Operating instructions
for
AirgoMatic Pro 3513
Vehicle lifting platforms

Machine type	Article no.	
K3513	HLS3513-11 HLS3513-14 HLS3513-17 HLS3513-61 HLS3513-64 HLS3513-67	HLS3513-DUO-11 HLS3513-DUO-14 HLS3513-DUO-17 HLS3513-DUO-61 HLS3513-DUO-64 HLS3513-DUO-67

HLS3513-DUO-11

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761-168_Manual_AirgoMatic Pro_HLS3513-(DUO)-11_14_17_61_64_67_2025.07_1.7_DE
Translation of the original version

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Functional checks and safety checks

Carried out by the manufacturer in accordance with the following specifications:

Following placards present:

- ☐ Type plate
- ☐ Operating instructions (brief version)
- ☐ Load-bearing capacity
- ☐ Mains pressure
- ☐ Raise UP, Lower DOWN
- ☐ Company logo
- ☐ CE mark
- ☐ Vehicle lift (HLS3513-DUO only)
- ☐ Slider position on the HHV (HLS3513-DUO only)

Function and safety checked:

- ☐ **Safety valve set to 4.5 bar operating pressure**

Checked:

- ☐ Functional test without load
- ☐ Fall safeguard function
- ☐ Road function (11 & 61 only)
- ☐ 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 lock function (HLS3513-DUO only)
- ☐ Slider release function (HLS3513-DUO only)
- ☐ Support arm function (HLS3513-DUO only)
- ☐ Support function (HLS3513-DUO only), if fitted
- ☐ Check CE stop for function and audible warning signal
- ☐ Check forced ventilation for proper functioning, if available

Serial no.: see cover sheet

Date: _____

Name: _____

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1 General information

These operating instructions 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. It is an integral part of the lifting platform and must therefore be handled and stored with care.

1.1 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!

1.2 Limitation of liability

All information and instructions in these 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

1.3 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.

1.4 Guarantee conditions

The statutory warranty conditions apply.

In the event of claims, please contact our customer service.

1.5 **Customer service**

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

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

2 Product description

2.1 Product structure

The pneumatic lifting platforms consist of a lifting element, the what is referred to as air bellows enclosed in a scissor-type hoist that lifts the load via a flange-mounted load handling device. In general usage, the scissor lift is referred to as the base body, which mounts the air bellows as a lifting element and has an appropriately designed catching device in the event of air bellows failure. This is referred to as a fall safeguard.
The flanged load handling device can look different. It can be made from what is referred to as a boom onto which the vehicle can drive and be completely lifted while standing on its wheels. This boom can be uncoupled so that the vehicle can be lifted wheel-free on the chassis. For this purpose, load handling devices are now used, which are flanged to the base body via a patented mounting.

2.2 Proper use

The vehicle lifting platform is designed exclusively for lifting motor vehicles (cars, includes SUVs, vans, trucks, vans) with a permitted nominal load as per the technical data standing on the wheels or with the appropriate load handling devices on suitable chassis pick-up points.

The mobile version of the lifting platform can also be used with the dedicated transport system. Only the transport system from Herkules Hebetechnik GmbH that is permitted for the specific type of platform is to be used. This allows the lifting platform including the vehicle to be lifted and moved by remote control.

The lifting platform may only be operated by persons who have read the operating instructions and have reached the age of 18.

Observing the inspection and maintenance work at prescribed time intervals is part of the proper use.

Expressly prohibited are:

- Lifting persons or other objects.
- Working under the raised vehicle.

2.3 Product identification

The characteristic data for the lifting platform can be found on the type plate. This is located in the base body next to the pneumatic circuit and contains the following data:

Article no.	HLS3513-XX	Year of construction	
Machine type	K3513	Operating pressure	6-8 bar
Serial No.		Safety pressure	4.5 bar
Load-bearing capacity	3500 kg	Unladen weight	

3 EC Declaration of Conformity

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

The manufacturer	**Herkules Hebetechnik GmbH** **Miramstraße 68b** **D-34123 Kassel, Germany**			
Documentation controller	**Herkules Hebetechnik GmbH**			
hereby declares that the machine described hereafter	**Vehicle lifting platform**	**Machine type** **K3513**	**Article no.** **HLS3513-11** **HLS3513-14** **HLS3513-17** **HLS3513-DUO-11** **HLS3513-DUO-14** **HLS3513-DUO-17**	 **HLS3513-61** **HLS3513-64** **HLS3513-67** **HLS3513-DUO-61** **HLS3513-DUO-64** **HLS3513-DUO-67**
fulfils the following EC directives :	**Machinery Directive 2006/42/EC**			

Applied harmonised standards:

EN 1493:2010	Vehicle lifting platforms

EC type examination	Examination certificate no. 44 205 12021023
Test centre	TÜV Nord Cert GmbH

4 Installation and commissioning

4.1 Requirements for personnel

Activity	Implementation
Installation/assembly	Herkules customer service installation technician / competent person
Commissioning	Herkules customer service installation technician / competent person
Instruction	Herkules customer service installation technician / competent person
Operation	Instructed person
Fault rectification	Herkules customer service installation technician / instructed person
Servicing	Herkules customer service installation technician / competent person
Maintenance	Herkules customer service installation technician / instructed person
Repair	Herkules customer service installation technician
Disassembly	Herkules customer service installation technician / competent person

Explanation of terms:

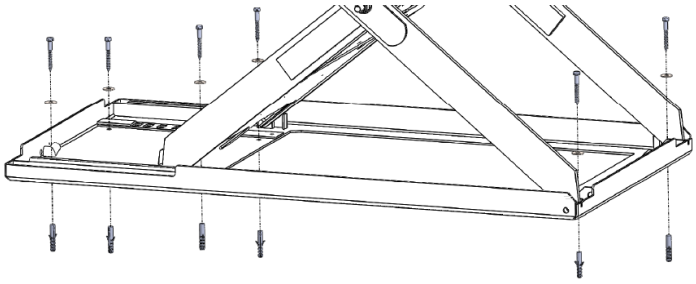
Competent person: The group of persons who have been trained by Herkules Hebetechnik GmbH on the devices and are qualified to carry out work on them.

Instructed person: The group of persons who have been instructed on the devices by competent persons or by reading the operating instructions. Instruction on the telephone by Herkules Hebetechnik GmbH customer service for e.g. fault rectification is also possible.

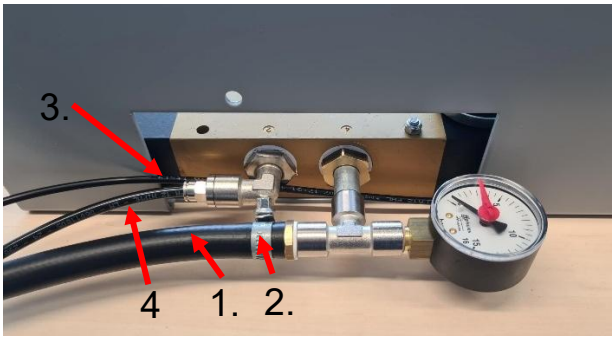
4.2 Assembly instructions

4.2.1 Fastening the lifting platform to the floor (recommended)

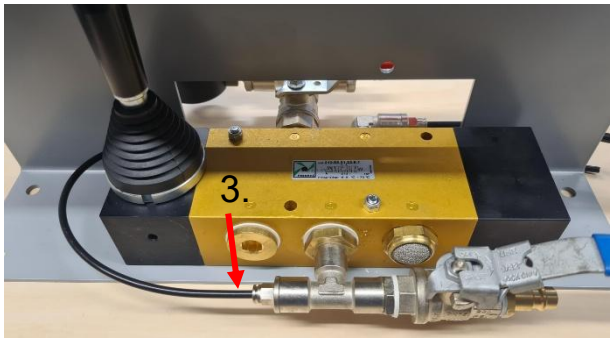
It is generally recommended to secure the lifting platform to the floor to prevent it from slipping. The drilling pattern can be found in the dimension sheet (see also chap. 13).



4.2.2 Connection of the hand lever valve



1. Ø9 rubber hose 2. Hose clamp



3. Ø4 PA hose 4. Ø6 PA hose

4.3 Installation of the lifting platform

In principle, the lifting platform can be driven on from both sides. In this sense, there is no prescribed drive-up direction. The operating company is therefore free to choose how they set up the lifting platform, but it is recommended to choose the drive-up direction on the opposite side to the compressed air supply in order to prevent the hose from being run over.

Environmental requirements:

- The lifting platform is only suitable for use in enclosed or covered and dry areas.
- The floor at the installation location of the lifting platform must be horizontal and level (per DIN 18202). In addition, the load-bearing capacity of the floor must be designed to bear the permissible total weight of the lifting platform incl. unladen weight. The lifting platform operating company is solely responsible for the selection of a suitable installation location.
- When changing the location of the lifting platform, the new installation location must be checked for the same criteria mentioned above.
- The lifting platform shall be used only in a temperature range of 5°C to 65°C.
- The dimensions of the lifting platform incl. vehicle must be observed, especially with regard to the hall height, in order to avoid a collision of this with the vehicle.

  - Escape routes must be maintained.
  - Ensure there is enough space between the lifting platform and the wall or other workplaces.
  - A compressed air supply of 6-8 bar mains pressure must be available.
  - When selecting the location of the control unit, make sure that the operator always has a clear view of the lifting platform and the vehicle as well as its surroundings. With DUO platforms, it is important to ensure that the operating positions for the wheel lift function are visible from the control panel so that the positions can be checked before lifting.
- The control unit must be placed in such a way that it is easy to reach. It must not be mounted more than 1.8m above the floor.

  - Only dry and oil-free compressed air may be used. If necessary, a water separator or air filter as well as pressure controller must be connected upstream (not included in the scope of delivery). Water and oil in the compressed air system can cause the air bellows to wear out very quickly from the inside. The manufacturer does not accept any warranty for damage caused in this manner.

4.4 Commissioning

After installation of the lifting platform and connection of the compressed air, the lifting platform can be put into operation. To test the correct function, the platform can first be raised without load. The following points should be checked at sight, if available:

  - Automatic folding up of the roll-off safeguard into its safeguard function.
  - Function of the fall safeguard: When driving up and at a standstill, this must lie on the underbody or be pulled along. When driving down, this must be pressed up by the piston cylinder. When the hand control is released, the fall safeguard must immediately drop to the floor.
- Tight fit of the attachments.
- Function of the CE stop. This is released during shutdown as soon as a certain lift height is not reached. The lifting platform stops automatically and can only be lowered again by operating the hand control again. An audible warning signal must be heard.

Also to be checked on DUO:

- Function of wheel lift – Does the end position lock work and does the lever automatically move to the secure end position when in the middle position?
- Function of the supports.
- Function of the runway.

5 Operation of the lifting platform

5.1 Driving on and aligning the vehicle

When driving on the lifting platform, make sure to drive slowly and carefully onto the lifting platform to prevent it from moving and damaging the vehicle. In principle, the lifting platform can be driven on without any problems with any vehicle that has a ground clearance of at least 110mm. In the case of lowered vehicles, driving up in reverse can be a solution. The front sill, which is usually lowered, is thus raised outside the stage. It must be ensured that the automatic roll-off safeguards are not blocked so that the roll-off safeguards are always effective when the vehicle is lifted.

Ensure that the front wheels are straight and that the vehicle is secured against rolling away before lifting. For this, the handbrake must be applied and a gear engaged. On vehicles with automatic transmissions, drive gear P must be engaged. Other vehicles must be safeguarded against rolling away in a comparable manner.

It must be ensured that the lifting platform is loaded with a maximum load distribution of 3:2 or 60:40% in the longitudinal direction. The centre of gravity of the vehicle must not be outside the base body. Unladen cars always fulfil this condition. With loaded vehicles, it must be ensured that the centre of gravity is above the base body despite the load. In terms of width, the vehicle's centre of gravity should be positioned on the centre line of the lifting platform if possible. The possible load must be taken into account in this instance as well.

The gratings of the lifting platform are designed to withstand a pressure of 1000 kg over an area of 200mm². Their standard mesh size is 44x44mm.

5.2 Operation

Once the vehicle is correctly positioned, it can be raised to the desired position by operating the control lever upwards.

Conversely, the vehicle can be lowered again when the control lever is operated downwards. When the control lever is released, the pressure is held and the lifting platform is at rest.

The control panel also has a manometer on which the pressure in the air bellows can be checked. If the indicated pressure exceeds 4.9 bar without the safety valve tripping, the work must be stopped immediately, the pressure released and the safety valve replaced (see Maintenance).

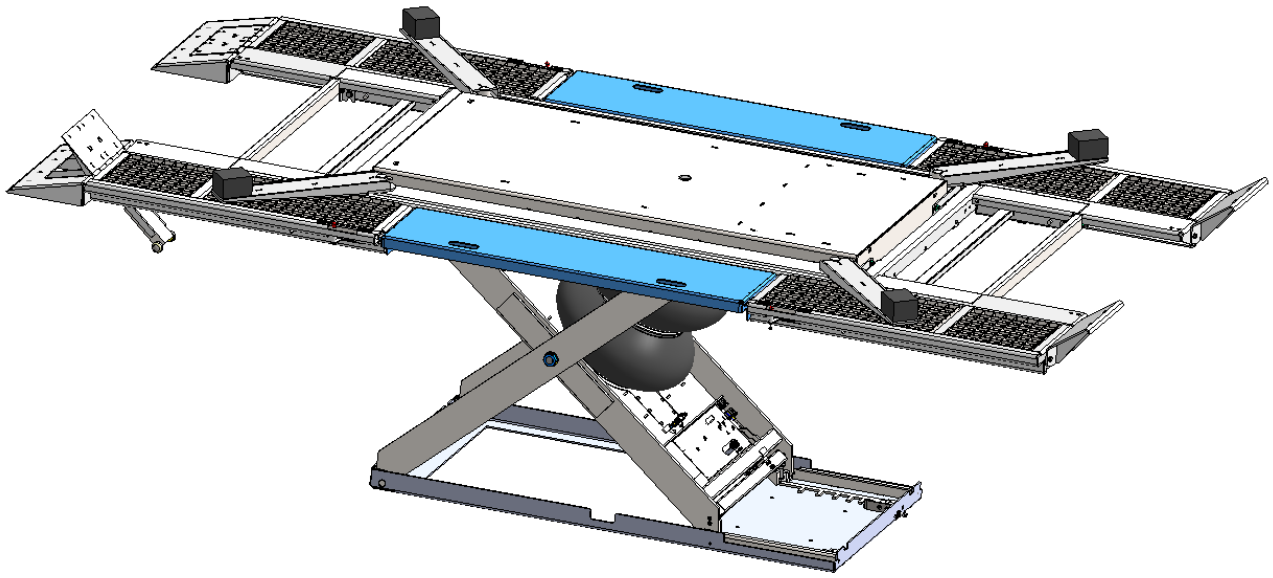
The vehicle must be observed during the entire lifting and lowering process. If there are persons or objects in the danger zone, the lifting or lowering process must be stopped immediately by releasing the control panel.

The air bellows installed in the base body always serves as the supporting means. The lifting platform should not be lowered onto the fall safeguard under load for longer periods of time to prevent increased wear and to ensure the safety function in any case. For maintenance purposes, the drop guard can be used as a safety support when the lift is not under load.

