ORIGINAL MANUAL

SCISSOR LIFT

INVENTION SL S35H

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1.SAFETY INFORMATION

THIS SCISSOR LIFT IS A KIND OF LIFTING EQUIPMENTS. TO MAKE SURE ITS SAFE WHEN OPERATE DEPEND ON THE TECHNIQUES AS WELL AS THE EXPERTISE OF THE OPERATOR. EVERY OPERATOR SHOULD KNOW THE FOLLOWING REQUIREMENTS BEFORE OPERATE THE LIFT.

THEY SHOULD:

- □ OBTAIN THOROUGH INSTRUCTIONS FROM A COMPETENT SOURCE ON ALL ASPECTS OF LIFT OPERATION.
- □ OBSERVE THE WARNINGS AND MAINTENANCE REQUIREMENTS IN THE OWNER'S MANUAL.
- □ OBTAIN QUALIFIED TRAINING IN SAFE AND PROPER OPERATION TECHNIQUES.
- □ OBTAIN PROFESSIONAL TECHNICAL SERVICE AS INDICATED BY THE OWNER'S MANUAL AND/OR WHEN MADE NECESSARY BY MECHANICAL CONDITIONS.

Please read the following important notice carefully before operate the

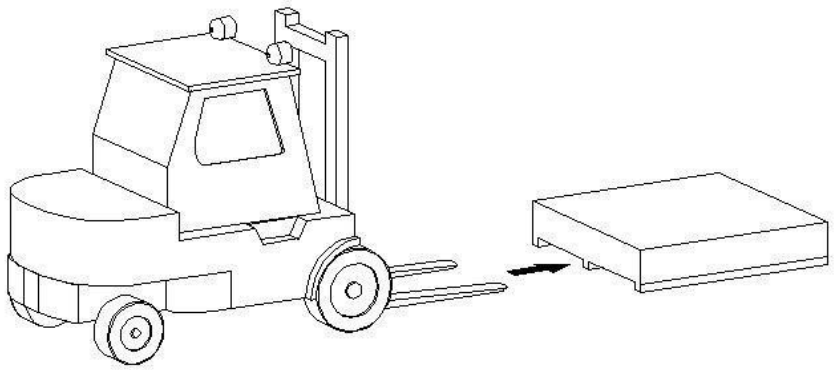
lift. Lifting Capacity: 3500KG

WARNING: When the lift is working, any personnel is not allowed to get in the lift and the car, it could result in severe injury or death!

DO NOT PUT ANYTHING ON THE SAFETY LOCK.

2. TRANSPORT & UNPACKING

Depending on the standard request, this lift and the hydraulic pump are protected by two cartons with pallets. And the machine must be handled with a forklift with the forks positioned as shown fill the figure.



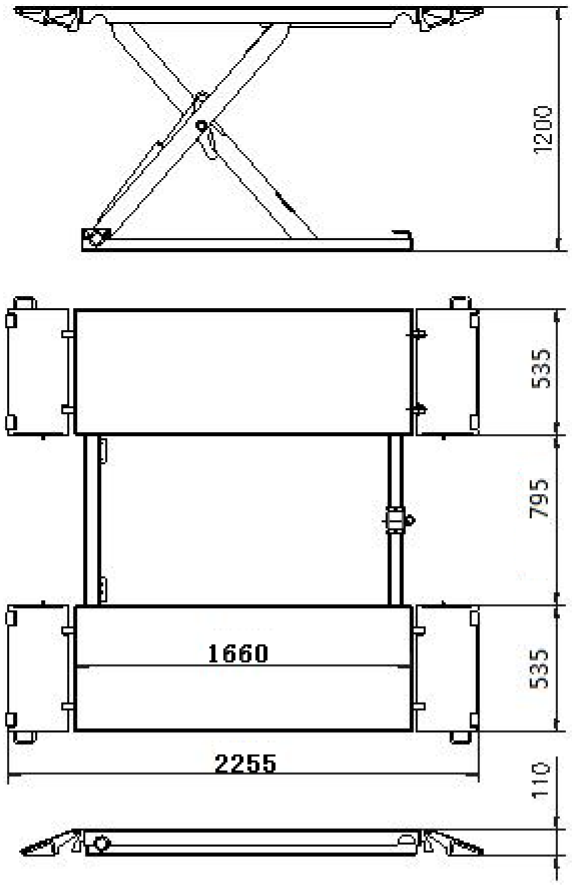
- **Shipping weight for the lift is** 530KG.
- **Shipping weight for the hydraulic pump is** 58KG.

CAUTION **Once the packing material has been removed, check the machine for any things of damage.**

WARNING **Keep the packing materials out of the reach of children as they can be a source of danger.**

- ***Keep the packing for possible future transport.***

3. SPECIFICATIONS



Lifting capacity	3500kg
Max. Lifting height	1200mm
Min. height	110mm
Overall width	1865 mm
Platform length	1660-2255mm
Space between platforms	795 mm
Lifting time	60 sec
Noise	70db (A) 1m
Operating temperature	10°C - +50°C
Work environment:	Closed room
Power supply	2.2KW (240v, 415v)
Gross weight	588kg
Net weight	530kg

4. WORKING PLACE

Choose the place that the machine can be installed in compliance with current work place safety regulations. The floor should not be broken or uneven so that the machine will be stable and the platform can move freely.

