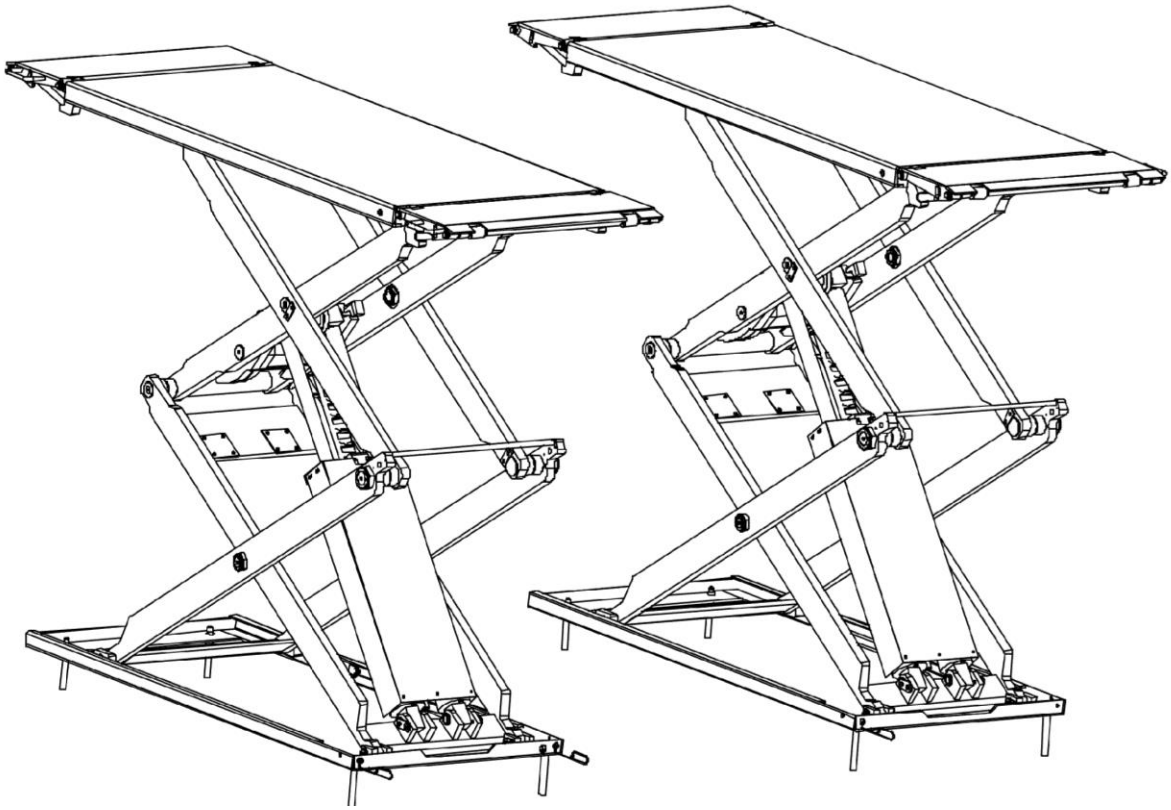
Model No. EE-6501

Short platform scissor lift
Low profile
With synchronization protection
Lifting capacity: 3000KG

Installation, Operation and Parts Manual



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

Date: 07/06/2024

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:

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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.

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 option 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, 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;

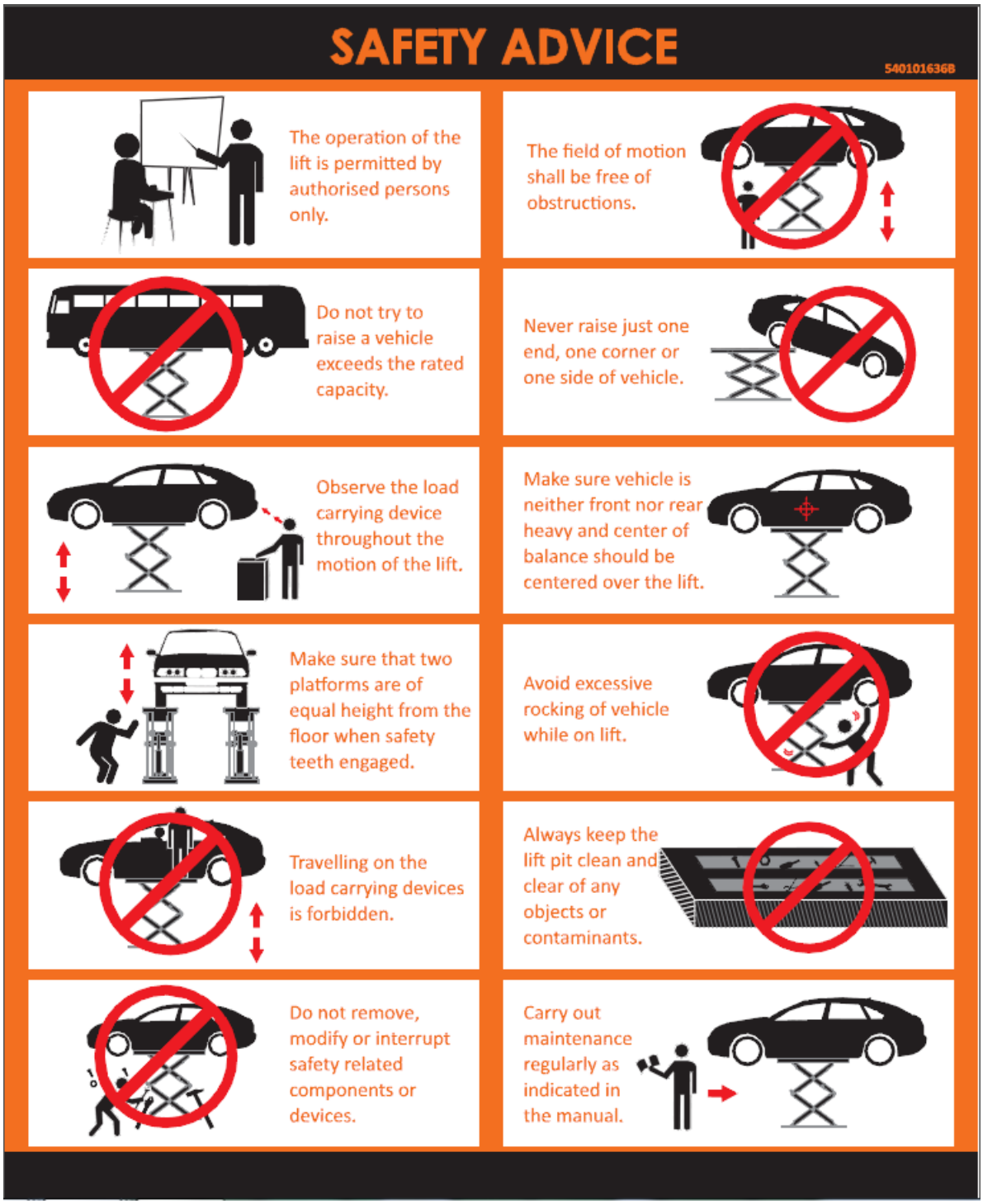
b. Empty the oil tank;

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.

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.



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 (A). 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 is packed by 2 sections for shipping

Name	*Packed by*	*Dimension(mm)*	*Weight(kg)*	*Quantity*
Control cabinet	*Wooden case*	*500*470*1020*	*Approx.100*	*1*
Lift	*Carton with wooden base*	*2050*700*400*	*Approx.800*	*2*

2.2 Storage

The packs must be kept in a covered and protected area in a temperature range of -10℃to +40℃. 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.

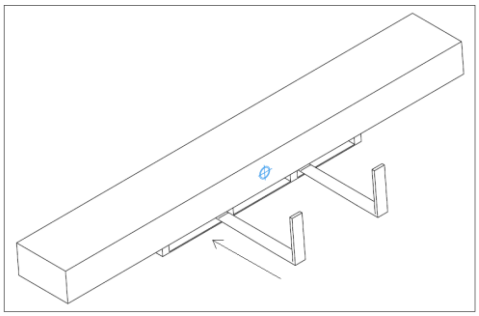
If stacking is unavoidable, use all appropriate precautions:

-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.

2.3 Lifting and handling

The packs can be lifted and transported only by using fork 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

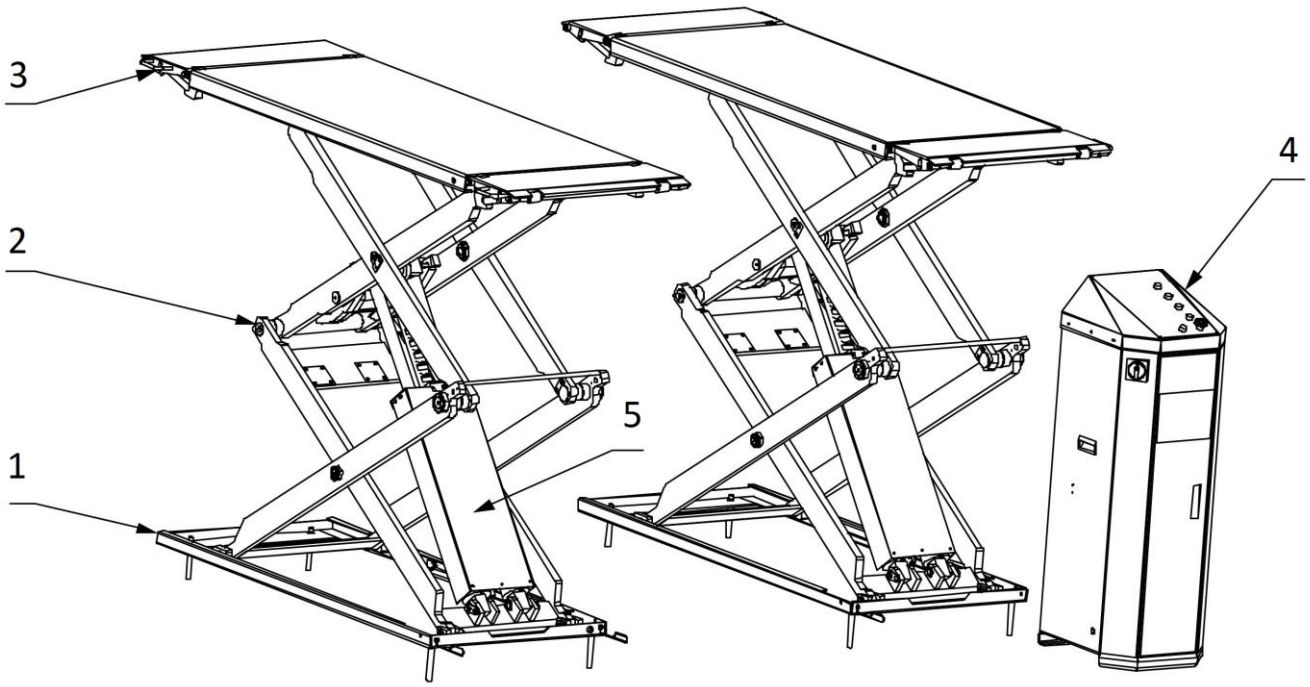
3.1 General descriptions

This is chassis-support vehicle lift, which is preferably for floor surface mounting. It is mainly composed by two lifting platforms and a power and control cabinet. Being hydraulically powered, the gear pump delivers oil to push upwards the pistons of oil cylinders and let the scissor arms of the lift rise accordingly.

The ramps, installed at both ends of the platforms, can serve as an extended part of the supporting platform for longer vehicles.