5.3 Runway

The runway is used to pass the free middle section between the two wheel-bearing boom elements. It is not designed to carry heavier loads. It is only possible to drive over the runway without risk if the underlying hall floor or possible support structures support the runway from below. If the wheelbase of a vehicle is so short that it would stand with at least one wheel on the runway, the vehicle may only be lifted wheel-free, i.e. with the aid of the support arms.

Once the desired lifting height has been reached, the runway can be folded down manually to better reach the sill or other areas of the vehicle to the side. Before lowering the lifting platform again, the runway must be retracted to avoid possible damage to the vehicle. If the runway has not been folded back in, it should automatically be pushed out of its anchorage and drop outwards when it reaches the base. It is possible that the vehicle may be damaged in the process.

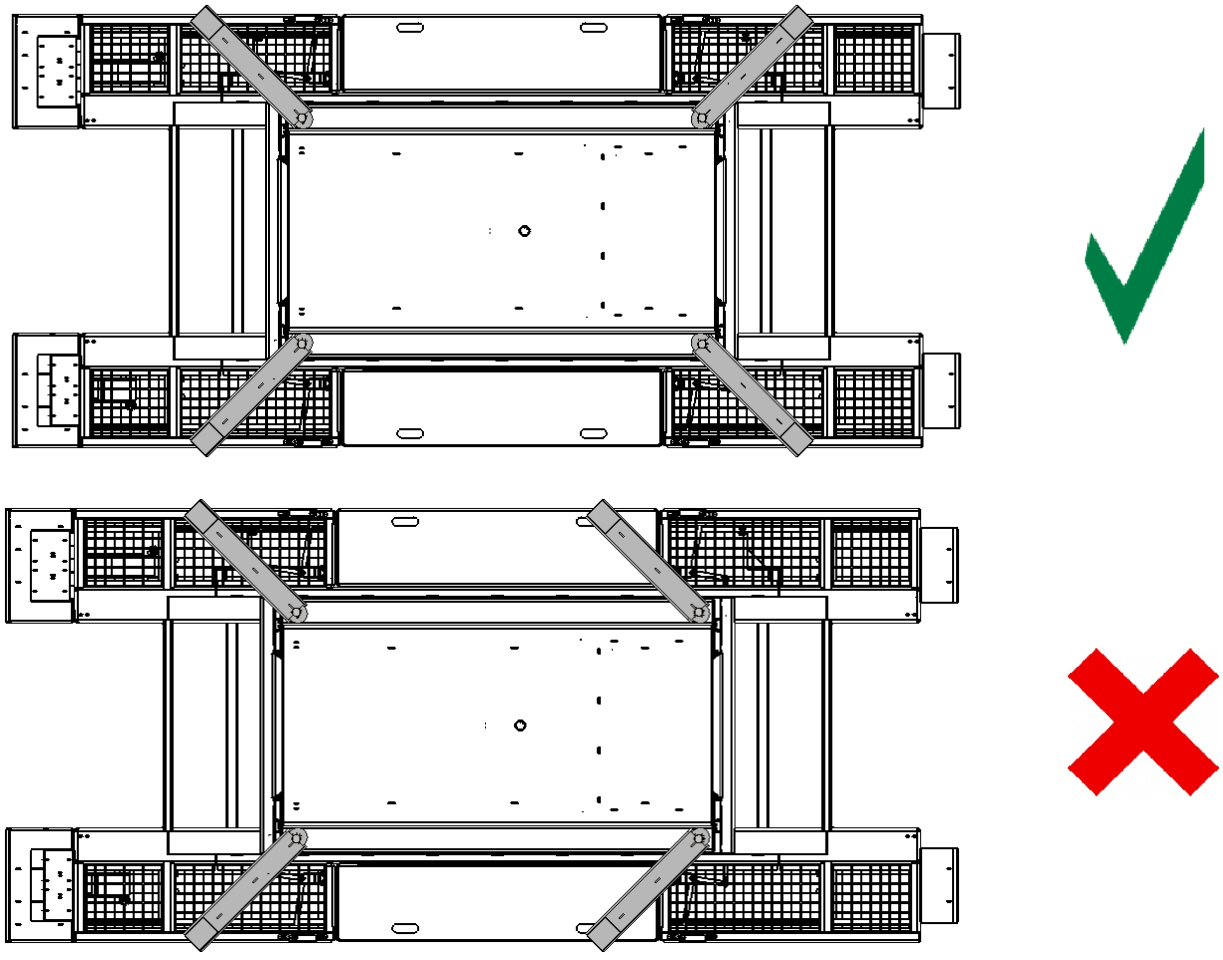


5.4 **Support arms (only on DUO)**

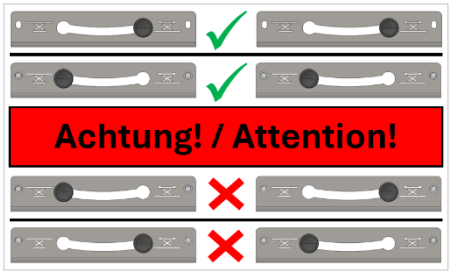
The support arms are flanged to the base body and serve for mounting the vehicle by the chassis. It is thus possible to lift the vehicle wheel-free. To use the support arms, the vehicle must be driven onto the lifting platform normally. Now the support arms must be folded out and positioned under the vehicle mounting points provided for this purpose. Rubber blocks are positioned and the boom is decoupled from the base body. The vehicle can now be lifted carefully.

Correct use of the rubber blocks: These must always be placed on the largest support surface and must not be stacked. They must rest with the full surface.

Correct support arm positioning: The support arms must always be folded out so that the vehicle is lifted with its centre of gravity as central as possible above the lift base body. It is also important to ensure that the fold-out direction is as symmetrical as possible, see screens below:

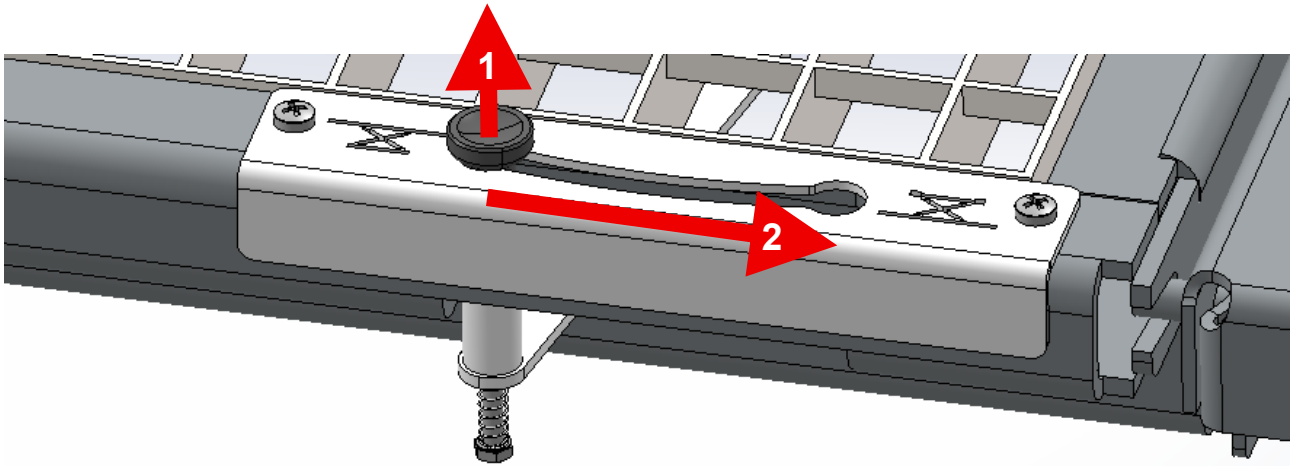


5.5 **Wheel-free lifting function (only on DUO)**

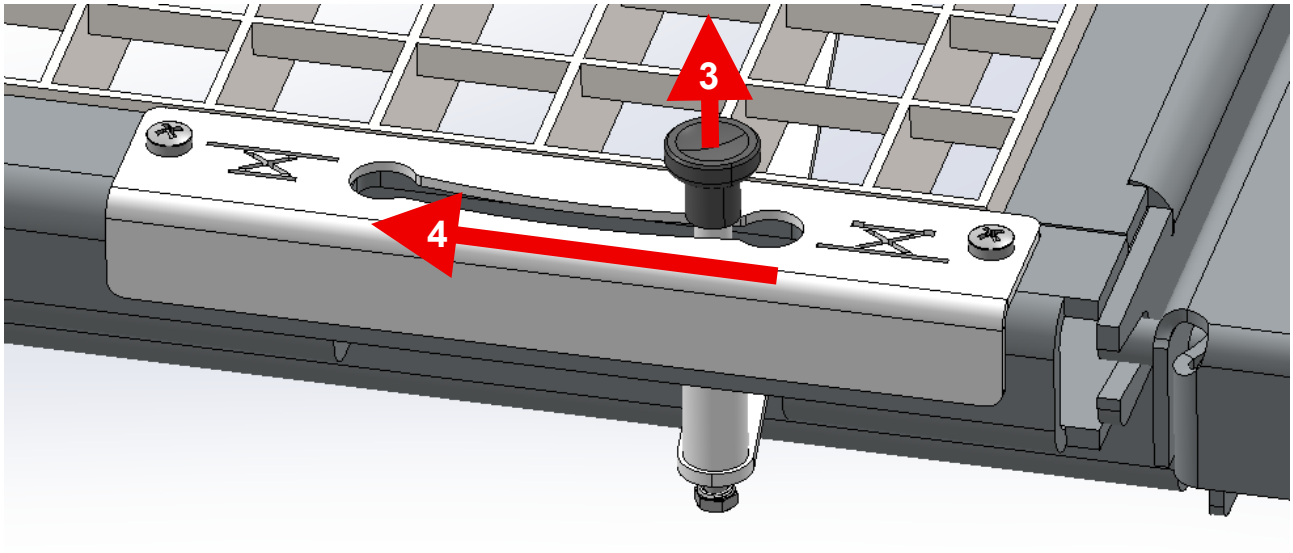


The wheel-free lift function is used in conjunction with the support arms to lift the wheels of the vehicle freely. After positioning the vehicle on the platform, the boom can be uncoupled from the base body. The coupling points are located on the front side of the base body and are to be operated at the height of each wheel. Both levers must always be operated, at the front and rear of the vehicle, see also sticker on the control panel:

To disengage, i.e. to use the wheel lift function, the black buttons on both sides must be pulled up (1) and pulled against the spring forces towards the “wheel lift” pictograms (2). Ensure that both buttons are pressed into the locking plates and that the wheel lift positions are locked. The decoupled base body can now move out of the boom.



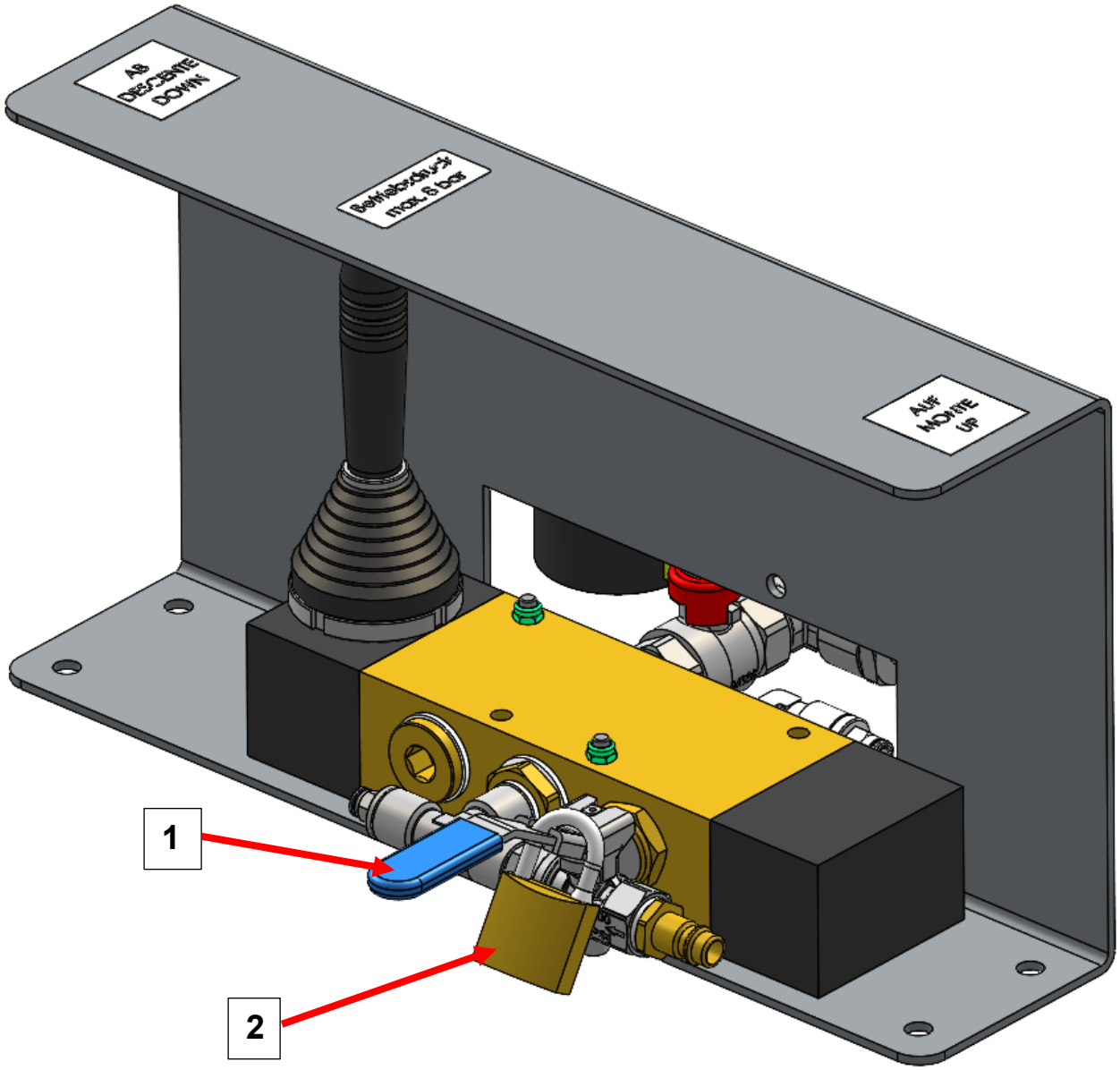
For coupling, the base body must be retracted into the boom until it reaches an end stop on the boom, which prevents the base body from “diving through” and jamming the support arms. Now pull up the black buttons (3) so that the buttons can slide through the spring forces to the “boom coupling” pictogram (4), thereby re-coupling the boom to the base body. Care must be taken to ensure that the buttons sink back into the locking plate to ensure complete coupling and to prevent tripping hazards. A boom that is not completely coupled in can fall down and possibly cause personal injury or damage to the vehicle. **Therefore, after each coupling procedure, the correct seating should be checked by slowly and carefully raising the lifting platform.**



5.6 End of working day

Always leave the lifting platform in the retracted state. A lifting platform that has been raised over a longer time frame can automatically move into the fall safeguard due to the smallest leaks in the pneumatics, which is thus subject to increased wear and must be serviced more often and replaced if necessary.

The lifting platform must be secured against unauthorised use. A padlock, which is not included in the scope of delivery, can be used for this purpose.



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

6 Risks and safety devices

The following is a presentation of the risks that may arise from a reasonably expected misuse of the lifting platform and an explanation of the safety devices that is intended to prevent damage.

