closed. The negative pressure in the lifter tube is intensified and the tube contracts causing a lifting motion to take place. Used to lift the object after proper placement of the suction foot.

## Maintenance



In order to ensure safe equipment function and to preserve lifting capacity, follow the maintenance instructions. Remedy any faults detected in Easyhand Pro immediately. Easyhand Pro may not be used until the defects are remedied.



**The equipment must be switched off prior to maintenance.**



**Only use original Easyhand Pro parts for maintenance, repairs, or replacement.**

### Daily checks:

- Check the filter daily in dirty or dusty conditions. Shake out and vacuum clean the filter. Damaged filters or filters that cannot be cleaned must be replaced.
- Check that the sealing strip on the suction plate is in satisfactory condition. If necessary, clean the strip with water. Defective sealing strips must be replaced.
- Visually inspect various parts of the machine for damage, cracking, and corrosion.



***Damaged or extremely dirty filters can harm the pump. This may cause loads to be dropped and injure the operator and or others. If the air filter is not cleaned, lifting capacity will eventually be lost and there is a risk that the vacuum pump will run hot.***

### Weekly checks:

Test the check valve to ensure that loads do not drop quickly if the power supply is lost.

Test the check valve (located at the top of the lifter tube) to ensure that loads do not drop quickly if power to the vacuum pump is lost.

- Start the vacuum pump.
- Lift a smooth, non-porous load of around 22 lb (10 kg) and let it hang.
- Switch off the vacuum pump. The load should now sink slowly to the floor.



**Do not use Easyhand Pro when load drops rapidly. Contact your dealer!**

- Inspect and make sure that the filter is not clogged or damaged.
- Inspect and make sure that the suction foot's rubber strip is not damaged.
- Inspect and assure that the lifter tube is not damaged.
- The lifter tube will stretch over time. Inspect and assure that the suction foot does not reach the floor. Shorten the lifter tube as necessary; refer to page 11, Cutting the lifter tube.

#### **Quarterly checks:**

- Inspect and assure that the suspension lug and the equipment Easyhand Pro is suspended from is not damaged.



**Do not use Easyhand Pro when there is damage to the lift. Contact your dealer!**

- Inspect and make sure that the nuts and bolts in the suspension system are tightened and secured where applicable.
- Inspect and make sure that the vacuum tube and lifter tube are airtight and are not chafed or crushed.

## Troubleshooting

<b>Fault</b>	<b>Possible causes</b>	<b>Corrective action</b>
<b>Poor or no lifting power</b>	The vacuum pump is not on?	Start the vacuum pump.
	The vacuum pump is not starting?	Check that that vacuum pump is not stuck. This can be caused by dirt, if the filter is not correctly cleaned. Contact your dealer for the manufacturer's recommended replacement component.
	The vacuum filter is clogged up?	Clean or replace the filter.
	Is the filter unit cover correctly installed?	Secure the cover correctly.
	The sealing strip of the suction plate is dirty/defective?	Clean or replace with a new sealing strip.
	Control handle damaged?	Contact your dealer for the manufacturer's recommended replacement component.
	Leak in the vacuum system? Vacuum hoses?	Check that all hose connections for vacuum hoses are tight. Check that the vacuum hose is intact and does not leak. Repair temporary with woven tape, part no. 700PS618. Order new hose and replace the old one as soon the part arrived.
	Leak in the vacuum system? Lifting tube? The load raised very slowly and speed up with increased height.	Check the lifting tube ends that there are no damages and the tube is not crushed. Repair with woven tape part no. 700PS618 in the case of a minor leak. Otherwise cut or replace lifting tube.
	Leak in the vacuum system? Quick-release connection, suction foot?	Check the quick-release coupling for tool changes is correctly fitted and the sealing and O-ring is not damaged. Always replace both parts if either of them are damaged.
	Rubbish in the suction foot?	Clean out and remove the rubbish from the suction foot.
	Is the load too heavy?	Check that the weight corresponds to Easyhand Pro's lifting capacity.
	Is the load too porous?	Check the porosity on the load with the supplier.
	Still no lifting power?	Contact your dealer for the manufacturer's recommended action to solve the problem.

<b>Fault</b>	<b>Possible causes</b>	<b>Corrective action</b>
<b>The load does not sink slowly in power outage test.</b>	Check if the check valve is damaged or leaking?	Refer to Maintenance, Weekly checks (page 19)

<b>Fault</b>	<b>Possible causes</b>	<b>Corrective action</b>
<b>Not possible to set desired balance level position for no load.</b>	Check balancing knob without load?	Check for damage on knob or if its stuck.  Contact your dealer for the manufacturer's recommended replacement component.
	Check that no rubbish is lodged in the balance valve.	Check in bottom of the control unit by lifting in the bottom valve to visually check whether there is any rubbish inside. If there is nothing visible, remove the control unit from the lifter tube (see, "Cutting the lifter tube" on page 11 and "Installing/re-installing the lifter tube" on page 12) Clean and remove any rubbish.

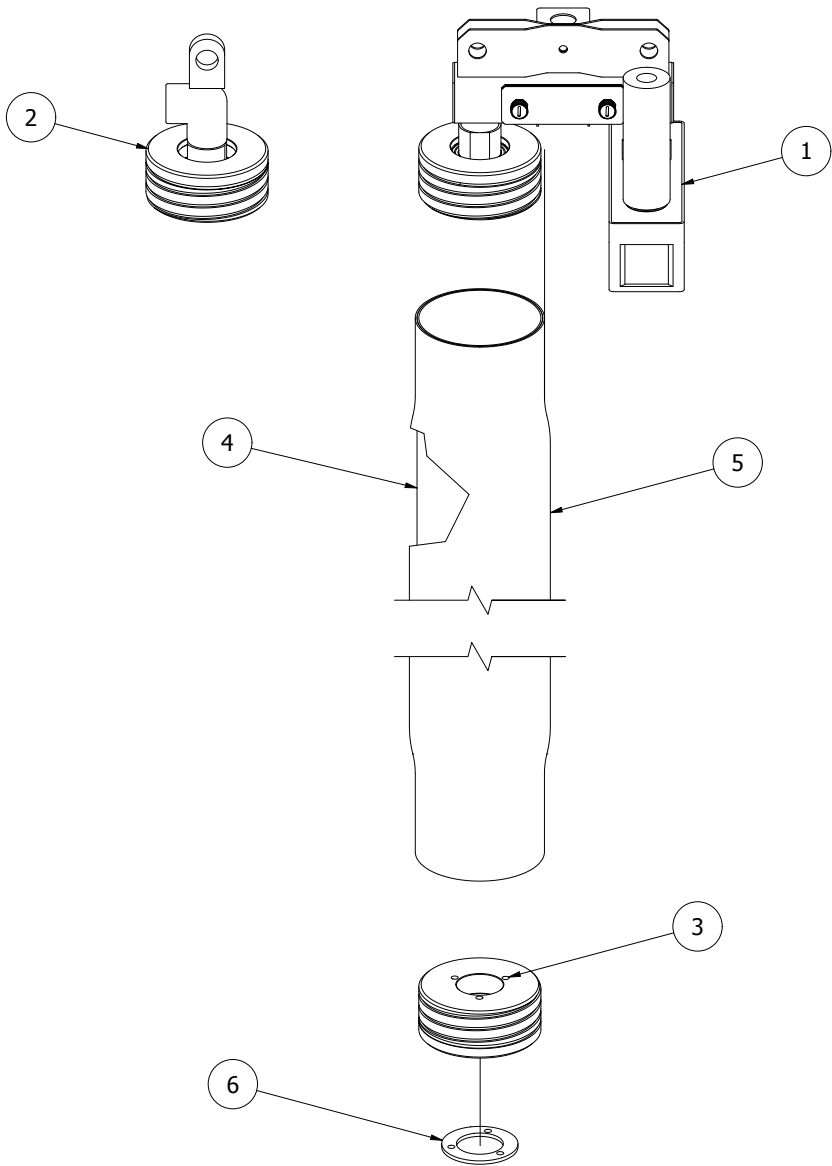
<b>Fault</b>	<b>Possible causes</b>	<b>Corrective action</b>
<b>The vacuum pump will not start/rotate</b>	Drive belt defective/incorrect belt tension.	Replace drive belt and/or adjust belt tension.
	Dirt/moisture in the vacuum pump.	Contact your dealer.

<b>Fault</b>	<b>Possible causes</b>	<b>Corrective action</b>
<b>Abnormal sound from the vacuum pump during normal operation (a whining sound is normal during operation).</b>	Incorrect belt tension.	Adjust the belt tension.

**If the fault persists after going through the points above, contact your dealer.**

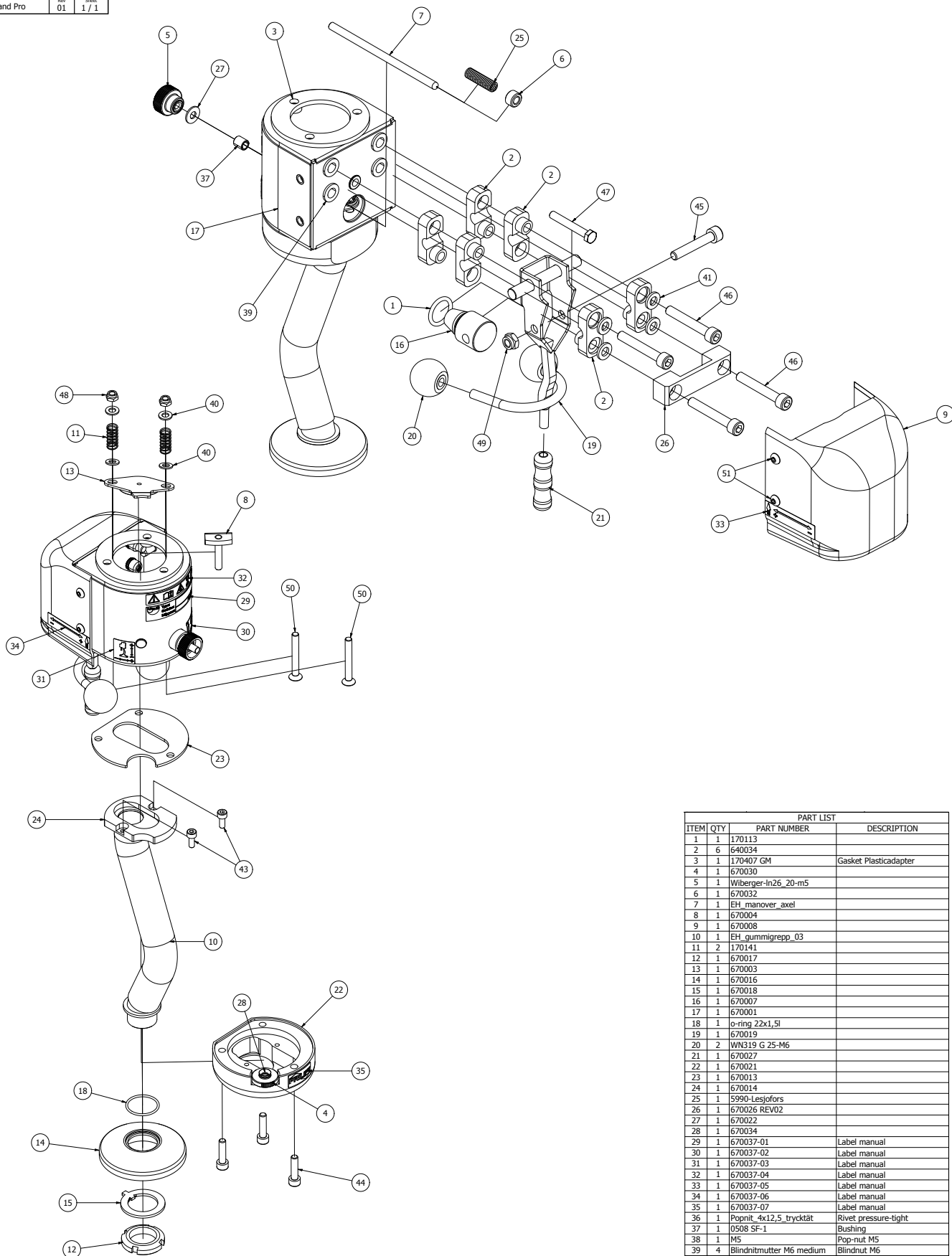
# Drawings

Description Complete lifting unit with attachment options		
Part Number	Rev	Sheet
Lifting unit	01	1 / 1



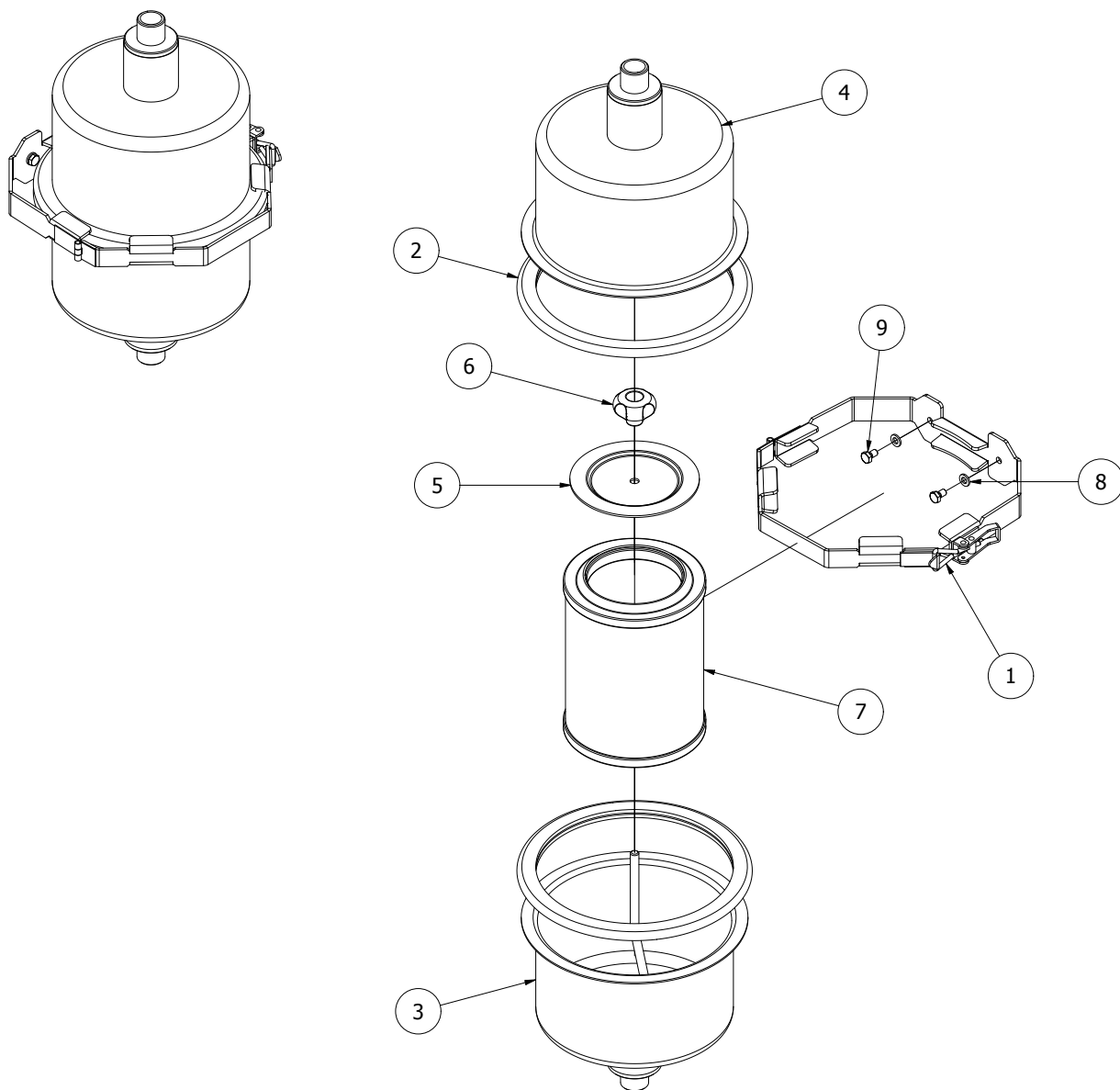
PART LIST		
ITEM	QTY	DESCRIPTION
1	1	Top Swivel with air pressure unit
2	1	Top Swivel complete, 2 lug, 1 lug
3	1	Plastic Adapter lower
4	1	Lifter tube
5	1	Protection sock
6	1	Gasket

