



2-POST-LIFT
TW242PEB4.3-400 / TW242PEB4.3-400-G
(Lifting capacity: 4200 kg)

TW242PEB4.3 & TW242PEB4.3-G

INSTALLATION, OPERATION AND MAINTENANCE MANUAL



Always read these operating instructions carefully before operating the lift. Follow the instructions carefully.

Table of contents

1. General information	1
2. Identification of the instructions for use	1
3. Technical data.....	1
4. Modification of the product	1
5. Safety-related information.....	2
5.1 Safety instructions.....	2
5.2 Warnings and symbols	3
5.3 Safety equipment	4
5.4 Load distribution	4
5.5 Monitoring and testing of the safety equipment.....	5
6. Conformity with the product.....	5
7. Technical specification	5
7.1 Machine description.....	5
8. Structure of the lifting platform.....	6
8.1 Before installation	6
8.2 Ground conditions.....	6
8.3 Assembly instructions.....	6
9. Commissioning	15
9.1 Safety precautions.....	15
9.2 Description of the control unit (control box).....	15
9.3 Lifting and lowering process flow chart.....	16
9.4 Operating instructions.....	17
10. Troubleshooting	20
11. Maintenance	21
11.1 Daily inspection and maintenance of the lifting platform elements before use	21
11.2 Weekly inspection and maintenance of the lifting platform elements	21
11.3 Monthly inspection and maintenance of the lifting platform.....	21
11.4 Annual inspection and maintenance of the lifting platform elements.....	22
12. Behaviour in the event of an incident	22
13. Appendix	23
13.1 Packing list	23
13.2 Lifting platform dimensions.....	24
13.3 Foundation requirements and working area	25

13.4 Hydraulic system28

13.5 Circuit diagrams29

13.6 Detailed drawing and parts description of the lifting platform34

13.7 Spare parts list39

Further attachment:

- **EU Declaration of Conformity**

Important information:

ASSEMBLY



You can find the assembly video for this lift on YouTube: https://youtu.be/C0m_B2JVH50 or scan the QR code.



PRODUCT PRESENTATION



You can find the product presentation video for this lift on YouTube: <https://youtu.be/Ecw5bHuHBko> or scan the QR code.





TIPS & TRICKS



In the "Tips & Tricks" section we show you simple solutions to work even more efficiently with your TWIN BUSCH® products.

<https://www.twinbusch.co.uk/2-post-lifts/2-post-lift-clear-floor-Profi-Line::162.html#horizontalTab4>

24/7 Service Center:



Our **24/7 Self-Service Center** is a mobile website designed for self-diagnosis of issues with your Twin Busch lift. Here, we provide an extensive video collection covering a wide range of relevant topics for your Twin Busch lift, from fine-tuning and maintenance to component replacement.

With the **24/7 Self-Service Center**, you have a versatile tool at your disposal to learn how to independently maintain and repair your Twin Busch lift.

To access the site on your mobile device, please visit [twinbusch.com/qr](https://www.twinbusch.com/qr) or scan the QR code provided alongside.

For Twin Busch lifts shipped from mid-2020 onwards, you'll also find the QR code on a sticker attached to the control box.

1. General information

The Profi-Line lift TW 242PEB4.3 / TW 242PEB4.3-G is designed for everyday professional workshop use. With **automatic unlocking** of the safety latches and **two-stage turntables**. **Barrier-free access**. The lift also has an **automatic limit switch** as soon as a vehicle that is too high reaches the lifting beam. There is a **practical plug-in adapter holder** on the outside of each column, which provides space for the safe storage of two height adapters.

2. Identification of the instructions for use

Operating instructions TW242PEB4.3 & TW242PEB4.3-G

of Twin Busch GmbH,
Ampèrestraße 1,
D-64625 Bensheim

Twin Busch UK Ltd.
9, Linnell Way
Telford Way Industrial Estate
NN16 8PS, Kettering (Northants)

Phone: +49 6251-70585-0
Telefax: +49 6251-70585-29
Internet :www.twinbusch.de
Email: info@twinbusch.de

Phone: +44 (0) 1536 522 960
Internet: www.twinbusch.co.uk
Email: info@twinbusch.co.uk

Status: -00, 27.06.24

File: TW242PEB4.3_TW242PEB4.3-G_2-Post-Lifts_Manual_uk_00_20240627.pdf

3. Technical data

Power supply	400 V / 3 phase
Protection	16A (C/sluggish)
Load capacity CE	4,200 kg
Degree of protection	IP 54
Lifting time	approx. 45 sec
Lowering time	approx. 30 sec
Net weight	650 kg
Noise level	< 70 db
Working environment	Working temperature: -15°C to +40°C
	rel. Humidity: 30 % to 85 %

4. Modification of the product

Improper use, as well as modifications, conversions and attachments of the lift and all its components not agreed with the manufacturer are not permitted. The manufacturer will not accept any liability in the event of improper installation, operation or overloading. Likewise, improper use will invalidate the CE certification and the validity of the expert opinion.

If there are any modification requests, please contact your dealer or the expert personnel of the Twin Busch GmbH beforehand.

5. Safety-related information

Read the operating instructions carefully before operating the lift. Keep the instructions in a safe place for future reference. Follow the instructions carefully to achieve the best performance from the machine and to avoid damage due to personal negligence.

Unpack all parts and use the packing list to check that all components are present.

Check all connections and components thoroughly for damage. The lift may only be put into operation if it is in a safe operating condition.

5.1 Safety instructions

- Do not install the lift on an asphalt surface.
- Read and understand the safety instructions before operating the lift.
- Do not under any circumstances leave the control panel when the lift is in motion.
- Keep your hands and feet away from moving parts. Pay particular attention to your feet when lowering.
- The lifting platform is to be operated by trained personnel only.
- Uninvolved persons are not allowed near the lifting platform.
- Wear suitable work clothing.
- The area around the lifting platform should always be kept free of obstructing objects.
- The lift is designed for lifting motor vehicles that do not exceed the maximum permissible weight.
- Always ensure that all safety precautions are taken before working near or under the vehicle.

Never remove safety-relevant components from the lifting platform. Do not use the lifting platform if safety-relevant components are missing or damaged.

- Do not under any circumstances move the vehicle or remove heavy objects from the vehicle that could cause significant weight differences while the vehicle is on the lift.
- Always check the mobility of the lift to guarantee its performance. Ensure regular maintenance. If any irregularity occurs, stop working with the lift immediately and contact your dealer.
- Lower the lift completely when not in use. Do not forget to disconnect the power supply.
- If you do not use the lift for a longer period of time, then:
 - a. Disconnect the lift from the power source.
 - b. Empty the oil tank.
 - c. Lubricate the moving parts with lubricating oil/grease.

Caution: To protect the environment, dispose of the oil that is no longer used in the prescribed manner.

- For safe lifting of transporters, it is essential to use the optional special lifting adapters.
You can find these at: www.twinbusch.co.uk

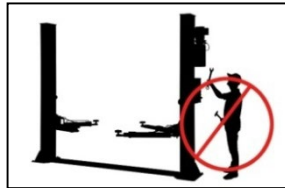
5.2 Warnings and symbols

All warning labels are clearly visible on the lift to ensure that the user uses the equipment in a safe and appropriate manner.

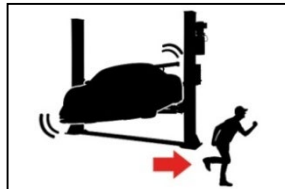
The warning signs must be kept clean and replaced if they are damaged or missing. Please read the signs carefully and memorise their meaning for future operations.



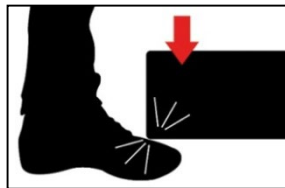
Read Instructions and safety instructions carefully before use!



Repairs and maintenance only by qualified personnel, never disable safety devices!



Always keep escape routes clear!



Watch your feet when lowering!
Danger of crushing!



Observe the vehicle manufacturer's mounting points!



Do not exceed the specified load capacity!



Never try to load only one side of the lifting platform!



Avoid strong shaking. Avoid shaking the vehicle.



Operation of the lifting platform only by qualified personnel!



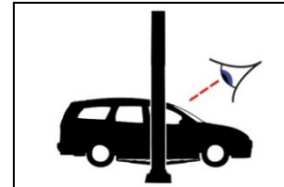
Only qualified personnel allowed in the vicinity of the lifting platform!



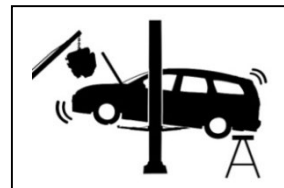
It is forbidden for persons to stand under the lift (when lifting or lowering)!



It is forbidden for persons to climb up onto the lift.



After briefly lifting the vehicle a few inches, check that it is securely seated!



When installing and removing heavy parts the vehicle can tip over!



Protect the lifting platform from moisture!
Electrical connections must be dry!



CAUTION!
Electrical voltage!

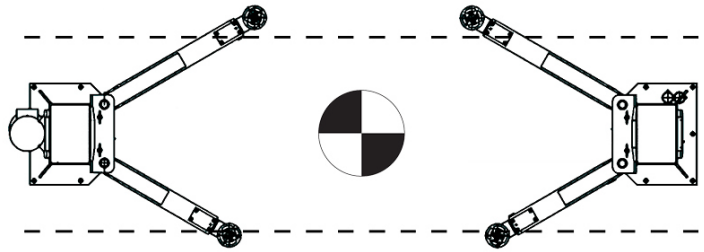
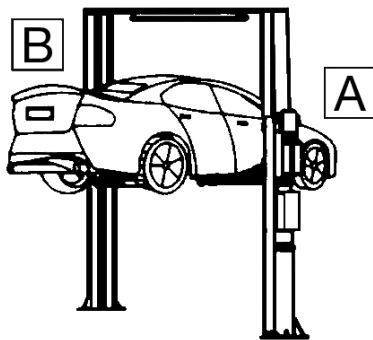
5.3 Safety equipment

For safe operation of the lifting platform, it is equipped with the following safety devices *):

- Safety detents
- Throttle valve in hydraulic line
- Limit switch
- Support arm lock
- Devices against jamming and crushing (shaft protection, foot deflector)
- Synchronisation cables

**) depending on the design and type of the lifting platform*

5.4 Load distribution



 center of gravity

Lifting Capacity	Load distribution	
	B	A
3.6 T	1.5 T	2.1 T
4.2 T	1.9 T	2.3 T
5.0 T	2.5 T	2.5 T
6.0 T	3.0 T	3.0 T

5.5 Monitoring and testing of the safety equipment

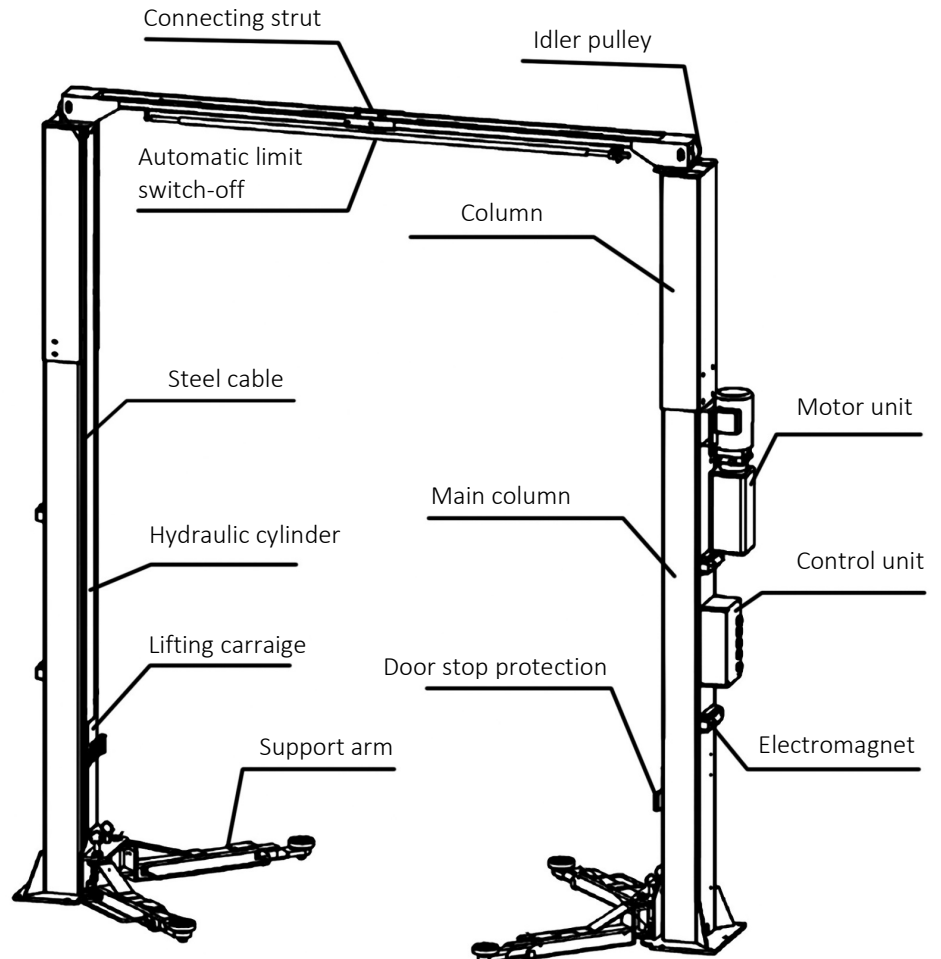
- | | |
|--|---|
| <ul style="list-style-type: none"> - Safety catch - Throttle valve - Limit switch - Support arm lock - Devices against jamming - Synchronisation cable | <p>Function test, when lowering the lift, safety catches must engage simultaneously and stop the downward movement.</p> <p>Fixed throttle, checking by user not possible</p> <p>When the limit switch is pressed, the motor stops or cannot start.</p> <p>When the support arms are raised, the support arm lock must engage and remain securely locked in place when loaded from the side.</p> <p>Must be in place, in working order and must not be deformed or damaged.</p> <p>Check steel cables regularly.</p> |
|--|---|

6. Conformity with the product

The TW 242PEB4.3 / TW 242PEB4.3-G 2-post lift is CE-certified and is compliant with the Machinery Directive 2006/42/EC, fulfilling the standards EN 1493:2022, EN 60204-1:2018 (look at: EU Declaration of Conformity, at the end of the user manual).

7. Technical specification

7.1 Machine description



8. Structure of the lifting platform

8.1 Before installation

Tools and equipment required:

- Suitable lifting tool for bulky and heavy components
- Hammer, pliers
- Phillips and slotted screwdriver
- Set of Allen spanners
- Spanner attachments and open-end spanners
- Impact drill
- Hydraulic oil HLP 32

8.1.1 Packing list:

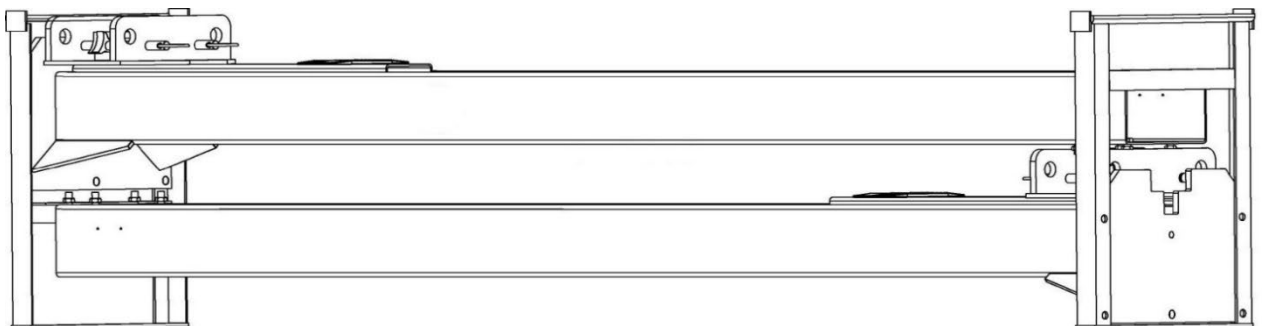
Unpack all components of the lifting platform and check the completeness of all components with the help of the packing list (see **appendix: Packing list**).

