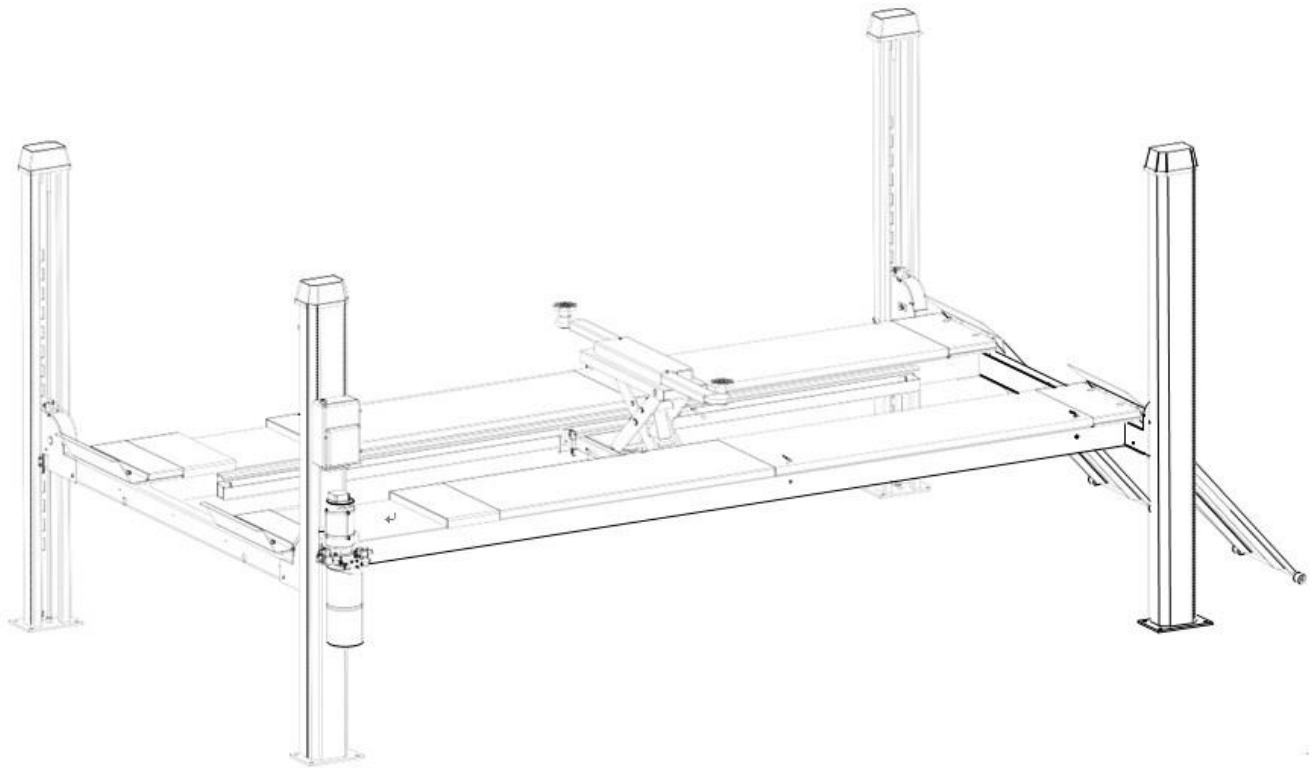
USER’S MANUAL



KAPPA 500/WT50

Wheel Alignment Four Post Lift

Chapter 1 General Information 4
1.1 Manual Keeping 4
1.2 Obligation in case of malfunction 4
1.3 Cautions for the safety of the operator 5
1.4 Warnings 5
Chapter 2 Product Identification 6
2.1 Warranty 6
2.2 Technical Service 6
Chapter 3 Packing, Transport and Storage 7
3.1 Packing 7
3.2 Lifting and Handling 7
3.3 Storage and Stacking of the Package 7
3.4 Delivery and check of packages 7
Chapter 4 Product Description 8
Chapter 5 Technical Specification 9
5.1 Technical Data 9
5.2 Lift Dimension Rough Drawing 9
5.3 Hydraulic Drawing 11
5.4 Electrical Drawing (380V/400V-3Ph) 12
5.5 Wiring Diagram 13
5.6 Pneumatic Drawing 14
Chapter 6 Safety 15
6.1 General Warnings 15
6.2 Risk for the people 15
6.3 Personnel Crushing Risks 15
6.4 Risk of the Vehicle falling from the lift 16
6.5 Slipping Risk 16
6.6 Electrocution Risk 16
6.7 Risk Resulting from improper lighting 16
6.8 Risk of breaking component during operation 16
6.9 Risk for unauthorized uses 17
6.10 Risk during vehicle lifting and working 17
Chapter 7 Installation 18
7.1 Tools for installation 18
7.2 Checking for room suitability 18
7.3 Lighting 18
7.4 Installation surface 18
7.5 Site Layout 18
7.6 Installation of runways and transverse beans 20
7.7 Steel Cable Routing Plan (Very Important) 21
7.8 Installation of safety Lock 23
7.9 Installation of the columns 24
7.10 Anchoring the columns 24
7.11 Hydraulic system connection 25
7.12 Installation of Jack 25
7.13 Pneumatic system connection 26
7.14 Make the electrical hookup to the power unit 26
7.15 Start up 26
7.16 Check and adjustment 27
7.17 Limit switch installation 27
7.18 Accessories Installation 28

7.19 Check with load....28
Chapter 8 Operation and Use....29
8.1 Controls....29
8.2 To raise the lift....30
8.3 To lower the lift....30
8.4 Jack Operation....30
Chapter 9 Maintenance....30
9.1 Ordinary Maintenance....30
9.2 Periodic Maintenance....30
Chapter 10 Troubleshooting....31

1 General Information

This chapter contains warning instructions to operate the lift properly and prevent injury to operators or objects.

This manual has been written to be used by shop technicians in charge of the lift (operator) and routine maintenance technician (maintenance operator).

The operating instructions are considered to be an integral part of the machine and must remain with it for its whole useful life.

Read every section of this manual carefully before operating the lift and unpacking it since it gives helpful information about:

- SAFETY OF PEOPLE

- SAFETY OF THE LIFT

- SAFETY OF LIFTED VEHICLES

The company is not liable for possible problems, damage, accidents, etc. resulting from failure to follow the instructions contained in this manual.

Only skilled technicians of Authorized dealers or service centers authorized by the manufacturer shall be allowed to carry out lifting, transport, assembling, installation, adjustment, calibration, settings, extraordinary maintenance, repairs, overhauling and dismantling of the lift.

THE MANUFACTURER IS NOT RESPONSIBLE FOR POSSIBLE DAMAGE TO PEOPLE, VEHICLES OR OBJECTS IF SAID OPERATIONS ARE CARRIED OUT BY UNAUTHORIZED PERSONNEL OR THE LIFT IS IMPROPERLY USED.

Any use of the machine made by operators who are not familiar with the instructions and procedures contained herein shall be forbidden.

1.1 Manual Keeping

For a proper use of this manual, the following is recommended:

- Keep the manual near the lift, in an easily accessible place.
- Keep the manual in an area protected from the damp.
- Use this manual properly without damaging it.
- Any use of the machine made by operators who are not familiar with the instructions and procedures contained herein shall be forbidden.

This manual is an integral part of the lift: it shall be given to the new owner if and when the lift is resold.

1.2 Obligation in case of malfunction

	In case of machine malfunction, follow the instructions contained in the following chapters.

1.3 Cautions for the safety of the operator

Operators must not be under the influence of sedatives, drugs or alcohol when operating the machine.

	Before operating the lift, operators must be familiar with the position and function of all controls, as well as the machine features shown in the chapter "Operation and use"

1.4 Warnings

	Unauthorized changes and/or modifications to the machine relieve the manufacturer of any liability for possible damages to objects or people. Do not remove or make inoperative the safety devices, this would cause a violation of safety at work laws and regulations.

	Any other use which differs from that provided for by the manufacturer of the machine is strictly forbidden.

	The use of non genuine parts may cause damage to people or objects

DECLARATION OF WARRANTY AND LIMITATION OF LIABILITY

The manufacturer has paid proper attention to the preparation of this manual. However, nothing contained herein modifies or alters, in any way, the terms and conditions of manufacturer agreement by which this lift was acquired, nor increase, in any way, manufacturer's liability to the customer.

TO THE READER

Every effort has been made to ensure that the information contained in this manual is correct, complete and up-to date. The manufacturer is not liable for any mistakes made when drawing up this manual and reserves the right to make any changes due the development of the product, at any time.

2 Product Identification

The identification data of the machine are shown in the label placed on the machine.
Below is a blank sample for reference. For the real place please check on the machine.

LOGO

Type: .....
Model: .....
Serial Number: .....
Year of Maufacturing: .....
Capacity: .....
Voltage: .....
Power: .....
Max. Pressure: .....

	Use the above data both to order spare parts and when getting in touch with the manufacturer (inquiry). The removal of this label is strictly forbidden.

Machines may be updated or slightly modified from an aesthetic point of view and, as a consequence, they may present different features from these shown, this without prejudicing what has been described herein.

2.1 Warranty

The warranty is valid for a period of 12 months starting from the date of the purchase invoice.
The warranty will come immediately to an end when unauthorized modifications to the machine or parts of it are carried out.
The presence of defects in workmanship must be verified by the Manufacturer's personnel in charge.

2.2 Technical Service

For all servicing and maintenance operations not specified or shown in these instructions, contact your dealer where the machine has been bought or the Manufacturer's Sales Department. Only skilled personnel who are familiar with the lift and this manual shall be allowed to carry out packing, lifting, handling, transport and unpacking operations.

3 Packing, Transport and Storage

3.1 Packing

The packing of the lift is delivered in following components:

- columns wrapped up in non-scratch material sealed with 2 straps, each 2 columns packed in one package
- runways each wrapped up in non-scratch material
- transverse beams each wrapped in non-scratch material
- jack wrapped up in non-scratch material
- power unit and the control panel and other accessories packed in a plywood box
- ramps wrapped in non-scratch material

(If customer has special request the packing will also be changed accordingly).

