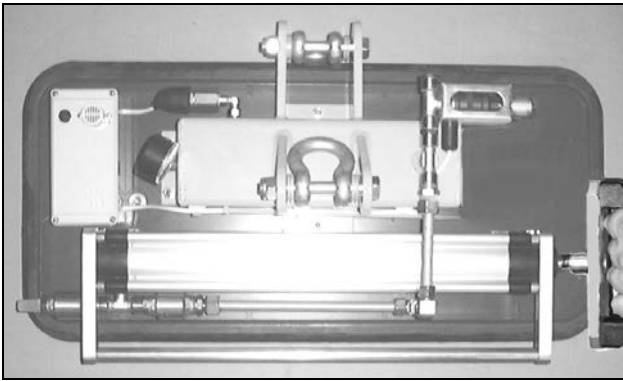
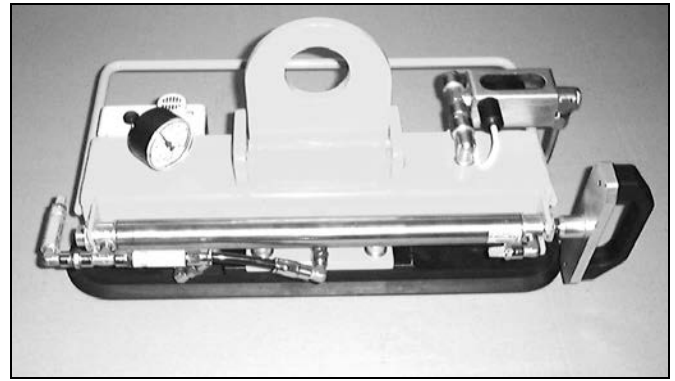


Vacuum lifter EP 800 / 600 / 400 / 300 / 150

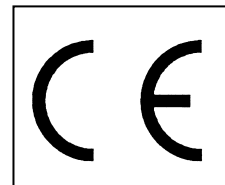


Picture 1a
Overall view of the Vacuum lifter EP 800



Picture 1b
Overall view of the Vacuum lifter EP 150

Description		Vacuum lifter		
Type				
EP 150 <input type="checkbox"/>	EP 300 <input type="checkbox"/>	EP 400 <input type="checkbox"/>	EP 600 <input type="checkbox"/>	EP 800 <input type="checkbox"/>
Machine's/ Serial no.				
Manufacturing year		2003		
Remote-control device (optional) <input type="checkbox"/>				
Injector valve (optional) <input type="checkbox"/>				



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1 Contact

For any questions and orders please contact the WEHA-Ludwig Werwein GmbH or directly the manufacturer:

In Germany
WEHA-Ludwig Werwein GmbH
Postfach 13 55 86331 Königsbrunn/ Augsburg Wikingerstr. 15 86343 Königsbrunn/ Augsburg Telefon: +49 (0) 8231 / 60 07-0 Telefax: +49 (0) 8231 / 60 07-148 E-mail: info@weha.com

In Austria
WEHA Steinbearbeitungsmaschinenvertriebsgesellschaft m. b. H.
Lange Gasse 17 A-1080 Wien Telefon: +49 (0) 1 / 40 39 340 Telefax: +49 (0) 1 / 40 88 762 E-mail: office.weha@aon.at

Our website :
http://www.weha.com
E-mail: info@weha.com

2 Conformity declaration "CE"

Conformity declaration EG EWG No. 89/392/EWG (EN 292)			
Manufacturer:	DREMA GmbH Wikingerstraße 15 86 343 Königsbrunn Tel.: 08231 / 91 69 - 22 Fax: 08231 / 91 69 - 24	Machine type:	Vacuum lifter EP
		Application:	To lift stone slabs
		Machine No.:	
Signature:	Erich Eberle		
Hereby we certify that the above-mentioned machine corresponds to the requirements of the above guideline.			

3 Symbols and warning instructions

The following explanations of the symbols occurring on the machine or in the operating instructions should help you to understand them.

3.1 Warning instructions on the Vacuum lifter EP

The following warning symbols can occur on the machine:



This symbol points out the availability of the operating instructions and warns the operator to read these instructions before the installation or the commissioning of the machine.