8.2 Ground conditions

The lifting platform must be installed on a solid foundation with a compressive strength of more than 3 kg/mm², a flatness of less than 5 mm and a minimum thickness of 200 mm. Detailed information can also be found in the corresponding foundation plan on our homepage at www.twinbusch.co.uk.

Note: If a new concrete floor is to be poured, it must cure for at least 28 days until a lifting platform can be installed.

8.3 Assembly instructions



- 1) Remove the packaging and take out the box with the accessories and cover plates. Read and understand the operating instructions before proceeding.
- 2) First you have to put a support between both columns or lift one of the columns with the help of a lifting tool. Then remove the upper bolts from the frame.

Attention: Please take special care that the column cannot fall down. The accessories could be damaged or people could be injured.

- 3) After you have removed the first column, place a support under the lower column. Then remove the bolts from the transport rack.
- 4) Set up both columns. Align the main and secondary pillars with each other.
 - a) After unpacking, you must decide where you want to place the column with the power supply, the control unit and the unlocking device.
 - b) Set up a pillar, place the drive-over plate on this pillar and determine the exact distance by erecting the second pillar and placing it on the second side of the drive-over plate.
- 5) First attach the main pillar, then the secondary pillar.
 - a) Drill the holes in the foundation for each ground anchor using a percussion drill. Drill perpendicular to the floor level.
 - b) Remove dirt and dust carefully after drilling (vacuum and blow out if necessary).

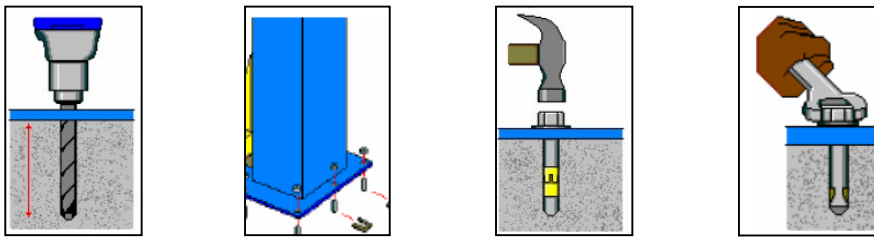
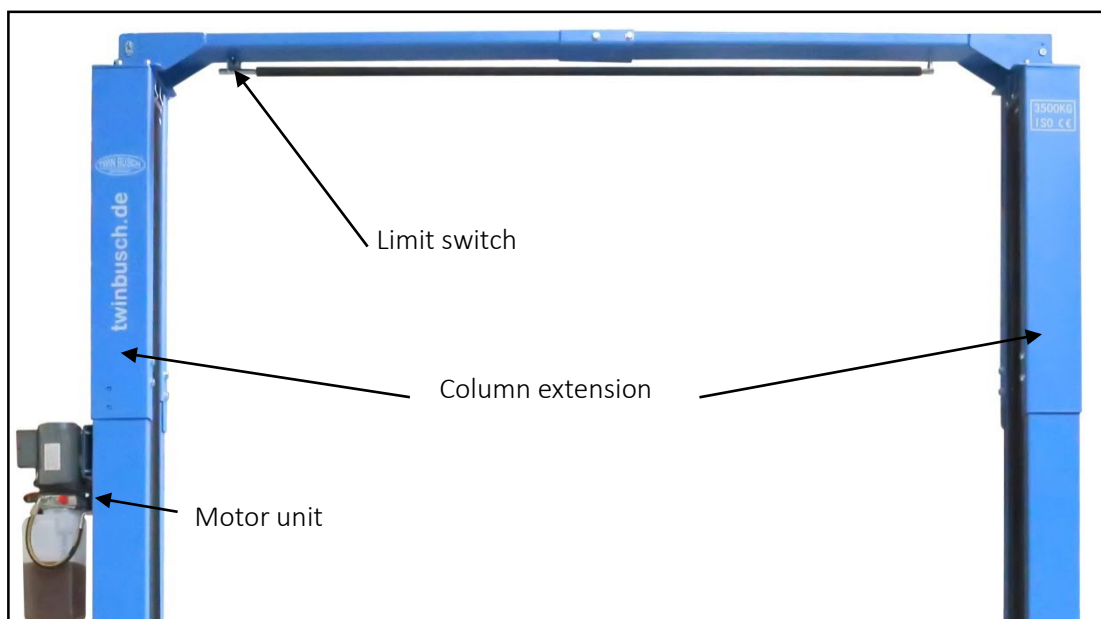


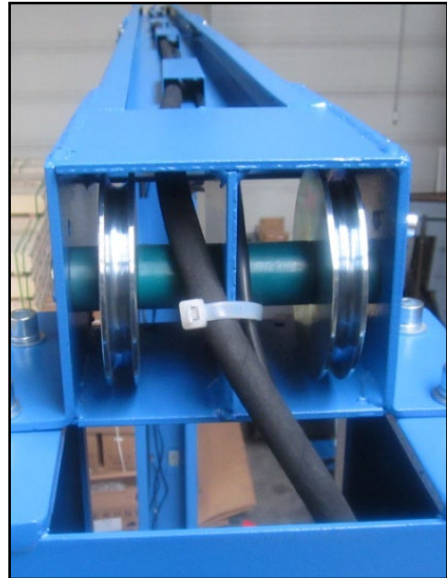
Illustration: Work steps for fixing the pillars

- 6) Install the cross connections at the top.

Connecting strut/cross-connection



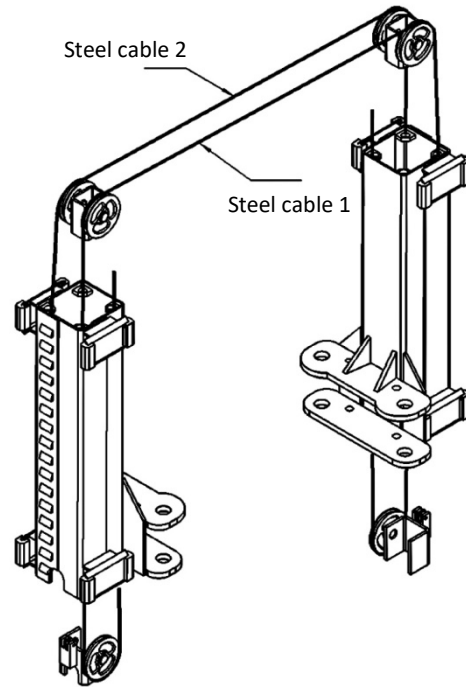
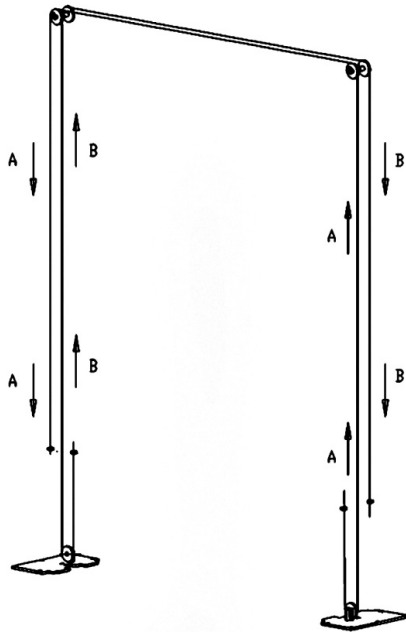
- a) Install the limit switch on the side on which the motor is located due to the cable length.
- b) Install the oil and electrical lines.



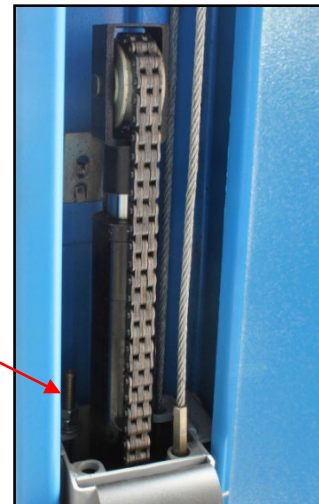
7) Connect the carriages to the steel cables

- a) Align the carriages on both sides of the column approx. 800 mm above floor level.
- b) Ensure that the safety catches on both sides of the column are engaged before you start installing the steel cables.
- c) **The slides must be at the same height from the ground before you continue.**
- d) Pull in the steel cables as shown in the following illustration.
- e) The steel cables must be set "tight" on both sides of the pillar. When doing this, make sure that you can hear the safety latches engage synchronously on both sides during the subsequent test run. If this is not the case, the steel cables or a steel cable must be re-tensioned.
- f) The ropes must always be secured against unintentional loosening (locked off) and oiled to ensure a long service life.

Caution: After adjusting the steel cable tension, the adjusting nuts on both sides of the column must be locked with another nut!



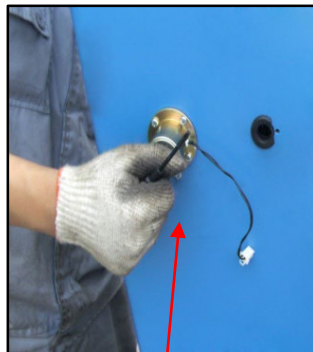
Thread for adjusting the steel cable tension



8) Fit the safety catches, the four electromagnets and the corresponding covers



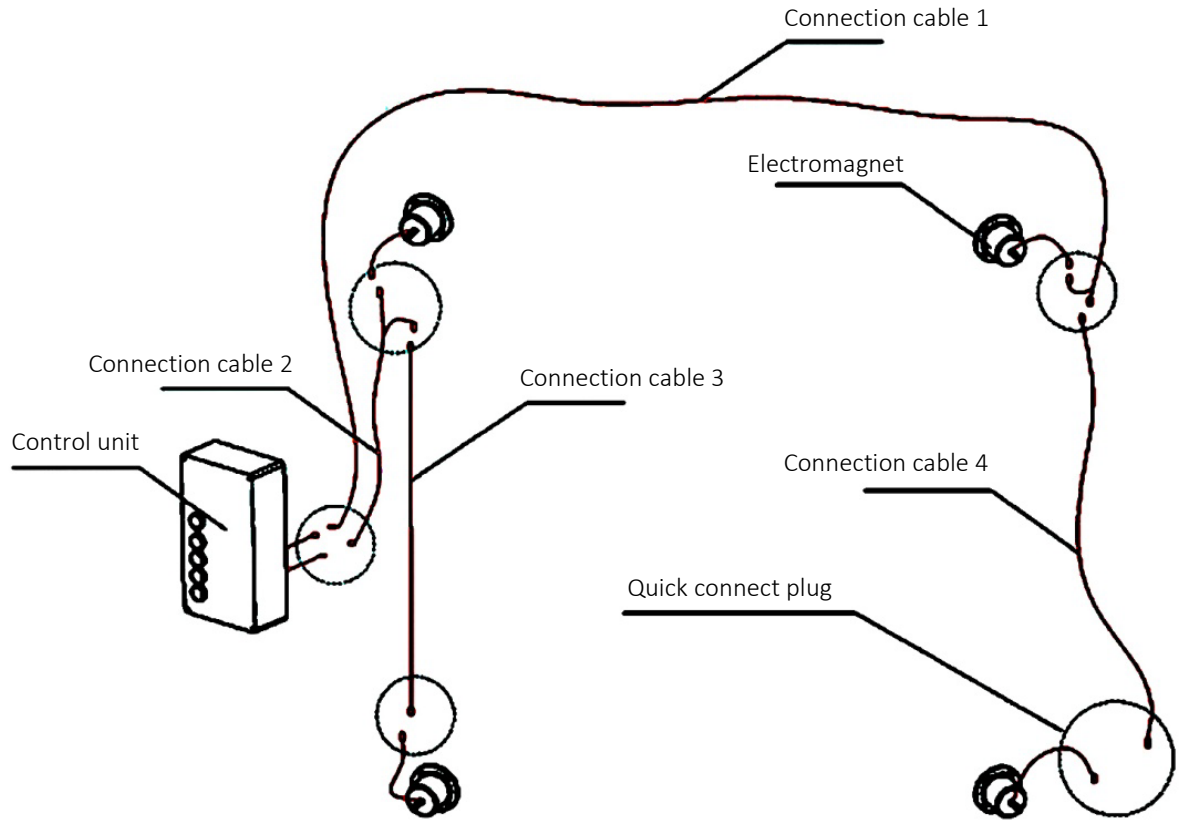
Safety catches



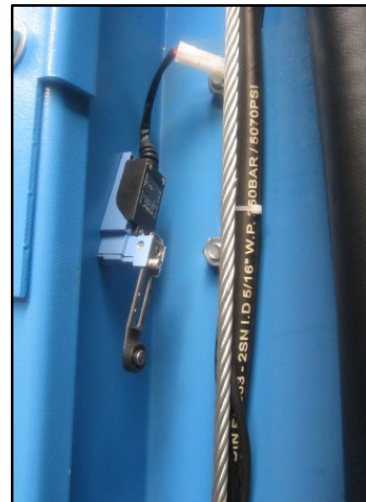
Electromagnet on the outer surface of the column



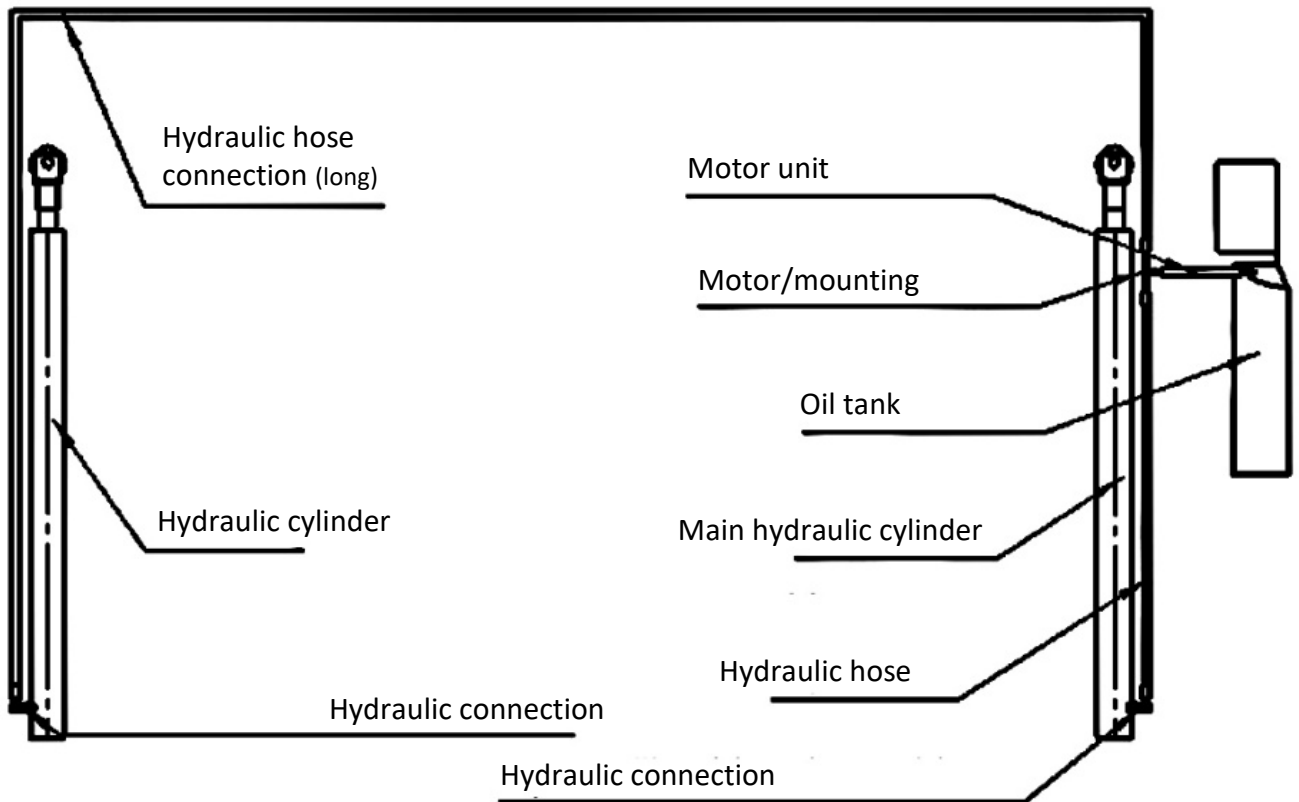
Cover (electromagnet)



- 9) Fit the limit switch (at a slight angle) at the top (inside) in the motor column.