3.2 Lifting and Handling

When loading/unloading or transporting the equipment to the site, be sure to use suitable loading (e.g. cranes, trucks) and hoisting means. Be sure also to hoist and transport the components securely so that they cannot drop, taking into consideration the package's size, weight and centre of gravity and it's fragile parts.

	Hoist and handle only one package at a time

3.3 Storage and Stacking of the Package

Packages must be stored in a covered place, out of direct sunlight and in low humidity, at a temperature between 10℃ and +40℃. Stacking is not recommended: the package's narrow base, as well as its considerable weight and size make it difficult and hazardous.

3.4 Delivery and check of packages

When the lift is delivered, check for possible damages due to transport and storage; verify that what is specified in the manufacturer's confirmation of order is included. In case of damage in transit, the customer must immediately inform the carrier of the problem.

Packages must be opened paying attention not to cause damage to people

(Keep a safe distance when opening straps) and parts of the lift (be careful the objects do not drop from the package when opening).

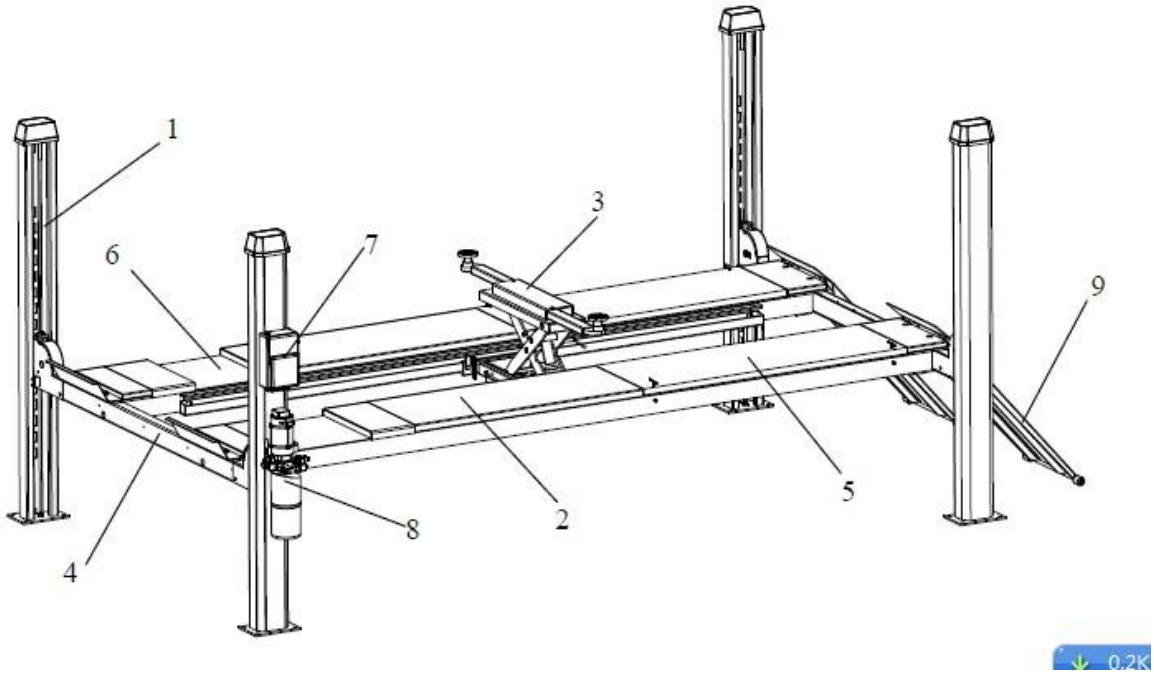
4 Product Description

Four Post Lift Rough Description

This four post lift has been designed for the lifting of motor-vehicles for wheel alignment and normal maintenance.
The maximum lifting weight is as specified on the serial plate.
Most of mechanical parts such as runway, transverse beams have been built in steel plate to make the lift stiff and strong while keeping a low weight.
The electro-hydraulic operation is described in details in chapter 8.

This chapter describes the lift's principal elements, allowing the user to be familiar with the machine.
As shown in below picture, the lift is composed of below parts:

1) Column, 4pcs
2) Platform, 2pcs
3) Pneumatic-hydraulic jack, 1pcs, Optional 2pcs
4) Transverse beam, 2pcs
5) Rear slipping plates, 2pcs
6) Groove for the turntable, 2pcs
7) Control panel, 1pcs
8) Hydraulic power unit, 1pcs
9) Drive-on ramp, 2pcc