Description		
Easyhand Pro manoeuvre handle		
Part Number	Rev	Sheet
EasyHand Pro	01	1 / 1



PART LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	170113	
2	6	640034	
3	1	170407 GM	Gasket Plasticadaptr
4	1	670030	
5	1	Wibberger-In26_20-m5	
6	1	670032	
7	1	EH_manover_axel	
8	1	670004	
9	1	670008	
10	1	EH_gummigrepp_03	
11	2	170141	
12	1	670017	
13	1	670003	
14	1	670016	Label manual
15	1	670018	Label manual
16	1	670007	Label manual
17	1	670001	Label manual
18	1	o-ring 22x1,5l	
19	1	670019	
20	2	WN319 G 25-M6	
21	1	670027	
22	1	670021	
23	1	670013	
24	1	670014	
25	1	5990-Lesjöfors	
26	1	670026 REV02	
27	1	670022	
28	1	670034	
29	1	670037-01	Label manual
30	1	670037-02	Label manual
31	1	670037-03	Label manual
32	1	670037-04	Label manual
33	1	670037-05	Label manual
34	1	670037-06	Label manual
35	1	670037-07	Label manual
36	1	Popnit_4x12,5_trycktät	Rivet pressure-tight
37	1	0508 SF-1	Bushing
38	1	M5	Pop-nut M5
39	4	Blindhutmutter M6 medium	Blindnut M6
40	4	DIN 125 - A 5,3	Washer
41	4	DIN 125 - A 6,4	Washer
42	1	DIN 557 - M5	Weld nut
43	2	DIN 912 - M4 x 10	Socket-head bolt
44	3	DIN 912 - M5 x 20	Socket-head bolt
45	1	DIN 912 - M6 x 35	Socket-head bolt
46	4	DIN 912 - M6 x 40	Socket-head bolt
47	1	DIN 931-1 - M5 x 35	Hex-head bolt
48	2	DIN 985 - M5	Lock nut
49	1	DIN 985 - M6	Lock nut
50	2	DIN 7991 - M5x40	Countersunk Socket-head bolt
51	4	ISO 7380-1 - M4 x 10	Round Socket-head bolt

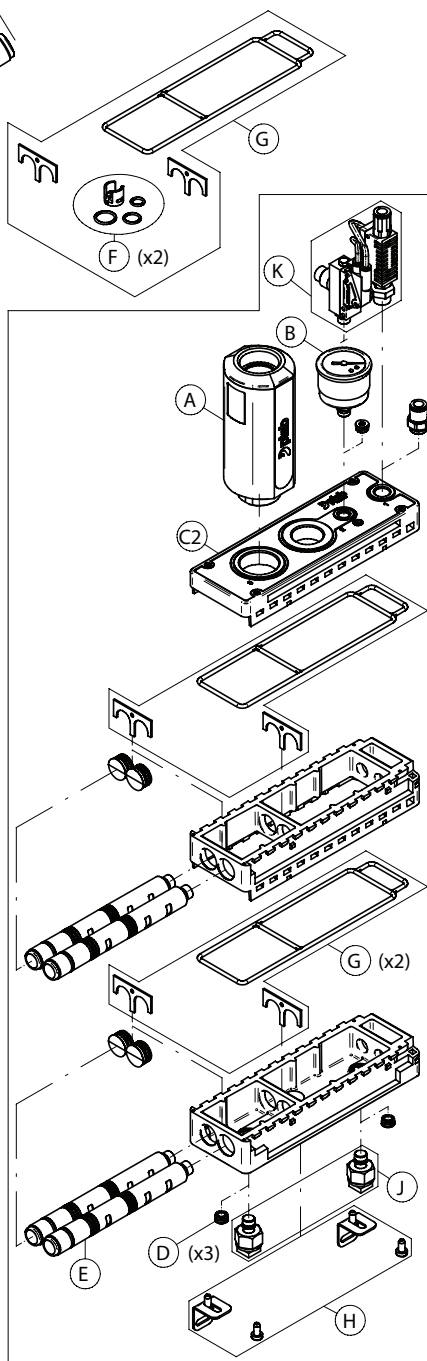
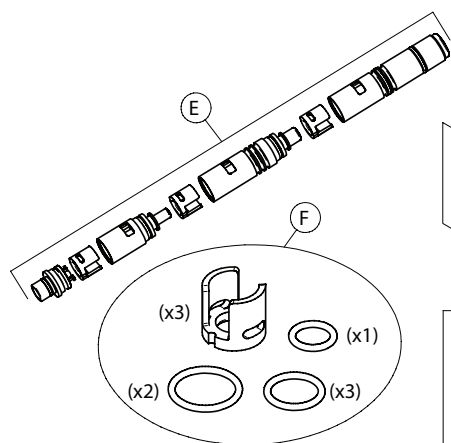
Description		
Filter unit compl. for 25mm hose		
Part Number	Rev	Sheet
644002	01	1 / 1



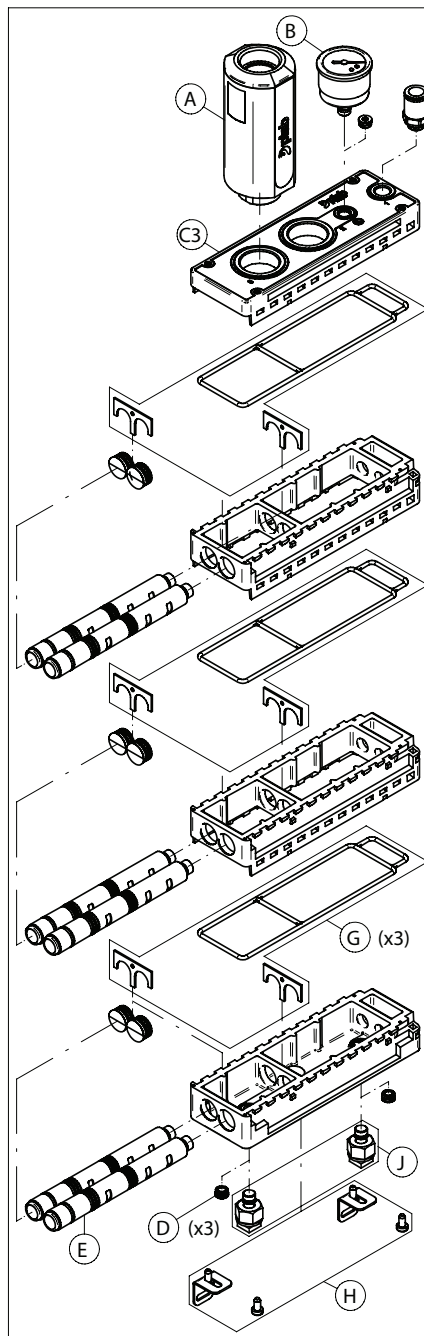
PART LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	644001-03	Locking mechanism filter unit
2	2	644001-04	Sealing strip
3	1	644002-02	Filter unit bottom - Ø25-adapter
4	1	644002-03	Filter unit top - Ø25-adapter
5	1	841132	Inner-lid filter
6	1	841416	Starknob for filter lid
7	1	WA6419	Air filter
8	2	DIN 125 - A 6,4	Washer
9	2	DIN 933 - M6 x 10	Hex-head bolt

## Pump A & B

### Ejector



**Pump A**



**Pump B**



## Pump C

### Rotary vane vacuum pumps

- oil-free and air-cooled
- incl. integrated suction filter, vacuum regulating valve and blow off valve

## Drehschieber-Vakuumpumpen

- trockenlaufend und luftgekühlt
- inkl. integriertem Ansaugfilter, Vakuumreguliertventil und Abblaseventil

## Pompes à vide à palettes

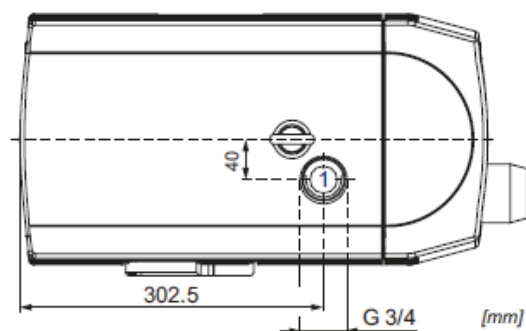
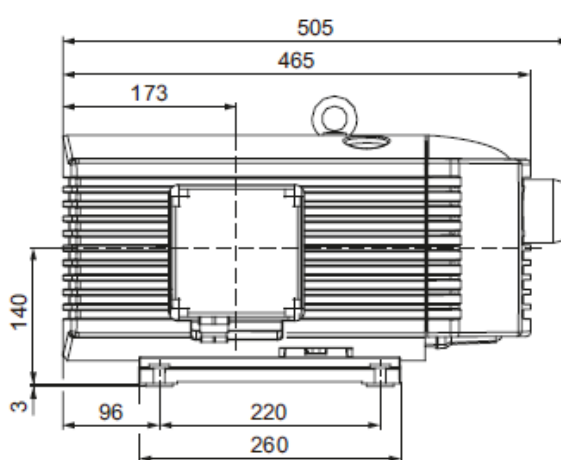
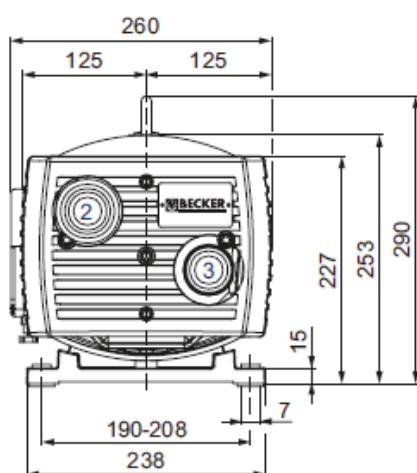
- fonctionnant à sec et refroidies par air
- incl. filtre d'aspiration intégré, soupape de réglage vide et soupape d'échappement

### Pompe per vuoto a palette

- funzionanti a secco e raffreddate ad aria
- incl. filtro di aspirazione integrato, valvola regolazione vuoto e valvola di sfiato

### Bombas de vacío de paletas

- sin aceite y refrigerado por aire
- incl. filtro de aspiración integrado, válvula reguladora de vacío y válvula de escape



- 1 Vacuum connection  
Sauganschluss  
Raccord vide  
Raccordo aspirazione  
Conexión de vacío
- 2 Vacuum regulating valve  
Vakuümreguliertventil  
Soupape de régulation vide  
Valvola regolazione vuoto  
Válvula reguladora de vacío
- 3 Blow-off valve  
Abbläseventil  
Soupape d'échappement  
Valvola di sfogo  
Válvula de escape

# Pump C

Betriebsanleitung  
Operating Instructions  
Instructions de service  
Istruzioni d'uso  
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Kezelési útmutató  
Navodilo za uporabo  
Navod na obsluhu  
El Kitabi  
Инструкция по эксплуатации  
使用说明书

