

**Model No. EE-6603BWF**

Long platform scissor lift

Recessed Installation

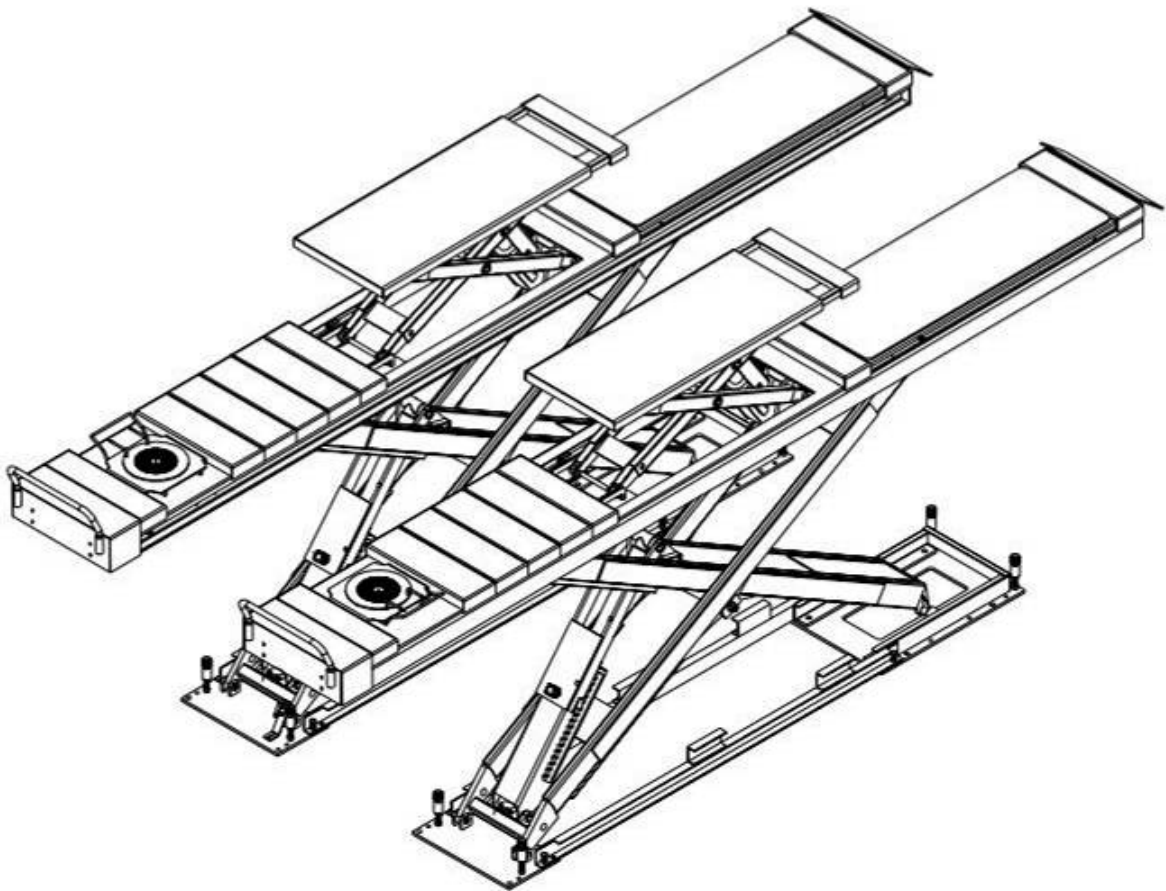
Manual Levelling

Lifting Capacity 4200KG/ 5000KG

**Installation, Operation  
and Parts Manual**



**EAE**



*Distributed by*

*Please read this entire manual carefully and completely before installation or operation of the lift.*

*Date: 29/03/2018*

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## IMPORTANT NOTES

Before start up, connecting and operating EAE products, it is absolutely essential that the operating instructions/owner's manual and, in particular the safety instructions are studied carefully. By doing so you can eliminate any uncertainties in handling EAE products and thus associated safety risks up front; something which is in the interest of you own safety and will ultimately help avoid damage to the device, When an EAE product is handed over to another person, not only the operating instructions but also the safety instructions and information on its designated use must be handed over to the person.

By using the product you agree the following conditions:

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### **Warranty**

The use of non-approved hardware will result in a modification of our products and thus to the exclusion of any liability or warranty, even if such hardware has been removed again in the interim.

It is not permissible to make any changes to our products and these are not only to be used together with genuine accessories and genuine replacement parts. Otherwise any warranty claims will be invalid.

### **Liability**

The liability of EAE is limit to the amount that the customer has actually paid for this product. This exclusion of liability does not apply to damages caused through willful misconduct or gross negligence on the part of EAE.

**All information in this manual is believed to be correct at time of publication.**

**EAE reserves the right to amend and alter technical data and composition without prior notice.**

**Please confirm at time of ordering.**

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# SAFETY NOTES

## 1.1 Operation of lifting platforms

This lift is specially designed for lifting motor vehicles. Users are not allowed to use it for any other purposes. The applicable national regulations, laws and directives must be observed.

Only users aged 18 or above who have been instructed on how to operate the lifting platform and have proven their ability to do so to the owner are to be entrusted with unsupervised operation of lifting platforms. The task of operating the lifting platforms must be granted in writing.

Before loading a vehicle onto the lifting platform, users should study the original operation instructions and familiarize themselves with the operating procedures in several trial runs.

**Lift vehicle within the rated load. Don't attempt to raise vehicles with excessive weight.**

## 1.2 Checking of the lifting platforms

Checks are to be based on the following directives and regulations:

- Basic principles for testing lifting platforms
- The basic health and safety requirements stipulated in the directive 2006/42/EC
- Harmonized European standards
- The applicable accident prevention regulations

The checks are to be organized by the user of the lifting platform. The user is responsible for appointing an expert or qualified person to perform checking. It must be ensure that the person chosen satisfies the requirements.

The user bears special responsibility if employees of the company are appointed as experts or qualified persons.

### 1.2.1 Scope of checking

Regular checking essentially involves performing a visual inspection and a functional test. This includes checking the condition of the components and equipment, checking that the safety systems are complete and functioning properly and that the inspection log book is completely filled in. The scope of exceptional checking depends on the nature and extent of any structural modification or repair work.

### 1.2.2 Regular checking

After initial commissioning, lifting platforms are to be checked by a qualified person at intervals of not longer than one year.

**A qualified person** is somebody with the training and experience required to possess sufficient knowledge of lifting platforms and who is sufficiently familiar with the pertinent national regulations, accident prevention regulations and generally acknowledged rules of engineering to be able to assess the safe operating condition of lifting platforms.

### 1.2.3 Exceptional checking

Lifting platforms with a lift height of more than 2 meters and lifting platforms intended for use with people standing under the load bearing elements of the load are to be checked by an expert prior or reuse following structural modifications and major repairs to load bearing components.

**An expert** is somebody with the training and experience required to possess specialist knowledge of lifting platforms and who is

sufficiently familiar with the pertinent national work safety regulations, accident prevention regulations and generally acknowledged rules of engineering to be able to check and give an expert opinion on lifting platforms.

### 1.3 Important safety notices

1.3.1 Recommend for indoor use only, DO not expose the lift to rain, snow or excessive moisture.

1.3.2 Only use this lift on a surface that is stable and capable of sustaining the load. Do not install the lift on any asphalt surface.

1.3.3 Read and understand all safety warnings before operating the lift.

1.3.4 Do not leave the controls while the lift is still in motion.

1.3.5 Keep hands and feet away from any moving parts. Keep feet clear of the lift when lowering.

1.3.6 Only these properly trained personnel can operate the lift.

1.3.7 Do not wear unfit clothes such as large clothes with flounces, ties, etc., which could be caught by moving parts of the lift.

1.3.8 To prevent evitable incidents, surrounding areas of the lift must be tidy and with nothing unsecured.

1.3.9 The lift is simply designed to lift the entire body of vehicles, with its maximum weight within the lifting capacity.

1.3.10 Always insure the safety locks are engaged before any attempt to work near or under the vehicle. Never remove safety related components from the lift. Do not use if safety related components are damaged or missing.

1.3.11 Do not rock the vehicle while on the lift or remove any heavy component from vehicle that may cause excessive weight shift.

1.3.12 Check at any time the parts of the lift to ensure the agility of moving parts and the performance of synchronization. Ensure regular maintenance and if anything abnormal occurs, stop using the lift immediately and contact our dealers for help.

1.3.13 Lower the lift to its lowest position and do remember to cut off the power source when service finishes.

1.3.14 Do not modify any parts of the lift without manufacturer's advice.

1.3.15 If the lift is going to be left unused for a long time, users are required to:

- a. Disconnect the power;
- b. Empty the oil tank;
- c. Lubricate the moving parts with hydraulic oil.

**WARNING:** The warnings, cautions and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.



**Attention:** For environment protection, please dispose the disused oil properly.

### 1.4 Warning labels

All safety warning labels are clearly depicted on the lift to ensure that the operator is aware of and avoid the dangers of using the lift in an incorrect manner. The labels must be kept clean and they have to be replaced if detached or damaged. Please read carefully the meaning of each label and memories them for future operation.

## SAFETY ADVICE

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 <p style="text-align: left; padding-left: 10px;">Only trained personnel are allowed to operate the lift.</p>	<p style="text-align: left; padding-left: 10px;">Always keep lift area clear when lowering or raising vehicle.</p> 
 <p style="text-align: left; padding-left: 10px;">Do not try to raise a vehicle exceeds the rated capacity.</p>	<p style="text-align: left; padding-left: 10px;">Never raise or lower a vehicle with one side platform.</p> 
 <p style="text-align: left; padding-left: 10px;">Watch closely the vehicle during raising or lowering.</p>	<p style="text-align: left; padding-left: 10px;">It is not allowed to work under the vehicle if safety teeth are not engaged.</p> 
 <p style="text-align: left; padding-left: 10px;">Make sure that two platforms are of equal height from the floor when safety teeth engaged.</p>	<p style="text-align: left; padding-left: 10px;">Avoid excessive rocking of vehicle while on lift.</p> 
 <p style="text-align: left; padding-left: 10px;">Do not climb onto the lift platforms or raised vehicle during lifting or lowering.</p>	<p style="text-align: left; padding-left: 10px;">Always keep the lift pit clean and clear of any objects or contaminants.</p> 
 <p style="text-align: left; padding-left: 10px;">Do not change the safety mechanism.</p>	<p style="text-align: left; padding-left: 10px;">Carryout maintenance regularly as indicated in the manual.</p> 

## 1.5 Potential safety risks

### 1.5.1 Mains voltage



Insulation damage and other faults may result in accessible components being live

Safety measures:

- Only ever use the power cord provided or a tested power cord.
- Replace wires with damaged insulation.
- Do not open the operating unit.

### 1.5.2 Risk of injury, danger of crushing



In the event of excessive vehicle weight, incorrect mounting of the vehicle or on removing heavy object, there is a risk of the vehicle falling off the lifting platform or tipping up.

Safety measures:

- The lifting platform is only ever to be employed for the intended purpose.
- Carefully study and heed all the information given in Section 1.4.
- Observe the warning notices for operation.

## 1.6 Noise level

Noise emitted during operating the lift should be less than 70dB. For your health consideration, it is suggested to place a noise detector in your working area.

# PACKING, STORAGE AND TRANSPORTATION

Packing, lifting, handling, transporting operations must be performed only by experienced personnel with appropriate knowledge of the lift and after reading this manual.

## 2.1 The lift was dismantled into 3 parts for transportation

Name	Packed by	Specification	Dimension	Weight	Quantity
Control cabinet	Wooden case	6603BWF	51*48*130cm	84KG	1
Power side platform	Carton with wooden base	*.42L.42T	463*65*46cm	1050KG	1
		*.48L.42T	520*65*46cm	1120KG	
		*.51L.50T	550*65*46cm	1180KG	
The opposite platform	Carton with wooden base	*.42L.42T	463*65*46cm	1050KG	1
		*.48L.42T	520*65*46cm	1120KG	
		*.51L.50T	550*65*46cm	1180KG	

## 2.2 Storage

The packs must be kept in a covered and protected area in a temperature range of  $-10^{\circ}\text{C}$  to  $+40^{\circ}\text{C}$ . They must not be exposed to direct sunlight, rain or water.

### Stacking the packs

We advise against stacking because the packs are not designed for this type of storage. The narrow base, heavy weight and large size of the packs make stacking difficult and potentially dangerous.

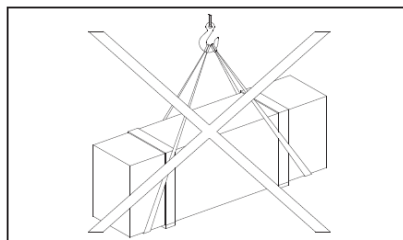
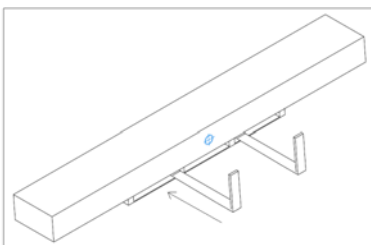
If stacking is unavoidable, use all appropriate precautions:

- never stack to more than 2 meters in height.
- never make stacks of single packs. Always stack pairs of packs in a cross pattern so that the base is bigger and the resulting stack is more stable. Once the stack is complete, restrain it using straps, ropes or other suitable methods.

A maximum of two packs can be stacked on lorries, in containers, and in railway wagons, on condition that the packs are strapped together and restrained to stop them falling.

## 2.3 Lifting and handling

The packs can be lifted and transported only by using lift trucks. The center of gravity and lashing points are marked on the packaging. Never attempt to hoist or transport the unit using lifting slings.



### Opening the packs

When the lift is delivered make sure that it has not been damaged during transportation and that all the parts specified on the packing list are present.