If the install at out, it must be protected by some kind of roofing against

rain. The following work environment conditions are applicable

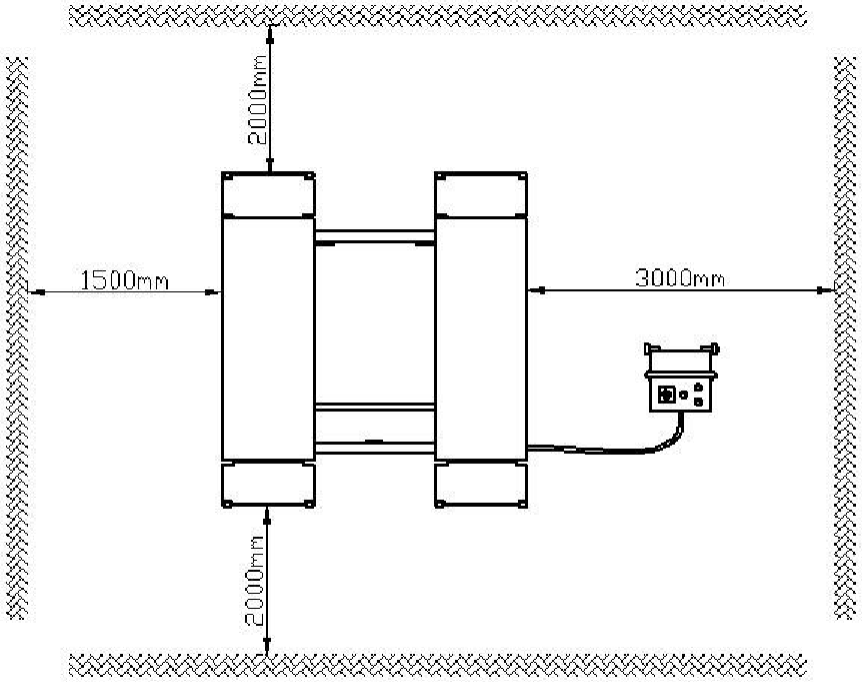
- **Relative humidity: from 30-95% without condensation.**
- **Temperature: 10-50℃.**

WARNING

The machine can not be operated in explosive atmospheres.

WORKPLACE REQUIREMENTS

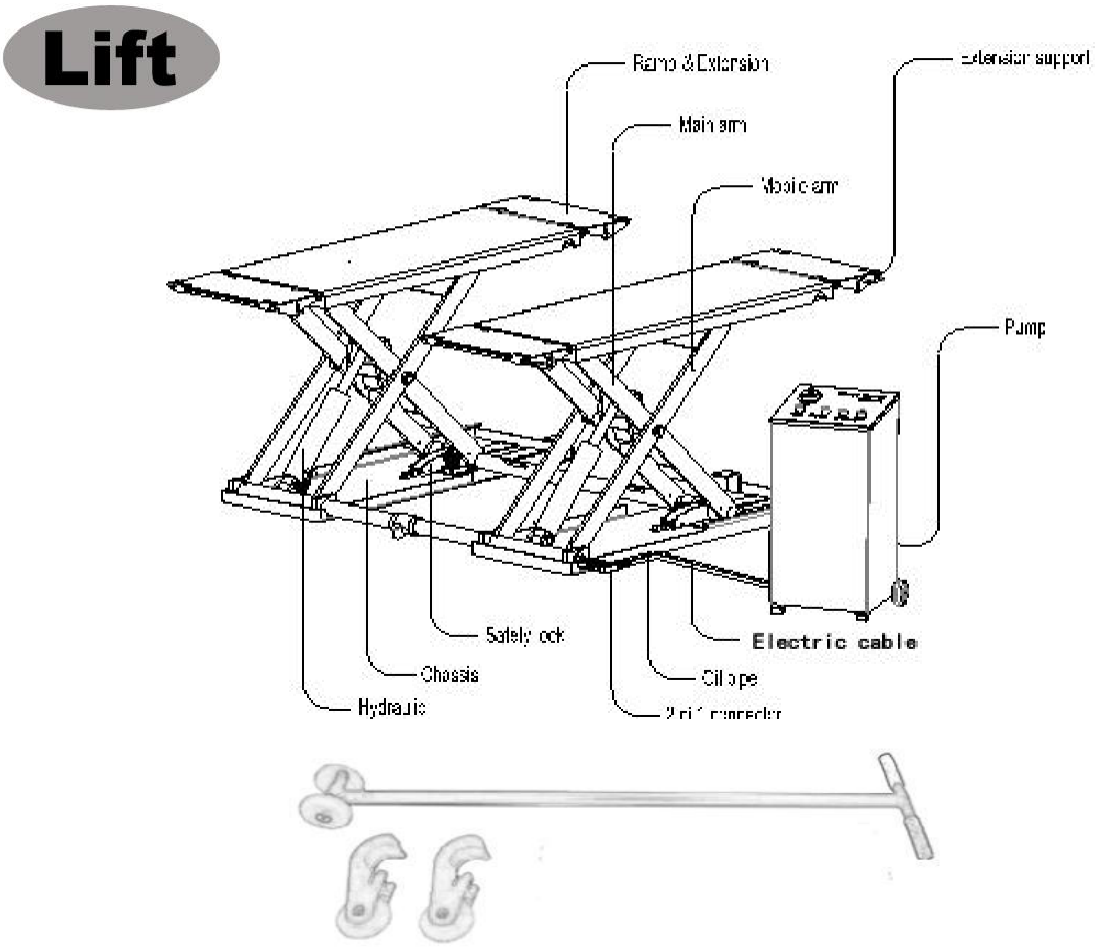
Machine need space: requirements are 3200X2000mm with a minimum distance from walls as shown in the diagram.