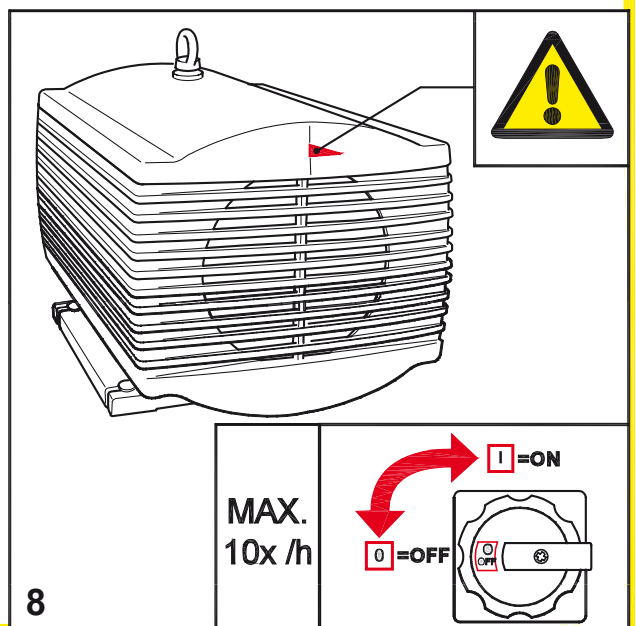
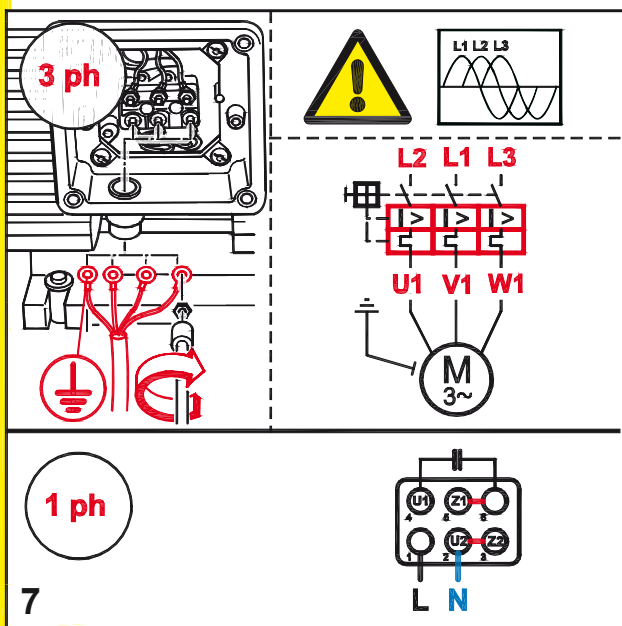
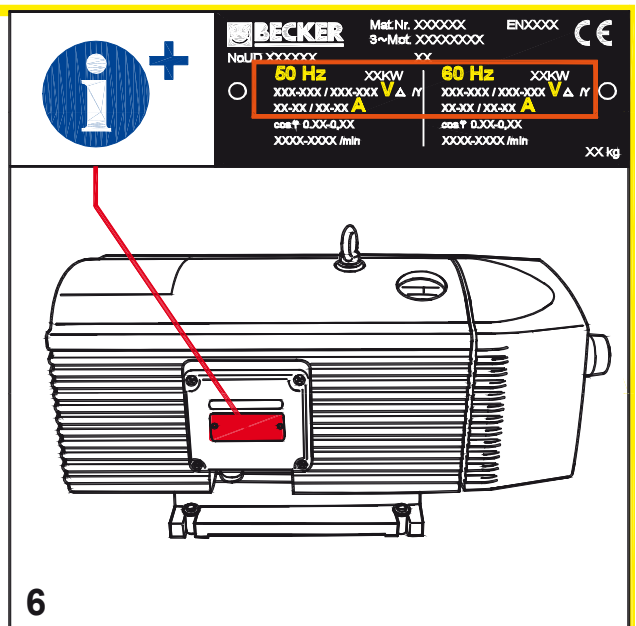
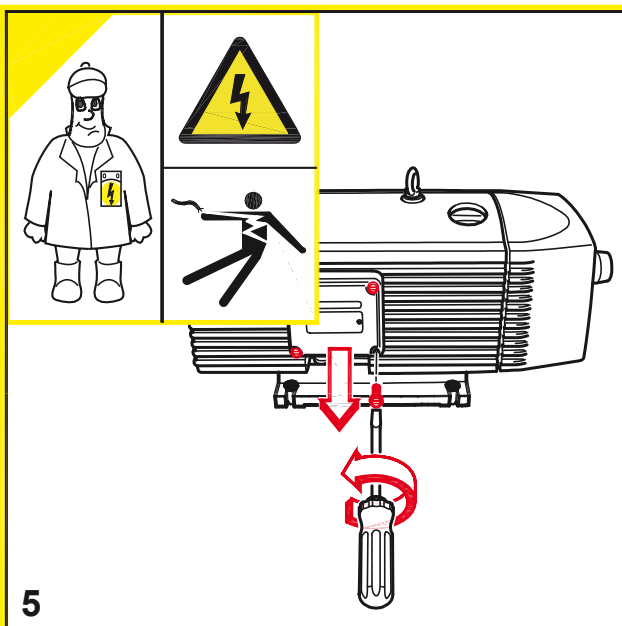
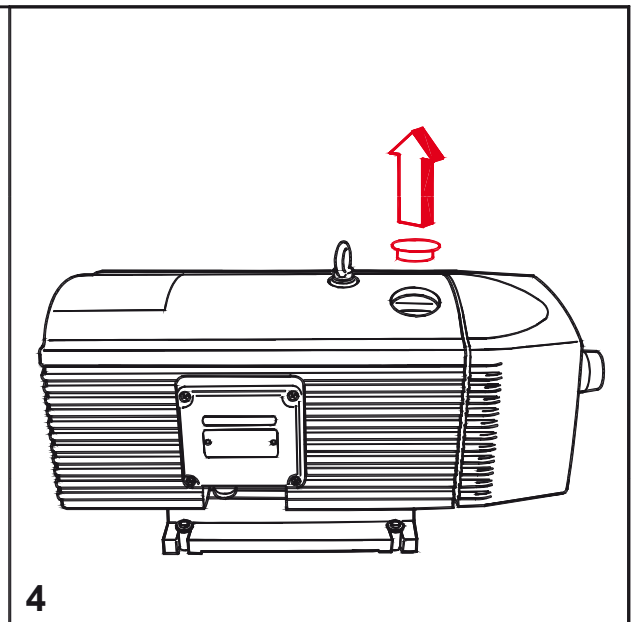
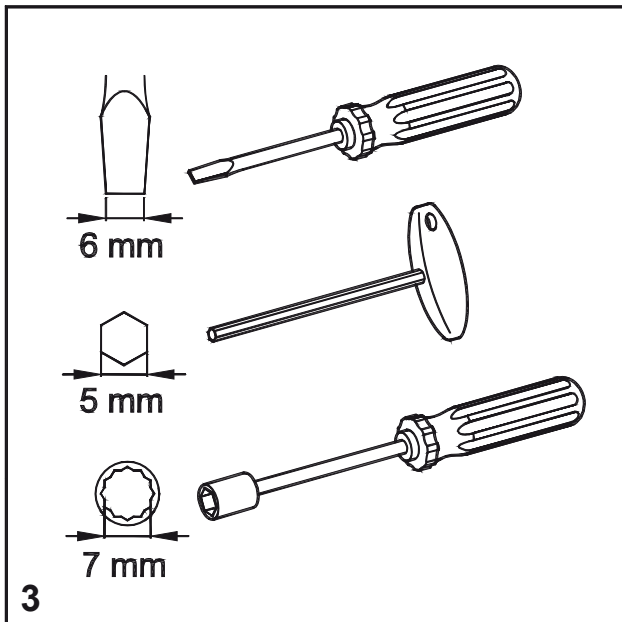
98/37 EG  
73/23 EWG

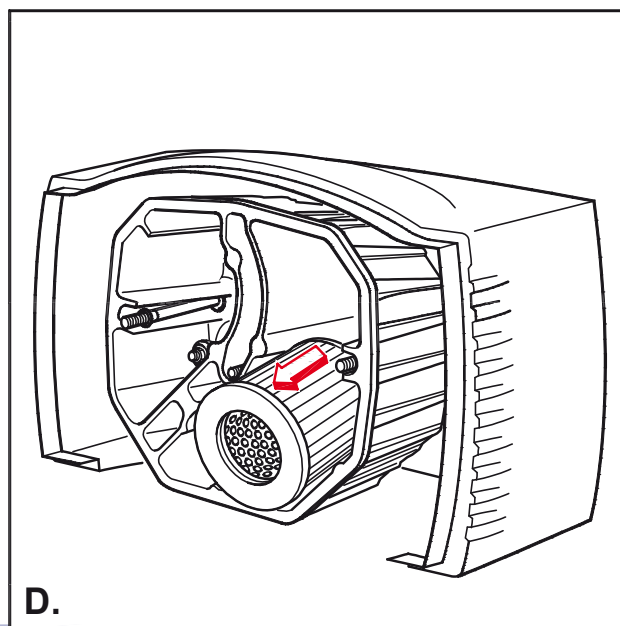
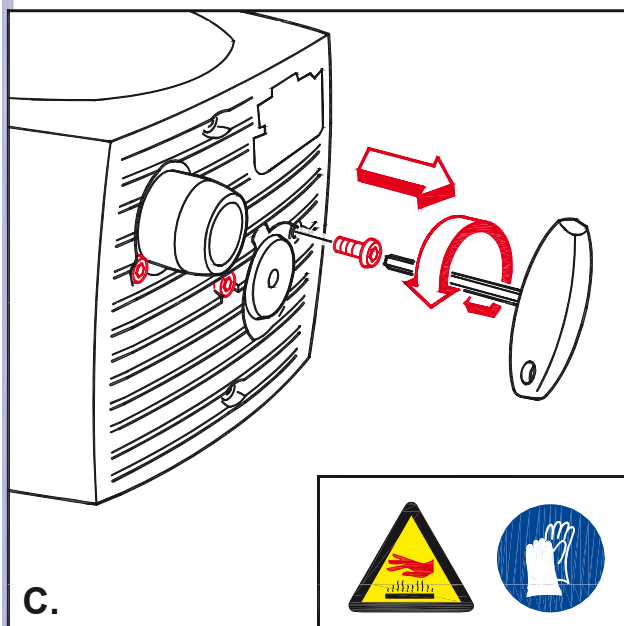
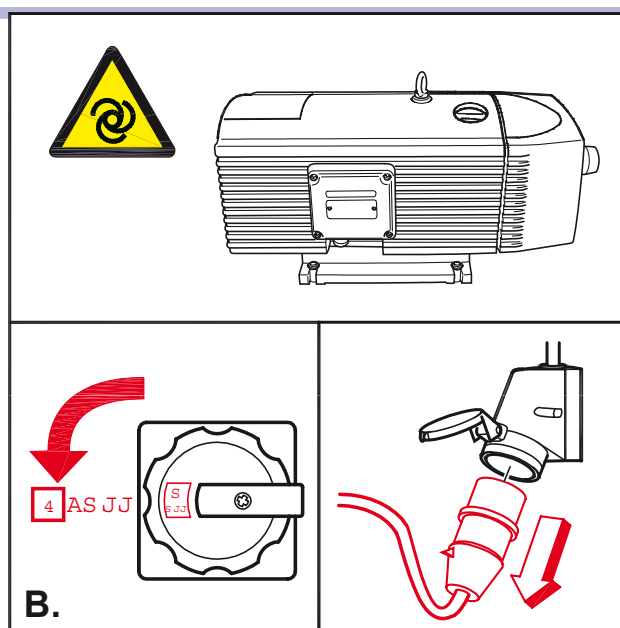
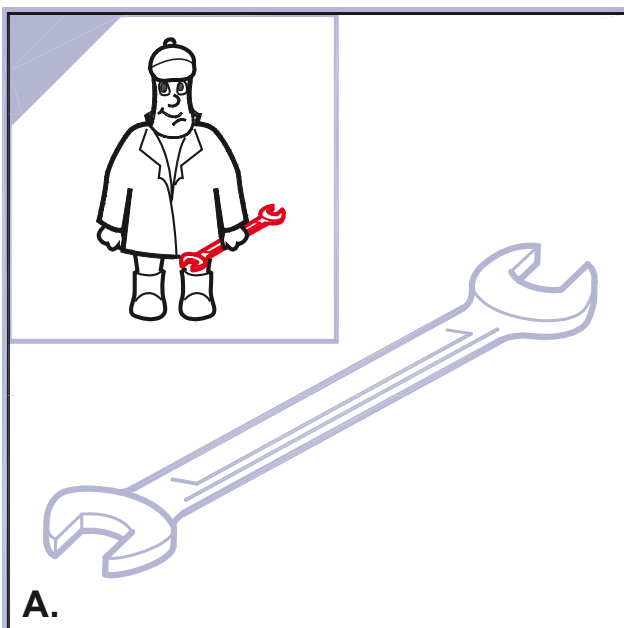
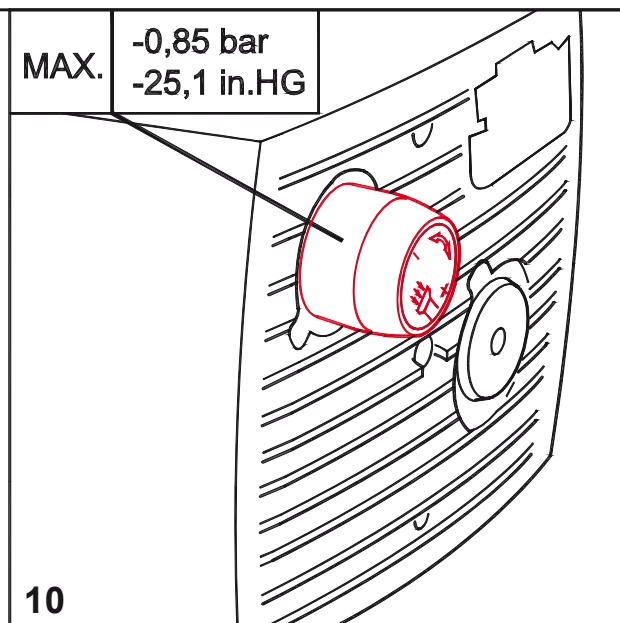
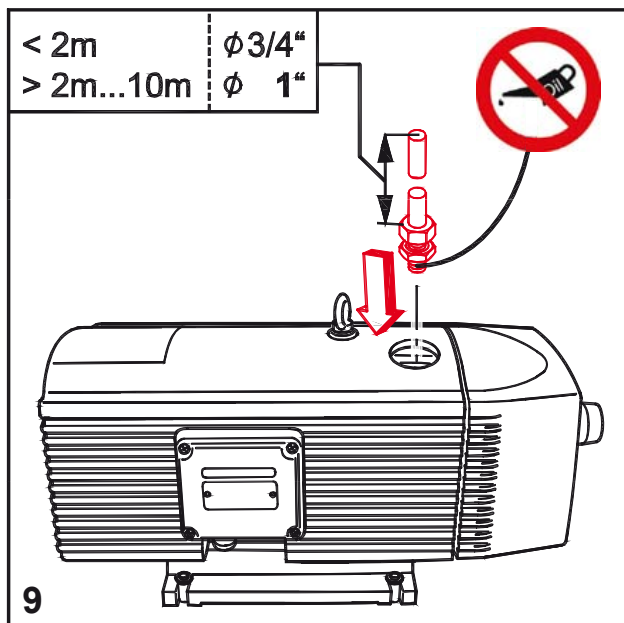


