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# Instructions and Maintenance Manual

## FOR HYDRAULIC SCISSOR LIFT



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The specifications stated on this brochure are not binding. We reserve the right to change the specification without notice

## Disclaimer

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This manual contains information that is correct to the best knowledge of the manufacturer. It is intended to be a guide and should not be considered as a sole source of technical instruction. It should not replace good technical judgment since all possible situations cannot be anticipated. If there is any doubt as to the exact installation, configuration, and/or use, please call the manufacturer or its distributor.

The choice of system component is the responsibility of the buyer, and how they are used cannot be the liability of the manufacturer or its distributors. Assembly, installation, commissioning, initial adjustment and testing, or any work relating to EXTRAORDINARY maintenance, repair, overhauls, transport and dismantling of the Lift must be performed by specialist personnel from the manufacturer or its authorized commission, install and dismantle Lifts.

The manufacturer and its distributors decline all responsibility for injury to persons or damage to vehicles or objects when any of the above mentioned operations have been performed by unauthorized personnel or when the rack has been subject to abuse.

This manual explains the operational and safety aspects that may prove useful to the Operator and Maintenance personnel. It will give a better understanding of the structure and operation of the Lift and the best use of the Lift. The operator should familiarise himself with the technical and safety aspects of the Lift to be competent in operating the Lift.

The words "Operator" and "Maintenance Fitter" used in this manual are construed as follows:

**OPERATOR:** person authorized to use the Lift. The Lift must be operated in the correct manner as indicated

**MAINTENANCE FITTER:** person authorized for routine maintenance of the Lift.

The end user can only use the Lift in the correct manner to which it is intended as defined in the instructions.

Loose clothing should not be worn when operating the Lift. Any personnel with long hair operating the Lift should use a protection cap as precautionary safety measures.


\*\*\*\*\* **IMPORTANT NOTE** \*\*\*\*\*


The following must be observed at all times to ensure correct use of the hoist.


- Follow regular maintenance schedule as per manual
- Ensure safety precautions are taken and use the hoist in accordance with the manufactures instructions
- It is the Owner's responsibility to ensure all safety regulations and work cover requirements are met to satisfy all state laws


## IMPORTANT MANUAL INFORMATION

Particularly important information is distinguished in this manual by the following notations:

	The Safety Alert Symbol means ATTENTION ! BECOME ALERT! YOUR SAFETY IS INVOLVED!
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	Failure to follow WARNING instructions could result in severe injury or death to the lift operator, a bystander or a person inspecting or repairing the lift.
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	A CAUTION indicates special precautions that must be taken to avoid damage to the lift.
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	A NOTE provides key information to make procedures easier or clearer. and also some important things.
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### NOTE:

- This manual should be considered a permanent part of this lift and should remain with it even if the lift is subsequently sold.

- We continually seeks advancements in product design and quality. Therefore, while this manual contains the most current product information available at the time of printing, there may be minor discrepancies between your lift and this manual. If you have any questions concerning this manual, please consult your dealer or call manufacturing.

## TABLE OF CONTENTS

1.	<b>SAFETY INFORMATION</b> .....	3
2.	<b>TRANSPORT &amp; UNPACKING</b> .....	4
3.	<b>SPECIFICATIONS</b> .....	4
4.	<b>WORKING PLACE</b> .....	5
5.	<b>DESCRIPTION</b> .....	6
6.	<b>INSTALLATION</b> .....	7
7.	<b>OPERATION</b> .....	8
8.	<b>STORING</b> .....	9
9.	<b>MAINTENANCE</b> .....	1 0
10.	<b>HYDAULIC POWER UNIT</b> .....	1 1
11.	<b>ELECTRIC SYSTEM</b> .....	1 3
12.	<b>HYDRAULIC SYSTEM</b> .....	1 3
13.	<b>STRUCTURE DIAGRAM</b> .....	1 4