WARNING

These measurements are also the machine working range. Persons other than specially trained and authorized operators are expressly forbidden to enter this area.

5. DESCRIPTION

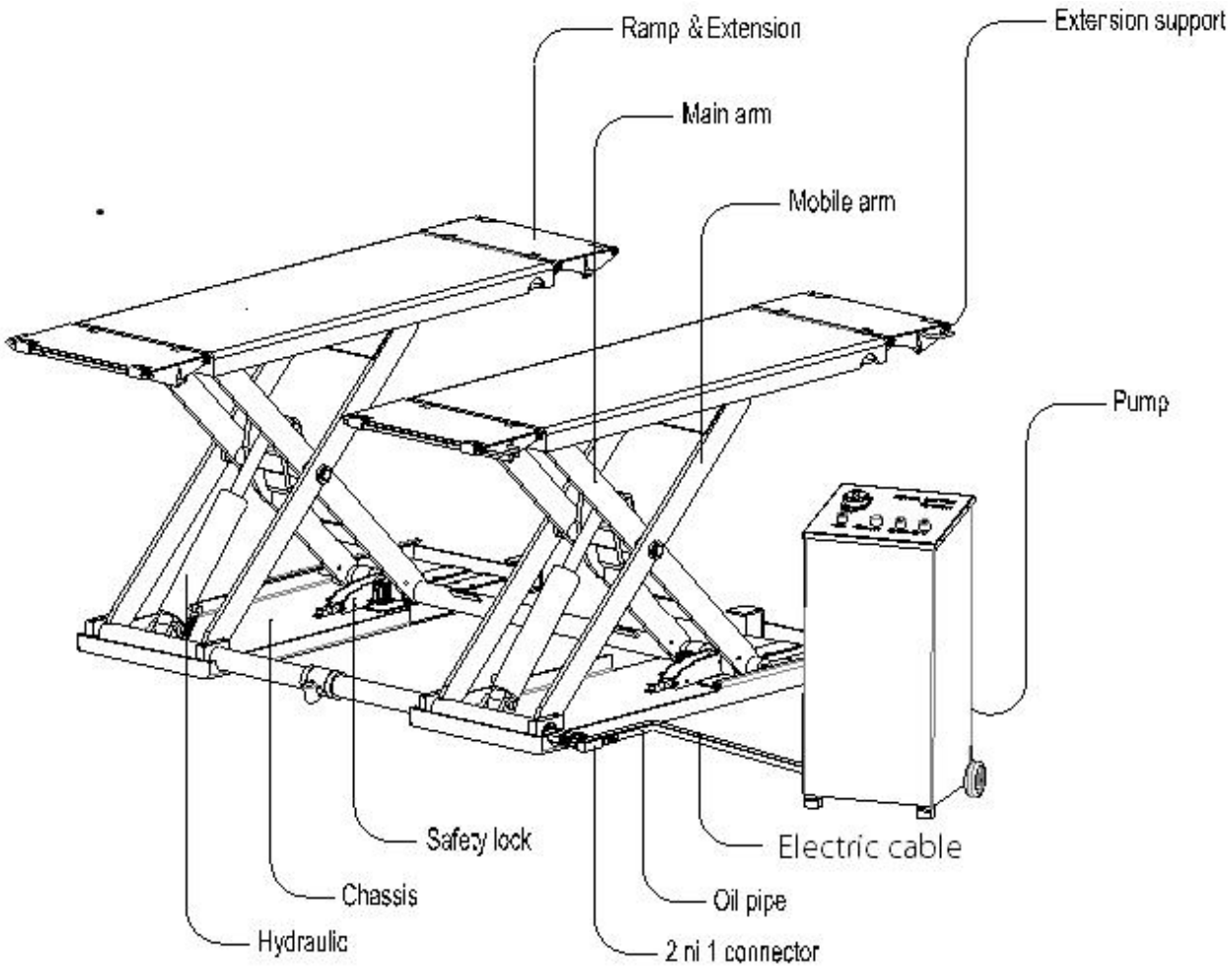


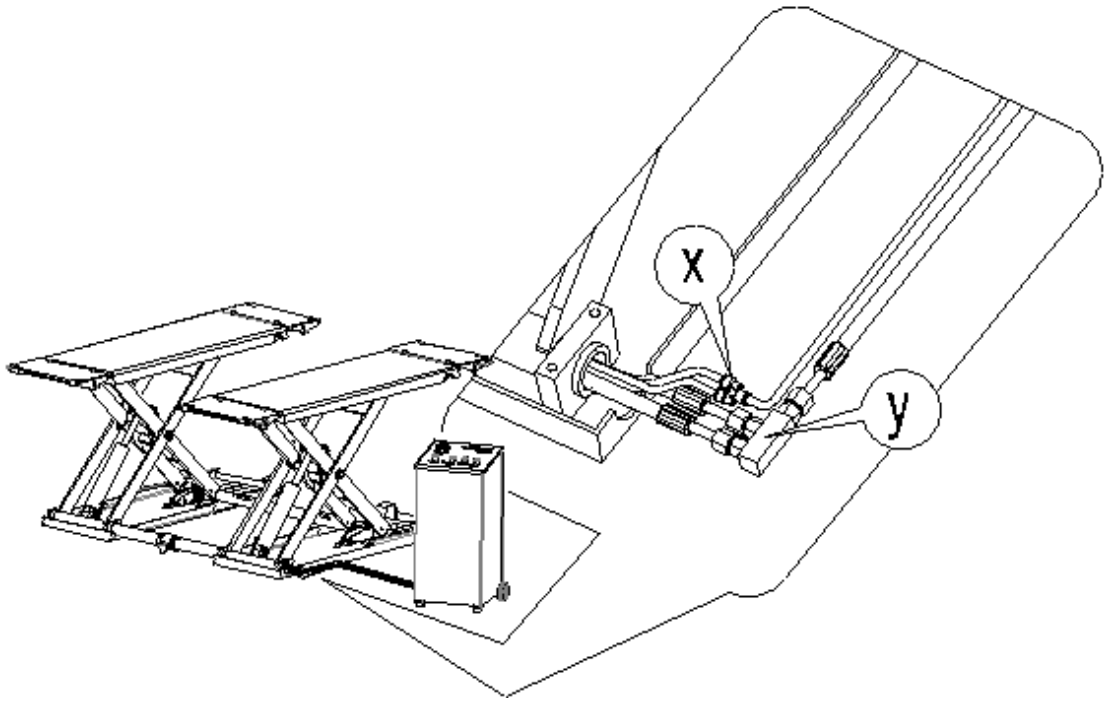
NOTE
It is the main parts figures above. More detailed components and assembly please see exploded view.

6. INSTALLATION

Connecting pipes

There are two pipes from the hydraulic pump as shown in the figure. (X) is a electric cable and used for the safety lock. (Y) is a hydraulic oil pipe and used for the hydraulic cylinders.


Ramp & Extension
Extension support
Main arm
Mobile arm
Pump
Safety lock
Electric cable
Chassis
Oil pipe
Hydraulic
2 ni 1 connector