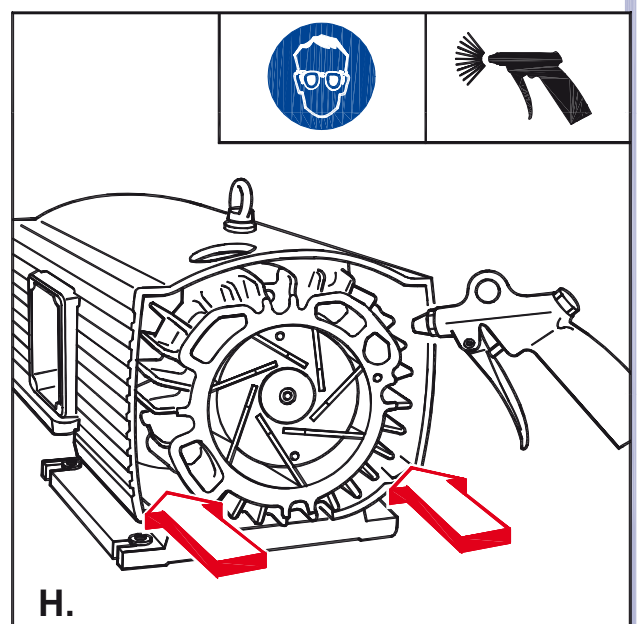
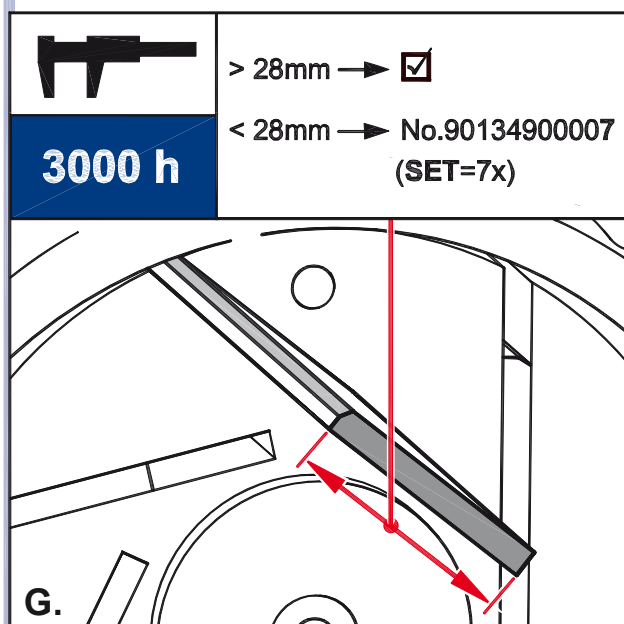
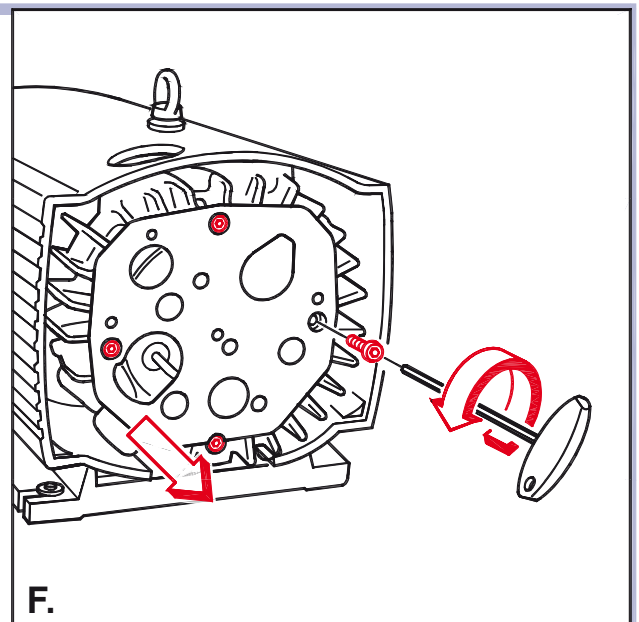
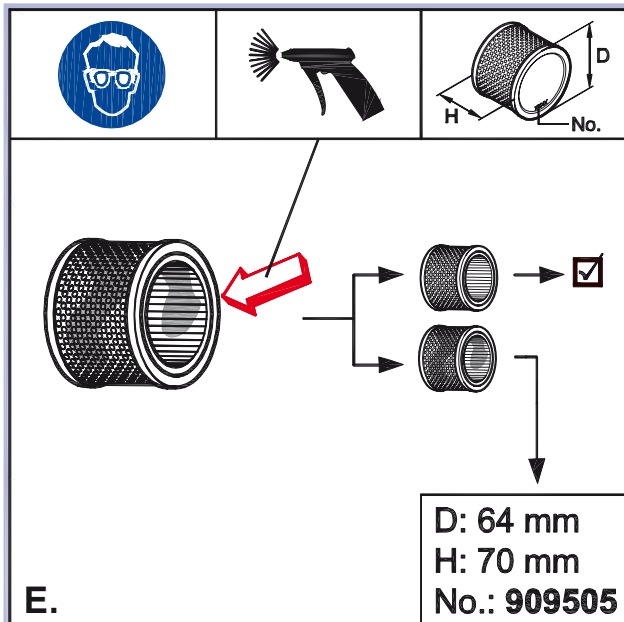
   						 <b>MAX. VACUUM</b>	 <b>mbar</b>
						 <b>MAX.</b>	 <b>m³/h</b>
						DIN EN ISO 2151 DIN EN ISO 3744	$L_{pA} = 62 \text{ dB(A)} - 50\text{Hz}$ $L_{pA} = 67 \text{ dB(A)} - 60\text{Hz}$ $K_{pA} = 3 \text{ dB(A)}$

 <b>1</b>	 <b>2</b>
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28100027502 07/07









## Pump D

### Rotary vane vacuum pumps

- oil-free and air-cooled
- incl. integrated suction filter, vacuum regulating valve and blow off valve

### Drehschieber-Vakuumpumpen

- trockenlaufend und luftgekühlt
- inkl. integriertem Ansaugfilter, Vakuumreguliertventil und Abblaseventil

### Pompes à vide à palettes

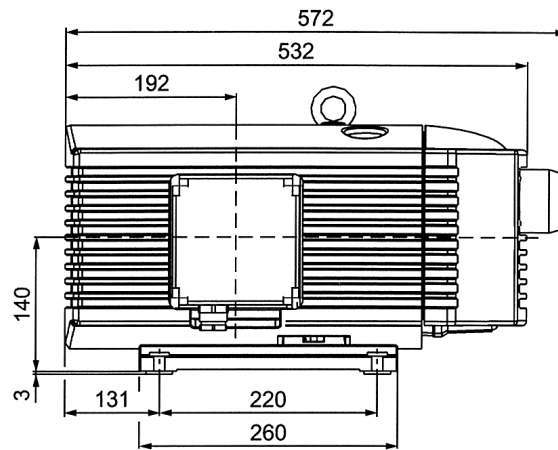
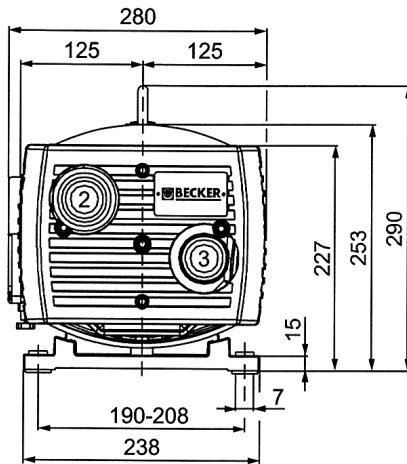
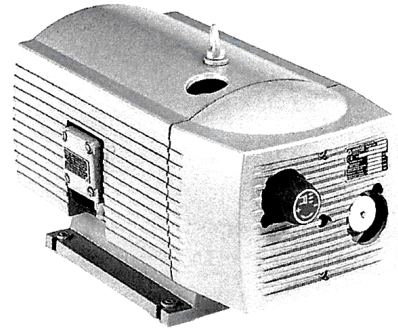
- fonctionnant à sec et refroidies par air
- incl. filtre d'aspiration intégré, soupape de réglage vide et soupape d'échappement

### Pompe per vuoto a palette

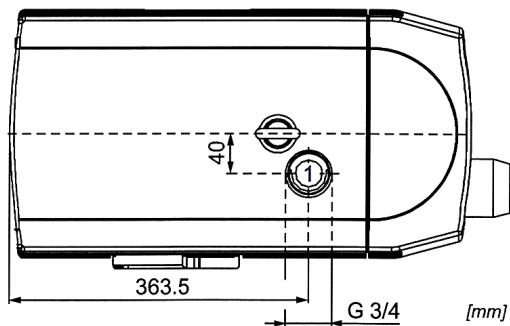
- funzionanti a secco e raffreddate ad aria
- incl. filtro di aspirazione integrato, valvola regolazione vuoto e valvola di sfogo

### Bombas de vacío de paletas

- sin aceite y refrigerado por aire
- incl. filtro de aspiración integrado, válvula reguladora de vacío y válvula de escape



- 1 Vacuum connection  
Sauganschluss  
Raccord vide  
Raccordo aspirazione  
Conexión de vacío
- 2 Vacuum regulating valve  
Vakuumreguliertventil  
Soupape de réglage vide  
Valvola regolazione vuoto  
Válvula reguladora de vacío
- 3 Blow-off valve  
Abblaseventil  
Soupape d'échappement  
Valvola di sfogo  
Válvula de escape




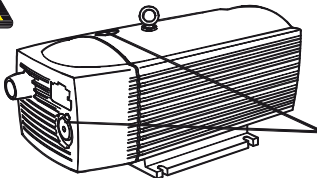



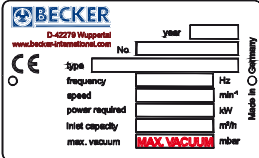




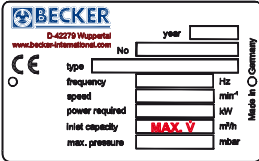
# Pump D

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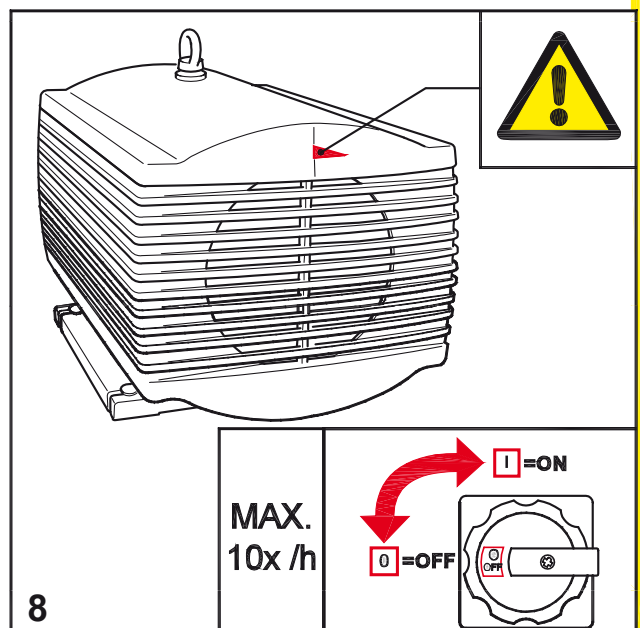
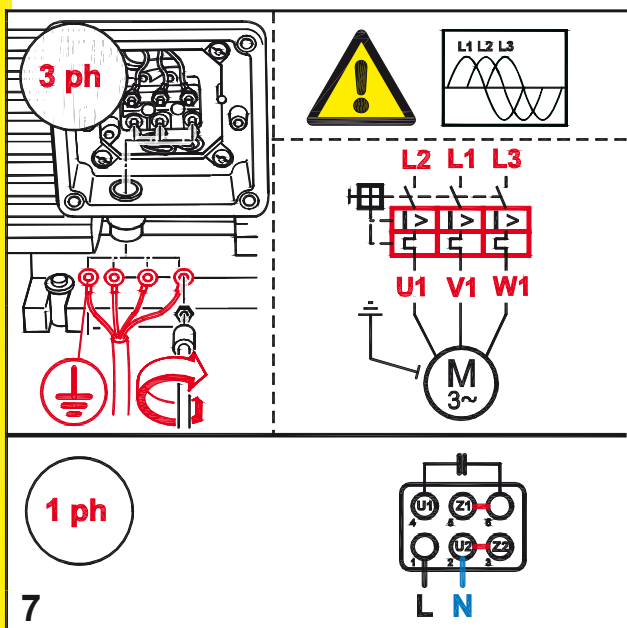
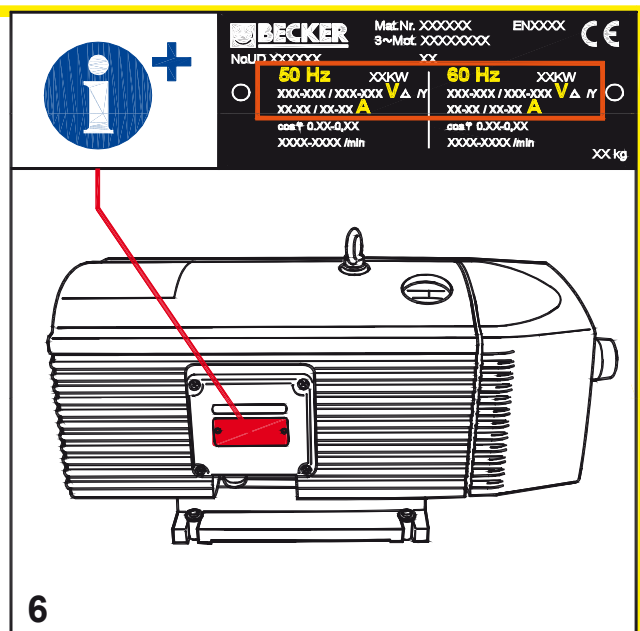
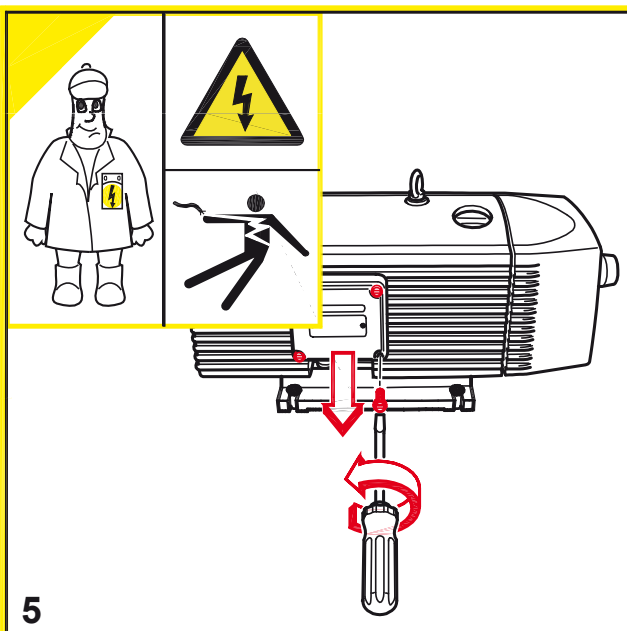
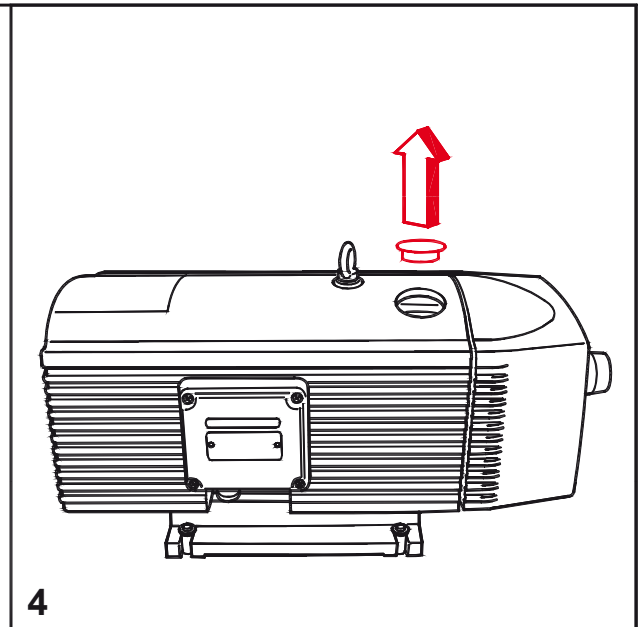
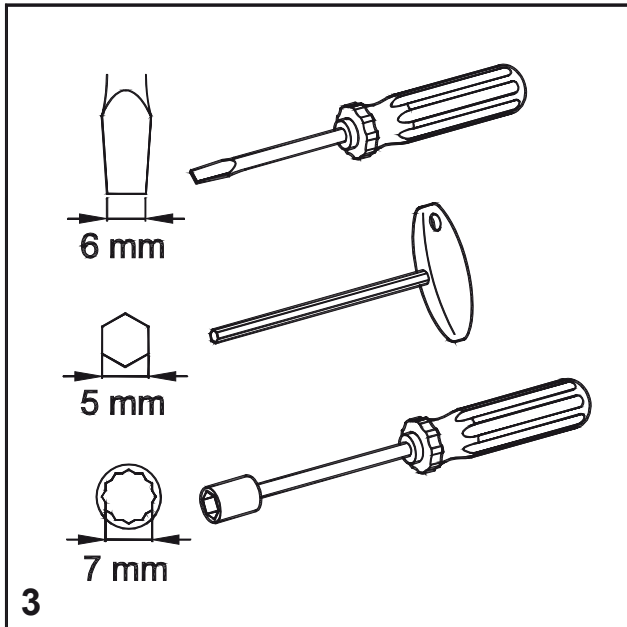
Driftsinstruks  
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Käyttöohje  
Driftsvejledning  
Instrukcja obsługi  
Kezelési útmutató  
Navod k obsluze  
Navodilo za uporabo  
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98/37 EG  
73/23 EWG

