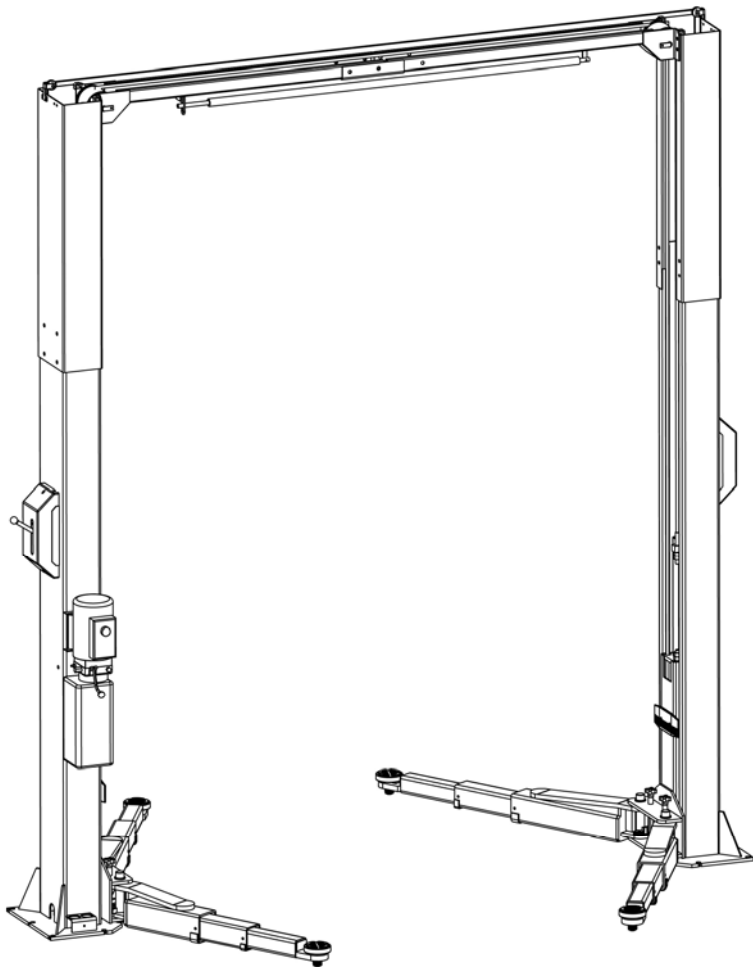


Model No. MJ-C12

Two Post Lift

Manual Release

Installation, Operation  
and Parts Manual



*Distributed by*

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

## IMPORTANT NOTES

Before start up, connecting and operating MAJOR products, it is absolutely essential that the operating instructions/owner's manual and, in particular the safety instructions are studied carefully. By doing so you can eliminate any uncertainties in handling MAJOR products and thus associated safety risks up front; something which is in the interest of you own safety and will ultimately help avoid damage to the device, When an MAJOR product is handed over to another person, not only the operating instructions but also the safety instructions and information on its designated use must be handed over to the person.

By using the product you agree the following conditions:

### **Copy right**

The enclosed instructions are the property of MAJOR or its supplier, and are protected against duplication and reproduction by copyright laws, international agreements, and other domestic legislation. The reproduction or disclosure of instructions or an extract thereof is prohibited and offenders are liable to prosecution; MAJOR reserves the right or initiates criminal proceedings and asserts claims for damages in the event of infringements.

### **Warranty**

The use of non-approved hardware will result in a modification of our products and thus to the exclusion of any liability or warranty, even if such hardware has been removed again in the interim.

It is not permissible to make any changes to our products and these are not only to be used together with genuine accessories and genuine replacement parts. Otherwise any warranty claims will be invalid.

### **Liability**

The liability of MAJOR is limit to the amount that the customer has actually paid for this product. This exclusion of liability does not apply to damages caused through willful misconduct or gross negligence on the part of MAJOR.

**All information in this manual is believed to be correct at time of publication.**

**MAJOR reserves the right to amend and alter technical data and composition without prior notice.**

**Please confirm at time of ordering.**

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# SAFETY NOTES

## 1.1 Operation of lifting platforms

This lift is specially designed for lifting motor vehicles. Users are not allowed to use it for any other purposes. The applicable national regulations, laws and directives must be observed.

Only users aged 18 or above who have been instructed on how to operate the lifting platform and have proven their ability to do so to the owner are to be entrusted with unsupervised operation of lifting platforms. The task of operating the lifting platforms must be granted in writing.

Before loading a vehicle onto the lift, users should study the original operation instructions and familiarize themselves with the operating procedures in several trial runs.

**Lift vehicle within the rated load. Don't attempt to raise vehicles with excessive weight.**

## 1.2 Checking of the lifting platforms

Checks are to be based on the following directives and regulations:

- Basic principles for testing lifting platforms
- The basic health and safety requirement
- The applicable accident prevention regulations

The checks are to be organized by the user of the lifting platform. The user is responsible for appointing an expert or qualified person to perform checking. It must be ensure that the person chosen satisfies the requirements.

The user bears special responsibility if employees of the company are appointed as experts or qualified persons.

### 1.2.1 Scope of checking

Regular checking essentially involves performing a visual inspection and a functional test. This includes checking the condition of the components and equipment, checking that the safety systems are complete and functioning properly and that the inspection log book is completely filled in. The scope of exceptional checking depends on the nature and extent of any structural modification or repair work.

### 1.2.2 Regular checking

After initial commissioning, lifting platforms are to be checked by a qualified person at intervals of not longer than one year.

**A qualified person** is somebody with the training and experience required to possess sufficient knowledge of lifting platforms and who is sufficiently familiar with the pertinent national regulations, accident prevention regulations and generally acknowledged rules of engineering to be able to assess the safe operating condition of lifting platforms.

### 1.2.3 Exceptional checking

Lifting platforms with a lift height of more than 2 meters and lifting platforms intended for use with people standing under the load bearing elements of the load are to be checked by an expert prior or reuse following structural modifications and major repairs to load bearing components.

**An expert** is somebody with the training and experience required to possess specialist knowledge of lifting platforms and who is sufficiently familiar with the pertinent national work safety regulations, accident prevention regulations and generally acknowledged rules of

engineering to be able to check and give an expert opinion on lifting platforms.

### 1.3 Important safety notices

1.3.1 Recommend for indoor use only. DO not expose the lift to rain, snow or excessive moisture.

1.3.2 Only use this lift on a surface that is stable and capable of sustaining the load. Do not install the lift on any asphalt surface.

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

1.3.4 Do not leave the controls while the lift is still in motion.

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

1.3.6 Only these properly trained personnel can operate the lift.

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

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

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

1.3.10 Always insure the safety locks are engaged before any attempt to work near or under the vehicle. Never remove safety related components from the lift. Do not use if safety related components are damaged or missing.

1.3.11 Do not rock the vehicle while on the lift or remove any heavy component from vehicle that may cause excessive weight shift.

1.3.12 Check at any time the parts of 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.

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

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

1.3.15 If the lift is going to be left unused for a long time, users are required to:






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

**WARNING: The warnings, cautions and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.**

1.4 Warning labels

**SAFETY ADVICE**  
540101441

	Only trained personnel are allowed to operate the lift.
	Always keep lift area clear when lowering or raising vehicle.
	Do not try to raise a vehicle exceeds the rated capacity.
	Always raise a vehicle with four swing arms.
	Position and adjust pads to lifting points recommended by vehicle manufacturers.

	Stop and check lift arm locks and stability of vehicle after short raising, then to desired height.
	Watch closely the vehicle during raising or lowering.
	Always use safety stands when moving/ installing heavy components.
	Avoid excessive rocking of vehicle while on lift.
	Do not climb onto the lift or raised vehicle during lifting or lowering.

### 1.5 Potential safety risks

#### 1.5.1 Mains voltage



Insulation damage and other faults may result in accessible components being live

Safety measures:

- Only ever use the power cord provided or a tested power cord.
- Replace wires with damaged insulation.
- Do not open the operating unit.

#### 1.5.2 Risk of injury, danger of crushing

In the event of excessive vehicle weight, incorrect mounting of the vehicle or on removing heavy object, there is a risk of the vehicle falling off or tipping up.

Safety measures:

- The lift is only ever to be employed for the intended purpose.
- Carefully study and heed all the information given in Section 1.4.
- Observe the warning notices for operation.

### 1.6 Noise level

Noise emitted during operating the lift should be less than 70dB (A). For your health consideration, it is suggested to place a noise detector in your working area.

## PACKING, STORAGE AND TRANSPORTATION

Packing, lifting, handling, transporting operations must be performed only by experienced personnel with appropriate knowledge of the lift and after reading this manual.

### 2.1 Packing

If it is not particularly required, the lift was dismantled into the following 3 parts for transportation.

<i>Name</i>	<i>Packed by</i>	<i>Quantity</i>
<i>Lift –C12</i>	<i>Steel brackets</i>	<i>1</i>
<i>Extension post –C12</i>	<i>Bubbled film</i>	<i>1</i>
<i>Power unit –C12</i>	<i>Carton</i>	<i>1</i>

### 2.2 Storage

The packs must be kept in a covered and protected area in a temperature range of  $-10^{\circ}\text{C}$  to  $+40^{\circ}\text{C}$ . They must not be exposed to direct sunlight, rain or water.

#### Stacking the packs

We advise against stacking because the packs are not designed for this type of storage. The narrow base, heavy weight and large size of the packs make stacking difficult and potentially dangerous.

If stacking is unavoidable, use all appropriate precautions:

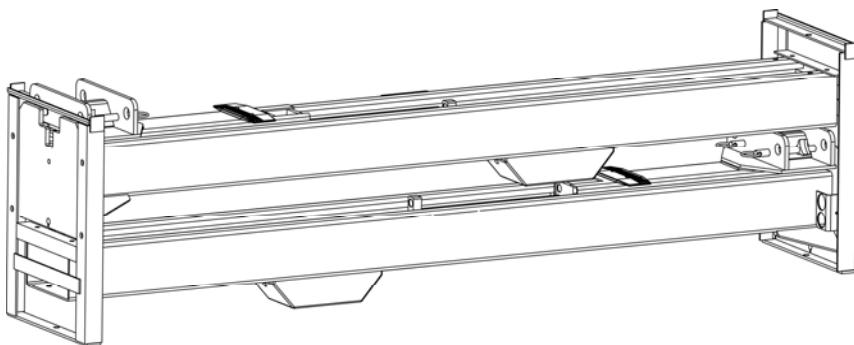
-never stack to more than 2 meters in height.

-never make stacks of single packs. Always stack pairs of packs in a cross pattern so that the base is bigger and the resulting stack is more stable. Once the stack is complete, restrain it using straps, ropes or other suitable methods.

A maximum of two packs can be stacked on lorries, in containers, and in railway wagons, on condition that the packs are strapped together and restrained to stop them falling.

### 2.3 Opening the packs

**The packs can be lifted and transported only by using lift trucks.** Never attempt to hoist or transport the unit using lifting slings.



When the lift is delivered make sure that it has not been damaged during transportation and that all the parts specified on the packing list are present.

Packs must be opened adopting all the precautions required to avoid injury to persons (keep at a safe distance when cutting the straps) or damage to parts of the machine (be careful that no parts are dropped while you are opening the packing).

