CITY OF INDUSTRY,CA
BROOKSHIRE,TX
BOLINGBROOK,IL
JERSEY CITY,NJ
POOLER, GA
TEL: 888-636-1918
EMAIL:INFO@AUTOKATO.COM
WWW.KATOOLAUTOEQUIP.COM

KATOOL AM120SD SINGLE LOCK RELEASE 2POST LIFT



Read the entire contents of this manual before using this product. Failure to follow the instructions and safety precautions in this manual can result in serious injury or death. Make sure all other operators also read this manual. By proceeding with setup and operation, you agree that you fully understand the contents of this manual and assume full responsibility for product use.

SAFETY INSTRUCTIONS:

1. Do not install the lift on any asphalt surface.
2. Read and understand all safety warning procedures before operating the lift
3. The lift, in its standard version, is not designed for outdoor use
4. Keep hands and feet away from any moving parts. Keep feet clear of lift when lowering
5. The lift may only be used by qualified staff, properly trained for the specific use of the machine.
6. Do not wear unfit clothes such as large clothe with flounces, tires, etc, which could get caught by moving parts of the machine.
7. The lifts surrounding area must be free from people or objects which could be a danger for lifting operations
8. The lift only designed to lift the entire body of vehicle, having maximum weight not more than the lift capacity
9. Always insure the safety devices are engaged before any attempt to work on or near vehicle.
10. The vehicle must be centered and positioned in a stable correct way with respect to the posts and following the instruction given by manufacturer
11. Make sure that the machine and its devices are working correctly, according to the specific instructions for maintenance.
12. Lower the lift to its lowest position when service finish.
13. Do not modify the machine without manufacturer’s advice.
14. If the machine is not to be used any more, owners are suggested to make it unusable by removing the power supply connections, emptying the oil tank and disposing the liquids by ring way.
15. If the lift is to be left unused for a long period, proceed as follows
    a. Disconnect the energy source;
    b. Empty the control unit tank;
    c. Grease the moving parts which might be damaged by dust or drying out.

All safety warning signs presented on the machine with the purpose to draw the operator’s attention from dangerous or unsafe situations. The labels must be kept clean and they have to be replaced if detached or damaged. Read the meaning of the labels carefully and memorize it.

Special specification

1. Equipment damage which in the process of shipment shall be claim by the buyer to the carrier.
2. Design and manufacture have considered the safety performance. However, proper training and thorough operation can increase the safety. Not reading illustrates, shall not operate or repair the equipment.
3. Identify the motor and the current state requirement of the nameplate, by professional and qualified electrician to connect.
4. Products of the company to the part structure improvement without notice. On the previous sales product updates without any obligation to notify customer.
5. Please carefully to read and fill in the instruction of the 《warranty card》, feedback to the distributor and the company filing. As the evidence of after service. Or regard give up the enjoyment of the corresponding service power, responsible for themselves responsibility.
6. Not be more than the rated lifting weight.
7. Please carefully read the warning marks.

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1、 Introduction:

This guide provides the owner and user with essential instructions for the proper use of the machine. Please read this guide carefully before operating the machine and follow the instructions to ensure its correct function, efficiency, and long service life.

This machine is meticulously designed with a double column structure and hydraulic drive. It operates stably, is convenient to use, and generates low noise. It is equipped with internal safety devices, making it safe and reliable. The machine's compact size makes it an ideal piece of equipment for car repair and maintenance.

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2、Main technical parameters:

Lifting capacity:	5500kg(12000lbs)
Lifting height:	1800mm(70.8”)
Overall height	3650mm(144”)
Minimum height:	110mm(4.3”)
Lifting time:	50s
Power supply	2.2kw
Rated oil pressure	18Mpa
Overall weight	621kg(1369lbs)

3 、Outline demention:

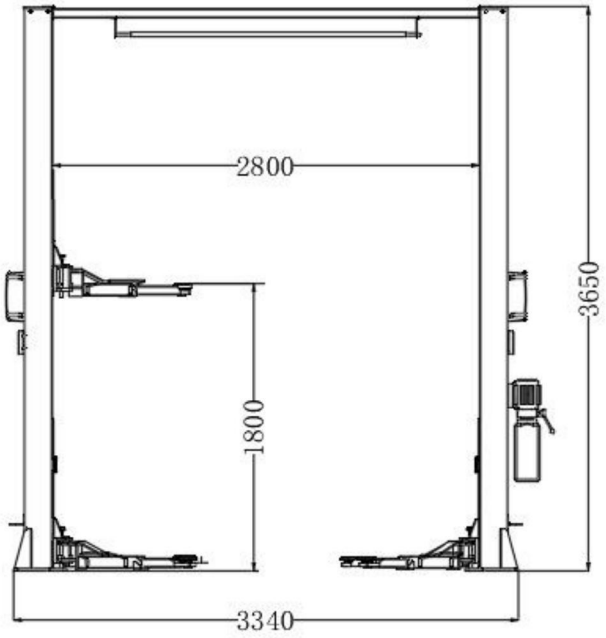


Chart 1

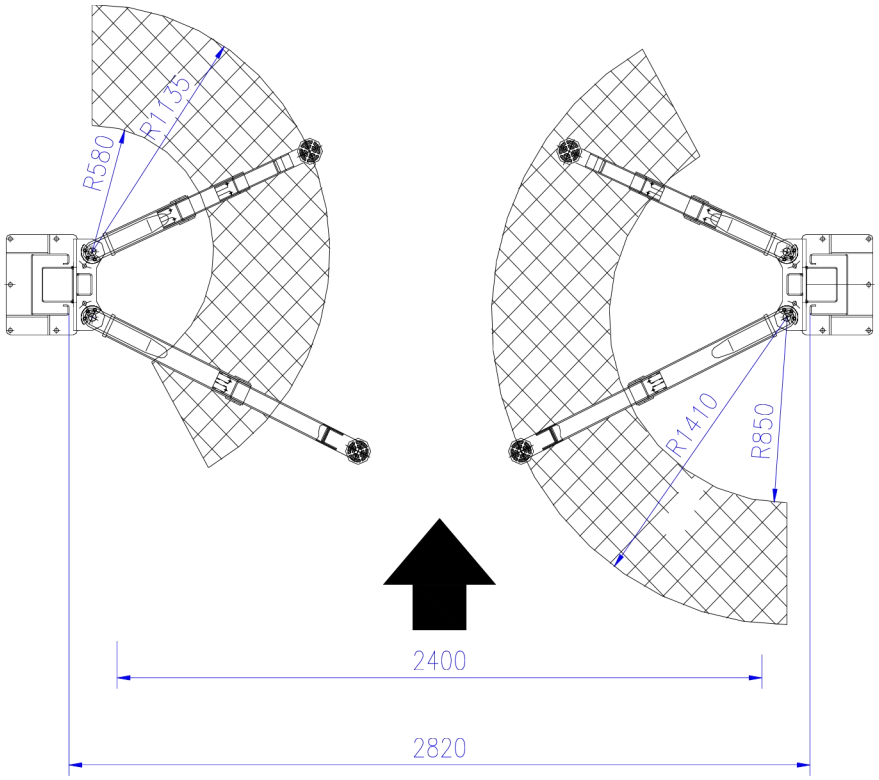


Chart 2

4、The structure and working principle of the machine:

The machine are make up of main and auxiliary column,hydraulic system driving two cylinders, push the wheel,drive the lifting steel chain elevate the pulley (see Figure 1 、2 and figure 3). Four lifting arms are hinged on the pulley, rotate 90°, in a swing and sliding telescopic arm to adapt to the different models of the supporting parts. The lifting arm is provided with a locking mechanism to prevent rotation of the lifting arm (see Figure 4). Two pulleys by synchronous wire rope keep up and down. Two pulleys are provided with a mechanical safety device. In the rising as insurance mechanical keys can automatically enter and disengage from the insurance point, sound crash, as judge mechanical insurance device work normal or not and two pulley are synchronized or not.

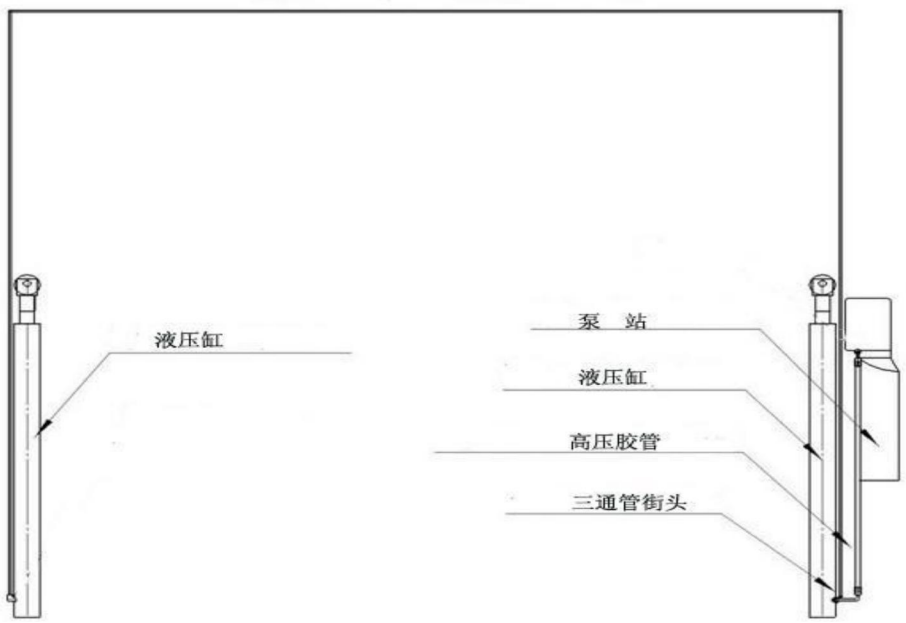


Chart 3 Installation steel rope

5、Installation and debugging:

5.1 Installation requirements:

(1)The thickness is more than 150mm,label more than 150# fine stone concrete, according to chart 5 to dig,Otherwise, according to figure 5 to make the concrete foundation bolt or directly buried anchor bolt M18.

(2) The difference between two columns bases shall not be more than 8mm, otherwise it shall be amended or put proper plate under the post.

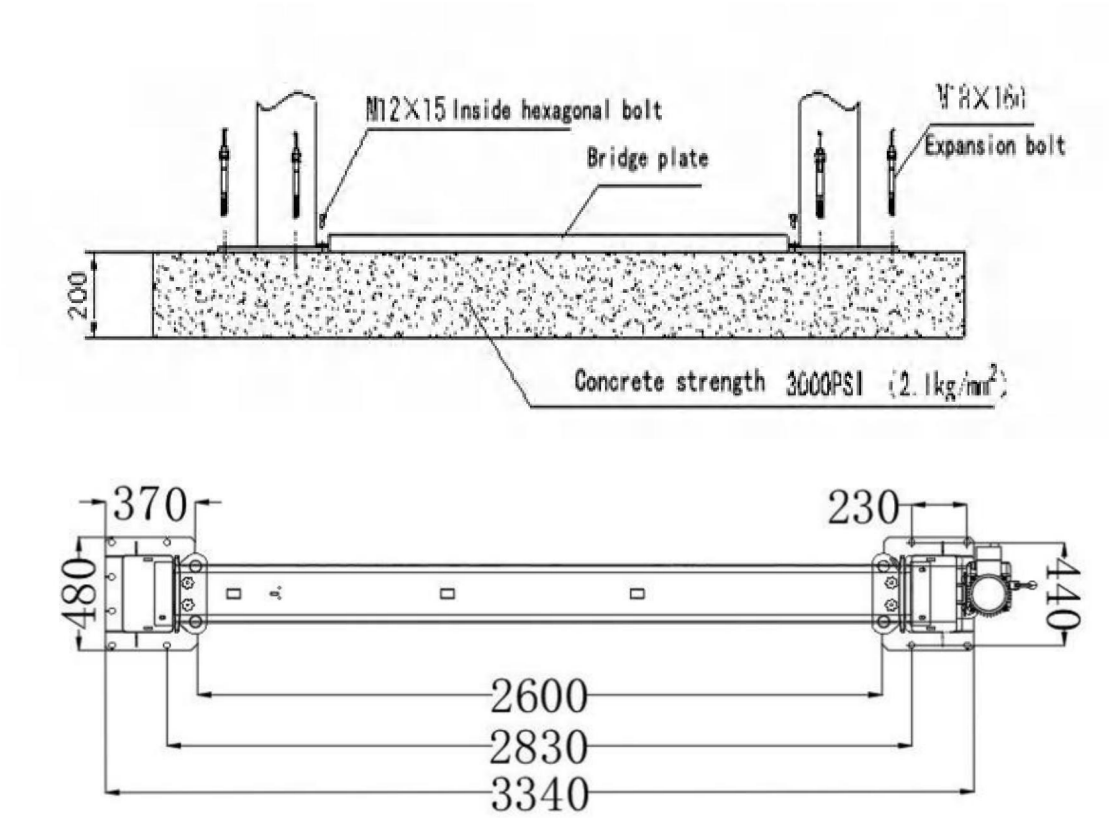


Chart 5 Installation

BEFORE INSTALLATION

1. Identify the components and check for any shortages. Contact us immediately if any items are missing.
2. Installation, adjustment, and testing operations should be performed by qualified personnel only.
3. The lift must be installed on a level concrete floor with a minimum thickness of 15 cm and an extension of at least 1.5 m from the anchoring points.
4. The lift installation surface must be relatively smooth and level in all directions.
5. After unloading the lift, place it near the intended installation location. Remove the shipping braces and packing materials from the unit, as well as the brackets and bolts holding the two columns together.

5.2 Installation steps:

PLEASE READ THE FOLLOWING INSTRUCTIONS BEFORE ASSEMBLING THE LIFT

STEP ONE: DETERMINE LOCATION AND MARKS WITH CHALK ON THE FLOOR

1. Determine which side will be the approach side and which side the power unit to be mounted.
2. Once the location is selected, use a chalk line to layout a grid for the post locations and make an outline of the posts on the floor at each location.
3. Before proceeding, double check measurements and make certain that the bases of each column are square and aligned with the chalk line.

STEP TWO: MOUNTING TWO COLUMNS, POWER UNIT COLUMN FIRST THEN THE OTHER.

1. Drill each anchor hole in the concrete using a rotary hammer drill. To assure full holding power, do not ream the hole or allow drill to wobble.
2. After drilling, remove dust thoroughly from each hole and make certain that the column remains aligned with the chalk line during this process
3. If shimming is required, insert the shims as necessary under the base plate so that when the anchor bolts are tightened, the columns will be plumb.
4. With the shims and anchor bolts in place, tighten by securing the nut to the base then turning. 2-3 full turns clockwise. DO NOT use an impact wrench for this procedure.

5. Position the other column at the designated chalk locations and secure to the floor following the same procedures as outlined in step 1,2,3,4.

STEP THREE: MOUNTING POWER UNIT

Attach the power unit to the power unit column with supplied tools and parts.
Fill the reservoir with hydraulic oil.

STEP FOUR: INSTALLING HYDRAULIC HOSE

Install the hydraulic lines as shown in HYDRAULIC CONNECTION, paying carful attention to keep the hoses clean and free of debris..

STEP FIVE: INSTALLING THE LIFTING ARMS

Install the swing arms on the carriages using the included pins. Check for proper engagement of the arm lock.

STEP SIX: MAKE THE ELECTRICAL HOOK UP TO POWER UNIT.

<u>WARNING:</u> THE WIRING MUST COMPLY WITH LOCAL CODE. HAVE A CERTIFIED
ELECTRICIAN MAKE THE ELECTRICAL HOOK UP TO THE POWER UNIT.

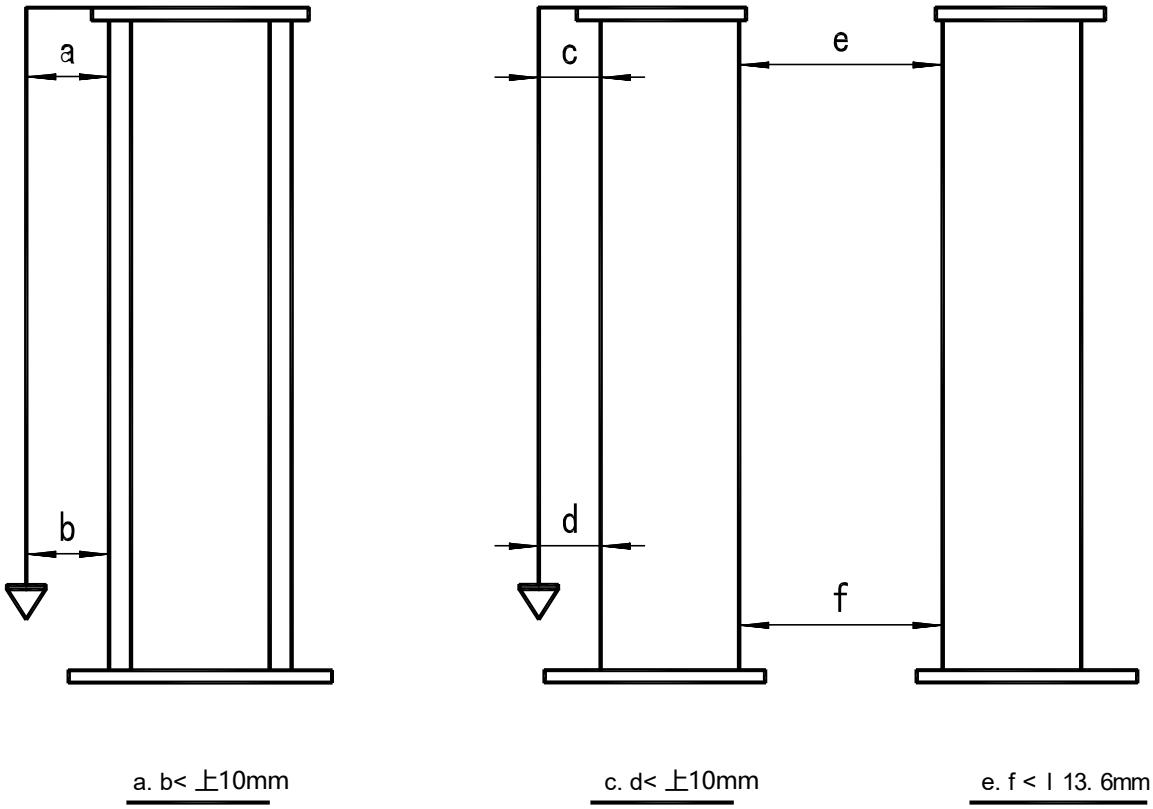


Chart 6 Installation checking

5.3 Load test:

No-load test:

(1)Full inspection installation before using.
(2)Press up button, if piston rod can extend explain the motor rotating is right.
(3) lifting pulley, if the rising chain relaxation, need to press up button, make the oil cylinder piston rod slowly stretched out to prevent chain extrusion wheel groove. Until the chain is tight.
(4)Declined, as long as the unlocking handle pull down and no automatic retraction is opened the machinery insurance. Before release lever pulled down to open the insurance, you must first rise block to10-20mm.
(5)First down the pulley to the lowest, then up the pulley. The crash in the insurance bond should be issued at the same time. If the sound has successively, then stop rising, make the pulley enter into the insurance, observation which pulley first stop falling (advanced into the insurance), with special socket spanner according to chart 3 tighten the pulley nut, further tightening synchronous wire rope. If necessary, it may be appropriate to relax the other

wire rope. Until the crash sound and two pulley enter into insurance basic synchronization. In the heavy load required polyphonic synchronization.

Synchronization is abnormal, do not rise the pulley to the limit position

Heavy load test:

（1）According to the instructions of the operation, carry out heavy load test

（2）In accordance with the requirements of polyphonic synchronous pulley

(3) Full travel rise and down several times,observe whether the hydraulic pipeline leakage or not, mechanical insurance is working properly. The lifting time and lifting height are all in line with the technical parameters, and the test load is over.

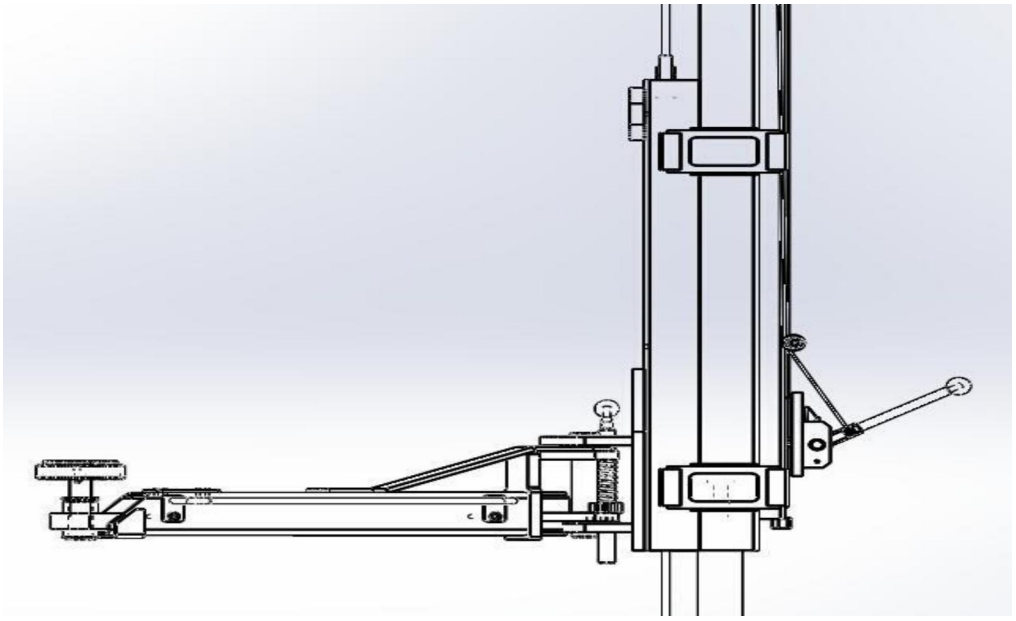


Chart 7 Security mechanical

The safety mechanism of the machine is composed of an unlocking plate, a torsion spring, a linkage steel wire rope, a lock tooth plate, etc. the protection function is as follows:

When rise the working table, under the action of the torsion spring ， safety lock keeps working, if have an accident (such as high pressure hose or rope rupture), working table abnormal down, safety lock unlocking plate, which is locked plate teeth stuck, and working table stop decline, to ensure safety.

When the work table fall, first rise work table a little 10-20mm, then pull down the main pillar of unlocking handle, under the action of steel rope ,around the unlocking plate pop-up the tooth groove at the same time, it is get rid of safety lock state. Press the manual unloading handle, the working table is under the action of self weight to down.

6、Hydraulic and electric system：

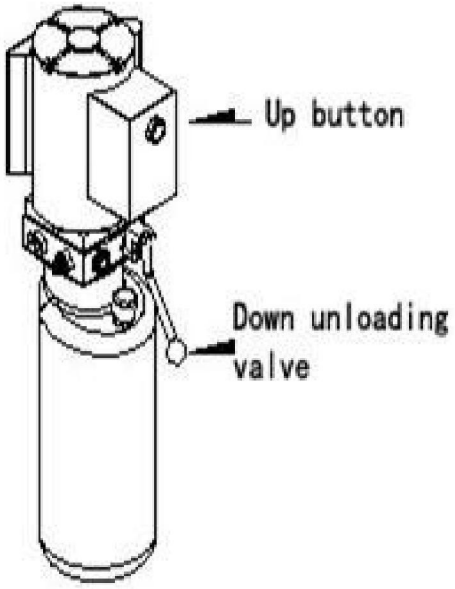


Chart 8 pump station

Electric system:

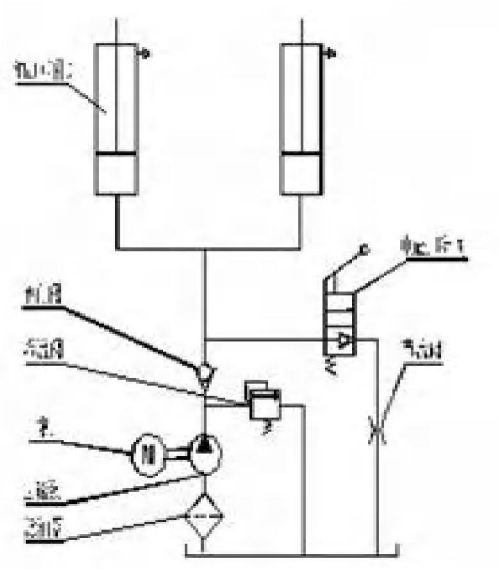
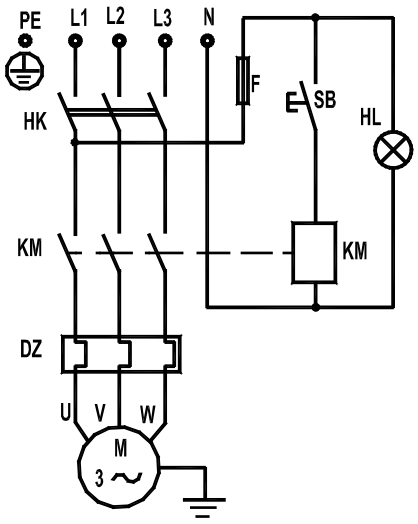
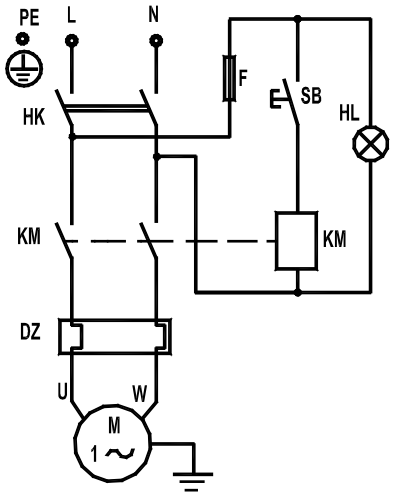


Chart 9 Hydraulic system



（380V）



（220V）

10 Electric chart

NO.	Code name	Name	Model	Quantity	Remarks
1	KM	AC contactor	CJX2-1210-AC220V	1	
2	M	Motor	2.2KW	1	
3	F	Insurance	RT18-32-2A	1	
4	DZ	Circuit breaker	DZ108-20-6.3-10A/380V （DZ108-20-10-16A/220V）	1	
5	HK	Combination switch	HZ5-20/4L03	1	

Hydraulic pump station (Chart 8) hanging on the column, hydraulic system see chart 9, adjust the "relief valve" can change the system pressure (the factory has adjust well), chang the lifting capacity (but not adjusted rated oil pressure 21MPa). Press down the manual unloading valve handle can down.

7、OPERATION:

WARNING: DO NOT PLACE ANY VEHICLE ON THE LIFT BEFORE TRIAL OPERATION. CYCLE THE UP AND DOWN SEVERAL TIMES TO INSURE LATCHES CLICK TOGETHER AND AIR IS REMOVED FROM THE CYLINDERS.

BEFORE OPERATION

a. Check all the pipelines and joints before use. The machine only can be used after there is not any leakage.
b. The lift, if its safety device malfunctions, shall not be used.
c. The machine shall not lift or lower an automobile if the center of gravity of automobile is not within the supporting range of the supporting device. Otherwise, the manufacturer will not bear any responsibility for the consequence resulted from the operation above mentioned.
d. The staff or operators shall be in a safe position when the machine lift or lower.
e. Raise and lower several times to make sure no air in the cylinder. Air inside of the cylinder makes raising not smoothly.

INSTRUCTIONS FOR USE

RAISING THE LIFT

1. Make sure that you have read the operation manual before operation.
2. Always lift the vehicle at the manufacturer recommended points.
3. Position the vehicle between columns
4. Adjust the swing lift arms so that the vehicle is positioned with the center of gravity of midway between pads.
5. Raise the lift by pressing the push button on power unit until the pads touch firmly the right points and recheck if the vehicle is secure.
6. Press down handle to make the lift in safe condition then perform maintenance or repair work.

LOWERING THE LIFT

1. Clean all the obstacles before lowering the vehicle.
2. Press the release handle and down handle, then go down.
3. Release your hand when vehicle lowered to the height you want.

8、MAINTENANCE:

8.1 DAILY PRE-OPERATION CHECK

The user should perform daily check. Daily check of safety latch system is very important the discovery of device failure before needed could save you from

expensive property damage, lost production time, serious personal injury, even death.

. Check safety lock audibly and visually while in operation.
. Check hydraulic connections, and hoses for leakage.
. Check chain connections, cable connections, wiring and switch for damage.
. Check bolts, nut and screws and tighten.
. Check swing arm restraints.

8.2 WEEKLY MAINTENANCE

. Check the cleanness of the mobile parts.
. Check the safety device as previously described.
. Check hydraulic fluid level as follow: let the trolleys go up completely and in case they do not reach maximum height, add oil.
. Check and tighten bolts, nuts and screws.

8.3 MONTHLY MAINTENANCE

. Check the tightening of screws.
. Check the hydraulic system seal and tighten the loose unions, if necessary.
. Check the greasing and wear condition of pins, rollers, bushes, of trolley structure as well as arms and relevant extensions, if necessary, replace the damaged parts by original spare parts.

8.4 YEARLY MAINTENANCE

Empty the tank and check the conditions of the hydraulic fluid. Clear the oil filter.

9、TROUBLE SHOOTING:

TROUBLES	POSSIBLE REASONS	WAYS TO SOLVE
MOTOR DOES NOT RUN	A.Breaker or fuse blown. B.Motor thermal overload tripped. C. Faulty wrong connections. D. Defective up button.	A.Replace it. B.Wait for overload to cool C.Call electrician for checking D.Call electrician for checking
MOTOR RUNS BUT WILL NOT RAISE	A.A piece of trash is under check valve. B. Check the clearance between the plunger valves of the lowering handle. C.Remove the check valve cover and clear the ball and seat. D.Oil level too low. Oil level should be just under the vent cap port when the lift is down.	Push handle down and push the up button at the same time. Hold for 10-15 seconds, which should flush the system.
OIL BLOWS OUT BREATHER OF POWER UNIT.	A. Oil reservoir overfilled. B. Lift lowered too quickly while under a heavy load. C. Bad capacitor. D. Low voltage call electrician for checking. E. Lift overloaded.	Call electrician for checking.
MOTOR HUMS AND WILL NOT RUN	A. Impeller fan cover is dented. B. Faulty wiring. C. Bad capacitor. D.Low voltage call electrician for checking. E.Lift overloaded.	A.Take off and straighten. B.Call electrician for checking. C.Call electrician for checking.
LIFT JERKS GOING UP AND DOWN	Air in hydraulic system.	Raise lift all the way to the top and return to floor. Repeat several times. Do not let this overheat the power unit.
OIL LEAKS	A.Power unit: if the power unit leaks hydraulic oil around the tank mounting flange check the oil level in the tank. The level should be two inches below the flange of the tank. B. Rod end of the cylinder. The rod seal of the cylinder is out. C.Breather end of the cylinder: the piston seal of the cylinder is out.	A.Check with a screwdriver. B. Rebuild or replace the cylinder. C.Rebuild or replace the cylinder.
LIFT MAKES EXCESSIVE NOISE	A. Leg of the lift is dry and requires grease. B. Cylinder pulley assembly or cable pulley assembly is not moving smoothly. C. May have excessive wear on pins or cylinder yoke.	

10、Warranty card

User name		Contact number		Date of purchase	
Contact add					
Product ID		Serial number		Invoice number	
Maintenance place name				Warranty phone	

Maintenance record card

Date	Record content	Change parts content				broker	appendix
		Name	Model	specification	quantity		

Warranty conditions

1、Begin from the date of purchase one year, under the normal use condition and the user in accordance with the 《operation manual》require to operate this product failure, our company will give limited free repair.

2、In the warranty time need repairs, user holds this warranty cards、invoices for free services. Change parts belong to our company.

3、Does not belong to the scope of warranty: a. As transportation、improper use.、base strength is not enough、power supply is not accordance with the stipulate、not accordance with 《operation manual》caused damage is covered by warranty; b. Exceed the time of free service, provide service need charging as the company cost; c. Easy wear parts do not belong to the scope of warranty.

Certificate of conformity

This equipment is qualified to grant leave the factory

Product name: Two post lift

Product ID:

Date of inspection:

Test Technician: seal

Ying Kou Hong Yuan Automotive maintenance equipment Co., Ltd.