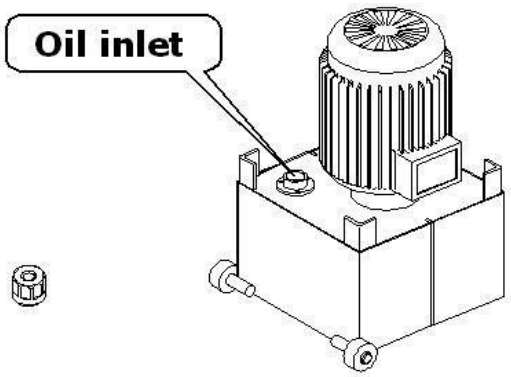

X
y

Enter hydraulic oil

Remove the motor box off, and then turn the oil cap anti-clockwise to open the oil inlet. Fill in the hydraulic oil 32# (in cold conditions) or 46# (in warm conditions) from the oil inlet as shown in the figure.

CAUTION

Use only given and eligible hydraulic oil, any other oil will cause severe damage to internal parts, such as the gear-pump, pipes and cylinders.

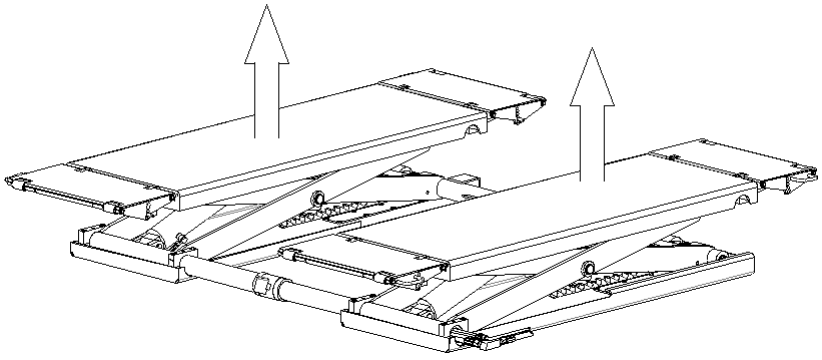


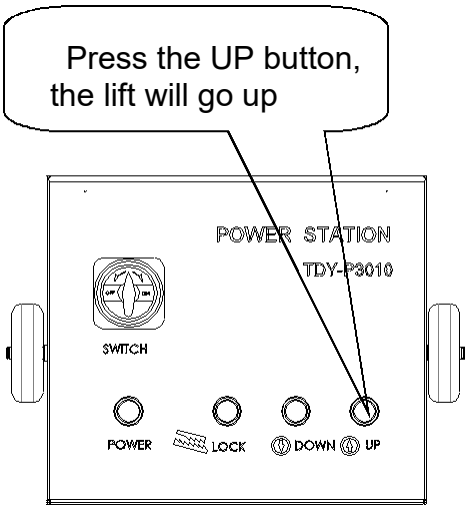
NOTE

- Make sure that there is sufficient oil in the tank when the machine in working
- Do not overfill the oil tank, otherwise it may overflow when the oil warms up and expands.
- Make sure that the oil tank cap is properly closed before working.

