Finkbeiner®

SINCE 1927



Original operating manual and test logbook

TPL7500


Hier Typenschild einkleben

EU Declaration of Conformity

This declaration only applies for the machine in the condition in which it was marketed; parts and/or modifications subsequently fitted by the end user are not taken into account.

Manufacturer:	Walter Finkbeiner GmbH Alte Poststraße 9/11 72250 Freudenstadt
Product description:	Stationary 2-column lifting platform TPL
Type(s):	TPL7500

Serial no./Year of construction: see type label

The machine mentioned above complies with all relevant provisions of the following harmonisation legislation, including the corresponding amendments:

2006/42/EU	Machine Directive
2014/30/EU	EMC Directive
2014/53/EU	Radio Equipment Directive

The safety objectives of the 2014/35/EU Low Voltage Directive are fulfilled.

The following harmonised standard was applied:

EN 1493:2022 Vehicle lifts

Authorised person for preparing the technical documentation:
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Freudenstadt, 12/08/2024



Gerhard Finkbeiner, CEO

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1 Introduction

1.1 Intended use

This lifting platform is intended exclusively for the following purpose:

- Lifting and lowering cars, vans and light commercial vehicles.
- Working site: Outdoors (not permanently), in covered rooms.
- Working under a lifted load is permitted.
- Reading the operating manual is part of the intended use.

Any other use constitutes non-intended use.

1.2 Impermissible use

The following uses are not permitted:

- Operation in explosion-hazarded areas.
- Transport of people or animals.
- Lifting non-intended loads.
- Lifting loads at an angle.
- Operation on unsuitable, uneven surfaces.
- Operation by persons who are not at least 18 years old.
- Operation by persons who are not suitably trained, instructed or authorised.

1.3 Symbols used

DANGER	
	Notes on the nature and source of the hazard • Consequence: Serious or fatal injury • Suitable hazard prevention measures

WARNING	
	Notes on the nature and source of the hazard • Consequence: Serious or fatal injury is possible • Suitable hazard prevention measures

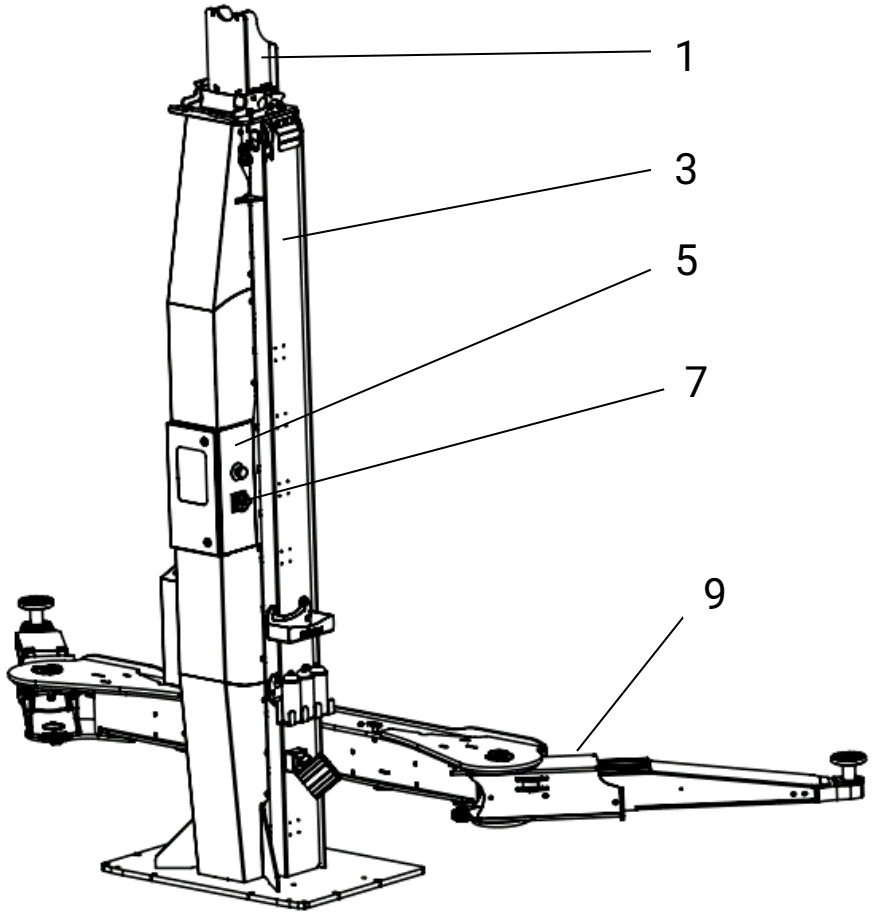
CAUTION	
	Notes on the nature and source of the hazard • Consequence: Light or moderate injury possible • Suitable hazard prevention measures

CAUTION	
	Notes on the nature and source of the hazard • Consequence: Material damage possible • Suitable material damage prevention measures

NOTICE	
	Notice

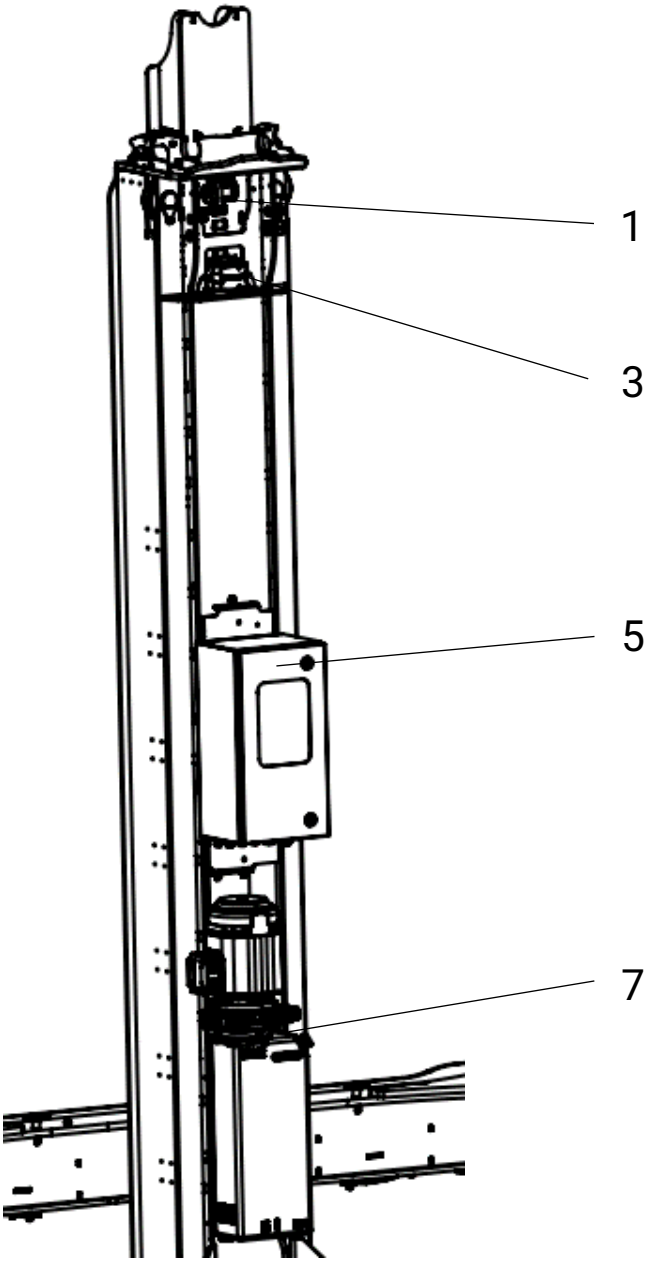
NOTICE	
	Note on environmental protection

1.4 Design and description of lifting platform



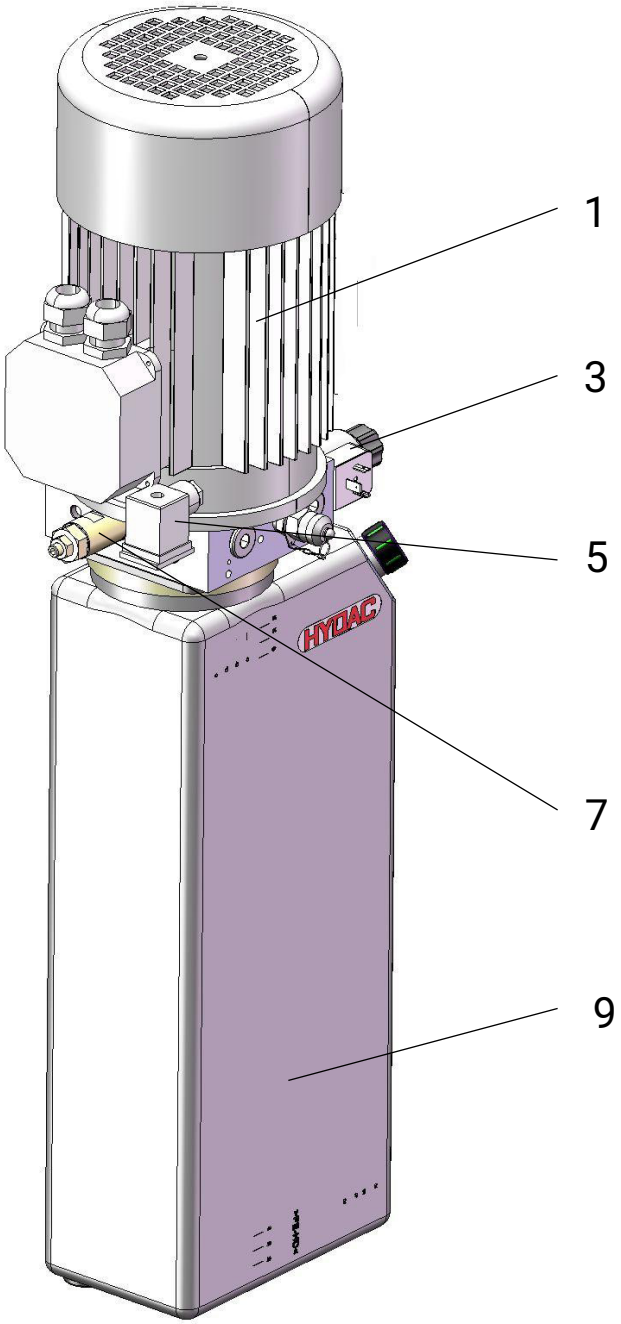
Exemplary illustration

No.	Description
1	Lift carriage
3	Column
5	Operating panel
7	Master switch with emergency stop function
9	Articulated arm



Exemplary illustration

No.	Description
1	Wire rope sensor (potentiometer)
3	Latch and magnet
5	Control cabinet
7	Hydraulic unit



Exemplary illustration

No.	Description
1	Motor
3	Lowering valve with emergency release screw
5	Proportional valve
7	Pressure limiting valve
9	Tank

2 Safety

2.1 Owner/operator's obligations

The owner/operator or the person authorised by him must ensure that the lift operator has understood all the safety instructions and that all guidelines and safety regulations are observed.
The lifting platform must be inspected regularly by an expert (country-dependent).
An expert is a trained person who has adequate experience in the field of lifting equipment, therefore is sufficiently familiar with the relevant occupational safety rules, accident prevention regulations, guidelines and generally accepted rules of practice to be able to determine the lifting platform's safe working condition.

2.2 Notes on this operating manual

2.2.1 Purpose

This operating manual is a detailed manual in accordance with DIN EN 1493 Vehicle Lifts. It provides all the information required to operate the lifting platform safely.

2.2.2 Availability, storage and transfer

- This manual must be made available to operating personnel to ensure safe working with the lifting platform.
- The manual must be stored near the lifting platform and be easily accessible.
- If the lifting platform is transferred to another location (e.g. if it is sold), this manual must be handed over to the new owner together with the lifting platform.

2.2.3 Target groups

This manual is intended for use by the following target groups:

Target group	Activities	Training/qualification
Shipping agent	• External transport of the lifting platform	• Completed training and experience in transportation, particularly in the transport of large equipment
Transporter	• Internal transport of the lifting platform	• Completed training and experience in transportation, particularly in the transport of large equipment
Electrician	• Working with and maintenance of electrical equipment	• Person with suitable training and experience who is able to carry out work on electrical devices and equipment and is independently able to detect and prevent possible electrical hazards.

Target group	Activities	Training/qualification
Hydraulics technician	• Working with and maintenance of hydraulic equipment	• Person with suitable training and experience who is able to carry out work on hydraulic devices and equipment and is independently able to detect and prevent possible hydraulic hazards.
Operator	• Lifting a load with the platform • Lifting/lowering the load • Testing, cleaning and possibly maintaining the lifting platform.	• At least 18 years old • Authorised to operate the lifting platform • Instructed how to operate the lifting platform • Trained in the use of the lifting platform
Installer (only with stationary lifting platforms)	• Transporting, connecting and setting up lifting platforms	• At least 18 years old • Instructed how to operate the lifting platform • Trained in the use of the lifting platform

2.2.4 Presentation conventions

2.2.4.1Action

1) Instruction to act, Step 1
2) Instruction to act, Step 2, etc.

2.2.4.2Prohibition signs

A prohibition sign forbids an action that could result in danger.

Symbol	Description
	Third-party access to the danger area is forbidden
	Staying under the load while it is being lifted/lowered is forbidden
	Danger area must be kept free of objects Observe a sufficient distance from limiting surfaces
	Do not cause the load to tilt

2.2.4.3Information signs

Symbol	Description
	Read and observe the operating manual
	Maintenance and repair work may only be done by trained personnel

2.3 Residual risks

The lifting platform presents the following residual risks:

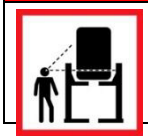
DANGER	
	Serious or fatal injury in case of improper use of the lifting platform. • Read and observe the operating manual, follow the instructions.

DANGER	
	Serious or fatal injury if the danger area is accessed. • While operating the lifting platform, the operator must remain outside the lift's area of movement and maintain an adequate safety distance from the lift's moving parts.

DANGER	
	Serious or fatal injury in case of unauthorised access to the danger area. • The operator must make sure that nobody is within the lifting platform's danger area.

DANGER	
	Serious or fatal injury in case of unauthorised use of the lifting platform. • When work with the lifting platform has been concluded, the master switch must be switched off and locked.

DANGER	
	Serious or fatal injury if escape routes are not provided. • The prescribed escape routes in accordance with national regulations must be provided during installation and operation.

DANGER	
	Serious or fatal injury in case of unsupervised use of the lifting platform. • The operator must keep the lifting platform and the lifted load under constant observation and switch the lift off immediately in case of a malfunction.

DANGER	
	Serious or fatal injury in case of a fall from the lifting platform. • Climbing onto the lifting platform or onto the lifted vehicle is forbidden. 15 • Riding on the vehicle or on the load-handling device is forbidden.

CAUTION	
	Material damage due to inadequate space conditions • Adequate safety distances to walls, ceilings and other fixed obstructions must be ensured. • During lowering, the operator must ensure that there are no objects within the lifting platform's danger area.

2.4 Personal protective equipment

Symbol	Description
	As a minimum, safety shoes of category S2 for car workshops. However, depending on the risk assessment on site, it may be necessary, use safety shoes of a higher category (e.g. S3).
	Wear protective gloves

2.5 Safety devices

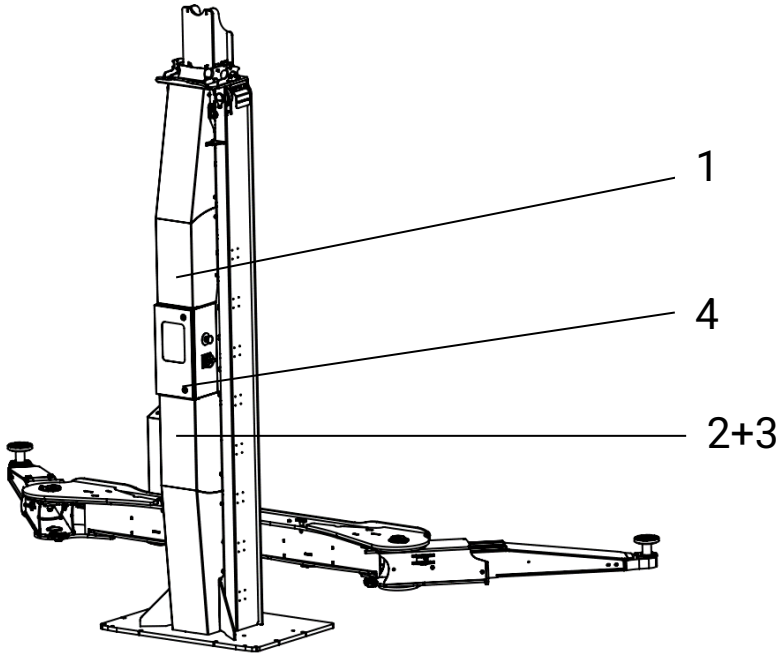
The following safety devices ensure safe operation of the lifting platform:

- Synchronised monitoring of lifting/lowering operation, with switch-off if permissible control range is exceeded. 16
- Lockable master switch with emergency stop function: Protection against unauthorised use, with immediate switch-off of the lift movement.
- Deadman control: If the button is released, the corresponding lift movement is stopped.
- Emergency stop: The lifting/lowering operation is stopped immediately by pressing any of the buttons.
- Check valve on hydraulic unit: Prevents unintentional lowering.
- Pressure limiting valve on hydraulic unit: Prevents overload.
- Mechanical latch: Additional protection against unintentional lowering.
- Hydraulic interlock of articulated arm.

The safety devices must be checked regularly. In case of damaged or manipulated safety devices, the lifting platform must be shut down immediately. It may only be put back into operation after the correct function of all safety devices has been ensured.

2.6 Adhesive label

The labels provide important information. The owner/operator must ensure that these labels are fixed to the lifting platform during its entire service life. Lost or damaged labels must be replaced immediately.



Exemplary illustration

1 Lifting capacity
2 Type label
3 Brief operating manual
4 High voltage

No.	Adhesive label	Adhesive label	No.
2	**Kurz gefasste Betriebsanleitung** (für Hebebühnen entsprechend DIN EN 1493) Diese kurz gefasste Betriebsanleitung enthält wichtige Hinweise für den sicheren Betrieb dieser Hebebühne. Diese kurz gefasste Betriebsanleitung muss gut lesbar und dauerhaft an der Hebebühne angebracht werden. Der Betreiber hat dafür zu sorgen, dass diese kurz gefasste Betriebsanleitung jederzeit an der Hebebühne vorhanden ist. **Die ausführliche Betriebsanleitung lesen** GEFAHR Personen- und Sachschäden möglich bei unsachgemäßer Bedienung. • Die der Hebebühne beigefügte ausführliche Betriebsanleitung beachten und lesen, insbesondere hinsichtlich des Verhaltens im Störfall. **Bedienung nur von befugten Personen** Die Hebebühne darf nur von Personen bedient werden, die mindestens 18 Jahre alt, befugt, geschult und eingewiesen sind. **Last sicher heben / absenken** Das Heben / Absenken von Lasten darf Personen nicht gefährden. Nachfolgend aufgeführte Gefährdungen müssen wie beschrieben vermieden werden: • Vor dem Heben einer Last muss sichergestellt sein, dass der Bewegungsbereich der Last und des Lastaufnahmemittels frei von Hindernissen ist. GEFAHR Schwere Verletzungen oder Tod möglich durch nicht ausreichende Platzverhältnisse. • Ausreichende Sicherheitsabstände zu Wänden, Decken und anderen festen Begrenzungen einhalten. • Der Bediener muss sicherstellen, dass sich beim Absenken keine Gegenstände im Gefahrenbereich der Hebebühne befinden. • Vor dem Heben einer Last muss sichergestellt sein, dass die Last sicher aufgenommen ist. Dies durch kurzes Freiheben kontrollieren. Bei Bedarf Last nochmals absenken und Lastaufnahme korrigieren. • Lasten dürfen nur unter Aufsicht gehoben / abgesenkt werden. GEFAHR Unbeaufsichtigtes Bedienen der Hebebühne kann zu schweren Verletzungen oder zum Tod führen. • Der Bediener muss die Hebebühne und die angehobene Last ständig beobachten und bei nicht ordnungsgemäßem Betrieb die Fahrbewegung sofort abbrechen. • Während des Hebens / Absenkens dürfen sich keine Personen im Gefahrenbereich aufhalten. GEFAHR Schwere Verletzungen oder Tod möglich bei unbefugtem Betreten des Gefahrenbereiches. • Der Bediener muss sicherstellen, dass sich keine unbefugten Personen im Gefahrenbereich der Hebebühne aufhalten. • Das Mitfahren oder Hochklettern auf die Hebebühne oder die Last ist verboten. WARNUNG Verletzungsgefahr durch Abstürzen oder Quetschen. • Hochklettern auf die Hebebühne/ angehobene Last ist verboten. • Mitfahren auf der Last oder dem Lastaufnahmemittel ist verboten. **Last heben / absenken** • Heben: Taster AUF drücken. Hebevorgang beenden: Taster AUF loslassen. • Absenken: Taster AB drücken. Absenkvorgang beenden: Taster AB loslassen. **Zusätzlich zu beachten bei ortsveränderlichen Hebebühnen:** • Vor dem Heben einer Last muss sichergestellt sein, dass die Hebebühne gegen unbeabsichtigte Bewegungen, z.B. Wegrollen, gesichert ist. GEFAHR Schwere Verletzungen oder Tod möglich bei unbeabsichtigter Bewegung der Hebebühne. • Hebebühne gegen unbeabsichtigte Bewegung sichern, siehe ausführliche Betriebsanleitung. • Die Hebebühne darf beim Betrieb im Freien nur bis zur maximalen Windgeschwindigkeit betrieben bzw. aufgestellt werden. GEFAHR Schwere Verletzungen oder Tod möglich durch umstürzende Hebebühne. • Hebebühne im Freien nur bis zur maximal zulässigen Windgeschwindigkeit betreiben (siehe ausführliche Betriebsanleitung). Brief operating manual	**7,5 t** Load capacity	1
3	Finkbeiner Walter Finkbeiner GmbH DE-72250 Freudenstadt www.finkbeiner.eu Typ: / Type: Serien-Nr.: / Serial-No.: Baujahr: / Year: Tragkraft: / Capacity: Druck: / Pressure: Gewicht: / Weight: Motor: / Motor: Ladegerät: / Batt. charger: Made in Germany Type label	 High voltage	4

2.7 Environmental protection

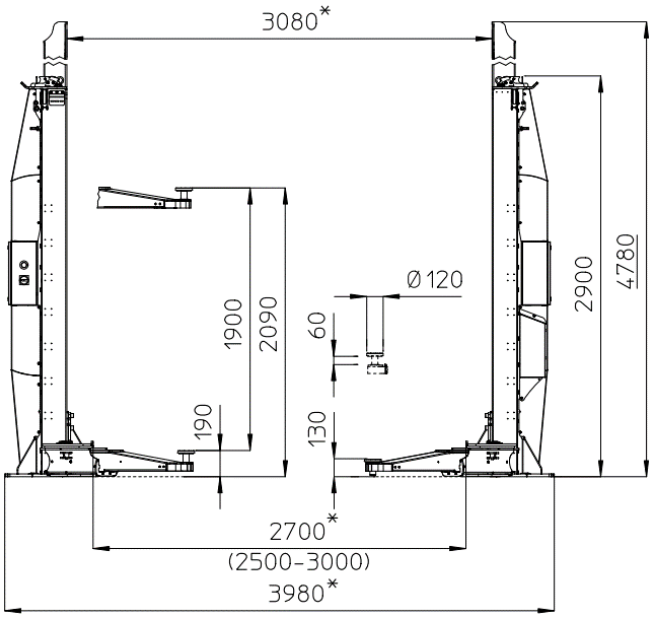
The owner/operator is responsible for ensuring that waste materials (packaging, oils, batteries) are disposed of correctly in accordance with national regulations.

3 Overview

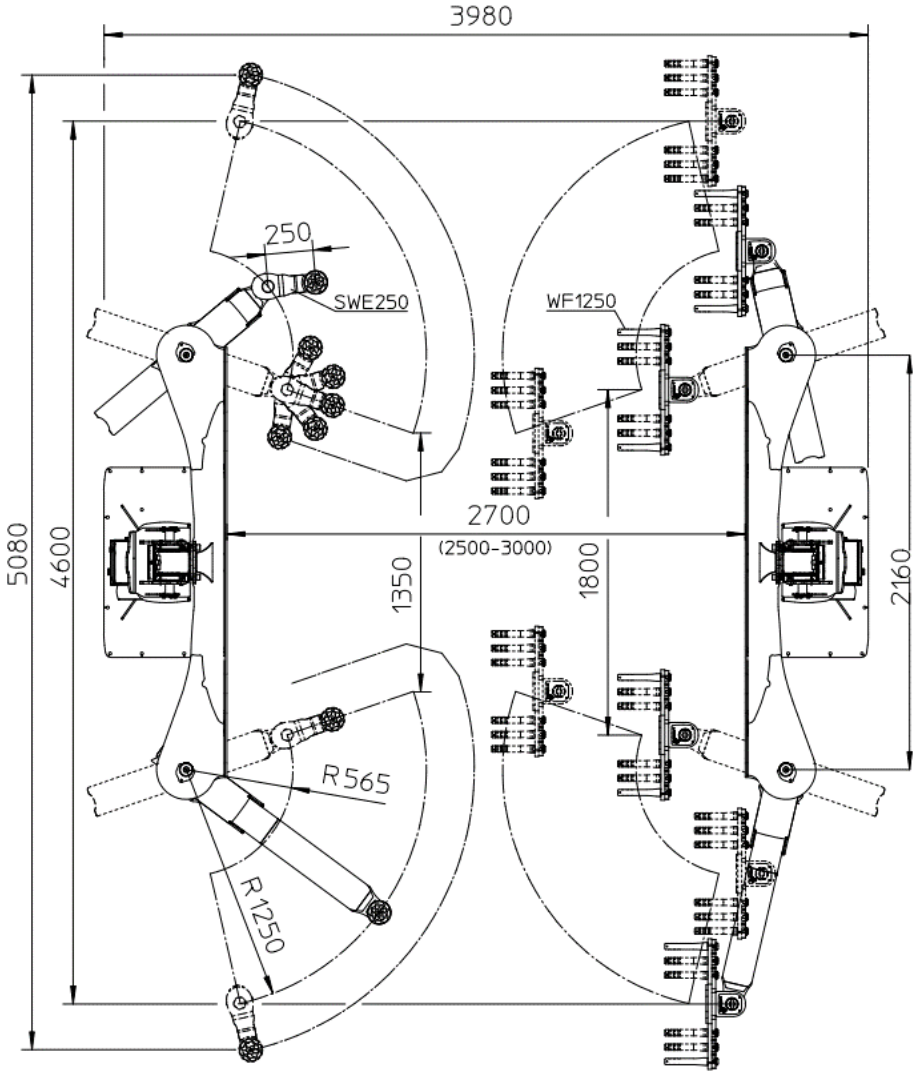
3.1 Technical data

Model	TPL7500
Load capacity	7.5 t (3.75 t per jack)
Load fixture	4 extendable articulated arms and 4 spindle plate Articulated arm length: Span width max. 4600 mm Loading height: 130 - 190 mm
Effective lifting height	1900 mm
Lifting time	About 60 sec.; lowering time depends on load
Operation	Up/down/slow
Display panel	Lifting height Signal strength Status displays
Control unit	Synchronised control, max. control deviation 25 mm Switch-off if deviation is >50 mm Continuous and smooth synchronous operation thanks to proportional technology Monitoring of all operational functions Wireless communication via radio Control voltage 24 V
Drive per jack	Electro-hydraulic via 3-phase motor 2.2 kW / 5 A
Connections (on site)	400 V/3 ph/(N)+PE/max. 16 A, min. 5x1.5 mm² Compressed air
Pressure relief valve adjustment	See type label
Weight per jack	See type label
Protection class	IP 54
Permissible temperature range	-5°C up to 50°C
Emission sound pressure level L_{PA}	< 73 dB(A)
Hydraulic oil	HLP ISO-VG 46, appr. 8 litres per jack
Surface treatment	Powder coating

3.2 Dimension drawings



The entry width is freely selectable from 2500 to 3000 mm; the drawing shows an entry width of 2700 mm The relevant dimensions differ depending on the entry width.



Exemplary illustrations

4 Transport

NOTICE	
	Environmental hazard due to leaking hydraulic oil. • To prevent hydraulic oil leaking out, do not tip the lifting platform.

4.1 Loading/unloading

- Normally, the jacks are loaded/unloaded in pairs with a forklift.
- The load capacity should be at least 2.5 tons.

4.1.1 Loading/unloading with forklift

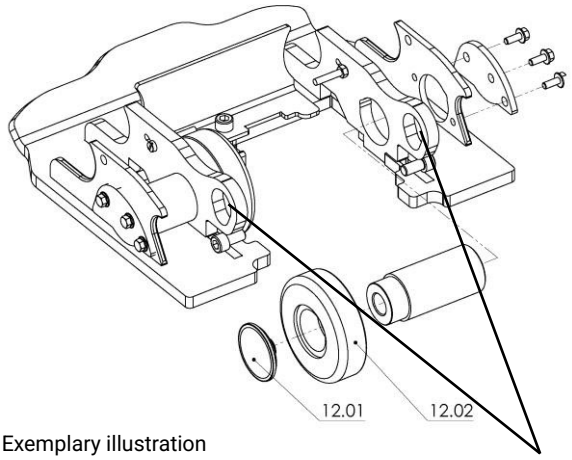


Exemplary illustration

1) Lift the jacks by the steel girders.
2) Make sure that the packaging unit cannot slip, e.g. by placing it on rubber.
3) Keep the packaging unit horizontal.
4) Carefully lower the packaging unit onto the ground.

4.1.2 Loading/unloading with crane

WARNING	
	• Only lift the jacks singly. • Only lift the jacks by means of the specified attachment points. • If a lifting strap is used, avoid possible damage to the strap from sharp edges.



Exemplary illustration

- Only lift the jacks by these attachment points.
- Load capacity of lifting tackle must be at least 1500 kg.
- While lifting the jack, make sure that it does not start swinging.

4.2 Transporting

To ensure safe transport on a suitable transport device, the regulations on securing loads must be observed. The regulations described above also apply for packaging and loading.

5 Installation and commissioning

DANGER	
	Serious or fatal injury if jacks tip over with or without load. • Jacks may only be mounted according to instructions on a firm and level surface.

5.1 Requirements for installation site

- Load-bearing floor, concrete quality at least C20/25, max. C50/60 acc. to EN 206:2000-12. Thickness at least 200 mm, normal reinforcement, fault-free, without joints.
- An additional layer of max. 30 mm thickness (e.g. tiles or screed) is allowed between concrete floor and base plate of lifting platform, but the layer must by similarly pressure resistant as the concrete.

5.2 Unpacking

NOTICE	
	• Only remove the packaging corners if the jacks are to be transported singly to the installation site. • Otherwise, remove the packaging only before installation on site.

5.3 Installing the lifting platform

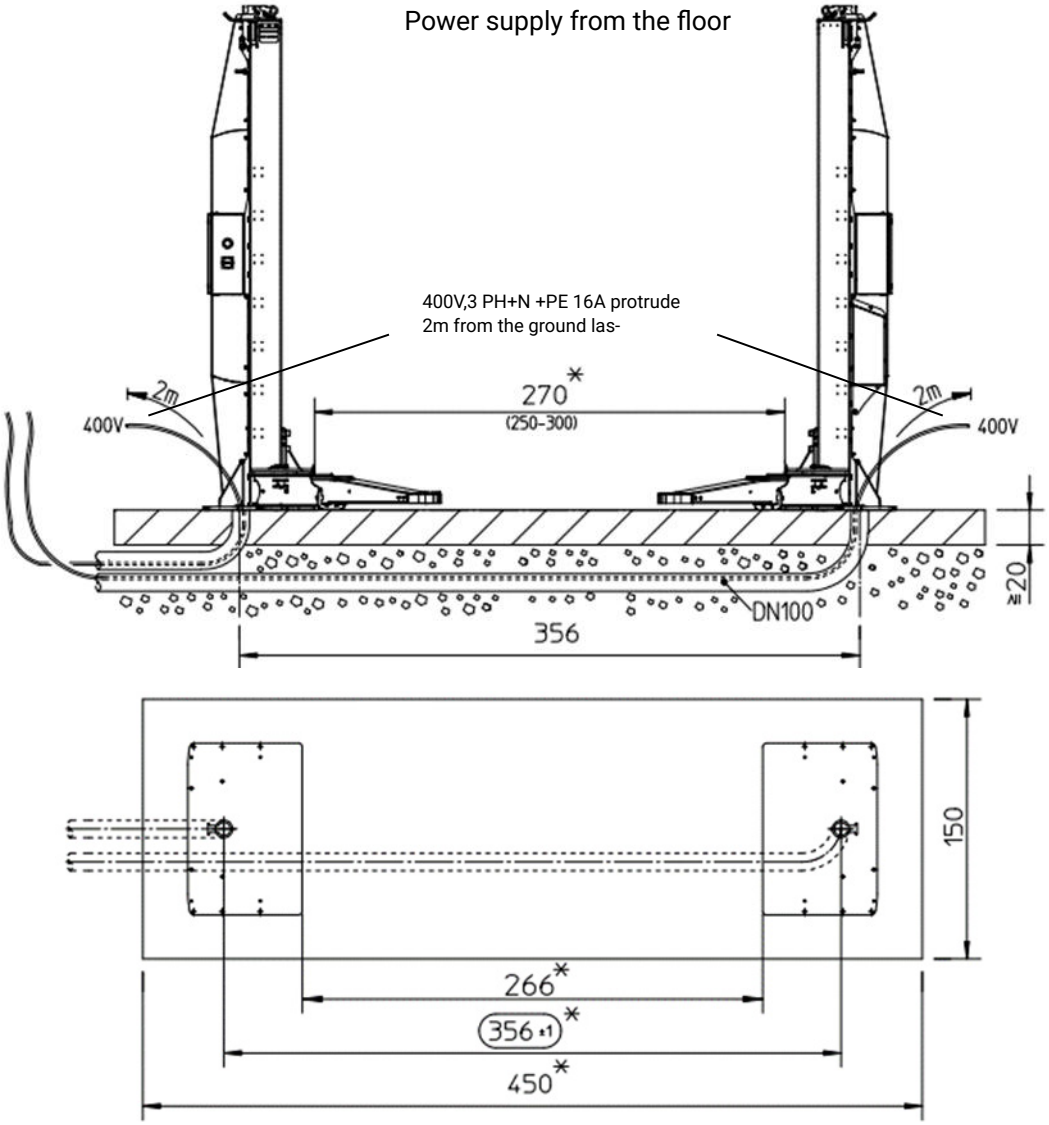
5.3.1 Checks before installation

1) Before positioning the jacks, check whether the power supply ducts are located at the correct point.
2) Check whether the supply cables meet the specified requirements (cross-section, number of leads, etc.).

5.3.2 Power supply from the floor

NOTICE
• * Entry width is freely selectable from 250 to 300 cm; drawing shows an entry width of 270 cm, • The relevant dimensions differ depending on the entry width. • Level ground • Minimum concrete quality C20/C25 • Minimum thickness of concrete slab = 20 cm • Longer anchor rods might have to be used depending on the screed/tile structure. • Screed and tiles must be able to withstand the required pressure loads. • No underfloor heating • Empty pipes ≥20 cm below the dowel anchorage depth • Sufficient reinforcement

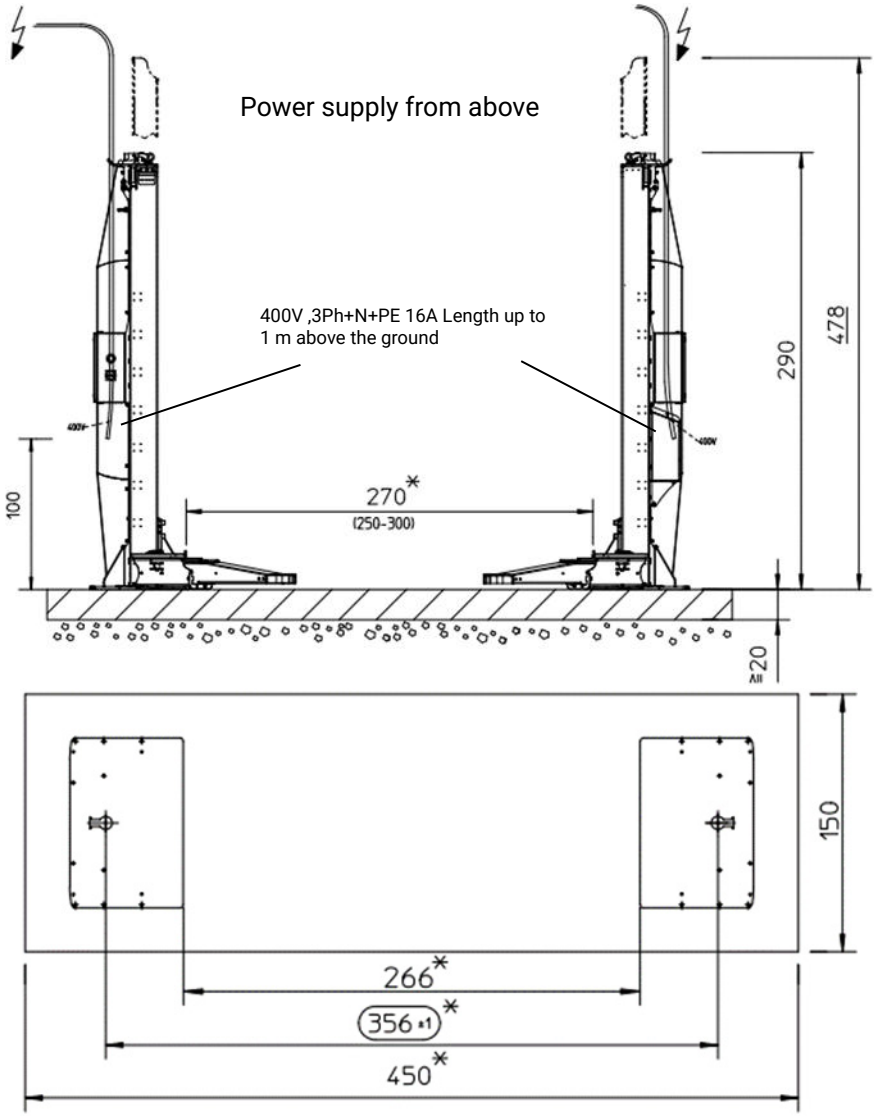
Power supply from the floor



NOTICE
• Floor anchoring is dimensioned for Fischer FIS A M12X200 R / HAS A4 M12x200 • max. concrete compression: 0.23% • max. concrete compressive stress: 7.0 N/mm² • max. total load per column: 46 kN • max. resulting tension load per column: 110 kN • max. tensile force of anchors: 17 kN • min. 25 cm dowel spacing to the freestanding concrete edge

5.3.3 Power supply from above

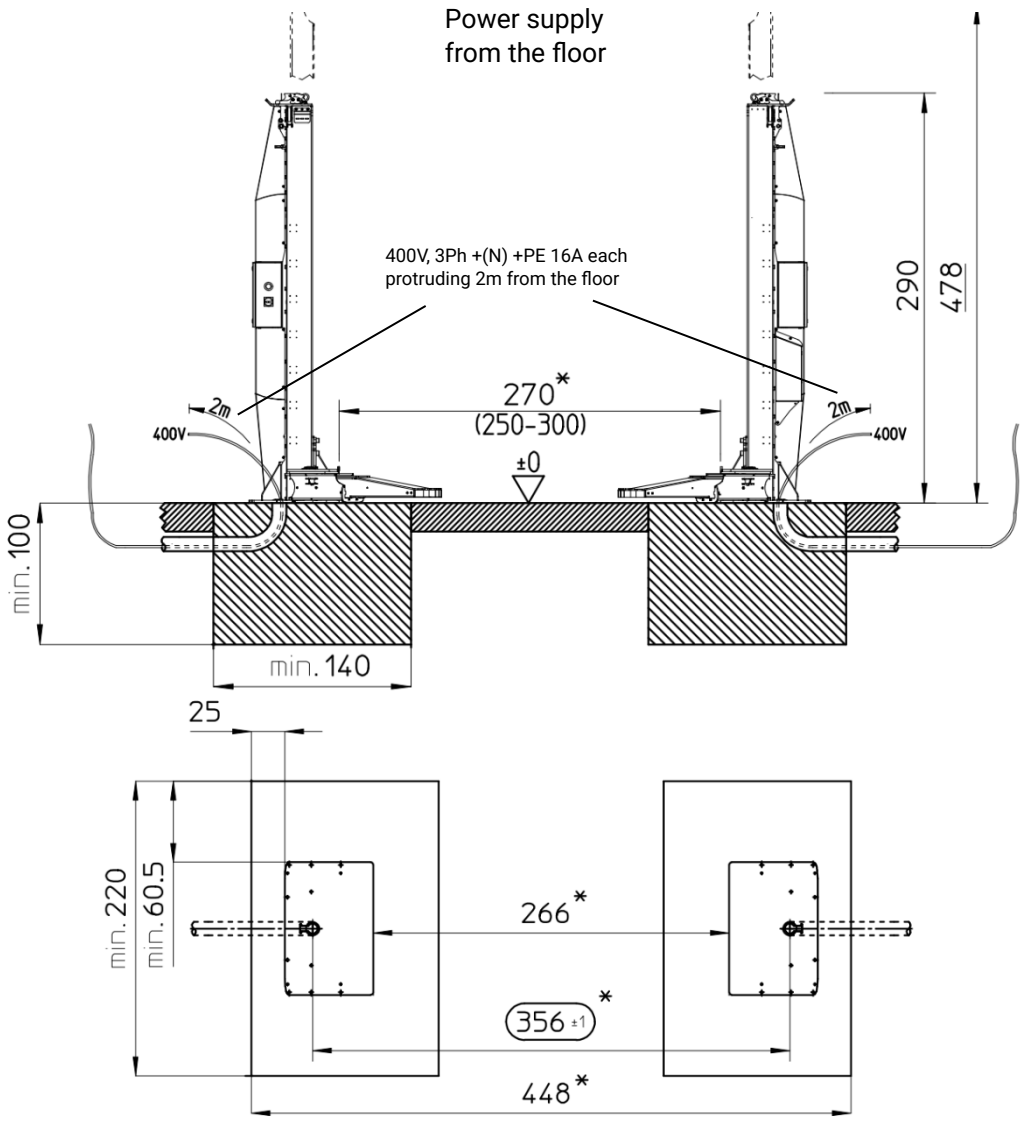
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5.3.4 Block foundation power supply from the floor

NOTE
The requirements for the foundation and the substrate are minimum requirements. They must always be checked against the local conditions

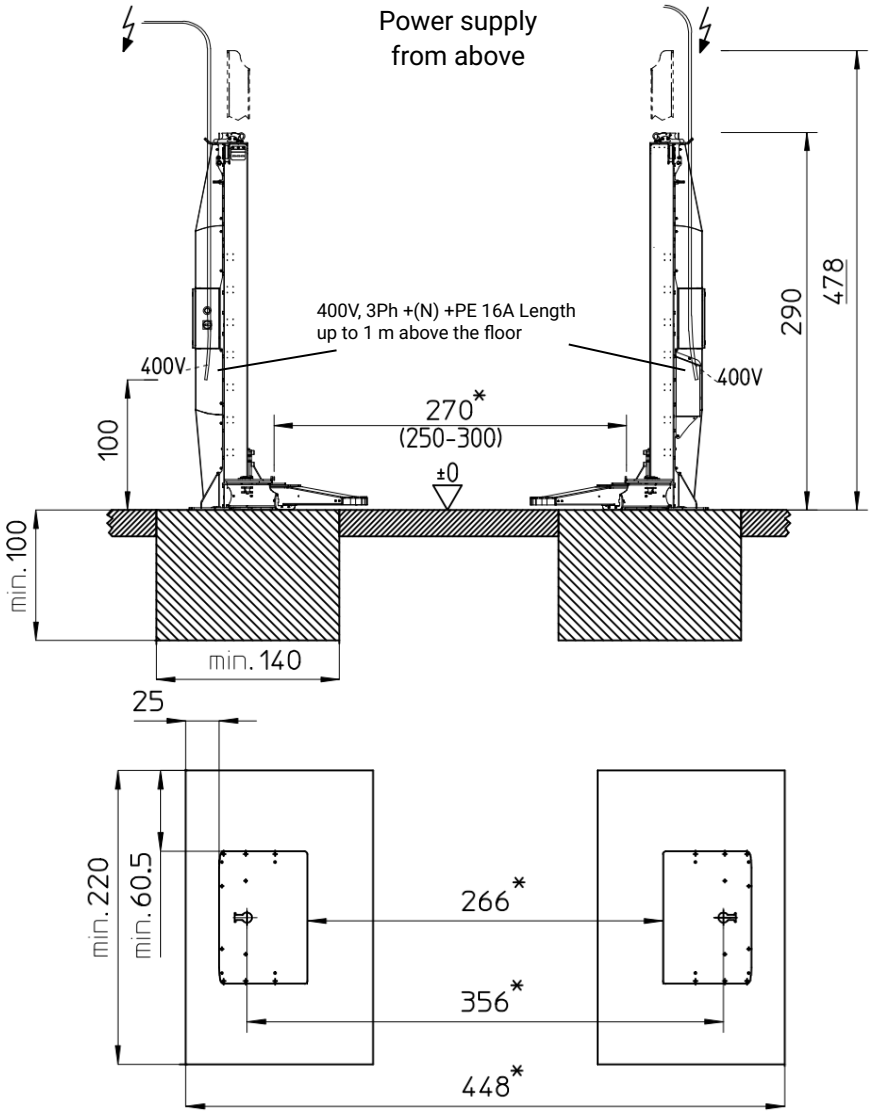


Exemplary illustrations

NOTE	
• Floor:	Level
• Bearing pressure:	Min. 200 kN/m²
• Minimum concrete quality:	C20 / C25
• Exposure class:	Min. XC2 / WA
• Sufficient reinforcement:	At least Q335 or equivalent round steel reinforcement
• Coverings, screeds and tiles:	Must be able to withstand the required pressure loads
• No underfloor heating	
• Empty pipes ≥20 cm below the dowel anchorage depth	
• Anchoring:	See sections 5.3.2 / 5.3.3 / 5.3.7

5.3.5 Block foundation power supply from above

NOTE
• The requirements for the foundation and the substrate are minimum requirements. They must always be checked against the local conditions



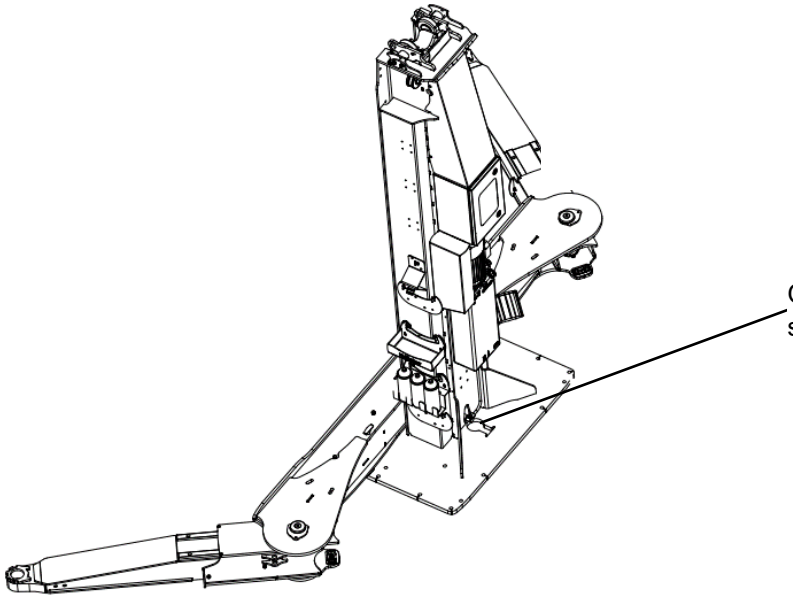
Exemplary illustrations

NOTE		
	• Floor:	Level
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	• Coverings, screeds and tiles:	Must be able to withstand the required pressure loads
	• No underfloor heating	
	• Empty pipes ≥20 cm below the	dowel anchorage depth
	• Anchoring:	See sections 5.3.2 / 5.3.3 / 5.3.7

5.3.6 Positioning the jacks

Ideally, the jacks are transported to the installation site as a pair (as delivered). If this is not possible, the jacks must be transported singly. In this case, the packaging must be removed first.

1) Transport the jacks to the installation site as a pair or singly.



Exemplary illustration

<u>When transported as a pair</u>

2) Position the packaging unit so that one jack is already in its specified location.

   With power supply from below:
   a) Suspend the packaging unit about 500 mm above the floor.
   b) Guide the supply leads through the openings in the jack base plates.
   c) Carefully lower the packaging unit.
3) Remove the packaging corners.
4) Position the second jack in its specified location.

5.3.7 Anchoring the lifting platform / possible variants

DANGER	
	• In case of doubt, drill a test hole, insert a dowel and tighten it with a torque of 100 Nm. If there is any visible damage within the influence zone (Ø200mm) (hairline cracks, cracks, etc.), the foundation is not suitable for installation of the lifting platform.

Important information:

	Fischer injection system	**Hilti injection system**
Dowel type	**FIS A M12X200 R**	**HAS A4 M12x200**
Drilling method	Hammer drilling	Hammer drilling
Fixture thickness	≤30 mm	≤30 mm
Concrete thickness	200 mm	200 mm
Nominal drill diameter	14 mm	14 mm
Borehole depth	>= 175 mm	>= 135mm
Anchoring depth	> = 140 mm	>= 135 mm
Borehole cleaning	4x air blast 4x brushing 4x air blast	4x air blast 4x brushing 4x air blast
No. of dowels per column	10	10
Injection mortar (check suitability)	FIS V Plus	HIT-HY 200-A V3
Spanner size	Size 19	Size 19
Installation torque	40 Nm	40 Nm
Purchase from Finkbeiner	Possible	Not possible.
More information:	www.fischer-international.com	www.hilti.group

Information revised: Document creation technical deviations possible

5.3.7.1Fischer dowels

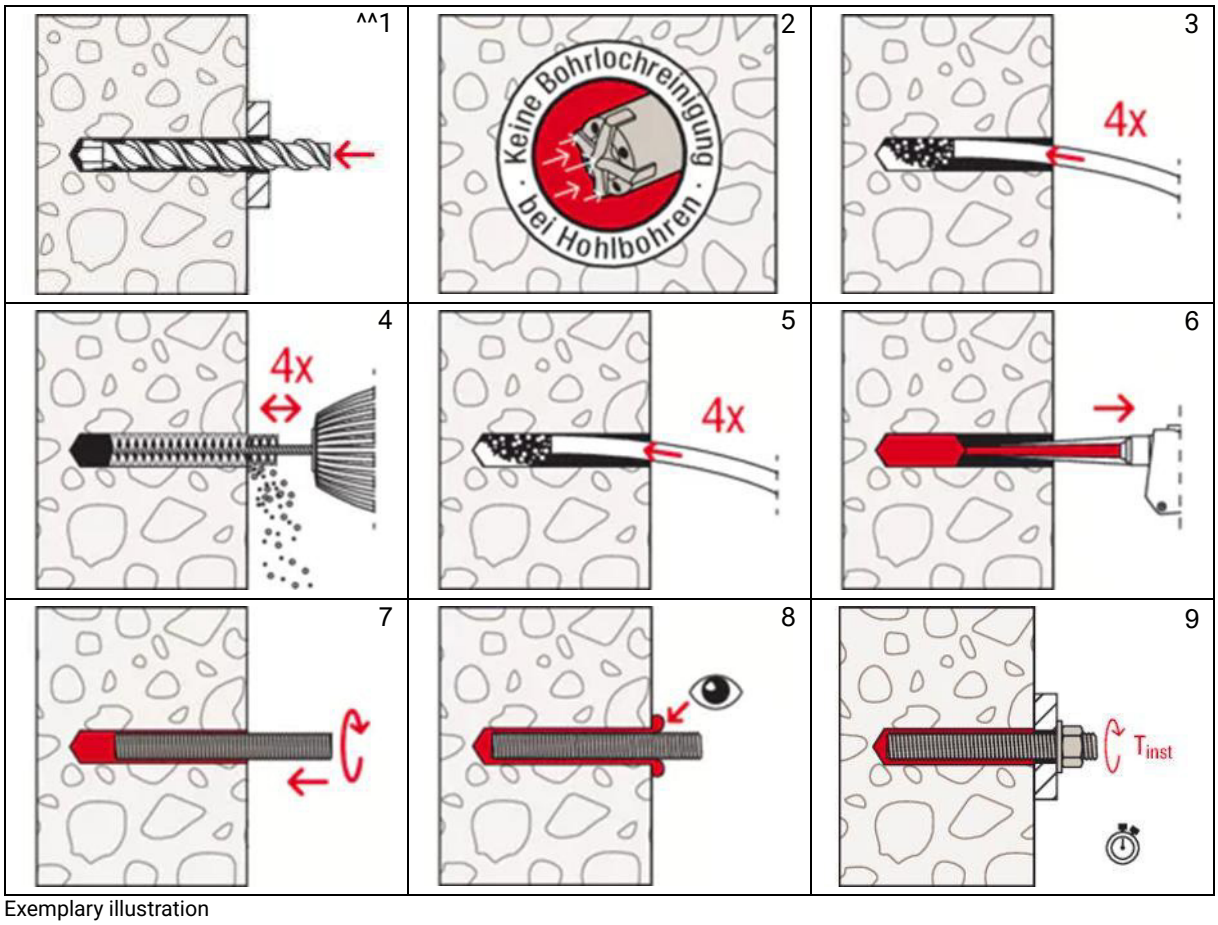
 Anchor rod FIS A M12X200 R	 Brush
 Mortar	

Exemplary illustration

DANGER

- It is essential that the processing/curing time specified below is observed. Do not install the lift at temperatures below 1°C or alternatively use the following mortar: FIS VW Plus Highspeed.
- Do not apply the installation torque before the specified curing time has elapsed.
- The manufacturer's instructions must be observed.

Assembly:



Exemplary illustration

1) Insert all dowels.

5.3.7.2Hilti dowels

(cannot be purchased via Finkbeiner)

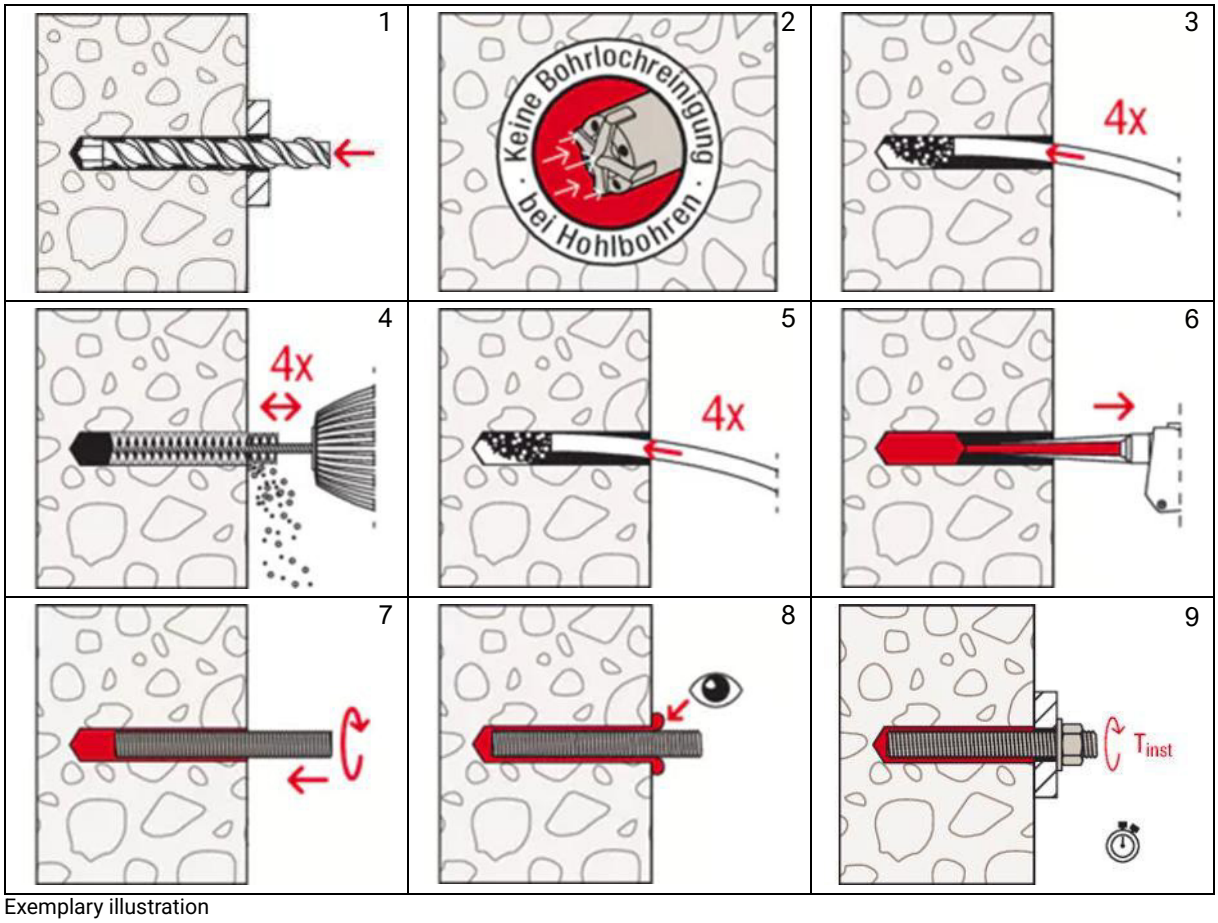
 Anchor rod HAS A4 M12x200	 Brush
 Mortar	

Exemplary illustration

DANGER

- It is essential that the processing/curing time specified below is observed. Do not install the lift at temperatures below -10°C.
- Do not apply the installation torque before the specified curing time has elapsed.
- The manufacturer's instructions must be observed.

Assembly:



Exemplary illustration

1) Insert all dowels.

5.3.8 Fill out the installation report

After completing the installation, the report sheet in the last chapter of this manual must be filled out and signed.

It is essential that this report is not misplaced or lost.

In case of questions regarding ground/floor conditions, please contact our application department.

5.3.9 Electrical connection

Supply cable for each jack: 400 V / 3ph+(N)+PE / 50 Hz /16 A.

DANGER	
	Serious or fatal injury in case of incorrect procedure • The lifting platform may only be connected by a qualified electrician. • Connect the lift to the specified power supply – an incorrect power supply can result in damage to the lift. • The power supply can be from below or above

1) Have the electrical connection carried out by a qualified electrician.

5.3.10 Fitting the arm supports (horizontal transport)

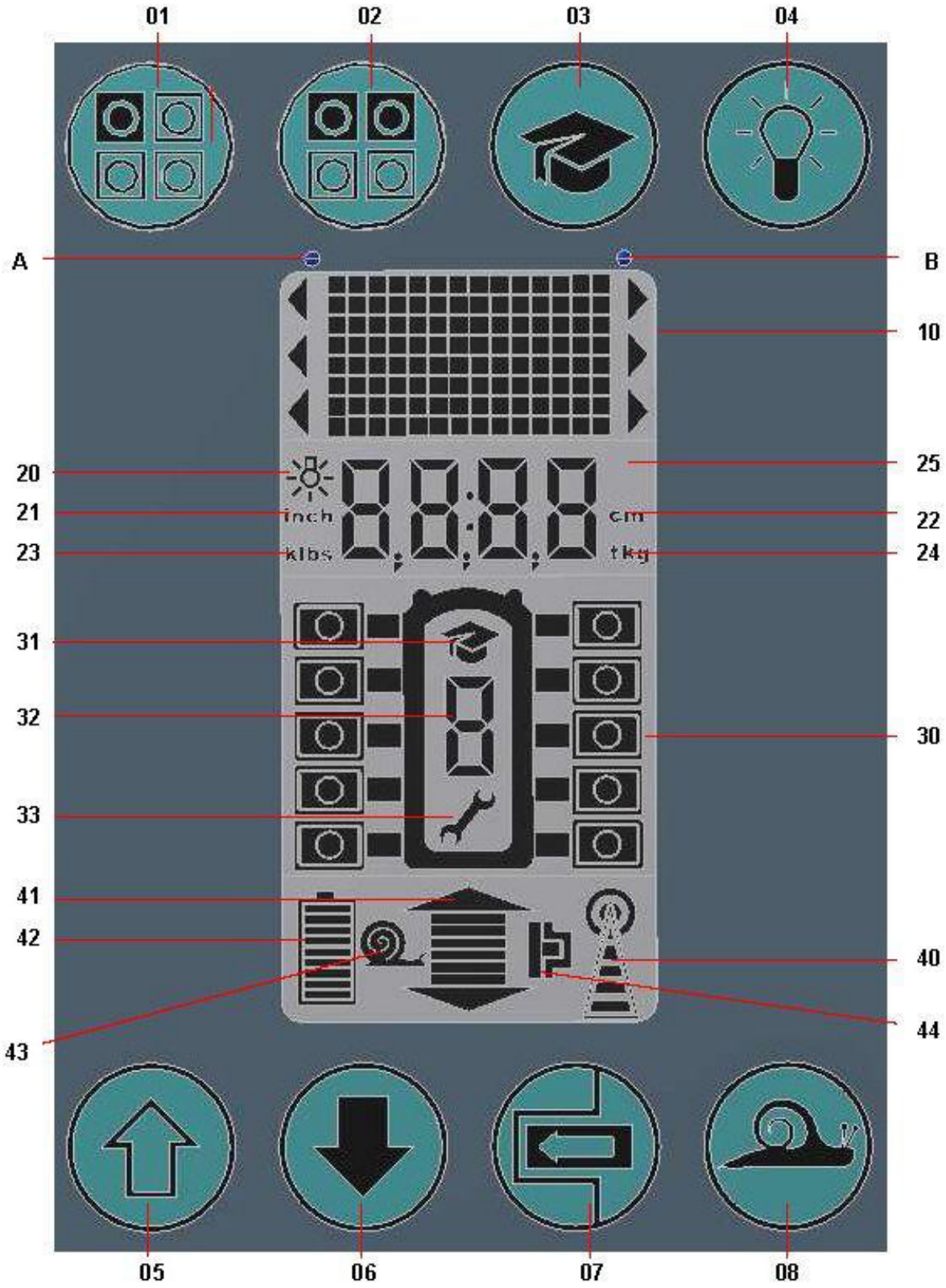
DANGER	
	Falling hazard. • When fitting the arm supports, make sure they do not fall. • Fit the arm supports only in the positions where there are also threads in the lifting carriage for all screws. • Do not use damaged screws. • If screws are damaged, they must be replaced immediately. Screw type: DIN912 M20x55 strength 8.8. • Tighten all screws to specification. 415 Nm • Check the tightening torque after 48 hours of operation

5) Fit the arm supports using the screws provided DIN912 M20x55 strength 8.8 on the lifting carriages of the jacks.

6 Operation

Operation involves the lifting platform's intended use.

6.1 Operating panel



No.	Keys	Remarks
01	Single operation	not with 2-column lifts
02	Operation in pairs/groups	not with 2-column lifts
03	Configuration/acknowledgement of error messages	
04	Background lighting/lighting (optional)	
05	Lifting	
06	Lowering	
07	Special functions	
08	Slow	
No.	Symbols	Remarks
10	Status messages	Separate chapter
20	Background lighting/lighting ON	
21/22	Lifting height in cm or inches	Country-specific
23/24	Weight in kg or lbs (optional)	Country-specific
25	Lifting height, weight, status messages	Status messages in separate chapter
30	System overview	Separate chapter
31	Configuration mode active	
32	Communication channel	
33	Service mode	Separate chapter
40	Data signal strength	
41	<Lifting> or <Lowering> key pressed	
42	Battery charge status	not with 2-column lifts
43	<Slow> active	
44	not active	
A	Green LED	Info LED of main controller
B	Green LED	Info LED of display module

NOTICE

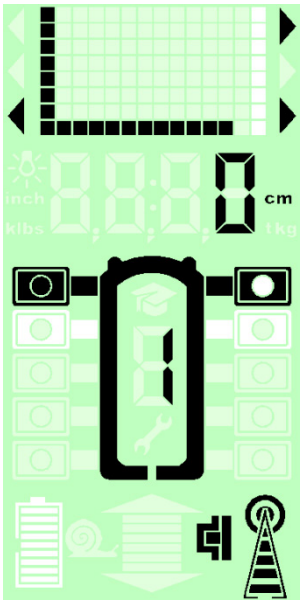
- The keys can have a different meaning in service mode.

6.2 Switching the lifting platform on

1) Switch the master switch on each jack on

NOTICE	
	• The master switches also serve as Emergency Off switches As soon as a master switch is switched off, the lifting platform is stopped

After switch-on, the display shows the following information:



The platform lift is ready for operation.

6.3 Driving a vehicle into the lifting platform

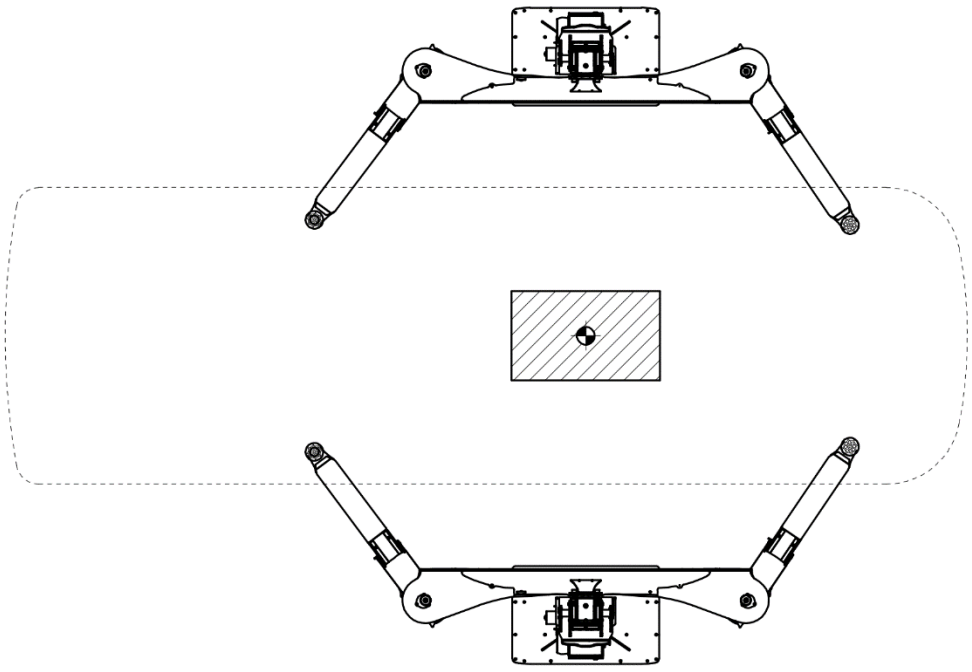
CAUTION
Risk of damage to vehicle and lifting platform. • Drive the vehicle centrally into the lifting platform.

1) Carefully drive the vehicle centrally into the lifting platform – if necessary, a banksman can provide assistance.

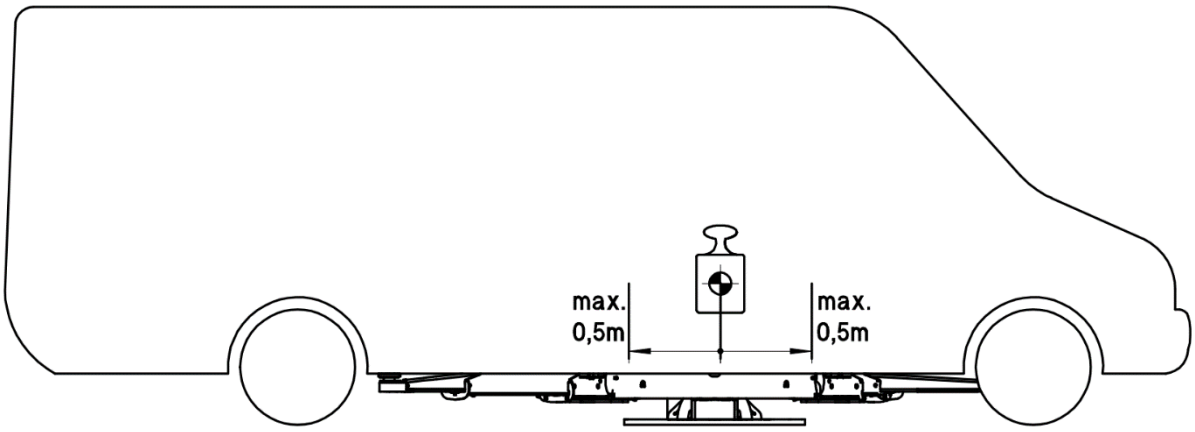
6.4 Lifting the load, general notes

DANGER
Falling hazard if vehicle is picked up incorrectly • Observe the load capacity as well as the weight of loads in the vehicle. • Only lift the vehicle at the lifting points provided by the manufacturer. • The spindle plates must be directly under the vehicle, do not use pieces of wood or other items between vehicle and spindle plates. • If the vehicle is to be lifted via the chassis, always use form-fitting U-supports (accessories). • Lifting with less than 4 articulated arms is forbidden. • One-sided lifting of loads is forbidden.

DANGER
Falling hazard if vehicle is picked up incorrectly • The vehicle's centre of gravity, incl. payload, must lie within the permissible area (see marking in drawing below):



Exemplary illustration

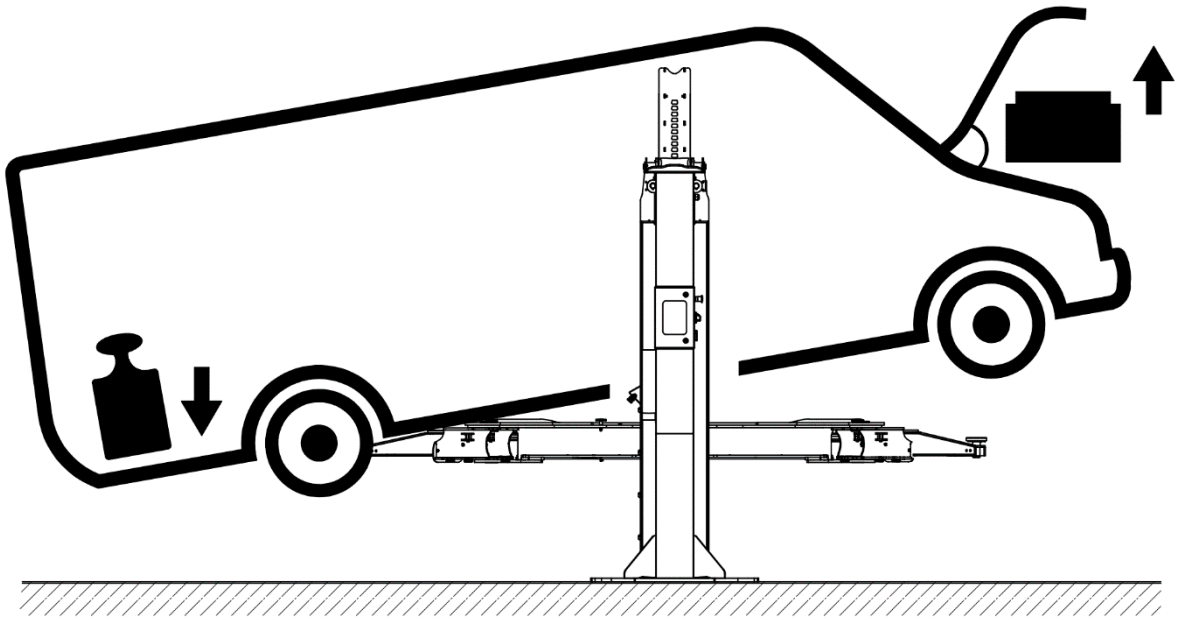


Exemplary illustration

DANGER

Falling hazard

- The centre of gravity can shift during removal and installation of vehicle components.



Exemplary illustration

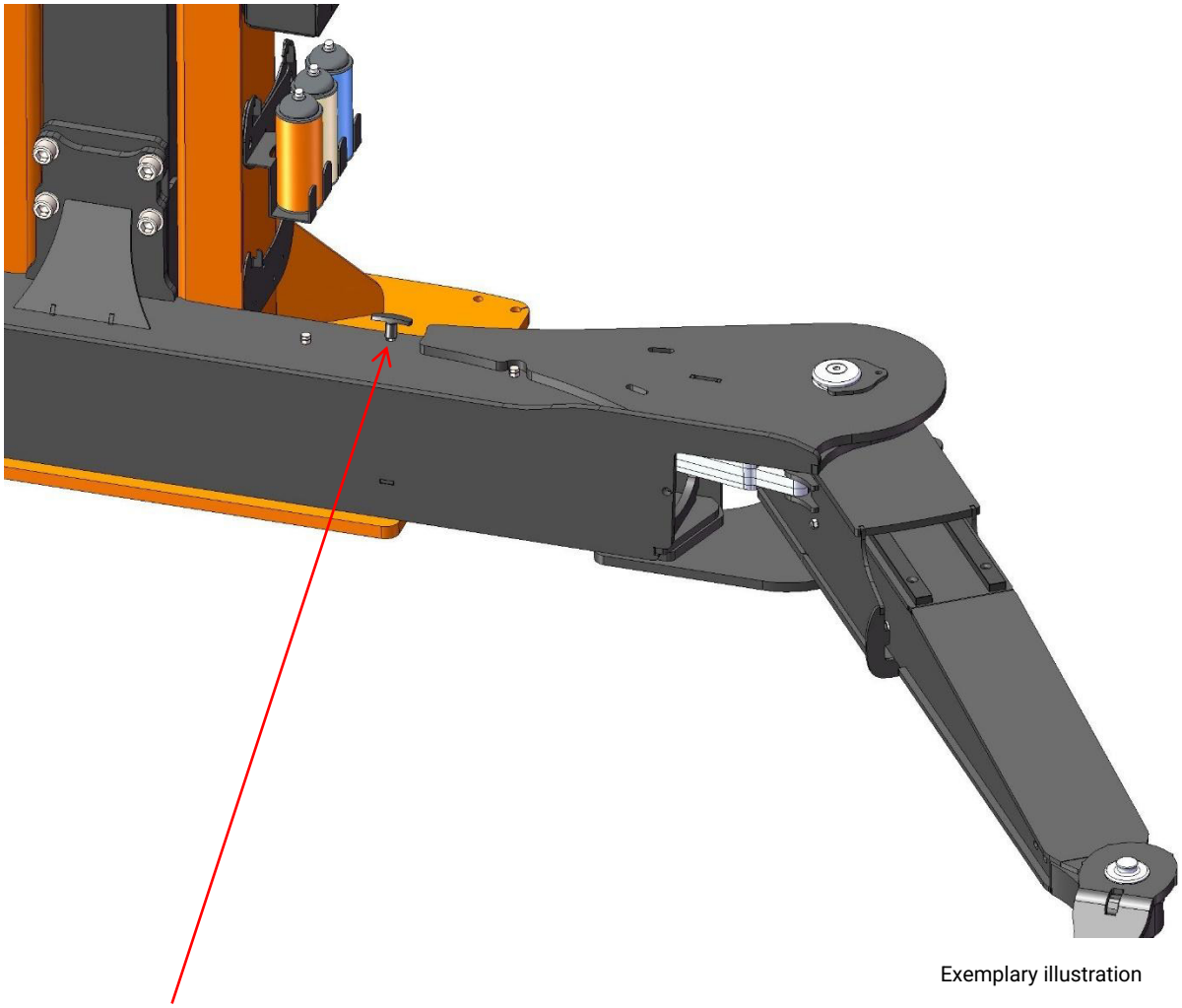
CAUTION

Risk of damage to vehicle and lifting platform.

- Lift the vehicle only via the wheels specified by the manufacturer, in particular on vehicles with articulated or trailing axles.
- When positioning the jacks under the vehicle, make sure that projecting vehicle body parts, such as e.g. mirrors, are not damaged.

6.5 Adjusting the articulated arms

- In their lowest position, the articulated arms can be moved freely. They are locked automatically as soon as they are raised from the floor.
- The articulated arms can be unlocked as follows:



Exemplary illustration

Pull lever:	Releases the arm
Release lever:	Locks the arm

1) Swing the arms under the vehicle and position all the arms under the lifting points.

6.6 Lifting and lowering

No persons may be on or in the vehicle.

DANGER
Risk of crashing due to incorrect lifting and lowering. • Avoid any forces that could cause the vehicle to slip, swing or tip. • Do not obstruct any operating controls such as the <Lifting> or <Lowering> keys or override their function.

CAUTION
Risk of material damage. • Remove all objects from under the vehicle before lowering it. • Close or secure any open doors that could collide with the jacks. • When lifting, ensure adequate free space above the lifting cylinder that extends above the jack. There must be adequate clearance height for the lifting platform and the vehicle to be lifted.

DANGER
 Risk of injury when entering the danger area. • While operating the lifting platform, the operator must remain outside the lift's area of movement and maintain an adequate safety distance from the lift's moving parts.

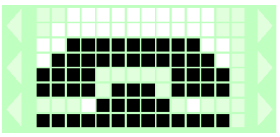
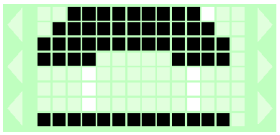
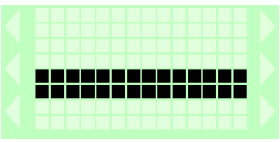
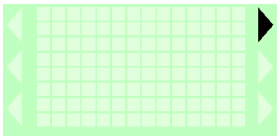
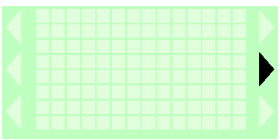
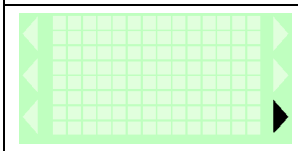
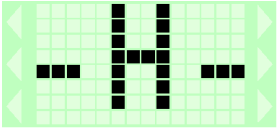
DANGER
 Risk of injury with unauthorised access to the danger area. • The operator must make sure that nobody is within the lifting platform's danger area.

NOTICE
• Before lowering, the lift first moves upwards about 1 cm.

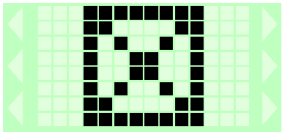
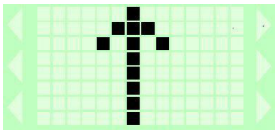
1) Press the corresponding key to lift or lower the vehicle.
2) Raise the vehicle about 5 cm and immediately make sure that the load is securely positioned.

6.7 Status messages

Status messages are shown in the upper part of the LCD display.

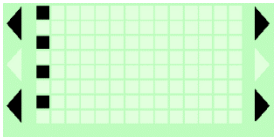
Symbol	Description
	The lift is in standby, the selected channel is free. Activation with  
	The lift is in standby, the selected channel is occupied. Activation is only possible if the selected channel is free.
	Upper limit switch, general During lifting, at least one jack has reached the upper limit position – the lift stops.
	CE Stop (crushing protection) During lowering, at least one jack has reached the crush protection limit (20 cm lift height) – the lift stops. Further lowering is possible by pressing the <Lowering> key again. An acoustic signal sounds until all jacks have reached the bottom position.
	CE Stop (crushing protection) deactivated
	Lower limit switch, general During lifting, all the jacks have reached the lower limit position.
	Reference system newly set Symbol appears when: • A system message is acknowledged (e.g. 5555)
	Upper limit switch, local This jack has reached the upper limit position.
	Lower limit switch, local This jack has reached the lower limit position.
	Status message in the lifting unit (but not for this jack) Al least one other jack generates a status message. Measure: Acknowledge the message and rectify the cause.

Exemplary illustrations

Symbol	Description
	Jack inactive/not selected. Jack cannot be operated.
	At least one jack is locked Measure: Lift about 5 cm, then lower again

Exemplary illustrations

6.7.1 Additional messages from software version 4.71

Symbol	Description
	If the free stroke was not carried out correctly and completely, (button released or limit switch reached), the error counter is incremented. This is indicated on the graphic display at top left. If the process is aborted three times in succession, the free stroke is locked and a vertical dotted line is shown on the left side of the display. The error is automatically deleted when the lift is in the permanent lowering mode for at least 4 seconds.
	If the lifting or lowering key is already pressed when switching on, the corresponding key is locked for lift movements. This is indicated with a double bar on the display. In addition, the button causing the issue is also displayed live. (Arrow)

Exemplary illustrations

NOTICE



• After clearing the actuation, the keyboard can be unlocked by pressing the buttons and  

 switching Off and On.

The keys must be pressed until the first signal tone is heard, and then released immediately. Now, the symbol for a locked keyboard should not be shown, otherwise the procedure must be repeated.

6.8 Configuring a further lifting unit

NOTICE

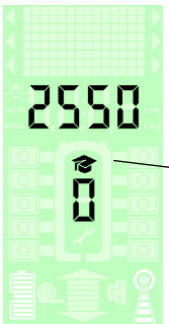
sually, the lifting platform is already configured.
Communication with the jacks is wireless via radio. If there are several lifting units in the workshop, they can be programmed either on the same channel or on different channels.
- If several lifting units are configured on the same channel, they cannot be operated simultaneously. Every lifting unit detects when the channel is free.
- Always configure only one lifting unit.
- Simultaneous configuration of several lifting units is forbidden.
- Only configure a lifting unit when no vehicle is on the lift.

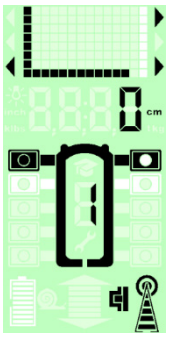
NOTICE

- The configuration mode described below must be called within 10 seconds after switching the master switch on. If this time is exceeded, the master switch must be switched off/on again.
- All jacks of a lifting unit must have the same code number.

NOTICE

• If the configuration mode is called for any jack, this code is deleted and the jack must be reconfigured.
- A **new code number** is assigned with every configuration procedure.
- Switch off all the jacks before configuring and proceed as follows:

No.	Symbol	Description	Display panel	Remarks
1	 	Jack 1: Calling the configuration mode: Press the key and keep it pressed, then Switch the master switch on.		255 = not configured The symbol flashes 0 = not configured

No.	Symbol	Description	Display panel	Remarks
2	 	Enter the channel number: Press the key and keep it pressed, then Press the key repeatedly until the required channel number appears (here: 1)		Possible channel numbers: 1/2/3/4/5/6/7/8/9
3	 	Enter the number of jacks: Press the key and keep it pressed, then Press the key repeatedly until the required number of jacks is displayed (here: 2)		
4	 	Enter the jack position: Press the key and keep it pressed, then Press the key		Jack 1 configured: 123 = random code number 1 = channel number **Go to jack 2**
5	Jack 2: Repeat steps 1 to 4			Jack 2 configured: Lifting unit is ready for operation

Exemplary illustration

7 Cleaning and care

To ensure the safety of persons and to maintain the lifting platform's value, it must be cleaned and cared for regularly. Regular care is also the prerequisite for maintaining warranty claims in case of possible corrosion damage.

- Remove all signs of contamination at regular intervals. 45
- Do not clean the lifting platform with high-pressure hose or steam.
- How often cleaning is necessary depends on the type of use. Under unfavourable conditions, weekly cleaning might be necessary.
- Do not use aggressive or scouring cleaning agents – instead, use warm water and a conventional cleaning liquid.
- Carefully remove all contamination with a sponge or brush.
- Make sure that no residues of the cleaning agent remain on the lifting platform.
- After cleaning, dry the lift with a cloth, and then spray it with a protective wax.

Note	
	• In order to increase the service life of the hydraulic cylinder when the lift is only partially used, we recommend raising the lift to the maximum height at regular intervals (once a month, or more frequently depending on environmental conditions).

8 Inspection

The lifting platform must be inspected regularly by the owner/operator and also by an independent expert to ensure its safe operation and prevent hazards for personnel.

DANGER	
	Risk of fatal injury when working with a damaged lifting platform. • In case of damaged or manipulated safety devices or if the lift exhibits signs of corrosion, deformations or cracks, it must be shut down immediately. It may only be put back in operation after the damage has been rectified.

8.1 Inspection by owner/operator

Inspection	Daily	Monthly
Mechanical latch: Check whether the catches make a regular "click" sound during lifting.	x	
Articulated arm lock: Check whether the articulated arms lock smoothly in the raised position.	x	
Corrosion, deformations, cracks	x	
Completeness of protective covers	x	
Lost or damaged labels must be replaced immediately.	x	
Inspection of hydraulic hoses and their couplings for leaks.	x	
Check the powder coating and touch it up if necessary. Any damage caused by external influences must be treated immediately after their detection. If not treated, such damage can cause extensive and permanent deterioration of the powder coating, e.g. by infiltration of all kinds of deposits.		x
Check the oil level in the hydraulic reservoir and top it up as necessary.		x

8.2 Inspection by an expert

Annual visual and functional test by an expert, with corresponding entry in the test logbook. Other maintenance intervals can depend on the regulations in other countries.

9 Maintenance and repair

9.1 Maintenance

9.1.1 Oil change

During normal operation in closed surroundings, an oil change is recommended every 5 years. In case of multi-shift operation and extreme environmental conditions, the oil should be changed at shorter intervals.

9.2 Repair

DANGER
	Risk of fatal injury when working with a damaged lifting platform. • Repairs may only be carried out by the manufacturer or by suitably trained persons.

CAUTION
	Damaged electrical components • The master switch must be switched off before replacing a damaged electrical component.

CAUTION
	• Only use original spare parts from the manufacturer.

10 Faults and trouble shooting

NOTICE

In case of faults that you cannot rectify yourself, please contact your dealer or service@finkbeiner.eu.

10.1 Prevention of possible faults

- Regularly clean and care for the lifting platform.
- Observe the maintenance instructions.
- Protect the lifting platform from moisture.
- Do not subject the lifting platform to corrosive substances.
- Do not carry out welding work on the lifting platform or use welding torches.

10.2 Behaviour in case of a malfunction

Malfunctions of the lifting platform can be caused by simple errors.
If the fault cannot be rectified by checking the following possible causes, please contact the corresponding customer service department.

DANGER

Risk of fatal injury when working with a damaged lifting platform.

- Shut down the lifting platform until the fault has been rectified by an expert. Secure the master switch with a padlock.
- The lifting platform may only be put back into operation when it is in a technically perfect and safe condition.

10.3 Fault messages



Fault messages are displayed in the two upper sections of the LCD display.

Exemplary illustration

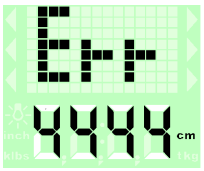
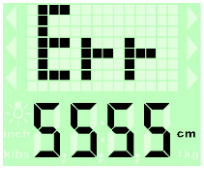
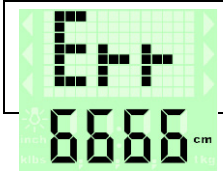
NOTICE

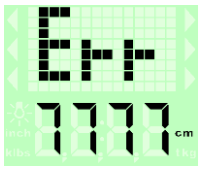
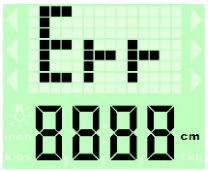
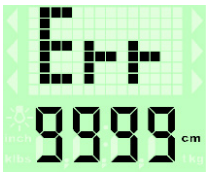
- Every error message (except 7070/7777) can be acknowledged by pressing the key.

NOTICE

	• Fault message 7070/7077 indicates that no height signal is present at the control unit. Therefore, the error message cannot be acknowledged. Until the fault has been rectified, the jacks can only be operated singly in the service mode.

DANGER	
	• If error messages are acknowledged repeatedly without rectifying the cause, this can result in impermissible height differences between the jacks and therefore lead to the vehicle being lifted at an angle. • If a fault has resulted in a height difference, the faulty jack must first be brought to the correct height by means of single operation. • If the fault occurs repeatedly, the lift may only be lowered.

Symbol	/cause	Measures
	The correct software is not installed in one or more of the jacks.	Install the same software in all the jacks
	Fault during configuration procedure	Start the procedure again
	One or more of the jacks is outside the permissible synchronisation tolerance. Possible cause, if no height difference can be measured: • Wire rope sensor (faulty potentiometer) Possible cause if a height difference can be measured: • Leaky lowering valve, jack has moved down • Proportional valve contaminated or faulty • Defective coil in proportional valve • Cable of proportional valve defective	Acknowledge the error message and correct the height difference; find cause and rectify it • Replace wire rope sensor • Clean/repair the valve • Clean/repair the valve • Replace the coil • Repair the cable
	The jack moves downward immediately when the <Lowering> key is pressed.	

Symbol	/cause	Measures
	• Proportional valve contaminated or faulty • Defective coil in proportional valve • Cable of proportional valve defective	• Clean/repair the valve • Replace the coil • Repair the cable
	Error in potentiometer • Defective cable connection • Contact problem in connector plug • Short circuit to ground • Short circuit to plus • Defective potentiometer	• Check cable connections • Rectify contact problem • Remove the short circuit • Replace the potentiometer
	• Error in safety circuit • Short circuit in unlocking magnet	• Replace the circuit board • Replace the magnet
	Error in control unit	• Replace the circuit board

Exemplary illustrations

10.4 Height compensation of skew

DANGER

- If a fault has resulted in a height difference, the faulty jack must first be brought to the correct height.
- If the fault occurs repeatedly, the lift may only be lowered.

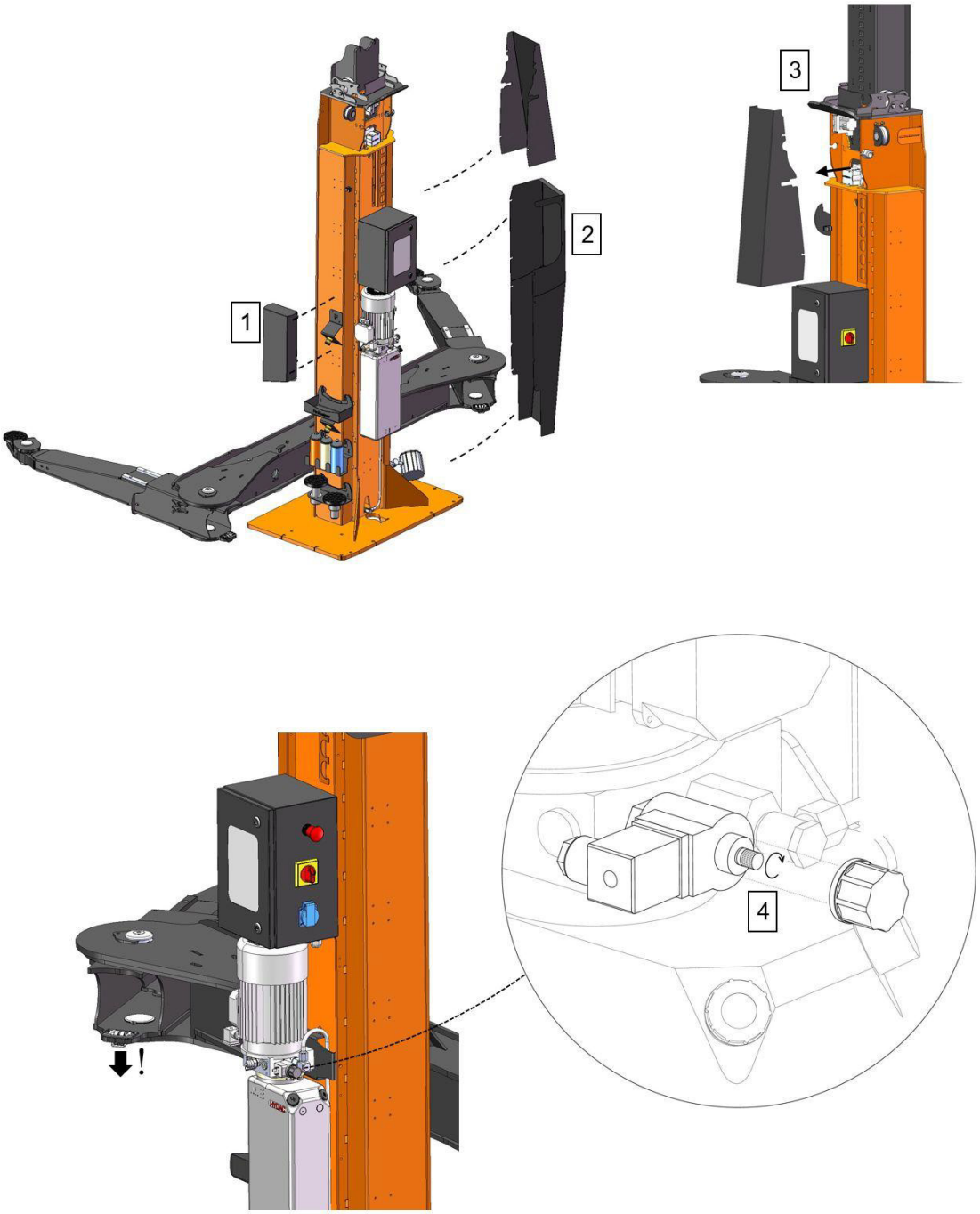
Height is compensated as follows:

1) Acknowledge the error message with the k
2) Press the <Lifting> or <Lowering> key; the jacks will correct the height in steps.
3) Repeat steps 1 and 2 until the lift height has been compensated and the error message no longer appears.

10.5 Emergency lowering – Operation in case of a fault

In case of an electrical fault, the lift can also be lowered without electric power.

DANGER	
	Risk of crashing if emergency lowering is not done correctly. • Make sure that the vehicle does not reach a dangerous angle. • Lower the jacks individually and in small steps.



Exemplary illustration

Proceed as follows:

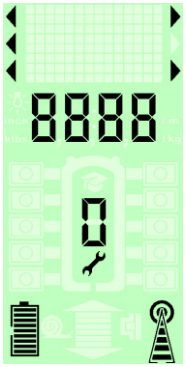
1) Remove the cover 1. 52
2) Remove the two covers 2, pull latch 3 backwards with a screwdriver and hold it open. If the latch cannot be opened, the lift carriage must be raised slightly with a lifting device.
3) For this, remove the plastic cap 4 at the right of the emergency lowering valve and slowly turn the knurled screw on the valve counterclockwise until the lift carriage starts moving downwards. Turning the knurled screw clockwise stops the lowering movement.
4) Lower the jacks individually in small steps.
5) Close all emergency lowering screws and replace the plastic caps.
6) Shut down the lift until it has been repaired.

10.6 Service mode

The service mode serves to operate the lifting platform in an emergency, e.g. after failure of radio communication or the height measuring system, or to make adjustments or recalibration.

NOTICE	
	• In the service mode, the jacks can only be operated singly.

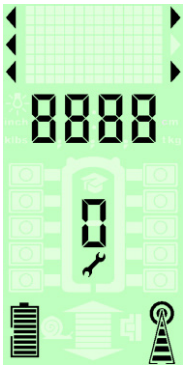
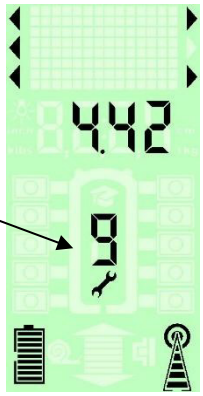
DANGER Risk of crashing due to incorrect lifting and	
	lowering. • Lifting or lowering vehicles at an angle or one-sided is forbidden.

Symbol	Description	Display panel	Remarks
	Call the service mode:		
	Press the key and keep it pressed, then		The "Spanner" symbol is displayed:
	Switch the master switch on.		Service mode active
The jacks can now be raised or lowered singly			
	Exit the service mode: Switch the master switch off and on again		

Exemplary illustrations

10.6.1 Querying the software version

The software version on the circuit board can be queried as follows:

Symbol	Description	Display panel	Remarks
	Call the service mode:		
	Press the key and keep it pressed, then		The "Spanner" symbol is displayed:
	Switch the master switch on.		Service mode active
	Press the key repeatedly until the number 9 appears in the display;		Software version (here: 4.42)
	Exit the service mode:		
	Switch the master switch off and on again		

Exemplary illustrations