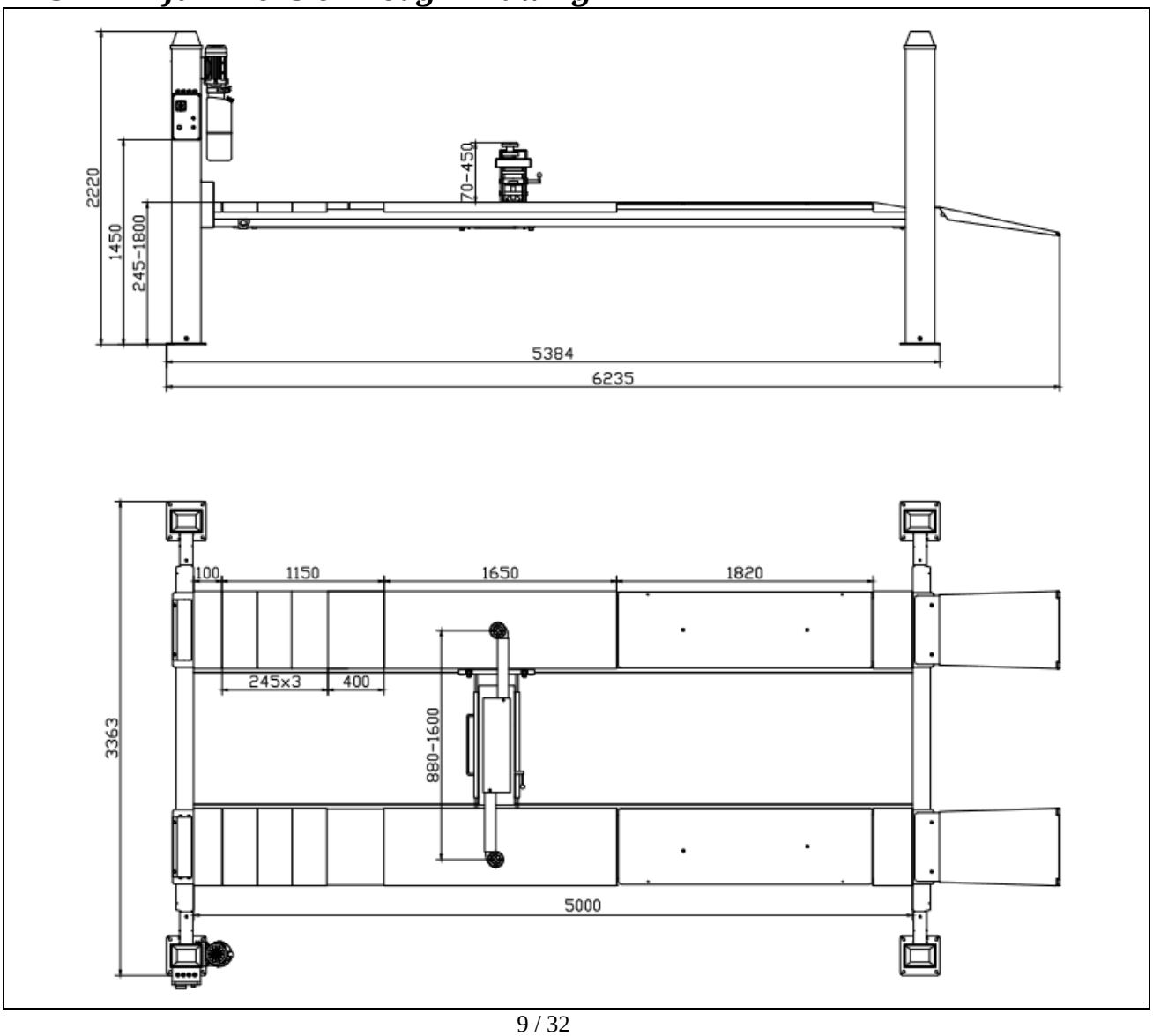


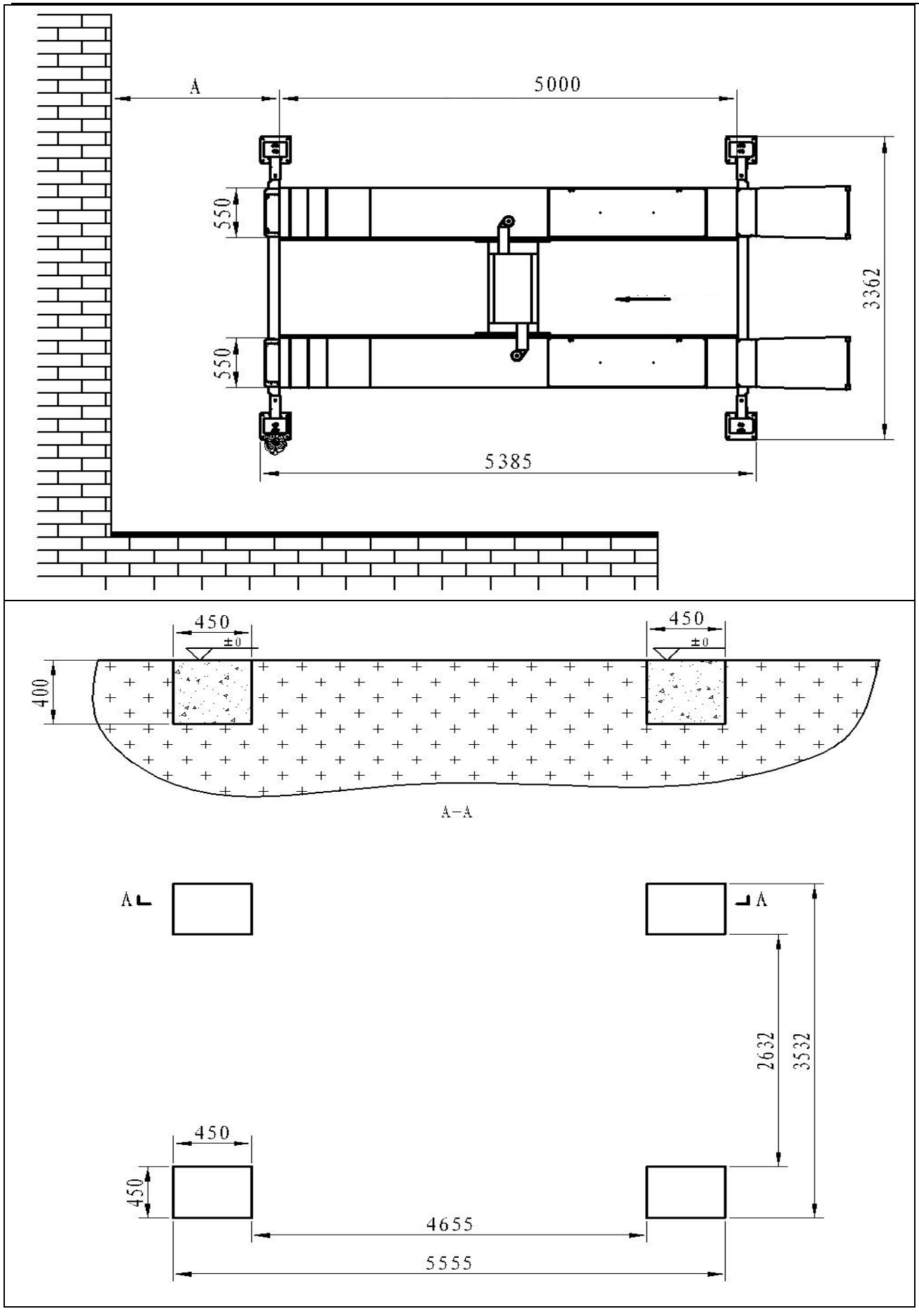
5 Technical Specification

5.1 Technical Data

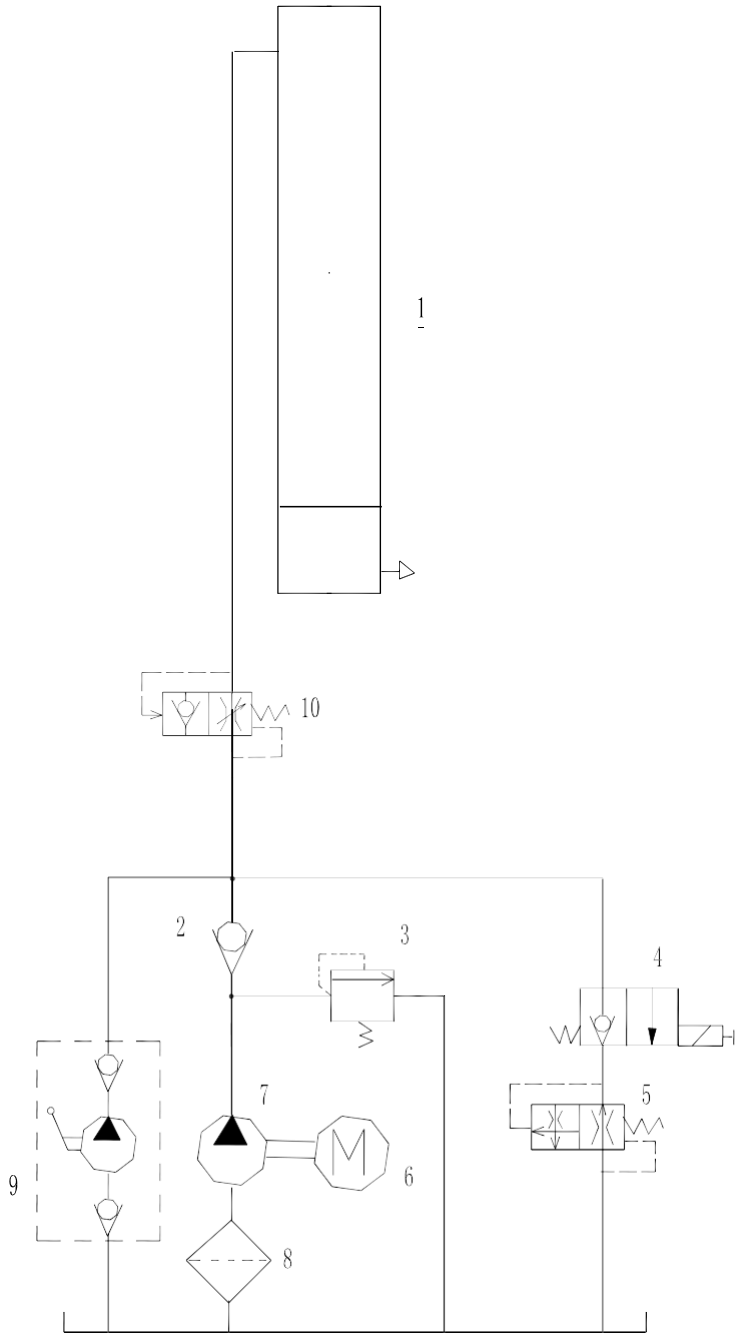
Lift Capacity	5000kg
Jack Capacity	3000kg
Maximum Lifting Height	1800mm
Minimum Height	245mm
Jack raised height	450mm
Runway length	5100mm
Runway width	550mm
Free width between runways	990-1100mm
Width between two columns	2930mm
Overall length	6235mm
Overall height	2220mm
Overall width	3363mm
Raised time	60s
Noise level	80 dB(A)/1m
Rated pneumatic pressure	6bar – 8bar
Working temperature	-10 ℃ - 40 ℃
Average weight of package	1780kg