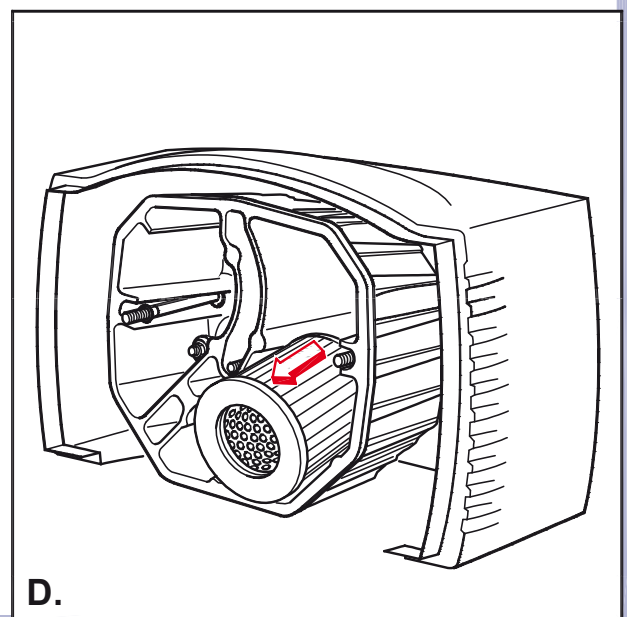
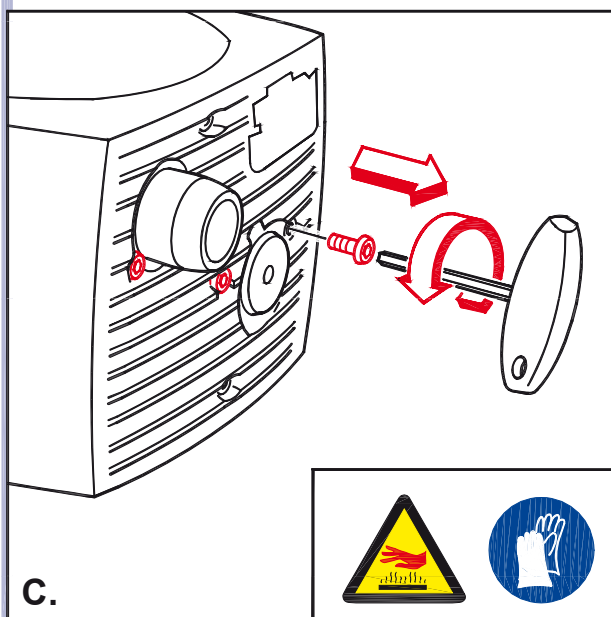
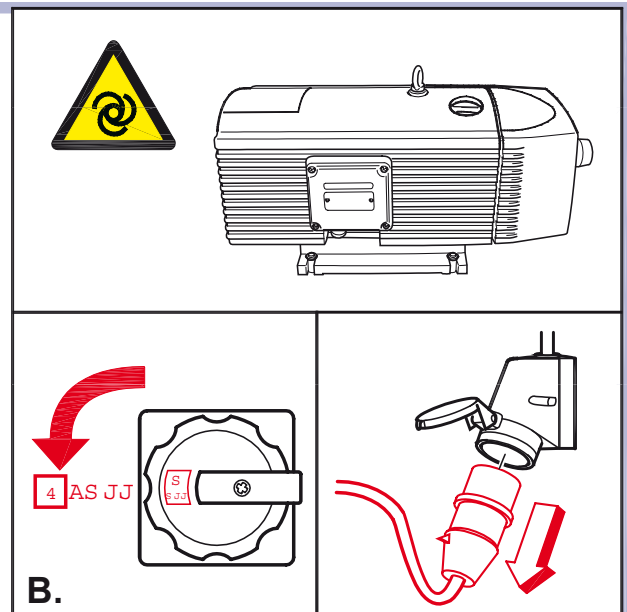
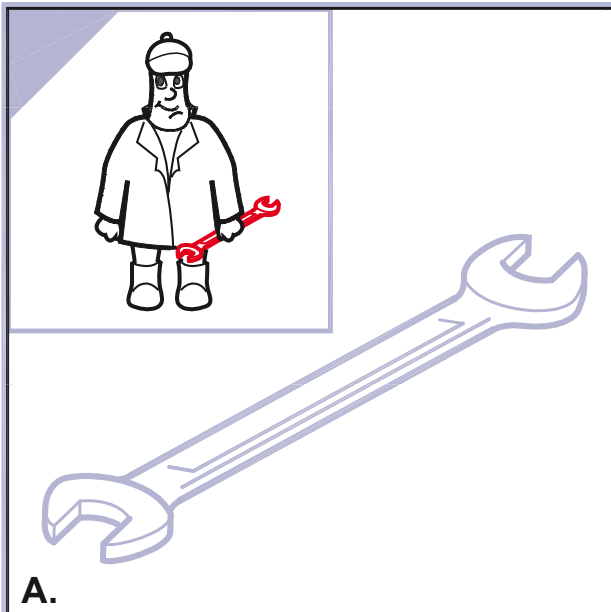
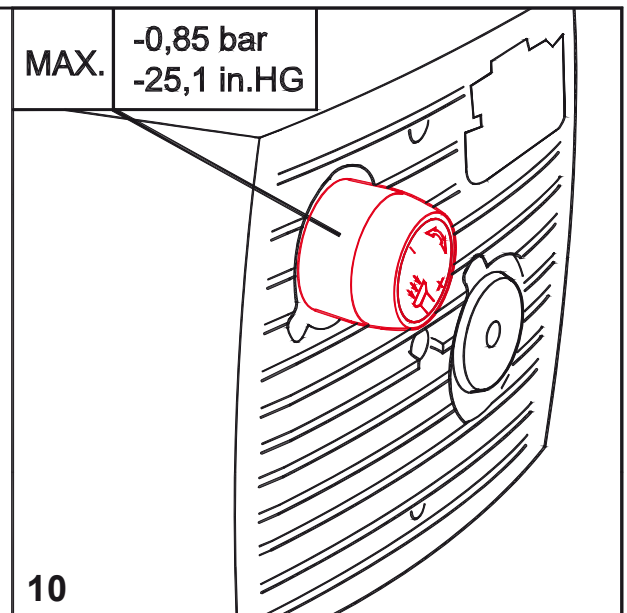
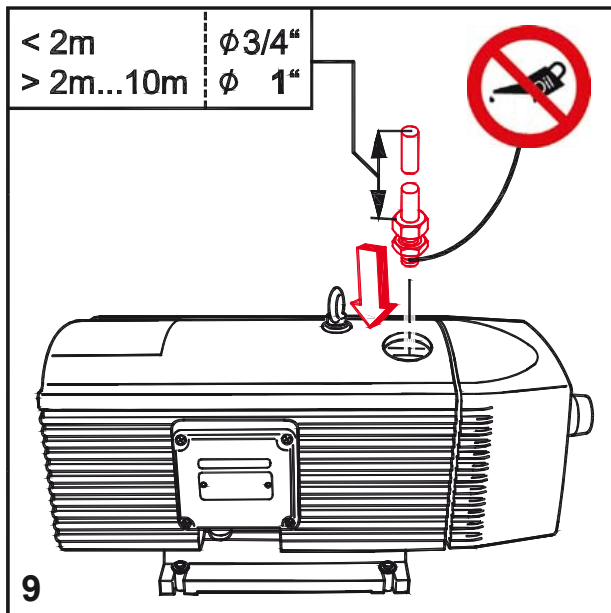


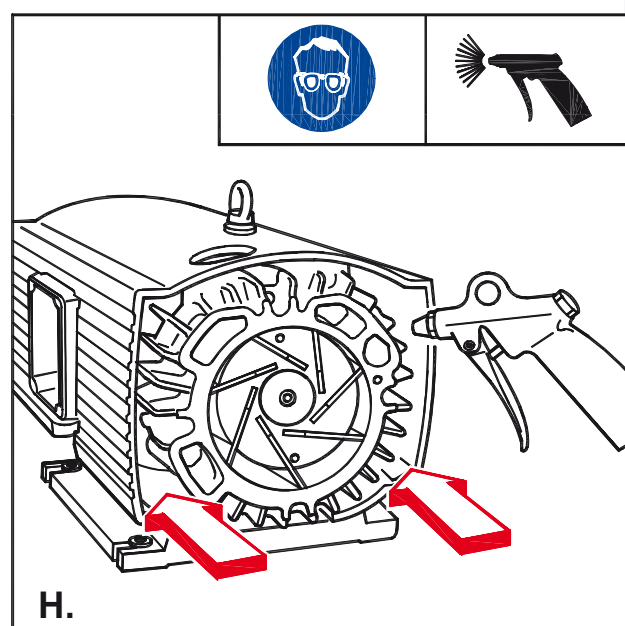
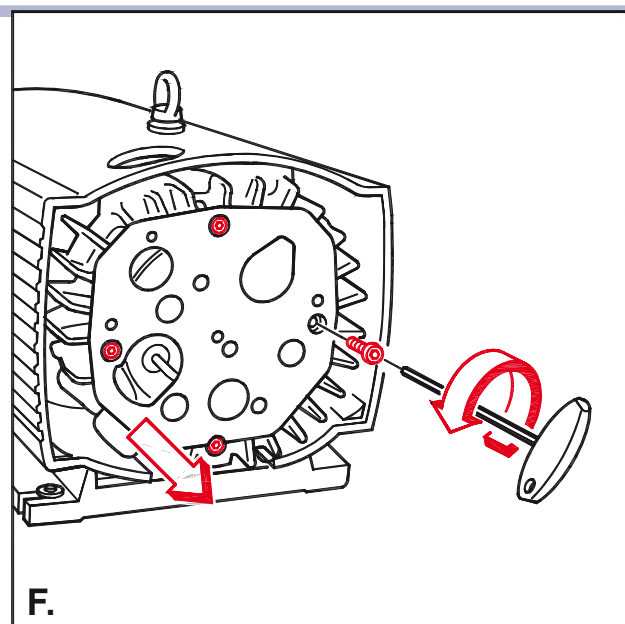
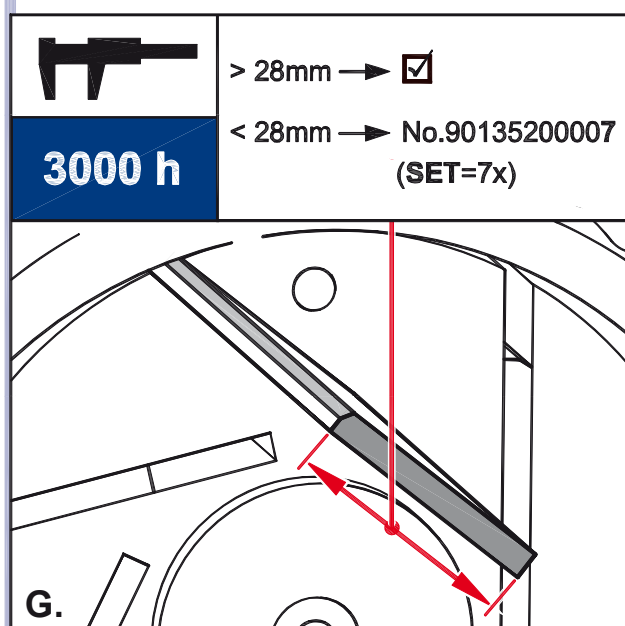
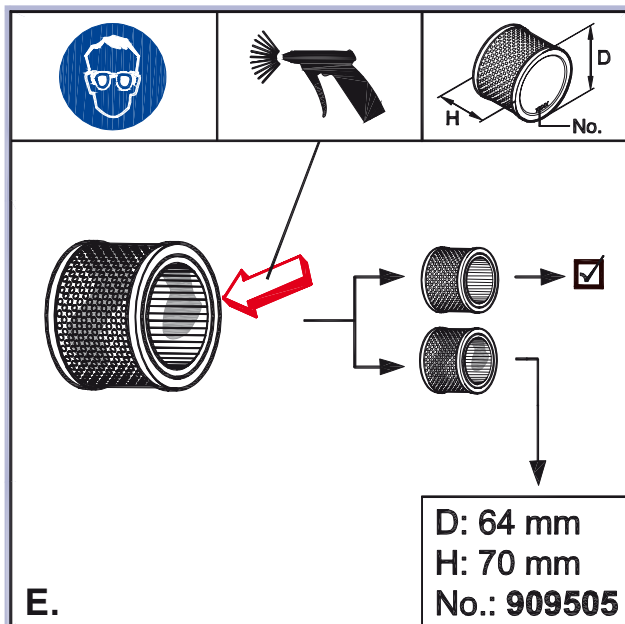
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 <input checked="" type="checkbox"/> <b>AIR</b>	 	 <b>MAX.</b>	 <b>MAX. V</b> m³/h
<p>DIN EN ISO 2151 DIN EN ISO 3744</p>			<p><math>L_{pA} = 67 \text{ dB(A)} - 50\text{Hz}</math> <math>L_{pA} = 72 \text{ dB(A)} - 60\text{Hz}</math> <math>K_{pA} = 3 \text{ dB(A)}</math></p>

