

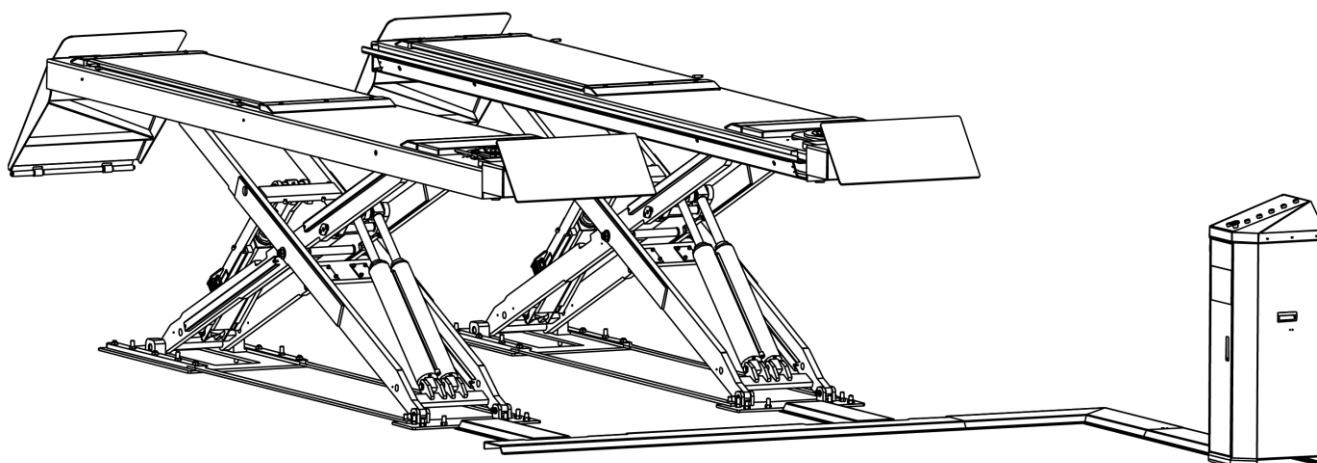
## Model No. EE-LX35B

Low Profile Long Platform Scissor Lift  
Electrical Levelling  
With Synchronization Protection  
Lifting Capacity 3500KG

## Installation, Operation and Parts Manual



# EAE



*Distributed by*

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

*DATE: 30/04/2018*

[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:

### **Copy right**

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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 lifting platform, 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 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 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.

**Attention:** For environment protection, please dispose the disused oil properly.

### 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>Never raise or lower a vehicle with one side platform.</p> 
 <p>Watch closely the vehicle during raising or lowering.</p>	<p>It is not allowed to work under the vehicle if safety teeth are not engaged.</p> 
 <p>Make sure that two platforms are of equal height from the floor when safety teeth engaged.</p>	<p>Avoid excessive rocking of vehicle while on lift.</p> 
 <p>Do not climb onto the lift platforms or raised vehicle during lifting or lowering.</p>	<p>Always keep the lift pit clean and clear of any objects or contaminants.</p> 
 <p>Do not change the safety mechanism.</p>	<p>Carryout maintenance regularly as indicated in the manual.</p> 

## 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 the lifting platform or tipping up.

Safety measures:

- The lifting platform 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. 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 4 parts for transportation

Name	Packed by	Dimension (mm)	Weight(kg)	Quantity
Control and power unit	Wooden case	610*510*1120	90	1
Power side platform	Carton with wooden base	4400*840*300	1100	1
The secondary platform	Carton with wooden base	4400*840*300	1100	1
Ramp	Bubble film	900*650*250	70	1

### 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.

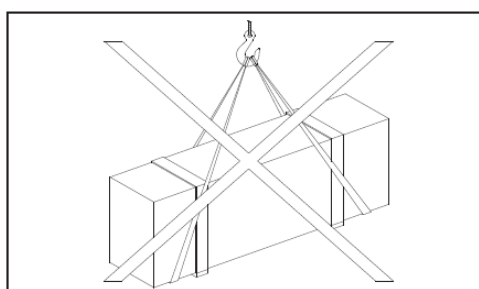
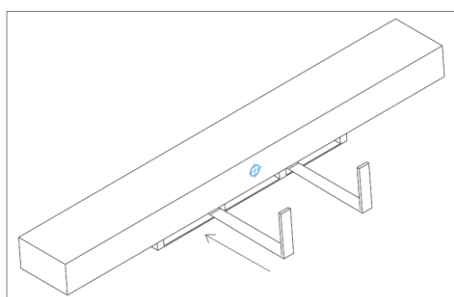
-never make stacks of single packs. Always stack pairs of packs in a cross pattern so that the base is bigger and the resulting stack is more stable. Once the stack is complete, restrain it using straps, ropes or other suitable methods.

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 Lifting and handling

The packs can be lifted and transported only by using lift trucks. The center of gravity and lashing points are marked on the packaging.

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 platform cylinder.**



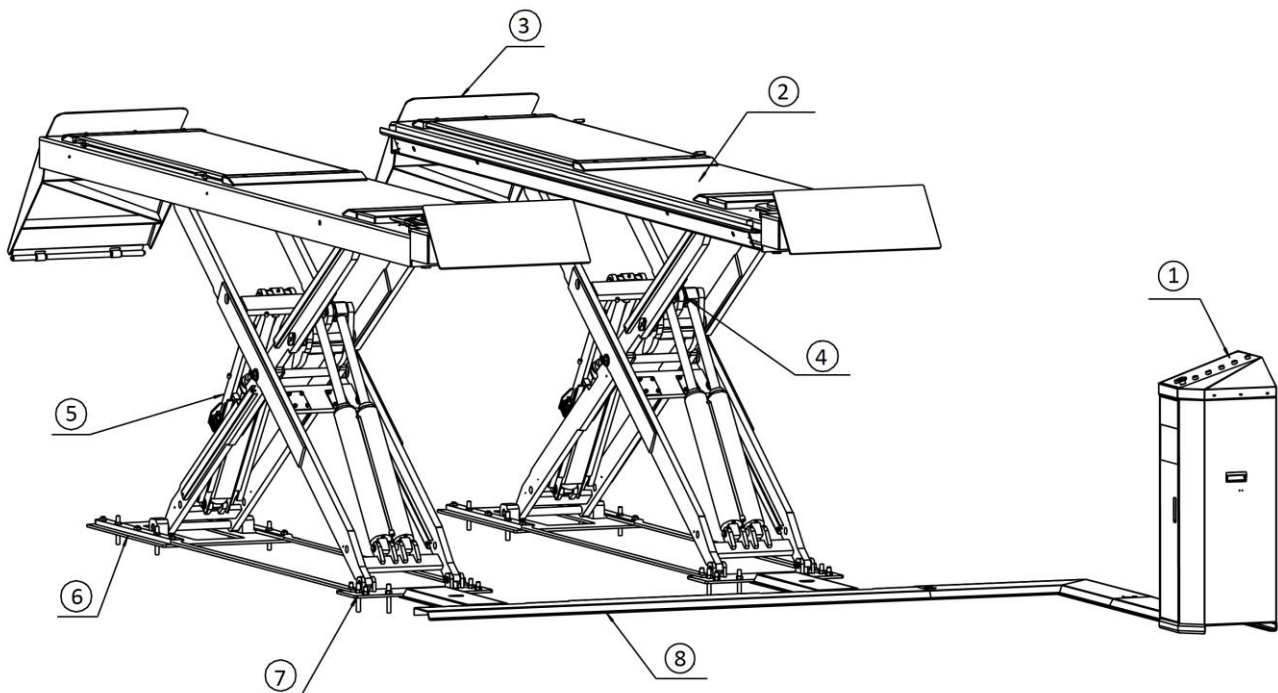
## PRODUCT DESCRIPTIONS

### 3.1 General descriptions

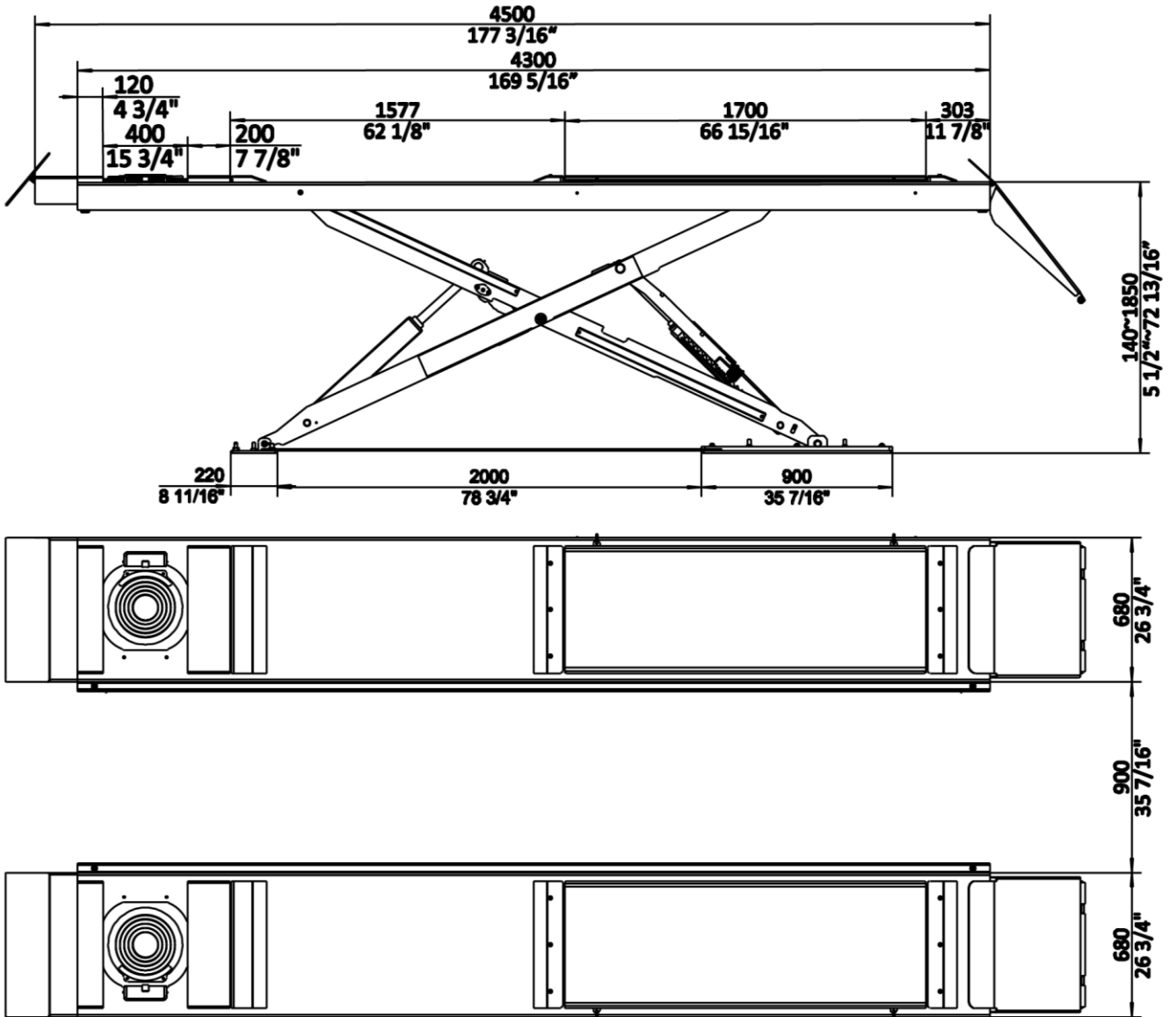
This model is designed for surface mounting and is mainly composed by lifting platforms, base plates, oil cylinders and a set of operation unit. The gear pump works making oil in the pump pushes upwards the pistons of oil cylinders. Thus, scissor brackets of the lift rise accordingly. The mechanical lock automatically engages in case of hydraulic failure.

Besides, designs like 24V operation voltage, low-height alarming buzzer, anti-surge valves, etc. have fully considered your personal security.

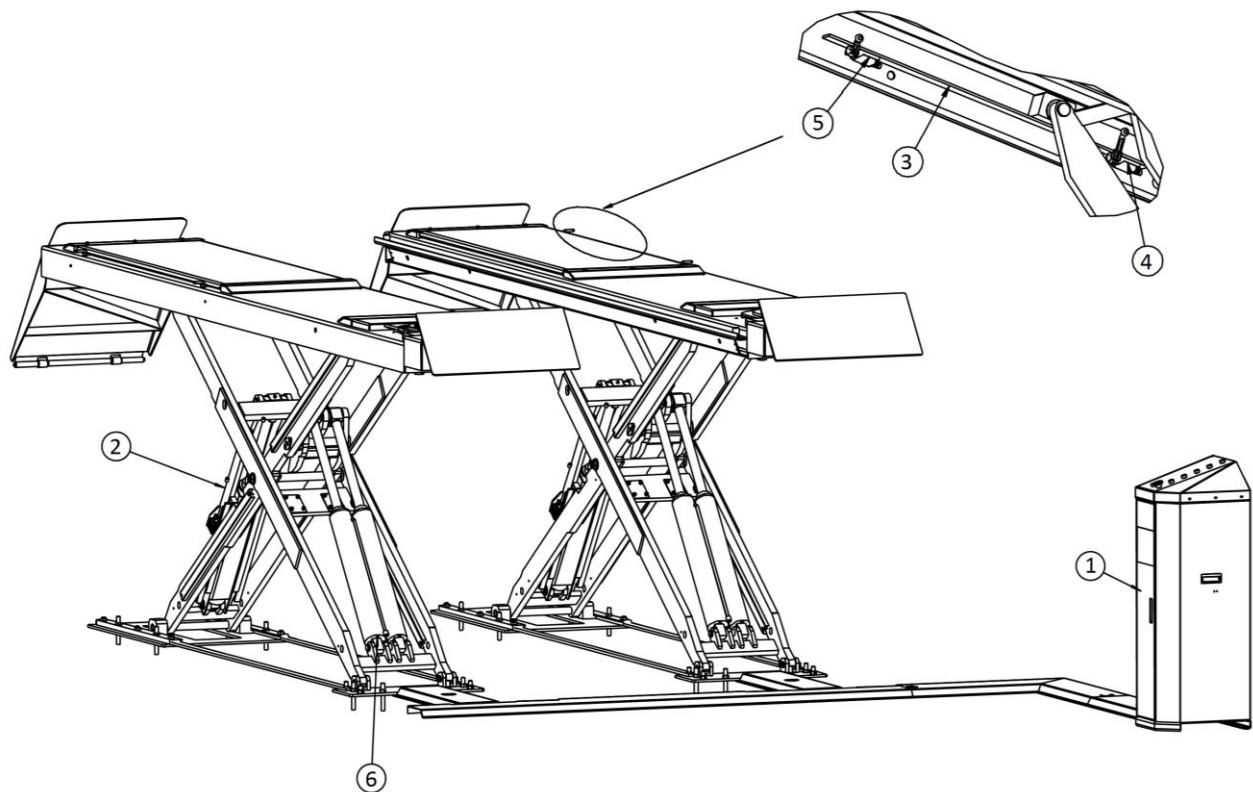
### 3.2 Construction of the lift



1. Control and power unit
2. Lifting platform
3. Drive-on ramp
4. Start rolling plate
5. Mechanical safety locking unit
6. Big base frame
7. Small base frame
8. Hose cover

**3.3 Dimensions**


### 3.4 Safety device descriptions



NO.	Safety device	Function
1	24V operation voltage	Safety voltage for operators.
2	Mechanical safety locking unit	Protect the lifting platform from moving down dangerously in case of hydraulic leakage.
3	Tip-up protection unit	Protect lifting platform from tipping-up caused by unbalanced load distribution.
4	Max height limit switch	Limit the travel of the lifting platform. Stop rising at a maximum height of 1850mm above ground.
5	Limit switch for safety lowering	Stop descending at safety height above ground to avoid pinching or shearing.
6	Anti-surge valve	Slow down the falling speed of lifting platform in case there is leakage of hydraulic oil hoses.

### 3.5 Technical data

Rated capacity(kg)	3500
Full raised height (mm)	1850
Full lowered height (mm)	140
Full raised time (with rated load)	3.5KW motor ,approx55s
Full lowered time (with rated load)	≤55s
Hydraulic working pressure (MPa)	24
Pneumatic working pressure (bar)	6-8
Oil tank volume	18L

## INSTALLATION INSTRUCTIONS

### 4.1 Preparations before installation

#### 4.1.1 Space requirements

Refer to 3.3 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 at the ends of the lifting platform for driving vehicles on and off.

**To stop vehicles colliding with the ceiling, it is advisable to fit an overhead light barrier in low ceiling buildings.**

#### 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> 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.**
- Routing of the compressed air connection to the installation location.

#### 4.1.3 Foundations preparations

Please refer to Annex 1 for floor dimensions.

##### **Indoor installation only.**

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.

C20/25 concrete base with strength more than 3000psi, Minimum thickness of 150mm.

Surface: 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	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		1
Socket spanner	D24mm	1
Levelling device		1
Hammer	10 pounds	1
Truck lift	Capacity more than 2500 kg	1
Lifting string	Capacity, 2500 kg	2
Lifting string	Capacity, 2500 kg	1
Torque spanner	MD400	1

#### 4.1.5 Checking parts

Unfold the package and check if any parts missed as per the following list. Do not hesitate to contact us in case any parts missed, but if you do not contact us and insist installing upon the lack of some parts, we as well as our dealers will not bear any responsibility for this and will charge for any parts subsequently demanded by the buyer.

S/N	Name	Specification	Qty
1	Lifting platform	LX35	2
2	Expansion bolt	M16*120	16
3	Control and power unit	3.5kW	1
4	Drive-on ramp(optional)	LX35-A9	2
5	Protective cover A(L=2200)	LX35-A14	3
6	Protective cover B(L=1000)	LX35-A18	1
7	Protective cover C(L=1000)	LX35-A16	1
8	Middle Protective cover (L=1000)	LX35-A20	1
9	Cross socket cap head tapping screw	ST4.8*35	20
10	Plastic expansion tube	M10*40	20
11	Cross socket cap head screw	M6*12	4
12	Hex nut	M6	4
13	Flat washer	M6	4

## 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

### Step 1: Dismantle the package of the lifting platforms.

Remove the carton and packing films wrapped on the platform.

**WARNING! : Take off oil hose protectors when cut off the packing strips.**

**WARNING! : Avoid scratching the painting surface and hoses.**

### Step 2: Place the lifting platform at expected installation site with a forklift and lifting straps.

Raise the platform by using a forklift and 2 lifting straps until the mechanical lock is engaged. Dismantle the bolts that fix the platform and its wooden package and then hoist the platform onto the expected installation site.

**Attention 1: Before hoisting, make sure the hoses and wires are well protected against damage.**

**Attention 2: It is necessary to hold the platform during the hoisting process. Irrelevant person is not allowed in installation area.**

### Step 3: Open the package of the control and power unit and take out accessories in it.

### Step 4: Connect hydraulic oil hoses.

Connect the oil hoses to the power unit as per the diagram for oil hose connection. Annex 3.

Screw torque for oil hose connector is 60N\*m.

*Attention: Connect as per the marks on the hoses and do not contaminate the hydraulic components during the connection.*

### Step 5: Connect the electrical system.

Refer to Annex 2 when fix the electrical system.

Connect the wire connectors for rising and lowering limit switches

Connect the power supplier cable to external electricity supply.

*(For three phase power supply, if the lift doesn't raise and the motor may turn in the wrong direction, in such event, interchange wires U, V in the control and power unit).*

### Step 6: Connect the pneumatic release system.

Refer to Annex 4.

Screw torque for pneumatic hose connector is 20N\*m.

External compressed air shall be prepared by the end user before installation. Pneumatic pressure 6-8 bar.

Attention: Do not contaminate the hoses during the connection.

### Step 7: 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**

Prepare 22 liters of hydraulic oil. Initially. Fill the tank full with about 18 liters of hydraulic oil. Run the main and the secondary lift for several cycles and add another 4 liters into the tank. The level of oil shall reach the tippets volume mark of the tank.

Run the lift for several cycles and add more oil until the lifting platform can reach its maximum height.

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

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

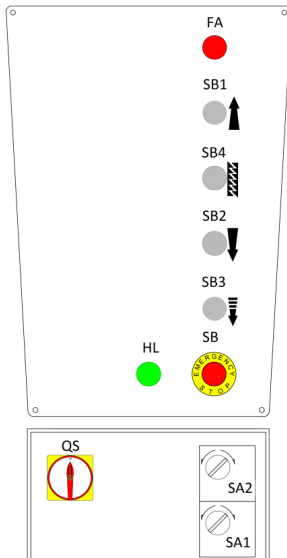
### Step 8: Levelling

**Refer to 5.2 and 5.4 operation instructions and turn SA2 to "OFF" mode before levelling operation.**

**Check the connection of the hydraulic and electrical system before levelling operation.**

**Review operation instructions and get familiar with lift controls by running the lift through a few cycles before levelling operation.**

**Check the connection of the hydraulic and electrical system before levelling operation**



SA1 Working or Levelling mode selection  
 SA2 Synchronization protection on or off

1. Open the door of control and power unit and find the selection switch SA1.
2. Turn SA1 to LA or LB mode, and push the lock button (SB4) 5 times in 5 seconds.
3. Push the UP button until both platforms rises a bit and after that push the DOWN button (SB2) to lower both platforms completely. (Repeat doing this for 2 or 3 times). If the platforms do not rise when you push the UP button for more than 20 seconds, please check the running direction of motor and oil volume in the oil tank.

(For three phase power supply, if the lift doesn't raise and the motor may turn in the wrong direction, in such event, interchange phase order for the wires of the power supply cable).

4. Turn the selection switch (SA1) to WK mode and push the DOWN button (SB2 or SB3) to lower both platform completely. Push the UP button to check if both platforms rises synchronously.
5. If the platforms still run with height deviation, the operator needs to judge which platform is controlled by LA and which is controlled by LB by turning SA2 to LA and push the UP button, the platform which rises firstly is controlled by LA and the other platform is controlled by LB. (Assume LA controls Platform A and LB controls Platform B). If in WK mode platform B rises more slowly than platform A, turn SA1 to LB and push the UP button until platform B rises to the same height as that of platform A.
6. Repeat step 4 and 5 until both platforms rise and lower synchronously. Turn SA1 to WK mode before using the lift for normal service work.

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

S/N	Check items	YES	NO
1	Screw torque of expansion bolts : 85N•m;;	√	
2	Rising speed ≥20mm/s;	√	
3	Noise with rated load ≤75dB;	√	
4	Grounding resistance: not bigger than 4Ω;	√	
5	Height difference of the two platform ≤5mm;	√	
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 the lift rises and lowers smoothly?	√	
11	If there is no abnormal noise during running with rated load?	√	
12	If there is no oil leakage when running with rated load?	√	
13	If there is no air leakage when running with rated load?	√	
14	If expansion bolts, nuts or circlips are well secured?	√	
15	If max lifting height is 1850mm (above ground)?	√	
16	If safety advices, name plate and logos are clear?	√	

## OPERATION INSTRUCTIONS

### 5.1 Precautions

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

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

5.1.3 The machine shall not lift or lower an automobile if its center of gravity is not positioned midway of the rising platforms. Otherwise, the manufacturer as well as the dealers will not bear any responsibility for any consequence resulted thereby.

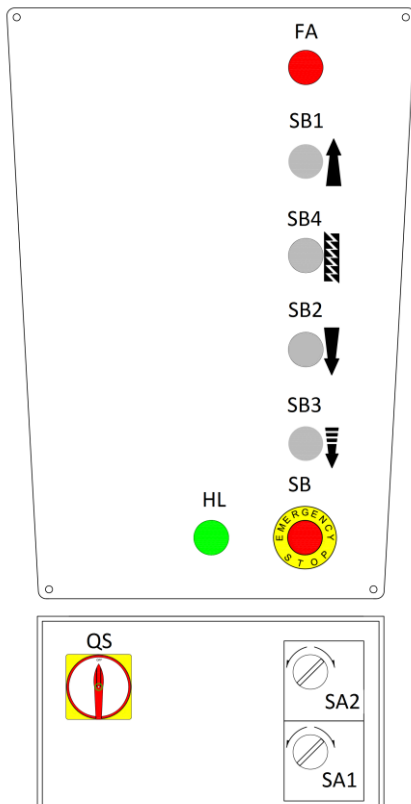
5.1.4 Operators and other personnel concerned should stand in a safety area during lifting and lowering process.

5.1.5 When platforms rise to the expected height, turn off the power to prevent any wrong operation done by unconcerned people. If necessary, lock the switch with a padlock.

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

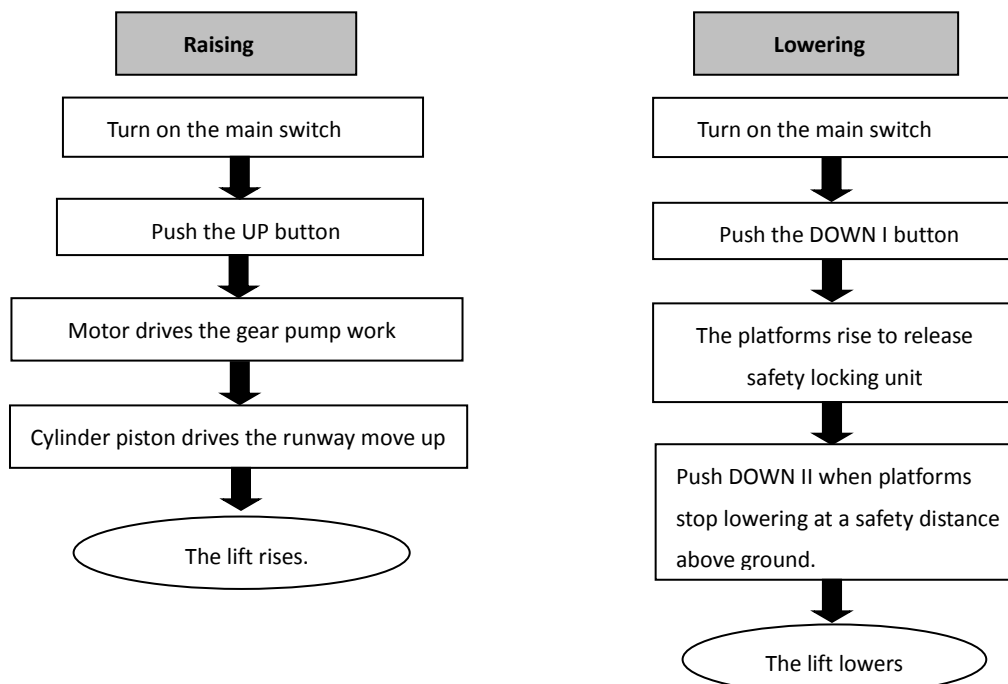


### 5.2 Control panel descriptions



POS.	Name	Function
FA	Alarm buzzer	Safe descent warning
SB1	UP button	Control the rising movement
SB2	DOWN I button	Control the initial lowering movement
SB3	DOWN II button	Control the final lowering movement (for safe descent)
SB4	LOCK button	Engage the safety locks
SB	Emergency stop	Stop power in emergency cases
HL	Power indicator	Show if power is on
QS	Main power switch	Power on /off
SA1	Selection switch	Working or Levelling mode selection
SA2	Selection switch	Turn on or off the synchronization protection device

### 5.3 Flow chart for operation



## 5.4 Operation instructions

*The lift must be only used in a static position for lifting and lowering vehicles.*

*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.*

*Turn SA1 to "WK" mode and SA2 to "ON" mode before normal use.*

*The normal users are not allowed to open the door of control and power unit.*

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. Never raise just one end, one corner or one side of vehicle.

### ***Raise the lift***

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

1. Drive and park the vehicle midway between two platforms. Make sure the vehicle is correctly positioned and secured against rolling.
2. Push the "UP" button on the control panel to lift the vehicle a bit off the ground and check again if the vehicle is in a safe position.
3. Having raised the vehicle to the height expected, push the "Safety Lock" button to ensure the mechanical safety lock is engaged. Push the "Emergency Stop" and check again the stability before doing maintenance or repair work.

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

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

1. Turn on the power switch.
2. Push "DOWN I" button to lower the lift. (Before it starts descending, the lift will automatically rise to disengage the mechanical locks.) It will stop lowering at a safe distance off the ground.
3. Push "DOWN II" button to continue lowering the platforms which accompanies with safety alarming buzz.

**Attention:** In the case the desynchronisation of the two platforms are unacceptable (the difference is more than 6cm) during lifting or lowering process, the synchronization protection device will be activated to stop any raising or lowering movement. In this case the normal operator needs to ask professional help from maintenance operator to restore the lift to normal working condition.

### ***HOW to restore to the normal working status?***

Open the door of the control and power unit;

Turn SA2 to OFF mode;

PUSH DOWN I and DOWN II button to fully lower the platform;

Level until both platforms are synchronized. (Refer to Step 8: Levelling)

Turn SA2 to ON mode.

## TROUBLE SHOOTING

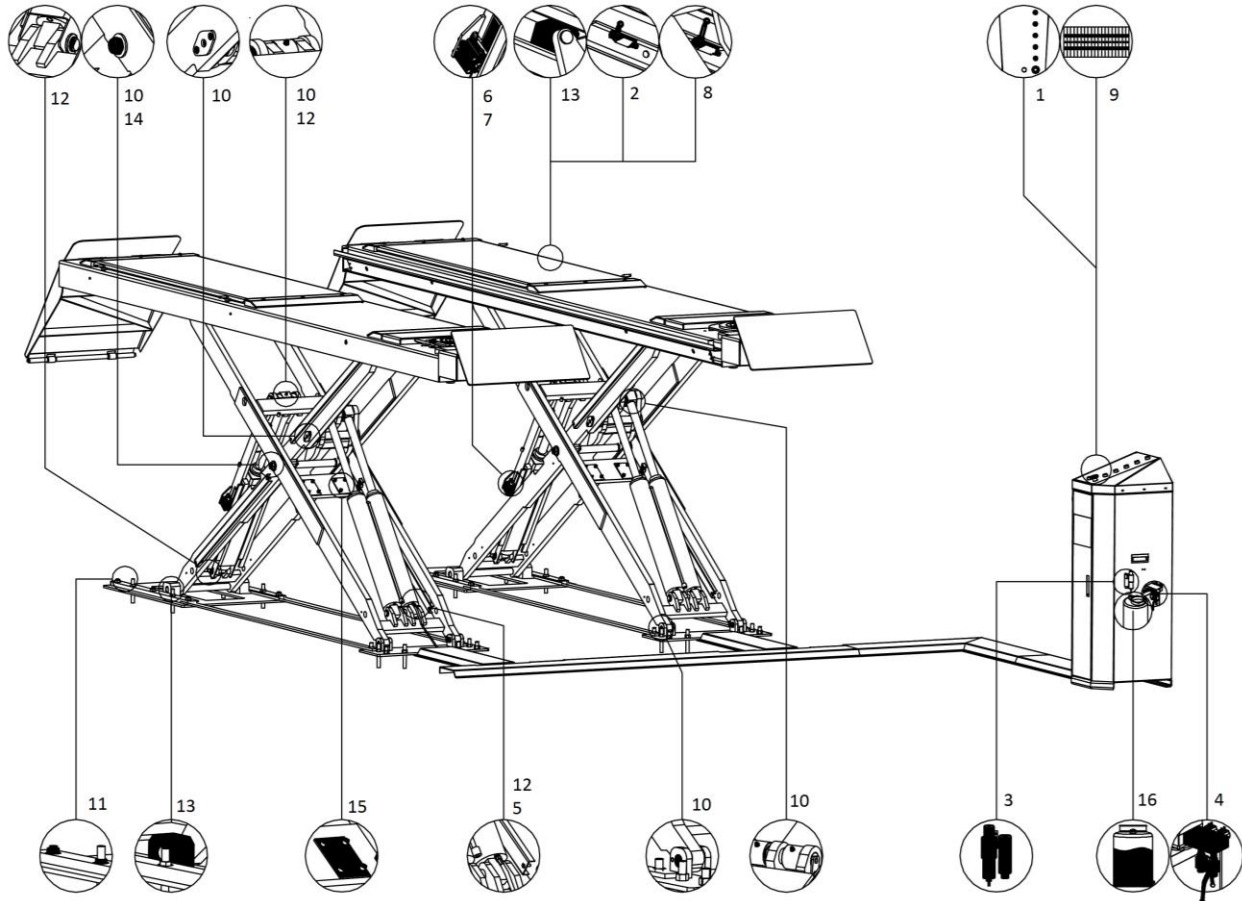
ATTENTION: If the trouble could not be fixed by yourself, please do not hesitate to contact us for help. We will offer our service at the earliest time we can. The troubles will be judged and solved much faster if you could provide us more details or pictures of the trouble.

TROUBLES	POSSIBLE CAUSES	SOLUTIONS
Motor does not run and will not raise.	Loose wire connection.	Check and make a good connection.
	Burnt 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
Platforms 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.
	Solenoid valve fails to work well.	Clean or replace it.
	Unloading valve leaks.	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.
Lowering too slow.	Jammed throttle valve	Add grease.
	Dirty hydraulic oil	Clean or replace.
	Jammed anti-surge valve	Change the oil.
	Jammed oil hose	Clean it.

## MAINTENANCE

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

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



S/N	Components	Methods	Period
1	Control buttons	Check if control buttons work as "hold- to -run " and check if they work as the function indicated.	Every day
2	Max height limit switch	Push the UP button, inspect and ensure the lifting platform stops rising at maximum lifting height.	Every day
3	Pneumatic filter	Listen and inspect the filter to ensure no leakage. Inspect and ensure the water level is below its max limit mark and the oil level is above the minimum limit mark.	Every day
4	Hydraulic block and valves	Inspect if the valves leak or not. Clean or change the valve if any leakage.	Every day
5	Oil hoses and connectors	Inspect to ensure no leakage before using the lift.	Every day
6	Pneumatic hoses and connectors	Inspect to ensure no leakage before using the lift.	Every day
7	Mechanical safety catch	Check if both mechanical catches can engage and disengage effectively and synchronously by pushing control buttons.	Every day

S/N	Components	Methods	Period
8	Lifting platform	Check the synchronization of both lifting platforms. Ensure both platforms ascend and descend synchronously.	Every day
9	Terminals in the control unit	Open the control unit, inspect the wire terminals and screw firmly if any terminals become loose.	Every 3 months
10	Joint shafts	Add grease into the oil cups.	Every 3 months
11	Anchored expansion bolts	Check with torque spanner. For M18 bolt, the torque is no less than 100N.m. For M16, the torque is no less than 85N.m	Every 3 months
12	Circlips of oil cylinder shaft	Inspect if any circlip goes off its groove. Make sure they are positioned in the grooves.	Every 3 months
13	Sliders and their running tracks	Push the UP and DOWN button to check if the slider is over-worn. Add grease to ensure smooth running. Change over-worn sliders.	Every 3 months
14	Self-locking nut	Check with torque spanner. The torque should be no less than 330N.m.	Every 3 months
15	Padding plate for the start roller	Add grease.	Every 3 months
16	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

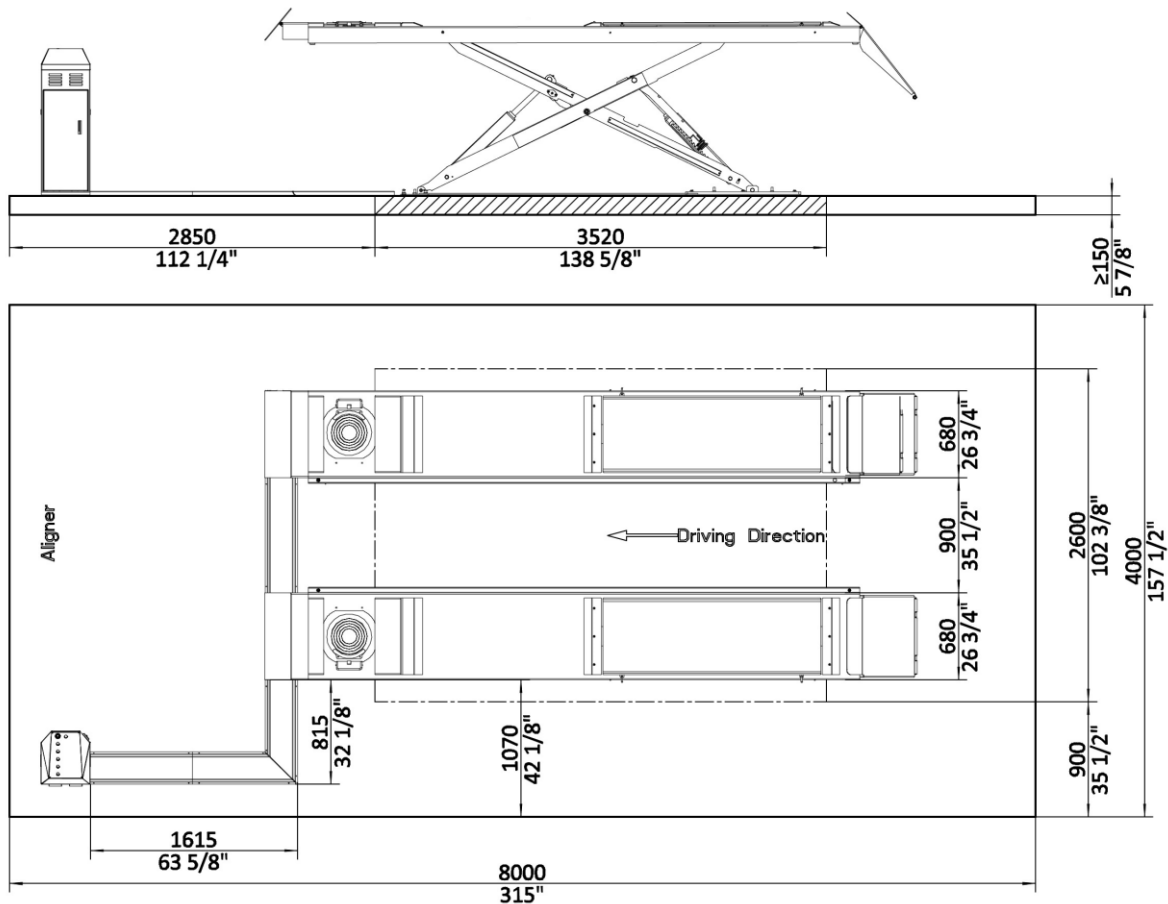
*If users stick to the above maintenance requirements, the lift will always keep a good working condition and its service life could be extended.*

## Annex 1, Floor Plan

### Indoor installation only.

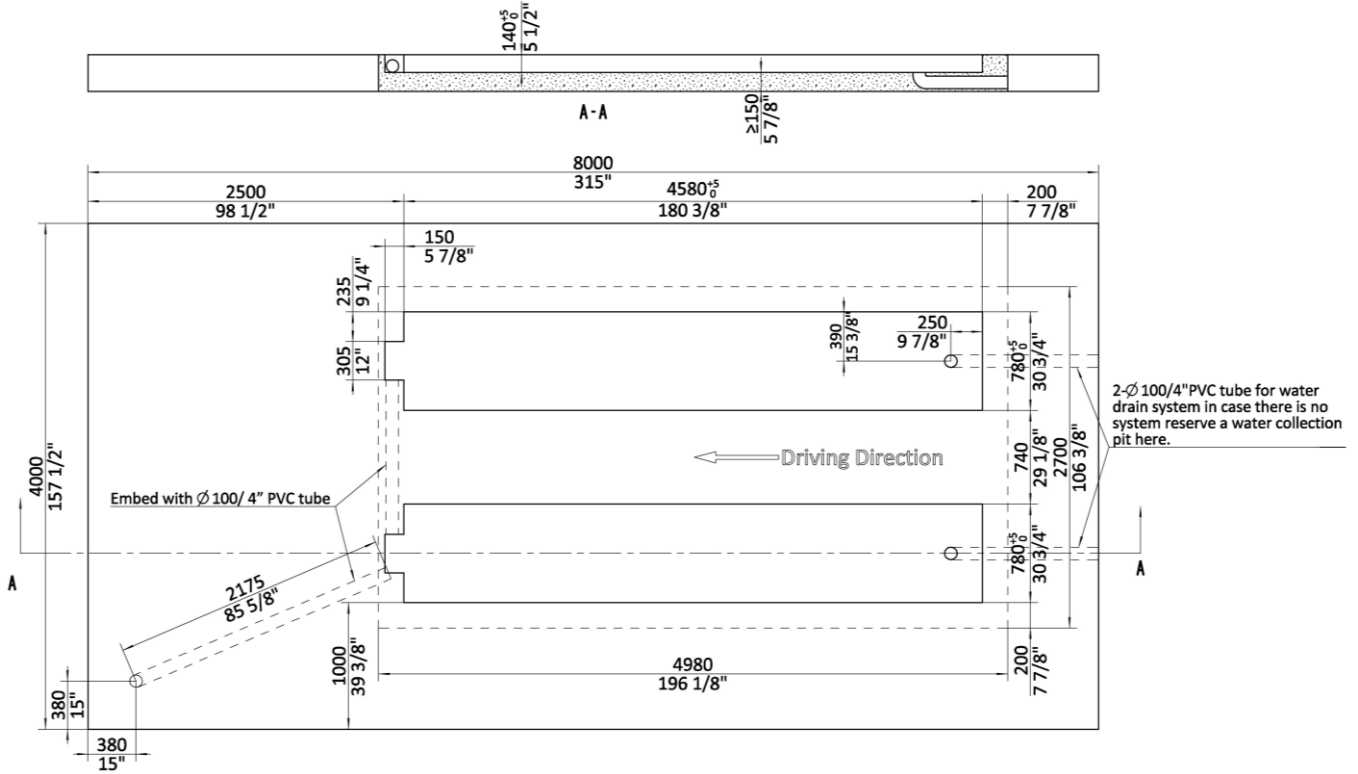
1. There must also be a clearance of at least 1 meter between the lifting platform and fixed elements (e.g. wall) in all lifting positions. There must be sufficient space for driving vehicles on and off.
2. The area enclosed by the dashed line (2600mm\*3500mm) in the below scheme needs to be built with C20/25 concrete, with strength more than 3000psi, minimum thickness of 150mm. Newly built concrete ground must be older than 20 days.
3. Surface: Horizontal and even (Gradients max. 0.5 %)
4. Flatness for the floor of the two pits shall within the tolerance of 5mm. (applicable to recessed mounting)
5. Embed L40 angle iron around the pit for edging (applicable to recessed mounting);
6. Reserve a water collection pit in the case drain pipes are not available (applicable to recessed mounting);
7. In mm and inch.

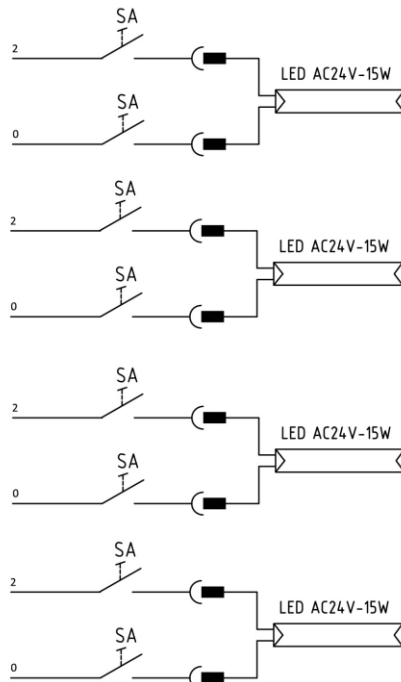
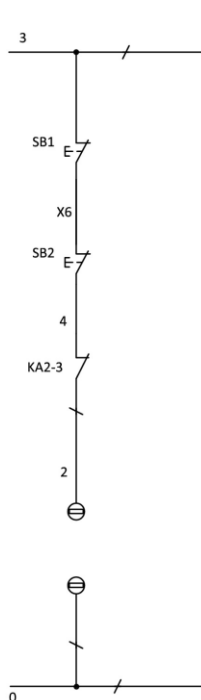
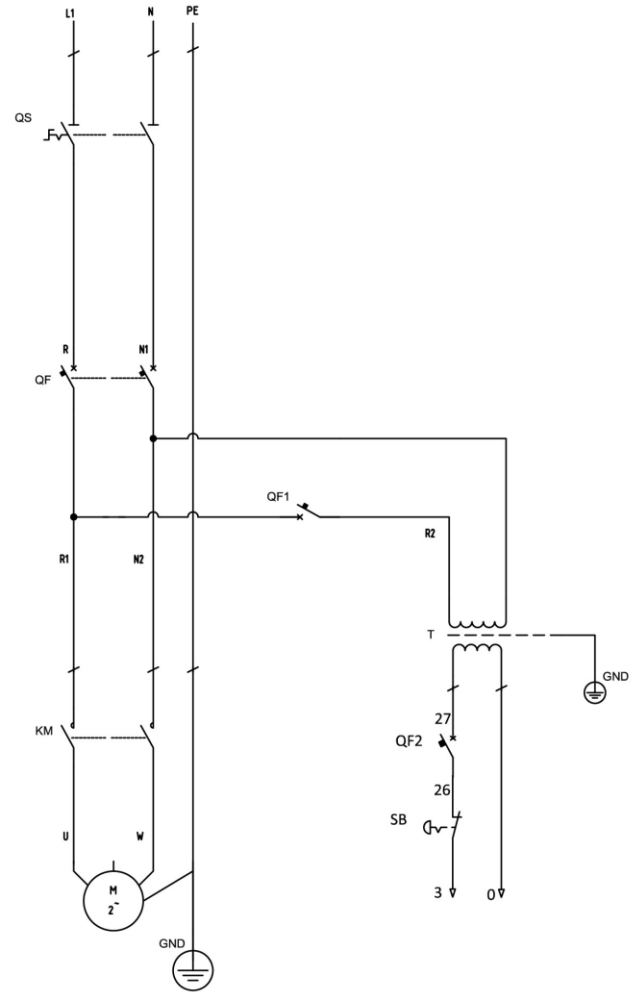
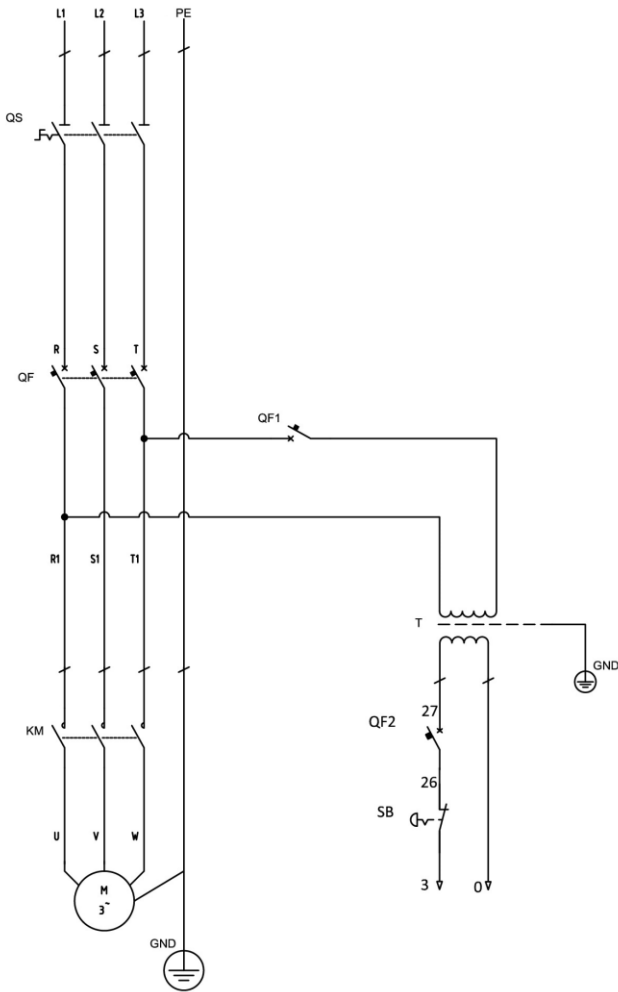
### Surface mounting





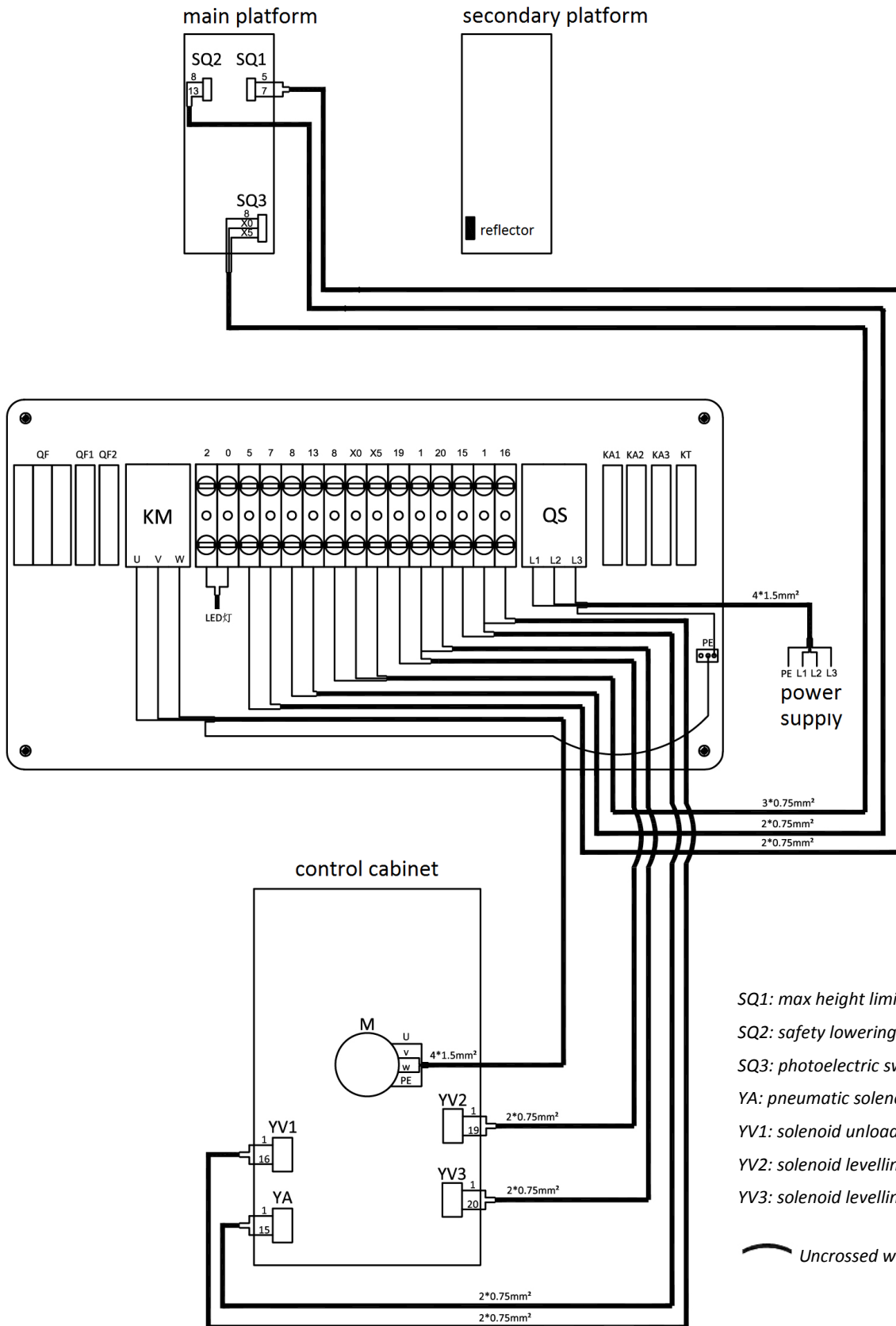
### Recessed mounting (optional)



**Annex 2, Electrical schemes and parts list**


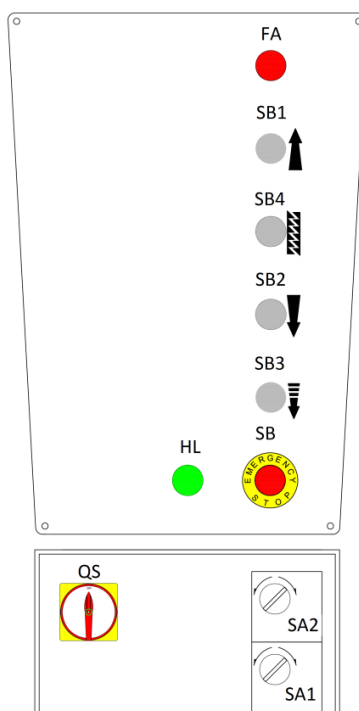






- SQ1: max height limit switch
- SQ2: safety lowering limit switch
- SQ3: photoelectric switch
- YA: pneumatic solenoid valve
- YV1: solenoid unloading valve
- YV2: solenoid levelling valve 1
- YV3: solenoid levelling valve 2

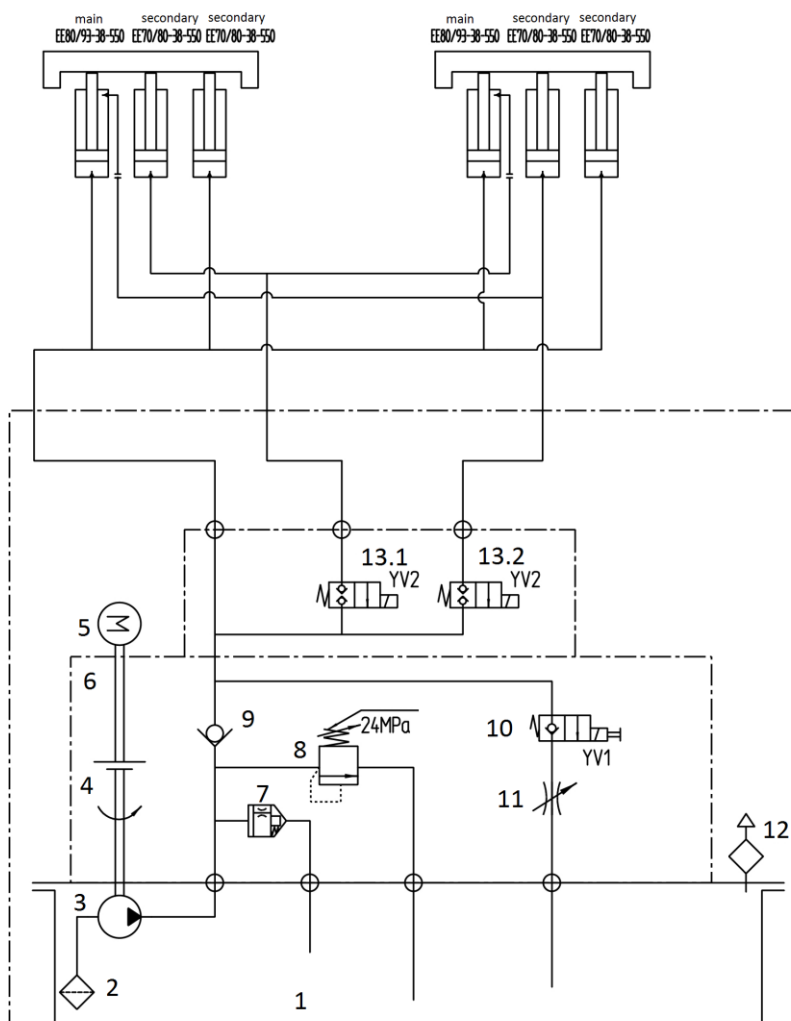
 Uncrossed wire



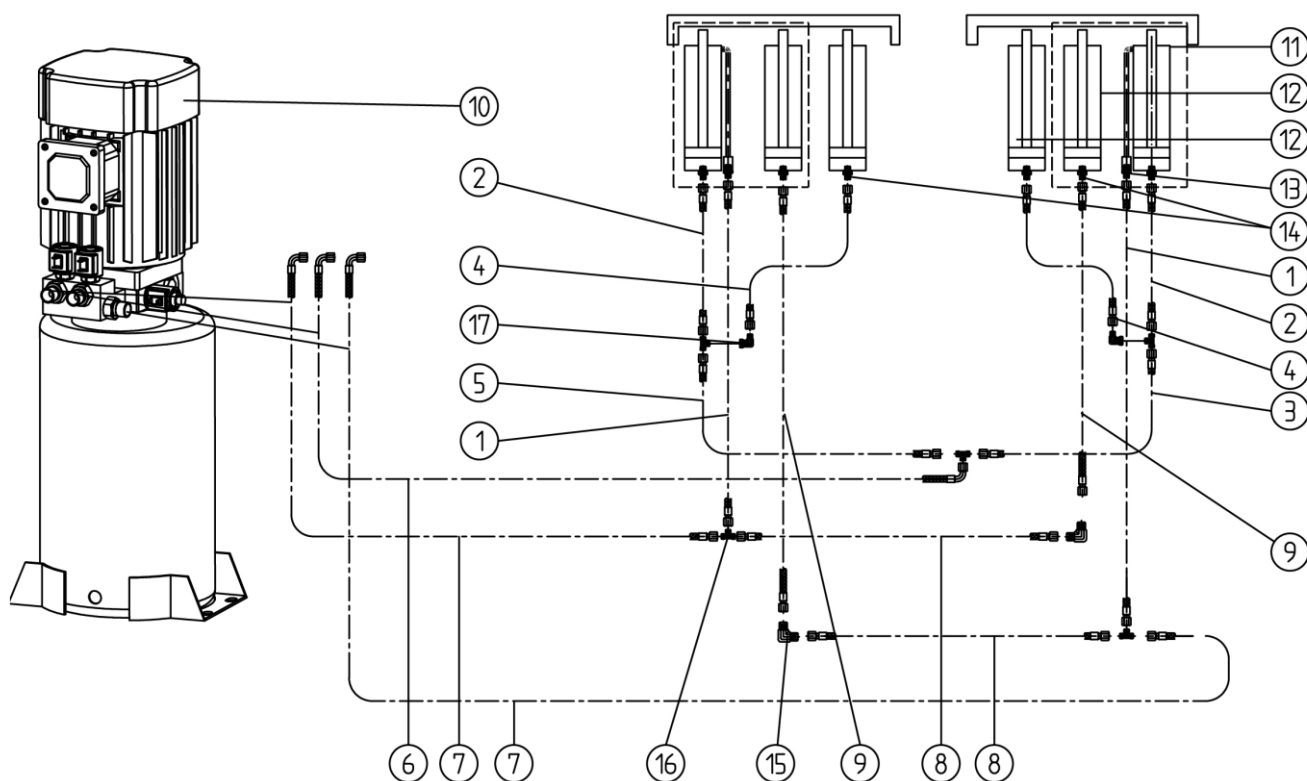
POS.	Code	Name	Qty
<b>T</b>	<b>320101128</b>	<b>Transformer (380/400/415-24)</b>	<b>1</b>
<b>M</b>	<b>320203001</b>	<b>Motor-380V-3.5KW-3PH-50HZ-2P</b>	<b>1</b>
SQ1	320301011	Limit switch	1
SQ2	320301009	Limit switch	1
SQ3	320306002	Photoelectric switch	1
SA1	320303023	Selection switch (3P)	1
SA2	320303019	Selection switch (2P)	1
QS	320304001	Power switch	1
<b>SB3</b>	<b>320401041</b>	<b>Button</b>	<b>1</b>
<b>SB1;SB2;SB4</b>	<b>320401044</b>	<b>Button</b>	<b>3</b>
SB	320402002	EMG stop	1
	320503002	Ground terminals	1
	320505006	Wire terminal	15
KA2,KA3	320601001	Relay	2
KA1	320601002	Relay	1
	320601011	Relay holder	3
	320601018	Relay feet fixer	6
KT	320602009	Integrated time relay	1
QF	320801001	Circuit breaker	1
QF1	320803001	Circuit breaker	1
QF2	320803005	Circuit breaker	1

POS.	Code	Name	Qty
KM	320901011	AC contactor	1
C	321001004	Capacitor	1
VD	321002001	Bridge rectifier	1
HL	321201001	Power indicator	1
FA	321202001	Alarm buzzer	1
SA	320305001	Rocker switch (optional)	4
LED	321201021C	LED lamp (optional)	4

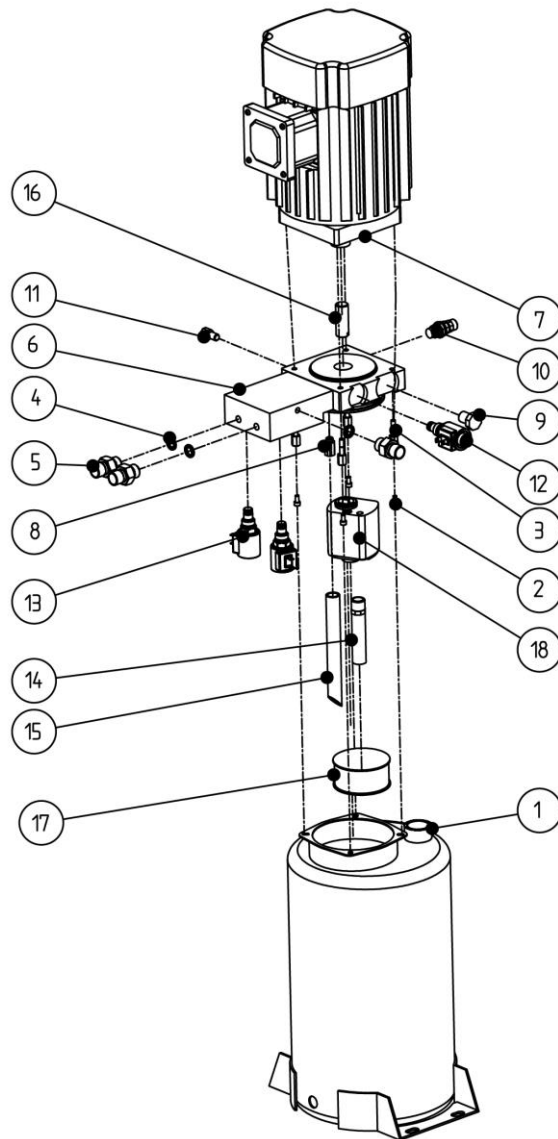
### Annex 3, Hydraulic schemes and parts list



1. oil tank 2.oil sucking filter 3.gear pump 4.coupling 5.motor  
 6. Composite hydraulic block 7.cushoin valve 8.overflow valve 9.single way valve 10.solenoid unloading valve  
 11. Flow control valve 12. Oil tank cover 13.levelling solenoid valve



POS.	Code	Name	Specification	Qty
1	624002040	Oil hose	L=1400	2
2	624002044	Oil hose	L=660	2
3	624001029	Oil hose	L=1150	1
4	624002046	Oil hose	L=3700	2
5	624001030	Oil hose	L=1350	1
6	624001293	Oil hose	L=4460	1
7	624001294	Oil hose	L=3770	2
8	624001295	Oil hose	L=1550	2
9	624002045	Oil hose	L=1300	2
10		Power unit	3.5kW or 2.2kW	
11	615049001	LX35 main oil cylinder	EX-LX35-MCYL	2
12	615049002	LX35 secondary oil cylinder	EX-LX35-SCYL	4
13	310101010	Straight connector	M14*1.5-G1/4inside cone	2
14	330305009	Straight connector with restrictive valve	BDPF-G14-G14-I60	6
15	310102034	Right angle connector	ELC-G1/4 I60-G1/4 I60	2
16	410210181	Three way connector	6603B-A9-B7	2
17	310102035	Adjustable right angle connector	EW-G1/4SR-	2



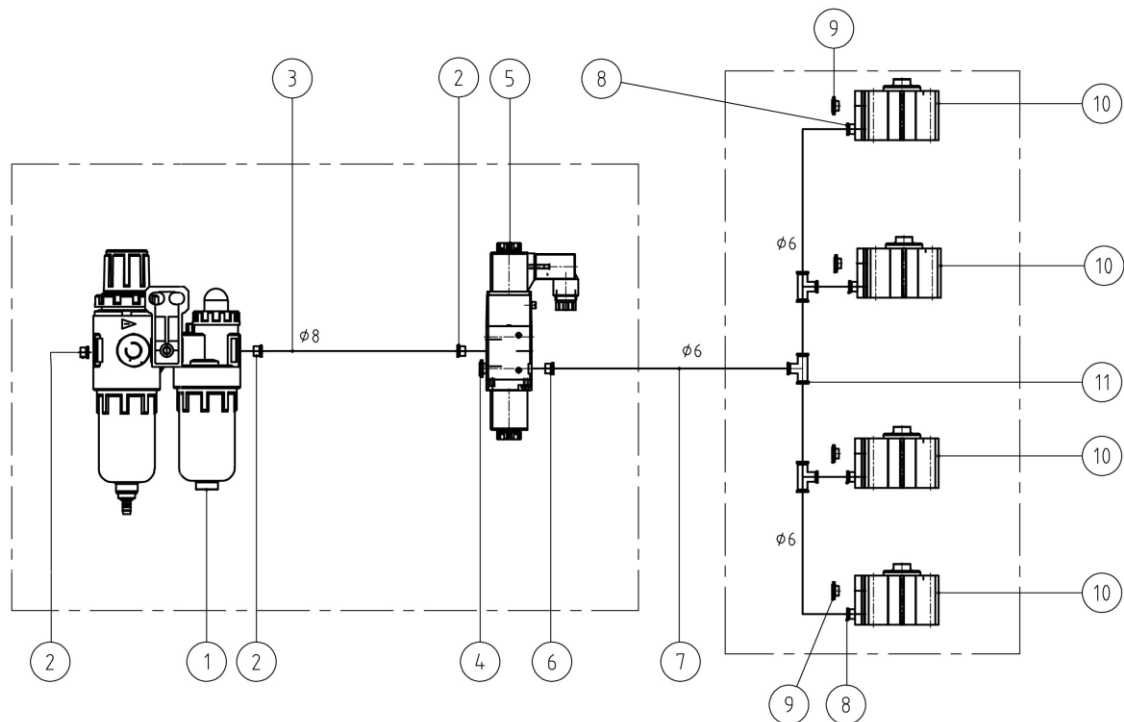
POS.	Code	Name	Specification	Qty
1	330405027	Steel oil tank	18L	1
2	201102002	Hex flange screw	M5*10	4
3	202109064	Hex socket cylinder head screw	M6*30	4
4	207103019	Flat washer	M14	3
5	310101010	Straight connector	G1/4-G1/4	3
6	330101008	Composite hydraulic block	YF-06	1
7	320203001	Motor	380V-3.5KW-3PH-50HZ-2P	1
	320203005	Motor	400V/3.5KW-3PH-50HZ-2P	1
	320203006	Motor	415V/3.5KW-3PH-50HZ-2P	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

POS.	Code	Name	Specification	Qty
8	330301001	Cushion valve	HZYF-C1	1
9	330302001	Single way valve	DYF-C	1
10	330304001	Over flow valve	EYF-C	1
11	330305002	Throttle valve		1
12	330308006	Solenoid unloading valve	DHF06-220H/DC24V	1
13	330308008	Levelling valve	DHF06-228H/DC24V	2
14	330401005	Oil sucking tube	XYGN-L293	1
15	330402001	Oil returning tube	YH-D	1
16	330404001	Coupling	YL-A	1
17	330403001	Oil sucking filter	YG-C	1
18	330201007	Gear pump	CBK-F233	1

### SEAL RINGS

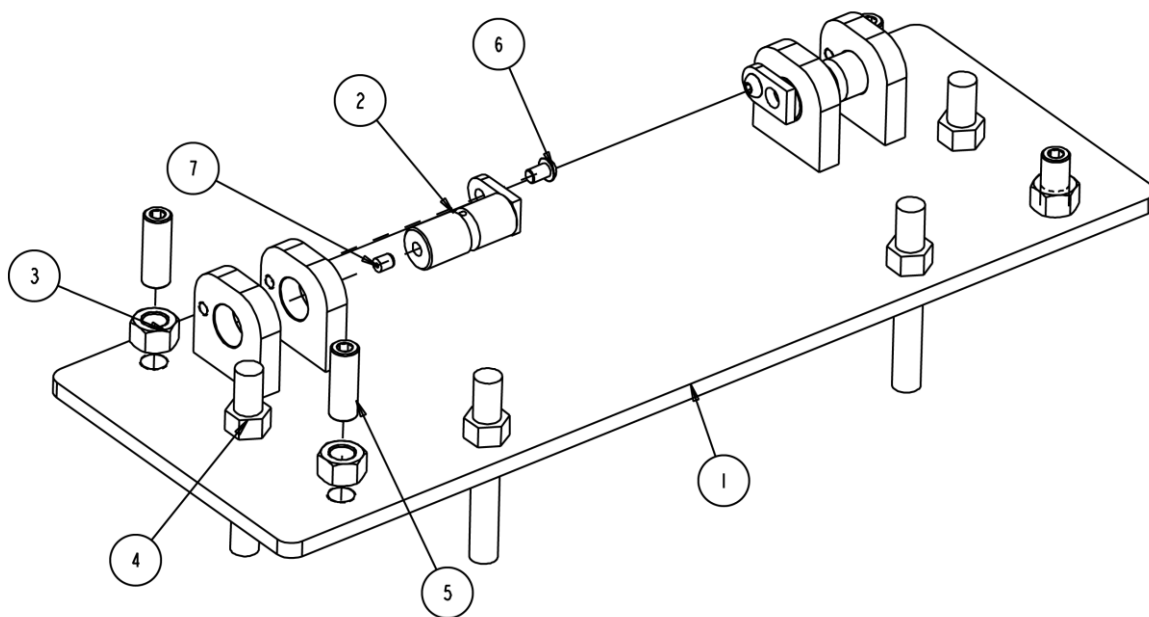
S/N	Code	Name	Specification	Qty	NOTE
1	207102008	Y seal ring	B7-80*65*9	4	Main cylinder
2	207102003	Y seal ring	SD38*48*5	2	Main cylinder
3	207105004	Dust proof ring	BHS38*46*6	2	Main cylinder
4	207102018	Y seal ring	SD-70*55*9	2	Secondary cylinder
5	207105004	Dust proof ring	BHS38*46*6	2	Secondary cylinder

### Annex 4, Pneumatic scheme and parts list



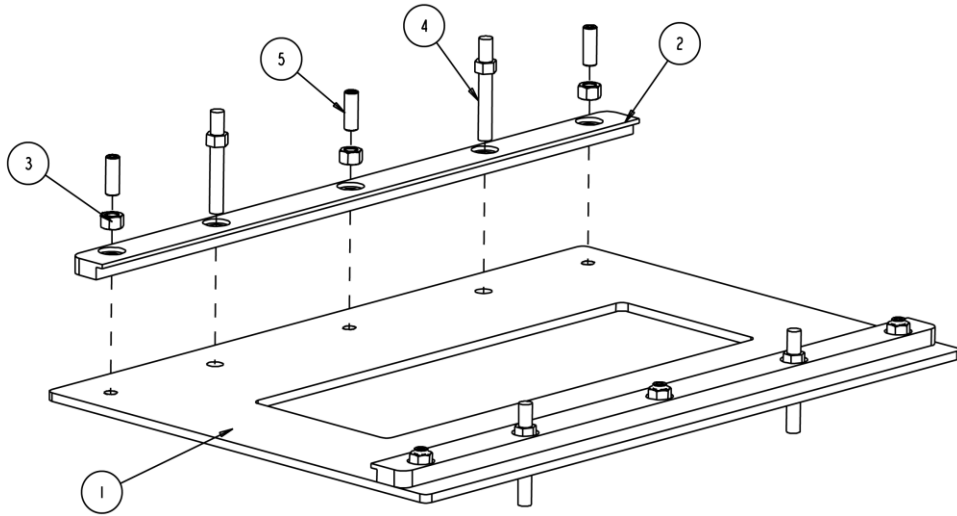
POS.	Code	Name	Specification	Qty
1	321004006	AFC Air filter combination	AFC2000	1
2	310102015	Quick pneumatic connector	KLL8-02	3
3	123010101	Pneumatic hose	D=6	1
4	310201002	Silencer	SLM02 R1/4 (M12)	1
5	310401001	Pneumatic solenoid valve	3V210-08DC24V	1
6	310101017	Pneumatic straight connector	KLC6-01	1
7	123010101	Pneumatic hose	D=6 20	1
8	310101024	Pneumatic straight connector	KLC6-01	4
9	310201003	Silencer	SLM01 R1/8 (M8)	4
10	310501003	Pneumatic cylinder	CQ2B32*20	4
11	310102015	Three way pneumatic connector	KLL8-02	3

### Annex 5, Mechanically exploded drawings and parts list

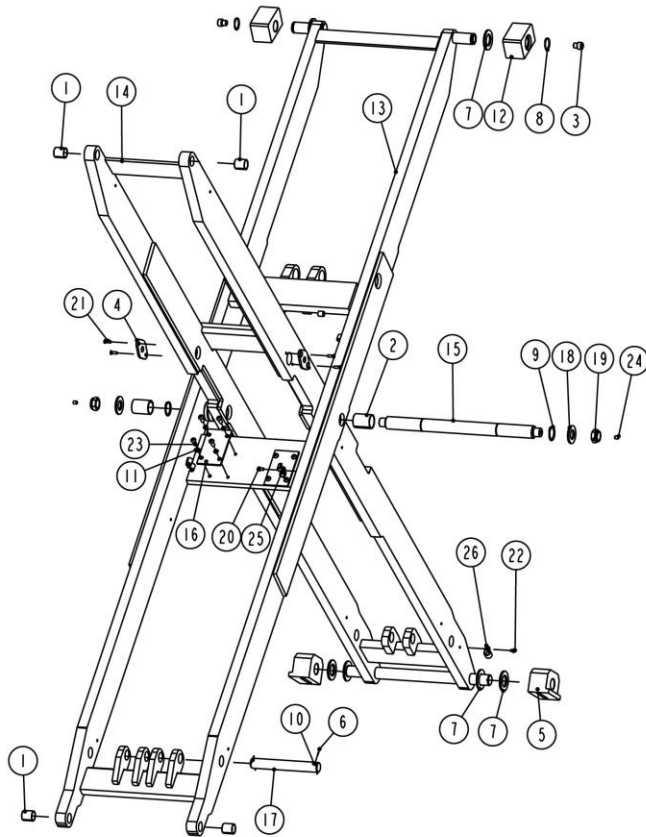


POS.	Code	Name	Specification	Qty
1	614049009	Base plate A	LX35-A1-B1	1
2	612049013	Shaft of the support holder	LX35-A1-B2	2
3	203101009	Hex nut M16	M16-GB6170	4
4	201201005	Expansion bolt M16*120	M16X120	4
5	202205002	Hex socket flat head tapping screw	M16X50-GB77	4
6	202110004	Hex socket cap head screw	M8X12_GB70_2	2
7	208106002	Pressed oil cup M8	M8YP_GB7940_4	2

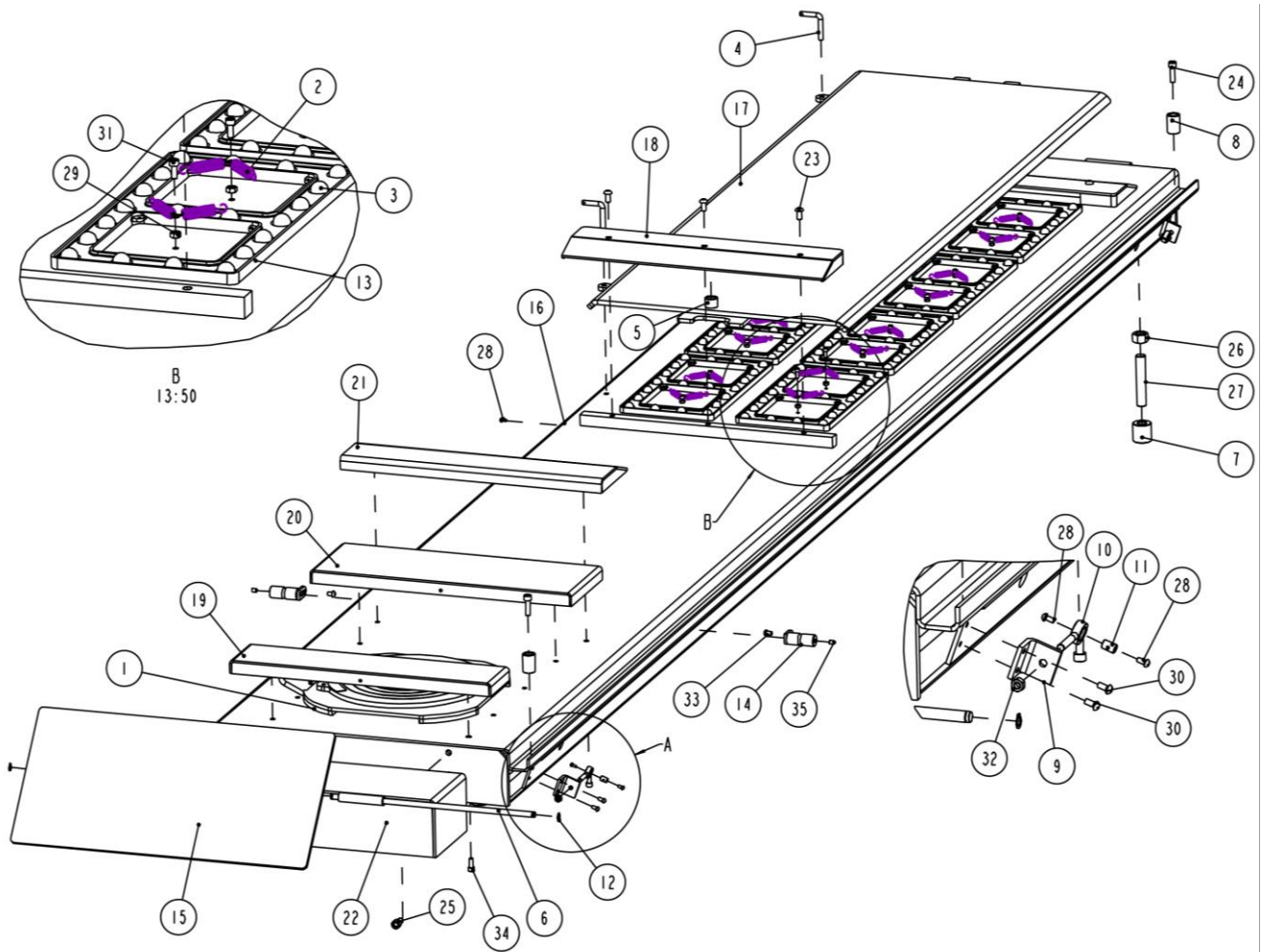




POS.	Code	Name	Specification	Qty
1	410490503	Big base frame	LX35-A2-B1	1
2	410049081	Plate for base frame B	LX35-A2-B2	2
3	203101009	Hex nut M16	M16_GB6170	6
4	201201005	Expansion bolt M16*120	M16X120	4
5	202205002	Hex socket flat head tapping screw	M16X50-GB77	6

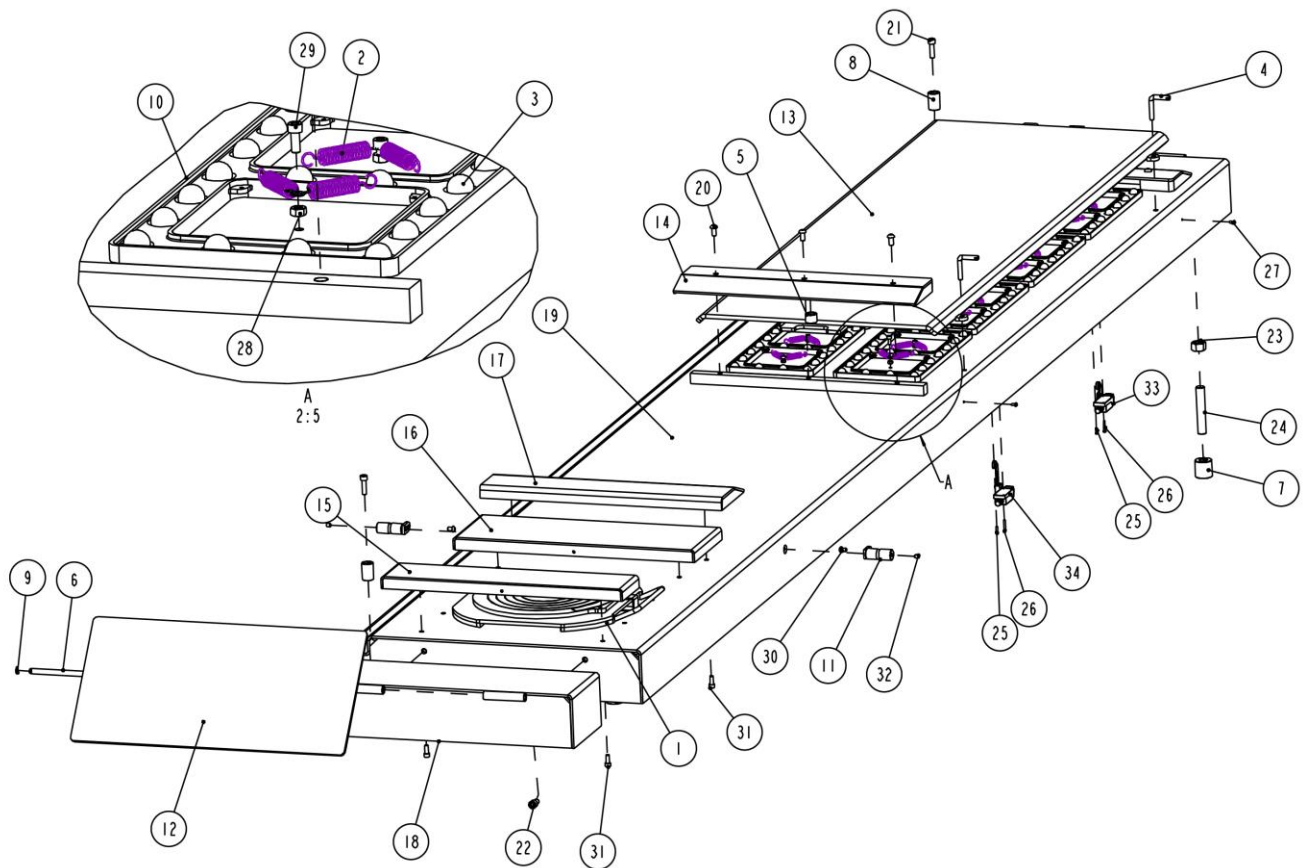


POS.	Code	Description	Specification	Qty
1	205101052	Bearing	2530_SF-2X	4
2	205101030	Bearing	3550_SF-2X	2
3	420210060B	Padding block	6603B-A5-B6	2
4	410251750	Shaft retaining block	6604V2-A3-B7	2
5	420260030B	Base slider	6605B-A6-B2-C2	2
<b>6</b>	<b>206201013</b>	<b>Cotter pin</b>	<b>D1_6X20-GB91</b>	<b>4</b>
7	204101006	Flat washer D30	D30-GB95	6
8	204301011	Circlip	D30-GB894_1	2
9	204301012	Circlip	D35-GB894_1	2
<b>10</b>	<b>206103003</b>	<b>Pin (with holes)</b>	<b>D6X40-GB880</b>	<b>2</b>
11	204201004	Spring washer	D8-GB93	8
12	420261010	Platform slider	HX6-A2-B10	2
13	614049003B	Outside support arm	LX35-A3-B1	1
14	614049004	Inside support arm	LX35-A3-B2	1
15	410490031	Middle shaft of the support arm	LX35-A3-B3	1
16	410490571	Pad plate	LX35-A3-B4	2
17	410490351B	Shaft for the cylinder	LX35-A3-B5	1
18	204101012	Flat washer C	M24	2
19	203103018	Hex locking nut	M24ZS	2
20	202109018	Hex socket cylinder head screw	M6X10-GB70	2
21	202101031	Cross socket flat head screw	M6X16-GB819	4
22	202101027	Cross socket cap head screw	M6X8-GB818	1
23	202110005	Hex socket button head screw	M8X20_GB70_2	8
24	208106002	Pressed oil cup M8	M8YP_GB7940_4	2
25	208101022	Type M double tube clamp	SGJ-16	2
26	208101028	Clamp	ZZ-D15	1



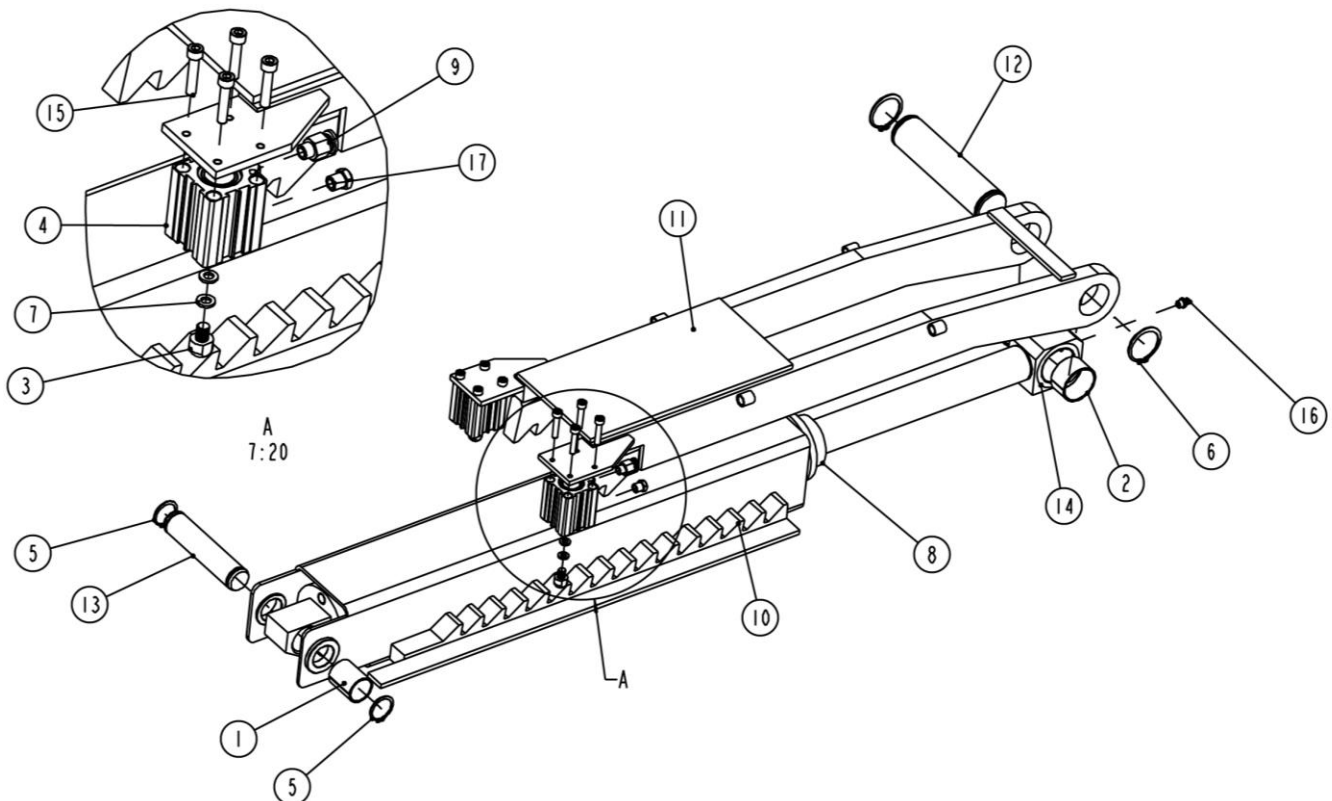
POS.	Code	Name	Specification	Qty
1	615027050	Turn table	615027050	1
2	410274470C	Pull spring	6435B-A4-B30	32
3	420270110	Ball	6435B-A21	160
4	410250221B	Bolt	6604V2-A4-B4	2
5	420250010	Nylon sheath	6604V2-A4-B5	2
6	410250211	Ramp shaft	6604V2-A4-B12	1
7	420260010	Adjustable nylon block	6605-A1-B8	4
8	420260040	Limit block	6605B-A21	2
9	410260131	Supporting plate	6605B-A22-B1	2
10	612026001	Pulling rod	6605B-A22-B2	2
11	410280381	Small shaft	6605B-A22-B3	2
12	204301002	Circlip	D12-GBT894_2	2
13	420490010	Square ball holder	LX35-A20	8
14	612049013	Shaft of the support holder	LX35-A1-B2	2
15	614049008B	Small ramp assembly	LX35-A4-B10	1

POS.	Code	Name	Specification	Qty
16	614049014	Platform A	LX35B-A4-B1	1
17	614049015	Slip plate	LX35B-A4-B2	1
18	614049016	Ramp for the slip plate	LX35B-A4-B3	2
19	614049017	Fixed box	LX35B-A4-B5	1
20	614049018	Box	LX35B-A4-B6	1
21	614049019	Ramp for the box	LX35B-A4-B7	1
22	614049020	Box	LX35B-A4-B8	1
23	202110007	Hex socket button head screw	M10X20_GB70_2	6
24	202109044	Hex socket cylinder head screw	M10X35-GB70	2
25	202109050	Hex socket cylinder head screw	M12X20-GB70	4
26	203101012	Hex nut M20	M20-GB6170	4
27	202205004	Hex socket flat head locking screw	M20X120-GB77	4
28	202101021	Cross socket cap head screw	M5X10-GB818	6
29	203101004	Hex nut M6	M6-GB6170	16
30	202101029	Cross socket cap head screw	M6X12-GB818	4
31	202109020	Hex socket cylinder head screw	M6X15-GB70	16
32	203103006	Hex locking nut	M8	2
33	202110004	Hex socket button head screw	M8X12_GB70_2	2
34	202109029	Hex socket cylinder head screw	M8X20-GB70	4
35	208106002	Pressed oil cup M8	M8YP_GB7940_4	2



POS.	Code	Name	Specification	Qty
1	615027050	Turn table	615027050	1
2	410274470C	Pull spring	6435B-A4-B30	32
3	420270110	Ball	6435B-A21	160
4	410250221B	Bolt	6604V2-A4-B4	2
5	420250010	Nylon sheath	6604V2-A4-B5	2
6	410250211	Ramp shaft	6604V2-A4-B12	1
7	420260010	Adjustable nylon block	6605-A1-B8	4
8	420260040	Limit block	6605B-A21	2
9	204301002	Circlip	D12-GBT894_2	2
10	420490010	Square ball holder	LX35-A20	8
11	612049013	Shaft of the support holder	LX35-A1-B2	2
12	614049008B	Small ramp assembly	LX35-A4-B10	1
13	614049015	Slip plate	LX35B-A4-B2	1
14	614049016	Ramp for the slip plate	LX35B-A4-B3	2
15	614049017	Fixed box	LX35B-A4-B5	1
16	614049018	Box	LX35B-A4-B6	1
17	614049019	Ramp for the box	LX35B-A4-B7	1
18	614049020	Box	LX35B-A4-B8	1

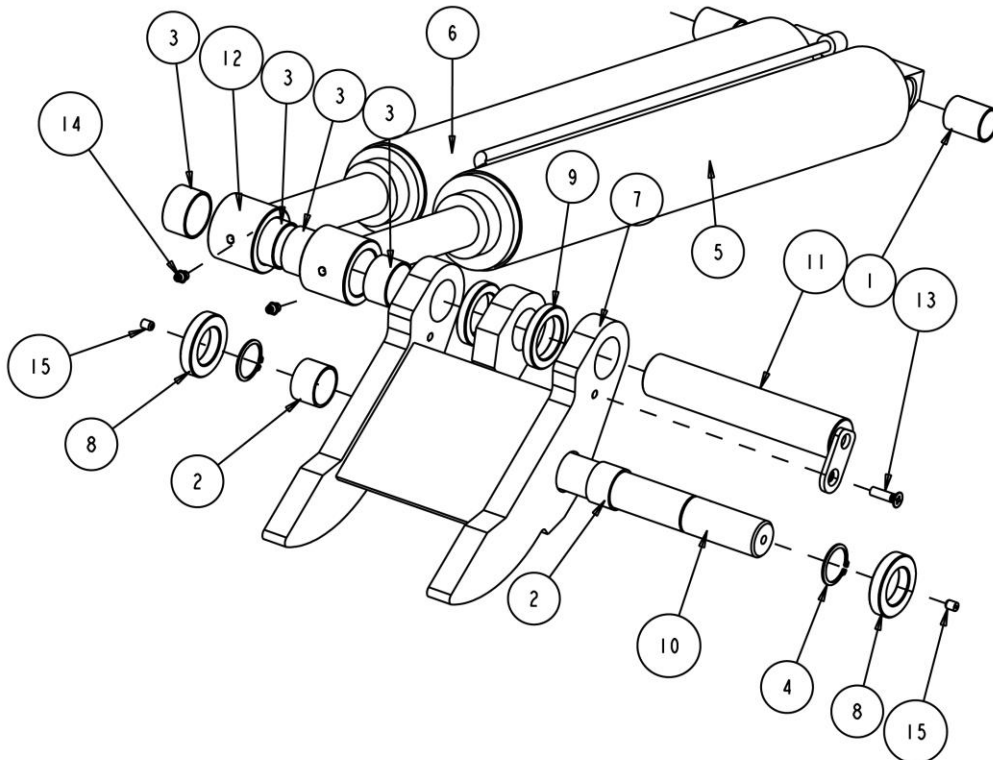
POS.	Code	Name	Specification	Qty
19	614049021	Platform B	LX35B-A4B-B1	1
20	202110007	Hex socket button head screw	M10X20_GB70_2	7
21	202109044	Hex socket cylinder head screw	M10X35-GB70	2
22	202109050	Hex socket cylinder head screw	M12X20-GB70	4
23	203101012	Hex nut M20	M20-GB6170	4
24	202205004	Hex socket flat head locking screw	M20X120-GB77	4
25	202109002	Cross socket cap head screw	M4X12-GB818	2
26	202103007	Cross socket cap head screw	M4X25-GB818	2
27	202101021	Cross socket cap head screw	M5X10-GB818	2
28	203101004	Hex nut M6	M6-GB6170	16
29	202109020	Hex socket cylinder head screw	M6X15-GB70	16
30	202110004	Hex socket button head screw	M8X12_GB70_2	2
31	202109029	Hex socket cylinder head screw	M8X20-GB70	4
32	208106002	Pressed oil cup M8	M8YP_GB7940_4	2
33	320301009	Limit switch	TZ-8104	1
34	320301011	Limit switch	TZ-8108	1



POS.	Code	Name	Specification	Qty
1	205101053	Bearing	2840_SF-2X	1
2	205101033	Bearing	4025_SF-2X	2

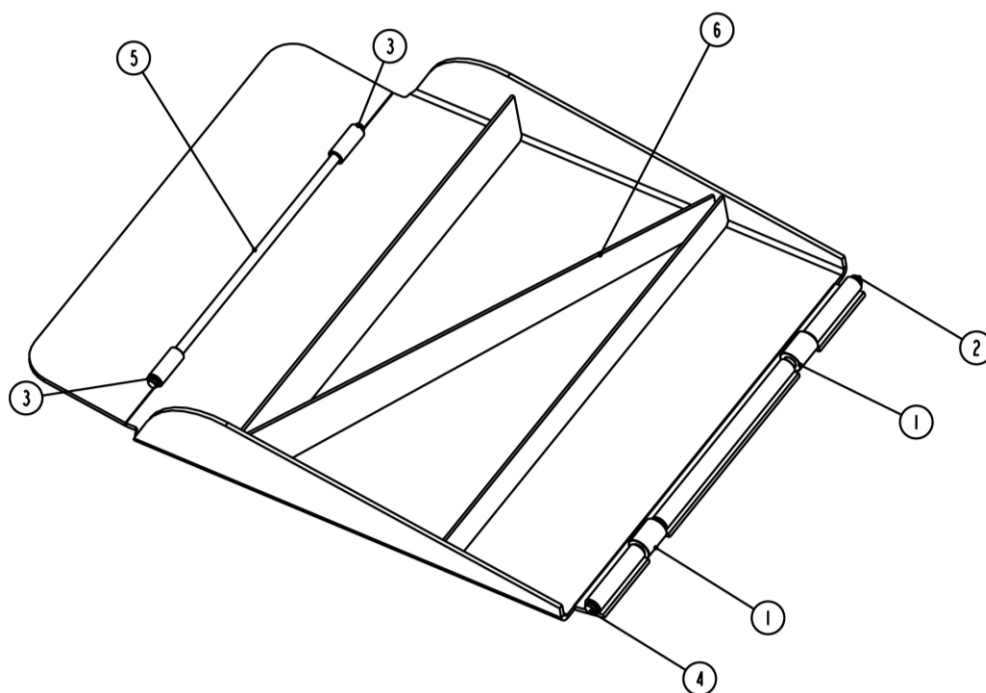


POS.	Code	Name	Specification	Qty
3	420210020	Adjustable head	6603B-A3-B9	2
4	310501003	Pneumatic cylinder	ASQ-32X20	2
5	204301010	Circlip	D28-GB894_1	2
6	204301004	Circlip	D40-GB894_1	2
7	204101005	Flat washer C	D8-GB95	4
8	615049002	Secondary oil cylinder	EX-LX35-SCYL	1
9	310101024	Pneumatic straight connector	KCL6-01	2
10	614049010	Oil cylinder sheath	LX35-A5-B2	1
11	614049011	Mechanical lock assembly	LX35-A5-B3	1
12	410490421	UP Shaft of the auxiliary cylinder	LX35-A5-B4	1
13	410490431	DOWN shaft of the auxiliary cylinder	LX35-A5-B5	1
14	410490580	Oil cylinder connection A	LX35-CYL-A	1
15	202101033	Cross socket cap head screw	M6*20	8
16	208106001	Straight oil cup	M8YB_GB9740_1	1
17	310201003	Silencer	PSV1_8	2



POS.	Code	Name	Specification	Qty
1	<b>205101053</b>	<b>Bearing</b>	<b>2840_SF-2X</b>	<b>2</b>
2	205101026	Bearing	3525_SF-2X	2

POS.	Code	Name	Specification	Qty
3	205101033	Bearing	4025_SF-2X	4
4	204301012	Circlip	D35-GB894_1	2
5	615049001	Main oil cylinder	EX-SSL6350 -MCYL	1
6	615049002	Secondary oil cylinder	EX-SSL6350 -SCYL	1
7	614049006	Start plate	SSL6350 -A6-B1	1
8	410049091	Washer of the start plate	SSL6350 -A6-B2	2
9	410491471	Flat washer	SSL6350 -A6-B3	2
10	410491481	Middle shaft of the start plate	SSL6350 -A6-B4	1
11	612049001	Shaft of the start plate	SSL6350 -A6-B5	1
12	410490583	Oil cylinder connection A	SSL6350 -CYL-A	2
13	202111007	Hex socket flat head screw	M8X20-GB819	1
14	208106001	Straight oil cup	M8YB_GB9740_1	2
15	208106002	Pressed oil cup M8	M8YP_GB7940_4	2



POS.	Code	Name	Specification	Qty
1	420270250	Small wheel	6435BWF-C08-9	2
2	410250211	Ramp wheel shaft of the JACK	6604V2-A9-B2	1
3	410250161	Circlip	D12_GB894_2	2
4	204301002	Circlip	D15_GB894_1	2
5	204301004	Ramp shaft	LX35-A4-B12	1
6	614049005	Drive-on ramp	LX35-A9-B1	1