

Model No. EE-612FE

Portable single post lift

Electrical Release

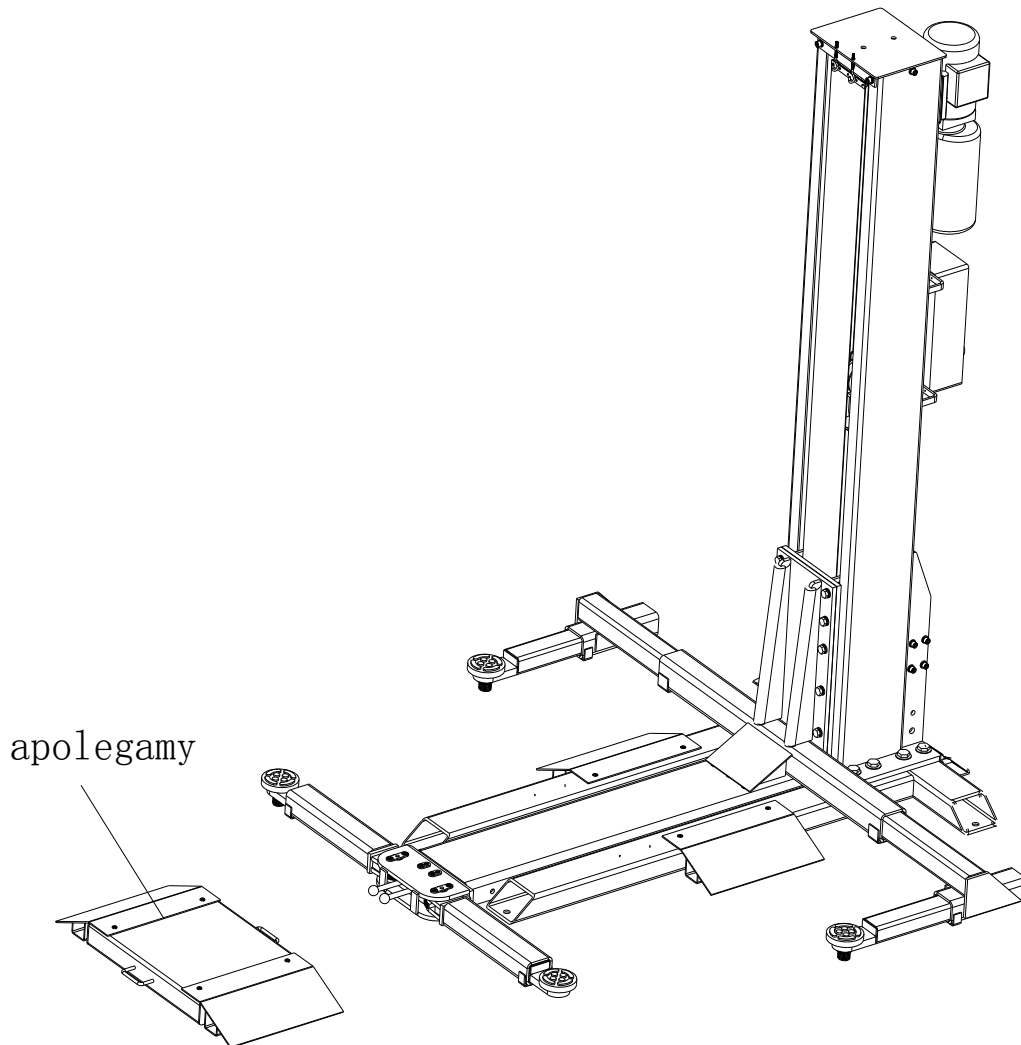
Lifting Capacity 2500KG

**Installation, Operation
and Parts Manual**



EverLift

VEHICLE LIFT SPECIALIST



apolegamy

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

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IMPORTANT SAFETY INSTRUCTIONS

1.1 Important notices

EverLift will offer one-year's quality warranty for the whole machine, during which any quality problem will be properly solved to the user's satisfaction. However, we will not take any responsibility for whatever bad consequence resulted from improper installation and operation, overload running or unqualified ground condition.

This single post lift is specially designed for lifting motor vehicles that weighs within its outmost lifting capacity. Users are not allowed to use it for any other purposes. Otherwise, we, as well as our sales agency, will not bear any responsibility for accidents or damages of the lift. Make sure to pay careful attention to the label of the lifting capacity attached on the lift and never try to lift cars with its weight beyond.

Read this manual carefully before operating the machine so as to avoid economic loss or personnel casualty incurred by wrong operation. Without professional advice, users are not permitted to make any modification to the control unit or whatever mechanical unit.

1.2 Qualified personnel

1.2.1 Only these qualified staff, who have been properly trained, can operate the lift.

1.2.2 Electrical connection must be done by a competent electrician.

1.2.3 People who are not concerned are not allowed in the lifting area.

1.3 Danger notices

1.3.1 Do not install the lift on any asphalt surface.

1.3.2 Read and understand all safety warnings before operating the lift.

1.3.3 The lift, if is not specially designed upon customer's request, is not fit for outdoor use.

1.3.4 Keep hands and feet away from any moving parts. Keep feet clear of the lift when lowering.

1.3.5 Only these qualified people, who have been properly trained, can operate the lift.

1.3.6 Do not wear unfit clothes such as large clothes with flounces, tires, etc, which could be caught by moving parts of the lift.

1.3.7 To prevent evitable incidents, surrounding areas of the lift must be tidy and with nothing unconcerned.

1.3.8 The lift is simply designed to lift the entire body of vehicles, with its maximum weight within the lifting capacity.

1.3.9 Always insure the safety latches are engaged before any attempt to work near or under the vehicle.

1.3.10 Make sure to place the lifting pads to the positions as suggested by vehicle makers and when gradually lift the vehicle to the desired height, operators should be certain that the vehicle will not slant, roll-over or slide in lifting process.

1.3.11 Check at any time the parts 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.

1.3.12 Lower the lift to its lowest position and do remember to cut off the power source when service finishes.

1.3.13 Do not modify any parts of the lift without manufacturer's advice.

1.3.14 If the lift is going to left used for a long time, users are required to:

- a. Disconnect the power source;
- b. Empty the oil tank;
- c. Lubricate the moving parts with hydraulic oil.

1.4 Training

Only these qualified people, who have been properly trained, can operate the lift. We are quite willing to provide professional training for the users when necessary.

Attention: For environment protection, please dispose the disused oil in a proper way.

1.5 Warning signs

All safety warning signs attached on the machine are for the purpose of drawing the user's attention to safety operation. The labels must be kept clean and need to be replaced when they are worn-out or have dropped. Read the explanations of the labels carefully and try to memorize them.

 <p>Remain clear of lift when lowering or lifting vehicle.</p>	 <p>Clear area if vehicle is in danger of falling.</p>	 <p>Do not override self-closing lift controls</p>	 <p>Do not shake vehicle heavily while on lift.</p>																												
 <p>Locate the vehicle with center gravity right between two adapters.</p>	 <p>Keep feet away from adapter while lift lowering.</p>	<p>CAUTION</p>  <p>Lift is only allowed to be used by trained operator.</p>	<p>CAUTION</p>  <p>Only authorized personnel allowed in lift area</p>																												
<p>CAUTION</p>  <p>Lift vehicle at the manufacturer's points</p>	<p>CAUTION</p>  <p>Always use safety stands when removing/installing heavy components</p>	 <p>Read the manual before installation or operation of the lift</p>	<p>WARNING</p> <ol style="list-style-type: none"> 1. Travelling on the load carrying devices is forbidden. 2. After raising a short distance, checked to ensure that it is correctly and safely positioned. 3. It is forbidden to climb onto the load or load carrying devices when they are raised. 																												
<p>CAUTION</p>  <p>Use height extension when necessary to ensure good contact.</p>	<p>CAUTION</p>  <p>Auxiliary adapters may reduce load capacity.</p>	<p>Arms must support the rated load weight as the following diagram.</p> <table border="1" data-bbox="826 1736 1066 1861"> <thead> <tr> <th rowspan="2">Lifting capacity</th> <th colspan="2">Load distribution</th> </tr> <tr> <th>D</th> <th>E</th> </tr> </thead> <tbody> <tr> <td>2.5T</td> <td>1.2+0.1T</td> <td>1.3+0.1T</td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table> <table border="1" data-bbox="1077 1736 1316 1861"> <thead> <tr> <th rowspan="2">Lifting capacity</th> <th colspan="2">Load distribution</th> </tr> <tr> <th>F</th> <th>G</th> </tr> </thead> <tbody> <tr> <td>2.5T</td> <td>1.3+0.1T</td> <td>1.2+0.1T</td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		Lifting capacity	Load distribution		D	E	2.5T	1.2+0.1T	1.3+0.1T							Lifting capacity	Load distribution		F	G	2.5T	1.3+0.1T	1.2+0.1T						
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OVERVIEW OF THE LIFT

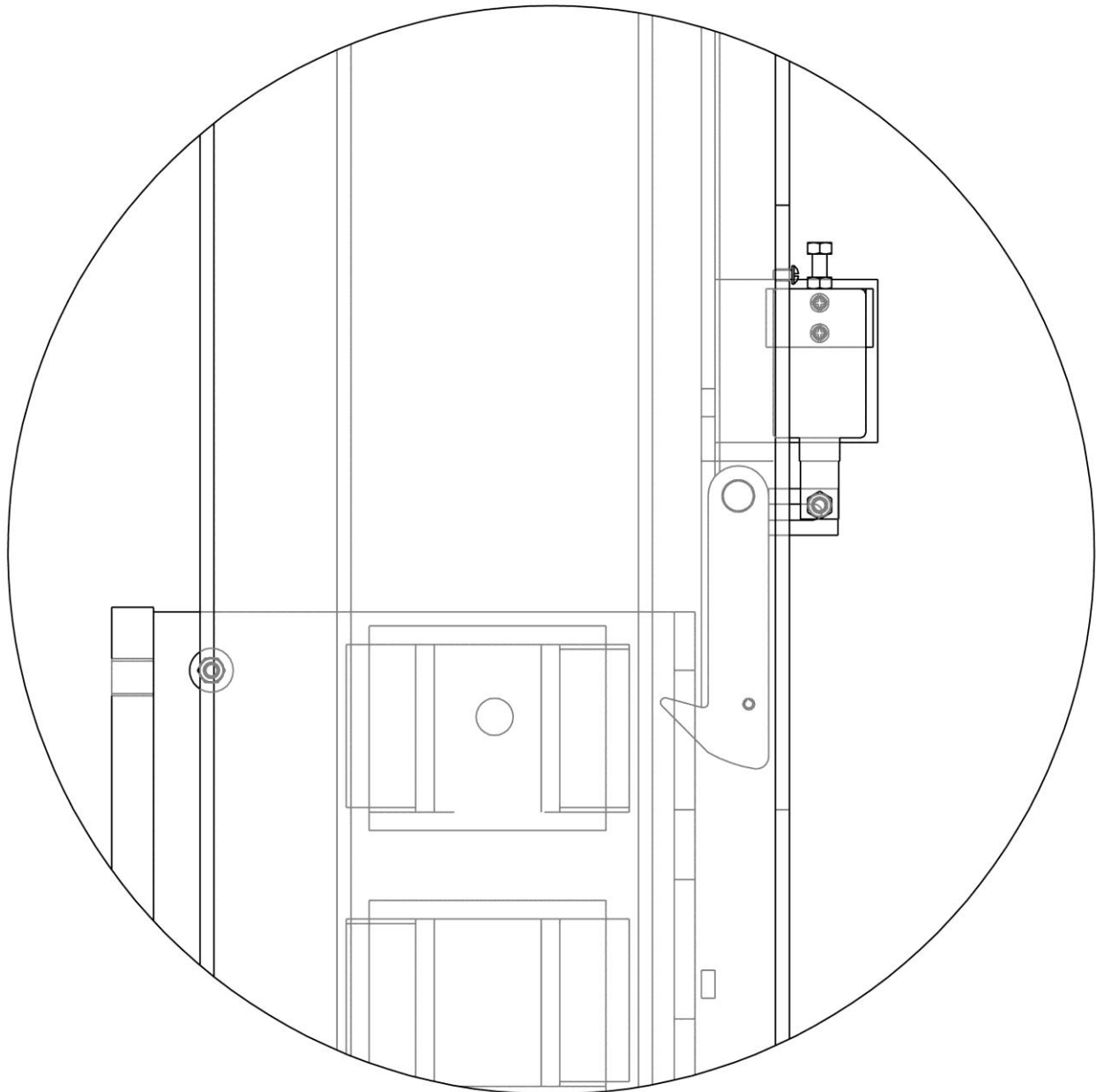
2.1 General descriptions

This single post lift is composed of base frame, post, carriage, lifting arms, cylinders, portable kit and motor unit, etc.

It is driven by an electro-hydraulic system. The gear pump delivers hydraulic oil to oil cylinders and pushes upwards its piston. The piston drives the chain to raise the carriage and the lifting arms.

During lifting process, the safety hook will be automatically engaged. Therefore, no slipping will happen in case the hydraulic system breaks down.

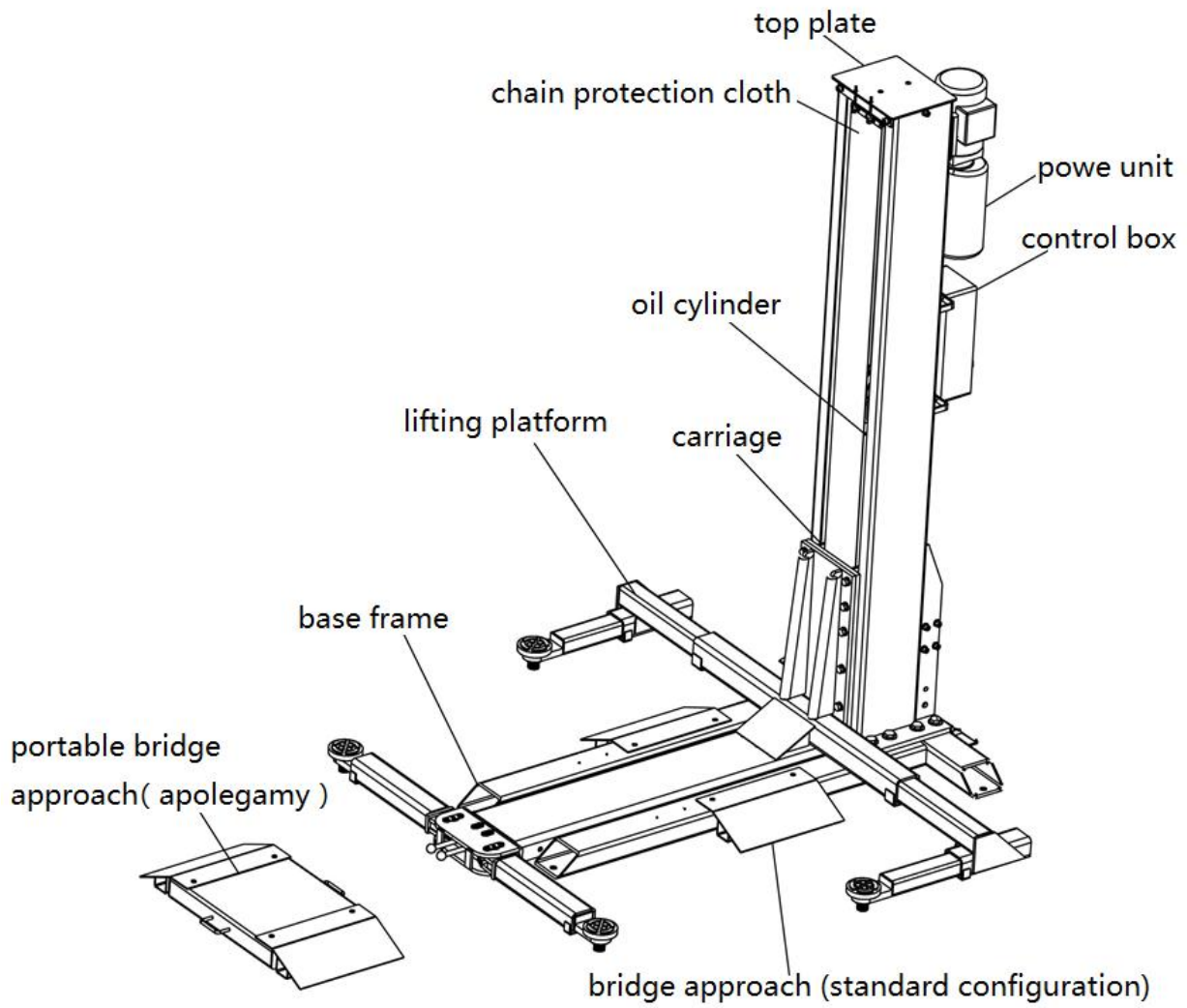
Safety structure



2.2 Technical data

Model	Lifting capacity	Full rise time	Full rise	Height	Width	Min height
EE-612FE	2500kg	50 Sec	1800mm	2600mm	2006mm	120mm

2.3 Construction of the lift



INSTALLATION INSTRUCTIONS

3.1 Preparations before installation

3.1.1 Tools and equipments needed

- ✓ Appropriate lifting equipment
- ✓ Anti-abrasion hydraulic oil.
- ✓ Rotary Hammer Drill with 3/4" drill bit.
- ✓ Chalk and tape measure, magnetic plump, 8 metersΦ15 level pipe.
- ✓ Sockets and open wrenches, a set of inside hex wrenches, cross and straight screw drivers.
- ✓ Hammer, 4pounds, sharp nose pliers, Φ17,Φ19,Φ22 socket spanners.

3.1.2 List for parts checking ---Annex 1 (Packing list)

Unfold the package and check if any parts missed as per Annex 1. 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, EverLift as well as our dealers will not bear any responsibility for this and will charge for any parts subsequently demanded by the buyer.

3.1.3 Ground conditions

The lift should be used on a smooth and solid concrete ground with its strength more than 3000psi, tolerance of flatness less than 5mm and minimum thickness of 200mm. In addition, newly built concrete ground must undergo more than 28days' cure and reinforcement.

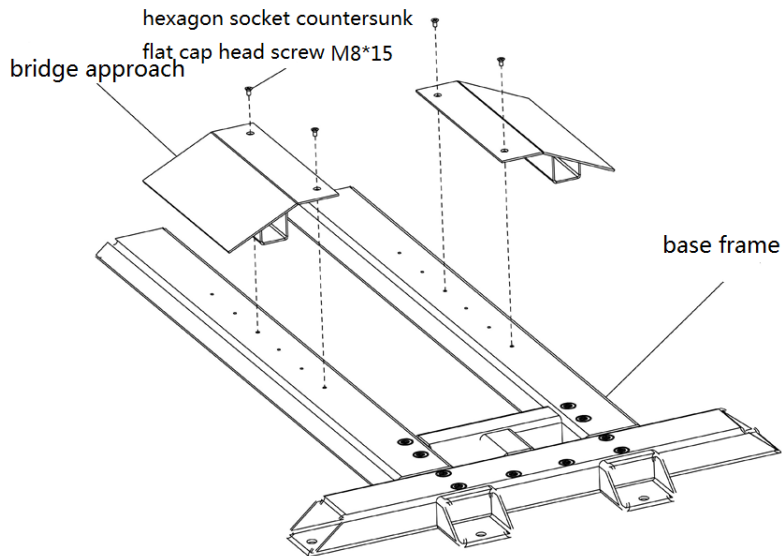
3.2 Precautions for installation

- 3.2.1 Make sure post stand vertical to the ground. No slanting.
- 3.2.2 Connections of oil hose and steel cable must be firm in order to avoid the looseness of steel cable and leakage of oil hose.
- 3.2.3 All bolts should be firmly screwed up.
- 3.2.4 Do not place any vehicle on the lift in the case of trial running.

3.3 Installation

Step 1: Remove the packaging, take out the carton for accessories.

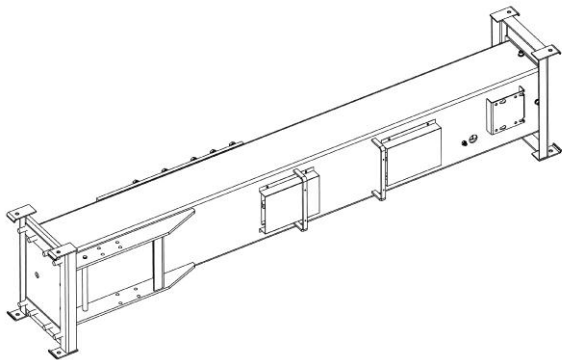
Step 2: Fix drive-on ramp with the base frame.



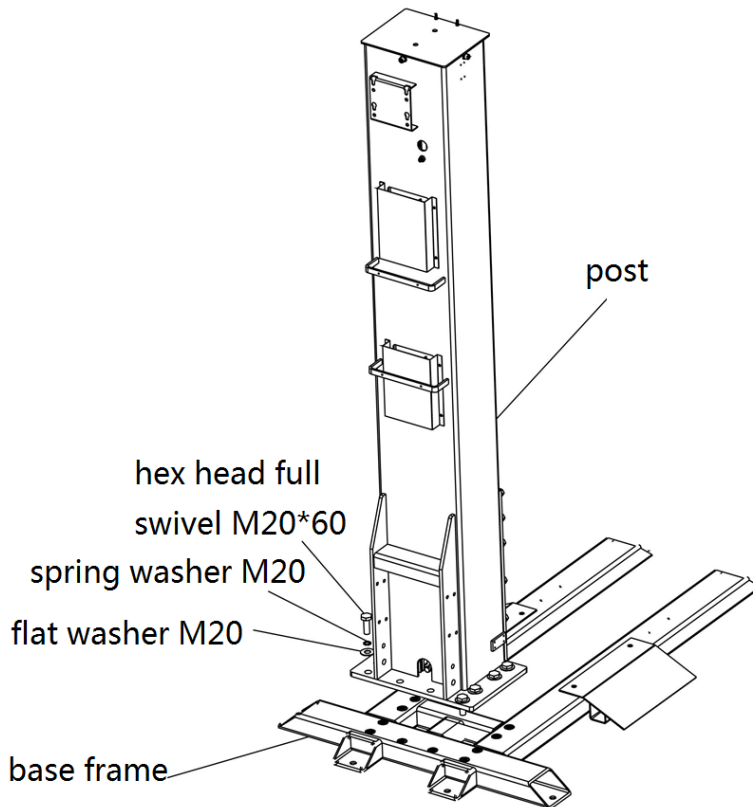
Step 3: Move the lifting arms and control box out from the post.

Suspend the post by lifting equipment and then dismantle the post from its packing frame

Attention : Please pay special attention not to let the post fall down for it may cause casualty or bring damages to the accessories fixed in the post.

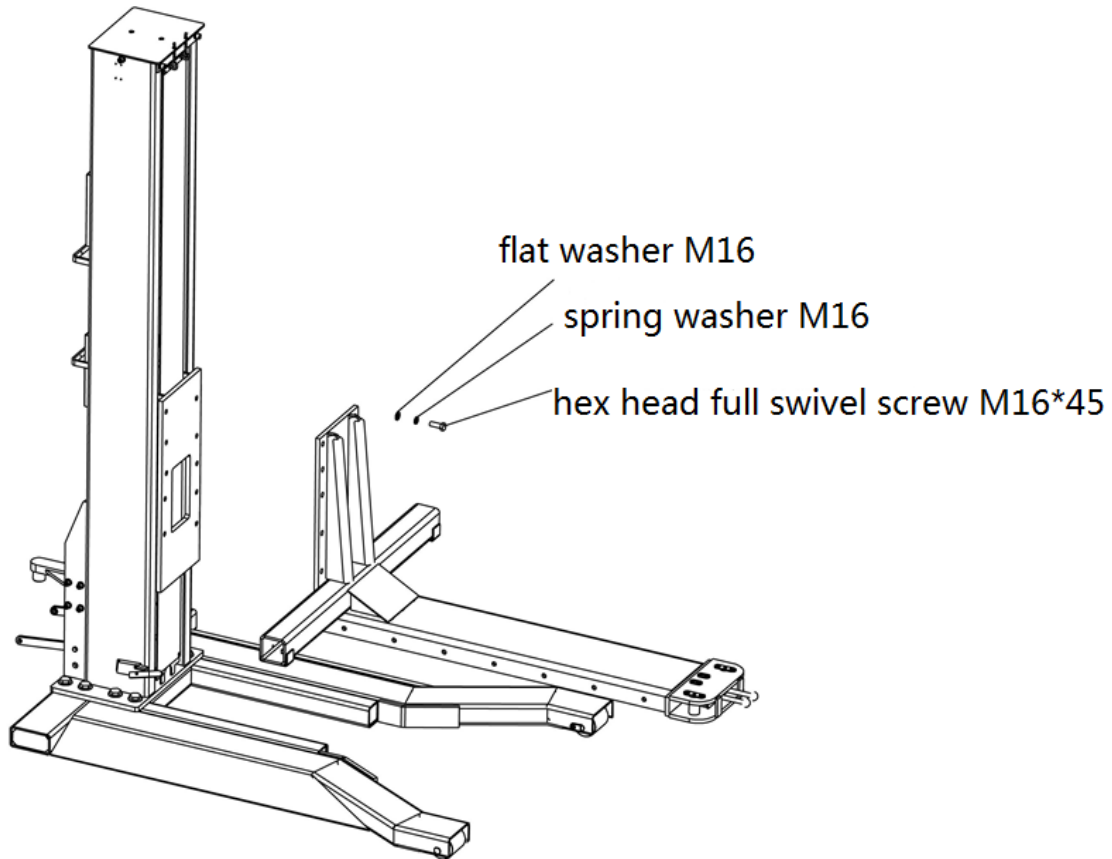


Step 4: Fix the post onto to the base frame and the portable kit connector

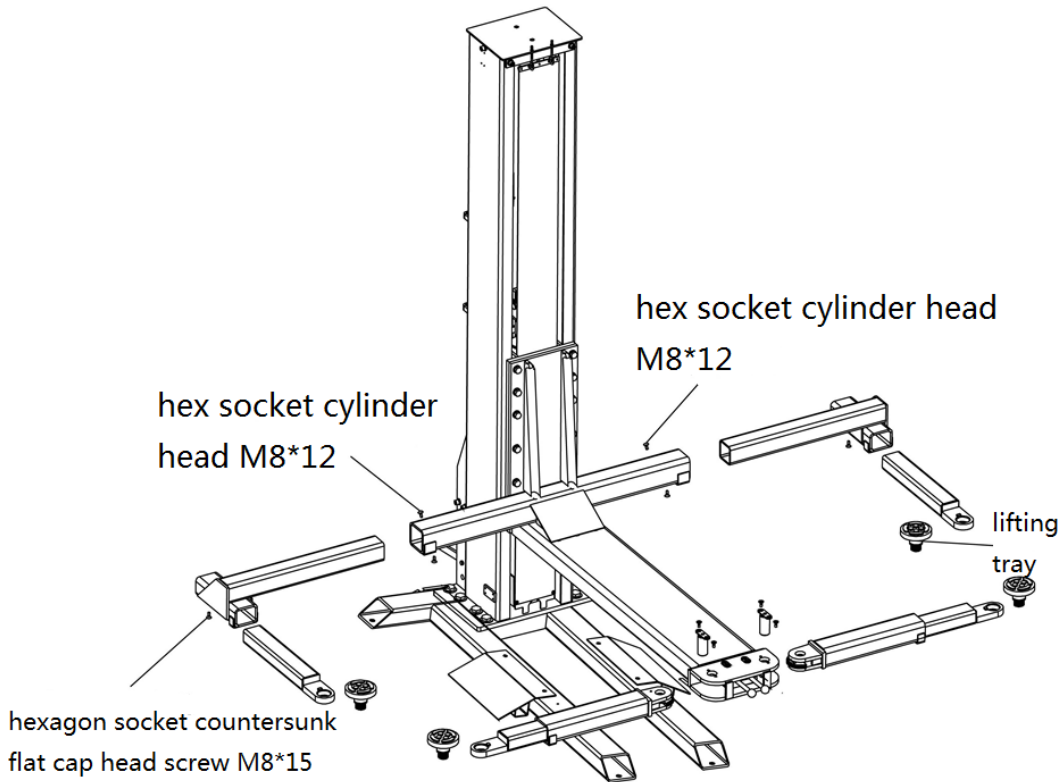


Step 5: Install the lifting platforms and lifting arms

1. Fix the lifting platform onto the carriage.



2. Connect lifting arms and the lifting platform.



Step 6: install the electromagnet and safety hook:

1, here is the installation diagram for electromagnet and safety hook. There are 2 places need to install the

electromagnet and safety hook.

Attention: the electromagnet and safety hook are already well installed and the wires are complete before delivery.

2, spare parts needed:

2 pcs of inside hex cap screw M6*35

8 pcs of cross head cap screw M6*8

2 pcs of hex nut M6

2 pcs of electromagnets

2 pcs of cover plate

2 pcs of elastic pin M5*40

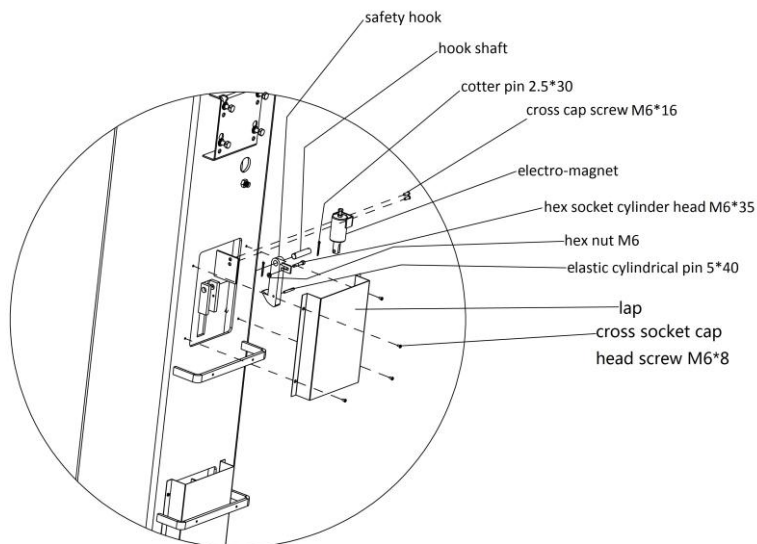
4 pcs of cross head cap screw M6*16

4 pcs of cotter pin 2.5*30

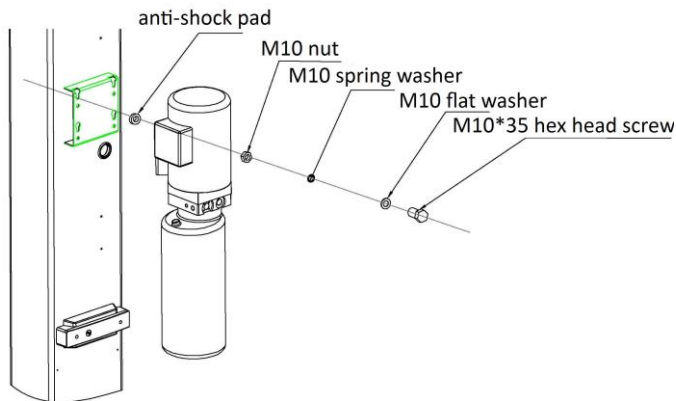
2 pcs of hook shaft

2 pcs of hook assembly

All these parts are well installed before delivery.



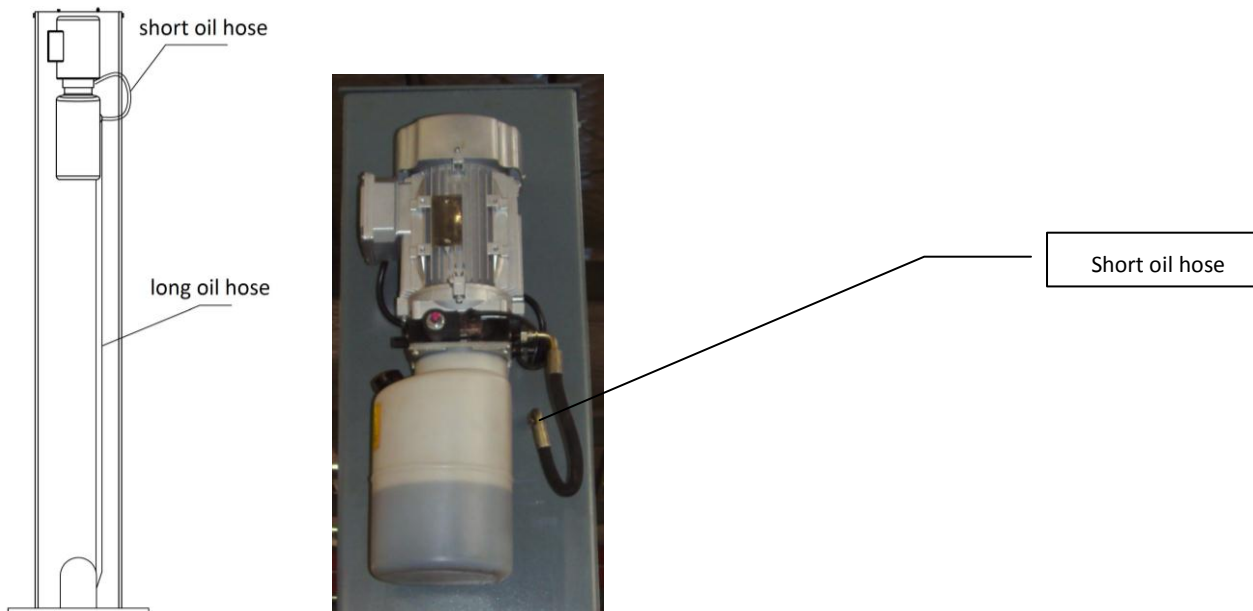
Step 7: Mount the power unit onto the post.



Step 8: Connect oil hoses.

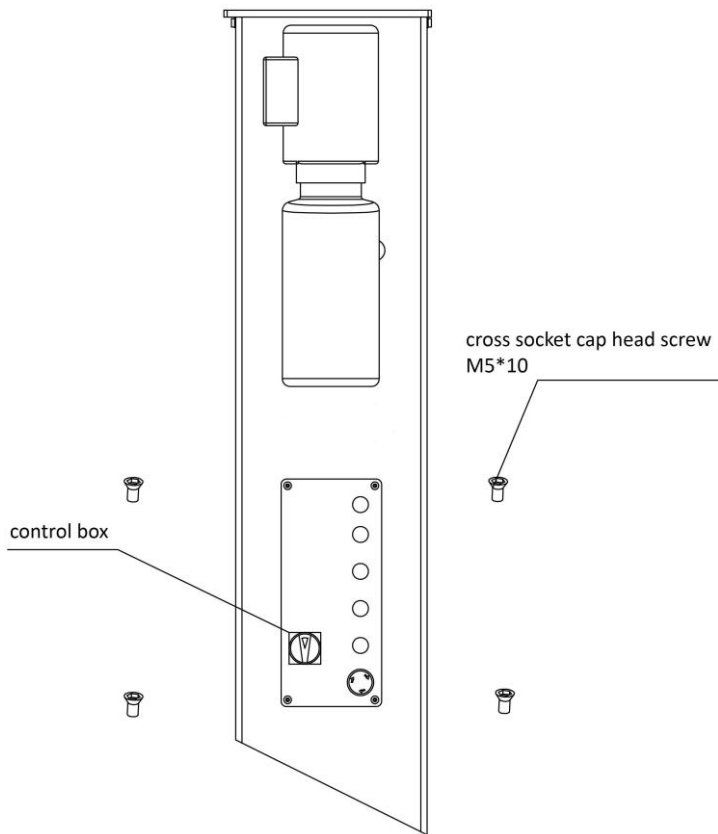
Connect the oil hose as per the following diagram.

Make sure the oil hose connector is clean before making the connection.

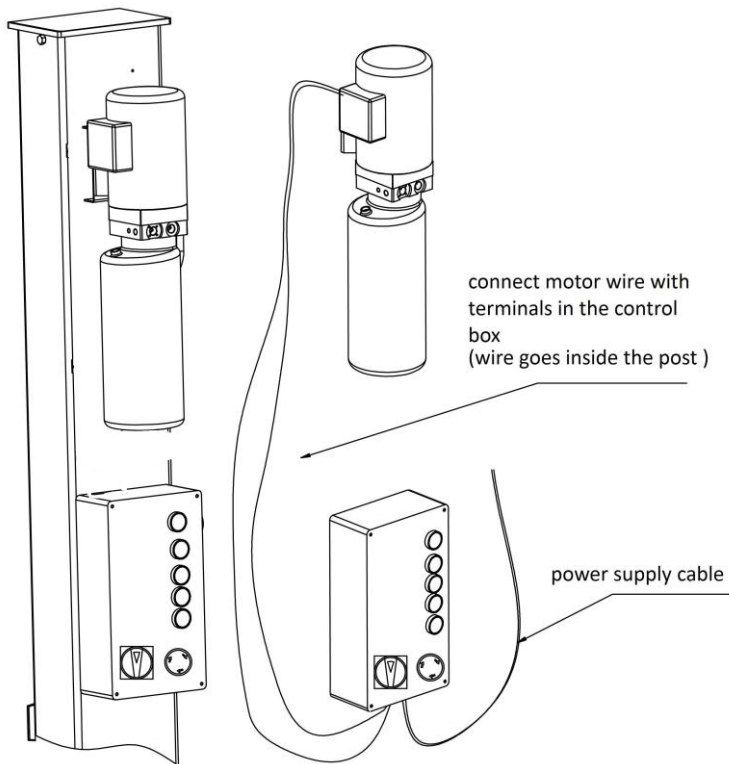
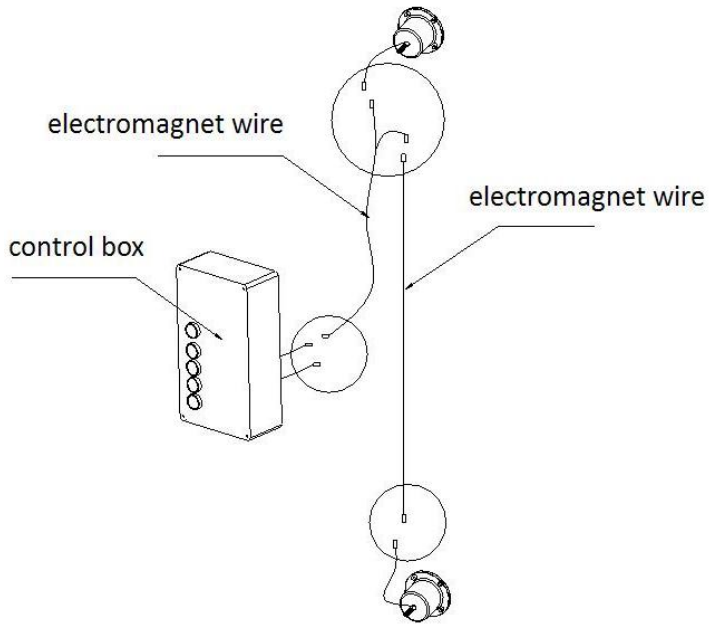


Step 9: Fix control module.

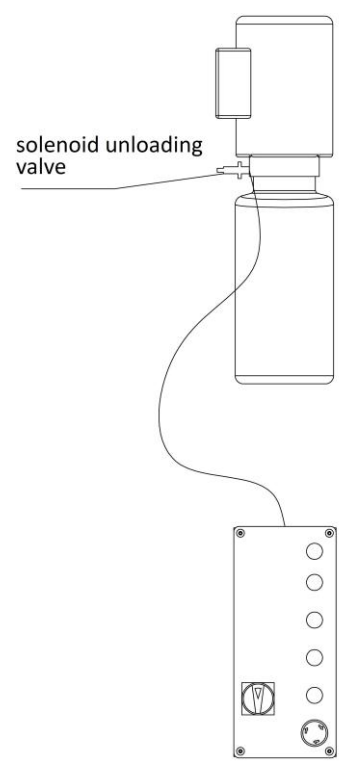
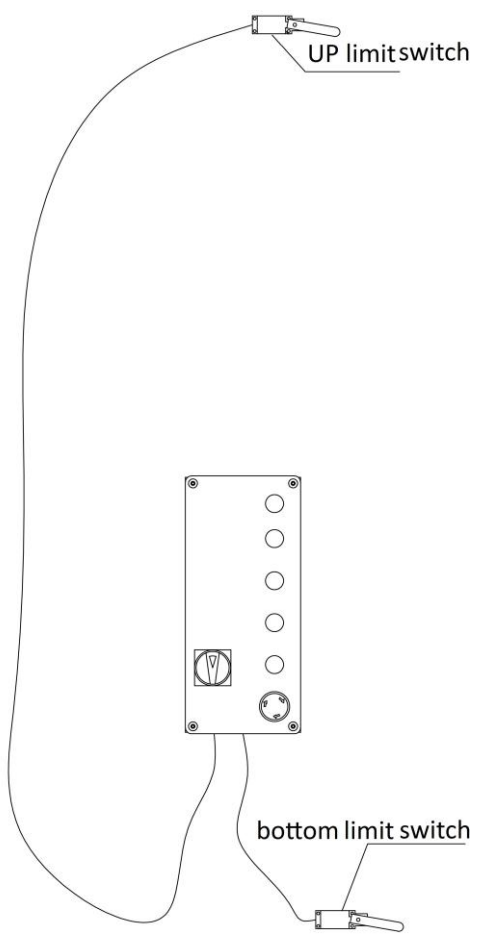
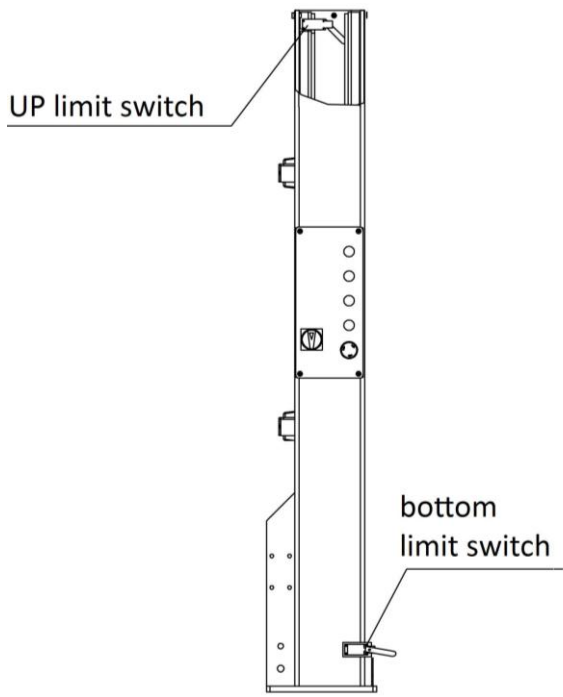
1. Mount the control box on to the power side post.



Step 10: Fix limit switches into the power side post.

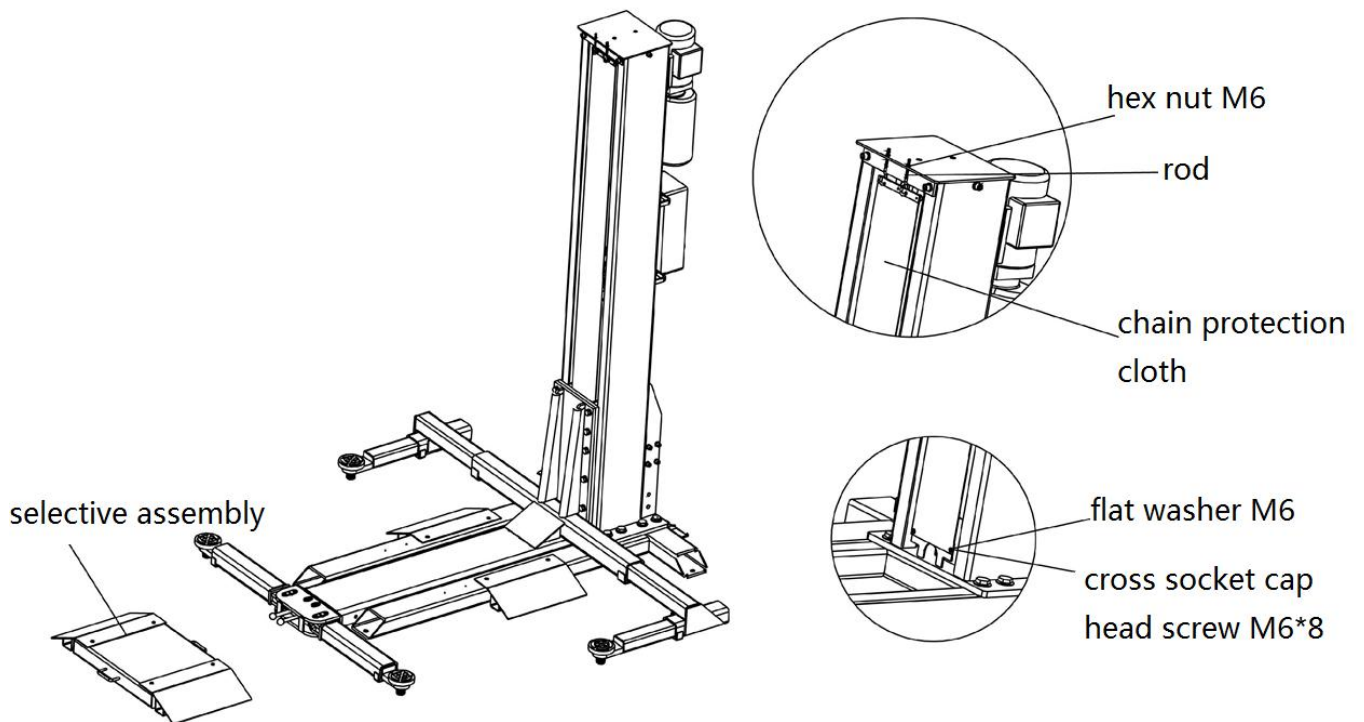


3. Connect quick connectors between electromagnets.



Step 11: Fix chain protection clothes.**Install the protective cloth:**

spare parts needed:

4 pcs of Hex nut**2 pcs of pulling rod of protective cloth****2 pcs of cross cap screw M6*8****2 pcs of Spring washer M6****2, after the installation of protective cloth, fix well the top plate.**

Step 12: Fill with hydraulic oil.

The volume of oil tank is 8L. To insure the lift work normally, the amount of oil in it should reach 4/5 of the tank's total volume.
32# anti-abrasion hydraulic oil for winter, 46# for summer.

Step 13: Trial running.

1. Do refer to the operation instructions in advance and keep in mind that no vehicle left on the lift in the process of trial running.
2. Check if all the connections are in good condition.

3.4 Items to be checked after installation.

S/N	Check items	YES	NO
1	Is the post vertical to the floor?		
2	Is the oil hose well connected?		
3	Is the steel cable well connected?		
4	Are all lifting arms well fixed?		
5	Are electrical connections right?		
6	Are the rest joints firmly screwed?		
7	Are all items need lubricating added with grease?		

OPERATION INSTRUCTIONS

4.1 Precautions

4.1.1 Check all the joints of oil hose. Only when there is no leakage, the lift can start work.

4.1.2 The lift, if its safety device malfunctions, shall not be used.

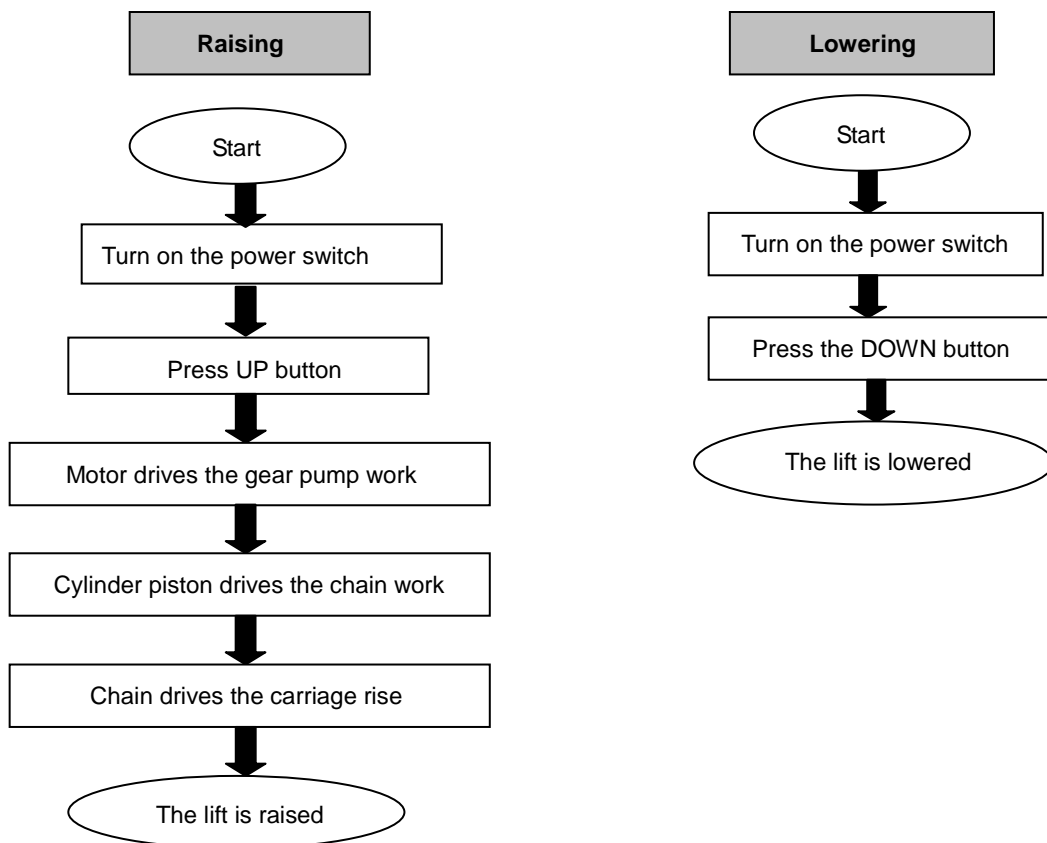
4.1.3 The machine shall not lift or lower an automobile if its center of gravity is not positioned midway of the lifting arms. Otherwise, the EverLift as well as our dealers will not bear any responsibility for any consequence resulted thereby.

4.1.4 Operators and other personnel concerned should stand in a safety area during lifting and lowering process.

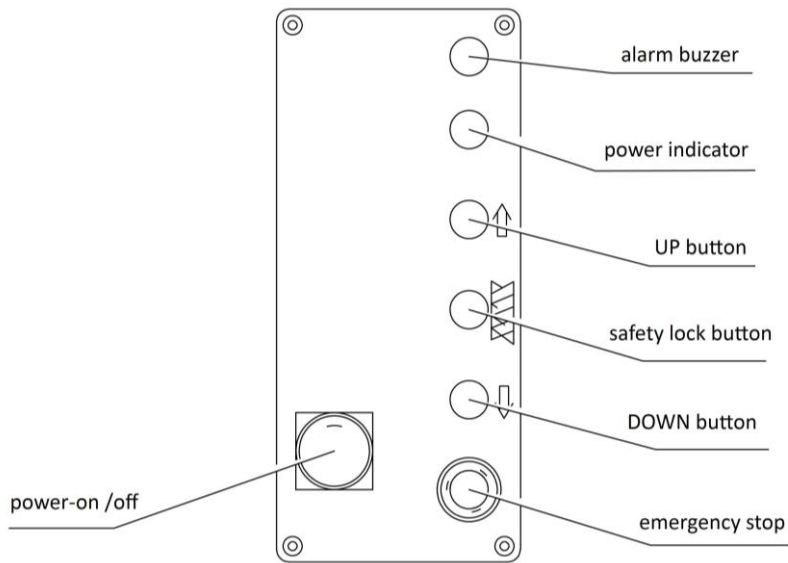
4.1.5 When lifting arms rise to the desired height, switch off the power at once to prevent any mal-operation done by unconcerned people.

4.1.6. Make sure the safety lock of the lift is engaged before start working under the vehicle and no people under the vehicle during lifting and lowering process.

4.2 Flow chart for operation



4.3 Operation instructions



Raise the lift

1. Make sure that you have read and understood the operation manual before operation.
2. Park the car on smooth and solid ground and then move the lift with its lifting platform located beneath the car.
3. Adjust the lifting arms until they reach the supporting positions of the vehicle and make sure the gravity of vehicle located mid way four lifting arms.
4. Connect the power supply as per requirements on the nameplate attached, and switch on. Press the "UP" button on the control box until pads of lifting arms touched the prop-position of vehicle.
5. Keep on raising the vehicle to let it have a bit clearance from the ground and check again its stability.
6. Raise the vehicle to the desired height, check it is safe or not, press the "Safety Lock" button on the control panel to have the safety lock engaged, turn off the power and then perform maintenance or repair work underneath.

Lower the lift

1. Switch on.
2. Press the "DOWN" button on the control box. Meanwhile the lifting arms automatically go upwards about 5CM which releases the safety lock. The lift lowers.
3. After the lifting arms lower to the lowest position, pull them out from under the vehicle and clear up all the obstacles.
4. Drive the vehicle away.

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, troubles could be judged and solved much faster if more details or pictures could be provided.

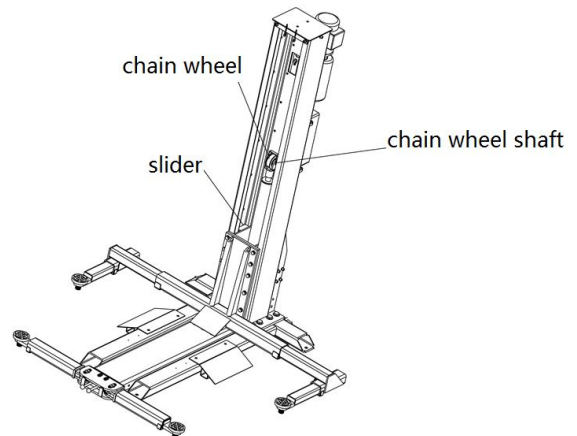
TROUBLES	CAUSE	SOLUTION
Abnormal noise	Abrasion exists on inside surface of the post.	Grease the inside of the post.
	Trash in the post.	Clear the trash
Motor does not run and will not rise	The wire connection is loose.	Check and make a good connection.
	The motor is blown.	Replace it.
	The limit switch is damaged or the wire connection is loose.	Connect it or adjust or replace the limit switch.
Motor runs but will not raise	The motor run reversely.	Check the wire connection.
	Overflow valve is loose or jammed.	Clean or adjust it.
	The gear pump is damaged.	Replace it.
	Oil level is too low.	Add oil.
	The oil hose became loose or dropped off.	Tighten it.
	The cushion valve became loose or jammed.	Clean or adjusts it.
Carriages go down slowly after being raised	The oil hose leaks.	Check or replace it.
	The oil cylinder is not tightened.	Replace the seal.
	The single valve leaks.	Clean or replace it.
	Solenoid valve fails to work well.	Clean or replace it.
	Steel cable is loose or not with same tightness	Check and adjust the tightness.
Raising too slow	The oil filter is jammed.	Clean or replace it.
	Oil level is too low.	Add oil.
	The overflow valve is not adjusted to the right position.	Adjust it.
	The hydraulic oil is too hot (above 45°) .	Change the oil.
	The seal of the cylinder is abraded.	Replace the seal.
	Inside surface of the post is not well greased.	Add grease.
Lowering too slow	The throttle valve jammed.	Clean or replace.
	The hydraulic oil is dirty.	Change the oil.
	The anti-surge valve jammed.	Clean it.
	The oil hose jammed.	Replace it.
The steel cable is abraded	No grease when installation or out of lifetime	Replace it.

MAINTENANCE

Easy and low cost routine maintenance can ensure the lift work normally and safely. Following are requirements for routine maintenance. Frequency of routine maintenance is determined by working condition and frequency.

THE FOLLOWING PARTS ARE NEEDED TO BE LUBRICATED

S/N	Name
1	chain wheel shaft
2	slider
3	chain wheel



6.1. Daily checking items before operation

The user must perform daily check. Daily check of safety lock system is very important – the discovery of device failure before action could save time and prevent great loss, injury or casualty.

- Before operation, judge whether the safety locks are engaged by sound.
- Check whether oil hose well connected and whether it leaks or not.
- Check the connections of chain and steel cable and check the power unit.
- Check whether expansion bolts are firmly screwed.
- Check if arm lock works well or not.

6.2. Weekly checking items

- Check the flexibility of moving parts.
- Check the working conditions of safety parts.
- Check the amount of oil left in the oil tank. Oil is enough if the carriage can be raised to highest position. Otherwise, oil is insufficient.
- Check whether expansion bolts are firmly screwed.

6.3. Monthly checking items

- Check whether expansion bolts are firmly screwed.
- Check the tightness of the hydraulic system and screw firm the joints if it leaks.
- Check the lubrication and abrasion circumstance of axial pins, carriages, lifting arms and other related parts and replace in time with new ones if they failed to work well.
- Check the lubrication and abrasion circumstance of steel cable.

6.4. Yearly checking items

- Empty the oil tank and check the quality of hydraulic oil.
- Wash and clean the oil filter.

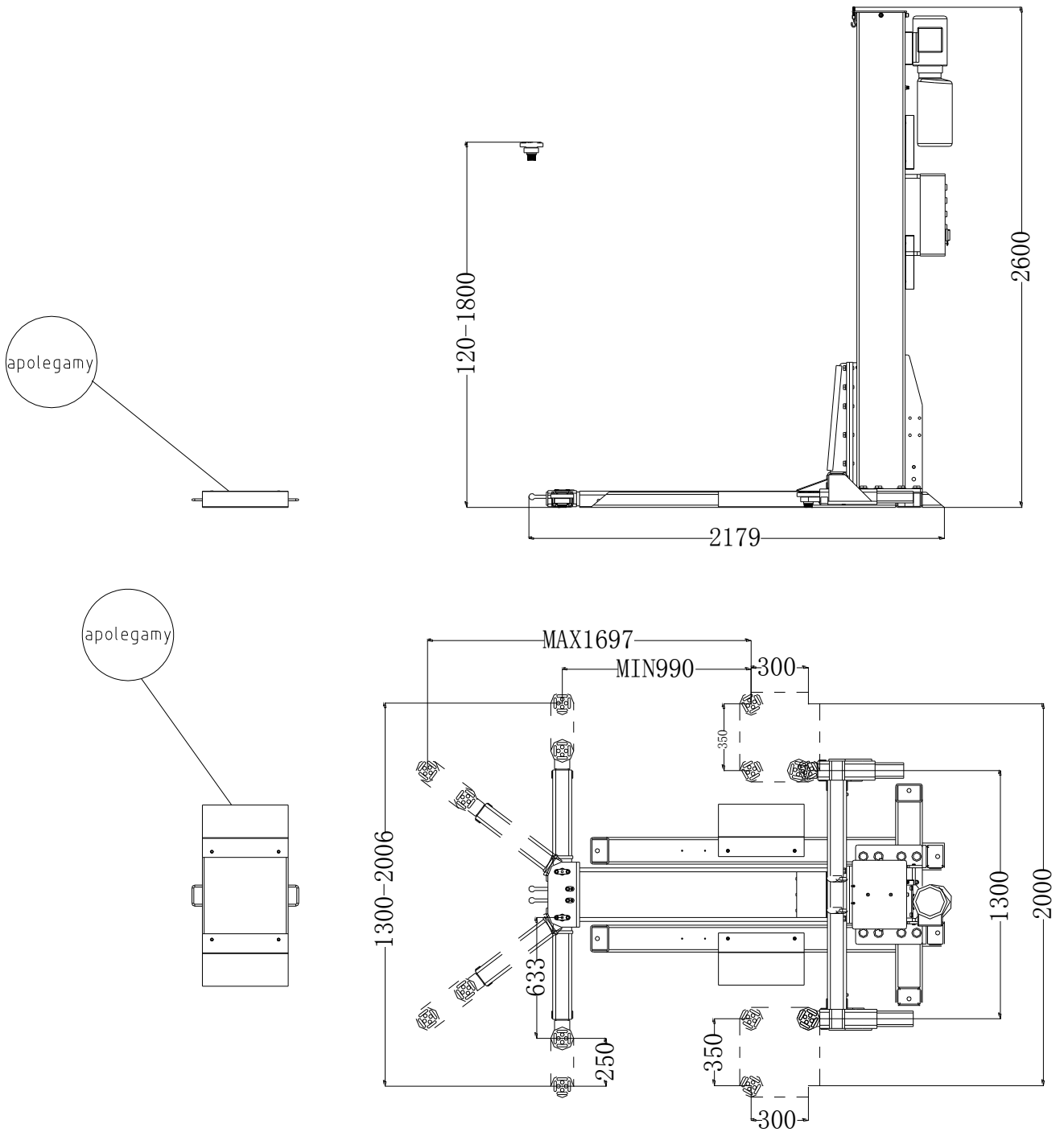
If users strictly follow the above maintenance requirements, the lift will keep in a good working condition and meanwhile accidents could be avoided to a large extent.

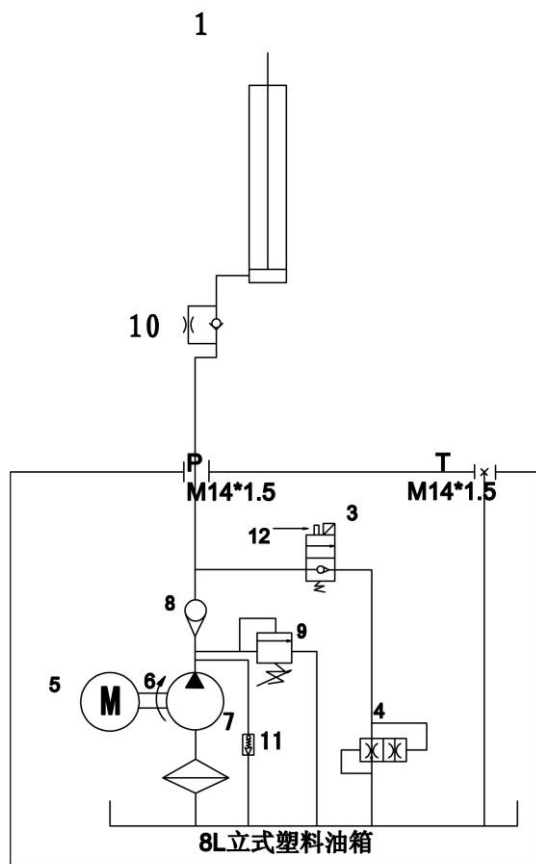
ANNEX

Annex 1, Packing List of the whole lift

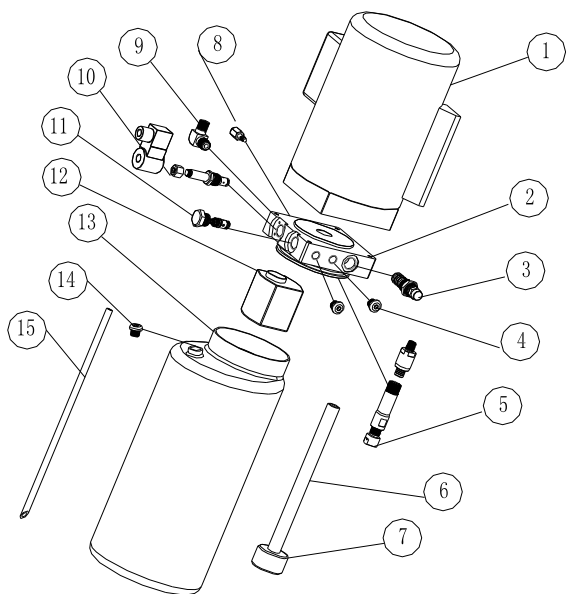
S/N	Material #	Name	Drawing#	Qty	Property	Note
1	615022101	Base frame(protable)	612E-A1	1	Assembly	
2	615022102	Post	612E-A2	1	Assembly	
3	615022004	Carriage	612E-A3	1	Assembly	
4	615022005	Lifting platform	612E-A4	1	Assembly	
5	615022011	Bridge approach (apolegamy)	612E-A8	1	Assembly	
The carton includes the following						
1	201102055	Hex head full swivel screw	M20*60	10	Standard	
2	204101011	Flat washer	D20	10	Standard	
3	204201009	Spring washer	D20	10	Standard	
4	420220020	Chain protection cloth	612E-A7	1	Assembly	
5	201102059	Hex head full swivel screw	M16*45	10	Standard	
6	204101009	Flat washer	D16	10	Standard	
7	204201010	Spring washer	D16	10	Standard	
8	410010051	Rod of chain protection cloth	6254E-A1-B5	2	Zinc-plating	
9	203101004	Hex nut	M6	4	Standard	
10	202101027	Cross socket cap head screw	M6*8	2	Standard	
11	204101004	Flat washer	M6	2	Standard	
12	201102020	Hex head full swivel screw	M10*35	4	Standard	
13	203101006	Hex nut	M10	4	Standard	
14	204201005	Spring washer	M10	4	Standard	
15	204101006	Flat washer	D10	4	Standard	
16	420040010	Anti-shock pad	6254E-A23	4	Rubber	
17	615004003C	Lifting tray	6254E-A7-B4	4	Assembly	
18	624001042B	Short oil pipe		1	Assembly	

Annex2, Overall diagram



Annex 3, Hydraulic working system


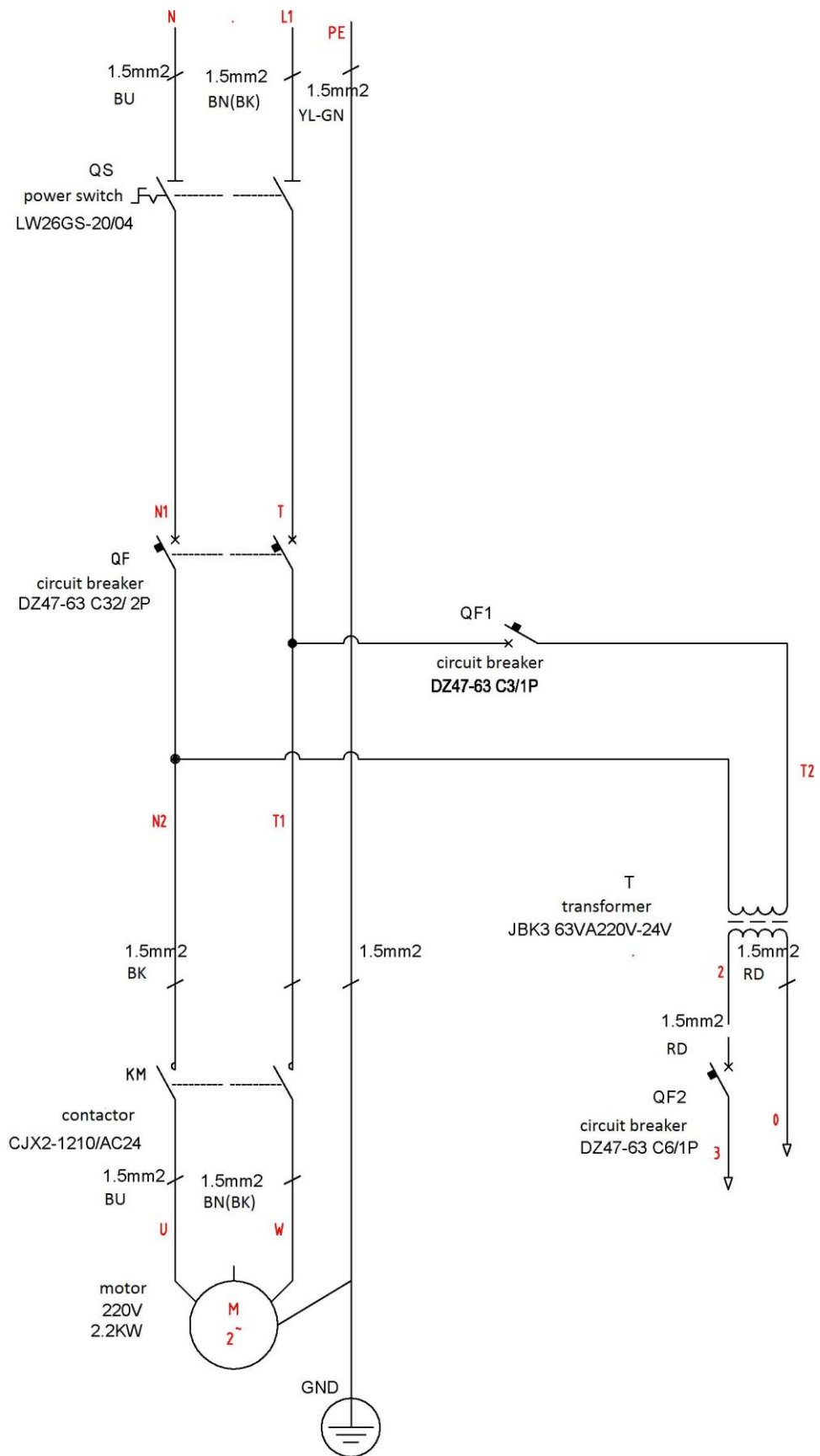
- 1. Drive oil cylinder
- 3. Solenoid unloading valve
- 4. Throttle valve
- 5. Motor
- 6. Coupling
- 7. Gear pump
- 8. Single-way valve
- 9. Over-flow valve
- 10. Anti-surge valve
- 11. Cushion valve
- 12. Emergency unloading valve



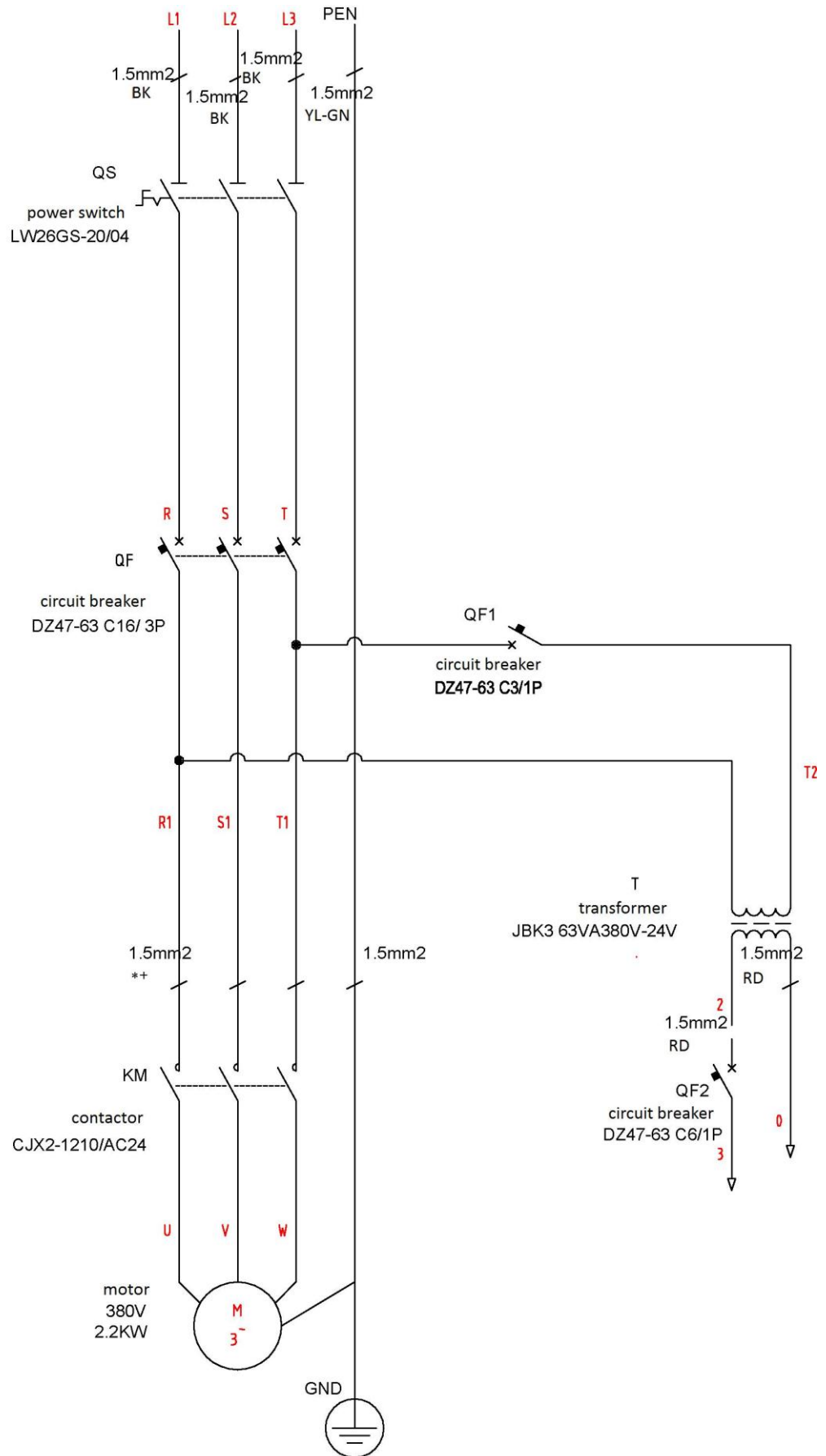
S/N	Name	Qty
1	Motor	1
2	Hydraulic block	1
3	Overflow valve	1
4	Removable plug	2
5	Cushion valve	1
6	Oil absorbing pipe	1
7	Oil filter	1
8	Throttle valve	1
9	Oil pipe tie-in	1
10	Solenoid unloading valve	1
11	One-way valve	1
12	Gear pump	1
13	Plastic oil tank	1
14	Oil tank cover	1
15	Oil back pipe	1

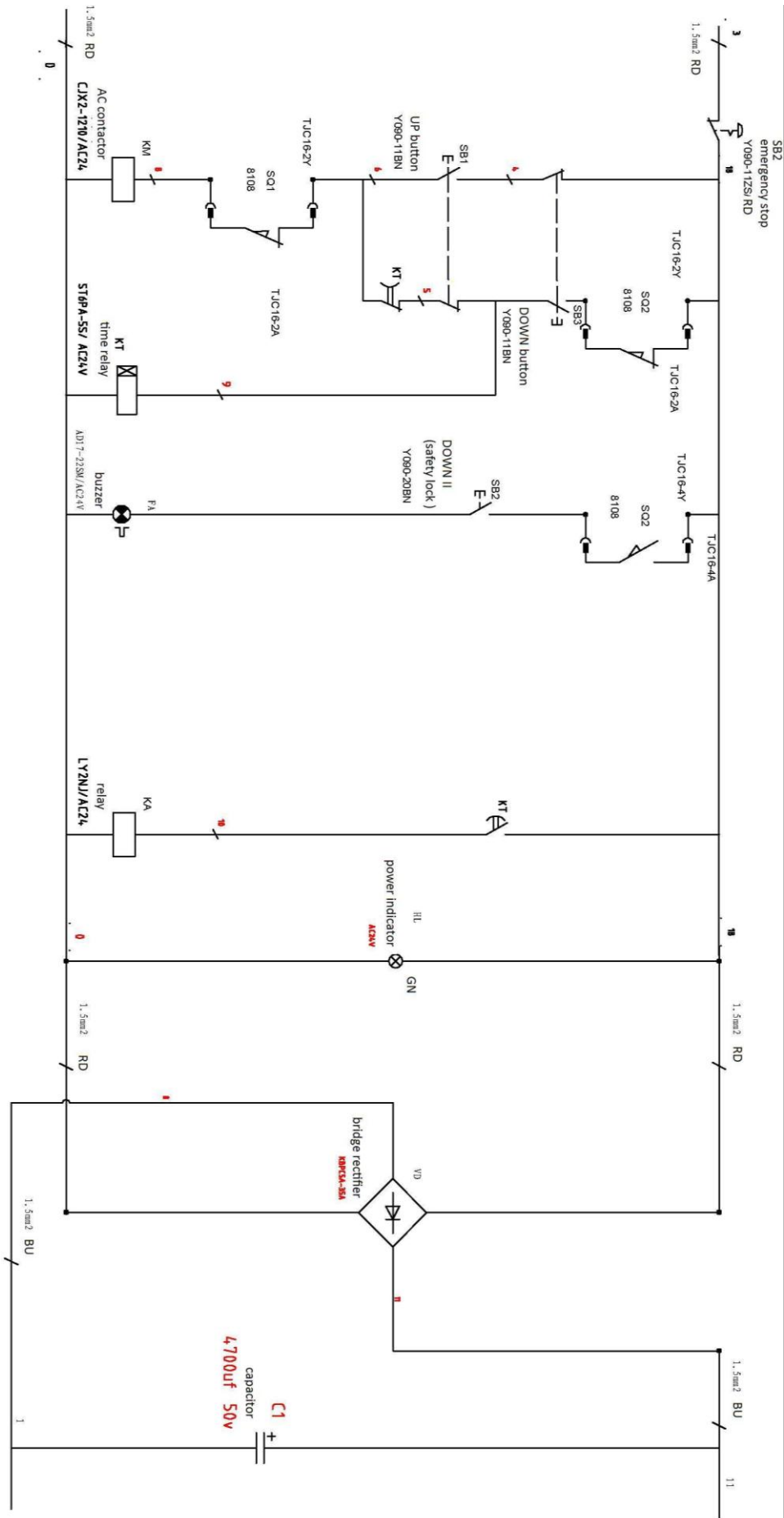
Annex4, Wiring diagram

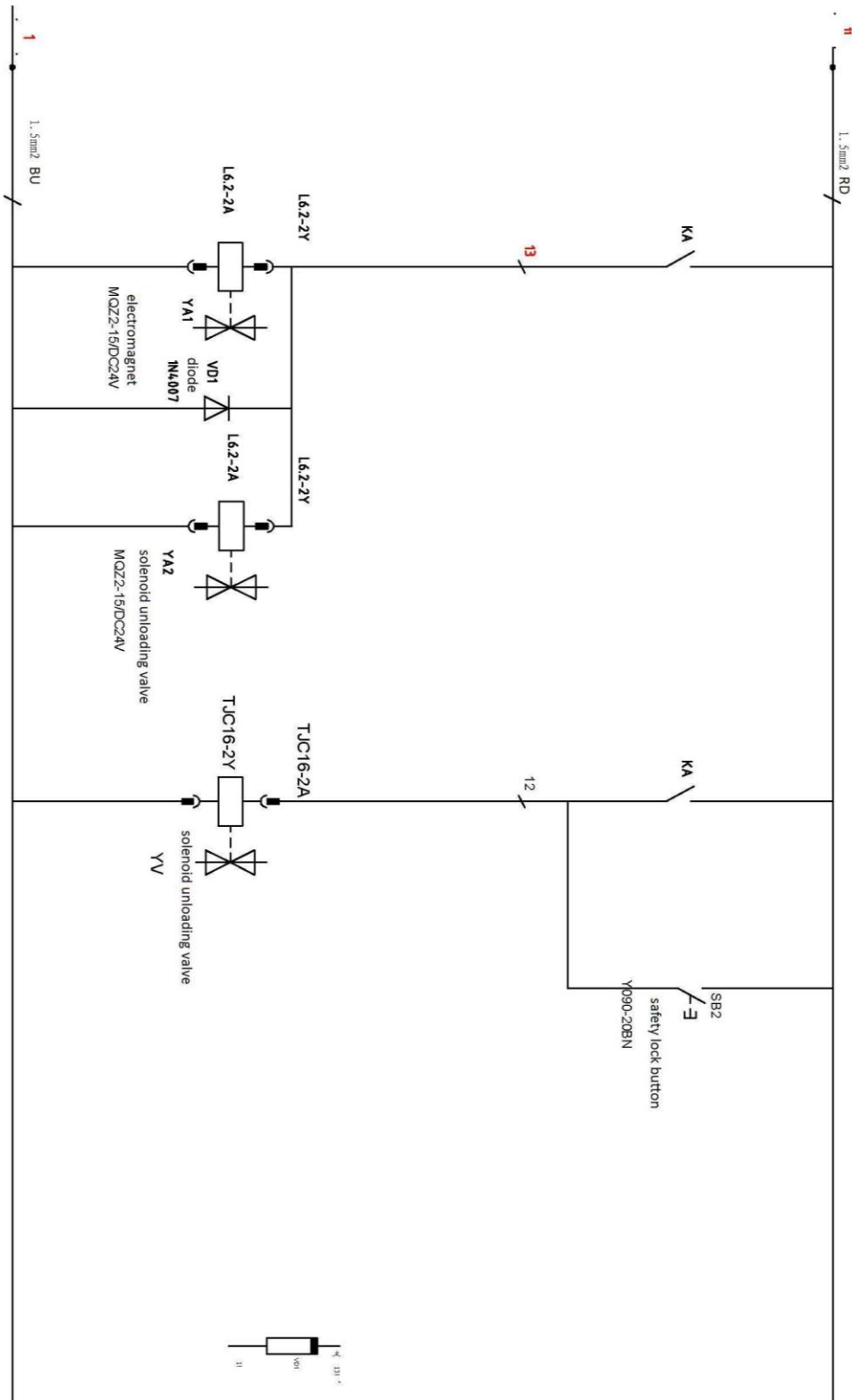
Single phase

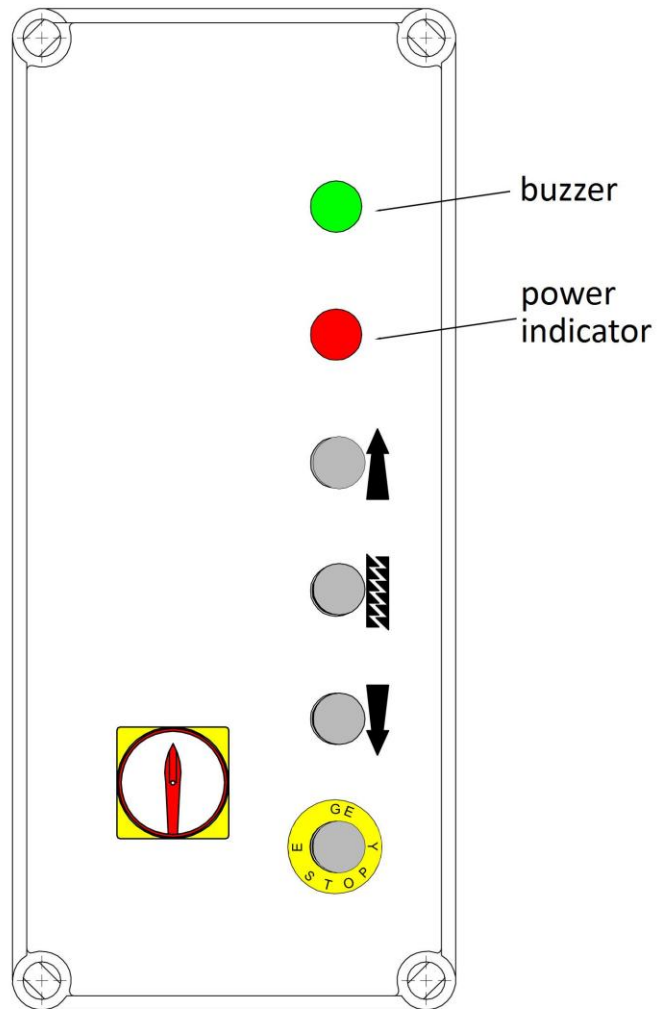
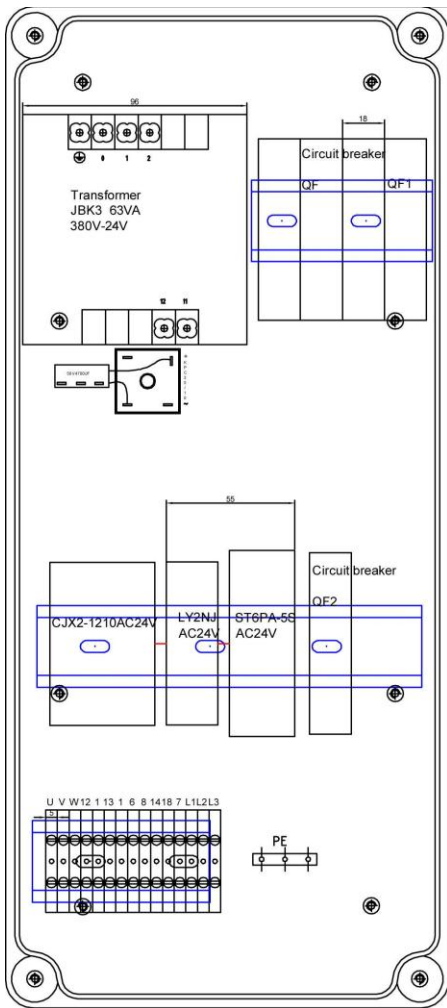


Three phase

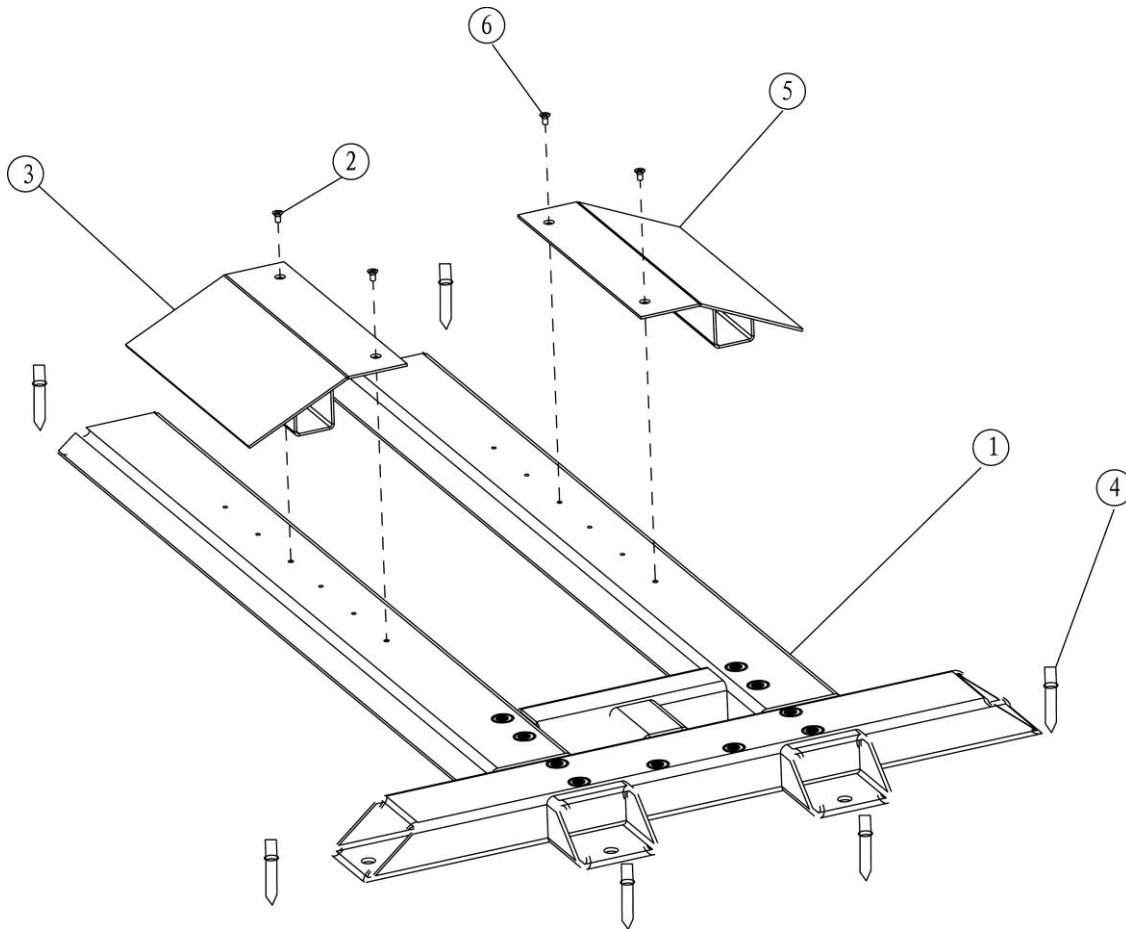




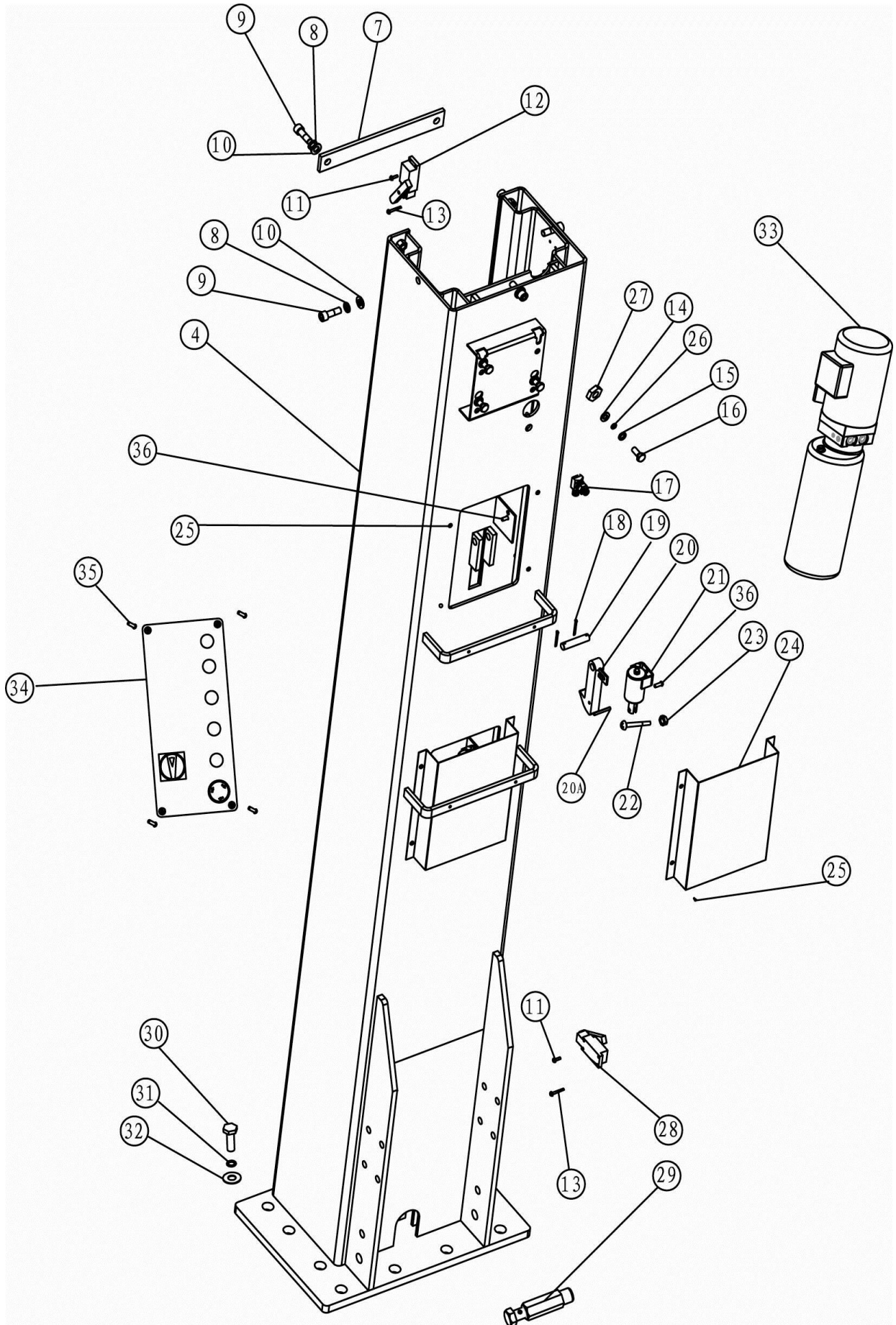




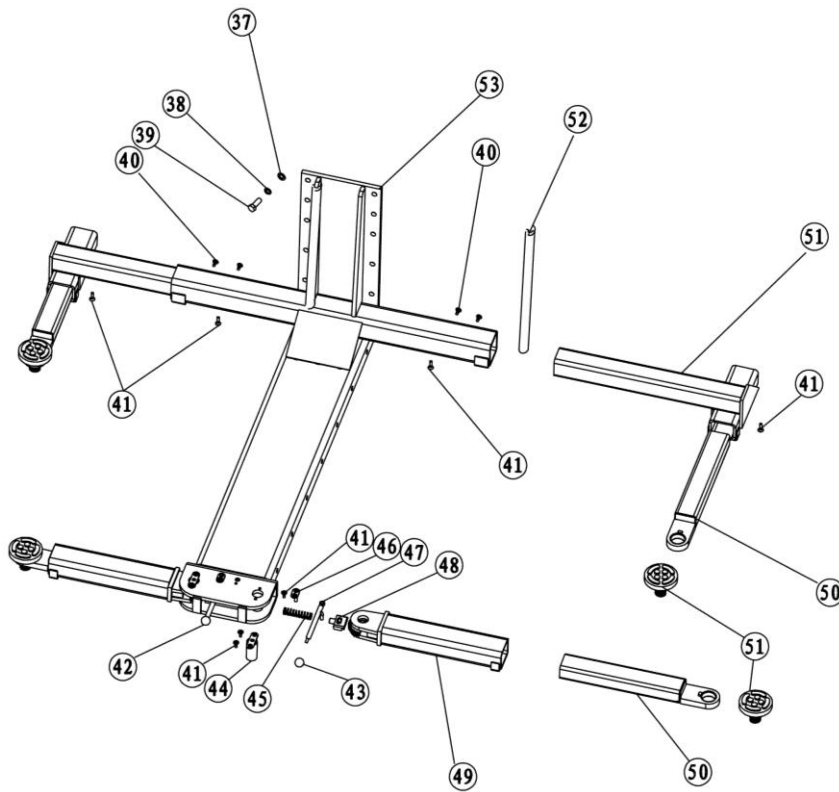
Annex5, Separated drawings for the lift



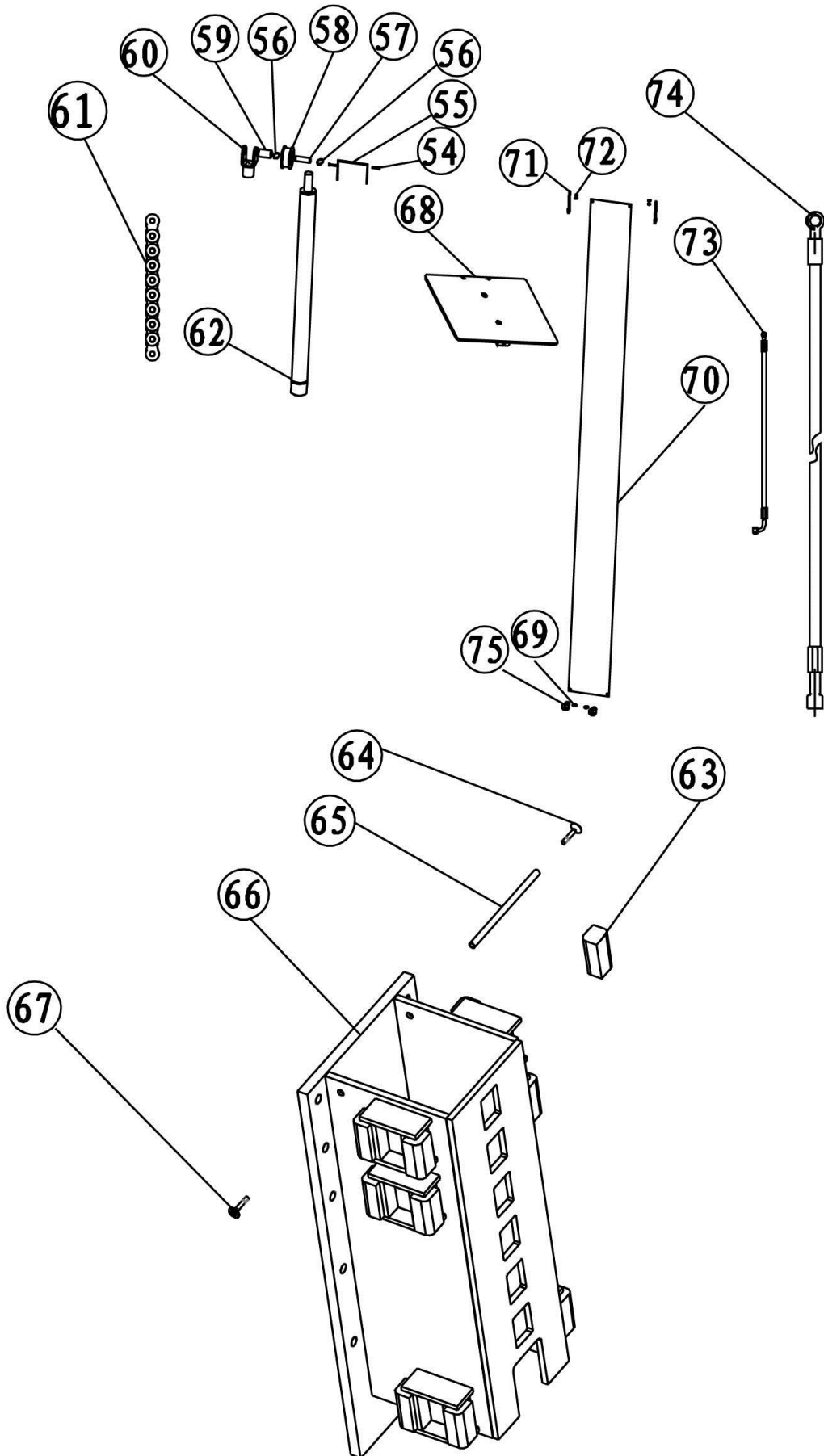
S/N	Material #	Name	Drawing#	Qty	Property	Note
1	614022001	Base frame (stationary)	612FE-A1-B1	1	Welded	
2	202111005	Hexagon socket countersunk flat cap head screw	M8*15	2	Standard	
3	614022002	Bridge approach	612FE-A1-B2	2	Welded	
4	201201008	Expansion bolt	M18*200	6	Standard	
5	614022002	Bridge approach	612FE-A1-B2	2	Welded	
6	202111005	Hexagon socket countersunk flat cap head screw	M8*15	2	Standard	



S/N	Material #	Name	Drawing#	Qty	Property	Note
7	410222533	Post (portable type)	612E-A2-B1	1	Powder-coating	
8	204101006	Spring washer	M12	13	Standard	
9	202109053	Hexagon socket cap screws	M12*35	13	Standard	
10	204101007	Flat washer	M12	13	Standard	
11	202101009	Cross socket cap head screw	M4*14	4	Standard	
12	320301011	Limit switch	TZ8108	1		
13	202101010	Cross socket cap head screw	M4*25	4	Standard	
14	204201005	Spring washer	M10	4	Standard	
15	204101006	Flat washer	M10	4	Standard	
16	201102020	Hex head full swivel screw	M10*35	4	Standard	
17	615022014	612 right -angle connector	612FE-A8	1	Assembly	
18	206201001	Cotter pin	M2.5*30	4	Standard	
19	410220011	Connection shaft	612FE-A16	2	Zinc-plating	
20	612022003	insurance hook	612E-A15	2	Assembly	
20A	206102007	Elastic cylindrical pin	M5*40	2	Standard	
21	330310002	Electromagnet	Standard	2	Standard	
22	202109024	Hexagon socket cap screws	M6*35	2	Standard	
23	203101004	Hex nut	M6	2	Standard	
24	410222583	Lap	612E-A2-B4	2	Q235A	
25	202101027	Cross socket cap head screw	M6*8	8	Standard	
26	420040010	Anti-shock pad	6254E-A23	4	Rubber	
27	203101006	Hex nut	M10	4	Standard	
28	320301011	Limit switch	TZ8108	1		
29	615022108	612 built-up joint	612E-A14	1	Assembly	
30	201102056	Hex head full swivel screw	M20*60	10	Standard	
31	204101011	Flat washer	M20	10	Standard	
32	204201009	Spring washer	M20	20	Standard	
33		Power unit		1		
34		Control box		1		
35	202101022	Cross socket cap head screw	M5*12	4	Standard	
36	202101029	Cross socket cap head screw	M6*12	4	Standard	

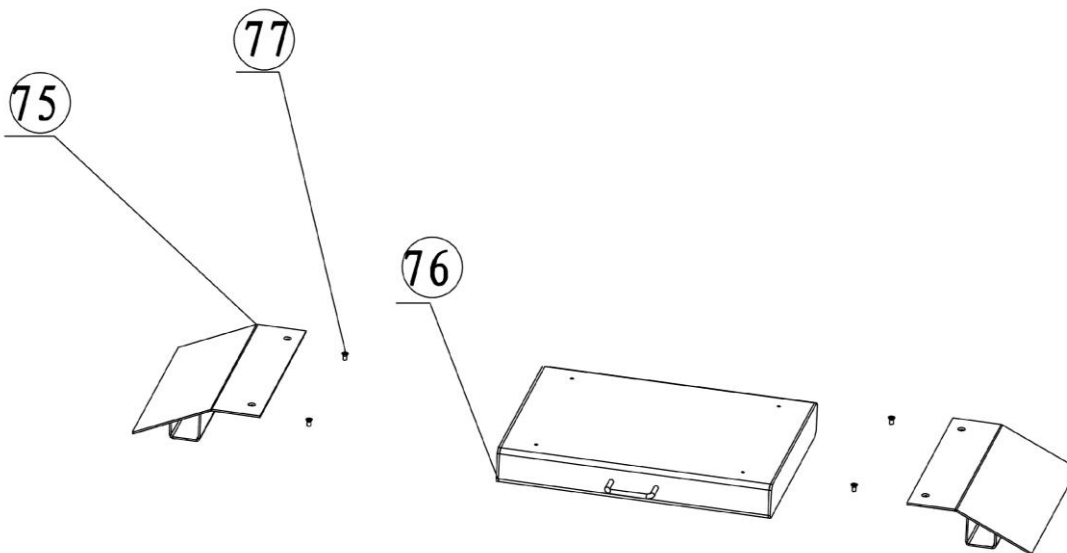


S/N	Material #	Name	Drawing#	Qty	Property	Note
37	204101009	Flat washer	M16	10	Standard	
38	204201010	Spring washer	M16	10	Standard	
39	201102059	Hex head full swivel screw	M16*45	10	Standard	
40	202109027	Hexagon socket cap screws	M8*12	4	Standard	
41	202111005	Hexagon socket countersunk flat cap head screw	M8*15	12	Standard	
42	615022019	Left handle	612E-A4-B8	1	Welded	
43	208105001	Red handle		2	Kunststoffe	
44	612022001	Front lock shat	612E-A4-B5	2	Zinc-plating	
45	410220021	Spring	612E-A4-B7	1	Zinc-plating	
46	612022205	Lock shaft of the handle	612E-A4-B11	2	Zinc-plating	
47	612022204	Right handle	612E-A4-B10-C1	1	Zinc-plating	
48	612022202	Front safety tooth	612E-A4-B6	2	Zinc-plating	
49	614022008	Front arm A	612FE-A4-B3-C1	2	Welded	
50	614022009	Front arm B	612FE-A4-B3-C2	2	Welded	
51	615004003C	Lifting tray	6254E-A7-B4	4	Assembly	
52	420220050	612 protective rubber strip	612E-A4-B2	2	Rubber	
53	614022005	Lifting platform	612E-A4-B1	1	Welded	



S/N	Material #	Name	Drawing#	Qty	Property	Note
54	202109017	Hexagon socket cap screws	M6*8	2	Standard	
55	410130081	Baffle	6255E-A7-B6	1	Zinc-plating	
56	204301009	Circlip	D25	2	Standard	
57	410010101	Chain wheel shaft	6254E-A4-B3	1	Zinc-plating	
58	410220071	612chain wheel	612FE-A6-B2	1	Zinc-plating	
59	205101013	Bearing	2548	1	Standard	
60	612001001	Chain wheel bracket	6254E-A4-B2	1	Zinc-plating	
61	208108003	6255E Chain		1	Assembly	
62	615022012	612 oil cylinder	612E-A6-B1	1	Assembly	
63	420010010	Slider	6254E-A2-B5	12	Nylon	
64	202111017	Hex socket flat head screw	M6*30	1	Standard	
65	410130061	Tube	612E-A3-B2	1	Zinc-plating	
66	614022004	Carriage	612E-A3-B1	1	Welded	
67	202111017	Hex socket flat head screw	M6*30	1	Standard	
68	614022012	Top plate	612E-A5	1	Welded	
69	204101004	Flat washer	D6	2	Standard	
70	420220020	Chain protection cloth	612E-A7	1	Assembly	
71	410010051	Rod of chain protection cloth	6254E-A1-B5	2	Zinc-plating	
72	203101004	Hex nut	M6	4	Standard	
73	624001042B	Short oil pipe		1	Assembly	
74	615022013	Long oil pipe		1	Assembly	

Optional ramp assembly



S/N	Material #	Name	Drawing#	Qty	Property	Note
75	614022002	Ramp A	612FE-A1-B2	2	Welded	
76	614019030	Ramp beam	612FE-A8-B1	1	Welded	
77	202111005	Hex socket flat head screw	M8*15	2	Standard	

Annex 6, Spare parts list

Spare parts for electrical system

S/N	Material #	Name	Spec.	Qty	Pic.	Note
1	320304001	Power switch	LW26GS-20/04	1		
2	320401001	Button	Y090-11BN	1		
3	321201001	Power indicator	AD17-22G-AC24	1		
4	320101057 320101054	Transformer	JBK3-160VA380V-24V JBK3-160VA220V-24V	1		
5	320901001	AC contactor	CJX2-1210/AC24	1		
6	320801001 320802001	Circuit breaker	DZ47-63 C16/3P DZ47-63 C32/2P	1		
7	320803001	Circuit breaker	DZ47-63 C3/1P	1		
8	320301011	Limit switch	TZ8108	2		
9	320402001	Emergency stop	Y090-11ZS/red	1		
10	321002001	Bridge rectifier	KBPC5A-35A	1		
11	321001004	Capacitor	4700UF/50A	1		
12	320601004	Relay	LY2NJ/AC24	1		

S/N	Material #	Name	Spec.	Qty	Pic.	Note
13	320601009	Relay holder	PTF-08A	1		
14	320602001	Time relay	ST6PA-5S/AC24V	1		
15	320602006	Time relay holder	PYF-08AE	1		
16	321204002	Control box	260*460*135	1		

Spare parts for the mechanical system

S/N	Material #	Name	Drawing#	Qty	Property	Note
1	420010010	slider	6254E-A2-B5	12	Nylon 1010	
2	207101019	O-seal ring	ID 23.6*3.55			
3	615022012	612 oil cylinder	612FE-A6-B1	1	Assembly	
4	207103020	Y-seal ring	KD70*60*8			
5	207105005	Anti-dust ring	DHS40(40*48*5/6.5)			
6	615004003C	Lifting tray	6254E-A7-B4	4	Assembly	