

Model No. EE-62CE-50T

Two Post Lift

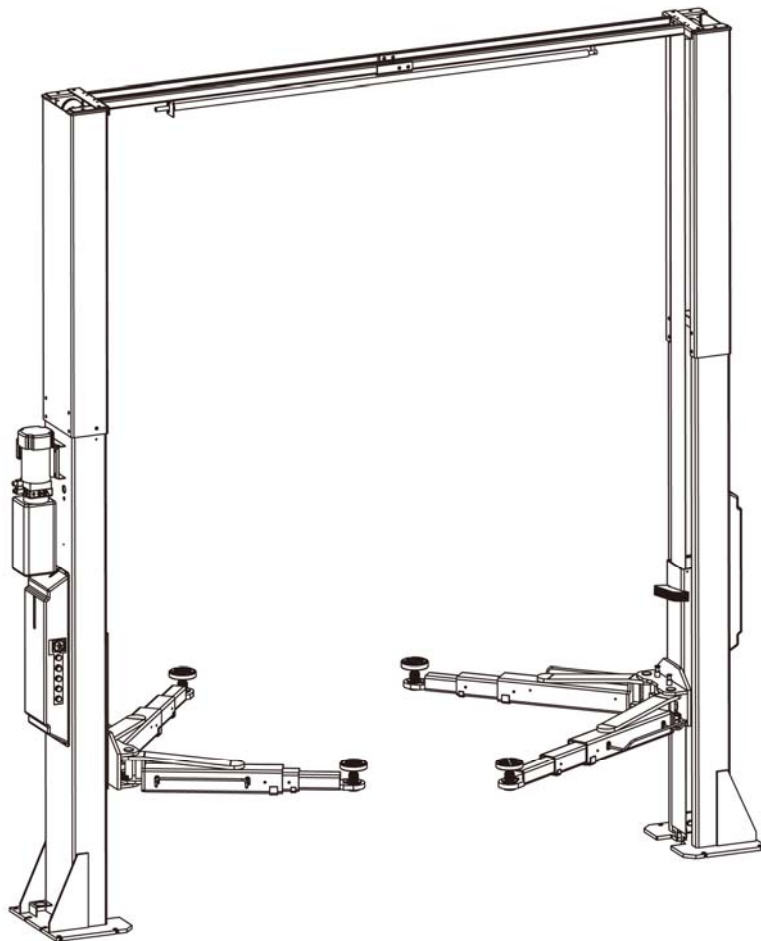
Electrical Release

Lifting Capacity 5000KG

## Installation, Operation and Parts Manual



# EAE



*Distributed by*

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

DATE: 19/09/2023

[www.eae-ae.com](http://www.eae-ae.com)

## IMPORTANT NOTES

Before start up, connecting and operating EAE 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 EAE 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 EAE 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:

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### **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 EAE 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 EAE.

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

**EAE 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 requirements stipulated in the directive 2006/42/EC
- Harmonized European standards
- 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 ensured 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, tires, 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 unconcerned.

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

All safety warning labels are clearly depicted on the lift to ensure that the operator is aware of and avoid the dangers of using the lift in an incorrect manner. The labels must be kept clean and they have to be replaced if detached or damaged. Please read carefully the meaning of each label and memories them for future operation.

### SAFETY ADVICE

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

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

## 1.5 Potential safety risks

### 1.5.1 Main 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 The lift was dismantled into the following 3 parts for transportation

Name	Packed by	Quantity
Lift (50T)	Steel brackets	1
Extending post	Bubble film	1
Power unit	Carton	1
Type-M foldable arm (Optional)	Wooden case	1

### 2.2 Storage

The packs must be kept in a covered and protected area in a temperature range of -10°C to +40°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:

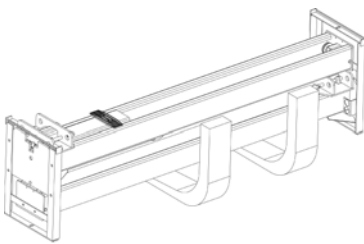
-never stack to more than 2 meters in height.

-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 Lifting and handling

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



#### Opening the packs

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

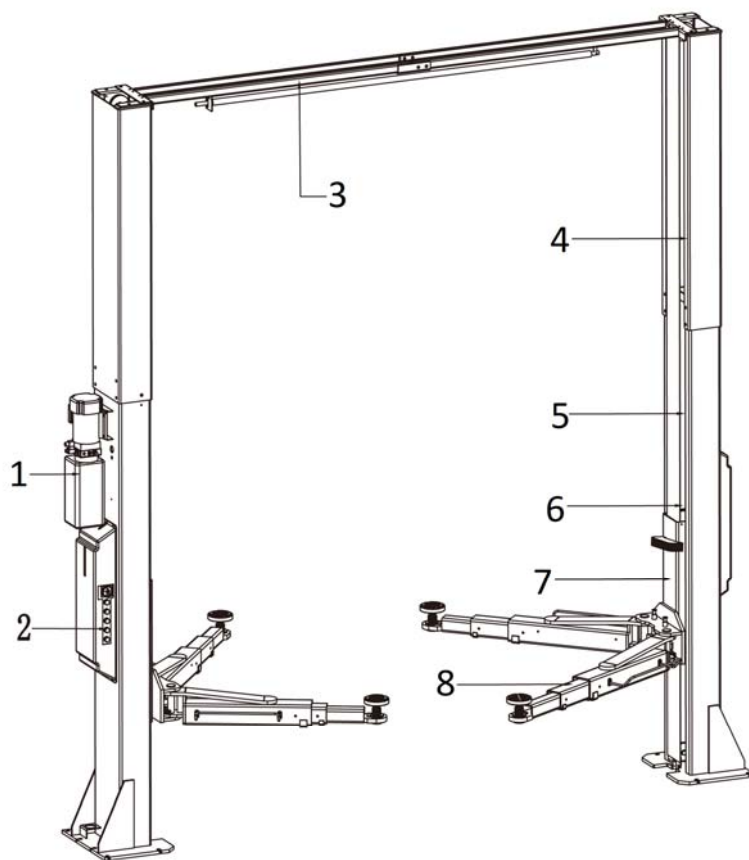
### 3.1 General descriptions

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



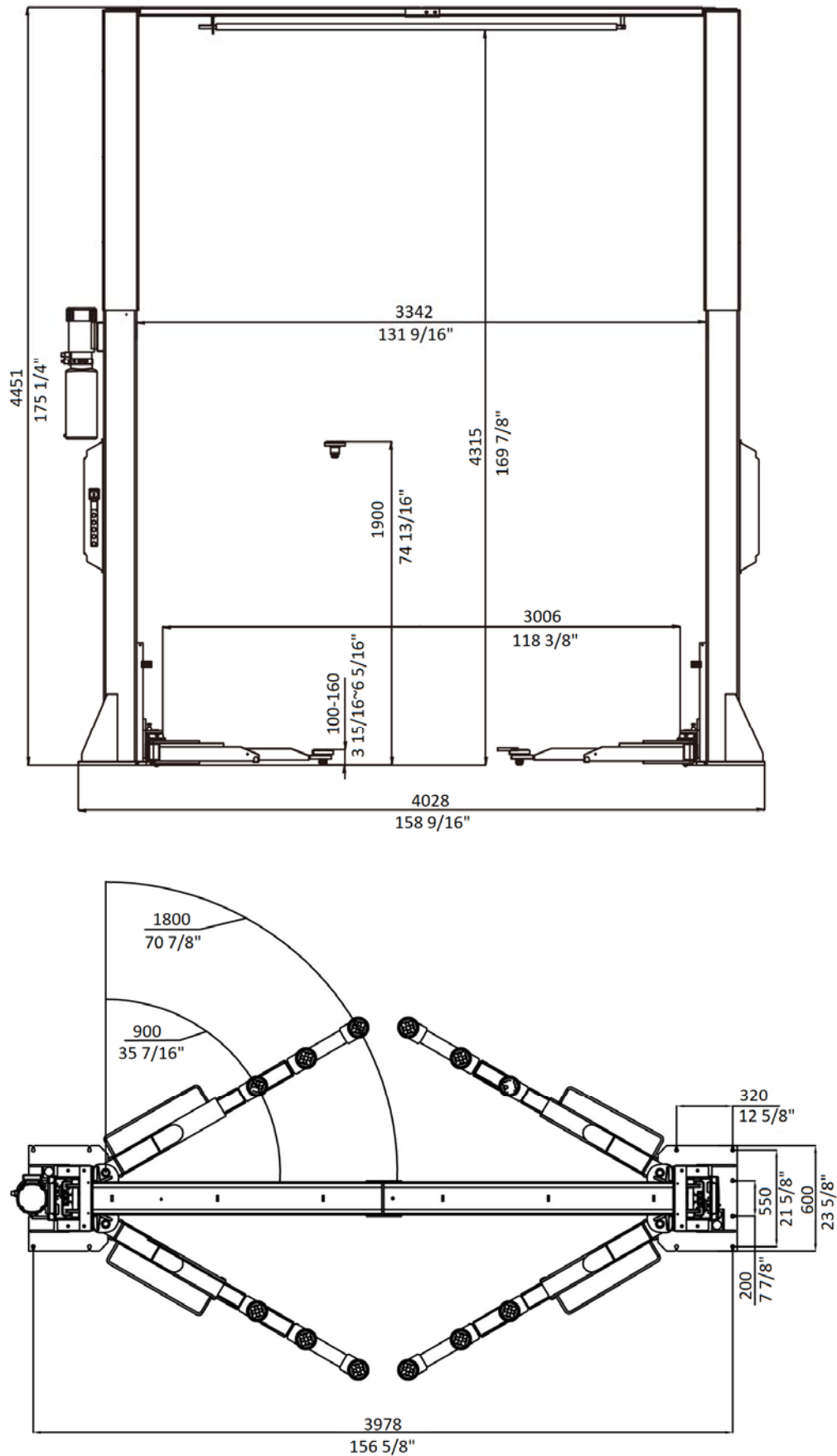
- 1. Hydraulic power unit
- 2. Control unit
- 3. Crossbeam
- 4. Extending post
- 5. Steel rope
- 6. Hydraulic cylinder
- 7. Carriage
- 8. Swing arm

### 3.3 Technical data

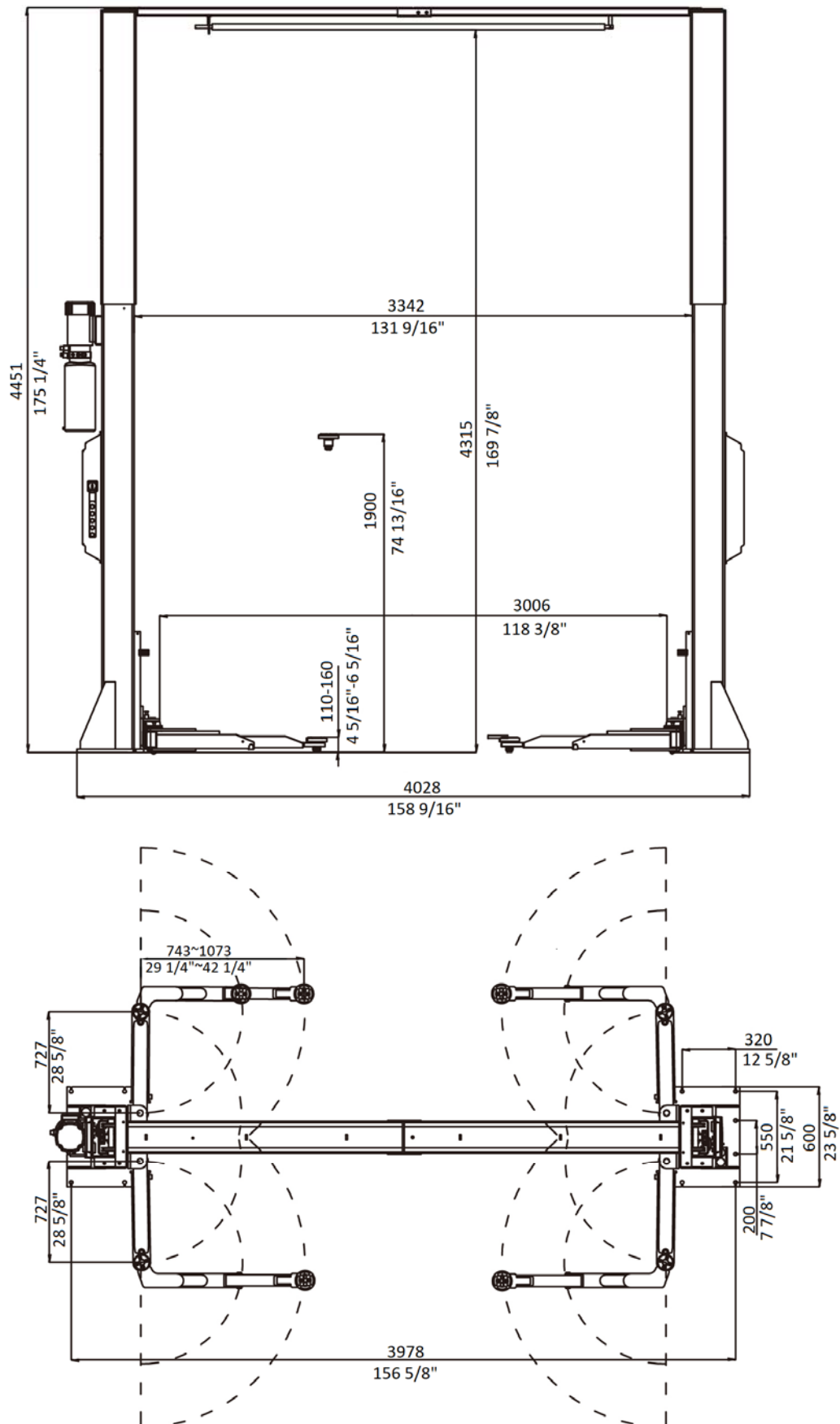
Model	EE-62CE-50T
Rated capacity	5000 kg
Max height of the pick-up adapter	1900mm
Initial height of the pick-up adapter	100 mm (straight arm)
	110 mm (foldable arm)
Full raised time (with rated load)	Approx.60s(2.2kW)