7. OPERATION

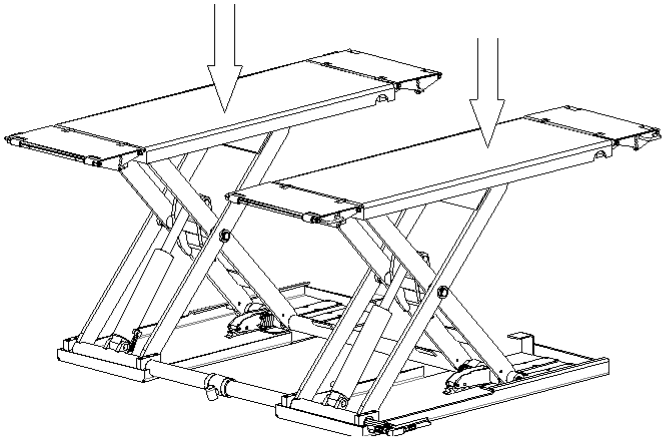
During all operations, keep hands and other parts of the body as far as possible from moving parts of the machine. With necklace, bracelets and too large clothes, can be dangerous for the operator.

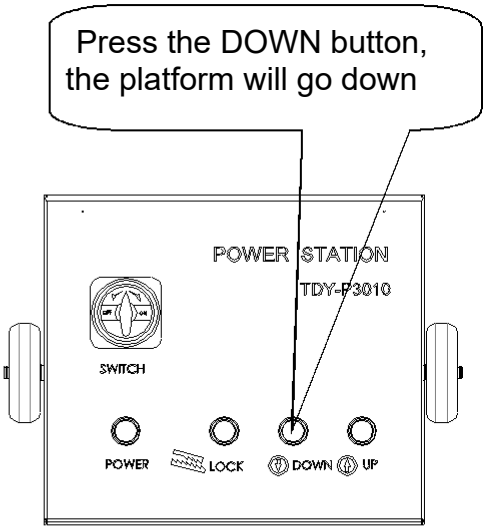


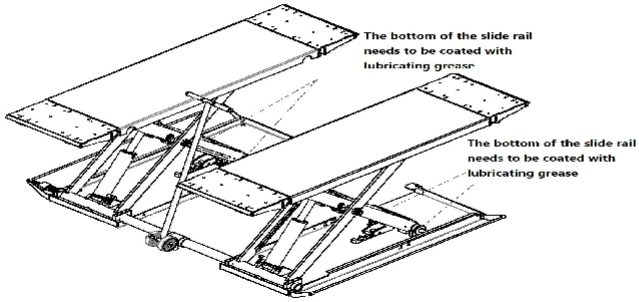


When the lift is working (lifting a car), remember:
any personnel do not get in the lift and the car, it could result in severe injury or

death!







8. STORING

If the machine has to be stored for a long time you should :

- Get down the platforms and no heavy object on them.
- Disconnect the machine from all power sources.
- Grease all the parts that could be damaged if they dry out.
- Empty hydraulic oil tank and wrap the machine in a sheet of protective plastic to prevent dust from reaching the internal working parts.

If the machine has to work again after a long storing period, it is necessary to:

- put the oil into the tank again.
- restore the electric connection.

9. MAINTENANCE

PRECAUTIONS

WARNING

Maintenance must be carried out only by skilled personnel who are very familiar with the lift.

When performing maintenance on the lift, follow all the necessary precautions to prevent the lift from being started accidentally**:**

1. Cut off the power and pull the plug out of the jack.

2. While maintenance is being performed on the machine, always keep in mind all the main possible risks and the safety instructions indicated in chapter 3 “safety risk of electric shock” at the machine power supply terminal strip.

IT IS PROHIBITED TO PERRORM MAINTENANCE ON THE OIL CYLINDER. IT SHOULD BE REPLACED WHEN DAMAGED.

IMPORTANT

1. Only use original spare parts and tools that are suitable for the job and in good condition;

2.Follow the maintenance schedule indicated in the manual: these frequencies are indicative and must always be considered as general rules to be respected.

3.Good preventive maintenance requires constant attention and continuous supervision on the machine. Quickly find the cause of any abnormalities such as excessive noise, overheating, leaking fluids, etc.

Special attention is required for:

1. The condition of lifting parts (cylinder, power unit);
2. Safety devices (oil cylinder and safety wedges)

To perform maintenance correctly, refer to the following documents supplied by the lift manufacturer:

1. Complete functional diagram of the electric equipment and auxiliary equipment indicating the power supply connections
2. Hydraulic diagram with lists of parts and max. Pressure values
3. Exploded drawings with the data needed to order spare parts

PERIODIC MAINTENANCE

OPERATION FREQUENCY

To keep the lift working at full efficiency, follow the indicated maintenance schedule. The manufacturer will not be responsible and will not honor the warranty as a result of non-compliance with the instructions indicated above.

NOTE

The frequency indicated refers to normal operating conditions; different frequencies will apply to particularly server conditions.

ALL MAINTENANCE OPERATIONS MUST BE PERFORMED WITH THE LIFT STOPPING OR THE MAIN SWITCH PLACED AT “O”.

When after the machine has been installed, check:

1 That the opposite carriages arms are at the same level

2 The power unit oil level. Add oil up to the right level, if necessary

3 EVERY MONTH

HYDAULIC POWER UNIT

3. Check the oil level in the tank, using the special dipstick, which is attached to the filler cap. If necessary, add oil through the cap to reach the required level. For the type of oil, see "TECHNICAL SPECIFICATIONS".
4. After the first 40 hours of operation, check the press oil contamination level. (Clean the filter and replace the oil if there is a high contamination level).

HYDRAULIC CIRCUIT

Check that there are no oil leaks in the circuit between the power unit and cylinder and in the cylinder itself. In this case, check the condition of the gaskets and replace them, if necessary.