						<b>A &gt; 100mm</b> <b>A &gt; 4"</b>	 <b>&gt; 5°C/41°F</b> <b>&lt; 45°C/113°F</b>	 <b>max. 90%</b>	 <b>max. 800m</b> 
 <b>1</b>  <b>39 kg</b> <b>85 lbs</b>						 <b>2</b>			









# Pump I

## Rotary vane vacuum pumps

- oil-free and air-cooled
- incl. integrated suction filter, vacuum regulating valve and integrated blow off valve

## Drehschieber-Vakuumpumpen

- trockenlaufend und luftgekühlt
- inkl. integriertem Ansaugfilter, Vakuumreguliertventil und integriertem Abblaseventil

## Pompes à vide à palettes

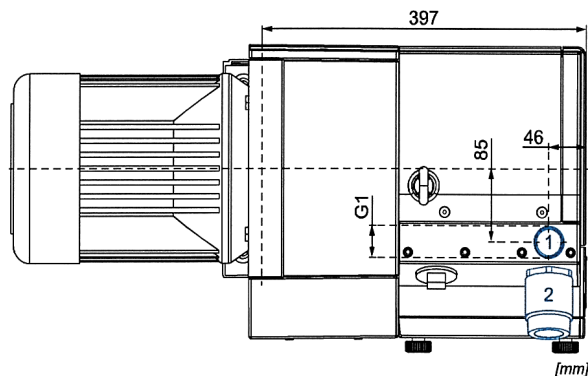
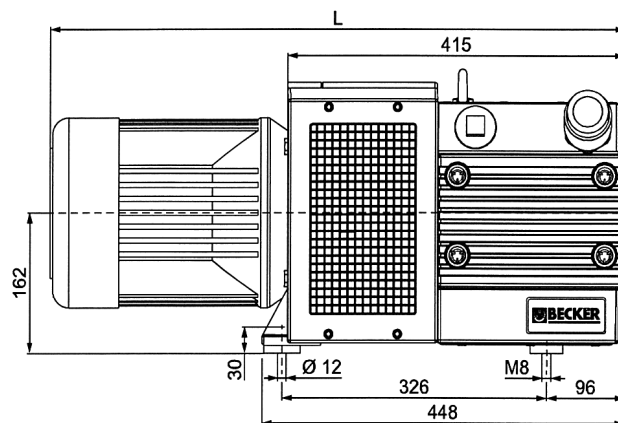
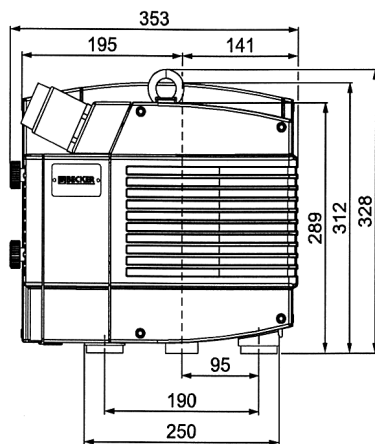
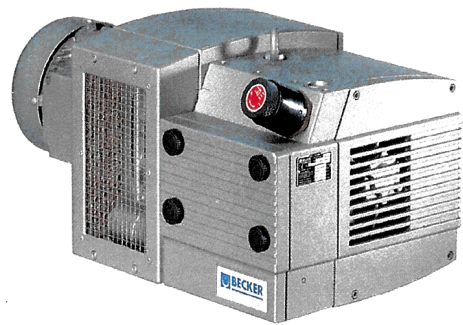
- fonctionnant à sec et refroidies par air
- incl. filtre d'aspiration intégré, soupape de reglage vide et soupape d'échappement intégré

## Pompe per vuoto a palette

- funzionanti a secco e raffreddate ad aria
- incl. filtro di aspirazione integrato, valvola regolazione vuoto e valvola di sfogo integrato

## Bombas de vacío de paletas

- sin aceite y refrigerado por aire
- incl. filtro de aspiración integrado, válvula reguladora de vacío y válvula de escape integrado



[mm]

- 1 Vacuum connection  
Sauganschluss  
Raccord vide  
Raccordo aspirazione  
Conexión de vacío
- 2 Vacuum regulating valve  
Vakuumreguliertventil  
Soupape de reglage vide  
Valvola regolazione vuoto  
Válvula reguladora de vacío


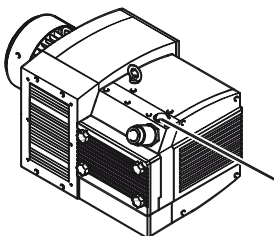



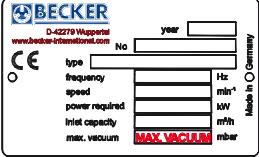

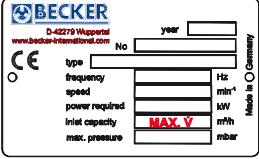





# Pump I






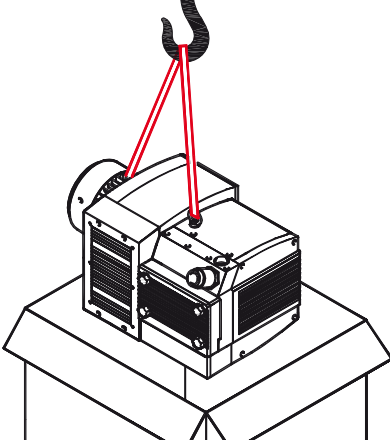
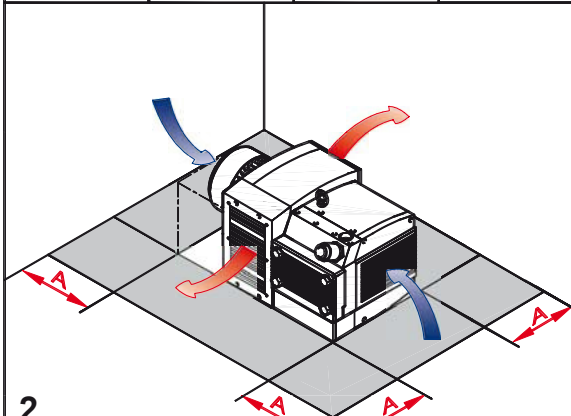
Betriebsanleitung  
Operating Instructions  
Instructions de service  
Istruzioni d'uso  
Handleiding  
Instrucciones para el manejo  
Manual de instruções  
Naudojimosi instrukcija  
Kasutusjuhend  
Lietošanas instrukcija  
Οδηγίες χρήσης  
取扱説明書  
사용설명서

Driftsinstruks  
Driftsinstruktioner  
Käyttöohje  
Driftsvejledning  
Instrukcja obsługi  
Kezelési útmutató  
Navodilo za uporabo  
Navod na obsluhu  
EI Kitabi  
Инструкция по эксплуатации  
使用说明书

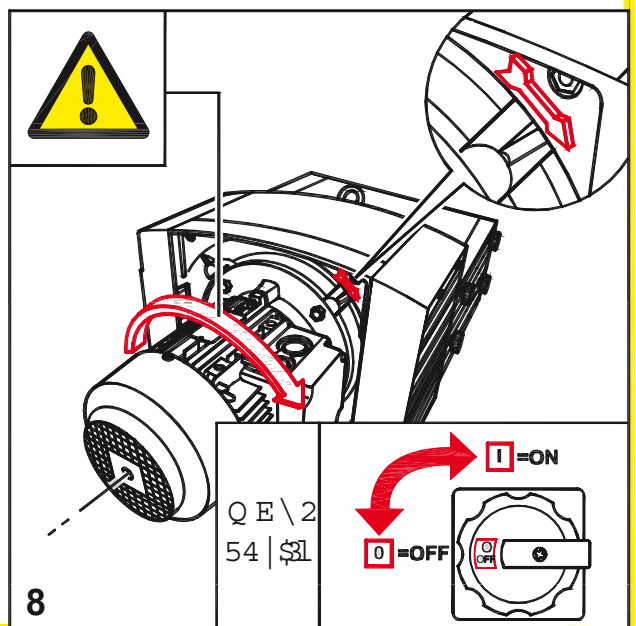
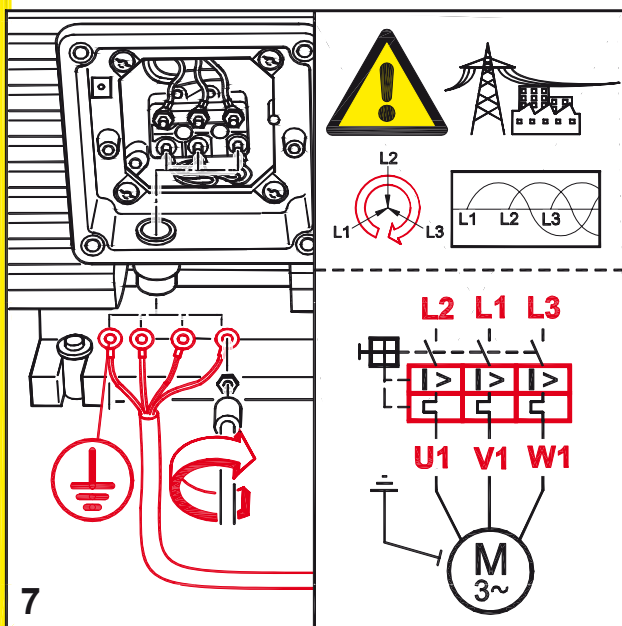
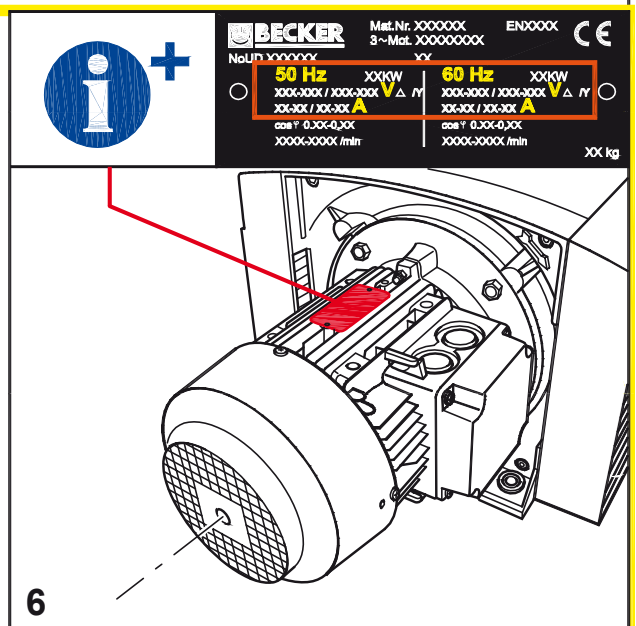
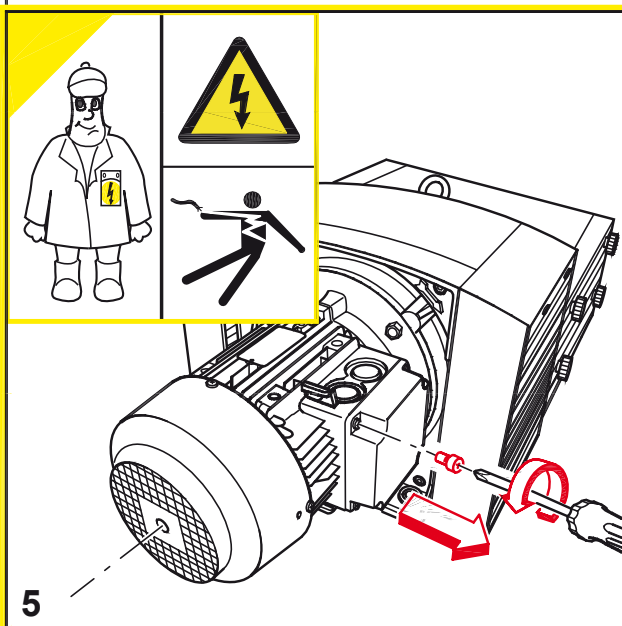
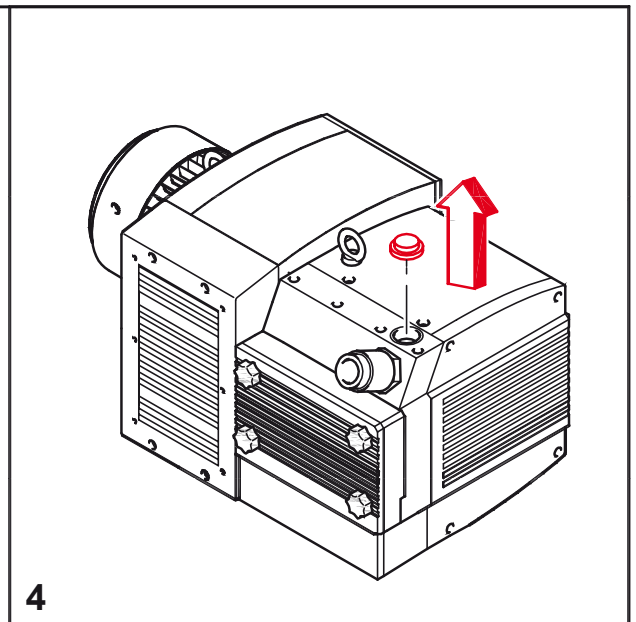
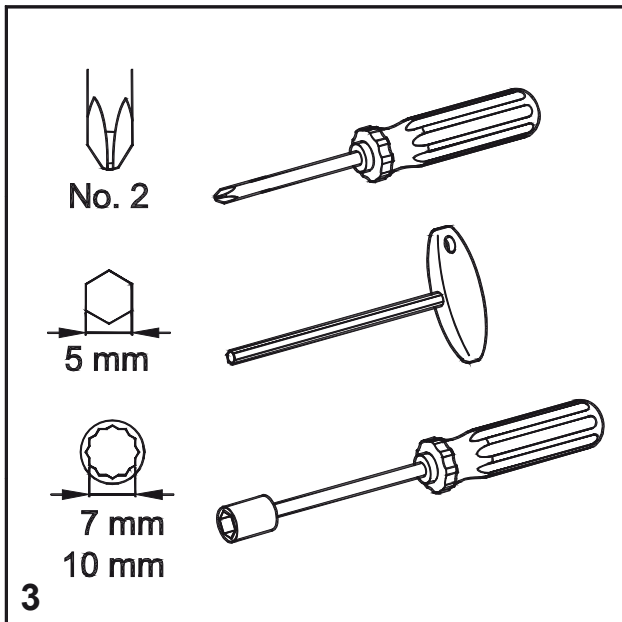
98/37 EG  
2006/95 EG



