Contents

1 Precautions

Warnings

- Please read and understand the manual before operation
- This manual is an important part of the product. Please read and understand it thoroughly.
- Keep the manual for future use in inspection and maintenance.
- Do not use the product for any other purposes.
- The manufacturer is not responsible for any damage caused by improper use or uses other than the designed purpose.

Precautions for Installation and Adjustment

- Please read this manual and operation manual in full before installation and adjustment. Any changes to the components or use for other purpose without the consent of the manufacturer may lead to direct or indirect damage to the product.
- Installation and adjustment personnel should have an understanding of electronic equipment.
- Never allow untrained personnel to operate the lift.
- Allow sufficient space for the lift so that operation should not be hindered.
- Do not install the lift in an environment with extreme temperature and humidity conditions. Keep it away from heating device, faucet, humidifier or furnace.
- Do not install the lift outdoors or expose it to rain. If it is really necessary to do so, a special order should be made from the manufacturer.
- Check the components against parts list before installation. In case of any questions, please contact your dealer or Launch Tech.
- For the sake of technical improvements, Launch (Shanghai) Machinery Co., Ltd reserves the right to change the specifications without prior notice.

2 Structure and Working Principle

2.1 Structure

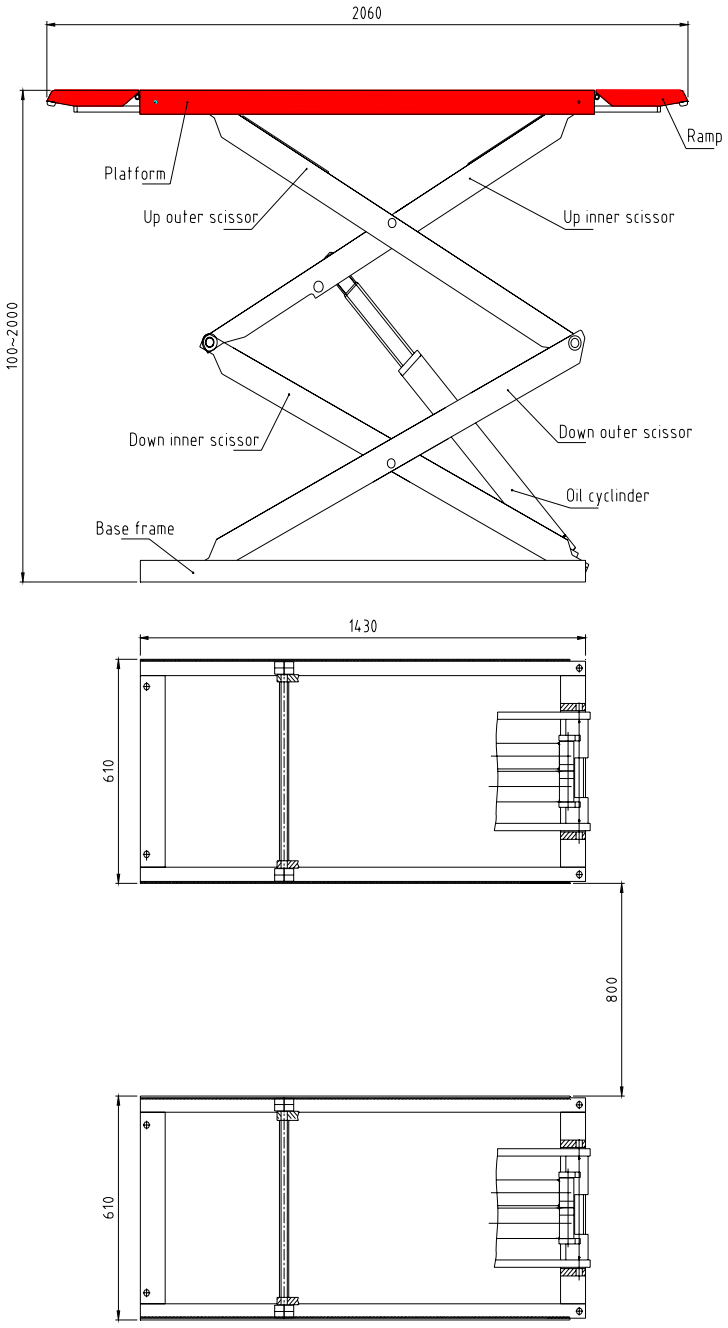


Fig.1

2.2 Electrical Diagram

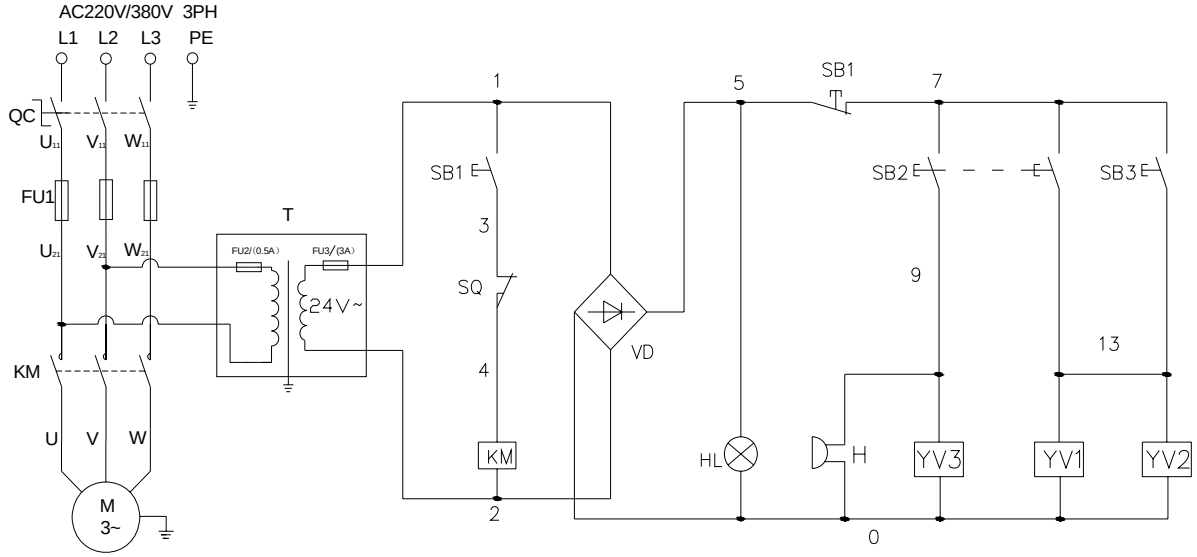


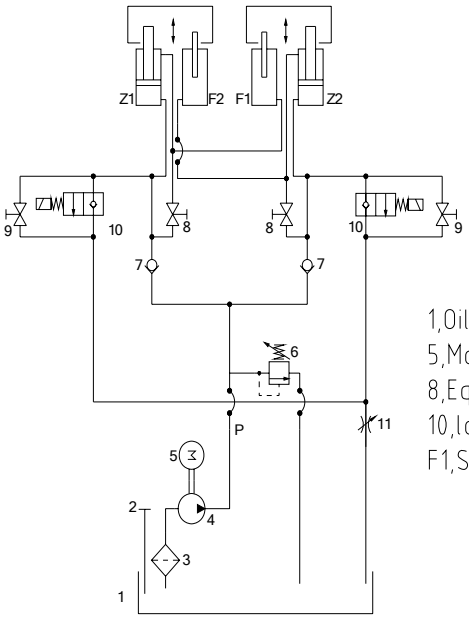
Fig.2

Lifting process: Press UP button SB1, The motor will drive the pump and send oil to the cylinder, which will in turn raise the platform upward. Release button SB1, the platform will stop rise. Keep pushing button SB1, when the platform reaches at the Max. height, release valve will be activated and protect the lift.

Safety Locking process: press Safety button SB3, solenoid valve YV1, YV2 will be engaged, the safety system is locked.

Lowering process: Press UP button SB1, platform rise a little, safety device is unlocked, then press DOWN button SB2, solenoid valve YV1, YV2, YV3 will be engaged, the platform begin to lower.

2.3 Hydraulic Diagram



1,Oil tank 2,Oil dipstick 3,Filter 4,Gear pump
5,Motor 6,Safety valve 7,Check valve
8,Equalization valve 9,Emergency lowering valve
10,lowering valve 11 Speed valve. Z1, Master cylinder
F1,Slave cylinder Z2,Master cylinder F2,Slave cylinder

Fig.3

2.4 Hydraulic Components in Control Desk

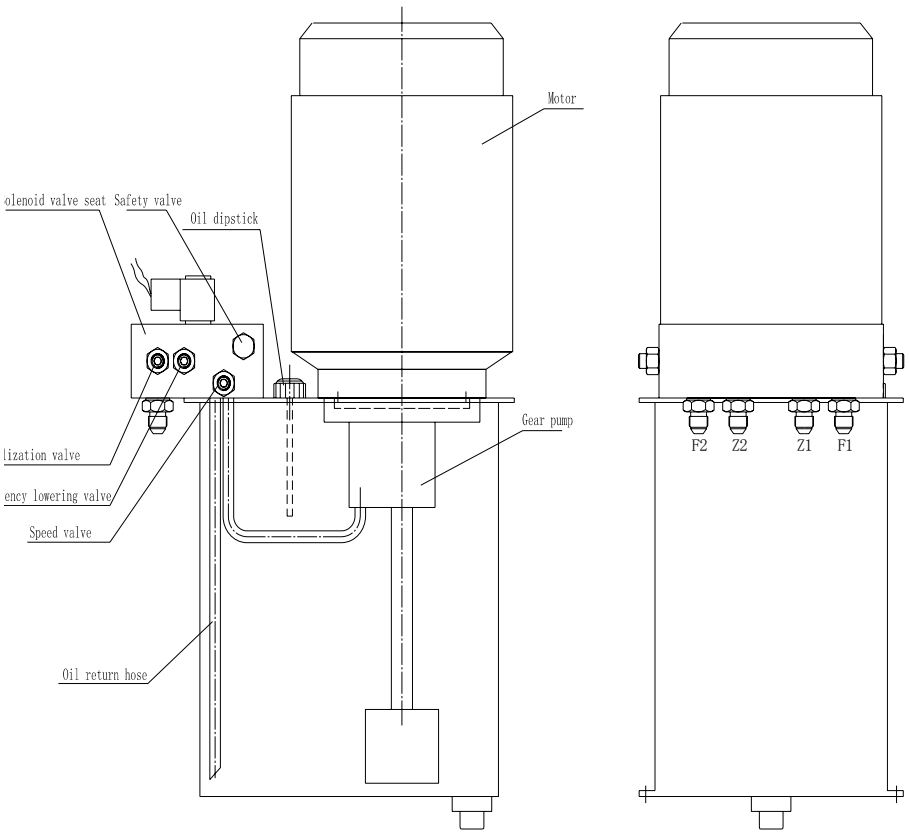


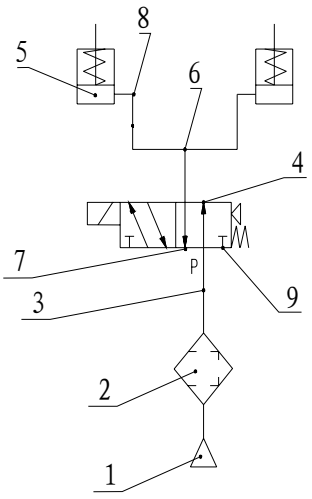
Fig.4

Under normal working conditions, equalization valves (8) and emergency lowering valves (9) are closed. Oil flows to the lower chamber of master cylinder through check valve and the force of the piston causes the oil in the upper chamber of the master cylinder to flow to the slave cylinder, so the two platforms go up equally. The flow of oil from check valve to the slave cylinder is blocked by equalization valves (8).

For emergency lowering, open 2 emergency lowering valves (9) to lower the lift slowly and carefully. The lowering speed can be adjusted by speed valve (11).

To equalize two platforms, open 2 equalization valves (8), raise the lift up and down 1 or 2 times and firmly closed valves (8).

2.5 Hydraulic Components in Control Desk



11 Right angle fitting 6-M5
10 Φ6 Air hose
9 T fitting
8 Cylinder MAL16x50
7 Solenoid air valve
6 End plug $\frac{1}{4}''$
5 End plug $\frac{1}{8}''$
4 Muffler
3 Right angle fitting 6-02
2 Filter
1 Right angle fitting 8-02

Fig.5

3 Tools

Please get the following tools ready for installation:

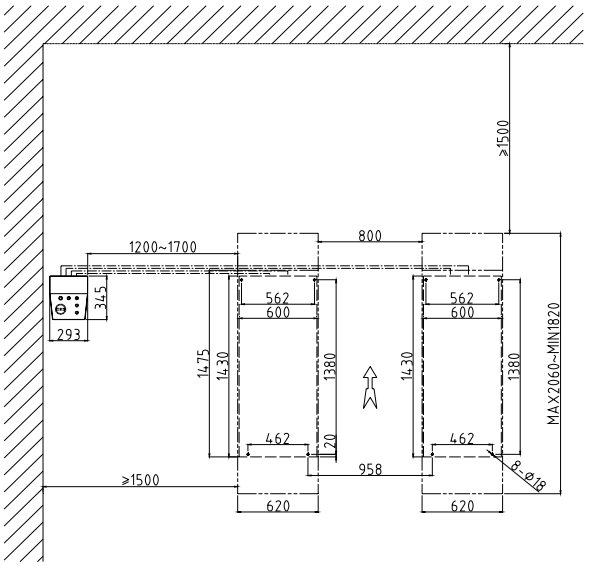
Tools	Specifications
Level Bar	L=400mm（15.7″）
Chalk Line	10mm（0.4″）
Taper Plunger Chip	
Hammer	1.5 kg(3 lb)
Crescent Wrench	40mm（1.6″）
Open end Wrench Set	11mm-23mm （ 0.43 ″
	-0.9″ ）
Allen Wrench Set	2mm-12mm
Screwdriver	150mm（5.9″）
Rotary Hammer Drill	20mm（0.8″）
Hard Alloy Drill Bit	Φ17mm（0.7″）
Frame Level（JB3239-83）	L*W*H ＝ 300mm × 40mm × 300mm(11.8 ″ ×0.16″ ×11.8″)

4 Unpacking

- The lift is delivered in one package: 2 platforms (with hydraulic hoses) and 1 control desk connected together.
- Unpack according to the instructions on the packages. Remove the packing materials and check for damage and loss of components.
- To avoid accidents from occurring, keep the packing material away from children. The packing materials need to be disposed of properly if they may contaminate the environment.

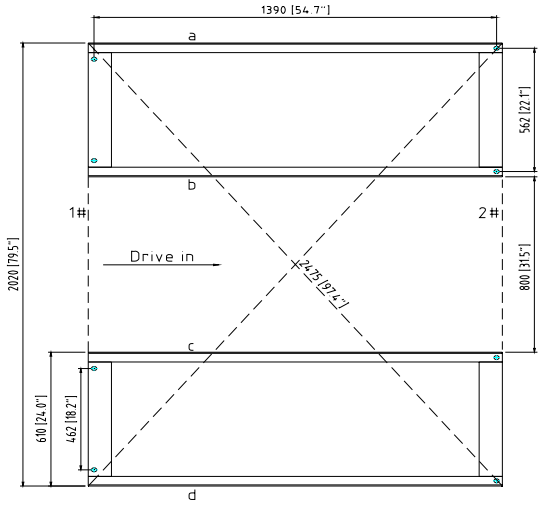
5 Installation

5.1 Basic Requirements



- Fig.6
- The lift can only be installed on concrete floor with a minimal thickness of 200mm（7.9”） and at least 7 days of solidification time.
- The strength of the concrete ground should exceed 3000PSI (2.1kgf/mm^2)
- The tolerance of the concrete floor levelness should not exceed 5mm (0.2”). Slight slope can be corrected with shims. Excessive slope on the ground will greatly affect the performance of the lift. In this case, new concrete slab should be made.
- Inspect for possible hindrance such as low ceiling, overhead pipelines in the work area, passageways and escapes. The working area of the lift should be 4.2m(165.4”) high to give enough space.
- Allow enough space (1.5m/59”) at the front and back and left and right of the lift so that operation should not be hindered.
- Power supply: Put the power source in place before installation. All the wiring should be performed by a qualified electrician.
- It is default installation, the control unit could be installed at the right side of lift as well. The installation should be performed by qualified people.

5.2 Base Frame Installation



5.3 Control Desk Installation

- Place the control desk in place according to the ground layout.(Fig.6)
- Use cover plate to protect the wires if there is no wire channel on the concrete floor.
- Fig.7
- Layout plan: Refer to the Total width 2020mm (79.5”), drawing two parallel lines (1# and 2#) on the concrete floor, the tolerance should less than 3mm (0.1”).
- Draw four parallel lines (a, b, c, d), vertical with 1# and 2#.
- Follow the drawing, put two platforms into the frame.

Warnings:

The base is the edge of Floor plate.

The tolerance should less than 6mm (0.24”)

Drawing the frame is very important. Poor drawing will cause many problems about assembly and operation.

- Fill hydraulic oil N32 or N46 (approximate 20L) into he oil tank (using oil dipstick to check the level). Pay special attention to avoid dust and contaminants into the oil.

5.4 Power supply connection

- Open the control desk, connect the wires according to the electrical diagram. After check the connection, switch on the power. Turn on the power supply switch which is on the panel of control desk. The indict light will turn on.
- Power switch is needed, and installed near control desk. Cut the power when maintenance or emergency. The damage which is caused by wrong wire connection is not covered by warranty.
- Make sure the oil level is above the standard level. DO NOT operate the lift if oil tank is empty.
- Fix all the oil hoses and press UP button, test the electrical parts: if motor does not operate, abnormal sound, platform does not rise, motor is hot, STOP operating immediately and check the wire connection.

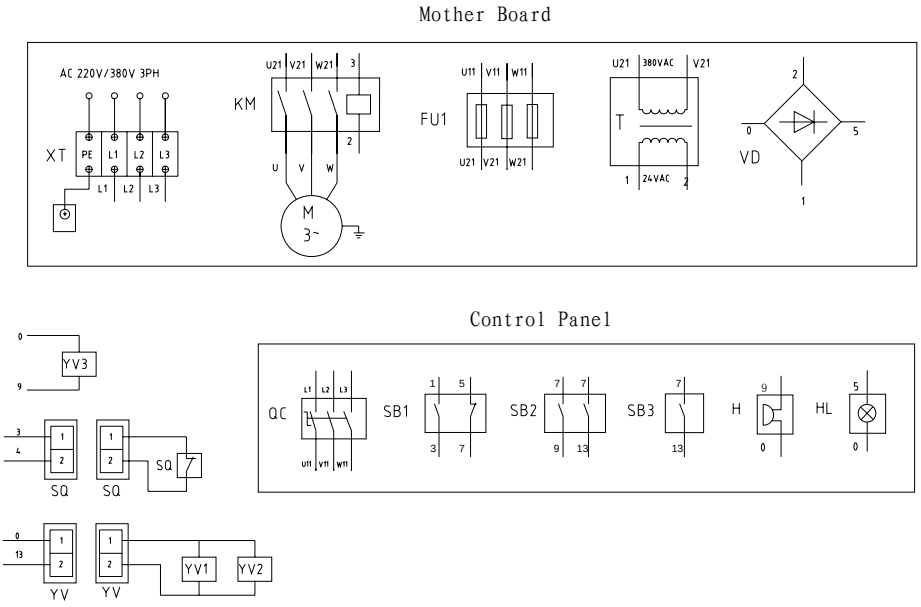


Fig.8

Notice:

High voltage in control desk, ground lead must be safe.

8 leters oil is needed in the first use, fill the oil and make sure the oil level is above the standard level.

5.5 Anchoring

- Wrap the oil fittings, cable connections and joints of the lift to prevent dusts from getting in.
- Raise the platforms to 1.5m, then install the anchor bolts.
- With the help of the holes on the base plate, drill and install the anchor bolts. In the process of drilling, make sure that there is no movement at the base frames. Fasten the base frames of the lift to the pits with 8 M16*120（M0.63"X4.7"） anchor bolts.
- Rotate the adjusting bolts, adjust the platform to same level, the equalization should less than 3mm (0.1”). Choose a right shim and place it under frame. Insert the shims at both sides of anchor bolt.
- Tighten out the nuts to fix the base frames on the floor.

Cautions: To ensure safety and performance, follow the installation procedures step by step.

- Wear safety goggles.
- Use strong alloy drill bit with a diameter of 18mm （0.71"）. Do not use worn-out drill bit.
- Keep the hammer drill upright with the surface of the hole.
- Keep hammer drill going by itself. Do not apply extra pressure.

- The depth of the hole depends on the length of the bolt. It is advisable that the bolts above the base frames should be around 30mm (1.2").
- Remove the dust from the holes.
- Tap the bolt into the hole, insert and hit the core until the bolt fully expands

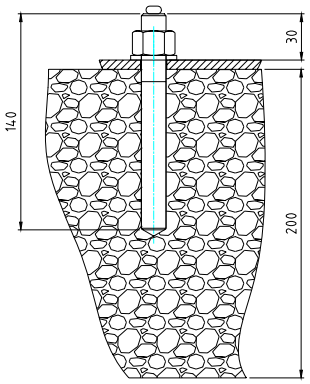


Fig.9

6 Adjustment

6.1 Preparation

- Lubricate the moving surface of the roller with #2 lithium lubricant. Lubricant should be applied evenly from left to right.
- Lubricate the joints of the lifts with #2 lithium lubricant.
- Check the oil tank for enough hydraulic oil.

6.2 Adjustment Procedures

- Check if all the connection bolts are tightly fastened.
- Press UP button, the platforms are raising; release the UP button, the platforms stop raising. Press DOWN button, the platforms are lowering.
- If there is air in hydraulic system due to new installation, air bleeding performance is needed. The air in the master cylinder can be bled after the platform goes up and down several times. The air in the slave cylinder can be bled by following steps: lift Master Platform close to the maximal height; unscrew the two exhaust screws severally. Screw the exhaust screw when the all the air are ejected.
- Refer to Fig.4 and cylinder adjustment, adjust the platforms to the same level.

Notice:

Attention should be paid to the position of oil pipes and hydraulic hose when the platforms move to the minimal height for the first time. Make sure they don not get stuck with platforms moving downwards.

When bleeding the air in the cylinders, can NOT unscrew the two exhaust screws at the same time or operate the lift when the exhaust screws are unscrewing.

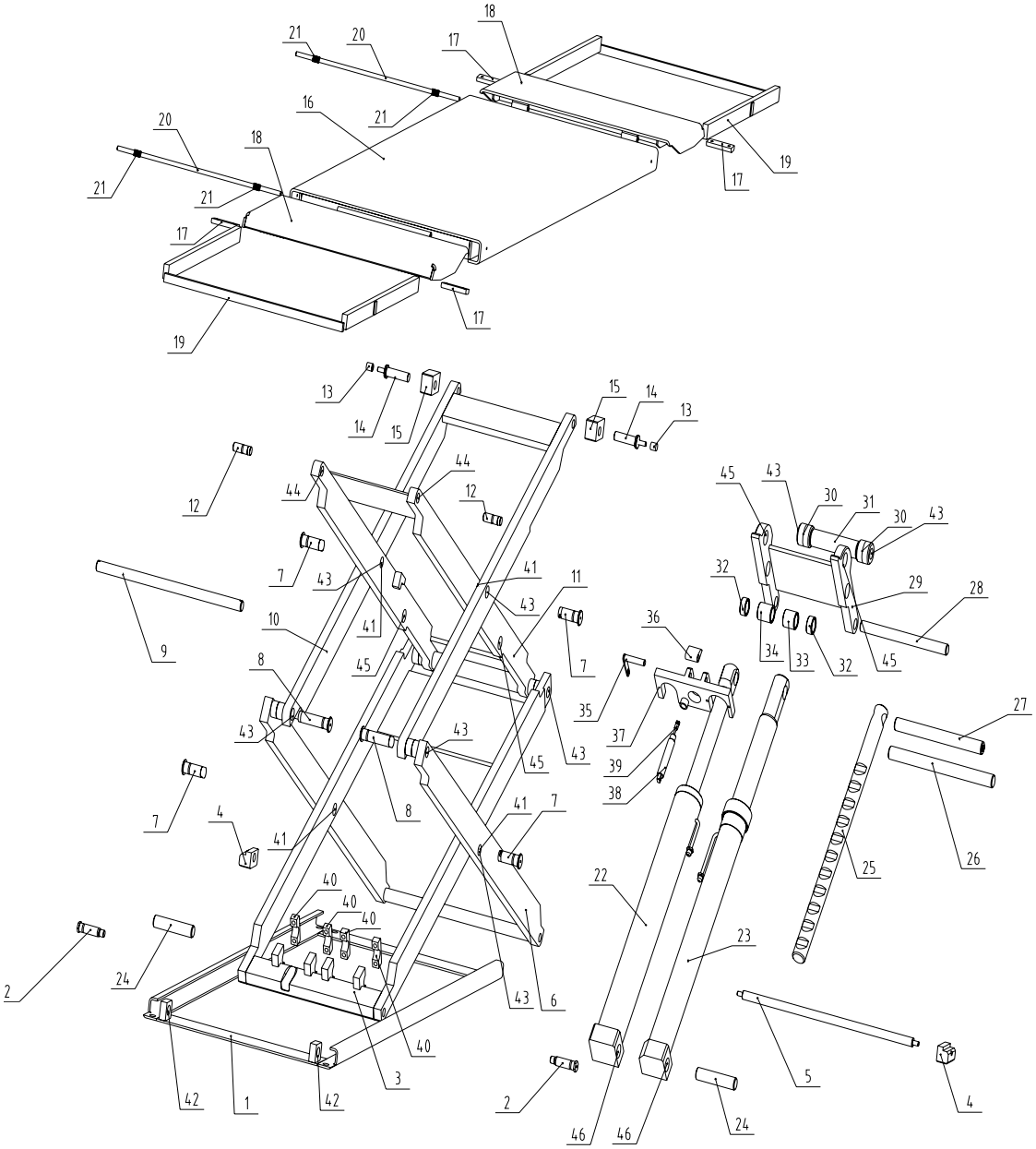
7. Safety Rules for Electrical Control System

1. Only personnel who are properly trained and have adequate knowledge and skill should undertake all electrical/electronic troubleshooting and repair.
2. Do not alter or bypass protective interlocks.
3. Before starting, read and observe all warning labels.
4. When trouble shooting make sure the power source has been disconnected and main switch has been locked.
5. Take extra precautions in damp areas to protect you from accidental grounding.
6. Before applying power to any equipment it must be established, without a doubt, that all persons are clear.
7. Do not open the electrical control panel unless it is necessary to check the electrical equipment.
8. Do not alter the electrical circuits unless authorized to do so by the manufacturer.
9. When replacing electrical components, make sure they conform to the manufacturer's specifications, including proper color coding.

10. Do not wear metal frame glasses, metallic necklaces or chains while working on any electrical equipment. Also do not wear any ring, watch or bracelet while operating electrical equipment.

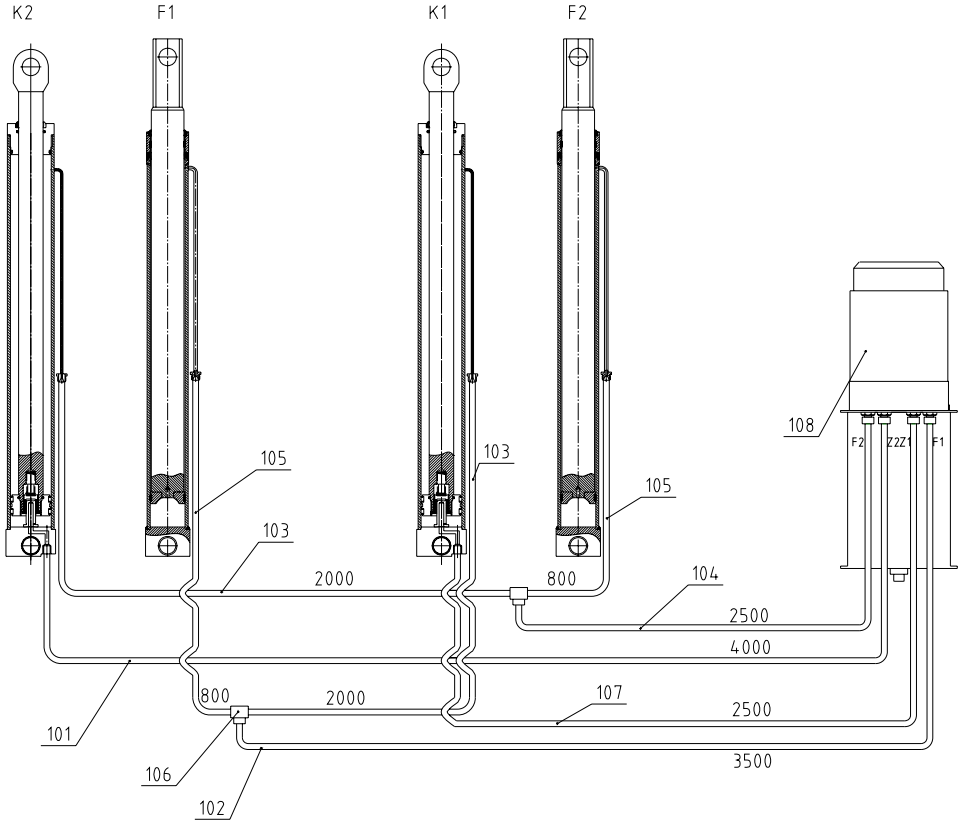
8 Parts List

This parts list is only to be used by maintenance and servicing personnel.
The manufacturer is not responsible in case it is used for any other purposes.
If any parts get damaged, please order from your dealer or Launch Tech.



NO.	ERP CODE	NAME
1	201021438	Base frame
2	103202084	Down inner scissor assembly
3	201021503	Scissor bracket
4	104991231	Slide block
5	103202086	Long axle
6	201021497	Scissor bracket
7	103202087	Connecting axle
8	103202088	Connecting axle I
9	103202091	Connecting long axle
10	201021436	Scissor bracket
11	201021434	Scissor bracket
12	103202092	Supporting axle
13	202010118	Axle bushing
14	103202093	Block axle
15	202010119	Sliding block
16	201021437	Platform
17	104991230	Supporting block
18	201021502	Platform
19	201021439	Supporting bracket
20	Y201013184D	Connecting axle
21	103202061	Spring
22	103202063	Cylinder assembly
23	103202062	Cylinder assembly
24	103202085	Cylinder axle
25	201013178	Safety stick
26	103202089	Axle
27	103202090	Cylinder axle
28	103202095	Roller axle
29	201021498	Arm bracket
30	103200865	Roller
31	201013176	Arm bushing
32	201013181	Safety bushing II
33	201013180	Safety bushing I

34	201013179	Safety bushing III
35	201021500	Safety chain
36	103202097	Safety claw
37	201021499	Safety assembly
38	103202083	Air cylinder assembly
39	103100291	Y fitting
40	201013188	Cylinder cover
41	Y201013055D	Scissor cover
42	103260111	Axle cover 2020
43	103260106	Axle cover 2525
44	103260195	Axle cover 2025
45	103260108	Axle cover 3025
46	103260194	Axle cover 2825

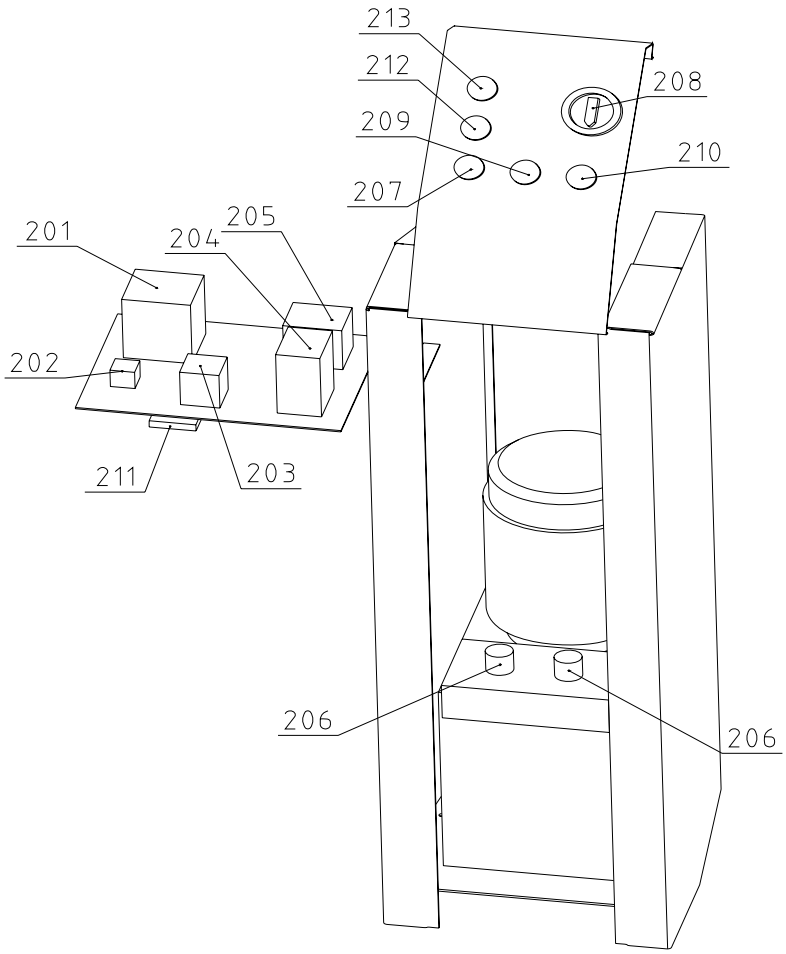


Hydraulic diagram

NO	ERP CODE	NAME
101	103260191	C type 4M end high pressure oil hose
102	103260190	C type bending head 3.5M high pressure oil hose
103	103260188	C type 2M high pressure oil hose
104	103260189	C type bending head 2.5M high pressure oil hose
105	103260193	C type 0.8M high pressure oil hose
106	103990055	T fitting

107	103260192	C type 2.5M end high pressure oil hose
108	103990185	Power unit assembly (380V/50Hz three phase)
	103990188	Power unit assembly (220V/50Hz single phase)
	103990187	Power unit assembly (200V/60Hz three phase)
	103990186	Power unit assembly (110V/60Hz single phase)
	103990190	Power unit assembly (220V/50Hz three phase)
	103990191	Power unit assembly (220V/60Hz three phase)
	103990192	Power unit assembly (220V/60Hz single phase)
	103990193	Power unit assembly (200V/60Hz single phase)

Electrical diagram



NO.	ERP CODE	NAME
201	102130034	Transformer
202	102270004	Rectifier
203	103180018	Connecting board
204	102110059	Contactor
205	102150053	Fuse
206	102240039	Solenoid valve
207	102100137	Button
208	102100087	Power switch
209	102140018	Alarm
210	102990065	Indicating light
211	103160033	Solenoid air valve
212	102100135	Button
213	102100136	Button

Equipment record (6 pages) attached.