This warning sign occurring on the machine points out to the operator the existence of electrical current, whose strong enough to cause an electric shock to the operator by contact with the danger point. In such a place health or life are at risk.



This warning sign warns the operator to wear ear-protection and goggles.

3.2 Symbols in the operating instructions

The following symbols can occur in the operating instructions:



This exclamation mark, framed in a equilateral triangle, draws attention to a very important information and recommends the operator to read and follow it with particular attention.



Obligation to recycle waste materials into the production process to help safeguard the natural resources and save the environment.



Marking of switches, articles, etc. in the pictures of this operating manual. The first number begins with the letter A, for the marking (e.g. article D) and the second number is the current numbering of the picture (e.g. picture 6.2) within a section e.g. 6.1 Inspection. The marking always refers to the accompanying or following description; otherwise the description refers to a marking in another picture.

4 Regulations for the use of the Vacuum lifter EP

Please pay attention to the information about the use of the machine.



Attention: danger of injury!

The inappropriate use leads to personal injuries and damage of materials!



The machine is especially conceived for one or several application fields.
The following chapters explain the possible applications and the dangers during the use.

4.1 Field of application of the Vacuum lifter EP

You've bought a quality product of WEHA-Ludwig Werwein GmbH.

The Vacuum lifter EP is a device to facilitate the movement of stone slabs.

Please note the following characteristics:

- Easy and fast movement of stone slabs, without electricity and compressed air
- Robust overall structure construction
- High lifting capacity of one stone slab
- Optical and sound warning device to warn early possible failure.

4.2 Inappropriate application

The Vacuum lifter EP can be exclusively used to move stone slabs.

- Use the Vacuum lifter EP for the intended purposes and do without means, which can damage the metal or other parts!
- The Vacuum lifter EP is completely and particularly appropriate for the indicated ranges of application.
- Do not place any object between the stone slab and the sealing lip of the Vacuum lifters EP.
- **Never walk under moving load!**

4.3 Safety regulations

- **Please read thoroughly these operating instructions before using the Vacuum lifter EP!**
- **Keep the operating instructions carefully in the proximity of the Vacuum lifter EP, for a future reference when in doubt.**
- **Unconventional changes or installing of additional devices will lead to the cancellation of any liability by the dealer or manufacturer!**
- **Remove all articles from the work area, which can be a possible source of danger!**
- **Only authorized persons may use the Vacuum lifter EP. Each user must have read and understood this documentation!**
- **Before each use check the basic parts and welding seams for damages! In case of defects don't use the Vacuum lifter EP, the use by unauthorized persons must be prevented by suitable measures!**
- **Check the sealing lip for damage and in case of damage take out of operation, by making the machine unusable making sure that there's no danger to other people!**
- **Make sure that the ground in the work area is solid and is not liable to subsidence!**
- **Make sure that the battery of the warning device is sufficiently charged. The safety regulations of the battery charger are enclosed in the operating instructions of the battery charger!**
- **Make sure that the area, on which you put the stone slab, has enough load capacity!**
- **Make sure that the sealing lip of the vacuum lifters EP is completely in contact with the stone slab!**
- **Make sure that the stone slab is dry and dust-free before coming in contact with the vacuum lifter EP. The surface of the stone slab must be smooth ground in the contact surface of the vacuum lifters EP. The face of the stone slab must be an even plane!**
- **Make sure that the Vacuum lifter EP is placed in the middle of the stone slab. Consider the possible subsidence too!**
- **Avoid excessive swinging or vibration of the moving load!**
- **The max. admissible load is to be found on the machine identification plate or in the technical data on chapter 4.6.**
- **Only one stone slab at a time may be lifted and transported by means of the Vacuum lifter EP!**
- **Keep the working area clean and provide sufficient lighting!**
- **Never walk under moving load!**
- **While handling the vacuum lifter EP always wear the appropriate protective clothing, in accordance with the valid rules for the prevention of accidents!**
- **This includes:**
 - **Working gloves and working clothes in accordance with the valid regulations!**
 - **Safety shoes in accordance with the valid regulations!**
 - **Safety helmet in accordance with the valid regulations!**
- **Use only suitable work pieces. Do not lift slabs liable to crack or break during the work.**
- **Check to ensure during use that nobody is in the proximity of the equipment, in order to avoid danger to other personnel!**
- **Check to see whether all the parts are correctly installed!**
- **In case of damage or malfunction of the machine, please contact the dealer or the manufacturer immediately!**
- **Protect the machine against the weather, e.g. rain, sun, humidity and etc.!**
- **In case of irreparable damage or other reasons which prevent the use of the machine in the long-term, cease its operation, by making the machine unusable thus making sure that there's no danger to other people!**
- **If disposing of the machine or parts thereof, dismantle and separate the different materials which can then be disposed of to be recycled!**