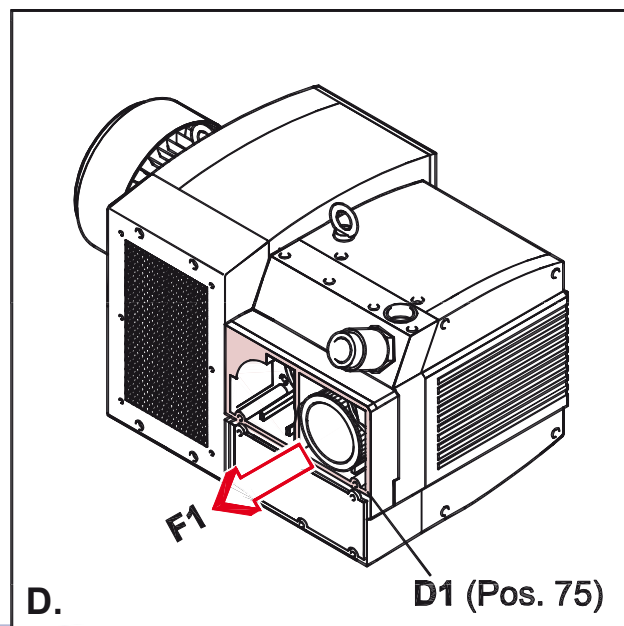
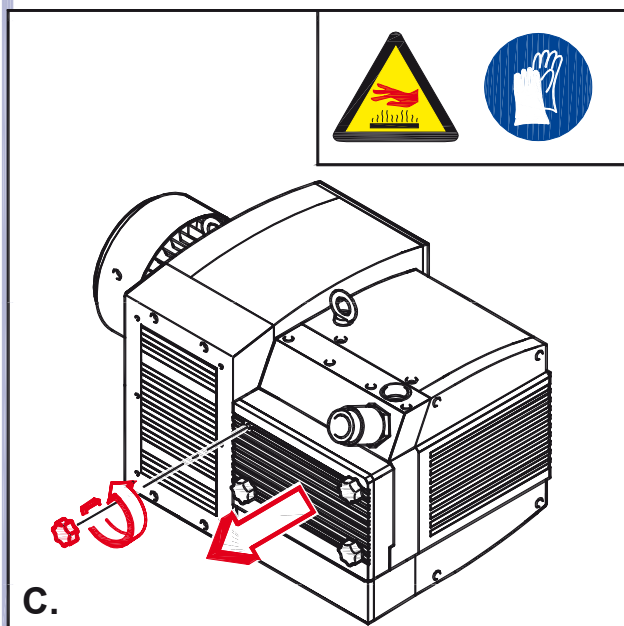
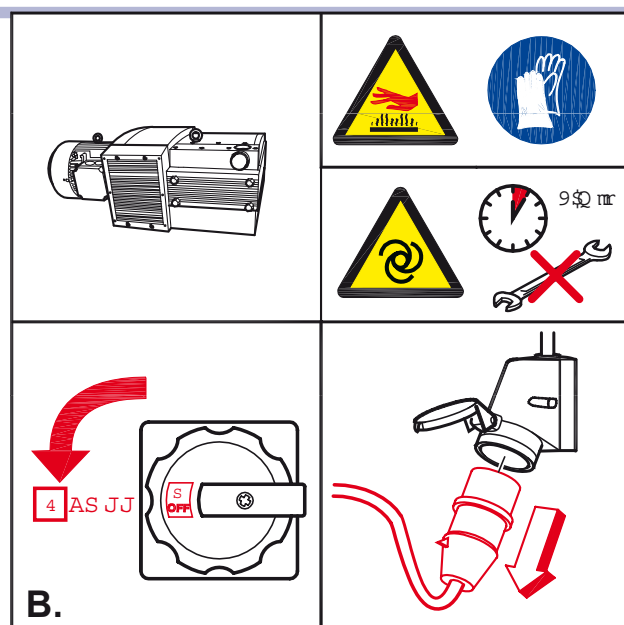
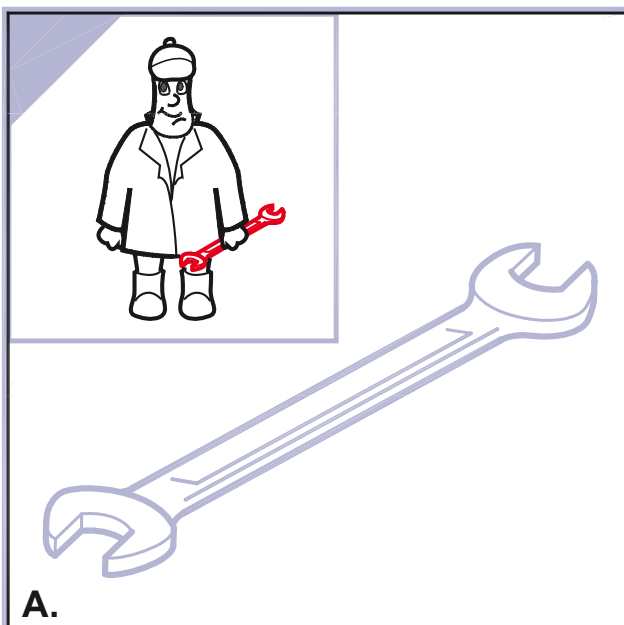
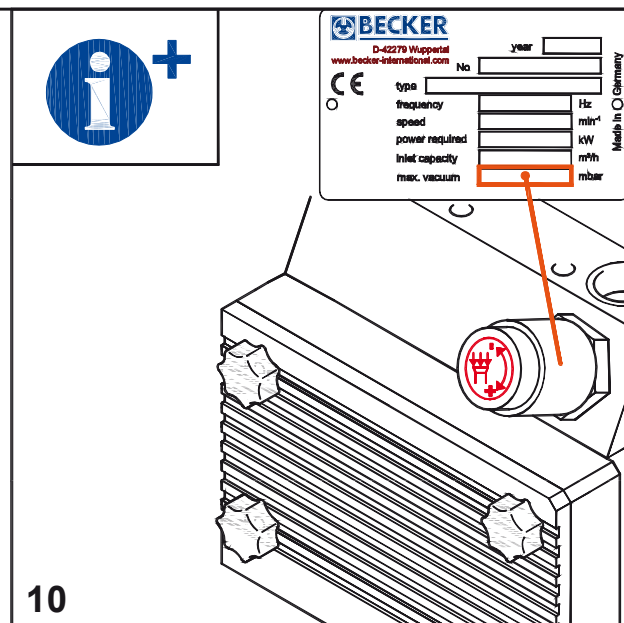
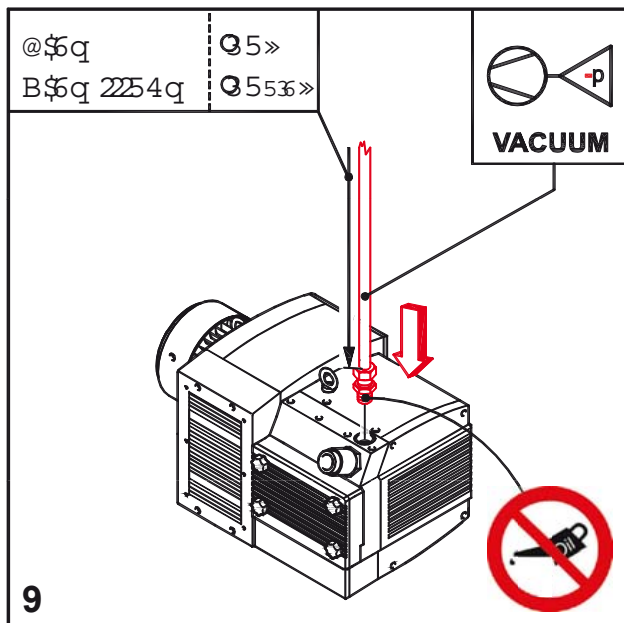
 	 	 <b>MAX. VACUUM</b>		 <b>MAX.</b>		 <b>AIR</b>	   	DIN EN ISO 2151 DIN EN ISO 3744	$L_{pA} = 72 \text{ dB(A)} - 50\text{Hz}$ $L_{pA} = 75 \text{ dB(A)} - 60\text{Hz}$ $K_{pA} = 3 \text{ dB(A)}$

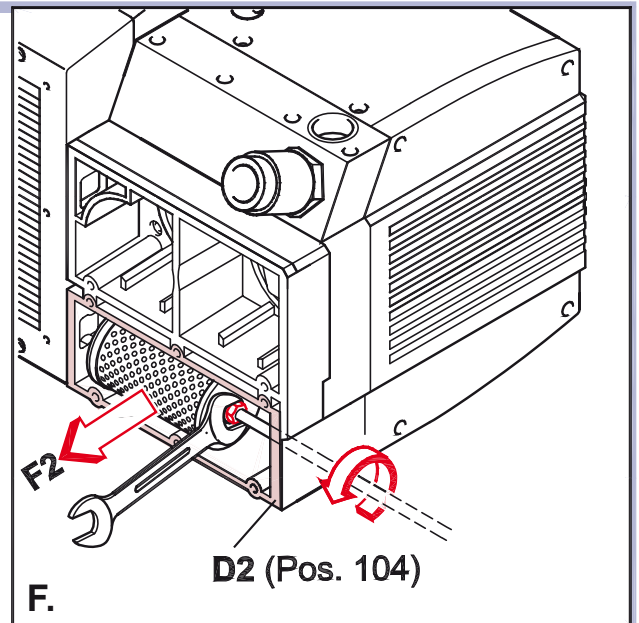
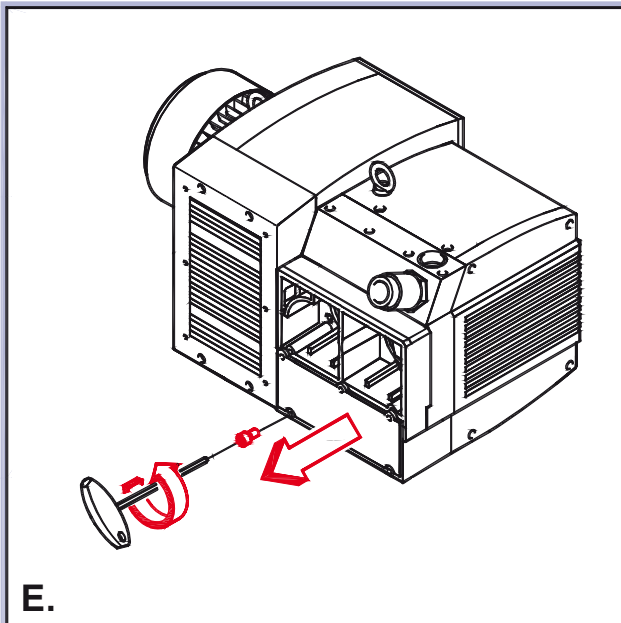
 <b>69 kg</b> <b>152 lbs</b>		<b>A &gt; 100mm</b> <b>A &gt; 4"</b>	 <b>&gt; 5°C/41°F</b> <b>&lt; 45°C/113°F</b>	 <b>max. 90%</b>	 <b>max. 800m</b>
					

28100021102 03/08

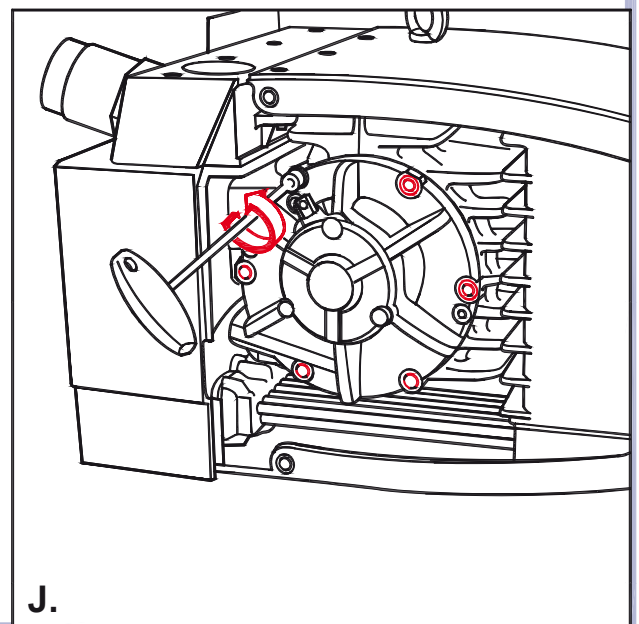
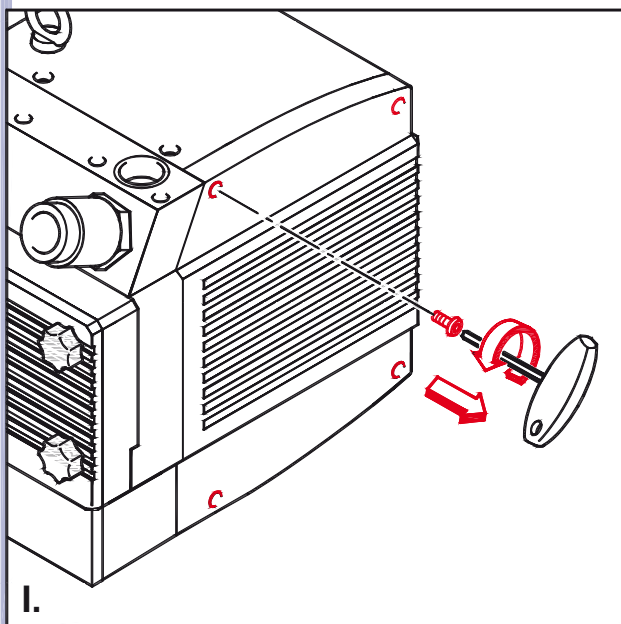
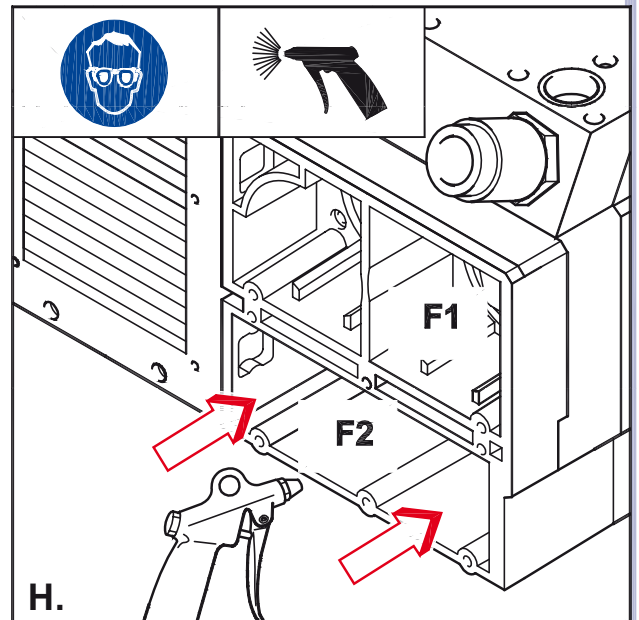