5.2 Lift Dimension Rough Drawing



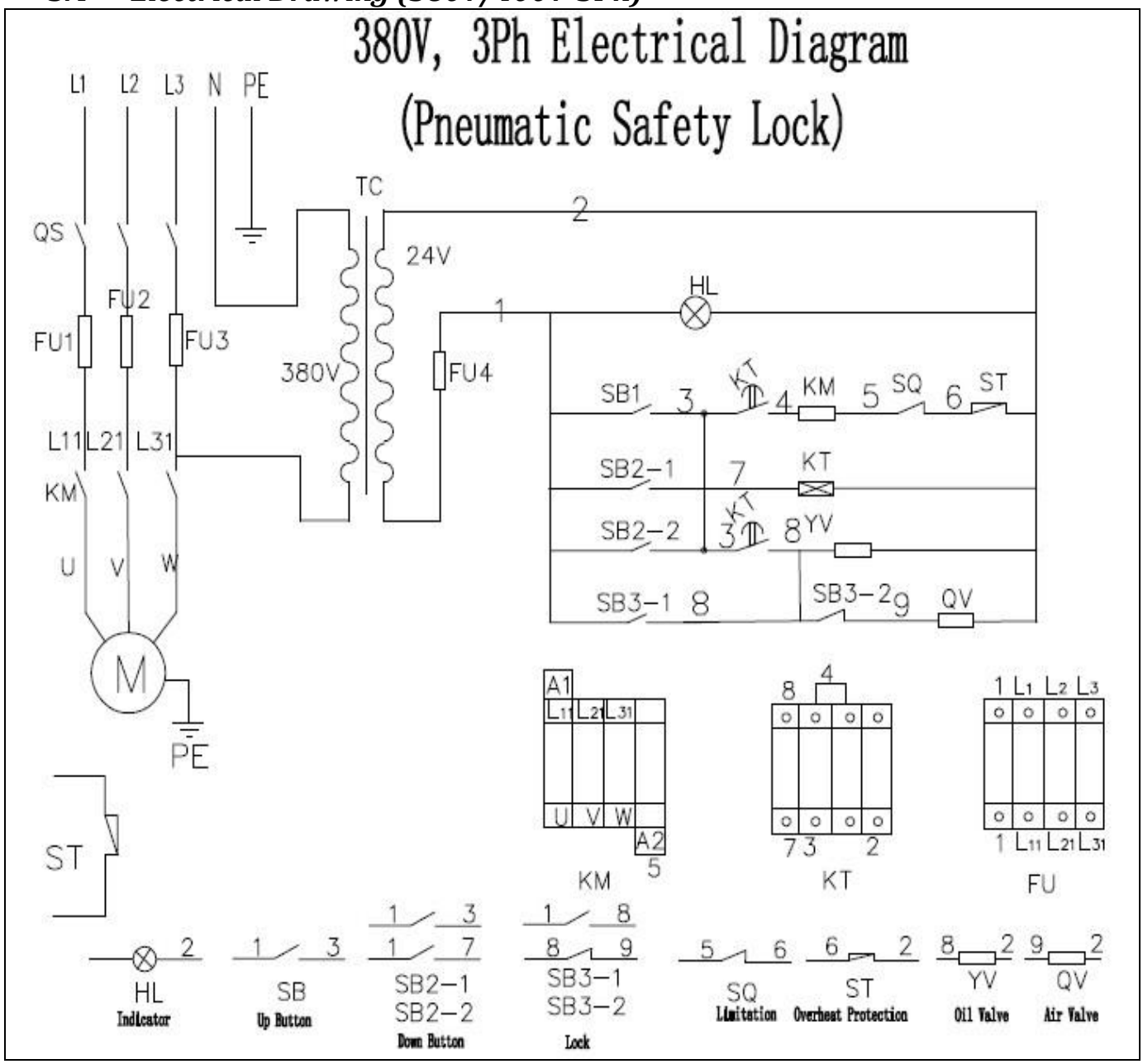

A
5000
550
550
3362
5385
450
±0
450
±0
400
A–A
A
A
2632
3532
450
450
4655
5555

5.3 Hydraulic Drawing

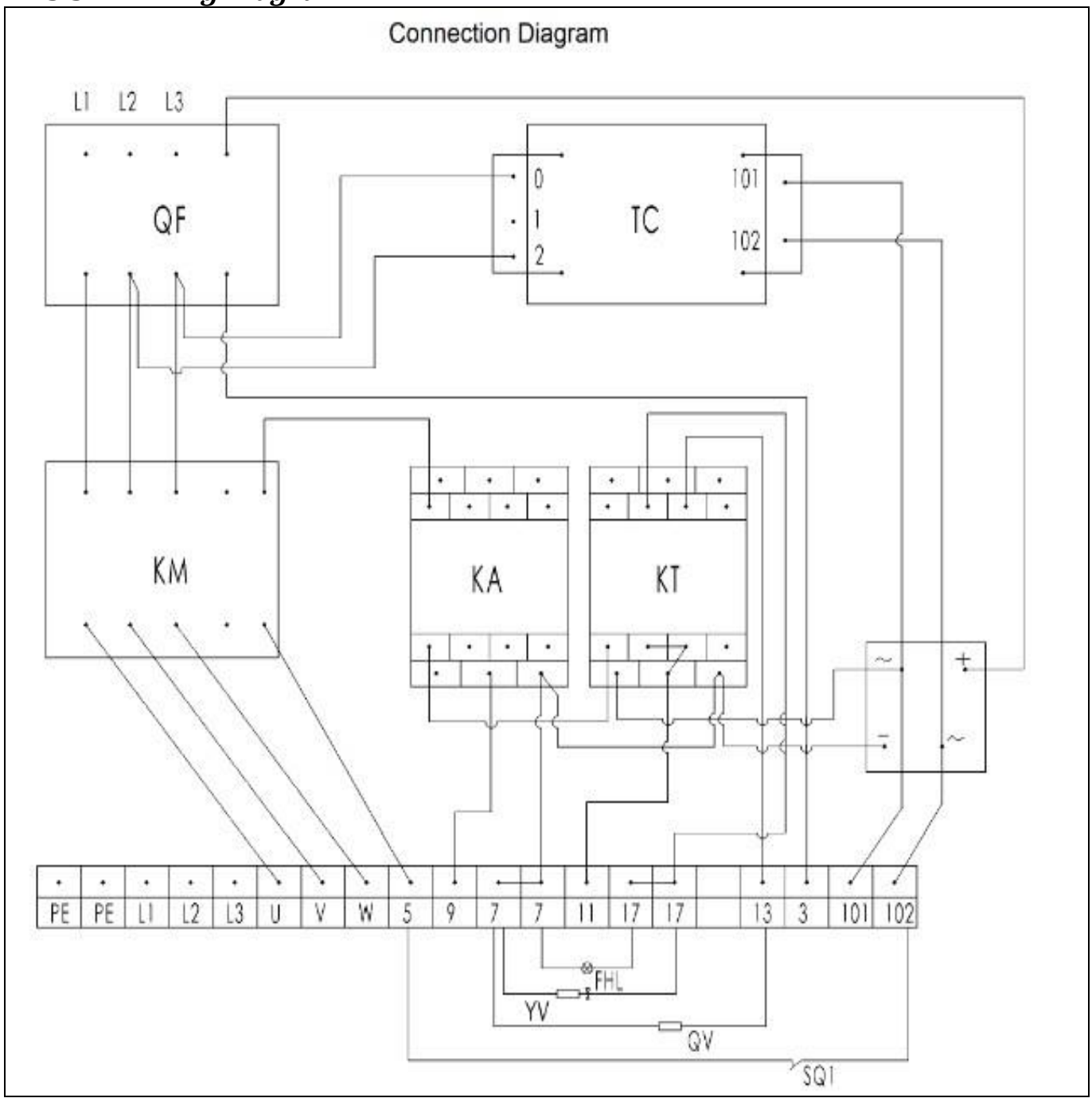


1	Main hydraulic cylinder	6	Motor
2	Non return valve	7	Gear pump
3	Maximum pressure valve	8	Oil filter
4	Lowering solenoid valve	9	Emergency hand pump - optional
5	Lowering control valve	10	Parachute valve - optional

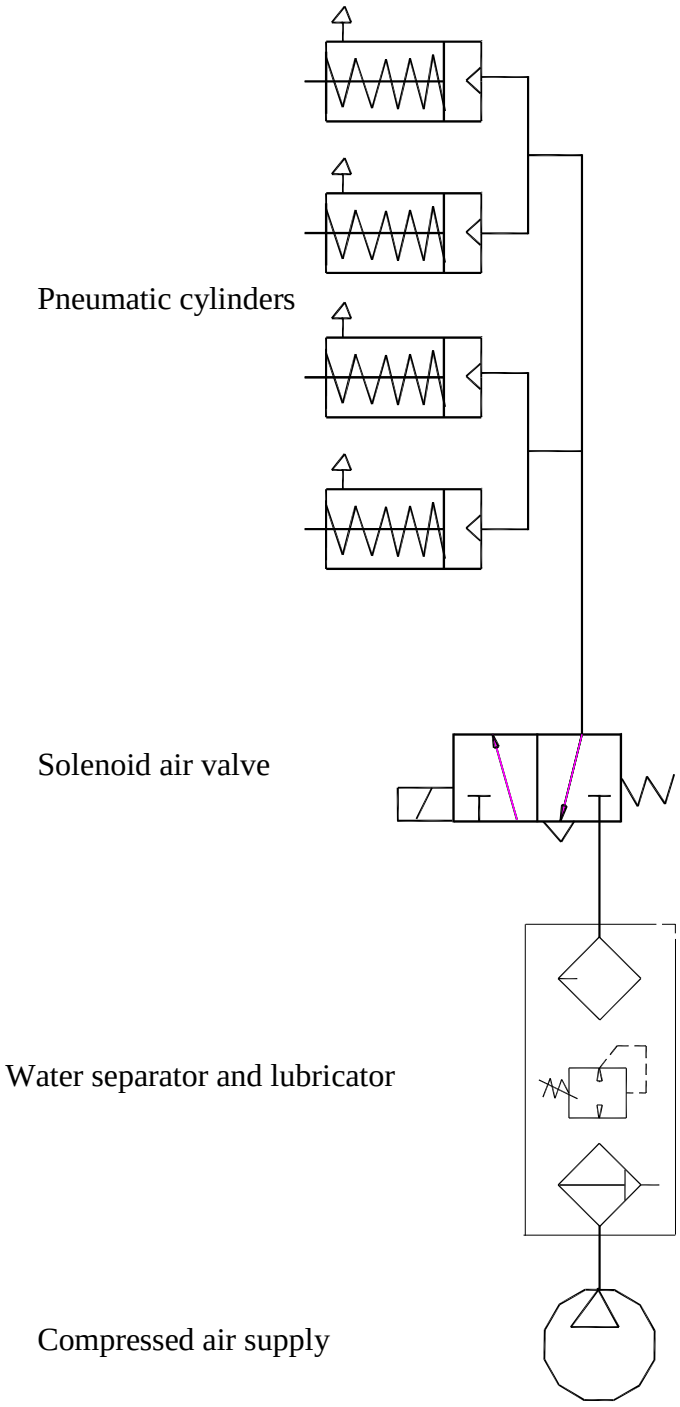
5.4 Electrical Drawing (380V/400V-3Ph)



5.5 Wiring Diagram



5.6 Pneumatic Drawing



6 Safety

Read this chapter carefully and completely because it contains important information for the safety of the operator and the person in charge of maintenance.

	The lift has been designed and built for lifting vehicles and making them stand above level in a closed area. Any other use is forbidden. The manufacturer is not liable for possible damages to people, vehicles or objects resulting from an improper or unauthorized use of the lift.

For operator and people safety, a safety area at least 1m free away from the lift must be vacated during lifting and lowering. The lift must be operated only from the operator's control site in this safety area.

Operator's presence under the vehicle, during working, is only admitted when the vehicle is lifted and runways are not running.

	Never use the lift when safety devices are off-line. People, the lift and the vehicles lifted can be seriously damaged if these instructions are not followed.

6.1 General Warnings

The operator and the person in charge of maintenance must follow accident-prevention laws and rules in force in the country where the lift is installed

They also must carry out the following:

- neither remove nor disconnect hydraulic, electric or other safety devices;
- carefully follow the safety indications applied on the machine and included in the manual;
- observe the safety area during lifting;
- be sure the motor of the vehicle is off, the gear engaged and the parking brake put on;
- be sure only authorized vehicles are lifted without exceeding the maximum lifting capacity;
- Verify that no one is on the runways during lifting or standing.

	Any use of the lift other than that herein specified can cause serious accidents to people in close proximity of the machine.

6.2 Risk for the people

All risks the personnel could run, due to an improper use of the lift, are described in this section.

6.3 Personnel Crushing Risks

During lowering of runways and vehicles, personnel must not be within the area covered by the lowering trajectory. The operator must be sure no one is in danger before operating the lift.







6.4 Risk of the Vehicle falling from the lift

Vehicle falling from the lift can be caused when the vehicle is improperly placed on platforms, and when its dimensions are incompatible with the lift or by excessive movement of the vehicle.
In this case, keep immediately away from the working area.





6.5 Slipping Risk

The risk of slipping can be caused by oil or dirt on the floor near the lift.

	Keep the area under and around the lift clean. Remove all oil spills.

6.6 Electrocution Risk

Avoid use of water, steam, and solvent, varnish jets in the lift area where electric cables are placed and, in particular, next to the electric panel.



6.7 Risk Resulting from improper lighting

Make sure all areas next to the lift are well and uniformly lit, according to local regulations.

6.8 Risk of breaking component during operation

Materials and procedures, suitable for the designed parameters of the lift, have been used by the manufacturer to build a safe and reliable product. Operate the lift only for the use it has been designed for and follow the maintenance schedule shown in the chapter “Maintenance”.