4.4 Safety device of the Vacuum lifter EP

The Vacuum lifter EP has been manufactured according to the general regulations for mechanical engineering.

Safety features include:

- The red warning lamp lights, when the warning device is switched on and if the required vacuum is falling.
- The audible alarm sounds when the warning device is switched on and if the required vacuum is falling.
- A vacuum gauge for constant vacuum control during the lifting process.
- The safety cover on the blue hand slide valve prevents the accidental opening of the hand slide valve.

4.5 Machine identification plate

The identification plate informs about the origin, identity as well as year of construction and, if necessary, about the maximum carrying capacity.

By the supply please compare the identification plate with the data on the first side of the operating instructions. If the data differ from each other, please contact immediately the dealer or the manufacturer.

Lieferer:	weha D-86343 Königsbrunn	
Bezeichnung:		
Typ:		
Fabrik-Nr.		
Baujahr:		
max. Tragfk.		

4.6 Technical and structural data

4.6.1 Vacuum lifter EP 150

Total height [cm]	19 cm	Max. Load capacity [kg]	150 kg
Total width [cm]	55 cm	Net weight [kg]	13 kg
Total length [cm]	33 cm	Suction area [cm x cm]	50 cm x 11 cm

4.6.2 Vacuum lifter EP 300

Total height [cm]	19 cm	Max. Load capacity [kg]	300 kg
Total width [cm]	55 cm	Net weight [kg]	14 kg
Total length [cm]	33 cm	Suction area [cm x cm]	54 cm x 15 cm

4.6.3 Vacuum lifter EP 400

Total height [cm]	19 cm	Max. Load capacity [kg]	400 kg
Total width [cm]	51 cm	Net weight [kg]	19 kg
Total length [cm]	40 cm	Suction area [Ø cm]	Ø 40 cm

4.6.4 Vacuum lifter EP 600

Total height [cm]	19 cm	Max. Load capacity [kg]	600 kg
Total width [cm]	61 cm	Net weight [kg]	22 kg
Total length [cm]	40 cm	Suction area [cm x cm]	60 cm x 25 cm

4.6.5 Vacuum lifter EP 800

Total height [cm]	24 cm	Max. Load capacity [kg]	800 kg (lying stone slab)
Total width [cm]	35 cm	Net weight [kg]	45 kg
Total length [cm]	75 cm	Suction area [cm x cm]	70 cm x 30 cm

4.7 Supply and connections

Battery charger - Electrical supply	230V / 50Hz
Compressed air supply (optional)	Filtered and lubricated with pressure of max. 8,0 bar

5 Assembly

Please read carefully the information in the chapter "Assembly" and follow it precisely. The manufacturer or the company WEHA-Ludwig Werwein GmbH will not be liable for any damage due to incorrect assembly.

On receipt, check the supplied commodity for any damage during transportation and packing. Advise the manufacturer/agent immediately about any damage!



**The dealer/manufacturer are not liable
for any defects caused by incorrect assembly and incorrect application!**



Please follow precisely the safety regulations in chapter 4.3 !

5.1 Removing the transportation packaging

The vacuum lifter EP is usually delivered in cardboard packaging.

Before unpacking please compare the attached delivery note with the supplied articles!

Remove the transportation packing:

- Release the adhesive strips and/or the strapping belts and unpack the contents carefully!
- Be careful by unpacking the vacuum lifter, in order to prevent it from damage!
- Heavy contact of the vacuum lifter on sharp edges can damage the surface protection and/or parts of the assembly!
- Dispose of the packing wastes for recycling according to the local guidelines!