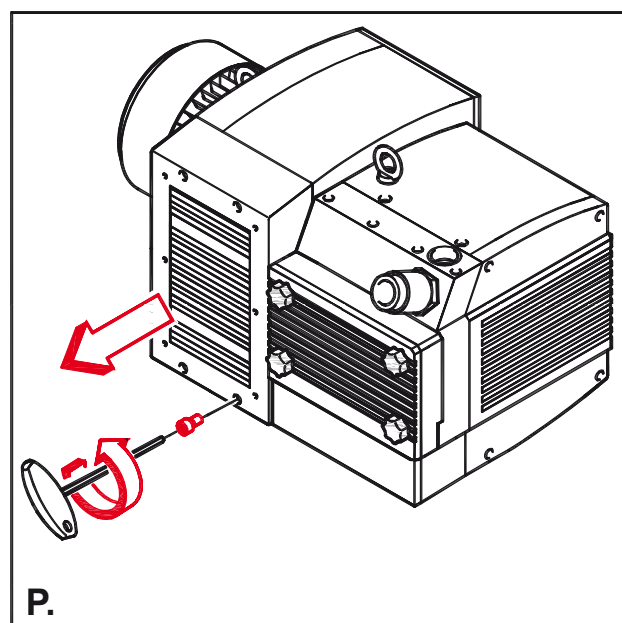
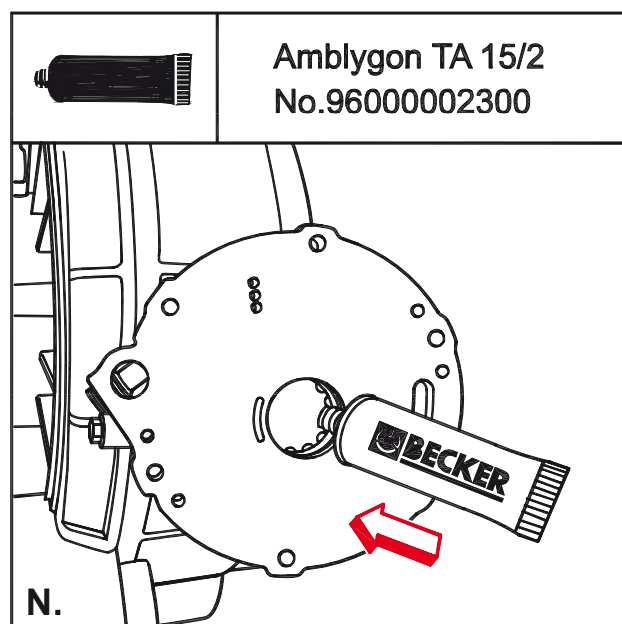
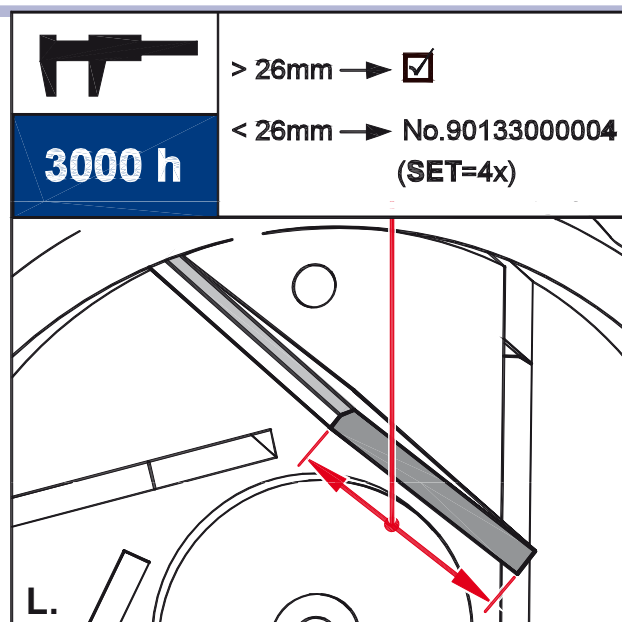
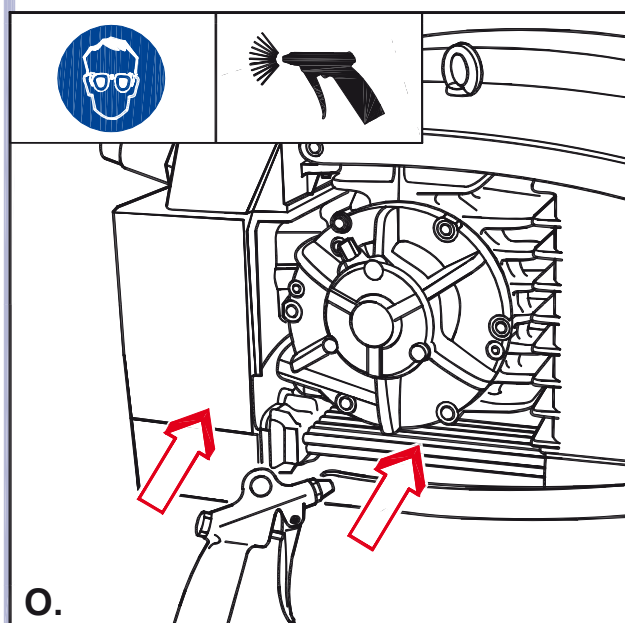
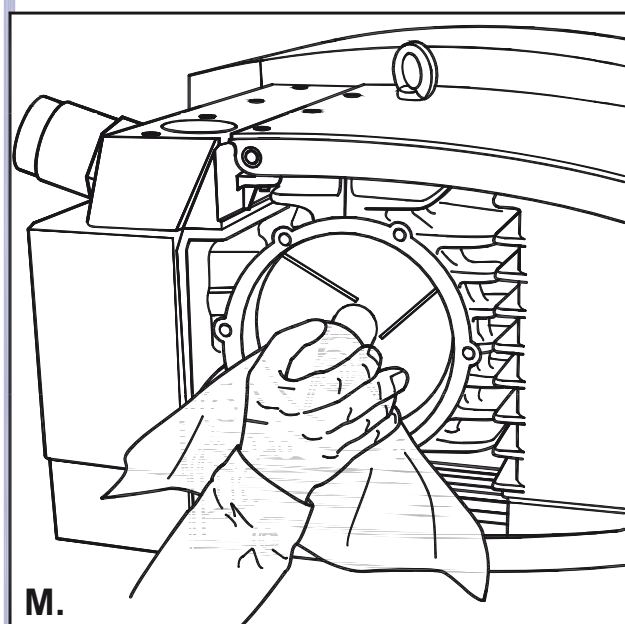
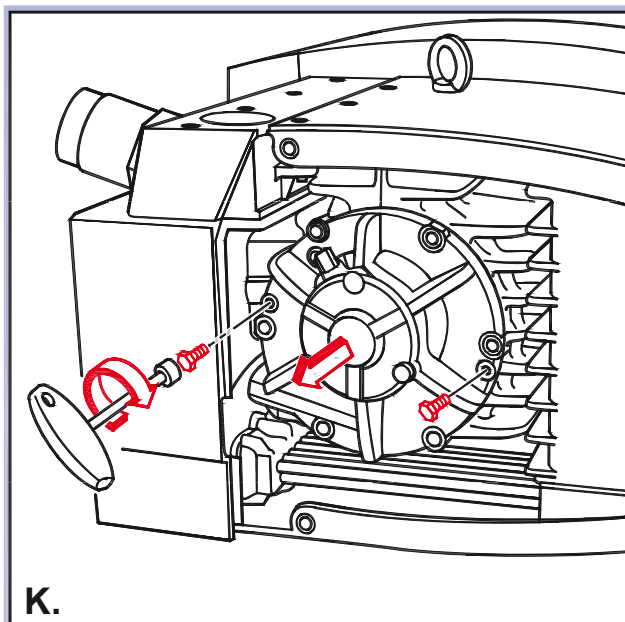






<p><b>F1</b> (standard)</p> <p>No.: <b>909507</b></p>	<p><b>F1*</b>, tsqiwiv- KVT 3.80/6</p> <p>No.: <b>909587</b></p>	<p><b>F2</b> (standard)</p> <p>No.: <b>909510</b></p>
	<p><b>Satz / Kit</b></p> <p>Tsw2&amp;40&amp;80: 60; 90; : 0&amp;90&amp; 5480&amp;690&amp;6 : 0&amp;6; 0&amp;8 : 0&amp;6&lt;&lt;</p> <p>No.: <b>549000 21100</b></p>	





> 26mm → ☒

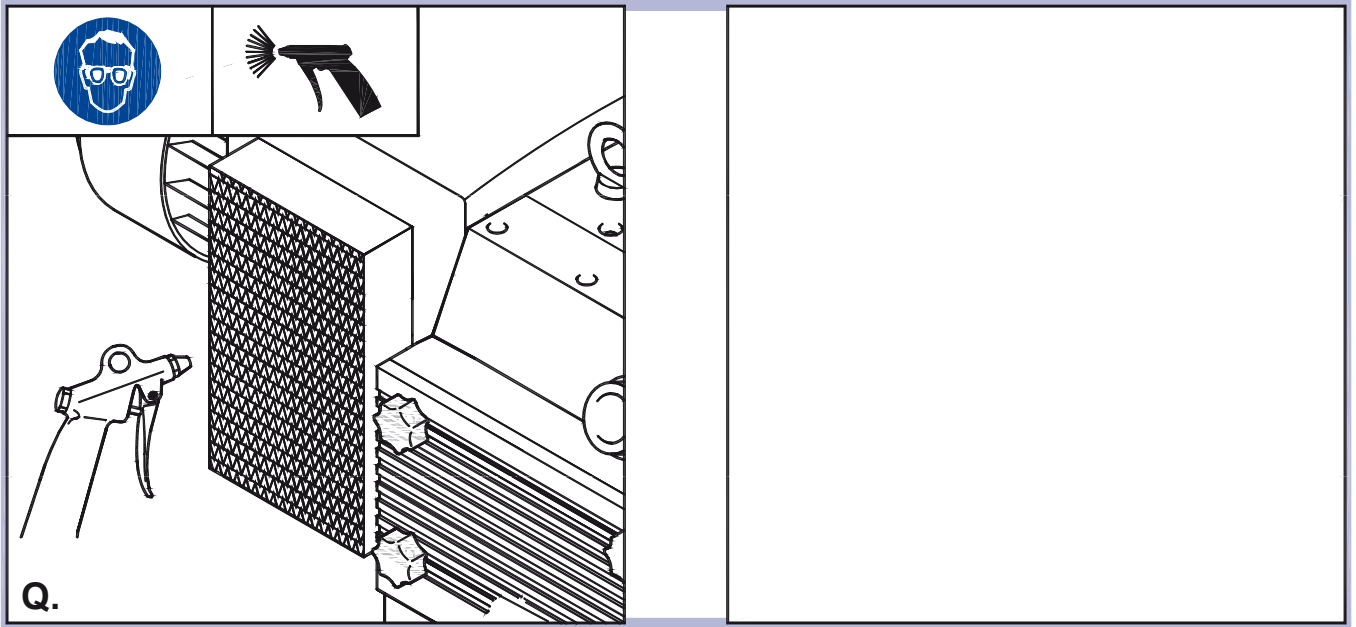
< 26mm → No.90133000004  
(SET=4x)

**3000 h**



**Amblygon TA 15/2**  
**No.96000002300**





# EC declaration of conformity of the machinery

TRANSLATION  
(according to 2006/42/EG, annex 2A)

**Manufacturer****RonI**

8001 Tower Point Drive  
Charlotte, NC 28227  
USA

Tel: 866-543-8635  
Fax: 866-543-9532  
E-mail: Info@RonI.com  
Web: www.RonI.com

**Representative for documentation**

Krister Johnsson  
Movomech AB

hereby declares that the machinery

**Designation**

Easyhand Pro

**Machine type**

Vacuum lifter

**Version**

60/80/100/120 (A) Pneumatic ejector  
60/80/100/120 (B) Pneumatic ejector

and that standards and/or technical specifications as described below are applied

- ☒ **Machinery Directive 2006/42/EC**  
☐ **EMC Directive 2014/30/EU**  
☐ **Low Voltage Directive 2014/35/EU**

and that standards and/or technical specifications as described below are applied.

- ☒ **Machinery Directive**  
SS-EN-ISO 12100:2010  
SS-EN 14238:2004 + A1:2009
- ☐ **EMC Directive**
- ☐ **Low Voltage Directive**

**Place:** Kristianstad

**Date:** 2021-02-01



Krister Johnsson, Managing Director  
Movomech AB



# EC declaration of conformity of the machinery

TRANSLATION  
(according to 2006/42/EG, annex 2A)

## Manufacturer

RonI  
8001 Tower Point Drive  
Charlotte, NC 28227  
USA

Tel: 866-543-8635  
Fax: 866-543-9532  
E-mail: Info@RonI.com  
Web: www.RonI.com

## Representative for documentation

Krister Johnsson  
Movomech AB

hereby declares that the machinery

### Designation

Easyhand Pro

### Machine type

Vacuum lifter

### Version

60/80/100/120 (C) Pump BE 25 vanes  
60/80/100/120 (D) Pump BE 40 vanes  
60/80/100/120 (K) Pump BE 60 vanes  
60/80/100/120 (I) Pump BE 90 vanes

and that standards and/or technical specifications as described below are applied

- ☒ **Machinery Directive 2006/42/EC**
- ☒ **EMC Directive 2014/30/EU**
- ☒ **Low Voltage Directive 2014/35/EU**

and that standards and/or technical specifications as described below are applied.

- |  |  |   |
|--|--|---|
| <input checked="" type="checkbox"/> <b>Machinery Directive</b><br>SS-EN-ISO 12100:2010<br>SS-EN 14238:2004 + A1:2009 | <input checked="" type="checkbox"/> <b>EMC Directive</b> | <input checked="" type="checkbox"/> <b>Low Voltage Directive</b><br>IEC 60204-32<br>IEC 60204-1 |
|--|--|---|

Place: Kristianstad

Date: 2021-09-01



Krister Johnsson, Managing Director  
Movomech AB





**RonI**  
8001 Tower Point Drive  
Charlotte, NC 28227  
USA

Telephone	866-543-8635
E-mail	<a href="mailto:Info@RonI.com">Info@RonI.com</a>
Web	<a href="http://www.RonI.com">www.RonI.com</a>