6.1 Risks/hazards

The operating company must ensure that the lifting platform is only used as per its intended purpose, namely as a vehicle lifting platform. In particular, no persons may be lifted. Furthermore, working or standing under the raised vehicle is strictly prohibited.

The following additional risks can occur even with improper use:

- Hitting an obstacle when lowering the lifting platform. The operator must keep an eye on the load and the area under the lifting platform at all times. If this cannot be guaranteed, a second person should be called in to observe the danger zone.
- Pressure can escape abruptly from the load-bearing equipment due to a defective pneumatic system. The lifting platform can drop unintentionally. The fall safeguard as a mechanical protective device prevents unintentional, critical sagging.
- The lifting platform has pinch and shear points. The scissor system is covered by the boom and the vehicle so that unintentional interference with the scissor system is not possible. Foot crush points are secured by the CE stop. Nevertheless, safety shoes should be worn to avoid injuries from falling parts.
- Incorrect loading of the lifting platform can cause it to tip over. It is essential to pay attention to the specified load distribution. For additional safety, it is recommended to anchor the lifting platform to the base.
- Defective installation or wear can cause parts of the lifting platform to break. The installation must be carried out by trained and experienced personnel and in accordance with the installation instructions. Regular maintenance must not be foregone. Wearing parts must be replaced as per the maintenance schedule.
- When lifting an unbraked vehicle, it can cause an asymmetrical load on the lifting platform by rolling away. The roll-off safeguards prevent the vehicle from falling, but not the dangers caused by the load shift.
- Too much pressure on the air bellows can cause it to crack and lose air. The air bellows are safeguarded with a safety valve and designed for triple safety. The air pressure should always be kept in mind. The safety valve must be checked and replaced regularly as per the maintenance schedule.
- Incorrect positioning or use of the support arms can cause the vehicle to tip over. Ensure that the support arms are used correctly.

6.2 Pneumatics and air bellows

The lifting platform works purely pneumatically, i.e. exclusively with compressed air. A sufficient supply of compressed air must be ensured. 6-8 bar mains pressure is required. The lifting function is performed by the air bellows, which inflates via the air pressure and thus raises the lifting platform together with the nominal load.

It is essential to protect the air bellows from external influences. No welding or other spark-producing work may be carried out in its immediate vicinity without further protecting the air bellows against this.

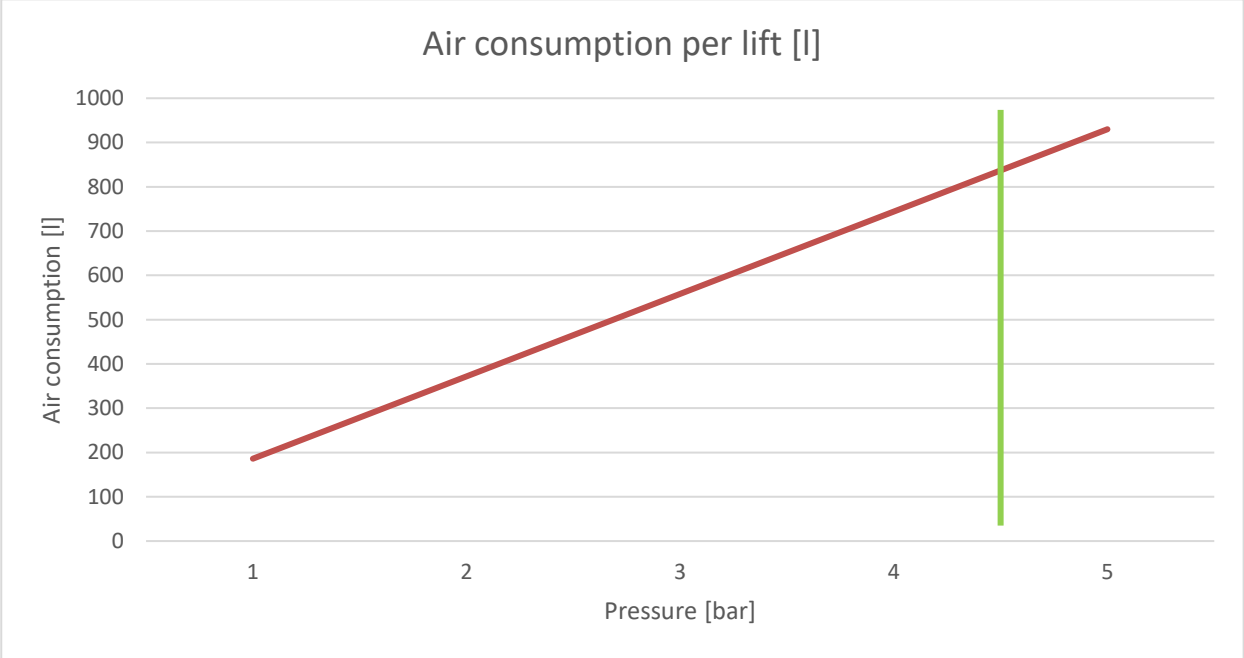
The compressed air supply is monitored via the manometer located on the control panel. The system is also protected against overpressure by a safety valve on the air bellows.
In addition, what is referred to as a CE stop is included in the pneumatics, which serves as a foot or crush protection. This has the function that from a certain lifting height, an audible warning signal sounds when the platform is lowered, which warns people in the danger zone. Before the warning signal starts, the platform stops automatically. Only after releasing and operating the control lever again does the platform continue to descend and generate the warning signal.
Likewise, the control unit can be equipped with so called forced ventilation. This automatically ventilates the air bellows completely as soon as the platform is completely lowered, without having to operate the control panel any further. This means that a possible residual pressure in the air bellows when the platform is unloaded

does not cause the platform to move up again a bit and damage the vehicle. In addition, work cycles are shortened. **This "forced ventilation" module is not built into the series and is only available as an option.**

Modifications to the pneumatics may only be carried out by competent persons. The pneumatic system is a modular system, it can be expanded with different functions. Examples of this are, for example, an automatic limit limiter. For more information, consult your dealer.

6.3 Compressed air

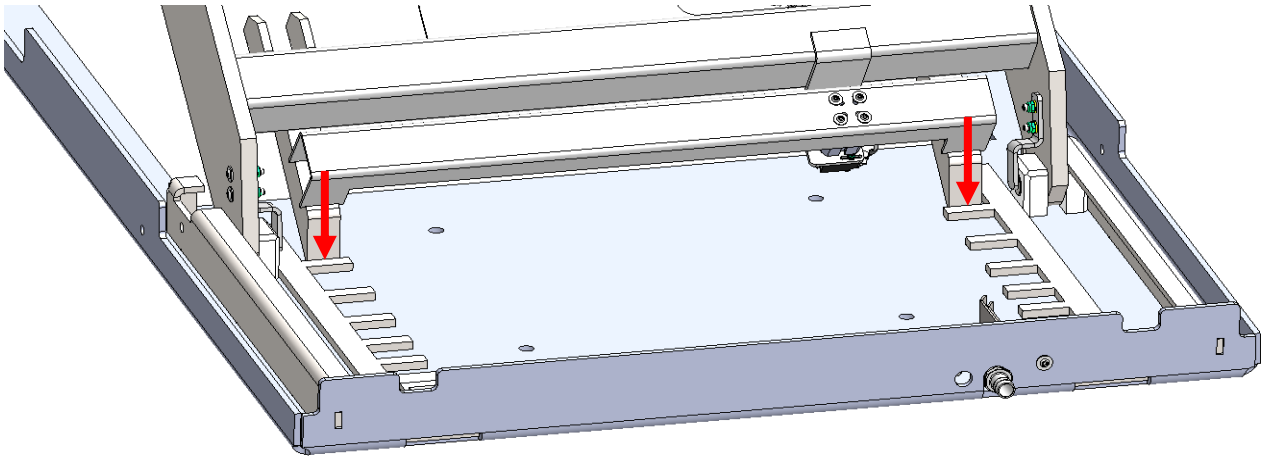
Only **dry** and **unoiled** compressed air may be used. Moisture from the inside can damage the air bellows in the long term, significantly reducing the service life of the air bellows.



Legend:
Red characteristic curve: Air consumption depends on the pressure in the air bellows.
Green characteristic curve: Safety valve 4.5 bar.

6.4 Fall safeguard

The fall safeguard is a mechanical protective device for the event that the air bellows experiences a sudden drop in pressure, e.g. due to tearing or bursting. It is connected to the pneumatic system. 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.



	If the lifting platform does not lower, the lifting platform has entered the fall safeguard due to a possible leak in the air line. In this case, the lifting platform must be raised a little so that the fall safeguard frees itself again. Afterwards, the lowering process can be repeated.
	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 lowering 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.

6.5 Foot protection

The CE stop, as it is referred to serves as foot protection. This is a safety device installed according to **DIN EN 1493:2010 vehicle lifting platforms §4.17.3**, which automatically stops the lifting platform at a certain height during the lowering process. Continuation is only possible by operating the hand control again. Further lowering is now accompanied by a constant, audible warning signal.

Furthermore, the access ramps and runway are designed to exert a vertical crushing force of less than 250N.

6.6 Incorrect coupling of load handling devices (for DUO only)

The vehicle must be observed during the entire lifting and lowering process. If there are persons or objects in the danger zone, the lifting or lowering process must be stopped immediately by releasing the control panel.

If the two levers for the wheel-free lifting function are in different positions, this will result in incorrect coupling, causing the load handling device and the vehicle to become unstable during lifting.

In this case, the following steps must be followed:

- Stop lifting process
- Check whether there are any persons in the vicinity of the platform – no persons are permitted to stand in the immediate vicinity of the lifting platform.
- Start the lowering process carefully – the load handling device may fall down.

7 Maintenance

Maintenance work must be performed at the specified maintenance intervals by instructed personnel.
Do not use flammable or aggressive fluids or media for cleaning, as this may damage the paintwork and the air bellows.

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.

First move the lifting platform to the highest position and safeguard this position with suitable means. Make sure that the compressed air supply is shut off!

Maintenance interval	Working process	Remark
Monthly Or after approx. 300 lifts	Check all moving parts for wear, clean and grease.	Use silicone-free grease.
	Check air bellows and air hoses for damage.	Air bellows may have hairline cracks. Critical damage is when the inner fabric becomes visible.
	Check valves and pneumatic connections for leaks.	Leak detection spray can be used.
	If necessary, check foundation plugs for secure seating.	
	Check middle pin for secure seating.	Tightening torque: 100 Nm
	Only on DUO: Functional testing of the coupling mechanisms (locking capability in the end positions must be ensured) The tension spring must always pull the coupling mechanism into a safe position	Wear testing of tension and compression springs
At least annually Or after approx. 3600 lifts	Perform regular safety checks	For inspection protocol and instructions, see chapter “**Regular safety inspection**”
Every 2 years Or after approx. 7200 lifts	Replace safety valve Only on DUO: Replace the tension spring of the coupling mechanisms of the wheel lift function	To be carried out by “competent person” only. Using an incorrect or damaged safety valve is a major safety risk.
Every 6 years or after approx. 22000 lifts	Replace air hoses	To be carried out by “competent person” only.
After 10 years	General assessment of the remaining service life.	To be carried out by a service technician from Herkules Hebetechnik GmbH or a suitably authorised person.

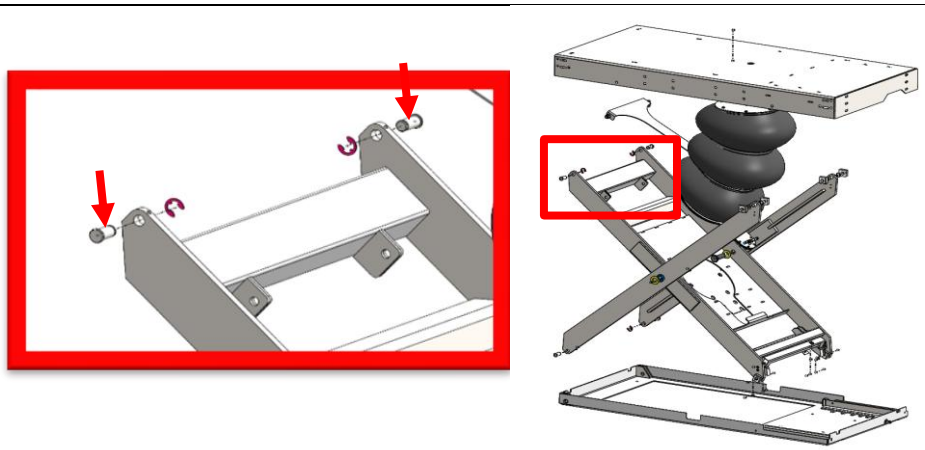
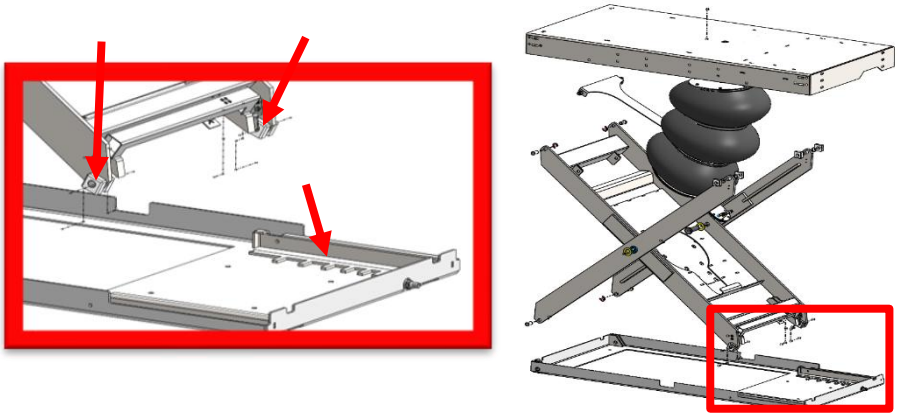
7.1 Shutdown for maintenance work