5.2 Scope of supply

Before beginning the assembly, please check precisely to see whether all necessary parts are available. If the scope of the supply is not complete contact the dealer or the manufacturer immediately.

Scope of supply consists of:

- 1 x Vacuum lifter EP with battery charger
- 1 x Operating instructions
- 1 x Remote-control device (optional)

5.3 Assembly instructions

The Vacuum lifter EP is delivered already assembled. Assembly of the individual parts is thus not necessary.

6 Operating instructions of the Vacuum lifter EP

The aim of this chapter is to inform you of the correct application of the machine. Consider the operating instructions in every detail!

Take care that any sharp edged articles do not damage the protective layer of the metal parts!



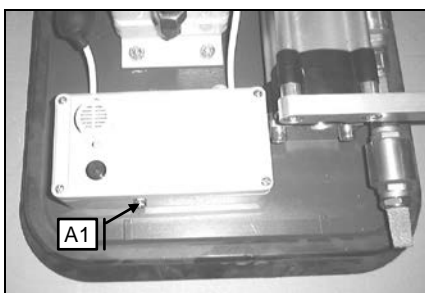
The dealer and/or manufacturer is not liable for any defects caused by incorrect assembly!



Please follow precisely the safety regulations in chapter 4.3 !

6.1 Preparing the Vacuum lifter EP

Before using the Vacuum lifter EP make sure that the warning device's battery is completely charged.



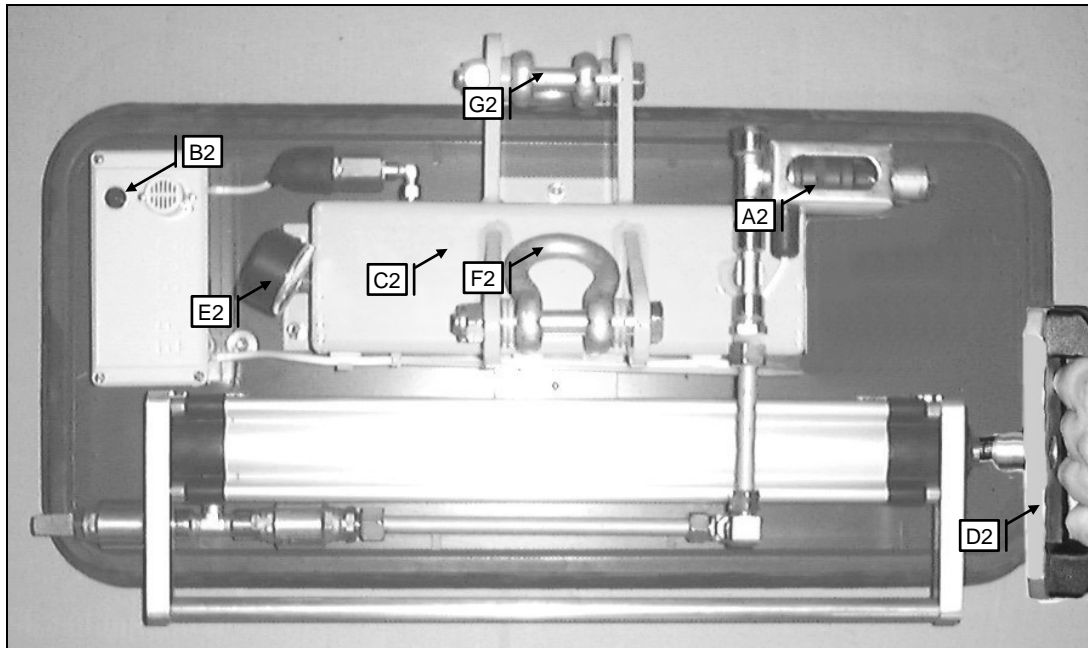
- Connect the battery charger BCA 120-600 to the electrical outlet 220-230V / 50Hz.
- Connect the cable exit of the battery charger with the connector [A1] of the warning device, which has to be charged.
- Check to see whether the charge control indicator on the battery charger lights up.
- When the charge control indicator goes out, it doesn't mean that the battery is completely recharged.
- Take the battery charger off the general power outlet and disconnect the warning device.