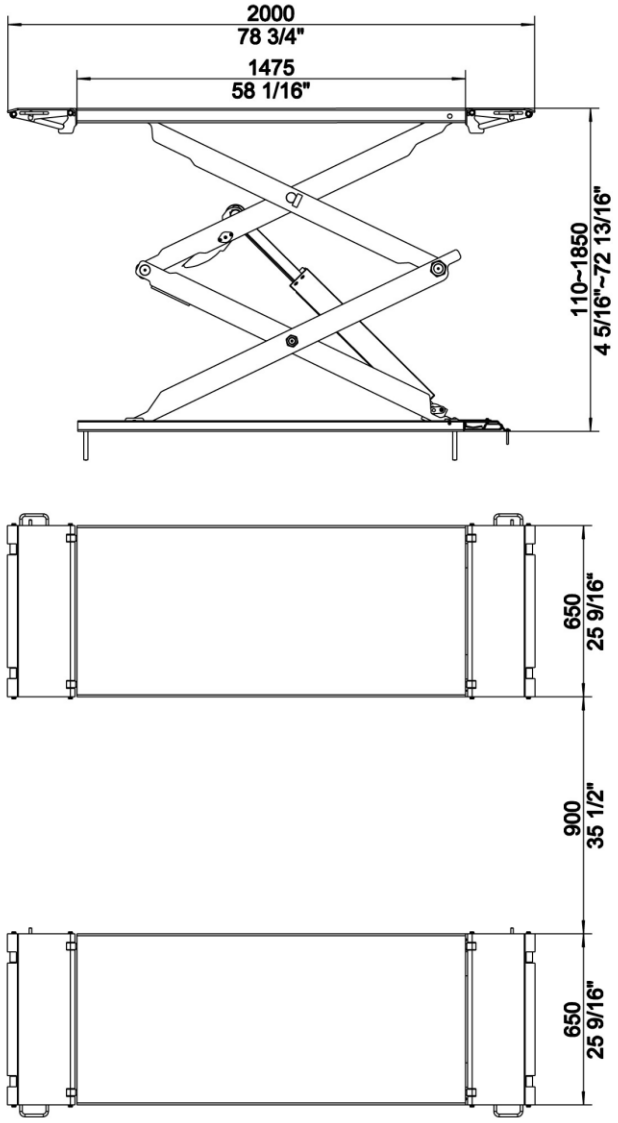
Besides, features like 24V control voltage and limit switch, low-height alarming buzzer, mechanical locking device, flow restrictive valves, etc. have fully considered the user's personal safety.

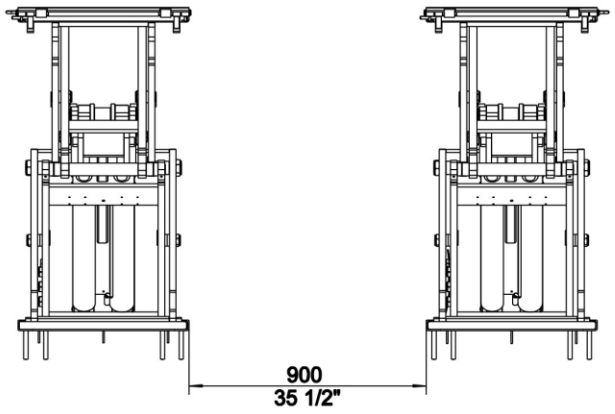
3.2 Construction of the lift



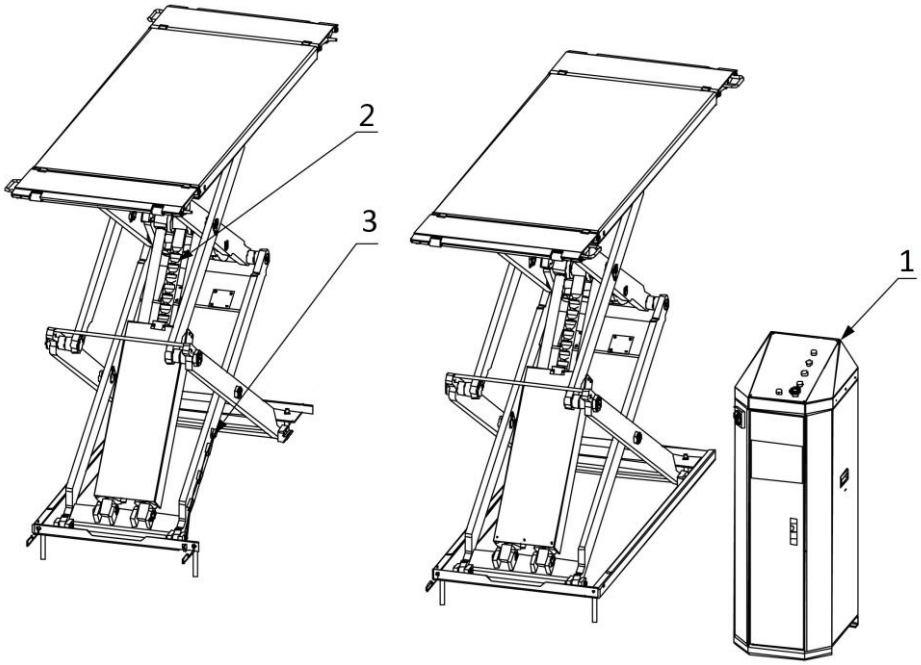
1. *Base frame assembly*
2. *Scissor bracket*
3. *Lifting platform*
4. *Power and control unit*
5. *Oil cylinder*

3.3 Dimensions





3.4 Safety devices descriptions



Pos.	Safety device	Function
1	24V control voltage	Safety voltage for operator.
2	Mechanical locking device	Catching device preventing unintentional lowering. Hold still the lifting platform in case of hydraulic leakage.
3	Safe descent limit switch	Protective device which stops the movement of the lift for the purpose of feet protection. The lifting platforms automatically stop lowering at a safe height above the ground. Push an additional DOWN II button to restart the lowering movement which is accompanied by an audible warning alerting service persons being away from the moving parts.
	Synchronization protection device	Prevent incidents caused by unintended desynchronization.

3.5 Technical data

Rated load capacity	3000kg
Full rise height	1850mm
Full lowered height	110mm
Full rise time with load	Approx.40s(3.5kw, 3Ph)
Full lowering time with load	≤30s
Hydraulic pressure	22-24MPa
Pneumatic pressure	6-8bar
Oil tank volume	10L

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^2 wire core for 3Ph power and 4.0mm^2 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

Indoor installation only.

The space requirement specified in the below scheme is for reference only.

There must be sufficient space for driving and lifting vehicles and enough safety distance shall be reserved according to the regulations of the local authorities. It is advised to reserve a clearance of at least 1 meter between the lift and fixed elements (e.g. wall) in all lifting positions.

C25-C30 concrete foundation with a minimum thickness of 150mm.

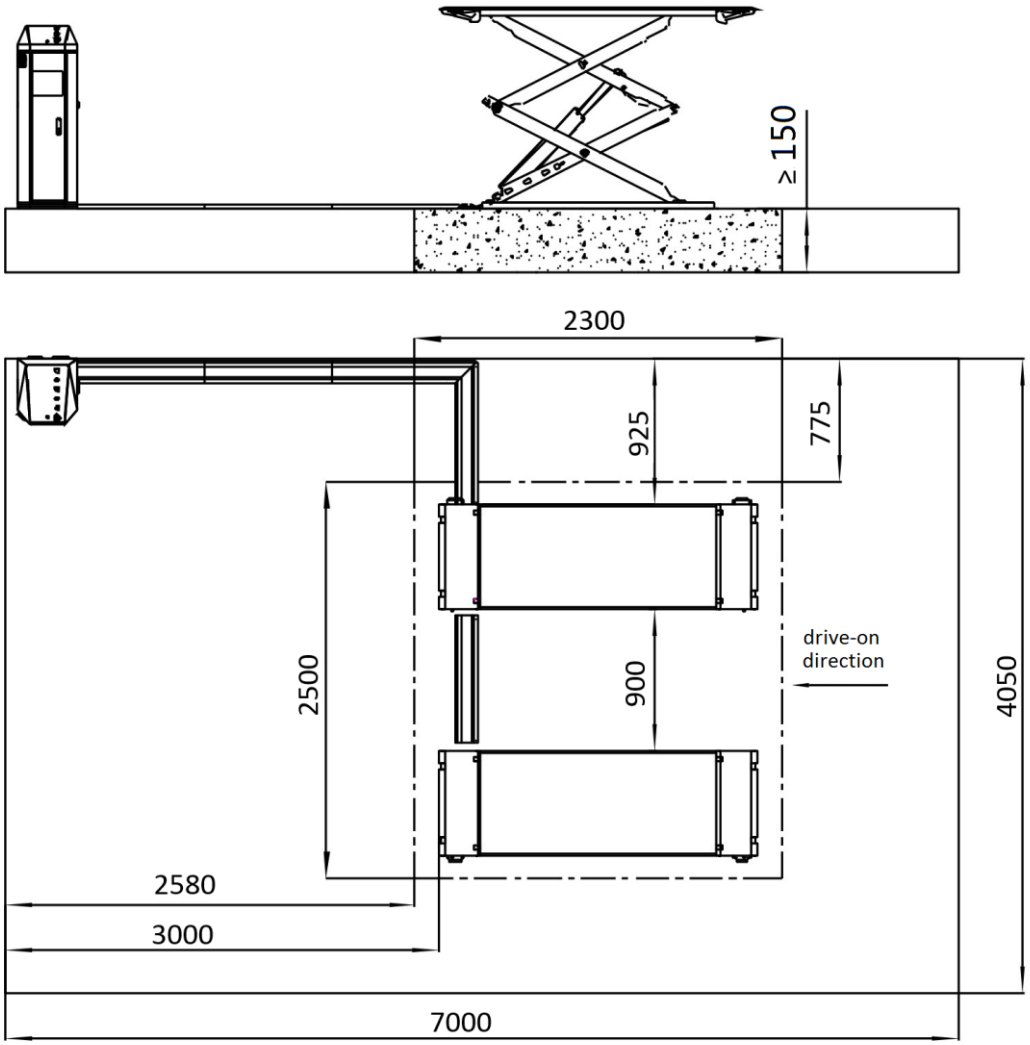
Surface: Horizontal and even (Gradients max. 0.5 %)

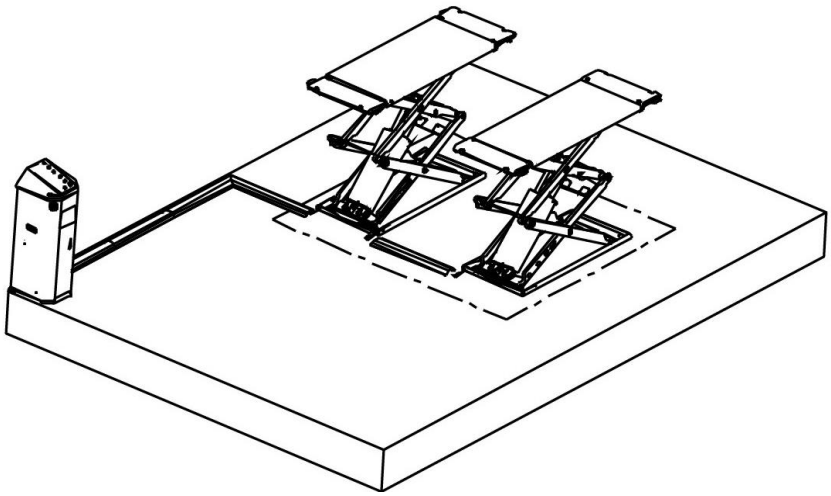
Newly built concrete ground must be older than 20days.

In mm.