HYDRAULIC PUMP

Under normal operating conditions, check that there is no change in the noise in the motor and gear pump and check that the relative bolts are properly tightened.

SAFETY SYSTEMS

3. Check the operating condition and efficiency of the safety devices .
4. Use a torque wrench to check that the post bases anchor bolts screws are properly tightened to the ground as well as the connection bolts.
5. Clean and lubricate the carriage side runners and guides.
6. Check that all screws are tightened
7. Check that the locking system works properly.
8. Grease all the moving parts.

EVERY 6-MONTHS…

HYDRAULIC

Check the contamination or aging level of the oil. Contaminated oil is the main cause of malfunctions of the valves and leads to a brief service life of the gear pumps.

EVERY 12- MONTHS

General check: visual inspection of all structural parts and mechanisms to guarantee that there are no problems or abnormalities.

Electric plant: skilled electricians (contact the service center) should test the electric plant, including the motor of the power unit, and control box.

HYDRULIC PLANT OIL

Replace the oil, following the instructions listed below:

4. Lower the lift to the minimum height (on the ground)
5. Make sure that the hydraulic cylinder is at the end of its travel

4 Disconnect the power supply to the lift rack.

5 Drain the oil from the hydraulic circuit, unscrewing the plug located at the bottom of the power unit reservoir.

6 Close the drain plug

7 Fill the hydraulic station oil cylinder with oil throng the plug located at the top of the hydraulic station.

The oil must be filtered.

Oil characteristics and types are reported in the technical specifications.

1. Close the filler plug
2. Energize the lift
3. Go through two or three up-down cycles (for a height about 20-30 centimeters) to insert oil into the circuit.

When changing the oil: use only recommend oil or the equivalent; do not use deteriorated oil that has been in the warehouse for an extended period of time.

AFTER EACH MAINTENANCE OPERATION, THE MACHINE MUST RETURN TO ITS INITIAL CONDITIONS, INCLUDING THE DISASSEMBLEED PROTECTION AND SAFETY DEVICE.

To ensure good maintenance, it is important:

1. To sue only tools that are suitable for the job and original spare parts
2. Follow the minimum maintenance schedule as indicated
3. Immediately find the cause of any abnormalities (excessive noise, overheating, leaking fluids, etc)
4. Pay special attention to lifting parts (cylinders) and safety devices
5. Use all the documentation supplied by the manufacturer (wiring diagrams, etc)