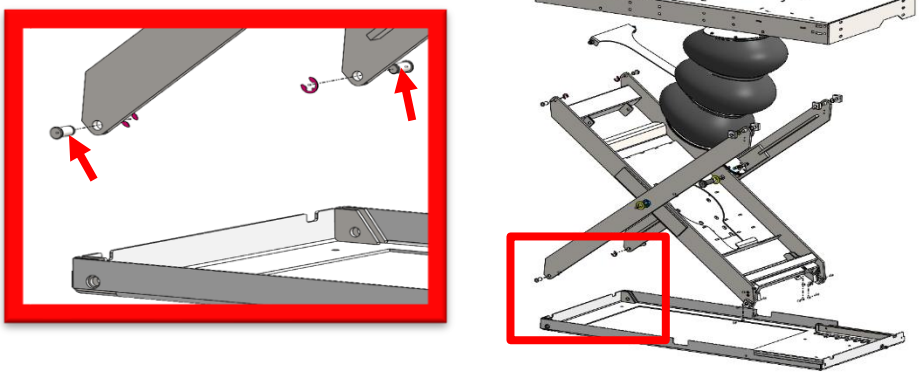
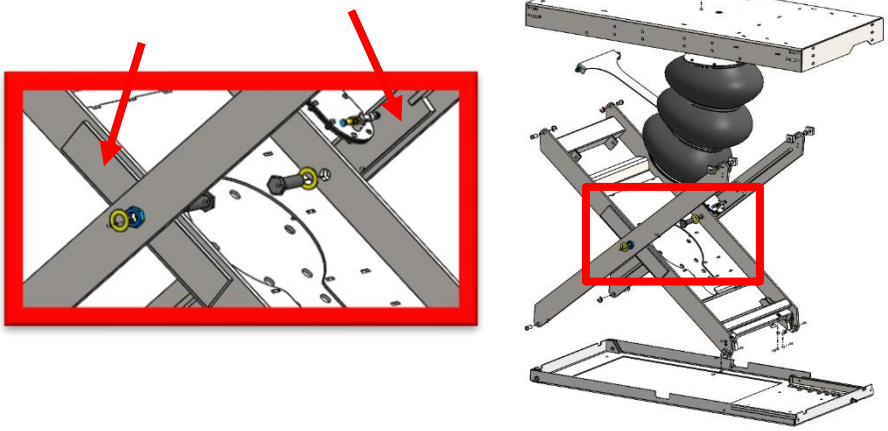
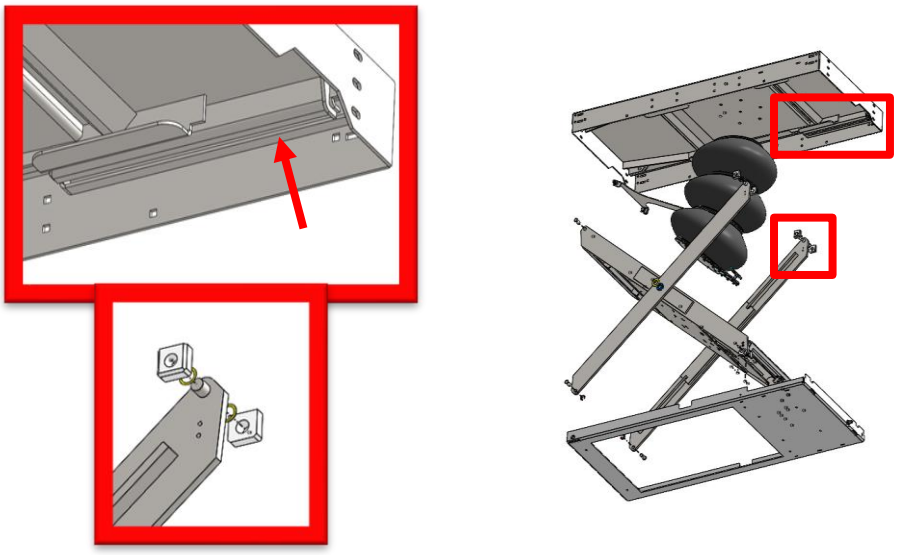
To shut down the lifting platform for maintenance, the following points must be observed:

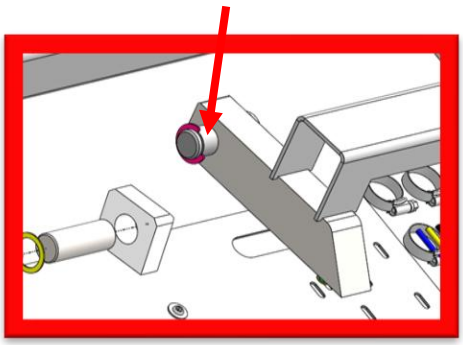
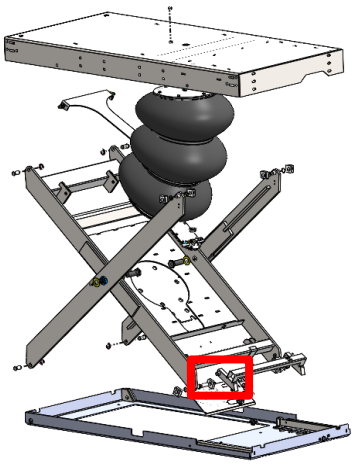
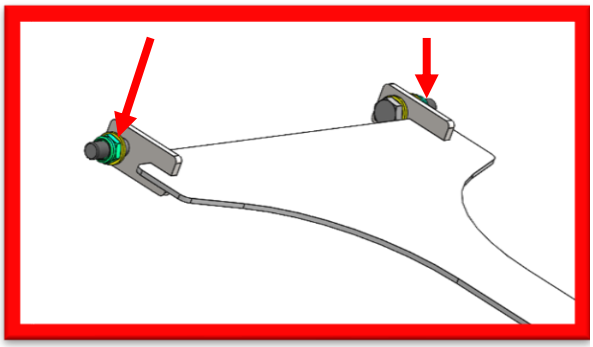
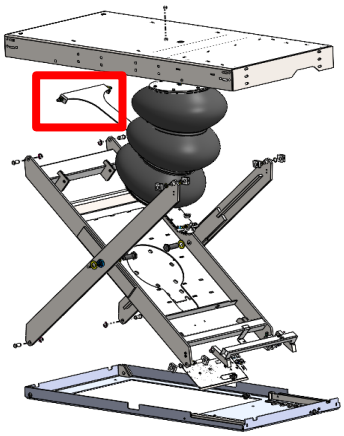
- Move the lifting platform to the top position.
- Lock the control unit with the main shut-off valve and disconnect the lifting platform from the supply line.
- Press the lever on the control panel in the opposite direction to “Lift” to lower the lifting platform to the last notch of the fall protection device and thus also completely deflate the air bellows.
- Perform maintenance work on the pneumatic components.
- For recommissioning, see chapter 5.2 Operation.

7.2 Checking and lubrication points

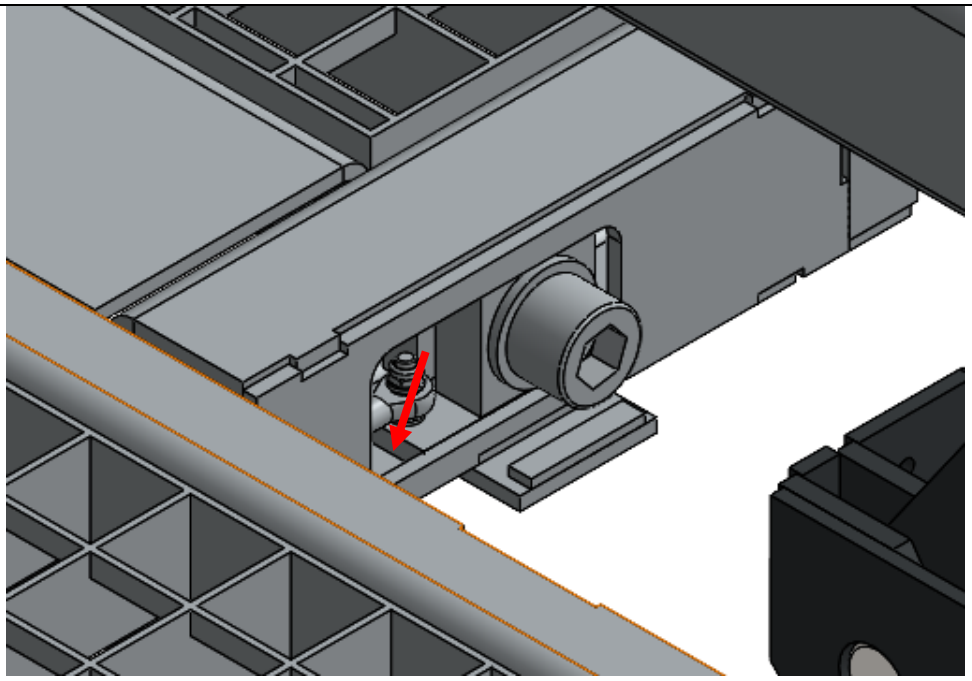
The following points must be fulfilled during each maintenance:

Check bolts for wear and fit, clean and lubricate.	
Check sliding blocks for wear and secure fit, replace if necessary. Clean and lubricate the slide surfaces.	

Check bolts for wear and fit, clean and lubricate.	
Clean and lubricate the slide surfaces of the inner and outer shears.	
Check the sliding blocks for wear, replace if necessary. Clean and lubricate the slide surfaces.	

Check fall safeguard bolts for wear, clean and lubricate.	 
Check screwed connection for tightness, clean and lubricate.	 

7.3 **Maintenance on DUO versions**

Check cylinder head bolts for tightness. Keep the slide blocks (4x) greased to ensure smooth slide reset and safe operation.	

8 Inspection

8.1 Regular safety inspection

The safety check is required to guarantee the operational safety of the lifting platform. It shall be carried out at intervals of no more than one year after initial commissioning.

The following notes must be observed for regular maintenance and safety inspections in accordance with §10 of the Ordinance on Industrial Safety and Health.

The regular safety inspection must be carried out by a competent person. It is recommended that this be done at the same time as any maintenance.

Use the inspection report on the following page for documentation.

Notes on various points:

Sticker present: The following stickers should be legible and visible:

1. Type plate
2. Nominal load
3. Information sign for support arms (only for DUO platforms)
4. Quick reference guide
5. CE mark

Function of the safety valve (4.5 bar): To be checked by inflating the air bellows while observing the manometer. After reaching the maximum pressure of 4.5 bar, the safety valve must trip and release the excess pressure.

Fall safeguard function: The fall safeguard must always slide over the teeth as parallel as possible. Only when lowering the platform must the fall safeguard be raised by the cylinder so that the platform can be lowered. As soon as the control lever is released and the exhaust air is interrupted, the fall safeguard must drop down again.

Function of the roll-off safeguards: There must be roll-off safeguards at both ends of the lifting platform to prevent the vehicle from rolling off the platform when the handbrake is released. The roll-off safeguard can either be bolted on or moved into position automatically by the access ramp. Check whether the roll-off safeguards move into their safeguarding position at low lift.

CE stop function: When lowering the platform, the platform must stop automatically at a lifting height of approx. 250mm. The platform can only be lowered further by releasing the control lever and operating it again, accompanied by an audible warning signal.

Function of the support arms: Tight fit and good rotational mobility must be checked. The support arms should always be inserted into the bushing with the support bolt at its maximum.

Tightness of the pneumatic system: To check the tightness of the pneumatics, the lifting platform should be lifted under load. If the lifting platform does not change its position within a period of 5 minutes (DGUV §3.2.4.4 point 6), the pneumatic system can be considered as sufficiently tight.

Safety inspections report

Machine type	
Serial number	

Test step	OK	Not OK	Follow-up Inspectio	Remark
Operating instructions present				
Type plate legible				
Load capacity sticker readable				
Mains pressure sticker readable				
Quick reference guide sticker				
“Lift/Lower” sticker legible				
All screws tight				
Scissor bolt safeguarding (torque 100 Nm)				
Condition of all hoses				
Function of the safety valve (4.5 bar)				
Manometer function				
Dead man's switch of the control lever				
Fall safeguard function				
Function of the roll-off safeguards				
General condition of the bearing structure				
CE stop function (status, perceptibility of the audible warning signal)				
Function of the support arms (DUO)				
Function of the wheel-free lift lock (DUO)				
Condition of air bellows				
Tightness of the pneumatic system				

Result	
	Commissioning not permitted
	Commissioning permitted, defects to be rectified before:
	Commissioning permitted

Safety check carried out on: _____

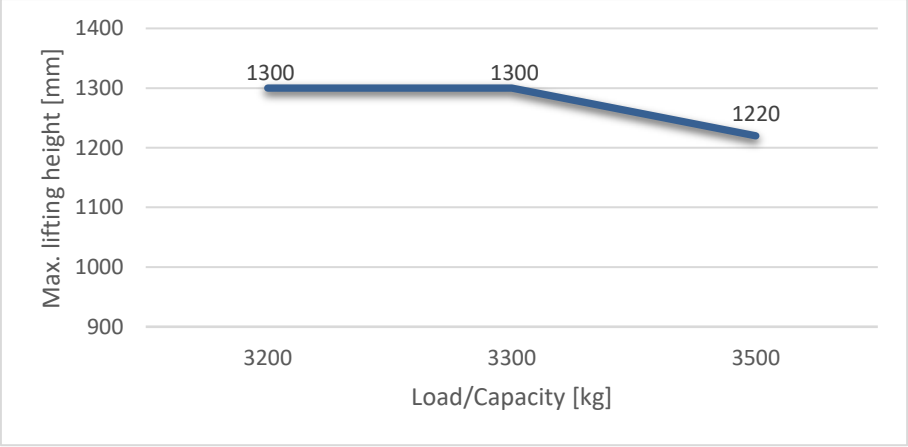
Name and signature of the tester: _____

Name and signature of the operating company/test taker: _____

9 Conduct in the event of a fault

9.1 Possible faults and remedial measures

Fault	Possible source of error	Fault rectification
Lifting platform does not lift off the floor.	Supply of compressed air interrupted.	Open the ball valve. Resolve hose pinch. Check mains compressed air.
Lifting platform does not continue to lift.	Maximum nominal load exceeded.	Reduce load.
	Maximum lifting height reached.	See diagram below.
	Safety valve blows off.	Check the manometer for pressure. Check the safety valve.
	Compressed air supply disturbed (see above).	See above
Platform does not lower any further.	Platform is in fall safeguard.	Raise the platform a little so that the fall safeguard is lifted out of the notch, then lower it again.
	The platform has hit an obstacle.	Raise the platform again, remove the obstacle, lower the platform.
Wheel-free lift function jams when unlocking	Lifting platform is not level on the floor.	Set up the lifting platform level, if necessary shim it in different places.
Wheel-free lift function jams when locking again	Base body with support arms is not completely retracted.	Release air further so that the base body retracts completely. Investigate the base for obstacles that have been driven over and prevent the lifting platform from retracting completely.



If faults persist that cannot be eliminated by the above measures, the customer service must be notified. For this purpose, the following information shall be provided:

- Article description
- Serial number
- Year of construction
- Precise description of the fault
- Image or video material a benefit

Customer service:

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

When replacing defective parts, only use original spare parts from the manufacturer, otherwise the warranty claim may be lost.

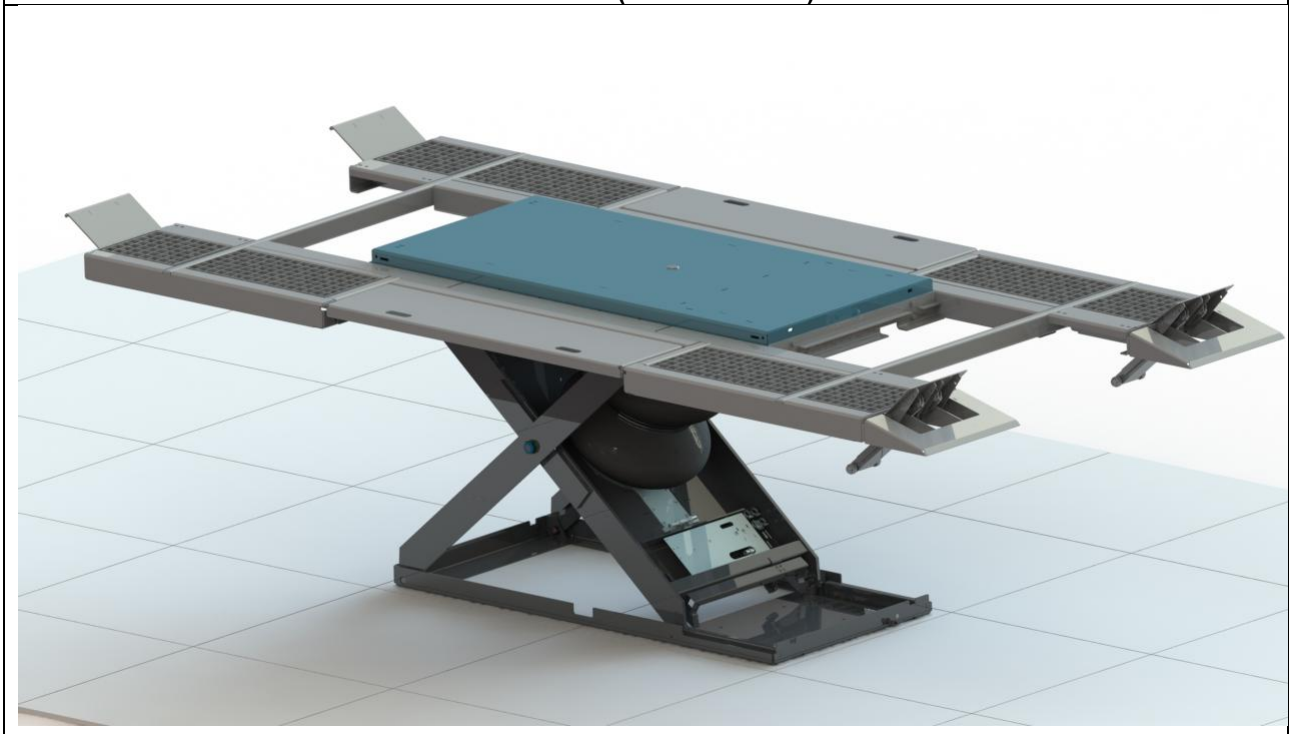
10 Technical data

	HLS3513-11/17/61/67	HLS3513-14/64	HLS3513-DUO-11/17/61/67	HLS3513-DUO-14/64
Load-bearing capacity [kg]	3500			
Load distribution max.	3:2 (against or in direction of travel)			
Unladen weight [kg]	1014	996	1140	1096
Lift time [s]	Min 50s			
Lowering time [s]	Min 40s			
Useful lift [mm]	1150			
Total height with support arm	1300	1150	1300	1150+50
Base body dimensions [mm]	1988 x 921			
Platform dimensions without ramps [mm]	4000 x 2000			
Mains pressure	6-8 bar			
Pressure limitation by safety valve	4.5 bar			
Noise exposure	<70 dB(A)			
Safety devices				
Fall safeguard	X	X	X	X
Roll-off safeguard	X	X	X	X
Safety valve	X	X	X	X
CE stop	X	X	X	X
Forced ventilation (pneu.)	Optional	Optional	Optional	Optional
Stroke limiter (pneu.)	Optional	Optional	Optional	Optional

Platform dimensions can be taken from the dimension sheets, see below.

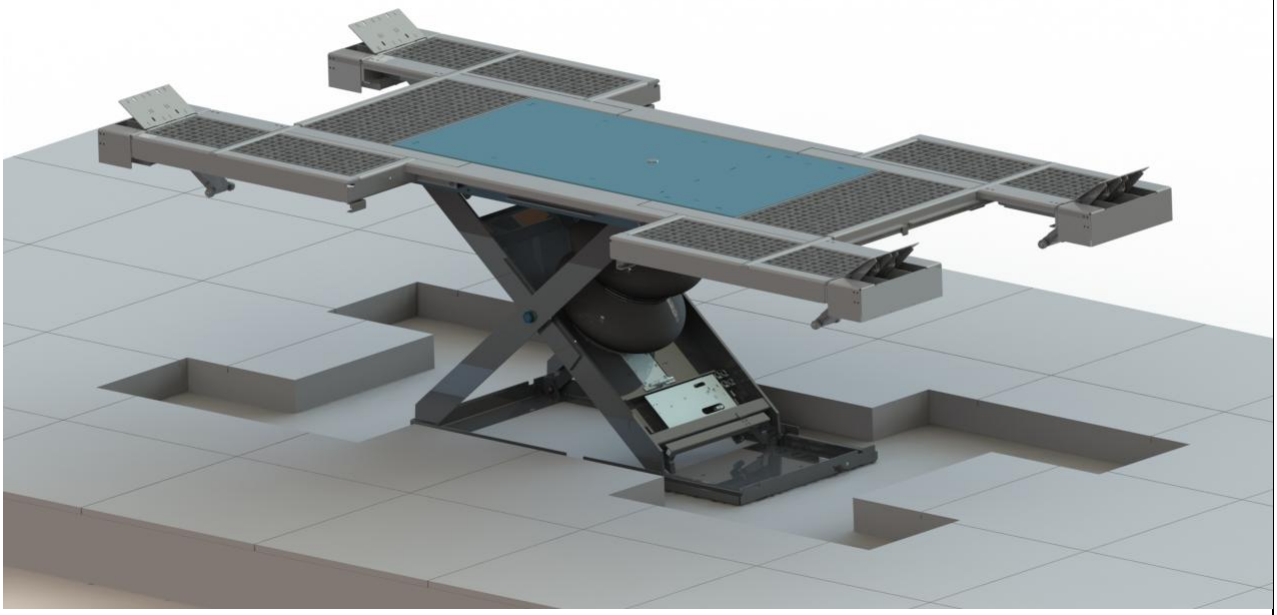
Versions

HL3513-11 (floor-mounted)

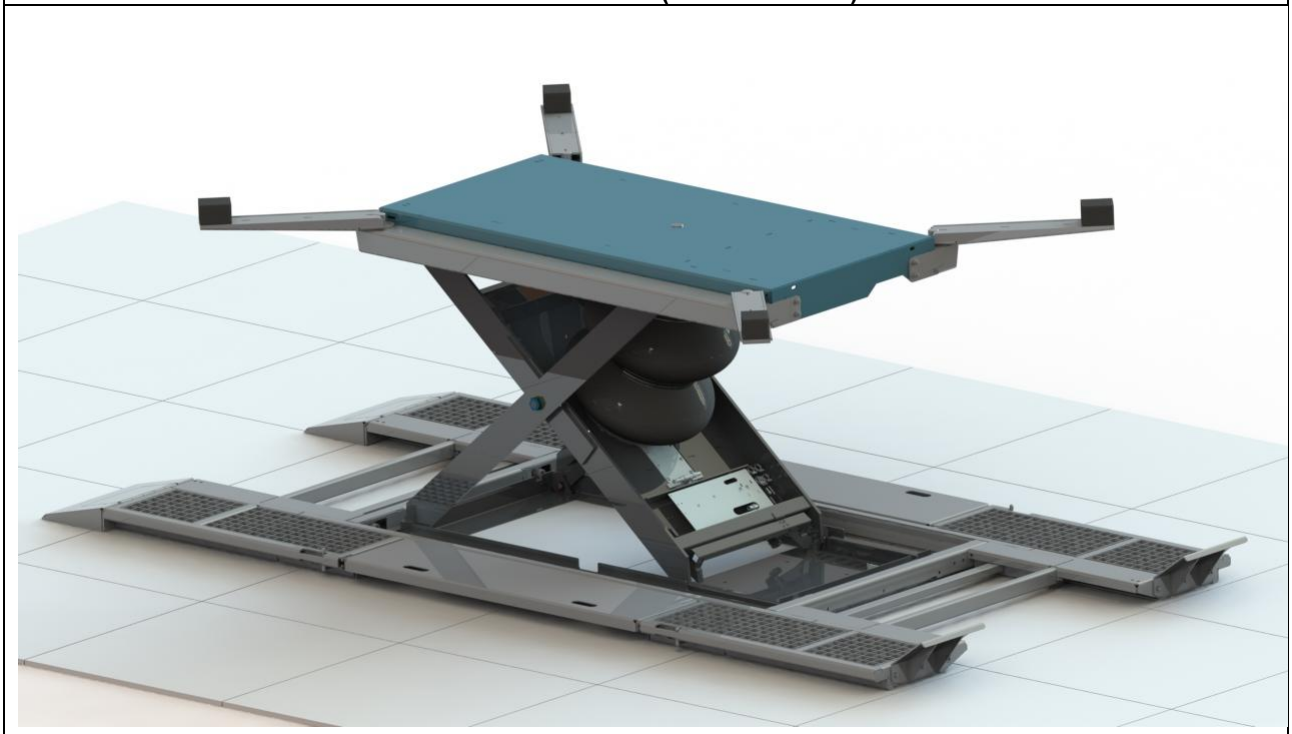
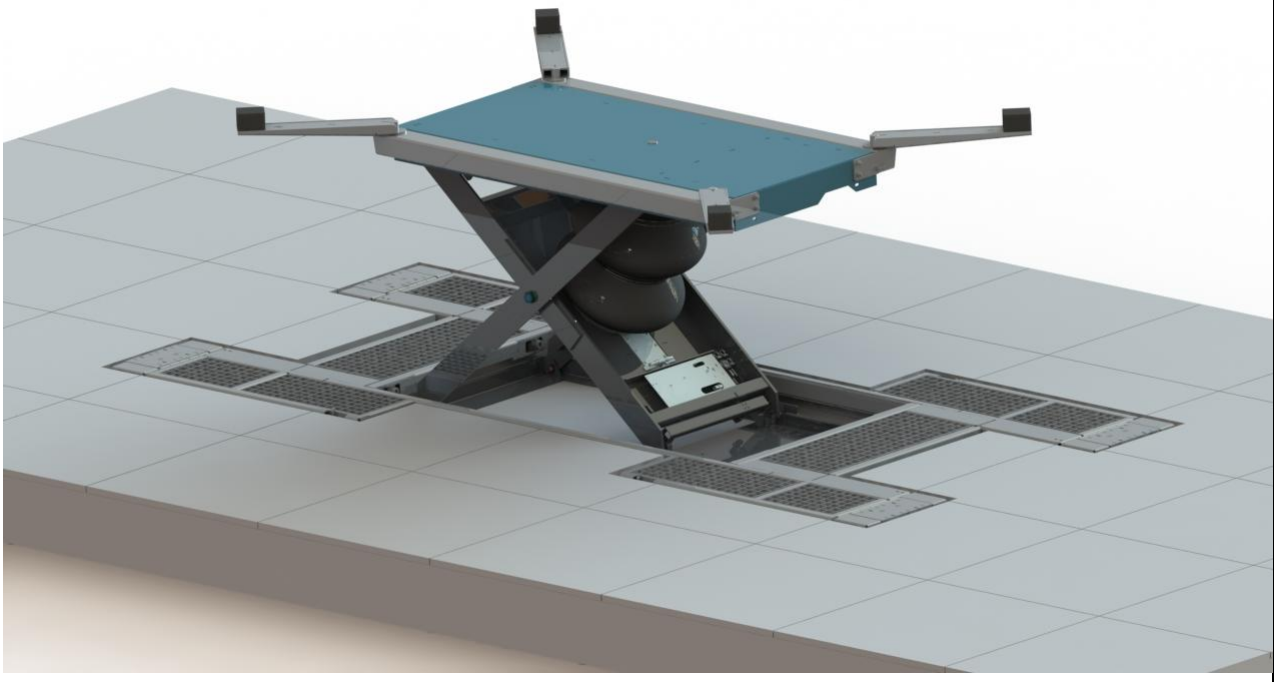


-17	Movable with Transmobil
-61	Additionally booked version for industrial use
-67	Movable with Transmobil and booked for industrial use

HLS3513-14 (floor installation)



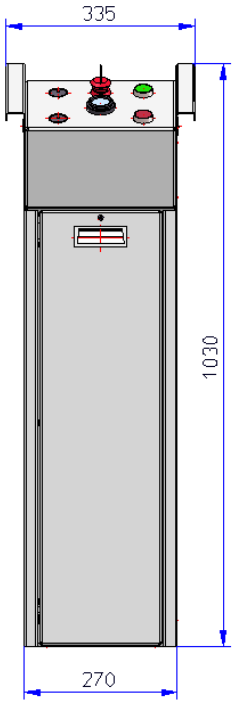
-64	Additionally booked version for industrial use

HLS3513-DUO-11 (floor-mounted)	
	
-17	Movable with Transmobil
-61	Additionally booked version for industrial use
-67	Movable with Transmobil and booked for industrial use
HLS3513-DUO-14 (floor installation)	
	
-64	Additionally booked version for industrial use

11 Accessories

11.1 Control column

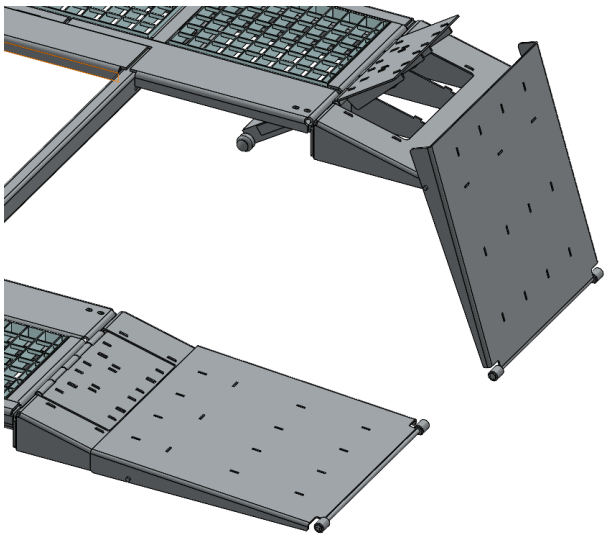
The control column is an alternative control unit that replaces the hand control unit. It consists of a control housing about 1 metre in diameter, which is firmly anchored to the base. It has easy-to-operate push buttons as operating elements. A manometer is mounted on the control module, with which the air pressure in the air bellows can be easily checked at any time.



Control column

11.2 Long ramps

Long ramps can assist when driving onto the lifting platform. On the one hand, they reduce the gradient to be overcome when driving up, which can result in less tyre spin and smoother driving onto the lifting platform. In addition, the axles are brought to a higher level earlier, so that ground clearance under the base body is less critical. In the case of lowered vehicles, long ramps can bring a benefit if the distance between the front spoiler and the wheel axle is particularly small (max. as long as the ramp itself).

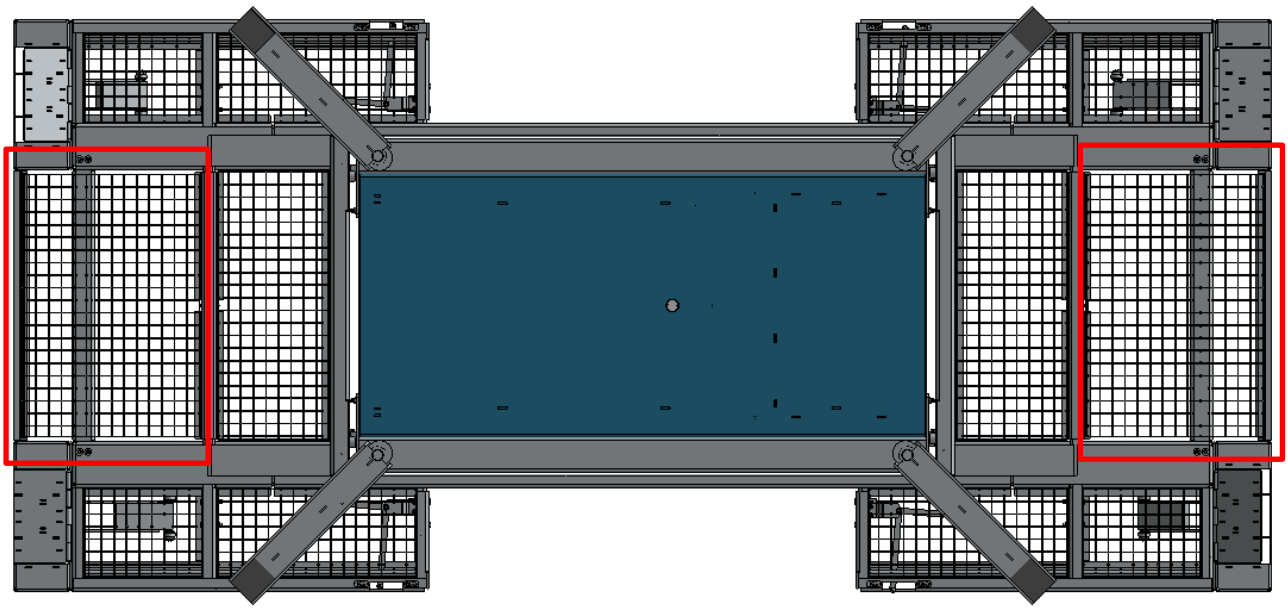


11.3 ATEX certification

It is also possible to purchase the lifting platform with ATEX certification. This must be specified in the order. This triggers an additional assembly process, where the lifting platform is equipped with the necessary additional material. Furthermore, the platform is subjected to an additional inspection according to the ATEX directive and thus certified in order to be able to fulfil the specified protection during installation.