### 3.4 Dimensions

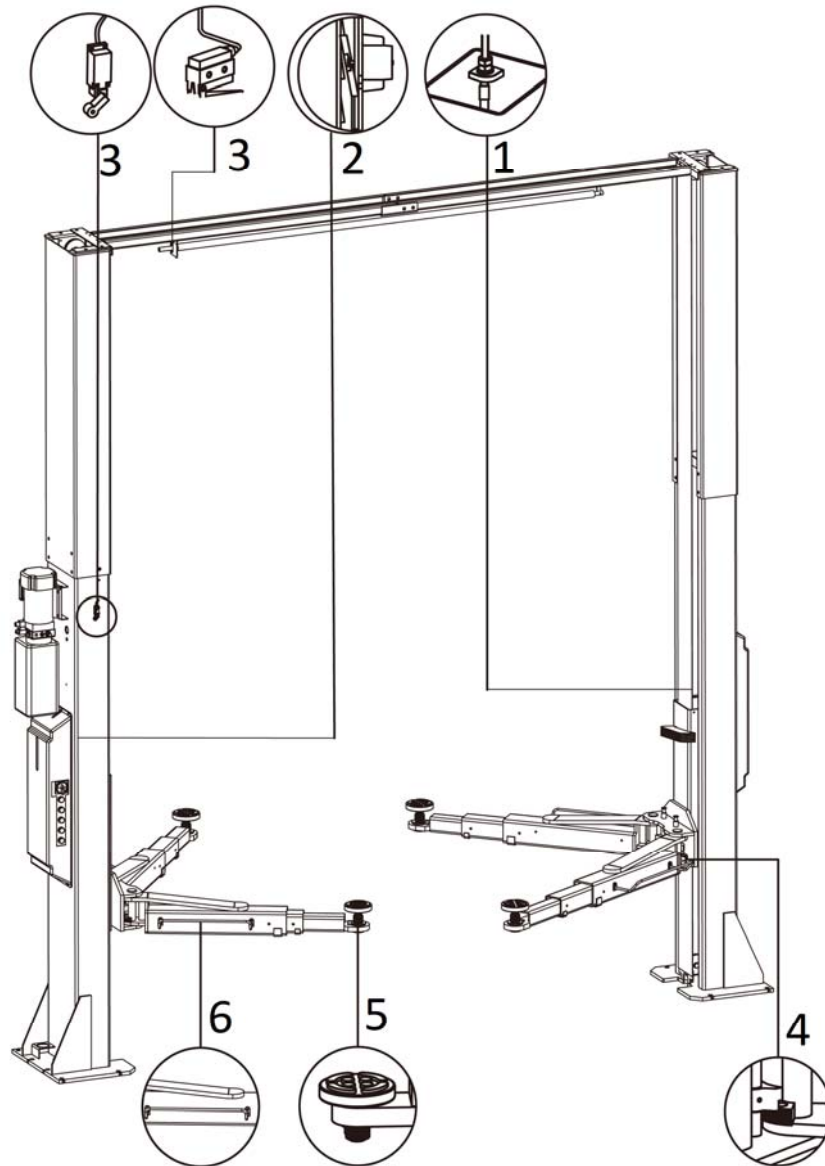
Dimension scheme with four 3-stage straight arms (Standard arms)



### Dimensions for the optional foldable arms



### 3.5 Safety devices descriptions



Pos.	Description	Function
1	Steel rope	Ensure sure the synchronization for both carriages
2	Mechanical safety locking unit	Catch the carriages in case of hydraulic failure
3	Limit switch	Stop rising movement at maximum safety height
4	Arm locking unit	Ensure the lifting arms are locked and avoid being swinging during lifting process
5	Lifting pad	Safe rubber contact with the wheel base of lifted vehicle
6	Fender	Protect feet from entering into danger areas that may cause pinching or shearing

# INSTALLATION INSTRUCTIONS

## 4.1 Preparations before installation

### 4.1.1 Space requirements.

**Indoor installation only.** 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 a qualified electrician.* Requirements for power supply cable of the installation site: at least 2.5mm<sup>2</sup> wire core for 3Ph power and 4.0mm<sup>2</sup> 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.
- Foundations preparations (see Annex 1, floor plan)

***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 foundation with a minimum thickness of 250mm.

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

Newly built concrete ground must be older than 20days.

### 4.1.3 Tools and equipment needed for installation

Tool name	Specification	Qty
Electrical drill	With D16 and D18 drill bit.	1
Open spanner	D17-19mm	2
Adjustable spanner	bigger than D30mm	1
Cross socket screw driver	PH2	1
Quick spanner handle adapter/ Ratchet	REB-310	1
Levelling device	1mm accuracy	1
Hammer	10 pounds	1
Truck lift	Capacity more than 1000kg	1
Torque spanner	MD400	1

## 4.2 Installation attentions

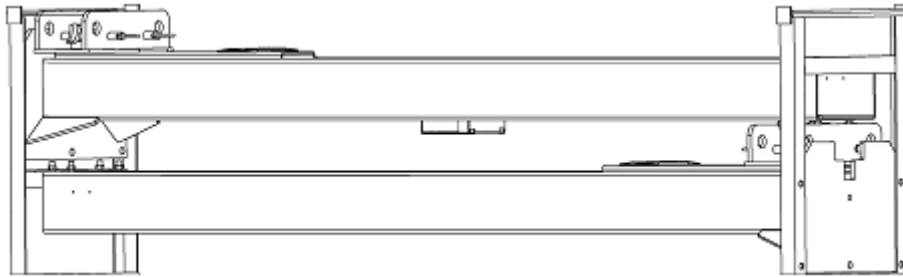
4.2.1 Tighten all hydraulic and electrical connections.

4.2.2 Tighten all screws, nuts and bolts.

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, take out the carton for accessories.

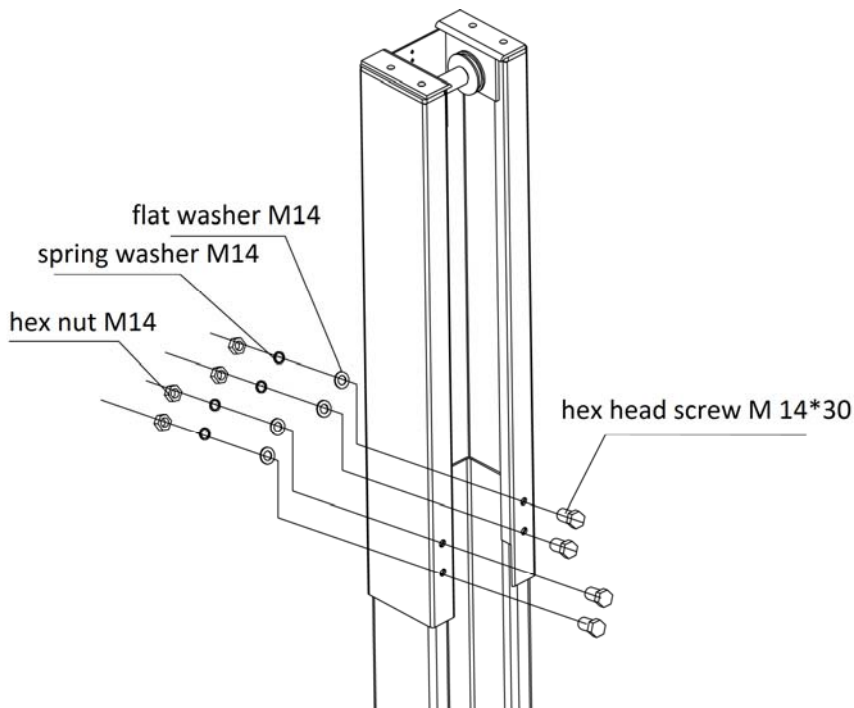
**Step 2:** Firstly, put something supporting between the two posts or suspend one of the posts by a crane and then remove the bolts from the packing frame.

**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.

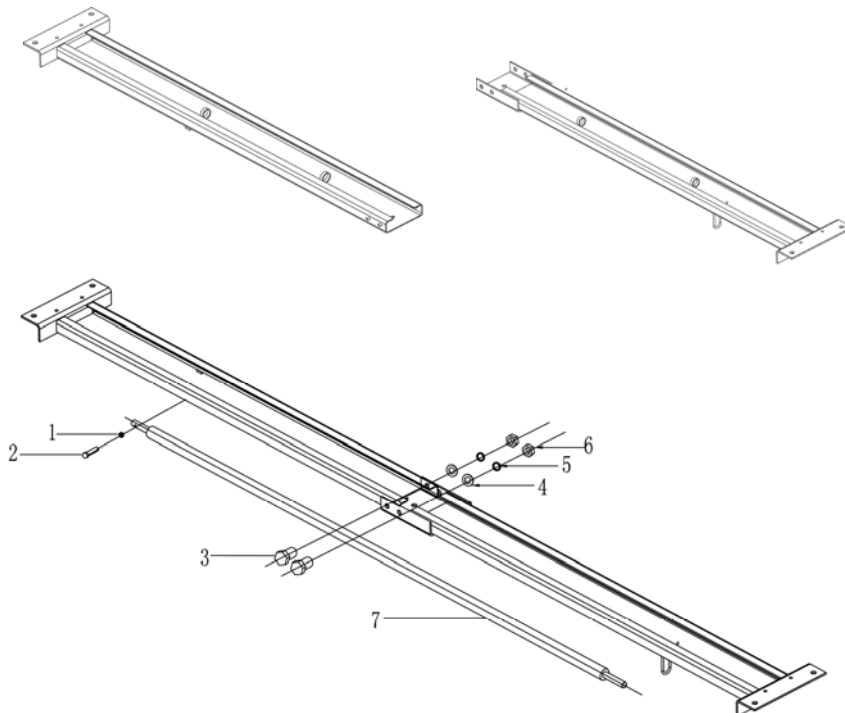
**Step 3:** When the first post has been taken away, place something supporter under the second post and then remove the bolts from the packing frame.

**Step 4:** Connect extending posts and cross beams

1. Firstly have the extending post firmly secured on to the body posts. This is only necessary when your lift is ordered with extending posts



2. Connect the beams and fix the roof protection bumper



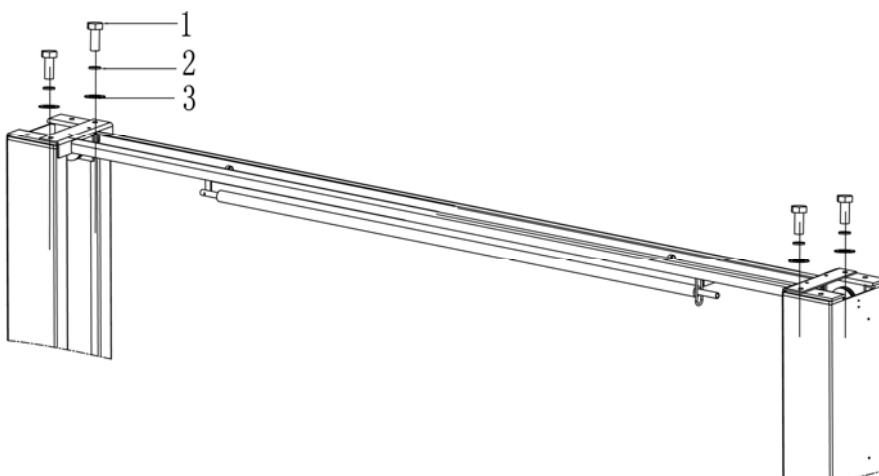
- 1. Self-locking nut M6
- 2. Hex socket cylinder screw M6\*35
- 3. Hex head screw M14\*35
- 4. Flat washer M14
- 5. Spring washer M14
- 6. Hex nut M14
- 7. Car roof protective rod

**Step 5: Fix the standing position for the two posts. (See Annex 1, floor plan)**

1. Unfold the package and decide on which post the power unit will be mounted.
2. Draw an outline of the base plate on the ground with chalk and ascertain the position for the post.

**Step 6: Connect cross beam.**

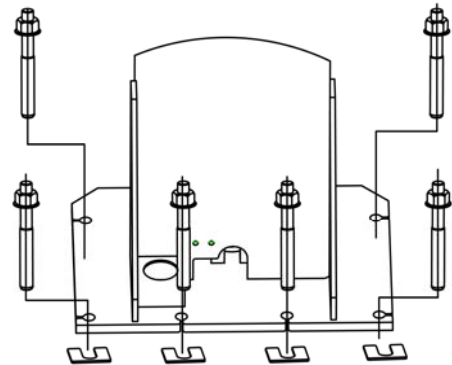
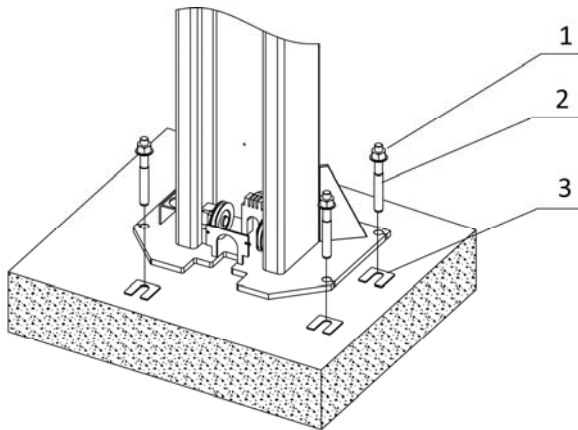
Make the posts face to each other and the distance between the posts equals to the length of the overhead crossbeam. Fix the beam to the posts by screw M12×30



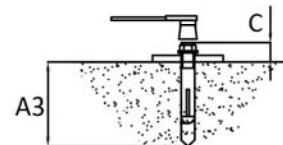
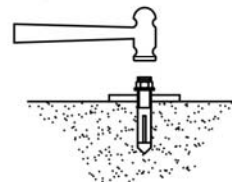
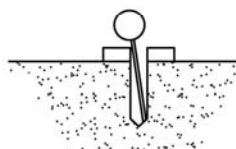
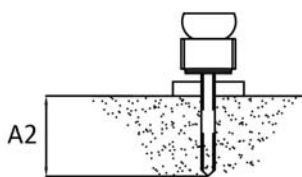
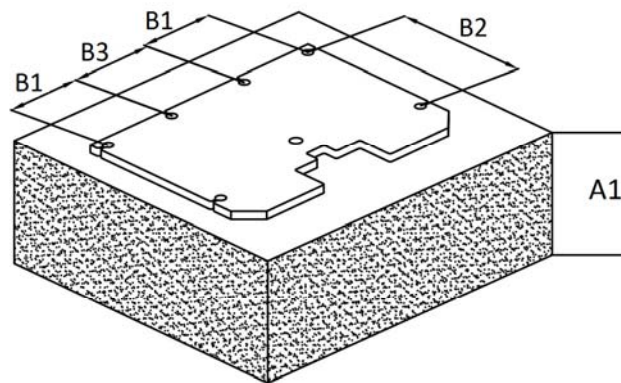
- 1. Hex head screw M12\*30
- 2. Spring washer M12
- 3. Flat washer M12

### Step 7: Erect and secure the post.

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.
6. Tighten the nuts. **Torque: 80-100Nm.**



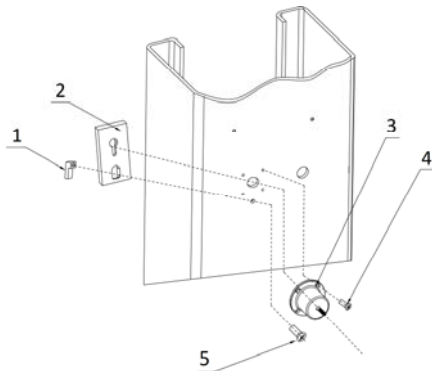
1. Nut
2. Expansion anchoring bolt
3. Equalizing plate



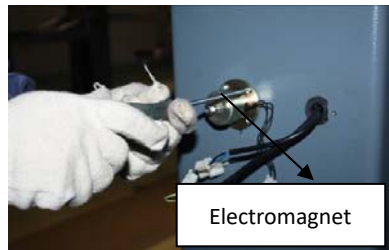
Anchoring bolt	A1 (foundation thickness )	A2 (drilling depth)	A3 (anchoring depth)	B1	B2	B3	C
M18x200	≥200mm	160mm	145mm	175mm	320mm	200mm	≤55mm

## Step 8: Install the mechanical locking unit.

Fix four safety locking plates and electromagnets with two of them on each post.