### 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: 3000KG**

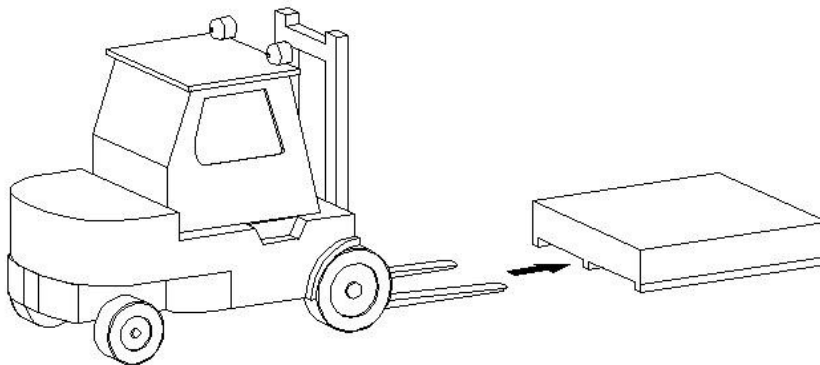
**WARNING: When the lift is working, any personnel is not allowed to get in the lift and the car, it could result in severe injury or death!**



**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 520KG.
- Shipping weight for the hydraulic pump is 80KG.

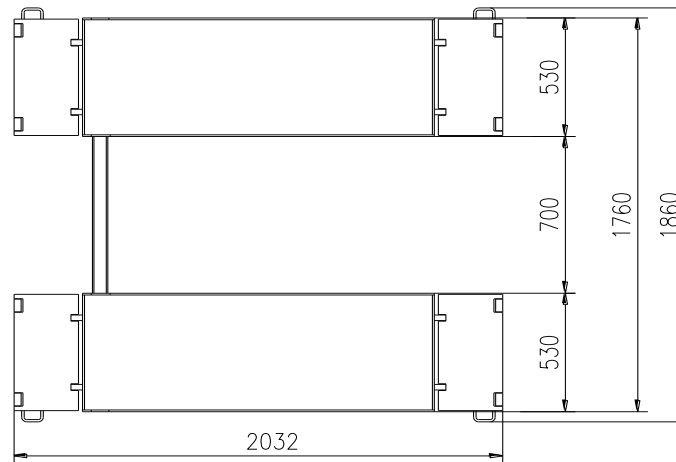
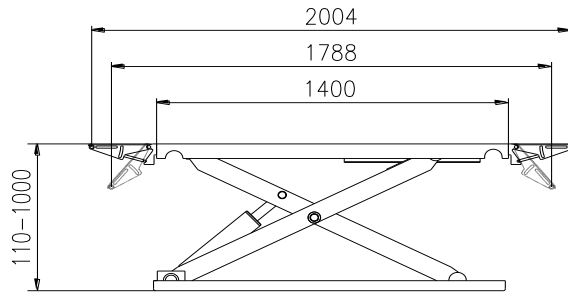
**CAUTION** Once the packing material has been removed, check the machine for any things of damage.



**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	3000kg	
Max. Lifting height	1000mm	
Min. height	110mm	
Overall width	1760mm	
Platform length	1400-2004mm	
Space between platforms	700mm	
Lifting time	60 sec	
Noise	70db (A) 1m	
Operating temperature	10°C - +50°C	
Work environment:	Closed room	
Power supply	2.2KW	200-240V 50/60Hz 1Ph.
		380-415V 50/60Hz 3Ph.
Gross weight	576kg	
Net weight	522kg	

## DIMENSIONS AND OVERALL CLEARANCE DIAGRAM

### 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

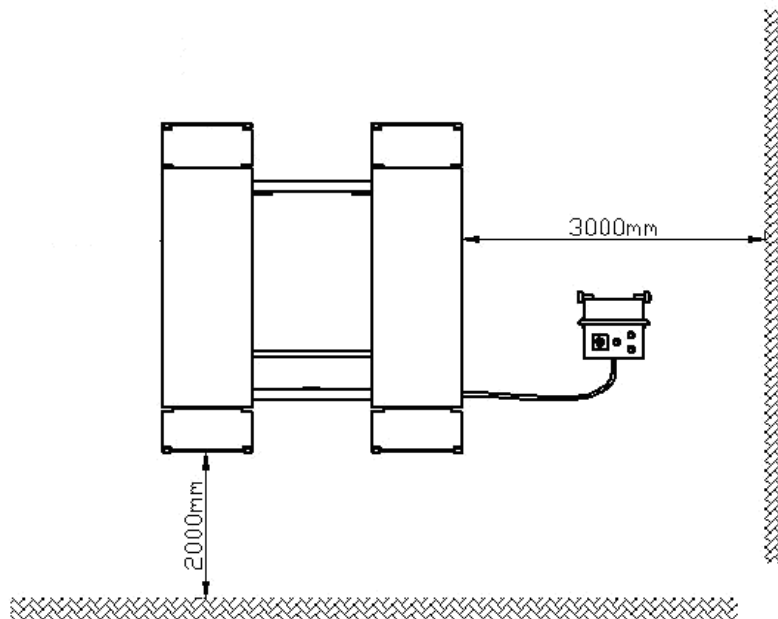
- Relative humidity: from 30-95% without condensation.
- Temperature: 10-50°C.