Picture 6.1 – Warning device

6.2 Transporting by means of the Vacuum lifter EP

- Place the stone slab so that it can be transported by means of the vacuum lifter EP. The suction area of the vacuum lifter EP must be completely in contact with the stone. Please find the technical data about the contact area of the vacuum lifter in chapter 4.6
- The Vacuum lifter EP must be placed in the center of the stone slab. Now find the technical data concerning the contact area of your Vacuum lifter in the chapter 4.6
- Make sure that the stone slab placed in the contact area of the Vacuum lifter EP is dust-free and dry. The stone slab's surface must be plane ground in the contact area of the Vacuum lifter EP and moreover the stone slab must have an even plane!
- Now place the Vacuum lifter EP in the middle of the stone slab.

- Make sure that the sealing lip of the Vacuum lifter EP lays completely and correct on the stone slab. Make sure that it doesn't twist.



Picture 6.2 – Vacuum lifter EP

- Push the blue ring of the hand slide valves [A2] on the right. The warning device gives off a sound warning signal and the red lamp [B2] lights. The operator is thereby warned that the necessary vacuum of -0,8 bar is not available. If the vacuum lifter is already in use, a residual vacuum is still available in the safety tank [C2]. If the warning device, the warning signal and the red lamp [B2] are not activated, it is possible that the necessary vacuum is still available at the moment.
- Activate now the pneumatic cylinder by pulling out to the right the handle [D2] of the piston and by retracting again to the left. Repeat the procedure till the Vacuum gauge [E2] shows a vacuum of -0,8 bar.
- At a vacuum pressure of -0,8 bar the red lamp [B2] and the sound warning signal will stop.
- Make sure that there's no vacuum loss. It's important that the indicator on the vacuum gauge doesn't move [E2]. If losing vacuum, the stone slab can't be transported. The sealing lip and the contact area must be checked and the vacuum has to be produced again. If the condition occurs again have the lifter checked by a technician.
- Now connect the Vacuum lifter EP by means of the eye [F2] to the lifting equipment.
- Make sure that the lifting tackle and the lifting equipment have the necessary load capacity to carry and transport the gross lifting weight. Don't exceed the admissible load capacity of your lifting equipment (see the technical data in chapter 4.6).
- Lift the vacuum lifter EP by means of the lifting equipment until the stone slab is hanging.
- Make sure that the stone slab is hanging horizontally if it's possible. In case of inclination the stone slab must be appropriately placed, otherwise it may come loose from the Vacuum lifter EP!
- Now you can lift the stone slab to the travelling height.
- Make sure that whilst transporting there are no vibrations and that the stone slab does not swing.



Attention danger!
If during the transport the sound warning signal sounds or the red lamp [B, Picture2] lights, you have to take the stone slab off immediately!
In case of emergency the vacuum can be quickly produced again by operating the pneumatic cylinder, to avoid a dangerous occurrence!



- Make sure that the area, on which the stone slab is placed, has enough load capacity!
- When the stone slab is in position and fastened, push the blue ring of the hand slide valve [A2] to the left. The vacuum chamber will be ventilated and the vacuum safety tank [C2] will retain the vacuum.
- Now you can remove the vacuum lifter EP from the stone slab.

Vacuum lifter EP 800:

- The vacuum lifter EP 800 may be placed only in vertical, erect position on the standing stone slab. Attention: max. admissible load capacity in this application case is 600 kg!
- In this application case you can use the appropriate eye [Picture 6.2; G2]. This second eye is available only on the Vacuum lifter EP 800.

6.3 Operating the additional assembly groups (optional)

6.3.1 Vacuum lifter EP with remote-control device

For the additional safety regulations see paragraph 4.3.