Packs must be opened adopting all the precautions required to avoid injury to persons (keep at a safe distance when cutting the straps) or damage to parts of the machine (be careful that no parts are dropped while you are opening the packing)

**Take special care with the hydraulic power unit, the control panel and the platform cylinder.**

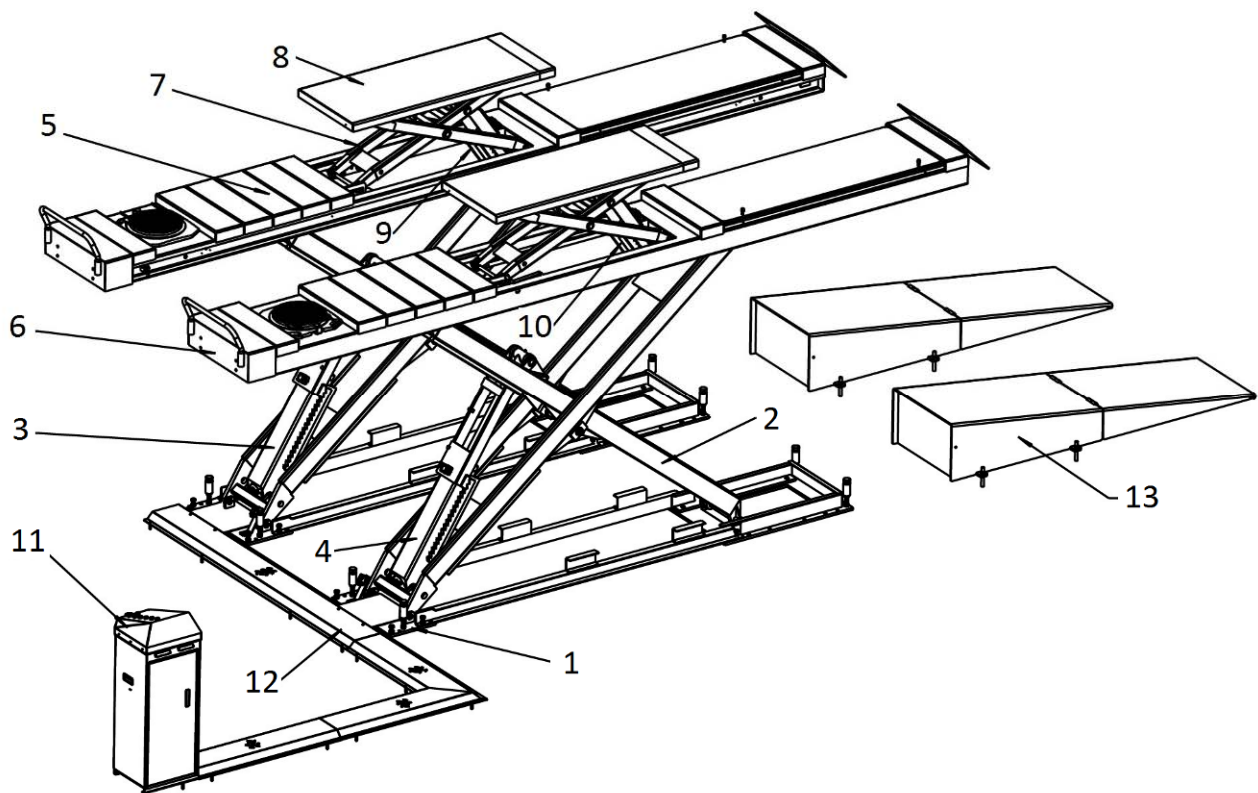
## PRODUCT DESCRIPTIONS

### 3.1 General descriptions

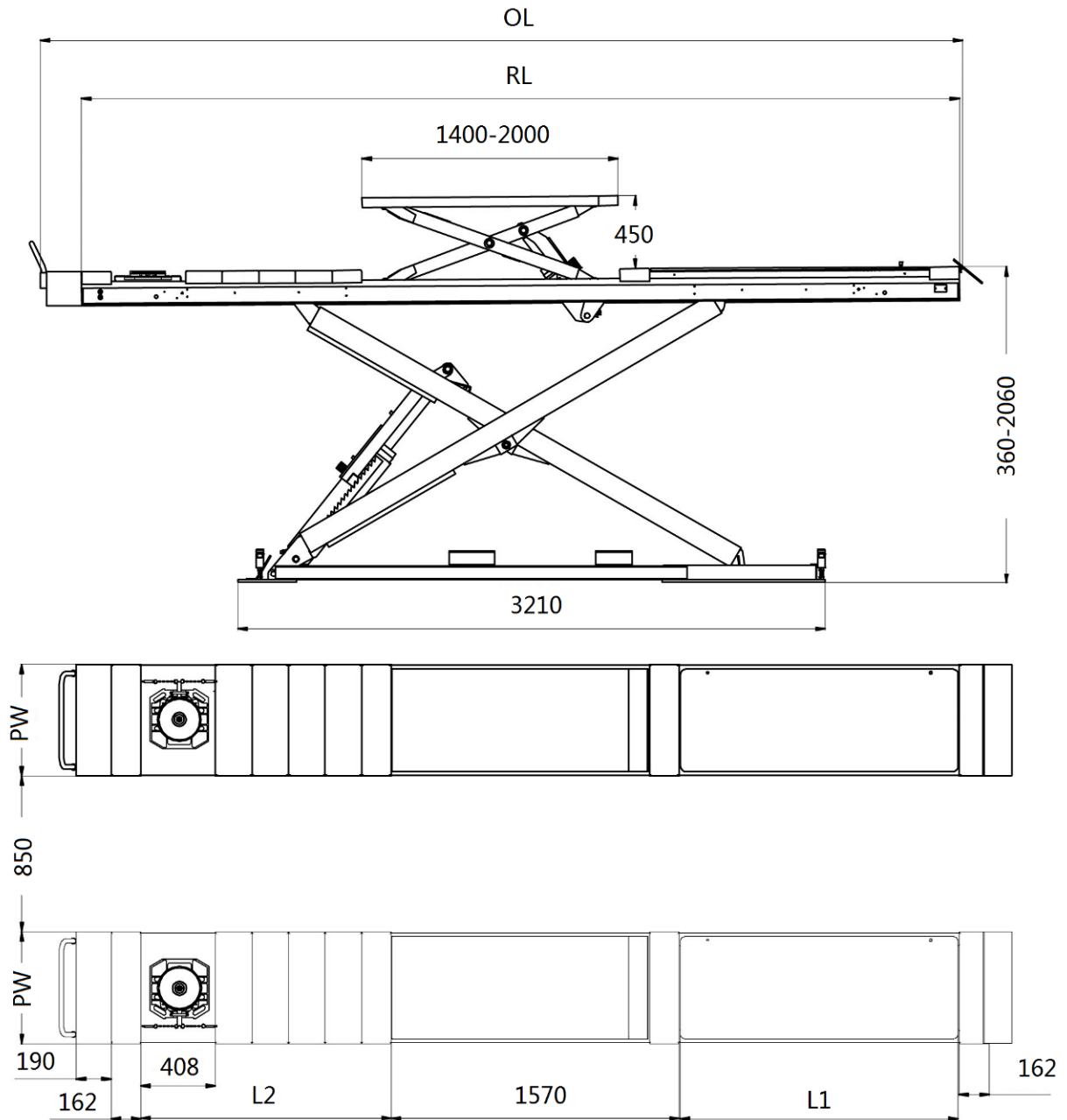
This model is recessed mounted and is mainly composed by two lifting platforms and a set of power unit. The gear pump works making oil in the pump will push upwards the pistons of oil cylinders. Thus, scissor brackets of the lift rise accordingly. In case of hydraulic failure, the mechanical safety locking unit ensures no sudden fall of lifting platforms.

Besides, designs like 24V working voltage of control box and limit switch, low-height alarming buzzer, anti-surge valves, etc. have fully considered your personal security.

### 3.2 Construction of the lift



1. Base frame assembly
2. Support arm of the main lift
3. Main oil cylinder and mechanical lock
4. Secondary oil cylinder and mechanical lock
5. Main lifting platform
6. Secondary lifting platform
7. Support arm of the wheel lift
8. Platform of the wheel lift
9. Main cylinder and lock of the wheel free lift
10. Secondary cylinder and lock of the wheel free lift
11. Control cabinet
12. Oil hose covers (for surface mount)
13. Drive-on ramp (for surface mount)

**3.3 Dimensions**


Specification	PW	RL	OL	L1	L2
*.42L	610	4200	4442	1320	970
*.48L	610	4800	5042	1520	1370
*.51L	610	5100	5342	1520	1570

### 3.4 Technical data

Specification	*.42L.42T	*.48L.42T/* .48L.50T	*.51L .50T
Rated capacity of the main lift	4200KG	4200KG/5000KG	5000KG
Applicable wheel track of the main lift	1100~1800mm	1100~1800mm	1100~1800mm
Applicable wheel base of the main lift	≤4000mm	≤4600mm	≤4900mm
Full raised height of the main lift	2060mm		
Initial height of the main lift	360mm		
Full raised time (with rated load)	≤50s		
Full lowered time (with rated load)	≤50s		
Rated capacity of the wheel free lift	3500KG		
Applicable wheel track of the wheel free lift	1100~1800mm		
Applicable wheel base of the wheel free lift	2100~2800mm		
Full raised height of the wheel free lift	450		
Hydraulic working pressure ( MPa )	24	24 / 29	29
Pneumatic working pressure (Bar)	6-8		
Oil tank volume	18L		

## INSTALLATION INSTRUCTIONS

### 4.1 Preparations before installation

#### 4.1.1 Space requirements.

Refer to 3.3 for the dimensions of the lift. There must also be a clearance of at least 1 meter between the lifting platform and fixed elements (e.g. wall) in all lifting positions. There must be sufficient space at the ends of the lifting platform for driving vehicles on and off.

**To stop vehicles colliding with the ceiling, it is advisable to fit an overhead light barrier in low ceiling buildings.**

#### 4.1.2 Foundations and connections

The user must have the following work performed before erecting the lift.

- Construction of the foundation following consultation with the manufacturer's customer service or an authorized service agent. Routing of the wiring to the installation location. **The user must provide fuse protection for the connection. *Electrical system connection must be done by licensed technicians.* Requirements for power supply cable of the installation site: at least 2.5mm<sup>2</sup> wire core for 3Ph power and 4.0mm<sup>2</sup> wire core for 1Ph power.**
- **Refer also to the corresponding information on the name plate and in the operation instructions. Before doing electrical connection, make sure the lift is electrically adapt to the local power supply.**
- Routing of the compressed air connection to the installation location.

### 4.1.3 Foundations preparations

Please refer to **Annex 1** for recessed floor dimensions.

### 4.1.4 Tools and equipment for installation

Tool name	Specification	Quantity
Electrical drill	With D16 and D18 drill bit.	1
Open spanner	D17-19mm	2
Adjustable spanner	bigger than D30mm	1
Cross socket screw driver	PH2	1
Quick spanner handle adapter/ Ratchet		1
Socket spanner	D24mm	1
Levelling device		1
Hammer	10 pounds	1
Truck lift	Capacity more than 2500KG	1
Lifting strap	Capacity, 1000KG	2
Lifting strap	Capacity, 2000KG	1

### 4.1.5 Checking parts

Unfold the package and check if any parts missed as per the following list. Do not hesitate to contact us in case any parts missed, but if you do not contact us and insist installing upon the lack of some parts, we as well as our dealers will not bear any responsibility for this and will charge for any parts subsequently demanded by the buyer.

No.	Name	Specification	Qty
1	Power side lifting platform assembly	6603B-01	1
2	Secondary lifting platform assembly	6603B-02	1
3	Control cabinet	6603BWF.E	1
4	Rubber pad	38*120*160mm	4
5	Expansion bolt	M16*120	16
6	Air hose	D=8	2m
7	Air hose connector	PP-20 5*8	1
8	User's Manual		1
9	Key		1
10	Oil tank label		1

## 4.2 Installation attentions

4.2.1 Joints of oil hose and wiring must be firmly connected in order to avoid leakage of oil hose and looseness of electrical wires.

4.2.2 All bolts should be firmly screwed up.

4.2.3 Do not place any vehicle on the lift in the case of trial running.

## 4.3 General Installation Steps

### **Step 1: Dismantle the package and place lifting platforms into recessed pits with a forklift and lifting straps.**

Raise the platform by using a forklift and 2 lifting straps until the mechanical lock is engaged. Dismantle the bolts that fix the platform and its wooden package and then hoist the platform onto the expected installation site.

**Attention 1: Avoid scratching the painting surface and hoses.**

**Attention 2: Before hoisting, make sure the hoses and wires are well protected against damage.**

**Attention 3: It is necessary to hold the platform during the hoisting process. Irrelevant person is not allowed in installation area.**

### **Step 2: Connect hydraulic system.**

Connect the oil hoses to the power unit as per the diagram for oil hose connection. Annex 3.

*Attention: Connect as per the marks on the hoses and do not contaminate the hydraulic components during the connection.*

### **Step 3: Connect the pneumatic release system**

Connect the pneumatic release system by the diagram of air hose connection in Annex 4.

Attention: Do not contaminate the pneumatic components during the connection.

### **Step 4: Connect electrical wires.**

Refer to Annex 2 when fix the electrical system.

Connect the wire connectors for raising and lowering limit switches

Connect the power supply cable to external electricity supply.

*(For three phase power supply, if the lift doesn't raise and the motor may turn in the wrong direction, in such event, interchange wires U, V in the control cabinet).*

### **Step 5: Fill with hydraulic oil.**

**ONLY CLEAN AND FRESH OIL ONLY .Lift must be fully lowered before changing or adding hydraulic oil.**

Pour 16 liters anti-abrasion hydraulic oil into the oil tank. The level of oil shall reach the tippets volume mark of the tank.

Run the lift for several cycles and add more oil until the lifting platform can reach its maximum height.

**Note:** It is suggested to use NO.46 hydraulic oil when average temperature of the location is above 18 degree Celsius and using NO.32 hydraulic oil when temperature is below 18 degree Celsius.

**Change the oil 6 months after initial use and change once per year thereafter.**

### **Step 6: Levelling**

*Refer to 5.4 operation instructions and turn off the infrared sensor switch before levelling operation.*

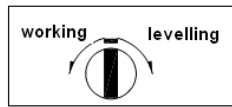
**Check the connection of the hydraulic and electrical system before levelling operation.**

**Review operation instructions and get familiar with lift controls by running the lift through a few cycles before levelling operation.**

**Attention: Level the platforms before connecting max height limit switch because if not, platforms may not rise to the highest position. The operator needs to know clear which levelling valve controls which platform. This could be judged by the way that the oil hose was connected or by trial raising or lowering.**

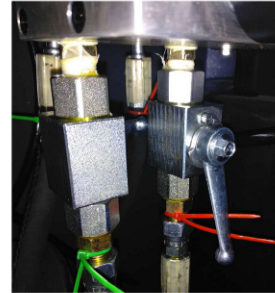
**Level the main lift.**


selection switch on the control panel



selection switch on in the control cabinet

the two valves for levelling operation  
 one for levelling the main lifting platform  
 one for levelling the wheel free lifting platform



**Main platform is the platform which stay farther from the control unit.**

**Secondary platform is the platform which stay next to the control unit.**

- 1) Connect the power supply, turn on the main switch and turn the selection switch on the panel to "lift"
- 2) Turn the selection switch in the control unit to **levelling mode**, **turn on the valve of the main lift** and push the "UP" button for 30 seconds. Normally the secondary platform starts rising.
- 3) Turn the selection switch to **working mode**, **turn off the valve** and push the "UP" button until both platforms rise to the maximum height.
- 4) Turn the selection switch to **levelling mode**, **turn on the valve** and push "DOWN" button until both platforms are fully lowered, stay about 5 seconds to bleed air in the cylinder. After that, push the UP button until the secondary platform rises a little bit.
- 5) Turn the selection switch to **working mode**, **turn off the valve** and push the UP button to check the synchronization.
- 6) If synchronization is still not achieved, turn the selection switch to **levelling mode**, **turn on the valve** and push "UP" or "DOWN" button to adjust the height of the secondary platform until it reaches the same height as the main platform.

**Level the wheel free lift**

- 1) Turn the selection switch on the control panel to the "jack".
- 2) Turn the selection switch in the control cabinet to **levelling mode** and turn on the corresponding levelling valve.
- 3) Push the UP button until both platforms of the "wheel free lift" go utmost top to bleed air in cylinders.
- 4) Push DOWN I button until both platforms of the "wheel free lift" have fully lowered.

Turn the selection switch in the control cabinet to **working mode** and PUSH UP BUTTON TO CHECK. THE wheel free lift SHOULD BE SYNCHRONIZED BY THIS STEP.

Repeat the above levelling steps until synchronization have reached.

**4.4 Items to be checked after installation.**

S/N	Check items	YES	NO
1	Screw torque of expansion bolts : 60-80N•m;	√	
2	Rising speed ≥20mm/s;	√	
3	Noise with rated load ≤75db;	√	
4	Grounding resistance: not bigger than 4Ω;	√	
5	Height difference of the two platforms ≤5mm;	√	
6	Mechanical locks are robust and synchronized when running with rated load ;	√	
7	If the control button works as "hold to run"?	√	
8	If limit switches work well?	√	
9	If grounding wire is connected?	√	

10	If rising and lowering smoothly?	√	
11	If there is no abnormal notice during running with rated load?	√	
12	If there is no oil leakage when running with rated load?	√	
13	If there is no air leakage when running with rated load?	√	
14	If expansion bolts, nuts or circlips are well secured?	√	
15	If max lifting height is 1700mm (above ground)?	√	
16	If Safety advices, name plate and logos are clear?	√	

## OPERATION INSTRUCTIONS

### 5.1 Precautions

5.1.1 Check all the joints of oil hose. Only when there is no leakage, the lift can start work.

5.1.2 The lift, if its safety device malfunctions, shall not be used.

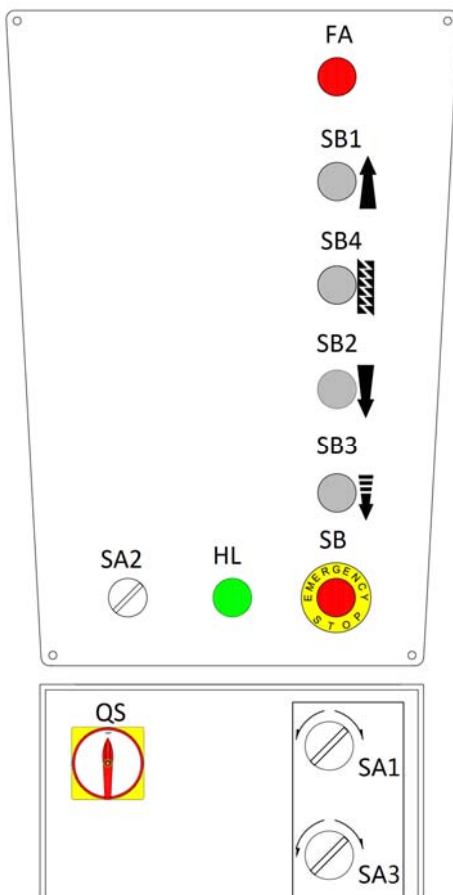
5.1.3 The machine shall not lift or lower an automobile if its center of gravity is not positioned midway of the rising platforms. Otherwise, the manufacturer as well as the dealers will not bear any responsibility for any consequence resulted thereby.

5.1.4 Operators and other personnel concerned should stand in a safety area during lifting and lowering process.

5.1.5 When platforms rise to the expected height, turn off the power to prevent any wrong operation done by unconcerned people. If necessary, lock the switch with a padlock.

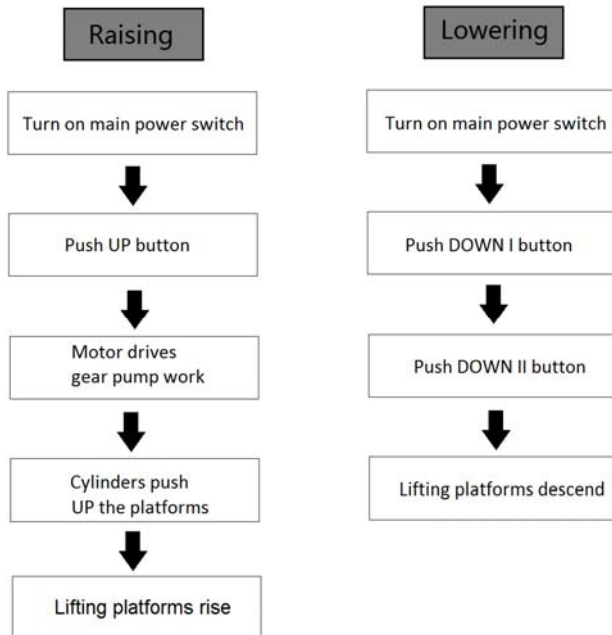
5.1.6 Make sure the safety lock of the lift is engaged before start working under the vehicle and no people under the vehicle during lifting and lowering process.

### 5.2 Control panel descriptions



POS.	Name	Function
FA	Alarm buzzer	Safety descent warning
SB1	UP button	Control the rising movement
SB2	DOWN I button	Control the initial lowering movement
SB3	DOWN II button	Control the final lowering movement
SB4	LOCK button	Engage the safety locks
SB	Emergency stop	Stop power in emergency cases
HL	Power indicator	Show if power is on
QS	Main switch	Power on /off
SA1	Selection switch	Select working or levelling mode
SA2	Selection switch	Select main lift or wheel free lift
SA3	Selection switch	Select infrared sensor on or off

### 5.3 Working flow chart



### 5.4 Operation instructions

**The lift must be only used in a static position for lifting and lowering vehicles.**

**Only use this lift on a surface that is stable and capable of sustaining the load. Do not install the lift on any asphalt surface.**

To avoid personal injury and/or property damage, permit only trained personnel to operate the lift. After reviewing these instructions, get familiar with lift controls by running the lift through a few cycles before loading vehicle on lifting platform.

Always lift the vehicle using all four adapters. Never raise just one end, one corner or one side of vehicle.

Turn SA1 to WORKING mode and SA3 to INFRARED ON before normal use. The normal users are not allowed to open the door of control cabinet.

#### **Using the main lift**

##### ***Raise the lift***

Make sure vehicle is neither front nor rear heavy and center of balance should be centered over the lift.

1. Make sure that you have read and understood the operation manual before operation.
2. Drive and park the vehicle midway between two platforms.
3. Turn the selection switch on the control panel to “Main lift” and push the “UP” button to raise the lifting platform a little bit off the ground and check the stability of the lifted vehicle.
4. Having raised the vehicle to the expected height, push the “Safety Lock” button to ensure the mechanical safety lock is engaged. Check again the stability before performing maintenance or repair work.

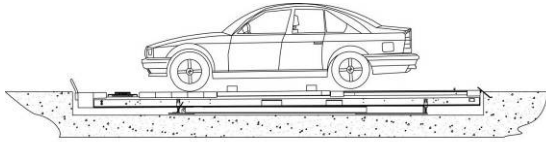
##### ***Lower the lift***

When lowering the lift pay careful attention that all personnel and objects are kept clear.

1. Turn on the power switch.
2. Push “DOWN I” button to lower the lift. It will stop lowering at proper height off the ground.
3. Push “DOWN II” button to continue lowering the platforms which accompanies with safety alarming buzz.

**Using the wheel free lift. Lifting capacity: 3500KG****Raise the wheel free lift**

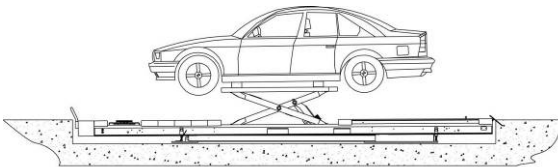
1. Turn the Selection switch on the control panel to “wheel free lift”.
2. Place rubber pads under the pick-up positions of vehicle. When it is necessary to use the platform extensions, push “UP” button to raise platforms of the jack a bit over the platforms of main lift and pull out the extensions.



3. Push “UP” button and check again if the rubber pads are directly under the pick-up points of the vehicle when they are very close to the vehicle’s chassis.



4. Keep on pushing “UP” button until reaches to the height expected. Full rise of the wheel free lift is 450mm over the platform of main lift.



5. Push the “Safety Lock” button to engage mechanical lock before service work.

**Lower wheel free lift**

**Attention: in case the platform extensions of the jack are used, the operator needs to push them in the when wheels of the serviced vehicle fall on steadily the platforms of the main lift.**

1. Turn the selection switch on the control panel to “wheel free lift”.
2. In the case height of the main lift is more than 500mm over the floor, push “DOWN I” button to lower the wheel free lift.  
Push “DOWN II” button while the height is less than 500mm which accompanies with safety alarming buzz too.
3. Remove rubber pads and other tools to provide an unobstructed exit for moving vehicle from the lift area.

**Attention: In the case the height difference between the two platforms reached to 6 cm during lifting or lowering process, the synchronization protection device will be activated to stop any raising or lowering movement. In this case the normal operator need to ask professional help from maintenance operator to restore the lift to normal working condition.**

**HOW to restore to the normal working status?**

- Open the door of the control cabinet;
- Turn SA3 to OFF status;
- PUSH DOWN I and DOWN II button to fully lower both lifting platforms;
- Level until both platforms are synchronized.
- Turn SA3 to ON status.

## TROUBLE SHOOTING

ATTENTION: If the trouble could not be fixed by yourself, please do not hesitate to contact us for help .We will offer our service at the earliest time we can. By the way, your troubles will be judged and solved much faster if you could provide us more details or pictures of the trouble.

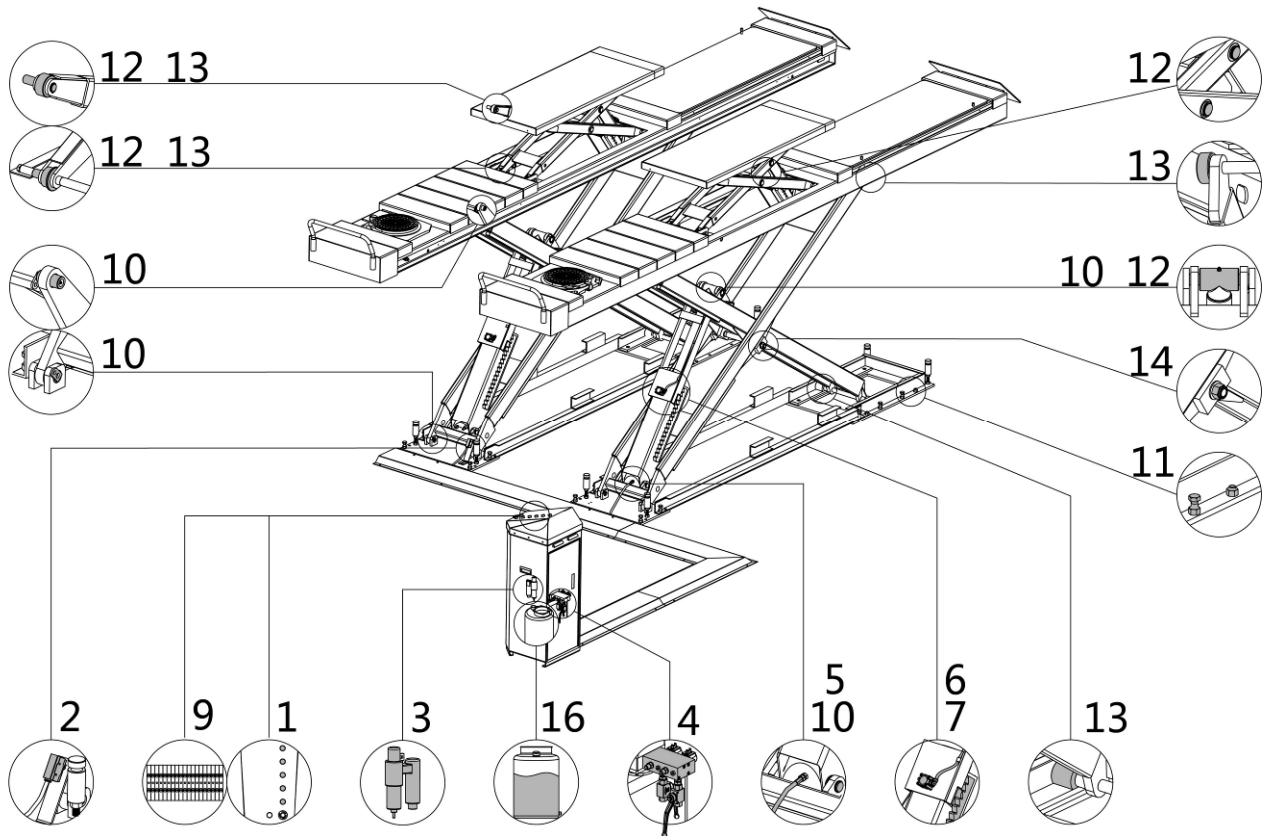
TROUBLES	CAUSES	SOLUTIONS
Motor does not run and will not raise.	Loose wire connection	Check and make a good connection.
	Burnt motor.	Replace it.
	Damaged limit switch or its wire connection is loose.	Adjust or replace the limit switch.
Motor runs but will not raise.	The motor run reversely.	Check the wire connection.
	Overflow valve is not well screwed up or jammed.	Clean or make adjustment
	Damaged gear pump.	Replace it.
	Too low oil level.	Add oil.
	The hose connection is loose.	Tighten it.
	The cushion valve is not well screwed up or jammed.	Clean or make adjustment
Platforms go down slowly after being raised.	The oil hose leaks.	Check or replace it.
	Untightened oil cylinder.	Replace the seal.
	The single way valve leaks.	Clean or replace it.
	Solenoid valve fails to work well.	Clean or replace it.
	Unloading valve leaks.	Check and adjust the tightness.
Raising too slow.	Jammed oil filter	Clean or replace it.
	Too low oil level.	Add oil.
	The overflow valve is not adjusted to the right position.	Make adjustment.
	Too hot hydraulic oil ( above 45° ) .	Change the oil.
	Abraded seal of the cylinder	Replace the seal.
Lowering too slow.	Jammed throttle valve	Add grease.
	Dirty hydraulic oil	Clean or replace.
	Jammed anti-surge valve	Change the oil.
	Jammed oil hose	Clean it.

# MAINTENANCE

Easy and low cost routine maintenance can ensure the lift work normally and safely.

Follow the below routine maintenance schedule with reference to the actual working condition and frequency of your lift.

**Lubricate with No.1 lithium base grease.**



S/N	Components	Methods	Period
1	Control buttons	Check if control buttons work as "hold- to -run " and check if they work as the function indicated.	Every day
2	Max height limit switch	Push the UP button, inspect and ensure the lifting platform stops rising at maximum lifting height.	Every day
3	Pneumatic filter	Listen and inspect the filter to ensure no leakage. Inspect and ensure the water level is below its max limit mark and the oil level is above the minimum limit mark.	Every day
4	Hydraulic block and valves	Inspect if the valves leak or not. Clean or change the valve if any leakage.	Every day
5	Oil hoses and connectors	Inspect to ensure no leakage before using the lift.	Every day
6	Pneumatic hoses and connectors	Inspect to ensure no leakage before using the lift.	Every day
7	Mechanical safety catch	Check if both mechanical catches can engage and disengage effectively and synchronously by pushing control buttons.	Every day

S/N	Components	Methods	Period
8	Lifting platform	Check the synchronization of both lifting platforms. Ensure both platforms ascend and descend synchronously.	Every day
9	Terminals in the control unit	Open the control unit, inspect the wire terminals and screw firmly if any terminals become loose.	Every 3 months
10	Joint shafts	Add grease into the oil cups.	Every 3 months
11	Anchored expansion bolts	Check with torque spanner. For M18 bolt, the torque is no less than 80N.m. For M16, the torque is no less than 60N.m	Every 3 months
12	Circlips of oil cylinder shaft	Inspect if any circlip goes off its groove. Make sure they are positioned in the grooves.	Every 3 months
13	Rolling wheels and their running tracks	Push the UP and DOWN button to check if the wheel is over-worn or cannot roll. Add grease to ensure smooth running. Change over-worn wheels.	Every 3 months
14	Self-locking nut	Check with torque spanner. The torque should be no less than 330N.m.	Every 3 months
15	Whole Lift	Running the lift for several cycles with and without rated load. The lift can run steadily and smoothly with no abnormal noise.	Every 3 months
16	Hydraulic oil	Change the oil 6 months after initial use and once per year thereafter. Inspect the hydraulic oil and change the oil if the oil becomes black or there is dirt in the oil tank.	Every year

*If users stick to the above maintenance requirements, the lift will always keep a good working condition and its service life could be extended.*

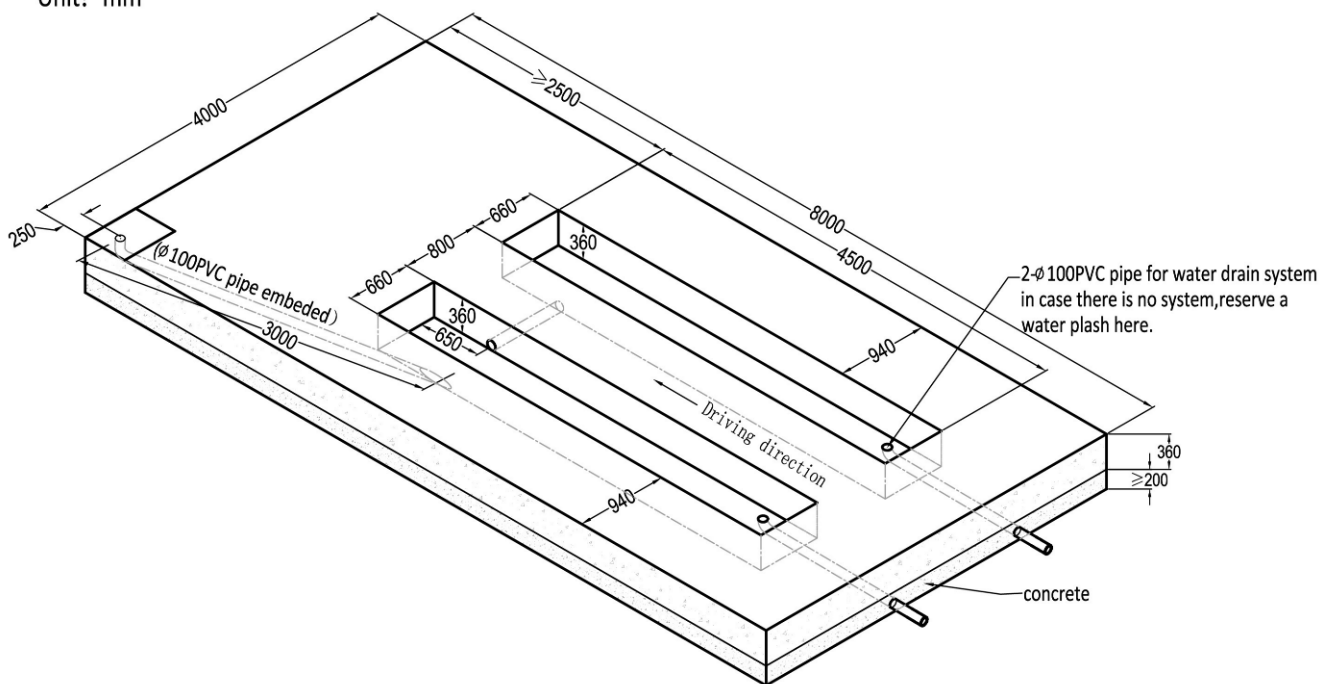
### Annex 1, Floor plan for recessed installation

1. **Indoor installation only.** There must be a clearance of at least 1 meter between the lifting platform and fixed elements (e.g. wall) in all lifting positions. There must also be sufficient space for driving vehicles on and off.
2. C20/25 concrete base with strength more than 3000psi. Concrete thickness of the pit base shall be more than 200mm and remove the peel-offs in the bit. Concrete Surface: Horizontal and even (Gradients max. 0.5 %).
3. Embedded L40 angle iron around the pit for edging.
4. Newly built concrete ground must be older than 20days.
5. In case drain pipes are not applicable, it is necessary to reserve a water collection pit.
6. In mm.

**Attention: Please refer to floor plan 42LC, 46LC, 48LC and 51LC in case rolling wheel free jacks need to be mounted.**

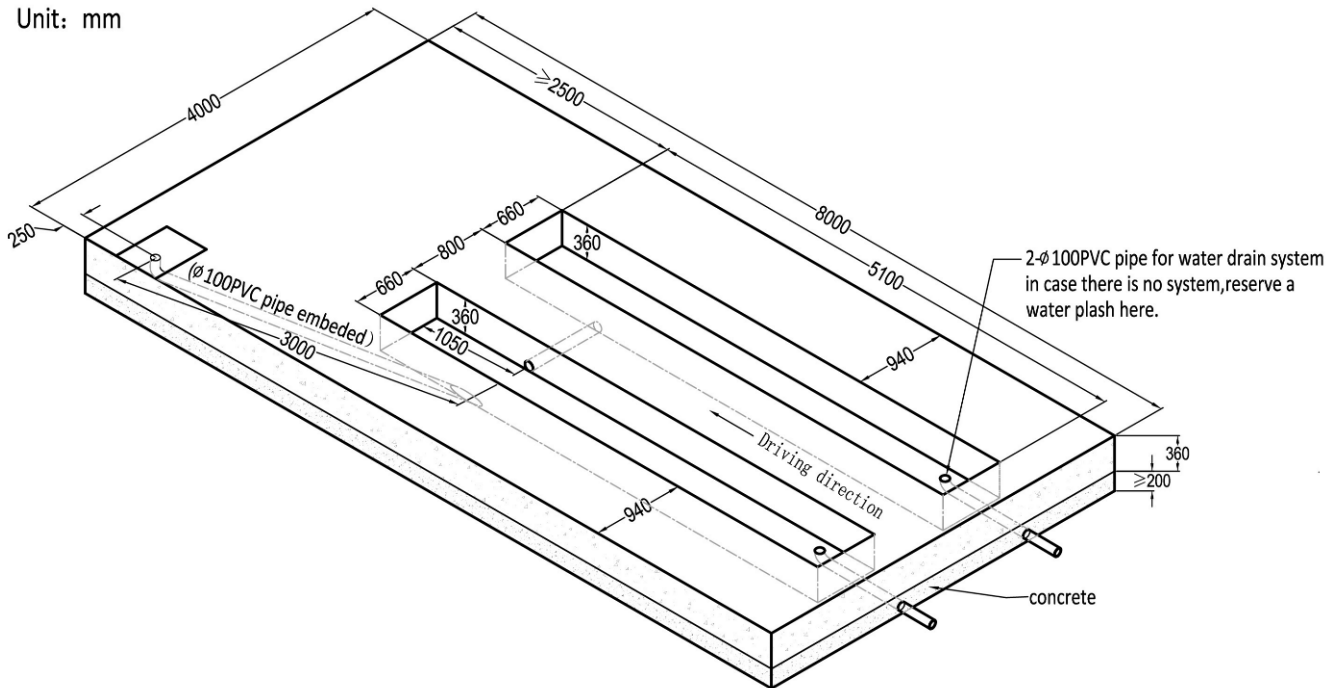
#### 42L:

Unit: mm

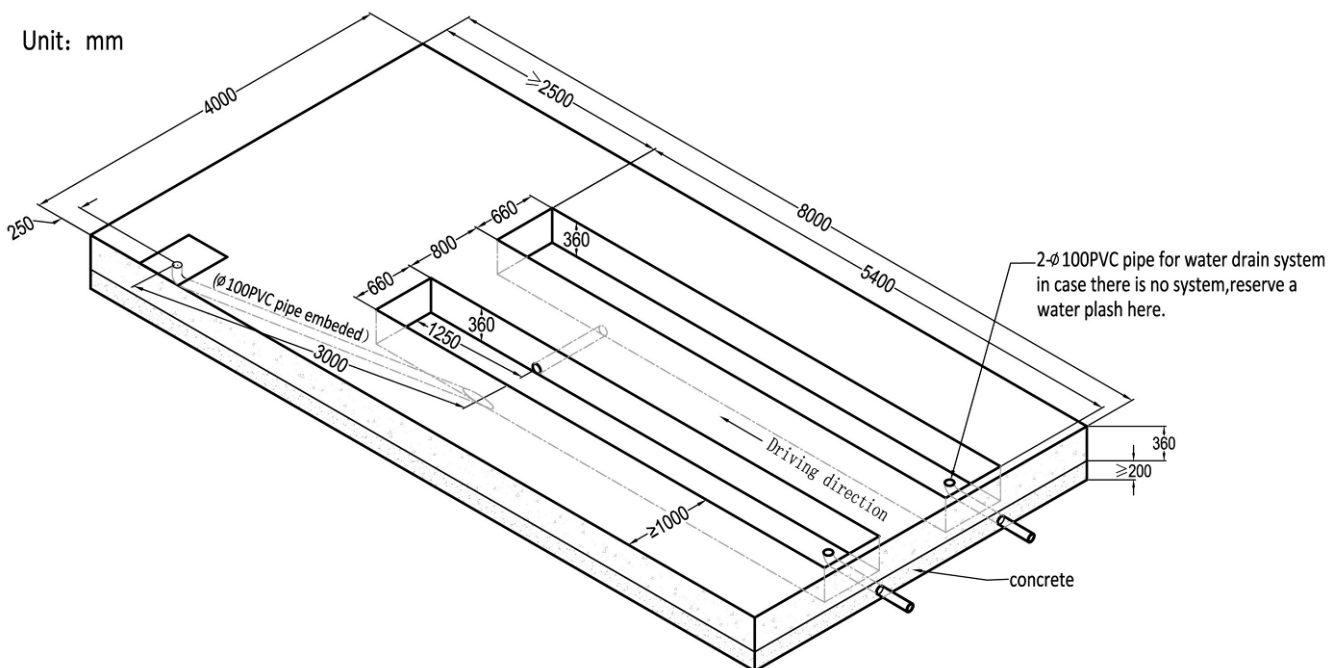


**48L:**

Unit: mm

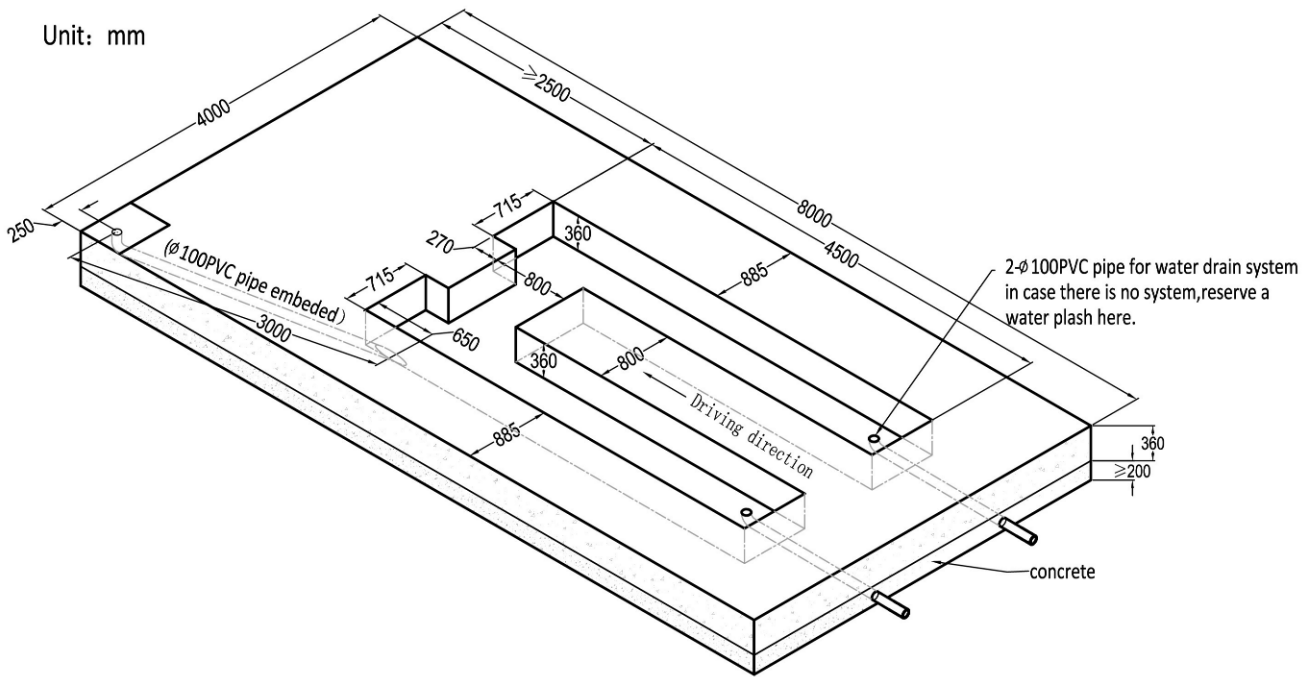

**51L:**

Unit: mm

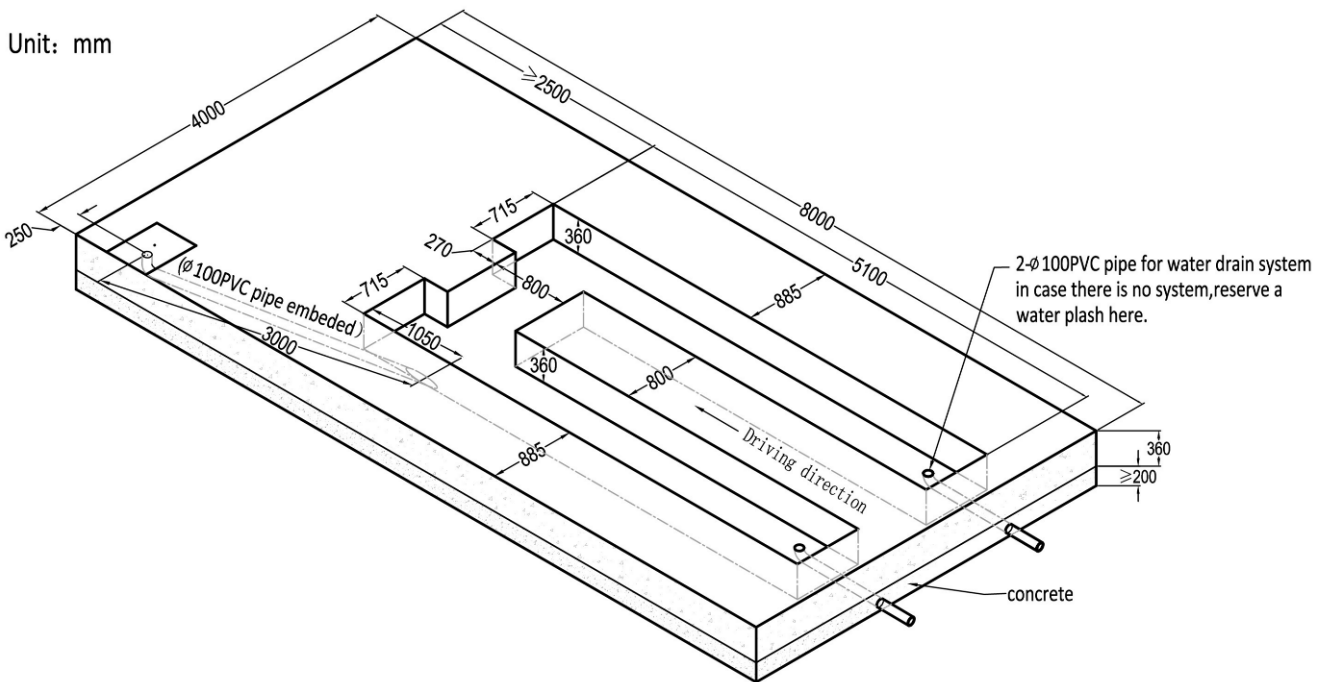


**42LC:**

Unit: mm

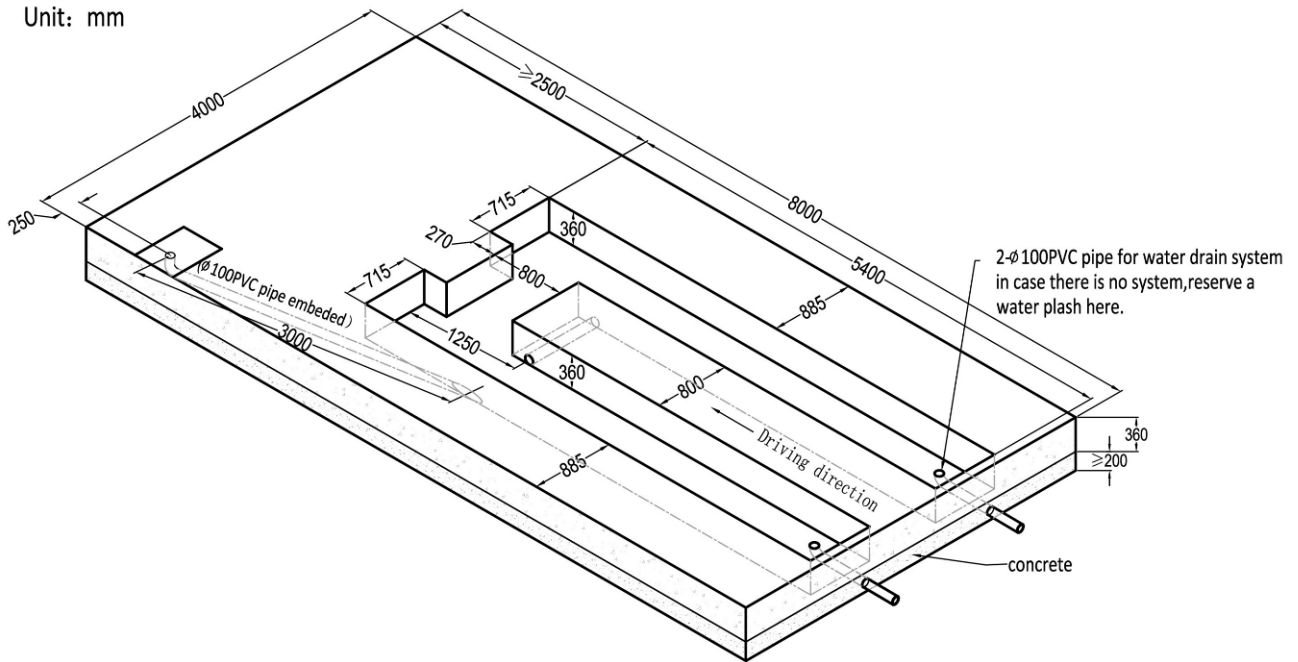

**48LC:**

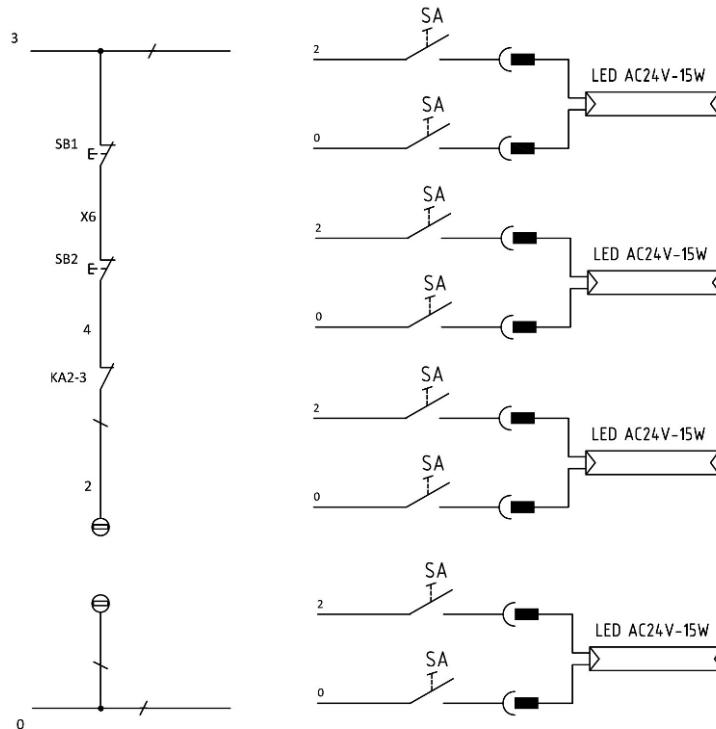
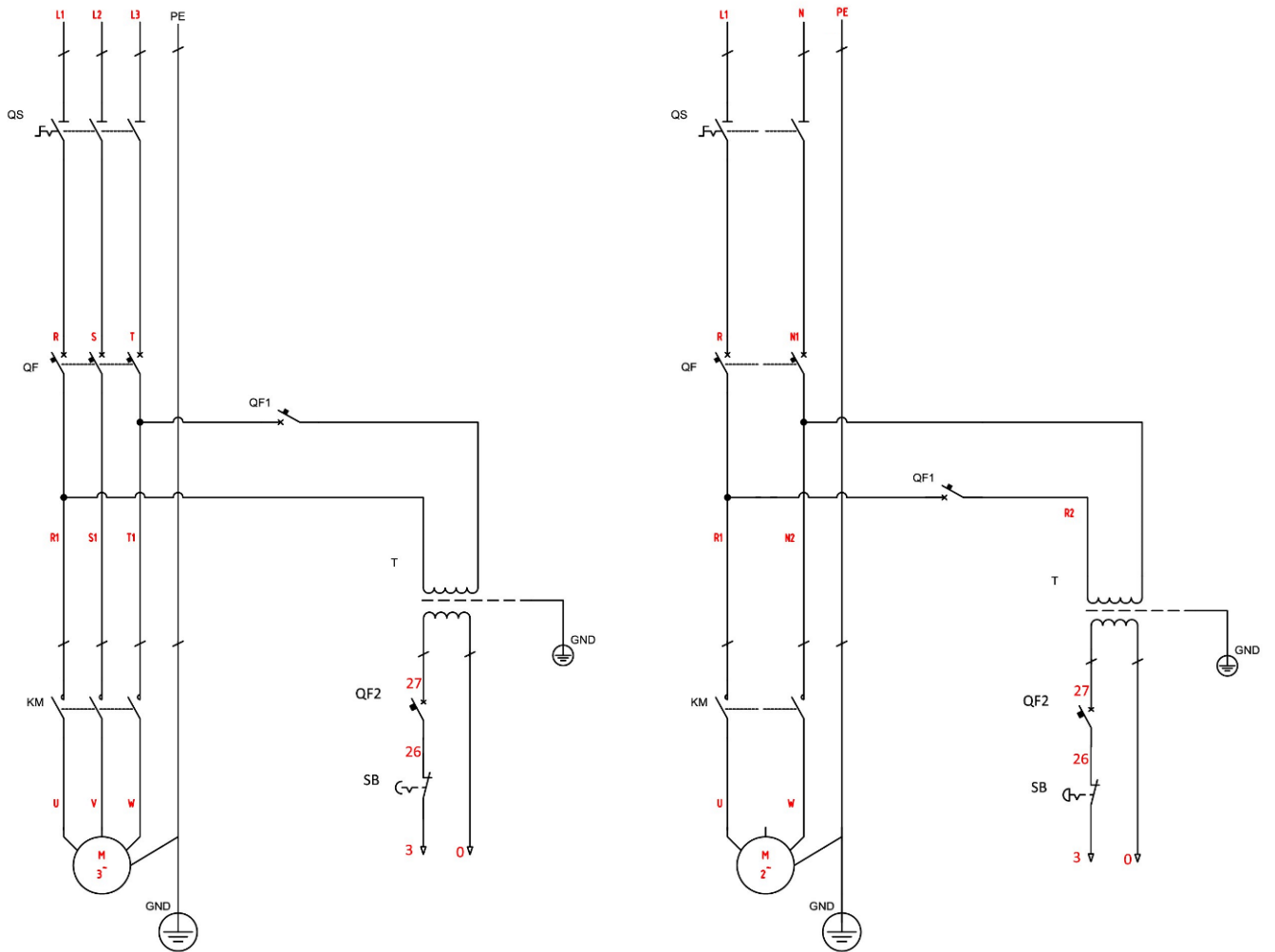
Unit: mm

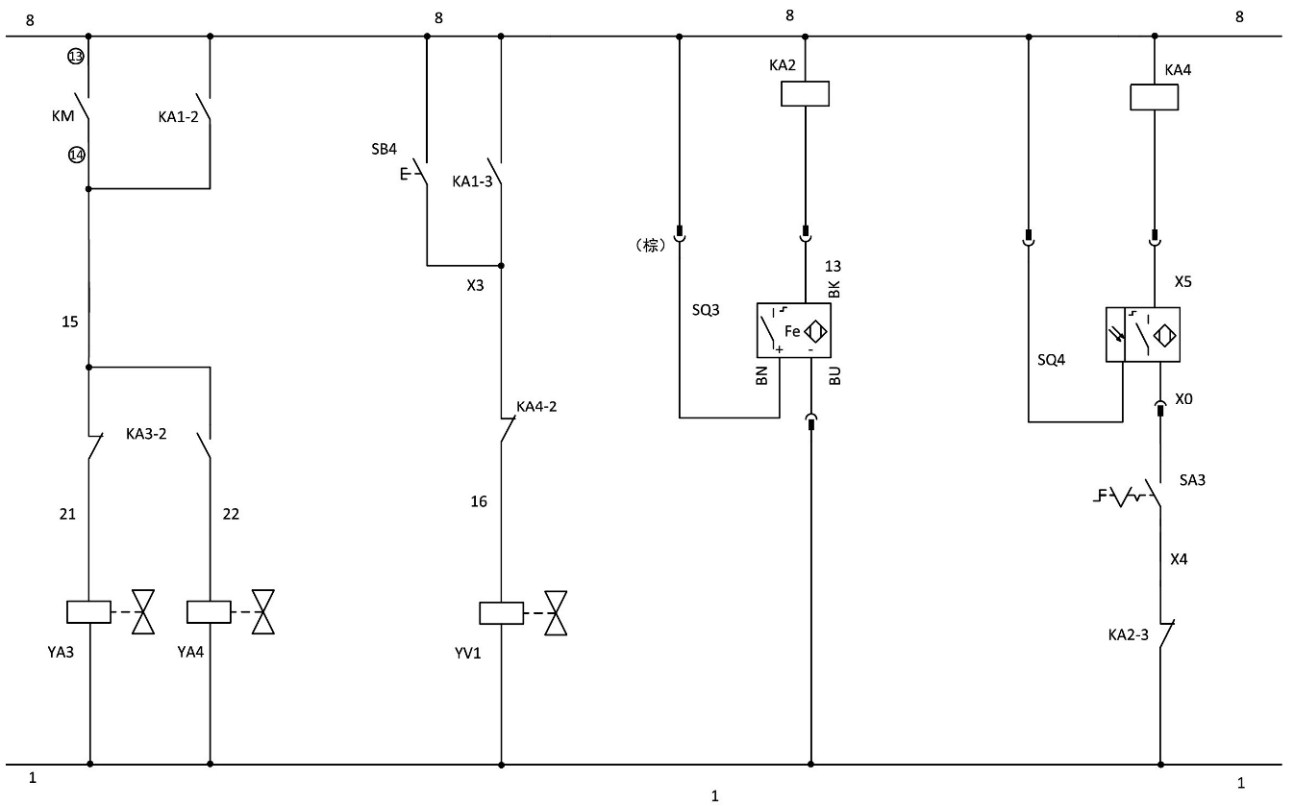
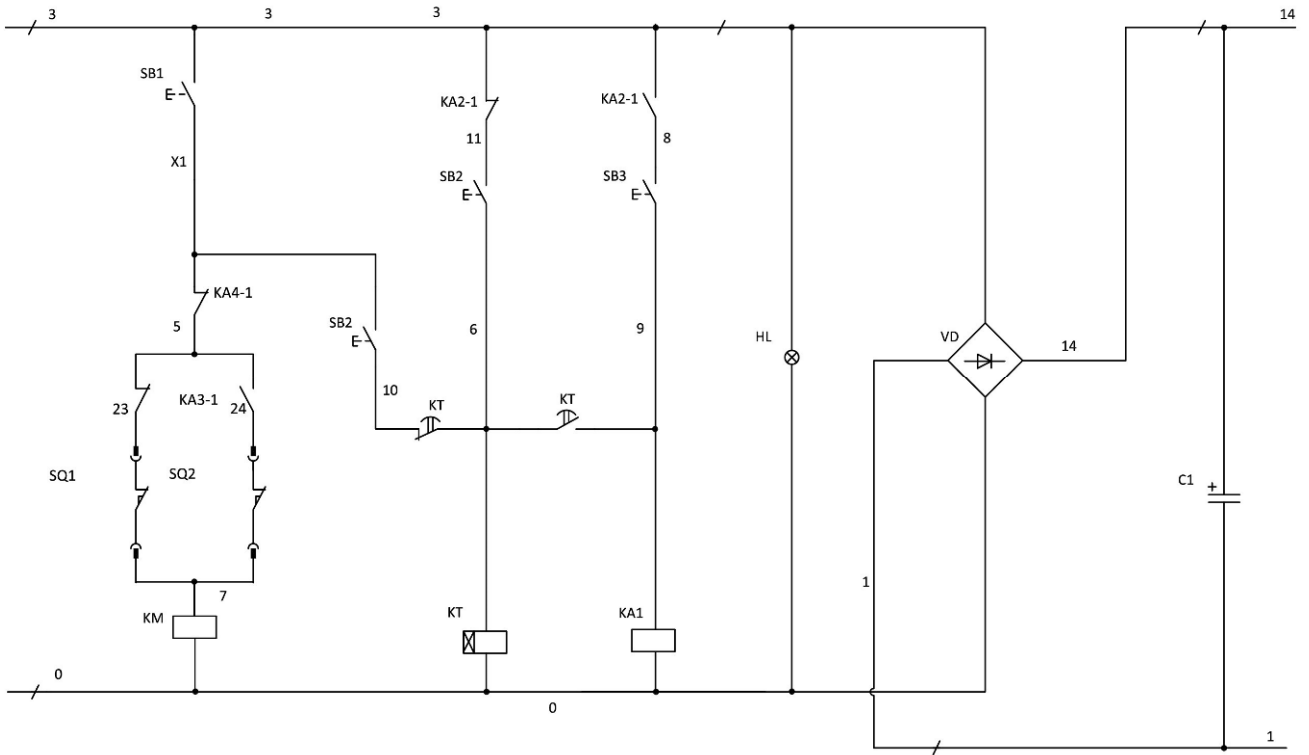


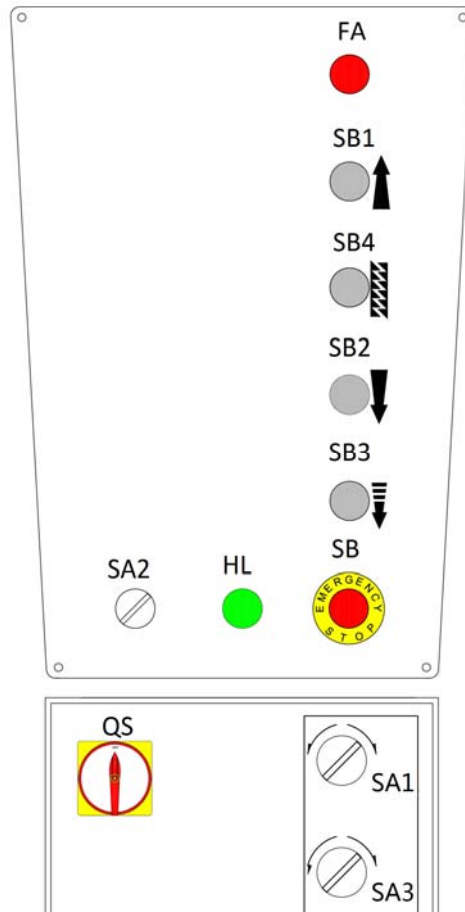
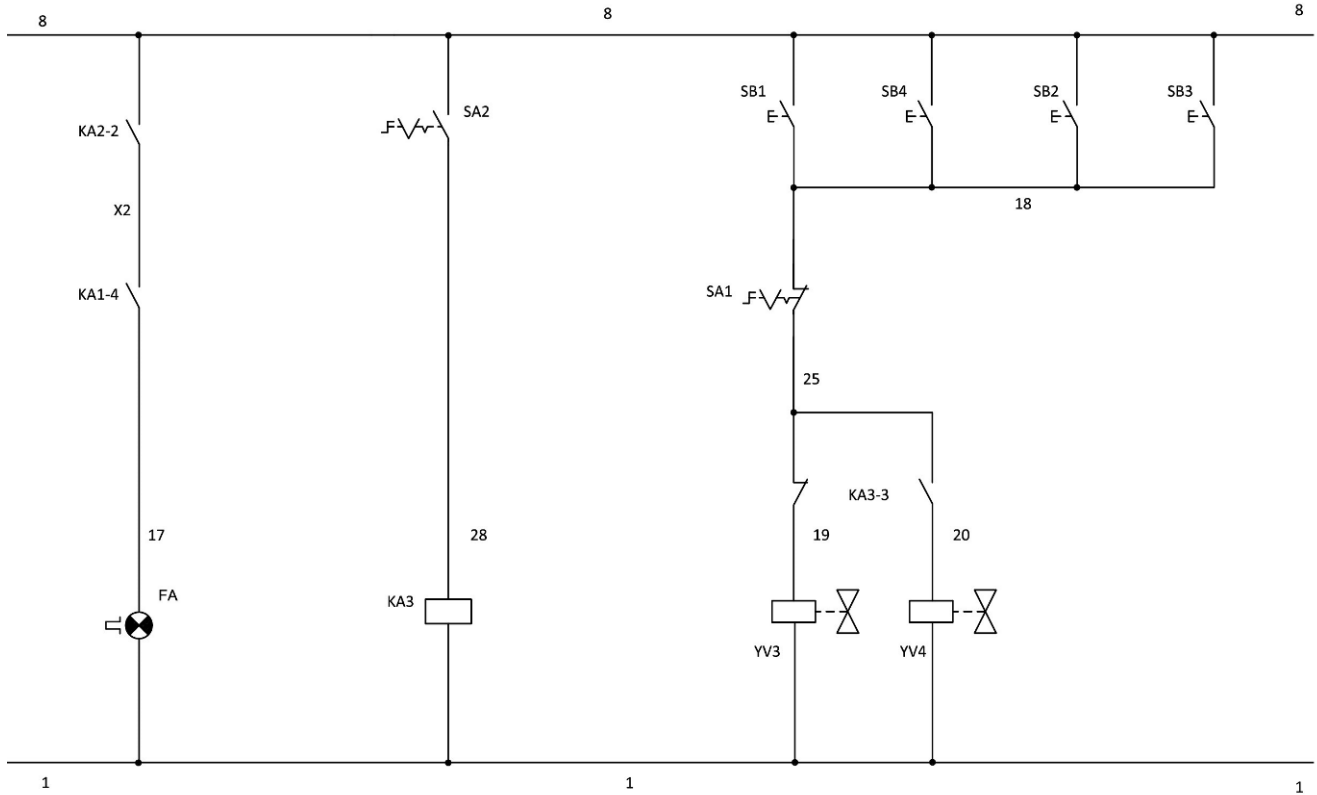
**51LC:**

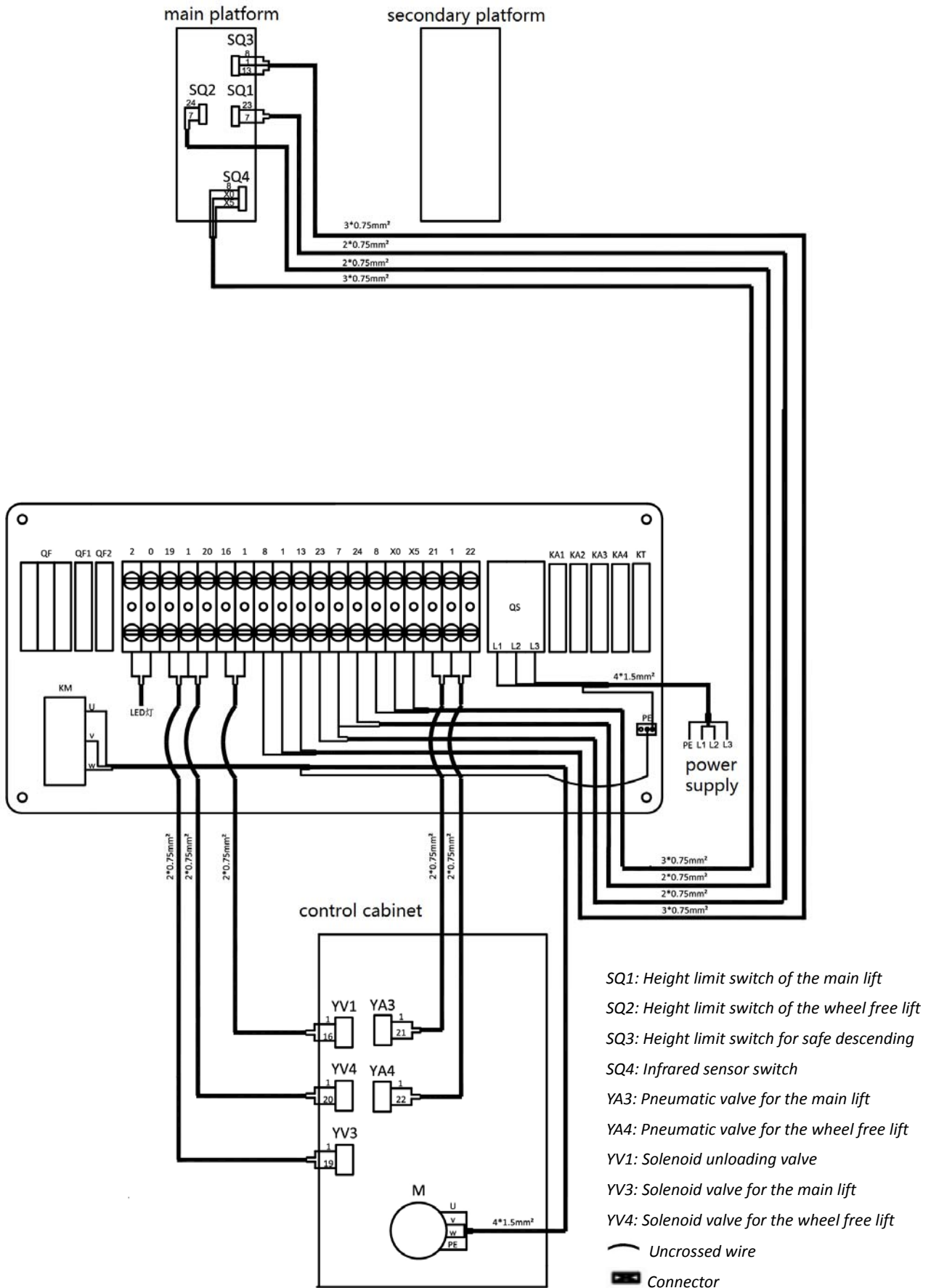
Unit: mm



**Annex 2, Electrical diagrams and parts list**


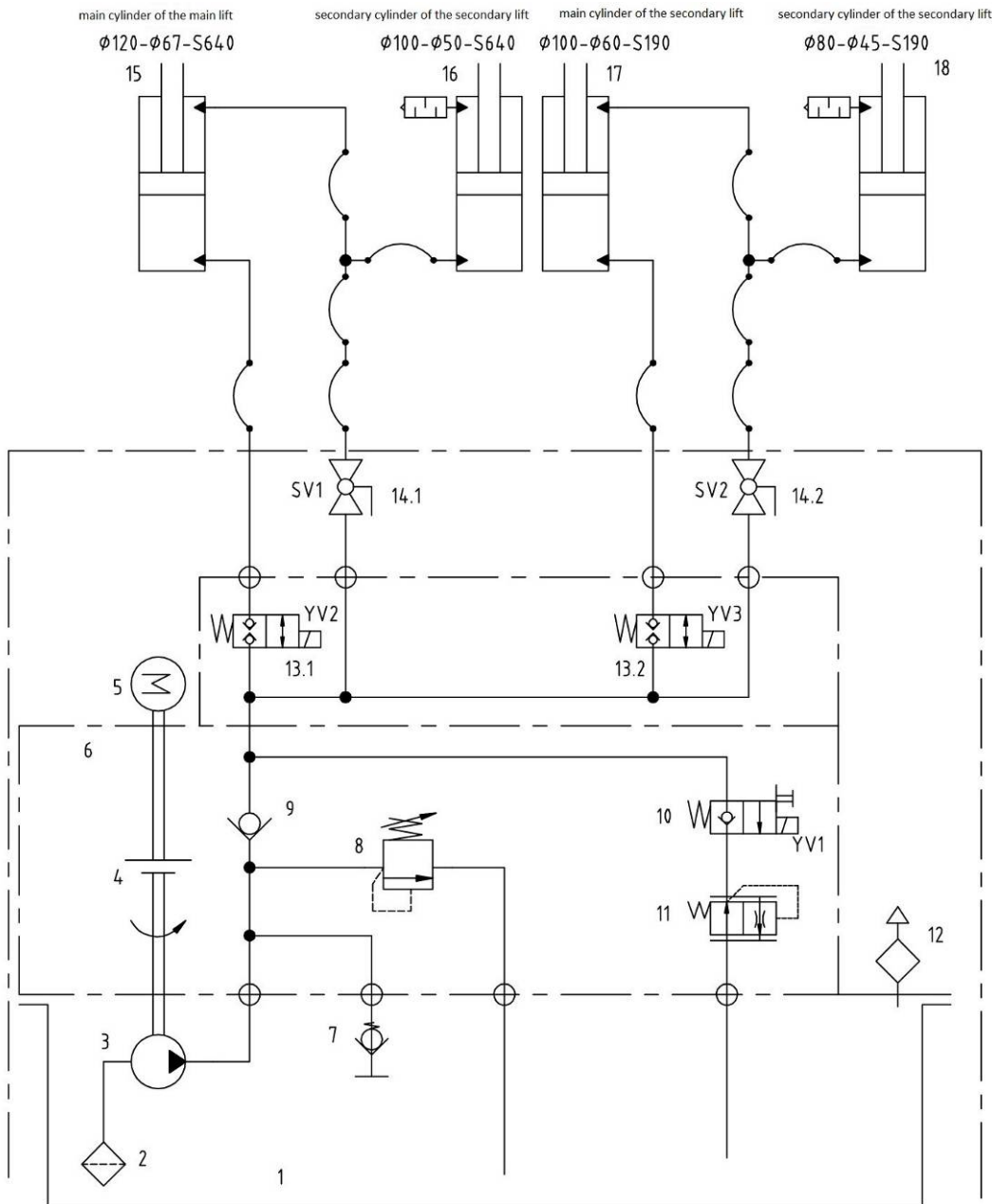




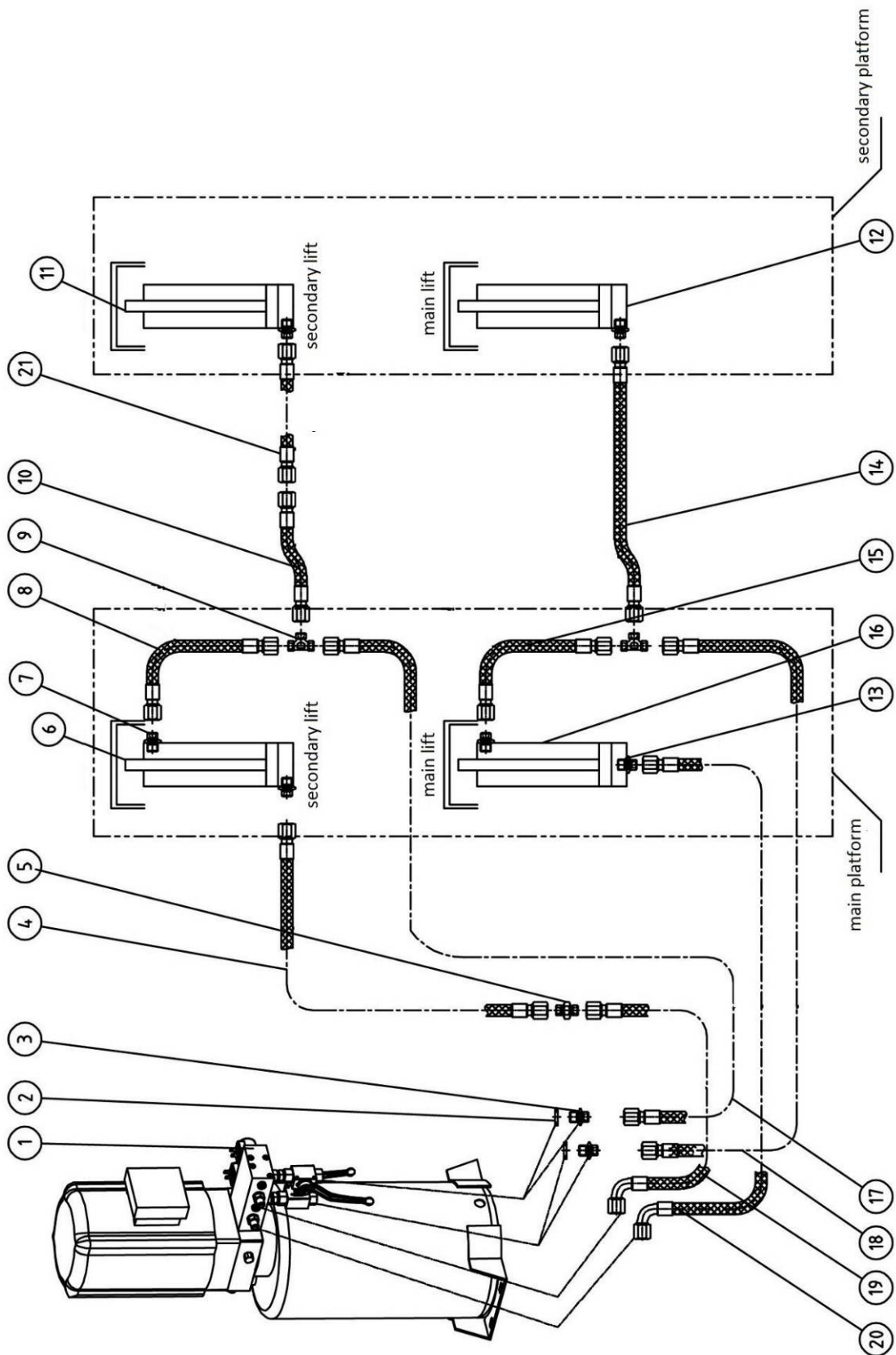


Pos.	CODE	Name	Specification	Qty
T	320101035	Transformer (380V)	JBK3(JBK5)-100VA 380V-24V	1
	320101036	Transformer (400V)	JBK3(JBK5)-100VA 400V-24V	1
	320101037	Transformer (415V)	JBK3(JBK5)-100VA 415V-24V	1
	320101032	Transformer (220V)	JBK3 (JBK5)-100VA 220V-24V	1
	320101033	Transformer (230V)	JBK3(JBK5)-100VA 230V-24V	1
	320101034	Transformer (240V)	JBK3(JBK5)-100VA 240V-24V	1
	320102005	Transformer (400-230V)	BK-100VA 400V230V-24V	1
SQ1,SQ2	320301003	Limit switch	D4MC-5020	2
SQ3	320302002	Proximity switch	PL05-N/1.8M	1
SQ4	320306002	Infrared sensor switch	E3F-R2NK	1
SA1,SA2,SA3	320303019	Selection switch	NP2-ED25C	3
QS	320304001	Power switch	LW26GS-20/04	1
SB3,SB4	320401017	Button	AR22FOR-20-W	2
SB1,SB2	320401019	Button	AR22FOR-31-W	2
SB	320402002	Emergency stop	XB2BS542C	1
	320503002	Ground terminals	4	1
	320505006	Wire terminal	VK-5N(UK-5N)	19
KA2;KA3;KA4	320601001	Relay	HH54P-L/DC24V (MY4NJ)	3
KA1	320601002	Relay	HH54P-L/AC24V(MY4NJ)	1
	320601011	Relay holder	PYF-14A-E	4
	320601018	Relay feet fixer		8
KT	320602009	Integrated time relay	ZYS11-A(AC24V 5S)	1
QF	320801001	Circuit breaker (3Ph)	DZ47-63C16/3P	1
	320802001	Circuit breaker (1Ph)	DZ47-63C32/2P	1
	320801003	Circuit breaker (DUAL)	DZ47-63C25/3P	1
QF1	320803001	Circuit breaker	DZ47-63C1/1P	1
QF2	320803005	Circuit breaker	DZ47-63C6/1P	1
KM	320901011	AC contactor (3.0kW/3.5kW,3Ph ;2.2kW,1Ph )	CJX2-1810/AC24V	1
	320901001	AC contactor(2.2kW,3Ph )	CJX2-1210/AC24	1
C	321001004	Capacitor	4700UF/50V	1
VD	321002001	Bridge rectifier	KBPC5A-35A	1
HL	321201001	Power indicator	AD17-22G-AC24	1
FA	321202001	Alarm buzzer	AD17-22SM/DC24	1

**NOTE: For power supply of other voltages, the transformer is different.  
Please check with our customers service people when order spare parts.**

**Annex3, Hydraulic diagrams and parts list**


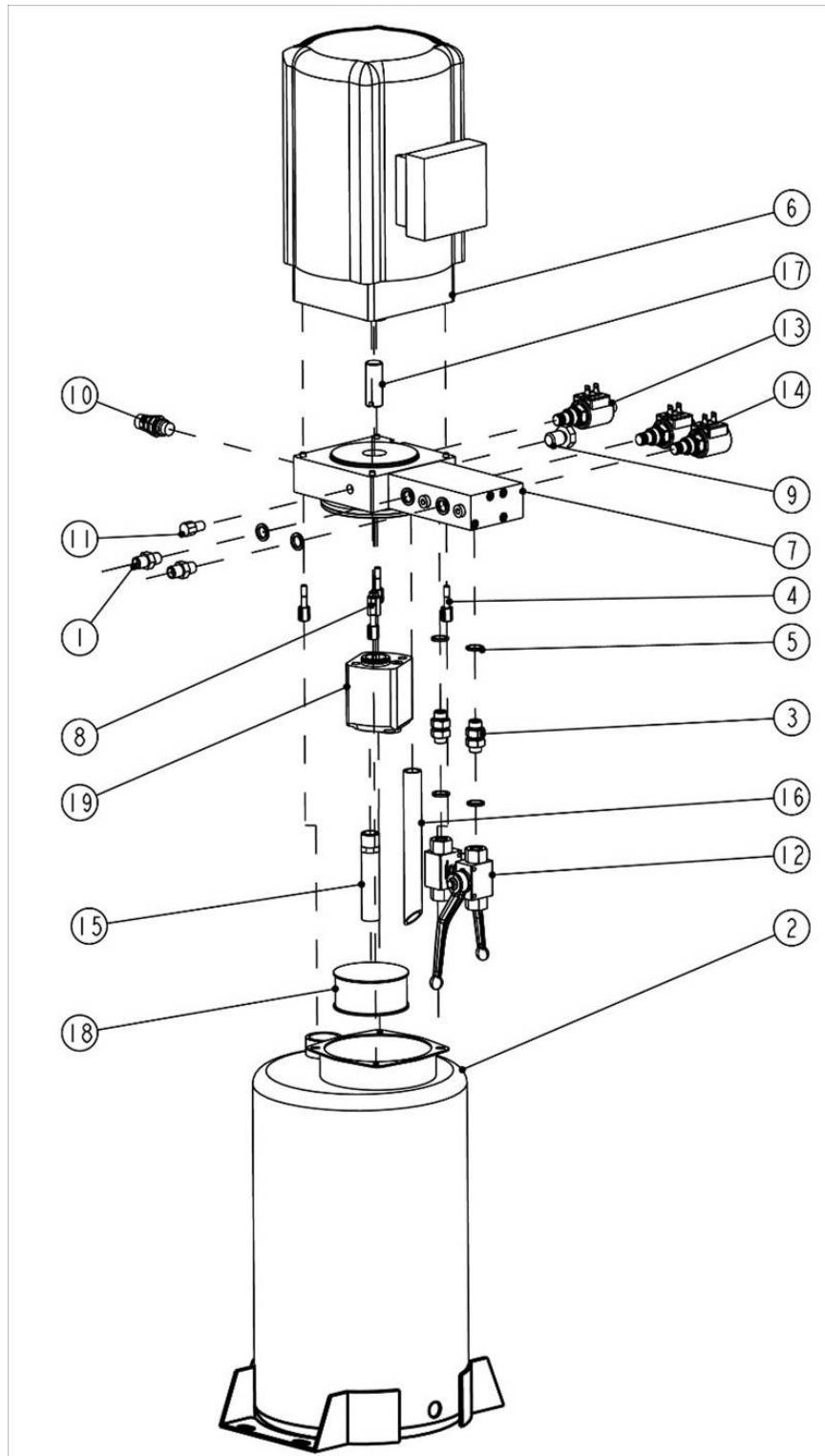
- |                       |  |
|-----------------------|--|
| 1. Oil tank           | 10. Solenoid unloading valve                 |
| 2. Oil sucking filter | 11. Flow control valve                       |
| 3. Gear pump          | 12. Oil tank cover                           |
| 4. Coupling           | 13. Leveling valve                           |
| 5. Motor              | 14. Ball valve                               |
| 6. Hydraulic block    | 15. Main cylinder of the main lift           |
| 7. Cushion valve      | 16. Secondary cylinder of the main lift      |
| 8. Over-flow valve    | 17. Main cylinder of the secondary lift      |
| 9. Single way valve   | 18. Secondary cylinder of the secondary lift |



Pos.	CODE	Name	Specification	Qty
1	623004***	Hydraulic power unit	EE-6603B-****	1
2	207103025	Composite washer	G1/4	4
3	310101010	Straight connector	G1/4---G1/4 inside swivel	4
4	624001152	Rubber oil hose	Φ8,L=6000mm	1
5	410210191	Straight connector	6603B-A9-B8	1
6	615021004	Main cylinder of the secondary lift	6603B-A3-B1	1
7	615019005	Tube connector B	6501-A4-B16	4
8	624001152	Rubber oil hose	Φ8,L=6000mm	1
9	410210181	Three way connector	6603B-A9-B7	2
10	624001155	Rubber oil hose	Φ8,L=2000mm	1
11	615021005	Secondary cylinder of the secondary lift	6603B-A3-B2	1
12	615021013	Secondary cylinder of the main lift	6603B-A6-B2	1
13	615019006	Straight throttle valve	6501-A4-B15	2
14	624001055	Rubber oil hose	Φ8,L=2000mm	1
15	624001056	Rubber oil hose	Φ8,L=350mm	1
16	615021012	Main cylinder of the main lift	6603B-A6-B1	1
17	624001154	Rubber oil hose	Φ8,L=4500mm	1
18	624001113	Rubber oil hose	Φ8,L=4500mm	1
19	624001153	Rubber oil hose	Φ8,L=6000mm	1
20	624001053B	Rubber oil hose	Φ8,L=6000mm	1
21	624001152	Rubber oil hose	Φ8,L=6000mm	1

### Seal rings for cylinders

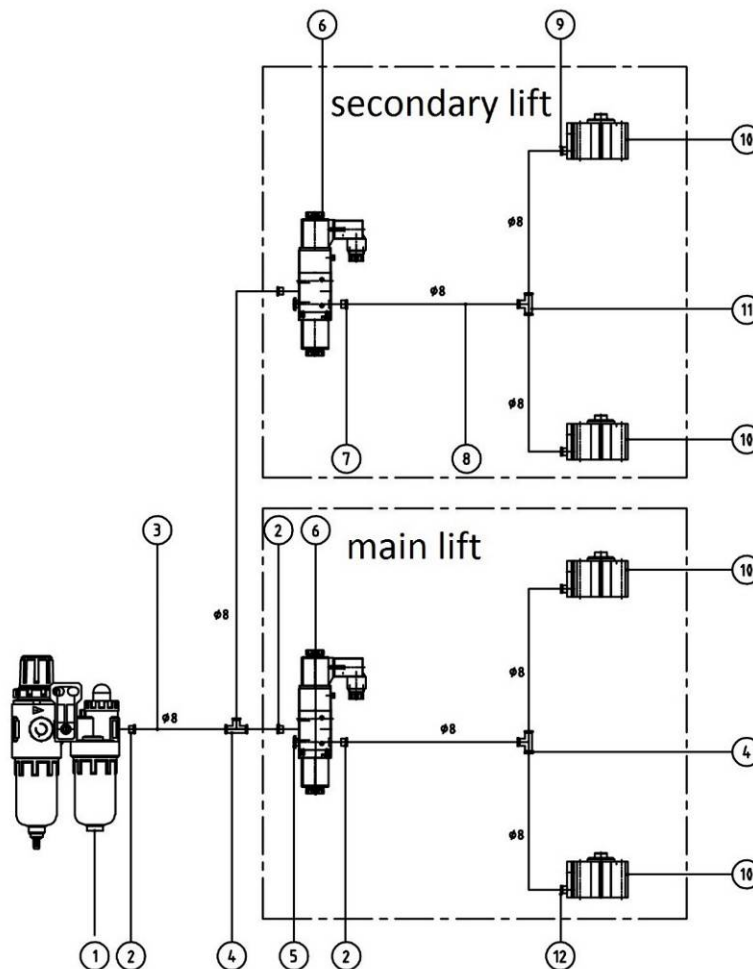
Seal rings	CODE	Name	Specification	Qty	Comments
1	207103009	Composite piston seal ring	KGD120*95*22.4*6.35	1	Main cylinder of the main lift
2	207102004	Y seal ring of the piston rod	SD67*77*6	1	Main cylinder of the main lift
3	207105018	Dust proof ring	DH67	1	Main cylinder of the main lift
4	207103010	Composite piston seal ring	KGD100*75*22.4*6.35	1	Secondary cylinder of the main lift
5	207105007	Dust proof ring	DHS50 (50*58*6)	1	Secondary cylinder of the main lift
6	207103010	Composite piston seal ring	KGD100*75*22.4*6.35	1	Main cylinder of the secondary lift
7	207102005	Y seal ring of the piston rod	SD60*70*6	1	Main cylinder of the secondary lift
8	207105009	Dust proof ring	BHS60	1	Main cylinder of the secondary lift
9	207103011	Composite piston seal ring	KGD80*60*22.4*6.35	1	Secondary cylinder of the secondary lift
10	207105008	Dust proof ring	DHS45 (45*53*6)	1	Secondary cylinder of the secondary lift



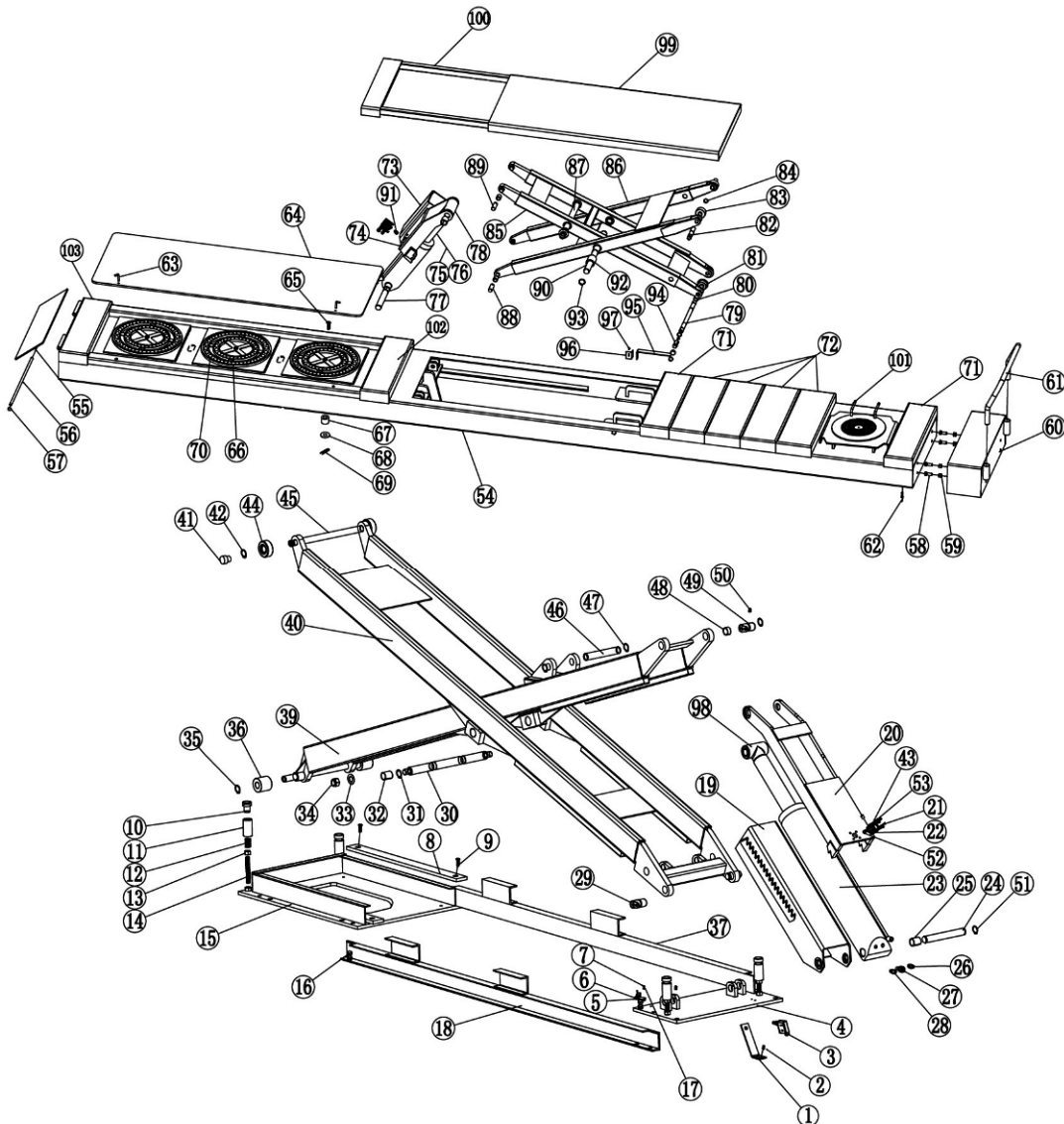
Pos.	CODE	Name	Specification	Qty
1	310101010	Straight connector	G1/4---G1/4	2
2	330405027	Steel oil tank	18L	1
3	310101025	Straight connector	G1/4--G1/4	2
4	202109064	Hex socket cylinder head screw	M6*30	4
5	207103025	Composite washer	13.7*20.00*1.50(BS224)	6

Pos.	CODE	Name	Specification	Qty
6	320201004	Motor	AC-MOTOR	1
7	330101009	Hydraulic block	YF-8	1
8	330301001	Cushion valve	HZYF-C1	1
9	330302001	Single way valve	DYF-C	1
10	330304001	Over flow valve	EYF-C	1
11	330305002	Throttle valve	-	1
12	330307001	Two way ball valve	GE2G1/4111AB	2
13	330308006	Solenoid unloading valve	DHF06-220H/DC24	1
14	330308008	Leveling valve	DHF06-228H/DC24	2
15	330401001	Oil sucking tube	YX-BL-170	1
16	330403001	Oil back tube	YH-D	1
17	330404001	Coupling	YL-A	1
18	330405013	Oil sucking filter	YG-C	1
19	330201006B	Gear pump	CBK-F225/CBK-2.5F	1

#### Annex 4, Pneumatic connections and parts list



Pos.	CODE	Name	Specification	Qty
1	321004006	AFC Air filter combination	AFC2000	1
2	310101015	Pneumatic connector	KLC8-02	5
3	123010201	Air hose	DE8	1
4	310103006	Three way pneumatic connector	KLE-8	2
5	310201003	Silencer	SLM01 R1/8 (M8)	2
6	310401001	Pneumatic directional valve	3V210-08DC24V	2
7	310101015	Straight pneumatic hose connector	KLC8-02	1
8	123010201	Pneumatic hose	DE8	2
9	310102024	Bending pneumatic connector	KLL8-01	2
10	310501001	Pneumatic cylinder	CQ2B32*20	4
11	310103006	Three way pneumatic connector	KLE-8	1
12	310101015	Straight pneumatic hose connector	KLC8-02	2

**Annex 5, Mechanically exploded drawings and parts list**


Pos.	CODE	Name	Specification	Qty
1	410211500	Bracket A for limit switch	6603B-A7-B11	1
2	202109008	Hex socket cylinder head screw	M5*12	3
3	320301003	Limit switch	D4MC-5020	1
4	614021032	Base A	6603B-A7-B9	2
5	410212433	Bracket C for limit switch	6603B-A7-B13	1
6	320302002	Proximity switch	PL-05N	1
7	202101002	Cross socket cap head screw	M3*15	2
8	410210171	Guide track	6603B-A7-B7	4
9	202103024	Cross sunken head bolt	M10*25	8
10	410210161	Cushion head	6603B-A7-B1-C3	8
11	410210151	Cushion holder	6603B-A7-B1-C1	8
12	410211390	Spring	6603B-A7-B1-C2	8
13	203101009	Nut	M16	8
14	208103001	Swivel bolt	M16*120	8
15	614021030	Base plate	6603B-A7-B6	2
16	201102041	Hex head full swivel screw	M16*50	8
17	208106001	Straight oil cup	M8*1	8
18	614021031	Base slot B	6603B-A7-B8	2
19	614021026	Cylinder sheath	6603B-A6-B3	2
20	614021028B	Mechanical safety lock	6603B-A6-B5	2
21	202109014	Inside hex cylinder head screw	M5*45	8
22	310501001	Air cylinder	CQ2B32*20	2
23	615021012	Drive oil cylinder	6603B-A6-B1	1
23	615021013	Assistant oil cylinder	6603B-A6-B2	1
24	410210141	Down shaft of oil cylinder	6603B-A6-B6	2
25	205101055	Bearing	SF-2X 3040	4
26	410210191	Connector B	6603B-A9-B8	2
27	210101005	Hex socket fitting	NPT 1/4	2
28	615019006	Throttle valve	6501-A4-B15	1
29	612021003B	Rotation shaft of the main lift	6603B-A5-B1	4
30	410210121	Pin shaft of the main lift	6603B-A5-B5	2
31	204301012	Circlip	φ35	4
32	205101059	Bearing 3556	SF-2X	4
33	204101012	Class C flat washer	M24	4
34	203103011	Non-metallic lock nut	M24	4
35	204301009	Circlip	D25	4
36	420210070	Down wheel	6603B-A5-B8	4
37	614021029	Base slot A	6603B-A7-B2	2

Pos.	CODE	Name	Specification	Qty
39	614021024	Arm A (4T)	6603B-A5-B2	2
40	614021025	Arm B (4T)	6603B-A5-B3	2
39	614021050	Arm A (5T)	6603B-A5-B2	2
40	614021051	Arm B (5T)	6603B-A5-B3	2
41	420210060B	Pad block	6603B-A5-B6	4
42	204301009	Circlip	M25(23.2)	4
43	310201003	Muffler	SLM01 R1/8 (M8)	4
44	420210050	UP wheel of the main lift	6603B-A5-B4	4
46	410210131	UP shaft	6603B-A5-B12	2
47	204301011	Circlip D30	GB/T894.2-1986	18
48	205101018	Bearing 3025	SF-1	4
49	612021003B	Rotation shaft of the main lift	6603B-A5-B1	4
50	202110004	Hex socket button head screw	M8*12	8
51	204301011	Circlip D30	D30	2
52	420420010	Adjustable head	66035-A03-B09	2
53	310102024	Bending pneumatic connector	KLL8-01	2
54	614021019	Runway (42L,left)	6603B-A4-B11	1
	614021042	Runway (42L,right)	6603B-A4-B11	1
	614021021	Runway (48L,left)	6603B-A4-B11	1
	614021044	Runway (48L,right)	6603B-A4-B11	1
	614021022	Runway (51L,left)	6603B-A4-B11	1
	614021045	Runway (51L,right)	6603B-A4-B11	1
55	614042008	Drive-on ramp	66035-A03-B02	2
56	410210111	Shaft A	6603B-A4-B9-C4	2
57	204301002	Circlip	D25	4
58	201102027	Hex head full swivel screw M12*30	M12*30	8
59	203101007	Hex nut M12	M12	8
60	614021009	Box A	6603B-A4-B1	2
61	410210173	Wheel retainer	6603B-A4-B2	2
62	202109030	Inside hex cylinder head screw M8*25	GB/T 70.1-2000	16
63	410250221	Bolt	6604B-A16	4
64	614021017	Side slip plate (4.6/4.8/5.1L)	6603B-A4-B7	2
64	614021035	Side slip plate (4.2L)	6603B-A4-B7	2
65	202103024	Cross sunken head bolt	GB/T 819.1-2000	14
66	420270110	Rotor ball	6435N-A21	240
67	420210030	Nylon sheath	6603B-A4-B7-C4	4
68	410250011	Washer	6604B-A1-B5	4
69	206201004	Cotter pin	M3*45	4

Pos.	CODE	Name	Specification	Qty
70	420270100	Rotor ball holder	6435N-A20	6
71	614021010	Box C	6603B-A4-B3	4
72	410210043	Box E	6603B-A4-B4	8
73	614021006	Sheath of small oil cylinder	6603B-A3-B3	1
74	614021008	Safety lock of the jack	6603B-A3-B6	2
75	615021004	Drive cylinder of jack	6603B-A3-B1	1
76	615021005	Assistant cylinder of jack	6603B-A3-B2	1
77	410210091	Down shaft	6603B-A3-B7	2
78	410212090	Three way connector	6603B-A3-B8	2
79	410210051C	Shaft B	6603B-A2-B7	2
80	205101005	Bearing 2022	SF-1	12
81	410210041B	Down wheel	6603B-A2-B6	4
82	410210031C	Shaft A	6603B-A2-B5	4
83	420210010B	Up wheel	6603B-A2-B4	4
84	204301007	Cliclip D20	GB/T894.1-1986	12
85	614021004B	Arm A of jack	6603B-A2-B1	2
86	614021005B	Arm B of jack	6603B-A2-B2	2
87	410210021	Up shaft	6603B-A2-B3	2
88	410210061	Rotor shaft B	6603B-A2-B8	4
89	410210071	Rotor shaft A	6603B-A2-B9	4
90	410210081	Pin shaft	6603B-A2-B10	2
91	420420010	Adjustable head	66035-A03-B09	2
92	205101023	Bearing 3050	SF-1	8
93	204301011	Circlip D30	GB/T894.1-1986	12
94	201102023	Hex head full swivel screw	M10*50(GB/T 5781-2000)	1
95	614021060B	Plate for limit switch	6603B-A10	1
96	410210073	Fixing plate for limit switch	6603B-A12	1
97	202101007	Cross cap screw	GB/T 70.2-2000	2
98	410212100	Three way connector	6603B-A6-B8	2
99	614021003C	Platform of the wheel free lift	6603B-A1-B2	2
100	614021002B	Platform extension of the wheel free lift	6603B-A1-B1	2
101	615027049	Turn table (optional)	400*400	2
102	614021011	Box D	6603B-A4-B4	2
103	614021023	Box F	6603B-A4-B14	2