The machine can not be operated in explosive atmospheres.

## WORKPLACE REQUIREMENTS

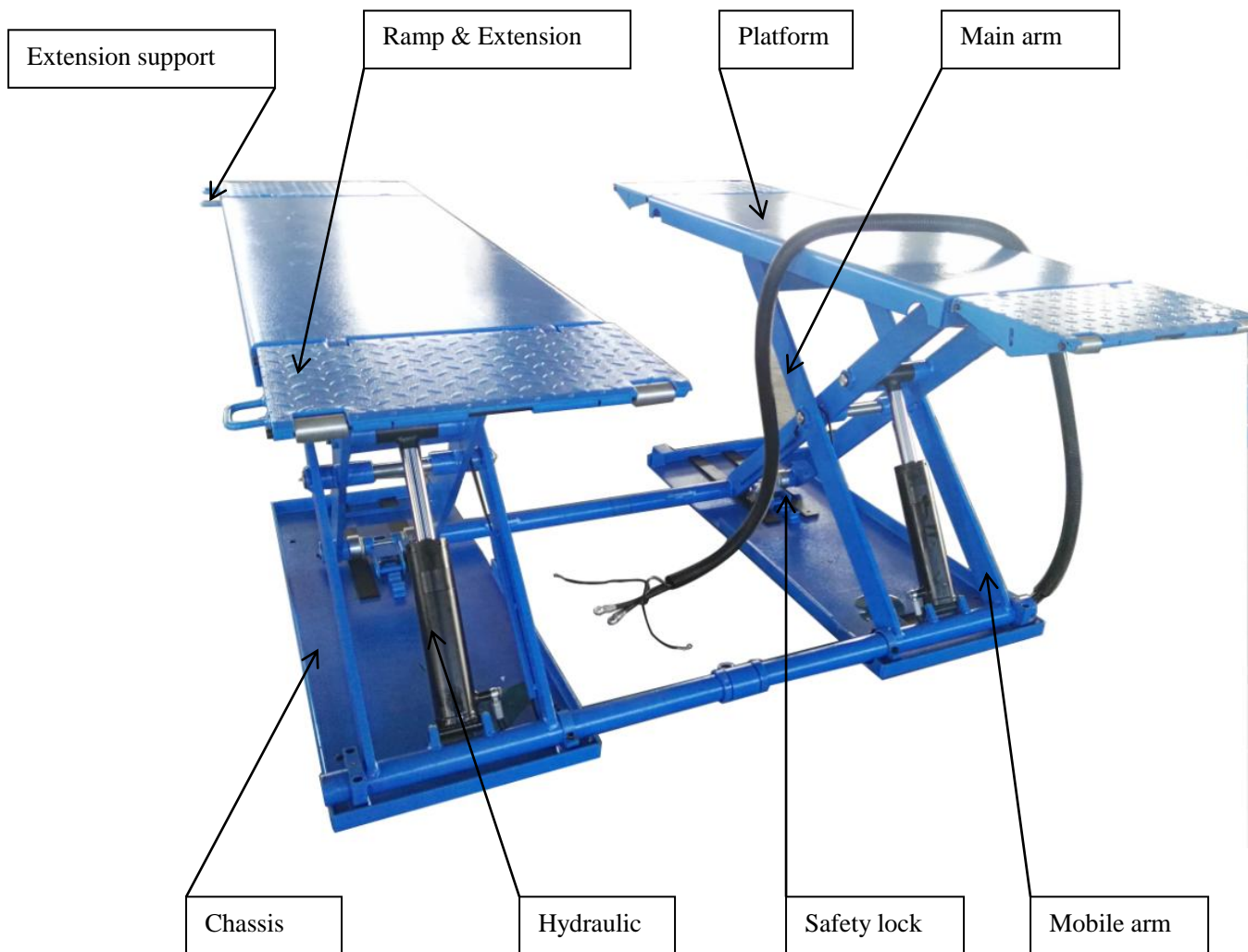
Machine need space: requirements are 3200X2000mm with a minimum distance from walls as shown in the diagram.