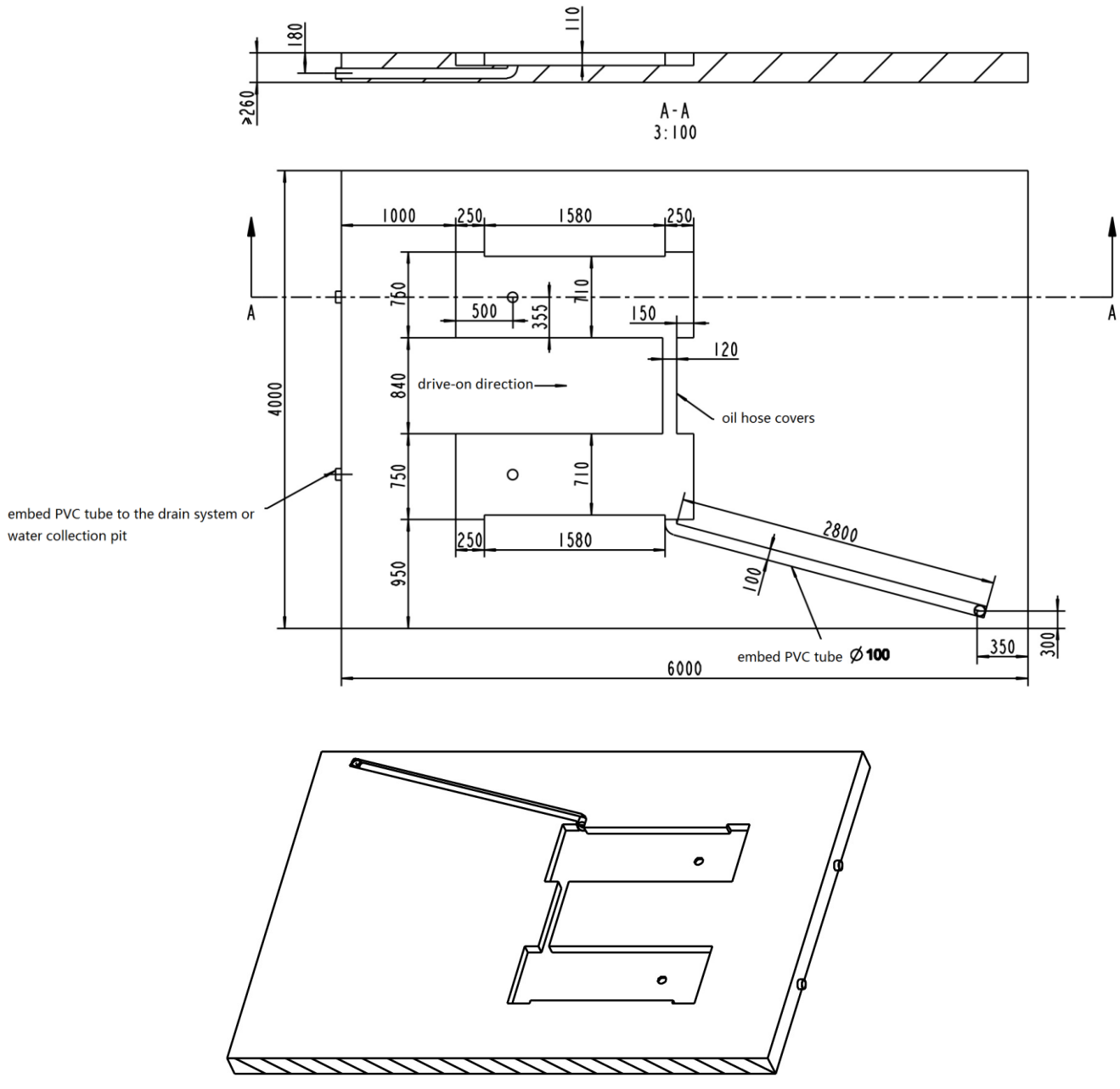
Surface mounting

The area enclosed by the dash line (2300mm*2500mm) shall have a minimum thickness of 150mm.





Recessed mounting



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 1000kg	1
Lifting strap	Capacity, 1000 kg	2

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	Qty
1	EE-6501 control cabinet	1
2	Rubber pick up pad	4
3	Expansion bolt	8
4	Pneumatic hose	2m
5	Manual	1
7	Key	1
8	Oil tanks label	1
Platform package		
No.	Name	Qty
1	EE-6501 platform	1
2	EE-6501 platform	1
3	Oil hose covers	5

4.2 Installation attentions

4.2.1 Tighten all hydraulic and electrical connections.

4.2.2 Tighten all screws, nuts and bolts.

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.

Attention 1: 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 straps until the mechanical lock is engaged. And then hoist the platform onto the expected installation site. (Refer to the following **fig. 1 and 2)** 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.

Attention 1: 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.

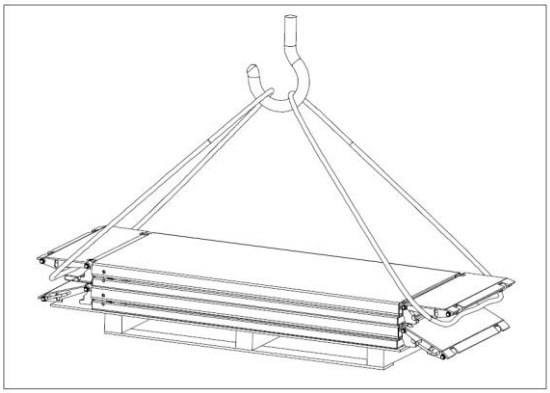


Fig 1

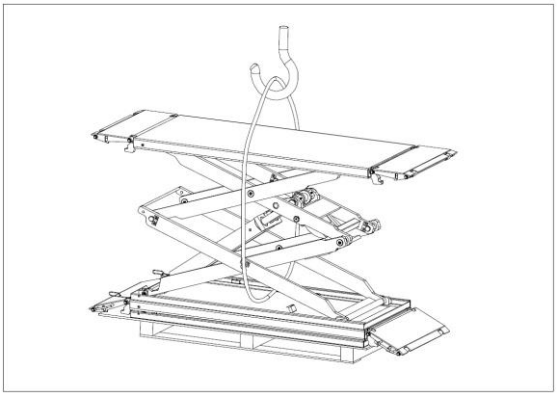


Fig2

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

Step 4: Connect oil hoses.

Refer to Annex 2 to connect oil hoses.

Connect as per the marks on the hoses and don't let any solid substance go into the hydraulic line.

It must be taken adequate care that all fittings shall be tightened. Severe leaking will occur if the hose fittings are not tightened.

Screw torque: 60Nm.

Step 5: Connect the electrical system.

Electrical connections must be done by a qualified electrician.

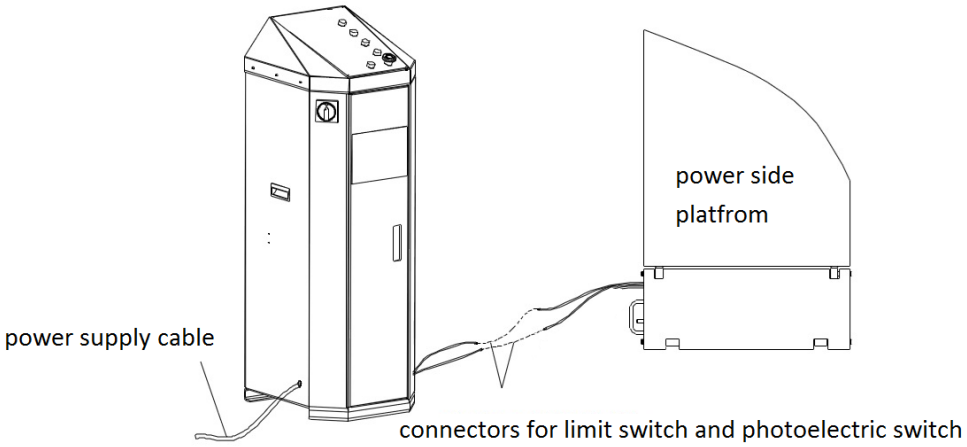
Requirements for power supply cable of the installation site: at least 2.5mm² wire core for 3Ph power and 4.0mm² wire core for 1Ph power.

Refer to Annex 1.

Connect two fast connectors for the limit switch and photoelectric switch.

Connect power supply cable to the 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).



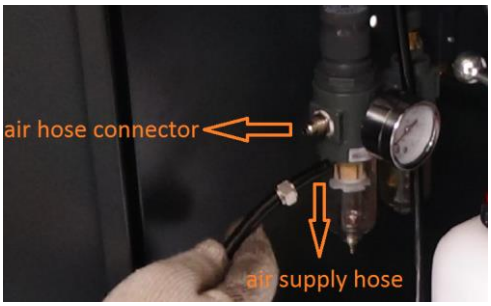
Step 6: Connect the pneumatic release system.

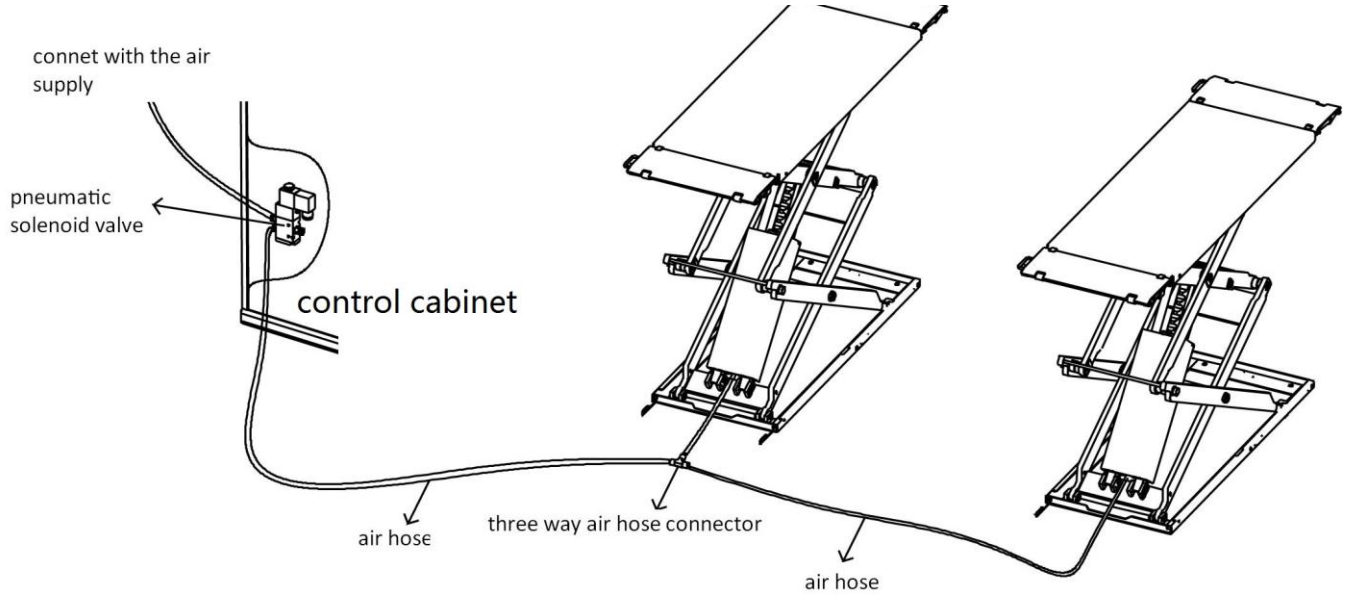
Screw torque: 20Nm

Connect air hoses as per the following fig.

External compressed air shall be prepared by the end user before installation.

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





Set the pneumatic pressure between 6-8 bars.

Push upward the button indicated in the following fig and turn the button until the hand of the pressure meter points to the NUMBER ”6” .

Push the button down thereafter.

It is suggested to add ISO VG32 mechanical oil into the oil tank.

Adjust the oil dipping quantity using the button on top of the oil cup.

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 10 liters of anti-abrasion hydraulic oil into the oil tank.

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

Note： It is suggested to use HM NO.46 hydraulic oil. Use HM NO.32 hydraulic oil when temperature is below 10 degree Celsius.

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

Step 8: Levelling

Refer to 5.2 and 5.4 operation instructions and turn SA1 to “OFF” mode before levelling operation.
Check the connection of the hydraulic and electrical system before levelling operation.
Ensure the oil hoses are correctly connected. Otherwise, oil cylinders may not work synchronously or could be damaged.
Review operation instructions and get familiar with lift controls by running the lift through a few cycles before levelling operation.

Raise the platform to the maximal height and continue pushing the UP button for 30 seconds.

Lower the platform completely to the bottom.

Raise the platform to check the synchronization.

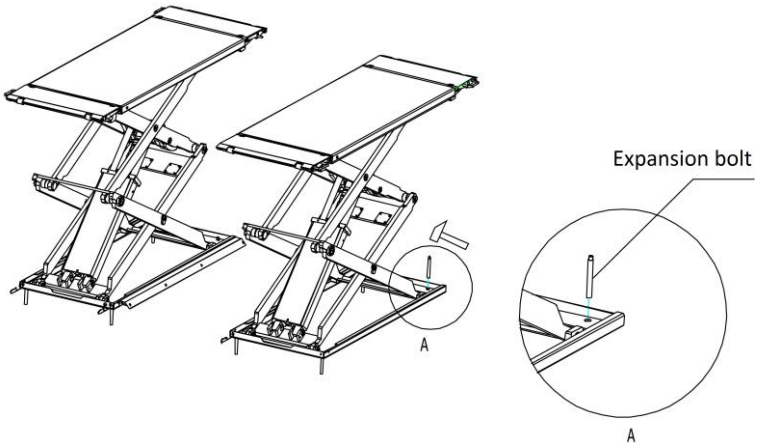
If not being synchronized, continue pushing the UP button for another 5 seconds after the platform has been raised to the maximal height.

Repeat above operations until the two platform run synchronously.