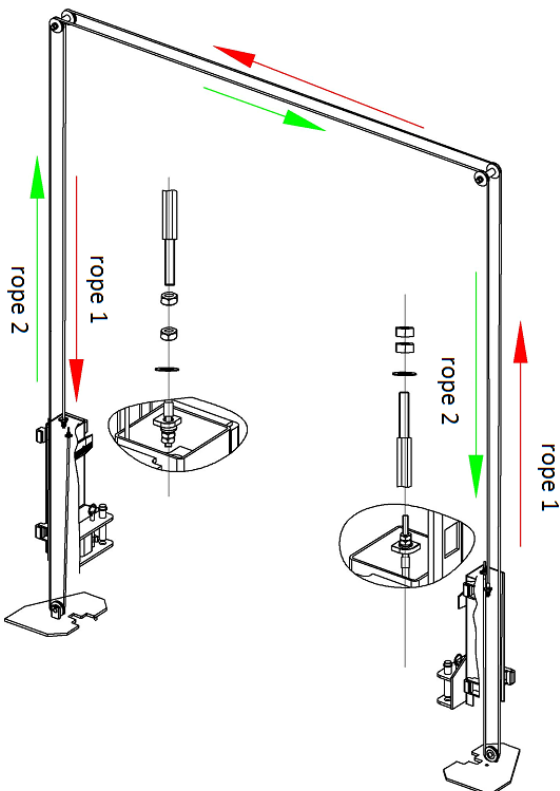


- 1.Orientation block
- 2.Safety locking plate
- 3.Electromagnet
- 4.Cross socket cap head screw M6x12
- 5.Cross socket cap head screw M6x16



## Step 9: Connect steel ropes.

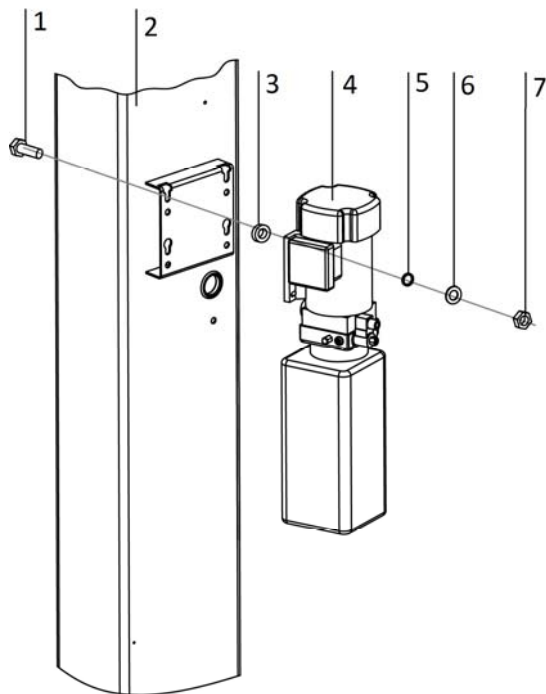
1. Route and fix according to the following diagram of steel rope connection.
2. Use suitable means to raise carriages at both sides to the first latching point. Ensure the both carriages are locked.
3. After the cable being fixed, adjust and make the cables at both sides be with the same tension. (This could be judged by the sound caused by mechanical safety locking system during lifting process.)
4. Grease with NO.1 lithium grease (It is a must.)



**Step 10: Install the hydraulic system.**

**Attention: Do not contaminate the hydraulic system when do the connection.**

1. Mount the power unit onto the power side post.



1.Hex head full swivel screw M10x35

2.Power side post

3.Anti-shock pad

4.Hydraulic power unit

5.Flat washer M10

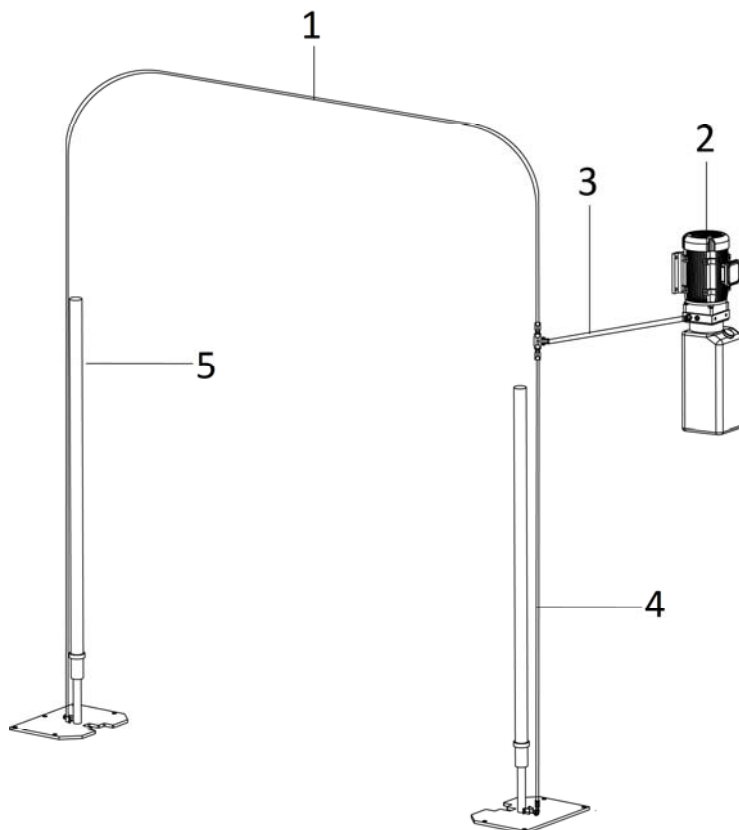
6.Spring washer M10

7.Hex nut M10

2. Connect oil hoses according to the following diagram.

Don't let any solid substance go into the hydraulic line.

Ensure the connectors are screwed tight against leakage.



1.Oil hose 1

2.Hydraulic power unit

3.Oil hose 2

4.Oil hose 3

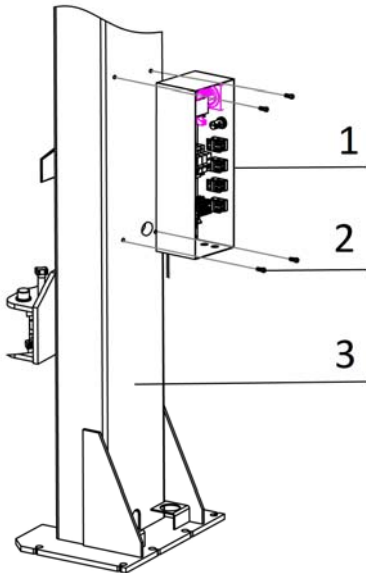
5.Hydraulic cylinder

**Step 11: Install the electrical system.**

**Attention: ONLY qualified electricians are permitted to do the electrical connection.**

Refer to electrical connection diagram before making the connection.

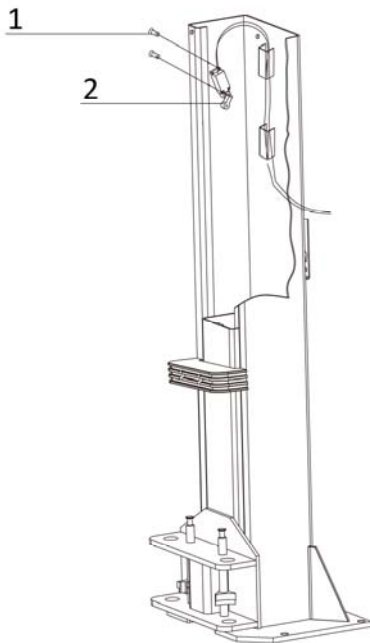
1. Mount the control box on to the power side post.



- 1.control box
- 2.hex socket screw M6\*10
- 3.post

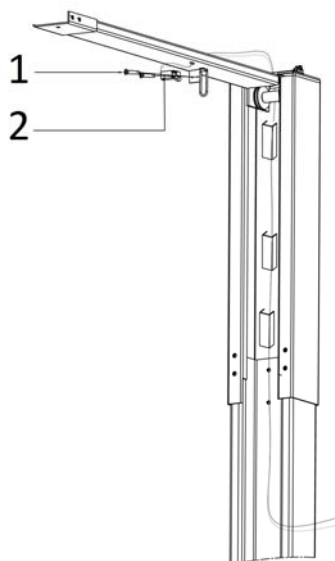
2. Fix the limit switch onto the inside surface of the power side post.

Connect the wire of limit switch with the terminals reserved in the control box.



- 1.Cross socket flat head screw M5x10
- 2.Limit switch

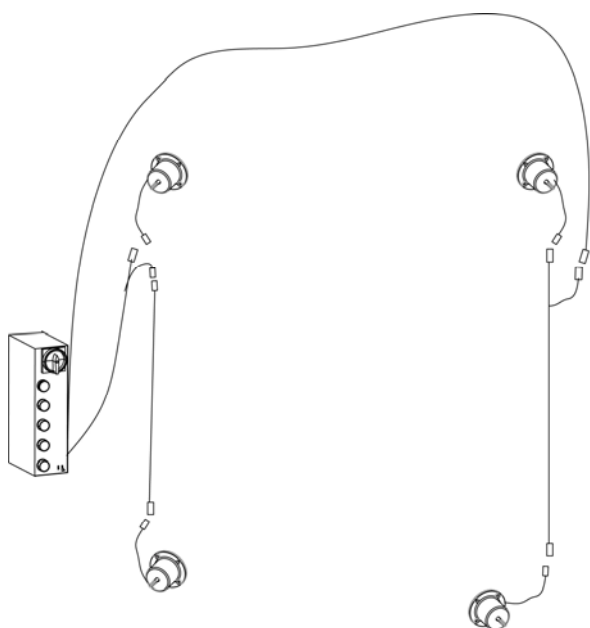
3. Connect the limit switch fixed at the cross beam.



1. Cross socket flat head screw M4\*25

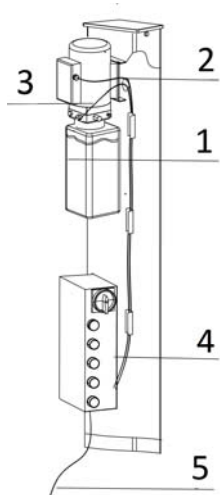
2. Limit switch D4MC1000

4. Connect quick connectors between electromagnets.



Quick connector

5. Connect the solenoid valve wire and motor wire.



1. Power unit

2. Motor wire

3. Solenoid valve wire

4. Control box

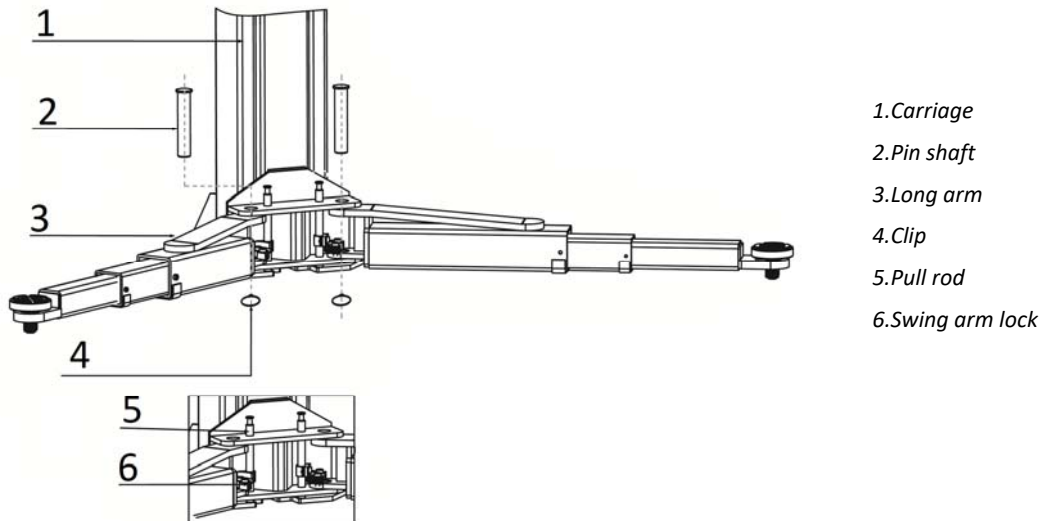
5. Power supply wire

## Step 12: Install lifting arms.

Connect the lifting arm and the carriage. The arm pin shafts must be greased at the installation.

Ensure the arm lock can engage and release effectively. .

**Attention: Install Lifting arms and fix feet protection bars ONLY after the complete assembly has been erected and anchored.**



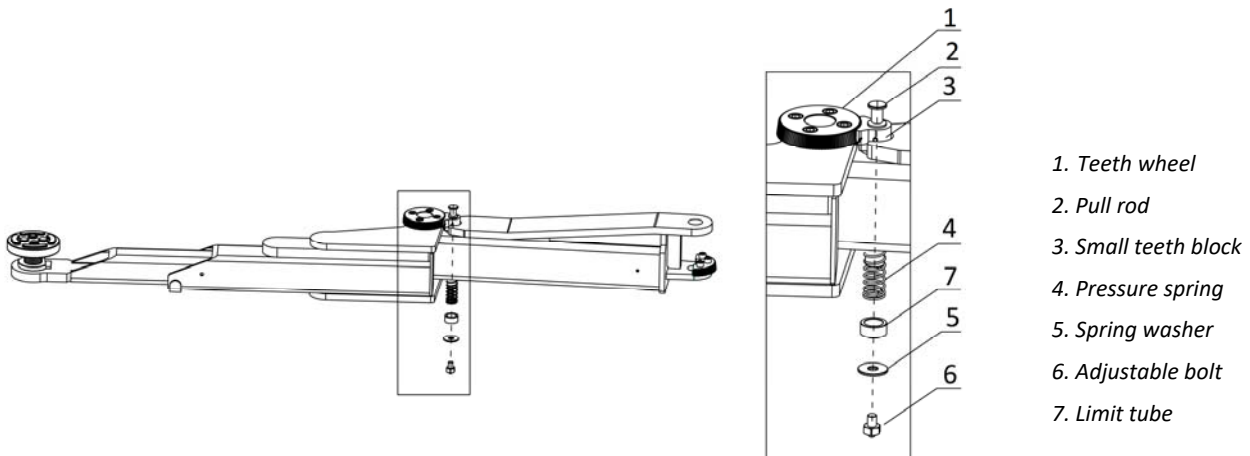
### Attentions for assembling optional foldable arms

Ensure the locking device at middle joint arm can engage and release effectively.

The lock may not release automatically on uneven surface.

On floor with level deviation being not more than 5mm, it can be adjusted to release automatically.

**Adjust the bolt (Pos.6) at the bottom properly, making the joint arm lock engage when the arm rises and disengage when the arm lowers to the bottom.**



## Step 13: Fill with hydraulic oil.

**CLEAN AND FRESH OIL ONLY. DON'T FILL THE TANK COMPLETELY FULL.**

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

Pour 10 liters of anti-abrasion hydraulic oil into the oil tank. The level of oil shall reach the tippets volume mark of the tank.

Add more oil after running the lift for several cycles until the lift can rise to the maximum lifting height.

It is suggested to use HM NO.46 hydraulic oil. When average temperature of the location is below 10°C, use HM NO.32 hydraulic oil.

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

## Step 14: Trial commissioning.

The purpose for trial commissioning is to check whether the lift is ready to be raised and lowered smoothly for safe use.

The user shall get familiar with lift controls through raising and lowering the lift a few cycles before using it to lifting vehicles.

## Bleeding the hydraulic system.

Vent air remained the oil cylinder. Screw loose 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, fluid level in power unit reservoir may go 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 mechanical safety locking system.

Check if mechanical locks can be well engaged and released in the lifting and lowering process.

## Check the synchronization of lifting carriages.

Adjust the nuts that fix the ropes at both sides, making them be under the same tension.

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

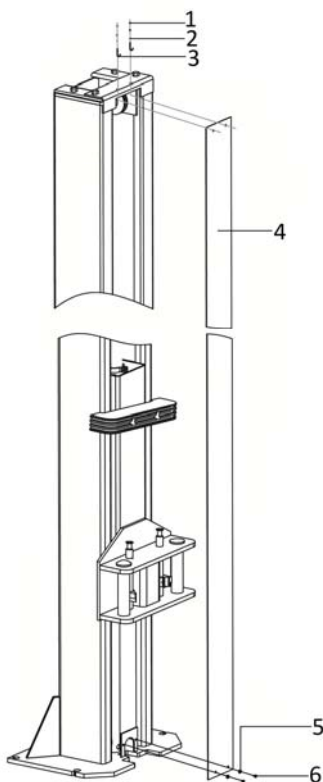
## Check the hydraulic lines.

Raise and lower for several complete cycles and inspect if the hose connectors, cylinders and valves are well tightened without leakage.

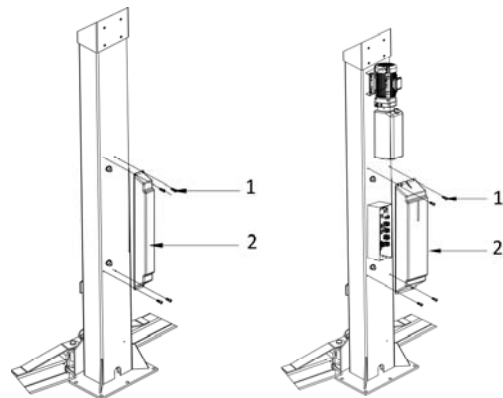
Check the speed for rising and lowering, ensuring that the maximum permitted speeds are not exceeded.

**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.**

## Step 15: Fix the two covering sheets and two covers for electromagnets.

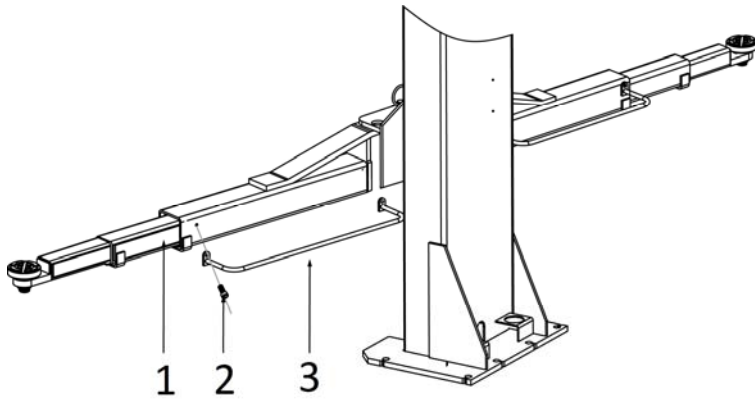


- 1.Hex nut M6
- 2.Flat washer M6
- 3.Hook
- 3.Covering sheet
- 5.Flat washer M6
- 6.Cross socket cap head screw M6x8



- 1.Hex socket screw M6x12
2. Cover

**Step 16: Fix feet protection fenders.**



1.Swing arm

2. Hex socket cylinder head screw M10x12

3.Feet protection fender

**4.4 Items to be checked after installation.**

S/N	Check items	YES	NO
1	Screw torque of expansion bolts : 80-100Nm;	√	
2	Rising speed $\geq 20\text{mm/s}$ ;	√	
3	Noise with rated load $\leq 75\text{dB(A)}$ ;	√	
4	Grounding resistance: not bigger than $4\Omega$ ;	√	
5	Height difference of the two carriages $\leq 5\text{mm}$ ;	√	
6	Mechanical locks are 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 is well secured?	√	
14	If the max lifting height is 1900mm?	√	
15	If Safety advices, name plate and logos are clear?	√	

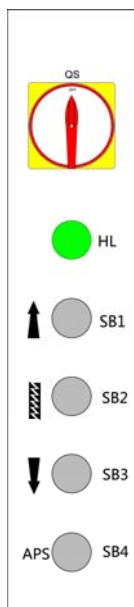
# OPERATION INSTRUCTIONS

## 5.1 Precautions

- ONLY authorized persons are permitted in the lift area.
- Do not try to raise the vehicle with excessive length or width. Otherwise there is risk of vehicle falling from lift.
- Inspect the space above and below the load and the loading carrying devices. It shall be free of obstructions before operating.
- Before raising operation, run the lift without load for a complete cycle to ensure it is in good condition.
- Before lifting the vehicle and during all operations on the vehicle, make sure that it is properly stopped by the hand brake.
- Check the vehicle after raising a short distance to ensure that it is correctly and safely positioned.
- It is forbidden for people to stand in the field of motion during raising or lowering movement.
- The load carrying device shall be observed by the operator throughout the motion of the lift.
- Engage the safety locking mechanism before entering under the raised vehicle.
- Avoid excessive rocking of vehicle while on the lift
- Always use safety stands when moving or installing heavy components.
- Do not climb onto the load or load carrying device when they are raised.

## 5.2 Operation instructions

To avoid personal injury and/or property damage, permit only trained 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. The lift must be only used in a static position for lifting and lowering vehicles.



Pos.	Descriptions	Function
QS	Power switch	Control main power
HL	Power indicator	Show if electricity is connected
SB1	UP button	Control the rising movement
SB2	Safety lock button	Engage the mechanical safety lock
SB3	DOWN button	Control the lowering movement
SB4	APS button	Push APS button to lower the carriage directly, on condition that the lock is not engaged.

***Only one operator is allowed to work around the vehicle lift.***

***Always engage the safety locking mechanism before any operation on the lifted vehicle.***

***Do not make any operation on the lifted vehicle at a height under the first latching position (less than 500mm).***

***Never attempt to lower the lifted vehicle to the bottom when any of its wheel is removed unless you are assured that no damage will occur.***

### ***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 trays 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. Turn on the main power switch.
4. Push the UP button on the control box until lifting adapters have touched the pick-up positions of vehicle.
5. Keep on raising the vehicle making its wheels have a bit clearance off the ground and check again the stability.
6. Raise the vehicle to the height excepted, push the "Safety Lock" button to engage the mechanical safety locking unit. Check again the stability and then perform maintenance or repair work underneath.

### ***Lower the lift***

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

1. Push the "DOWN" button on the control box. Meanwhile the lifting arms automatically go upwards about 5CM which releases the mechanical safety locking unit. After that the lift starts descending.
2. When the lift is fully lowered, position the lift arms and adapters to provide an unobstructed exit before removing vehicle from lift area.
3. Drive the vehicle away.

### ***APS function***

***In the case the mechanical locking unit is released, push APS button for direct lowering.***

It enables to efficiently park the lifted vehicle at exact height which is necessary for chassis maintenance, transmission repair or changing. Without this APS system, it is hard and also time-consuming to park exactly as each time you lower the vehicle, the carriage of the lift will rise to release the mechanical safety catch.

## TROUBLE SHOOTING

ATTENTION: If the trouble could not be fixed by yourself, please do not hesitate to contact us for help.

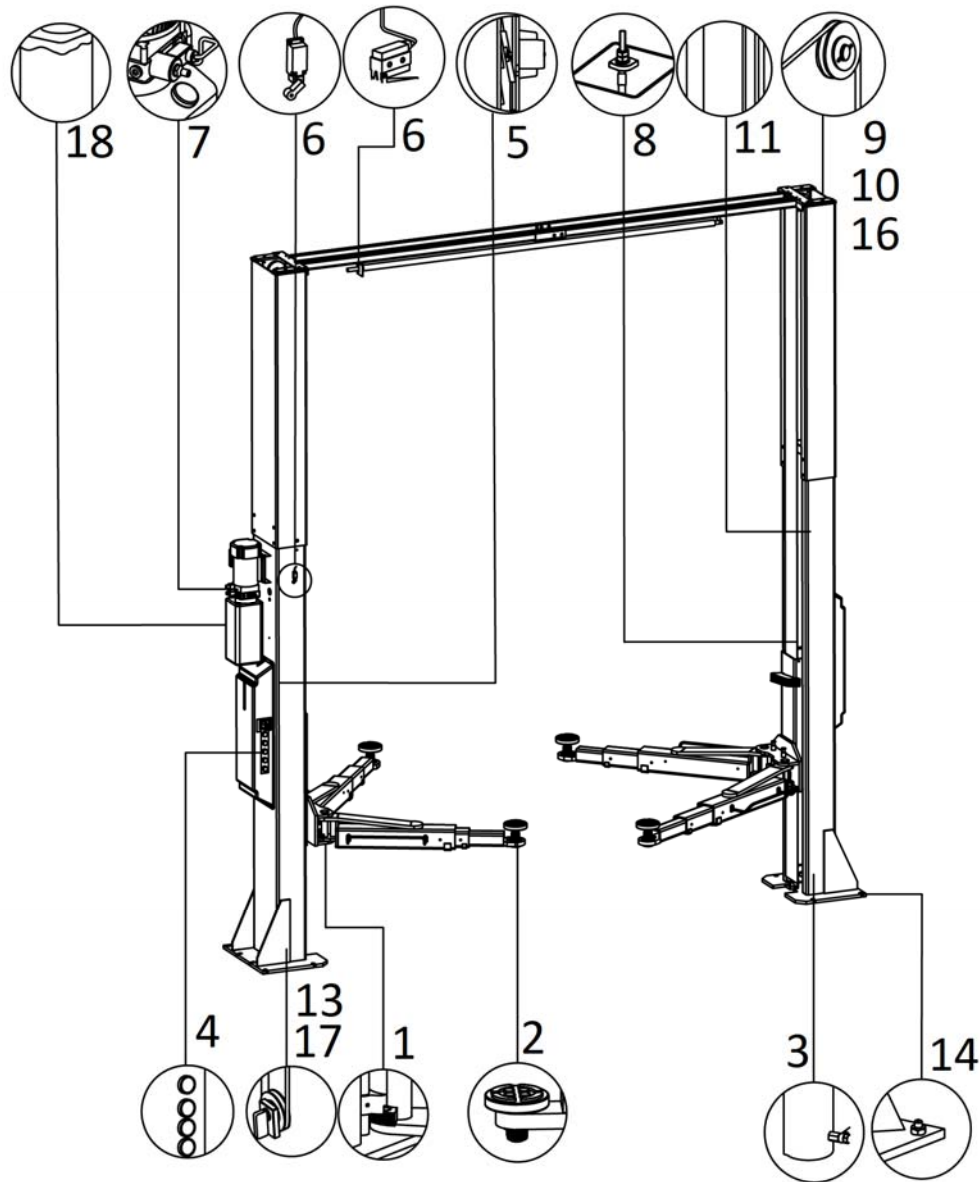
We will offer our service at the earliest time we can.

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 rope	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 it.
	Dirty hydraulic oil	Change the oil.
	Jammed anti-surge valve	Clean it.
	Jammed oil hose	Replace it.
The steel rope is abraded	No grease at installation or out of lifetime	Replace it.

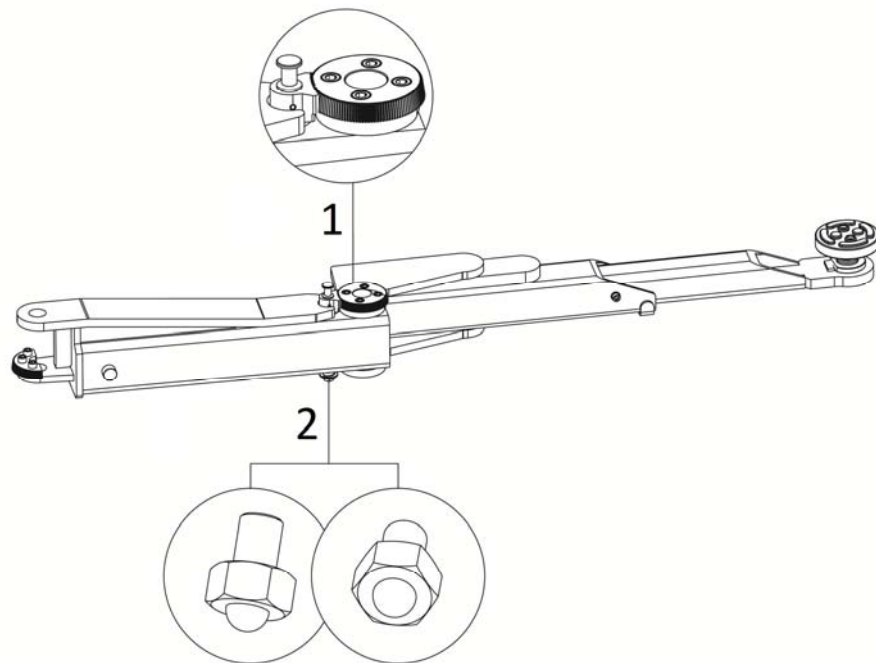
## MAINTENANCE

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



S/N	Components	Methods	Period
1	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
2	Rubber contact pads	Inspect the pads and clean off any objects that may cause sliding or damage	Every day
3	Cylinder and oil hose connectors	Inspect to ensure no leakage before using the lift.	Every day
4	Control buttons	Check if control buttons work as "hold- to -run" and check if they work as the function indicated.	Every day

S/N	Components	Methods	Period
5	Mechanical safety catch	Check if both mechanical catches can engage and disengage simultaneously by pushing control buttons.	Every day
6	Limit switch	Push the UP button and inspect and to ensure the lifting platform stops rising when the switch is activated.	Every day
7	Unloading valve	Inspect if the valve leaks or not. Clean or change the valve if it leaks.	Every day
8	Steel ropes	Check the synchronization of both carriages and adjust the tension of the cable when desynchronization is unacceptable.	Every day
9	Bushing of the upside pulley and circlip of the shaft	Lubricate the bushing with NO.1 lithium based grease. Check if the circlip is in its original position.	Every 3 months
10	Steel ropes	Lubricate the cable with NO.1 lithium based grease. It is advised to change with new steel ropes every 3 years. (Not obligatory if the parts are in good condition) Stop using the lift and replace the cable immediately on condition that there are ten or more broken wires on a cable.	Every 3 months
11	Running track inside the post for carriages	Lubricate the track with NO.1 lithium based grease. No obstruction on the track.	Every 3 months
13	Bushing of the downside pulley and circlip of the shaft	Lubricate the bushing with NO.1 lithium based grease. Check if the circlip is in its original position.	Every 3 months
14	Expansion bolts	Check with torque spanner. 80-100Nm	Every 3 months
	Whole Lift	Running the lift for several cycles with and without rated load. The lift can run steadily and smoothly with no abnormal noise.	Every 3 months
16	Bushing of the upside pulley and circlip of the shaft	Slacken the steel rope and dismantle the pulley assembly. Measure the abrasive clearance and change the bushing if the clearance is bigger than 0.5mm.	Every year
17	Bushing of the downside pulley and circlip of the shaft	Slacken the steel rope and dismantle the pulley assembly .Measure the abrasive clearance and change the bushing if the clearance is bigger than 0.5mm.	Every year
18	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 year



S/N	Components	Methods	Period
1	Joint arm lock	Push the DOWN button to lower the arms till the bottom and check if the joint arm lock can release automatically at bottom. <b><u>Adjust the bolt (Pos.2) at the bottom properly, making the joint arm lock engage when the arm rises and disengage when the arm lowers to the bottom.</u></b>	Every day
2	Ball bearing	Clear the dirt or other solid objects sticking under the ball and check if the ball moves flexibly.	Every week

*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

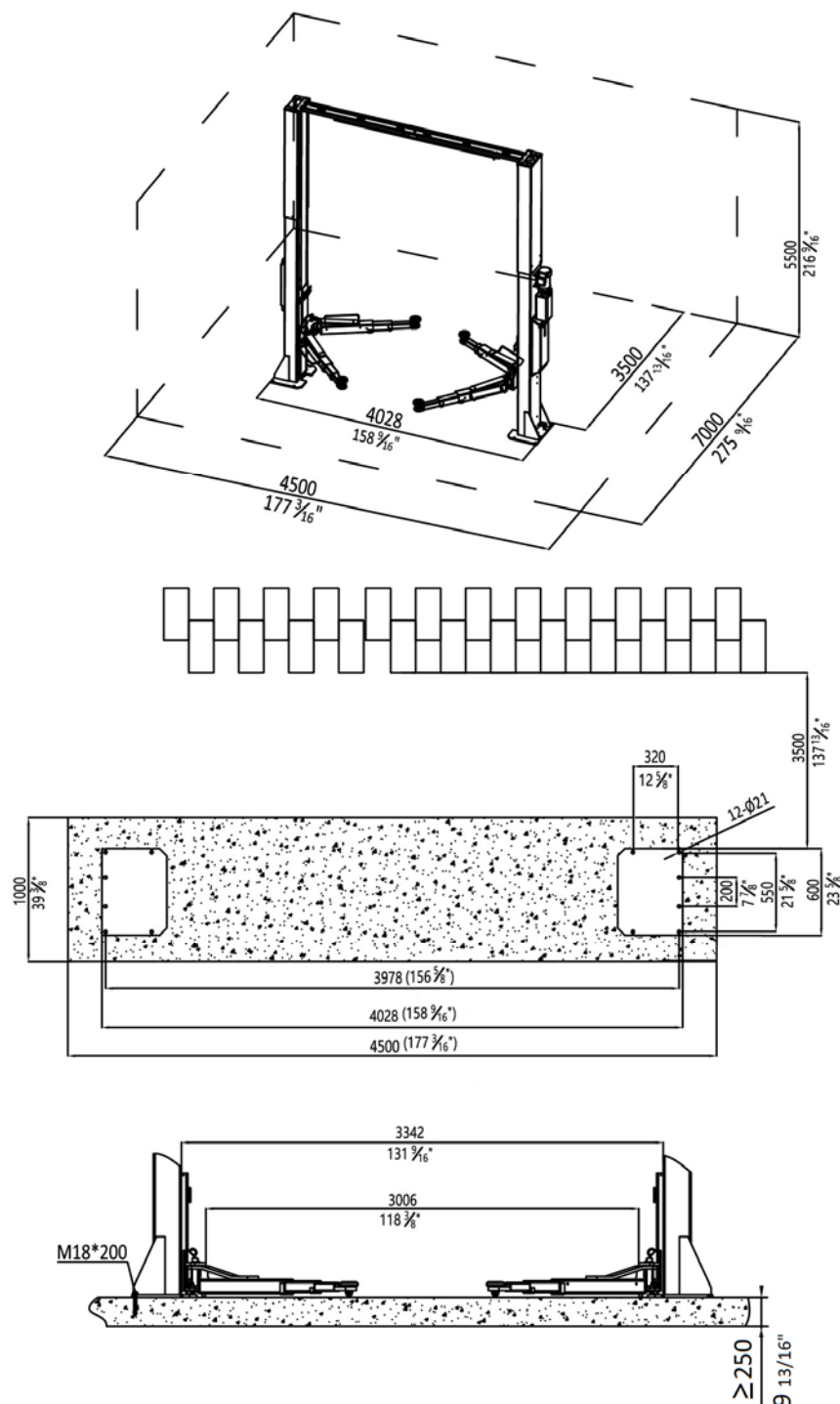
**Indoor installation only.** The space requirement specified in the below scheme is for reference only. There must be sufficient space for driving and lifting vehicles and enough safety distance shall be reserved according to the regulations of the local authorities. It is advised to reserve a clearance of at least 1 meter between the lift and fixed elements (e.g. wall) in all lifting positions.

C30 concrete foundation with a minimum thickness of 250mm.

Surface under the base plate of each post: Horizontal and even (Gradients max. 0.5 %)

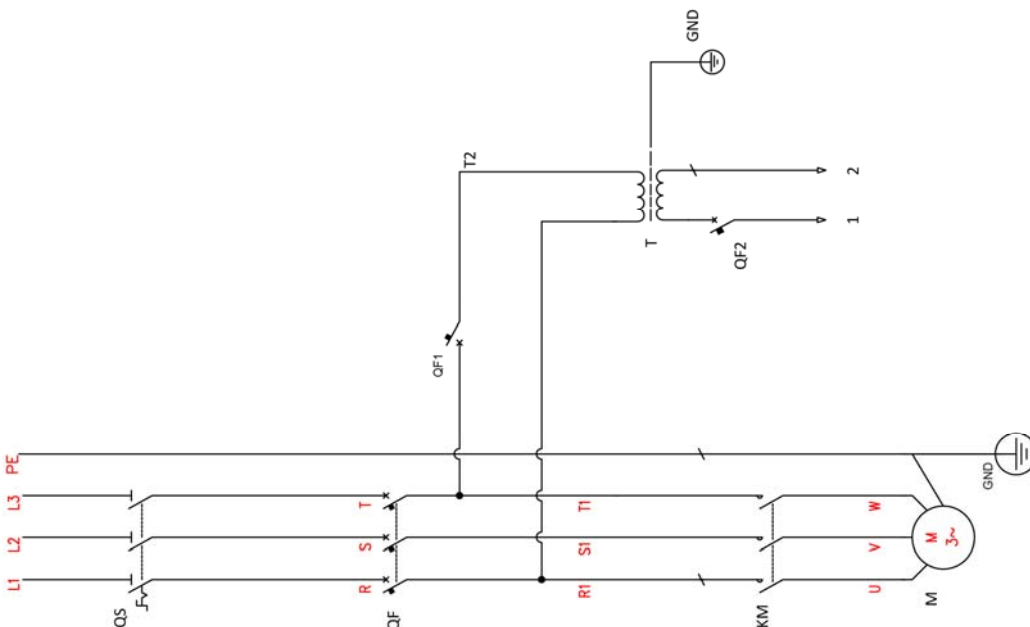
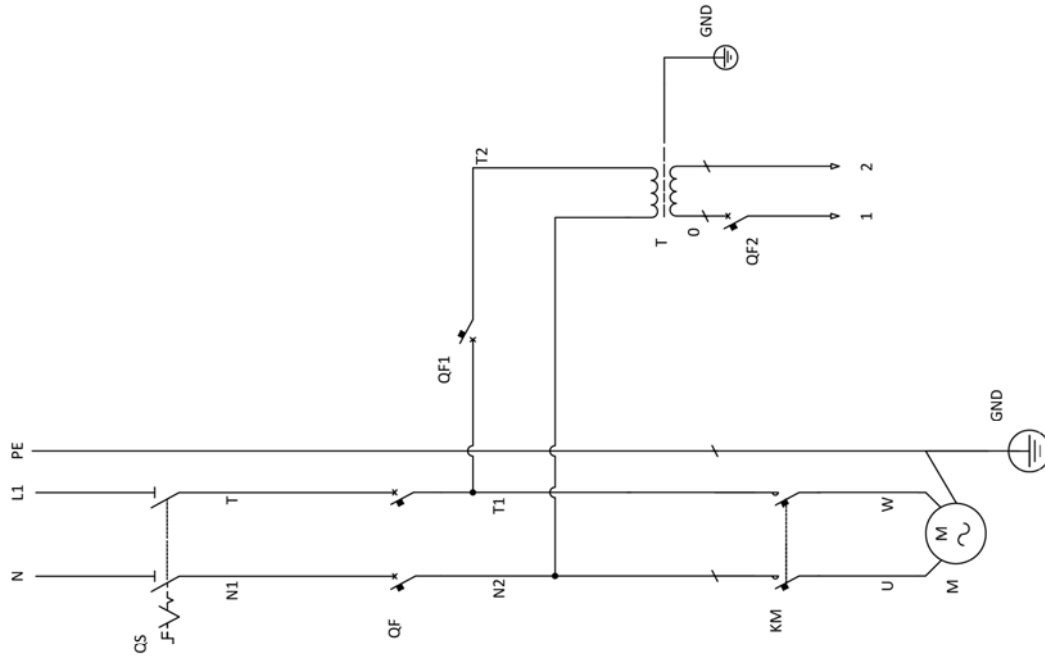
Newly built concrete ground must be older than 20days.

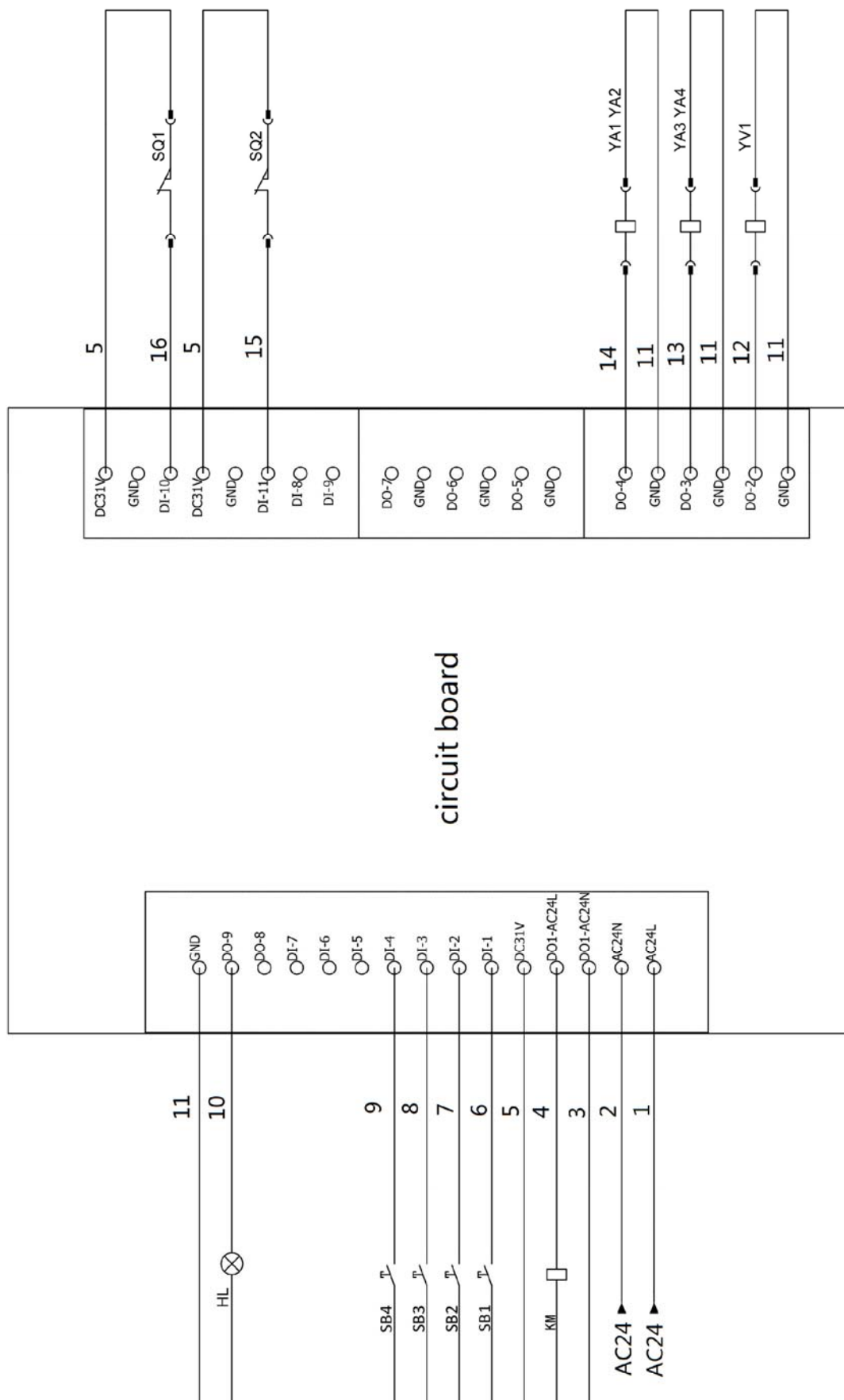
In mm.

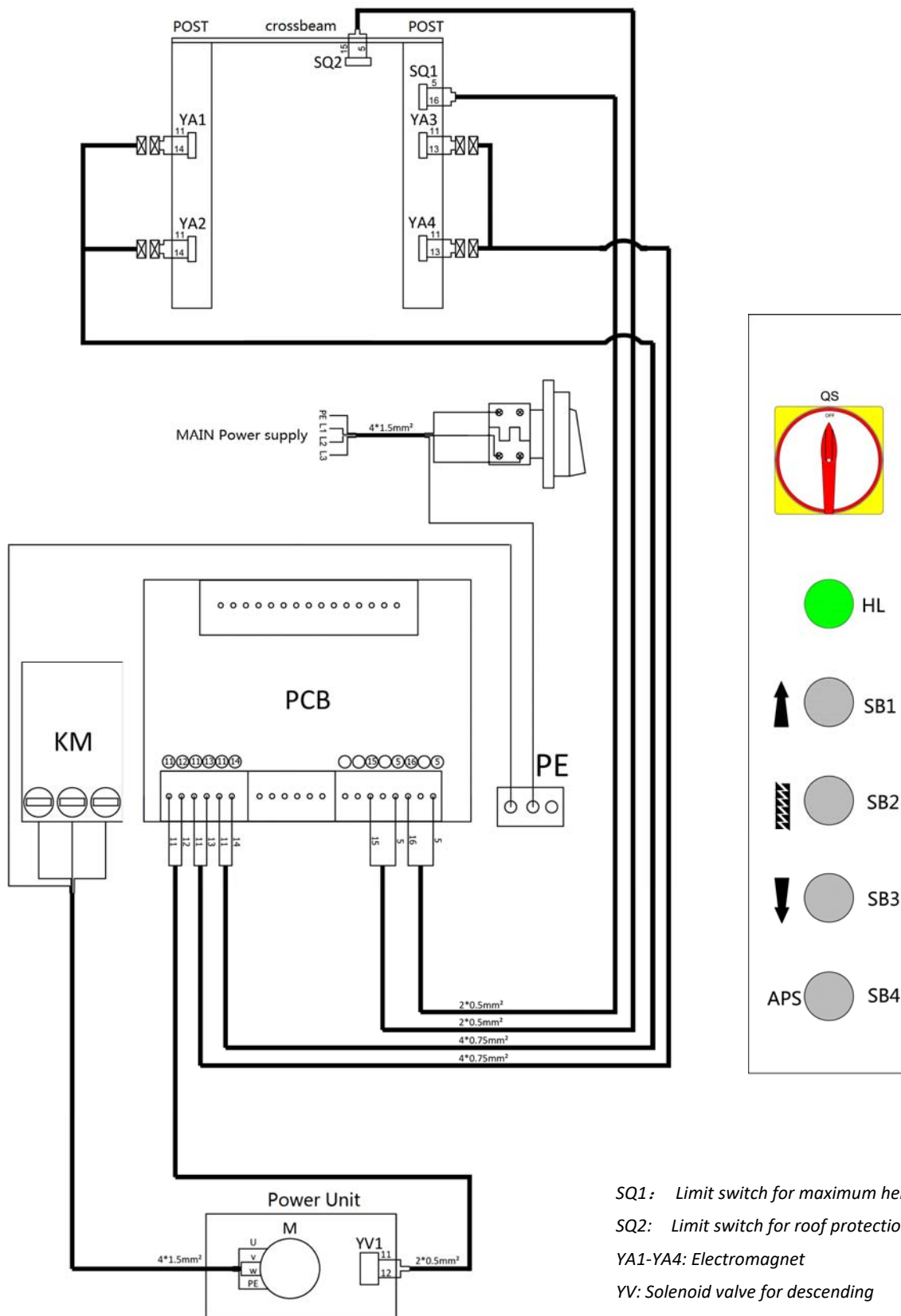


## Annex 2, Electrical diagrams and parts list

(Note: For the specific requirements on voltage, the actual voltage of your lift may differ with the following diagram)







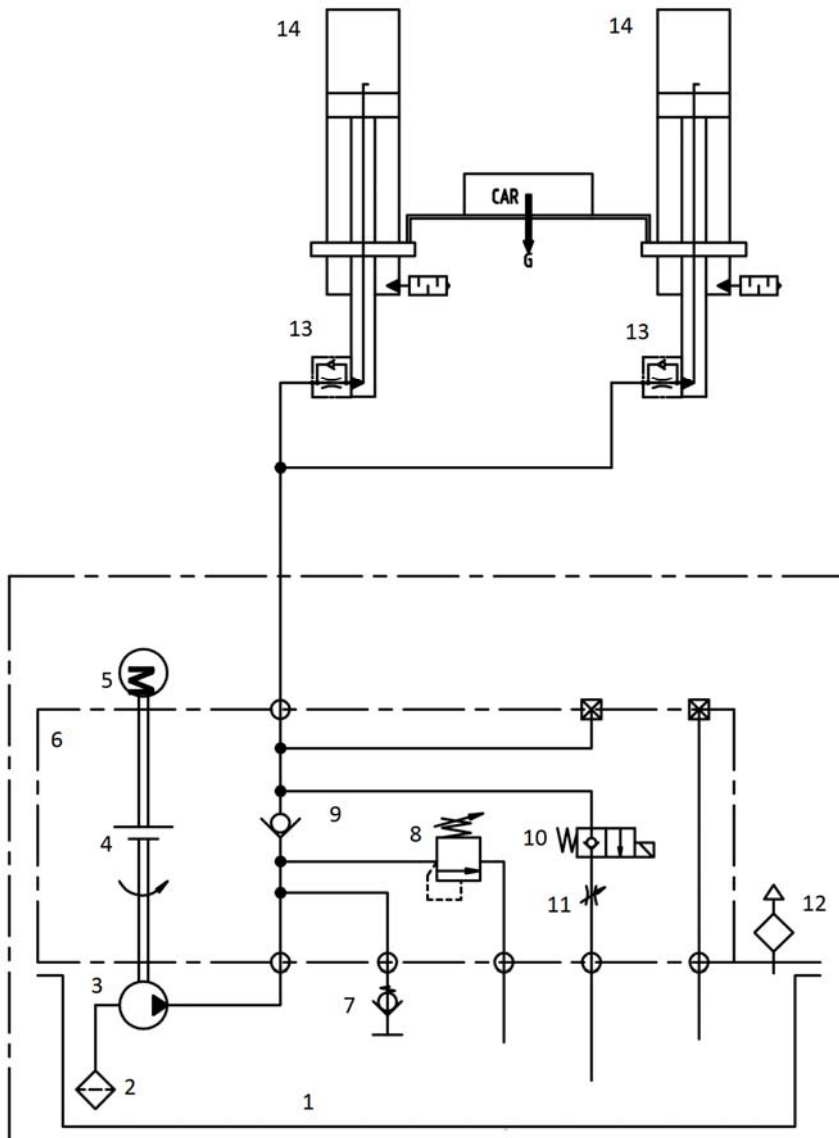
Supply cable	Yellow-Green	Blue	Other colors
3 wires	Earth wire	Neutral wire	Phase wire
5 wires	Earth wire	Neutral wire	Phase wire
Supply cable	Yellow-Green	Other colors	
4 wires	Earth wire	Phase wire	

Pos.	Code	Description	Qty
T	320102013	Transformer (dual 380V220V)	1
T	320102014	Transformer (dual 400V230V)	1
T	320102015	Transformer (dual 415V240V)	1
QF	320801003	Circuit breaker	1
QF1	320803003	Circuit breaker	1
QF2	320803006	Circuit breaker	1
KM	320901011	AC contactor	1
QS	320304001	Main switch	1
SB1 SB2 SB3 SB4	320401042	Button	4
SQ1	320301011	Limit switch	1
SQ2	320301002	Limit switch	1
YA1 YA2 YA3 YA4	330310005	Electromagnet	4
HL	321800001	Power indicator	1
	<b>791130035</b>	<b>Circuit board</b>	<b>1</b>

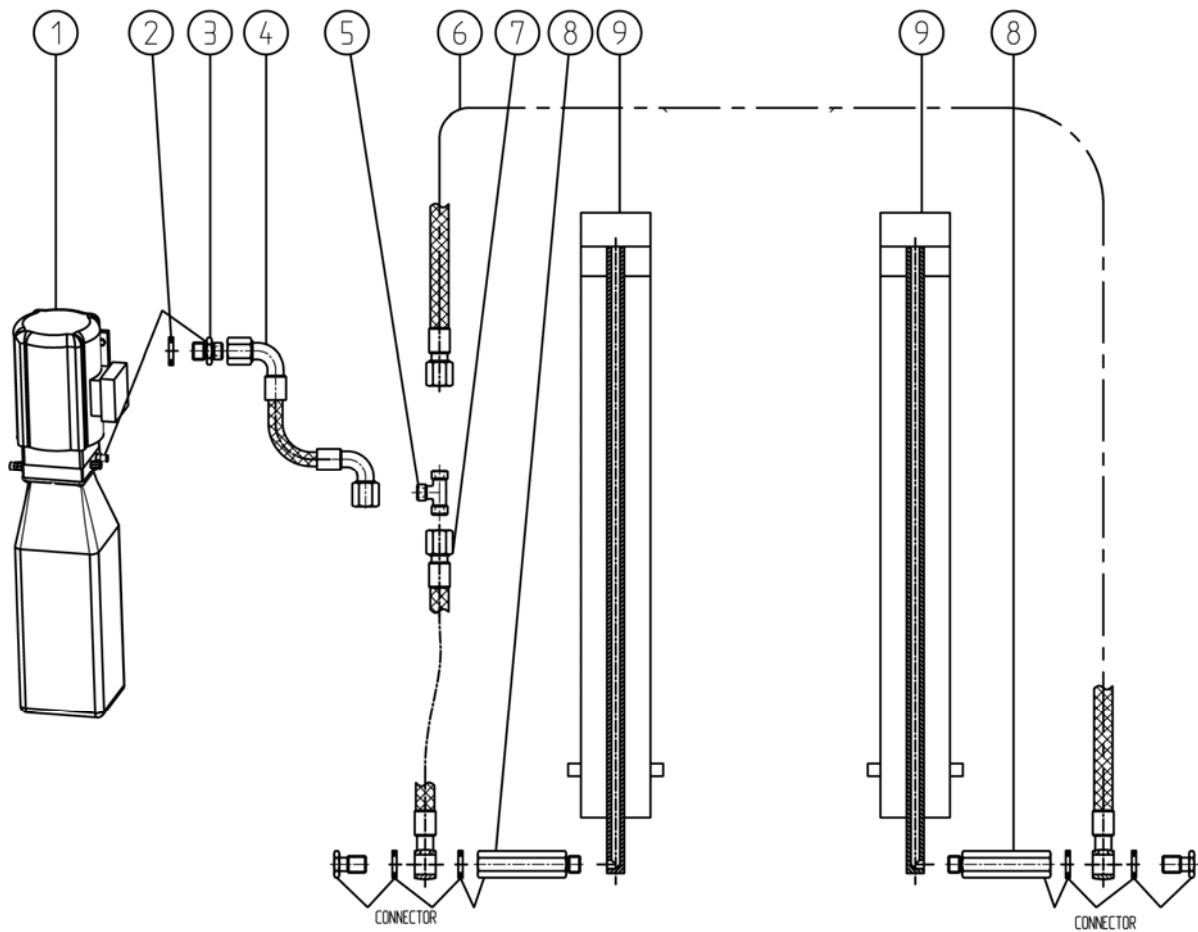
**NOTE:** For power supply of other voltages, the transformers are different.

Please check with our customers service people when order spare parts.

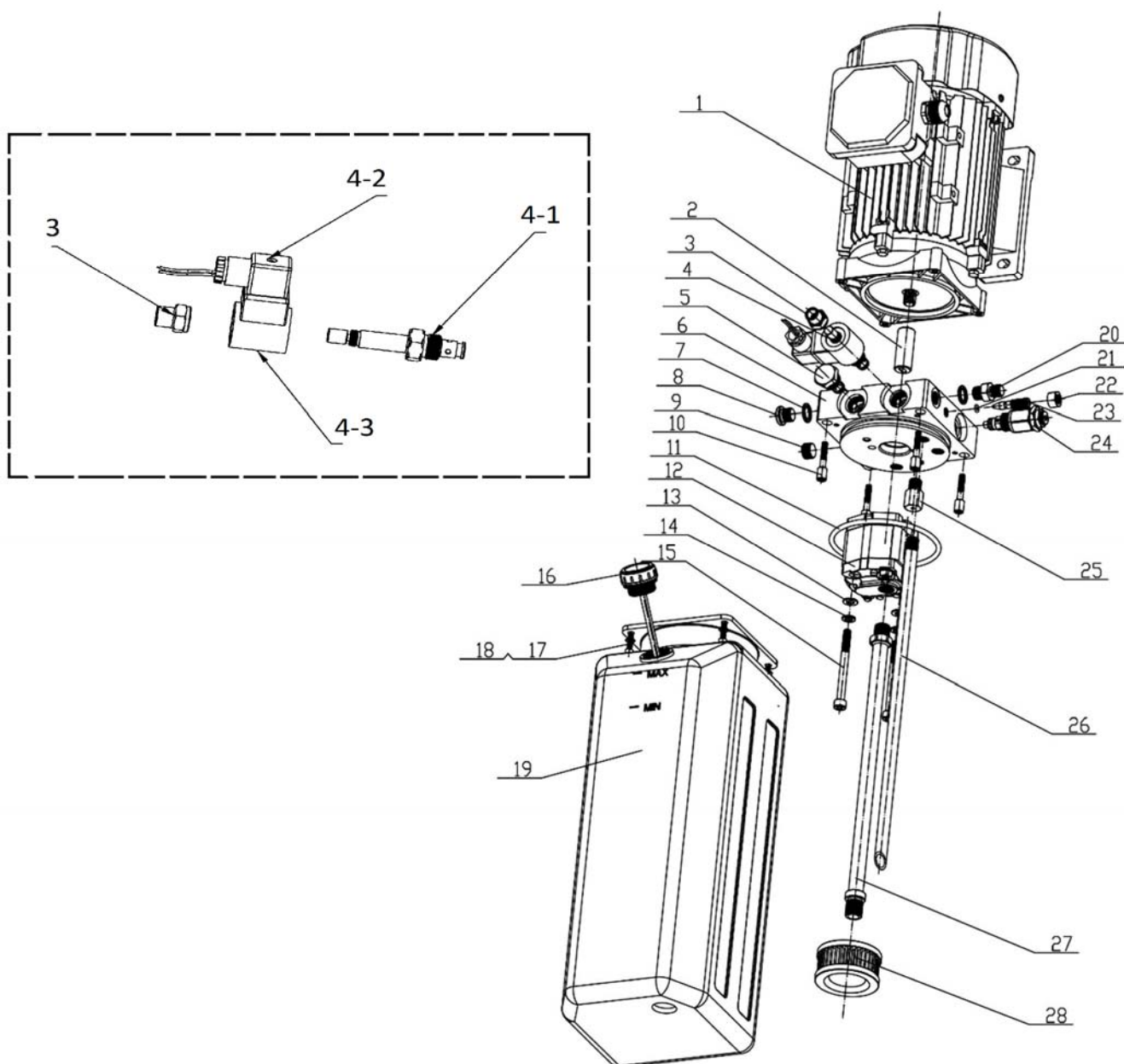
### Annex 3, Hydraulic diagrams and parts list



- 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.solenoid valve for descending
- 11.flow control valve
- 12.tank cover
- 13.composite connector
- 14.oil cylinder



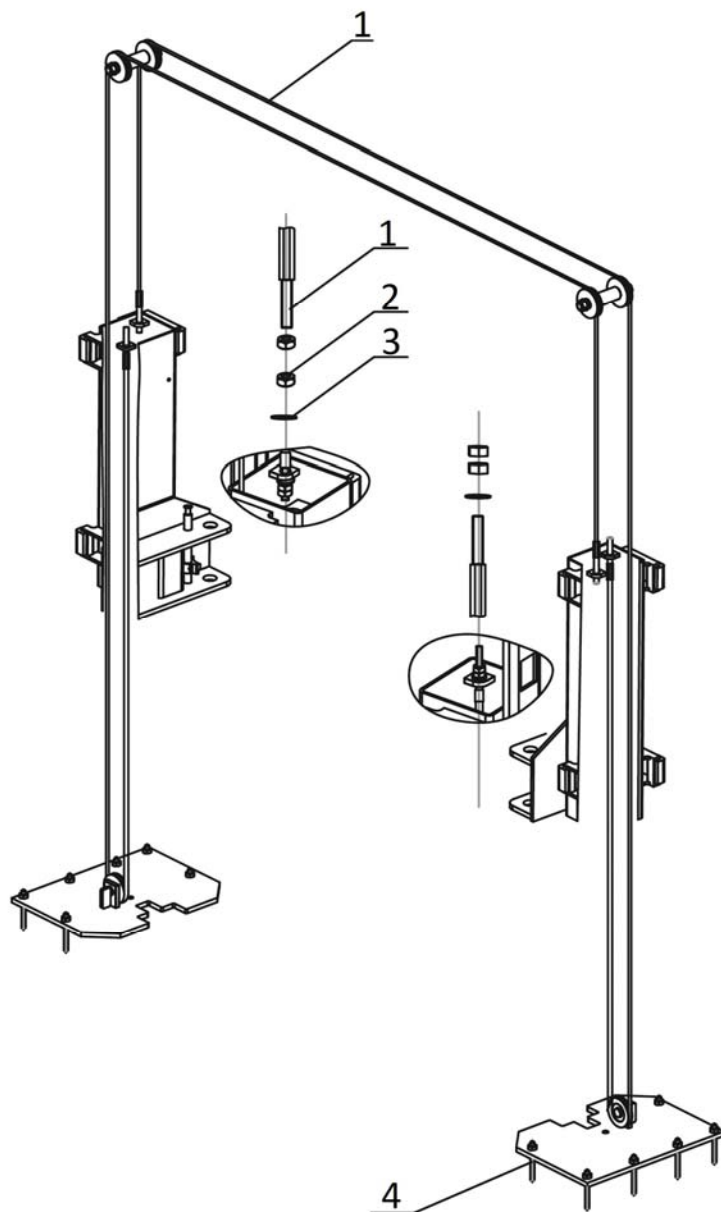
Pos.	Code	Description	Specification	Qty
1		Power unit		1
2	207103025	Composite washer	13_7X20X1_5	5
3	310101008	Shift connector	M14*1.5-G1/4 inside cone	1
4	624008046	Rubber oil hose	L=320	1
5	615006003	Three way connector	6214E-A4-B4	1
6	624002005B	Rubber oil hose	L=10100	1
7	624002004B	Rubber oil hose	L=2265	1
8	615015003	Composite connector	6255E-A7-B7	2
9	625000013B	Oil cylinder	YG5060-38-1800	2



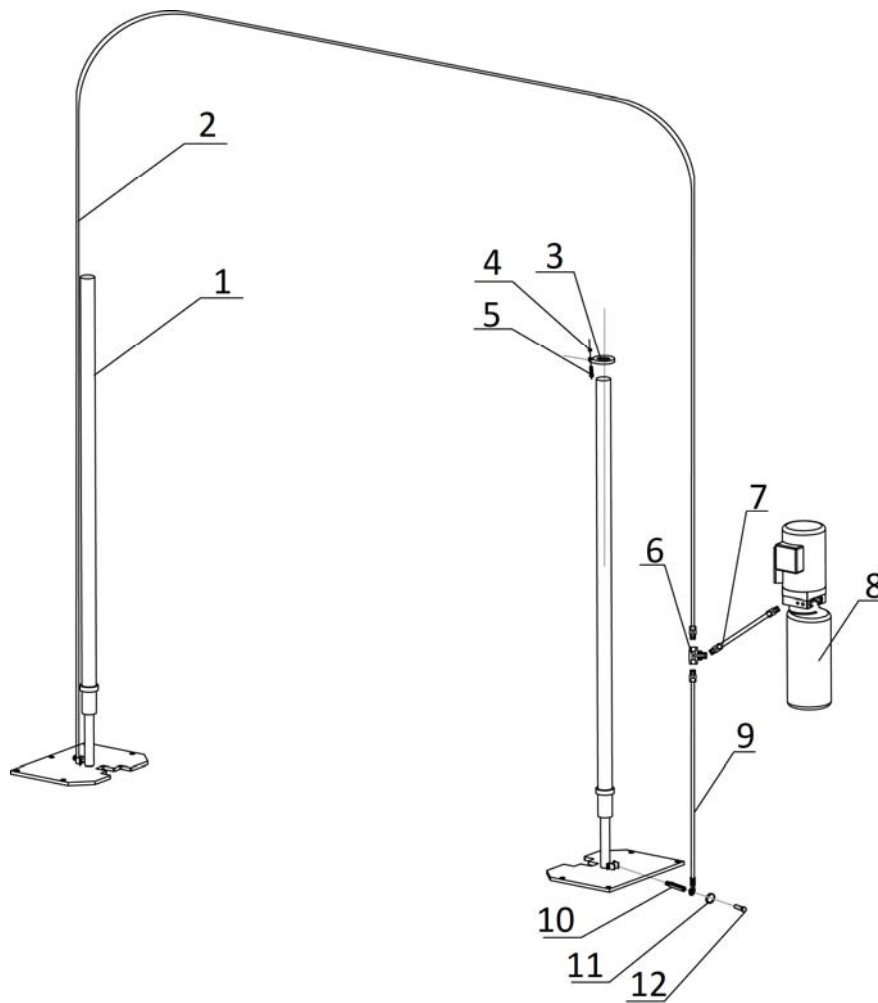
Pos.	Code	Descriptions	Specification	Qty
1	320201001	Motor	220V-2.2KW -1PH-50HZ-2P	1
	320201002	Motor	230V-2.2KW -1PH-50HZ-2P	1
	320201003	Motor	240V-2.2KW -1PH-50HZ-2P	1
	320201004	Motor	380V-2.2KW -3PH-50HZ-2P	1
	320201005	Motor	400V-2.2KW -3PH-50HZ-2P	1
	320201006	Motor	415V-2.2KW -3PH-50HZ-2P	1
	320201011	Motor	220V-2.2KW -1PH-60HZ-2P	1
	320204016	Motor	380V-3.0KW -3PH-50HZ-2P	1
	320204017	Motor	400V-3.0KW -3PH-50HZ-2P	1
	320204018	Motor	415V-3.0KW -3PH-50HZ-2P	1
	320203001	Motor	380V-3.5KW -3PH-50HZ-2P	1

Pos.	Code	Descriptions	Specification	Qty
	320203005	Motor	400V-3.5KW -3PH-50HZ-2P	1
	320203006	Motor	415V-3.5KW -3PH-50HZ-2P	1
2	330404006	Coupling	48mm (YBZ-F2.1D4H1/1-03)	1
3	203204102	Locking nut	FHLM-1/2-20UNF	1
4	791150005	Solenoid valve assembly (include part No.3, 4-1,4-2 and 4-3)	DC24V	1
4-1	330311005	Valve spool	24DC(Keta) (LSV-08-2NCP-M-2H)	1
4-2	330308032	Solenoid plug	DIN43650-DC	1
4-3	330308031	Solenoid	LC2-08-C-2H,24VDC	1
5	330302008	Non-return valve	YBZ-E2D3I1/1-03	1
6	330101113	Hydraulic block	LBZ-T2BK-8	1
7	207103025	Composite washer	M14	2
8	310101008	Transition connector	M14*1.5-G1/4 inside cone	1
9	210101014	Plug	Z3/8	1
10	201101100	Bolt	M6*50 (NLJLD)	4
11	207101098	O-ring	109*5.3	1
12	330201005	Gear pump (2.2kW-60Hz)	CBK-F220/CBK-2.1F	1
	330201006	Gear pump (2.2 kW-50Hz)	2.5cc/r (CBKA-F2.5F)	1
	330201007	Gear pump (3.0kW)	CBK-F233	1
	330201008	Gear pump (3.5kW)	CBK-F242	1
13	204101005	Washer	M8	4
14	204201013	Spring washer	M8	2
15	202109072	Hex socket cylinder head screw (with spring washer)	M8*85	2
16	330502013	Lid of oil tank (breather)	YBZ-BT-M30*2-B	1
17	202109144	Bolt	M5*18	4
18	204101003	Flat washer	M5	4
19	330405051	Plastic oil tank	10L-SLYX-10L-L-BX	1
20	210101013	Plug	M14*1.5	1
21	207101099	O-ring	5*1.8	4
22	203102003	Hex nut (thin, 6mm)	M10*1	1
23	330305015	Flow-restrictive valve	YBZ-E2D3I1/1-11A	2
24	330304007	Relief valve	YF08-40	1
25	330301003	Buffer valve	HCF-Z1/4	1
26	330402006	Oil-returning pipe	YBZ-E2D3I1/1-09	1
27	330401013	Oil-sucking pipe	YBZ-SJYG350	1
28	330403003	Oil-sucking filter	YBZ-E2D3I1/1-10	1

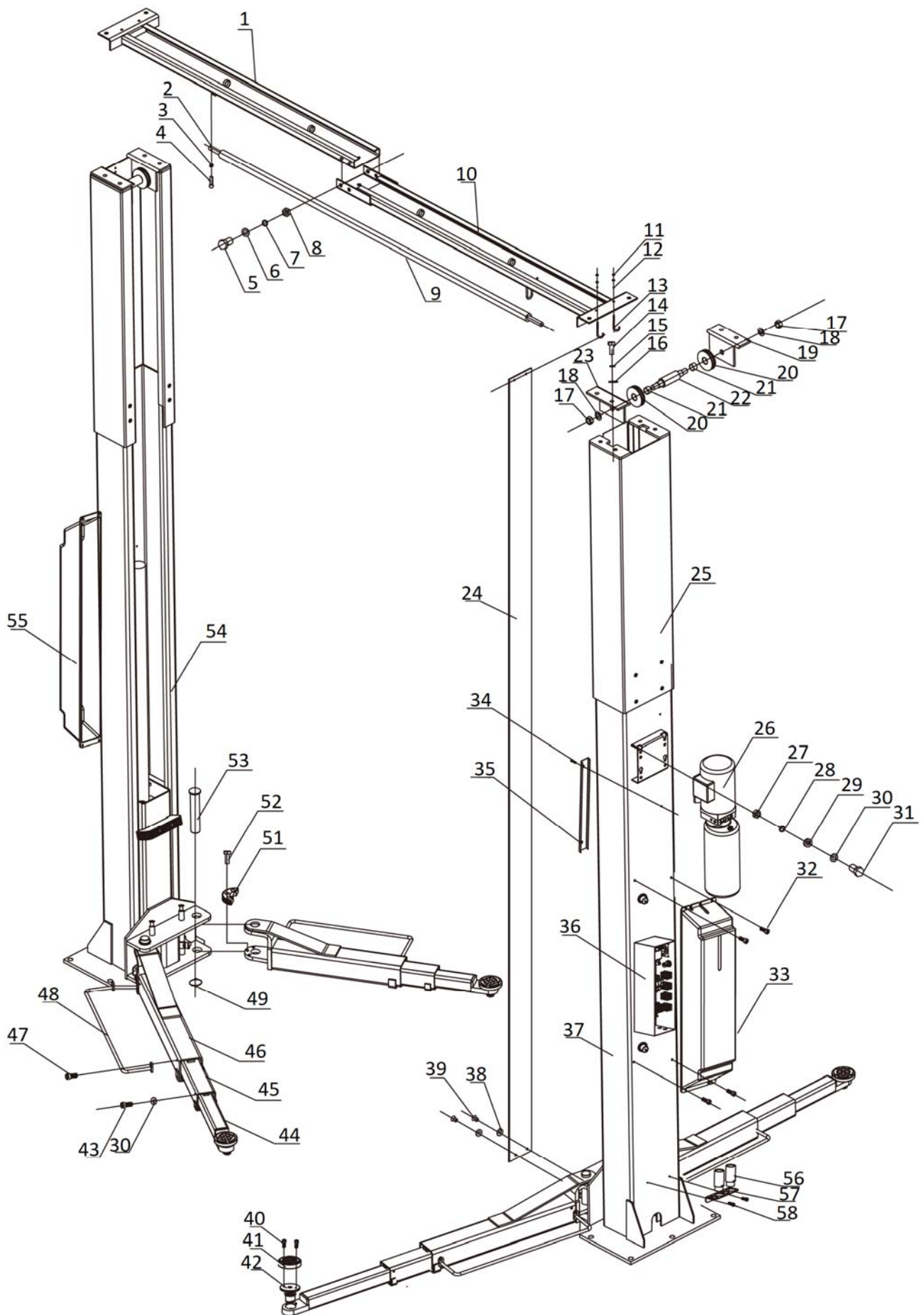
#### Annex 4 , Mechanically exploded drawings and parts list



Pos.	Code	Description	Specification	Qty
1	615016001C	Steel rope	L=12530	2
2	203101012	Hex nut	M20	8
3	204101011	Flat washer	φ20	4
4	201201008	Expansion bolt	M18*200	12

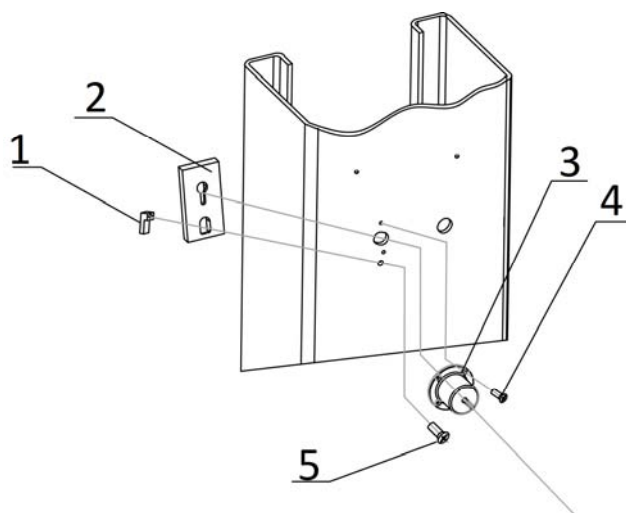


Pos.	Code	Description	Specification	Qty
1	625000013B	Oil cylinder	YG5060-38-1800	2
2	624002005B	Oil hose	L=10100mm	1
3	410170101B	Ring for cylinder fixation	6264-A24-B1	2
4	203103005	Hex locking nut	M6	2
5	202109096	Hex socket cylinder head screw	M6*40	2
6	615006003	Three way connector	6214E-A4-B4(6214A-A5-B2)	1
7	624008046	Rubber oil hose	L=320	1
8		Power unit		1
9	624002004B	Oil hose	L=2265	1
10	615015003	Composite connector	6255E-A7-B7	2
11	207103025	Composite washer	13.7*20.00*1.50(BS224)	2
12	615015003	Composite connector	6255E-A7-B7	2

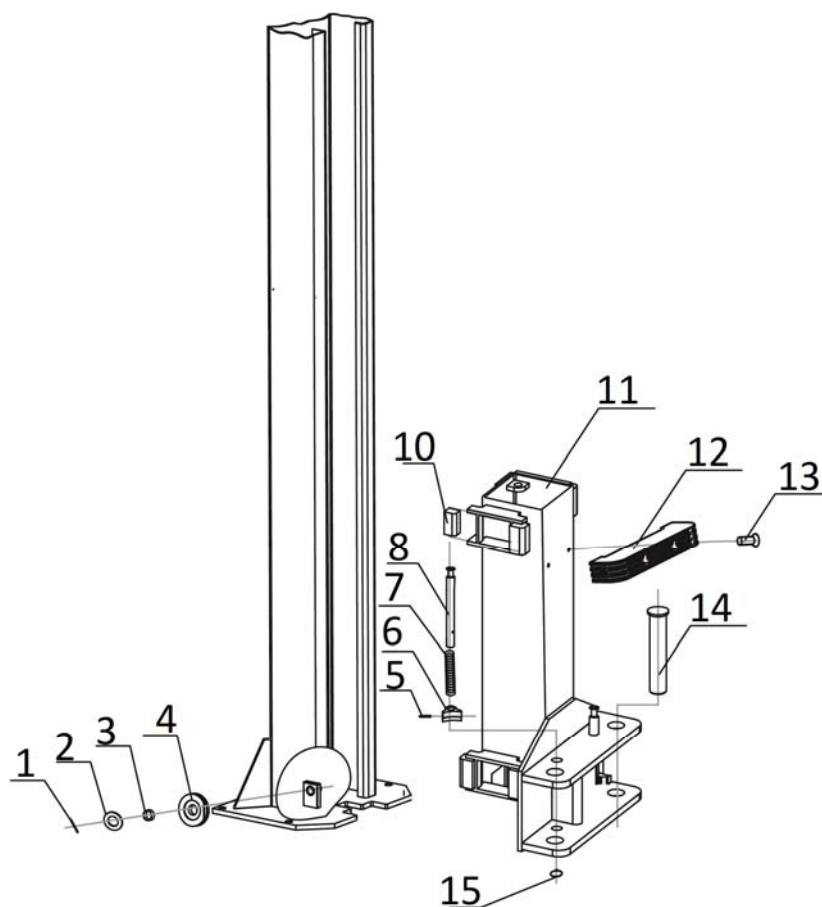


Pos.	Code	Description	Specification	Qty
1	614016006	Inside beam	6215E-A10-B2	1
2	410160023	Rod	6215E-A10-B3	1
3	203103005	Hex locking nut	M6	1
4	202109024	Hex head full swivel screw	M6*35	1
5	201102035	Hex head full swivel screw	M14*30	5
6	204101008	Flat washer	M14	5
7	204201007	Spring washer	M14	5
8	203101008	Hex nut	M14	5
9	420060010	Black foam tube	22	1
10	614016005	Outside beam	6215E-A10-B1	1
11	203101004	Hex nut	M6	8
12	204101004	Flat washer	M6	8
13	410010051	Rod of chain protection cloth	6254E-A1-B5	4
14	201102027	Hex head full swivel bolt	M12*30	8
15	204201006	Spring washer	M12	8
16	204101007	Class C flat washer	M12	8
17	203101012	Hex nut	M20	4
18	204101011	Flat washer	M20	4
19	410060033	Left support bracket	6214E-A22-B1	2
20	410050011	Pulley	6254EB-A3-B3	4
21	420160010	Spacer	6215E-A9-B2	4
22	410160011B	Shaft of the upside pulley	6215E-A9-B3	2
23	410060023	Right support bracket	6214E-A22-B3	2
24	615016004	Column curtain	6215E-A5	2
25	614016004	Post extension	6215E-A9-B1	2
26		Power unit		1
27	203101006	Hex nut	M10	4
28	204201005	Spring washer	M10	4
29	204101006	Flat washer	M10	4
30	420040010	Anti-shock washer	6254E-A23	4
31	201103004	Hex head full swivel screw	M10*35	4
32	202109019	Hex socket cylinder head screw	M6*12	8
33	<b>420680117</b>	<b>Protective cover on the power side post</b>	<b>62B-A17</b>	1
34	202101026	Cross socket cap head screw	M5x30	6
35	410040023B	Covering plate	6254E-A18	6
36		Control box		1
37	614901370	Power side post	62C-A1-B1-50T-2	1
38	204101004	Flat washer	M6	8
39	202101027	Cross socket cap head screw	M6*8	4

Pos.	Code	Description	Specification	Qty
40	202111007	Hex socket flat head screw	M8*20	8
41	420130010	Rund rubber pad	6214EKZ-A4-B4-C4	4
42	615035037	Lifting tray	6214EKZ-A4-B4	4
43	202109040	Hex socket cylinder head screw	M10*15	4
44	614013213B	Retractable arm	6255E-A4-B3	4
45	614013212	Middle arm	6255E-A4-B2	4
46	614013211B	Support arm	6255E-A4-B1	4
47	202110018	Hex socket cylinder head screw	M10*12	8
48	614004030B	Fender for the short arm	6254E-MDN-A10-B4	4
49	204301013	Circlip	M38	4
50	612013002	Height adapter	6214EKZ-A4-B5	4
51	410901967	Teeth wheel (half)	6255E-A4-B5	4
52	202109085	Hex socket cylinder head screw	M12*30	12
53	410049031B	Shaft	6254E-A12	4
54	614901370	Post	62C-A1-B1-50T-2	1
55	420047160B	Protective cover for locking unit at the secondary post	62-A16	1
56	612013002	Height extender	6214EKZ-A4-B5	4
57	410901744	Holder for height adapter	6254E-A1-B1-C6-V0	2
58	202110004	Hex socket flat head screw	M8*12	4



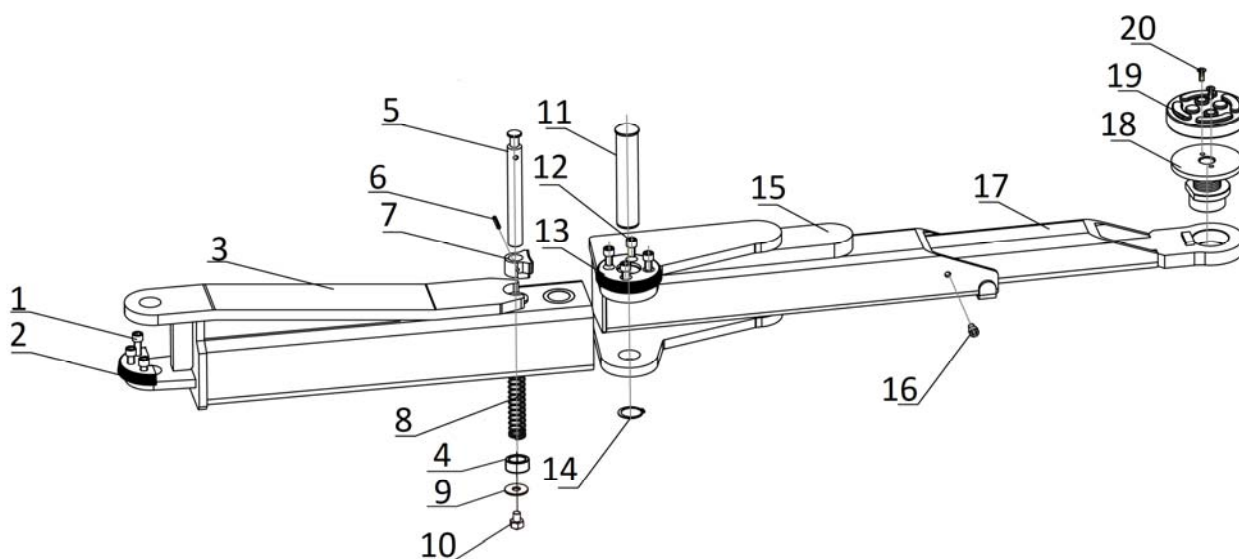
Pos.	Code	Description	Specification	Qty
1	410040071	Orientation block	6254E-A17	4
2	615068208	Safety locking plate assembly	6254E-A13-V1	4
3	330310005	Electromagnet	6254E-A14	4
4	202109017	Hex socket cylinder head screw	M6*8	8
5	202109020	Hex socket cylinder head screw	M6*15	4



Pos.	Code	Description	Specification	Qty
1	206201004	Cotter pin	M3*45	2
2	410010031	Washer	6254E-A1-B3	2
3	205101008	Bushing	2518	2
4	410130051	Pulley	6255E-A1-B2	2
5	206102013	Elastic cylindrical pin	D6X40-GB879	4
6	410901966	Teeth block	6255E-A3-B6	4
7	410150121	Pressed spring	6254E-A2-B4	4
8	410902399B	Pull rod	6255E-A3-B4-C1-1	4
10	420010010	Slider	6254E-A2-B5	16
11	614901814	Carriage	6215E-A3-B1-V1	2
12	420680124	Protective rubber pad	62B-A3-B11	2
13	202109031	Hex socket cylinder head screw	M8*30	4
14	410049031B	Shaft	6254E-A12	4
15	204301009	Circlip	D25-GB894_2	4

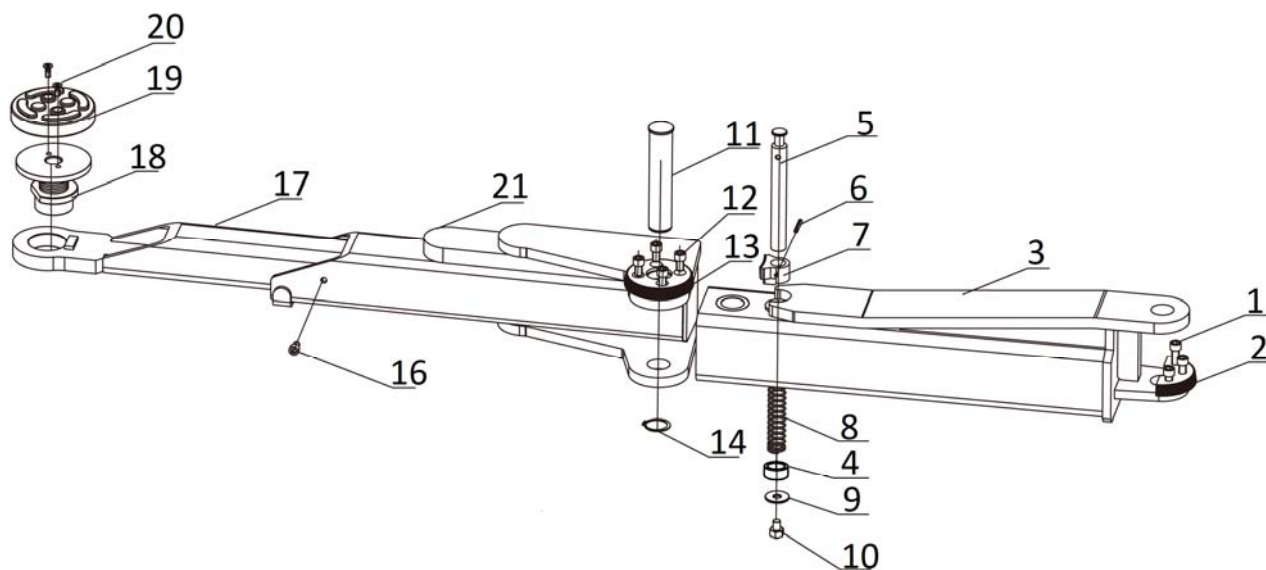
## Mhanical schemes and parts list for optional foldable arms (Optional)

### Arm A assembly



Pos.	Code	Description	Specification	Qty
1	202109085	Hex socket cylinder head screw	M12X30-GB70_1	3
2	410901967	Semi-teeth block	6255E-A4-B5	1
3	614901751	1st section of the arm assembly	E25-A4-B1	1
4	410912764	Limit tube	E25-A4-B11	1
5	410911700	Pull rod for joint arm	E25-A4-B6	1
6	206102013	Cylindrical pin	D6X40-GB879	1
7	410901966	Small teeth block	6255E-A3-B6	1
8	410150121	Pressure spring	6254E-A2-B4	1
9	410911710	Washer for pressure spring	E25-A4-B7	1
10	208109039	Universal ball bearing	BCHL12-M12X15-11	1
11	410911709	Shaft	E25-A4-B10	1
12	202109050	Hex socket cylinder head screw	M12X20-GB70_1	4
13	410911699	Teeth wheel	E25-A4-B5	1
14	204301013	Circlip	D38-GB894_1	1
15	614901752	2nd section of the arm assembly	E25-A4-B2	1
16	202109040	Hex socket cylinder head screw	M10X16-GB70_1	1
17	614901753	3rd section of the arm assembly	E25-A4-B3	1
18	615035037	Lifting tray (no contact pad)	6214EKZ-A4-B4	1
19	420130010	Round pad	6214EKZ-A4-B4-C4	1
20	202111007	Hex socket flat head screw	M8X20-GB70_3	2
18+19+20	615035022	Lifting tray assembly	6214EKZ-A4-B4-V0	1

## Arm B assembly



Pos.	Code	Description	Specification	Qty
1	202109085	Hex socket cylinder head screw	M12X30-GB70_1	3
2	410901967	Semi-teeth block	6255E-A4-B5	1
3	614901751	1st section of the arm assembly	E25-A4-B1	1
4	410912764	Limit tube	E25-A4-B11	1
5	410911700	Pull rod for joint arm	E25-A4-B6	1
6	206102013	Cylindrical pin	D6X40-GB879	1
7	410901966	Small teeth block	6255E-A3-B6	1
8	410150121	Pressure spring	6254E-A2-B4	1
9	410911710	Washer for pressure spring	E25-A4-B7	1
10	208109039	Universal ball bearing	BCHL12-M12X15-11	1
11	410911709	Shaft	E25-A4-B10	1
12	202109050	Hex socket cylinder head screw	M12X20-GB70_1	4
13	410911699	Teeth wheel	E25-A4-B5	1
14	204301013	Circlip	D38-GB894_1	1
16	202109040	Hex socket cylinder head screw	M10X16-GB70_1	1
17	614901753	3rd section of the arm assembly	E25-A4-B3	1
18	615035037	Lifting tray (no contact pad)	6214EKZ-A4-B4	1
19	420130010	Round pad	6214EKZ-A4-B4-C4	1
20	202111007	Hex socket flat head screw	M8X20-GB70_3	2
18+19+20	615035022	Lifting tray assembly	6214EKZ-A4-B4-V0	1
21	614901754	2nd section of the arm assembly	E25-A5-B1	1