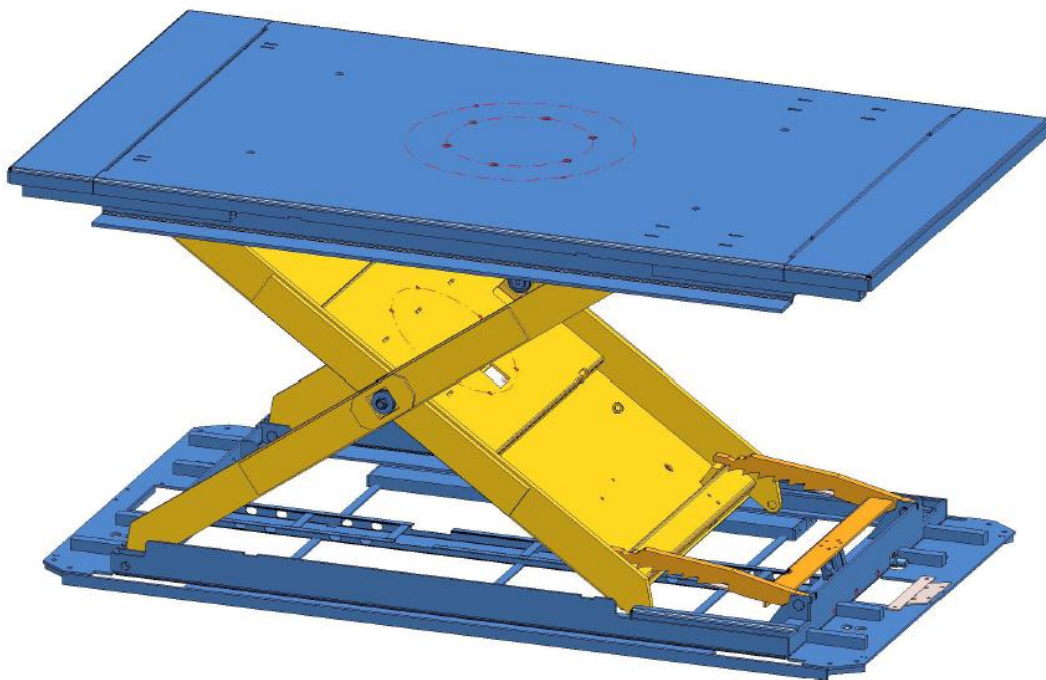


Operating manual  
for  
lifting platform

Machine type	Article-No.	Serial No.
K1200-HLS-SB	K1200-01-KO	



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Translation from German original





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# 1 Functional and safety checks

**carried out by manufacturer to the following specifications:**

All the plates that are applied to the lifting platform should not be removed and must remain legible

**Following information plates are present:**

- Type plate
- Operating instructions (short form)
- Carrying capacity
- Mains pressure
- Lift and Descend labels
- Company logo
- CE marking

**Function and safety tested:**

- Safety valve set to 3.5 bar operating pressure

**Tested:**

- Functional test without load
- Function lifting/ lowering
- Operating valve goes automatically to 0 setting
- Function anti-drop safety device
- Function air cushion
- No damage on the surface of the air bag
- All bearing screws are firmly seated
- Secure scissor and bearing bolts
- Condition of pneumatic air lines, (seated firmly and leak-proof)

Serial-no. : see cover sheet

Date : \_\_\_\_\_

Name : \_\_\_\_\_

Herkules Hebetchnik GmbH

Falderbaumstr. 34

D 34123 Kassel

Tel. 0561/58907-0

Fax 0561/58907-34

## 2 General information

The operating instructions (and test log book) contain important information concerning the installation, and ensure safe, proper, and economical operation as well as preservation of operational safety. Observance of these operating instructions will help you to avoid danger, reduce repair costs and downtime as well as to increase the life of your service lift.

As evidence of regular **safety checks** this test log book contains a form. This should be used to provide documented details of tests. (It is advisable to make a copy of the form before starting to fill it out.)

### Installation and testing

Safety-related work and safety inspections may only be performed by suitably trained personnel. In this documentation, personnel are designated as expert and qualified persons.

### 2.1 Hazard indications

The following symbols are used to indicate danger points and to highlight important information. An explanation is given of their meanings. Please pay particular attention to areas of the text containing a symbol of this nature.



**This describes a hazard to life or severe injury. There is a severe hazard of mortal injury if the procedure described is not carried out correctly.**



**This indicates a key function or an important note!**

### 2.2 Limitation of liability

All details and indications in this operating manual were compiled taking into account the applicable standards and regulations, and the latest technology as well as our many years of insight and experience. The manufacturer accepts no liability for any damage caused by:

- Failure to adhere to the operating manual
- Improper use
- The intervention of non-qualified staff
- Arbitrary alterations
- Neglecting maintenance

## 2.3 Copyright

These operating instructions are to be treated as confidential and are solely intended for personnel working with the machinery. Transfer of the operating manual to third parties without the written consent of the manufacturer is prohibited.



**Text, drawings, images and other illustrations are copyrighted and intellectual property rights apply.**

## 2.4 Terms of guarantee

The terms of guarantee are included as a separate document in the sales brochures.

## 2.5 Customer Service

For technical information, please contact our customer service centre as follows:

<b>Customer Service:</b>	Herkules Hebetchnik GmbH Falderbaumstraße 34 D – 34123 Kassel Tel.: +49 (0)561 58907-0 Fax: +49 (0)561 58907-34 Email: <a href="mailto:info@herkules.de">info@herkules.de</a>
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### 3 Base sheet

**Designation; Type:** .....

**Serial No.:** See cover sheet

**Manufacturer:** **HERKULES Hebetchnik GmbH**  
**Falderbaumstr. 34**  
**D - 34123 Kassel**

**Intended use:**

The Transmobil is an electric vehicle, independent of any rails, which is used to carry vehicle lifts either with or without a vehicle on-board. The permitted load capacity for the Transmobil is 3,000 kg.



Any construction-related modifications as well as basic repairs are to be recorded on this master sheet!

**Changes to the construction, testing by experts, re-commissioning**  
(Date, type of change, expert signature)

.....  
Name

.....  
Address of assessor

.....  
Location

.....  
Date

.....  
Signature of assessor



## 4 Product description

### 4.1 Intended use

The lifting platform Art. No. K1200-HLS-SB is exclusively intended for the lifting of loads with a permissible total weight of up to 2800 kg. The lifting of persons is prohibited.

The scope of intended use also includes the reading of the current operating manual as well as compliance with all the indications included in the same – particularly safety instructions.

The scope also extends to ensuring that all inspection and maintenance operations are implemented within the prescribed time periods.

If the lifting platform is not used in accordance with the previous directive, the safe operation of the lifting unit cannot be guaranteed.

Any other use of the lifting platform, or that exceeding the above purposes, shall be considered inappropriate. For all damage to persons and objects, which arises due to improper usage, the operator of the lifting platform rather than the manufacturer shall be responsible!

## 4.2 Structure

The K1200-HLS vehicle lifting platform consist of a lower frame with air cushions , an upper with two scissors, a double air bag, anti-drop safety device and a control panel

The air bag implements the lifting movement, which is executed laterally by means of the scissor. The scissors also limit the platform's lifting height. An anti-drop safety device prevents the lifting platform from subsiding in the event of air loss.

The operation of the lift is done with a control unit, which are the tubes connected to the lift.

Neither electric nor hydraulic power is necessary to operate the vehicle lifting platform. It is operated solely by means of compressed air.

For further information about the K1200-HLS vehicle lifting platform please see chapter **“Technical data”**.

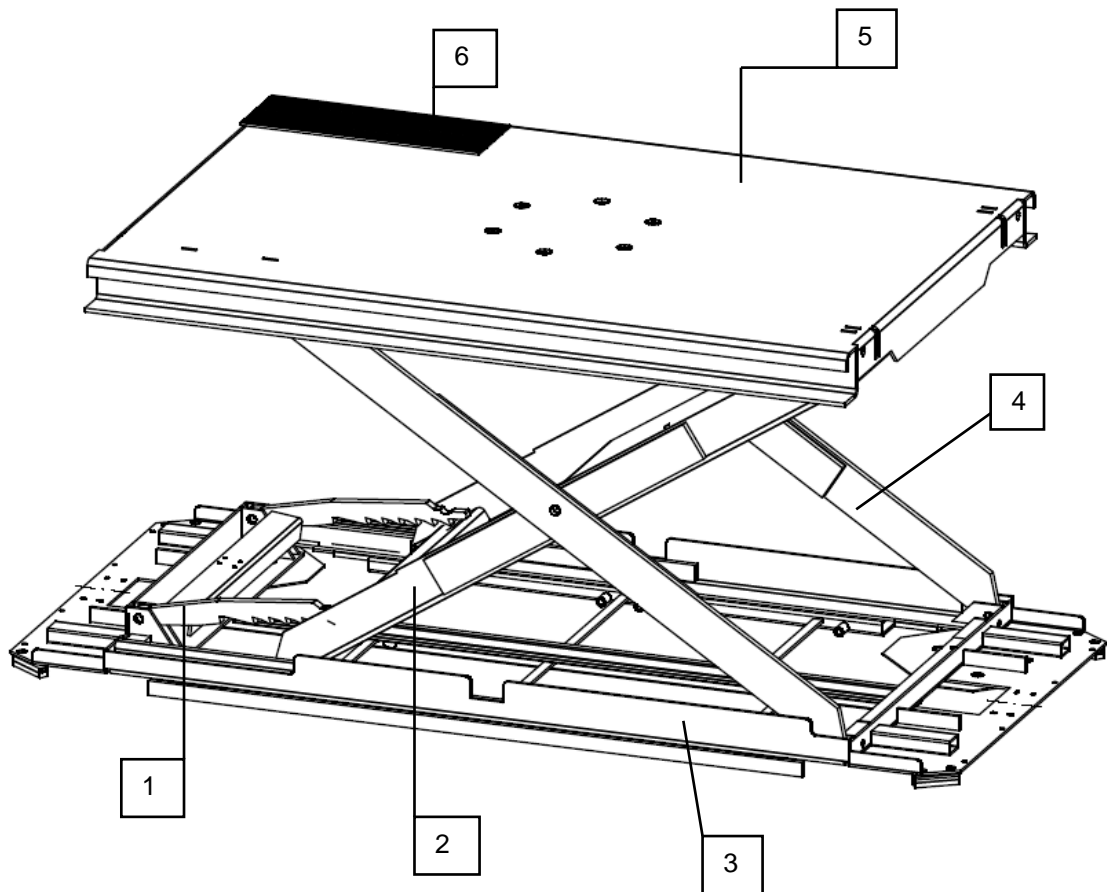


Figure 1: Construction of the lift

No.	Description
1	Fall protection
2	Inside scissors
3	Lower frame with air cushion
4	outside scissors
5	Upper frame
6	Rubber mat

### 4.3 Technical data

<i>Subject to technical changes.</i>	<b>K1200-01-KO</b>
Max. lifting platform capacity	2800 kg
Load distribution	1:1 ( constant )
Lifting Time	ca.25 sec.
Lowering Time	ca.35 sec.
Max. lifting height of platform	825 mm
Max. overall height	950 mm
Min. headroom	150 mm
Base body length	2000 mm
Base body width	1100 mm
Table length / wide	2000 mm/ 1100 mm
Gear	Pneumatic (2 air bellows)
Operating pressure for safety valve	3,5 bar
Pneumatic connection to supply system P <sub>max</sub>	8 bar (provided by customer) 6 bar minimum
Noise level	70 dB(A)
Composition	K1208-KO 2.8-001-3
Pneumatics	K1208-KO 2.8-010-4
Wear parts	K1208-KO 2.8-001-3
<b>Safety device</b>	
Lifting platform fall protection device	yes
Safety valve	yes

### 4.4 Product identification

The details of the lifting platform are stated on the type shield on the machine frame as well as in the EC Declaration of conformity.

Details Nameplate	Article No.		Year of construction	
	Machine type		Operating pressure	
	Serial No.		Vers.	
	Lifting capacity		Empty weight	

## 5 EC Declaration of conformity

in accordance with Appendix II A of the EC Machinery  
 Directive 2006/42/EC

The manufacturer	<b>Herkules Hebetchnik GmbH</b> <b>Falderbaumstraße 34</b> <b>D- 34123 Kassel</b>			
Party responsible for documentation	<b>Herkules Hebetchnik GmbH</b>			
hereby states that the machine described below	<b>Lifting platform</b>	<b>Machine type</b> K1200-HLS	<b>Article No.</b> K1200-01-KO	<b>Serial No.</b> <b>See cover sheet</b>
complies with the Health and Safety requirements of the following EC directives:	<b>Machinery Directive 2006/42/EG</b>			

Applicable harmonised standards

EN 1570 EN 12100; EN 13857; EN 349	Lifting platform Safety of machinery safety distances
--	--

**Any construction-related modifications, which affect the technical data specified in the operating instructions and thus significantly alter the intended use of the machine, shall render this declaration of conformity null and void!**

Kassel, 06.09.2011

Place, Date



René Bartsch, CEO

## 6 General safety instructions

### 6.1 Operator's duty of care

The lifting platform was designed and constructed with consideration of a hazard assessment and following careful selection of the harmonised standards with which to comply, as well as additional technical specifications. It thus corresponds to the latest technology, meaning unrivalled safety is guaranteed.

However, this safety level can only be reached during practical operation, when all the measures required for the same have been implemented. The scope of the duty of care for the operator of the lifting platform includes planning these measures and monitoring the execution of the same.

#### The operator must, in particular, ensure that

- The lifting platform is only used in the intended manner (see chapter “**Product description**”). The lifting platform is only operated when in a sound, fully-functional state and in particular, the safety installations are regularly checked for their functional efficiency
- The control bank for the control of the lifting platform is arranged and designed such that the operators can observe the lifting platform and the load with all movements as well as the space under the lifting platform and the load itself being visible. With poor visibility, the operator must ensure sufficient lighting is used.
- Entry into the danger area (the space under the lifting platform and under the load) by third parties is prevented. Operations in the danger area are prohibited. Excluded are maintenance operations, see chapter “**Safety check**”.
- The operating manual is always conveniently available to read and is fully available at the installation location of the lifting platform.
- The lifting platform is only operated by persons having read and understood the operating manual.
- These persons are regularly trained to deal with all ongoing occupational health and safety issues, as well as being familiar with the operating manual and particularly the safety instructions contained in the same.
- Only suitably qualified and expert persons shall be allowed to repair the lifting platform.
- No safety and warning notices attached to the lifting platform must be removed and all should remain legible.
- After working with the platform, this reverts to the lowest position and the control unit is secured against any misuse using a padlock (supplied by customer).

### 6.2 Operator's duties

The operating safety ordinances are intended for the operators of work equipment used in vulnerable areas.

The operator must take a risk assessment of the area where the work equipment (service lift) will be used. The dangers that arise during the use of the work equipment related to the substances and working environment should be detected and taken into account.

The operator shall take the measures necessary and choose operating equipment suitable for the conditions prevailing at the workplace and assure the safety and health of employees.

For the execution of risk assessment and decision on suitable equipment, the operator must apply country-specific guidelines and standards.

## 6.3 Fundamental safety measures



When operating the lifting platform, it must be observed the prevention against legal accidents in accordance with BGV A 1 (General Provisions, German law). For information purposes please refer to the regulation BGR 500 (operation of equipment, German law).



Make sure that the front wheels are oriented in an upright position. Before lifting, ensure the vehicle against rolling. Put the handbrake and reverse or first gear. Vehicles with automatic transmission put the gear P.



The operator must always observe carefully the car during the lifting or lowering process.



During the work on high heat (welding, grinding, etc..) protect the elements of the lifting platform and the air cushion or air bag against damage.

We draw your attention in particular to the following regulations:

- Follow the operating instructions during the operating of the lifting platform.
- The lifting platform must be used only to lift motor passenger cars.
- The total weight of the lifted vehicle must not exceed the prescribed load capacity, with a maximum permitted load distribution of 1:1 in or against the drive-on direction.
- Only employees who are over the age of 18 and who have received full instruction in operating the lifting platform are authorised to use the lifting platform without supervision.
- Apart from the operator, no person is allowed to be within the working area of the lifting platform during the lifting or lowering process.
- No person may be carried either on the lifting platform or inside the vehicle.
- Climbing onto the lifting platform or onto the lifted vehicle is prohibited.
- If any modifications to the structure or after any repairs to bearing parts have been made, the lifting platform must be inspected by a authorised expert. All such modifications and repairs must be entered onto the master data sheet.
- Before the vehicle is driven onto the lifting platform, always ensure that there is sufficient space between low-lying parts of the vehicle and the lifting platform.
- Do not make interventions on the lifting platform before maximum lift (no load) is reached and is supported by the supports.



Failure of safety rules will result in severe personal injuries and damage to the elevated vehicle.

Before installing the lifting platform:

- Ensure that the floor base on which the platform will be used is sufficiently strong.
- Ensure an adequate distance of the ceiling and walls.

## 6.4 Requirements of operating personnel

The lifting platform must only be operated by persons who have been trained, instructed and authorised. These persons must be familiar with the operating manual and proceed in accordance with the same. The respective authorisations of the operating personnel are to be clarified.

Moreover, for the following activities, specific qualifications are required:

Work Pattern	Execution
Installation	must only be performed by qualified person/customer service installer
Setting-up	must only be performed by qualified person/customer service installer
Briefing	must only be performed by qualified person/customer service installer
Troubleshooting	must only be performed by qualified person/customer service installer
Maintenance	must only be performed by qualified person/customer service installer
Upkeep	must only be performed by qualified person/customer service installer
Repairs	must only be performed by qualified person
Demounting	must only be performed by qualified person/customer service installer

Trainee operators must initially only work with the lifting platform when supervised by an experienced person. Evidence of the completed and successful orientation should be confirmed in writing.

All control and safety installations must, generally speaking, only be operated by suitably trained persons.

All persons engaged in work involving the lifting platform, must have read the operating manual and sign to confirm that they have understood the contents of the same.

## 7 Transport and preparation

Carefully position the lifting platform and boom onto the pallet with a suitable conveyor to the installation location.



**Lifting capacity of the conveyor > equivalent to the empty weight of the lifting platform (see technical data)**

### 7.1 Transport inspection

Upon receipt of delivery, test the lifting platform for completeness and damage in transit. In the case of obvious external damage having been sustained, please proceed as follows:

1. Leave the goods and packaging in an unchanged state. Do not attempt to use the product.
2. Immediately contact the customer service

<b>Customer Service:</b>	Herkules Hebetchnik GmbH Falderbaumstraße 34 D – 34123 Kassel Tel.: +49 (0)561 58907-0 Fax: +49 (0)561 58907-34 Email: info@herkules.de
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**Do not send back damaged goods before discussion with the customer service centre!**

### 7.2 Alignment and preparation

Position the parts such that the air hoses are in line with the air supply. Remove film and transport lock. Connect the control unit (lever valve in the accessories) with the 16 and 6mm rubber hoses with the base bodies of the lifting platform. For this purpose, use the enclosed hose clamps.

### 7.3 Packaging and disposal

The lifting platform is packaged with cardboard and film. After removal, these must be disposed of in an environmentally friendly manner. The packaging material should not be burnt.



## 8 Installation and assembly

When installing the lifting platform, the following safety instructions must be adhered to without fail – in order to avoid the risk of life-threatening injuries, damage to the machine and damage to other objects.

- The installation work must only be carried out by suitably-trained persons and with compliance of the safety instructions during the process.
- Before commencing the installation work, the lifting platform must be examined for any damage in transit.
- Always ensure that only authorised persons enter the working space and that no other persons are exposed to any risk from the installation work.
- All machine connections (hoses) must be positioned such that they do not create any trip hazard.
- Please also read the chapter “General safety instructions”.

### 8.1 Requirements for installation site

The lifting platform is only designed for use in sealed, dry and enclosed spaces.

The ground used for the installation site of the lifting platform must be horizontal and level (in accordance with DIN 18202), while the load-bearing capacity of the ground must also be sufficient to accommodate the maximum permissible total weight of the lifting platform. The operator of the lifting platform shall be the sole party responsible for the selection of a suitable installation site.

The lifting platform may only be used within a temperature range of 5 to 65°C. When selecting the installation site, please take into consideration the dimensions of the lifting platform, as described in chapters **4.3** and **14**.

Sufficient overhead clearance (at least equivalent to the total height of the lifting platform plus that of the load) must be ensured. Here, it is important to ensure that minimum distances (in accordance with country-specific rules and workplace regulations) to the hall walls or to other devices are complied with. It is important to ensure that the use of the lifting platform does not impede any escape routes. There must also be sufficient lighting at the installation site (in accordance with country-specific rules and workplace regulations).

At the installation site, to operate the lifting platform, a compressed air supply must be provided with 8 bar network pressure. There must also be a compressed air hose supplied by the customer with a large cross-section (Min. hose nozzle internal D=13mm as a connection to the 16mm internal hose on the lifting platform).



**Use only dry and oil-free compressed air! A filter regulator must be incorporated into the mains cable (air filter and water separator)!**

## 8.2 Preparation for installation

Connect control unit with the 16, 13 and 6mm rubber hoses to the lifting platform. For this purpose, use the hose clamps provided by customer. Connect the compressed air hose with the NW7 socket connector on the valve. With the lifting platform positioned on the pallet, fill with air until the fall protection device loop has slid over the last catch. Release lever valve.

Subsequently, align the lifting platform and fix it to the carriage, for this purpose, see the section "Fixing the lifting platform"

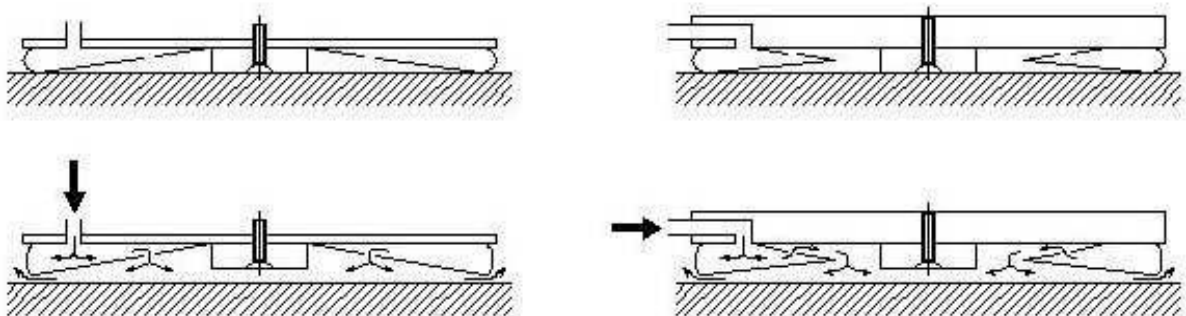
The aforementioned lifting platform will be installed in a standard transverse carriage of the customer and installed as a single construction by the customer.

The lifting platform must be aligned and fixed over the lower frame onto the construction.

## 8.3 Additional information on the Floor specification

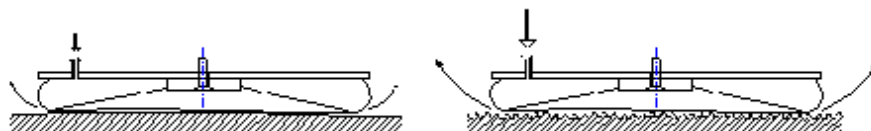
### Floor specification

The right condition for the correct functioning of aircushion systems is offered by a NON POROUS, SMOOTH and LEVEL floor. Appropriate is a mechanically trowelled floor with a smooth even finish. The surface can be impregnated to prevent dust, porosity and reduce wear. The joints can be filled using a silicone kit or plastic tape.



### SMOOTH

smooth floors ensure the air film to be as thin as possible. The air film determines the air consumption. The aircushion principle is based on the escape of excess air between the membrane and the floor. This air film allows the load to float almost without friction.



### NON POROUS

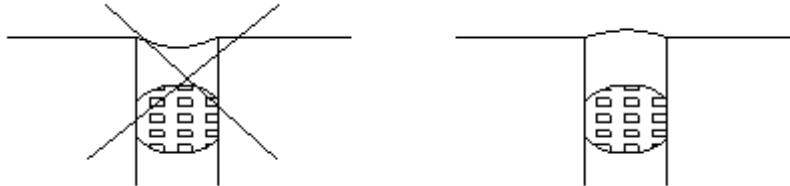
non porous floors are necessary to enable the aircushions to be inflated with air and keep the loss of air to a minimum.

**LEVEL**

floors prevent the load from drifting away, this will happen with a sloping floor

**JOINTS**

Expansion joints can be filled with a Urethane or Silicone kit. The top shape of the filler should be rounded and convex, not concave (ca. 0,2 of the width).



**FLOOR CLASSIFICATION**

To provide an example of the influence of the operating surface on air consumption we made a comparison between several surfaces. These have been given a suitable rating: 1 = optimum, 10 = unacceptable

1. Glass 1
2. Epoxy floor 1 – 2
3. Galvanized steel plate 1 – 2
4. Hardboard, plastic, linoleum, spray painted chipboard 1 – 2
5. Concrete floor, impregnated 2
6. Concrete floor, not treated 3 – 3
7. Concrete floor, not treated, new to 3 months 5 – 6
8. Concrete, manually trowelled (not acceptable) 8 – 10
9. Asphalt (not acceptable) 10 – 15.

**OLD FLOORS.**

Old floors can be suitable if they are smooth and there are no dents or cracks, otherwise improvement is necessary. For minimum costs paint or an impregnation can be applied. When, however, a new topcoat is necessary, a good attaching to the original surface is very important when applying aircushion transport.

**NEW FLOORS.**

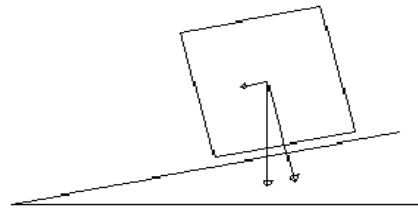
New floors are very appropriate if they are comparable to the following standard:

BSI-8204 Part 2 (UK), ASTM-E1155 M-87 (USA) or similar.					
Deviation (t) in mm	1	3	9	12	15
Length (L) in m	0,1	1	4	10	15

**POROUS FLOORS**

On a porous floor the loss of air may be so high, that insufficient air is supplied to create a satisfactory air film. The verage concrete floor without special treatment is to a certain degree porous. Normally, painting or sealing a concrete floor is sufficient treatment to overcome porosity.

Aircushions can, due to their elasticity, give limited adaption to unevenness in the floor up to a maximum of 2% of their aircushion diameter. Large fluctuations can work like slope. An object on aircushions will, because of the low friction, drift away on a sloping floor. The extra power, necessary to push the load "uphill" again, will be : "slope percentage x weight i.e. 1% x 10.000 kg = (100 kg) 1.000 N.



### INCIDENTAL TRANSPORT

A floor can always be made suitable for aircushion transport by covering it with f.i. a metal or plastic sheet. Joints and cracks can be covered or taped. Thresholds or steps can be overcome by using the tilt possibility of the aircushions and some filling material.

under the following conditions  
an AIRCUSHION TRANSPORT SYSTEM functions  
**ALWAYS and EVERYWHERE**

- 1 – sufficient air supply
- 2 – aircushions are parallel to the floor
- 3 – a suitable floor
- 4 – no over/under loading. Air cushions from 6.000 kg up, need a minimum loading of ca. 20 %

## 9 Operation

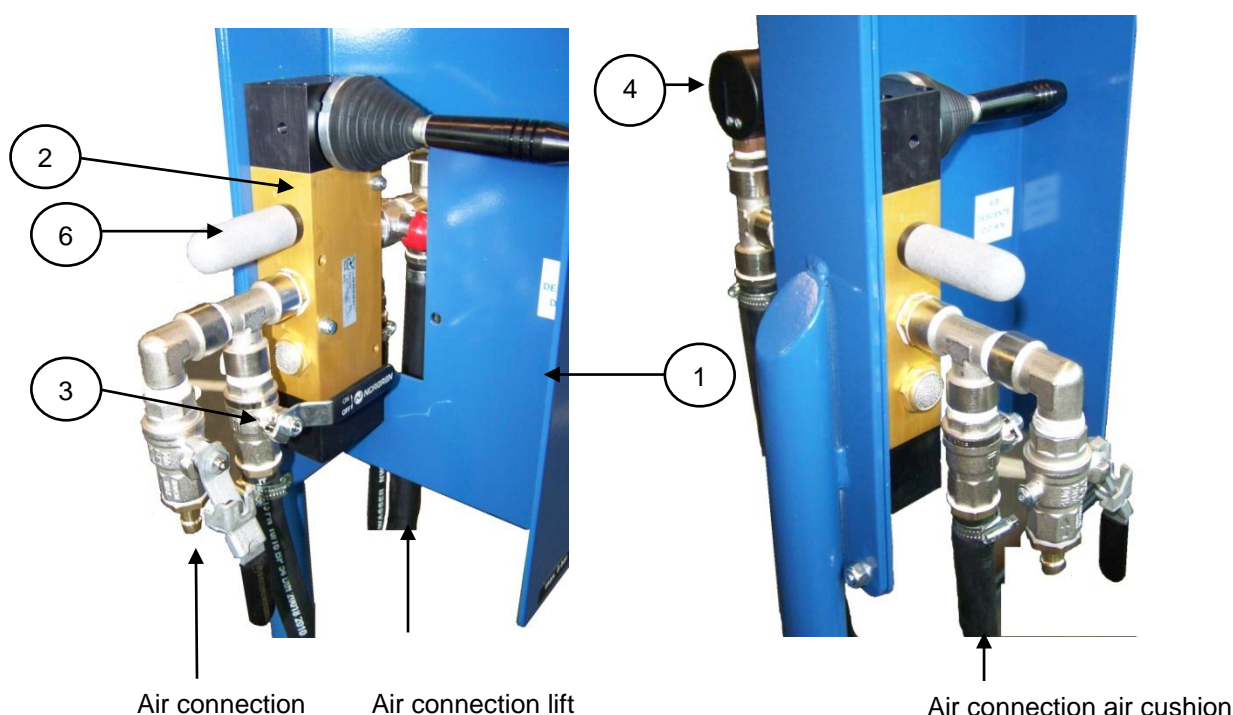
When using the lift, the following safety and the safety instructions in Chapter 6 must be observed - this will cause serious injury to persons, damage to machinery and other property damage avoided.

The lift may be used / applied according to its intended use.  
Inform yourself before using the lift on the correct response to incidents.



People who work with the lift must wear safety shoes and be familiar with the operating instructions.

### 9.1 Description of control unit



The lift comes with a hand lever valve. The control valve has three positions: raise, 0 position and sinks. The positions are marked accordingly. A sturdy frame (1) protects the operating valve (2). The pressure gauge (4) shows the pressure in the bellows. With the valve (3), the compressed air is fed to the air cushion. Connection leads to the fall protection.



**Always adhere to the safety instructions when operating the lifting platform!**

piece	Name	No.	drawing	item No.
1	sturdy frame	1	K 1201-096-3	
1	operating valve	2		700-220
2	Ball valve	3		760-109
1	pressure gauge	4		735-104
1	coupling connector	5	1/2" NW10	730-187
1	Silencer	6		810-139
1	coupling connector	7	1/2" NW7,2	730-184
6	coupling connector	8	1/2" NW13	730-188

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## 9.2 Working with elevated load

- Please follow the statutory accident prevention regulations.
- No persons should enter the space under the raised load.
- No parts should be placed on the raised load and the lifting platform.
- Load suspension device and load should not be exposed to vibration.
- Be careful of shifting the centre of gravity when mounting or removing heavy parts. This may cause the load to tilt over from the lifting platform.



**Secure the load against tilting.**

## 9.3 Starting-up

Before using the lifting platform, please implement the following functional checks:

- Ensure that no persons or objects are within the working space of the lifting platform.
- Ensure that the network air is present.
- Check to ensure that the shut-off valve on the control unit is open
- Activate the shift lever of the valve in the setting Lift-UP, until the lifting platform has reached the maximum height
- Place the shift lever of the valve in the setting Lift-DOWN, until the lifting platform stops automatically
- Repeat lifting and lowering movements without any load several times
- At the end of each lifting process or when in an intermediate position, the fall protection device should audibly snap into place in the gears

Please follow the operating instructions for the working area on the lifting platform.  
During operation, only operating personnel should access the lifting platform.

Please also read chapter “**General safety instructions**”.

## 9.4 Operate

Before starting up the lifting platform, read and respect the safety instructions in chapter 6, during the operation of the lifting platform.



**It is essential that you maintain visual contact with the lifting platform and the vehicle at all times during the lifting and descent operations.**

### Drive on/ drive up the lifting platform

- Make sure that the lifting platform is in the lower position, that the central ramps are inserted into the extension arms and that the access ramps are clipped onto the supports.
- Drive on the lifting platform with the vehicle over the access ramps, extension arms and intermediate ramps. Please take regard to the front roll-off safety device.
- Make sure that the vehicle is centred in longitudinal and traversal direction on the lifting platform. Secure the
- vehicle against rolling off, engage the gear and handbrake. To leave the lifting platform, proceed in reverse order.

### To lift up the lifting platform, please follow these steps:

- Make sure that the lifting platform can be lifted up without any risk.
- Activate the shift lever of the operating valve on “lift up” and hold this position until the vehicle is lifted up on it’s wheels.
- Check if the vehicle is positioned correctly on the lifting platform.
- Continue with the lifting process until the desired height is reached. If the desired height is reached, activate the shift lever of the operating valve on “position 0”. The lifting platform remains at this height. Releasing the shift lever, the lever returns automatically in “position 0” and the lifting process stops. The lifting process stops automatically if the maximum lifting height is reached.



**During the lifting process, make sure that at the end of each lifting process (especially in intermediate position less than lift max.) the anti-drop safety device is on both sides engaged securely in the gearing. This is identifiable, the anti-drop safety device snaps in audibly. It may not be carried out any workings under the lifted up with load (e.g. vehicle) lifting platform.**

### To lower the lifting platform, please follow these steps:

- Before lowering the risk area must be controlled, that in the workspace of the lifting platform are no persons or objects.
- Activate the shift lever of the operating valve on “lower” and hold until the lifting platform is completely lowered.
- The lowering process ends, when the lifting platform has reached the initial position. An interruption of the lowering process is in any time possible by moving the shift lever in position 0. Releasing the shift lever, the lever returns also at lowering process automatically in position 0 and the lowering process stops.

### Anti-drop safety device

- During the lifting process to maximum height, the anti-drop safety device is swivelled downwards. The snap tabs of the anti-drop safety device slides on both sides over the snap cavity on the lower frame. After stop lifting in an intermediate position the anti-drop safety device has to snap in on both sides for security.

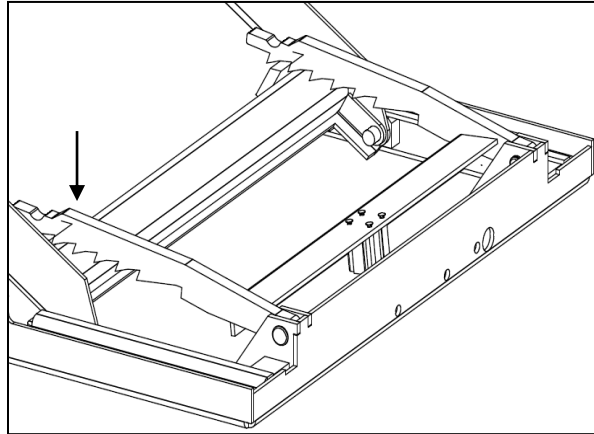


Figure 4: lifting up - anti-drop safety device swivelled downwards

- During the lowering process in initial position the anti-drop safety device is swung out over the cylinder. After stop lowering, the snap tabs of the anti-drop safety device fall down immediately.

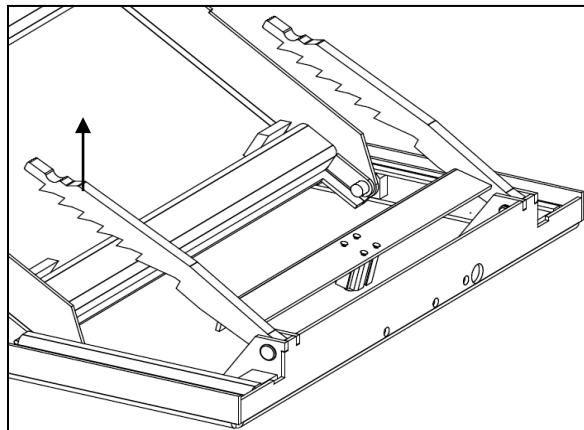


Figure 5: lowering - anti-drop safety device swung out upwards



**If the lifting platform does not lower down, the anti-drop safety device is perhaps claimed by a leak air line. In that case activate for a short-time the shift lever on “lift up” until the anti-drop safety device is free. Repeat the lowering process.**



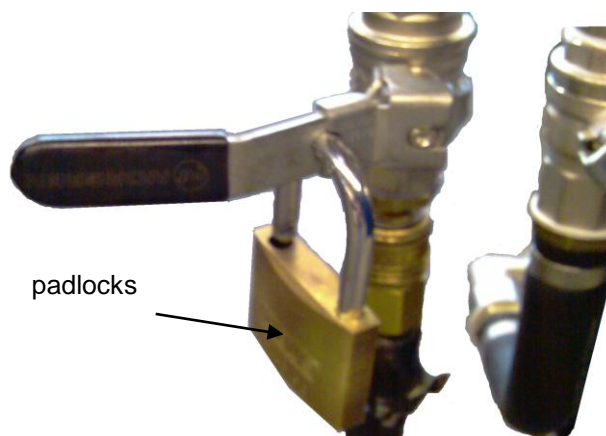
## 9.5 End of work

After ending work with the lifting platform, the following points should be checked:

1. The lifting platform must be in the lowest position.
2. Shut the cut-off valve.
3. Safeguard the cut-off valve against unauthorised use.



Open



Closed

For the selection of the padlock you follow these guidelines:

- U-lock
- Castle width: 38-43 mm
- Ironing Closed height: 28-35 mm
- shackle diameter: 6 mm

Recommendation of padlocks

Manufacturers	Item No.
Burg Wächter	222 45
GTV Schließ-Systeme	1392 (A=40mm, B=29mm, C=6mm)

## 10 Assistance in the event of faults

To avoid damage to machinery or life-threatening injuries when correcting faults on the lifting platform, following points must be observed without fail:

- Only repair faults if you possess the requisite qualifications.
- First make sure that the lifting platform cannot be started up accidentally by shutting off the compressed air supply.
- Use a support to secure the upper frame in lifted position.
- Also read chapter “General Safety Information”.

### 10.1 Likely faults and how to correct them

Source of fault	Correction of defects
<p><b>Disfunction during lifting</b></p> <p>Maintenace unit pressure gauge without effective pressure.</p> <p>Hoses jammed, kinked or damaged.</p>	<p>Provided by the customer</p> <p>Control and provide for effective pressure P<sub>max</sub> = 8 bar</p> <p>Open shut-off valve on the control unit</p> <p>Replace hose lines with new ones</p>
<p><b>Disfunction during lowering</b></p> <p>The lifting platform has met an obstacle</p>	<p>Lift the platform slightly, remove the obstacle, repeat the lowering process</p>
<p><b>Anti-drop safety device</b></p> <p>Anti-drop safety device activated or locked with air loss and/or without compressed air supply.</p>	<p>1. In case of light air lake, lift up the lifting platform without checking.</p> <p>2. Provide for effective pressure P<sub>max</sub> = 8 bar.</p> <p>3. In case of strong air lake, find leakage and if necessary change the defective parts.</p>



Once you have carried out checks (1-3) gently raise the lifting platform until the anti-drop safety device disengages, then lower it.



If despite the remedial action set out above, the lifting platform still does not rise or descend, call Customer Services.

**Customer Service:** Herkules Hebetchnik GmbH  
D – 34123 Kassel  
Tel.: +49 (0)561 58907-0  
Email: info@herkules.de



Use only original manufacturer’s spare parts to replace faulty parts.

## 11 Maintenance

Maintenance must be carried out only by suitably qualified persons.

Maintenance and cleaning of the lifting platform must be carried out at regular intervals by the operator - **at least once a month** -. Do not use water or flammable liquids in no case.

For a long life and continuous operational efficiency of the lifting platform, please respect the following points:

- Control and lubrication points, 1 to 7 (with moving parts) are listed on the next page.
- Use only original spare parts as well as suitable working tools.
- The recommended maintenance intervals are to be respected.
- For all maintenance work, which are not fixed or given in this instruction for use, contact your salesperson or rather the customer service department of the manufacturer.

**With a grave operating efficiency of the lifting platform, the wearing parts (such as bearing bolts and bushings and slide blocks) are to be frequently checked and replaced. The wear limit is reached when the diameter of the components is reduced by more than 0.5 mm.**

Effect maintenance work only in lifted position, (max. Height, without load) and use a support for the lifting platform and shut off the compressed air supply.

Maintenance intervals	Workstep	Lubricant, maintenance agents
Monthly	Check for wear, clean and lubricate all movable parts like hinge bolts, slide blocks, slide faces	Sector painter Use only greases that does not contain substances that might impair surface wetting – “that is silicone”
Monthly	Control the airbag and hoses for damage. Visual control and leak tightness. Control the surface of the airbag for contamination, clean and care	Use suitable maintenance and cleaning agents for rubber surfaces
Monthly	Control valves for functional capability and leak tightness	
Monthly	Check fundament dowels for tightness, if necessary re-screw tightly	
Monthly	Control maintenance unit (filter regulator), observe instruction of the manufacturer	
At least once a year	Regular safety checks chapter 11.1	
Every 2 years of operating year	Change safety valve	
Every 6 years of operating year	Change complete kit of rubber hoses	

## **11.1 Characteristics and product-life of the airbag**

The airbag is a flexible element specifically developed for use in the lifting platforms. Rubber sleeve is subject to the aging process and is to check particularly careful after 6 years. Our statistics shows that airbags, which were maintained carefully, can afford over 20 years their services.

If the airbag was set out harmful influence like:

- Use of oily compressed air
- UV-Radiation
- Use of chemical products
- Mechanical damage of the rubber parts like abrasion, pricking, or the like

the airbag must be exchanged after 6 operating years despite of the positive results of the check of denseness and porosity.

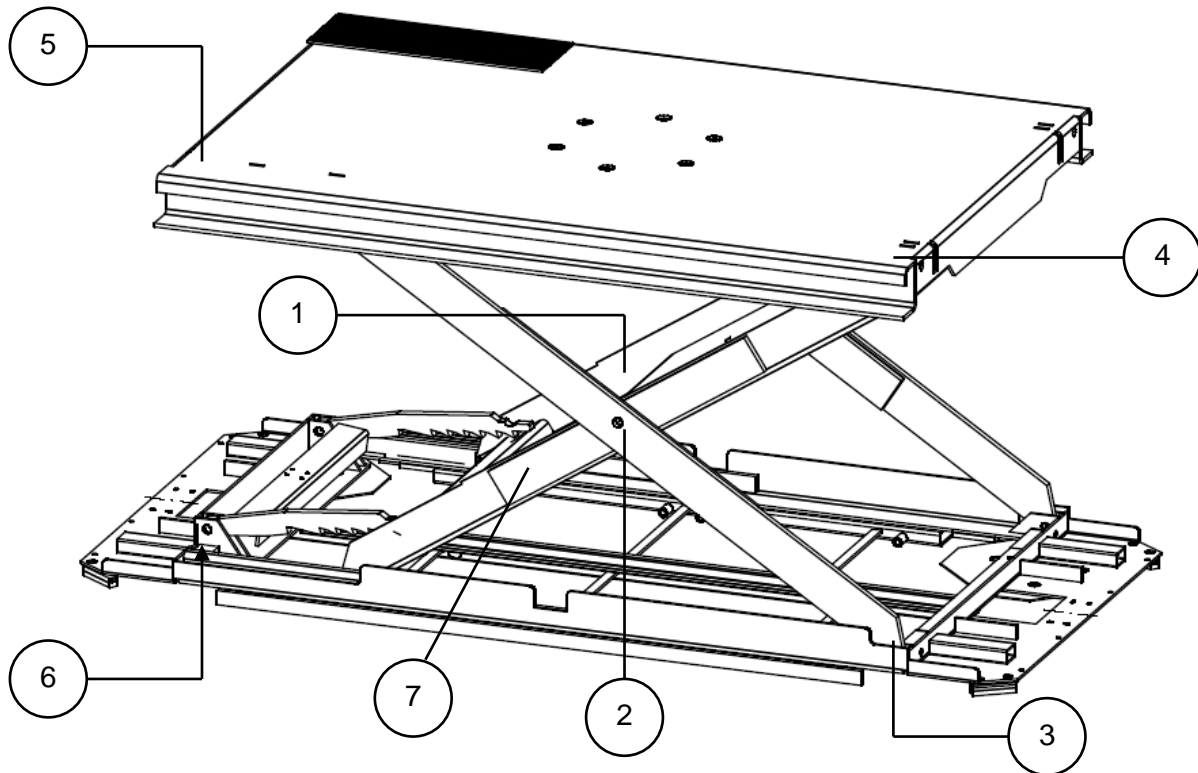
Permissibly are only original parts of the manufacturer.

## **11.2 Comment to filter regulator and air lines**

The filter control system is not included with delivery of the lifting platform. A filter control system in the mains connection must be provided by the customer. Use only dry and non-oily air. During maintenance and cleaning follow the indications and information of the manufacturer of the filter control system.

## 11.3 Inspection points

The following checkpoints should be checked at the service intervals.



### Inspection- and grease points

1. Check airbag for damage  
Check that the screws for the airbag fastenings above and below the platform are firmly seated. Tighten if necessary.
2. Main bearing / scissors bolts  
Check the locknut on the scissors bolts of correct seat. If the parts are damaged, exchange the complete main bearing.
3. Solid bearing lower frame  
Check that the lock washer on the bearing bolts on the solid bearing of the scissors (on the bottom) on the right and left side are correctly seated. Correct or exchange it if necessary.
4. Solid bearing upper frame  
Check that the lock washer on the bearing bolts on the solid bearing of the scissors (on the top) on the right and left side are correctly seated. Correct or exchange it if necessary.

### Grease points

On sliding surfaces:

5. Outside scissors with sliding piece on the upper frame
6. Inside scissors with sliding piece on the lower frame
7. Inside surface of the outside- and inside scissors right and left

## 12 Safety check

The safety check is required to guarantee the operational security of the lifting platform.

### The following must be implemented:

Before the initial setting-up of the lifting platform by the manufacturer.

Please refer to the form "Operational and safety check" to do so (**chapter "Functional and safety checks"**).

After the initial start-up, check at regular intervals in accordance with §10 ( 2 ) Occupational Health and Safety regulations !:

Please refer to the form "Regular safety checks" (**chapter "Regular safety check"**).

In copies, record the state of the lifting platform and store the test record alongside the operating manual.



**Both one-time and regular safety checks must be carried out by a suitably-trained person. It is advisable to also implement maintenance at the same time.**



**As part of its customer service program, the Herkules Hebetchnik GmbH company offers maintenance contracts. Once a year, a customer service representative will visit your company, during which time all the required operations will be implemented and the relevant inspection records issued for the employers' liability insurance association.**

**For further questions, please contact our customer service.**

<b>Customer Service:</b>	Herkules Hebetchnik GmbH Falderbaumstraße 34 D – 34123 Kassel Tel.: +49 (0)561 58907-0 Fax: +49 (0)561 58907-34 Email: info@herkules.de
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## 12.1 Regular safety check

(In accordance with §10 ( 2 ) BetrSichV !)

Type	
Serial No.	

Test step	OK	Not OK	Verification	Notes
Nameplate				
Plate with lifting capacity				
Plate with network pressure				
Caution shearing system				
Company logo				
Secure fit of all supporting screws				
Secure fit of shearing pins (middle)				
State of pneumatic lines (secure fit and airtightness)				
Safety valve set to 3.5 bar op. pressure				
Manometer network pressure $P_{max} = 8$ bar				
When released, control valve reverts automatically to 0 setting				
Fall protection function				
State of air bellows				
State of supporting construction				
State of air cushion				

Inspection result	
	Start-up not permitted, verification required
	Start-up possible, faults to be rectified by:.....
	No fault, start-up possible immediately

Safety check performed on: .....

Name, address of competent person: .....

.....

Signature of competent person

Signature of operator

### With the required fault rectification

.....

Signature of competent person

Signature of operator

## 13 Dismantling and disposal

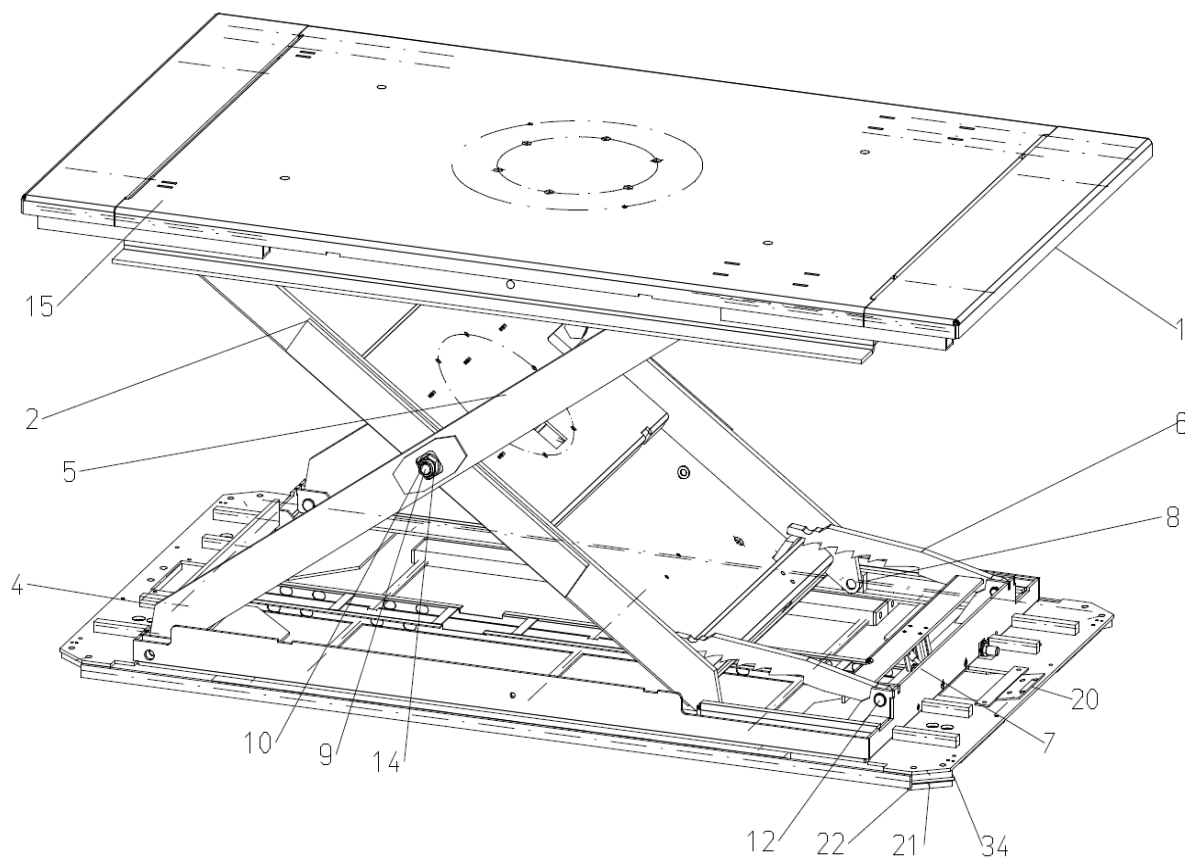
### 13.1 Disposal

The lifting platform must be disposed of in accordance with current applicable environmental and disposal guidelines.



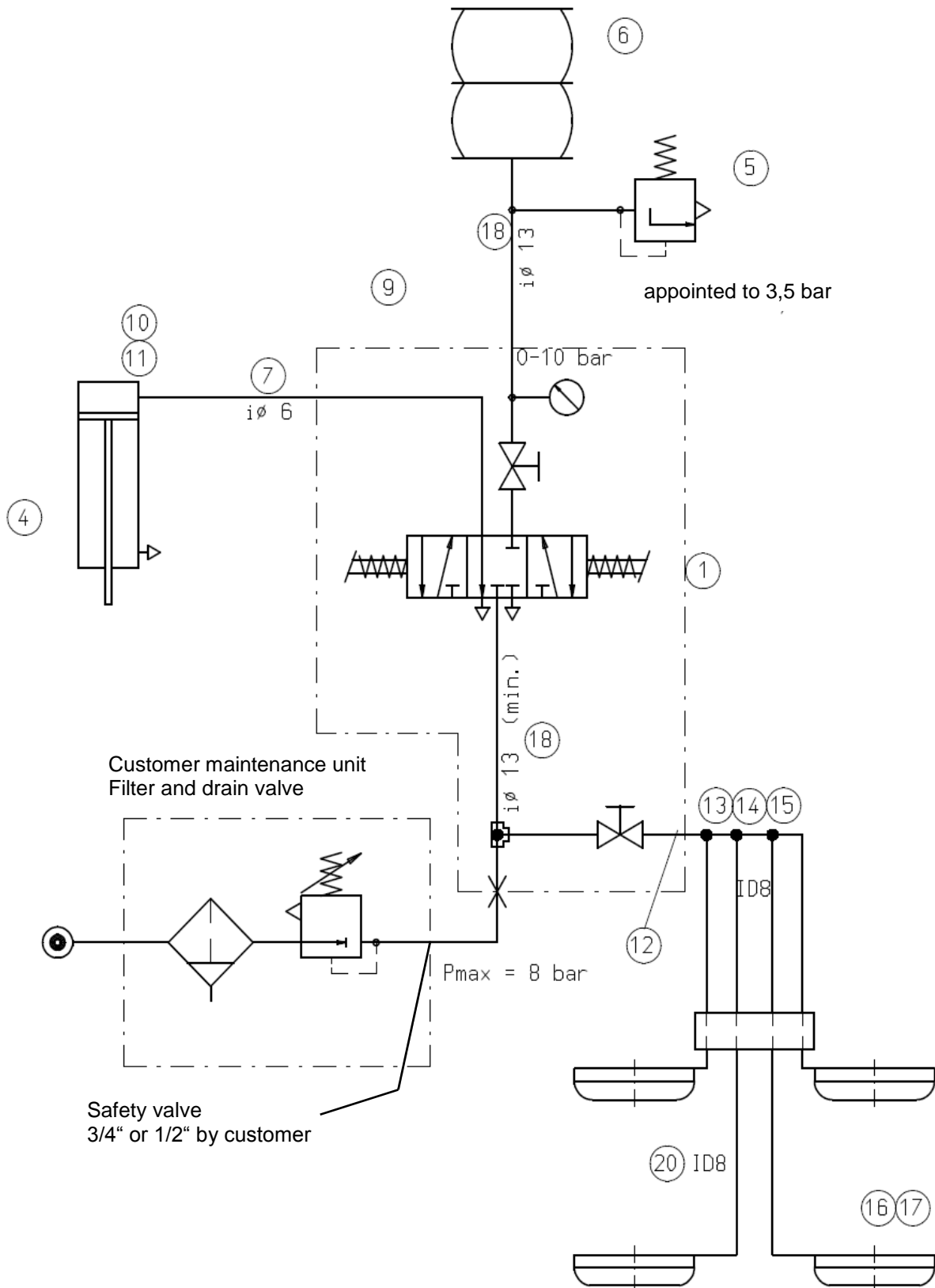
## 14 Additional information

Composition lifting platform K 1200-01-KO (Drawing K1208-KO 2.8-001-3)



Pcs.	Description	Consecutive no.	Drawing No.
1	Upper frame	1	K 1208 KO-2,8-004-2
1	Inside shear	2	K 1208-006-2
1	Lower frame	4	K 1208 KO-2,8-005-1
1	External shear	2	K 1208-007-3
1	Pneumatics	5	K 1208 KO 2,8-010-4
1	Fall protection device	6	K 1208 KO-2,8-030-3
1	Sliding for fall protection device	7	695-001
1	Sliding	8	695-000
2	Central Bolt	9	500-661-1
2	Lower fixed bearing bolt	11	690-139
2	Fall protection device bolt	12	690-140
2	Hexagonal nut M24-8	14	500-631
2	upper fixed bearing bolt	15	690-147
1	mount for distributors	20	K 1208 KO-3,2-014-4
24	Compensating plate	21	K 1208 KO-3,2-021-4
1	Trolley	22	K 1201-121-3
8	compensation for a glider	34	K 1208 KOLB 3,2-029-4

Pneumaticplan K 1200-01-KO (Drawing K1208-KO 2,8-010-4)



**Pneumatic parts list**

Pcs.	Description	Consecutive no.	Drawing No.	Article No.
1	Hand lever valve	1	K 1208-Ko 2,8-028-4	
1	Pneumatic cylinder	4	40x25	700-207
1	Safety valve 3,5 bar	5	3/8"	700-171
1	Air bellows	6	K 1207-010-3	
1	Rubber hose black ca.7m	7	Inner Ø 6mm	720-106
4	Hose clamp	9	16-25	720-121
1	Angle plug connection	10	1/8"x 6mm	730-170
1	hose menders	11	6mm	730-138
1	Rubber hose black ca.8m	12	Inner Ø16mm	720-113
4	Ball Valve	13	1/4"	760-112
2	Hose clamp	15	10-16	720-119
4	Air cushion	16		800-223
1	Rubber hose black ca. 7m	18	Inner Ø 13mm	720-112
4	Extension piece	20	1/4" a x 1/4" i	

**Pneumatic pos.5- safety valve**

Installed at the air bellows- under the inside shear

