Operating instructions and test book for **AirgoMatic 3213** vehicle lifting platforms

Machine type	Article no.	Serial No.
K 3213 HLS	HLS 3213-11 /-61	
K 3213 HLS	HLS 3213-14 /-64	
K 3213 HLS	HLS 3213-16 /-66	
K 3213 HLS	HLS 3213-DUO-11 /-61	
K 3213 HLS	HLS 3213-DUO-14 /-64	
K 3213 HLS	HLS 3213-DUO-16 /-66	

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CE

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Translation of the german original version

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1 Functional checks and safety checks

carried out by the manufacturer in accordance with the following information:

Following placards present:

- ☐ Type plate
- ☐ Operating instructions (brief version)
- ☐ Load-bearing capacity
- ☐ Mains pressure
- ☐ Raise UP, Lower DOWN
- ☐ Company logo
- ☐ CE mark
- ☐ Vehicle lift (HLS3213-DUO only)

Function and safety checked:

- ☐ **Safety valve set to 4 bar operating pressure**

Checked:

- ☐ Functional test without load
- ☐ Fall safeguard function
- ☐ Runway function
- ☐ Control valve moves to the 0 position autonomously
- ☐ No damage on the surface of the air bellows
- ☐ All load-bearing screws tight
- ☐ Scissors bolts / bearings safeguard
- ☐ Condition of pneumatic lines (firm seating and leak-tightness)
- ☐ Access ramp/roll-off safeguard function
- ☐ Slider release function (HLS3213-DUO only)
- ☐ Support arm function (HLS3213-DUO only)
- ☐ Support function (HLS3213-DUO only)

Serial no.: see cover sheet

Date: _____

Name: _____

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2 General information

These operating instructions (and test book) contain important information on the installation, for safe, correct and economical operation and for maintaining the functional safety of your lifting platform.
Observing the operating manual helps to avoid hazards, reduces repair costs and down times, and extends the service life of the lifting platform.

This test book contains a form to use as verification of the regular **safety checks**. Use this to document the checks. (It is recommended to make copies of the form before filling it out for the first time.)

Installation and checking

Safety-relevant work and the safety checks shall be carried out exclusively by persons who are trained for this. They will be referred to in this document as specialists and competent persons.

2.1 Warnings

The following symbols are used with the explanatory text in order to highlight hazard points and important information. Pay particular attention to sections of text identified with these symbols.

Indicates a risk to life and limb. There is a risk to life in the event of improper implementation of the procedure highlighted with this warning!

Indicates a key function or an important note!

2.2 Limitation of liability

All information and instructions in this operating instructions have been provided under due consideration of applicable guidelines, the current state of technology, as well as our many years of experience.
The manufacturer accepts no liability for damage caused by:

- Disregard of the operating instructions
- Improper use
- Use of untrained personnel
- Unauthorised conversions
- Negligent maintenance

2.3 Copyright

The operating instructions must be treated as confidential. They are only intended for persons involved with the machine. It is prohibited to make the operating instructions available to third-parties without the written permission of the manufacturer.

The texts, drawings, figures and other representations contained within them are copyright protected and subject to industrial property rights.

2.4 Guarantee conditions

The statutory warranty conditions apply.

2.5 Customer service

You can reach our customer service department for technical queries as follows:

Customer service: Herkules Hebetechnik GmbH
Miramstraße 68b
34123 Kassel, Germany
Tel: +49 (0)561 58907-70
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3 Product description

3.1 Proper use

The vehicle lifting platform serves exclusively for lifting motor vehicles (passenger cars) with a permissible nominal load, according to technical data, on the wheels.
Alternatively, the vehicle can also be lifted using the wheel-free lifting function (HLS 3213-DUO only)

Lifting persons or other objects is not permitted.

It is not permitted to work underneath the raised vehicles or during the lifting or lowering process.

Operation shall be carried out only by persons who have read and understood the operating instructions and who are over 18 years of age.

Vehicles shall be lifted only at the intended points (pick-up points or tyres). Only vehicles shall be lifted, as stipulated in the operating instructions.

Intended use also includes thoroughly reading these operating instructions and complying with all information contained within - in particular the safety instructions.

Furthermore, this also includes ensuring that all inspection and maintenance work is carried out at the specified time intervals.

If the vehicle lifting platform is not used in accordance with these provisions, it is not possible to guarantee safe operation of the lifting platform.

No other form of use, nor any extended form of use of the lifting platform, can be defined as 'intended use'.

Any personal injuries and material damage, as well as damage to the vehicle, arising as a result of incorrect use are the responsibility of the operator of the vehicle lifting platform and not the manufacturer!

3.2 Product structure

The HLS vehicle lifting platform consists of a pneumatically operated platform body and outriggers which lift the vehicle directly via the wheels.
Alternatively, the vehicle can also be lifted using the wheel-free lifting function (HLS3213-DUO only).
The air bellows carry out the lifting movement, which is guided laterally by the scissors. The scissors likewise restrict the lift height of the lifting platform. A fall safeguard prevents the lifting platform collapsing dramatically in the event of a loss of compressed air.

The lifting platform is operated with a control unit which is connected to the lifting platform via two air hoses. (Air bellows / fall safeguard)

Technical data on vehicle lifting platforms can be found in the chapter **"Technical Data"**.

Please refer to the chapter **"Installation"** for instructions on correct installation.

Figure 1: *HLS3213-14 product*

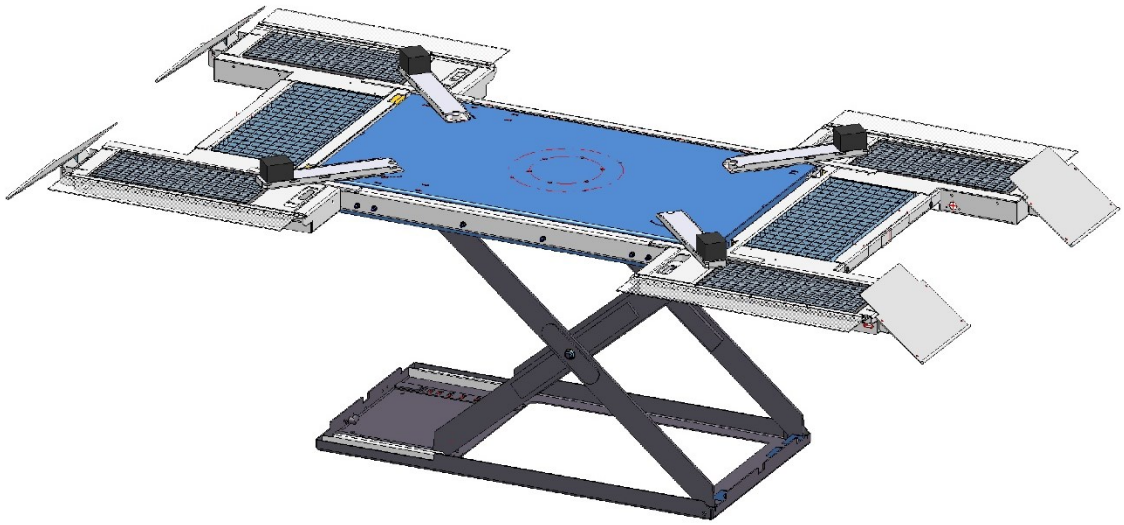


Figure 2: *HLS3213-DUO-14 product*

3.3 Technical data

Subject to technical changes.	**HLS 3213-11 / -61 HLS 3213-14 / -64 HLS 3213-16 / -66**	**HLS 3213-DUO-11 / -61 HLS 3213-DUO-14 / -64 HLS 3213-DUO-16 / -66**
Lifting platform load-bearing capacity	3200 kg	
Load distribution max.	3:2 in extending direction or opposite to the extending direction	
Unladen weight	HLS3213-11/-61: 925 kg HLS3213-14/-64: 865 kg HLS3213-16/-66: 865 kg	HLS3213-DUO-11/-61: 1050 kg HLS3213-DUO-14/-64: 955 kg HLS3213-DUO-16/-66: 955 kg
Lifting platform lifting time	max. 25 seconds	
Lifting platform lowering time	max. 30 seconds	
Lifting platform usable lift stroke	1150 mm	
Total height with support arm max.	1300 mm	1300 mm + 40 mm
Drive-over height	HLS3213-11/-61: 110 mm HLS3213-14/-64: 0 mm HLS3213-16/-66: 0 mm	HLS3213-DUO-11/-61: 110 mm HLS3213-DUO-14/-64: 0 mm HLS3213-DUO-16/-66: 0 mm
Overall height max. with support arm	152 mm	152 mm + 40 mm
Length of main body	1950 mm	1950 mm
Width of main body	1056 mm	1056 mm
Platform length (without ramps)	4026 mm	4026 mm
Width of platform	2101 mm	2101 mm
Drive	Pneumatic (3 air bellows)	
Operating pressure for safety valve	4 bar	
Pneumatic mains connection pressure P_{max}	8 bar (provided by customer)	
Noise exposure	< 70 dB(A)	
Safety devices		
Lifting platform fall safeguard	Yes	Yes
Safety valve	Yes	Yes
Vehicle roll-off safeguard	Yes	Yes
Protective flaps	Yes (HLS3213-14/64 only)	Yes (HLS3213-DUO-14/64 only)
CE stop with acoustic signal	Yes (HLS3213-16/66 only)	Yes (HLS3213-DUO-16/66 only)

3.4 Product identification

The characteristic data for the lifting platform is provided on the type plate on the machine frame and in the EC Declaration of Conformity.

Information Type plate

Article no.		Year of construction	
Machine type		Operating pressure	
Serial No.		Safety pressure	
Load-bearing capacity		Unladen weight	

4 EC Declaration of Conformity

According to Annex II A of the EC Machinery Directive 2006/42/EC

The manufacturer	**Herkules Hebetechnik GmbH** **Miramstraße 68b** **34123 Kassel, Germany**			
Documentation controller	**Herkules Hebetechnik GmbH**			
hereby declares that the machine described below	**Lifting platform**	**Machine type** **K3213-HLS** **K3213-HLS** **K3213-HLS** **K3213-HLS** **K3213-HLS** **K3213-HLS**	**Article no.** **HLS 3213-11/-61** **HLS 3213-14/-64** **HLS 3213-16/-66** **HLS 3213-DUO-11/-61** **HLS 3213-DUO-14/-64** **HLS 3213-DUO-16/-66**	**Serial no.** **See cover sheet**
satisfies the requirements of the following EC Directives:	**Machinery Directive 2006/42/EC**			

Applied harmonised standards:

EN 1493	Vehicle lifting platforms

EC type examination	Test certificate no.
	4420512021017
Test centre	TÜV Nord Cert GmbH

5 General safety instructions

5.1 Operating company's duty of care

The HLS vehicle lifting platforms have been designed and constructed taking into account a hazard analysis and after careful selection of the harmonized standards that must be complied with, and with due consideration of additional technical specifications. They are therefore state of the art and guarantee a maximum level of safety.

This safety can only be attained when all required measures are taken. It falls under the duty of care of the lifting platform owner to plan these measures and to monitor the execution of these measures.

In particular, the owner must ensure that

- the lifting platform is only used as intended (see section **"Product description"**).
- the lifting platform is only operated when in a faultless and functional condition, and in particular that the safety devices are regularly checked for proper functioning.
- the positioning and design of the control unit is such that the operator can observe the lifting platform and the load during all movements, and can overlook the space under the lifting platform and the load. In the event of poor illumination, the operator must provide adequate lighting.
- entry to the hazard area (space underneath the lifting platform and under the load) by people is prevented. Working in the hazard area is prohibited. Exceptions to this are maintenance tasks (see the chapter **"Maintenance"**).
- that the operating instructions are always in a legible condition and are completely available at the lifting platform location.
- the lifting platform must be operated only by personnel who have read and understood the operating instructions.
- such personnel are regularly instructed on all applicable issues regarding industrial safety and environmental protection, and that such personnel are familiar with these operating instructions and in particular with the safety instructions contained herein.
- only competent persons and specialists repair the lifting platform.
- no safety and warning information on the lifting platform is removed and remains legible.
- no interventions (e.g. repairs) are carried out on the lifting platform without having taken adequate safety measures (secure the platform body with suitable means against sagging).

5.2 Responsibilities of the operating company

The industrial safety regulations stipulate a few measures for the operator of working equipment for use in hazardous areas.

The operating company must carry out a hazard assessment for the area in which the operating equipment (lifting platform) is to be used. This should identify and take into account the hazards that could arise with the use of the operating equipment in conjunction with the operating materials and the working environment.