□ HYDRAULIC SYSTEM

1. Oil cylinder 1

2. Oil cylinder 2

3. Descending valve

4. Slipping valve

5. Throttle valve

6. Retaining valve

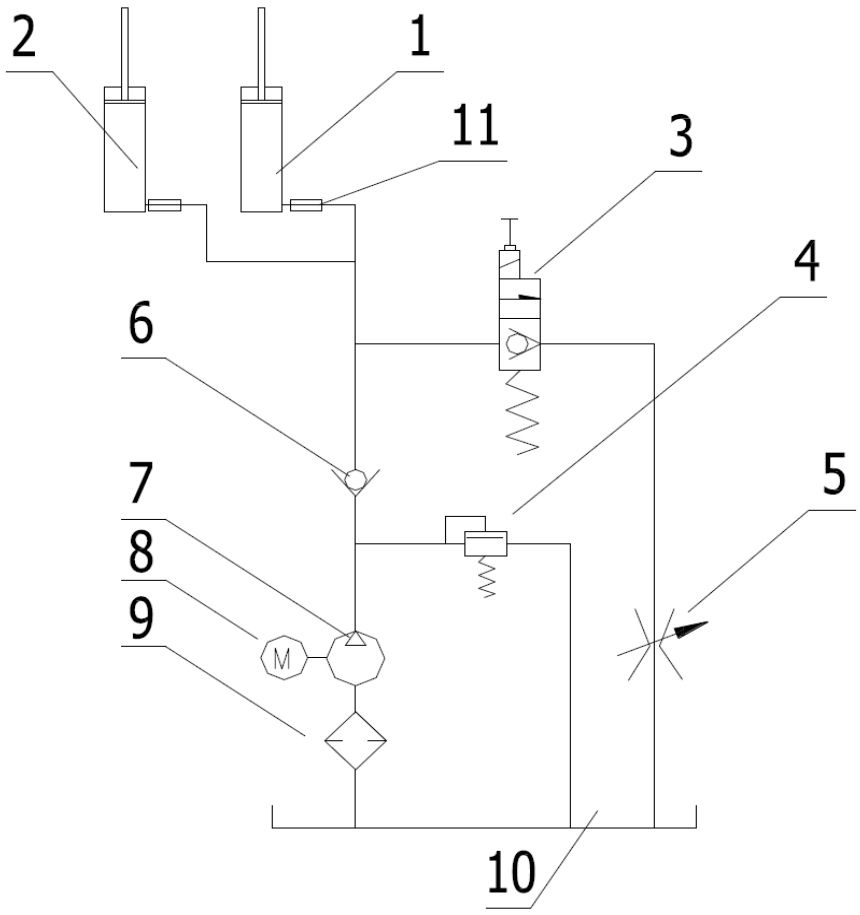
7. Motor

8. Pump station

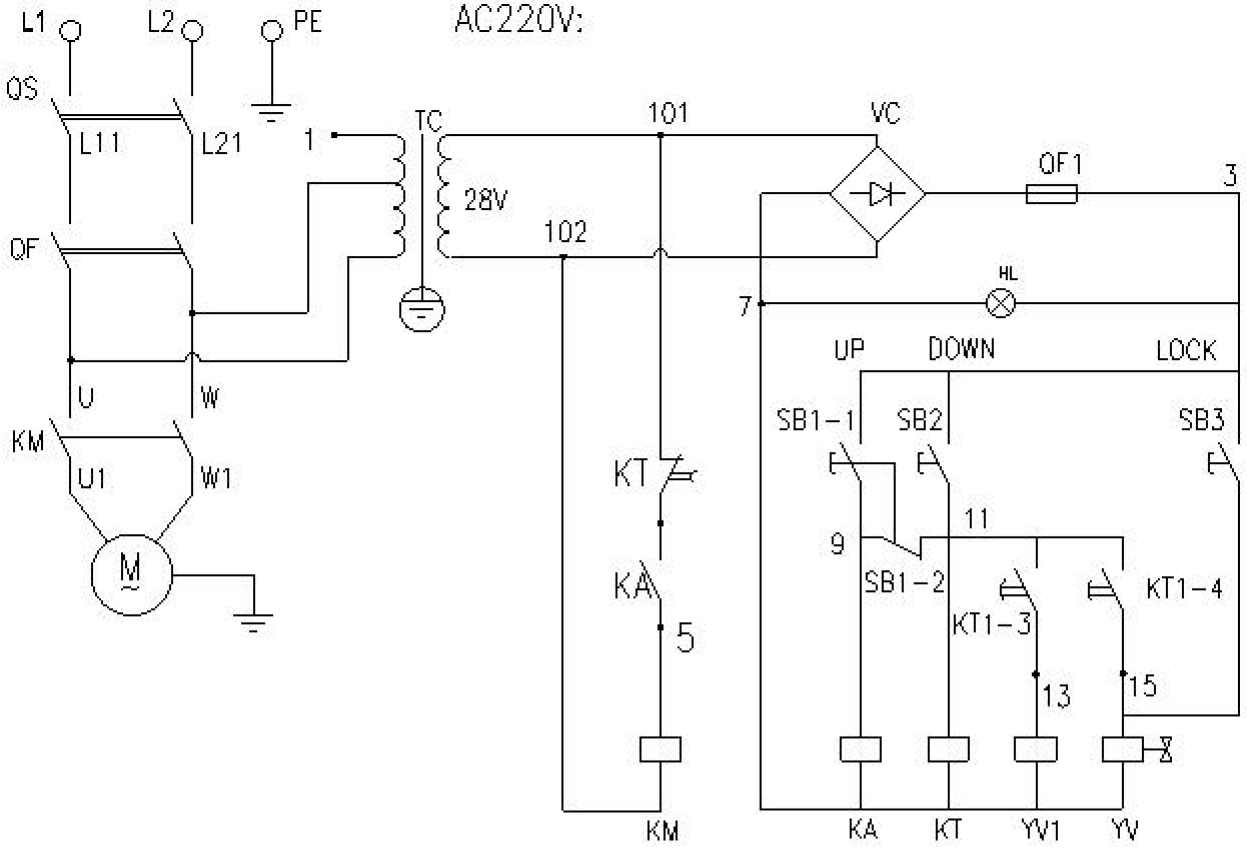
9. Oil filter

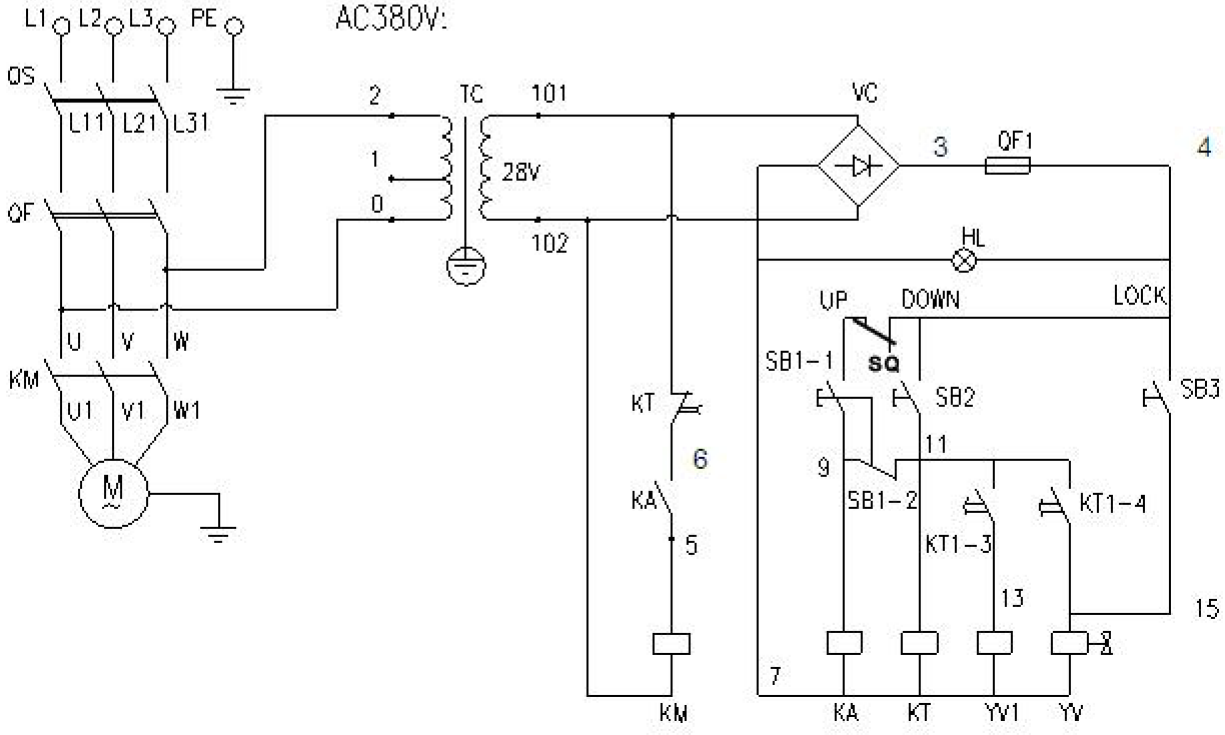
10. Oil Tank

11. safe valve



12. ELECTRIC SYSTEM

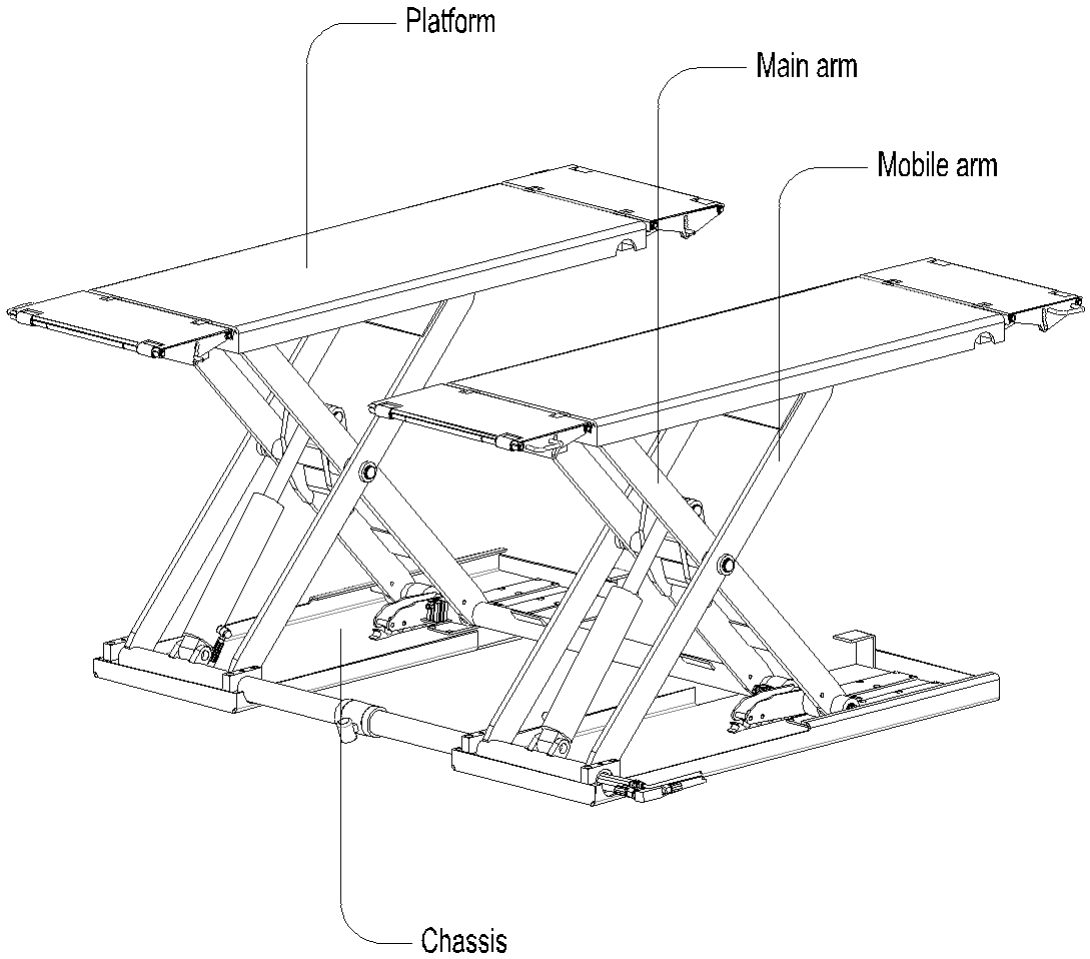




QS	Power switch	SB2	Downside button
QF	Circuit interrupter	SB3	Tooth lock button
QF1	Circuit interrupter	KM	A.C. contactor
TC	Transformer	KA	intermediate relay
VC	rectifier bridge	KT	Time relay
HL	Indicator	YV1	Delay unlock the solenoid valve while descending
SB1	Upside button	YV	electromagnetic unloading valve (Hydraulic)

Refer to the above circuit diagram for the connection of the motor.
The rotation of the motor should be towards the direction of the pump, if not, amend the connection of motor.

STRUCTURE DIAGRAM



Operation detail introduction:

Press UP key to let the lift start to work, and when the lift reach the Max. High point, the limited position switch will take the function. At that time, please re-press UP key, then the lift cannot go up any more.

When the lift reach the Max. High point, you have to remember to press LOCK key, then the locking hook will be locked tightly. If you ignore this step, the limited switch will be broken easily.

When the vehicle maintenance finished, you need to press DOWN key, then the lift will go up for 3 second, then the locking hood will be loosen, and then the lift will go down.

Time relay position: