TWIN BUSCH GERMANY

2-POST-LIFT
TW242CEB4.3-G
(Lifting capacity: 4200 kg)

TW242CEB4.3-G

INSTALLATION, OPERATION AND MAINTENANCE MANUAL

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

Table of contents

Further attachment:

- **Operating instructions for post lifts**
- **Inspection book for post lifts**
- **EU Declaration of Conformity**

Important information:

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/Tips-Tricks:_:74.html

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 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 TW242CEB4.3-G 2-post lift essentially consists of two columns, two carriages, four swivel arms, a drive unit and two control units.

This is driven by an electro-hydraulic system. The gear pump delivers hydraulic oil to the oil cylinders and pushes their pistons upwards. The piston of the cylinder lifts the carriage and the swivel arms. The post lift is equipped with a mechanical safety lock that prevents it from slipping in the event of a hydraulic failure. Depending on the vehicles to be lifted, the column can be installed either symmetrically or asymmetrically.

The asymmetrical pillar configuration offers maximum door opening clearance for passenger cars that have a relatively low door position, while the symmetrical pillar configuration offers more width between the pillars for vans and lorries that are wider and have a relatively higher door position.

2. Identification of the operating instructions

Operating instructions TW 242CEB4.3-G

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Status: -00, 20.01.25

File: TW242CEB4.3-G_2-Post-Lifts_Manual_uk_00_20250120.pdf

3. Technical data

Lifting capacity	4,200 kg
Degree of protection	IP 54
Lifting time	50 s~ 65 s (2.2 kW 1 Ph) 35 s~ 40 s (3.5 kW 3 Ph)
Max lifting height	1900 mm (locking deactivated)
Low lifting point	85 mm
Applicable wheel track	≤2400 mm
Applicable wheelbase	2000 mm~ 3100 mm
Volume of the oil tank	10 L

4. Modification of the product

Improper use, modifications, conversions and attachments of the post lift and all its components that have not been agreed with the manufacturer are not permitted. The manufacturer accepts no liability for improper installation, operation or overloading. Improper use also invalidates the CE certification and the validity of the certificate.
If you require any changes, please contact your dealer or the expert staff at Twin Busch GmbH beforehand.

5. Safety-related information

Read the operating instructions carefully before putting the post lift into operation. 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 post lift should only be put into operation if it is in a safe operating condition.

5.1 Safety instructions

- Do not install the post lift on an asphalt surface.
- Read and understand the safety instructions before operating the post lift.
- The two post lift is intended for indoor installation only. Do not expose it to rain, snow or excessive moisture. Do not use the post lift near explosives or open areas with flammable liquids.
- Do not leave the control unit under any circumstances when the post lift is in motion.
- Keep hands and feet away from moving parts. Pay particular attention to your feet when lowering.
- The post lift may only be operated by trained personnel.
- Bystanders are not permitted in the vicinity of the post lift.
- Wear suitable work clothing.
- The area around the post lift should always be kept free of obstructions.
- The two post lift is designed for lifting vehicles that do not exceed the maximum authorised weight.
- Always ensure that all safety precautions have been taken before working near or under the vehicle.

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

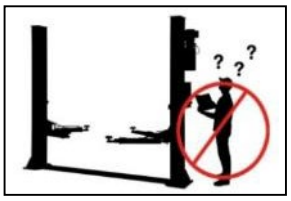
- Do not under any circumstances move the vehicle or remove heavy objects from the vehicle that could cause significant weight differences while the vehicle is on the two post lift.
- Always check the movement of the lift to guarantee its performance. Ensure regular maintenance. If an irregularity occurs, stop working with the post lift immediately and contact your dealer.
- Lower the lift completely when it is 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 unused oil in the prescribed manner.

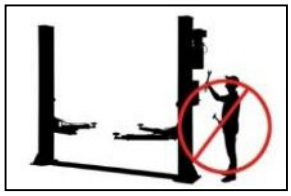
5.2 Warnings and symbols

All warnings are clearly visible on the lift to ensure that the user uses the device 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 use.

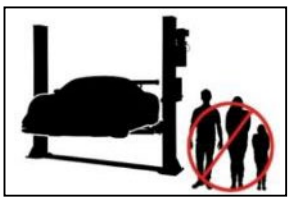
Read Instructions
and safety instructions
carefully before use!



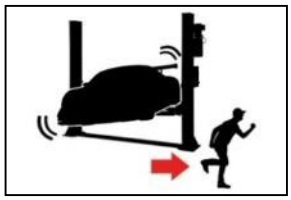
Operation of the lifting platform only by qualified personnel!



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

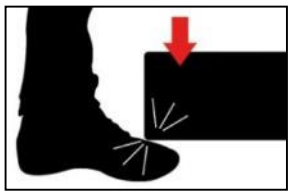


Only qualified personnel allowed in the vicinity of the lifting platform!



Always keep escape routes clear!

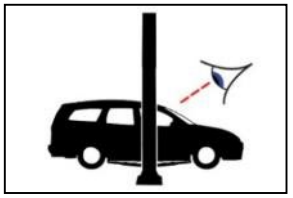
It is forbidden for persons to stand under the lift (when lifting or lowering)!



Watch your feet when lowering!
Danger of crushing!

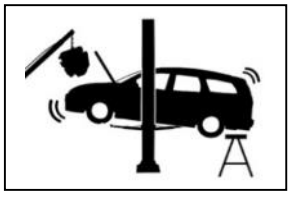
It is forbidden for persons to climb up onto the lift.

Observe the vehicle manufacturer's mounting points!



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

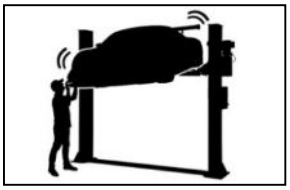
Do not exceed the specified load capacity!



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

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

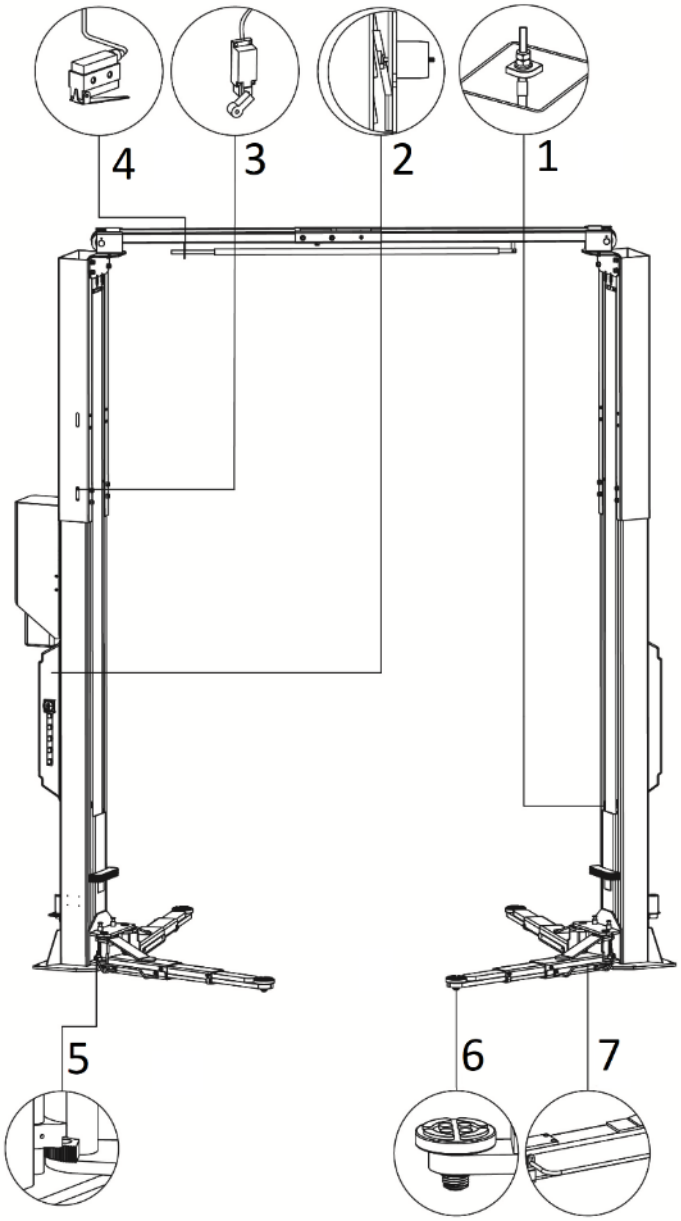
Protect the lifting platform from moisture!
Electrical connections must be dry!



Avoid strong shaking. Avoid shaking the vehicle.

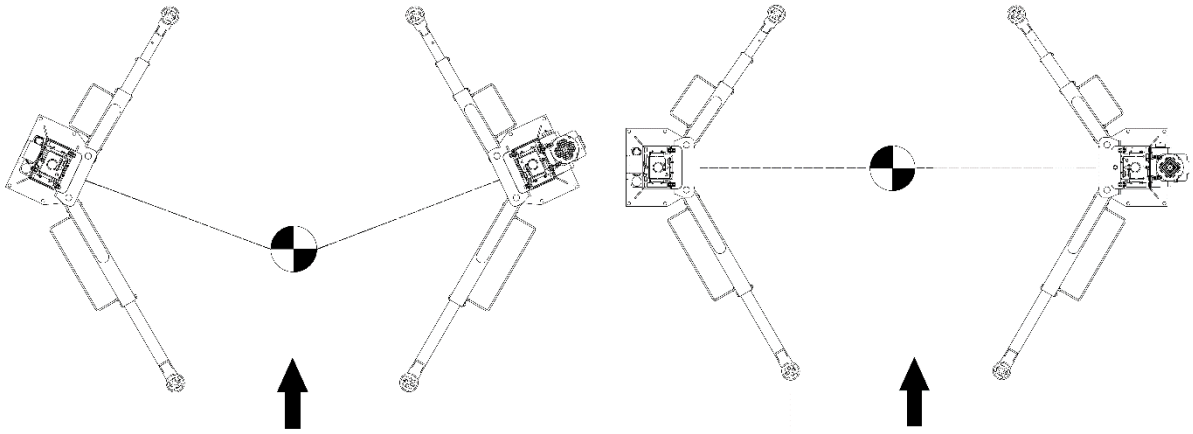
CAUTION!
Electrical voltage!

5.3 Safety precautions



Pos.	Description	Function
1	Steel cable	Balance the carraiges on both sides.
2	Mechanical safety interlock	Catches the carrqaiges in the event of a hydraulic failure.
3	Limit switch for maximum height	Stops lifting at maximum height.
4	Limit switch for the roof guard	Stops lifting when the overhead bar is pushed upwards by the vehicle roof.
5	Arm lock	Locks the support arms and prevents them from swinging during the lifting process.
6	Lifting pads	Secure rubber contact with the lifting point of the raised vehicle.
7	Foot guard	Protects your feet from entering hazardous areas that can lead to crushing or shearing.

5.4 Vehicle centre of gravity

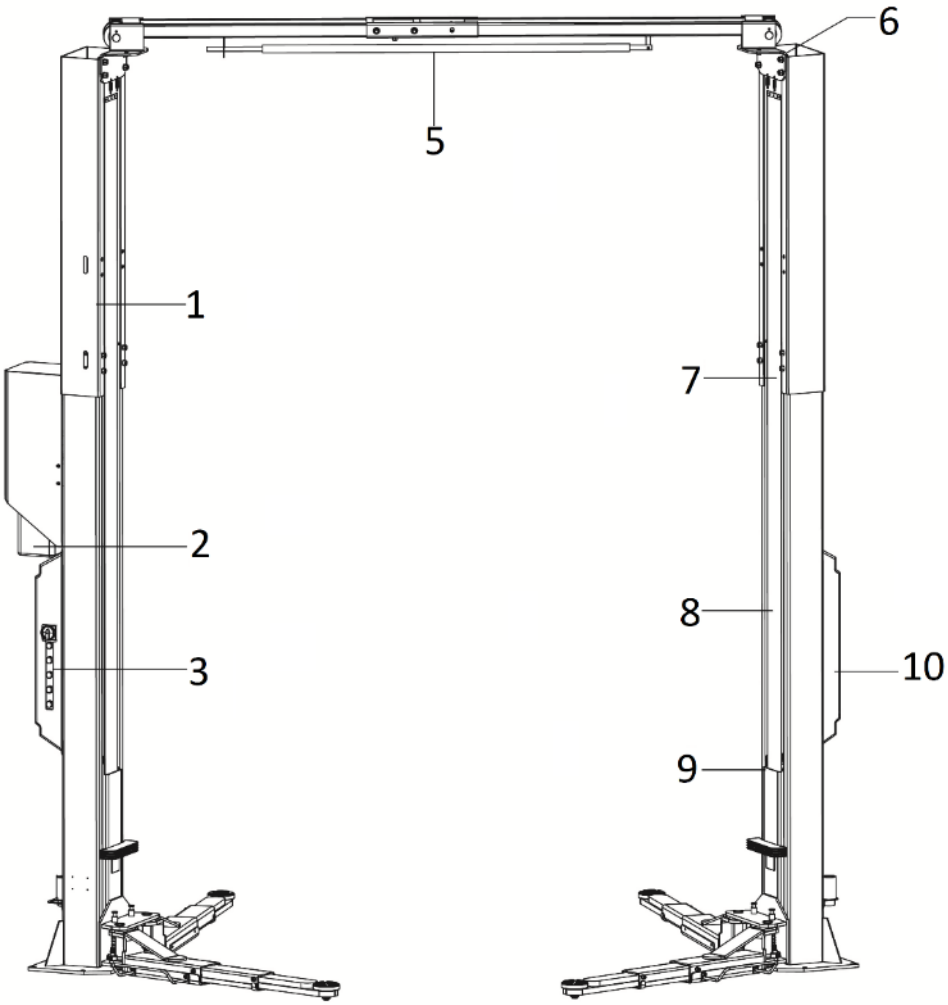


6. Conformity with the product

The TW 242CEB4.3-G 2-post lift is CE-certified and complies with the Machinery Directive 2006/42/EC and fulfils the standards EN 1493:2022, EN 60204-1:2018 (see under: EU Declaration of Conformity, at the end of the operating instructions).

7. Technical specification

7.1 Machine description



1. Extendable column
2. Hydraulic unit
3. Main control unit
4. Swivel arm
5. Cross member
6. Cable pulley
7. Steel cable
8. Hydraulic cylinder
9. Lifting carriage
10. Control unit 2

8. Assembly of the post lift

8.1 Before installation

Tools and equipment required:

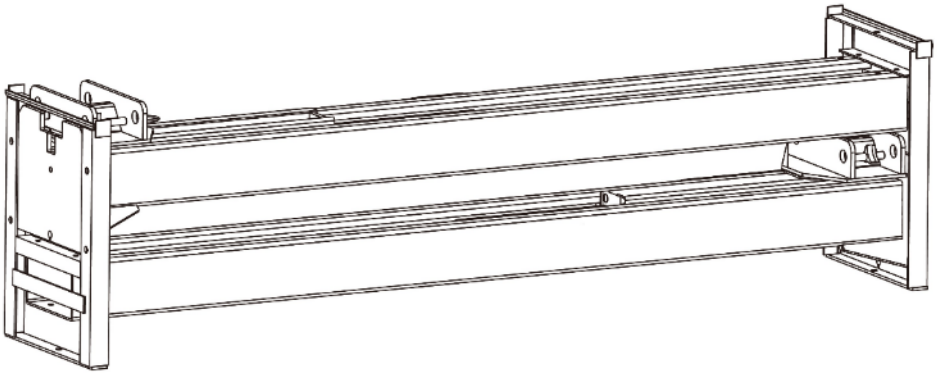
- Suitable lifting tool for bulky and heavy components
- Hammer
- Phillips and slotted screwdriver
- Torque wrench
- Spanner attachments and open-end spanners
- Electric drill
- Hydraulic oil HLP 32

8.2 Ground conditions

The lift 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 before a lift can be installed.

8.3 Assembly instructions



1) Remove the packaging and take out the box containing the accessories. Read and understand the operating instructions before proceeding.

2) Firstly, you need to place a support between the two columns or lift one of the two columns using a lifting tool. Then remove the upper bolts from the frame.

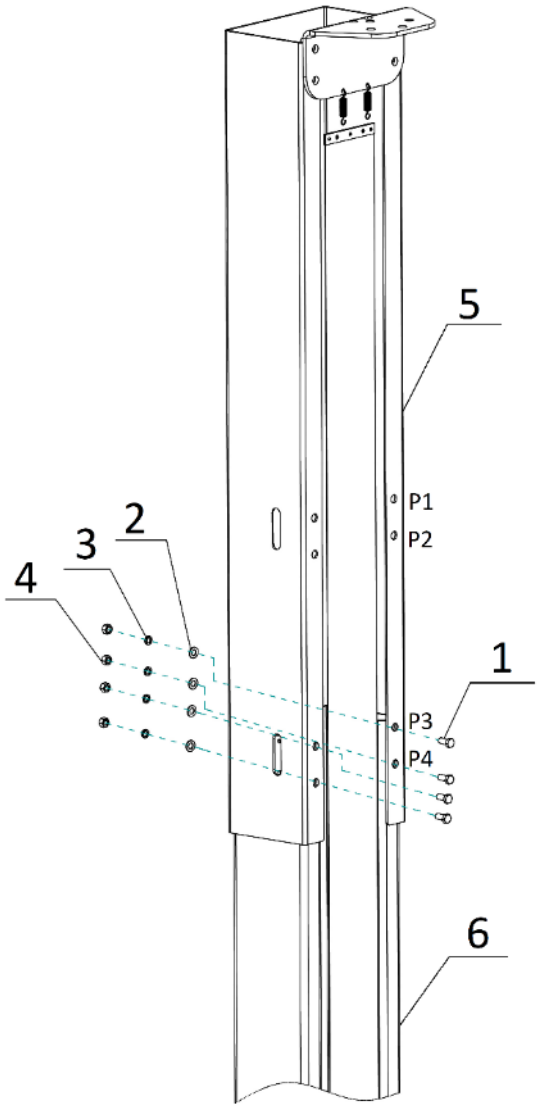
   Caution: Please take particular care to ensure that the column cannot fall down. The accessories could be damaged or people could be injured.

3) After you have removed the first column, place a support under the lower column. Then remove the bolts from the transport rack.

4) Connect the extension pieces for the uprights.

   a) Fit the pull-out section.

Note: Provided that the ceiling of your workshop is higher than 4300 mm, you should attach the extension piece to the main column using the hole pairs P3 and P4.
If the ceiling is lower than 4300 mm, you must tighten the extension piece over the pairs of holes P1 and P2.



1 Hexagon head screw with swivel joint M14*30

2 Washer M14

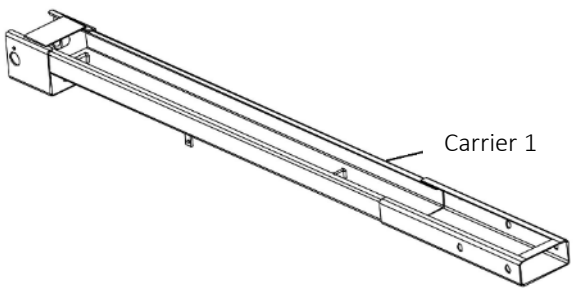
3 M14 spring washer

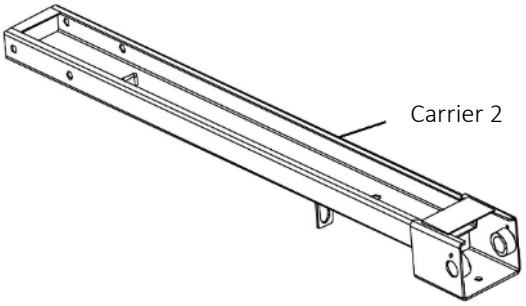
4 Hexagon nut M14

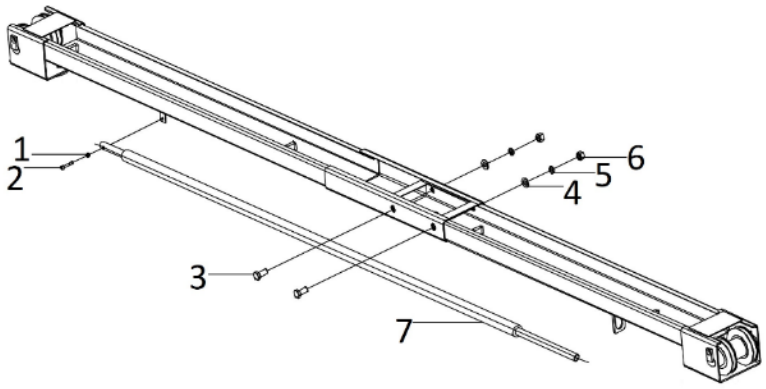
5 Pillar 1

6 Pillar 2

b) Fit the overhead crossbars and attach the roof protection bar. First connect support 1 and support 2 with the hexagon head screw M14x30. Then fasten the roof protection bar with the M6x35 cylinder head screw with hexagon socket.







1 Allen screw with hexagon socket M6*35

2 Lock nut M6

3 Hexagon head screw with swivel joint M14*30

4 Flat washer M14

5 M14 spring washer

6 Hexagonal nut M14

7 Protective bar for the roof

5) Determine the mounting position and set up the columns.

a) Determine the type of configuration. Depending on the ceiling height of the workshop, the configuration can either have a total height of 3867 mm or 4300 mm. Depending on the type of vehicles to be lifted, the column configuration can be either symmetrical or asymmetrical.

b) Specify the column on which the power pack is to be mounted.

c) Use chalk to draw an outline of the base plate on the installation site and determine the position of the two columns.

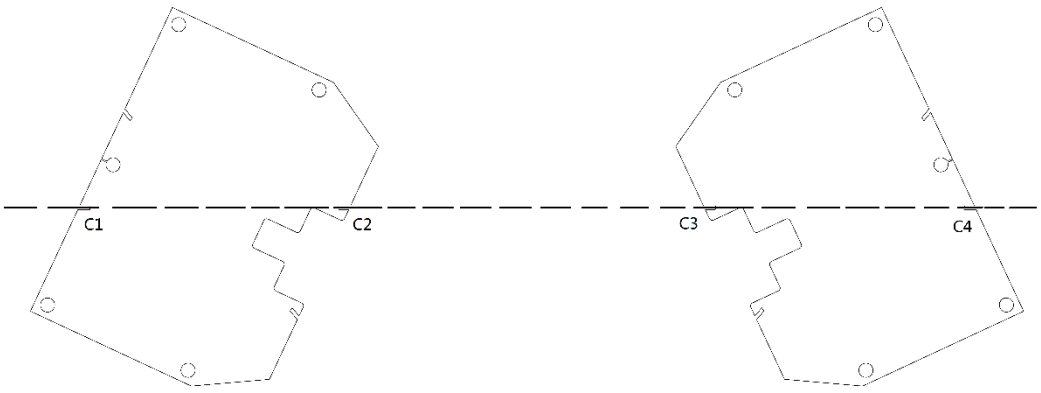
d) Place the columns opposite each other and use suitable means to lift them up.

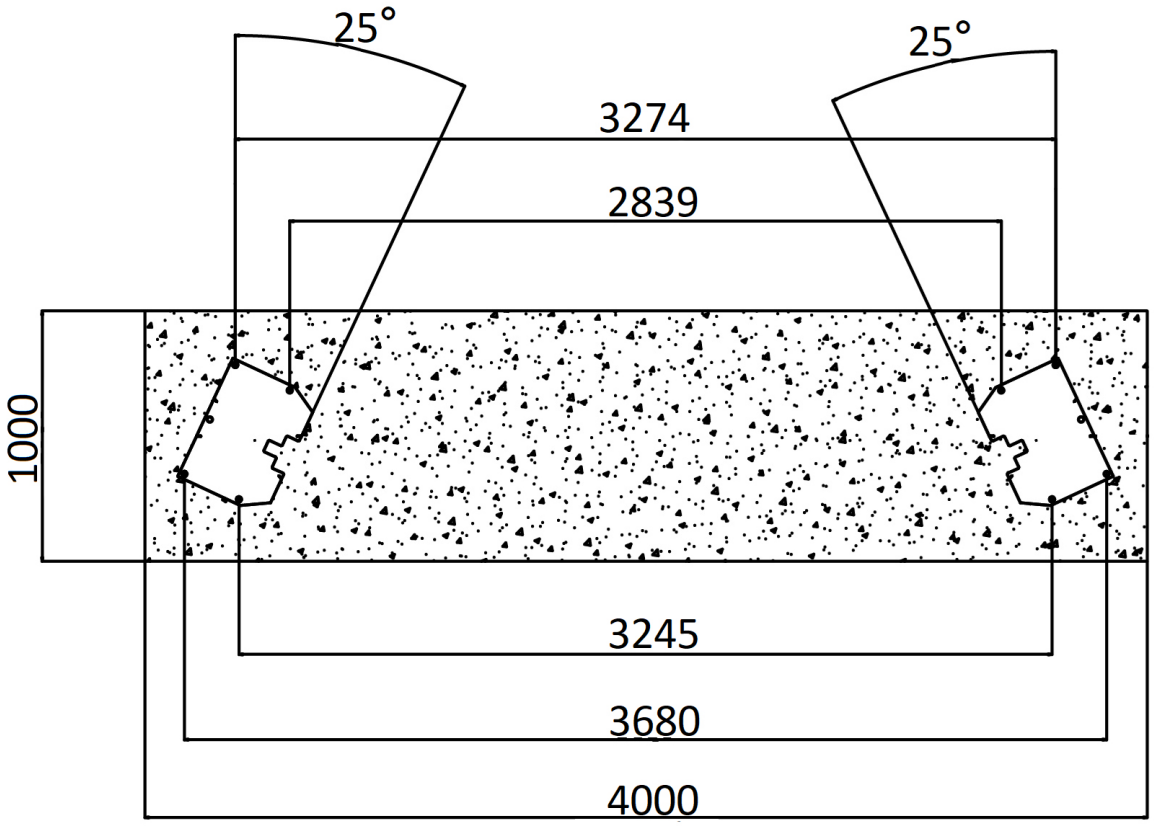
6) Secure the columns to the floor using anchoring bolts.

1. Check the position of the two base plates and realign them.

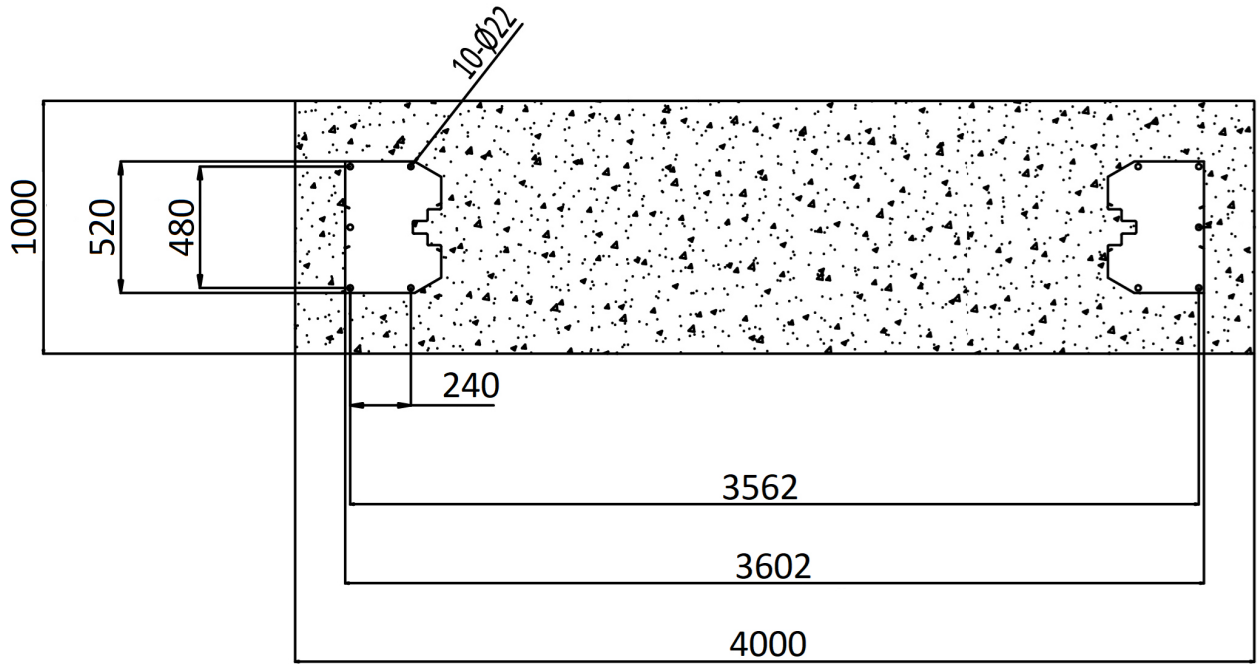
Floor plan for <u>asymmetrical</u> column arrangement:

Align the two base plates so that the marking points C1, C2, C3 and C4 are on the same straight line.





Floor plan for <u>symmetrical</u> column arrangement:

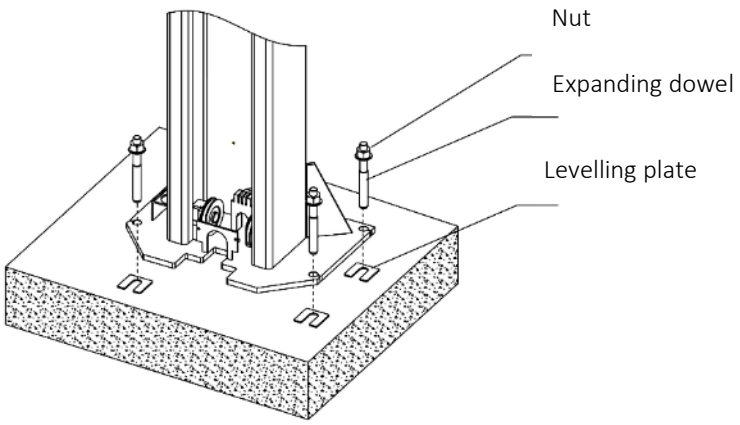


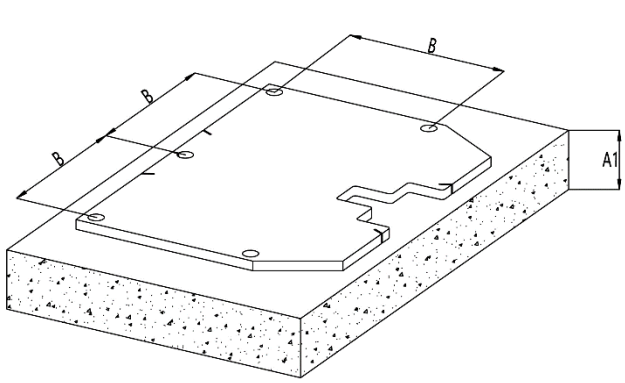
2. Lift the lifting carriage into the first locking position using suitable means. All fixing holes in the base plate are then accessible. Ensure that the locking pawl is engaged.

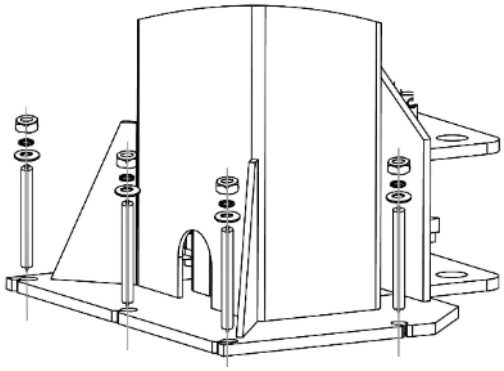
3. Drill the mounting holes. Remove the drilling dust from the hole.

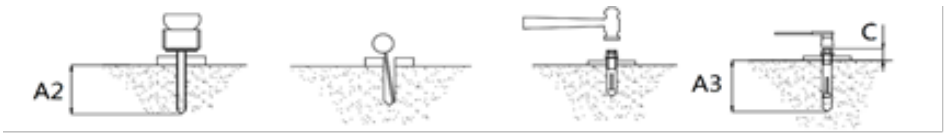
4. Use a spirit level to check the vertical alignment of the columns. If necessary, place shims under the base plates to ensure that the columns are vertical.
   Caution: Do not install more than 1 shim under each anchor position of the base plate. Otherwise, there is a risk that the load will be transferred unevenly to the foundation, resulting in leaning.

5. Tighten the nuts (tightening torque 80-100 Nm).









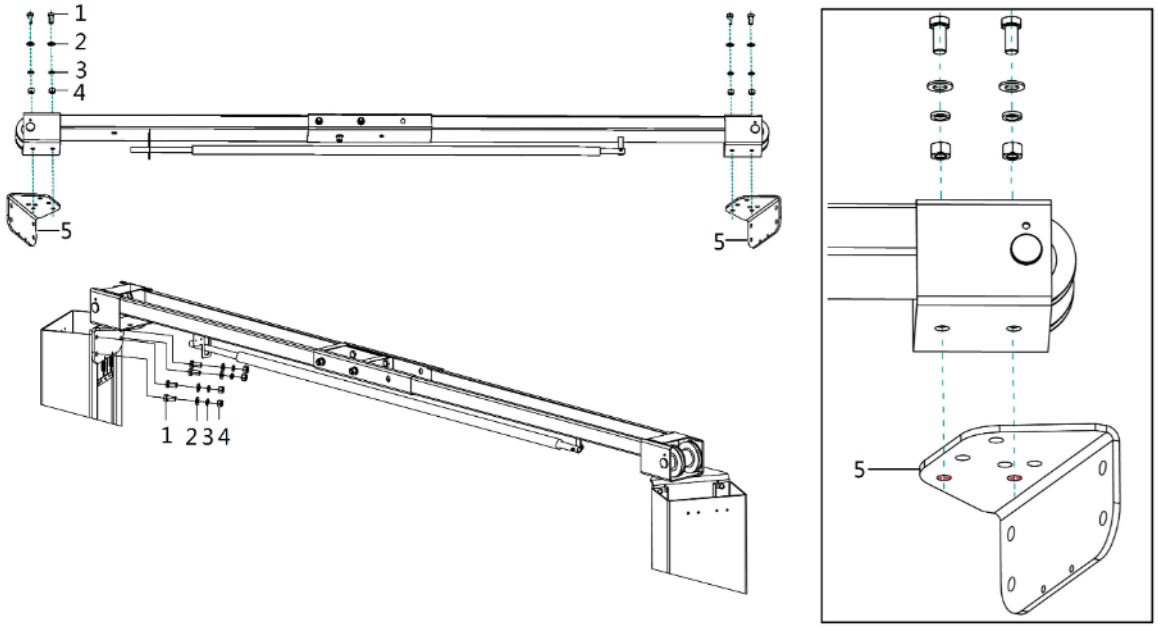
Anchoring bolt	A1 (foundation thickness)	A2 (drilling depth)	A3 (anchoring depth)	B	C
M18x160	≥200 mm	130 mm	105 mm	240 mm	≤55 mm

7) Attach the crossbar to the two pillars.

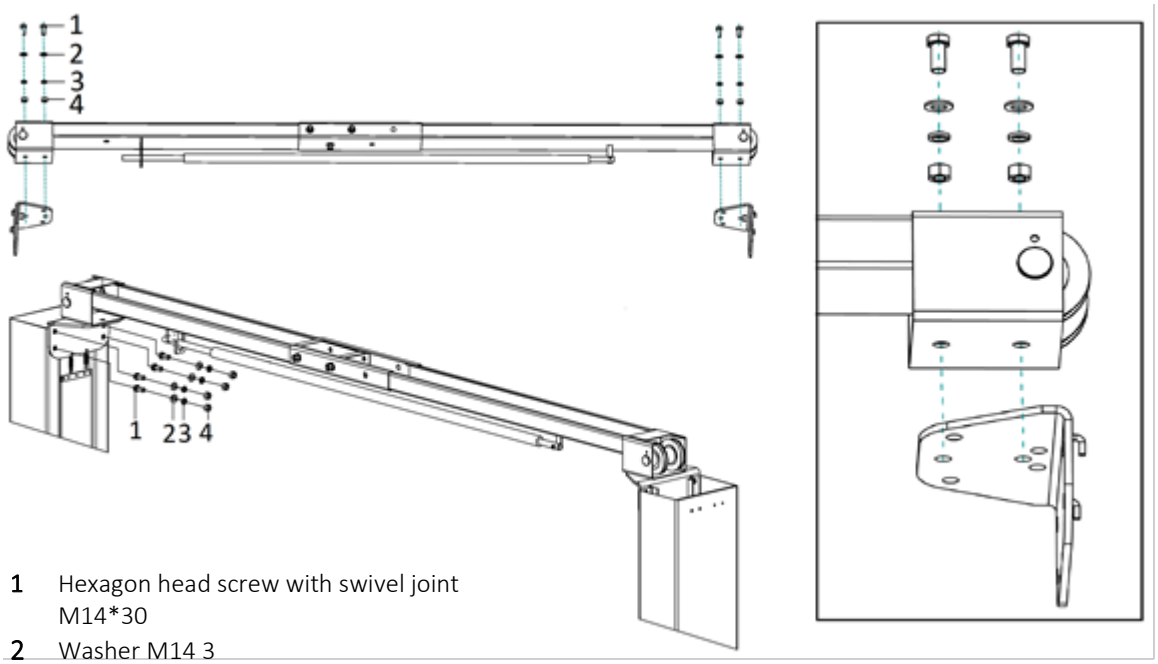
Refer to the following illustrations for two types of configurations, identify and mark the correct holes on the connecting part (position 5).

Tighten the beam with the two connecting parts and connect the beam to the two posts by tightening the two connecting parts with the two posts.

Correct connection position for the asymmetrical column configuration:

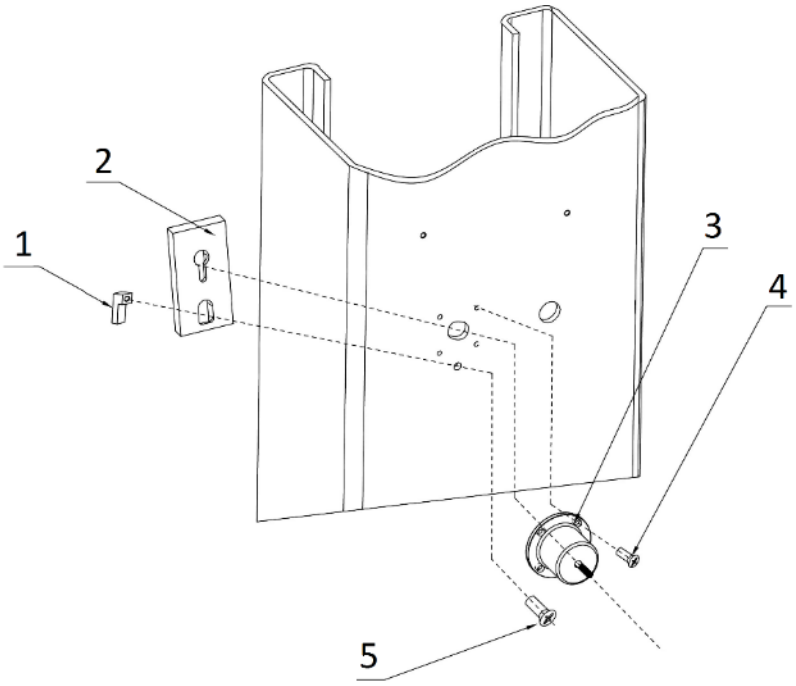


Correct connection position for the symmetrical column configuration:



1 Hexagon head screw with swivel joint M14*30
2 Washer M14 3
3 Spring washer M14
4 Hexagon nut M14
5 Connecting part

8) Install the mechanical locking unit.
Attach four safety locking plates and electromagnets, two on each post.



1 Orientation block

2 Safety locking plate

3 Electromagnet

4 Allen screw with hexagon socket M6*8

5 Allen screw with hexagon socket M6*15

9) Connect the steel cables.

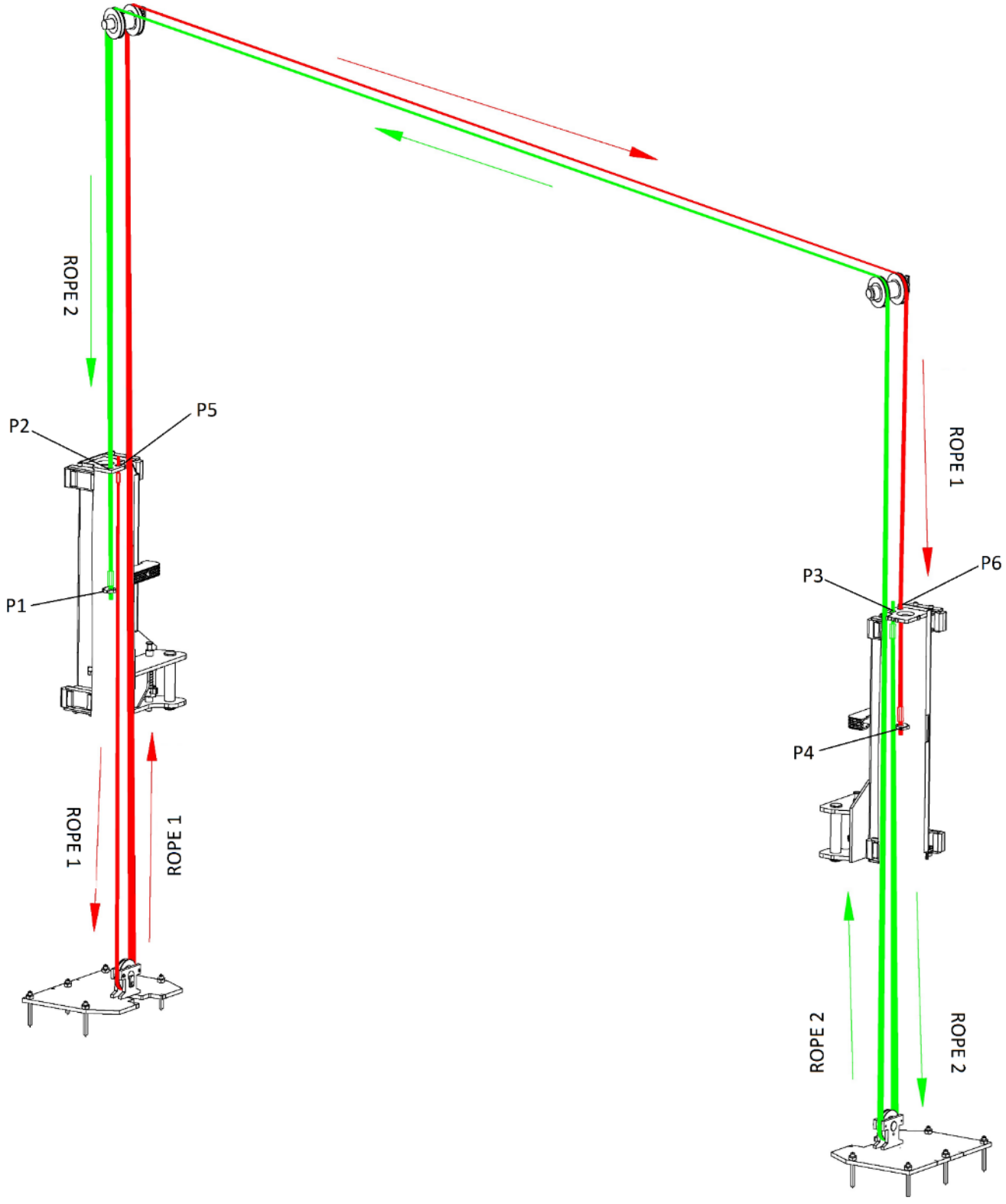
a) Determine the height configuration.

b) Before attempting to lay the balance cables, raise the lifting carriage on both sides to the first locking position and ensure that the mechanical safety locks in each post are fully engaged

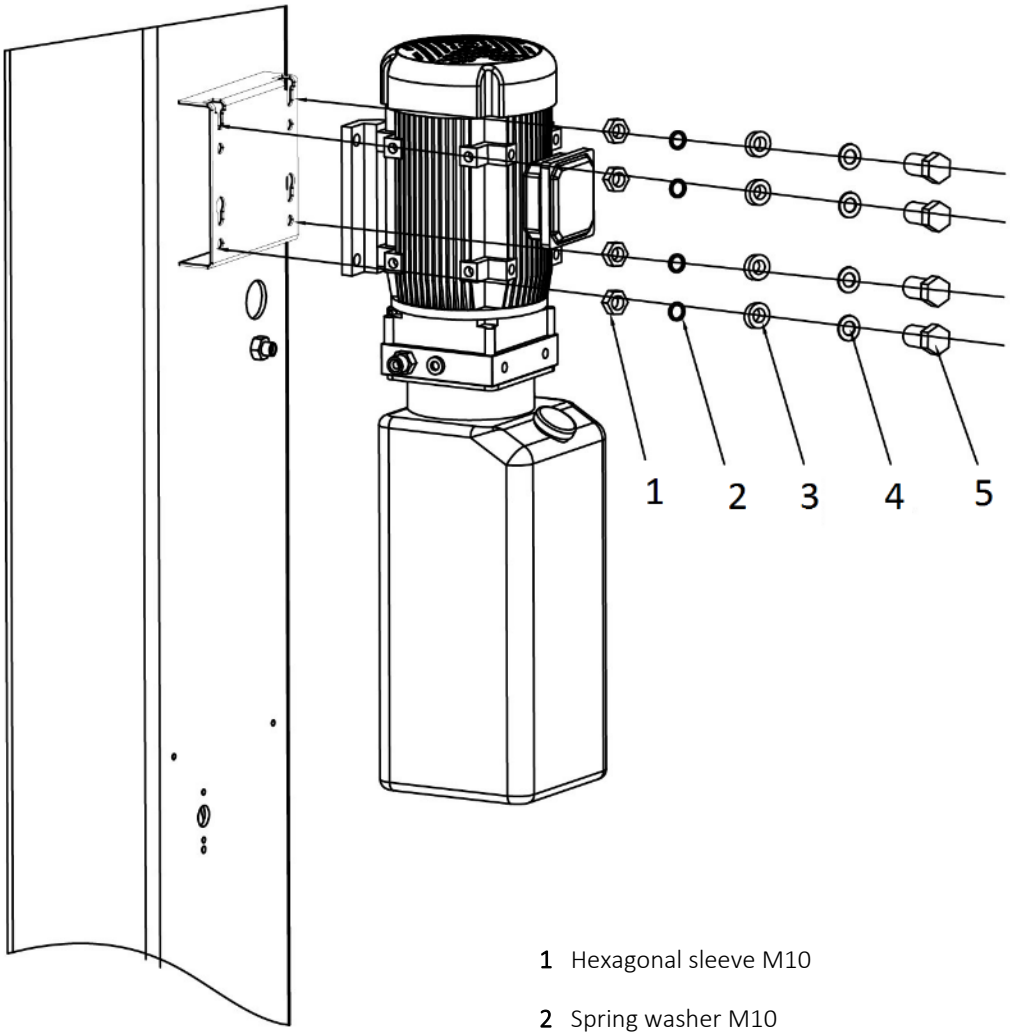
The following diagram shows the cable tensioning positions for a configuration with a total height of 3867 mm.
For a higher configuration with a total height of 4300 mm, tension the two ends of ROPE 2 from P1 to P2 and from P3 to P4. Tension the two ends of ROPE 1 from P5 to P1 and from P4 to P6.

c) Set the ropes on both sides to the same tension, which you can judge by the clicking noise during the lifting process.

d) Grease with lithium grease no. 1.


ROPE 2
P2
P5
P1
ROPE 1
ROPE 1
ROPE 1
P3
P6
P4
ROPE 2
ROPE 2

10) Install the motor.
Mount the power pack on the power side post.



1 Hexagonal sleeve M10

2 Spring washer M10

3 Flat washer M10

4 Shock-absorbing cushion

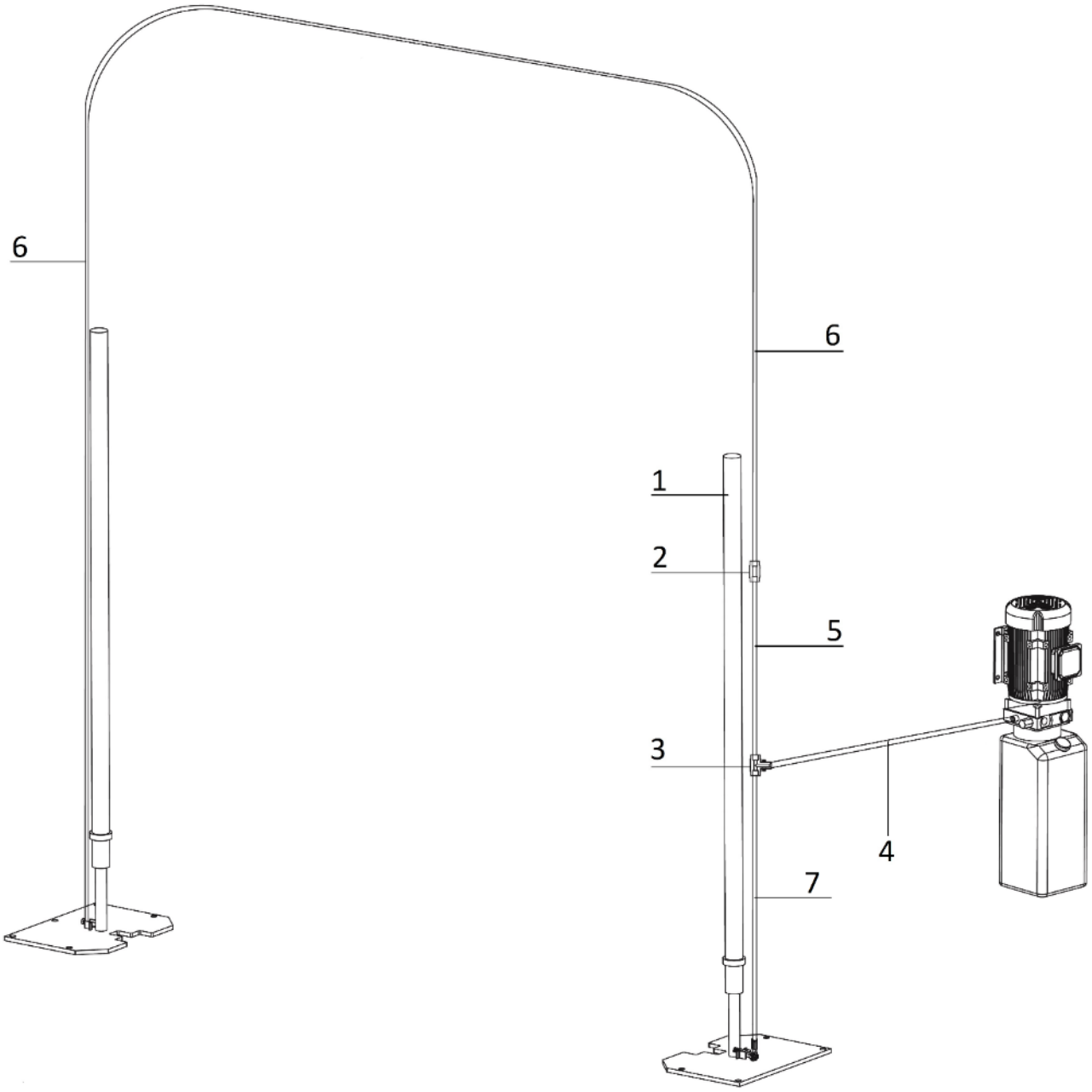
5 Swivelling screw with hexagon head M10x35

11) Connect the hydraulic hoses.
The following diagram shows the connection for the configuration with a total height of 4300 mm.

Connect hose 3 (pos.6) directly to the three-way connection (pos.3) for a lower height configuration of 3867mm.

Ensure that all connections are firmly tightened and do not leak. Ensure that no solid substances get into the hydraulic line. If the hose connections are not tightened securely, serious leaks will occur.

Screw torque: 25-30 Nm.



1 Oil cylinder

2 Straight connection (optional, can only be used for a total height of 4300 mm)

3 Three-way connector

4 Rubber oil hose 1, L=320mm

5 Rubber oil hose 2, L= 840mm (optional, can only be used for a total height of 4300mm)

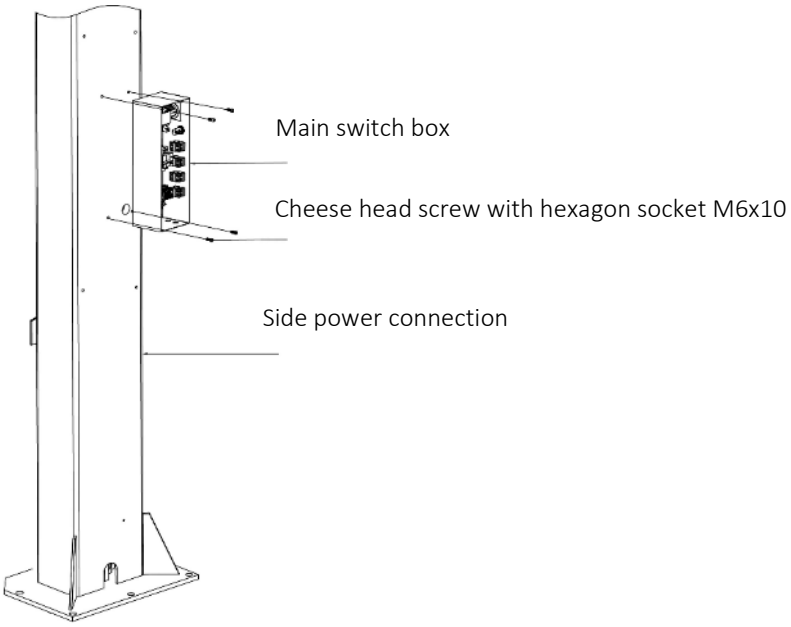
6 Rubber oil hose 3, L=8625 mm

7 Rubber oil hose 4, L=2265 mm

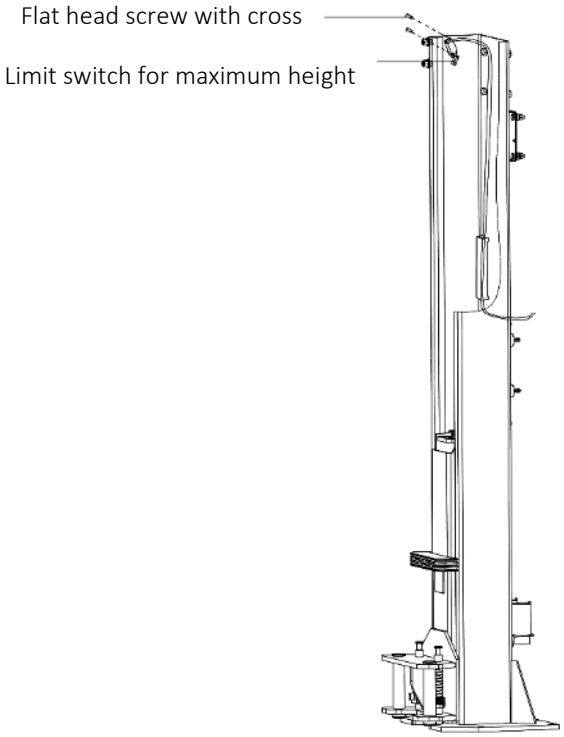
13) Install the control unit.
ONLY qualified electricians may carry out the electrical connection. Read the type plate and check that the supply voltage matches the voltage of the post lift. Read the electrical connection diagram in the appendix for reference before making the connection.

Caution: All electrical wires must be properly secured against damage to the wire ropes.

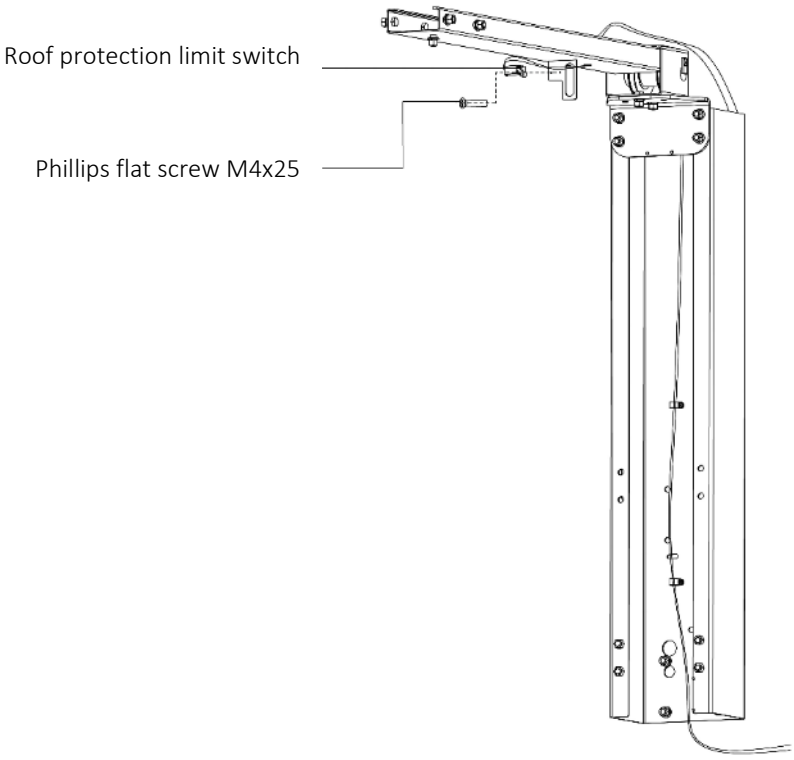
a) Mount the main control box on the mains-side post.



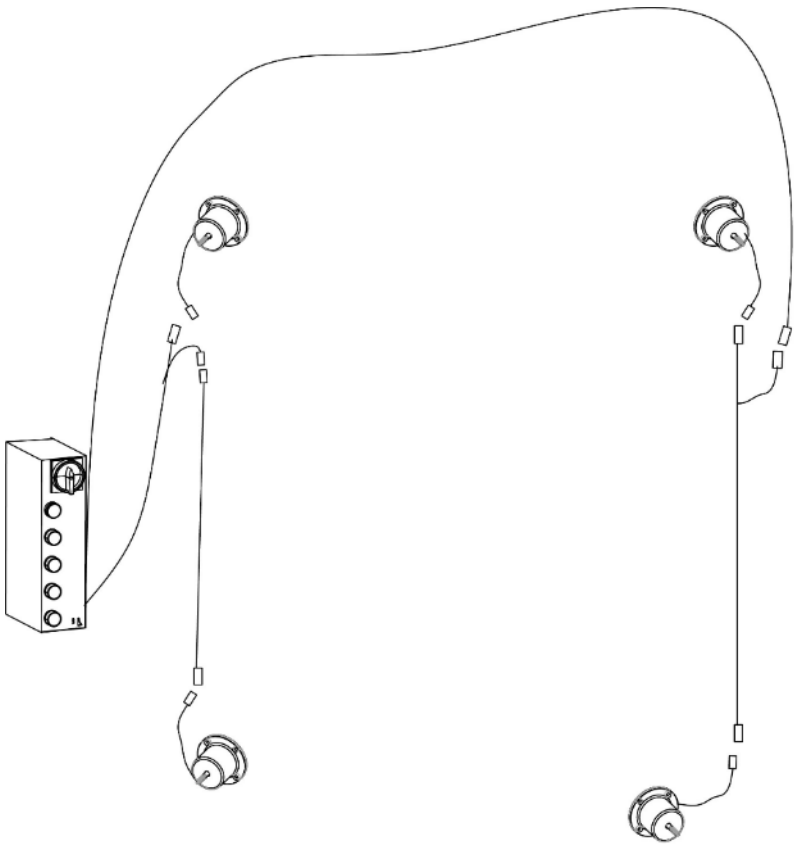
b) Attach the limit switch for the maximum height to the inside of the power side column. Connect the wires of the switch to the corresponding terminals reserved in the main switch box.



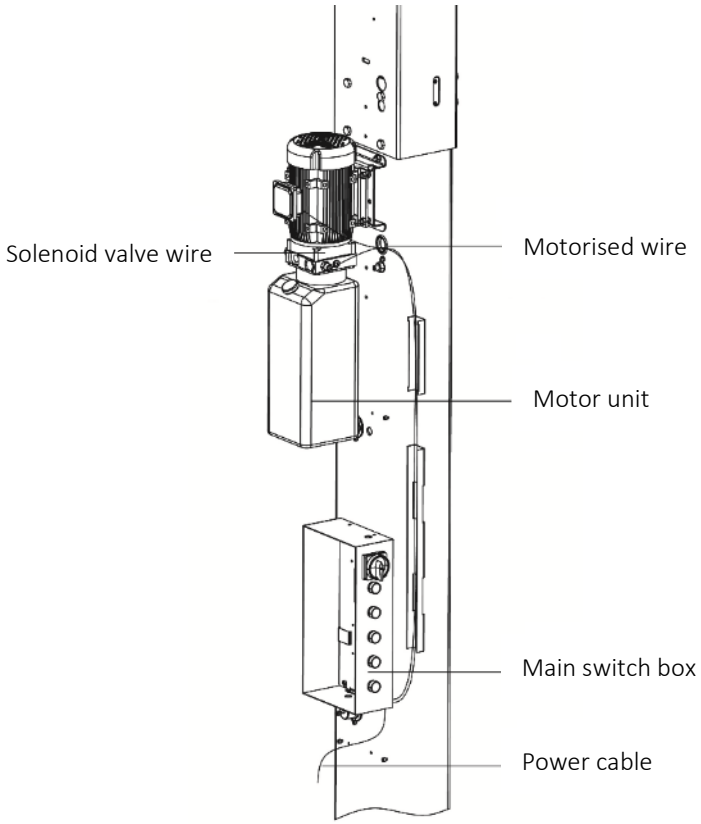
c) Attach the limit switch for the roof guard to the roof crossbar and connect its wires to the corresponding terminals in the main switch box.



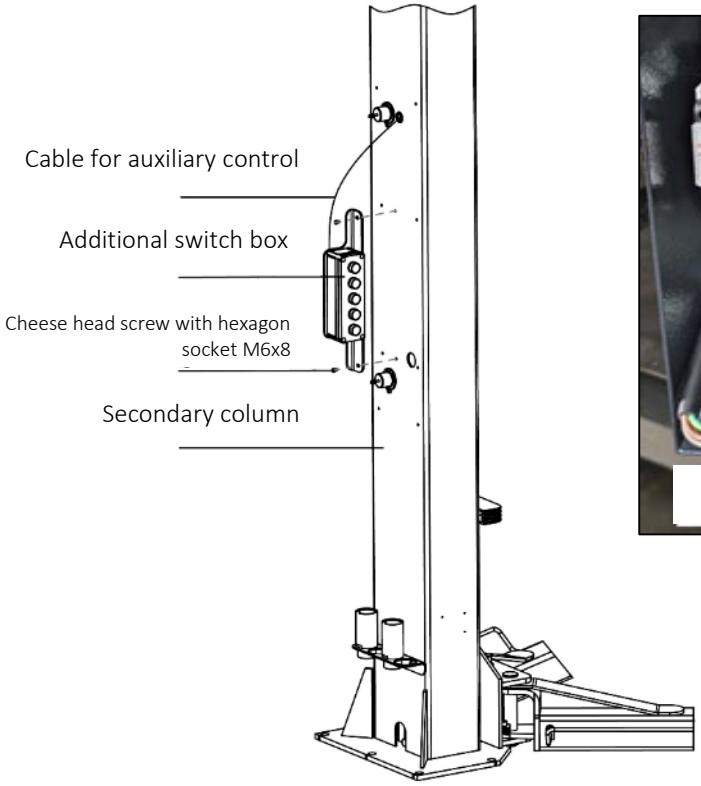
d) Connect the quick connectors between the electromagnets. Connect the wires to the corresponding terminals reserved in the main switch box.

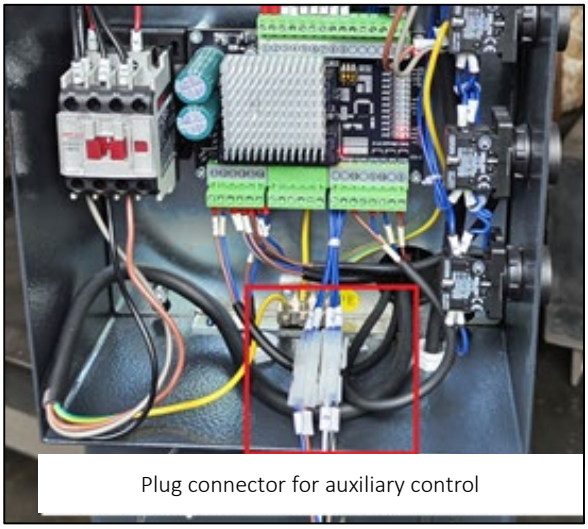


e) Connect the solenoid valve cable and the motor cable.



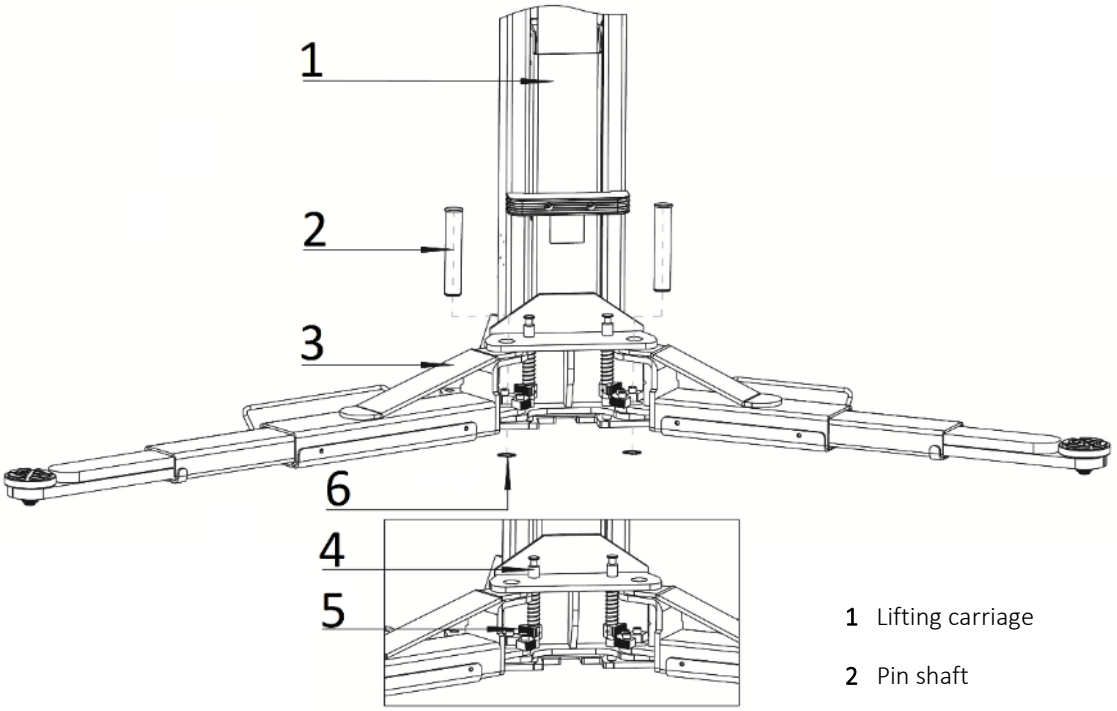
f) Attach the auxiliary control unit to the other pillar, run the cable along the inside of the pillar and up the top of the support. Finally, connect it to the connections reserved in the MAIN Control Box.





Plug connector for auxiliary control

14) Fit the swing arms.
Connect the four swivel arms to the carriage using bolt shafts. The bolt shafts (no. 2) must be greased during installation.
Check whether the arm lock can be effectively engaged when lifting.
Attention: Attach the lifting arms and the protective bars for the feet ONLY after the entire Assembly has been erected and anchored.



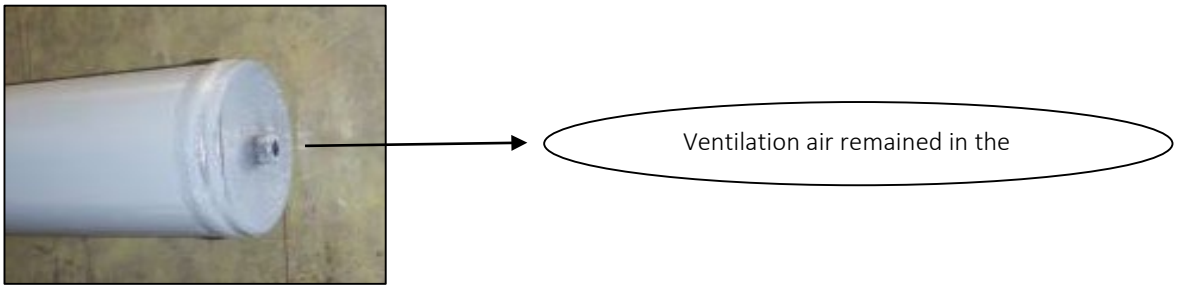
1 Lifting carriage
2 Pin shaft
3 Swivel arm
4 Pull rod
5 Arm locking unit
6 Circlip D38

15) Fill with hydraulic oil.
ONLY USE CLEAN AND FRESH OIL. DO NOT FILL THE TANK COMPLETELY FULL.
The lift must be lowered to the ground before you change or top up the hydraulic oil. Prepare 10 litres of abrasion-resistant hydraulic oil. The oil level must reach the fill level mark on the tank.
After bleeding the hydraulic system, top up with more oil after operating the lift for several cycles until it can rise to the maximum lifting height.
It is recommended to use HM NO.46 hydraulic oil. If the average temperature at the place of use is below 10°C, **use hydraulic oil type: HLP 32.**

16) Trial commissioning
The purpose of the test commissioning is to check whether the lift can be raised and lowered smoothly for safe useage.
The user must familiarise themself with the controls of the post lift by raising and lowering it a few times before using it to lift vehicles.

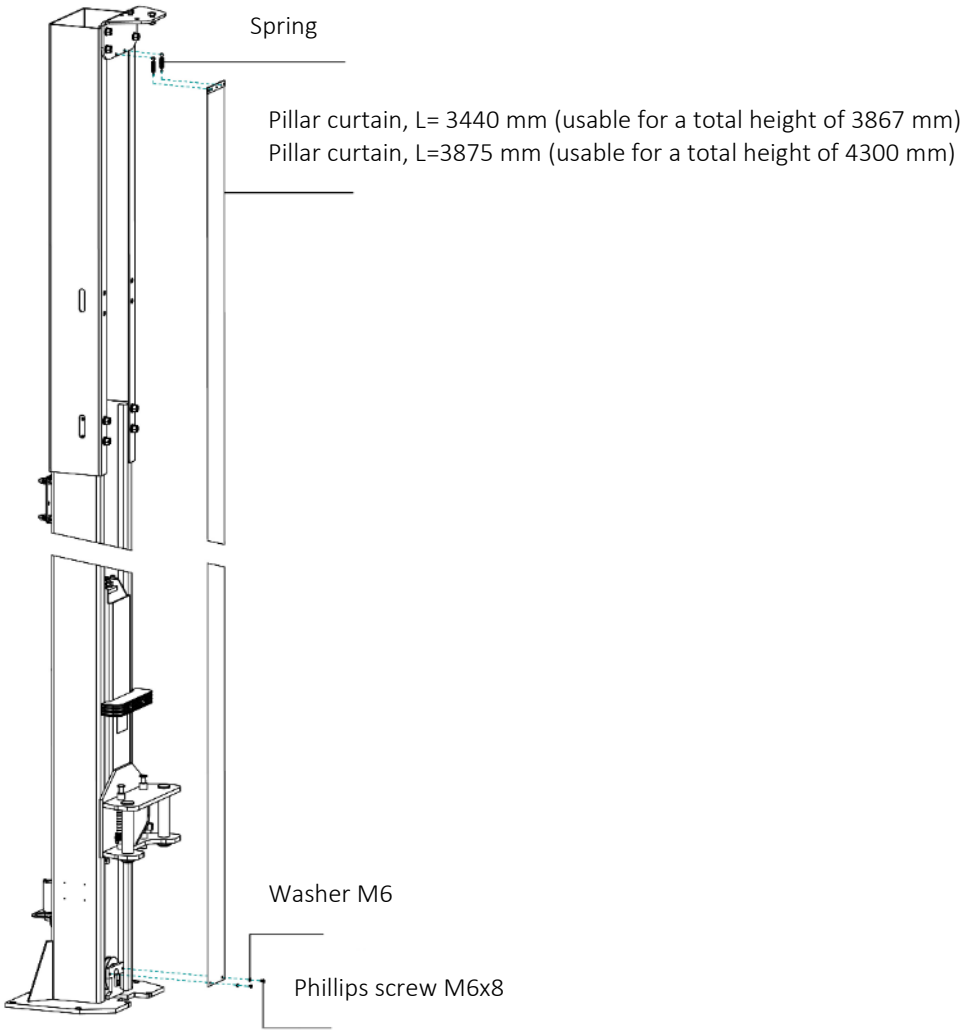
Bleeding the hydraulic system:

Bleed the remaining air from the oil cylinder. Unscrew the nut on the top of the oil cylinder and press lightly on the OPEN button until oil escapes. Then tighten the nut again.

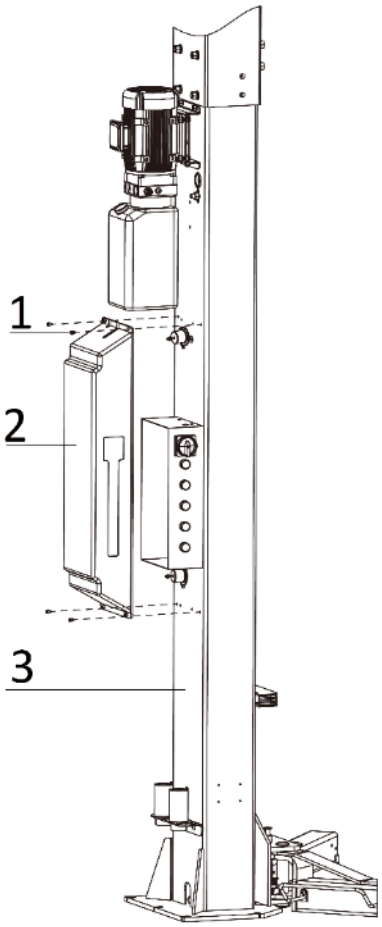


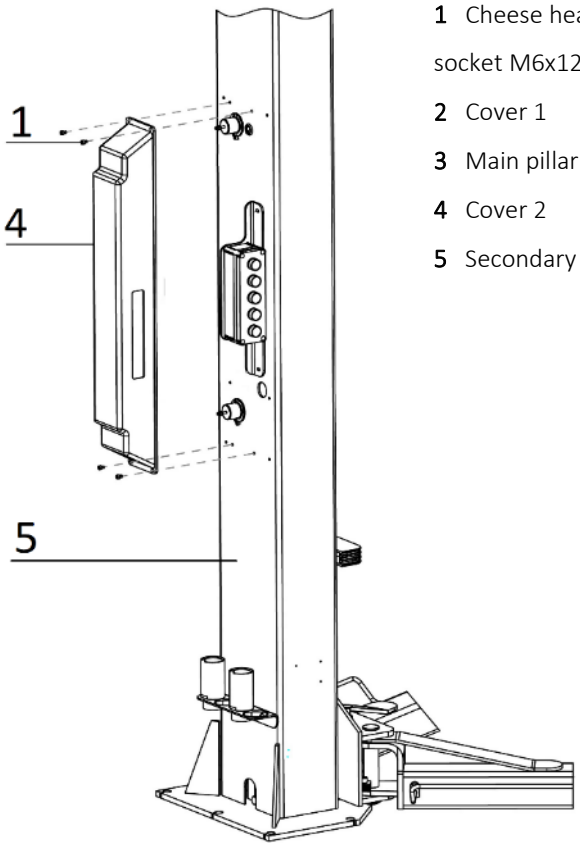
After bleeding, the fluid level in the power unit reservoir may drop. If necessary, top up with more fluid to raise the lift to its full height. You only need to top up the fluid to raise the lift to its full height.

17) Attach the curtain for each column.



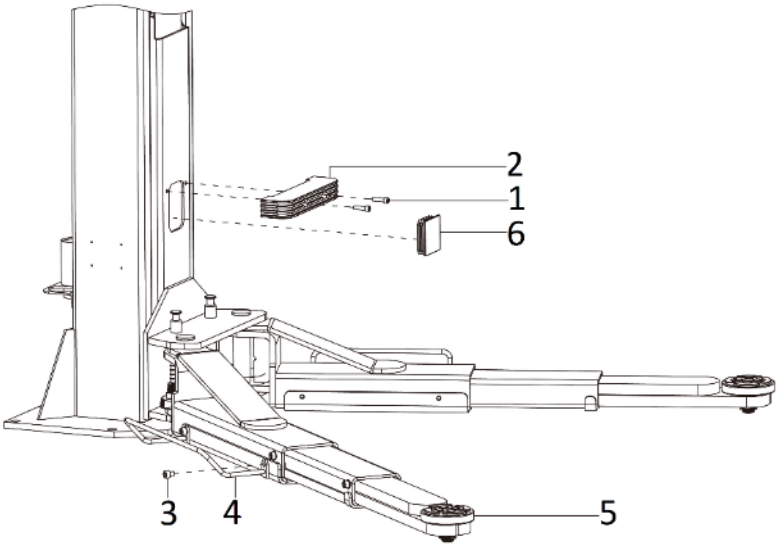
18) Attach two protective covers.
Attach the covers (pos.2, pos.4) to the pillars.





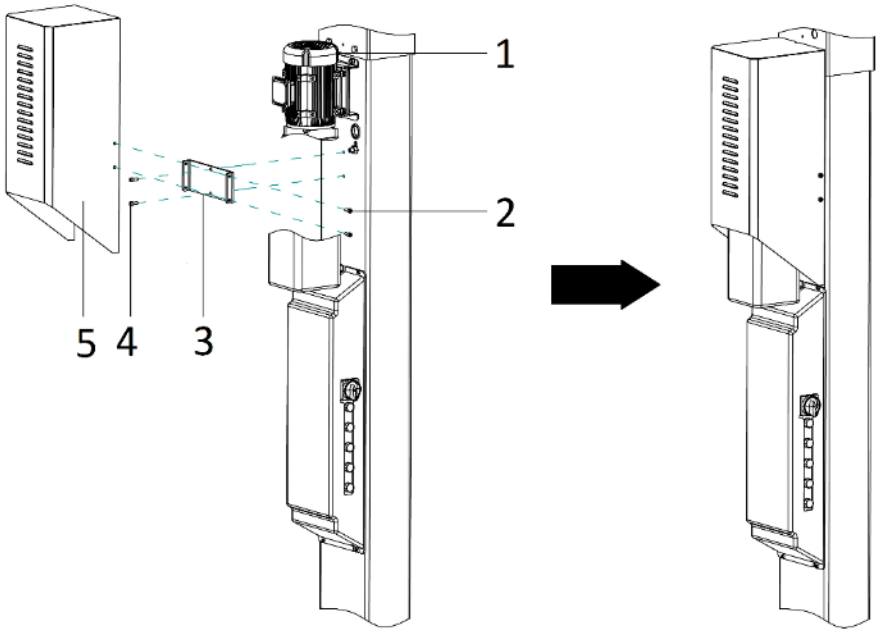
1 Cheese head screw with hexagon socket M6x12
2 Cover 1
3 Main pillar
4 Cover 2
5 Secondary column

19) Attach the protective pads for the door opening, the foot guards and the lifting pads.



1 Cheese head screw with hexagon socket M8x30
2 Door protection pad
3 Cheese head screw with hexagon socket M10x12
4 Foot protection bars
5 Turntable
6 Plastic protective cover

20) Install the motor cover.
First attach the holder to the column and then the motor cover to the holder.



1 Motor

2 Allen screw with hexagon socket M8*12

3 Bracket for the housing

4 Allen screw with hexagon socket M8*12

5 Motor cover

8.4 Assembly checklist

S/N	Check	YES	NO
1	Screw torque of the floor expansion bolts: 80-100 Nm		
2	Increasing speed ≥20 mm/s		
3	Noise at nominal load ≤75 dB(A)		
4	Earthing resistance: Not greater than 4 Ω		
5	Height difference between the two slides ≤5 mm		
6	Mechanical locks are robust and synchronised when running at rated load		
7	All control buttons function as "hold to execute"		
8	The limit switches work well		
9	The earthing cable is connected		
10	The carraiges lift and lower gently		
11	There are no abnormal noises when running under load		
12	No oil leaks when the motor is running under load		
13	The expansion bolts, nuts or circlips are well secured or tightened		
14	The maximum lifting height can be reached		
15	All safety instructions, type plates and logos are clearly marked.		

9. Commissioning

9.1 Safety precautions

a) If the safety devices are defective or show abnormalities, the lift must not be put into operation under any circumstances!

b) Check that all connections of the hydraulic lines are tight and functional. If there are no leaks, the lifting process can be started.

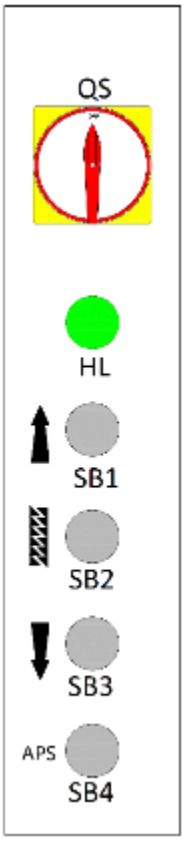
c) Only the operator should be in the vicinity of the post lift during a lifting or lowering operation. Always ensure that there are no persons in the danger zone.

d) Vehicles should always be aligned so that the vehicle's centre of gravity is in the middle between the lift columns. If this is not the case, the lift should not be used. Otherwise, neither we nor the dealer, if any, will accept responsibility for any problems or damage caused.

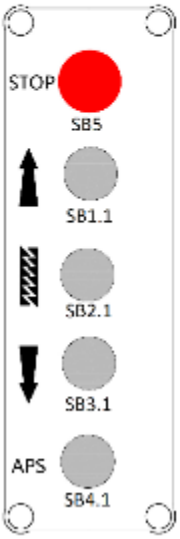
e) When the desired lifting height is reached and the safety catches are engaged, switch off the power supply to the lift before starting work in order to avoid incidents caused by unintentional operation by other people.

f) Ensure that the safety catches are engaged before starting work on or under a vehicle. No persons may be in the working area of the post lift during the lifting and lowering process.

9.2 Description of the control unit (control box)



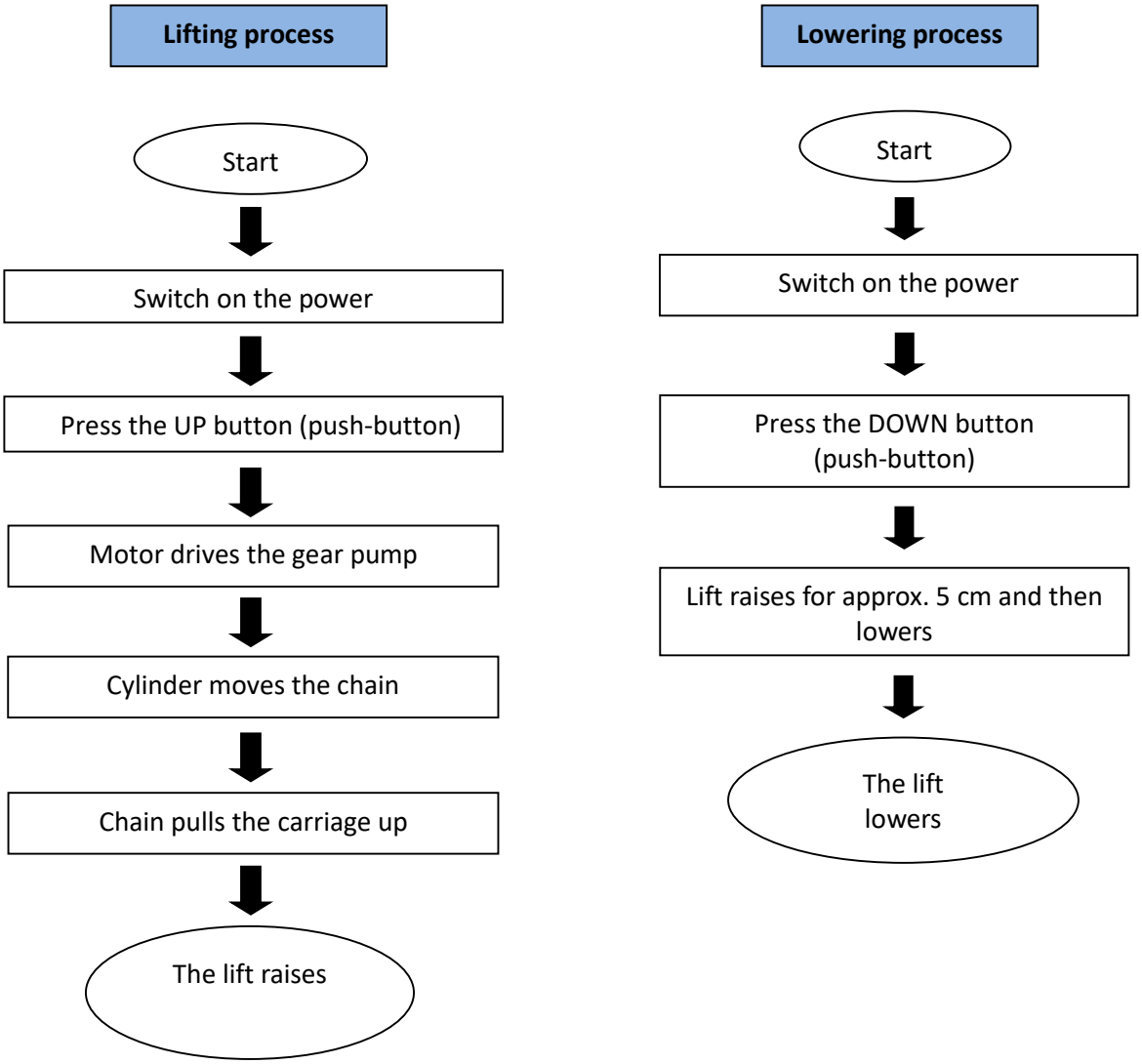
Main control



Auxiliary control

Pos.	Description	Function
QA	Main power switch	Switch on or off. Also serves as an emergency stop switch.
HL	Operating light	Indicates whether there is a power supply.
SB1/ SB1.1	UP button (push-button)	Lifting the post lift.
SB2/ SB2.1	LOCK button (push-button)	Activates the mechanical safety lock
SB3/ SB3.1	DOWN button (push-button)	Lowering the post lift.
SB4/ SB4.1	APS button	Press the APS button to lower the carriage directly, provided that the locking mechanism is not activated.
SB5	Stop button	Press to deactivate the control buttons of the additional control. Press it again to reactivate the auxiliary control buttons.

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 post lift so that the vehicle's mounting points match the post 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 lifted about 10-15 cm. Stop the lifting process and make sure that the vehicle has been picked up correctly and safely.
6. Raise the vehicle to the intended height; press the "LOCK button" to activate the mechanical safety lock. Check the stability again and then carry out maintenance or repair work underneath.

9.4.2 Lowering process

1. Connect the power supply and switch the main switch to ON.
2. Press the DOWN button (push-button) to move the lifting carriages approx. 5 cm out of the safety catches.
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.

9.4.3 APS function

When the mechanical lock is released, press the APS button to lower it directly.

It enables the lifted vehicle to be placed efficiently at the exact height required for chassis maintenance, repair or gearbox replacement. Without this APS system, it is difficult and also time-consuming to place it accurately, as the post lift carriage raises each time you lower the vehicle to release the mechanical lock.

10. Troubleshooting

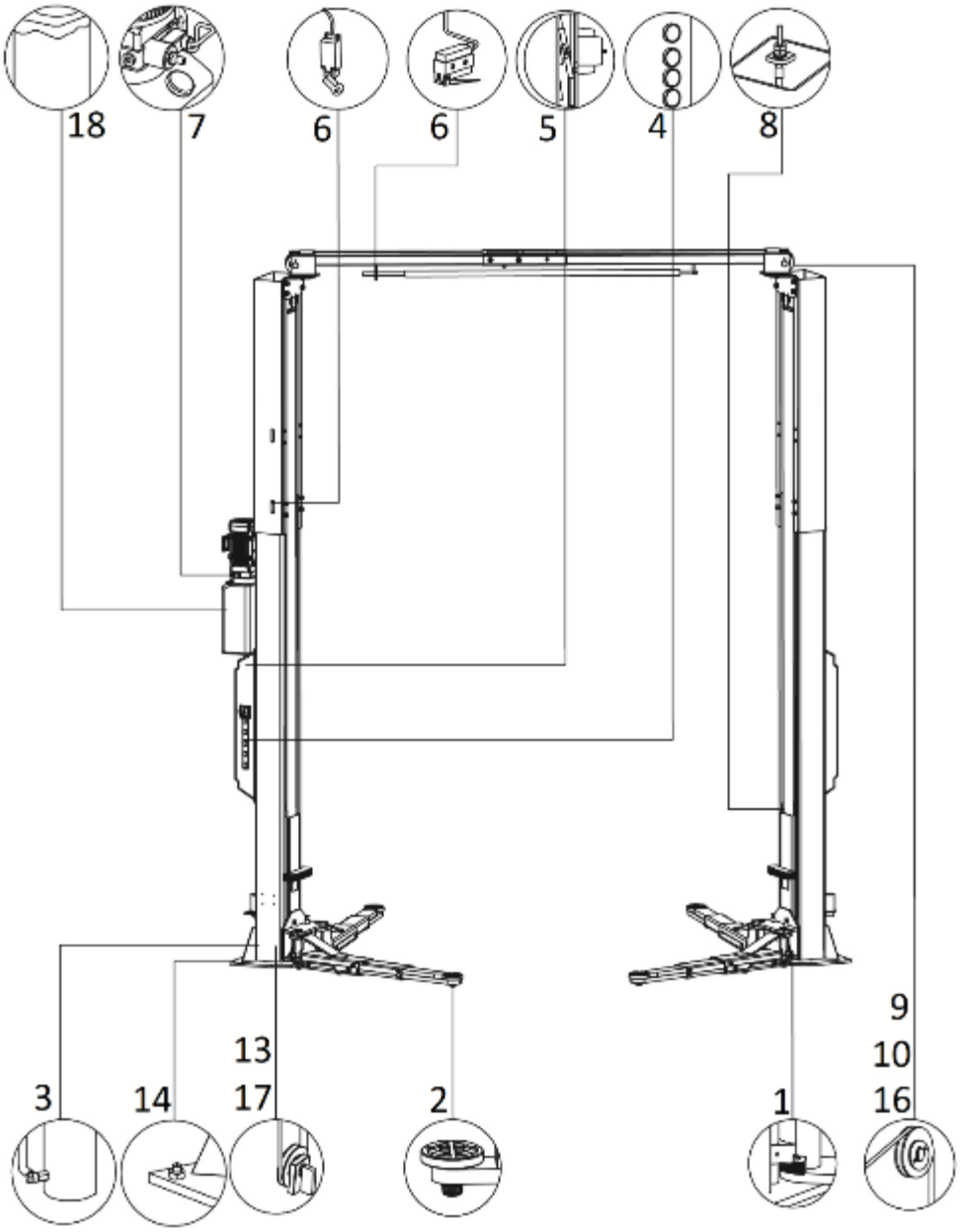
Please note: Do not hesitate to contact the expert staff at Twin Busch GmbH if you are unable to rectify a fault yourself. We will be happy to help you solve the problem. In this case, please document the fault and send us pictures and a precise description of the fault so that we can identify and rectify the cause as quickly as possible.

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

PROBLEM	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 is running, 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 damping valve is loose or jammed/blocked.	Clean or fasten it.
The carraiges lower slowly after they have been raised.	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.
	Manual or electric drain valve is leaking/dirty.	Clean or replace it.
Lifting too slowly.	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.
	The cylinder seal is worn.	Replace the seal.
Lowering too slowly.	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 oil hose is damaged/kinked.	Replace it.
The steel cable is worn.	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 environmental conditions, the degree of soiling and, of course, the stress and load on the lift.



Pos.	Component	Method	Period
1	Swivel arm locking units	Press the UP button to raise the support arms and check that the four swivel arms are locked into position.	Every day
2	Lifting adapter	Check that it can be screwed up and down smoothly. Grease the swivel joint if necessary. Check the rubber pads and remove any objects that could cause slippage or damage.	Every day
3	Connections for cylinders and oil hoses	Before using the post lift, check that there are no leaks.	Every day

Pos.	Component	Method	Period
4	Control buttons	Check whether the control buttons function as "hold-to-run" and check whether they fulfil the specified function.	Every day
5	Mechanical safety interlock	Check whether both mechanical locks can be effectively engaged and disengaged by pressing the control buttons.	Every day
6	Limit switch	Activate the switch using suitable means and press the UP button to check whether the carriage stops.	Every day
7	Discharge valve	Check whether the valve is leaking. Clean the valve or replace it if it is leaking.	Every day
8	Steel cables	Check the synchronisation of both carriages and adjust the tension of the cables if the asynchronisation is unacceptable.	Every day
9	Bushing of the upper deflection pulley	Lubricate the socket with lithium-based grease NO.1.	Every 3 months
10	Steel cables	Lubricate the rope with NO.1 lithium-based grease. It is recommended to use a new steel cable every 3 years. (Not mandatory if the parts are in good condition) Discontinue use and replace the rope immediately if ten or more wires on a rope are broken.	Every 3 months
11	Running path for carraiges within the columns	Lubricate the path with NO.1 lithium-based grease. No obstacles on the path.	Every 3 months
13	Bush of the lower deflection pulley	Lubricate the socket with lithium-based grease NO.1.	Every 3 months
14	Expansion bolt	Check with a torque spanner. For M18 screws, the torque should not be less than 80 Nm.	Every 3 months
	2 post lift	Run the lift for several cycles with and without nominal load. It will run smoothly and quietly without any unusual noises.	Every 3 months
16	Bushing of the upper deflection pulley	Loosen the steel cable and dismantle the pulley unit. Measure the abrasion clearance and replace the bushing if the clearance is greater than 0.5 mm.	Every year
17	Bush of the lower deflection pulley	Loosen the steel cable and dismantle the pulley unit. Measure the abrasion clearance and replace the bushing if the clearance is greater than 0.5 mm.	Every year
18	Hydraulic oil	Change the oil 6 months after the first use and then once a year. Check the hydraulic oil and change it if the oil turns black or if there is dirt in the oil tank.	Every year

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

12. Behaviour in the event of a malfunction

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	Remedy
No power supply available.	Check power supply.
Power supply interrupted.	Check power supply line.
Main switch not switched on or defective.	Check main switch.
Emergency stop pressed or defective.	Unlock emergency stop, check.
Fuse in power connection has blown or is defective.	Check fuse.
Fuse in the switch box has blown or is defective.	Check fuse.

Problem: Lifting platform cannot be raised.

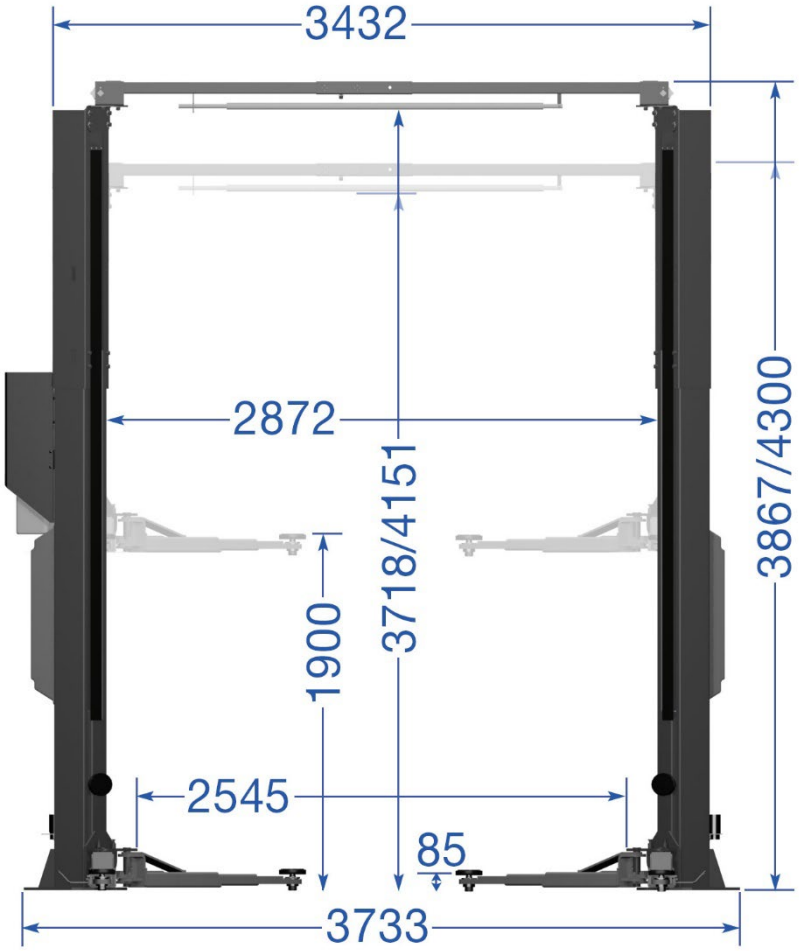
Possible causes	Remedy
With three-phase current: one phase is missing.	Check power supply.
With three-phase current: Direction of rotation of motor reversed.	Check direction of rotation, change phase if necessary.
Oil pump defective.	Notify Twin Busch Service.
Emergency drain open.	Close emergency release valve.
Motor is defective.	Notify Twin Busch Service.
Overload.	Overload valve has opened, reduce load.

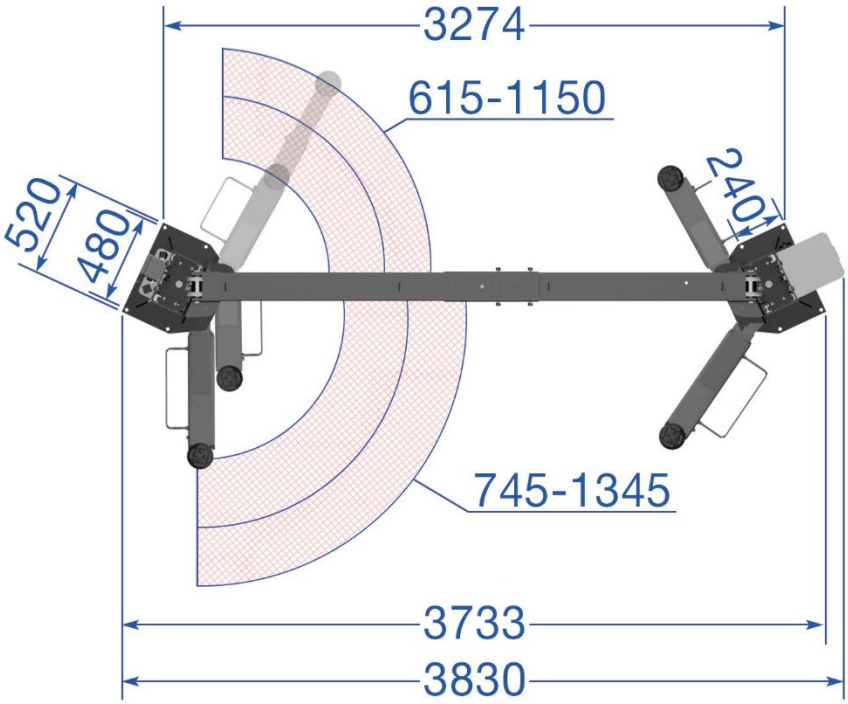
Problem: Lift cannot be lowered.

Possible causes	Remedy
Lifting platform sits in safety catches.	Raise platform a little, pull detents, lower.
Lifting platform has moved into limit switch.	If necessary, loosen limit switch, raise 1 cm and lower.
Motor is defective.	Open safety latch and lift over. Lower emergency drain.
Lifting platform has been blocked during lowering.	Raise the lifting platform slightly again and remove the obstacle.

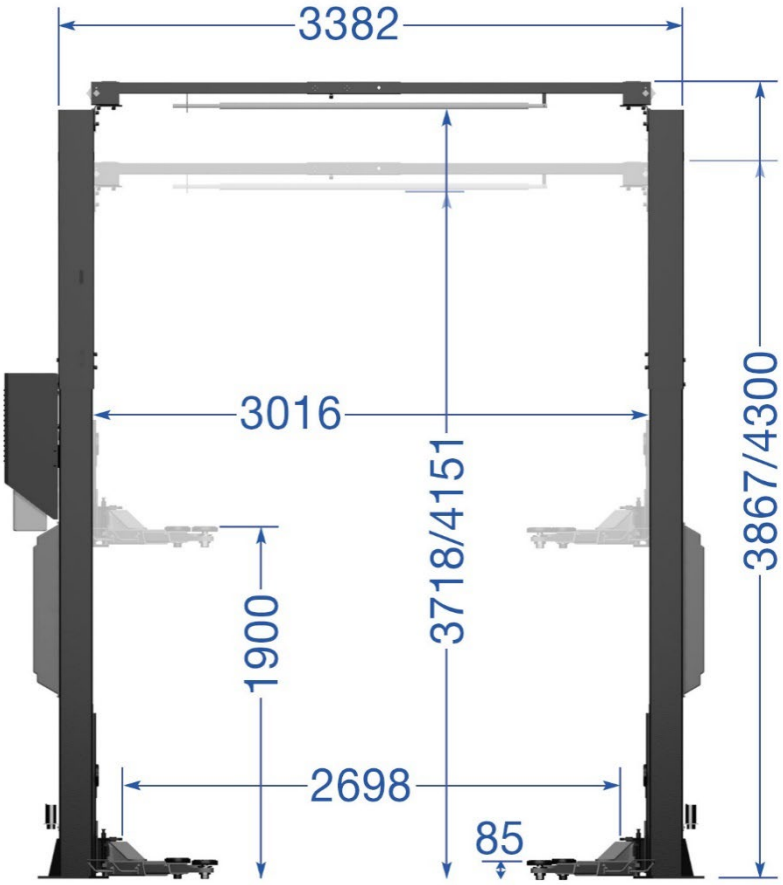
13. Apendix

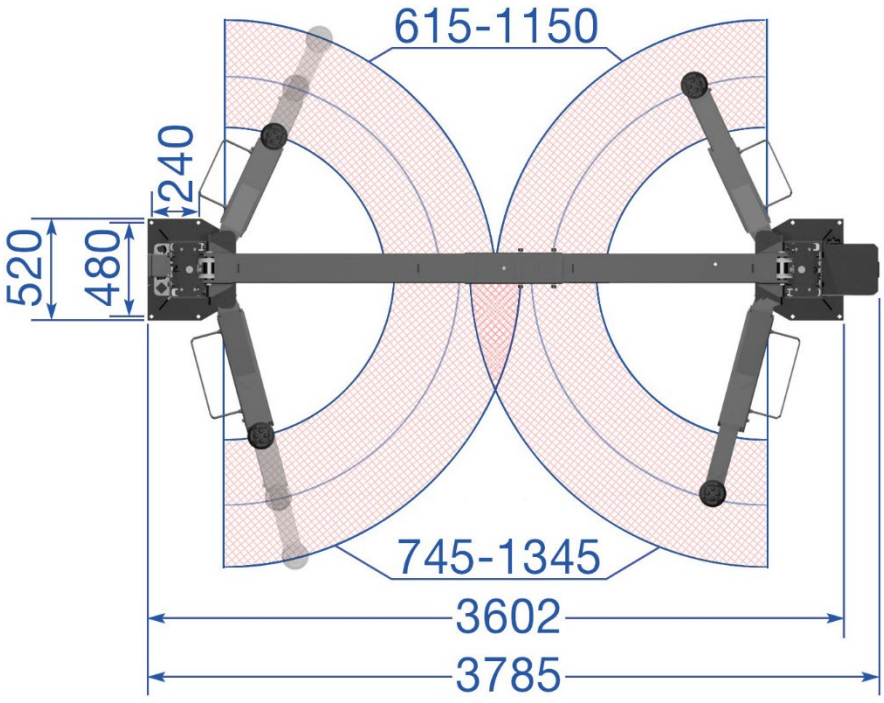
13.1 Dimensions for asymmetrical column configuration with low-profile arms





13.1 Dimensions for symmetrical column configuration with low-profile arms

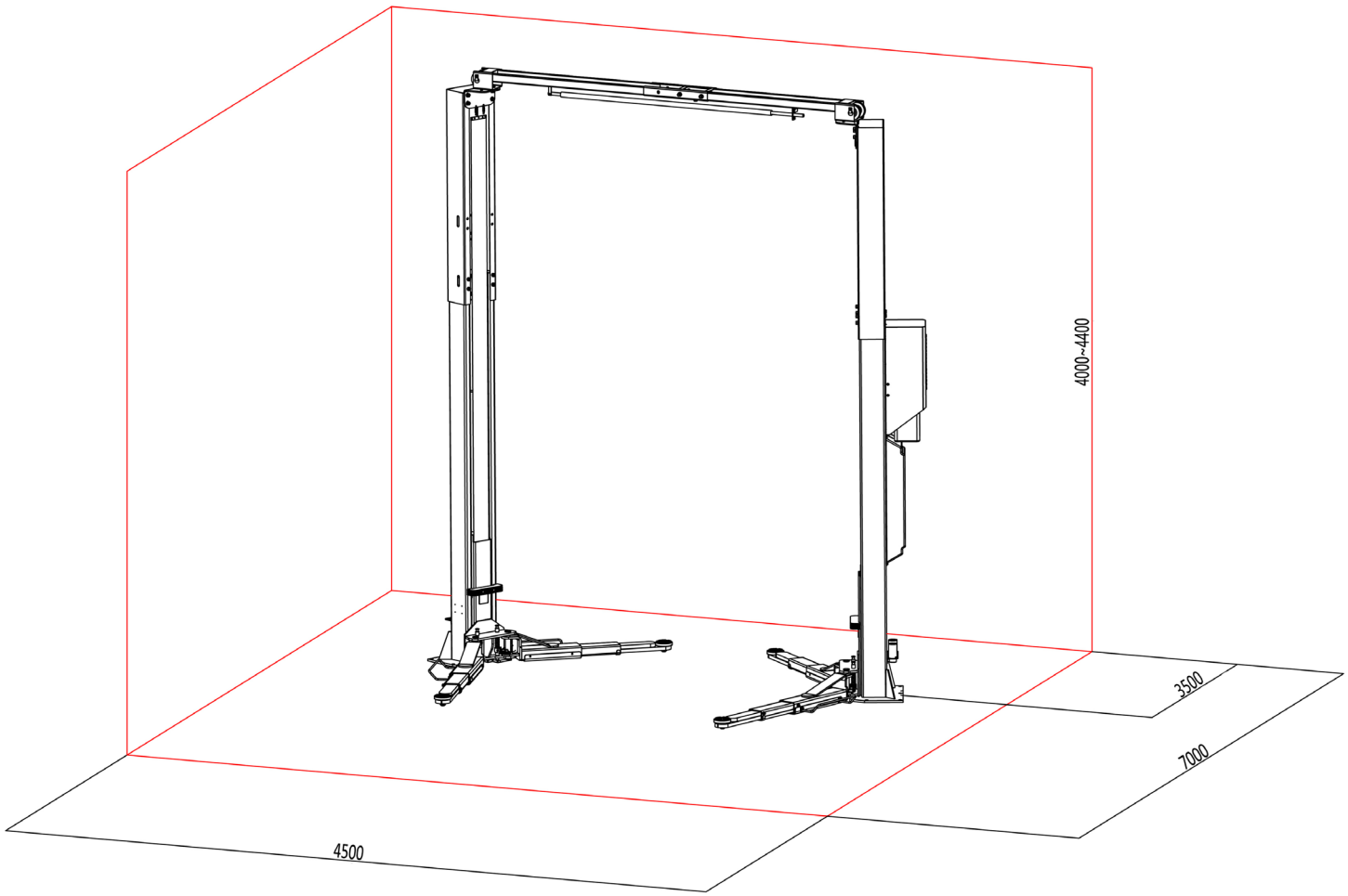


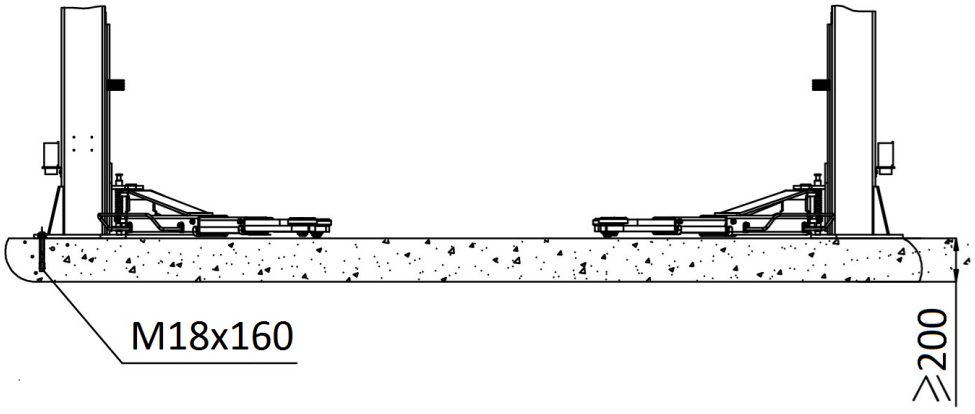


13.2 Foundation requirements and working area

Requirements for the concrete:

- Concrete C25/C30 with a minimum thickness of at least 200 mm.
- 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.





For ground exposed to frost, note the following:

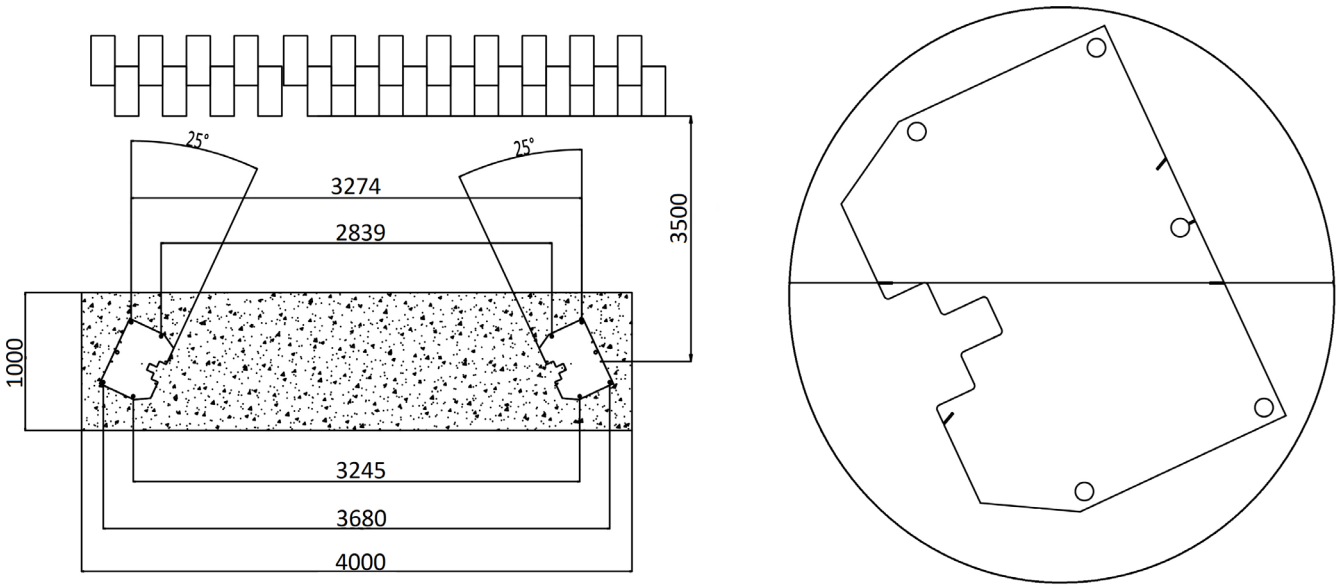
For frost exposure, the concrete must comply with exposure class XF4, as dripping de-icing agent cannot be ruled out. This results in the following minimum requirements for the concrete when exposed to frost:

Exposure class:	XF4
Maximum w/c:	0,45
Minimum compressive strength:	C30/37 (instead of C20/25)
Minimum cement content:	340 kg/m³
Minimum air void content:	4.0 %
Total foundation depth:	≤ 80 cm (due to frost resistance)
Remainder filled with gravel:	0/32

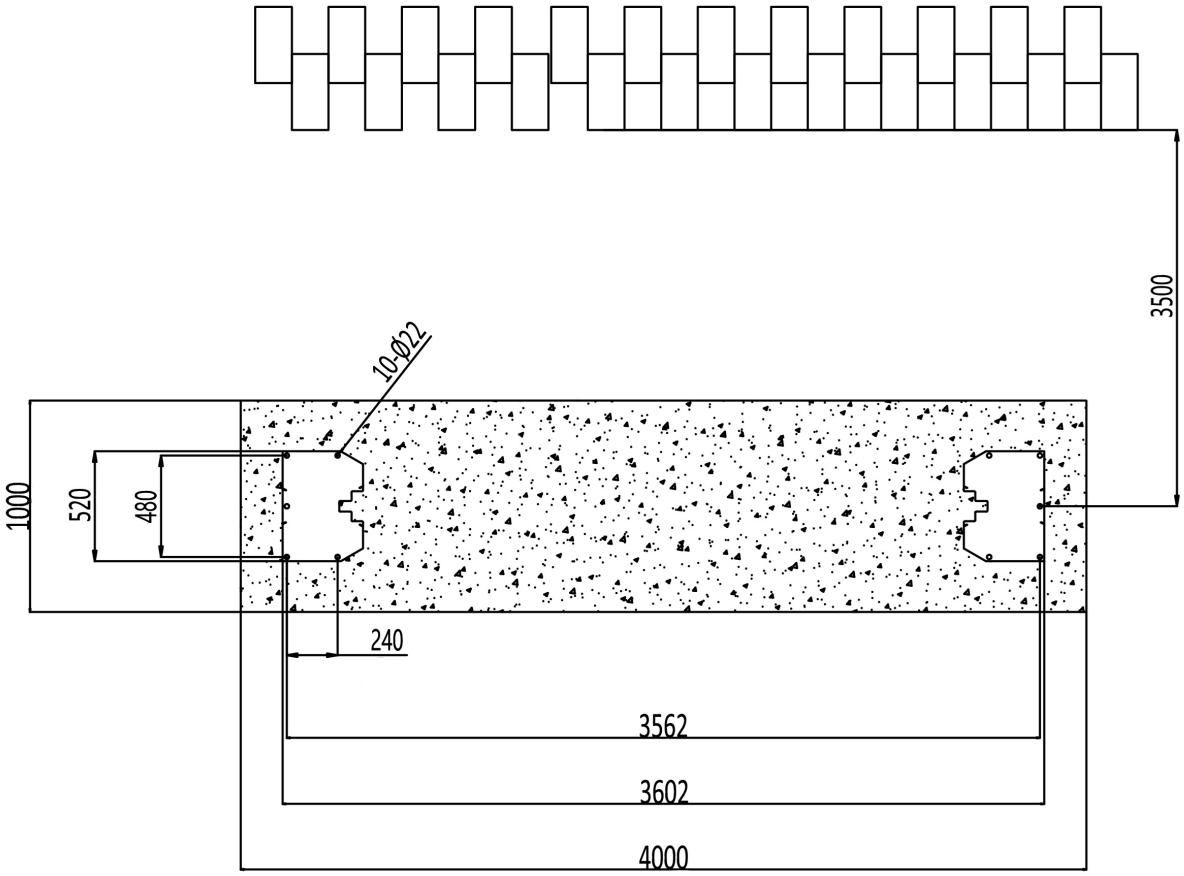
It must be noted, however, that the lifts are not designed for outdoor use (except for galvanised models). The control box is IP54, but the rest of the electrics, motors and limit switches are IP44 at most.

Basic layout for <u>asymmetrical</u> column configuration

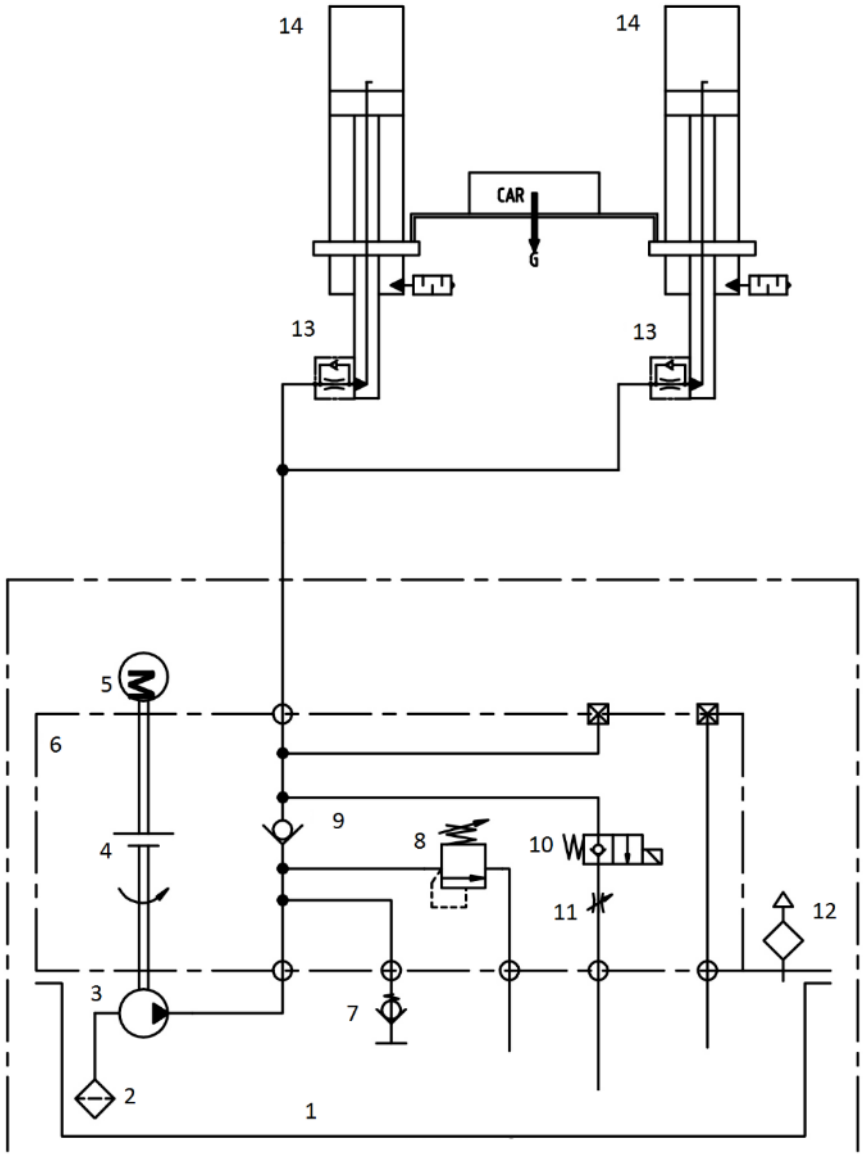
Check the angle of the two base plates with a straight line. The line must go through both openings provided on the base plates.



Basic layout for <u>symmetrical</u> column configuration



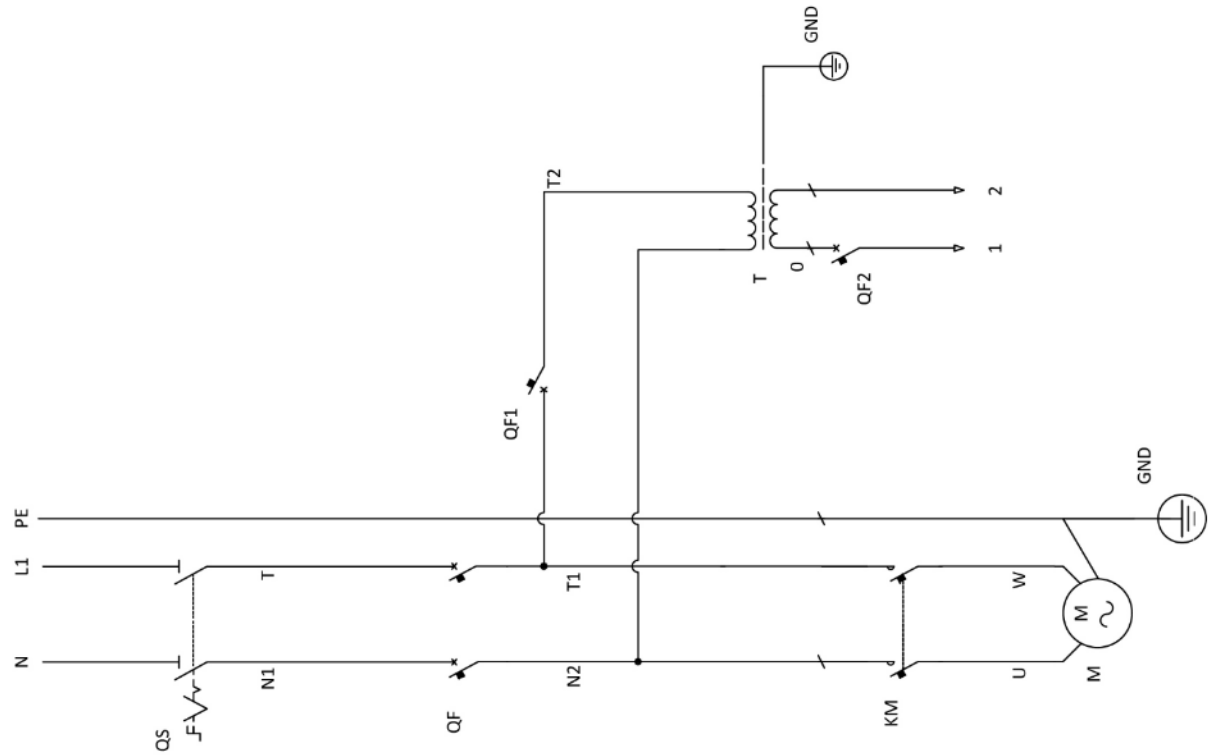
13.3 Hydraulic system

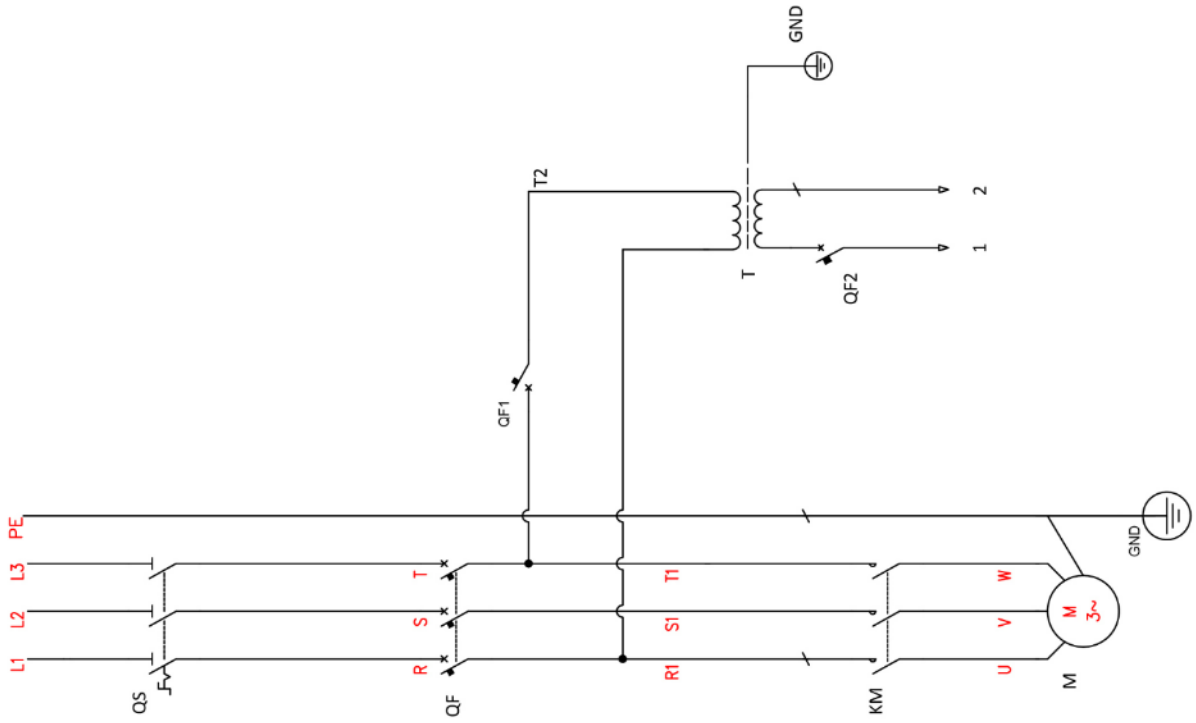


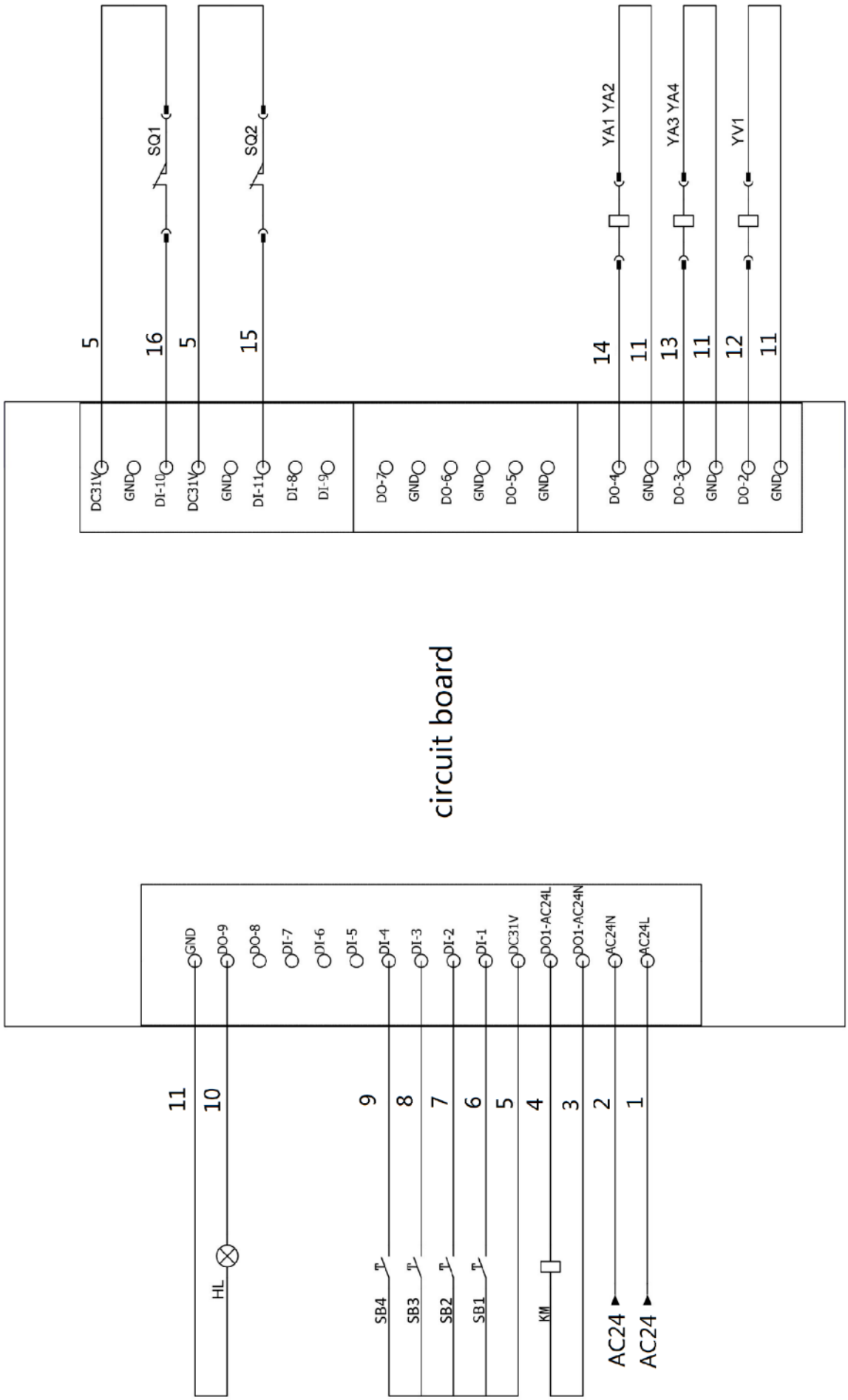
1. Oil tank
2. Oil suction filter
3. Gear pump
4. Clutch
5. Motor
6. Hydraulic block
7. Buffer valve
8. Pressure relief valve
9. Non-return valve
10. Solenoid valve for downward travel
11. Flow-limiting valve
12. Oil tank cover (venting)
13. Hose leak protection valve
14. Oil cylinder

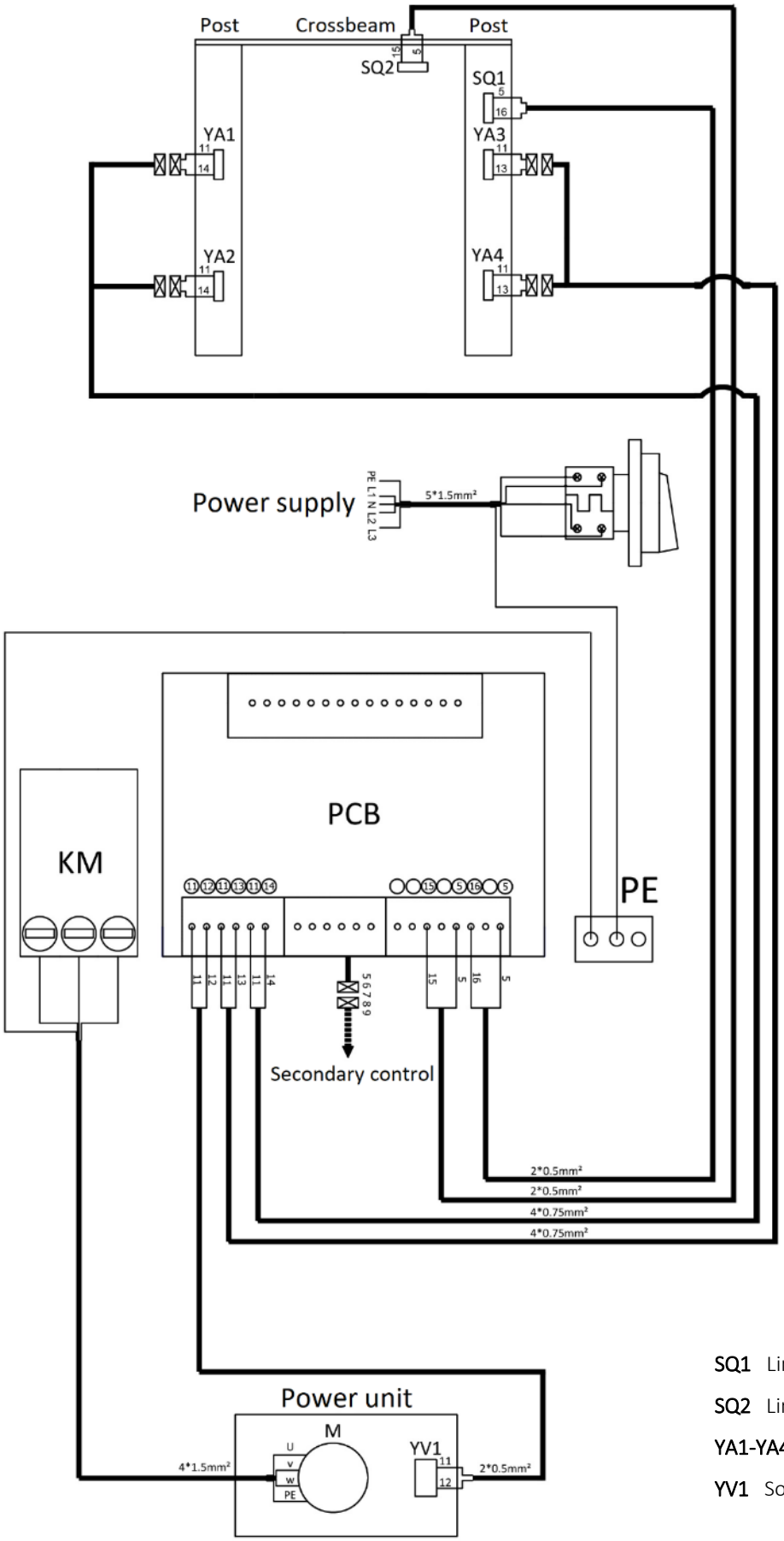
13.4 Circuit diagrams

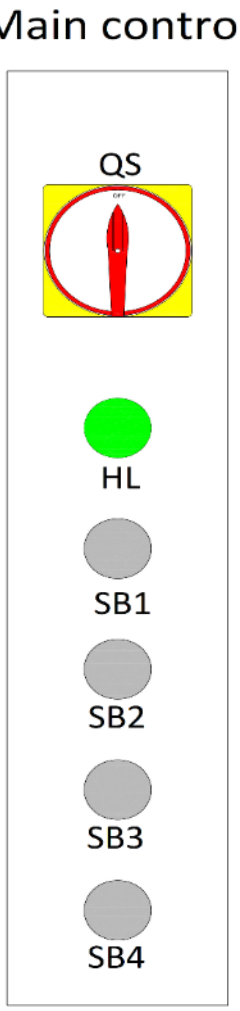
(Note: For specific voltage requirements, the actual voltage of your post lift may differ from the following diagram).






circuit board
DC31V
GND
DI-10
DC31V
GND
DI-11
DI-8
DI-9
DO-7
GND
DO-6
GND
DO-5
GND
DO-4
GND
DO-3
GND
DO-2
GND
SQ1
SQ2
YA1 YA2
YA3 YA4
YV1
5
16
5
15
14
11
13
11
12
11
GND
DO-9
DO-8
DI-7
DI-6
DI-5
DI-4
DI-3
DI-2
DI-1
DC31V
DO1-AC24L
DO1-AC24N
AC24N
AC24L
11
10
9
8
7
6
5
4
3
2
1
HL
SB4
SB3
SB2
SB1
KM
AC24
AC24





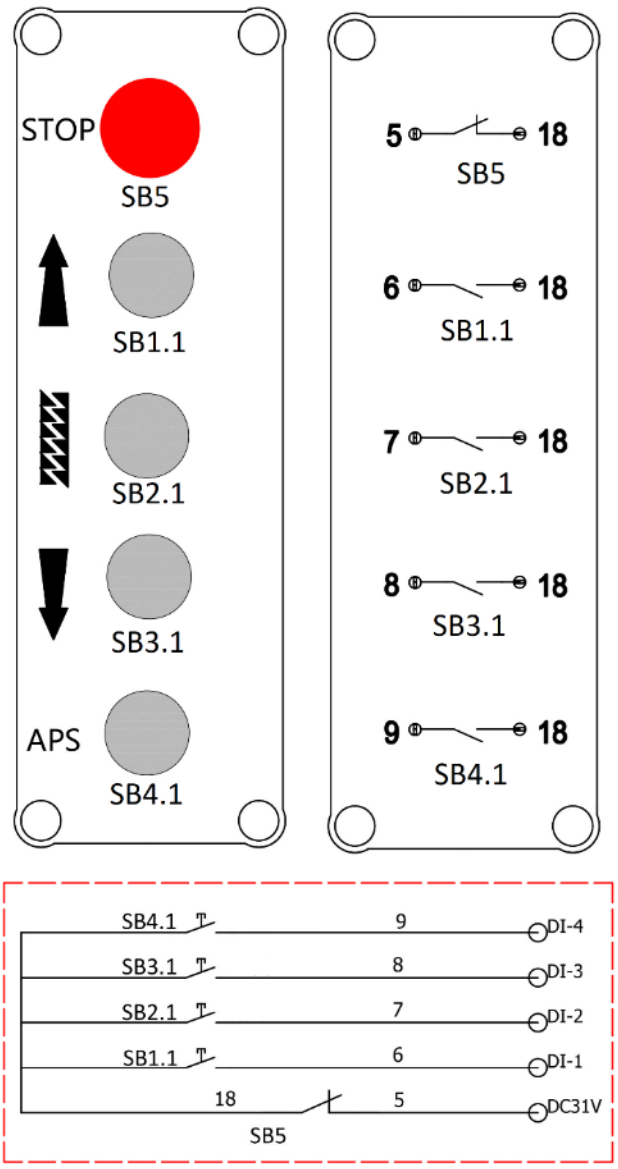
SQ1 Limit switch for maximum height

SQ2 Limit switch for roof guard

YA1-YA4 Electromagnet

YV1 Solenoid valve for downward travel

Auxiliary Control



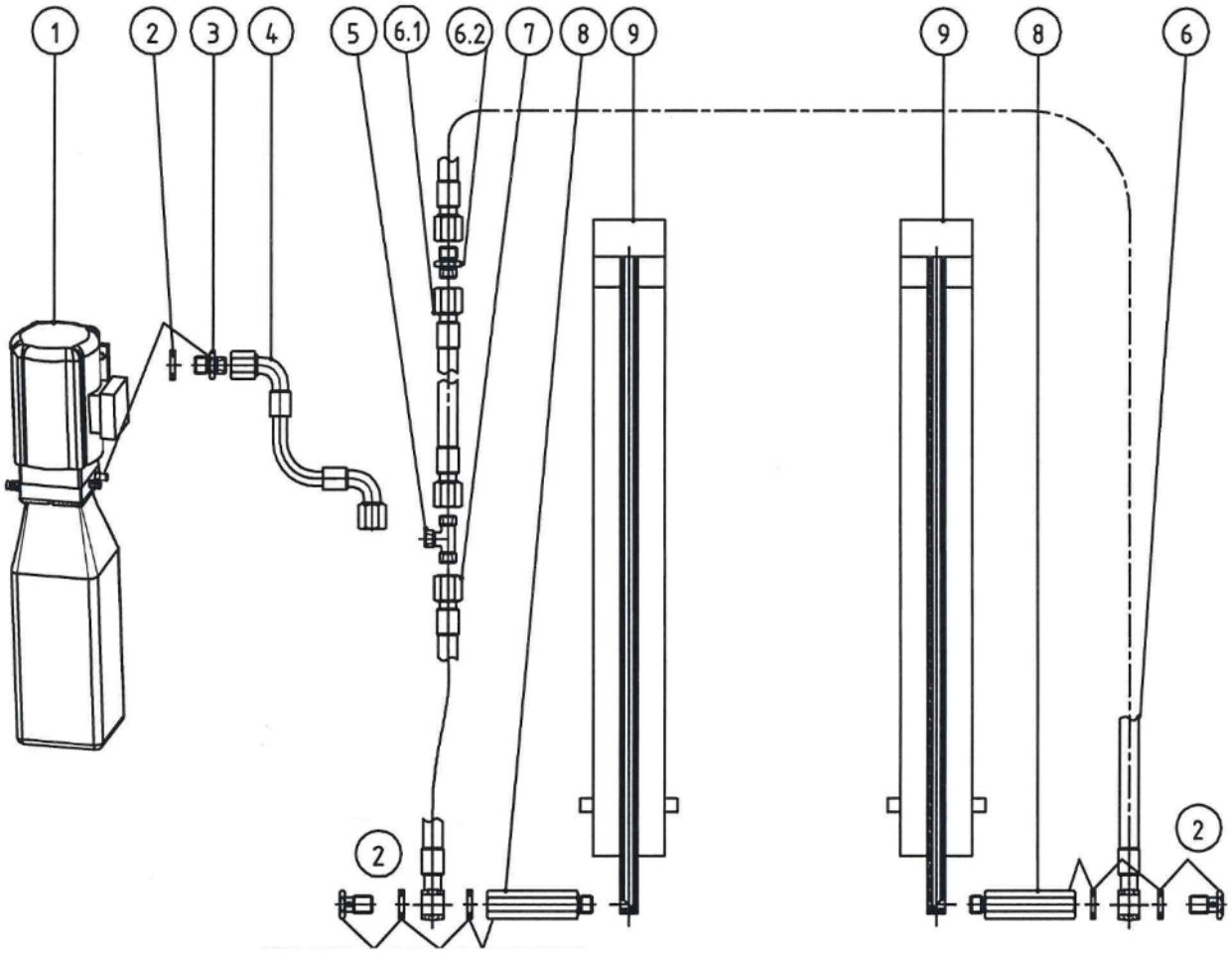
Mains cable	Yellow-green	Blue	Other colours
3 wires	Earthing cable	Neutral wire	Phase wire
5 wires	Earthing cable	Neutral wire	Phase wire
Mains cable	**Yellow-green**	**Other colours**	
4 wires	Earthing cable	Phase wire	

Pos.	Code	Description	Quantity
T	320102013	Transformer (two 380V220V)	1
T	320102014	Transformer (twice 400V230V)	1
T	320102015	Transformer (double 415V240V)	1
QF	320801003	Circuit breaker	1
QF1	320803003	Circuit breaker	1
QF2	320803006	Circuit breaker	1

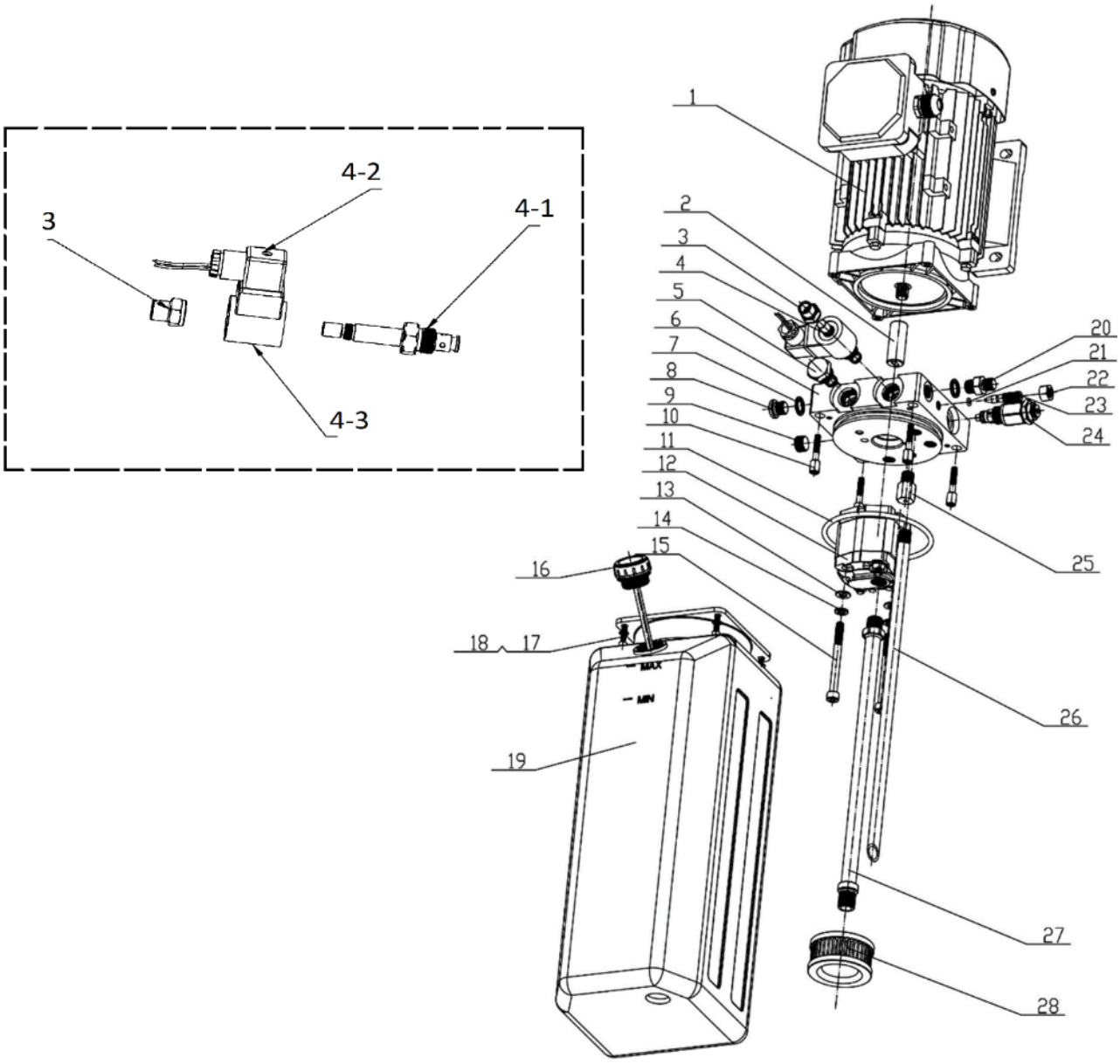
Pos.	Code	Description	Quantity
KM	320901011	AC protection	1
QA	320304001	Main switch	1
SB1, SB2, SB3, SB4 SB1.1 SB2.1 SB3.1 SB4.1	320401042	Button	8
SB5	320402030	Button	1
SQ1	320301011	Limit switch	1
SQ2	320301002	Limit switch	1
YA1 YA2 YA3 YA4	330310005	Electromagnet	4
HL	321800001	Current display	1
	321301026	Circuit board	1
	322000005	Auxiliary control box	1

NOTE: The transformers are different for power supplies with other voltages.
Please contact our customer service department when ordering spare parts.

13.5 Detailed drawing and parts description of the post lift



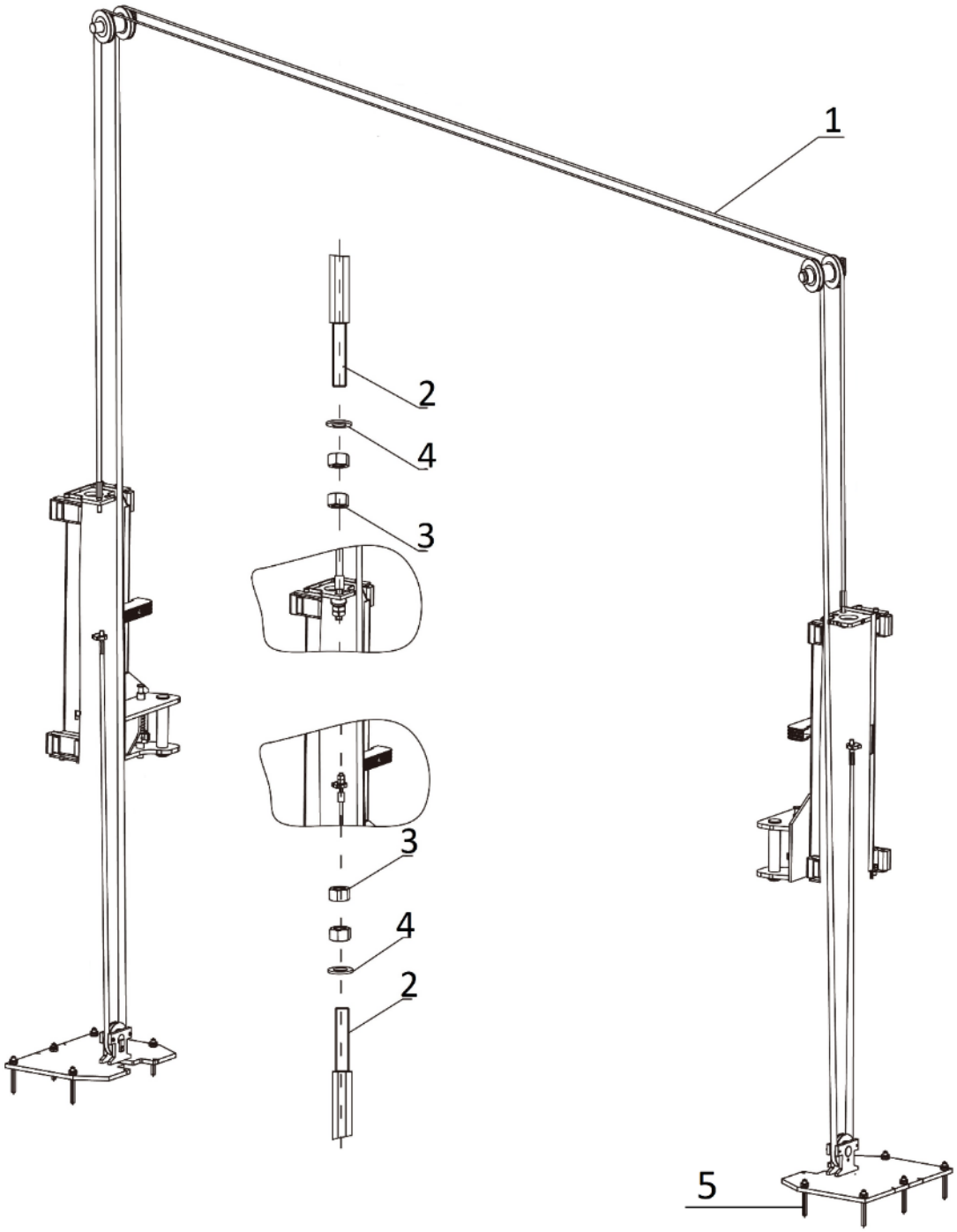
S/N	Code	Description	Specification	Quantity
1	622034290	Aggregate	400V/230V-3.5kW-3Ph-50Hz-2P	1
2	207103025	Composite disc	13.7*20*1.5	5
3	310101008	Switch connector	M14*1.5-G1/4 internal cone	1
4	624008046	Oil hose	Φ8.,L= 320 mm	1
5	615006003	Three-way connector	6214E-A4-B4	1
6	624002025B	Rubber oil hose	L= 8625 mm	1
6.1	624008246	Rubber oil hose (can only be used for a total height of 4300 mm)	L= 840 mm	1
6.2	410210191	Straight connection (can only be used for a total height of 4300 mm)	6603B-A9-B8	1
7	624002004B	Rubber oil hose	L= 2265 mm	1
8	615015003	Connecting element	6255E-A7-B7	2
9	625000013	Oil cylinder	YG5060-38-1800	2



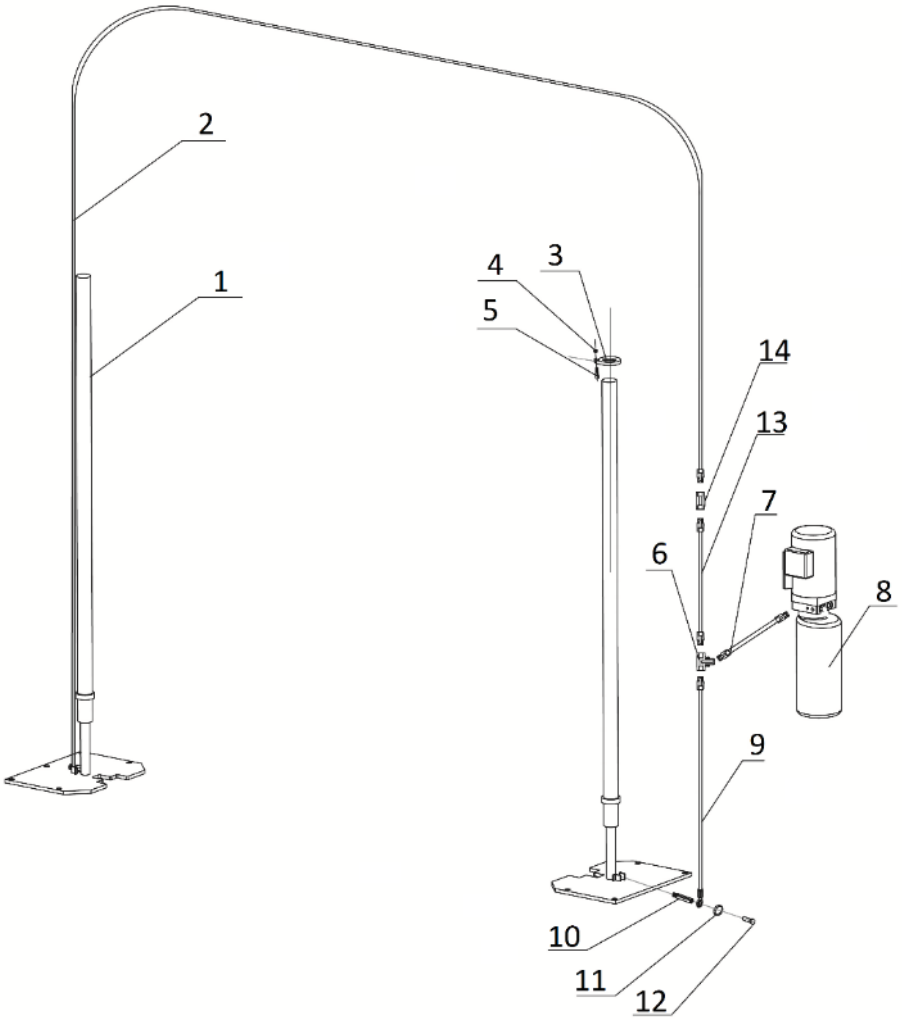
S/N	Code	Descriptions	Specification	Quantity
1	320204304	motor	400V/230V-3.5kW -3PH-50HZ-2P	1
2	330404006	Clutch	48mm（YBZ-F2.1D4H1/1-03）	1
3	203204102	Lock nut	FHLM-1/2-20UNF	1
4	791150005	Solenoid valve assembly (contains part no. 3, 4-1, 4-2 and 4-3)	DC24V	1
4-1	330311005	Valve piston	24DC (Keta)（LSV-08-2NCP-M-2H）	1
4-2	330308032	Solenoid plug	DIN43650-DC	1
4-3	330308031	Solenoid coil	LC2-0-C-2H,24VDC-	1
5	330302008	Non-return valve	YBZ-E2D3I1/1-03	1
6	330101113	Hydraulic block	LBZ-T2BK-8	1
7	207103019	Composite disc	M14	2
8	310101008	Transition connector	M14*1.5-G1/4 internal cone	1
9	210101014	Plug	Z3/8	1

S/N	Code	Descriptions	Specification	Quantity
10	201101100	Screw	M6*50（NLJLD）	4
11	207101098	O-ring	109*5.3	1
12	330201008	Gear pump (3.5 kW)	CBK-F242	1
13	204101005	Washer	M8	4
14	204201013	Spring washer	M8	2
15	202109072	Allen screw with hexagon socket (with spring washer)	M8*85	2
16	330502013	Oil tank cover (venting)	YBZ-BT-M30*2-B	1
17	202109144	Screw	M5*18	4
18	204101003	Washer	M5	4
19	330405051	Plastic oil tank	10L-SLYX-10L-L-BX	1
20	210101013	Plug	M14*1.5	1
21	207101099	O-ring	5*1.8	4
22	203102003	Hexagon nut (thin, 6mm)	M10*1	1
23	330305015	Flow-limiting valve	YBZ-E2D3I1/1-11A	2
24	330304007	Pressure relief valve	YF08-40	1
25	330301003	Buffer valve	HCF-Z1/4	1
26	330402001	Oil return line	YH-D	1
27	330401013	Oil-swallowing pipe	YBZ-SJYG350	1
28	330403001	Oil-sucking filter	YG-C	1

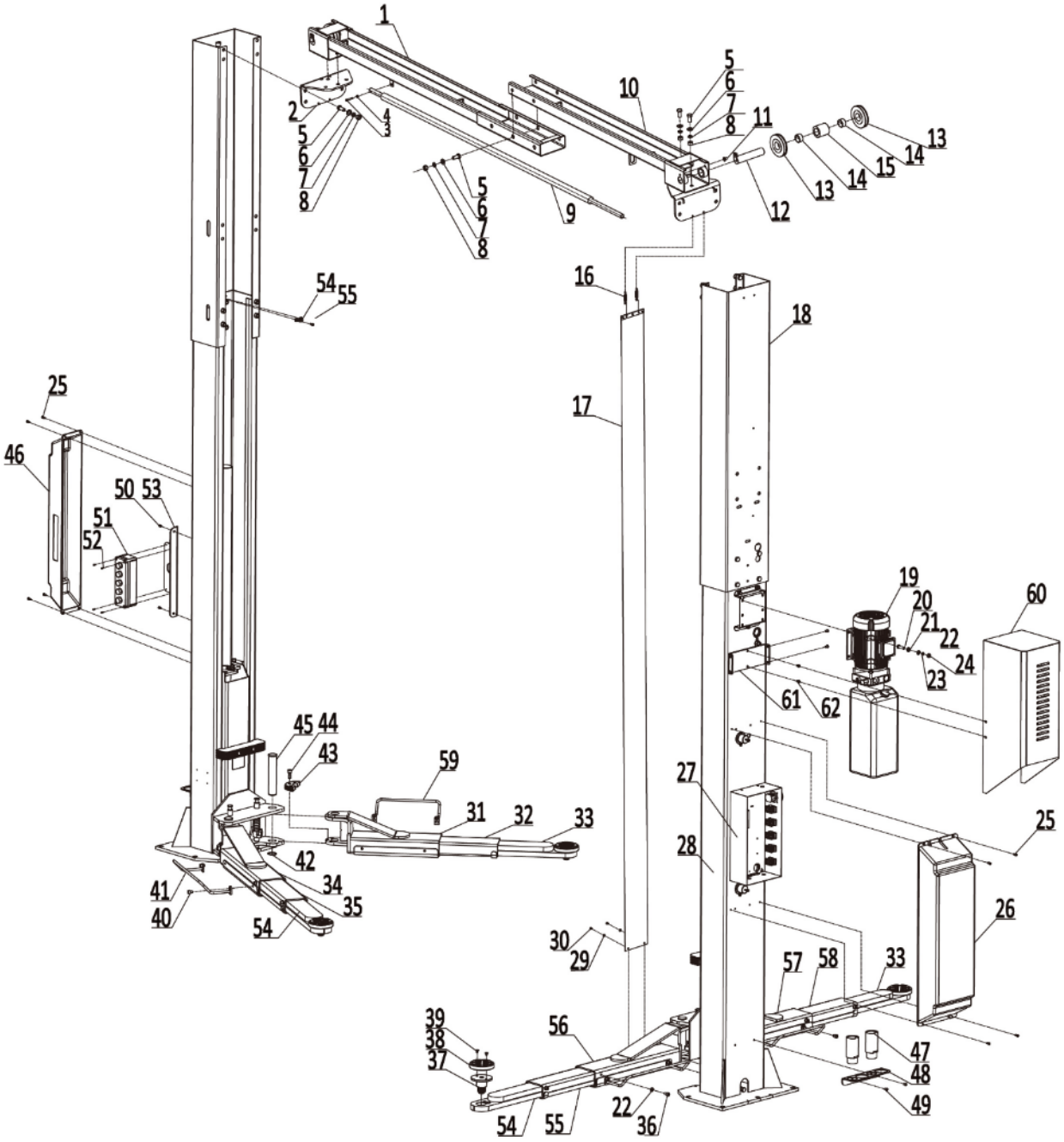
13.6 Exploded views and spare parts list



S/N	Code	Description	Specification	Quantity
1	615068742	Steel cable	62C-A22 L=11260MM Φ9.3	2
2	615068742	Steel cable	62C-A22 L=11260MM Φ9.3	2
3	203101009	Hexagon nut	M16	8
4	204101009	Washer	M16	4
5	201201007	Expansion screw	M18*160	10



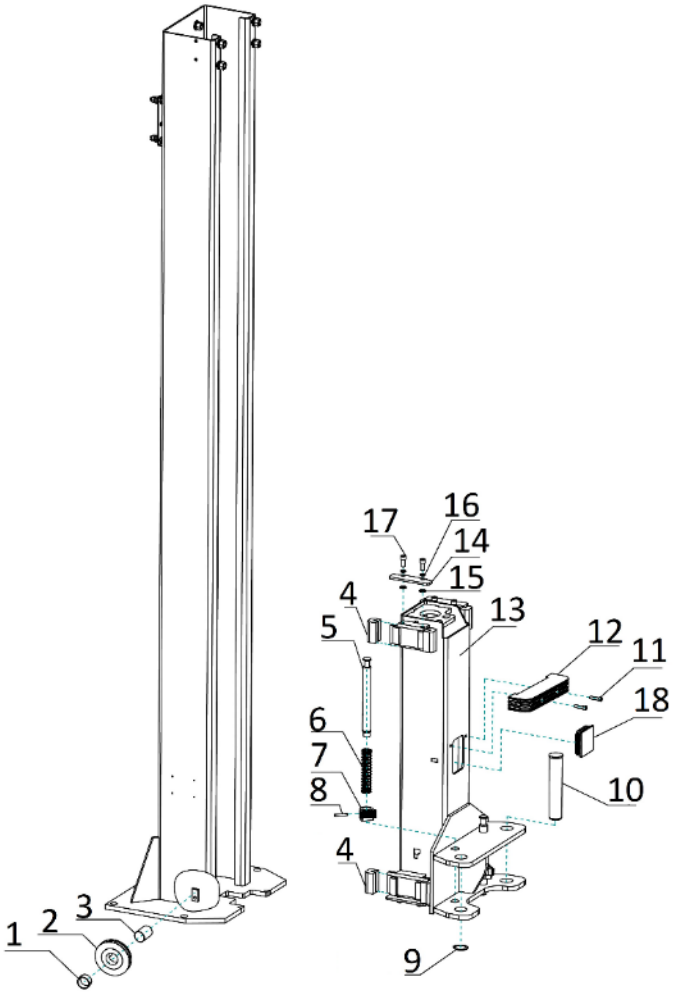
S/N	Code	Description	Specification	Quantity
1	625000013	Oil cylinder	YG5060-38-1800	2
2	624002025B	Rubber oil hose 3	L=8625mm	1
3	410170101B	Ring for cylinder mounting	6264-A24-B1	2
4	203103005	Hexagon lock nut	M6	2
5	202109024	Hexagon head screw fully rotatable	M6*35	2
6	615006003	Three-way plug	6214E-A4-B4	1
7	624008046	Rubber oil hose 1	L=320mm	1
8		Aggregate	3.5kW	1
9	624002004B	Rubber oil hose 4	L=2265mm	1
10	615015003	Composite connection	6255E-A7-B7	2
11	207103025	Composite disc	13.7*20.00*1.50(BS224)	2
12	615015003	Composite connection	6255E-A7-B7	2
13	624008246	Rubber oil hose 2 (optional, can only be used for a total height of 4300 mm)	L=840mm	1
14	410210191	Straight connection (optional, can only be used for a total height of 4300 mm)	6603B-A9-B8	1



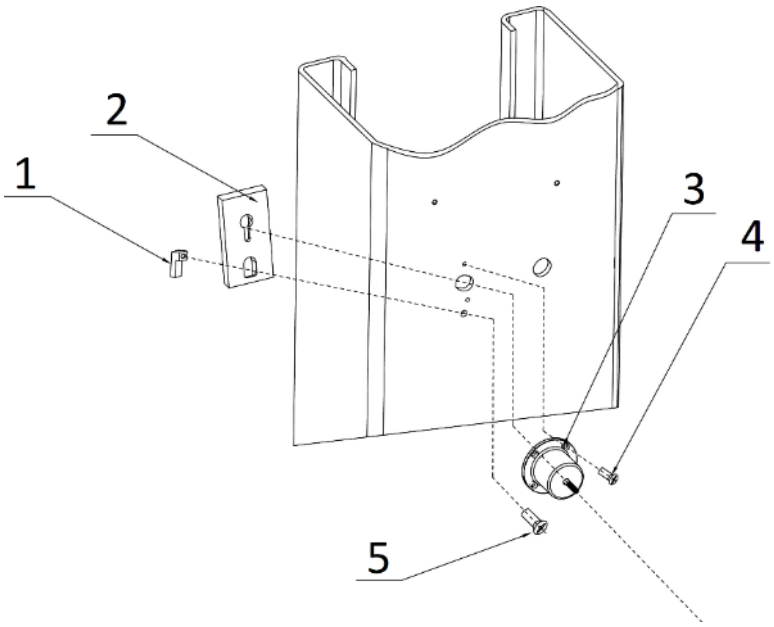
S/N	Code	Description	Specification	Quantity
1	614901691	Crossbar(off)	62C-A21-B1-42T-EA	1
2	614901732	Connecting plate	62C-A21-B3-42T-EA	2
3	202109024	Hexagon head screw with swivel joint	M6X35-GB70_1	1
4	203103005	Hexagon lock nut	M6-GB889	2
5	201102035	Hexagon head screw with swivel joint	M14X30-GB5783	33
6	204101008	Washer	D14-GB95	33
7	204201007	Spring washer	D14-GB93	33
8	203101008	Hexagon nut	M14-GB6170	33
9	420060010	Black foam hose	6214E-A21-B3	1

S/N	Code	Description	Specification	Quantity
10	614901692	Cross member (in)	62C-A21-B2-42T-EA	1
11	202111008	Countersunk head screw with hexagon socket	M10X16-GB70_3	2
12	612901718	Upper pulley shaft	62C-A21-B3	2
13	410902109	Belt pulley	C9Z-A1-B2	6
14	205101101	Warehouse	3520-SF-1X	6
15	410911631	Space envelope	62C-A21-B4	2
16	410274470C	Spring	6435B-A4-B30	4
17	615068743	Chain protection cloth (usable for a total height of 4300mm)	62C-A1-B5,L=3875mm	2
17	615068647	Chain protection cloth (usable for a total height of 3867mm)	62C-A1-B3,L=3440mm	2
18	410912171	Column extension	62CV3-A2-B1-C1	2
19	622034290	Aggregate	400V/230V-3.5kW-3Ph-50Hz-2P	1
20	201103004	Hexagon head screw with swivel joint	M10X35-GB5783	4
21	420040010	Anti-shock disc	6254E-A23	4
22	204101006	Washer	D10-GB95	26
23	204201005	Spring washer	D10-GB93	23
24	203101006	Hexagon nut	M10-GB6170	7
25	202109019	Allen screw with hexagon socket	M6X12-GB70_1	8
26	420680117	Protective cover 1 on the net-side post	62B-A17	1
27	420680177	Frame of the main switch box	62C-A20-42T-EA	1
28	614901757	Current side column	62C-A4-B1-42T-EA	2
29	204101004	Washer	D6-GB95	4
30	202101027	Phillips head screw with hexagon socket	M6X8-GB818	4
31	614901425	Support arm of the short 3-stage arm (left)	6254E-A29-B1	1
32	614901426	Centre arm of the short 3-stage arm (left)	6254E-A29-B2	1
33	614901427	Retractable arm of the short 3-stage arm	6254E-A29-B3	2
34	614901736	Support arm of the long 3-stage arm (left)	6254E-A30-B1	1
35	614901735	Centre arm of the long 3-stage arm (left)	6254E-A30-B2	1
36	202109040	Allen screw with hexagon socket	M10X16-GB70_1	6
37	610004547	Flat lifting tray (no contact pad)	6254E-A7-B4-V1	4
38	420040250	Round cushion	6254E-A7-B4-C4	4
39	202111004	Countersunk head screw with hexagon socket	M8X12-GB70_3	8
37+38+39	610004517	Turntable	6254E-A7-B4-V2	4
40	202110018	Allen screw with hexagon socket	M10X12-GB70_1	8
41	614004030B	Fender for the long 3-stage arm	6254E-MDN-A10-B4	2
42	204301013	Snap ring	D38-GB894	4
43	410901074	Semi-dental block	6254E-A7-B8	4
44	202109085	Allen screw with hexagon socket	M12X30-GB70_1	12
45	410049031B	Pin shaft	6254E-A12	4
46	420680181	Protective cover 2 on the secondary column	62B-A14	1

S/N	Code	Description	Specification	Quantity
47	612004003B	Height adapter	6254E-A11	4
48	410901744	Bracket for the height adapter	6254E-A1-B1-C6-V0	2
49	202110004	Hexagon socket head screw	M8X12-GB70_2	4
50	202109017	Allen screw with hexagon socket	M6X8-GB70_1	2
51	322000005	Frame for auxiliary control unit	250*80*70, black	1
52	202101008	Phillips head screw with hexagon socket	M4X10-GB818	4
53	410912133	Installation plate for the additional control box	62B-A1-B3	1
54	614901424	Retractable arm of the long 3-stage arm	6254E-A28-B3	2
55	614901423	Centre arm of the long 3-stage arm (right)	6254E-A28-B2	1
56	614901422	Support arm of the long 3-stage arm (right)	6254E-A28-B1	1
57	614901733	Support arm of the short 3-stage arm (right)	6254E-A31-B1	1
58	614901734	Centre arm of the short 3-stage arm (right)	6254E-A31-B2	1
59	614004012B	Fender for the short 3-stage arm	6254E-A27-B4	2
60	614901871	Motor cover	62B-A22-B1-1	1
61	410912142	Bracket for motor cover	62B-A22-B2-1	1
62	202110004	Hexagon socket head screw	M8X12-GB70_2	6



S/N	Code	Description	Specification	Quantity
1	205101101	Warehouse	3520-SF-1X	2
2	410902109	Belt pulley	C9Z-A1-B2	2
3	410540080	Lower pulley shaft	C12-A1-B3-C1	2
4	420680083	Slider	C9Z-A1-B5	16
5	410902001B	Tie rod	6254E-A2-B1-C1-1	4
6	410150121	Pressure spring	6254E-A2-B4	4
7	410901075	Tooth block	6254E-A2-B9	4
8	206102013	Elastic column pin	D6X40-GB879	4
9	204301013	Snap ring	D38-GB894	4
10	410049031B	Pin shaft	6254E-A12	4
11	202109031	Allen screw with hexagon socket	M8X30-GB70_1	4
12	420680124	Rubber pad protection	62B-A3-B11	2
13	614901880	Carrier	62C-A5-B1-42T-EA	2
14	410912173	Retaining plate for slider	62B-A7-B9-C2	8
15	204101006	Washer	D10-GB95	16
16	204201005	Spring washer	D10-GB93	16
17	202110012	Allen screw with hexagon socket	M10X25-GB70_2	16
18	210101018	Plastic protective cover	80X80MM	2



S/N	Code	Description	Specification	Quantity
1	410040071	Orientation block	6254E-A17	4
2	410040061	Safety locking plate	6254E-A13	4
3	330310005	Electromagnet	6254E-A14	4
4	202109017	Allen screw with hexagon socket	M6*8	8
5	202109020	Allen screw with hexagon socket	M6*15	4

EC-declaration of conformity

CE

TWIN BUSCH® GERMANY

The company

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

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

TW242CEB4.3 (EE-62CE-42T) | **4.200 kg**

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**

Applied harmonized standards and regulations

EN 1493:2022	**Vehicle Lifts**
EN 60204-1:2018	**Safety of Machinery – Electrical Equipment of Machines**
EN 12100:2010	**Safety of machinery - General principles for design - Risk assessment and risk reduction**

CE Certificate

MD-388 Issue 1

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place of issue:	Helsinki
technical file no.:	SHES221102015501-01/02/03/04

Certification body

SGS Fimko Ltd.,
Takamotie 8,
FI-00380 Helsinki
Notified Body Appointment No.: 0598

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 (adress as below)

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Tel. 06251 / 70585-0 · Fax: 70585-29

Authorized signatory: Michael Glade
Bensheim, 10.03.2023 Qualitätsmanagement

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