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 wire and used for the safety lock. (Y) is a hydraulic oil pipe and used for the hydraulic cylinders.





### ***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 30# from the oil inlet as shown in the figure.

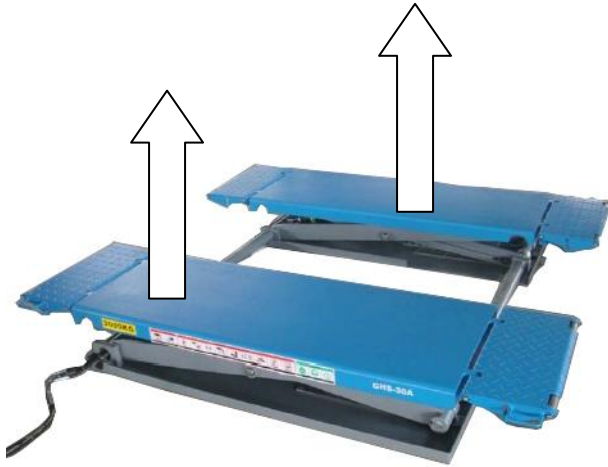


### **NOTE**

- Make sure that there is sufficient oil in the tank when the machine is 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**

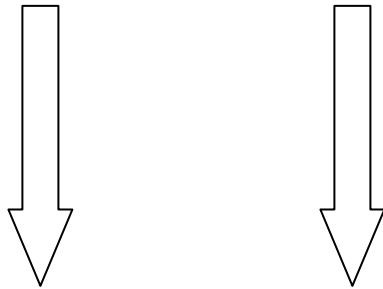
During all operations, keep hands and other parts of the body as far as possible from moving parts of the machine. With necklace, bracelets and too large clothes, can be dangerous for the operator.



Press the UP button,  
the lift will go up



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!



Press the DOWN button,  
the platform will go down



## 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

## **10. HYDAULIC POWER UNIT**

- 1 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”.
- 2 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**

- 1 Check the operating condition and efficiency of the safety devices .
- 2 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.
- 3 Clean and lubricate the carriage side runners and guides.
- 4 Check that all screws are tightened

- 5 Check that the locking system works properly.
- 6 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:

1. Lower the lift to the minimum height (on the ground)
2. Make sure that the hydraulic cylinder is at the end of its travel
3. Disconnect the power supply to the lift rack.
4. Drain the oil from the hydraulic circuit, unscrewing the plug located at the bottom of the power unit reservoir.
5. Close the drain plug
6. Fill the hydraulic station oil cylinder with oil through 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 DISASSEMBLED PROTECTION AND SAFETY DEVICE.**

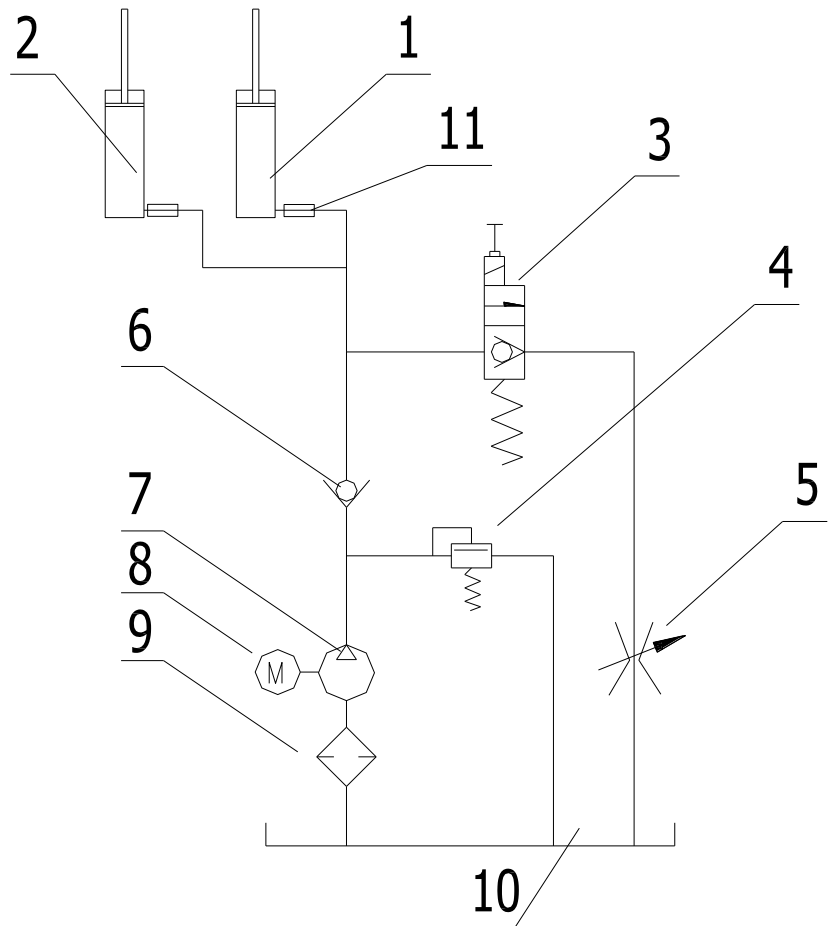
To ensure good maintenance, it is important:

1. To use only tools that are suitable for the job and original spare parts
2. Follow the minimum maintenance schedule as indicated

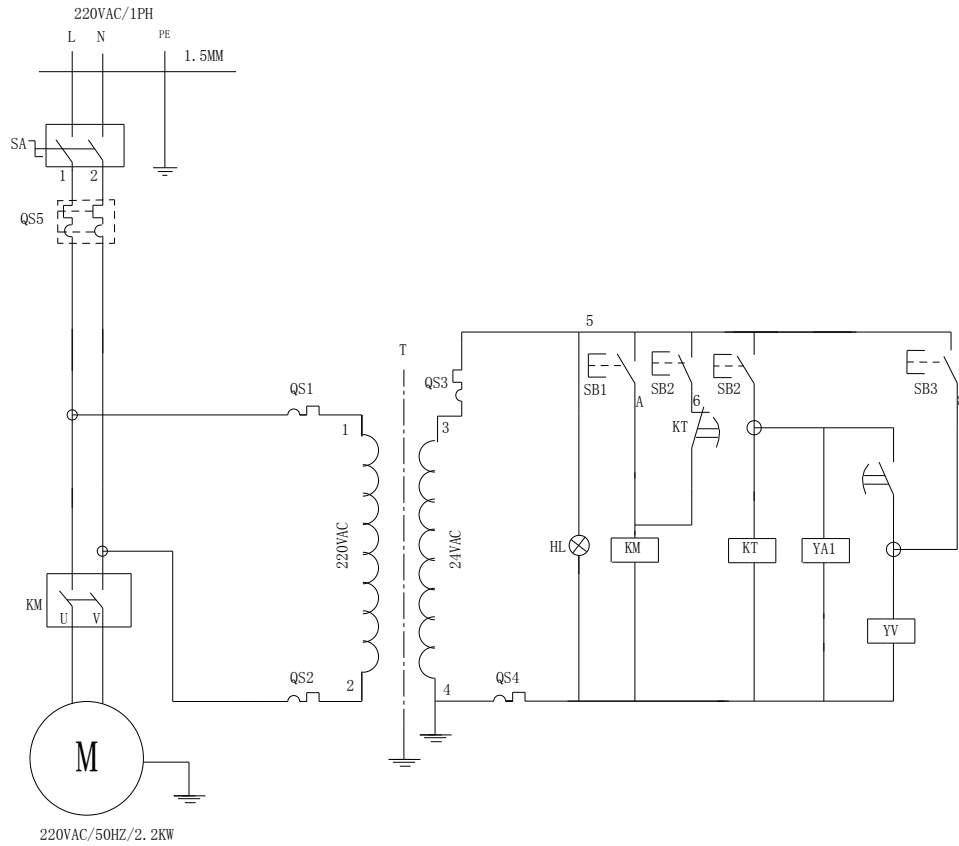
3. Immediately find the cause of any abnormalities (excessive noise, overheating, leaking fluids, etc)
4. Pay special attention to lifting parts (cylinders) and safety devices
5. Use all the documentation supplied by the manufacturer (wiring diagrams, etc)

## 11. 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



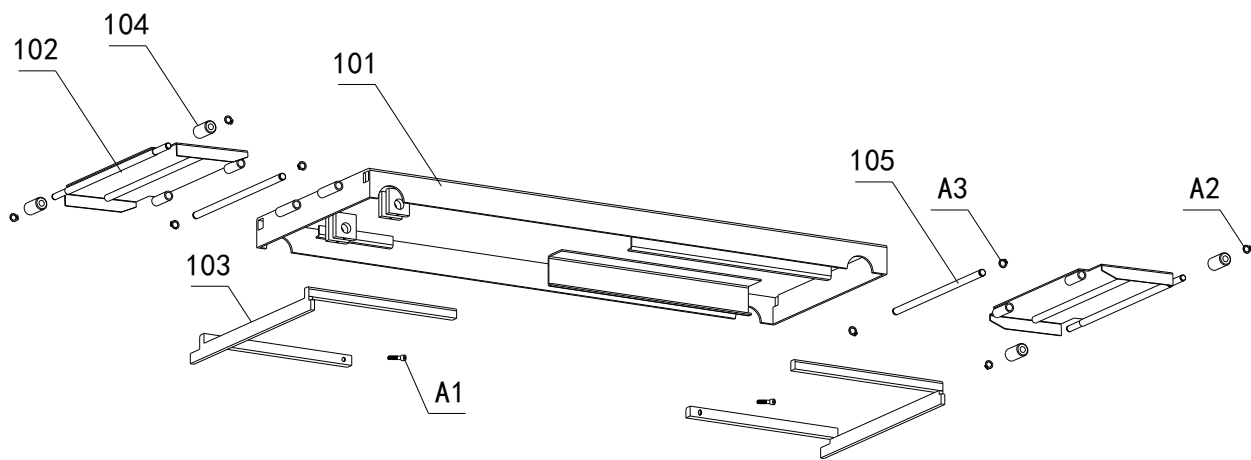
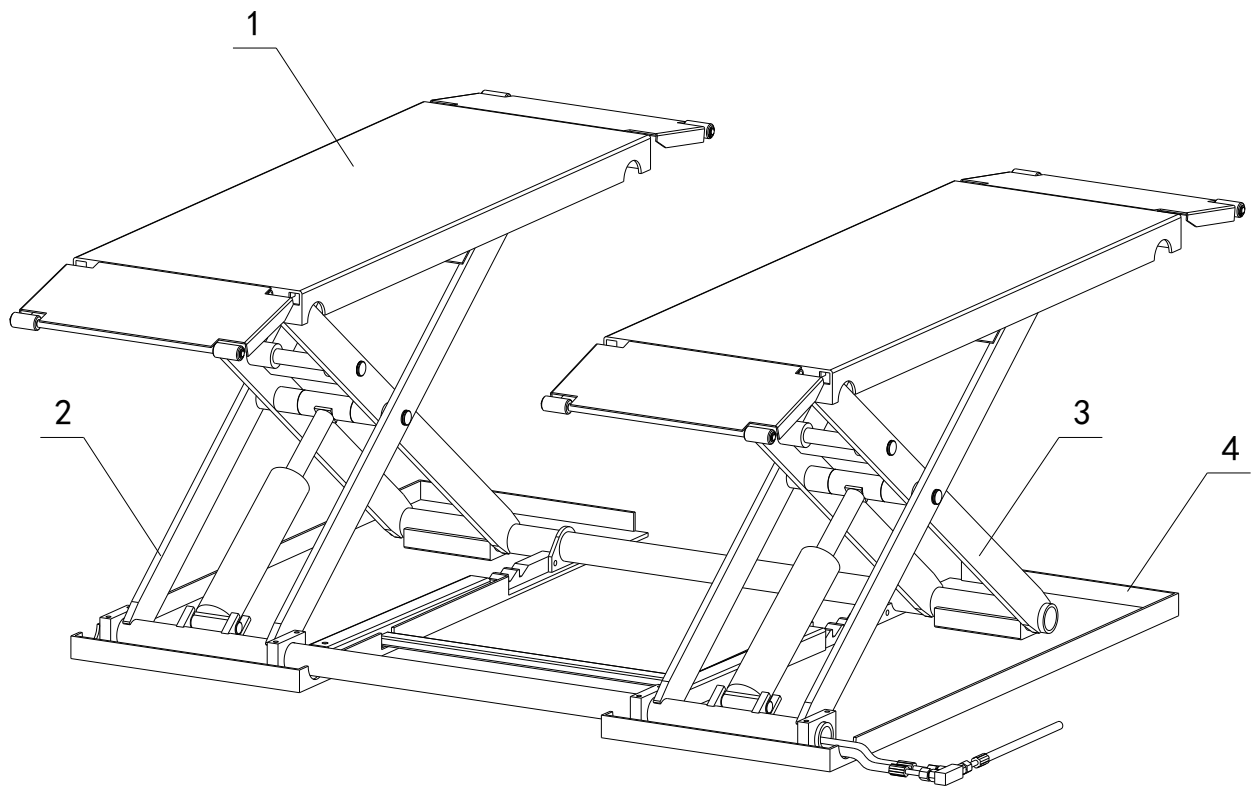
## 12. ELECTRIC SYSTEM