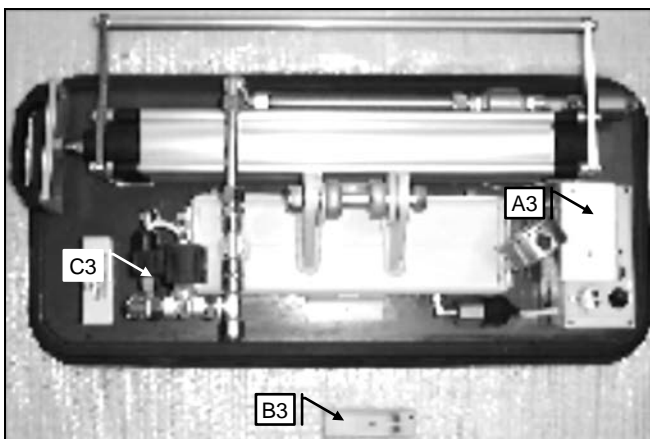
Attention danger!
Take care that the remote-control device can not be accidentally released!



Attention danger!
Ensure that no strong electro-magnetic fields are in the proximity, e.g. mobile phones, electrified rails, power lines or similar!

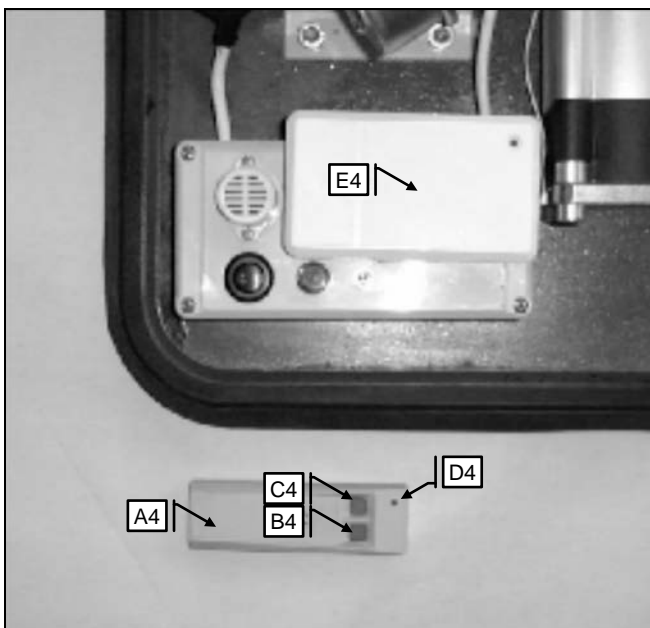


- The vacuum lifter EP with remote-control device should not be used near strong electro-magnetic fields. Do not keep in close proximity or do not use any mobile phone whilst in operation.



Picture 6.3 – Remote-control device

- You can operate the hand slide valve by means of remote-control device, comprising the receiver [A3], the remote-control device [B3] and the control valve [C3].
- Before putting into operation make sure that the 9V-Block-Battery of the remote-control device has enough power.

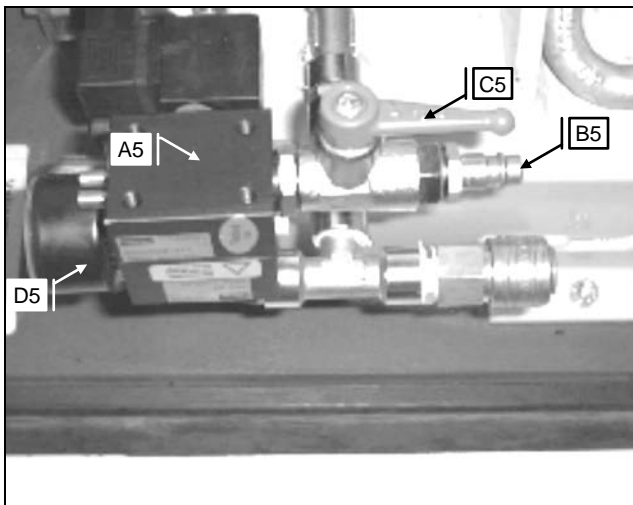


Picture 6.4 - Remote-control device

- Instead of the instruction „Turn the blue ring of the hand slide valve [A2] to the right [Picture 6.2]“ [Paragraph 6.2] push the gray button [B4] of the remote-control device [A4].
- The remote-control device [A4] must show with the front side (the side with the red warning light [D4]) to the receiver [E4]. If the remote-control device [A4] is used in the right way, both red warning devices [D4] light.
- Now you must operate the pneumatic cylinder again, as explained in paragraph 6.2 from point 8.
- **After setting down and securing the stone slab, press the red button [C4] of the remote-control device. The vacuum chamber will be now ventilated and the vacuum safety tank retain the vacuum.**

6.3.2 Vacuum lifter EP with pneumatic injector valve

- The pneumatic injector valve can be individually installed on the vacuum lifter EP as an expansion kit!