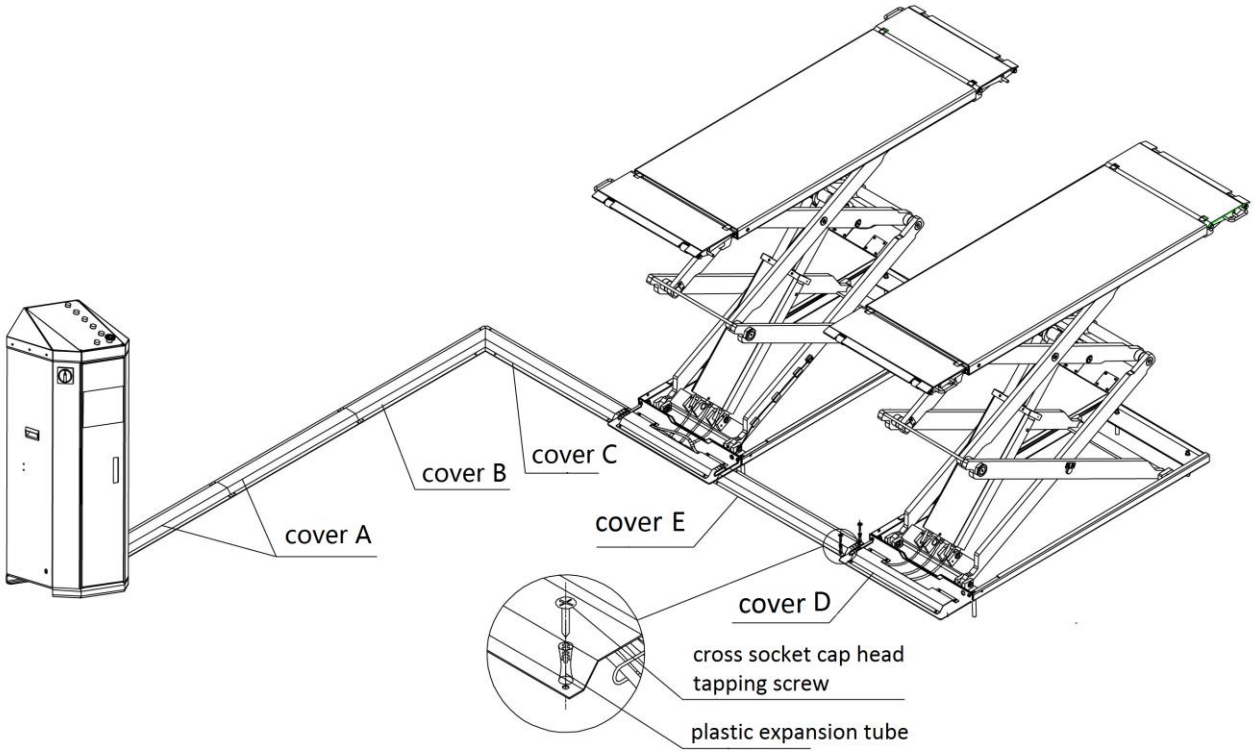
Step 9: Fix base frames with expansion bolts.

Screw torque: 60 -80Nm

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.
4. Hammer in the expansion bolts and tighten the nuts.



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: 60-80Nm;		
2	Rising speed ≥20mm/s;		
3	Noise under rated load ≤75dB(A);		
4	Grounding resistance: not bigger than 4Ω;		
5	Height difference of the two platform ≤5mm;		
6	Mechanical locks are robust and synchronized when running with rated load;		
7	All control buttons works as “hold to run” ;		
8	The limit switches work well;		
9	The grounding wire is connected;		
10	The carriage rises and lowers smoothly;		
11	There is no abnormal noise when run with load;		
12	There is no oil leakage when run with load;		
13	The expansion bolts, nuts or circlips are well secured or tightened;		
14	The max lifting height can be reached;		
15	All safety advices, name plate and logos are clear;		

OPERATION INSTRUCTIONS

5.1 Precautions

5.1.1 Read and digest the complete operation instructions before operating the lift.

5.1.2 Only authorized persons are permitted to operate the lift.

5.1.3 Do not try to raise the vehicle with excessive length or width.

5.1.4 The space above and below the load as well as of the loading carrying devices shall be free of obstructions.

5.1.5 Position supporting pads to pick-up positions recommended by vehicle manufacturers.

5.1.6 Check the vehicle after raising a short distance to ensure that it is corrected and safely positioned.

5.1.7 The load carrying device shall be observed by the operator throughout the motion of the lift.

5.1.8 Engage the safety locking mechanism before entering under the raised vehicle.

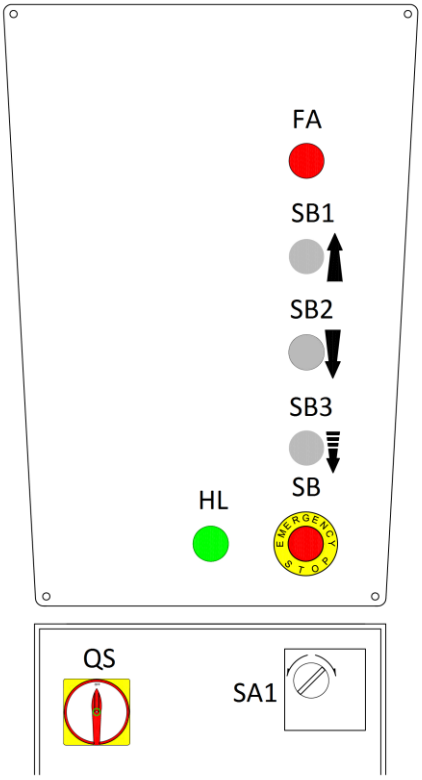
5.1.9 Always use safety stands before removing and installing heavy component which may cause uneven load distribution.

5.1.10 Avoid excessive rocking of vehicle while on the lift.

5.1.11 It is forbidden for people to stand in the field of motion during raising or lowering movement.

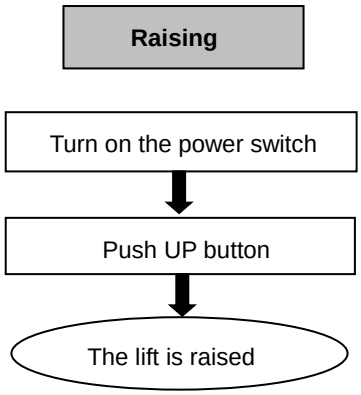
5.1.12 Do not climb onto the load or load carrying device when they are raised.

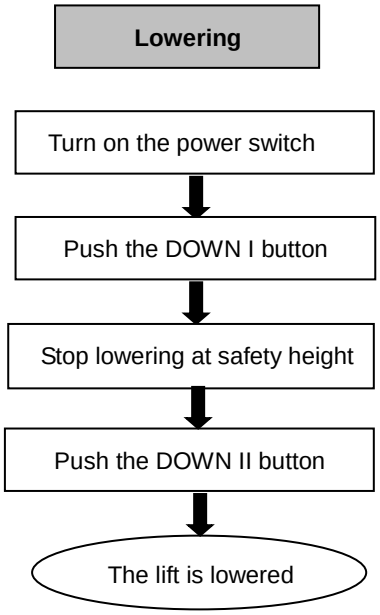
5.2 Operation instructions



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 safe descent)
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	Turn on or off the synchronization protection device

5.3 Flow chart for operation





5.4 Operation instructions

To avoid personal injury and 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.

Turn SA1 to "ON" mode before normal use.

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. Load vehicle on lift carefully. Position the lift adapters to contact at the vehicle manufacturer's recommended lift points.
3. Push the UP button to raise lift until adapters contact vehicle.
4. Check adapters for secure contact with vehicle. Raise lift to expected working height.

Lower the lift

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

1. Push the DOWNI button to lower the lifting platform. It will stop lowering at safety height.
2. Push DOWN II button to continue lowering the platforms which accompanies with an acoustic warning.
3. After the lifting platform is fully lowered, remove rubber pads and other tools to provide an unobstructed exit for moving vehicle from the lift area.
4. Drive the vehicle away.

Attention: In the case the desynchronisation of the two platforms are unacceptable (having a height deviation of more than 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.

Methods for restoring the lift to run normally.

Open the door of the control cabinet;

Turn SA1 to OFF mode;

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

Level until both platforms are synchronized; (Refer to Step 8: Levelling)

Turn SA1 to ON mode.

5.5 Emergency lowering

Emergency situation means: 1. Electricity power failure 2. Failure on equipment itself

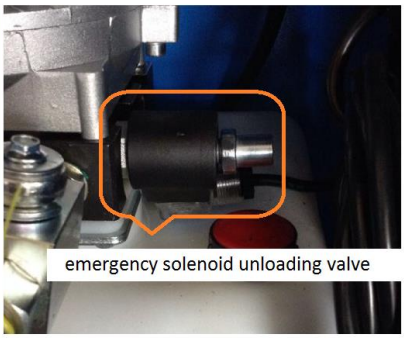
Suitable condition: Compressed air is available.

Normally, in case of sudden electricity power failure, the compressed air remained can still make the pneumatic system of the lift work.

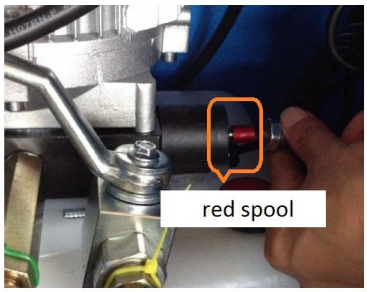
In the case the mechanical safety locks are not engaged, follow the following steps for emergency lowering.

Attention: Pay careful attention as there could be potential hazards in doing so.

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



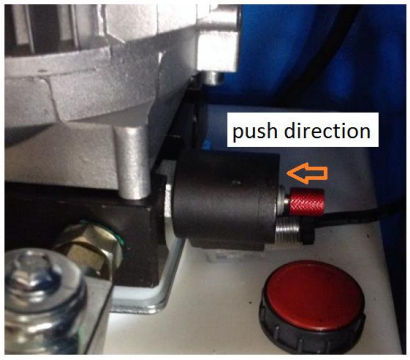
2. Take off the protective cap of the valve and see red spool of the valve.



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

Attention: when do the above operation, operators need to focus on the lowering platform.

If any abnormal occurs, stop pushing the blue air-supplying button and push and turn clockwise the red spool until hear the sound which implicate the valve is closed.



4. Turn off the unloading valve by pushing and turning clockwise the red spool until hear the sound which implicate the valve is closed.

NOTE: For different models, the pictures showing above may differ from lift to lift, but the methods is the same.

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	POSSSIBLE 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	Clean or replace it.
	Dirty hydraulic oil	Clean or replace it.
	Jammed *parachute valve.*	Clean or replace it.
	Jammed oil hose	Clean it.

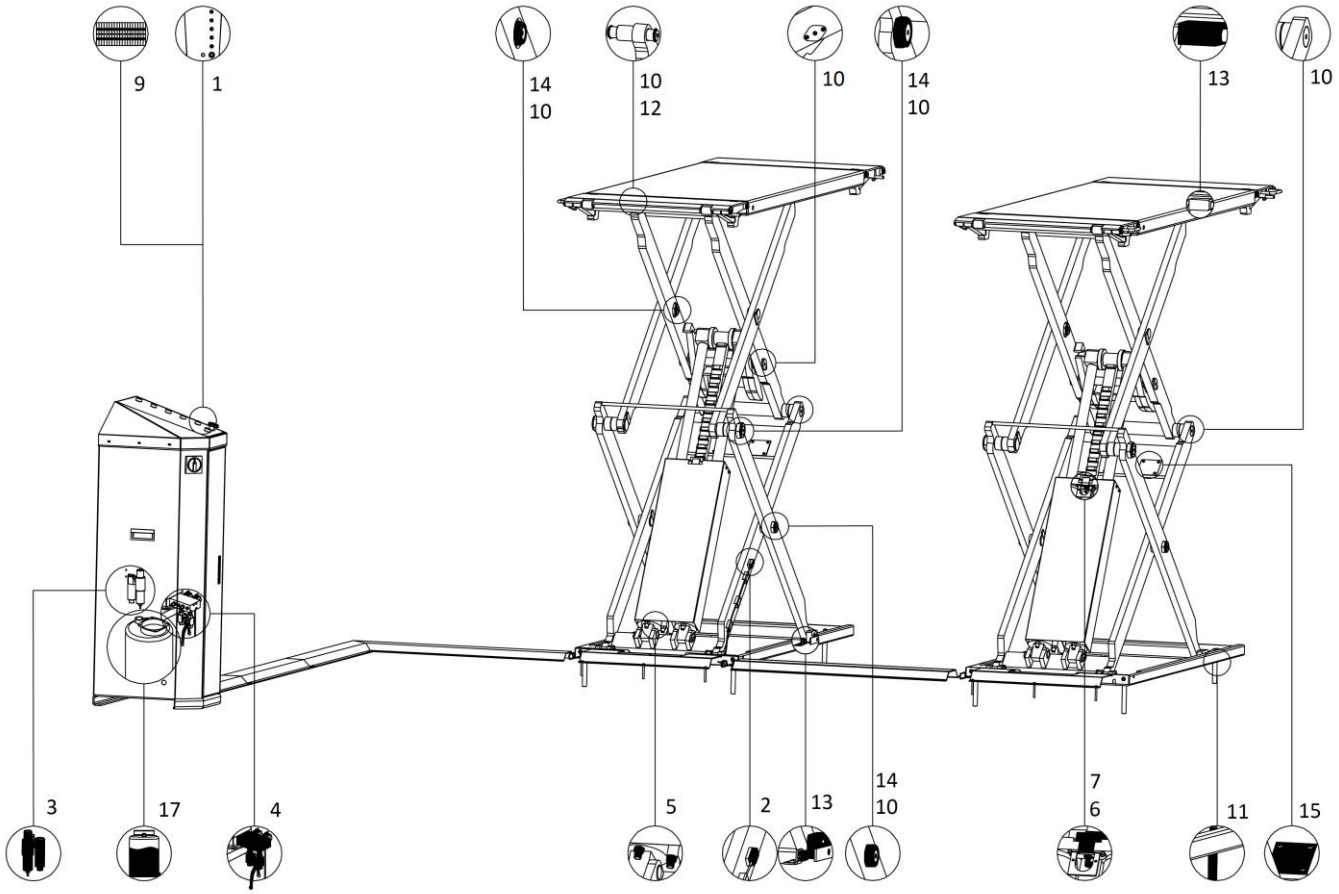
MAINTENANCE

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

Following are requirements for routine maintenance.

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

Lubricated moving parts with NO.1 lithium base grease before use.

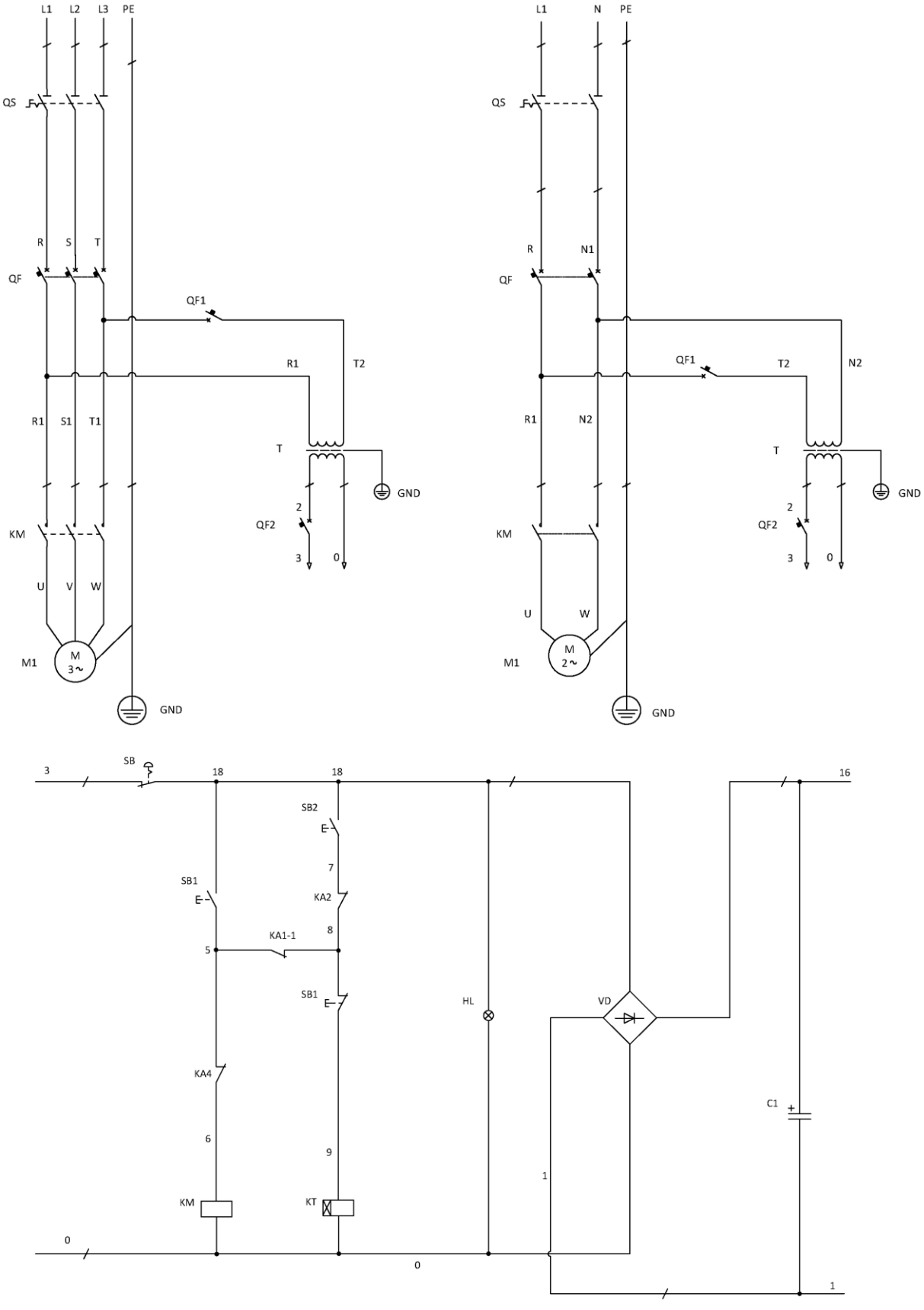


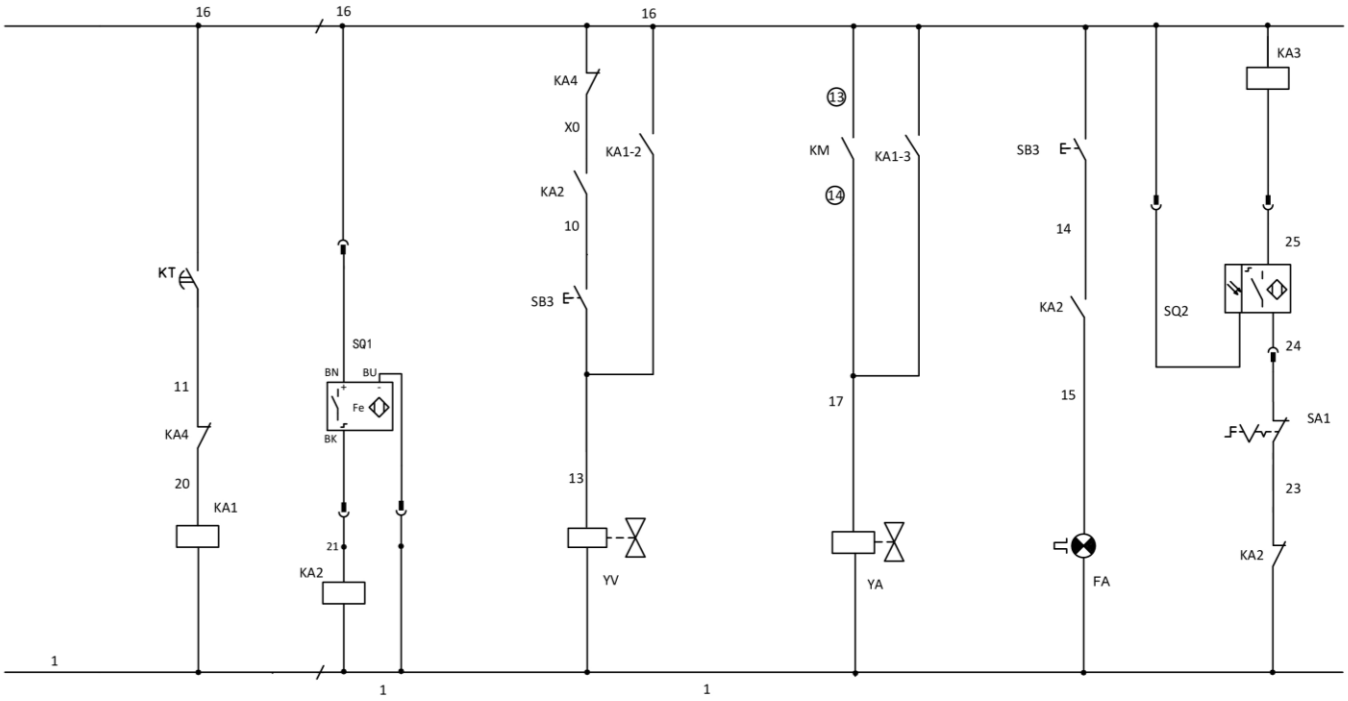
Pos.	Components	Methods	Period
1	Control buttons	Check if control buttons work as "hold- to -run " and check if they work as the function indicated.	Every day
2	Safe descent limit switch	Push the DOWN I button, inspect and ensure the lifting platform stops descending at a proper height above ground.	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

Pos.	Components	Methods	Period
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
8	Alarming buzzer	Push DOWN II button to continue the lowering movement when the lifting platforms automatically stop lowering at safety height above the ground. Check if the buzzer alarms.	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. Torque: 60-80N.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	Padding plate for the start roller	Check its tightness and add grease.	Every day
16	Whole Lift	Running the lift for several cycles with and without rated load. The lift can run steadily and smoothly with no abnormal noise. Check the synchronization of both lifting platforms. Ensure both platforms ascend and descend synchronously.	Every day
17	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, Wiring diagrams and parts list

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16
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KA4
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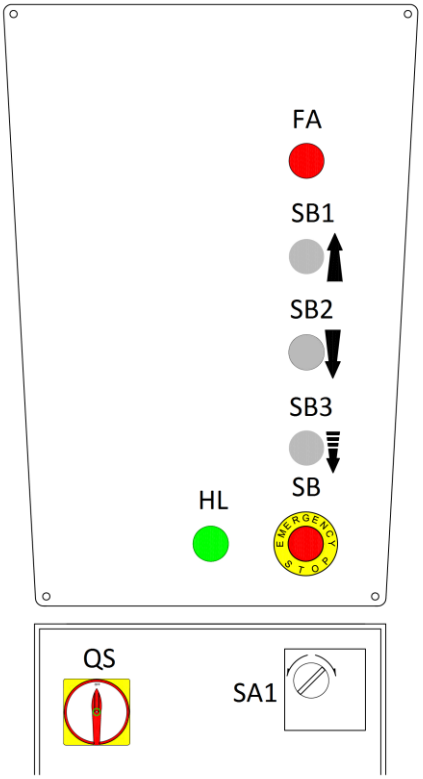
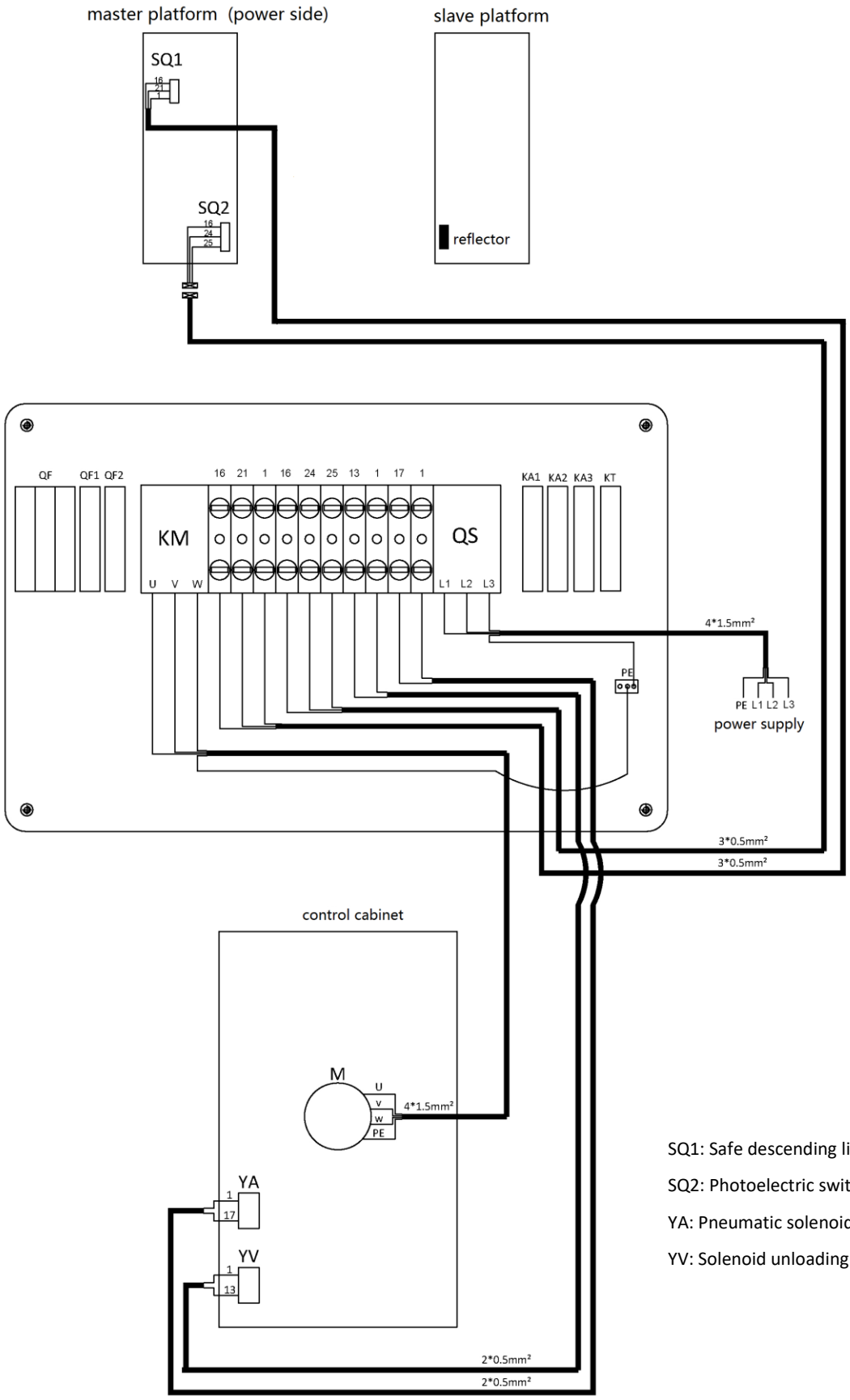

FA
SB1
SB2
SB3
SB
HL
EMERGENCY STOP
QS
SA1



SQ1: Safe descending limit switch

SQ2: Photoelectric switch

YA: Pneumatic solenoid valve

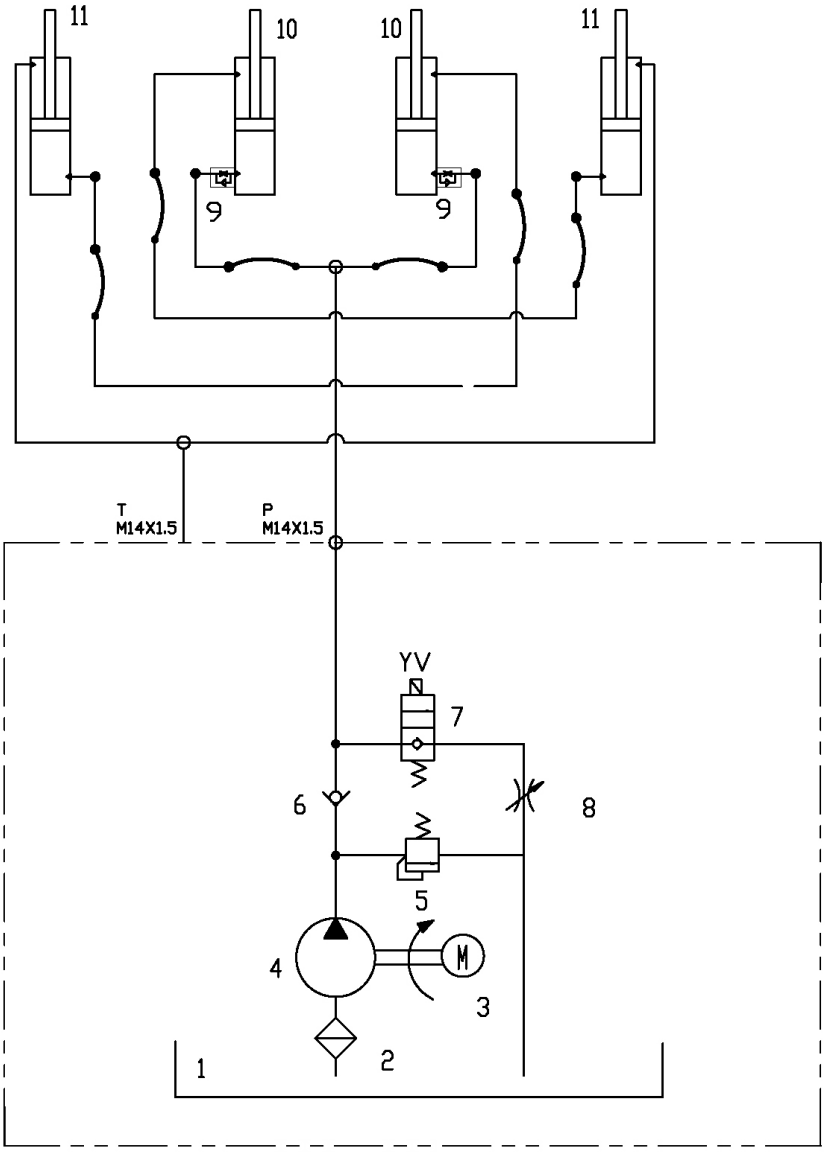
YV: Solenoid unloading valve

Power supply details (3Ph)		Power supply details (1Ph)	
Isolating main switch	20A	Isolating main switch	20A
Circuit breaker	C16/3P	Circuit breaker	C32/2P
Power cord	4*1.5mm^2	Power cord	3*1.5mm^2

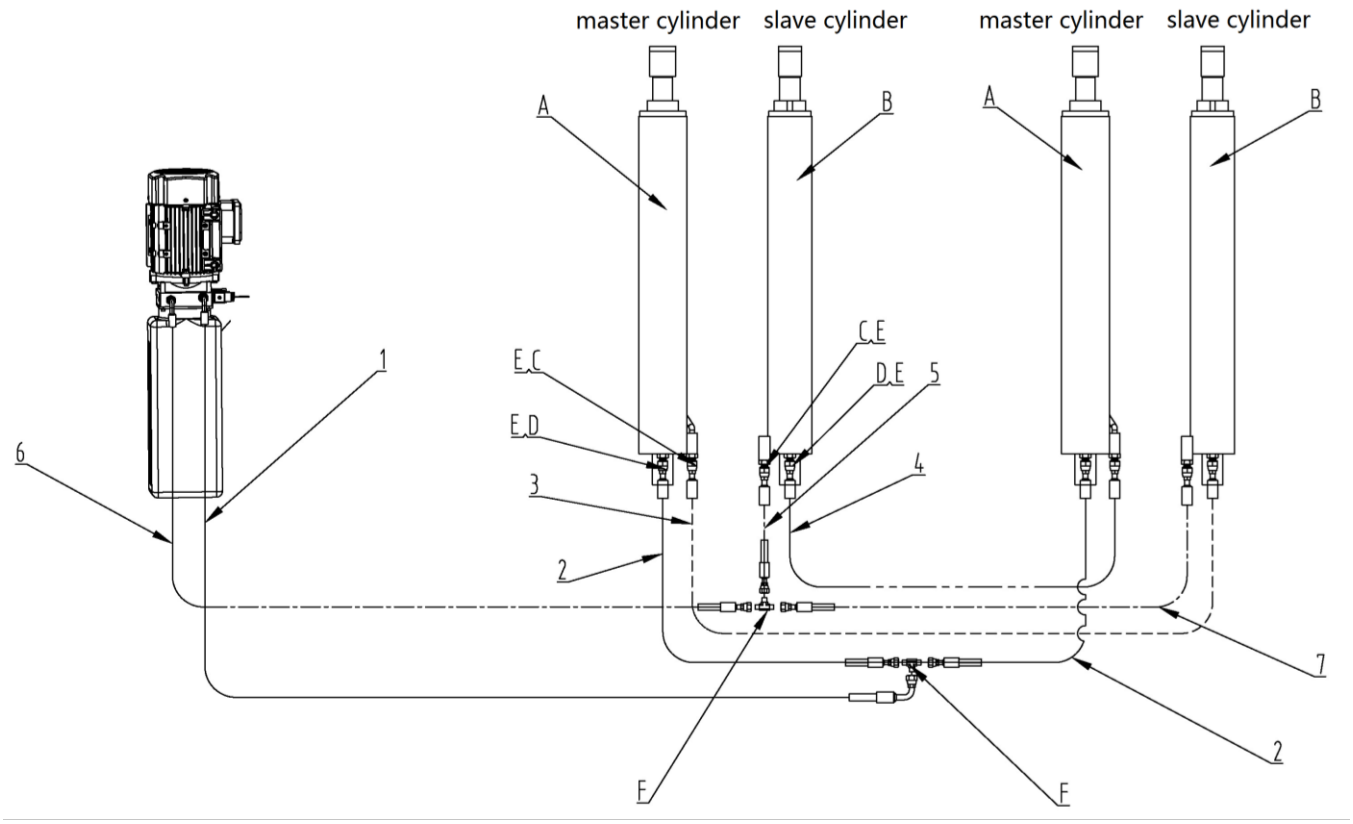
Supply cable	Yellow-Green	Blue	Other colors
3 wires	Earth wire	Neutral wire	Phase wire
5 wires	Earth wire	Neutral wire	Phase wire
Supply cable	**Yellow-Green**	**Other colors**	
4 wires	Earth wire	Phase wire	

Pos.	Code	Description	Qty
T	320102005	Transformer (400V/230V-24V)	1
M		Motor	1
QS	320304001	Power switch	1
SQ2	320306006	Photoelectric switch	1
SQ1	320306010	Proximity sensor switch	2
SA1	320303019	Selection switch	1
SB1,SB2	320401041	Button	2
SB3	320401038	Button	1
SB	320402002	Emergency stop	1
	320503002	Ground terminals	1
	320505006	Wire terminal	14
	320505011	Retaining chip	2
KA1/KA2/KA3	320601001	Relay	3
	320601011	Relay holder	3
	320601018	Relay feet fixer	6
KT	320602009	Compact time relay	1
QF	320801003	Circuit breaker	1
QF1	320803001	Circuit breaker	1
QF2	320803003	Circuit breaker	1
KM	320901011	AC contactor	1
C	321001004	Capacitor	1
VD	321002001	Bridge rectifier	1
HL	321201001	Power indicator	1
FA	321202001	Alarm buzzer	1

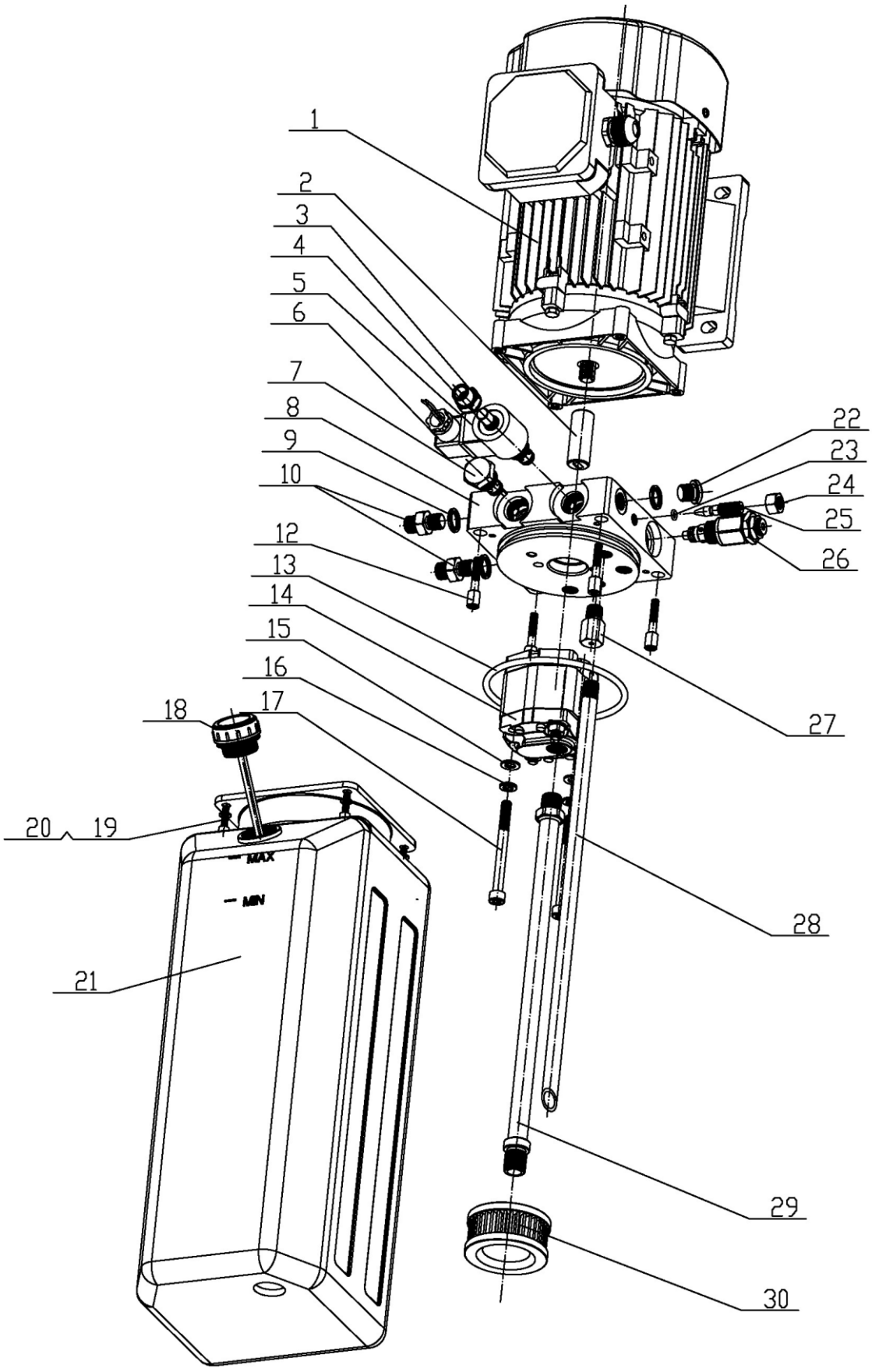
Annex 2, Hydraulic diagrams and parts list



1	oil tank	7	solenoid valve
2	filter	8	restrictive valve
3	motor	9	straight connector with restrictive valve
4	gear pump	10	master cylinder
5	relief valve	11	slave cylinder
6	non-return valve		



Pos.	Code	Description	Specification	Qty
1	624001876	Oil hose	L=4900mm	1
2	624001221	Oil hose	L=950mm	2
3	624008183	Oil hose	L=1810mm	1
4	624008184	Oil hose	L=1960mm	1
5	624008185	Oil hose	L=230mm	1
6	624008207	Oil hose	L=4300mm	1
7	624008186	Oil hose	L=1700mm	1
A	625000009	Master cylinder	YG80/92-38-552	2
B	625000010	Slave cylinder	YG70/80-38-552	2
C	310101010	Straight connector	G1/4---G1/4	4
D	330305009	Straight connector with restrictive valve	BDPF-G14-G14-I60	4
E	207103025	Composite washer	13_7X20X1_5	8
F	410210181	Three-way connector	6603B-A9-B7	2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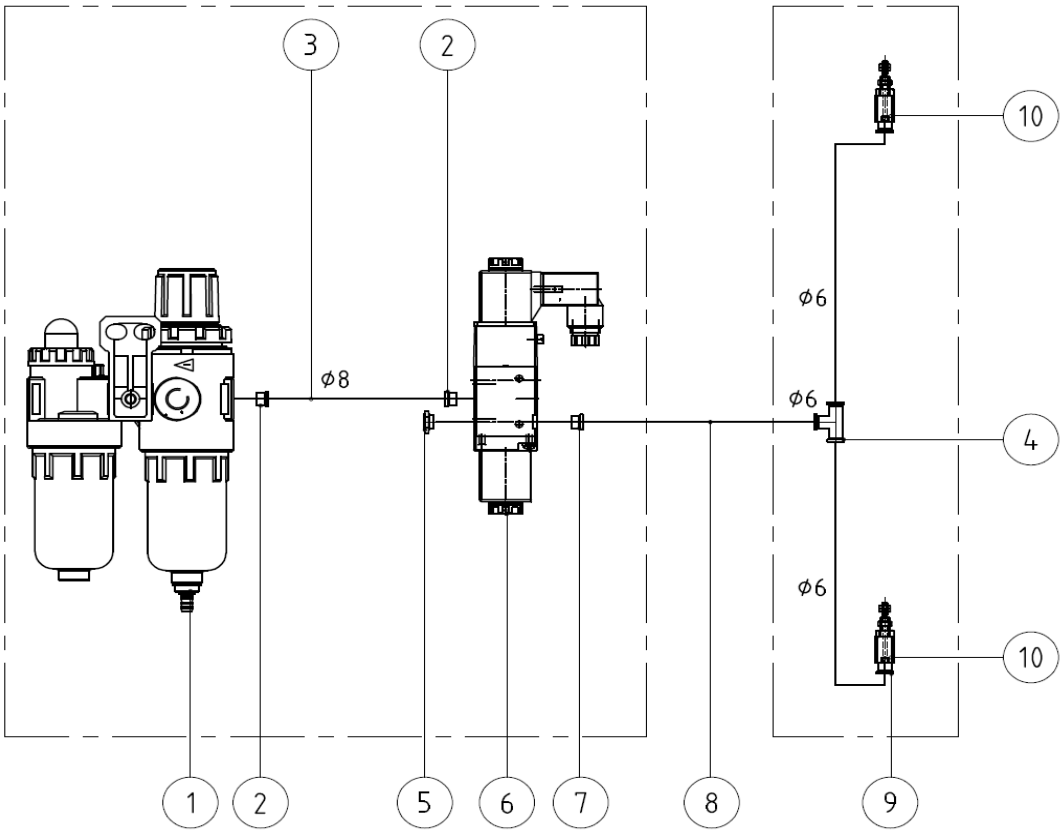
Pos.	Code	Description	Specification	Qty
1	320203005	Motor	400V-3.5KW -3PH-50HZ-2P	1
2	330404007	Coupling	46mm（LBZ-T202BK-1）	1
3	203204102	Tightening nut	FHLM-1/2-20UNF	1
4	330311005	Spool of the solenoid valve	24DC(Keta)（LSV-08-2NCP-M-2H）	1
5	330308031	Solenoid coil	LC2-0-C-2H,24VDC	1
6	330308032	Plug for the solenoid coil	DIN43650-DC	1
7	330302008	Non-return valve	YBZ-E2D3I1/1-03	1
8	330105005	Hydraulic block	LBZ-T2BK-13	1
9	207103019	Composite washer	M14	3
10	310101008	Power unit connector	M14*1.5-G1/4	2
12	201101100	Bolt	M6*50(NLJLD)	4
13	207101098	Type O seal ring	109*5.3	1
14	330201007	Gear pump（3PH 3.5KW）	CBK-F233	1
15	204101005	Flat washer	D8-GB95	4
16	204201013	Spring washer	M8	2
17	202109072	Hex socket cylinder head bolt	M8x85-GB70_1	2
18	330405070	Lid of the tank	10L	1
19	202109144	Bolt	M5x18	4
20	204101003	Flat washer	D5-GB95	4
21	330405001	Oil tank	10L	1
22	210101013	Fitting	M14*1.5	1
23	207101099	Type O seal ring	5*1.8	4
24	203102003	Hex nut	M10x1-GB6172_1	1
2	330305015	Restrictive valve	YBZ-E2D3I1/1-11A	2
26	330304010	Relief valve	DANRV-08-50	1
27	330301003	Cushion valve	HCF-Z1/4	1
28	330402001	Oil-back pipe	YH-D	1
29	330401005	Oil-sucking pipe	XYGN-L293	1
30	330403001	Filter	YG-C	1

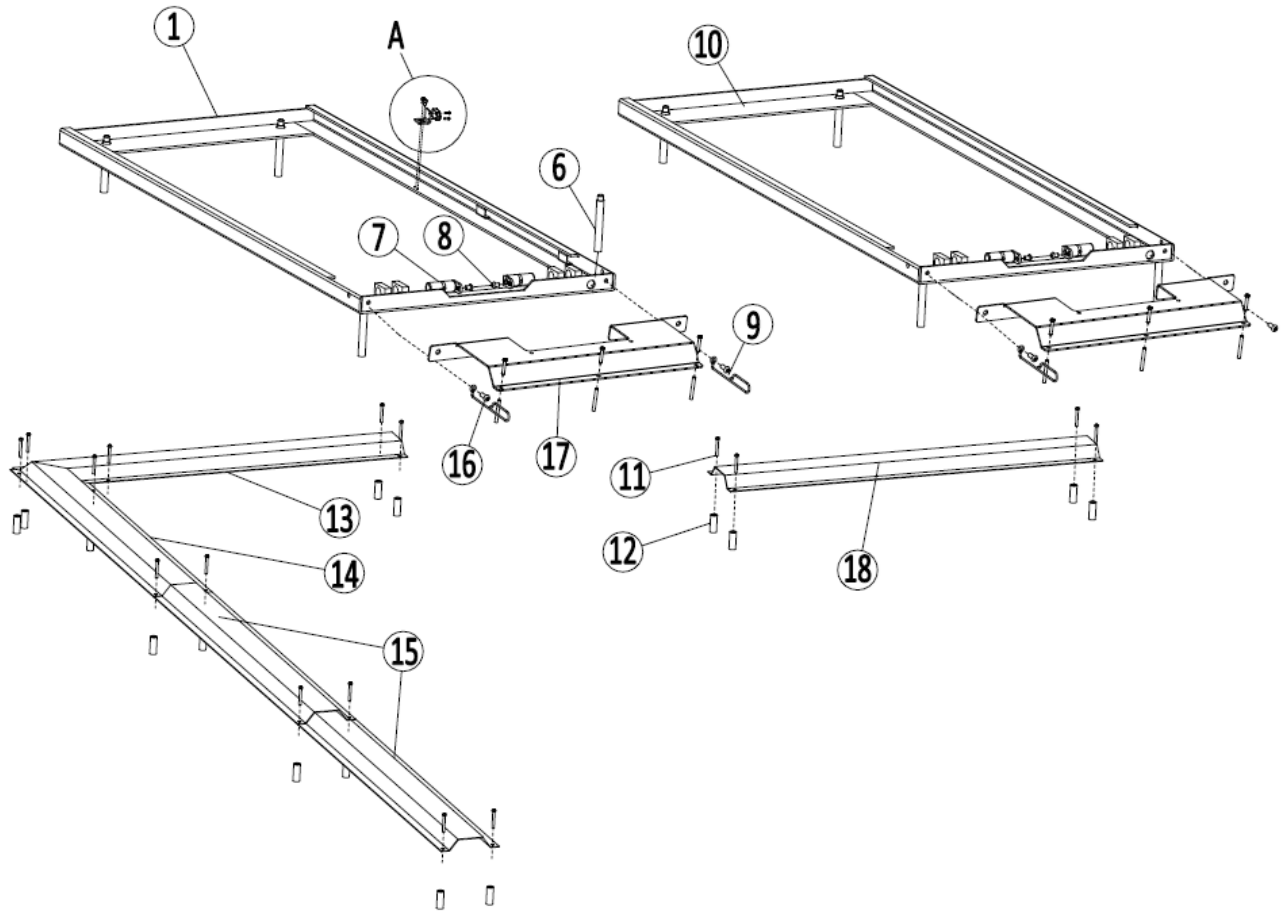
NOTE: The motor is different for differnent voltage or capacity.
Please check with our customers service people when order spare parts.

Annex 3, Pneumatic diagrams and parts list

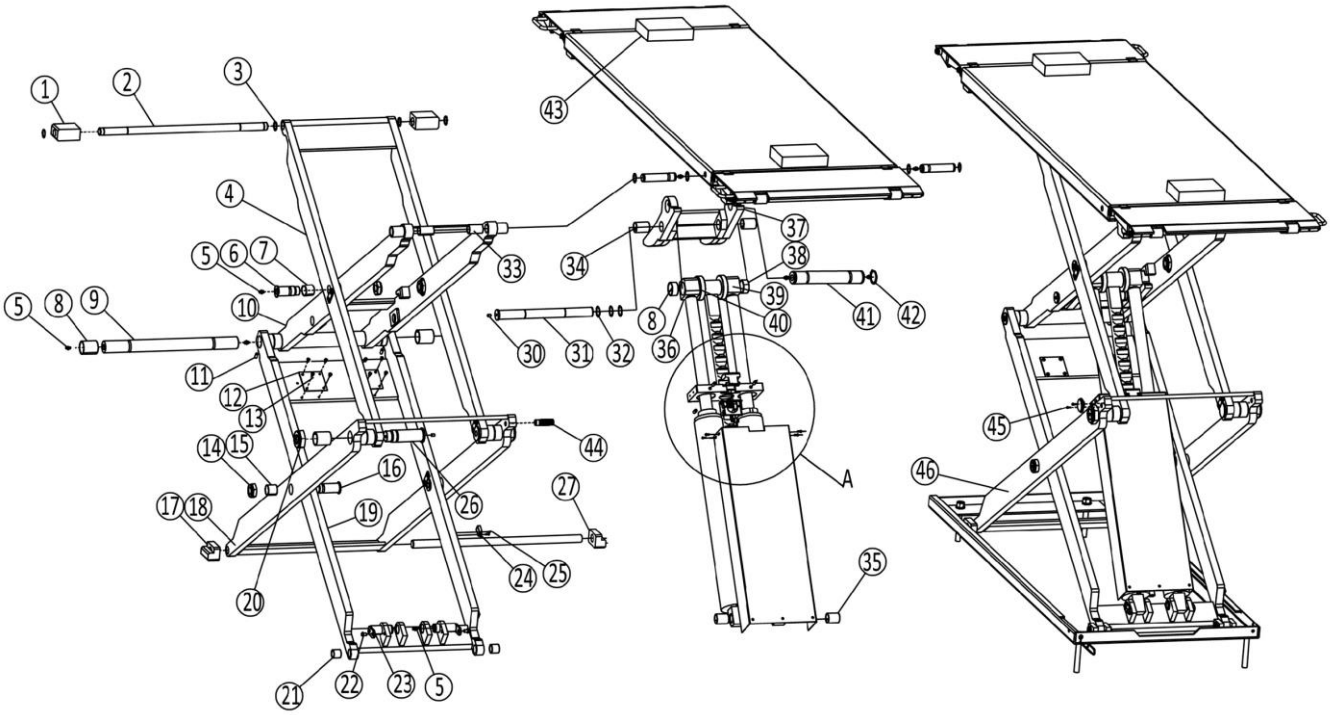


Pos.	Code	Description	Specification	Qty
1	321004006	AFC Air filter combination	AFC2000-M	1
2	310101015	Pneumatic connector	KLC8-02	3
3	123010101	Air hose	D6	1
4	310103010	Three way connector	Match with M6 air hose	1
5	310201002	Silencer	SLM01 R1/8 (M8)	1
6	310401001	Pneumatic directional valve	3V210-08DC24V	1
7	310101017	Straight pneumatic connector	KLC6-02	1
8	123010101	Pneumatic hose	D6	1
9	310101018	Straight pneumatic connector	KLC6-M5	2
10	310501027	Pneumatic cylinder	MSI16X25	2

Annex 4, Mechanically exploded drawings and parts list

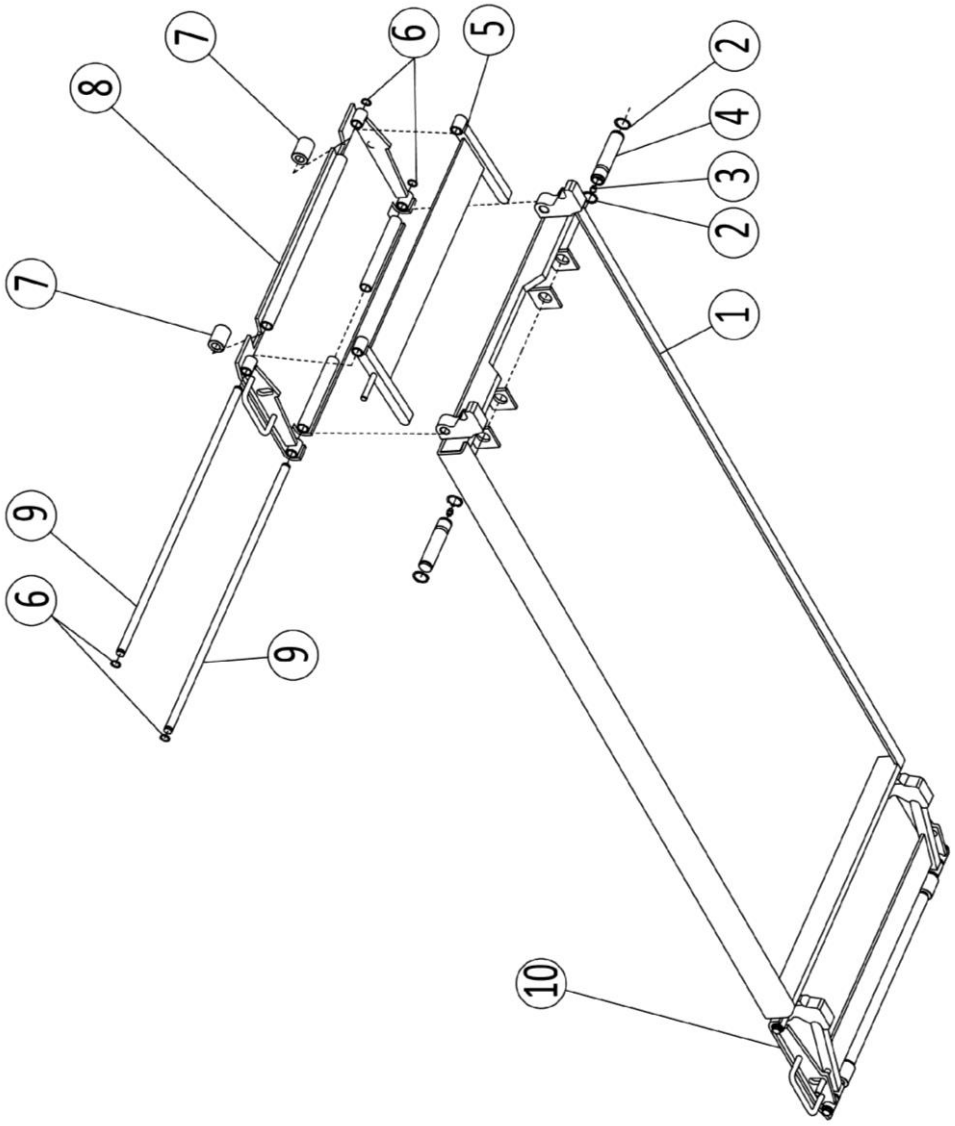


Pos.	Code	Description	Specification	Qty
1	**612019510**	**Base frame (Galvanized)**	**6501.B-A6-B1**	**1**
6	201201005	Expansion bolt	M16*120	8
7	612019504	Base frame rotation shaft	65012-A1-B5	4
8	202110004	Hex socket button head screw	M8*12	4
9	410190251B	Oil hose clipper	6501-A1-B4	3
10	**612019510**	**Base frame (Galvanized)**	**6501.B-A6-B1**	**1**
11	202301008	Cross socket cap head tapping screw	ST4.8*35	26
12	121010103	Plastic expansion tube	M10*40	26
13	**410911162**	**Hose cover C (Galvanized)**	**6501-A11**	**1**
14	**410911161**	**Hose cover B(Galvanized)**	**6501-A10**	**1**
15	**410911164**	**Hose cover A (Galvanized)**	**6501-A9**	**2**
16	202110005	Hex socket button head screw	M8*20	3
17	**410911160**	**Hose cover D (Galvanized)**	**65012-A9**	**2**
18	**410911163**	**Hose cover E (Galvanized)**	**65012-A13**	**1**

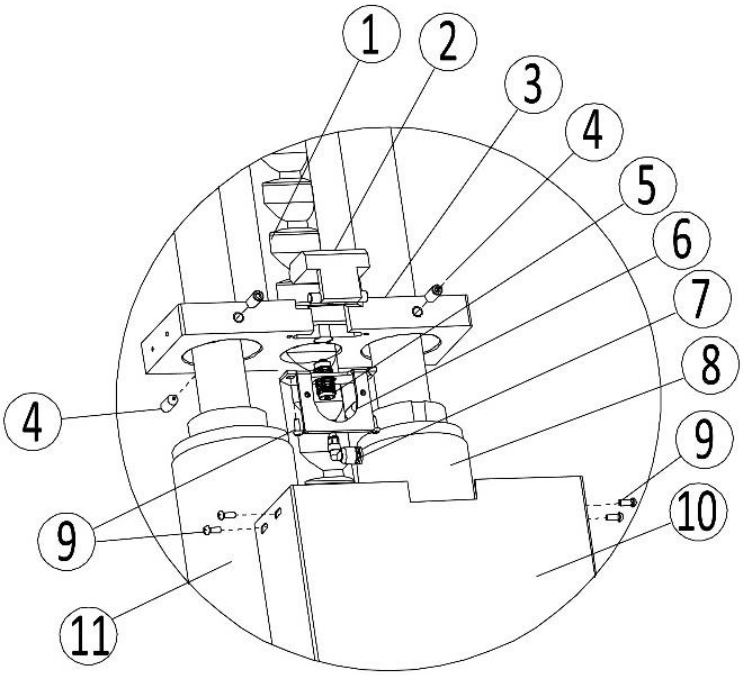


Pos.	Code	Description	Specification	Qty
1	420190190	UP slider	65012-A2-B17	4
2	410195061	UP rotation shaft	65012-A2-B15	2
3	204301009	Circlip	25	8
4	614019502	Arm B	65012-A2-B1	2
5	208106002	Oil cup M8	M8	10
6	410195021C	Joint shaft C	65012-A2-B6	4
7	205101017	Bearing	SF-2X	8
8	205101060	Bearing	SF-2X	10
9	410195051B	Joint shaft D	65012-A2-B12	2
10	614019503	Rotation arm A	65012-A2-B2	2
11	202206007	Hex socket locking screw	M8*12	4
12	410195581C	Padding plate	65012-A2-B14	4
13	202101021	Cross socket cap head screw	M5*10	16
14	203103016	Hex locking nut	M27*3	8
15	205101054	Bearing	SF-2X	4
16	410195081C	Joint shaft E	65012-A2-B10	4
17	420190040	DOWN sliding block	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	M36*3	4
21	205101050	Bearing	SF-2X	4

Pos.	Code	Description	Specification	Qty
22	202110004	Hex socket button head screw	M8*12	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	2
26	410195031C	Joint shaft B	65012-A2-B9	4
27	420190040	DOWN sliding block	6501-A2-B13	1
30	208106002	Pressed oil cup	M8	4
31	410195111B	Rotation shaft of the start plate	65012-A3-B6	2
32	204301011	Circlip 30	M30	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
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	4
43	420190230	Rubber pad	38*120*100	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	Description	Specification	Qty
1	**612901320**	**Lifting platform (Galvanized)**	**65012-A5-B3-E**	**2**
2	204301009	Circlip 25	M25(23.2)	8
3	208106002	Oil cup M8	M8	4
4	410195181B	Shaft of the lifting platform	65012-A5-B2	4
5	614019507	Supporting rod	65012-A5-B1-C6	4
6	204301004	Circlip 15	M15	16
7	420180010	Small roller wheel	MR30-A22-B5	8
8	**612067058**	**Ramp A (Galvanized)**	**6501.B-A5-B1**	**2**
9	410195071	Shaft of the ramp	65012-A5-B1-C4	8
10	**612067059**	**Ramp B(Galvanized)**	**6501.B-A5-B4**	**2**



Pos.	Code	Description	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	8
5	310501027	Pneumatic cylinder	MSI16X25	2
6	410901632	Cylinder holder	65012-A4-B10	2
7	310101018	Straight pneumatic connector	KLC6-M5	2
8	625000010	Slave cylinder	YG70/80-38-552	2
9	202101007	Cross socket cap head screw	M4*8	12
10	410190093B	Oil cylinder sheath	65012-A4-B14	2
11	625000009	Master cylinder	YG80/92-38-552	2