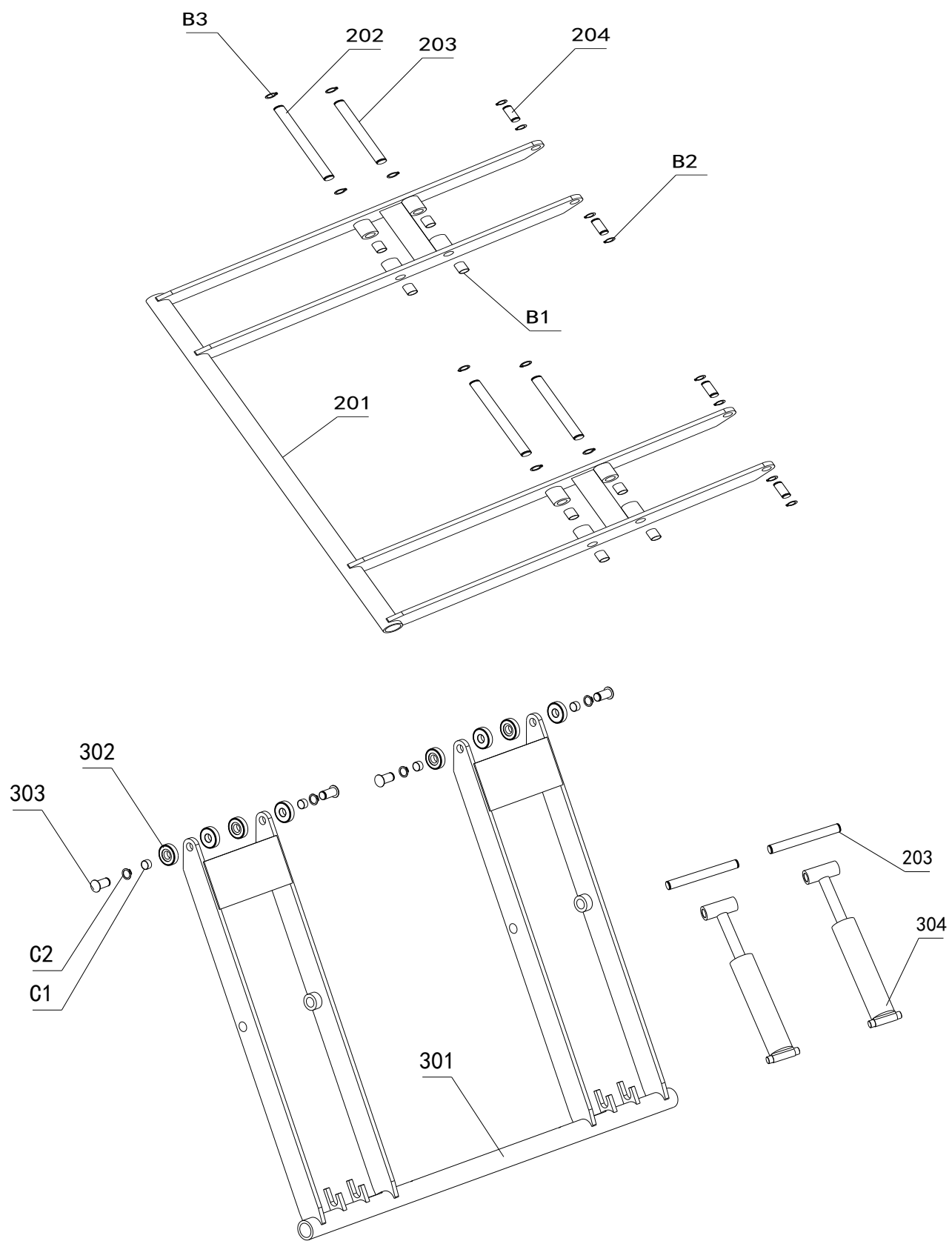
QS	SWITCH (BREAKER)	YV	VALVE
KM	ALTERNATING CONTACTOR	M	ELECTRIC MOTOR
HL	PLAY DETECTOR TORCH	KT	relay
SB1	UP SWITCH	FU1-3	断路保护开关
SB2	DONE SWITCH	FU4	fuse
SQ	LIMIT SWITCH	QV	气动电磁阀
TC	TRANSFORMERS		