The operating company must carry out the required measures and select the appropriate operating equipment suitable for the conditions at the workplace and whose proper use should guarantee the health and safety of all concerned.

For the implementation of the hazard assessment and the selection of suitable operating equipment the operator must apply the country-specific guidelines and standards.

5.3 Fundamental safety measures

When dealing with lifting platforms, the legal accident prevention regulations per BGV A 1 (general regulations) must be complied with. The BGR 500 (operating work equipment) can be used for information.

Ensure that the front wheels are aligned straight ahead. Before lifting, secure your vehicle against rolling away. Apply the handbrake and engage first gear or reverse gear. In the case of vehicles with automatic transmissions, engage "P".

The vehicle in question must be monitored by the operating person throughout the whole lifting or lowering procedure.

Lifting platform components such as air cushions or air bellows must be protected from mechanical and chemical damage when the work involves the generation of high heat (welding, grinding, etc.).

Particular attention is drawn to the following regulations:

- The lifting platform is intended only for lifting motor vehicles (passenger cars).
- The total weight of the vehicle to be lifted shall not exceed the stipulated load-bearing capacity, whereby a maximum load distribution of 3:2 in the extending direction or 2:3 in the opposite direction is permitted.
- Observe the operating instructions when operating the lifting platform.
- Independent operation of the lifting platform is permitted only by persons who are at least 18 years of age and who have been trained in the operation of the lifting platform.
- There shall be no persons, other than the operator, within the movement area of the load and the lifting platform during the lifting or lowering process.
- The transport of persons on the lifting platform or in the vehicle to be lifted is prohibited.
- Climbing onto the lifting platform or the raised vehicle is forbidden.
- When working on the lifting platform (e.g. repairs) sufficient safety measures must be taken. (Secure platform body with suitable means against sagging.)
- Before driving on the lifting platform, make sure that there is sufficient distance between low-lying vehicle parts and the lifting platform.
- The rubber blocks must be set down on the largest contact surface. It is not permitted to stack these.

Disregarding the safety instructions can result in serious injuries to personnel and to the raised vehicle being damaged.

5.4 Operating personnel requirements

The lifting platform must only be operated by personnel who are trained, instructed and authorised to do so. These people must be familiar with the operating instructions and act in compliance with them. The respective competences of the operating personnel must be clearly defined.

Furthermore, special qualifications are required for the following activities:

Activity	Implementation
Installation	Herkules customer service installation technician / competent person
Commissioning	Herkules customer service installation technician / competent person
Instruction	Herkules customer service installation technician / competent person
Fault rectification	Herkules customer service installation technician / competent person
Servicing	Herkules customer service installation technician / competent person
Maintenance	Herkules customer service installation technician / competent person
Repair	Herkules customer service installation technician
Dismantling	Herkules customer service installation technician / competent person

Personnel in training should initially only work on the lifting platform under the supervision of an experienced person. Successfully completed instruction should be confirmed in writing.

Only instructed personnel are permitted to activate any of the control and safety devices.

All persons who work on the lifting platform must read the operating instructions and provide their signature to confirm that they have understood them.

6 Transport and preparation

6.1 Transport inspection

After receipt of delivery, check the goods for external transport damage.
In the event of damage being detected, proceed as follows:

- Leave the goods and the packaging unchanged. Do not use the goods.
- Contact the Herkules customer service department immediately.

Customer service: Herkules Hebetechnik GmbH
Miramstraße 68b
34123 Kassel, Germany
Tel: +49 (0)561 58907-70
Fax: +49 (0)561 58907-34
Email: info.de@hedson.com

Do not send damaged goods back before talking to the Herkules customer service department!

6.2 Disposal of packaging materials

The packaging materials must be disposed of in accordance with current environmental and disposal guidelines.

7 Installation and assembly

When installing the lifting platform, ensure that the following safety instructions are complied with. This will prevent life-endangering injuries, damage to machinery and other property.

- Installation work may only be performed by qualified personnel in compliance with the safety instructions.
- Prior to starting installation work, examine the lifting platform for transport damage.
- Make sure that only authorised personnel are permitted to enter the working area and that no other person is at risk as a result of the installation work.
- All machine connections (hoses) must be laid such that they do not cause trip hazards.
- Also read the chapter **"General safety instructions"**.

7.1 Environmental prerequisites for installation

The lifting platform is suitable exclusively for use in closed, dry and covered areas.

The floor at the installation location of the lifting platform must be horizontal and level (per DIN 18202) and the load-bearing capacity of the floor must be designed to bear the permissible total weight of the lifting platform. The lifting platform operating company is solely responsible for the selection of a suitable installation location.

The lifting platform shall be used only in a temperature range of 5°C to 65°C. When selecting the installation location, take into account the size of the lifting platform as described in chapter **"Technical data"** and in chapter **"Additional information"** (note also the dimensions with a raised vehicle).

There must be adequate ceiling height (minimum total height plus the height of the vehicle) available. In doing so, ensure that the minimum clearances (in accordance with country-specific regulations and workplace safety regulations) to the hall walls or other objects are complied with. Ensure that no emergency escape routes are blocked by the use of the lifting platform. The installation location must have adequate lighting (in accordance with country-specific regulations and workplace safety regulations).

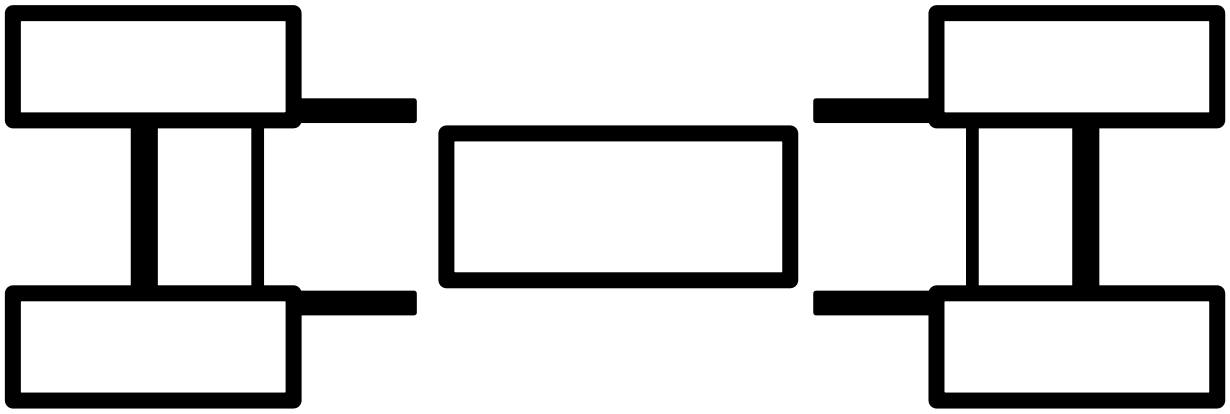
A compressed air connection R1/2" with max. 8 bar network pressure must be available at the installation location to operate the lifting platform.

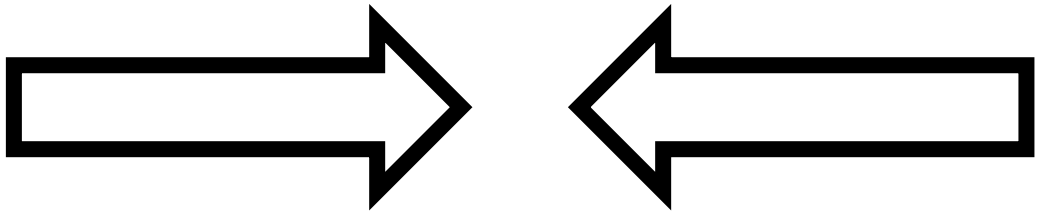
When selecting the installation location for the control unit, ensure that the operator will have a clear view of the lifting platform and the vehicle to be raised or the raised vehicle.

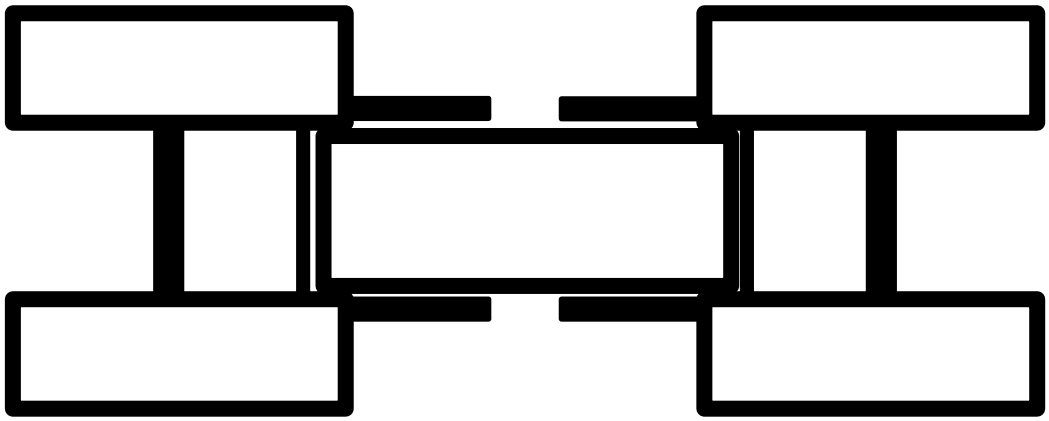
Use only dry, non-oiled compressed air! There must be a filter regulator in the mains line (air filter and water separator)!

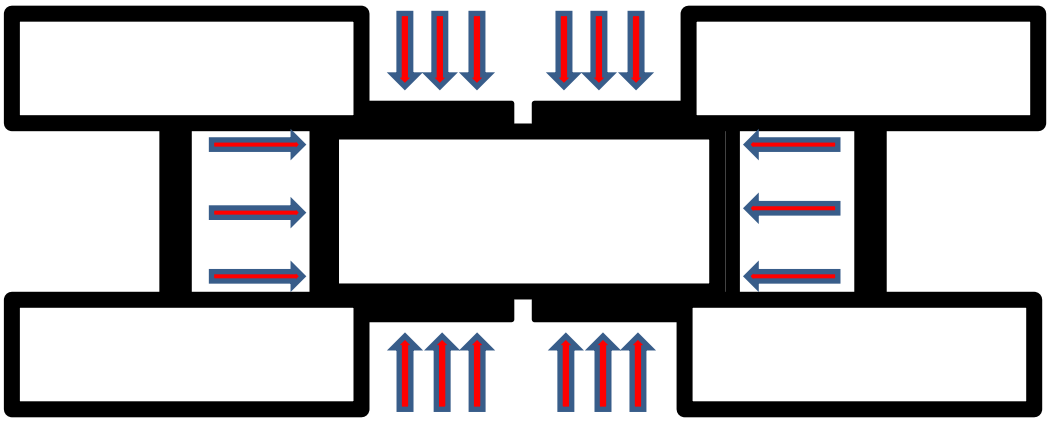
7.2 Installation instructions

Detailed assembly instructions are included separately.









8 Operation

When operating the lifting platform the following safety instructions and the chapter **"General safety instructions"** must be complied with. This will prevent life-endangering injuries to people, damage to machinery and other property.

The lifting platform should only be used for its intended purpose. Familiarise yourself with the proper behaviour in the event of malfunction prior to using the lifting platform.

Persons who work with the lifting platform must wear safety shoes and must be familiar with the operating instructions.