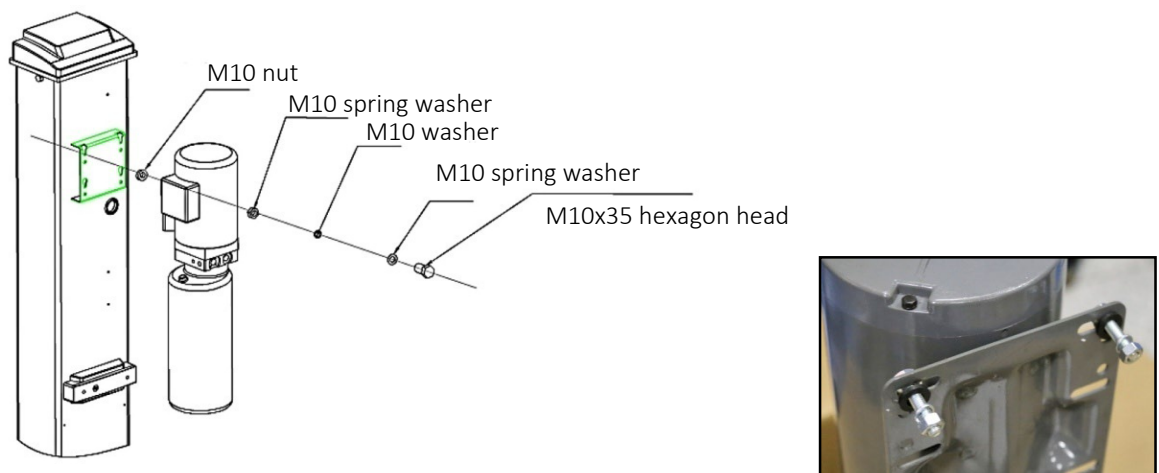


10) Connect the oil hose



11) Install the hydraulic system

a) Mount the motor unit

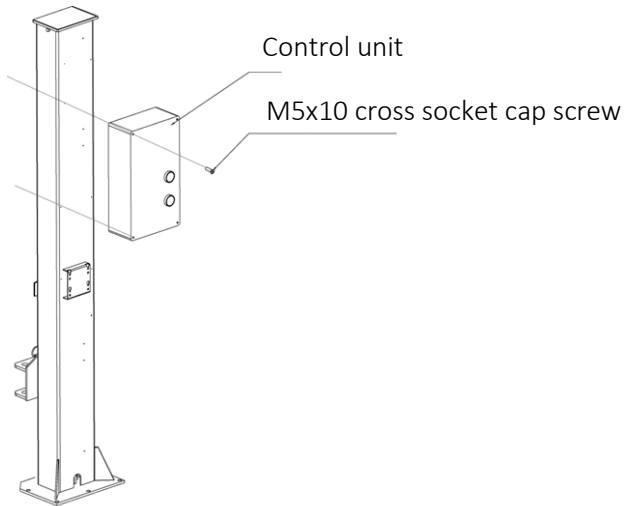


b) Make sure that all hose ends are clean and free of dirt.

c) Connect the hydraulic lines as shown in the following illustration or in the hydraulic circuit diagram.

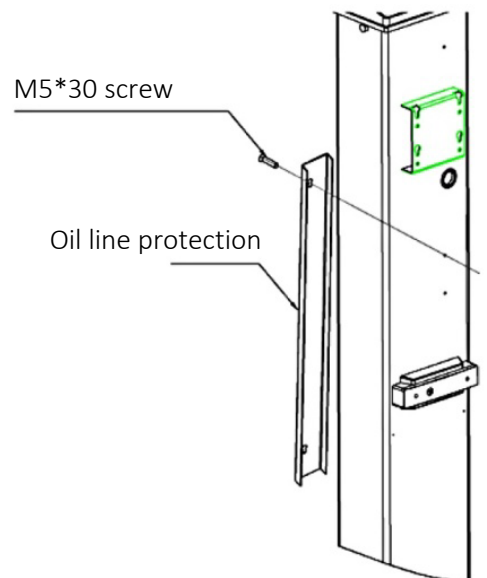
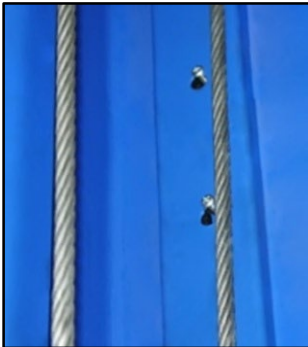
12) Install the control unit or control box.

- a) Install the control unit or control box.
- b) Connect the power supply to the control unit as shown in the following illustration.



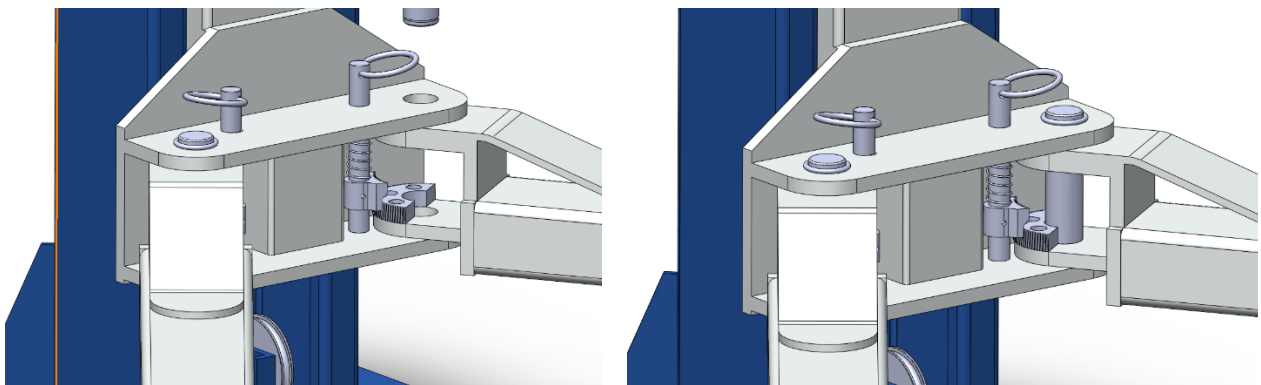
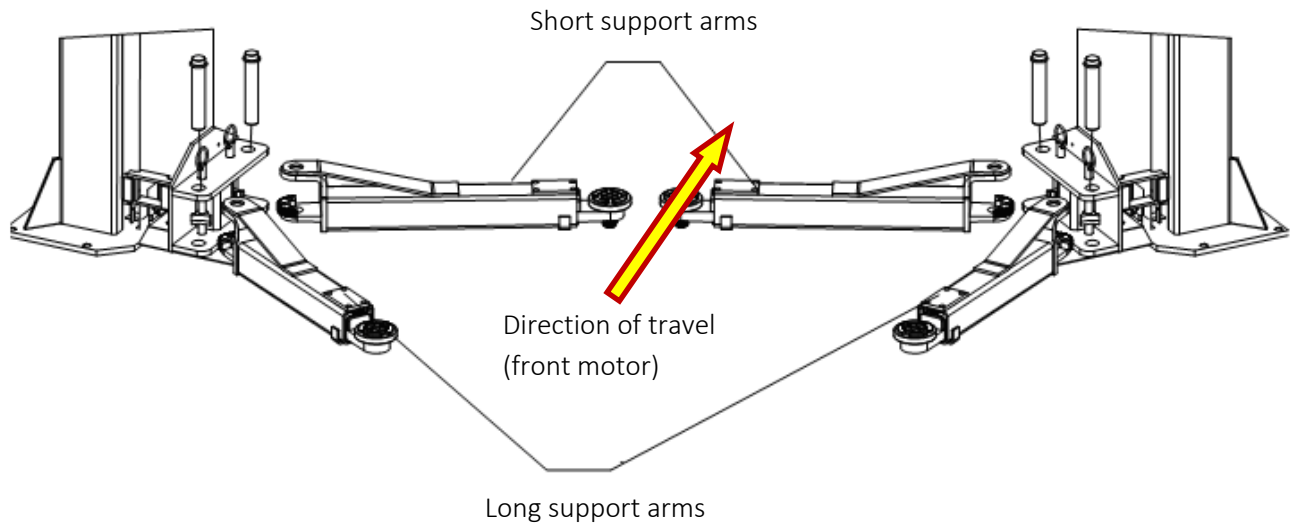
c) Fit the limit switch at the top end of the main column as shown in the following illustration.

13) Fit the protective cover for the oil line.



14) Mount the support arms.

- a) Insert the support arms into the lifting carriages, pay attention to the interlocking of the anti-rotation blocks. If necessary back off the bolts holding the half moons in place and then re-tighten.
- b) Place the support arm bolts in the holes provided, as shown in the following figure.



Insert the support arm, lifting the support arm anti-rotation device in the process. Insert the bolt and secure with a circlip.

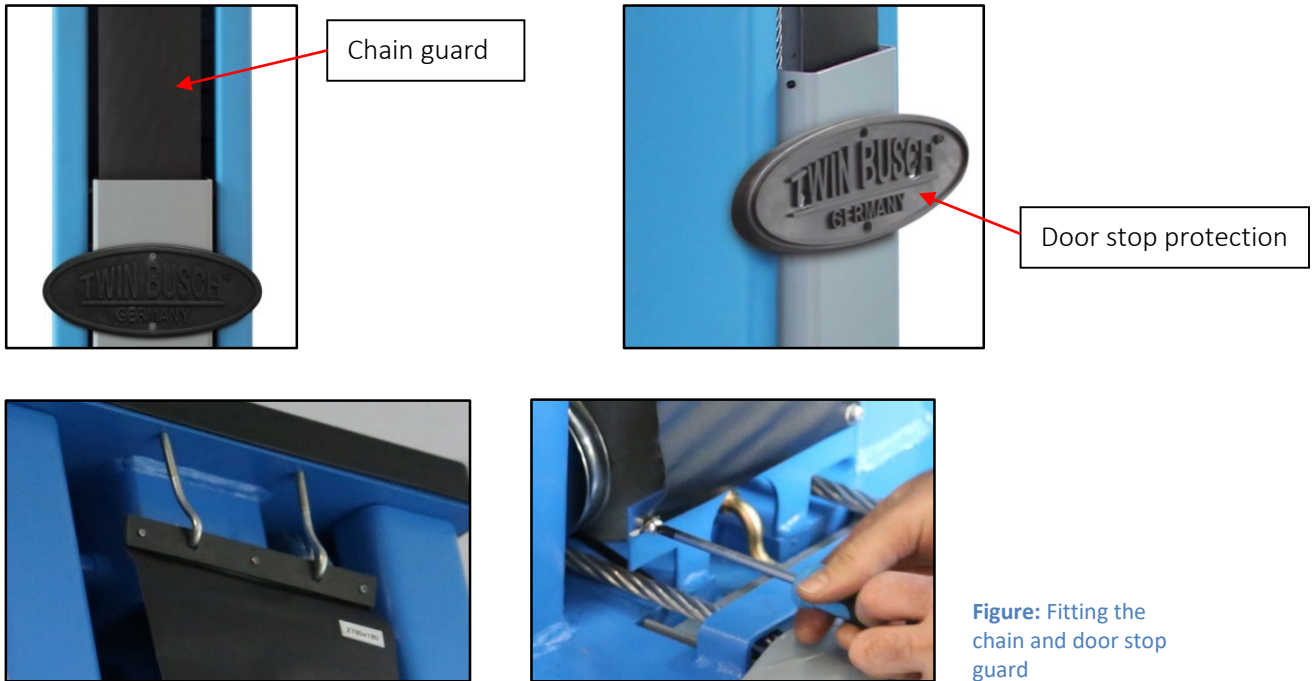
15) Filling the hydraulic system

The hydraulic oil tank has a capacity of approx. 10 litres. To ensure that the lift functions correctly, you should fill the oil tank to 80 % with hydraulic oil. **Hydraulic oil type: HLP 32**

16) Test run

- a) Follow the procedure in **section 9 Commissioning** and make absolutely sure that **NO** vehicle is on the lifting platform during a test run.
- b) Before the test run, check all connections and terminals for correct functioning.

17) Fit the door stop protection.



8.4 Test points after assembly

S/N	Check	YES	NO
1	Are the columns vertical to the floor? (90°)		
2	Are the two columns parallel to each other?		
3	Is the oil hose connected correctly?		
4	Is the steel cable correctly and firmly connected?		
5	Are all support arms correctly and firmly mounted?		
6	Are the electrical connections correct?		
7	Are the joints all screwed tight?		
8	Have all parts that need to be greased been greased?		

9. Commissioning

9.1 Safety precautions

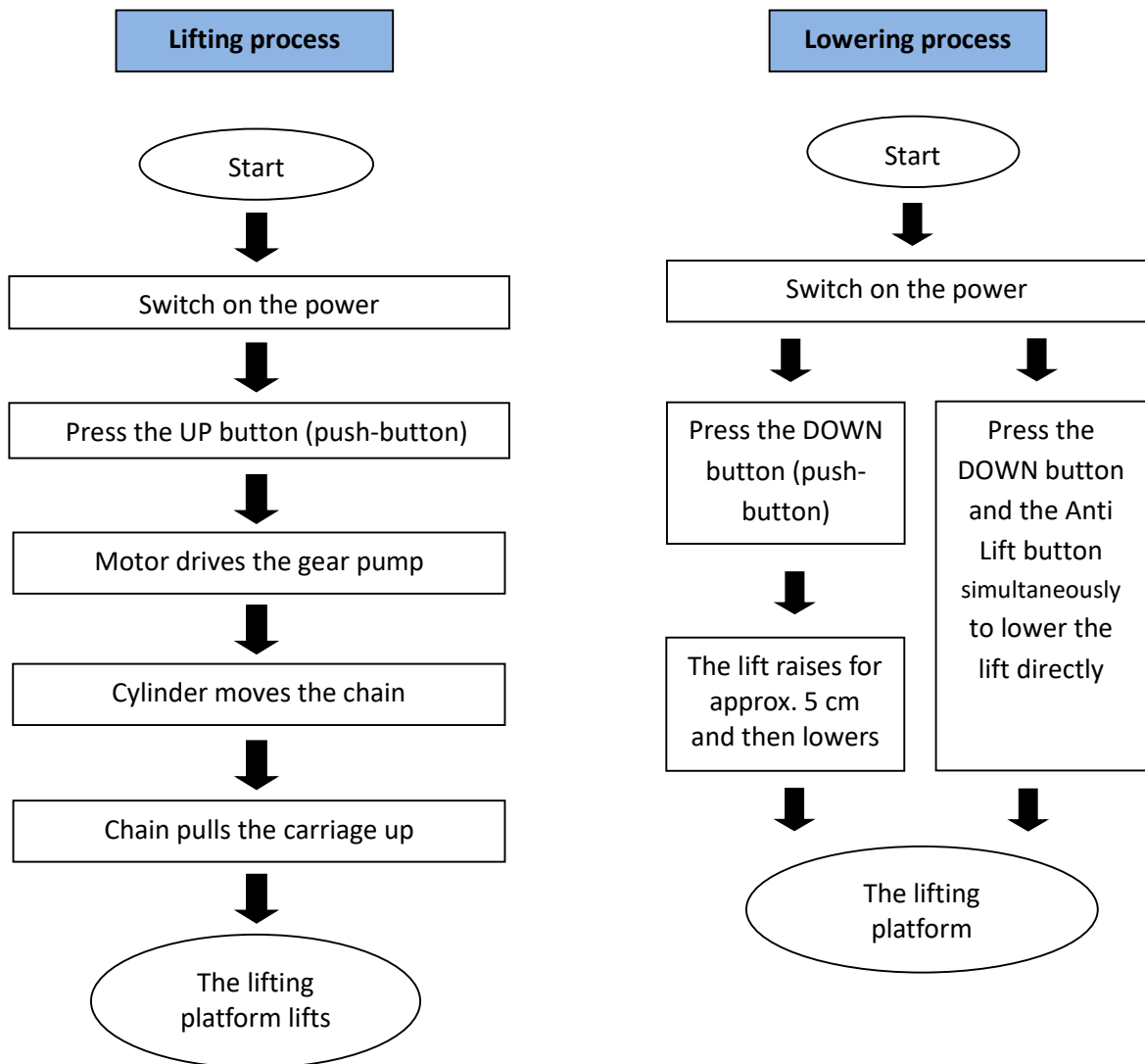
- a) If the safety devices are defective or show any abnormalities, the lifting platform must not be operated under any circumstances!
- b) Check all connections of the hydraulic lines for tight fit and proper functioning. If there are no leaks, a lifting operation can be started.
- c) Only the operator should be near the lift during a lifting or lowering operation. Always ensure that there are no persons in the danger zone.
- d) Vehicles should always be aligned so that the vehicle's center of gravity is centrally located between the lift columns. If this is not the case, the lift should not be used. Otherwise, neither we nor the intermediary dealer, if any, will accept responsibility for any problems or damage caused as a result.
- e) When the desired lifting height has been reached and the safety catches are engaged, switch off the power supply to the lifting platform before starting work in order to avoid incidents caused by unintentional operation by other persons.
- f) Make sure that the safety catches are engaged before starting work on or under a vehicle. No persons should be in the working area of the lift during the lifting and lowering process.

9.2 Description of the control unit (control box)



Description	Function
Main switch	Switching on or off
Operating light	Indicates whether there is a power
UP button (push-button)	Lifting the lifting platform
Safety catches	Lowering into the safety catches
Anti Lift Button	Lowering the lift without lifting
DOWN button (push-button)	Lowering the lifting platform
230 V socket outlet	Connect consumer
Emergency stop switch	Switches the system off in an emergency

9.3 Lifting and lowering process flow chart



9.4 Operating instructions

9.4.1 Lifting process

1. Read and understand the operating instructions before starting work.
2. Connect the power supply and switch the main switch to ON.
3. Park the vehicle with its centre of gravity in the middle between the two pillars.
4. Align the support arms of the lift so that the vehicle's mounting points match the lift mounts. Make sure that the vehicle is positioned correctly.
5. Switch on the lift and press the UP button on the control unit until the support arms touch the vehicle at the pick-up points specified by the vehicle manufacturer and the vehicle has been lifted approx. 10-15 cm. Stop the lifting process and make sure that the vehicle has been picked up correctly and safely.
6. After final alignment and checking, press the UP button again and keep it pressed until the desired lifting height is reached.
7. Press the lock button to lower the lift carriages into the safety catches.
8. Turn the main switch to OFF and start working on or under the vehicle.

9.4.2 Lowering process

1. Connect the power supply and switch the main switch to ON.
2. Press the DOWN button on the control unit. The lifting carriages of the lifting platform will now raise by about 5 cm to release the locking mechanism of the safety catches. The electromagnetic release valve then opens and the lifting carriages lower.
3. As soon as the lifting carriages have reached the lowest position, the support arms can be swivelled out from under the vehicle.
4. The vehicle can now be removed.

9.5 Emergency lowering function in the event of a power failure

1. If the lifting carriage is not engaged.

- a) Pull all the electromagnets to the outside of the two columns at the same time in order to open the safety catches and tie back with cable ties.

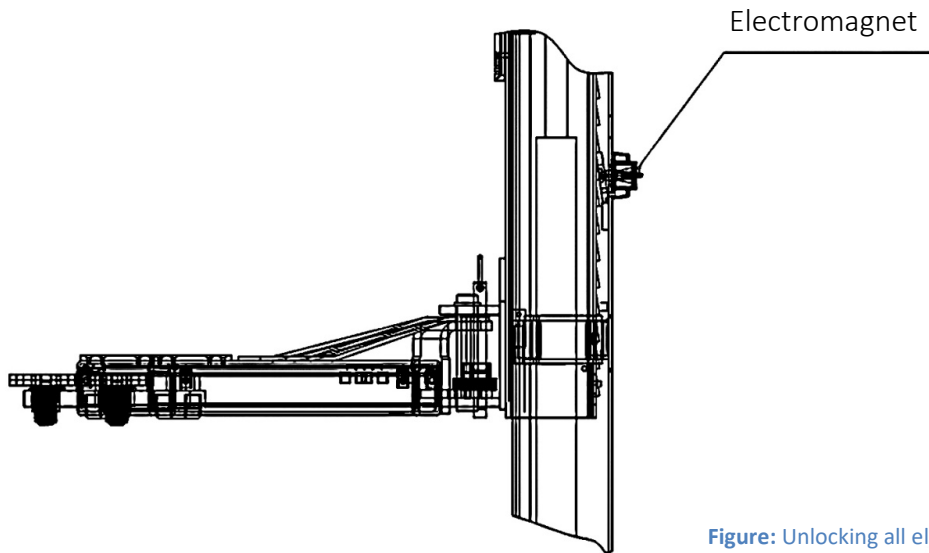
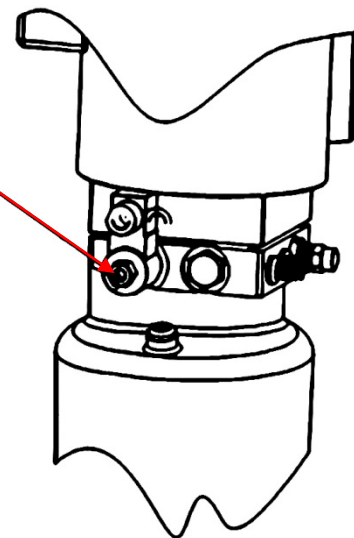
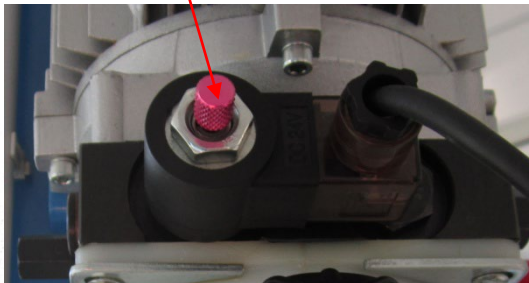


Figure: Unlocking all electromagnets

- b) Actuate the manual drain (bayonet catch).
(Push in the knurled screw and turn anti-clockwise "OPEN", clockwise "CLOSED")

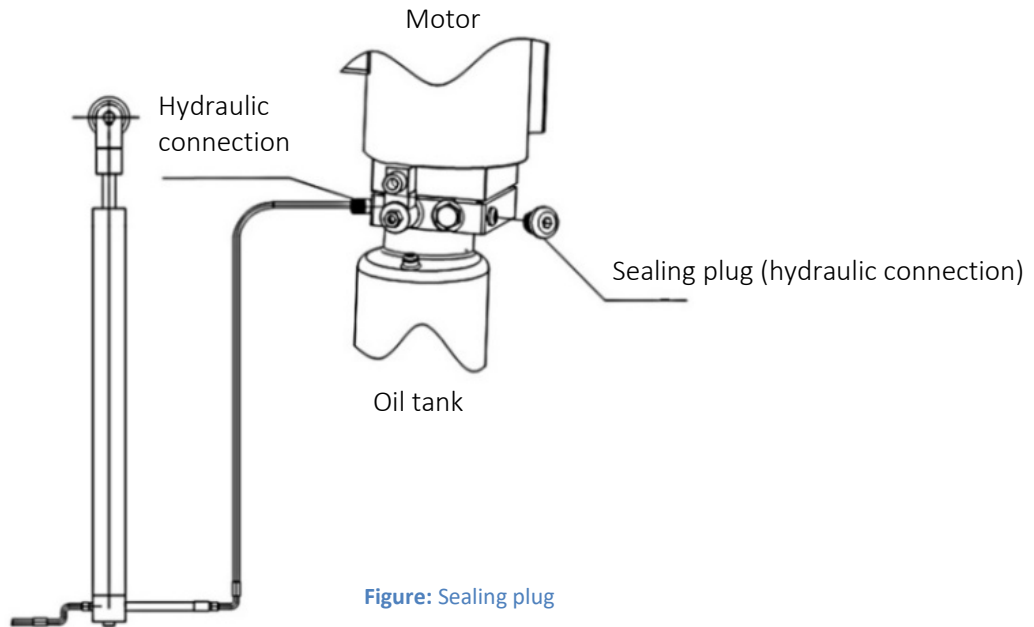
Electromagnetic

Drain valve

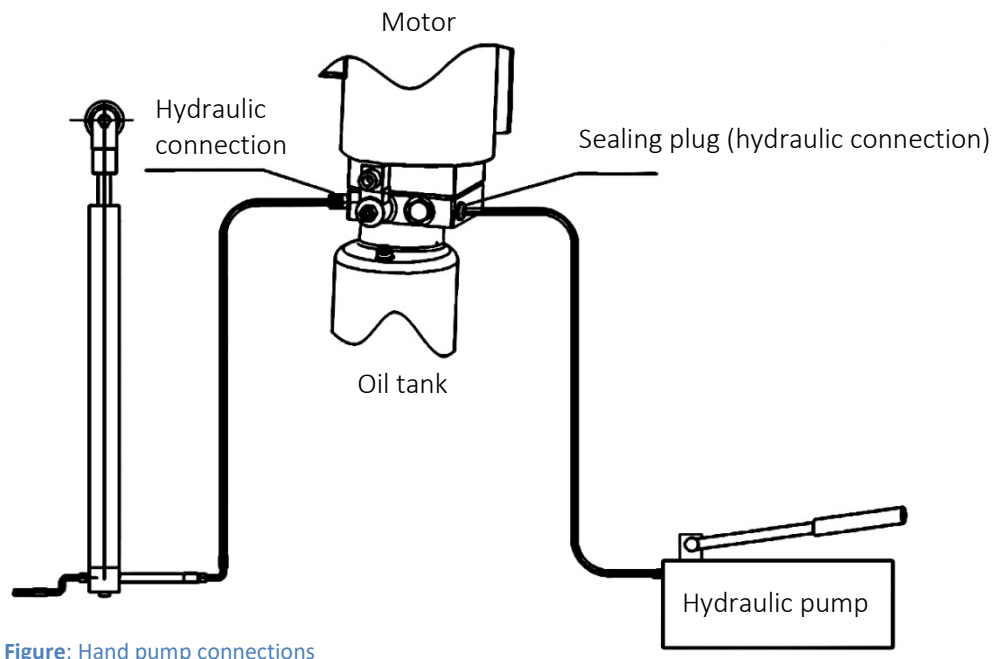


2. With the lifting carriage engaged.

- a) Unscrew the sealing plug to open the manual hydraulic pump.
to be able to connect.



- b) Actuate the lever of the hydraulic pump to supply the cylinder with oil and release the lock.



- c) Then follow the procedure from 1. if the lifting carriage is not engaged.

10. Troubleshooting

Attention: Do not hesitate to contact the expert staff of Twin Busch GmbH if you are unable to rectify an error yourself. We will be happy to assist you in rectifying the problem. In this case, document the error and send us pictures and a precise description of the error so that we can identify and remedy the cause as quickly as possible.

The following table lists possible errors, their cause and the corresponding troubleshooting for quicker identification and self-remedy.

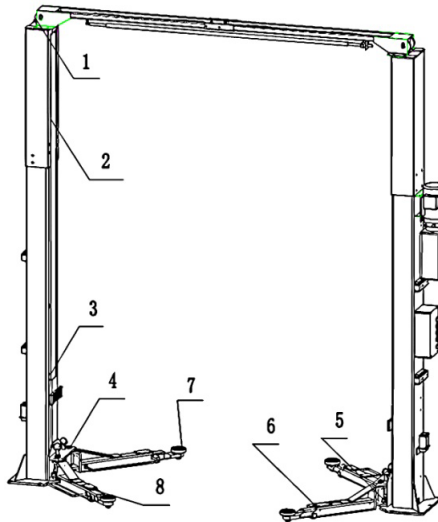
PROBLEMS	CAUSE	SOLUTION
Unusual noise.	Wear on the inside of the pillars.	Grease the inside of the pillars.
	Contamination in the columns.	Remove the dirt.
The motor cannot be started, nor does the lift move up.	The cable connections are loose.	Check the cables and reconnect them.
	The motor is defective.	Replace it.
	The limit switch is defective/damaged or the cable connection is loose.	Reconnect the cables or replace the limit switch.
Motor runs, but does not raise the lift.	The motor is running backwards/in the wrong direction of rotation.	Check the cable connection.
	The pressure relief valve is loose or dirty.	Clean or screw it tight.
	The gear pump is defective.	Replace them.
	The oil level is too low.	Top up with oil.
	The oil hose has come loose or is torn off.	Fasten or replace it.
The beams lower slowly after they have been raised.	The damping valve is loose or jammed/blocked.	Clean or fasten it.
	The oil hose is leaking.	Check or replace it.
	The oil cylinder/piston is leaking.	Replace the seal.
	The directional valve is leaking.	Clean or replace it.
	The pressure relief valve is leaking.	Clean or replace it.
Lifting too slowly.	Manual or electric drain valve is leaking/dirty.	Clean or replace it.
	The oil filter is dirty or jammed.	Clean or replace it.
	Oil level is too low.	Top up with oil.
	The pressure relief valve is installed incorrectly.	Mount it correctly.
	The hydraulic oil is too hot. (over 45°C)	Change the oil.
Lowering too slowly.	The cylinder seal is worn.	Replace the seal.
	The throttle valve is jammed/dirty.	Clean or replace it.
	The hydraulic oil is contaminated.	Change the oil.
	The drain valve is blocked.	Clean it.
The steel cable is worn.	The oil hose is damaged/kinked.	Replace it.
	Not greased during installation or it is worn.	Replace it.

11. Maintenance

Regular maintenance of your lift will ensure a long and safe service life. Suggestions for maintenance intervals and the activities to be carried out are listed below. How often you service your lift depends on the ambient conditions, the degree of soiling and, of course, the stress and load on the lift.

The following points must be lubricated:

S/N	Description
1	Upper pulley
2	Steel cable
3	Sledge
4	Bolt
5	Grid segment
6	Support arm
7	Turntable thread
8	Lower pulley



11.1 Daily inspection and maintenance of the lifting platform elements before use

A daily check of the safety-relevant components must be carried out before each start-up! This can save you a lot of time due to failure, major damage or even injury.

- Check that all connections and screw connections are tight.
- Check the hydraulic system for leaks and functionality.
- Check that the support arm locks are working correctly.
- Carry out a test run (without the vehicle) to check whether the safety catches are working properly.
- Clean heavily soiled lifting platform elements.
- Lubricate all lift elements that are not well lubricated.

11.2 Weekly inspection and maintenance of the lifting platform elements

- Check the mobility of all adjustable and flexible lifting platform elements.
- Check the condition and correct functioning of all safety-relevant lifting platform elements.
- Check the fill level of the hydraulic oil. (lowered lifting carriage - high fill level, max. raised lifting carriage - low fill level).

11.3 Monthly inspection and maintenance of the lifting platform

- Check that all screw connections and joints are tight.
- Check the lifting carriage, the support arm bolts, the support arms and all other moving lift elements for wear and lubricate them.
- Check the condition of the steel cable for signs of wear and oil the steel cable with low-viscosity lubricating oil.

11.4 Annual inspection and maintenance of the lifting platform elements

- Empty and clean the hydraulic oil tank and replace the hydraulic oil.
- Replace the oil filter.

If you follow the above maintenance intervals and maintenance activities, your lift will remain in good condition and damage and accidents will continue to be avoided.

12. Behaviour in the event of an incident

If the lift malfunctions, simple faults may be the cause. Use the following list for troubleshooting *).

If the cause of the error is not listed or cannot be found, please contact the expert Twin Busch GmbH team.

Never attempt to carry out repairs yourself, especially on safety devices or electrical system parts.

*) Points depending on the design and type of the lifting platform





Work on electrical systems only by qualified electricians!

Problem: Lifting platform can neither be raised nor lowered.

Possible causes

- No power supply available.
- Power supply interrupted.
- Main switch not switched on or defective.
- Emergency stop pressed or defective.
- Fuse in power connection has blown or is defective.
- Fuse in the switch box has blown or is defective.

Remedy



- Check power supply.
- Check power supply line.
- Check main switch. 
- Unlock emergency stop, check. 
- Check fuse.
- Check fuse.

Problem: Lifting platform cannot be raised.

Possible causes

- With three-phase current: one phase is missing.
- With three-phase current: Direction of rotation of motor reversed.
- Oil pump defective.
- Emergency drain open.
- Motor is defective.
- Overload.

Remedy

- Check power supply. 
- Check direction of rotation, change phase if necessary. 
- Notify Twin Busch Service.
- Close emergency release valve.
- Notify Twin Busch Service.
- Overload valve has opened, reduce load.

Problem: Lift cannot be lowered.

Possible causes

- Lifting platform sits in safety catches.
- Lifting platform has moved into limit switch.
- Motor is defective.
- Lifting platform has been blocked during lowering.

Remedy

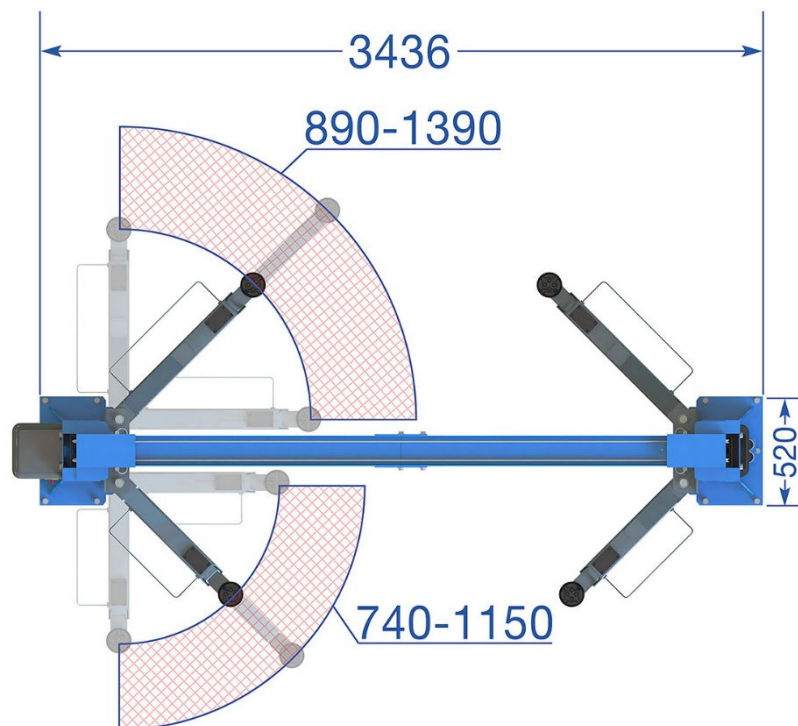
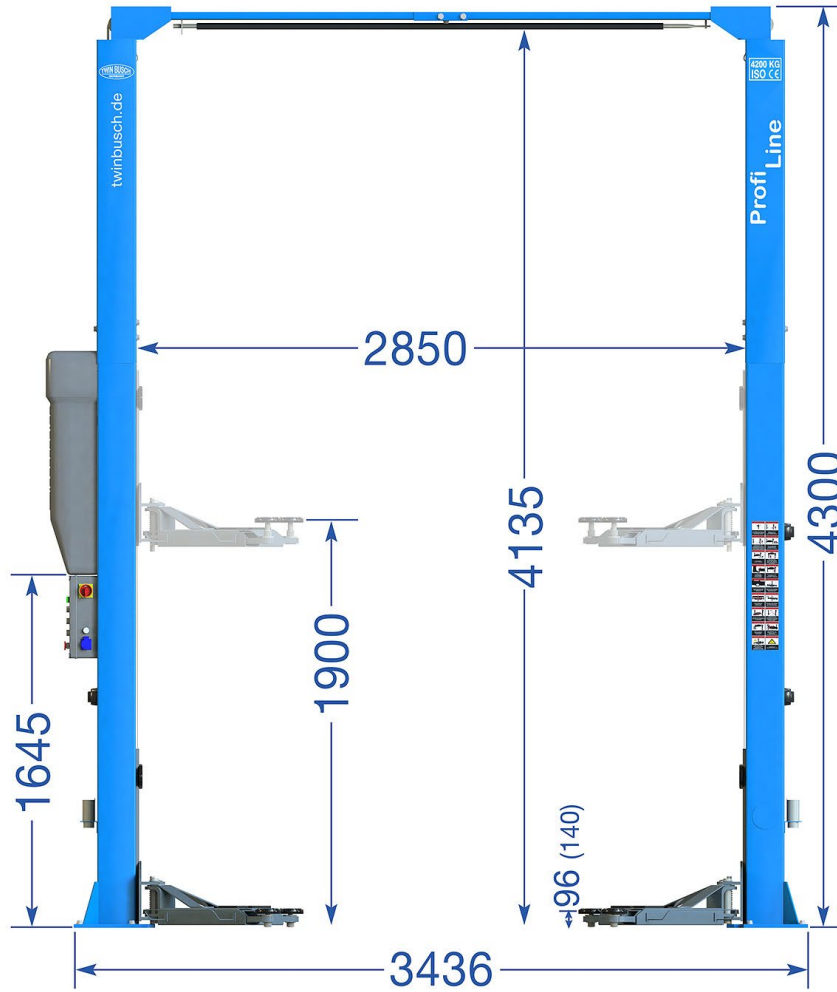
- Raise platform a little, pull detents, lower.
- If necessary, loosen limit switch, raise 1 cm and lower.
- Open safety latch and lift over.
- Lower emergency drain.
- Raise the lifting platform slightly again and remove the obstacle.

13. Appendix

13.1 Packing list

S/N	Material	Name	Drawing	Property	Qty
1		Columns (motor side)	FL-8224E-A1	Component	1
2		Columns	FL-8224E-A2	Component	1
3		Sledge	FL-8224E-A3	Component	2
4		Hydraulic unit		Component	1
5		Master cylinder	FL-8224-A4-B3	Component	1
6		Master cylinder	FL-8224-A4-B2	Component	1
7		Electrical system		Component	1
8			Control unit		1
9			Cables		1
10		Steel cable L = 8785 mm	FL-8224E-A6	Component	2
11		Long support arm	FL-8224-A7	Component	2
12		Short support arm	TW-235E-A8	Component	2
13		Cover plate	FL-8224-A9		1
14		Base plate	FL-8224-A10		1
The box contains the following parts					
17		Cover	FL-8224E-A1-B6	ABS	2
18		Pull-out arm	FL-8224 -A12	Galvanised	4
19					
20		Support arm bracket (short)	FL-8224 -A18-B4	Component	2
21		Support arm bracket	FL-8224-A7-B4	Component	2
22		Recording set	FL-8224 -A7-B3	Component	4
23		Short oil hose L = 2550 mm		Component	1
24		Long oil hose L = 2880 mm	8224E-B4-B2	Component	1
25		Safety catches	FL-8224E -A1-B2	Component	
26					
27		Guide pin	FL-8224E -A1-B3	Galvanised	
28		Hose cover	FL-8224E -A1-B8	Sheet metal	6
29		Chain guard	FL-8224 -A11	Component	2
30		Chain guard holder	FL-8224 -A13	Galvanised	4
31		Door stop protection	FL-8224 -A3-B7	Rubber part	2
32		Nylon disc	FL-8224 -A17		10
33					
34		Hex mother	M10*35	Standard part	4
35		Hex mother	M8*12	Standard part	8
36		Screw	M6*10	Standard part	28
37		Screw	M6*30	Standard part	12
38		Screw	M6*16	Standard part	4
39		Screw	M8*16	Standard part	4
40		U.Disc	M6	Standard part	8
41		U.Disc	M10	Standard part	4
42		Spring washer	M10	Standard part	4
		Hex mother	M6	Standard part	8
		Hex mother	M10	Standard part	4
		Type B Seeger ring	38	Standard part	4
		Fixing bolt	M18*180	Standard part	10

13.2 Lifting platform dimensions



13.3 Foundation requirements and working area

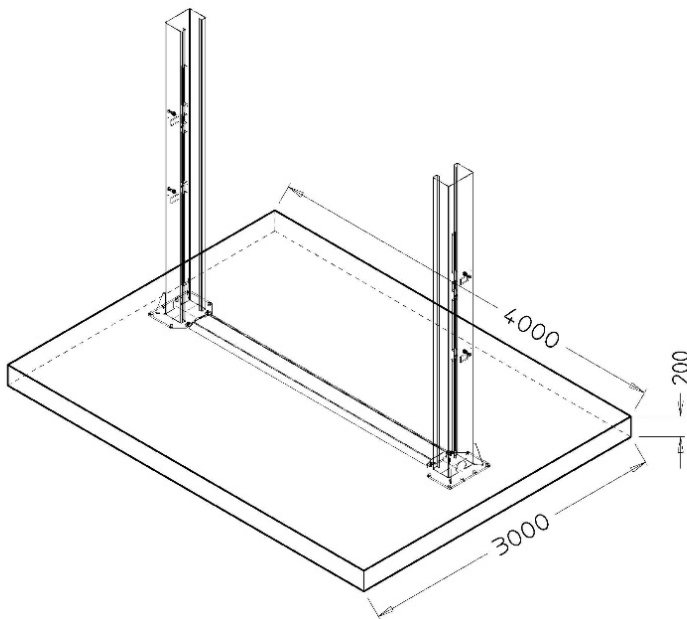
Requirements for the concrete:

- Concrete C20/25 according to DIN 1045-2 (previous designation: DIN 1045 concrete B25).
- The floor must be level and have a flatness of less than 5 mm/m.
- Newly poured concrete must cure for at least 28 days.

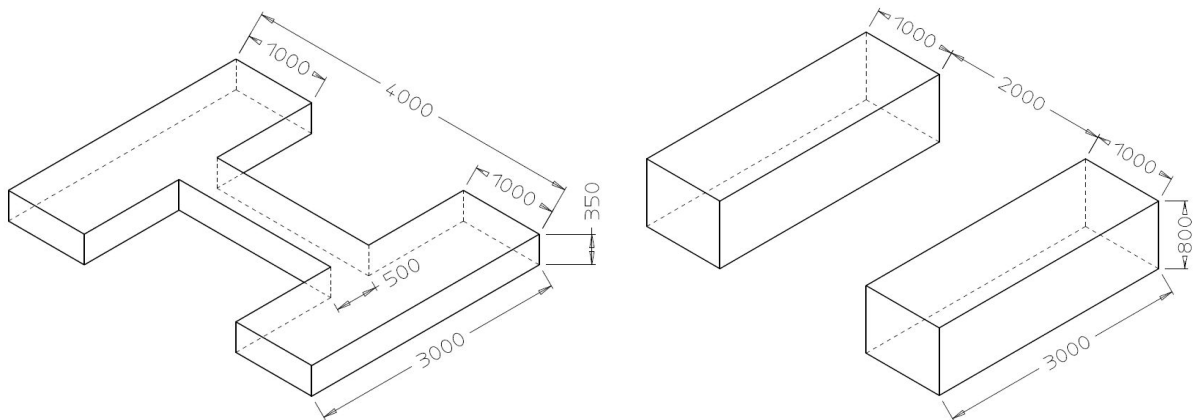
Foundation dimensions:

- Ideally, the entire hall floor should be made of C20/25 concrete with a thickness of at least 200 mm.

Minimum dimensions of the foundation slab (lifting platform placed in the centre):



Alternatively, in H-shape or two blocks:



Other requirements:

- The surrounding soil must be suitable for the load, e.g. no sandy soils, etc.
- Reinforcements in the concrete are not mandatory for proper use of the lift, but are recommended.
- If in doubt, the foundation should be determined and checked by a structural engineer.

For soil exposed to frost, note the following:

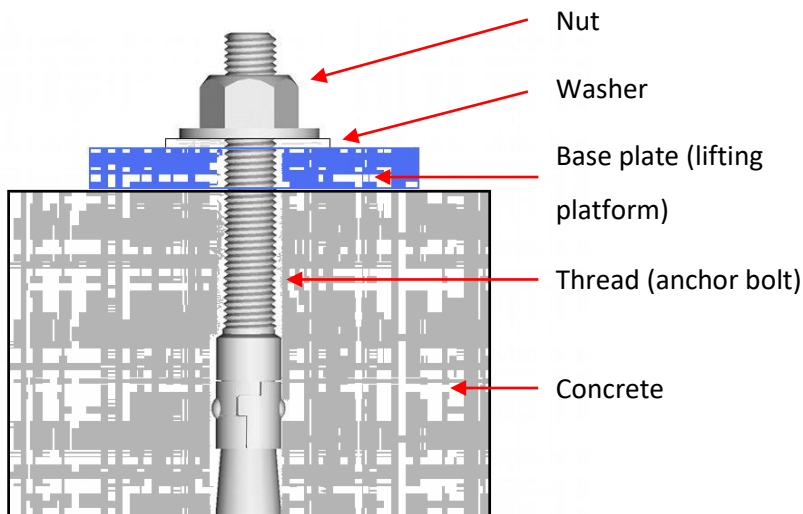
For frost exposure, the concrete must comply with exposure class XF4, as dripping de-icing agent cannot be ruled out.

This results in the following minimum requirements for the concrete when exposed to frost:

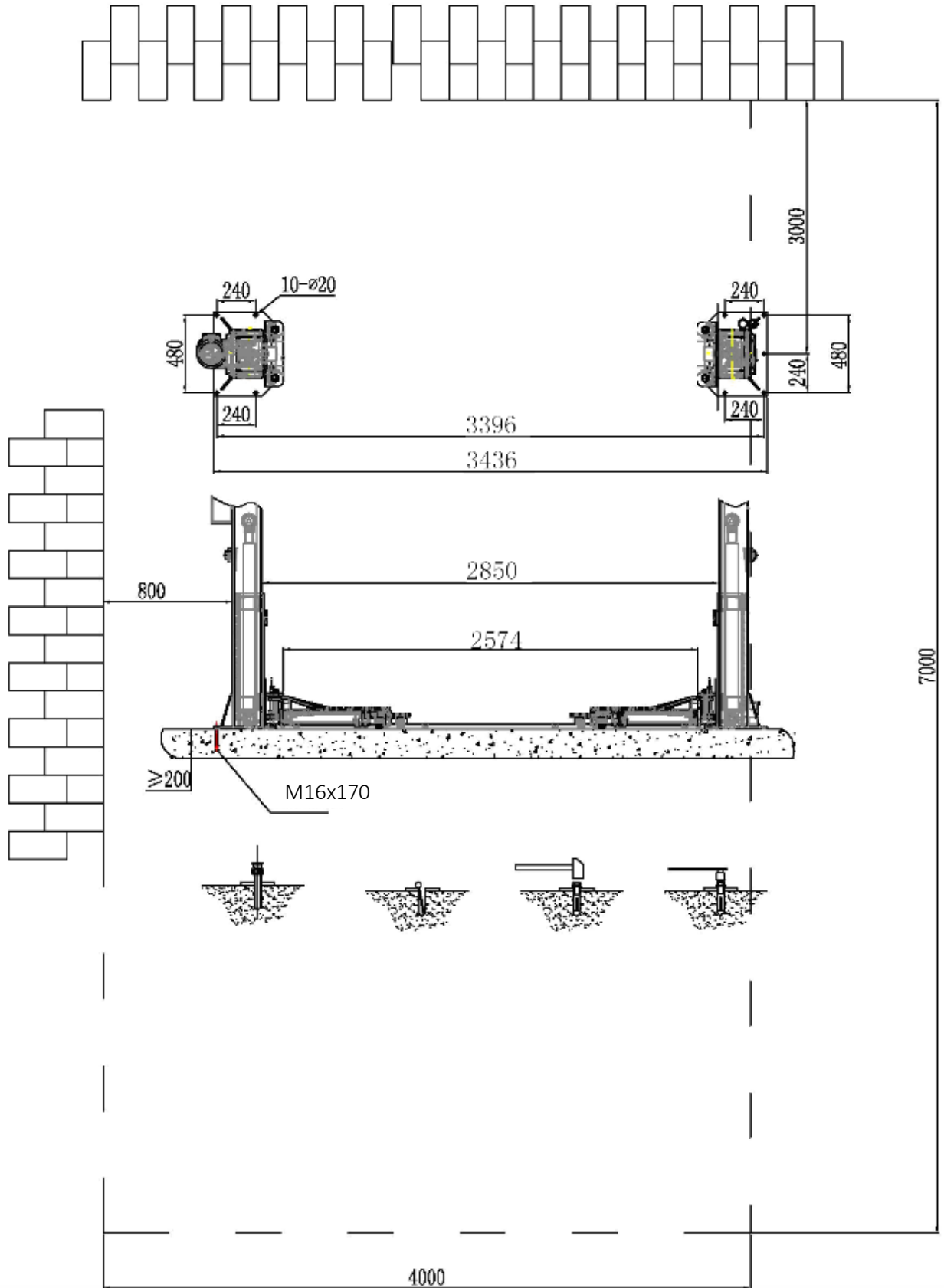
Exposure class:	XF4
Maximum w/c:	0,45
Minimum compressive strength:	C30/37 (instead of C20/25)
Minimum cement content:	340 kg/m ³
Minimum air void content:	4.0 %

It must be noted, however, that the lifts are not designed for outdoor use. The control box is IP54, but the rest of the electrics, motors and limit switches are IP44 at most.

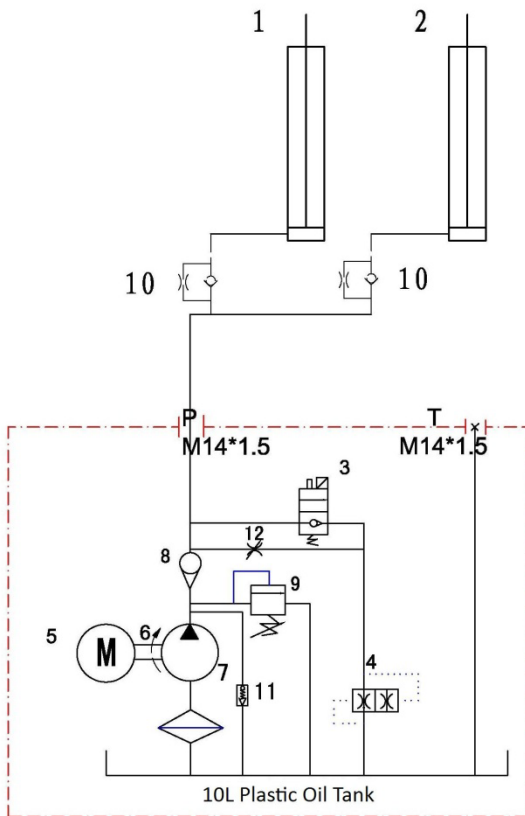
Anchor bolt fastening



Tightening torque of the anchor bolts
is: 110 Nm

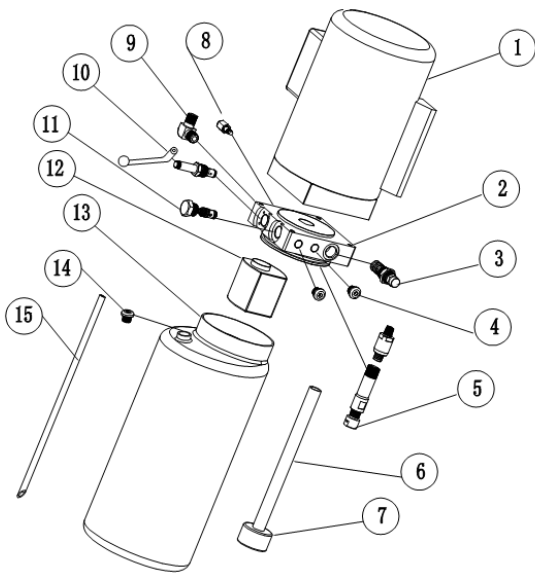


13.4 Hydraulic system



1. Master cylinder
2. Secondary cylinder
3. Manual drain valve
4. Throttle valve
5. Motor
6. Clutch
7. Gear pump
8. Non-return valve (one-way valve)
9. Pressure relief valve (max.: 19.4 Mpa)
10. Throttle check valve
11. Pressure control valve
12. Emergency release valve

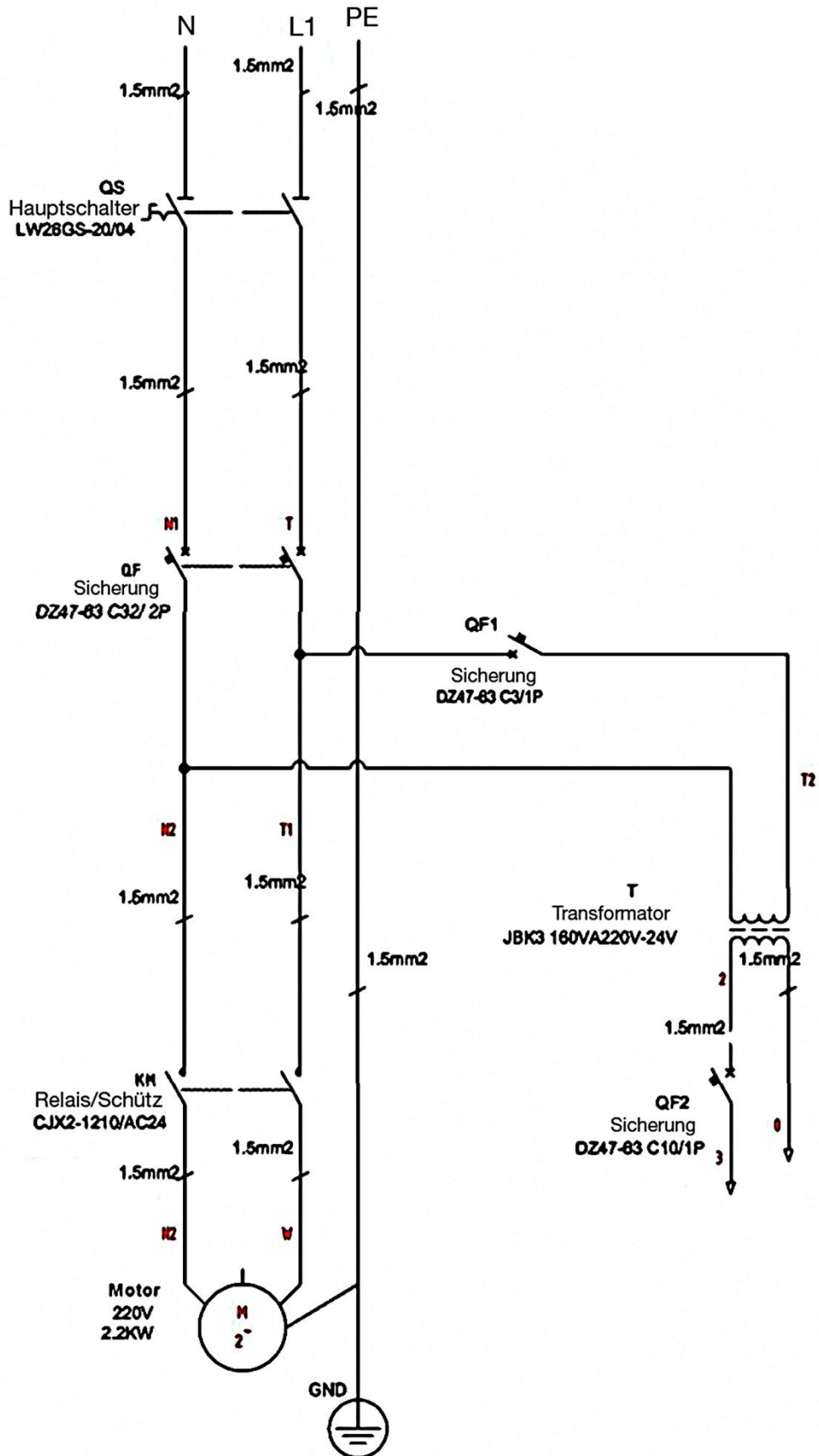
10 litre oil tank



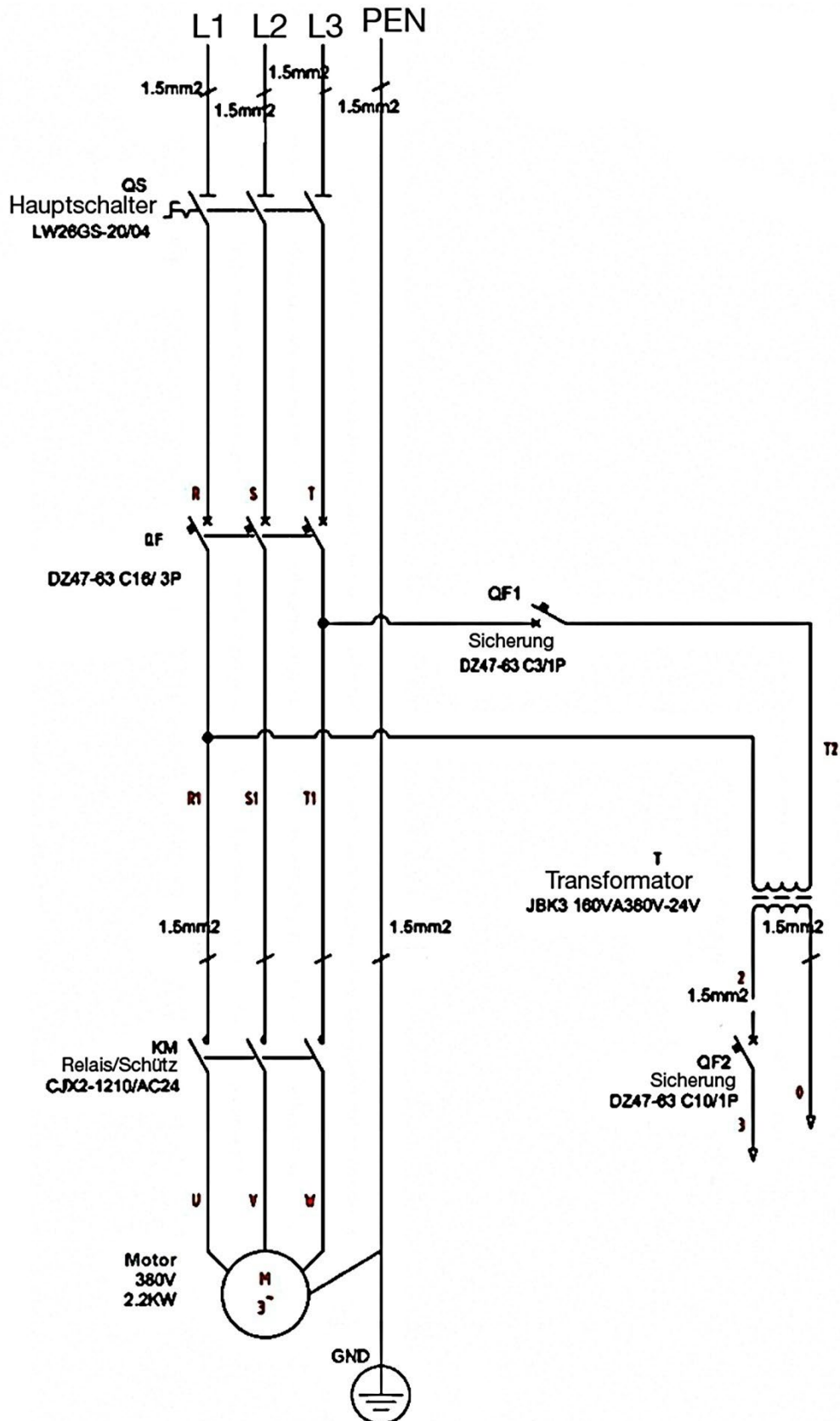
S/N	Name	Quantity
1	Motor	1
2	Hydraulic block	1
3	Pressure relief valve	1
4	Screw plug	2
5	Pressure control valve	1
6	Oil intake pipe	1
7	Oil filter	1
8	Throttle valve	1
9	Connection link	1
10	Electromagnetic drain	1
11	One-way valve	1
12	Gear pump	1
13	Plastic oil tank	1
14	Oil tank plug	1
15	Oil return line	1

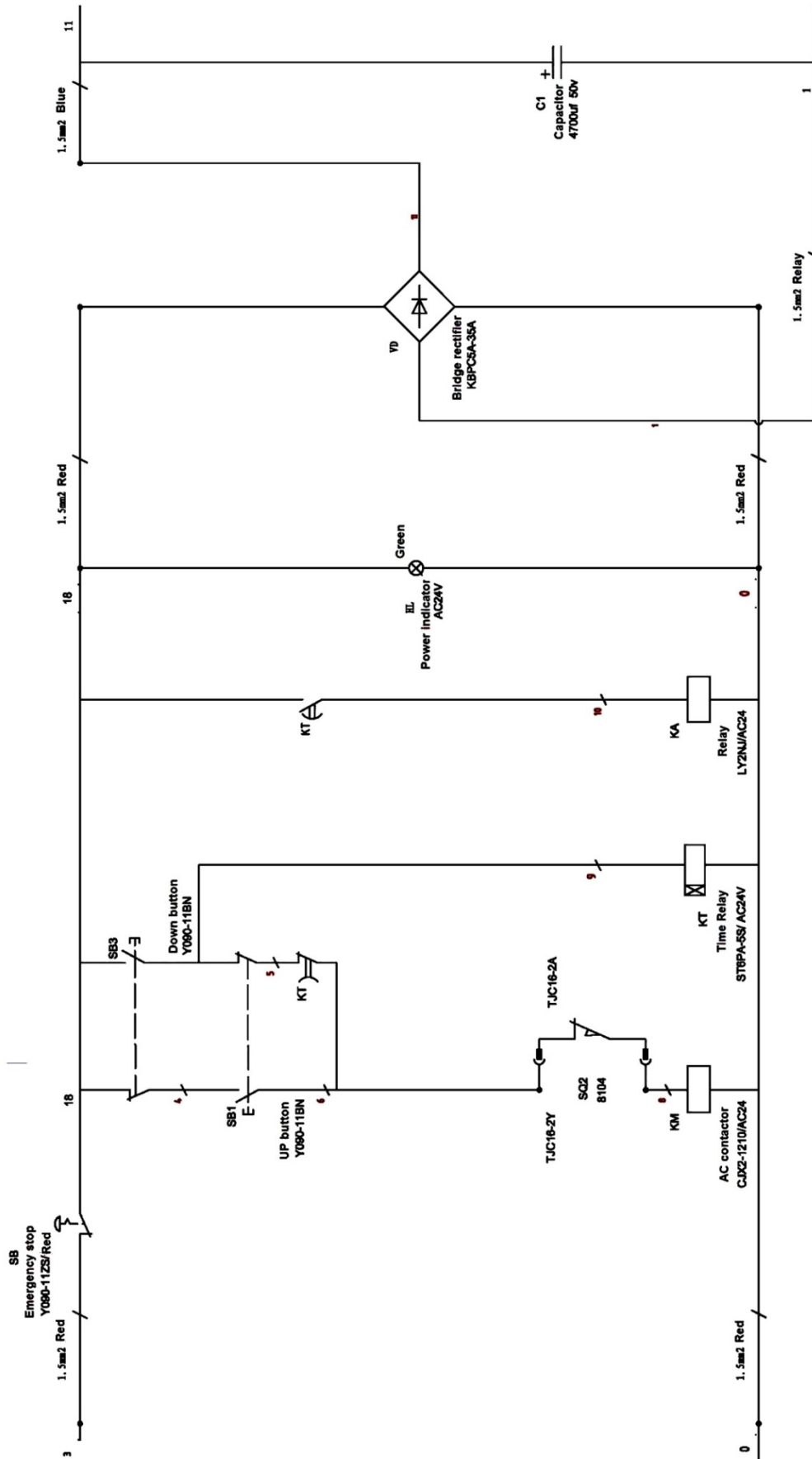
13.5 Circuit diagrams

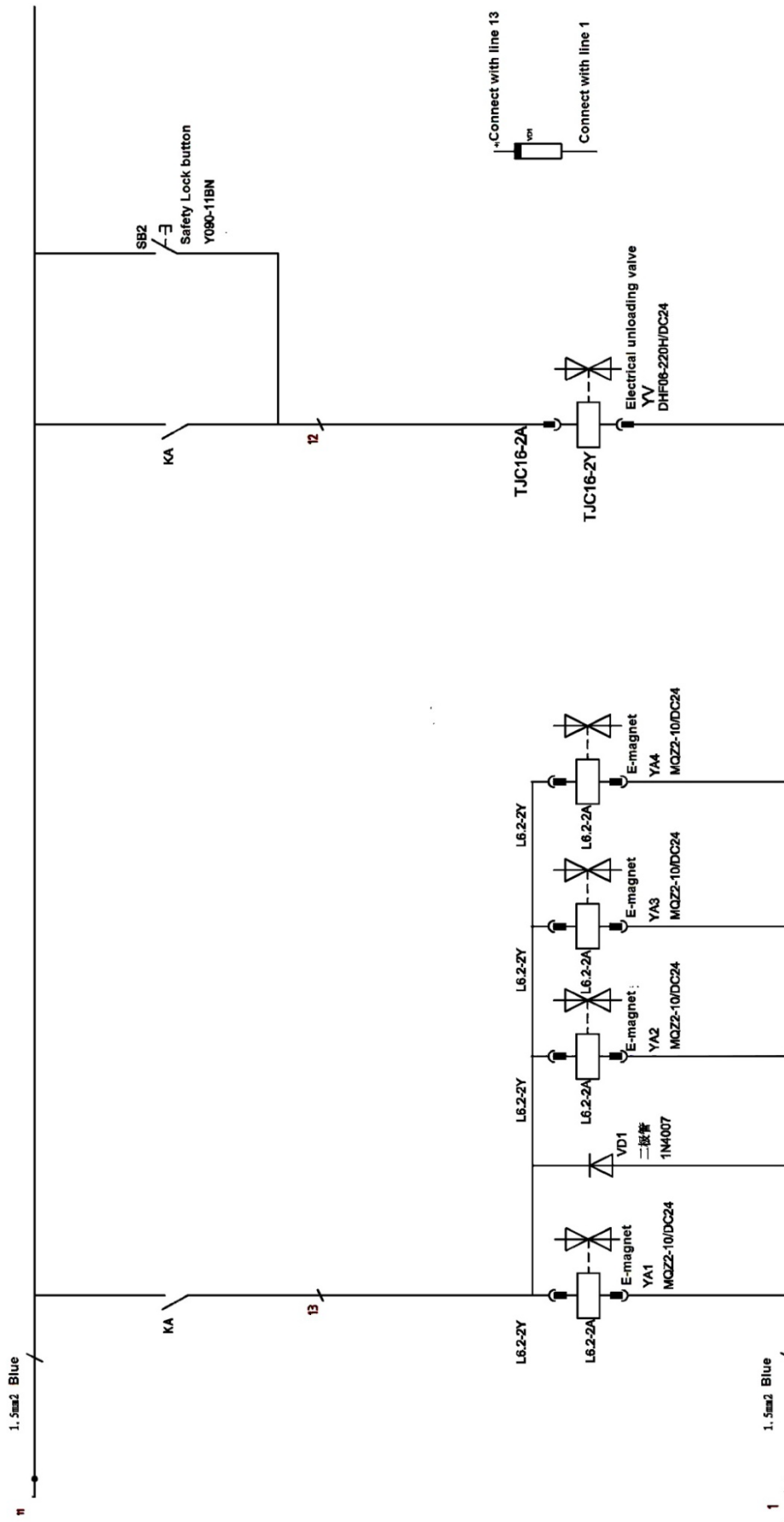
Single-phase circuit diagram

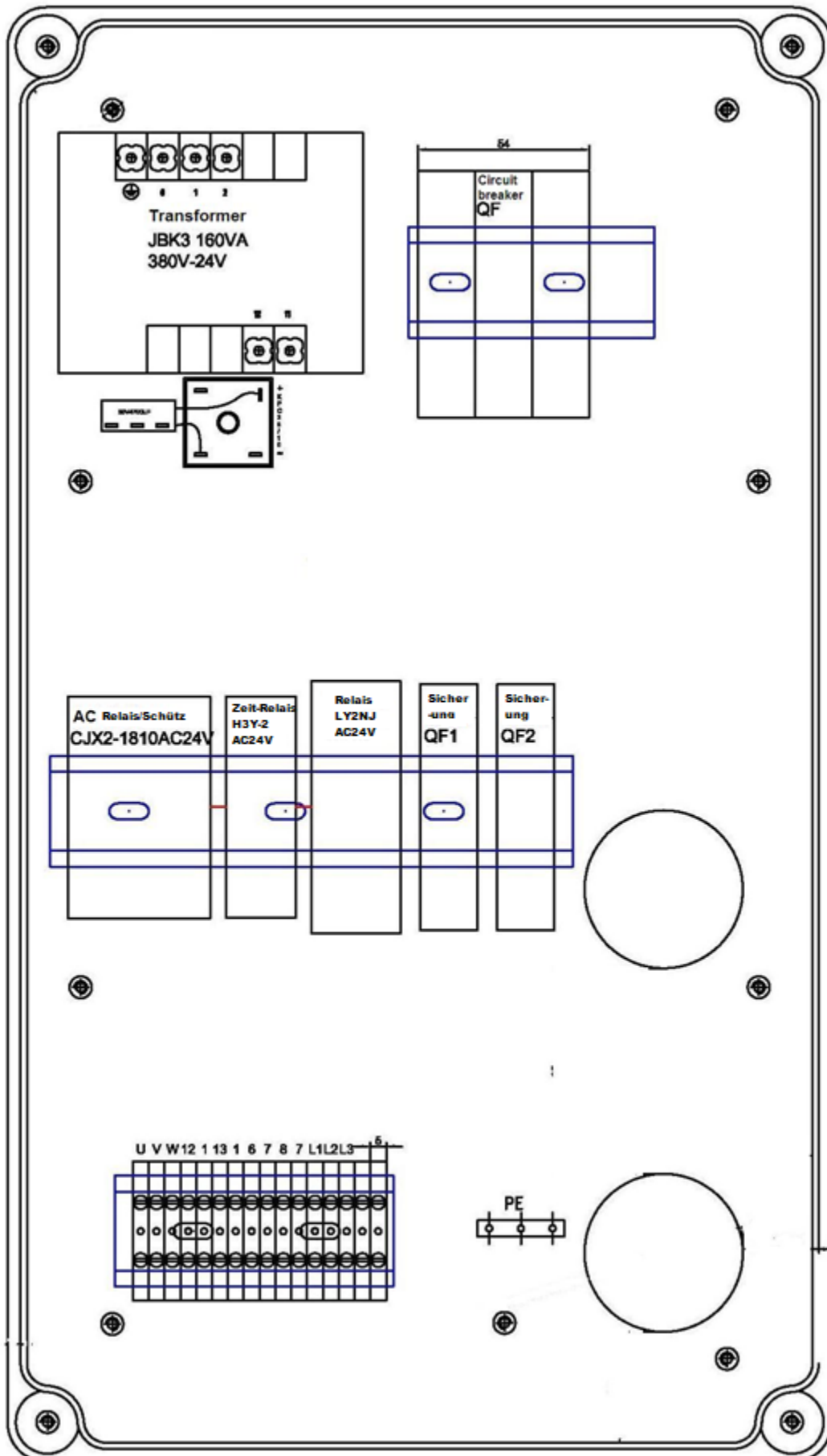


Three-phase circuit diagram

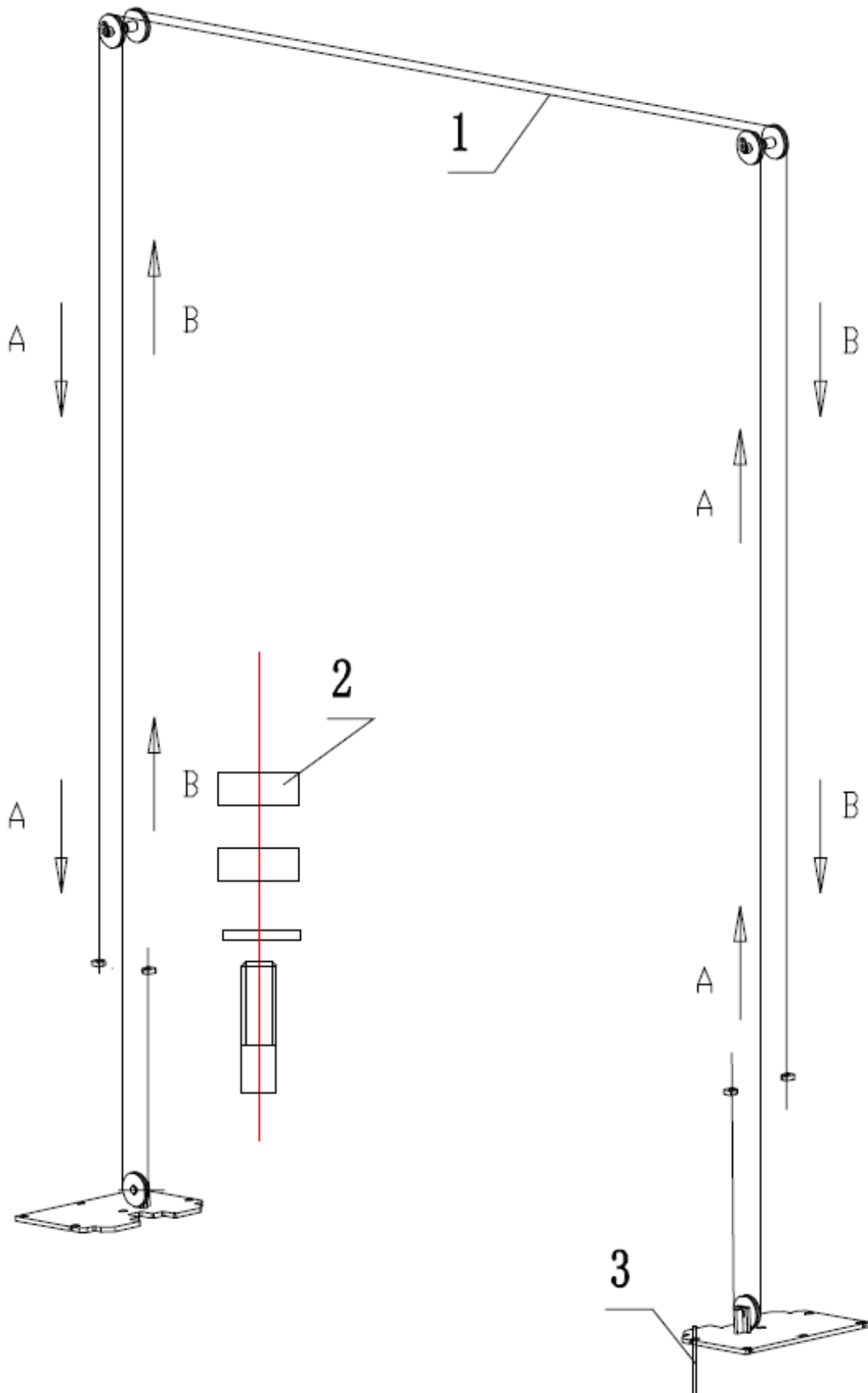


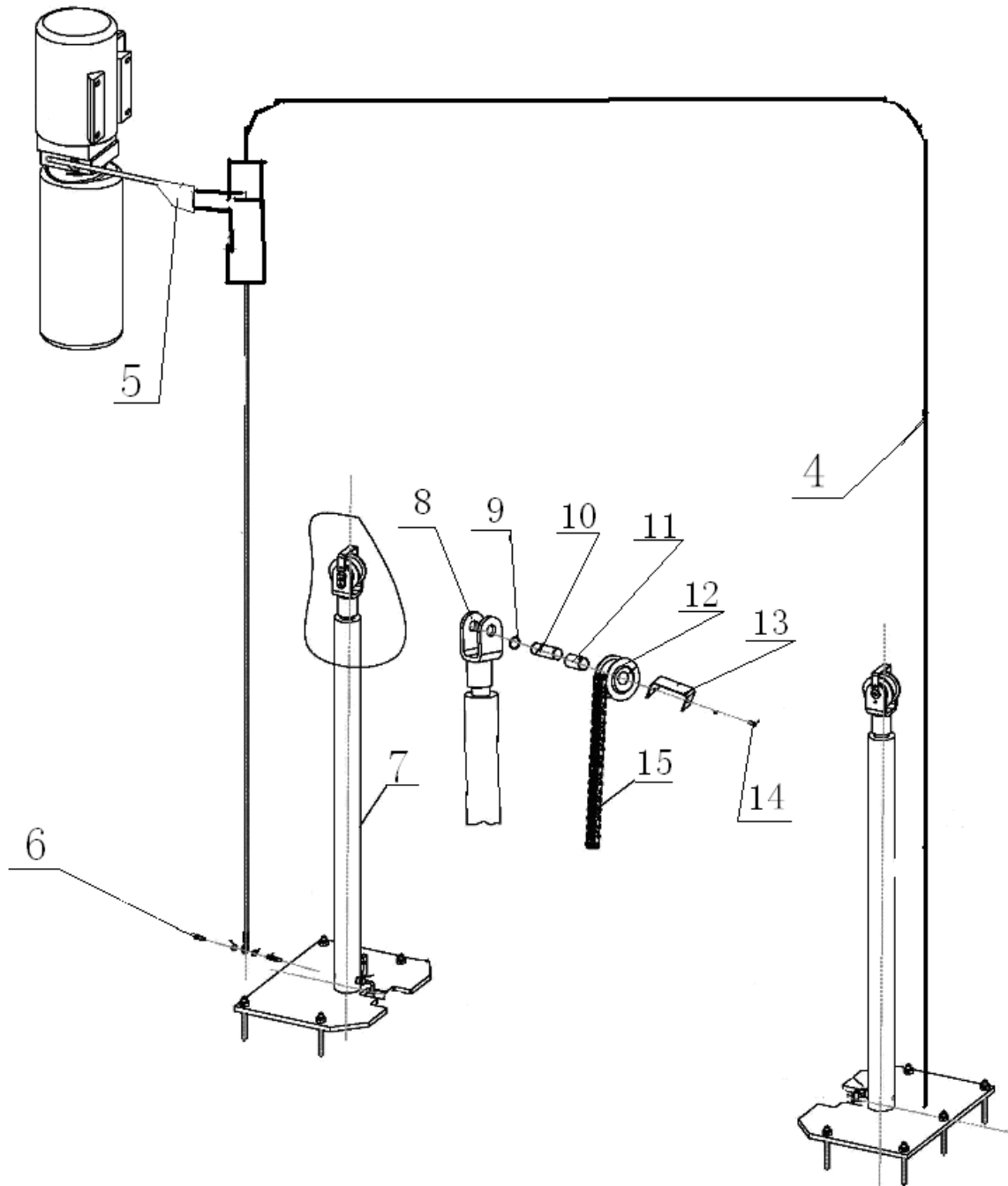






13.6 Detailed drawing and parts description of the lifting platform

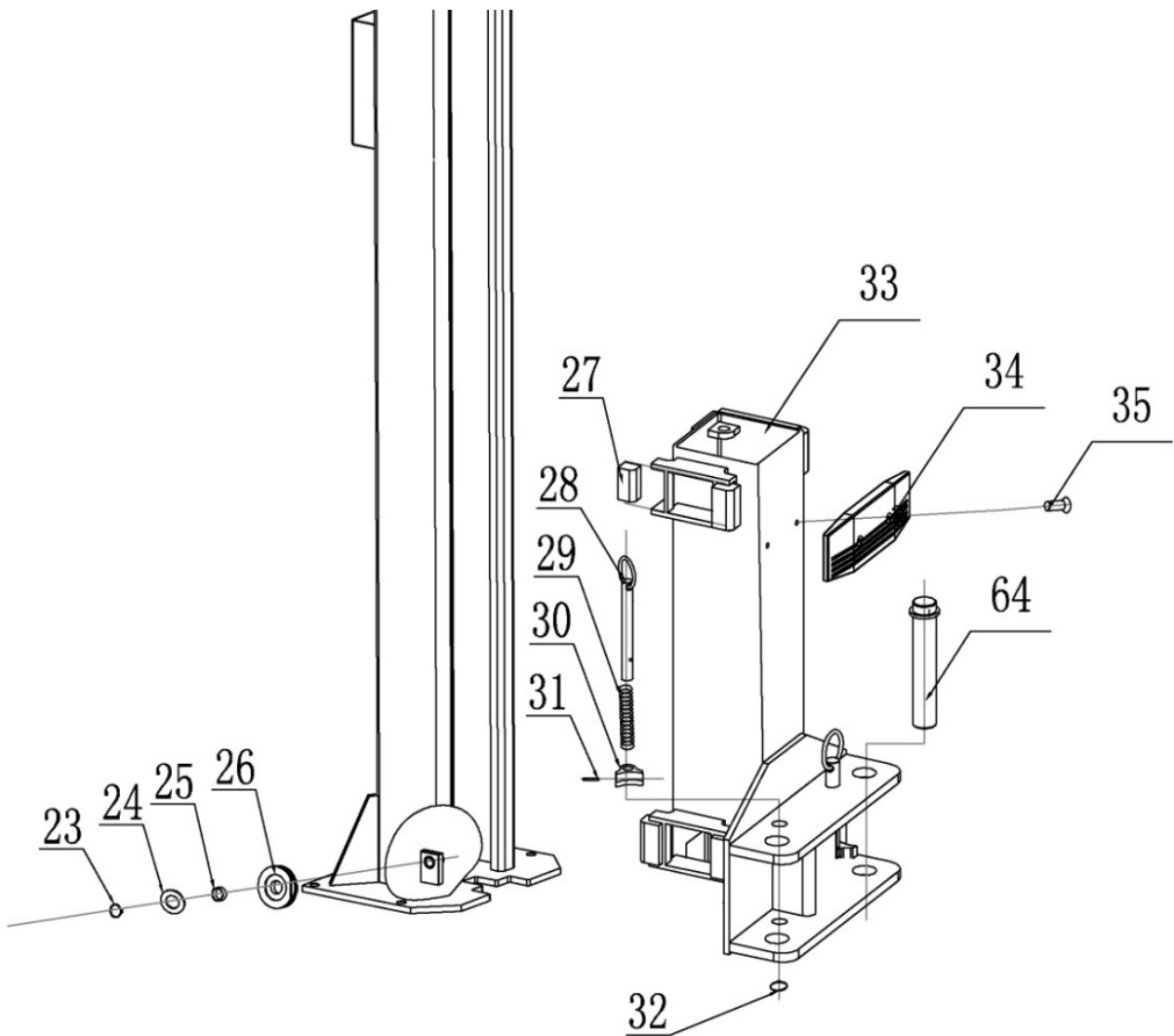
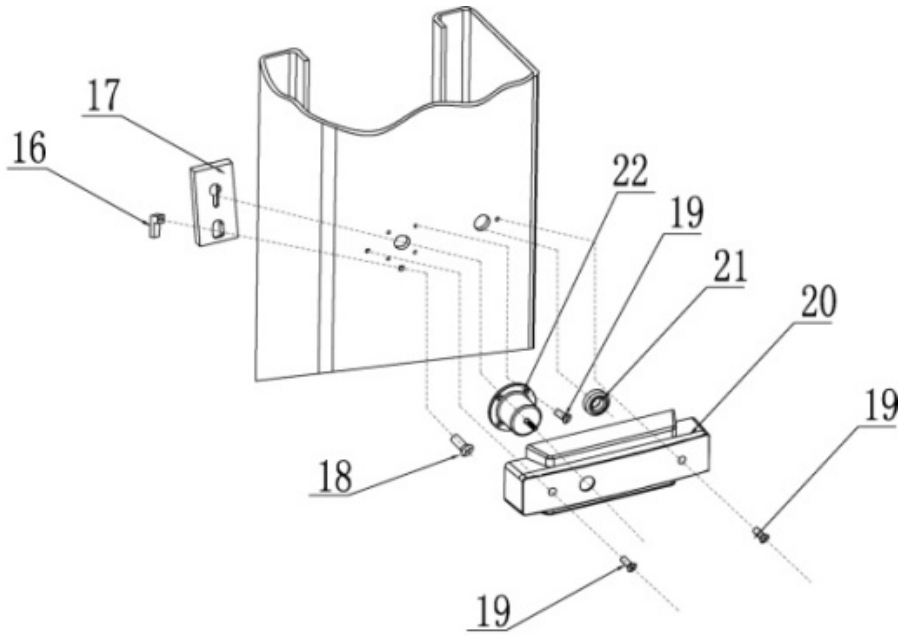




S/N	Material	Name	Drawing/Spec.	Qty	Property	Grade
1		Steel cable L= 10870 mm	FL-8214-A6	2	Assembly	
2		Hex nut M16	GB/T610-2000	8	Standard	
3		Expansion bolt M16*170		10	Standard	

S/N	Material	Name	Drawing/Spec.	Qty	Property	Grade
4		Oil trousers L= 8500		1	Assembly	
5		Short oil hose L=500		1		
6		Connector		1		
7		Oil cylinder	FL-8224-A4-B2	1	Assembly	
8		Cylinder fixing ring	FL-8224-A4-B9	2	Q235A	
9		Hex head full swivel screw	GB/T894.2-1986	4	Standard	
10		Chain shaft	FL-8224-A4-B11	2	Q235A	
11		Shaft 2548	SF-1	2	Assembly	
12		Chain wheel	FL-8224-A4-B10	2	Assembly	
13		U shape plate	FL-8224-A4-B12	2	Assembly	
14		Anex screw M6*10	GB/T70.1-2000	4	Copper	
15		Chain	LH1234-127LGB/6074-1995	2	Assembly	

S/N	Material	Name	Drawing/Spec.	Qty	Property	Grade
16		Positioning block	FL-8224E-A1-B3	4	Q235A	
17		Safety locking plate	FL-8224E-A1-B2	4	Q235A	
18		Cross socket cap headed screw	GB/T818-2000	4	Standard	
19		Cross socket cap headed	GB/T818-2000	24	Standard	
20		Electromagnet protection cover	FL-8224E-A1-B5	4	Plastic	
21		Φ20 hose protection ring	FL-8224-A1-B6	4	Rubber	
22		Electromagnet (small)	FL-8224E-A1-B4	4	Assembly	



S/N	Material	Name	Drawing/Spec.	Qty	Property	Grade
23		Circlip ϕ 25	GB/T894.2-1986	2	Standard	
24		Washer		2	Q235A	
25		Bearing 2512	SF-1	2	Standard	
26		Down pulley	FL-8224-A1-B2	2	Q235A	
27		Slider	FL-8224-A3-B6	16	Nylon	
28		Pulling rod	FL-8224-A3-B2	4	Welded	
29		Pressure spring	FL-8224-A3-B5	4	Zinc plating	
30		Teeth block	FL-8224-A3-B4	4	Zinc plating	
31		Elastic cylindrical pin M5*35	GB/T879.1-2000	4	Standard	
32		Circlip 22		4	Standard	
33		Carriage	FL-8224-A3-B1	2	Welded	
34		Protection rubber pad	FL-8224-A3-B7	2	Rubber	
35		Cross socket flat head		4	Standard	
64		Shaft	FL-8224-A12	4	Welded	

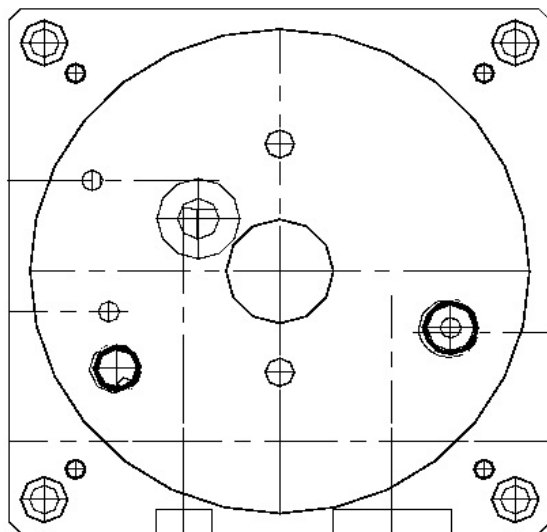
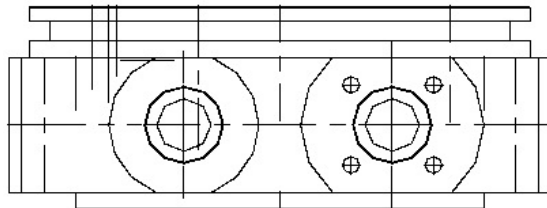
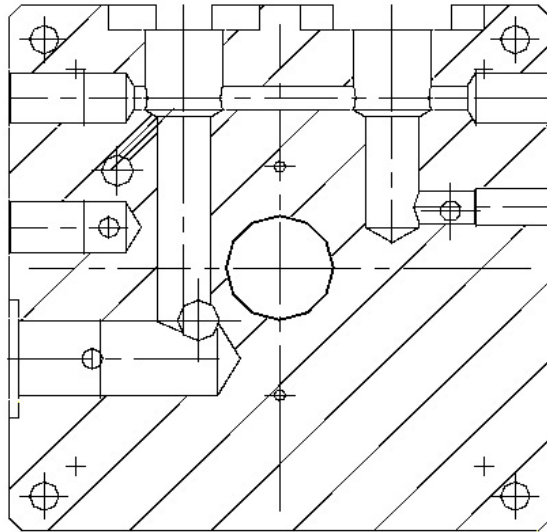
13.7 Spare parts list

S/N	Material	Item	Spec.	Qty	Pic	Grade
1		Power switch	LW26GS-20/04	1		
2		Button	LAY711BN12	1		
3		Power indicator	AD17-22G-AC24	1		
4		Transformer	JBK3-160VA400V-24V JBK3-160VA230V-24V	1		
5		AC contactor	CJX2-1210/AC24	1		
6		Circuit breaker	DZ47-63 C16/3P DZ47-63 C32/2P	1		
7		Circuit breaker	DZ47-63 C3/1P	1		
9		Limit switch	TZ8108	1		
11		Emergency stop	Y090-11ZS/red	1		
12		Bridge rectifier	KBPC5A-35A	1		
13		Capacitor	4700UF/50A	1		

S/N	Material	Item	Spec.	Qty	Pic	Grade
14		Relay	LY2NJ/AC24	1		
15		Relay holder	PTF-08A	1		
16		Time relay	ST6PA-5S/AC24V	1		
17		Time relay holder	PYF-08AE	1		
18		Control box	230*380*135	1		

S/N	Material	Name	Drawing/Spec.	Qty	Property	Grade
1		Slider	FL-8224-A3-B6	16	Nylon 1010	
2		Rubber lifting pad	FL-8224-A7-B3-C4	4	Rubber	
3		O-seal ring	(ID)23.6*3.55	1		
4		Y- seal ring	KD 63*48*10	1		
5		Anti-dust ring	DHS 40*48*5/6.5	1		

13.8 Cross-section of the hydraulic block





The company

Twin Busch GmbH | Amperestr. 1 | D-64625 Bensheim

hereby declares that the **2-post vehicle lift**

**TW236PE-400, TW236PE-230, TW236PEB3.9-400, TW236PEB3.9-230,
TW242PE-400, TW242PE-230, TW242PEB4.3-400, TW242PEB4.3-230
TW250-400, TW250-230, TW250B4.5-400, TW250B4.5-230 | 3,6 t, 4,2 t, 5,0 t**

Serial number:

in these configurations we have placed on the marked complies with the relevant essential health and safety requirements of the following EC-directive(s) in its/their current version(s).

EC-directive(s)

2006/42/EC

Machinery

2014/35/EU

Low Voltage

Applied harmonized standards and regulations

EN 1493:2022

Vehicle Lifts

EN 60204-1:2018

Safety of Machinery – Electrical Equipment of Machines

CE Certificate

M6A 087411 0081 Rev. 00

date of issue: 17.08.2023

N8MA 087411 0080 Rev. 00

place of issue: München

technical file no.: 646642303601

Certification body

TÜV SÜD Product Service GmbH,

Ridlerstraße 65,

D-80339 München

Notified Body Appointment No.: 0123

In the case of improper use, as well as in the case of assembling, modification or changes which are not agreed with us, this declaration will lose its validity.

Authorized person to compile technical documentation is: Michael Glade (address as below)



TWIN BUSCH GmbH

Amperestr. 1 · 64625 Bensheim

Tel. 06251 / 70585-0 · Fax: 70585-29

Authorized signatory: Michael Glade
Bensheim, 07.11.2023 Qualitätsmanagement

Twin Busch GmbH | Amperestr. 1 | D-64625 Bensheim

twinbusch.de | E-Mail: info@twinbusch.de | Tel.: +49 (0)6251-70585-0



You can find more products at:

twinbusch.co.uk

Twin Busch UK LTD
Kettering
Northants NN16 8PS

Tel.: +44 (0) 1536 522 960
E-Mail: info@twinbusch.co.uk
Web: www.twinbusch.co.uk

The technical specifications and illustrations provided in the user manual are not binding. Our products are subject to technical changes, so the delivered condition may vary.