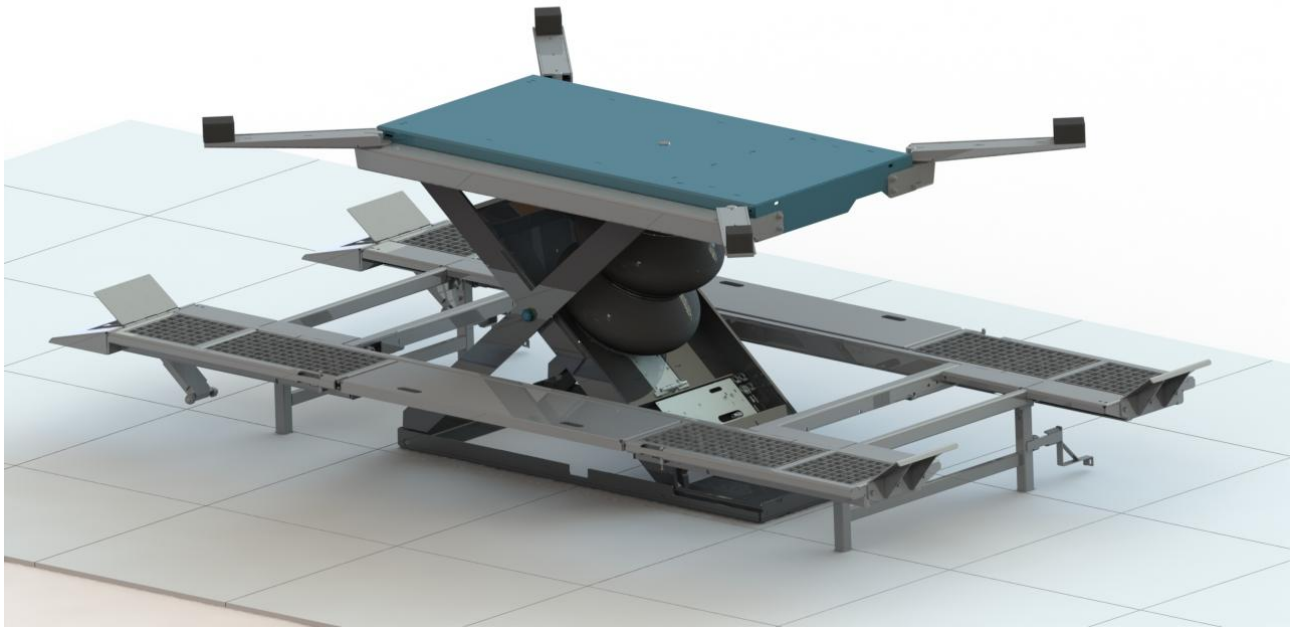
11.4 Front gratings

The front gratings close the contour of the lifting platform at the front with an additional mounting plate and a matching grating. This grating can also be driven over and withstands the same pressure as the standard grating.



11.5 **Supports (only on DUO-11)**

Use of the supports is optional. With them, the vehicle can first be brought to a raised level. To do this, the lifting platform with vehicle is raised at least approx. 0.5 metres. Now the supports can be unlocked by pressing the locking bolt on the side. They automatically drop into their working position. When the lifting platform is now lowered again, the boom automatically places itself stably on the supports. Now the base body can be unlocked using the free lift function and the vehicle can be lifted wheel-free.

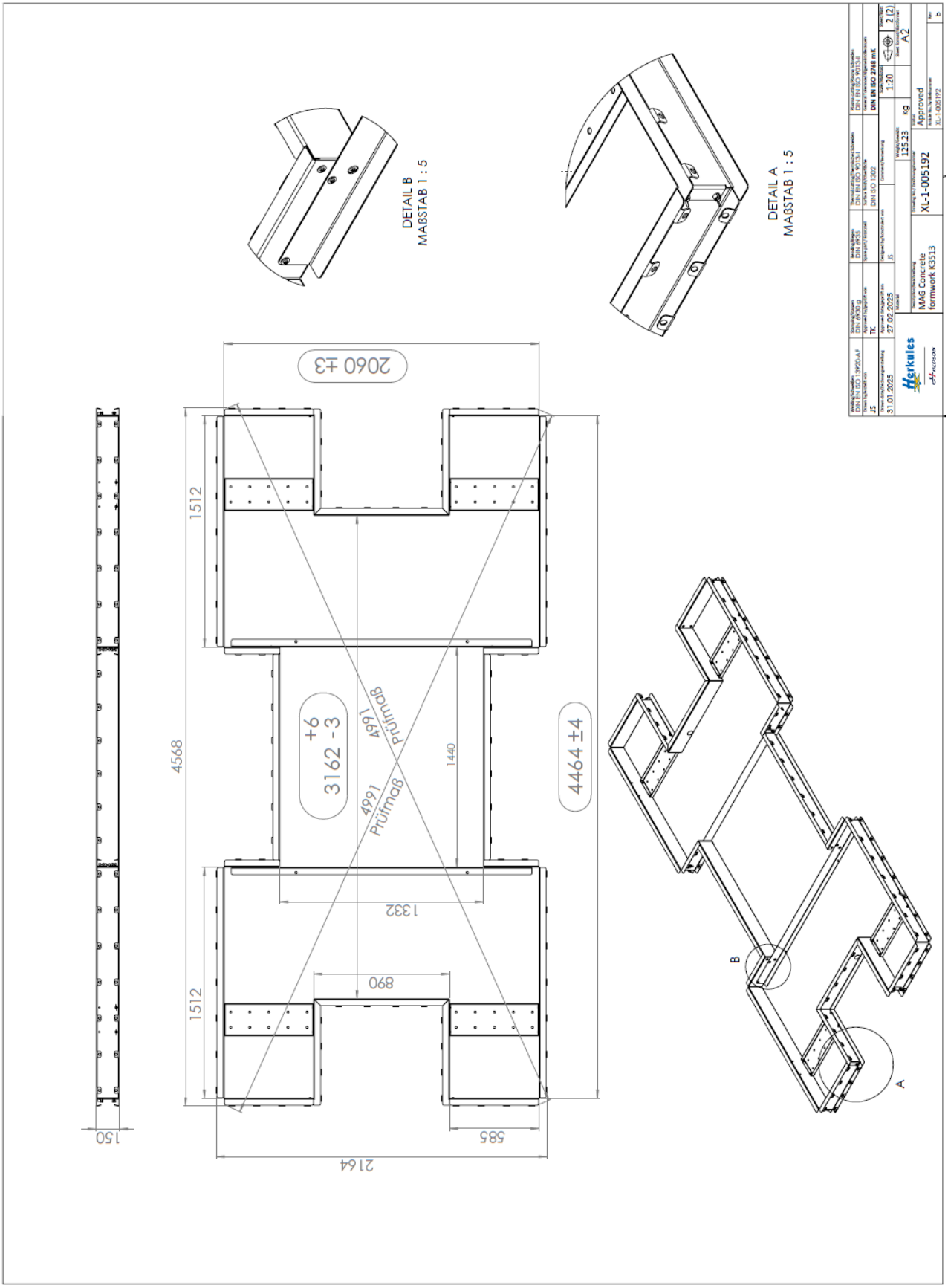


11.6 **Forced ventilation**

The explanation of the function can be found in the chapter “**Pneumatics and air bellows**”.

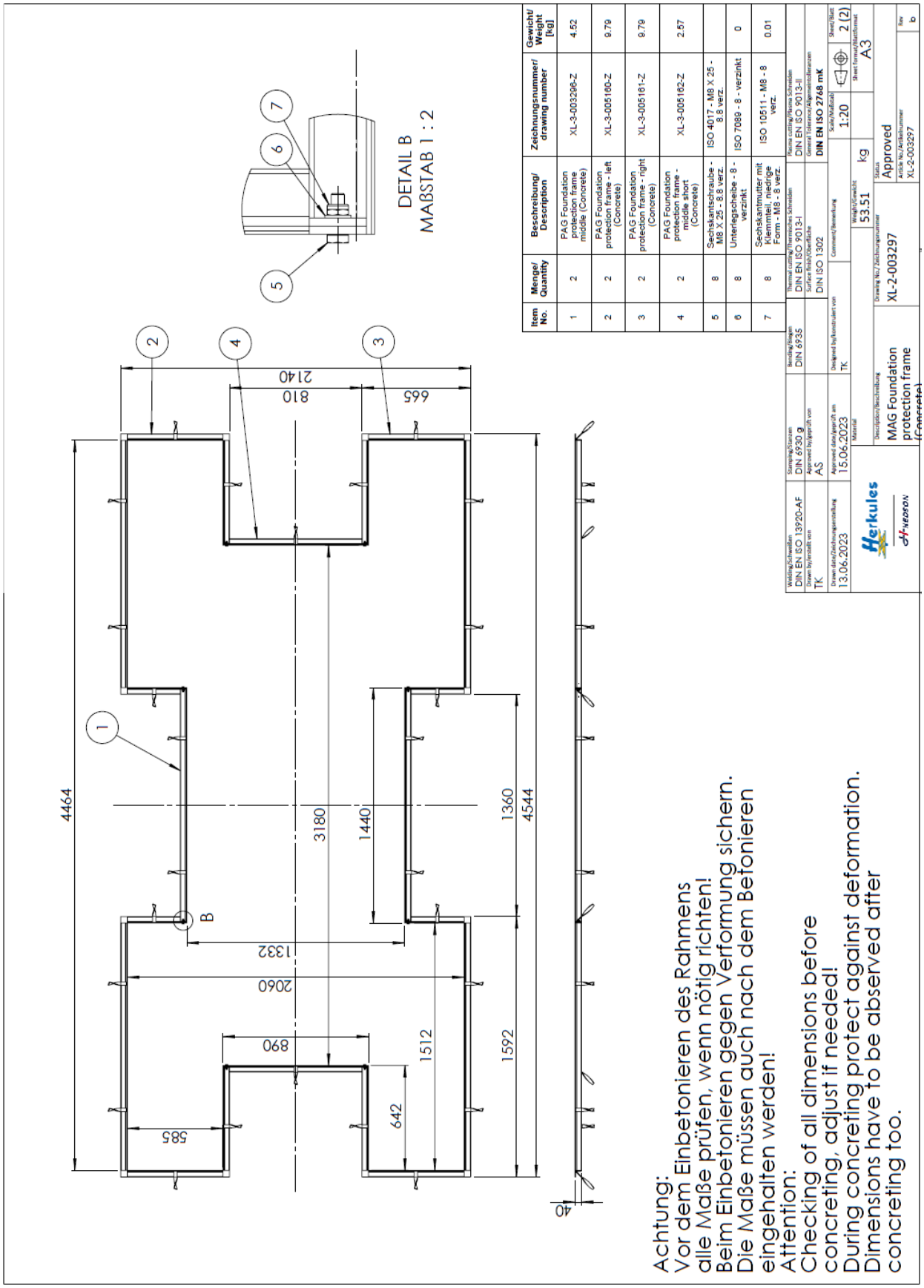
11.7 **Concrete formwork**

This ready-made formwork significantly reduces the work involved for pit manufacturers. The formwork must first be assembled and secured to the foundation slab using dowels and screws. The liquid concrete can then be poured around the formwork.