8.1 Description of the controls

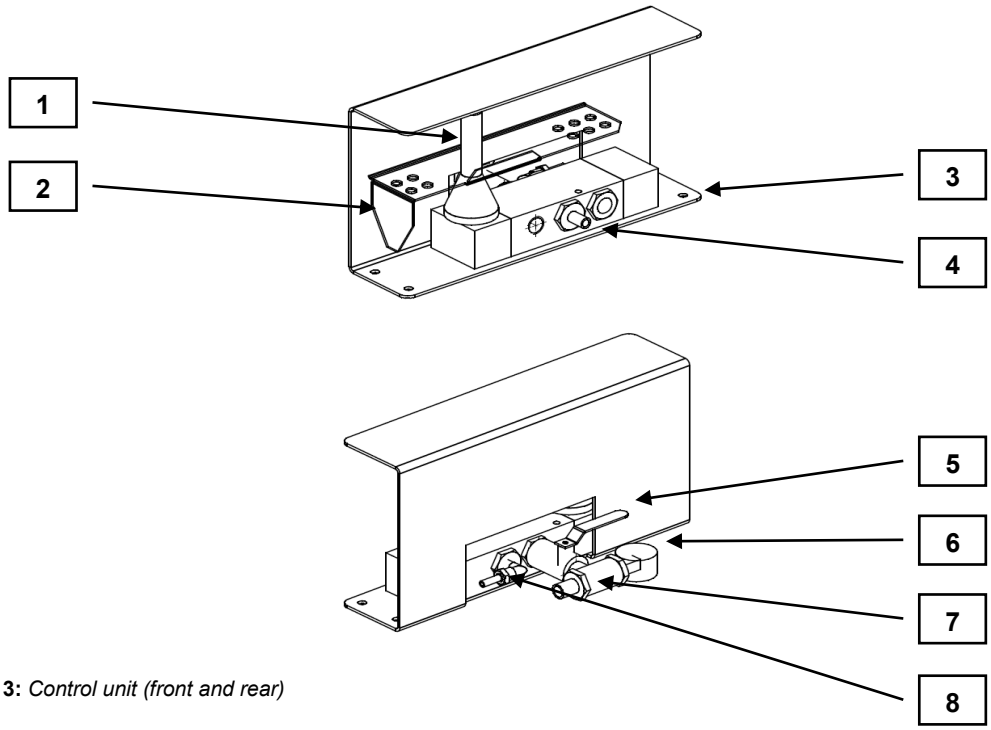


Figure 3: *Control unit (front and rear)*

No.	Description	Additional information
1	Manual operating lever	
2	Foot operating lever	Optional / special accessory
3	Mounting points (4 pcs)	Mounting material not included
4	Compressed air supply connection	NW 7.2
5	Main shut-off valve	
6	Manometer	Air bellows pressure display (max. 4 bar)
7	Hose line connection	16 mm (air bellows)
8	Hose line connection	6 mm (fall safeguard)

The lifting platform can be selected to be delivered with a hand lever valve or with a foot lever valve. The control valve has three positions (with corresponding marking): Raise, 0-position and lower. A sturdy frame protects the control valve. The pressure gauge shows the pressure in the air bellows.

8.2 Commissioning

Carry out the following function checks before using the lifting platform:

- Make sure that no persons or objects are within the working area of the lifting platform.
- Ensure compressed air supply.
- Open the main shut-off valve on the control unit.
- Move the control unit actuating lever to the Raise UP position until the lifting platform reaches the top end position.
- Move the control unit actuating lever to the Lower DOWN position until the lifting platform reaches the bottom end position.
- Repeat lifting and lowering movements several times without load.
- The fall safeguard should lie on the lower frame on both sides at the end of each lifting process.

Observe the operating instructions for the respective workstations on the lifting platform. Only operating personnel are permitted to remain in the vicinity of the lifting platform during operation.

Also observe the chapter **"General safety instructions"**.

8.3 Description of the fall safeguard

The fall safeguard is a safety element that serves to catch the platform in the event of a sudden loss of air. The air bellows are the load-bearing element and should not be manually emptied! The fall safeguard does not serve as a replacement support. When raising or lowering, ensure that the fall safeguard can latch into place on both sides in parallel.

- The fall safeguard is swivelled in downwards when lifting to the lift stroke$_{max}$. The catch lugs of the fall safeguard glide on both sides over the catch recesses on the lower frame.

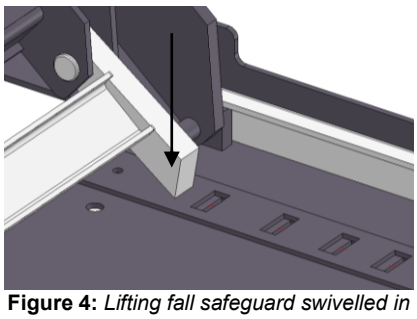


Figure 4: *Lifting fall safeguard swivelled in*

- When lowering to the home position, the fall safeguard is fully swivelled out by cylinders. After stopping the lowering process, the catches of the fall safeguard immediately drop down. This can be identified by a clearly audible "click".

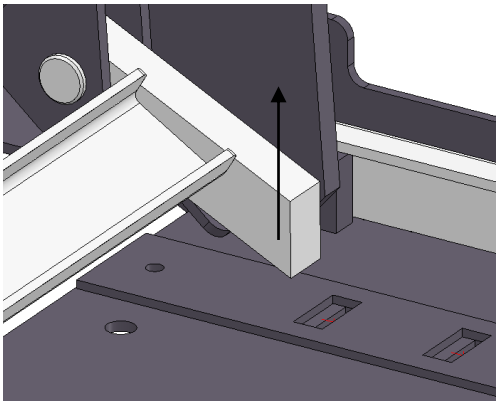


Figure 5: *Lowering-Fall safeguard swivelled out upwards*

	If the lifting platform does not lower, it may be that a leaking air line has caused the fall safeguard to engage. In this case, move the control level briefly to the "Raise UP" position again until the fall safeguard is free. Them, repeat the lowering process.
	The air bellows is the supporting element of the platform, the fall safeguard is a safety device and does not serve as an additional support
	If the fall safeguard does not fall back onto the lower frame at the end of the lifting operation, work on the lifting platform must be interrupted immediately. The load must be removed from the platform and the fall safeguard must be checked for faults in accordance with additional safety requirements (see maintenance section). The lifting platform may only be put back into operation if the fall safeguard is in working order.

8.4 Function of protective flaps (HLS3213-(DUO)-14/-64 only)

The protective flaps on the outriggers of the lifting platform perform an important safety function. They prevent unintentional trapping / crushing of body parts for example, when the lift is retracted.

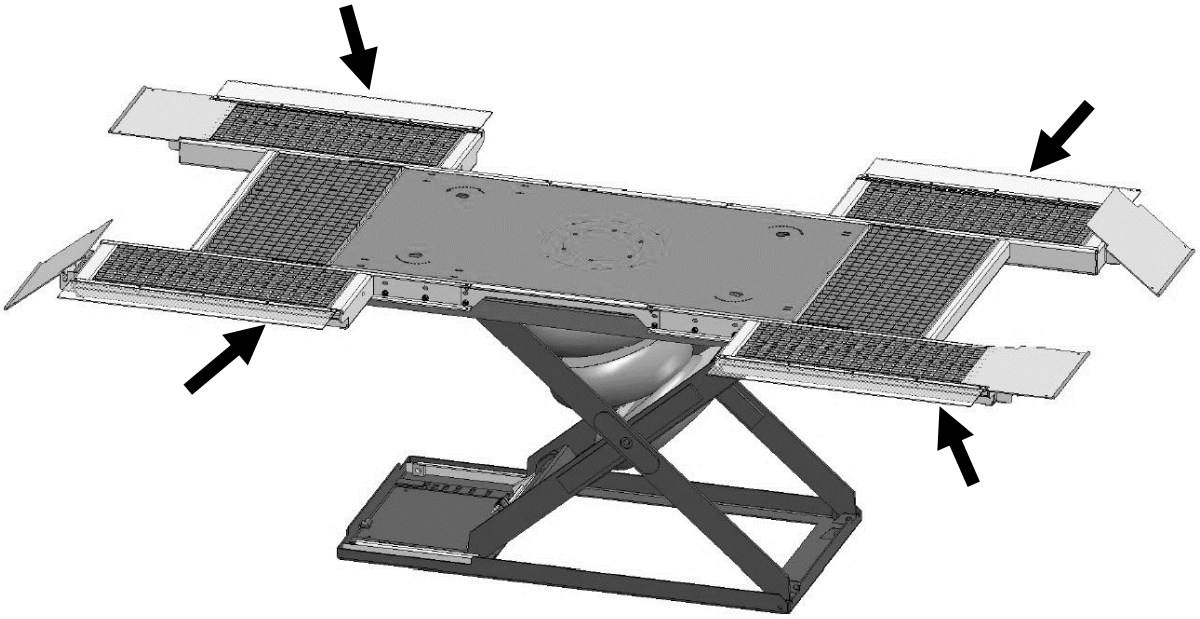


Figure 6: *Protective flaps*

8.5 Function of CE stop (HLS3213-(DUO)-16/-66 only)

The pneumatic CE stop replaces the protective flaps. Approx. 120 mm before the end of the lowering process the lifting platform stops automatically. Only after acknowledging at the control valve (back to 0-position and lowering DOWN once more) does the lifting platform retract fully into the pit / grating again accompanied by an acoustic signal.

8.6 Description of the roll-off safeguard

When the lifting platform is raised, the access ramps serve as roll-off safeguards. They must not be removed during use of the lifting platform. Before starting any work, check that the access ramps are correctly positioned, otherwise there is a risk of the vehicle rolling down.

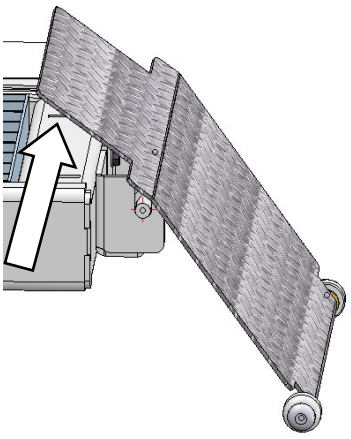


Figure 7: *Raised lifting platform with access ramp installed*

8.7 Function of intermediate runway (HLS3213-(DUO)-11/-61 only)

If necessary, the intermediate runways can be folded down for even better access to the raised vehicle. Before lowering the lifting platform into the home position, the intermediate runways must be folded up (see figure **"Intermediate runway in home position"**).

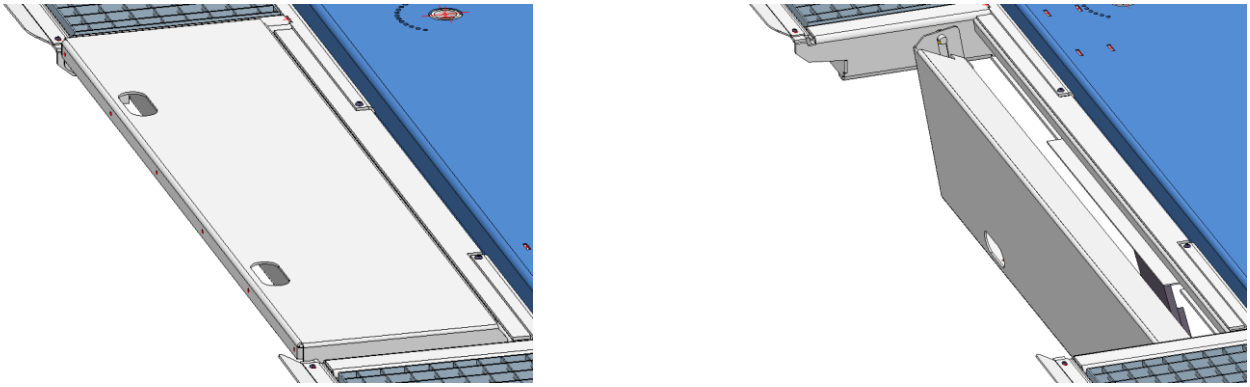


Figure 8: Intermediate runway in basic position/intermediate runway folded down.

8.8 Operation

Read through the safety instructions in the **"General safety instructions"** chapter carefully before commissioning and ensure that these are complied with during operation.

8.8.1 Moving the lifting platform:

- Make sure that the lifting platform is completely retracted.
- Drive onto the lifting platform with the vehicle using the access ramps.
- Make sure that the vehicle is positioned lengthways and across as centrally as possible on the lifting platform.
- Secure the vehicle to prevent it from rolling away by engaging the handbrake and putting the vehicle in gear.

8.8.2 Raising the lifting platform:

- Check that the vehicle is securely seated on the lifting platform.
- Ensure that the lifting platform can be raised without hazard.
- Set the operating lever of the control valve to "Raise UP" and hold there until the desired height is reached. Upon releasing the operating lever, this automatically springs back to the 0 position and the lifting process stops. The lifting process stops automatically if the maximum lift height is reached.

When raising, ensure that the fall safeguard strikes the lower frame on both sides (clearly audible "click") at the end of each lifting process (particularly with intermediate positions that are lower than the max. lift stroke).

8.8.3 Lowering the lifting platform:

- Before lowering, it is necessary to check the endangered area. It is essential that there are no persons or objects in the working area of the lifting platform.
- The intermediate runways must be folded up**. (**HLS3213-(DUO)-11/-61 only**)**
- Set the operating lever of the control valve to "Lower DOWN" and hold it until the lifting platform with the vehicle has reached the lower end position.
- The lowering process ends when the lifting platform has reached its initial position and there is no more air pressure in the air bellows (check the manometer). Upon releasing the operating lever, it automatically returns to the 0-position even during the lowering process and the process is interrupted.

8.8.4 Leaving the lifting platform:

- Before leaving it, ensure that the lifting platform has been completely retracted and that the air bellows are completely empty. (Observe manometer and listen for venting noise)
- Remove the vehicle carefully using the access ramps.

8.9 The correct vehicle lift (HLS3213-DUO)

The vehicle can be lifted either standing on its wheels on the HLS3213-DUO lifting platform or using the wheel-free lifting function.

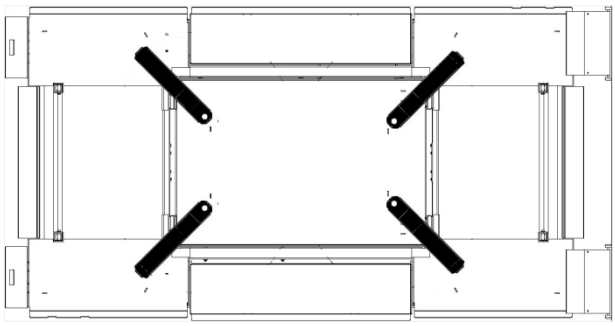
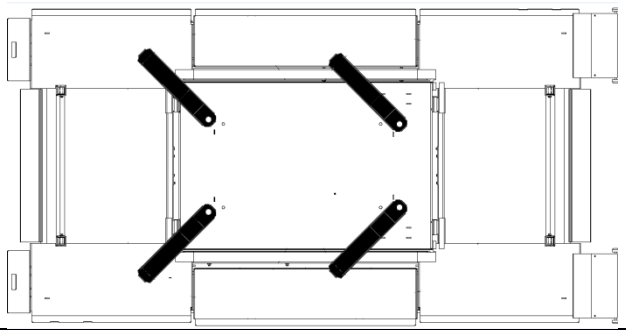
The safety regulations in the chapter **"General safety instructions"** must also be observed.

Only the pick-up points specified by the respective vehicle manufacturer may be used to pick up the vehicle. Disregarding these instructions can result in serious injuries to personnel and to the raised vehicle being damaged.

It is imperative to ensure that the vehicle lift is either closed via the platform base body or optionally via all four articulated arms. A so-called "mixed vehicle lift" is not permitted.

The total weight of the vehicle to be lifted shall not exceed the stipulated load-bearing capacity, whereby a maximum load distribution of 3:2 in the extending direction or 2:3 in the opposite direction is permitted.

When positioning the articulated arms, ensure that the load to be lifted is evenly distributed across the platform main body (see figure "Positioning articulated arms").

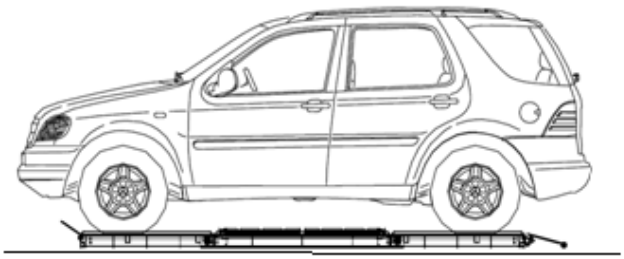
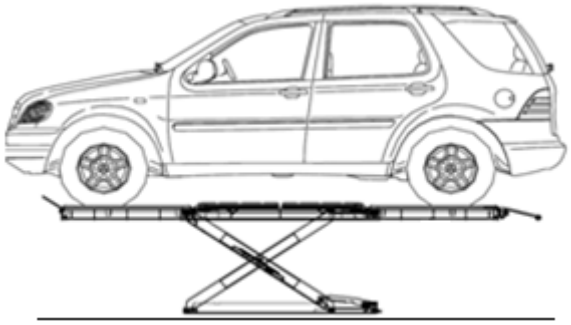
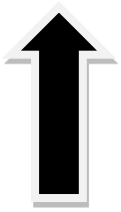
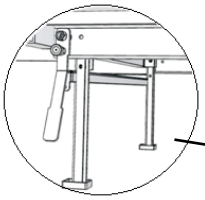
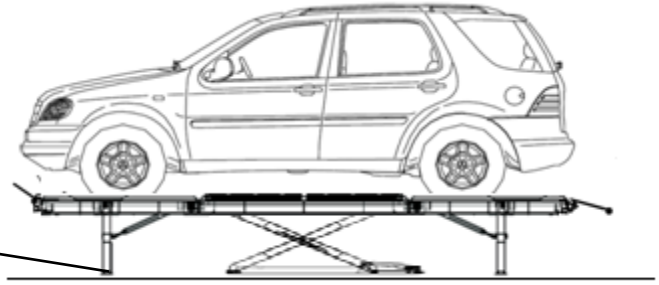
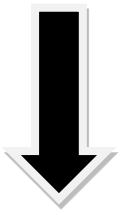
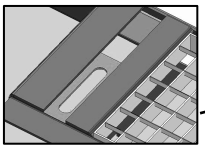
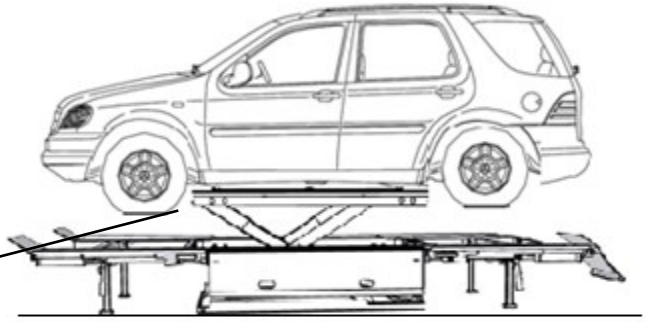
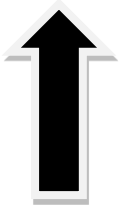
Description	Illustration	
CORRECT The position of the articulated arms was chosen optimally. The load is introduced evenly into the basic body of the platform.		
INCORRECT The position of the articulated arms was chosen incorrectly. The load is introduced unevenly into the basic body of the platform. **The safety of the lifting platform is no longer guaranteed.**		

Rubber blocks must be set down on the largest contact surface. It is not permitted to stack these.

8.10 Operation of the wheel-free lift function (HLS3213-DUO)

The vehicle can be lifted either standing on its wheels or using the wheel-free lifting function.

Only the pick-up points specified by the respective vehicle manufacturer may be used to pick up the vehicle using the wheel-free lifting function. Disregarding these instructions can result in serious injuries to personnel and to the raised vehicle being damaged

Description	Illustration	
• Driving onto the lifting platform		
• Raising the lifting platform (approx. 500mm)		
• Folding down supports on both sides (HLS3213-DUO-11 only)  • Lowering the lifting platform		
• Positioning articulated arms with rubber blocks under the car pick-up points • Releasing the locking lever on both sides  • Raising the lifting platform		

8.11 Working on raised vehicles

- Observe the statutory accident prevention regulations.
- No-one is permitted to stand under the vehicle while it is raised.
- It is not permitted to place parts on the raised vehicle or on the lifting platform.
- Ensure that the load-bearing equipment and the vehicle are not made to vibrate.
- Pay attention to the shifting of the centre of gravity if heavy parts are installed or removed. This may cause the permissible load distribution of 3:2 to be exceeded and the lifting platform could tip.

8.12 End of working day

The following points must be observed, after the completion the work with the lifting platform:

- The lifting platform must be moved into the lower end position.
- Close the main shut-off valve of the control unit.
- Secure the main shut-off valve against unauthorised use with a padlock (not supplied).

Figure 9: Control unit secured against unauthorised use

No.	Description
1	Main shut-off valve locked
2	Padlock (not included)

Padlock requirements:

- Shackle inner width: 22-26 mm
- Shackle height closed: 40-45 mm
- Shackle diameter: max.6 mm

9 Help with faults

To avoid damage to the machine or life-threatening injuries when performing trouble-shooting on the lifting platform, ensure strict compliance with the following points:

- Only rectify a fault if you possess the stipulated qualifications.
- First secure the lifting platform against unintended restart, by shutting off the compressed air supply.
- Secure the upper frame in raised position with a block or a suitable support.
- Also read the chapter **"General safety instructions"**.

9.1 Possible faults and remedial measures

Fault	Fault source	Fault rectification
Fault when raising	Maintenance unit manometer shows no mains pressure. Hose lines blocked, kinked or damaged. Manometer pressure 1 bar above the permissible pressure of the safety valve	Ensure Pmax = 8 bar for mains pressure. Open the shut-off valve on the control unit. Check hoselines and replace with new ones if required. Check the safety valve for contamination, replace if necessary.
Fault when lowering	Lifting platform sitting on an obstacle Fall safeguard latched into place	Raise lifting platform, remove obstacle, then lower anew. Ensure Pmax = 8 bar for mains pressure, move the control level to the "RAISE UP" position until the fall safeguard is free. Them, repeat the lowering process.

If the lifting platform still cannot be raised/lowered despite the measures listed above, contact the customer service department.

Customer service: Herkules Hebetechnik GmbH
Miramstraße 68b
34123 Kassel, Germany
Tel: +49 (0)561 58907-70
Fax: +49 (0)561 58907-34
Email: info.de@hedson.com

If replacing defective parts, use only original replacement parts from the manufacturer.

10 Maintenance

Maintenance work must be performed at the specified maintenance intervals by instructed personnel.
Do not use flammable liquids for cleaning, as this may damage the paintwork and the air bellows. Cleaning with water or moisture should also be avoided to prevent rust formation. If the platform has been wet cleaned, it must then be dried in an open state.
For the lifting platform to have a long service life and continuous availability for use, the following points must be observed:

- Only original spare parts and suitable tools may be used.
- Comply with the maintenance intervals.
- Contact your dealer or the customer service department of the manufacturer for all maintenance work that is not specified or shown in these instructions.

Carry out the servicing only once the max. lift stroke (unloaded) has been reached, the lifting table is supported by suitable means and the compressed air supply is shut off!

Maintenance interval	Working process	Remarks
Monthly Or after approx. 300 lifts	Check for wear, and clean and grease all moving parts such as linkage bolts, slide pieces, slide surfaces. Check air bellows and air hoses for damage. Visual check and leak-tightness. Check the surface of the air bellows for contamination Check functionality and leak-tightness of valves Check foundation plugs for secure seating Replace fastening if necessary Check customer-provided maintenance unit (filter regulator), observe the manufacturer's instructions for this Check middle pin for secure seating	In painting areas use only greases that do not contain any substances that could impair the wetting characteristics of the paint.
Yearly Or after approx. 3600 lifts	Regular safety check per §10 (2) of BetrSichV (industrial safety act)	Check log, see the chapter **"Regular safety check"**.
Every 2 operating years Or after approx. 7200 lifts	Replace safety valve	
Every 6 operating years Or after approx. 21600 lifts	Replace complete air hose set	

10.1 Air bellows characteristics and service life

The air bellows are a flexible element specifically developed for use in the lifting platform. The rubber bladder is subject to an ageing process and must be checked particularly carefully.

Tips for a longer service life:

- Use of dry and non-oiled compressed air.
- Protection from UV-radiation (e.g. through welding or UV driers).
- Avoidance of use of chemicals.
- Protection from mechanical damage (punctures, etc.).
- Observe maintenance and care instructions (see chapter **"Maintenance"**).

Damaged air bellows must be replaced. Only the original parts from the manufacturer are permitted.

10.2 Remarks for filter regulator and air lines

The filter regulator is not included with the lifting platform. A filter regulator must be provided by the customer in the mains line. Use only dry, non-oiled compressed air. During maintenance and cleaning activities, observe the information and instructions from the filter regulator manufacturer.

10.3 Remarks for the slide surfaces of the scissors

The design principle results in very high forces being exerted on the slide surface of the scissors. These forces can lead to scoring on the slide surfaces. The function of the lifting platform will not be impaired by this. The instructions and maintenance intervals described in the chapter **"Maintenance"** must be observed.

10.4 Checking and lubrication points

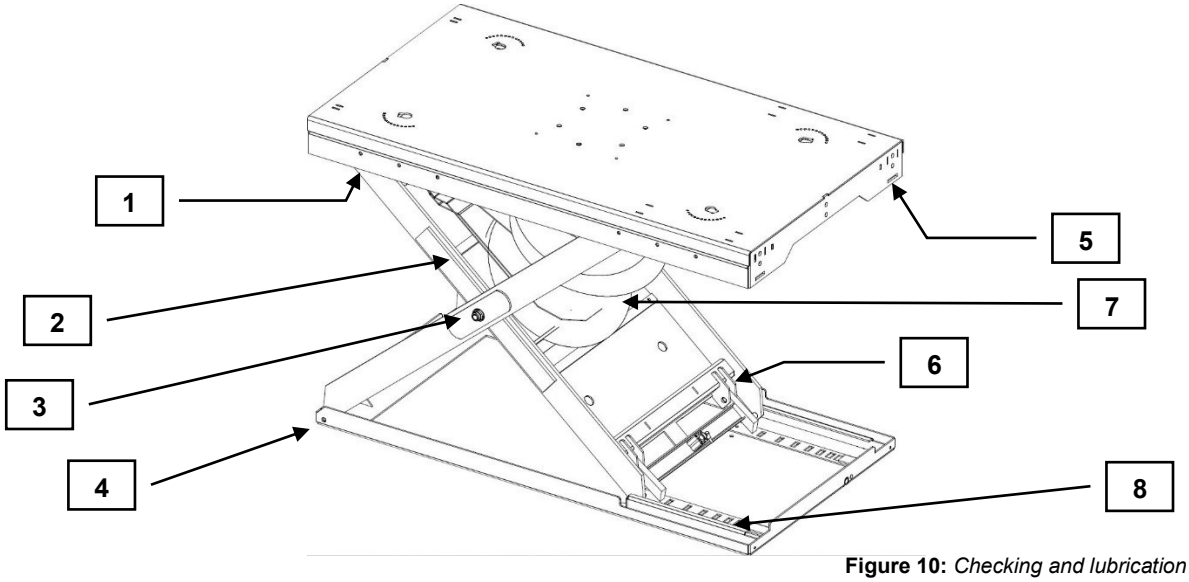


Figure 10: *Checking and lubrication points*

No.	Description	Checking and lubrication points
1	Bearing bolts, top (Right and left)	- Check the correct seating of the lock washers of the two bearing bolts. - Check and lubricate bearing bolts, replace if necessary
2	Slide surfaces of the scissors (Right and left)	- Check the slide surfaces for wear. - Lubricate the slide surfaces.
3	Scissors bolts (Right and left)	- Check scissors bolts for correct seating. - Check locknuts.
4	Bearing bolts, bottom (Right and left)	- Check the correct seating of the lock washers of the two bearing bolts. - Check and lubricate bearing bolts, replace if necessary
5	Slide pieces and guide rails, top (Right and left)	- Check slide pieces for damage and wear, replace if necessary - Lubricate slide pieces and guide rails.
6	Bearing bolts, fall safeguard (Right and left)	- Check the correct seating of the lock washers of the two bearing bolts. - Check and lubricate bearing bolts, replace if necessary.
7	Air bellows	- Check bellows for damage. - Check firm seating of screws for fastening the air bellows, top and bottom.
8	Slide pieces and guide rails, bottom (Right and left)	- Check slide pieces for damage and wear, replace if necessary - Lubricate slide pieces and guide rails.

11 Safety check

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

It is to be carried out:

Before the initial commissioning of the lifting platform at the manufacturer's site.
Use of the “Functional check and safety check” form (chapter **“Functional check and safety check”**).

After the initial commissioning at regular intervals per §10 (2) BetrSichV !:
Use of the “Regular safety check” form (chapter **“Regular safety check”**).
Log the condition of the lifting platform in a copy of this and keep it with the operating instructions and test book.

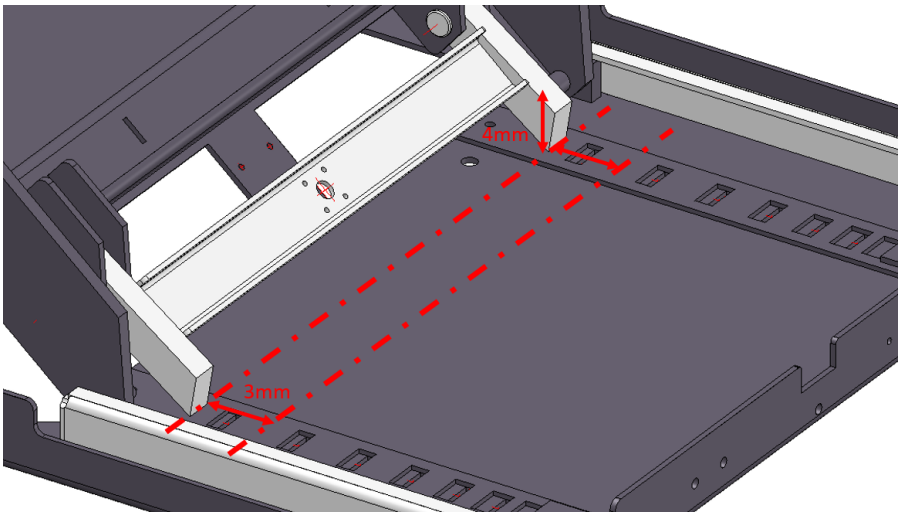
The regular safety check must be carried out by a competent person. It is recommended to carry out a service at the same time.

Within the scope of customer support, Herkules Hebetechnik GmbH offers maintenance contracts. Once per year, your business will be visited by a customer service technician and all necessary work will be carried out and the associated test log created for the employers' mutual insurance association.

In the event of further questions please contact our customer service department.

Customer service:
Herkules Hebetechnik GmbH
Miramstraße 68b
34123 Kassel, Germany
Tel: +49 (0)561 58907-70
Fax: +49 (0)561 58907-34
Email: info.de@hedson.com

Information figure for the test step “Fall safeguard function” (tolerance of the tooth difference: height: 4mm, length: 3mm)



11.1 Regular safety check

(per §10 (2) of BetrSichV [industrial safety act]!)

Device type	
Serial number	

Test step	OK	Not OK	Test follow-up	Remark
Type plate				
Plate with payload				
Plate with mains pressure				
Operating instructions (brief version)				
Lifting / lowering identification				
All load-bearing screws tight				
Scissors bolts safeguard				
Condition of pneumatic lines				
Safety valve set to 4 bar operating pressure				
Manometer mains pressure P_{max} = 8 bar				
Control lever moves autonomously to the 0 position when released.				
Fall safeguard function (tolerance of the tooth difference: height: 4mm, length: 3mm)				
Access ramp function				
Condition of runway (metal grating)				
Function of CE stop (HLS3213-(DUO)-16/-66 only)				
Function of protective flaps (HLS3213-(DUO)-14/-64 only)				
Support arm function (HLS3213-DUO only)				
Condition of air bellows				
Condition of load-bearing structure				
Functional test of lifting platform with vehicle				

Results of the check	
	Commissioning not permitted, re-check required
	Commissioning permitted, defects to be rectified before: .....
	No defects (commissioning permitted)

Safety check carried out on: …….....

Name and address of competent person: …….....

…… ……..

Signature of competent person Signature of the operator

In the event of defect rectification being required

…… ……..

Signature of competent person Signature of the operator

12 Disassembly and disposal

12.1 Dismantling

For proper disassembly, carry out the steps in the installation instructions in the chapter **“Installation instructions”** in reverse order.

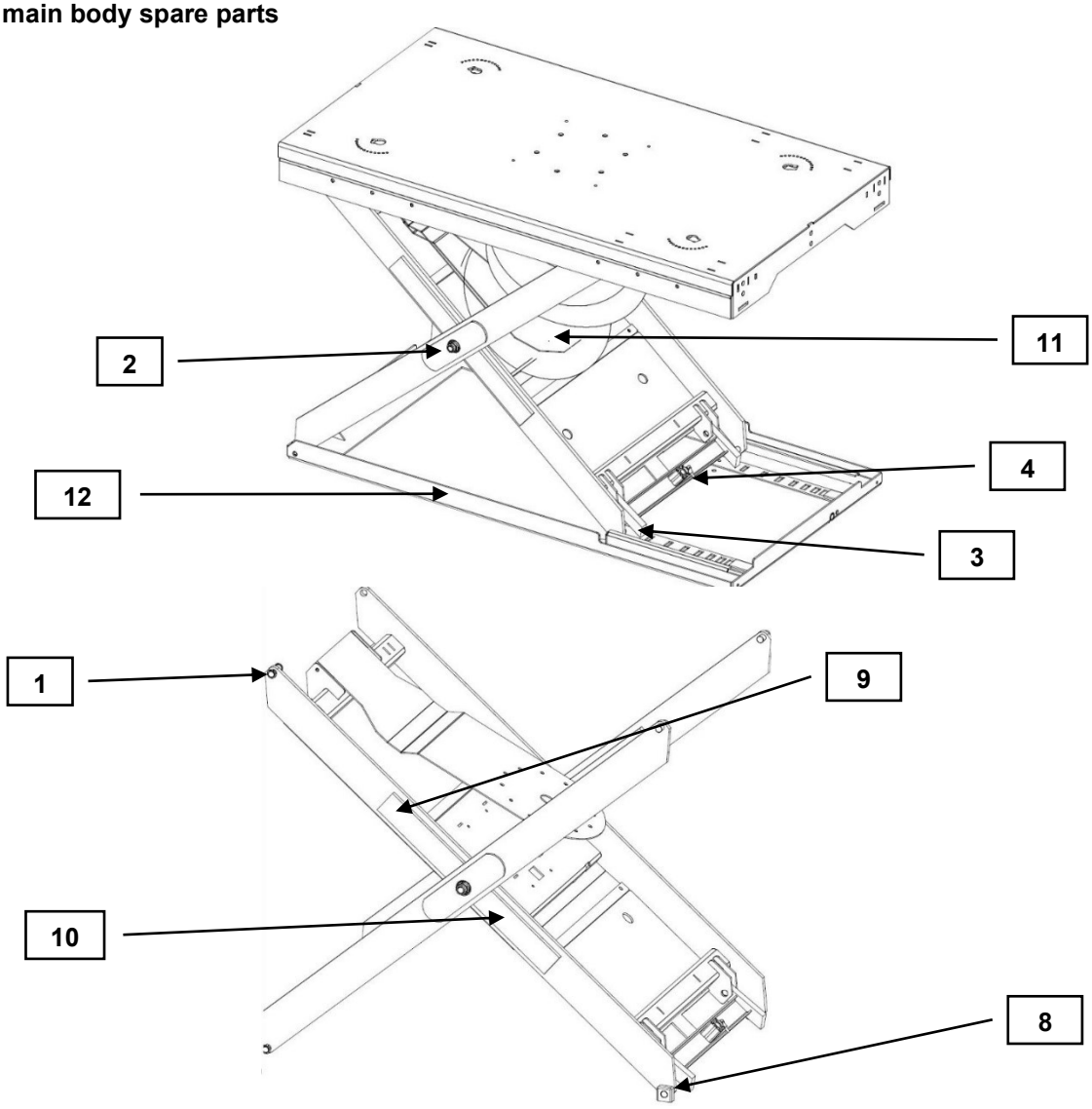
Observe the safety regulations in the chapter **“General safety instructions”** during disassembly.

12.2 Disposal

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

13 Additional information

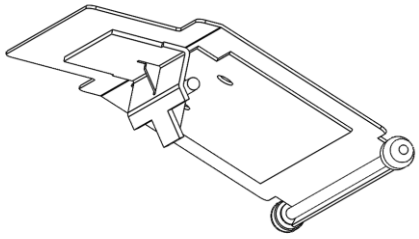
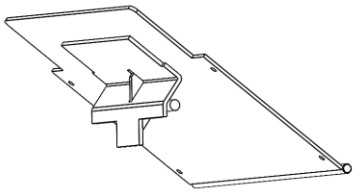
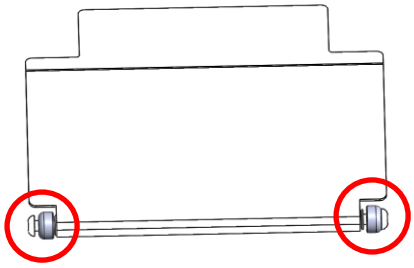
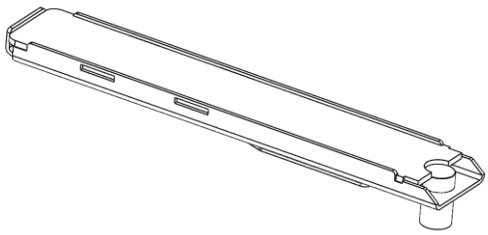
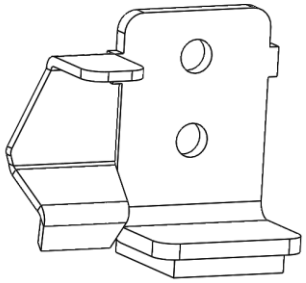
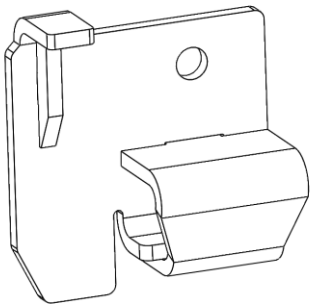
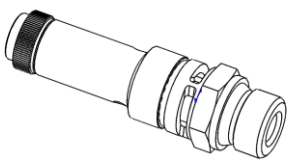
Platform main body spare parts



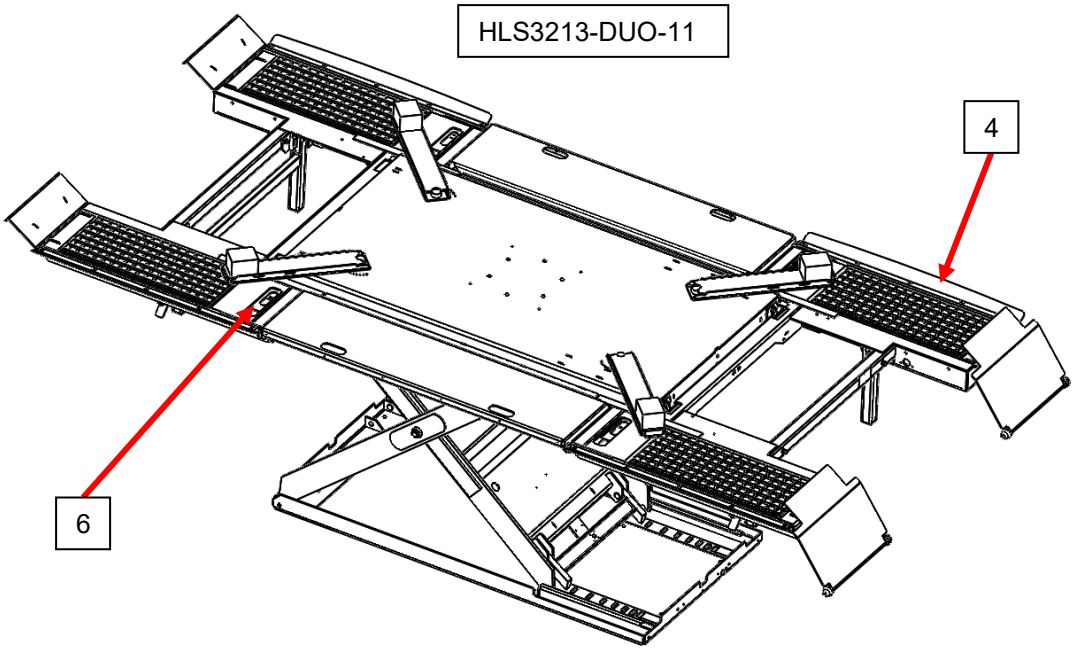
No.	Article	Description	Article number
1	Bolt set	Fixed bearing bolts, fall safeguard bolts, 2 slide pieces, no middle bolts	3000-0198
2	Middle bolt set	Middle bolt set	3000-0199
3	Fall safeguard	Fall safeguard incl. bolts and cylinder	3000-0200 VZ
4	Fall safeguard cylinder	Cylinder and screws	3000-0201
5	Hand valve	Hand valve	3000-0202
6	Outer hose set	Size 6 and size 16 hose (6 m) incl. hose clamps	3000-0203
7	Inner hose set	Size 6 and size 16 hose (2m) incl. hose clamps	3000-0204
8	Slide pieces	Two slide pieces, shims	3000-0205
9	Inner scissors	Inner scissors, bolts, slide pieces, fall safeguard	3000-0206 VZ
10	Outer scissors	Outer scissors, bolts, middle bolts + slide pieces	3000-0207 VZ
11	Air bellows, compl.	Air bellows, compl.	3000-0208 VZ
12	Lower frame	Lower frame, fixed bearing bolts, slide pieces, air connection, clamps	3000-0209 VZ
13	Draw plate screws	Draw plate screws	3000-0210

Platform outrigger spare parts

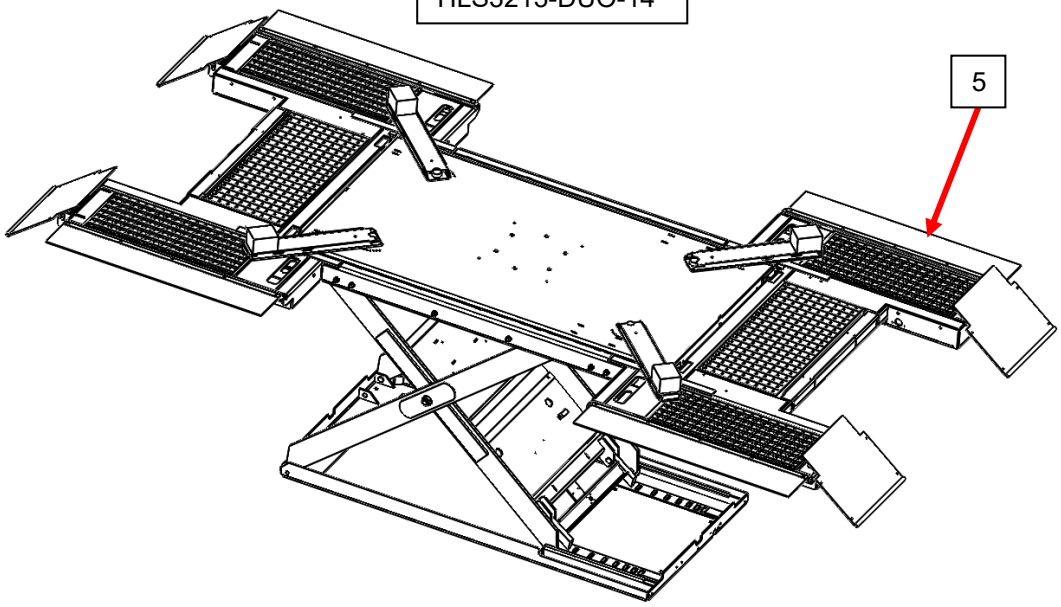
No.	Article	Description	Article number
1	Ramp 11 set	Set of two -11 ramps including rollers	3000-0186 VZ
2	Ramp 14 set	Set of two -14 ramps	3000-0187 VZ
3	Set of 11 ramp rollers	Rollers for two 11 ramps including all washers	3000-0188
4	Foot deflector -11 individual	One foot deflection for 11 variant including screws	3000-0189 VZ
5	Foot deflector -14 individual	One foot deflection for 14 variant including screws	3000-0190 VZ
6	DUO slider	Single slider	3000-0191 VZ
7	DUO support arm	One DUO support arm	3000-0192 VZ
8	Runway bolts	Four bolts for the runway	3000-0193
9	Pick-up DUO outrigger -11	Two DUO pick-ups 11 version	3000-0194 VZ
10	Pick-up DUO outrigger -14	Two DUO pick-ups 14 version including screws	3000-0195 VZ
11	Screw set DUO outrigger	All screws for the DUO outriggers	3000-0196
12	Screw set HLS outrigger	All screws for the HLS outrigger	3000-0197
13	Safety valve	Safety valve from inner scissors	700-339