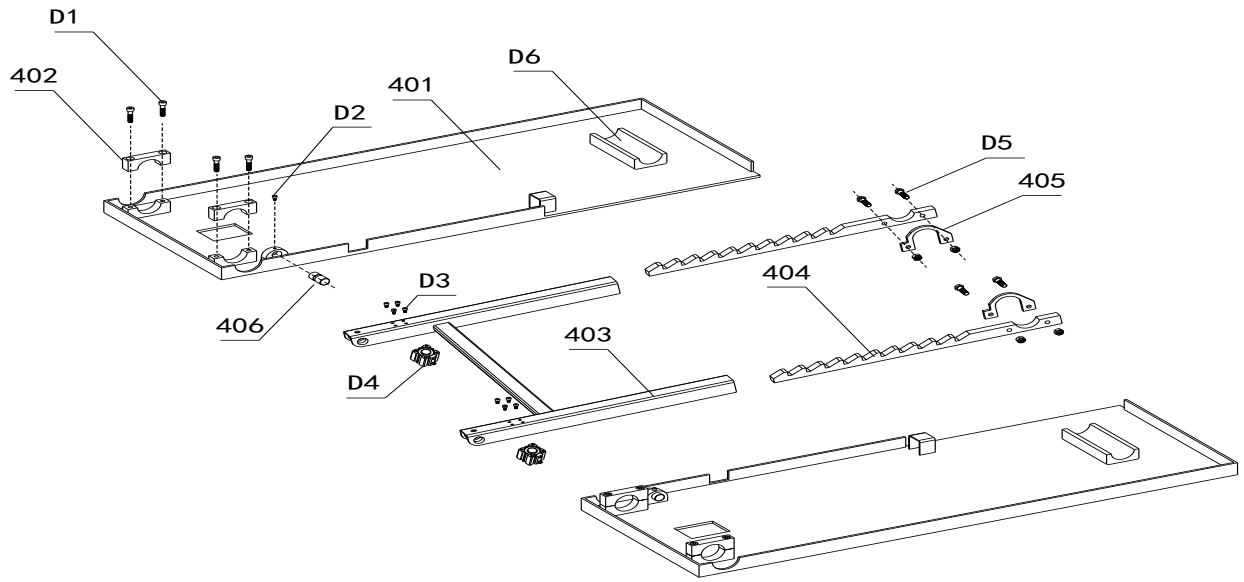
Refer to the above circuit diagram for the connection of the motor.  
The rotation of the motor should be towards the direction of the pump, if not, amend the connection of motor.

### 13. STRUCTURE DIAGRAM









Code	Name	Code	Name
1	Platform	301	Internal arm
2	Internal arm	302	Roller
3	External arm	303	Shaft for roller
4	Base	304	Cylinder
101	Platform	C1	Bearing 2515
102	Ramp	C2	Circlip $\Phi$ 25
103	Ramp Support	401	Base
104	Roller	402	Tube support
105	Shaft for ramp	403	Upper lock
A1	Bolt M6 $\times$ 10	404	Lock
A2	Circlip $\Phi$ 14	405	Lock fix
A3	Circlip $\Phi$ 16	406	Lock shaft
201	External arm	D1	Bolt M10 $\times$ 55
202	Shaft for arm	D2	Bolt M6 $\times$ 10
203	Shaft for cylinder	D3	Bolt M5 $\times$ 30
204	Shaft for arm	D4	Cylinder
B1	Bearing 3030	D5	Bolt M10 $\times$ 55
B2	Circlip $\Phi$ 25	D6	Slider
B3	Circlip $\Phi$ 30		