Picture 6.5 - Vacuum lifter EP with injector valve

- The application of the pneumatic cylinder will be completed with the pneumatic injector valve [A5]. The vacuum can be produced by means of the pneumatic injector valve [A5] as well.
- Before using the pneumatic injector valve [A5], first of all connect the compressed air supply to the compressed-air nipple [B5]. Max. air pressure is 10,0 bar.
- Instead of the instruction „Operate the pneumatic cylinder,....“ [Paragraph 6.2; Point 8] the vacuum will be produced by opening the hand valve [C5] in arrow's direction.
- The momentary vacuum appears on the vacuum gauge [D5].
- When the vacuum of -0,8 bar appears on the vacuum gauge [D5] close anticlockwise the hand valve [C5]. The evacuation takes approximately 1 minute, if the vacuum safety tank had not already emptied.

7 Maintenance



The operator of the vacuum lifter EP must be instructed in the following activities by a person with the appropriate training !



The manufacturer is not liable for any damage due to neglect of these instructions!

Please follow precisely the safety regulations in chapter 4.3!

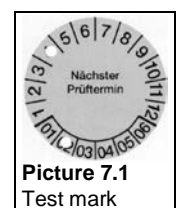
7.1 Maintenance

The Vacuum lifter EP does not require regular maintenance.

- The sealing lip of your Vacuum lifter must be cleaned monthly and checked for damage.

7.2 Inspection

- The Vacuum lifter EP is a load carrying attachment! The user of the Vacuum lifter EP must make sure that an expert checks it at least once a year! (§ 40, Abs. 1, VBG 9a)
- The next test for the Vacuum lifter EP is shown on the yellow mark „nächster Prüftermin“. (e. g. April 2003)
- Only the persons, who have the necessary knowledge and training may implement repairs and welds (poisoning danger!)
- You can have your vacuum lifter EP checked by an expert at the manufacturers, ask us!



Please follow precisely the safety regulations in chapter 3.3!

This inspection has to be executed at least once a year.

- Check the vacuum lifter EP once a year for rusty parts, in particular all the welded seams.
- Remove the rust and protect these parts by means of an appropriate anti-corrosive agent, e.g. zinc spray.
- Check the rubber sealing lip for damages and if necessary have it changed by the dealer or the manufacturer.



Only the persons, who have the necessary knowledge and training may implement repairs and welds (poisoning danger!)



8 Parts list

In the following chapter you find the part list for the vacuum lifter EP. Please consider by orders of spare parts that a smooth completion can take place only by full information about the data specified into the part list. Thus always indicate by an order the quantity, the piece's description, the article number and if it's necessary the abbreviation.



Only the manufacturer may implement repairs!



Unconventional repairing or use of non-manufacturers parts will lead to the cancellation of any liability and right to claim under guarantee by the dealer or manufacturer.