**Take special care with the hydraulic power unit, the control panel and the cylinder.**



## PRODUCTS DESCRIPTIONS

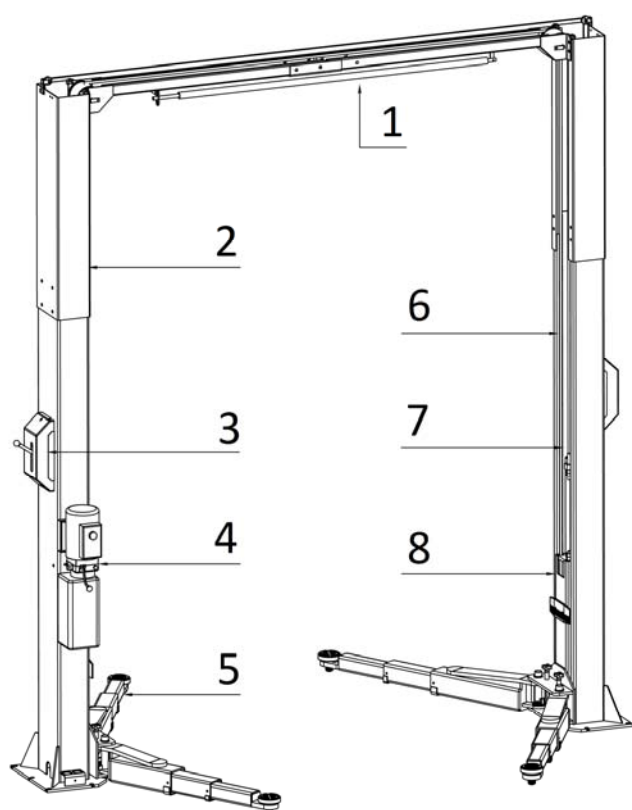
### 3.1 General descriptions

This is chassis supporting vehicle lift for road vehicles.

It is mainly composed by two posts, two carriages, four swing arms and a power and control unit.

It is driven by an electro-hydraulic system. The gear pump delivers hydraulic oil to oil cylinders and pushes upwards its piston. The cylinder piston drives to raise the carriage and swing arms. It is equipped with mechanical safety locking unit which ensures no risks of slipping off in case of hydraulic failure.

### 3.2 Construction of the lift

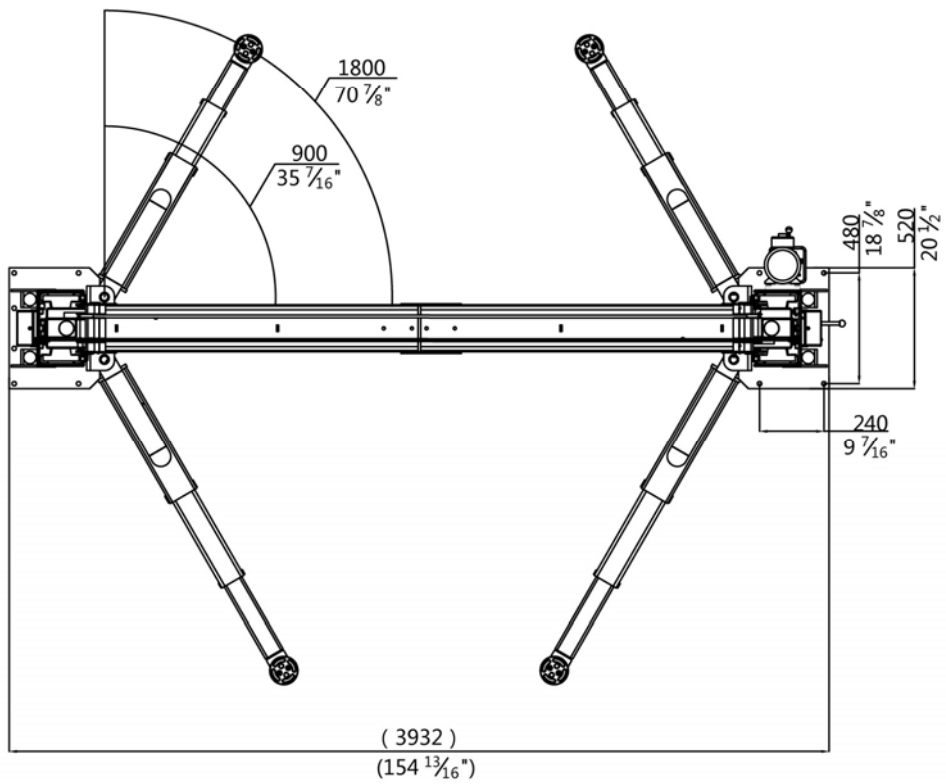
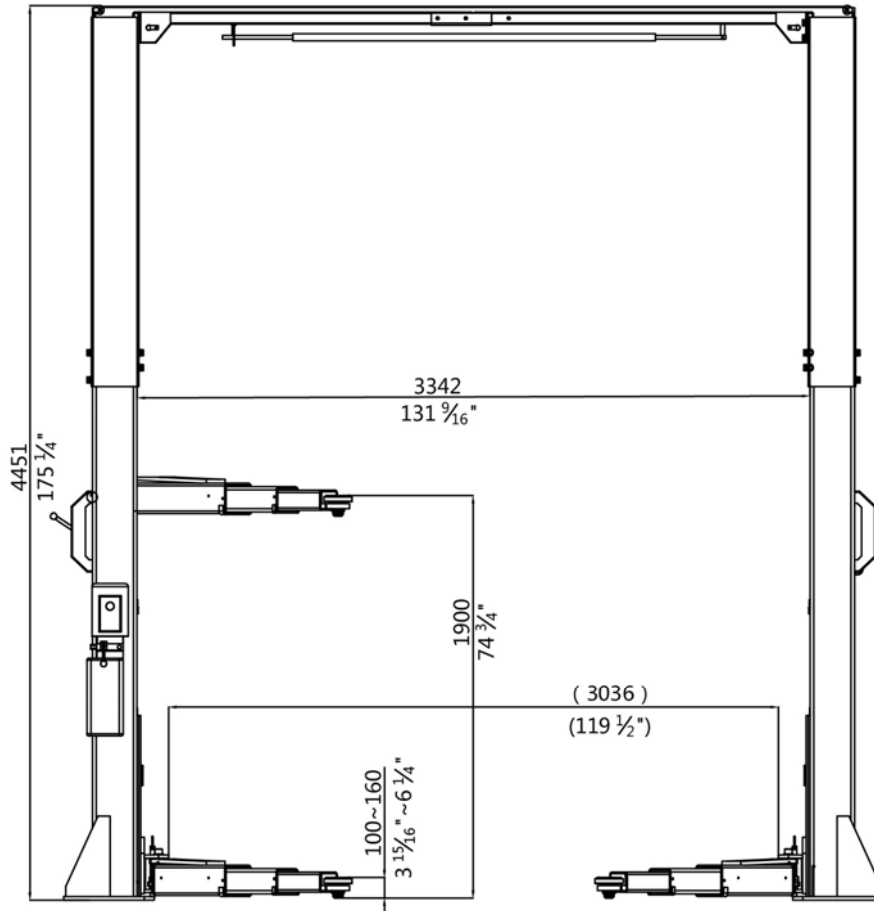


1. Overhead crossbeam
2. Extending post
3. Mechanical safety locking unit
4. Hydraulic power unit
5. Lifting arm
6. Post
7. Hydraulic cylinder
8. Carriage

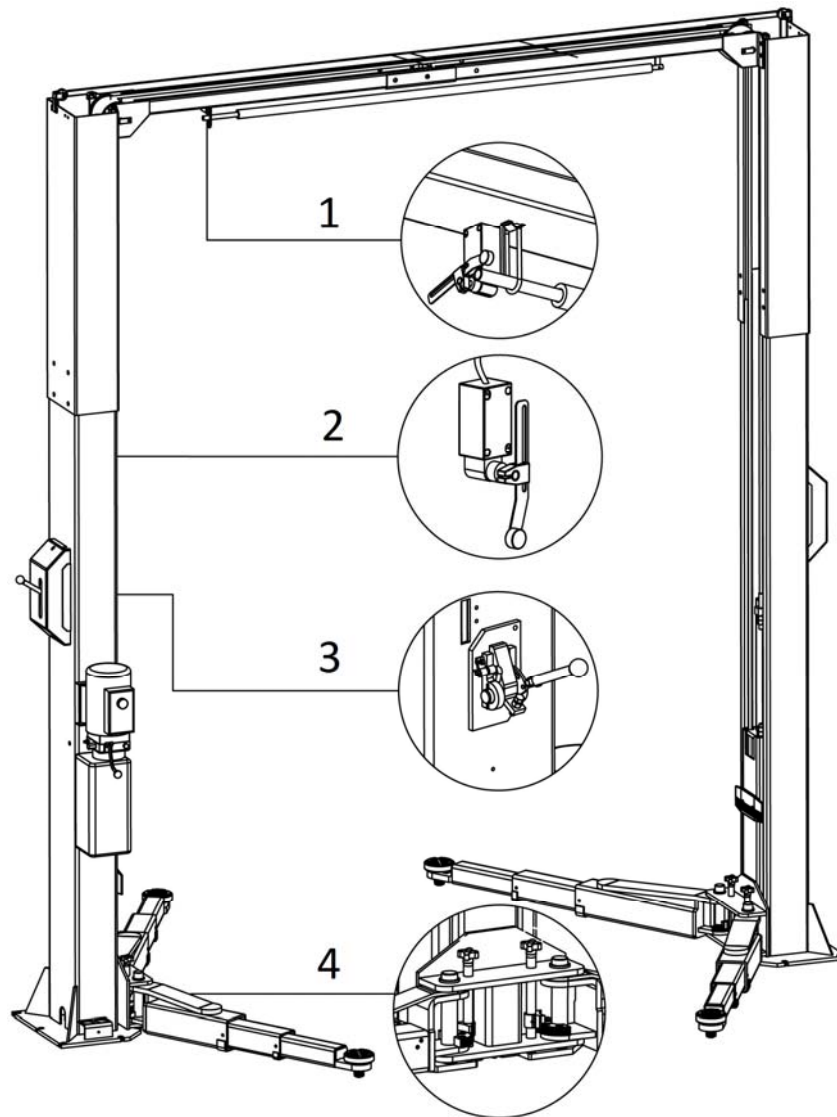
### 3.3 Technical data

Maximal Capacity	12000 lbs.
Full rise height	74 3/4"
Min height	3 15/16"
Full rise time (with rated load)	Approx.90s
Full descent time (with rated load)	Approx.50s
Oil tank volume	3.2 US gal

3.4 Dimensions



3.5 Safety devices descriptions



POS.	Descriptions	Function
1	Roof protective limit switch	Stop rising in case the overhead bar is touched.
2	Max height limit switch	Stop rising at max height
3	Mechanical safety locking unit	Catch the carriages in case of hydraulic failure
4	Arm lock	Ensure the lifting arms are locked and avoid being swinging during lifting process

# INSTALLATION INSTRUCTIONS

## 4.1 Preparations before installation

### 4.1.1 Space requirements

Refer to 3.4 for the dimensions of the lift. There must also be a clearance of at least 1 meter between the lifting platform and fixed elements (e.g. wall) in all lifting positions. There must be sufficient space for driving vehicles on and off.

### 4.1.2 Foundations and connections

The user must have the following work performed before erecting the lift.

Construction of the foundation following consultation with the manufacturer’s customer service or an authorized service agent. Routing of the wiring to the installation location. **The user must provide fuse protection for the connection. Electrical system connection must be done by licensed technicians.** Requirements for power supply cable of the installation site: at least 2.5mm<sup>2</sup> (0.072 sq. inch) wire core for 3Ph power and 4.0mm<sup>2</sup> (0.0907 sq. inch) wire core for 1Ph power.

Refer also to the corresponding information on the name plate and in the operation instructions.

Before doing electrical connection, make sure the lift is electrically adapt to the local power supply.

### 4.1.3 Foundations preparations

Refer to Annex 1 for footing.

*To ensure stability and safety under load, the lift shall be installed with the base frame being in direct and firm contact with the concrete foundation. Don't attempt to fix the base frame directly onto floor with ceramic and other decorated surfaces otherwise you put the lift into a very dangerous situation.*

C30 concrete base with a minimum thickness of 7 7/8" (continuous footing).

Surface under the base plates: Horizontal and even (Gradients max. 0.5 %)

Newly built concrete ground must be older than 20days.

### 4.1.4 Tools and equipment needed for installation

Tool name	Specification	Quantity
Electrical drill	D19 drill bit	1
Open spanner	D17-19	2
Adjustable spanner	bigger than D30	1
Cross socket screw driver	PH2	1
Quick spanner handle adapter/ Ratchet	REB-310	1
Socket spanner	D24	1
Hammer	10 lbs.	1
Truck lift	Capacity, 2200 lbs.	1
Lifting strap	Capacity, 2200 lbs.	2
Torque spanner	MD400	1

### 4.2 Installation attentions

4.2.1 Joints of oil hose and wiring must be firmly connected in order to avoid leakage of oil hose and looseness of electrical wires.

4.2.2 All bolts should be firmly screwed up.

4.2.3 Do not place any vehicle on the lift in the case of trial running.

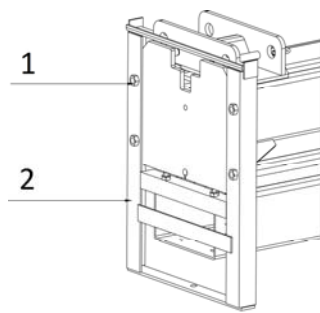
### 4.3 General installation steps

#### ONLY TRAINED AND QUALIFIED INSTALLERS CAN PERFORM LIFT INSTALLATION DUTIES.

**Step 1: Remove the packaging and take out the accessories attached.**

*Attention :* The packs must be opened adopting all the precautions required to avoid injury to persons (keep at a safe distance when cutting the straps) or damage to parts of the machine (be careful that no parts are dropped while you are opening the packing).

**Use proper means (put something supporting under the post or suspend the post by a crane) to suspend the post, unscrew and remove the bolts fixed on the iron rack.**



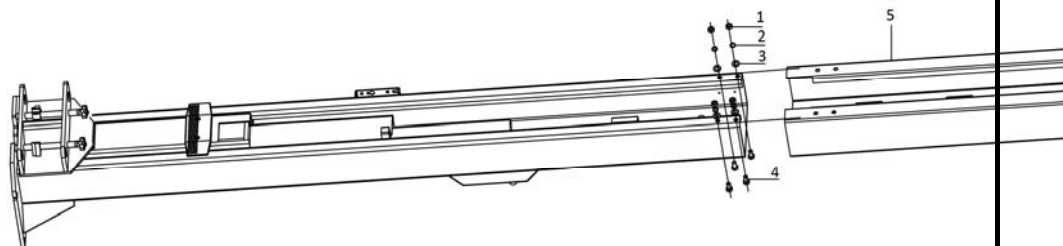
1. Hex bolt
2. Iron rack

*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 2: Fix the standing position for the two posts. (See Annex 1, floor plan)**

1. Decide on which post the power unit is going to be mounted.
2. Draw an outline of the base plate on the installation ground with chalk and ascertain the position for the two posts.

**Step 3: Connect extending posts.**

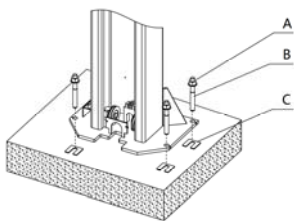


1. Hex nut M14
2. Flat washer M 14
3. Spring washer M14
4. Hex head full swivel screw M14\*30
5. Extending post

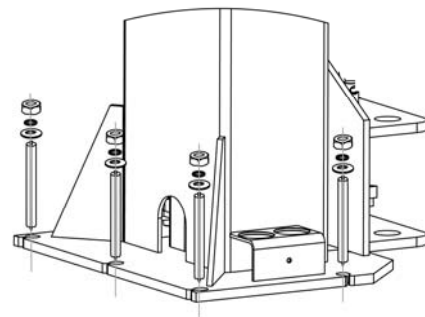
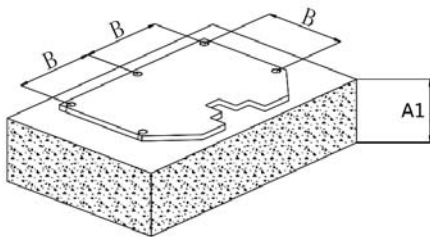
**Step 4: Erect and secure the post.**

**Anchoring bolts: 3/4" \* 7 7/8" (M19\*200) , Torque: 59-73 lb.ft**

1. Make the posts face to each other and the distance between the posts equals to the length of the base plate. Use proper means to erect the post.
2. Use suitable means to raise the lifting carriage to the first latching position. All the mounting holes in the base plate are then accessible. Make sure the locking pawl is engaged.
3. Check and align the position of the base plates again.
4. Drill the mounting holes. Remove the drilling dust from the hole.
5. Use a spirit level to check the vertical alignment of the posts. If necessary, place equalizing plates under the base plates.

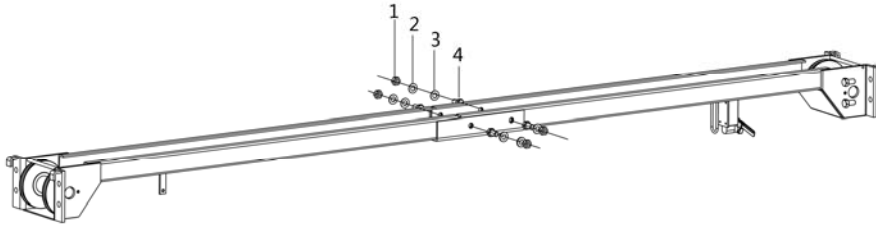


- A. Nut
- B. Expansion anchoring bolt
- C. Equalizing plate

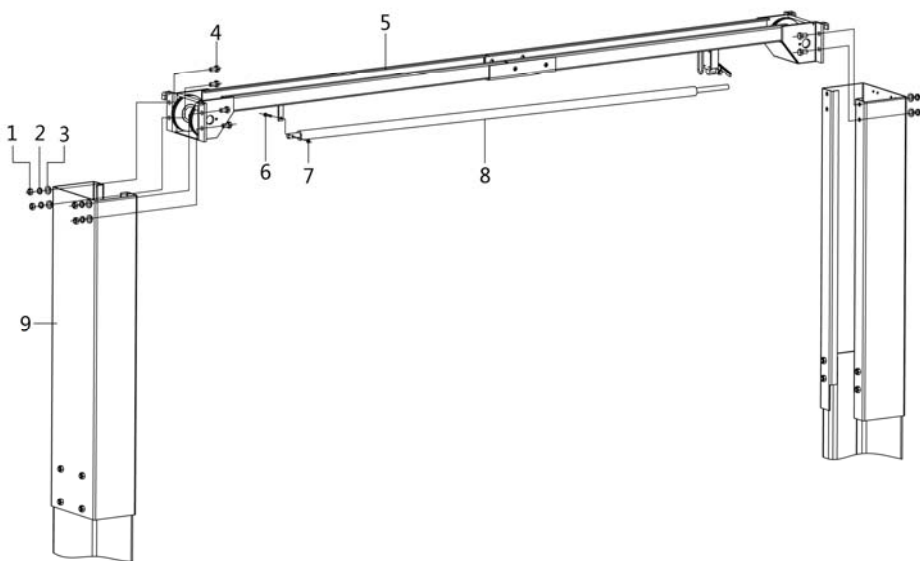


Anchoring bolt	A1 (foundation thickness )	A2 (drilling depth)	A3 (anchoring depth)	B	C
M19*200 (3/4" * 7 7/8")	≥200mm (7 7/8")	160mm (6 5/16")	145mm(5 11/16" )	240mm (9 7/16")	≤55mm(2 3/16")

### Step 5: Connect crossbeam.



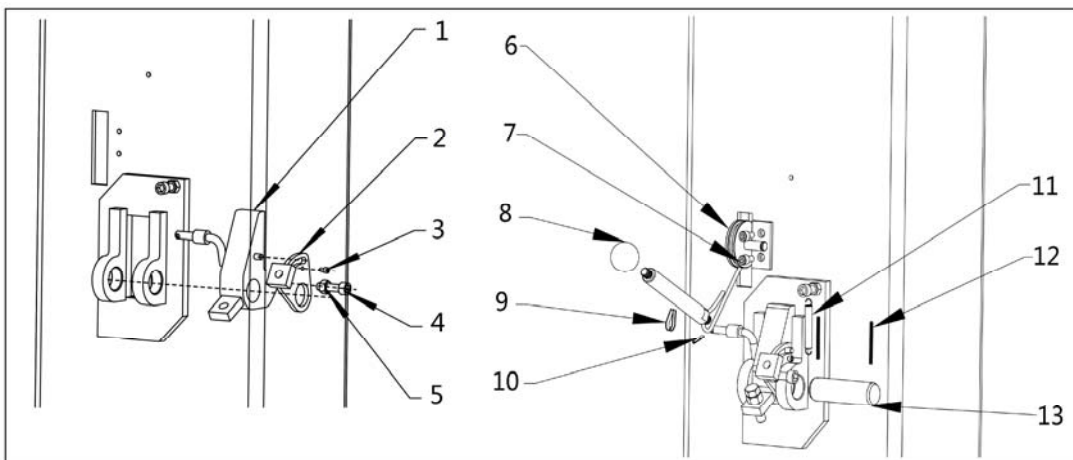
- 1. Hex nut M14
- 2. Flat washer M14
- 3. Spring washer M14
- 4. Hex head full swivel screw M14\*30



- 1. Hex nut M14
- 2. Flat washer M14
- 3. Spring washer M14
- 4. Hex head full swivel screw M14\*30
- 5. Crossbeam
- 6. Hex socket cylinder head screw M6\*30
- 7. Hex nut M6
- 8. Protective rod
- 9. Extending post

### Step 6: Fix the mechanical safety locking unit assembly.

#### 1. Assemble the mechanical locking unit.



- 1. Main safety hook
- 2. Release plate
- 3. Hex socket cylinder head screw M4\*8
- 4. Hex socket cylinder head screw M8\*30
- 7. M6\*8 hex socket cylinder head screw
- 8. Handle ball
- 9. Rope ring
- 10. Elastic cylindrical pin M3\*20

5. Hex nut M8

6. Guiding reel for release rope

11. Pull spring

12. Cotter pin M3\*45

13. Shaft

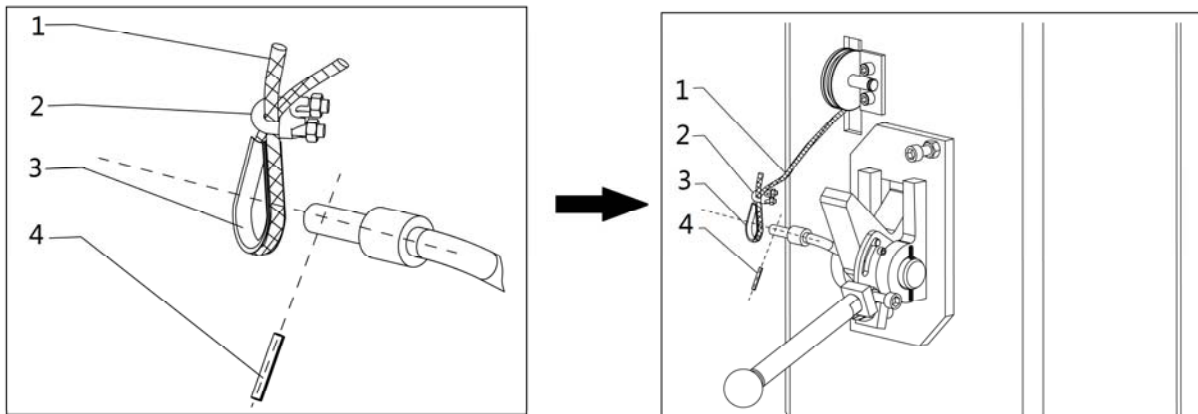
### 2. Route and fix the release rope for mechanical safety locking assembly.

2.1 Fix the release rope at the power side post.

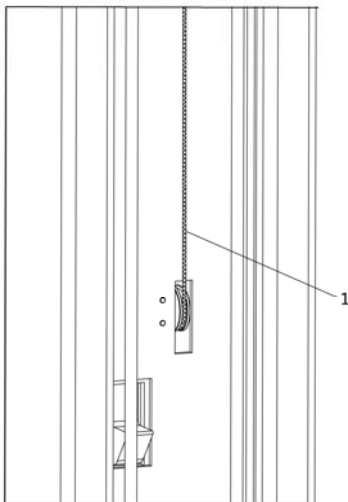
Let one end of the rope (1) go around and the ring (3) and bind it with a special clip (2).

Put the ring wound up with rope on the shaft as indicated in the following drawing and fix the cylindrical pin onto the shaft so as to prevent the ring from going off the shaft.

Make the other end of the rope go through the pulley nearby and let it go upwards to the top of the column.



inside the column



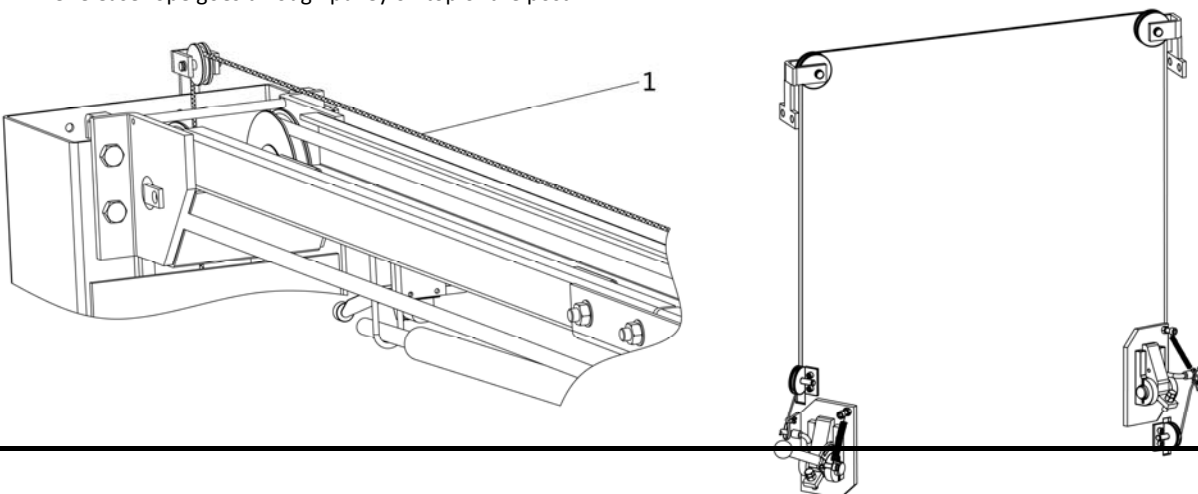
1. Release rope

2. Rope locker

3. Rope ring

4. Cylindrical pin M3\*20

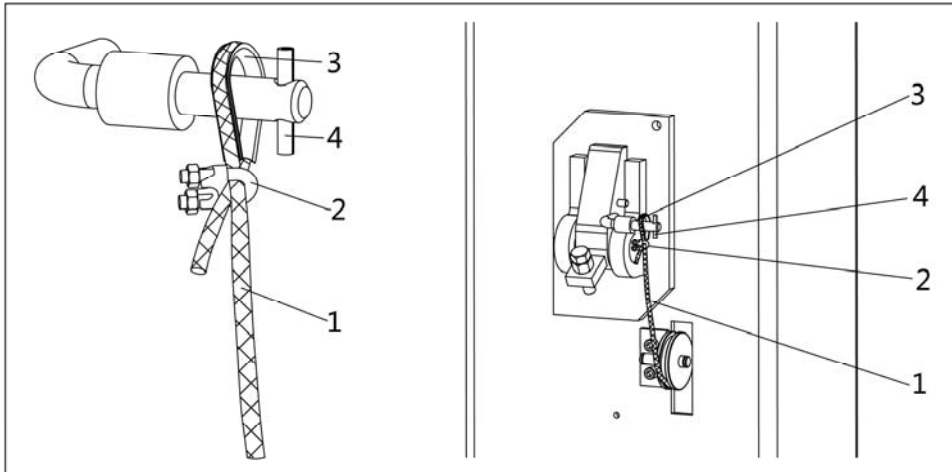
2.2 The release rope goes through pulley on top of the post





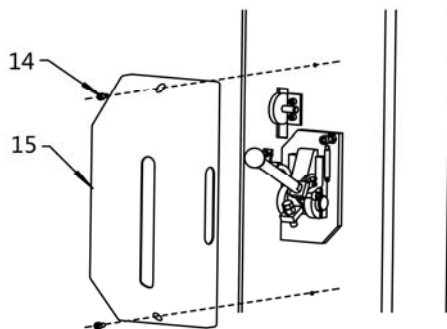
2.3 Fix the other end of the release rope with the locking unit on the secondary column.

Adjust and tighten the release rope as tight as it could be. Make sure both mechanical safety hooks are in firm contact with outside surface of the column. Slack wire will cause release failure.



- 1. Release rope
- 2. Rope locker
- 3. Rope ring
- 4. Cylindrical pin M3\*20

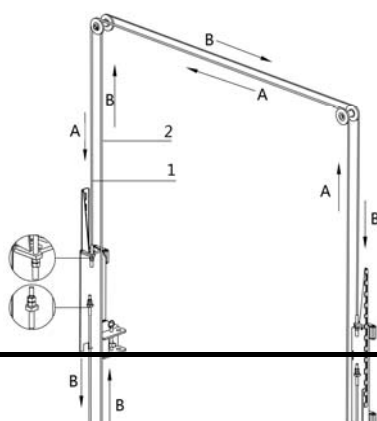
**3. Fix the protective cover.**



- 14. M6\*8 hex socket cylinder head screw
- 15. Protective cover

**Step 7: Connect the synchronization steel cable.**

1. Route and fix according to the following scheme.
2. Before attempting to route the cables, raise the lifting carriage at both sides to the first latching position making sure that the mechanical safety locking units in each post are fully engaged.
3. After fixed the cables, adjust and make the cables at both sides be under the same tension which could be judged by the sound emitted during lifting process.
4. Grease the cable after being fixed. (It is a must.)

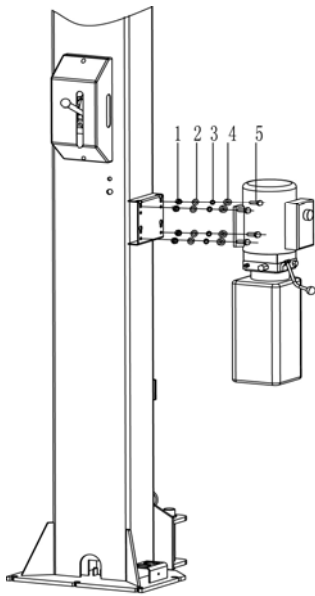


1. Steel cable A

2. Steel cable B

### Step 8: Connect the hydraulic system.

1. Install hydraulic power unit onto the power side post.



1. Hex nut M10

2. Flat washer M10

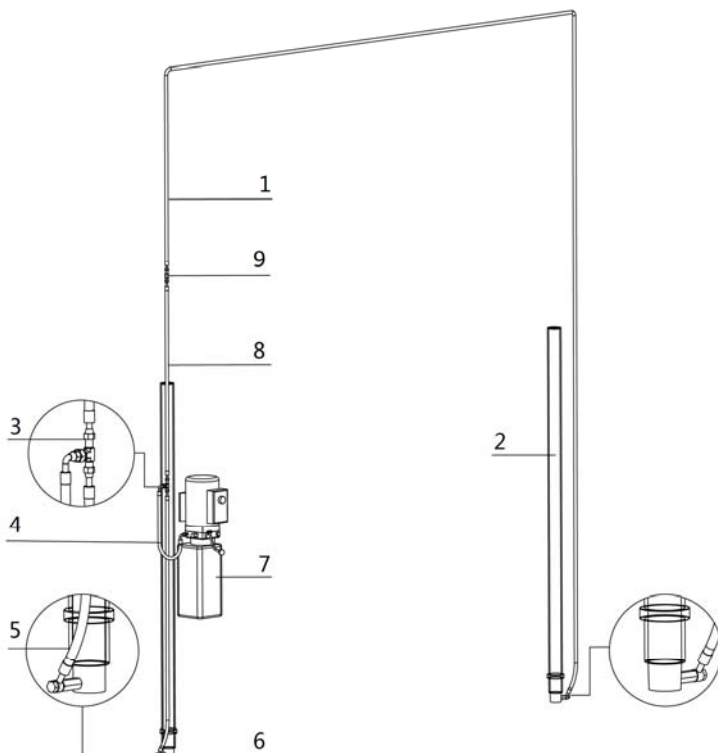
3. Spring washer M10

4. Anti-vibration pad

5. Hex head full swivel screw M8\*30

2. Connect oil hoses to the “T” connector in the power side post.

NOTE: make sure the connectors and hoses are clean.



1. Oil hose A

2. Hydraulic cylinder

3. Three way connector

4. Oil hose B

5. Oil hose C

6. Composite connector

7. Power unit

8. Oil hose D

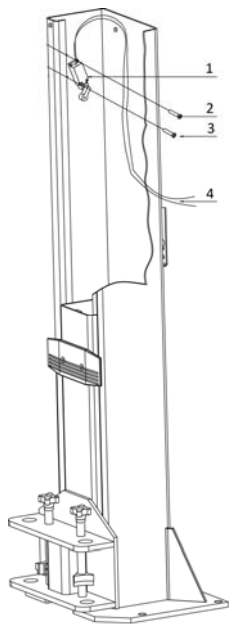
9. Straight connector

**Step 9: Make the electrical connection.**

**ONLY qualified electricians are permitted to do the electrical connections.**

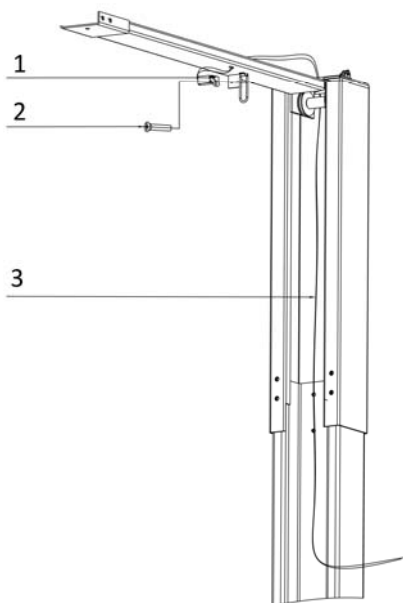
**Check that the supply voltage is adapted to the voltage of the lift. Follow the wire connection scheme to finish the wire connection.**

1. Fix max height limit switch onto the inside surface of the power side post and connect its wire to the terminals reserved at the motor.



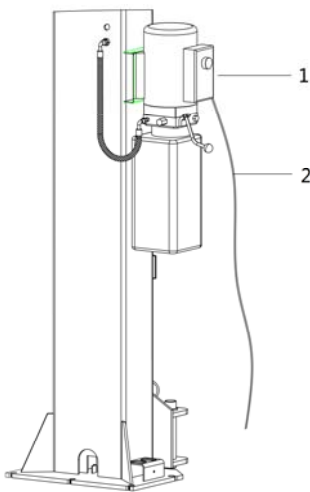
1. Max height limit switch
2. Cross socket cap head screw M4\*12
3. Cross socket cap head screw M4\*25
4. Wire

2. Fix roof protection limit switch onto the overhead crossbeam and connect its wire.



1. Limit switch
2. Hex socket screw M4\*25
3. Wire

3. Connect the power supply cable.



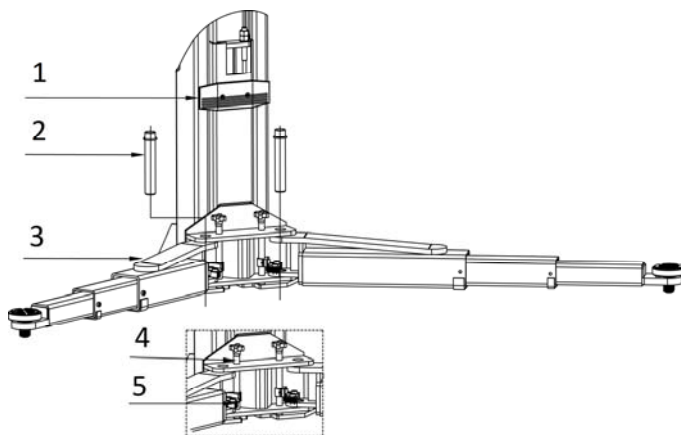
- 1. Power unit
- 2. Power supply cable

### Step 10: Install lifting arms.

The arm pin shafts (No. 2) must be greased at the installation.

Install the lifting arms onto the carriages and ensure the arm lock could work.

Attention: Install Lifting arms ONLY after the complete assembly has been erected and anchored.



- 1. Carriage
- 2. Pin shaft
- 3. Long arm
- 4. Pulling rod
- 5. Arm lock

### Step 11: Fill with hydraulic oil.

**ONLY CLEAN AND FRESH OIL ONLY**

**Lift must be fully lowered before changing or adding hydraulic oil.**

Prepare 3 USgals of hydraulic oil. Fill about 2.5 USgals into the oil tank to run the lift up and down for 2 or 3 cycles and refill the rest oil until the lift can rise to the rated maximal height. .

**Note:** It is suggested to use HM NO.46 hydraulic oil when average temperature of the location is above 18 degree Celsius and using HM NO.32 hydraulic oil when temperature is below 10 degree Celsius.

Change the oil 6 months after initial use and once per year thereafter.

**Step 12: Trial running.**

**Get familiar with lift controls by running the lift through a few cycles before loading vehicle on lift.** This step is of particular importance as it can check if the oil hose is correctly connected. The connection is qualified when there is no abnormal sound or leakage after having been tested for 5-6 times.

*If the lift doesn't raise, the motor may turn in the wrong direction. In such event, interchange wires U, V in the connection box.*

**Bleeding the hydraulic system**

Unscrew but don't remove the nut on top of the oil cylinder and slightly press the UP button until oil gets out. Screw the nut tight thereafter.



Vent air remained in the cylinder

After bleeding system, fluid level in power unit reservoir may be down. Add more fluid if necessary to raise lift to full height. It is only necessary to add fluid to raise lift to full height.

**Check the synchronization of both lifting carriages.**

Ensure the synchronization by adjusting the balance steel cables at both sides. Make both cables be of the same tightness.

This could be judged by the sound emitted by the safety locking unit during lifting process.

**Check the mechanical safety locking unit.**

Check and ensure both safety locking hooks can be effectively engaged or released.

**4.4 Items to be checked after installation**

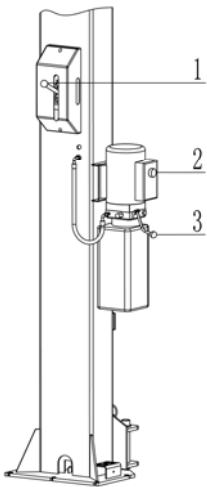
S/N	Check items	YES	NO
1	Screw torque of expansion bolts : 59 lb-ft;	√	
2	Rising speed $\geq 13/16''/s$ ;	√	
3	Noise with rated load $\leq 75dB(A)$ ;	√	
4	Grounding resistance: not bigger than $4\Omega$ ;	√	
5	Height difference of the two carriages $\leq 3/16''$ ;	√	
6	Mechanical catch unit is robust and synchronized when running with rated load ;	√	
7	If the control button works as "hold to run"?	√	
8	If limit switches work well?	√	
9	If grounding wire is connected?	√	
10	If rising and lowering smoothly?	√	
11	If there is no abnormal notice during running with rated load?	√	
12	If there is no oil leakage when running with rated load?	√	
13	If expansion bolts, nuts or circlips are well secured?	√	
14	If the max lifting height is $74\ 3/4''$ ?	√	
15	If Safety advices, name plate and logos are clear?	√	

# OPERATION INSTRUCTIONS

## 5.1 Precautions

- 5.1.1 Read and digest the complete operation instructions before operating the lift.
- 5.1.2 Only authorized persons are permitted to operate the lift.
- 5.1.3 Do not try to raise the vehicle with excessive length or width.
- 5.1.4 The space above and below the load as well as of the loading carrying devices shall be free of obstructions.
- 5.1.5 Position supporting pads to pick-up positions recommended by vehicle manufacturers.
- 5.1.6 Check the vehicle after raising a short distance to ensure that it is corrected and safely positioned.
- 5.1.7 The load carrying device shall be observed by the operator throughout the motion of the lift.
- 5.1.8 Engage the safety locking mechanism before entering under the raised vehicle.
- 5.1.9 Always use safety stands before removing and installing heavy component which may cause uneven load distribution.
- 5.1.10 Avoid excessive rocking of vehicle while on the lift
- 5.1.11 It is forbidden for people to stand in the field of motion during raising or lowering movement.
- 5.1.12 Do not climb onto the load or load carrying device when they are raised.

## 5.2 Operation instructions



POS.	Name	Function
1	Unlocking handle	Release the mechanical locking unit.
2	UP button	Control ascending movement. Disengage the mechanical locking unit.
3	Lowering handle	Control descending movement. Engage the mechanical locking unit.

**To avoid personal injury and/or property damage, permit only trained and qualified personnel to operate the lift. After reviewing these instructions, get familiar with lift controls by running the lift through a few cycles before loading vehicle on lift. Always lift the vehicle using all four adapters. Never raise just one end, one corner or one side of vehicle adapters.**

### Raise the lift

**Make sure vehicle is neither front nor rear heavy and center of balance should be midway between adapters and centered over the lift.**

1. Park the vehicle between two posts.
2. Adjust the lifting arms until lifting adapters are under the pick-up positions of the vehicle and make sure the gravity of vehicle located over the center of four lifting arms.
3. Push the "UP" button until lifting adapters have touched the pick-up positions of vehicle.
4. Keep on raising the vehicle making its wheels have a bit clearance off the ground and check again the stability.
5. Raise the vehicle to the expected height, push the "Lowering handle" to engage the mechanical safety locking unit. Check again the

stability before doing maintenance or repair work underneath.

### **Lowering**

**When lowering the lift pay careful attention that all personnel and objects are kept clear.**

1. Push the "UP" button to disengage the mechanical locking unit.
2. Push down the unlocking handle to release mechanical locking unit and meanwhile push down the lowering handle.
3. When the lift is fully lowered, position the lift arms and adapters to provide an unobstructed exit before removing vehicle from lift area.
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. Troubles could be judged and solved much faster when more details or pictures could be provided.

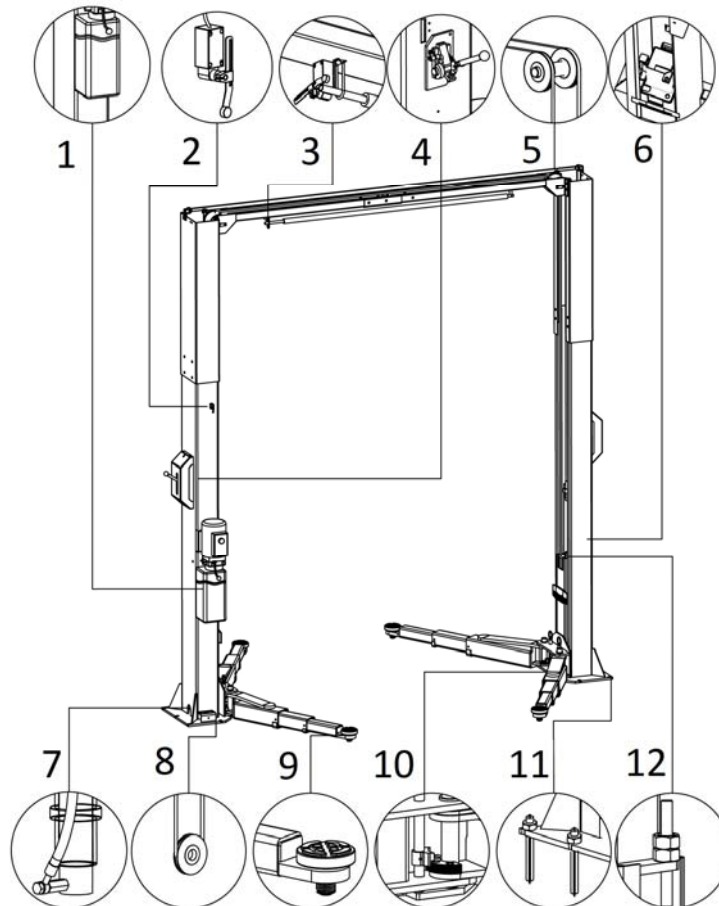
TROUBLES	POSSIBLE CAUSES	SOLUTIONS
Abnormal noise	Abrasion exists on insider surface of the posts.	Grease the inside of the post.
	Trash in the post.	Clear the trash
Motor does not run and will not rise	Loose wire connection	Check and make a good connection.
	Blown motor.	Replace it.
	Damaged limit switch or its wire connection is loose.	Adjust or replace the limit switch.
Motor runs but will not raise	The motor run reversely.	Check the wire connection.
	Overflow valve is not well screwed up or jammed.	Clean or make adjustment
	Damaged gear pump.	Replace it.
	Too low oil level.	Add oil.
	The hose connection is loose.	Tighten it.
	The cushion valve is not well screwed up or jammed.	Clean or make adjustment
Carriages go down slowly after being raised	The oil hose leaks.	Check or replace it.
	Untightened oil cylinder.	Replace the seal.
	The single way valve leaks.	Clean or replace it.
	Unloading valve fails to work well.	Clean or replace it.
	Slack steel cable	Check and adjust the tightness.
Raising too slow	Jammed oil filter	Clean or replace it.
	Too low oil level.	Add oil.
	The overflow valve is not adjusted to the right position.	Make adjustment.
	Too hot hydraulic oil ( above 45° ) .	Change the oil.

	Abraded seal of the cylinder	Replace the seal.
	Inside surface of the posts is not well greased.	Add grease.
Lowering too slow	Jammed throttle valve	Clean or replace.
	Dirty hydraulic oil	Change the oil.
	Jammed anti-surge valve	Clean it.
	Jammed oil hose	Replace it.
The steel cable is abraded	No grease at installation or out of lifetime	Replace it.

## INSPECTION AND MAINTENANCE

Easy and low cost routine inspection and maintenance can ensure the lift work normally and safely.

Follow the below routine inspection and maintenance schedule with reference to the actual working condition and frequency of your lift.



S/N	Components	Methods	Period
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S/N	Components	Methods	Period
1	Hydraulic oil	Change the oil 6 months after initial use and once per year thereafter. Inspect the hydraulic oil and change the oil if the oil becomes black or there is dirt in the oil tank.	every 180 days
2	Max lifting height limit switch	Use proper means to activate the switch and push UP button to check if the carriage stop rising.	every 30 days
3	Roof protection limit switch	Use proper means to activate the switch and push UP button to check if the carriage stop rising	every 30 days
4	Mechanical safety locking unit	Check if mechanical locking hooks can engage or disengage simultaneously by pushing control buttons.	every day
5	Upside pulley and steel cable	Lubricate the pulley and steel cable. Inspect and add more grease when necessary.	every 90 days
6	Slider and its moving path	Lubricate the slider and its moving path inside the post. Change the slider when it is over worn.	every 90 days
7	Cylinder connector	Check the hydraulic tightness of oil cylinder connector.	every 90 days
8	Downside pulley and steel cable	Lubricate the pulley and steel cable. Inspect and add more grease when necessary.	every 90 days
9	Lifting adapter	Check if it can screw UP and DOWN smoothly. Add grease onto the swivel when necessary. Inspect the rubber pads and clean off any objects that may cause sliding or damage.	every day
10	Swing arm locking units	Push the UP button to raise the lifting arms and check if four swing arms are locked into position. Add grease in case necessary.	every day
11	Expansion bolts	Check with torque spanner. Torque: 59-73 lb.ft	every 90 days
12	Steel cables	Check the synchronization of both carriages and adjust the tightness of the cable if desynchronization is unacceptable.	every day

*If users stick to the above maintenance requirements, the lift will always keep a good working condition and its service life could be extended.*

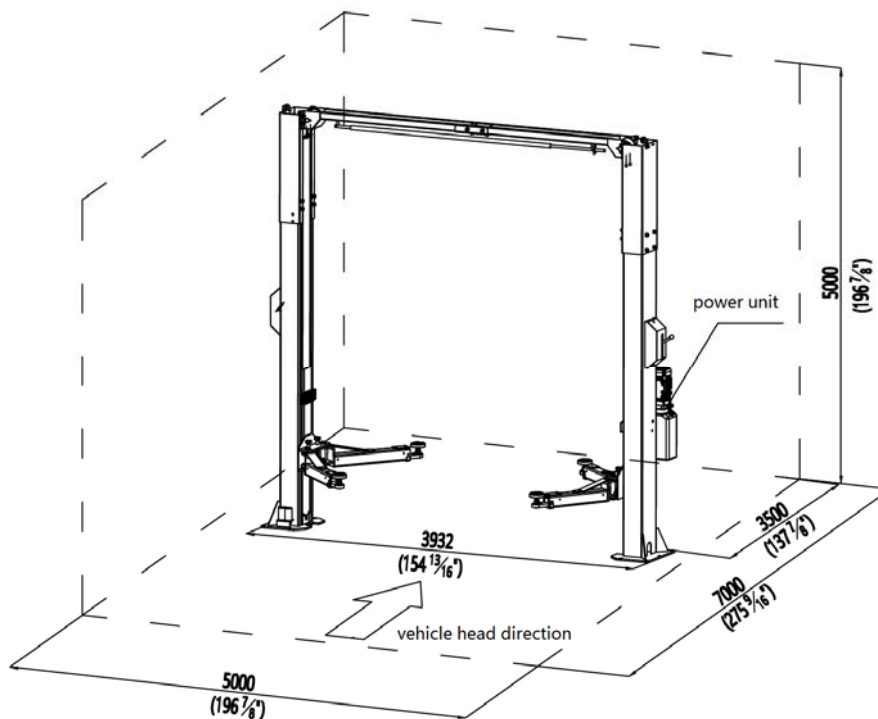
### Annex 1, Floor plan

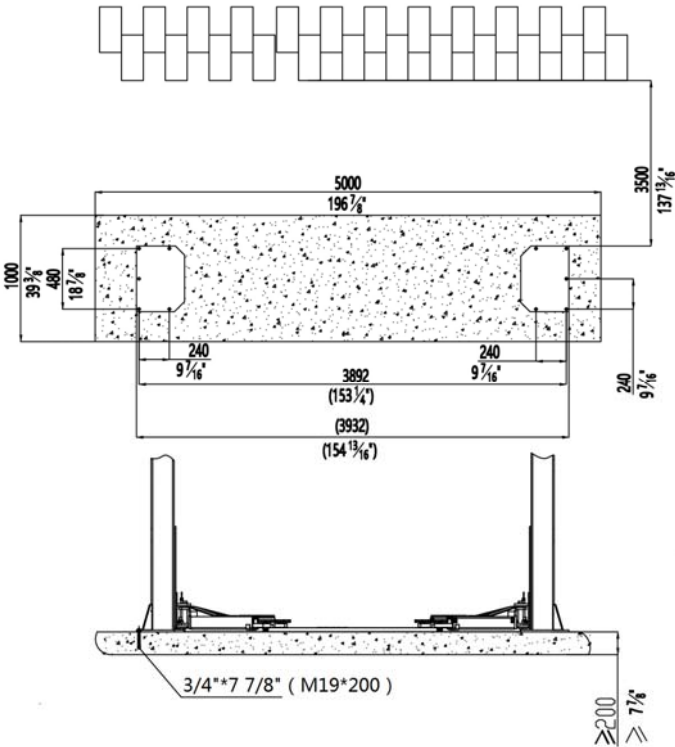
**Indoor installation only.** There must also be a clearance of at least 39 3/8" between the lifting platform and fixed elements (e.g. wall) in all lifting positions. There must be sufficient space for driving vehicles on and off.

C30 concrete base with a minimum thickness of 7 7/8".

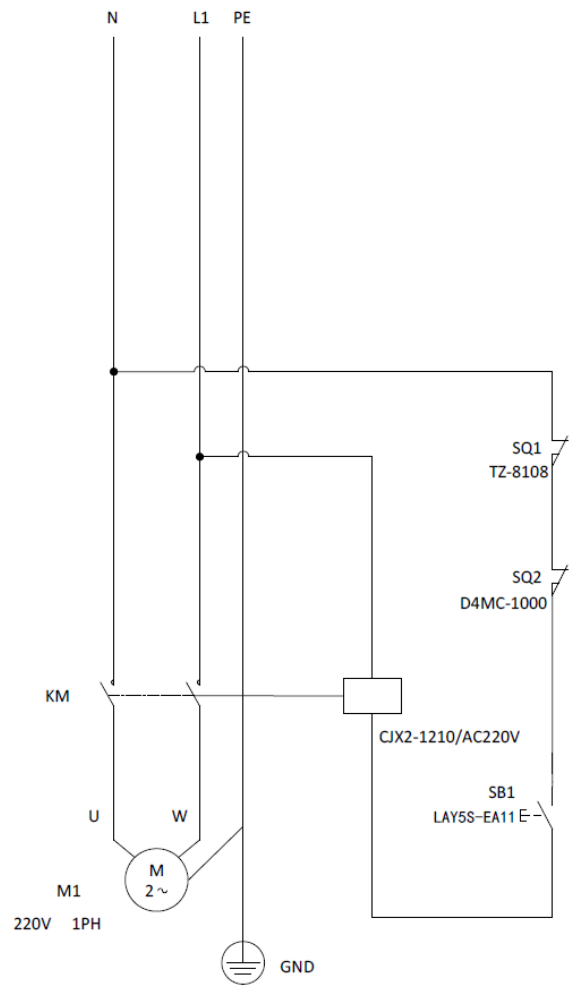
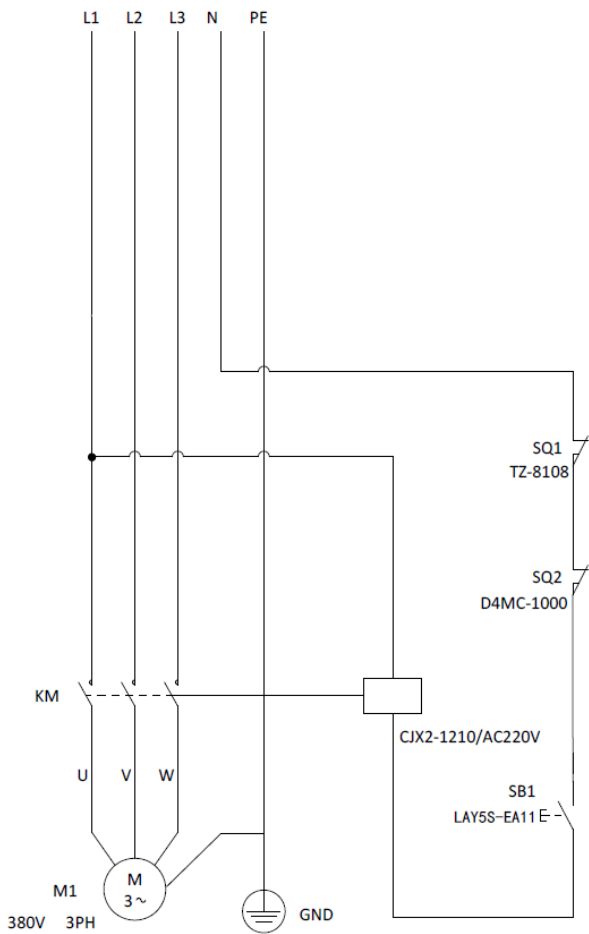
Surface under the base plates : Horizontal and even (Gradients max. 0.5 %)

Newly built concrete ground must be older than 20days.



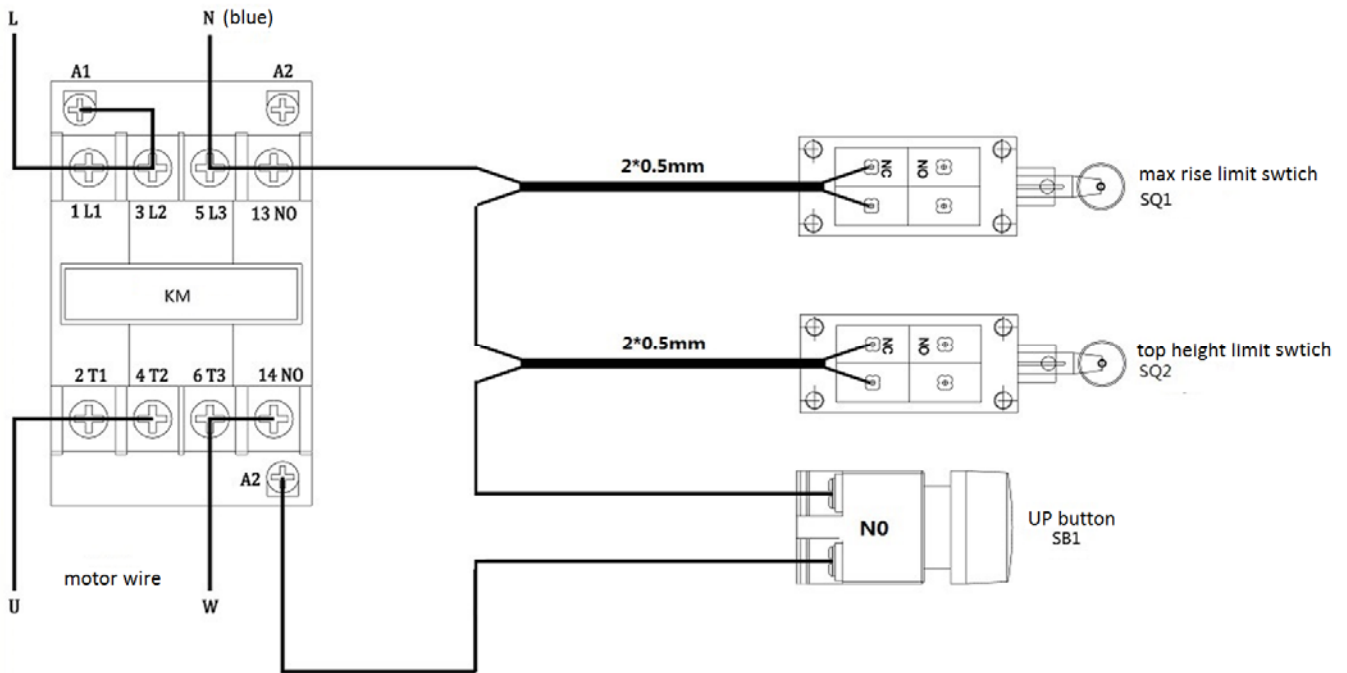


### Annex 2, Electrical schemes and parts list



POS.	CODE	Description	Qty	Note
SB1	320401042	PUSH button	1	
KM	320901003	AC contactor	1	380V/220V
SQ1	320301011	Limit switch	1	
SQ2	320301002	Limit switch	1	

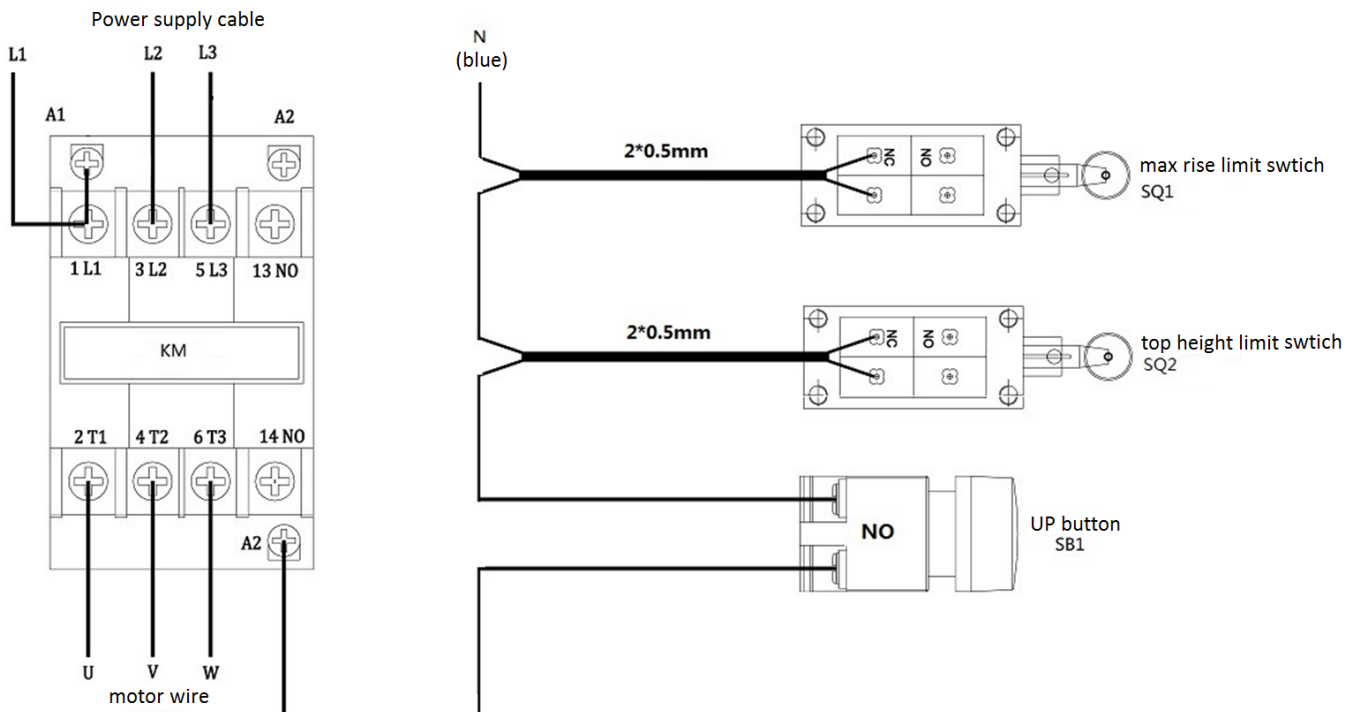
### 1Ph wire connection



Wire L is going to be fixed with terminals A1, 3L2 and 1L1. Wire N is going to be fixed with terminals 5L3 and 13NO.

Wire U is going to be fixed with terminals 2T1 and 4T2. Wire W is going to be fixed with terminals 6T3 and 14NO.

### 3Ph wire connection

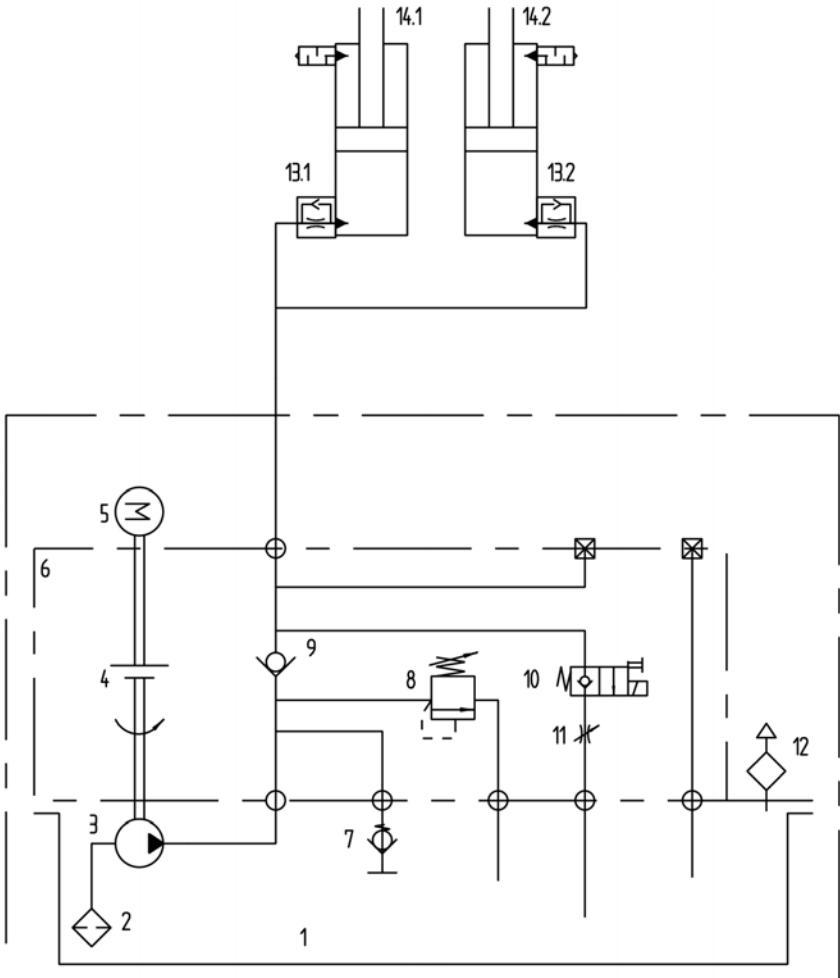


Wire L1 is going to be fixed with terminals 1L1 and A1 . Wire L2 is going to be fixed with terminal 3L2.

Wire L3 is going to be fixed with terminal 5L3.

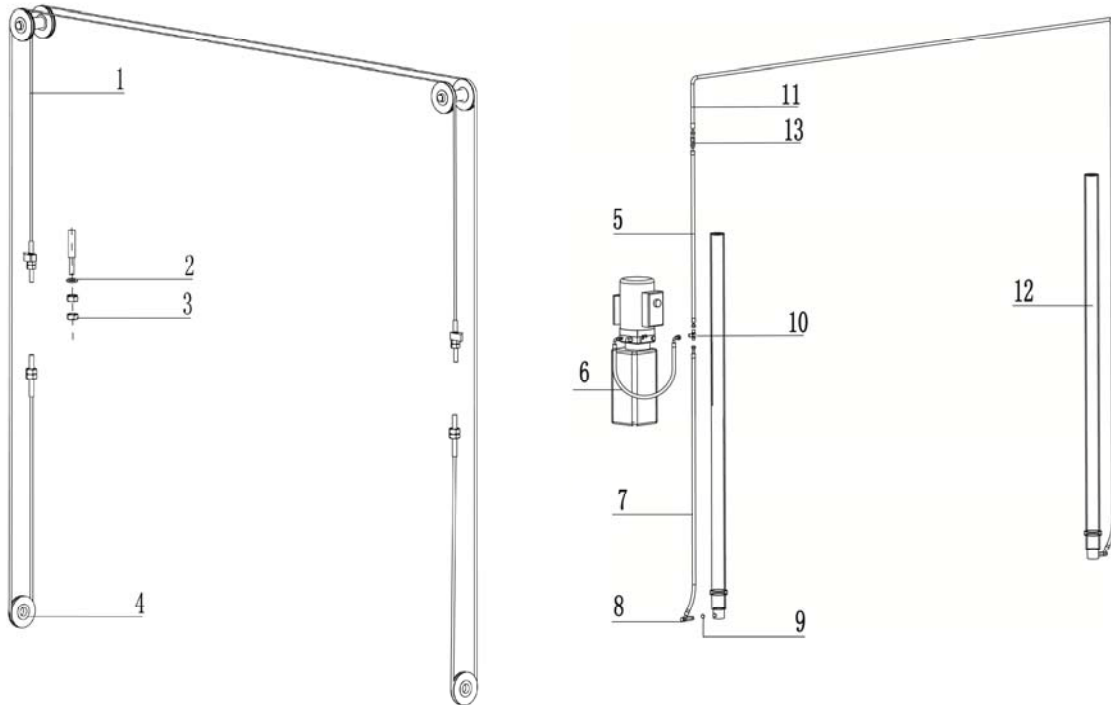
Wire U,V,W are going to be respectively fixed with terminals 2T1 , 4T2 and 6T3.

Annex 3, Hydraulic schemes and parts list

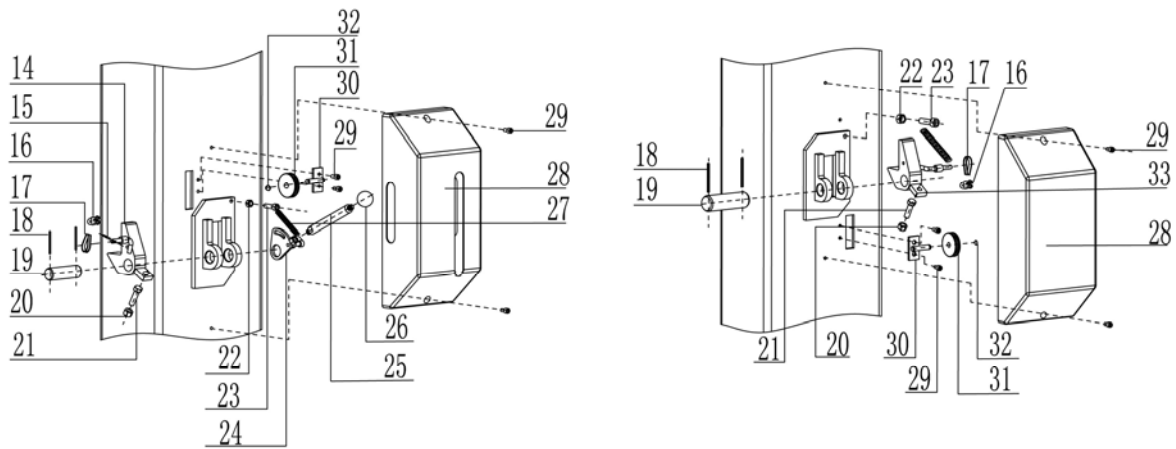


- 1. oil tank
- 2. oil sucking filter
- 3. gear pump
- 4. coupling
- 5. motor
- 6. hydraulic block
- 7. cushion valve
- 8. overflow valve
- 9. single way valve
- 10. manual unloading valve
- 11. flow control valve
- 12. oil tank cover
- 13. composite hydraulic block
- 14. oil cylinder

Annex 4, Mechanical exploded drawings and parts list

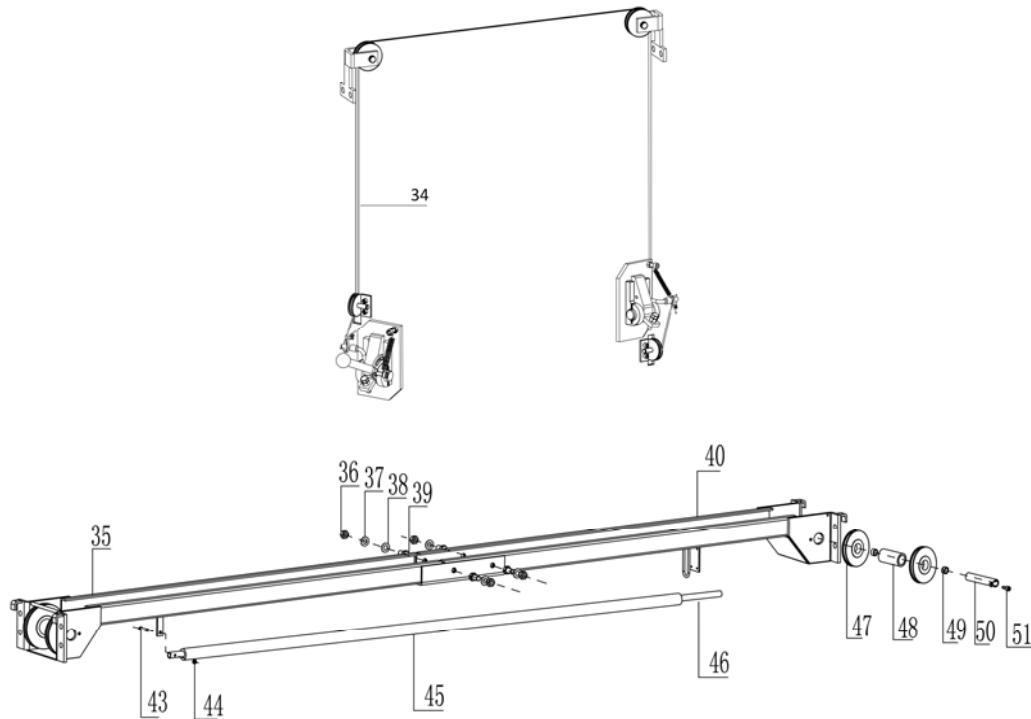


POS.	CODE	Description	Specification	Qty
1	615056115	Steel cable	L=11900	2
2	204101011	Flat washer	φ20	4
3	203101012	Hex nut	M20	8
4	410540041	Pulley	C12-A1-B2	2
5	624002069	Oil hose	L=1350	1
6	624001272	Oil hose	L=300	1
7	624002068	Oil hose	L=1050	1
8	310101047	Composite fitting	BG14-JG14BLT-L40	2
9	207103025	Composite washer	13.7*20.00*1.50(BS224)	6
10	615006003	Three way connector	6214E-A4-B4	1
11	624002070	Oil hose	L=10000	1
12	615056116	Cylinder	YG7083-60-1750	2
13	410210191	Straight connector	6603B-A9-B8	1

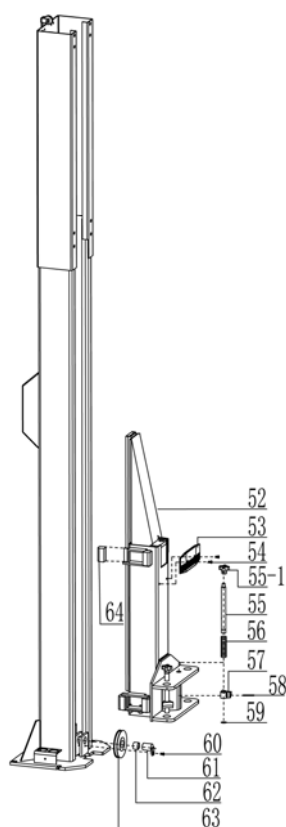


POS.	CODE	Description	Specification	Qty
14	614054003	Safety hook	C12-A1-B4	1
15	206201004	Cotter pin	M3*45	6
16	208101037	Rope locker	M3-1	2
17	430020260	Rope ring		2
18	206201004	Cotter pin	M3*45	6
19	410540031	Safety shaft	C12-A1-B6	2
20	203101006	Hex nut	M10	2
21	201103004	Hex head full swivel bolt	M10*35	2
22	203101005	Hex nut	M8	2
23	202109030	Hex socket cylinder head screw	M8*25	2
24	614054006	Release plate	C12-A1-B5	2
25	410150021B	Release handle	6215DZ-A1-B3-C1	1
26	208105003B	Handle ball	Black full swivel	1
27	410047530B	Pull spring	62B-A10-B9-M	2
28	614054001	Safety lock cover	C12-A1-B9	2
29	202109017	Hex socket cylinder head screw	M6*8	8
30	614006012B	Pulley	6214DS-A9	2
31	420080030	Pulley II	6214DS-A7	2
32	204301001	Circlip	φ10	2
33	612056003	The secondary hook	C12-A2-B3	1





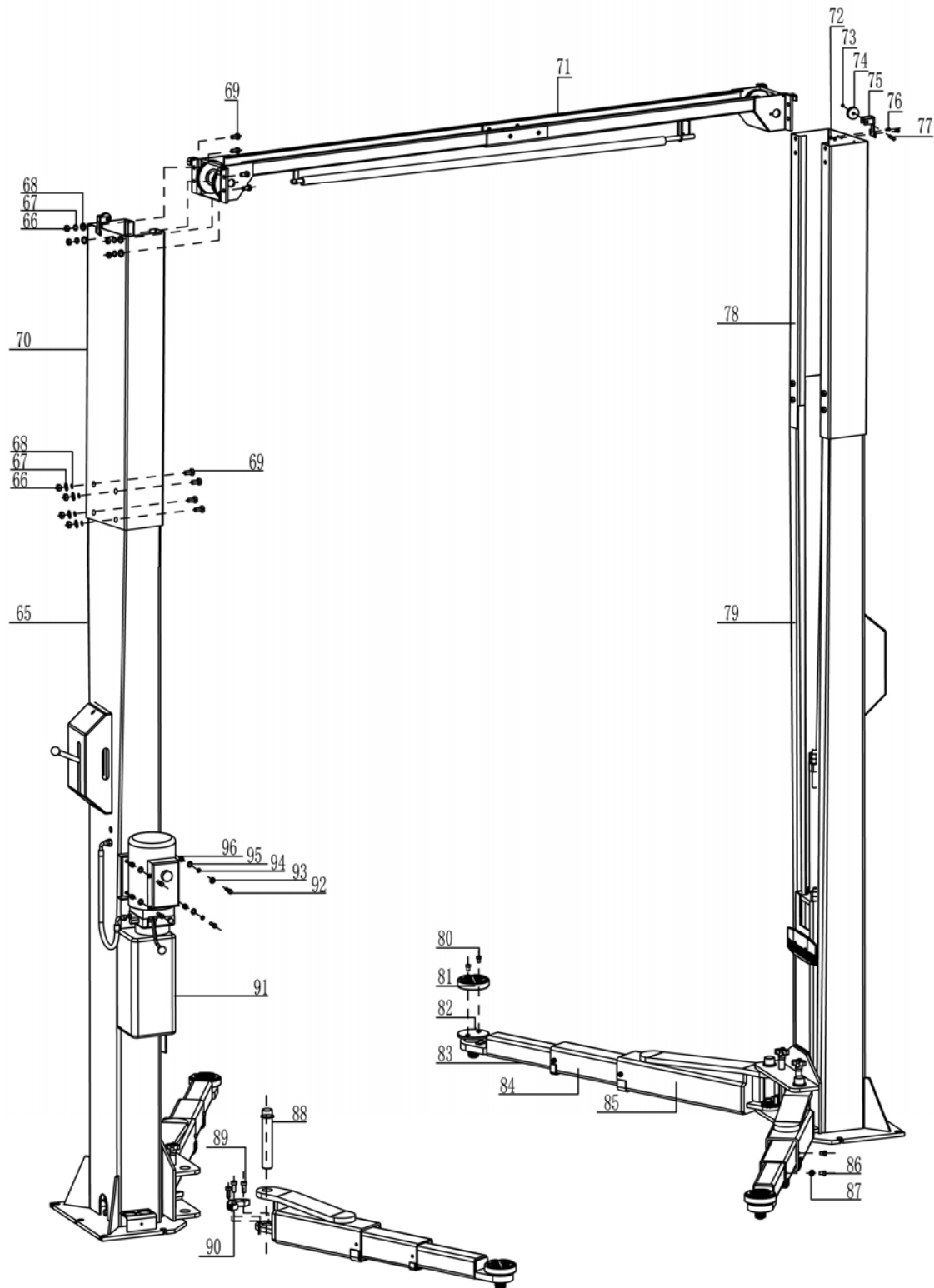
POS.	CODE	Description	Specification	Qty
34	126040201	Steep rope	φ 2.5	1
35	614056207	Crossbeam (out)	C12J-A21-B1	1
36	203101008	Hex nut	M14	6
37	204201007	Spring washer	M14	6
38	204101008	Flat washer	M14	6
39	201102035	Hex head full swivel screw	M14*30	6
40	614056206	Crossbeam (in)	C12J-A21-B2	1
43	202109024	Hex socket cylinder head screw	M6*35	1
44	203103005	Locking nut	M6	1
45	420060010	Black foam tube	ID=22	1
46	410160023	Long rod	6215E-A10-B3	1
47	410540041	Pulley	C12-A1-B2	4
48	410540011	Spacer sheath	C12-A21-B4	2
49	205101101	Bearing	3520	6
50	612054507	Upside pulley shaft	C10S-A21-B3	2
51	202111004	Hex socket flat head screw	M8*12	2



POS.	CODE	Description	Specification	Qty
52	614056203	Carriage assembly	C12J-A3-B1	2
53	420040160	Protective rubber pad	6254E-A2-B6	2
54	202111004	Hex socket flat head screw	M8*12	4
55	410902399	Pulling rod	6255E-A3-B4-C1-1	4
55-1	203204011	Knob	50*M10	4
56	410150121	Pressure spring	6254E-A2-B4	4
57	410901966	Teeth block	6255E-A3-B6	4
58	206102013	Elastic post pin	D6X40-GB879	4
59	204301009	Circlip	D25-GB894_2	4
60	202111004	Hex socket flat head screw	M8*12	2
61	612056001	Shaft for downside pulley	C12-A1-B3	2
62	205101101	Bearing	3520	6
63	410540041	Pulley	C12-A1-B2	4
64	420080010B	Slider	C10-A3-B2	16

# Installation, Operation and Parts Manual

## MJ-C12



POS.	CODE	Description	Specification	Qty
65	614056201	Power side post	C12J-A1-B1	1
66	203101008	Hex nut	M14	24
67	204201007	Spring washer	M14	24
68	204101008	Flat washer	M14	24

# Installation, Operation and Parts Manual

MJ-C12

POS.	CODE	Description	Specification	Qty
69	201102035	Hex head full swivel screw	M14*30	24
70	614056204	Extending post	C12J-A19	1
71	615056204	Crossbeam assembly	C12J-A21	1
72	203103006	Hex locking nut	M8	4
73	204301001	Circlip	φ10	4
74	410060301	Pulley II	6214DS-A8-0	2
75	410060573	Support bracket for the upside pulley	6214DS-A10	2
76	202109028	Hex socket cylinder head screw	M8*16	4
77	410060310	Shaft	6214DS-A10-B2-2	2
78	614056205	Extending post (right side)	C12J-A20	1
79	614056202	The secondary post	C12J-A2-B1	1
80	202111007	Hex socket flat head screw	M8*20	8
81	420130010	Rubber pad	6214EKZ-A4-B4-C4	4
82	615035037	Lifting tray assembly	6214EKZ-A4-B4	4
83	614013213B	Retractable arm	6255E-A4-B3	4
84	614013212	Middle arm	6255E-A4-B2	4
85	614013211B	Support arm	6255E-A4-B1	4
86	202109040	Hex socket cylinder head screw	M10*15	8
87	204101006	Flat washer	M10	8
88	410049031B	Pin shaft	6254E-A12	4
89	202109085	Hex socket cylinder head screw	M12*30	12
90	410901967	Teeth wheel	6255E-A4-B5	4
91	330103004	Power unit (ETL)	220V-60HZ-1PH-21MPA-10L	1
92	201102013	Hex head full swivel bolt	M8*30	4
93	203101006	Hex nut	M10	4
94	204101006	Flat washer	M10	4
95	204201005	Spring washer	M10	4
96	420040010	Anti-shock ring	6254E-A23C81:D9C2:D96	4