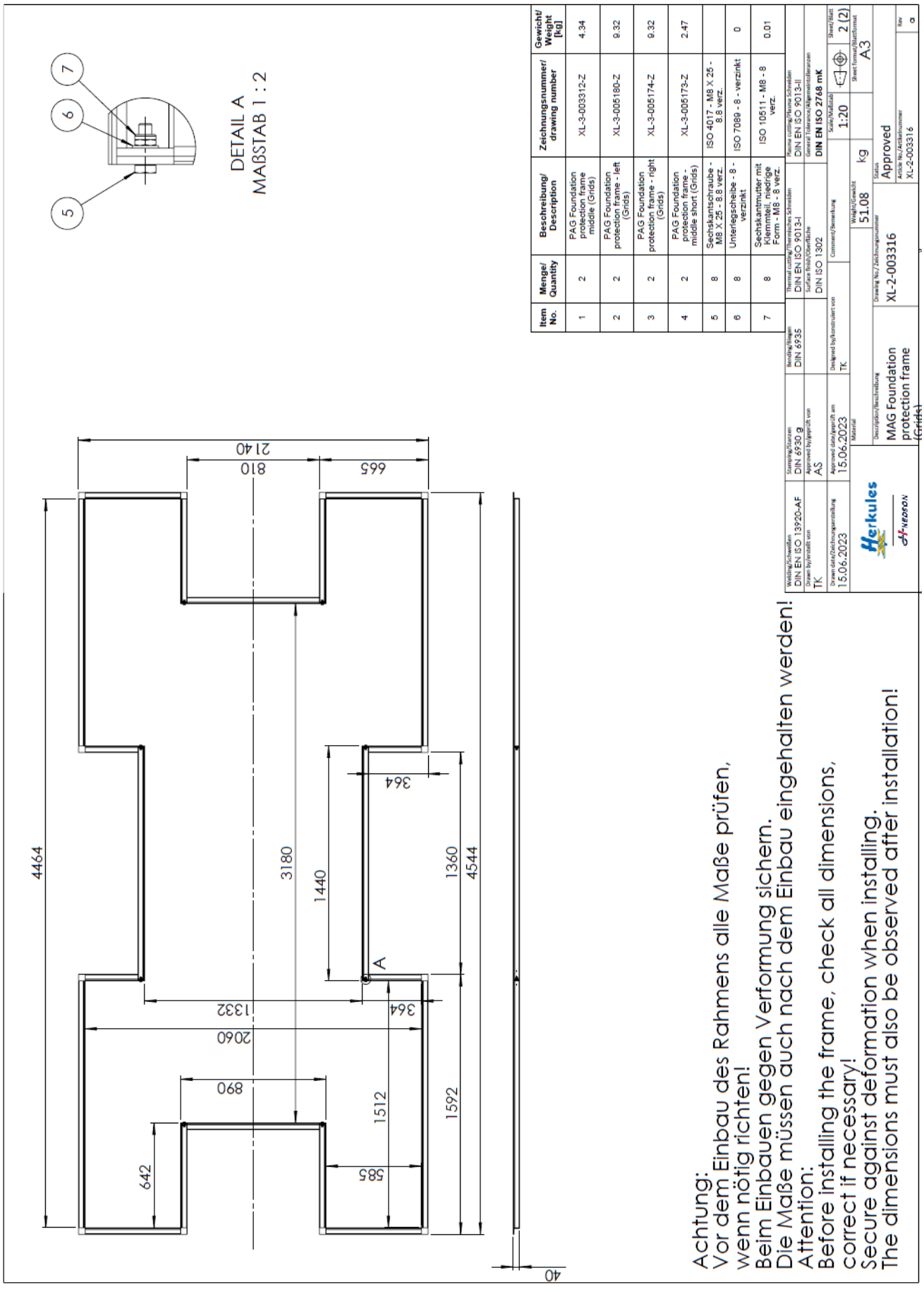


11.8 **Foundation protection frame**

11.8.1 For concrete (standard)

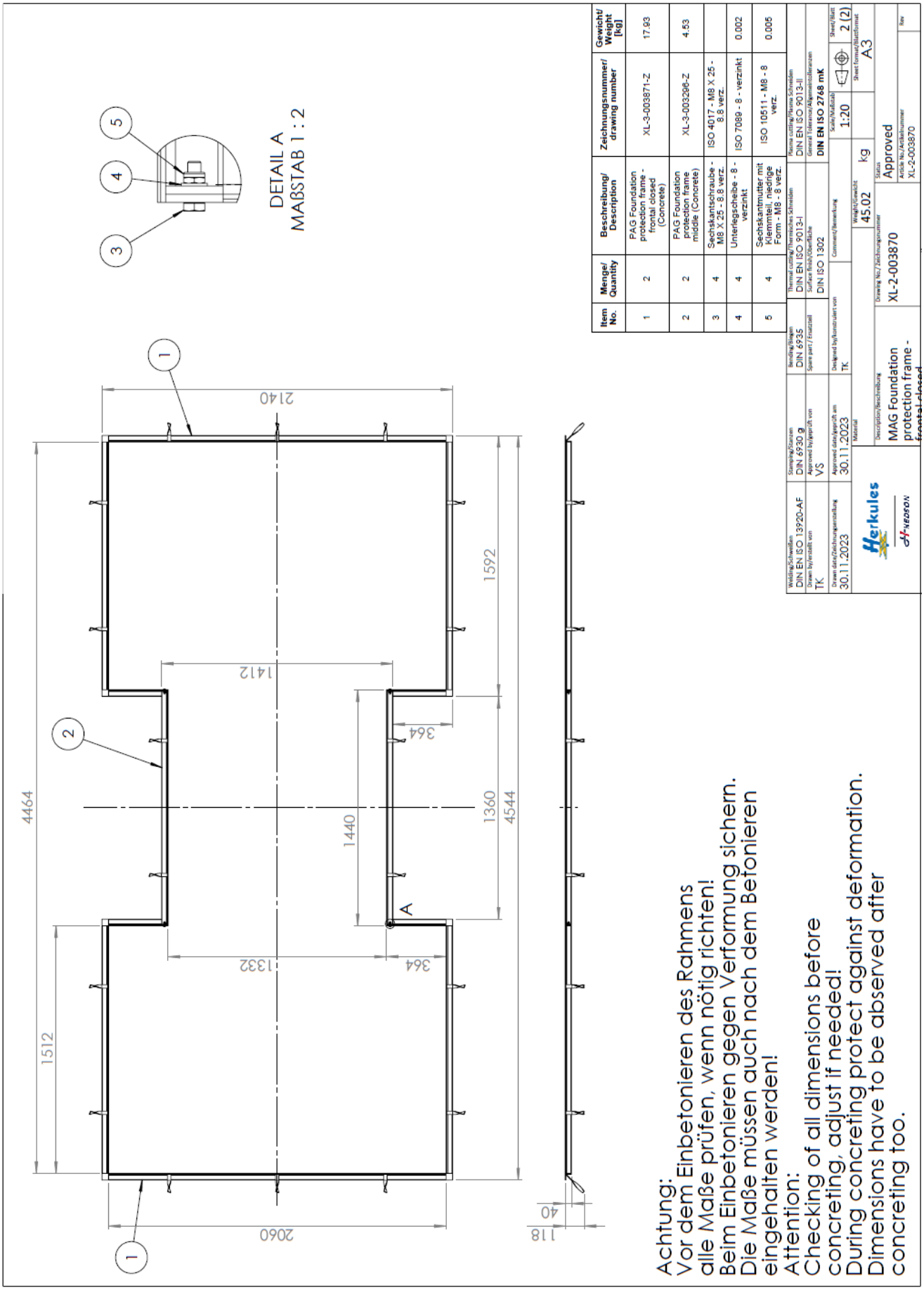


11.8.2 For grid grating (standard)

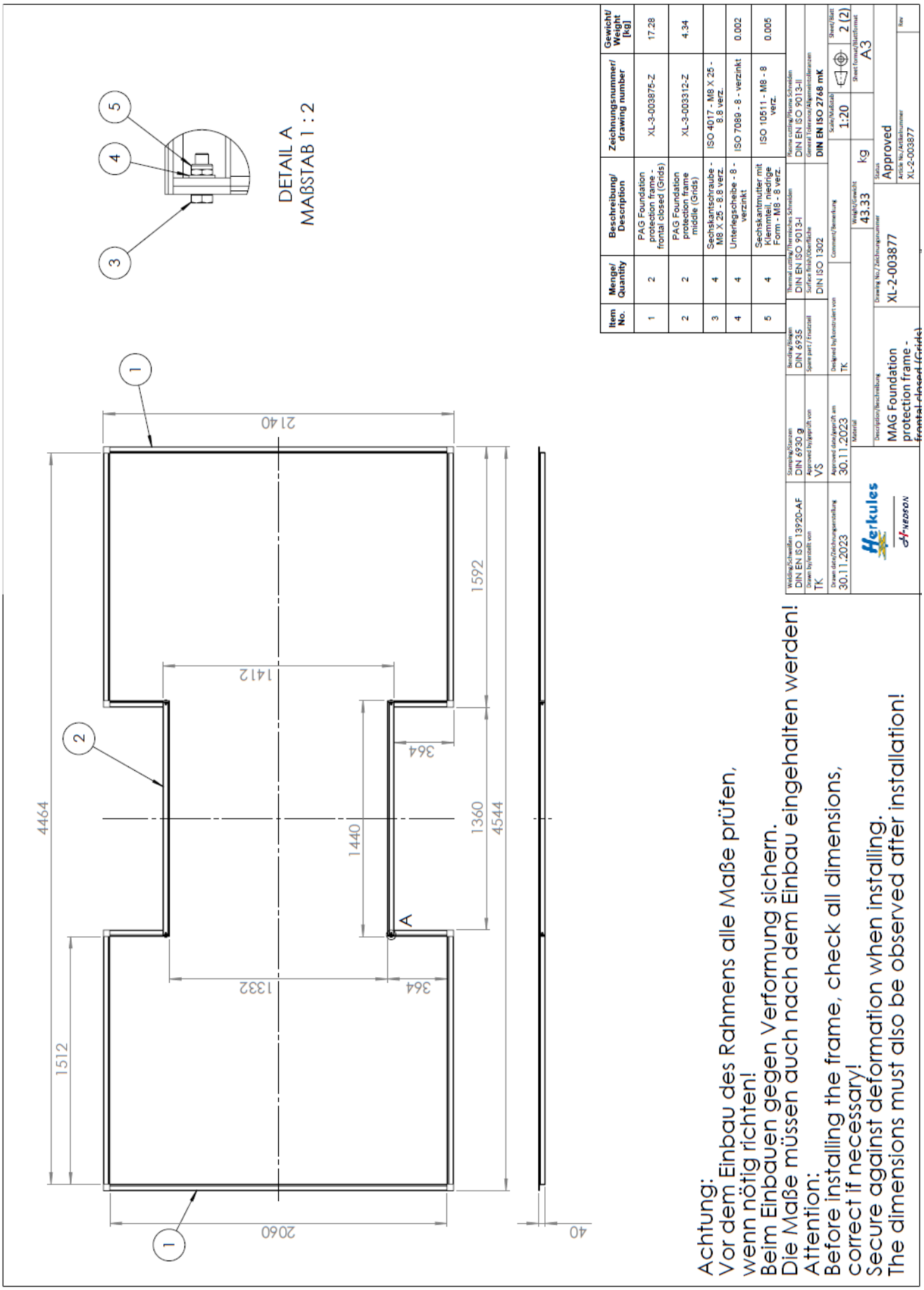


Item No.	Menge/ Quantity	Beschreibung/ Description	Zeichnungsnummer/ drawing number	Gewicht/ Weight [kg]
1	2	PAG Foundation protection frame middle (Grids)	XL-3-003312-Z	4.34
2	2	PAG Foundation protection frame - left (Grids)	XL-3-005180-Z	9.32
3	2	PAG Foundation protection frame - right (Grids)	XL-3-005174-Z	9.32
4	2	PAG Foundation protection frame - middle short (Grids)	XL-3-005173-Z	2.47
5	8	Sechskantschraube - M8 X 25 - 8.8 verz.	ISO 4017 - M8 X 25 - 8.8 verz.	
6	8	Unterlegscheibe - 8 - verzinkt	ISO 7089 - 8 - verzinkt	0
7	8	Sechskantmutter mit Klemmteil, niedrige Form - M8 - 8 verz.	ISO 10511 - M8 - 8 verz.	0.01

11.8.3 For concrete (closed at the front)



11.8.4 For grid grating (closed at the front)



Item No.	Menge/ Quantity	Beschreibung/ Description	Zeichnungsnummer/ drawing number	Gewicht/ Weight [kg]
1	2	PAG Foundation protection frame - frontal closed (Grids)	XL-3-003875-Z	17.28
2	2	PAG Foundation protection frame middle (Grids)	XL-3-003312-Z	4.34
3	4	Sechskantschraube - M8 X 25 - 8.8 verz.	ISO 4017 - M8 X 25 - 8.8 verz.	
4	4	Unterlegscheibe - 8 - verzinkt	ISO 7089 - 8 - verzinkt	0.002
5	4	Sechskantmutter mit Klemmteil, niedrige Form - M8 - 8 verz.	ISO 10511 - M8 - 8 verz.	0.005

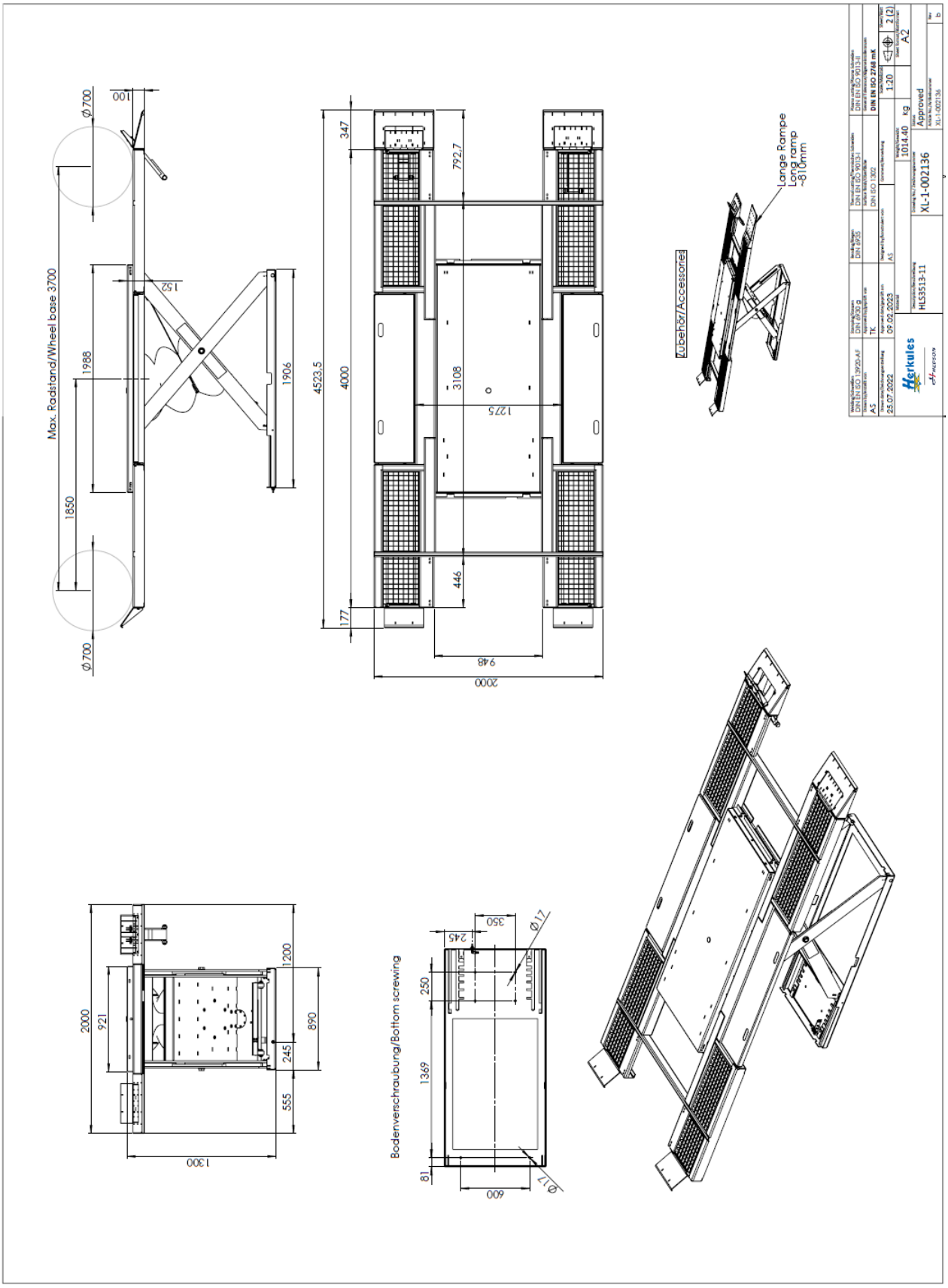
Thermal cutting/Thermisches Schneiden: DIN EN ISO 9013-I
Surface finish/Oberfläche: DIN ISO 1302
Plasma cutting/Plasma Schneiden: DIN EN ISO 9013-II
General Tolerance/Allgemeintoleranzen: DIN EN ISO 2768 mK
Welding/Schweißen: DIN EN ISO 13920-AF
Stamping/Stanzen: DIN 6930 g
Bending/Biegen: DIN 6935
Drawn by/Ersteller: TK
Approved by/geprüft von: VS
Spare part / Ersatzteil
Designed by/konstruiert von: TK
Comment/Bemerkung
Weight/Gewicht: 43.33 kg
Drawn date/Zeichnungserstellung: 30.11.2023
Approved date/geprüft am: 30.11.2023
Material
Description/Beschreibung: MAG Foundation protection frame - frontal closed (Grids)
Drawing No./ Zeichnungsnummer: XL-2-003877
Scale/Maßstab: 1:20
Sheet format/Blattformat: A3
Sheet/Blatt: 2 (2)
Status: Approved
Article No./ Artikelnummer: XL-2-003877
Rev

12 Spare parts

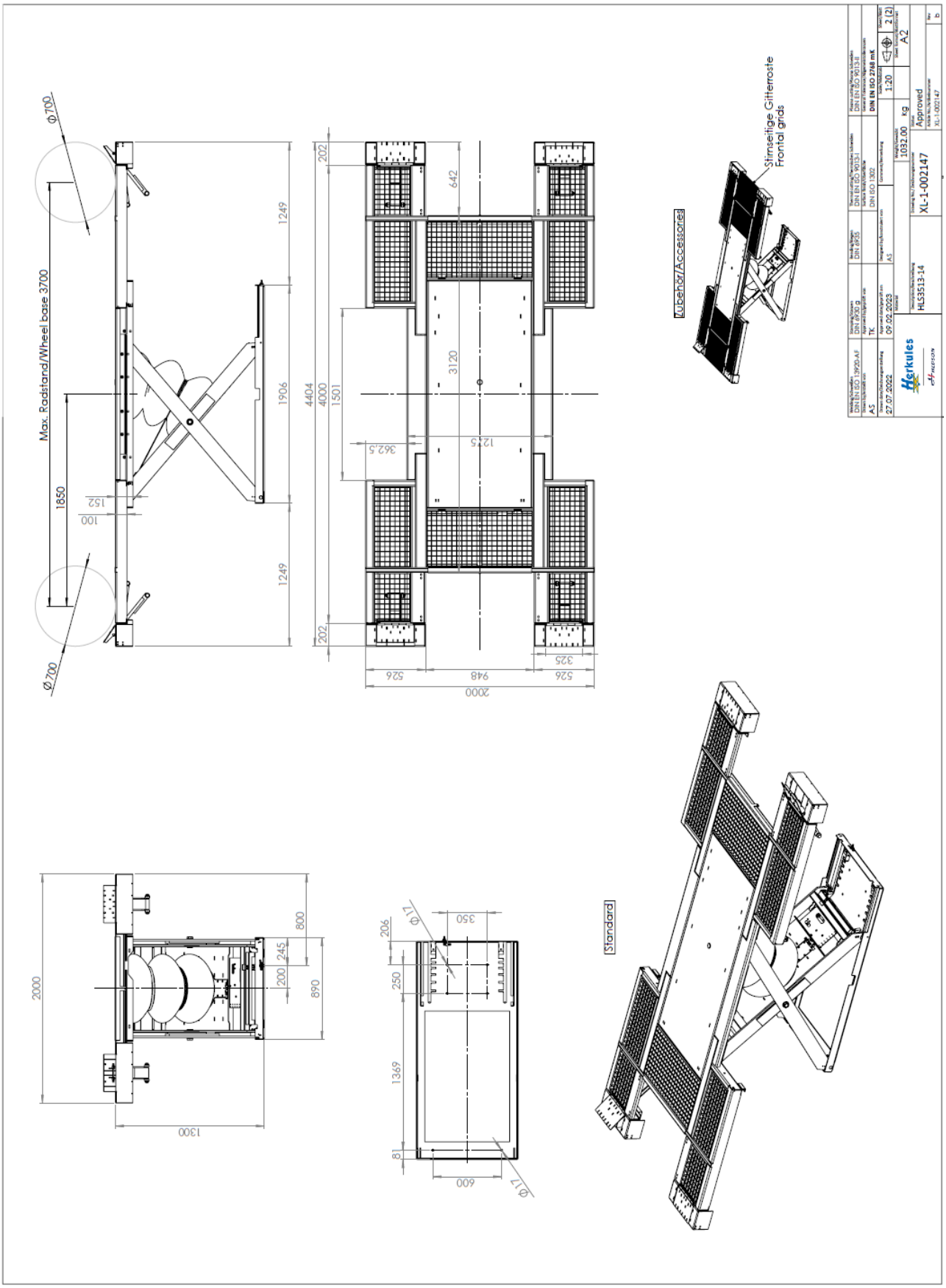
See spare parts list.

13 Dimension sheets

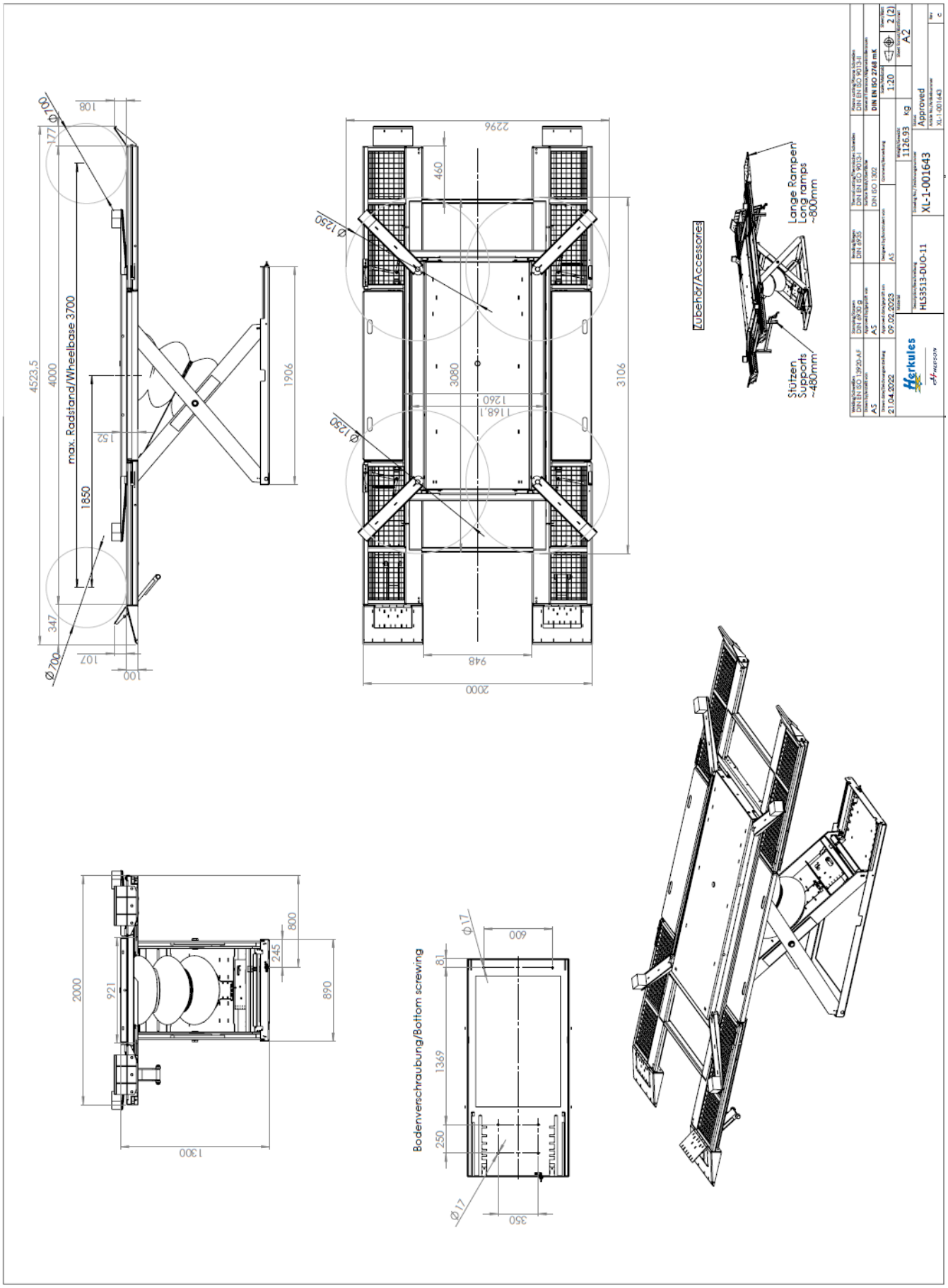
13.1 **HLS3513-11/17/61/67**



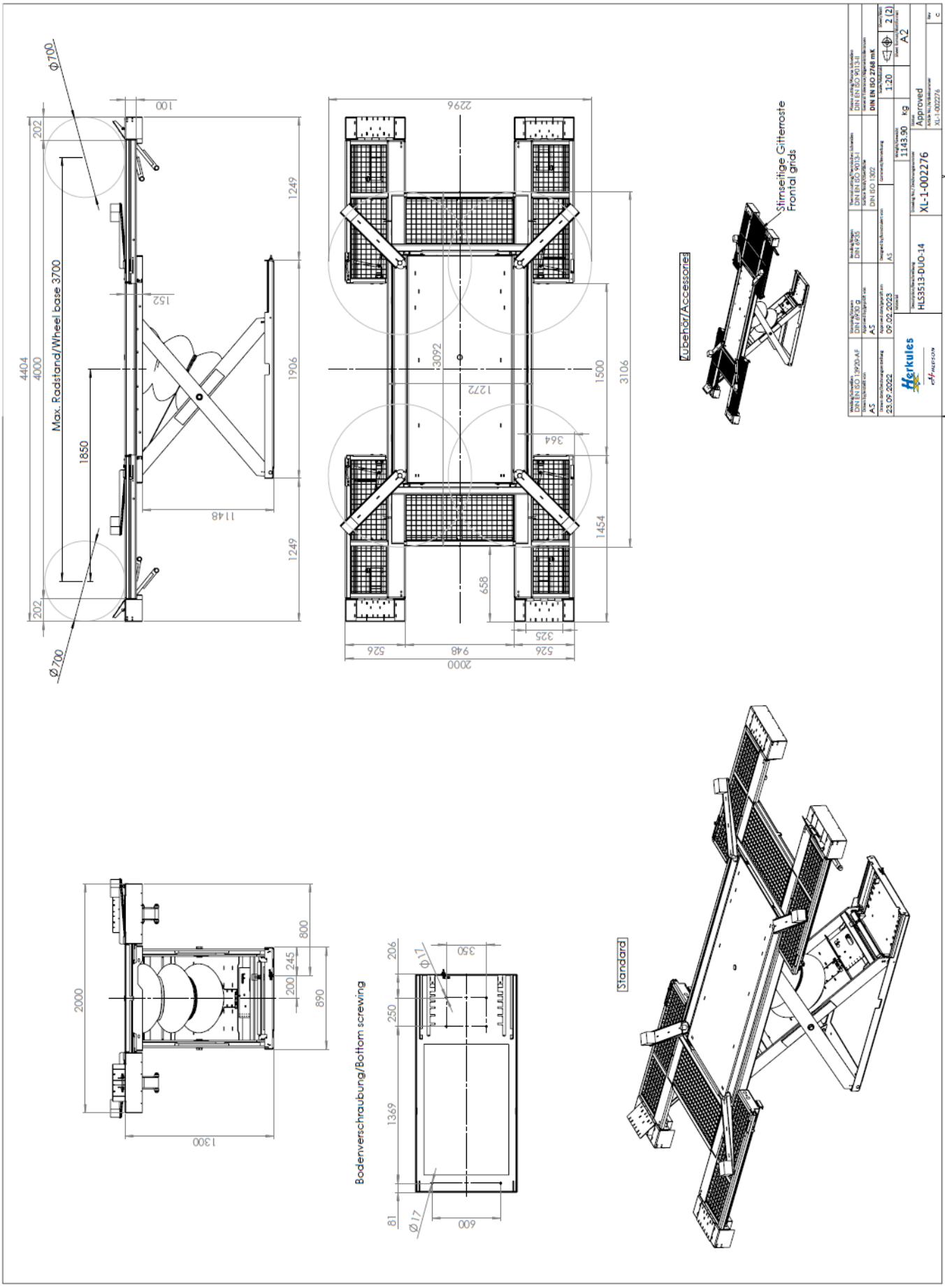
13.2 **HLS3513-14/64**



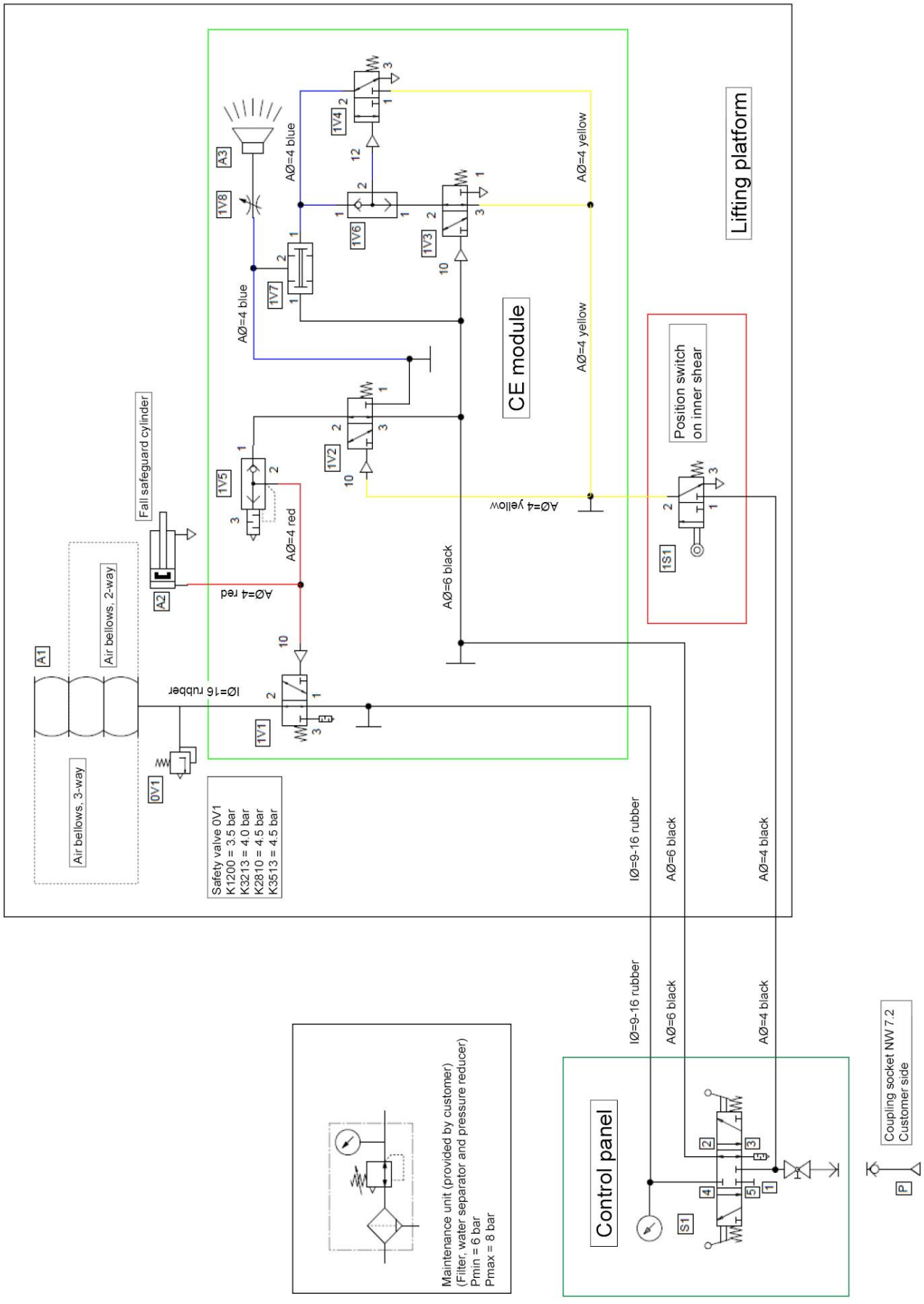
13.3 **HLS3513-DUO-11/17/61/67**



13.4 **HLS3513-DUO-14/64**



14 Pneumatic diagram



15 Additional information

Also visit our website: http://www.hedson.com

16 Notes