Pos.	Quantity	Description	Abbreviation	Werkpc.
1	1	Suction plate for EP 150 vulcanized	Art. No. VD080088	
1	1	Suction plate for EP 300 vulcanized	Art. No. VD080043	
1	1	Suction plate for EP 400 vulcanized	Art. No. VD080215	
1	1	Suction plate for EP 600 vulcanized	Art. No. 8020823	
1	1	Suction plate for EP 800 vulcanized	Art. No. VD080120	
2	1	Pneumatic cylinder for EP 150 / EP 300 / EP 400 / EP 600		
2	1	Pneumatic cylinder for EP 800	P2 63 H400 S/2	
3	1	Foot	ISO 6431 Ø 63	
4	1	Vacuum safety tank		
5	1 (2)	Eye (by EP 800)		
6	1	Screw M16 x 120	DIN 933	
7	1	Nut M16		
8	1	Check valve Europa	ART 100 R 3/8	
9	1	Sound absorber	3 SEP R 3/8	
10	1	Vacuum meter	Art. No. 8020818	
11	1	Vacuum gauge's screw connection	MAVer 12 PLR A3C	
12	1	Vacuum pressure switch	Type 300 800 312 14	
13	1	Hand slide valve R 3/8		
14	1	Safety cover	A 024 R 3/8	
15	8	Screws M8 x 16		
16	1	Grip plate		
17	1	Handle		
18	1	Bar		
19	1	Halter bar right		
20	1	Halter bar left		
21	6	Pipe	Ø 12 x 1	
22	1	Body	Art. No. 8020817	
23	1	Warning device switch	Art. No. 8020816	
24	1	LED		
25	1	Connector		
26	1	Buzzer		
27	1	Battery 12V DC	Art. No. VD080095	
28	1	Mini-contact switch		
29	1	Battery charger	Art. No. VD080086	
30	1	Hand transmitter		
31	1	Receiver		
32	1	3/2 control valve R 1/8		
33	1	Connector		
34	1	PG 11 C 18211 N21		
35	1	Injector valve		
36	1	Quick coupling - Type 26 NW 7.2		
37	1	Plug nipple NW 7.2		
38	1	Pipe bend		



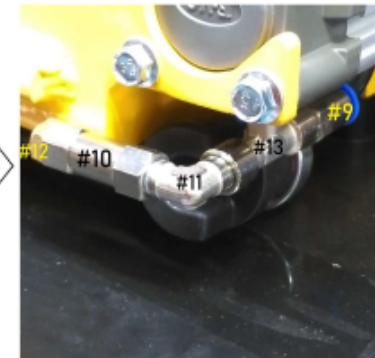
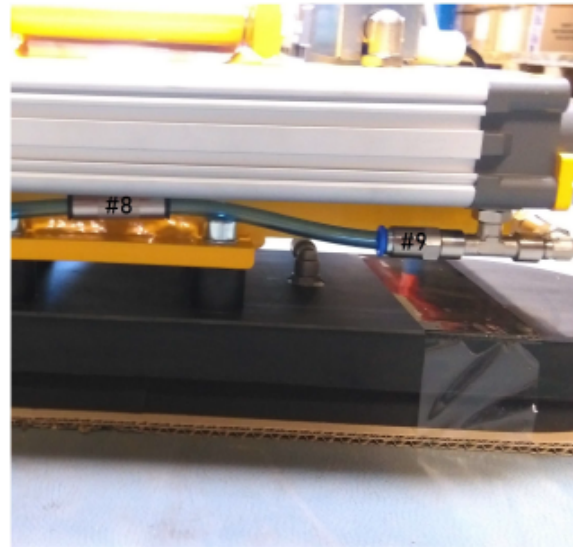
39	1	Warning device		
40	1	Remote-control device (optional)		
41	1	Pneumatic injector valve (optional)	Art. No. 8020800	

Vacuum lifter EP

Vacuum lifter EP 150	Art. No. 8010307
Vacuum lifter EP 300	Art. No. 8010305
Vacuum lifter EP 400	Art. No. 8010306
Vacuum lifter EP 600	Art. No. 8010308
Vacuum lifter EP 800	Art. No. 8010310



ET Nummer	Bezeichnung	Artikel #
1	Schutzhaube für Handschiebeventil	122577
2	Handschiebeventil	122578
3	Verbindung Handschieber / Abscheider	127378
4	Wasserabscheider	118921
5	Winkelstück 90° an Wasserabscheider	127379
6	Vakuum-Meter Ø50 mm	115623
7	Ladegerät	101361
8	T Stück an Handpumpe	137400
9	Rückschlagventil mit Schnellkupplung Ø8 mm	101538
10	Rückschlagventil	126274
11	Winkelstück 2x 1/8" Außengewinde	140884
12	Schalldämpfer kurz Gewinde 1/8"	140885
13	T Stück	134531



Stand März 2018