6.9 Risk for unauthorized uses



The presence of unauthorized persons next to the lift and on the platforms is strictly forbidden during lifting as well as when the vehicle has been already lifted

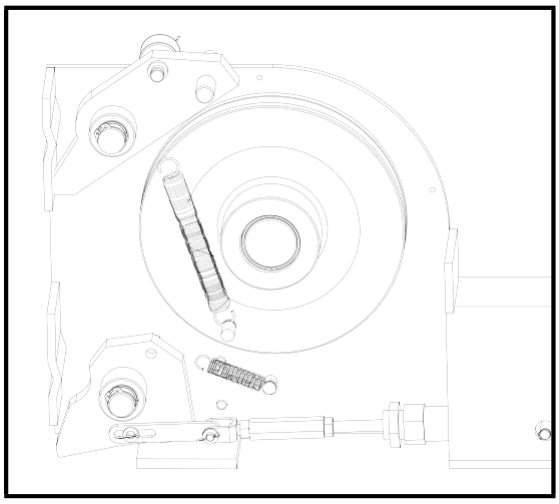
6.10 Risk during vehicle lifting and working

To avoid overloading and possible breaking during lifting and working, the following safety devices have been used:

- A maximum pressure valve placed inside the hydraulic unit to prevent excessive weight.

	The maximum pressure valve has been preset by the manufacturer to a proper pressure. Do not try to adjust it to overrun the rated lifting capacity.

- A special design of the safety mechanism built in each column to prevent the lift from sudden lowering in case of the cable failure.



	It is strictly forbidden to modify any safety device. Always ensure the safety device for proper operation during the service.

7 Installation

	Only skilled technicians, appointed by the manufacturer, or by authorized dealers, must be allowed to carry out installation. Serious damage to people and to the lift can be caused if installations are made by unskilled personnel. Always refer to the exploded views attached during installation.

7.1 Tools for installation

- Rotary Hammer Drill ¢ 16
- Masonry Bit
- Hammer
- Level
- Open-End Wrench Set
- Medium Crescent Wrench
- Hex-Key/Allen Wrench Set
- Crow Bar for Shim Installation
- Chalk Line
- Medium Cross Screwdriver
- Medium Flat Screwdriver
- Tape Measure

7.2 Checking for room suitability

The lift has been designed to be used in covered and sheltered places.
The place of installation must not be next to washing areas, painting workbenches, solvent or varnish deposits. The installation near to rooms, where a dangerous situation of explosion can occur, is strictly forbidden. The relevant standards of the local Health and Safety at Work regulations, for instance, with respect to minimum distance to wall or other equipment, must be observed.

7.3 Lighting

Lighting must be carried out according to the effective regulations of the place of installation. All areas next to the lift must be well and uniformly lit.

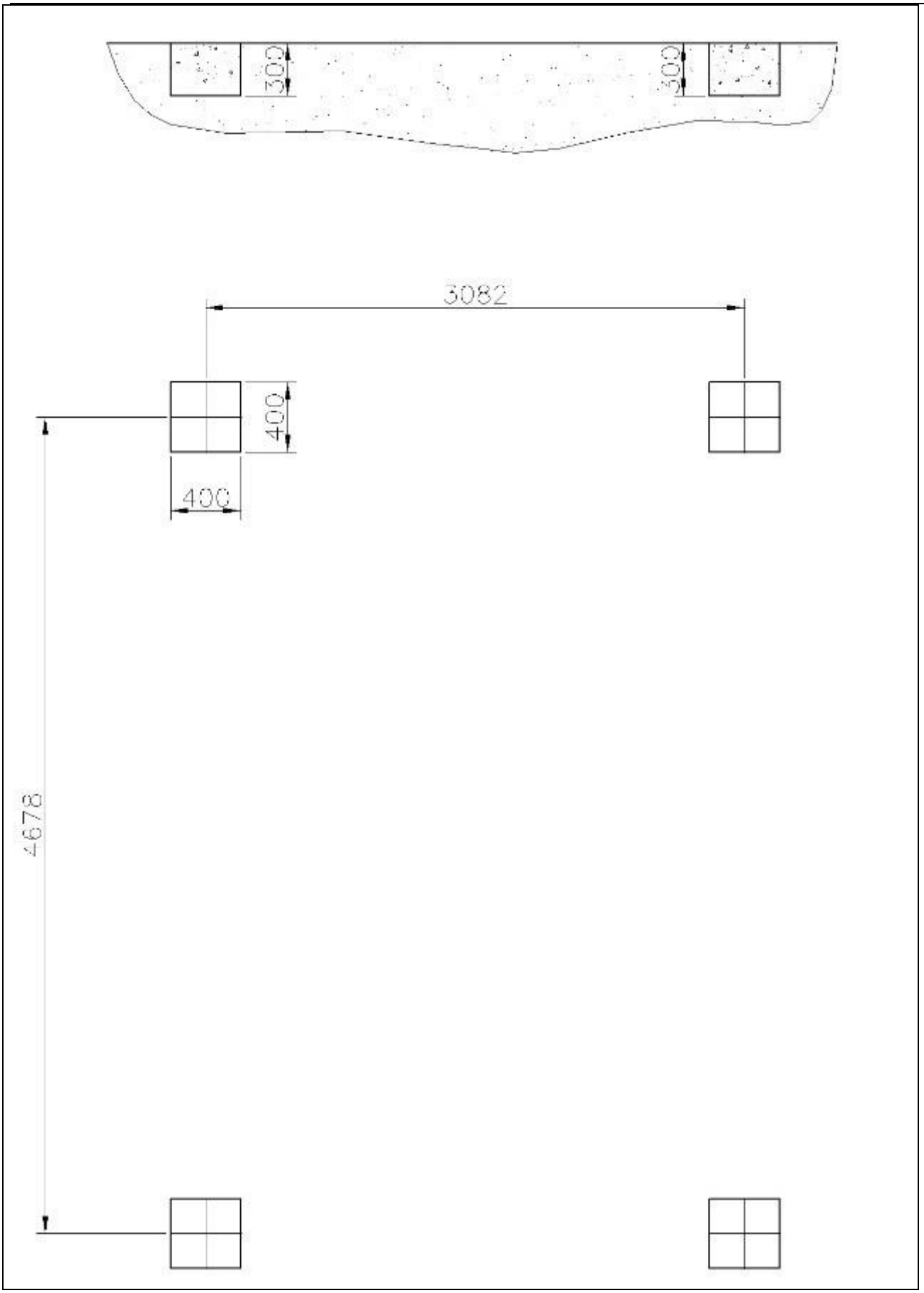
7.4 Installation surface

The lift must be placed concrete surface sufficiently resistant. The surface must be suitable for bearing maximum stress values, also in unfavorable working conditions. New concrete must be adequately cured by at least 10 days minimum. For installations on raised surface, compliance with the maximum carrying capacity of the surface is recommended.

	A level floor is suggested for proper installation. Small differences in floor slope may be compensated for by proper shimming. Any major slope change will affect the level lifting performance. If a floor is of questionable slope please consider to pour the new concrete slab.

7.5 Site Layout

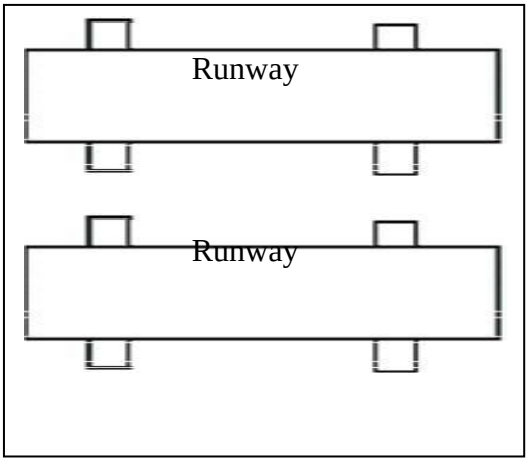
- Determine which end of the lift will be approach side.
- Determine which side the power-side runway (with the hydraulic cylinder attached) will be located on. Remember that the power-side runway must be installed on the same side as the power-side column.
- For 4-post lift please do not make foundation hole for fixing bolt before you set up the lift and adjust it well. Normally people firstly get lift, set it up, adjust then fix the post. If you prepare the bolt hole in the foundation before lift arrival it is not a good idea.
  Below drawing is for reference only.


300
300
3082
400
400
4678

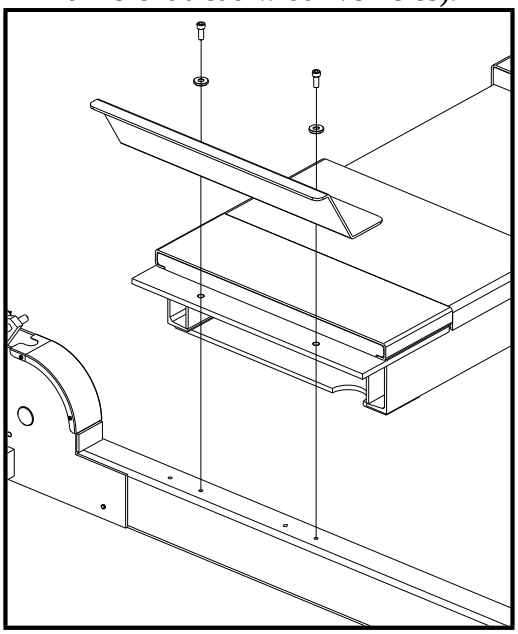
7.6 Installation of runways and transverse beans

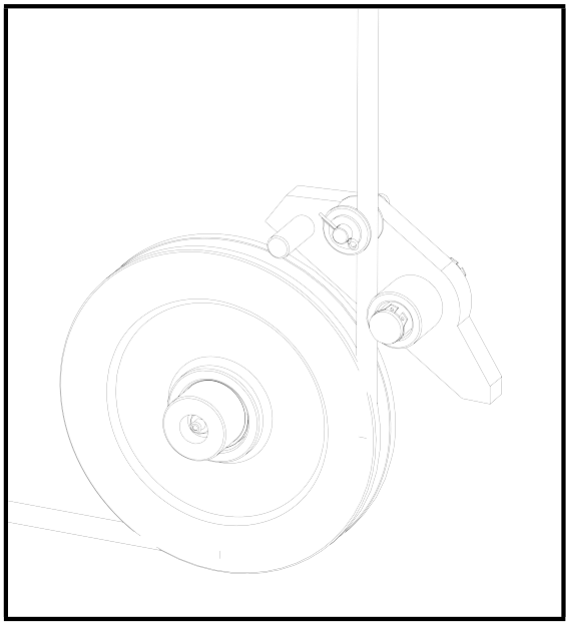
	It is important to position the power-side runway (with the hydraulic cylinder) on the same side as the power unit location. The rails on each side must be installed to the inside.

- Place each runway on the wooden blocks as shown in the figure, which is suggested to be approximate 100mm high, and position each runway according to the layout. Make sure that the rails on each side must be installed to the inside. Pay attention to the location of the power-side runway.



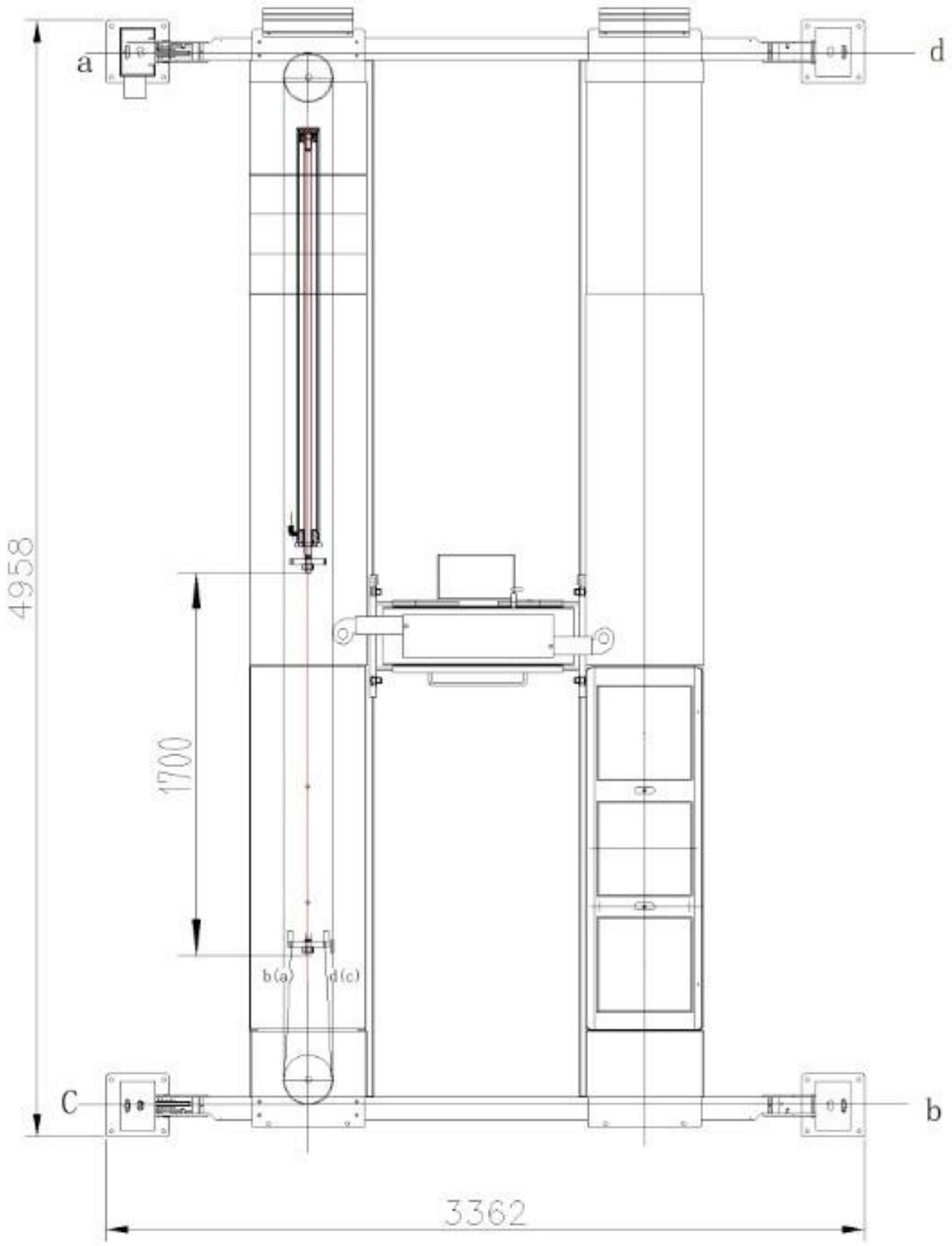
- Lift the transverse beams by using hoisting means to the ends of runways. Make sure the accessories are installed in the runways before installation. Pay attention to position the side with big windows inward and adjacent the power-side runway. Be sure that the plastic slide blocks are in position.
- Pull out each steel cable from the end of power-side runway and route the cable though the transverse beams referring to the cable routing diagram. Make sure that the cables are not twisted during routing and routed out through the safety roller in the correct way.
- Line up the runways with the bolt holes in the transverse beams and temperately bolt in position (the off-side runway can be bolted in two positions on the transverse beam for different tread width vehicles).



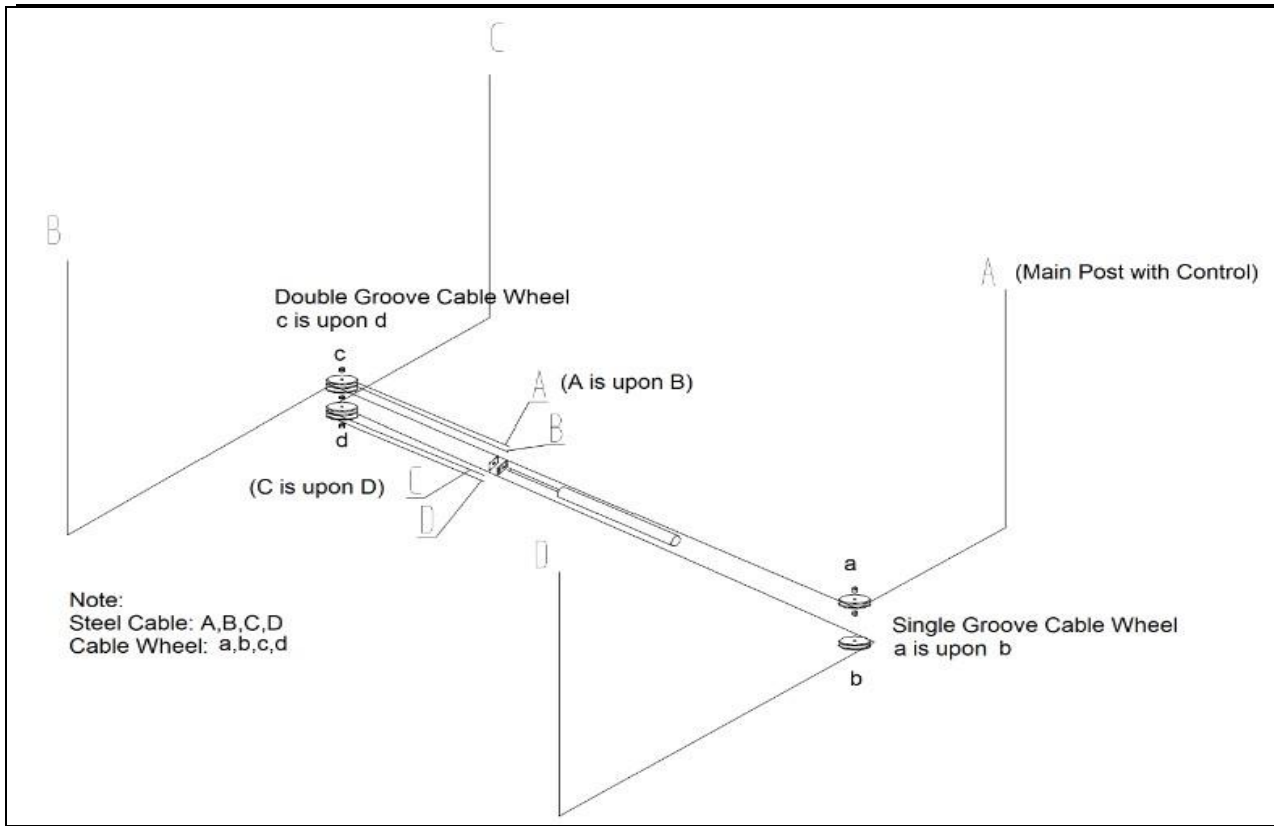


	Before installation, make sure that all accessories have been installed in the runways and transverse beams.

7.7 Steel Cable Routing Plan (Very Important)

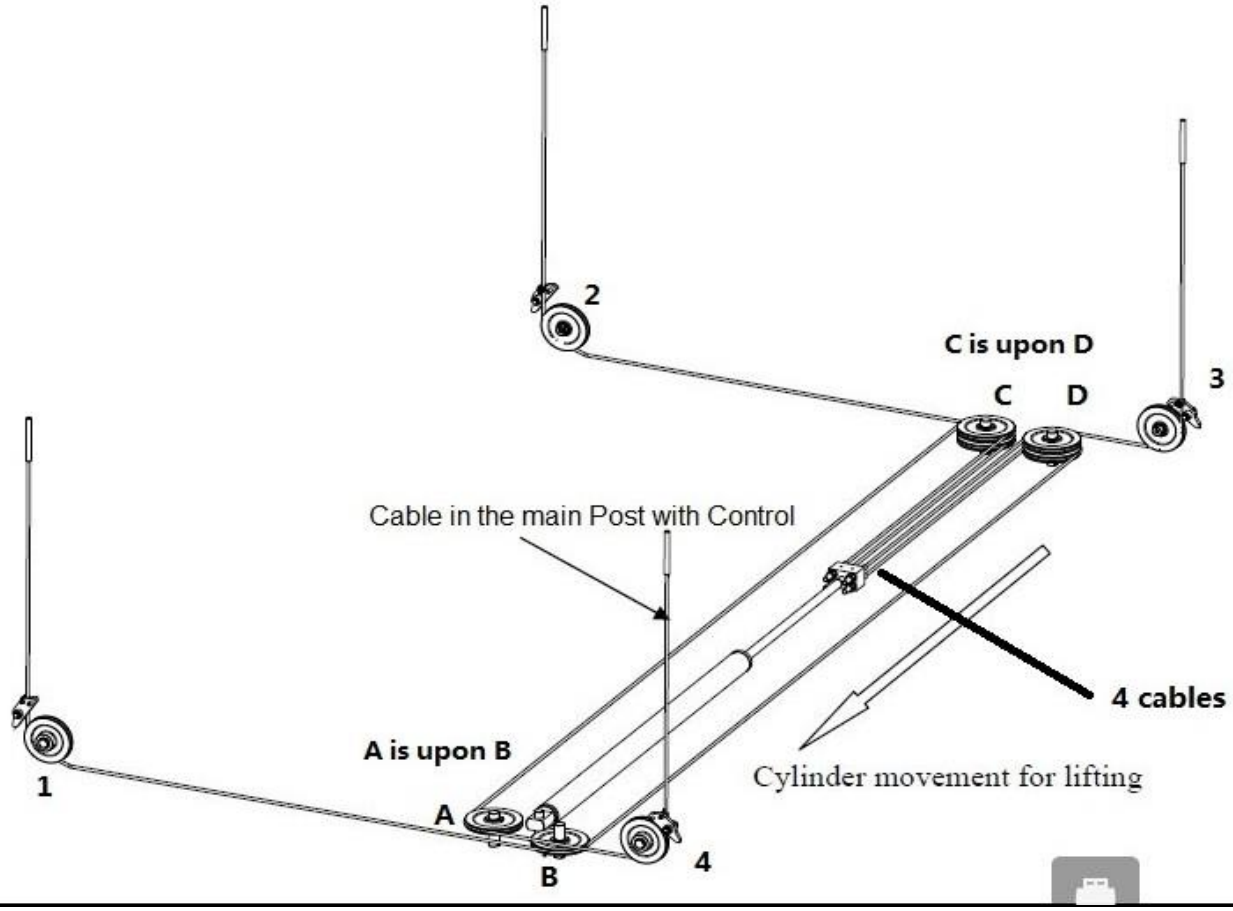


Please check above drawing:
Post “a” is the main post with control part!
For more detailed cable rooting please refer to below two pictures.



2 rooting drawing on this page is the same but in different view. Please refer to any one!

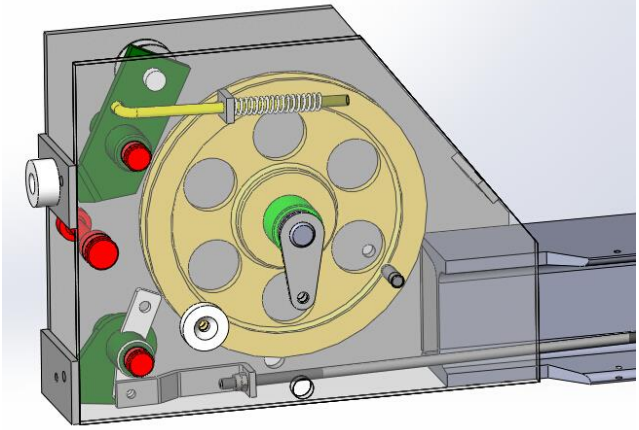
CABLE ROUTING PLAN

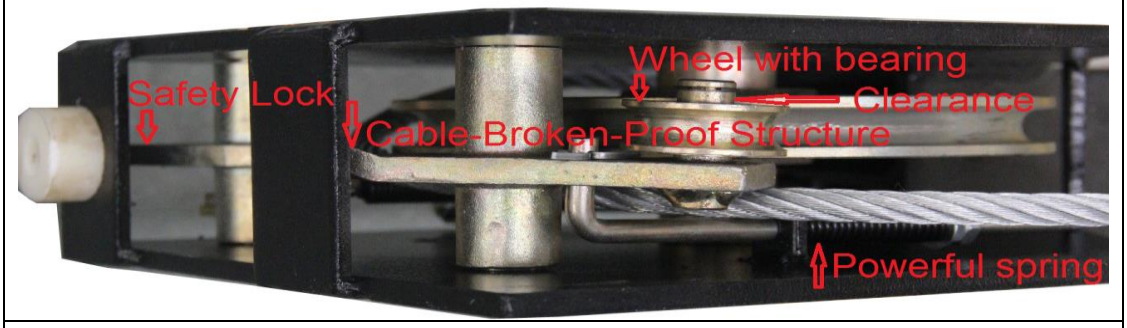


There will be some initial stretching of the cables in the beginning. It will be necessary to re-adjust the cables a week after the first week, then three to six months thereafter. Failure to do this will cause uneven lifting.

7.8 *Installation of safety Lock*

- Once you check below description clearly then it is easy to install/adjust the safety lock..





There are two lock tongues.

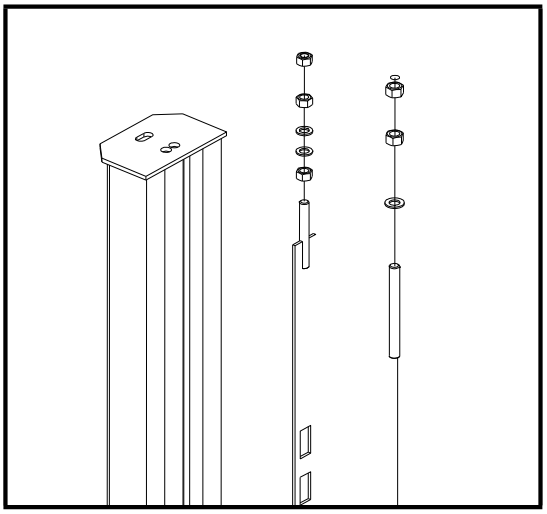
- Upper one is working only when the cable get broken suddenly!
  So please make sure below 2 points
  a) Make the spring tight so that it is powerful!
  b) Adjust the tongue to make sure the tip is pointing to the middle of the hole on the lock bar.
- Lower Lock tongue is normal working safety lock.
  It is always intends to lock the lift.
  Please make sure the connection bolt if tightly fixed. Also we must make Sure the tip is pointing to the middle of the hole on the lock bar.

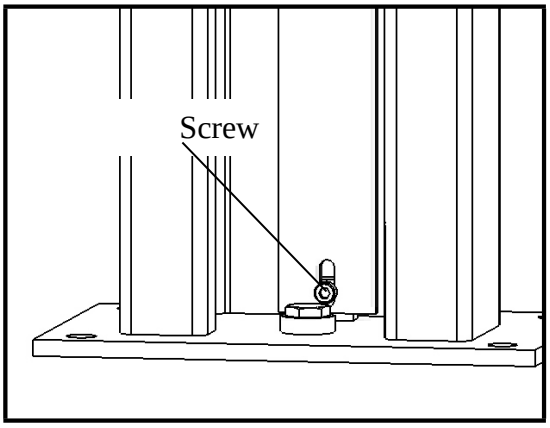
Please be careful to check above bolt when you adjust the safety lock.
When you press the "Down" Button, magnetic air valve will let compressed air goes into the 4pcs safety lock air cylinder then withdraw the above thin bar to unlock the lift.
Possible mistake:
1) If the thin bar is too long then it can not withdraw the lock tongue efficiently. So please be careful to adjust it!
2) Time relay setting
If the car is heavy, but if the time relay is setting too short.
The motor running too short before lift goes down…
In such case the lock tongue still pressed and can not released 100%.
If not all tongue released then lift start to goes down then it is dangerous, even get the lift damaged. So please adjust the time relay setting around 2.5s or even 3s especially there is very heavy car….

But if we set the time relay too long then when car is light it is not good also. Lift will goes up too much during "Down" press.
So please be professional according to exact situation

7.9 Installation of the columns

- Transport the columns to the located site.
- Move each column toward the respective end of the transverse beam until stopped by the slide blocks on the transverse beam. Make sure that the power-side column is positioned in the correct location.
- Incline the column at an appropriate angle and insert the bolted end of the safety rack into the top cap of the respective column from its bottom. Make sure to use caution to prevent columns from falling over. Do not use too much force to bend the rack during installation.
- Fix the racks onto the top cap of the respective column as shown in the below picture using the included nuts and washer.
- Adjust each rack in equal height by tightening or unloosing the adjusting nuts.
- Fix the bottom of the rack on the column using the included screw as shown in the below picture.
- Install the steel cables onto the top cap of respective column as shown in the picture using the included nuts and washer.
- Adjust each cable in equal tension by tightening or unloosing the adjusting nuts.





7.10 Anchoring the columns

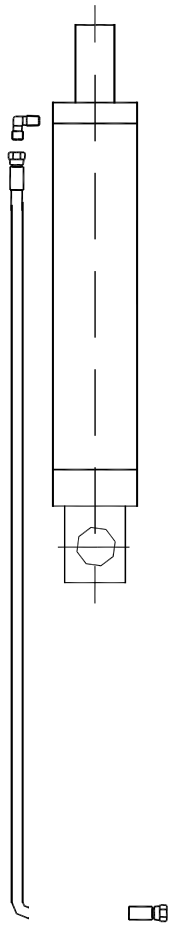
- Before proceeding, check the measurement referring to the layout and make sure that the base plate of each column is square.
- Using the base plate as guide, drill each hole in the concrete approximately 120mm deep with the rotary hammer drill D.16. To assure full holding power, do not ream the hole or allow drill to wobble.
- After drilling, remove dust thoroughly from each hole using compressed air or wire brush.
- Assemble the washers and nuts on the anchors then tap into each hole with a hammer until the washer rests against the base plate. Be sure if shimming is required, enough threads are left exposed.
- If shimming is required, insert the shims as necessary around the anchor bolts, the columns will be plumb.
- With the shims and anchor bolts in place, tighten by securing the nut to the base.

7.11 Hydraulic system connection

⚠	When routing the hydraulic hose, make sure that the hose is clear of any moving part, make sure to keep the hose and fittings clean from dust. Failure to do so may result in hydraulic line failure which may result in damage or personal harm.

- Fix the hydraulic power unit onto the support mounted on the power-side column using the supplied screws and washers;
- Route the hydraulic hoses referring to the below picture;
- Tighten the fittings thoroughly.

Hydraulic drawing



Pump

7.12 Installation of Jack

- Mount the jack rollers into the jack.
- Adjust base extensions to accommodate the free distance between the rails of two runways.
- Lift the jack beam onto the rails using hoisting equipment.

7.13 *Pneumatic system connection*

	When routing the air tubes, make sure that the tubes are clear of any moving part. It may necessary to tie the tubes clear by using nylon tie straps or wire. Failure to do so may result in safety failure which may result in damage or personal harm.

System of the lift is connected) must be equipped with a servicing unit composed of water separator, lubricator and pressure reducer. These devices can be supplied by the manufacturer on request.

- Mount the solenoid air valve on the power-side column and fix it using the screws
- Connect the pneumatic lines pre-assembled on the runways to the solenoid air valve;
- Connect the pneumatic system of the lift and the jack beam to the pneumatic supply at site;
- Check the pneumatic control operations for proper performance.

7.14 *Make the electrical hookup to the power unit*

	The hookup work must be carried out by a qualified electrician. Make sure that the power supply is right. Make sure the connection of the phases is right. Do not run the power unit with no oil. Damage to pump can occur. The power unit must be kept dry.

- Fix the control panel onto the power-side column using the included screws.
- Make the electric hookup to the hydraulic power unit referring to the wiring diagram using included electric cable.
- Make sure the connection of the phases is right and the lift is grounded.

	If no special request, black wires are for phases, the blue is for neutral (for single phase circuit), the yellow/green is for grounding.

7.15 *Start up*

	During Start up procedure, observe all operating components and check for proper installation and adjustment. Do not attempt to raise vehicle until a thorough operation check has been completed.

- Make sure that all columns are plumb and that the base plate of each column is square
- Make sure the lift fixing to the ground using anchor bolts and all anchor bolts tightened

- Make sure the electrical system feeding voltage is equal to that specified in the nameplate on the motor
- Make the lift is connected to the ground
- Make sure the working area is free from people and objects
- Grease sliding blocks placed on transverse beams
- Verify that the control unit is powered
- Pour oil in the tank (about *more than 10 liters one time*)
- Feed the lift by switching on the power switch
- Feed the lift with air supply
- Verify that the motor direction of rotation is that shown on the label by pushing the lifting button. If motor get hot or sounds peculiar please stop immediately and recheck the electrical connection.
- Raising the lift slowly by pressing the lifting button until the lift reaches the full height. Do not continue pressing button after lift reaches full height. Damage to motor can occur if continued.
- Repeat raise and lower the lift completely at least 3 times to bleed the trapped air inside the cylinder.

7.16 Check and adjustment

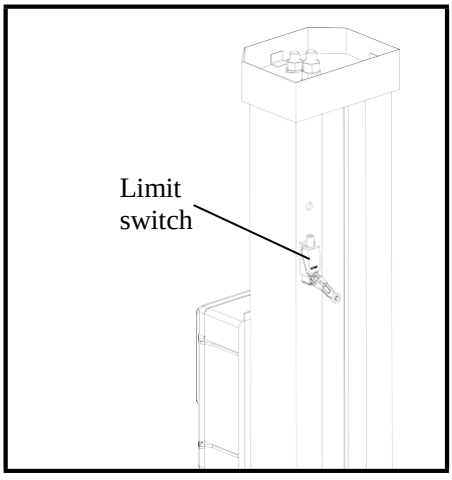
During the Start up procedure, check and make adjustments:

- Level of runways. Adjust the cable in the equal tension;
- Make sure the safeties are engaging uniformly and four safeties can engage in the same position of the safety rack in the column.
- Make sure the safety mechanisms are functioning properly. Adjust it if necessary by screwing or loosing the nuts on the safety hook
- Proper oil level in the tank, refill if needed;
- Cylinder operation;
- No leakage in hydraulic line;
- The lift for reaching its maximum height;

7.17 Limit switch installation

	Only skilled personnel must be allowed to carry out this operation. An improper adjustment of limit switches could cause damages to the lift, objects and people.

- Fix the maximum height limit switch on the power side-column in the right position using the included screws. When routing the electric cable of limit switch in the column, make sure to go though the clip placed in the column to keep it clear of any moving.
- Carry out the complete cycle of lowering and lifting and check for proper installation and for reaching the
  Maximum working height (1850mm), adjust it if necessary.



7.18 Accessories Installation

- Install the front wheel stops.
- Install the ramps on the lift.
- Install the post cover onto the top of each column.
- Install the power unit cover.

7.19 Check with load

	Warning: please follow carefully the instructions in the coming paragraph for avoiding damages on the lift.

Carried out two or three complete cycles of lowering with the vehicle loaded and lifting and:

- Repeat the checks provided for by 7.15.
- Check no strange noise during lifting and lowering.
- If the runways weren't leveled, readjust.

8 Operation and Use

	Never operate the lift with any person or equipment below. Never exceed the rate lifting capacity. Always ensure that the safety locks are engaged before any attempt is made to work on or near the vehicle. Never leave the lift in an elevated position unless the safeties are engaged. If an anchor bolt becomes loose or any component of the lift is found to be defective, Do not use the lift until repairs are made. Do not permit the electric control panel to get wet!

8.1 Controls



Switch

The power switch can be set in two positions:

0 Position: the electric circuit is not powered; the switch can be padlocked to prevent the use of the lift.

1 Position: the electric circuit is powered

Power

It shows that the electric circuit is powered

Up

When pressed, the hydraulic power unit is operated: the lift will be raised.

Lock

When pressed, the lift lowers to engage the nearest mechanical safeties.

Down

When pressed, the lowering solenoid valve is powered: the lift begins to lower under its weight and the load lifted.

8.2 To raise the lift

- Position the vehicle tires in the centre of each runway.
- Set parking brake or use wheel chock to hold vehicle in position.
- Before raising the vehicle, be sure the safety area is free of people and objects. Pay attention to the overhead clearance.
- Set the power switch to 1 position.
- Raise the lift by pressing the lifting button on the control panel until the desired height is reached.
- Push the safety engaging button to make the lift engage the nearest safeties.
- Check to make sure all four safeties are uniformly engaged before entering the work area.

8.3 To lower the lift

- Be sure the safety area is free of people and objects.
- Push the lifting button to raise the lift a little bit to clear off the safety.
- Press the lowering button, the lift takes few seconds to release the safeties and then the lowering solenoid valve is powered: the lift begins to descend under its weight and the load Lifted.

8.4 Jack Operation

The lift adopts a pneumatic-hydraulic Jack. It has 3-steps manual safety lock for safety.
When jack goes up, the safety lock is always released.
When jack goes down, the jack safety is always locked.
So if we want to lower the jack we must release the safety lock by handle manually.



9 Maintenance

	Only trained people who know how the lift works, must be allowed to service the lift.

To service properly the lift, the following has to be carried out:

- Use only genuine spare parts as well as equipment suitable for the work required;
- Follow the scheduled maintenance and check periods shown in the manual;
- Discover the reason for possible failures such as too much noise, overheating, oil blow-by, etc.
- Refer to documents supplied by the manufacture or dealer to carry out maintenance.

	Before carrying out any maintenance or repair on the lift, disconnect the power supply, padlock the general switch and keep the key in a safe place to prevent unauthorized persons from switching on or operating the lift.

9.1 Ordinary Maintenance

The lift has to be properly cleaned at least once a month using self-cleaning clothes.

	The use of water or inflammable liquid is strictly forbidden.

Be sure the rod of the hydraulic cylinders is always clean and not damaged since this may result in leakage from seals and, as a consequence, in possible malfunctions.

9.2 Periodic Maintenance

Daily pre-operation	• Check hydraulic connections and hoses for leaks • Check safety lock audibly and visually while in operation • Check bolts, nuts and screws are tight
Every 1 month	• Check all chain/cable connections, pins and bolts to insure proper mounting • Check all anchor bolts and retighten if necessary • Check columns for square-ness and plumb • Check steel cable tension, adjust if necessary • Check all lifting pads, replace if necessary • Lubricant columns with grease • Lubricate all pivot pins • Check the hydraulic oil, fill or replace if necessary • Check hydraulic systems for proper operation
Every 12 months	• Verify that all components and mechanisms are not damaged • Verify the steel cables are not worn up to 5%, change if necessary • Check the electrical system to verify that the motor, limit switch and control panel operate properly (this work must be carried out by skilled electricians) • empty the oil tank and change the hydraulic oil

10 Troubleshooting

A list of possible troubles and solutions is given below

TROUBLE:	POSSIBLE CAUSE:	SOLUTION:
The lift does not work	The main switch is not turned on	Turn the switch on
	There is no power	Check Power on to restore if necessary
	The electrical wires are disconnected	Reconnect
	Fuses are blown	Check for correct voltage
		Replace
The lift does not raise	The lift is overloaded	Check the vehicle weight
	The motor direction of rotation is not correct.	Interchange the two phases on the main switch
	The oil in the power unit is not sufficient.	Add some hydraulic oil
	The UP button is faulty.	Check UP button and connection for proper operation. Replace if needed
	The maximum pressure valve clogged or leaks	Check and clean if dirty, or replace if faulty
	The lowering valve does not close.	Check and clean if dirty or replace if faulty
	The suction tube or pump filter is dirty.	Check and clean if needed.
	Presence of air in the hydraulic system	Bleed the hydraulic system
The lifting capacity is not sufficient	The pump is faulty	Check the pump and replace if needed.
	Oil leakages in hydraulic circuit	Check the circuit for any leakage
The lift does not lower when the lowering handle is pressed	The lowering valve does not work properly	Check the valve and replace if needed.
	The safety lock is not released	Release the safety lock.
	The steel cables are not in the same tension.	Readjust the steel cables.
The lift does not lower smoothly	Presence of air in the hydraulic system	Bleed the hydraulic system
	Lubrication of sliders is not enough.	Grease
	Sliders are damaged	Replace
The motor does not stop when the lift reaches it maximum height	The maximum height limit switch does not work	Check the limit switch and replace if needed