1		**2**	
3		**7**	
9		**10**	
13			

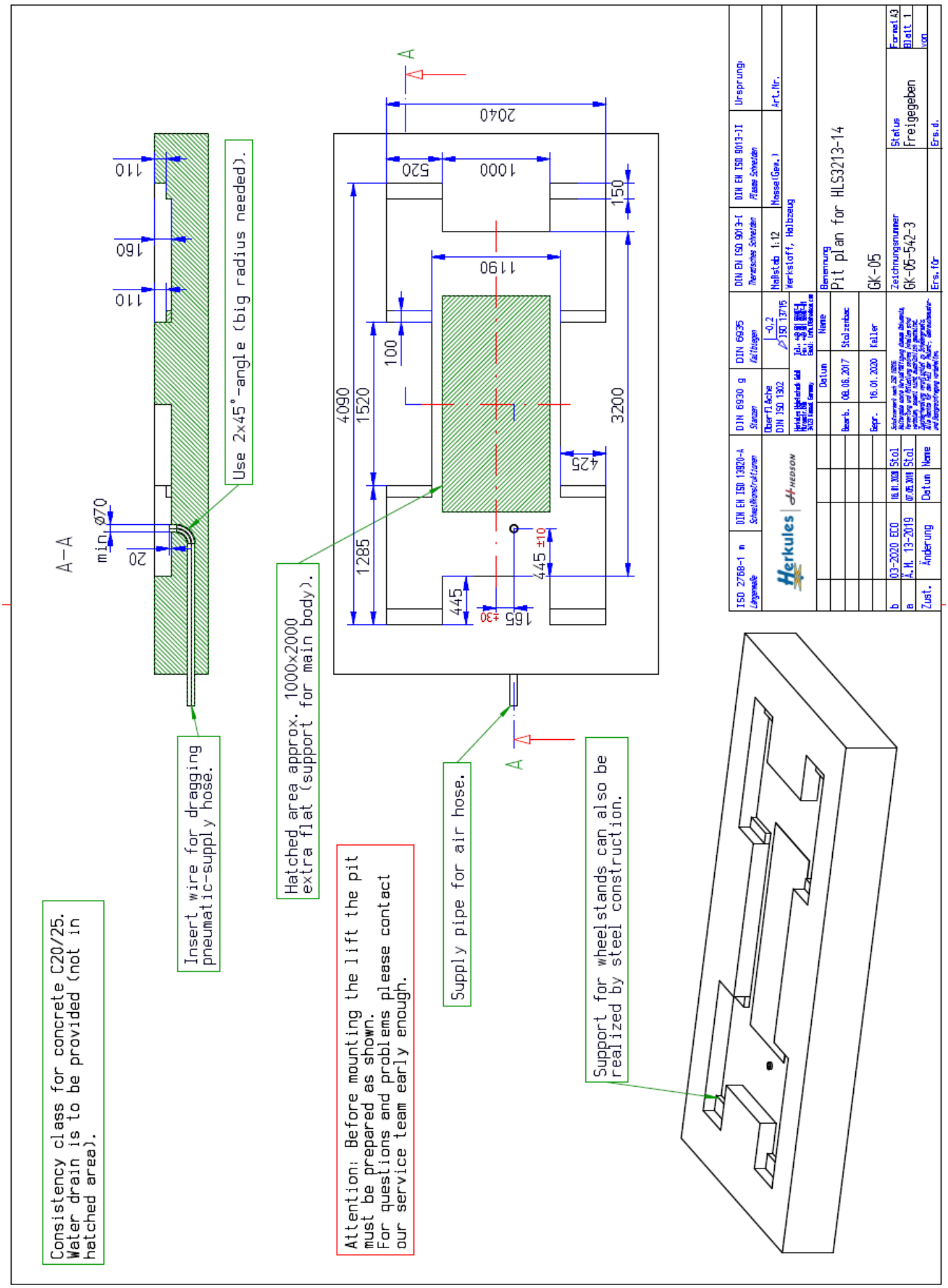
HLS3213-DUO-11



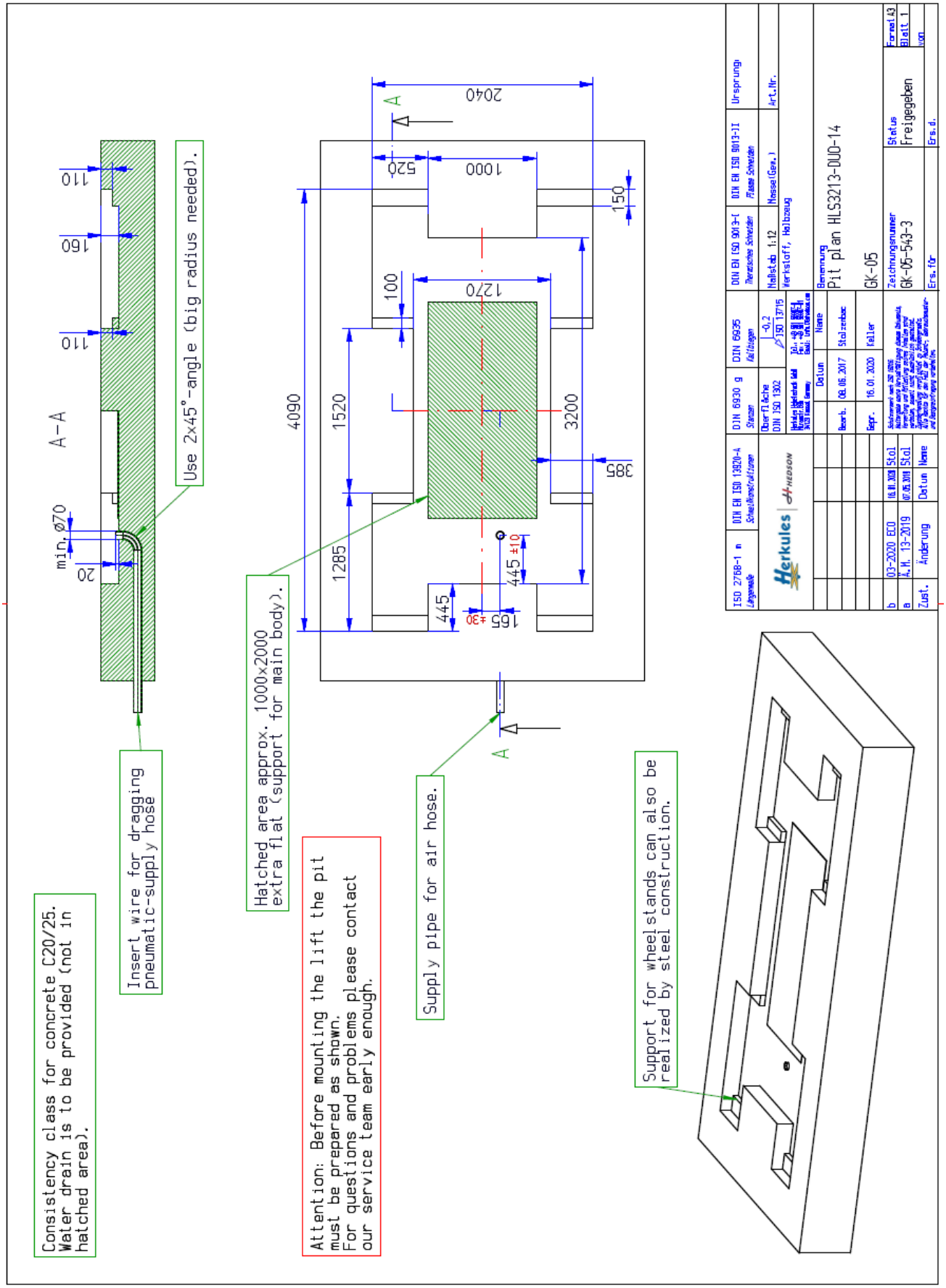
HLS3213-DUO-14



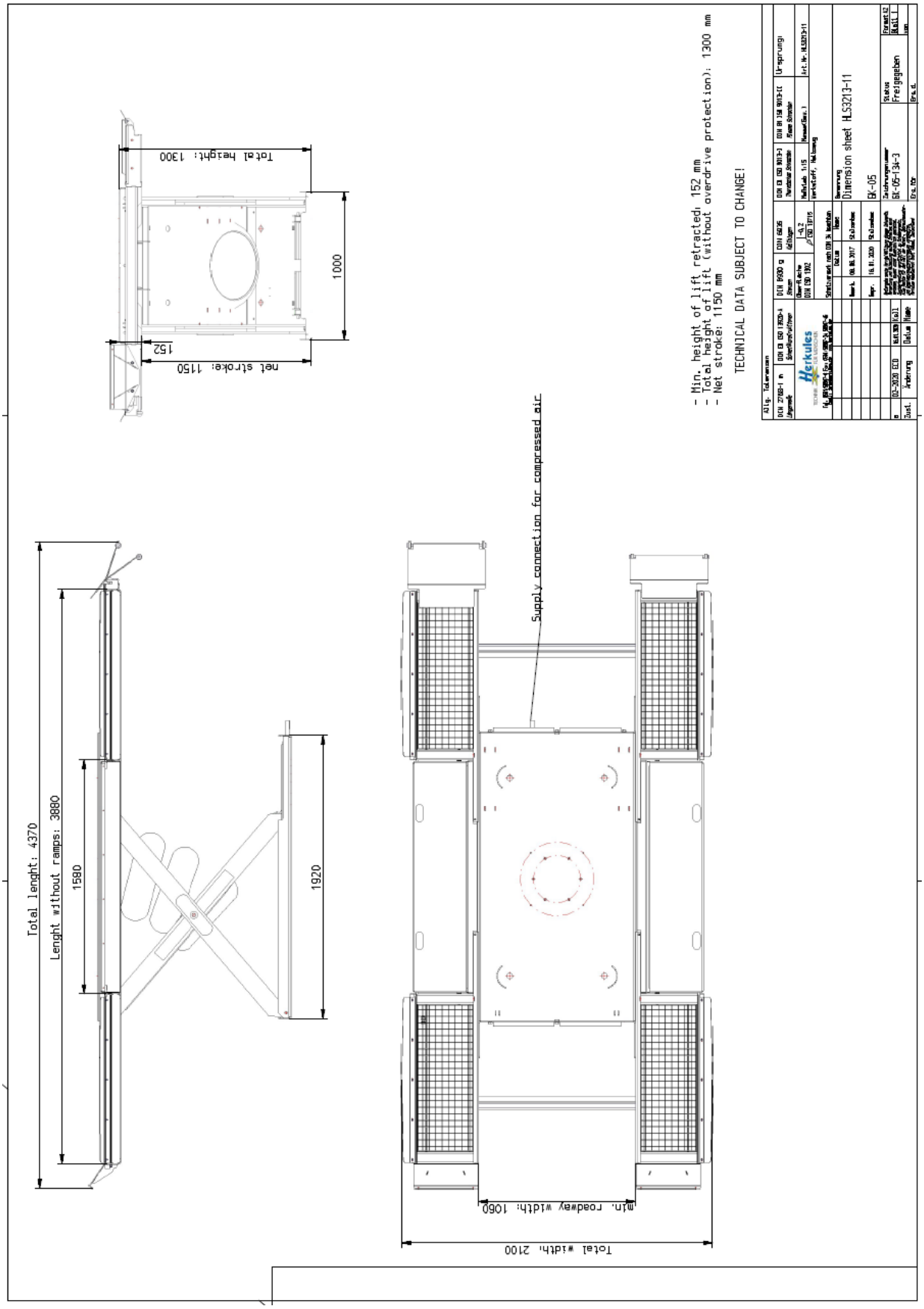
Installation diagram HLS3213-14/ 16:



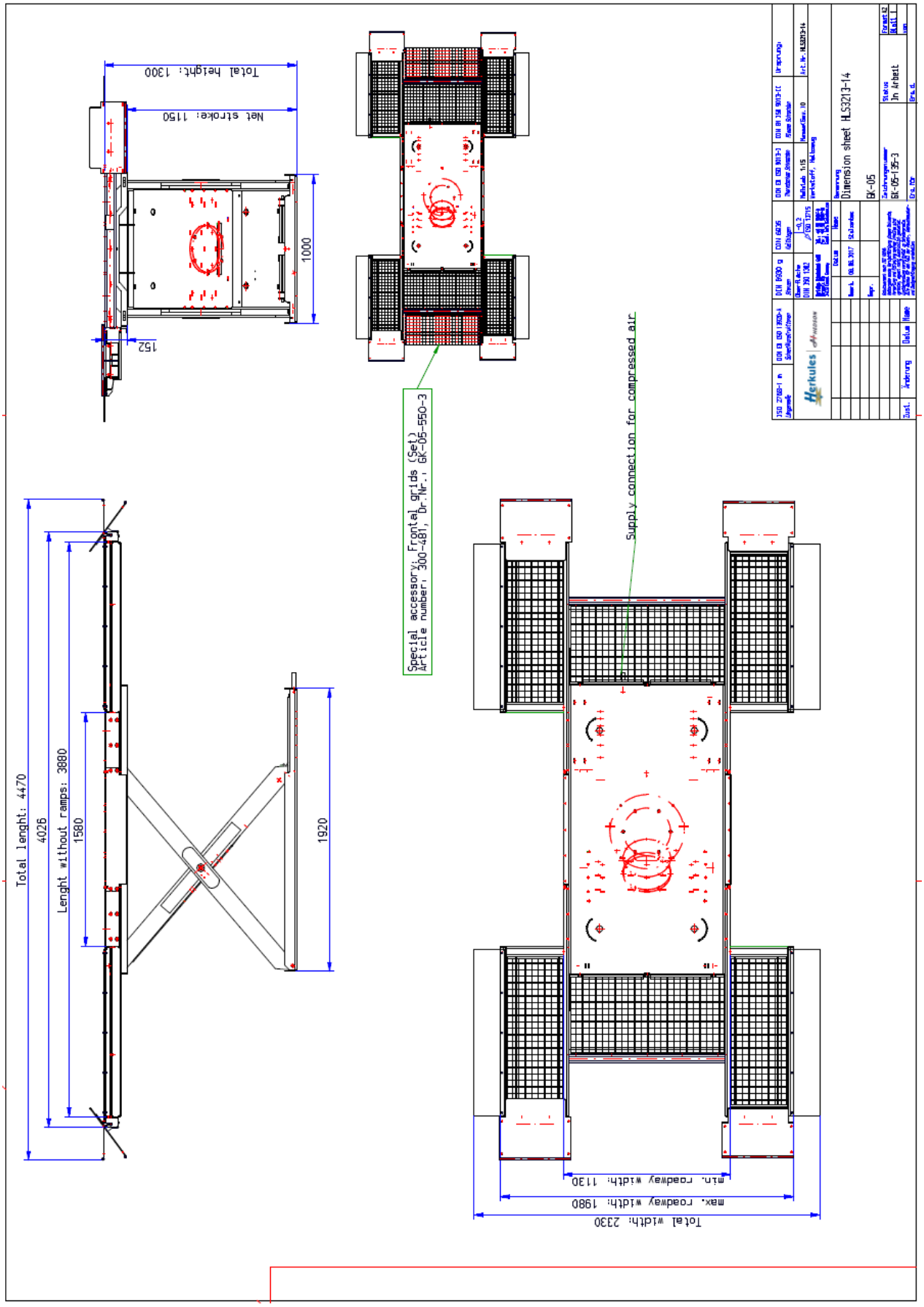
Installation diagram HLS3213-DUO-14/ 16:



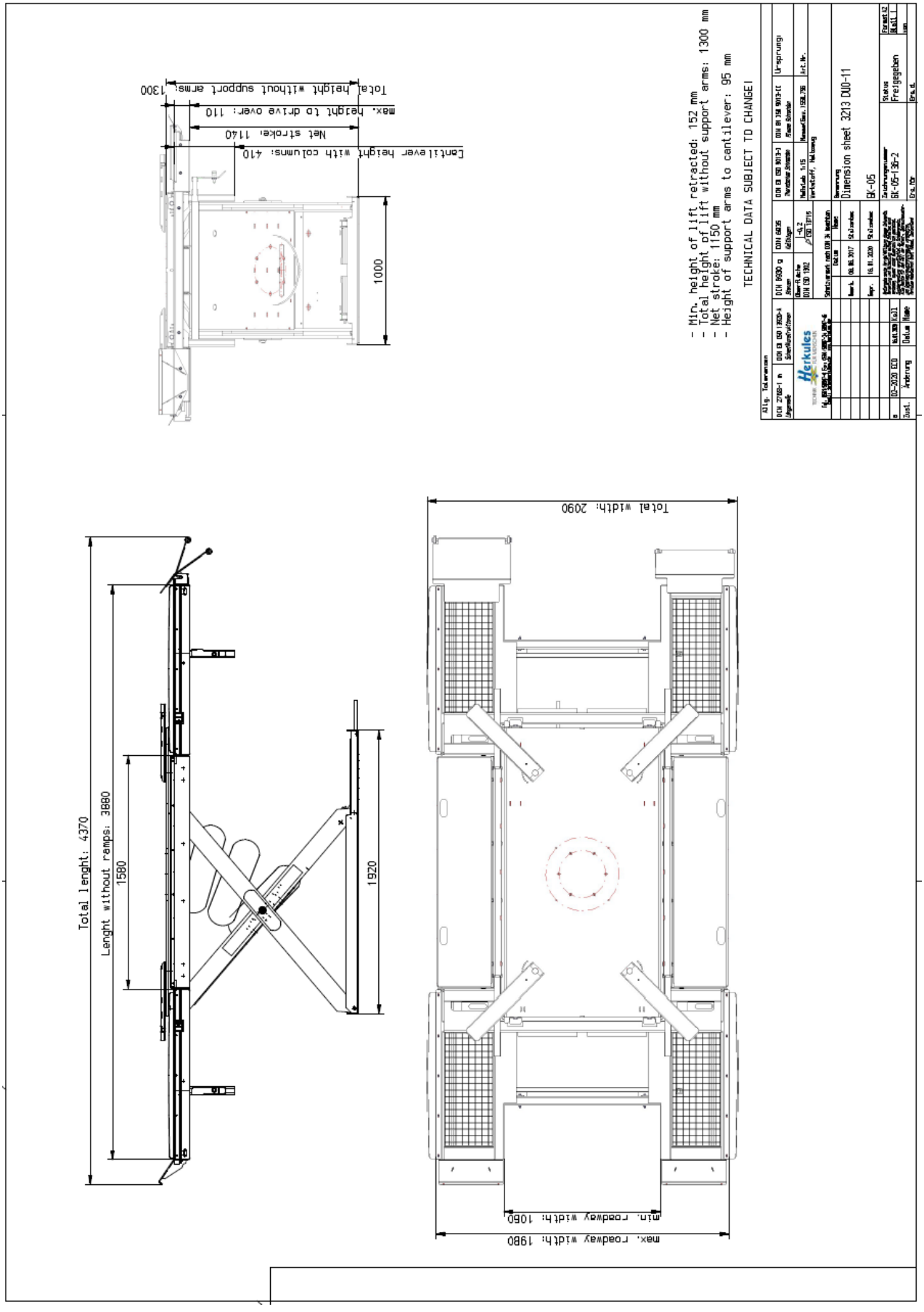
Dimensional drawing HLS3213-11/ -61:



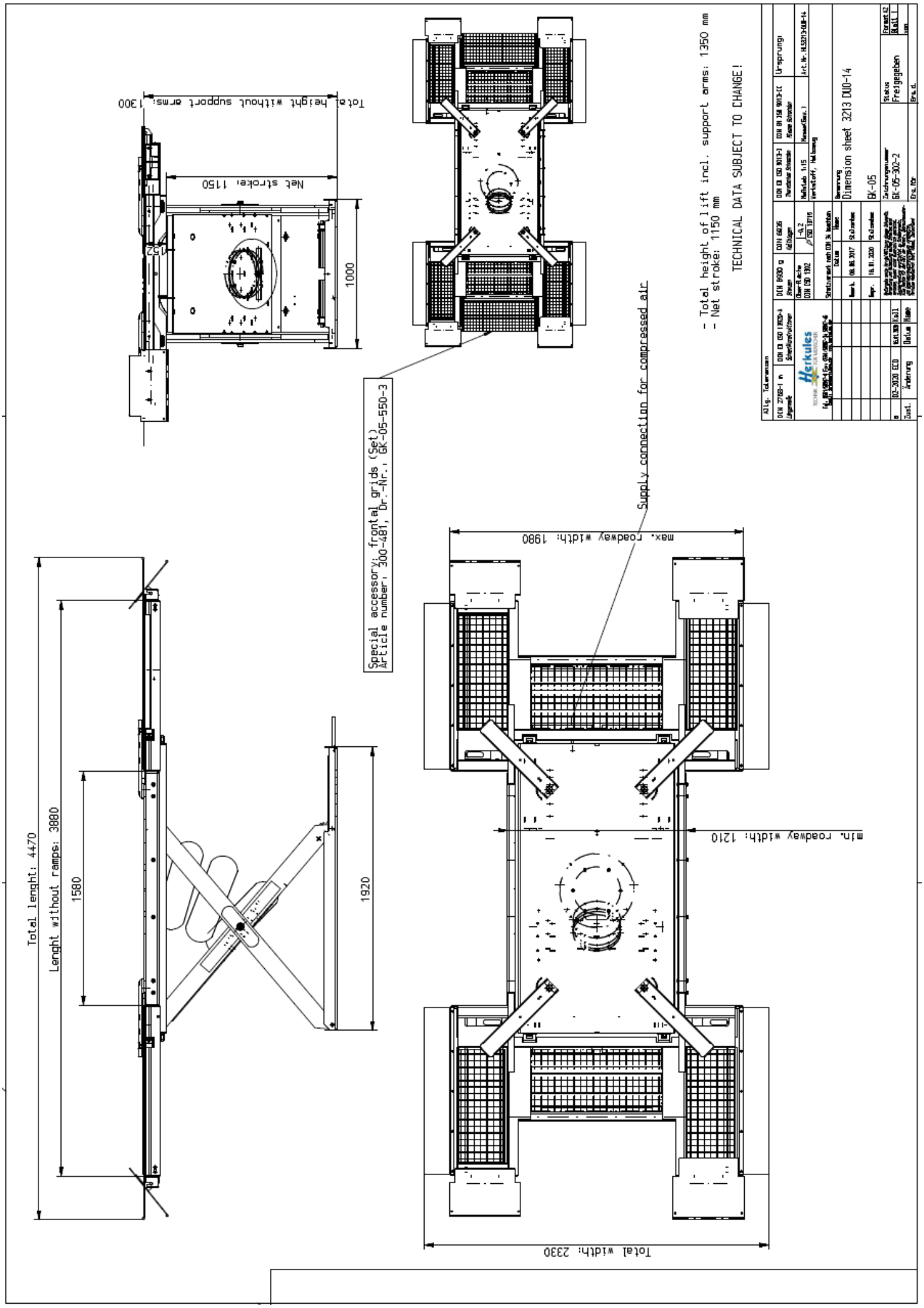
Dimensional drawing HLS3213-14/-64:



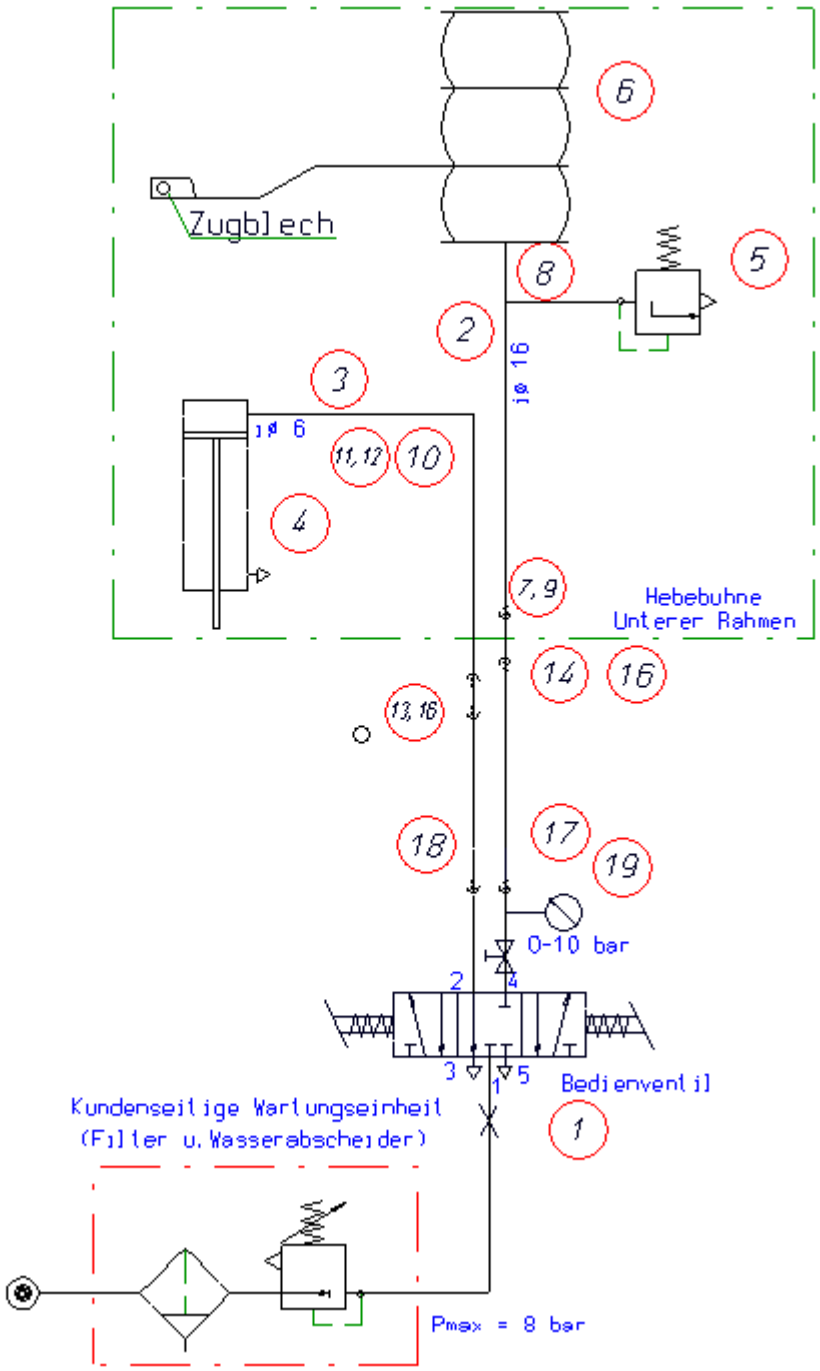
Dimensional drawing HLS3213-DUO-11 /-61:



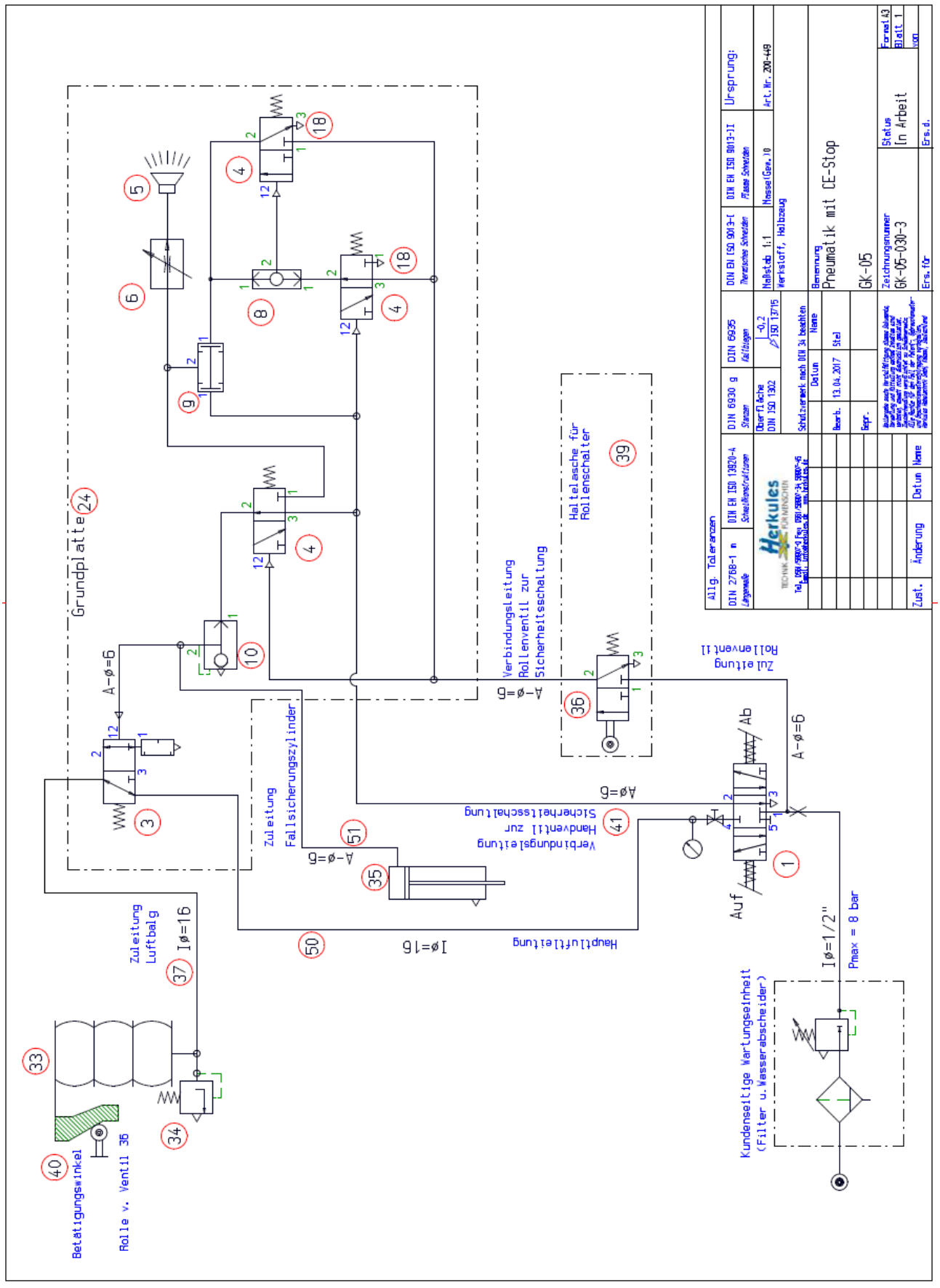
Dimensional drawing HLS3213-DUO-14 / -64:



Pneumatic diagram:



Pneumatic diagram CE-Stop:



Notes: