

Model No. EE-6501V2

Short platform scissor lift

Low profile

Manual Leveling

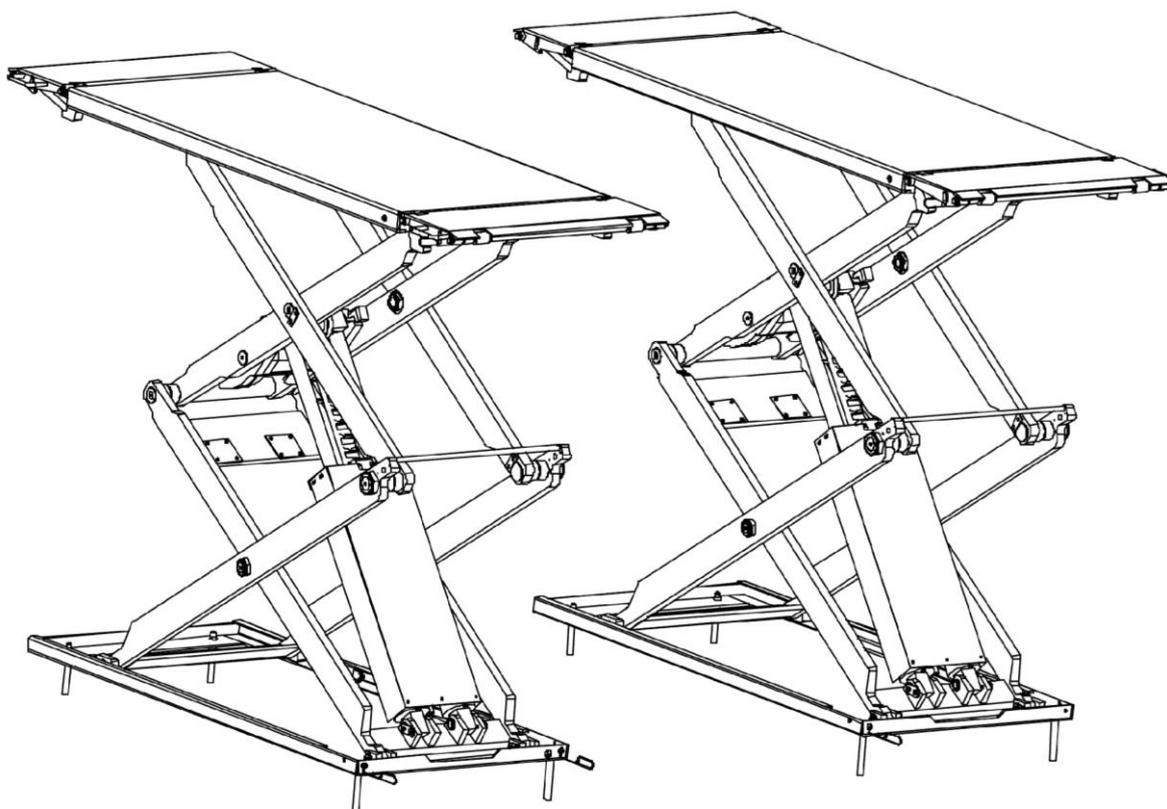
With synchronization protection

Lifting capacity: 3000KG

**Installation, Operation
and Parts Manual**



EAE



Distributed by

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

Date: 09/03/2017

www.eae-ae.com

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:

Copy right

The enclosed instructions are the property of EAE or its supplier, and are protected against duplication and reproduction by copyright laws, international agreements, and other domestic legislation. The reproduction or disclosure of instructions or an extract thereof is prohibited and offenders are liable to prosecution; EAE reserves the right or initiates criminal proceedings and asserts claims for damages in the event of infringements.

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.

IMPORTANT NOTES	2
SAFETY NOTES	4
1.1 Operation of lifting platforms.....	4
1.2 Checking of the lifting platforms	4
1.3 Important safety notices.....	5
1.4 Warning labels.....	6
1.5 Potential safety risks.....	7
1.6 Noise level	7
PACKING, STORAGE AND TRANSPORTATION	8
2.1 The lift was dismantled into the following 2 parts for transportation.....	8
2.2 Storage	8
2.3 Lifting and handling.....	8
PRODUCT DESCRIPTIONS	9
3.1 General descriptions.....	9
3.2 Construction of the lift.....	9
3.3 Dimensions	10
3.4 Safety devices descriptions.....	11
3.5 Technical data	12
INSTALLATION INSTRUCTIONS	12
4.1 Preparations before installation.....	12
4.2 Installation attentions	15
4.3 General Installation Steps.....	15
4.4 Items to be checked after installation	19
OPERATION INSTRUCTIONS	19
5.1 Precautions.....	19
5.2 Operation instructions.....	20
5.3 Flow chart for operation.....	20
5.4 Operation instructions.....	21
5.5 Emergency lowering	22
TROUBLE SHOOTING	24
MAINTENANCE	25
ANNEX	27
Annex1, Wiring diagrams and parts list	27
Annex2, Hydraulic diagrams and parts list.....	32
Annex3, Pneumatic diagrams and parts list.....	36
Annex4, Mechanically exploded drawings and parts list.....	37

SAFETY NOTES

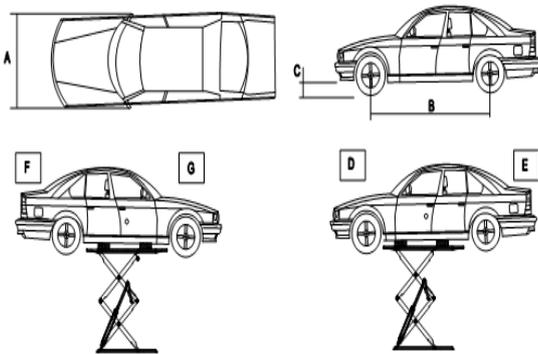
1.1 Operation of lifting platforms

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.



A (mm)	B (mm)	C (mm)	D (T)	E (T)	F (T)	G (T)
1900	2000	110	1.8	1.2	1.2	1.8

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 option on lifting platforms.

1.3 Important safety notices

1.3.1 Recommended 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, level and dry and not slippery ,and capable of susutaining 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, tires, 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 unconcerned.

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

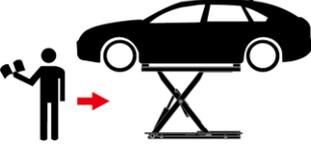
situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

Attention: For environment protection, please dispose the disused oil in a proper way.

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
540101634

 <p>Only trained personnel are allowed to operate the lift.</p>	<p>Always keep lift area clear when lowering or raising vehicle.</p> 
 <p>Do not try to raise a vehicle exceeds the rated capacity.</p>	<p>Never raise or lower a vehicle with one side platform.</p> 
 <p>Watch closely the vehicle during raising or lowering.</p>	<p>Make sure vehicle is neither front nor rear heavy and center of balance should be centered over the lift.</p> 
 <p>Make sure that two platforms are of equal height from the floor when safety teeth engaged.</p>	<p>Avoid excessive rocking of vehicle while on lift.</p> 
 <p>Do not climb onto the lift platforms or raised vehicle during lifting or lowering.</p>	<p>Always keep the lift pit clean and clear of any objects or contaminants.</p> 
 <p>Do not change the safety mechanism.</p>	<p>Carryout maintenance regularly as indicated in the manual.</p> 


www.eae-ae.com

Copyright © EAE Automotive Equipment Company Limited, All rights reserved.

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 the following 2 parts for transportation

Name	Packed by	Dimension(mm)	Weight(kg)	Quantity
Control cabinet	Wooden case	580*510*1010	100	1
Lift platforms	Carton with wooden base	2050*700*400	800	2

2.2 Storage

The packs must be kept in a covered and protected area in a temperature range of -10°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.

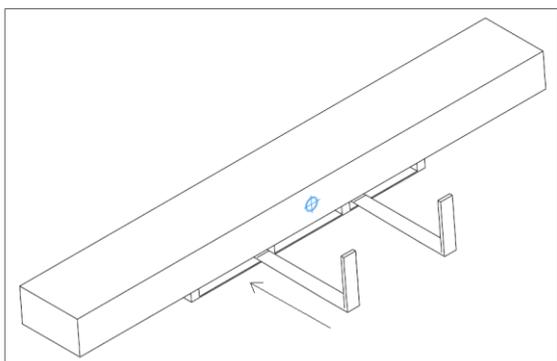
If stacking is unavoidable, use all appropriate precautions:

- 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.



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)

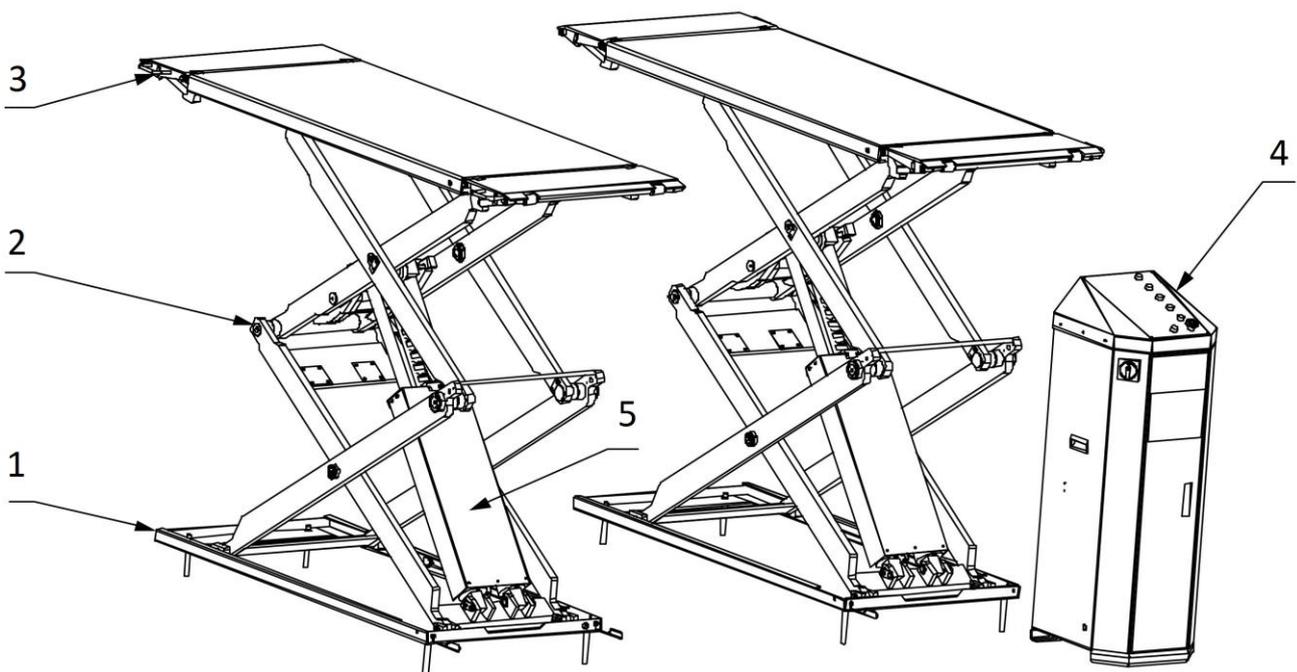
Take special care with the hydraulic power unit, the control panel and the platform cylinder.

PRODUCT DESCRIPTIONS

3.1 General descriptions

This full rise scissor lift is of pretty lower profile when at its lowest position. Its four cylinder structure makes the lowest clearance from ground is 110mm. This model is designed with two different leveling systems-auto leveling and manual leveling. For it is specially designed for surface mounting, users could have it installed with great convenience. Its platform extension deign not only can be used as a ramp, but also can serve as an extended part of the platform for much longer vehicles. Besides, designs like, 24V working voltage of control box and limit switch, alarming buzzer, pneumatic safety lock, anti-surge valves, etc. have fully considered your personal security.

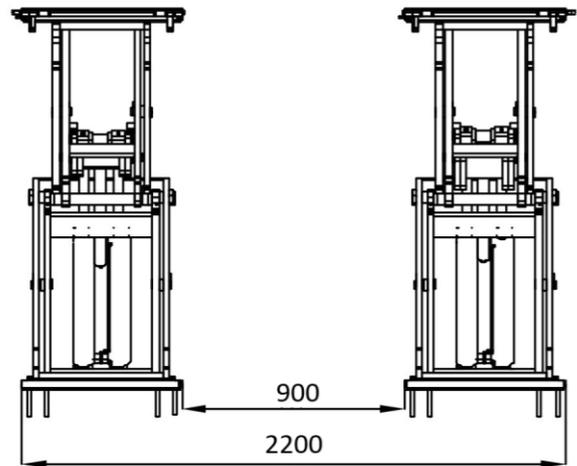
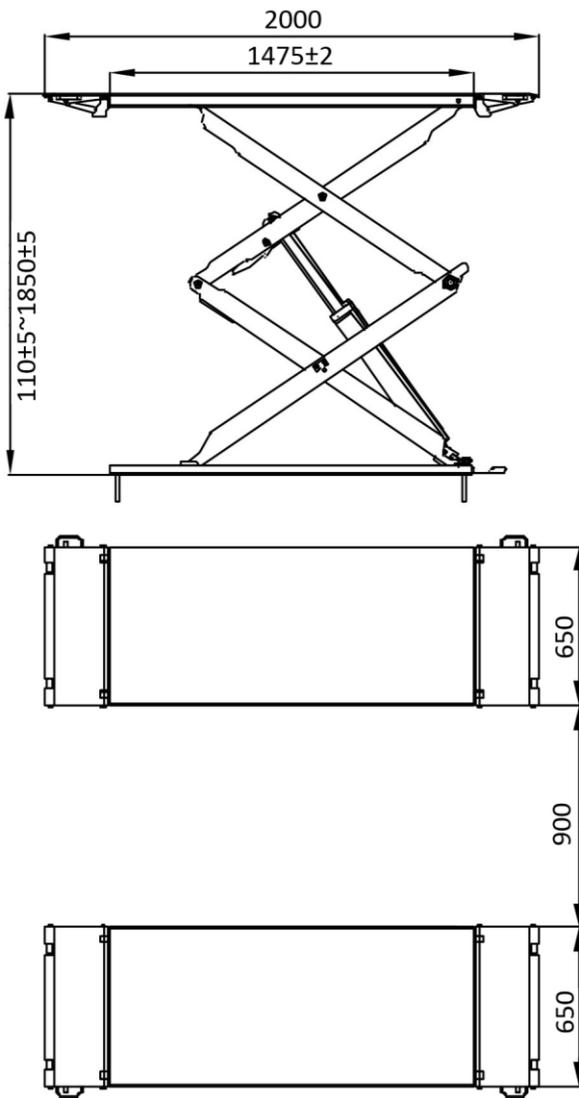
3.2 Construction of the lift



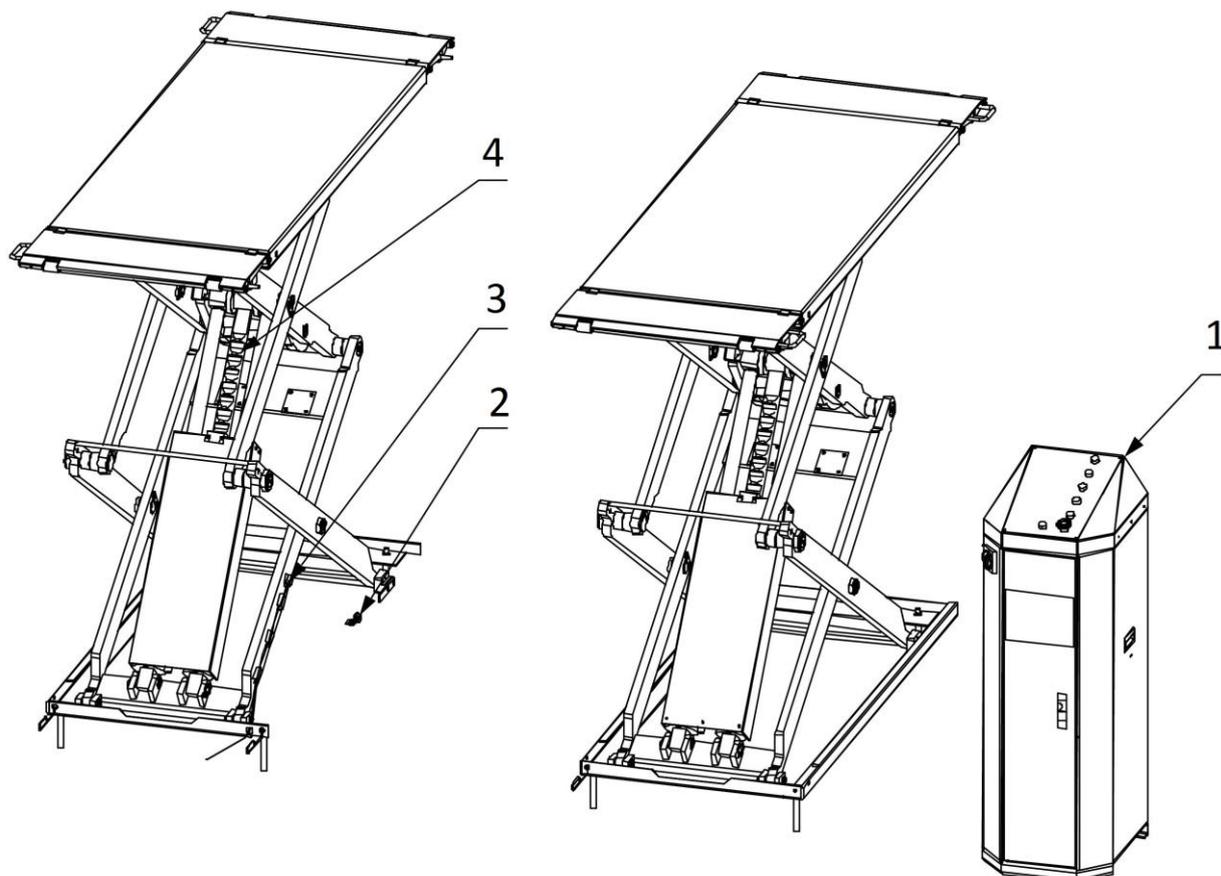
1. Base frame assembly
2. Scissor bracket
3. Lifting platform
4. Operation unit
5. Oil cylinder

3.3 Dimensions

Unit: mm



3.4 Safety devices descriptions



POS.	Safety device	Function
1	24V operation voltage	Safety voltage for operators.
2	Max height limit switch	Ensure the lifting platform stop rising when reach a height of 1850mm above the ground.
3	Safety lowering height limit switch	The lifting platforms automatically stop lowering at safety height above the ground. It needs to push DOWN II button to continue the lowering movement, meanwhile alarming buzzer will be heard warning service persons being away from the moving parts.
4	Mechanical lock	Protect the lifting platform from falling down in case of failed hydraulic system.
5	Infrared synchronization protection	Prevent incidents caused by desynchronization.

3.5 Technical data

Rated load capacity	3000KG
Full rise height	1850mm
Full lowered height	110mm
Full rise time with load	≤50s
Full lowering time with load	≤30s
Hydraulic pressure	22-24MPa
Pneumatic pressure	6-8bar
Oil 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.

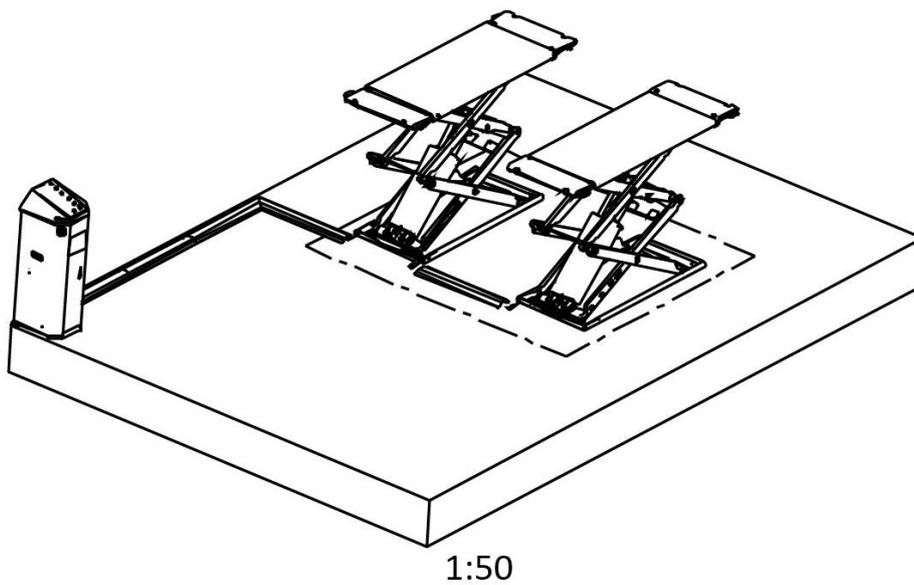
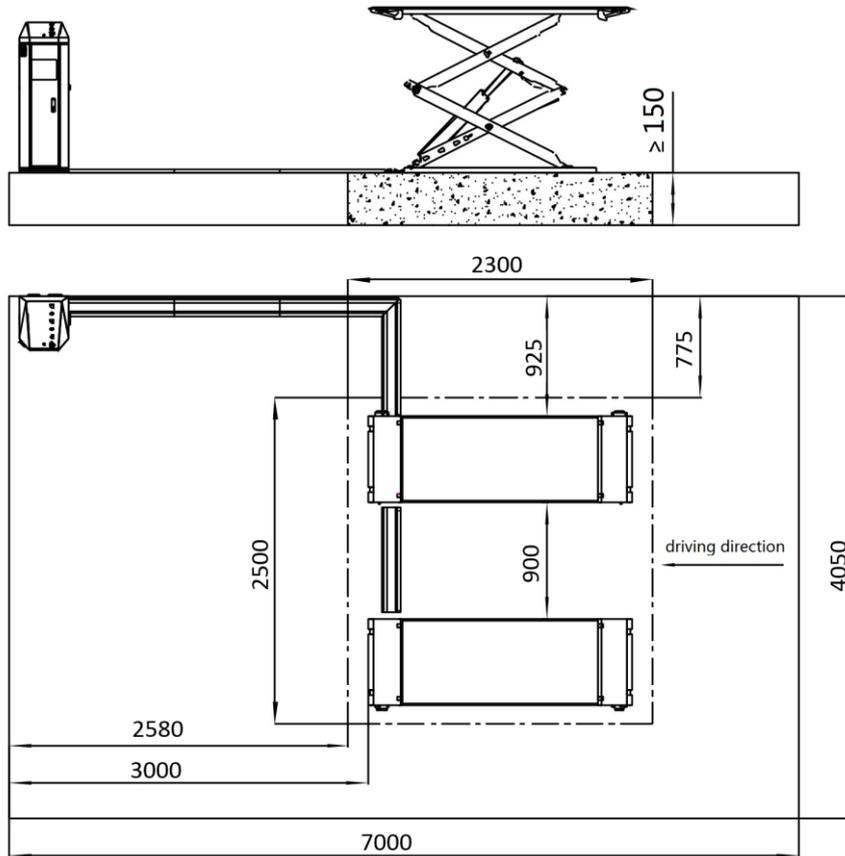
Attention: electrical system connection must be done by licensed technicians.

Requirements for power supply cable of the installation site: at least 2.5mm² wire core for 3Ph power and 4.0mm² wire core for 1Ph power.

- 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.
- Routing of the compressed air connection to the installation location.
- Refer also to the corresponding information in the operation instructions.

4.1.3 Foundations preparations

- C20/25 concrete base with strength more than 3000psi, tolerance of flatness less than 5mm and minimum thickness of 150mm. In addition, newly built concrete ground must be older than 20days.



4.1.4 Tools and equipment needed for installation

Tool name	Specification	Quantity needed
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	1mm accuracy	1
Hammer	10 pounds	1
Truck lift	Capacity more than 2500KG	1
Lifting string	Capacity, 1000KG	2
Lifting string	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.

Control cabinet package			
No.	Name	Specification	Qty
1	EE-6501 control cabinet		1
2	Rubber pad	38*120*160mm	4
3	Expansion bolt	M16*120	8
4	Pneumatic hose	D=8	2m
5	Manual	A4	1
7	Key		1
8	Oil tanks label		1
Platform package			
No.	Name	Specification	Qty
1	6501.V2 main platform		1
2	6501.V2 secondary platform		1
3	Oil hose covers		5

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 of the lifting platforms.

Remove the carton and packing films wrapped on the platform.

Attention1: Take off oil hose protectors when cut off the packing strips.

Attention 2: Avoid scratching the painting surface and hoses.

Step 2: Place the lifting platform at expected installation site.

Raise the upper platform by using a forklift and 2 lifting strings until the mechanical lock is engaged. And then hoist the platform onto the expected installation site. (Refer to the following **fig. 1and2**) Dismantle the bolts that fix the lower platform and its wooden package and move it to the installation site in the same way as the upper platform.

Attention1: Before hoisting, make sure the hoses and wires are well protected against damage.

Attention 2: It is necessary to hold the platform during the hoisting process. Irrelevant person is not allowed in installation area.

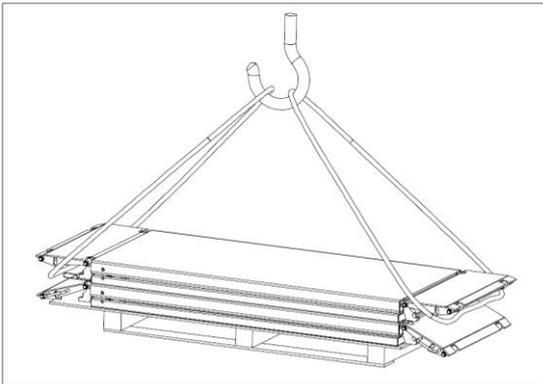


Fig 1

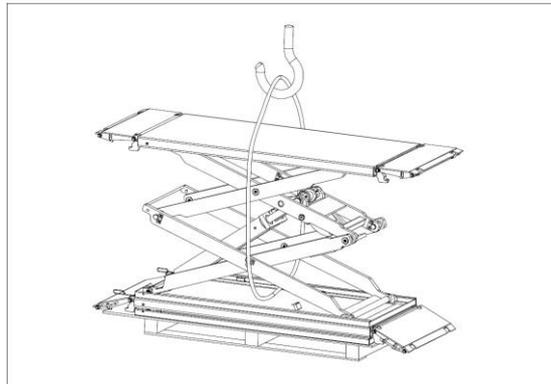


Fig2

Step 3: Open the package of the control cabinet and take out accessories in it.

Step 4: Connect oil hoses as per Annex 2. Screw torque for connector is 60N*M.

Firstly, connect the oil hoses between the two platforms. There are 3 oil hoses together. And then, connect the 2 oil hoses from the main platform with the tie-ins remained on the hydraulic block in the control cabinet. Oil hoses go into the cabinet trough the holes remained at the bottom of the cabinet.

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

Step 5: Connect the electrical system.

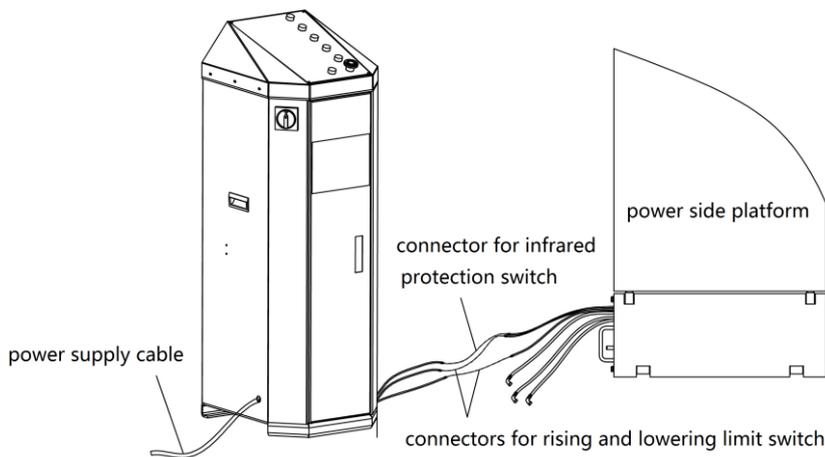
Requirements for power supply cable of the installation site: at least 2.5mm² wire core for 3Ph power and 4.0mm² wire core for 1Ph power.

Refer to Annex 1 when fix the electrical system.

Connect the wire connectors for rising and lowering limit switches

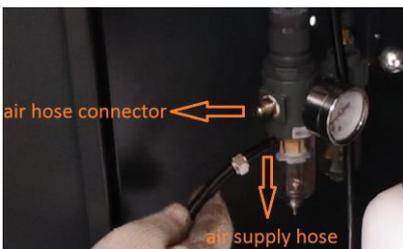
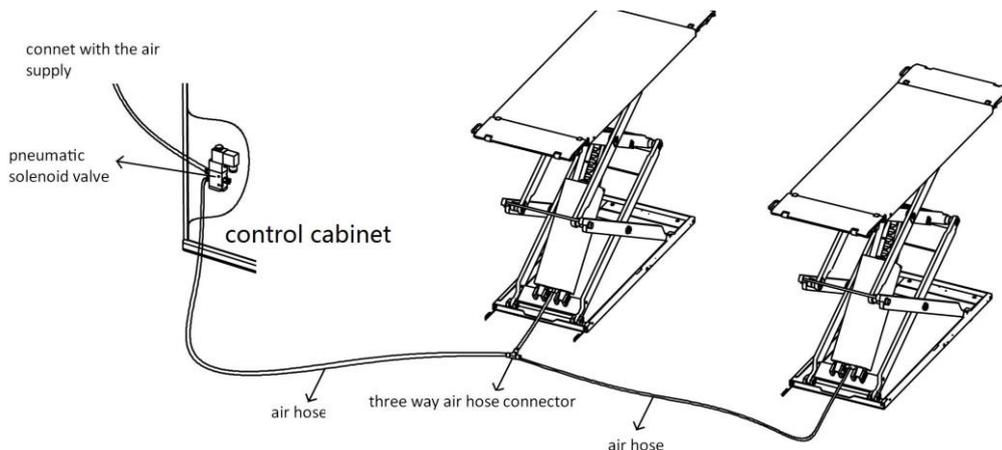
Connect the power supplier cable to external electricity supply.

(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 6: Connect the pneumatic release system. Screw torque for connector is 20N*M.

Connect air hoses as per the following fig.

External compressed air shall be prepared by the end user before installation. Pneumatic pressure 6 kg/cm²-8kg/cm²



Step 7: Fill with hydraulic oil.

CLEAN AND FRESH OIL ONLY. DON'T FILL THE TANK COMPLETELY FULL.

Lift must be fully lowered before changing or adding hydraulic oil

Pour 18 liters HM32 anti-abrasion hydraulic oil into the oil tank. The level of oil shall reach the tippets volume mark of the tank.

Add more oil after running the lift for several cycles until the lift can rise to the maximum lifting height.

Note: As running speed of the lift is mainly decided by the viscosity of the hydraulic oil, we suggest using 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 month after initial use and change once per year thereafter.

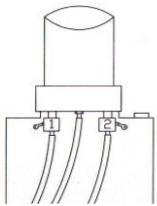
Step 8: Leveling

Refer to 5.4 operation instructions and turn off the infrared switch before leveling operation

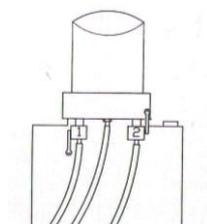
Attention: Level the platforms before connecting height limit switch because if not, platforms cannot rise to the highest position. Before leveling, make sure the oil hoses are correctly connected. Otherwise, oil cylinders may not work synchronously or could be damaged. In addition, operators need to know clear which leveling valve controls which platform. This could be judged by the way that the oil hose was connected or by trial raising or lowering.

Manual leveling

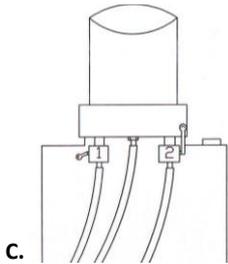
Open one of the leveling valves and press the UP button to supplement oil to the oil hose connected. Close the valve to stop adding oil. In normal working condition, both leveling valves are closed. If both valves are open, two platforms of the lift can still rise but will not move upwards synchronously.



A. Both valves open

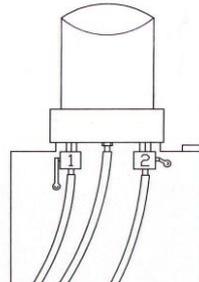


B. Both valves closed: Normal working



C.

One valve open, the other closed: leveling condition



D.

A.1. Open both leveling valves and press the UP button to have both platforms raised to the highest positions. Repeat this step for two or three times. (Take care that this step could be time consuming, because there's air in the cylinders and no load on the platforms.)

A.2. Close both leveling valves as per drawing B. Press the UP button to see if both platforms rise synchronously. (Normally, till now the platforms may not rise synchronously.)

A.3. If not work synchronously, one platform may rise faster than the other. Users should first judge which leveling valve controls which platform and then open the valve that controls the slower-rising platform to supplement oil into its oil hose. Press the UP button to make both platforms rise to the same height. (The other valve here must be closed.)

A.4. Close both leveling valves. Press DOWN I button to have both platforms lowered to the lowest position.

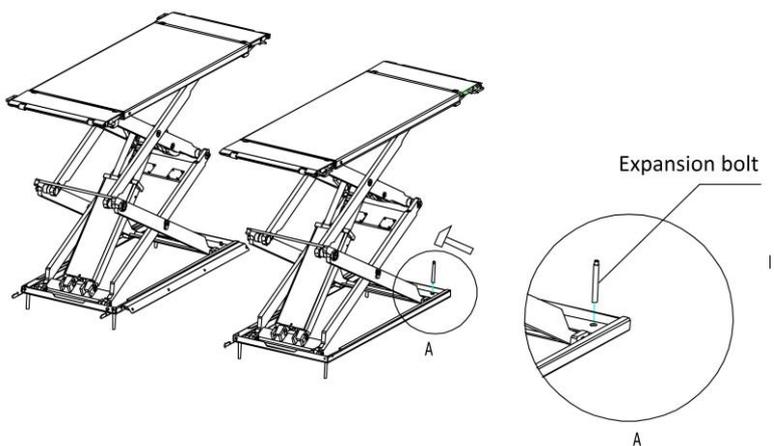
A.5. In case they do not lower synchronously, open the valve that controls the slower-lowering platform and press DWON I button to have them lowered to the lowest position and then close the leveling valve. If the lift is equipped with a height limit switch, press DOWN II button when platforms stop lowering at a safety height from the ground.

A.6. After both leveling valves having been closed, press the UP button to check if both platforms rise synchronously.

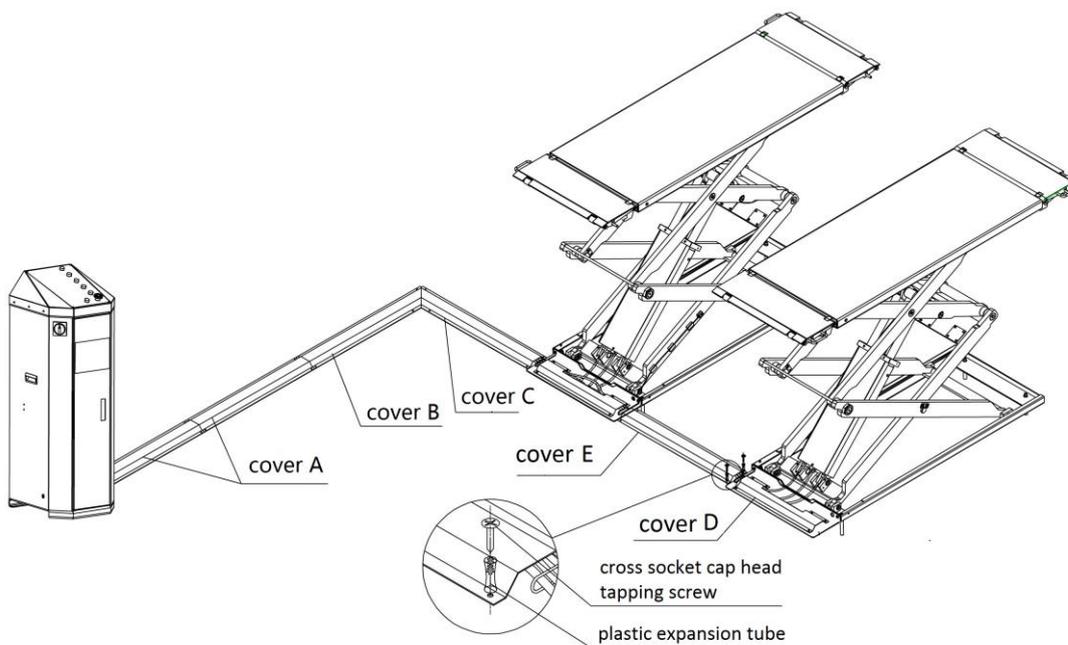
A.7. Repeat doing step A5 and step A 6 until synchronization achieved.

Step 9: Fix base frames with expansion bolts.

1. Adjust the distance between the two lifting platforms and mark the points for each anchoring bolt.
2. Drill anchor holes with an electrical drill. Make sure to drill vertically.
3. Remove thoroughly the debris and dust in holes and hammer in and secure with expansion bolts.



Step 10: Fix oil hose protection covers.



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 $\geq 20\text{mm/s}$;		
3	Noise with rated load $\leq 75\text{db}$;		
4	Grounding resistance: not bigger than 4Ω ;		
5	Height difference of the two platform $\leq 5\text{mm}$;		
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 is well secured?		
15	If max lifting height is 1850mm?		
16	If Safety advices, name plate and logos are clear?		

OPERATION INSTRUCTIONS

5.1 Precautions

5.1.1 Check all connections 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.

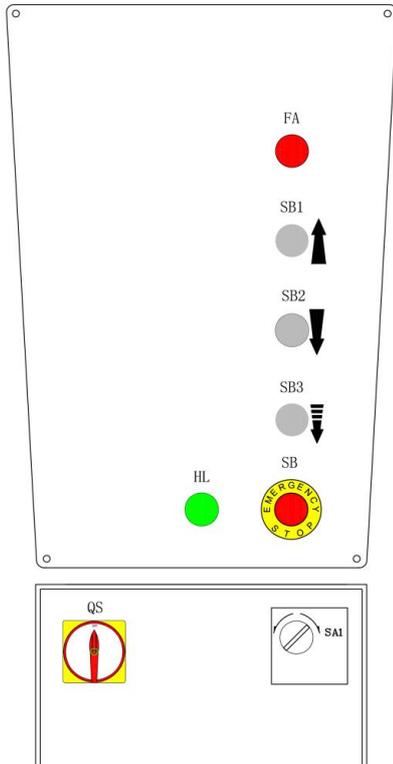
5.1.3 It shall not lift or lower an automobile if its center of gravity is not positioned midway of the runways. Otherwise, we as well as our dealers will not bear any responsibility for any consequence resulted thereby.

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

5.1.5 When runways being raised to the desired height, switch off the power at once to lock the button with a padlock to prevent any wrong operation done by unconcerned people.

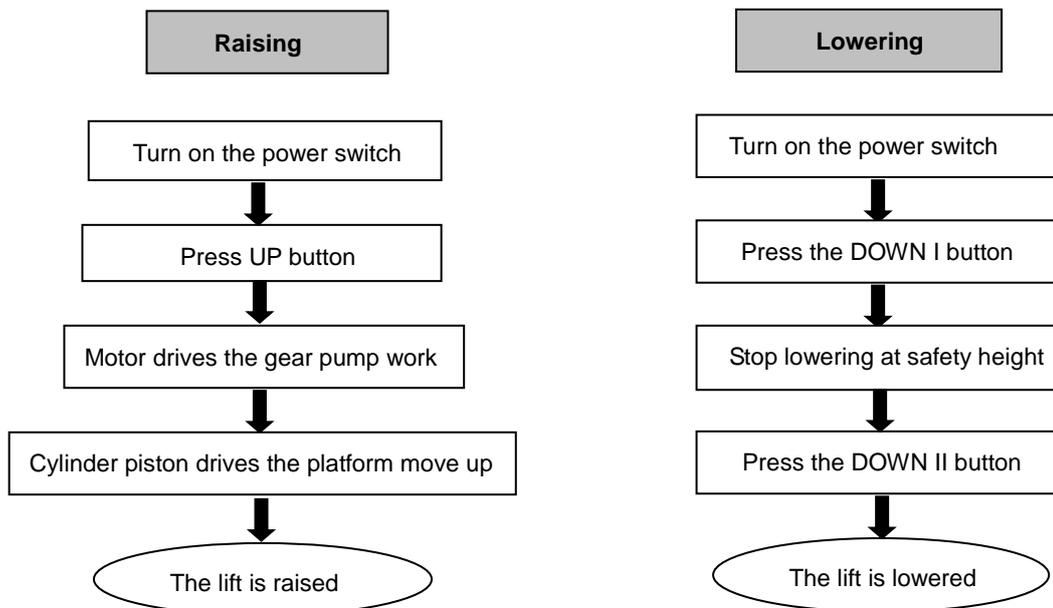
5.1.6 Make sure the safety lock of the lift is engaged before start working under the vehicle and no people under the vehicle during lifting and lowering process.

5.2 Operation instructions



Pos.	Name	Function
FA	Alarm buzzer	Safety warning
SB1	UP button	Control the rising movement
SB2	DOWN I button	Control the lowering movement
SB3	DOWN II button	Control the lowering movement (for lowering safety)
SB	Emergency stop	Cut operation power in emergency case
HL	Power indicator	Show if electricity is connected
QS	Power switch	Control main power
SA1	Selection switch	Control infrared on or off

5.3 Flow chart for operation



5.4 Operation instructions

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 lift. Always lift the vehicle using all four adapters. Never raise just one end, one corner or one side of vehicle. The lift must be only used in a static position for lifting and lowering vehicles.

The normal users are not allowed to open the door of control cabinet.

Raise the lift

Make sure vehicle is neither front nor rear heavy and center of balance should be midway between adapters and 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. Place the four rubber pads under the prop-points of the vehicle and ensure car's gravity have fallen on the rubber pads.
4. Press the UP button on the control box until rubber pads have touched the prop-points of vehicle.
5. Keep on pressing the UP button to lift the vehicle a bit higher from the ground and check again if the vehicle is in a safe position.

Lower the lift

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

1. Switch on.
2. Press the DOWN I button to lower the lift. It will stop lowering at safety height.
3. Press DOWN II button to continue lowering the platforms. Alarming buzz will be heard.
4. Remove rubber pads and drive the vehicle away

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 needs 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 SA1 to OFF status;

PUSH DOWN I and DOWN II button to fully lower the platform;

Level the lift until both platform are synchronized.

Turn SA1 to ON status.

5.5 Emergency lowering

Emergency situation means:

1. Electricity power failure
2. Failure on equipment itself

Suitable condition:

Compressed air is available. Normally, in case of sudden electricity power failure, the compressed air remained in the air compressor's tank can still make the pneumatic system of the lift work.

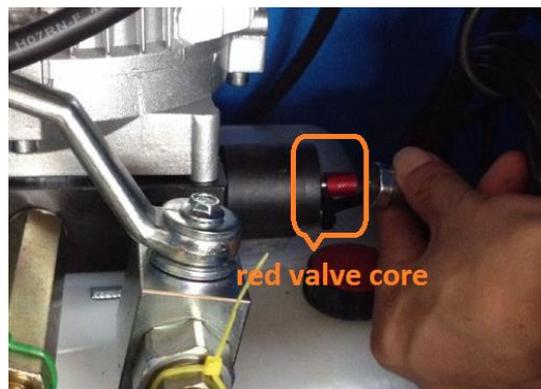
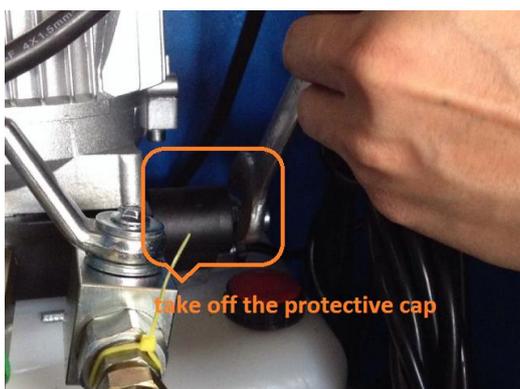
Emergency lowering steps when mechanical safety locks are not engaged

Attention: Operates needs to pay extremely attention when adopt the below emergency lowering steps. There could be potential safety risks.

1. Open the control cabinet and find out the manually controlled air-supplying button and emergency unloading solenoid valve.

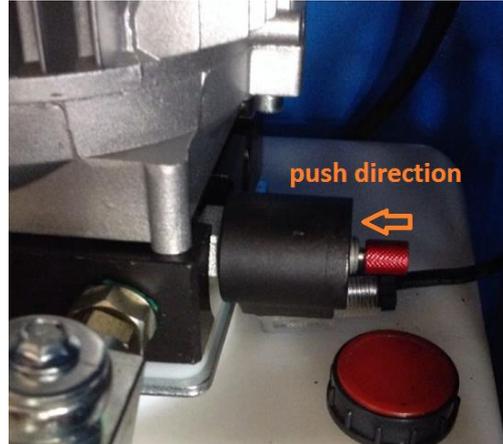


2. Take off the protective cap of the valve and see red the valve core.



3. Push the blue air-supplying button and meanwhile push and turn anticlockwise the red valve core until sound which implicate the valve is open is heard. At this time, lifting platforms may lower.

Attention: when do the above operation, operators need to focus on the lowering movement. If any abnormal occurs, Stop pushing the blue air-supplying button and push and turn clockwise the red valve core unit the sound which implicate the valve is closed is heard



4. Close the unloading valve by pushing and turning clockwise the red core until you can hear the sound which implicate the valve is closed.

TROUBLE SHOOTING

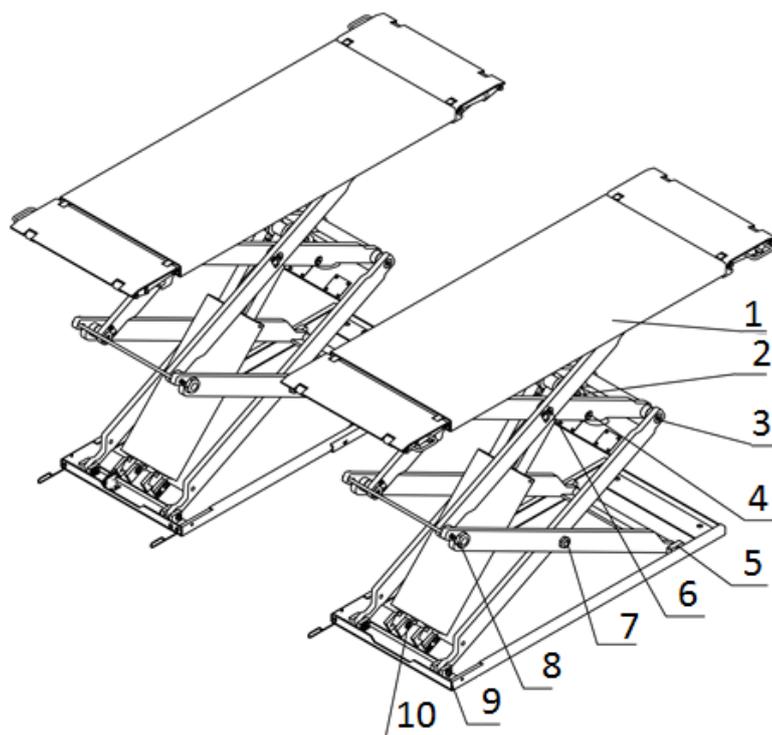
ATTENTION: If the trouble could not be fixed by yourself, please do not hesitate to contact us for help .We will offer our service at the earliest time we can. By the way, your troubles will be judged and solved much faster if you could provide us more details or pictures of the trouble.

TROUBLES	CAUSE	SOLUTION
Motor does not run and will not raise	The wire connection is loose.	Check and make a good connection.
	The motor is burnt	Replace it.
	The limit switch is damaged or the wire connection is loose.	Connect it or adjust or replace the limit switch.
Motor runs but will not raise	The motor run reversely.	Check the wire connection.
	Overflow valve is loose or jammed.	Clean or adjust it.
	The gear pump is damaged.	Replace it.
	Oil level is too low.	Add oil.
	The oil hose became loose or dropped off.	Tighten it.
	The cushion valve became loose or jammed.	Clean or adjusts it.
Platforms go down slowly after being raised	The oil hose leaks.	Check or replace it.
	The oil cylinder is not tight	Replace the seal.
	The single valve leaks.	Clean or replace it.
	The overflow valve leaks.	Clean or replace it.
	Electrical unloading valve leaks.	Clean or replace it.
Rising too slow	The oil filter is jammed.	Clean or replace it.
	Oil level is too low.	Add oil.
	The overflow valve is not adjusted to the right position.	Adjust it.
	The hydraulic oil is too hot (above 45°).	Change the oil.
	The seal of the cylinder is abraded.	Replace the seal.
Lowering too slow	The throttle valve jammed.	Clean or replace.
	The hydraulic oil is dirty.	Change the oil.
	The anti-surge valve jammed.	Clean it.
	The oil hose jammed.	Replace it.

MAINTENANCE

Easy and low cost routine maintenance can ensure the lift work normally and safely. Following are requirements for routine maintenance. You may decide the frequency of routine maintenance by consulting your lift's working conditions and time.

6.1 The following positions need to be lubricated before use with NO.1 lithium base grease.



POS.	Name
1	Platform slider
2	Oil cylinder rotation shaft
3	Joint shaft D
4	Start rotation shaft
5	Base frame slider
6	Joint shaft C
7	Joint shaft E
8	Joint shaft B
9	Base frame rotation shaft
10	Oil cylinder rotation shaft

6.2 Routine check and maintenance

6.2.1 Daily checking items before operation

Daily check is essentially necessary. The discovery of device failure before action could save your time and prevent you from great loss, injury or casualty.

- ✓ Commission the lift and check if mechanical safety lock system works well.
- ✓ Check oil hose connection. No leakage is allowed.
- ✓ Check the electric connections and insulation.
- ✓ Check the connection of scissor arms.

6.2.2 Weekly checking items

- ✓ Check the smooth movement of moving parts. Check that there are no foreign parts in the way of moving parts.
- ✓ Check the function of safety related units.
- ✓ Check the amount of oil left in the oil tank. Oil is enough if the carriage can be raised to highest position. Otherwise, oil is insufficient.

6.2.3 Monthly checking items

- ✓ Check whether the expansion bolts are well anchored.
- ✓ Check the tightness of the hydraulic system.
- ✓ Check the lubrication and abrasion condition of moving parts.

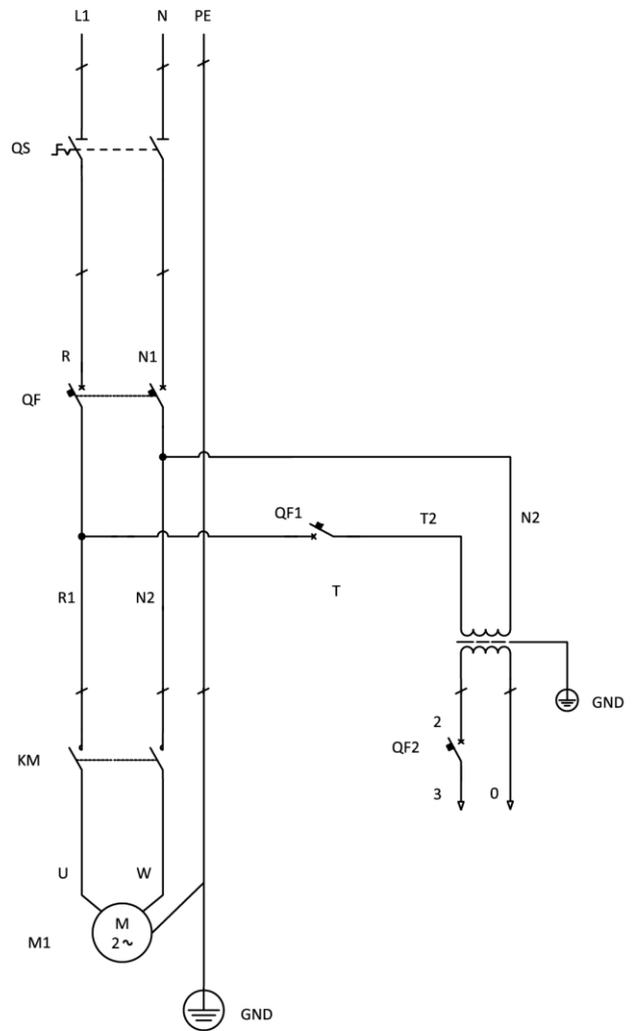
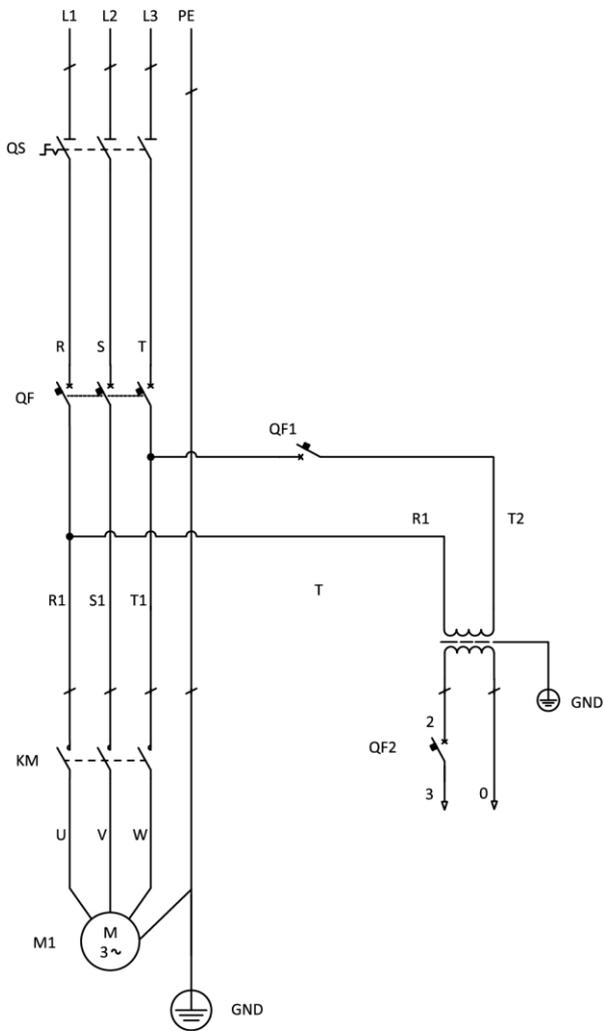
6.2.4 Yearly checking items

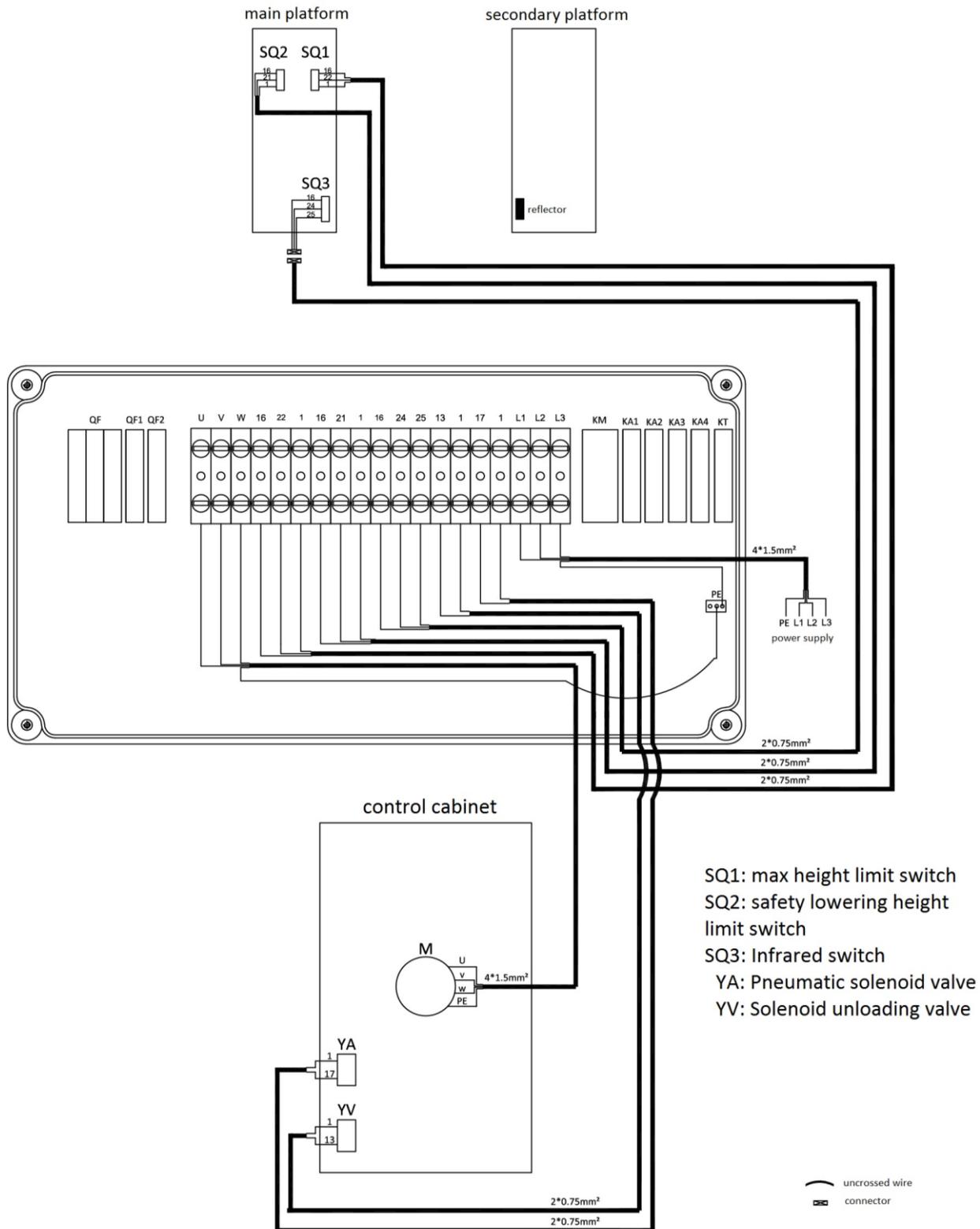
- ✓ Check whether the expansion bolts well anchored.
- ✓ Check the function of safety related units.
- ✓ Check the cleanness of hydraulic system and replace hydraulic oil.
- ✓ Check the tightness of the hydraulic system.
- ✓ Check the lubrication and abrasion condition of moving parts.

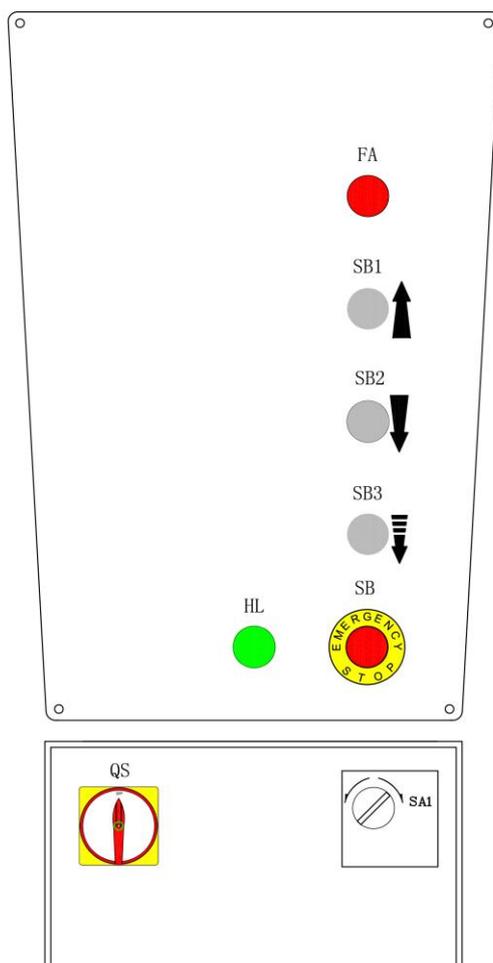
If users strictly follow the above maintenance requirements, the lift will keep in a good working condition and meanwhile accidents could be avoided to a large extent.

ANNEX

Annex1, Wiring diagrams and parts list

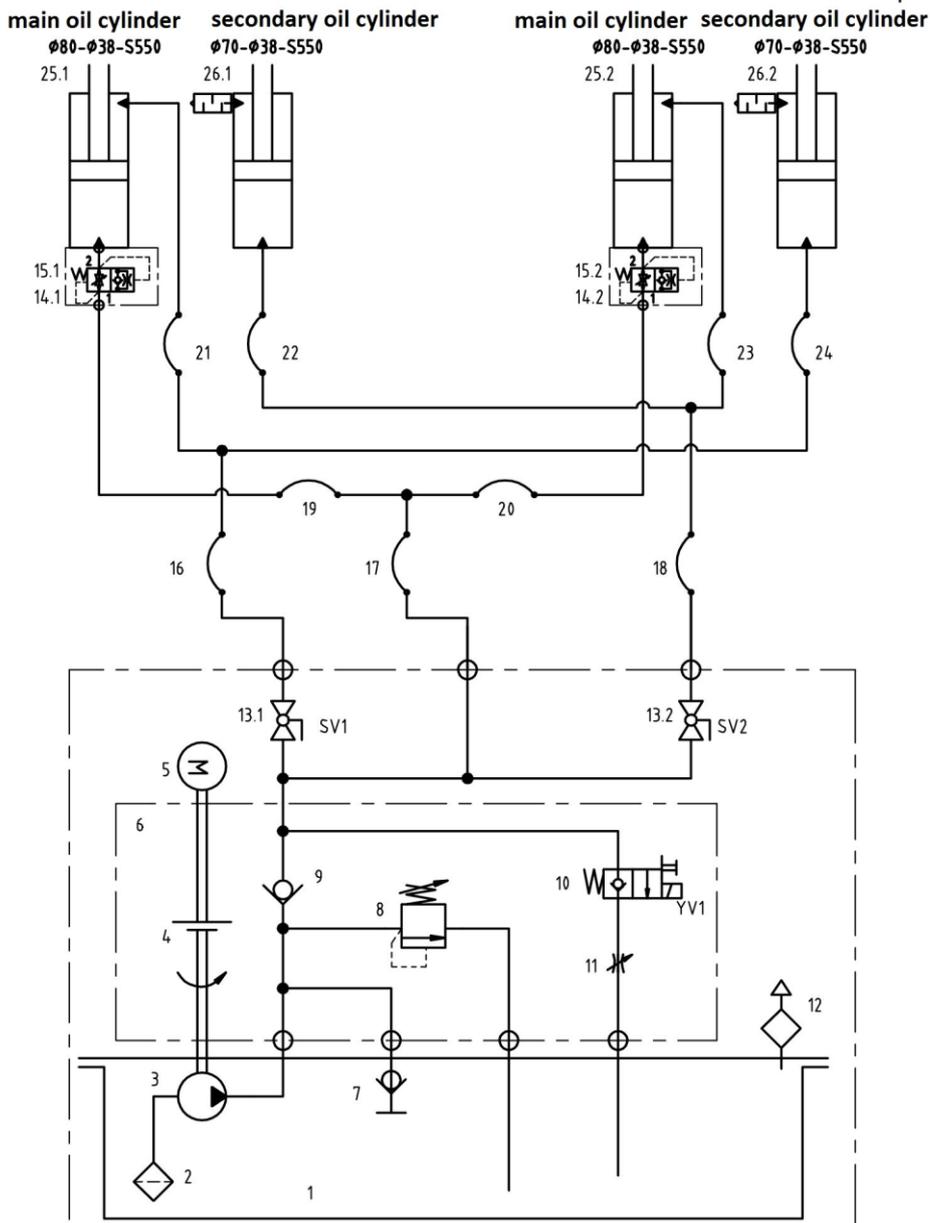




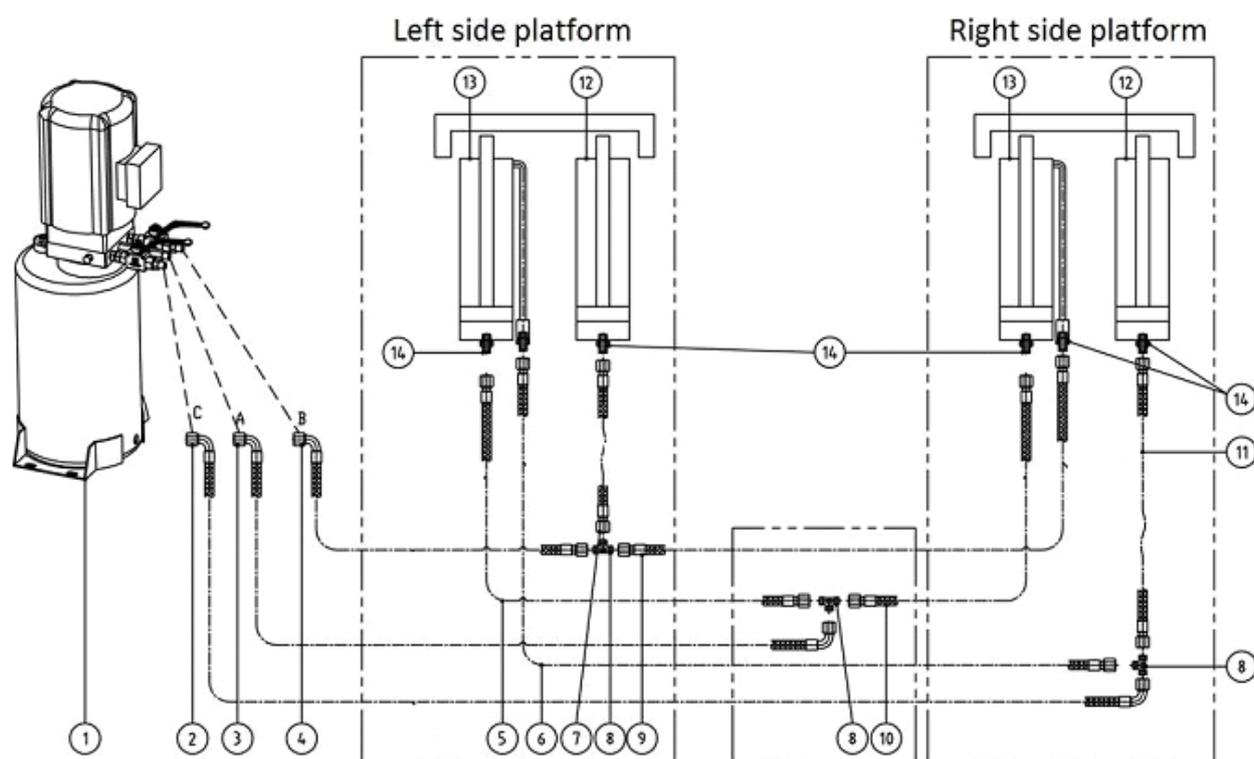


Pos.	CODE	Name	Specification	Qty
T	320101011	Transformer (220V)	JBK3-63VA 220V-24V	1
	320101013	Transformer (230V)	JBK3-63VA 230V-24V	
	320101014	Transformer (240V)	JBK3-63VA 240V-24V	
	320101016	Transformer (380V)	JBK3-63VA 380V-24V	
	320101017	Transformer (400V)	JBK3-63VA 400V-24V	
	320102008	Transformer	BK-100VA 400V230V-220V50VA 24V50VA	
	320101018	Transformer (415V)	JBK3-63VA 415V-24V	
M		Aluminum motor	2.2kW /3.0kW	
QS	320304001	Power switch	LW26GS-20/04	1
SQ3	320306006	Photoelectric switch	HG-M18NPN.L=60	1
SQ1;SQ2	320306010	Proximity sensor switch	Y18-Z-PK4	2
SA1	320303009	Selection switch	AR22PR-211B	1
SB1;SB2	320401013	Button	AR22FOR-11-W	2
SB3	320401017	Button	AR22FOR-20-W	1
SB	320402002	Emergency stop	XB2BS542C	1

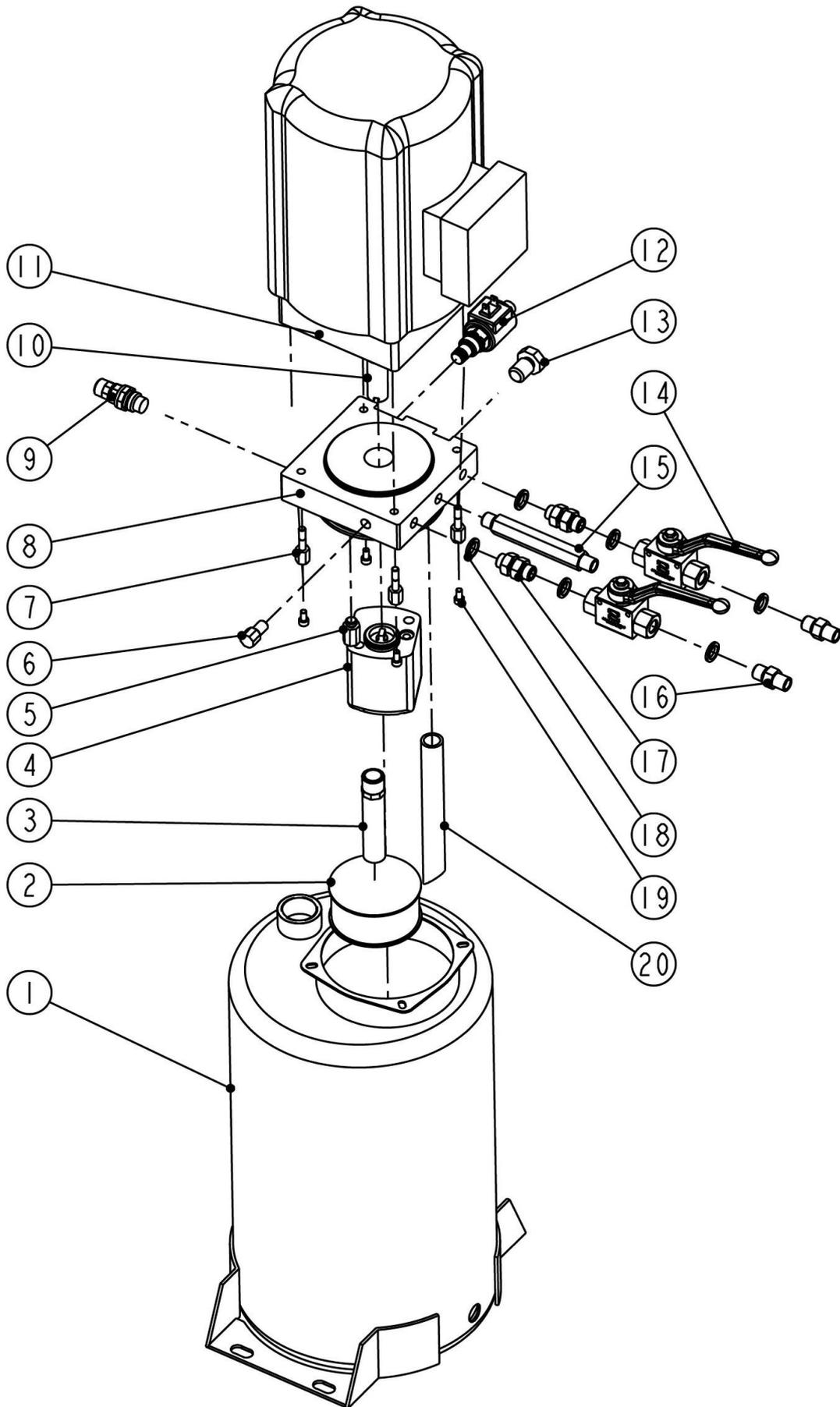
Pos.	CODE	Name	Specification	Qty
	320503002	Ground terminals	4	1
	320505006	Wire terminal	VK-5N(UK-5N)	13
	320505011	Retaining chip	LT-2.5	2
KA1;KA2;KA3;KA4	320601001	Relay	HH54P-L/DC24V (MY4NJ)	4
	320601011	Relay holder	PYF-14A-E	4
	320601018	Relay feet fixer		8
KT	320602009	Compact time relay	ZYS11-A(AC24V 5S)	1
QF	320801001	Circuit breaker-3Ph	DZ47-63C16/3P	1
QF	320802001	Circuit breaker-1Ph	DZ47-63C32/2P	1
QF1	320803001	Circuit breaker	DZ47-63C1/1P	1
QF2	320803003	Circuit breaker	DZ47-63C3/1P	1
KM	320901001	AC contactor -3Ph	CJX2-1210/AC24	1
KM	320901011	AC contactor (2.2kW,1Ph/3.0kW,3Ph)	CJX2-1810/AC24-220V-1P	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

Annex2, Hydraulic diagrams and parts list


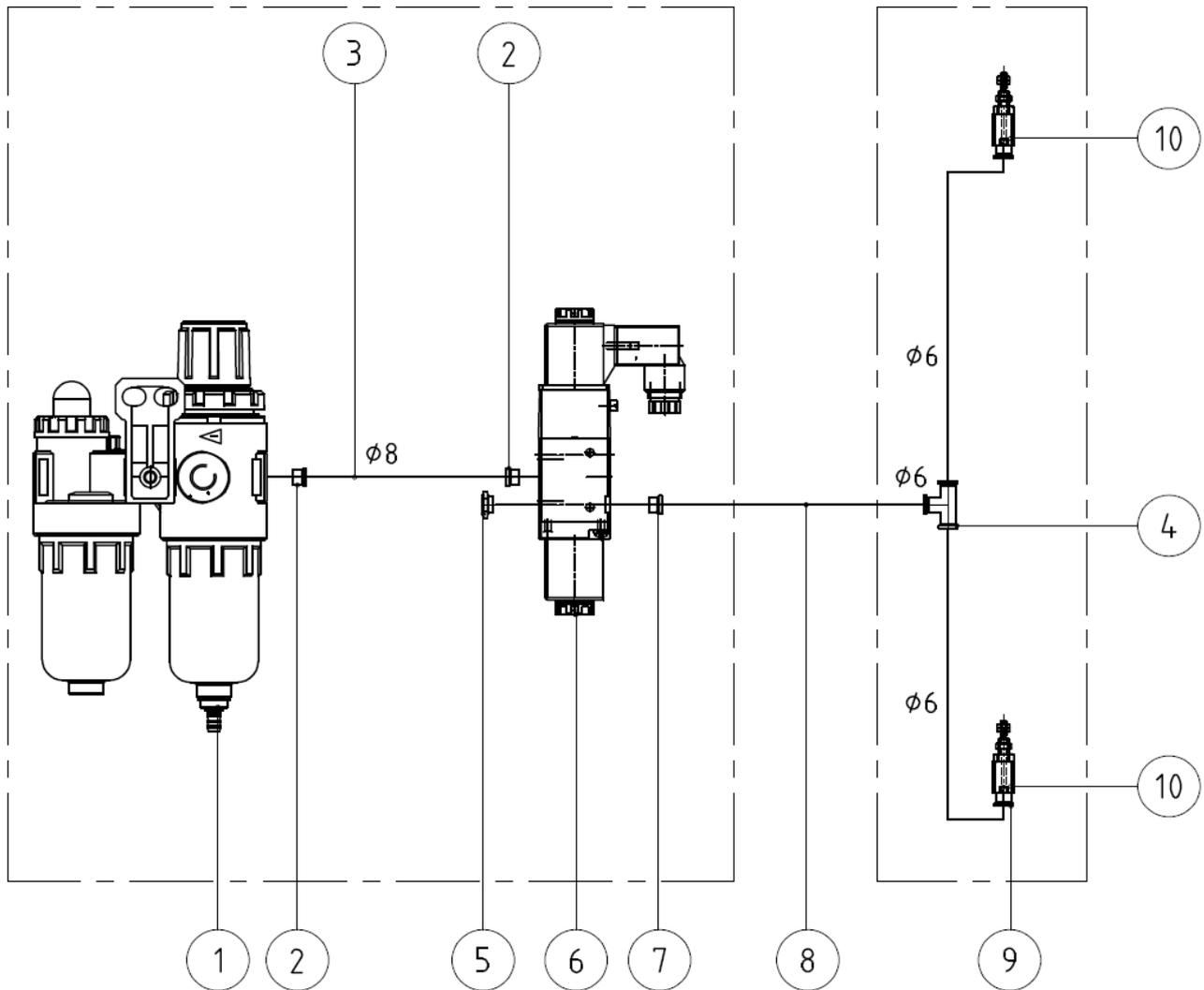
1. Oil tank
2. Filter
3. Gear pump
4. Coupling
5. Motor
6. Hydraulic block
7. Cushion valve
8. Overflow valve
9. Single way valve
10. Solenoid unloading valve
11. Throttle valve
12. Tank cover
13. Leveling ball valve
14. Connector of parachute valve
(optional)
15. Parachute valve (optional)
- 16-24. oil hose
25. Main oil cylinder
26. The secondary oil cylinder



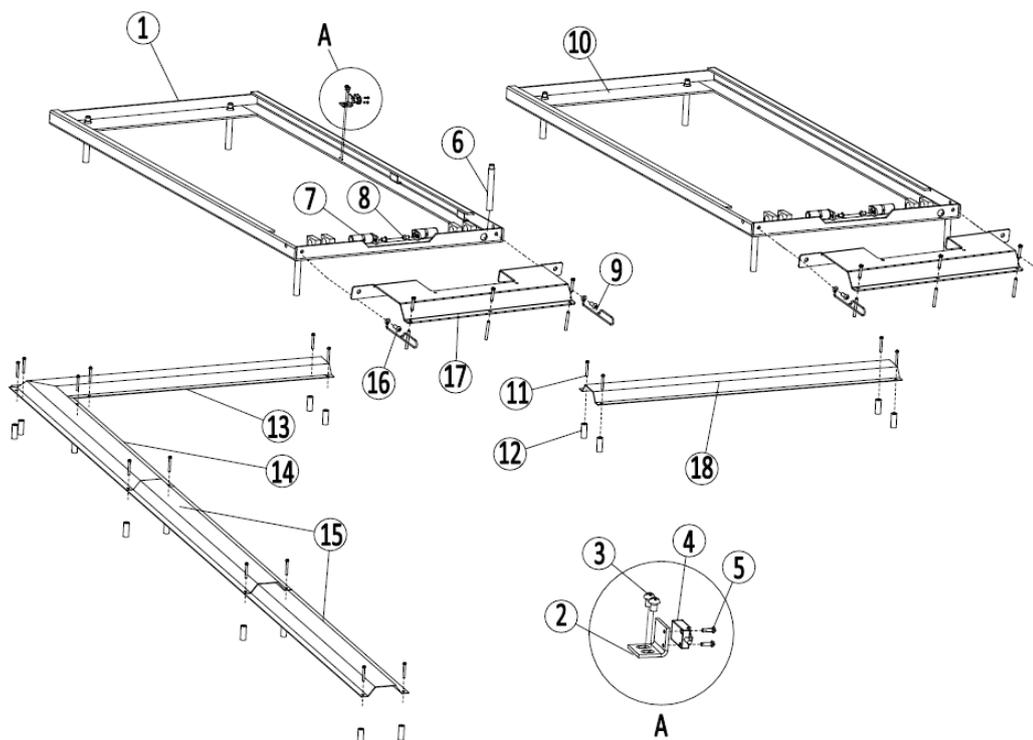
Pos.	CODE	Name	Specification	Qty
1	610019752	Power unit	220V-1Ph-60HZ-2.2KW	1
	610019683	Power unit	380V-3Ph-50HZ-2.2KW	1
	610019347	Power unit	400V-3Ph-50HZ-2.2KW	
2	624001266	Oil hose	L=5600mm	1
3	624001876	Oil hose	L=4900mm	1
4	624001004	Oil hose	L=4100mm	1
5	624001221	Oil hose	L=950mm	1
6	624001129	Oil hose	L=1750mm	1
7	624001005	Oil hose	L=230mm	1
8	410210181	three way connector	6603B-A9-B7	3
9	624001129	Oil hose	L=1750mm	1
10	624001221	Oil hose	L=950mm	1
11	624001006	Oil hose	L=250mm	1
12	615019004D	Main cylinder	6501-A4-B7φ70*550	2
13	615019003D	Secondary cylinder	6501-A4-B8φ80*550	2
14	310101028	Shifting connector	G1/4,M14x1.5	6
Seal ring	CODE	Name	Specification	Qty
1	207102008	Y shape seal ring	B7-80*65*9	2
2	207102003	Y shape seal ring	SD38*48*5/6.5	2
3	207105004	Dust-proof ring	BHS38*46*6	1
1	207102018	Y shape seal ring	B7-70*55*9	1
2	207105004	Dust-proof ring	BHS38*46*6	1



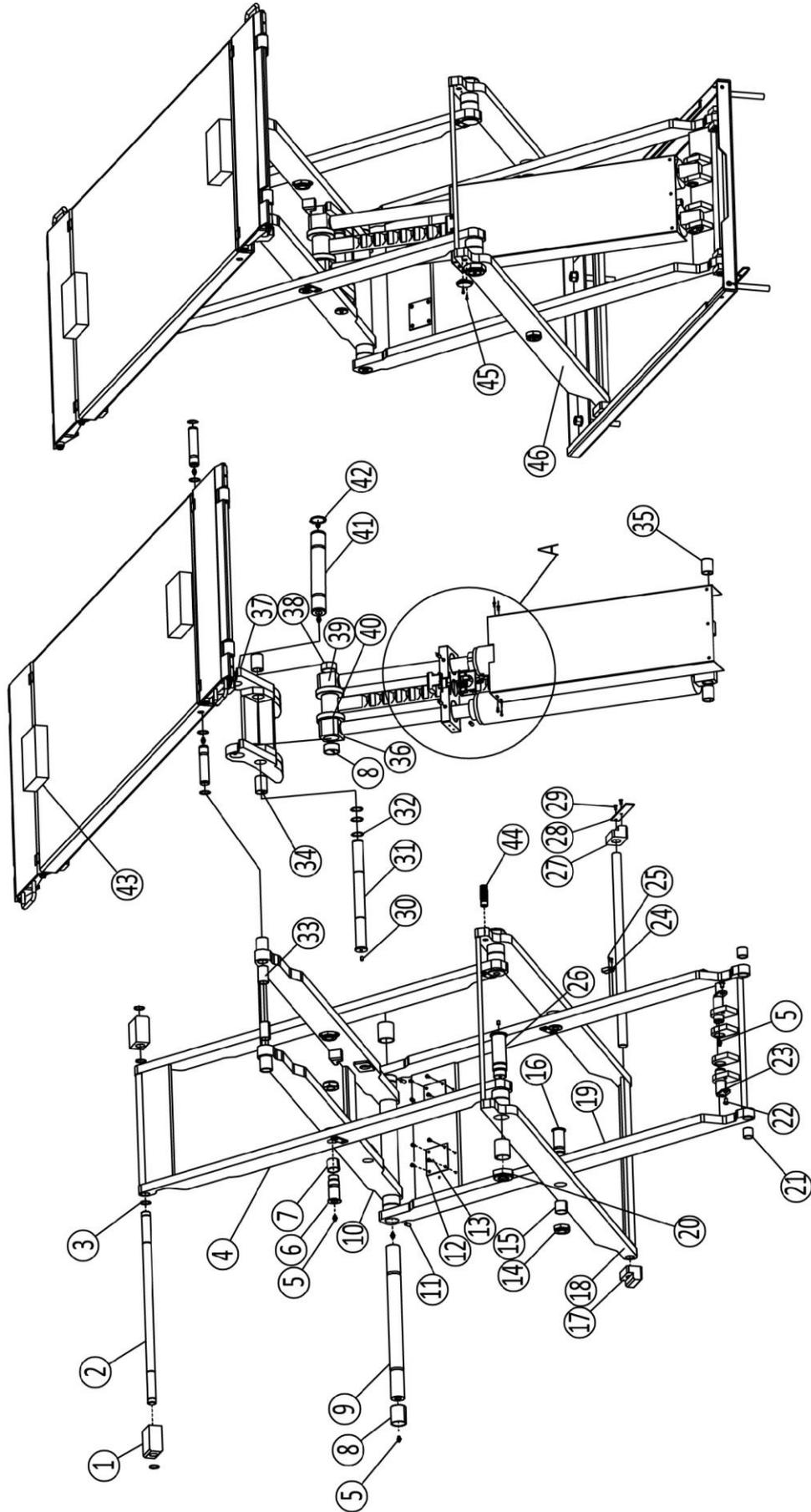
Pos.	CODE	Name	Specification	Qty
1	330405027	Steel oil tank	18L	1
2	330403001	Oil sucking filter	YG-C	1
3	330401005	Oil sucking tube	YX-BL-293	1
4	330201005	Gear pump assembly (for 2.2kW,3Ph motor)	CBK-F220/CBK-2.1F	1
	330201004	Gear pump assembly (for 2.2kW,1Ph motor)	CBK-F216	1
	330201007	Gear pump assembly (for 3.0kW,3Ph motor)	CBK-F233	1
5	330301001	Cushion valve	HZYF-C1	1
6	330305002	Throttle valve	-	1
7	202109064	Hex socket cylinder head screw	M6*30	4
8	330101007	Hydraulic block	YF-4	1
9	330304001	Over flow valve	EYF-C	1
10	330404001	Coupling	YL-A	1
11	320201001	Motor	220V-2.2KW -1PH-50HZ-2p	1
	320201002	Motor	230V-2.2KW -1PH-50HZ-2P	1
	320201003	Motor	240V-2.2KW -1PH-50HZ-2P	1
	320201004	Motor	380V-2.2KW -3PH-50HZ-2p	1
	320201005	Motor	400V-2.2KW -3PH-50HZ-2P	1
	320201006	Motor	415V-2.2KW -3PH-50HZ-2P	1
	320204016	Motor	380V-3.0KW-3PH-50HZ-2P	1
	320204017	Motor	400V-3.0KW-3PH-50HZ-2P	1
	320204018	Motor	415V-3.0KW -3PH-50HZ-2P	1
12	330308006	Solenoid unloading valve	DHF06-220H/DC24	1
13	330302001	Single way valve	DYF-C	1
14	330307001	Two way ball valve	GE2G1/4111AB	2
15	310101026	Straight connector	G1/4-G1/4 L=120	1
16	310101010	Straight connector	G1/4-G1/4	2
17	615019005	Tube connector B	G1/4-G1/4	2
18	207103019	Composite washer	M14	6
19	201102002	Hex flange screw	M5*10	4
20	330402001	Oil back tube	YH-D	1

Annex3, Pneumatic diagrams and parts list


Pos.	CODE	Name	Specification	Qty
1	321004006	AFC Air filter combination	AFC2000-M	1
2	310101015	Pneumatic connector	KLC8-02	3
3	123010101	Air hose	D=6	1
4	310103010	Three way connector	Match with M6 air hose	1
5	310201002	Silencer	SLM01 R1/8 (M8)	1
6	310401001	Pneumatic directional valve	3V210-08DC24V	1
7	310101014	Straight pneumatic connector	KN6-02	1
8	123010101	Pneumatic hose	D=6	1
9	310102007	90 pneumatic hose connector	PL6-M5	2
10	310501012	Needle pneumatic cylinder	5mm	2

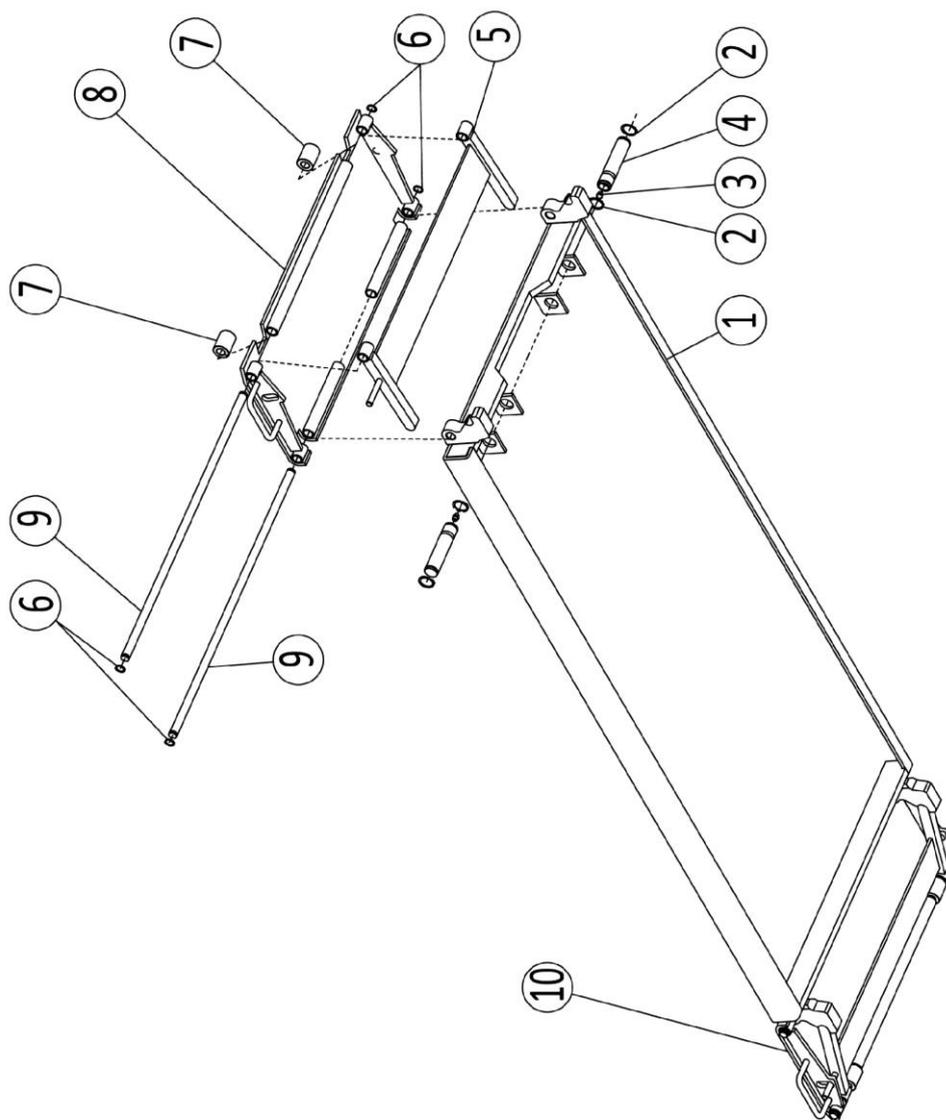
Annex4, Mechanically exploded drawings and parts list


Pos.	CODE	Name	Specification	Qty
1	614019501	Base frame A	65012-A1-B1	1
2	410192331	Limit switch holding plate	65012-8	1
3	202101027	Cross socket cap head screw M6*8	GB/T818-2000	2
4	320306010	Proximity sensor	Y18-Z-NK4	1
5	202101040	Cross socket cap head screw M3*10	GB/T818-2000	2
6	201201005	Expansion bolt M16*120		8
7	612019504	Base frame rotation shaft	65012-A1-B5	4
8	202110004	Hex socket button head screw M8*12	GB70	4
9	410190251	Oil hose clipper	6501-A1-B4	3
10	614019510	Base frame B	65012-A6-B1	1
11	202301008	Cross socket cap head tapping screw	GB845	26
12	121010103	Plastic expansion tube	GB/T 7129-2001	26
13	410190043	Hose cover C	6501-A11	1
14	410190033	Hose cover B	6501-A10	1
15	410190023	Hose cover A	6501-A9	2
16	202110005	Hex socket button head screw M8*20		3
17	410192873B	Hose cover D	65012-A9	2
18	410195793B	Hose cover E	65012-A13	1



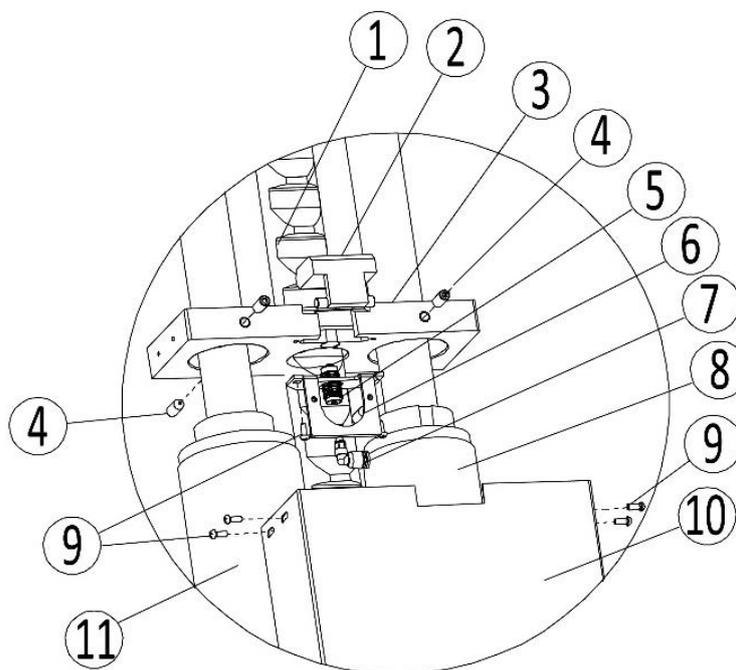
Pos.	CODE	Name	Specification	Qty
1	420190190	UP slider	65012-A2-B17	4
2	410195061	UP rotation shaft	65012-A2-B15	2
3	204301009	Circlip 25	GB/T894.1—1986	8
4	614019502	Arm B	65012-A2-B1	2
5	208106002	Oil cup M8	M8	10
6	410195021C	Joint shaft C	65012-A2-B6	4
7	205101017	Bearing 3020	SF-2X	8
8	205101060	Bearing 4050	SF-2X	10
9	410195051B	Joint shaft D	65012-A2-B12	2
10	614019503	Rotation arm A	65012-A2-B2	2
11	202206003	Hex socket locking screw M8*20	GB_T78	4
12	410195580B	Padding plate	65012-A2-B14	4
13	202101021	Cross socket cap head screw M5*10	GB/T818-2000	16
14	203103016	Hex locking nut	GB/T6172.1-2000	8
15	205101054	Bearing 3030	SF-2X	4
16	410195081C	Joint shaft E	65012-A2-B10	4
17	420190040	DOWN sliding plate	6501-A2-B13	3
18	614019048	Arm D	65012-A2-B4A	1
19	614019504	Arm C	65012-A2-B3	2
20	203103017	Hex locking nut	GB/T6172.1-2000	4
21	205101050	Bearing 2525	SF-2X	4
22	202110004	Hex socket button head screw M8*12	GB70	4
23	612019008B	Oil cylinder shaft assembly	65012-A4-B9	4
24	320306010	Proximity sensor	Y18-Z-NK4	1
25	202101040	Cross socket cap head screw M3*10	GB/T818-2000	2
26	410195031C	Joint shaft B	65012-A2-B9	4
27	420190060	Limitation slider	6501-A2-B18	1
28	410190311B	Limitation plate	65012-A2-B19	1
29	202103008	Cross socket cap head screw M5*10	GB819	2
30	208106002	Pressed oil cup M8	GB7940	4
31	410195111B	Rotation shaft of the start plate	65012-A3-B6	2
32	204301011	Circlip 30	GB/T894.1-1986	6
33	205101052	Bearing 2530	SF-2X	4
34	205101022	Bearing 3045	SF-1	4
35	205101053	Bearing 2840	SF-1	4
36	410190141B	Oil cylinder connection A	6501-A4-B11	2
37	614019511B	Start plate	65012-A3-B2	2
38	205101035	Bearing 4040	SF-2X	2

Pos.	CODE	Name	Specification	Qty
39	410190151	Oil cylinder connection B	6501-A4-B1	2
40	410190111	Oil cylinder roller wheel	6501-A4-B12	4
41	410195131C	Oil cylinder rotation shaft	6501V2-A3-B1	2
42	204301014	Circlip 40	GB/T894.1-1986	4
43	420190090	Rubber pad	6501-14	4
44	320306006	Infrared sensor	HG-M18NPN	1
45	202101007	Cross socket cap head screw	M4*8	2
46	614019049	Arm D	65012-A2-B4B	1



Pos.	CODE	Name	Specification	Qty
1	614019042	Lifting platform	65012-A5-B3	2
2	204301009	Circlip 25	GB/T894.1—1986	8
3	208106002	Oil cup M8	M8	4

Pos.	CODE	Name	Specification	Qty
4	410195181B	Shaft of the lifting platform	65012-A5-B2	4
5	614019507	Supporting rod	65012-A5-B1-C6	4
6	204301004	Circlip 15	GB/T894.1—1986	16
7	420180010	Small roller wheel	MR30-A22-B5	8
8	614019506	Ramp A	65012-A5-B1	2
9	410195071	Shaft of the ramp	65012-A5-B1-C4	8
10	614019509	Ramp B	65012-A5-B4	2
11	420190090	Rubber pad	6501-14	4



Pos.	CODE	Name	Specification	Qty
1	612019506B	Mechanical safety teeth	65012-A4-B2	2
2	410193121	Mechanical safety block	65013-A4-B5	2
3	410195431D	Oil cylinder flange	65012-A4-B3	2
4	202207002	Hex socket locking screw M8*16	GB/T80-2000	8
5	310501012	Needle pneumatic cylinder	CJPB10*10	2
6	410191831	Sheath fixing plate	6501-A4-B9-C3	2
7	310102007	90 connector	PL6-M5	2
8	615019004D	Secondary cylinder	6501-A4-B7	2
9	202101007	Cross socket cap head screw M4*8	GB/T818-2000	12
10	410190093B	Oil cylinder sheath	65012-A4-B14	2
11	615019003D	Main oil cylinder	6501-A4-B8	2