

Model No. EE-6603BWF

Long platform scissor lift

Recessed Installation

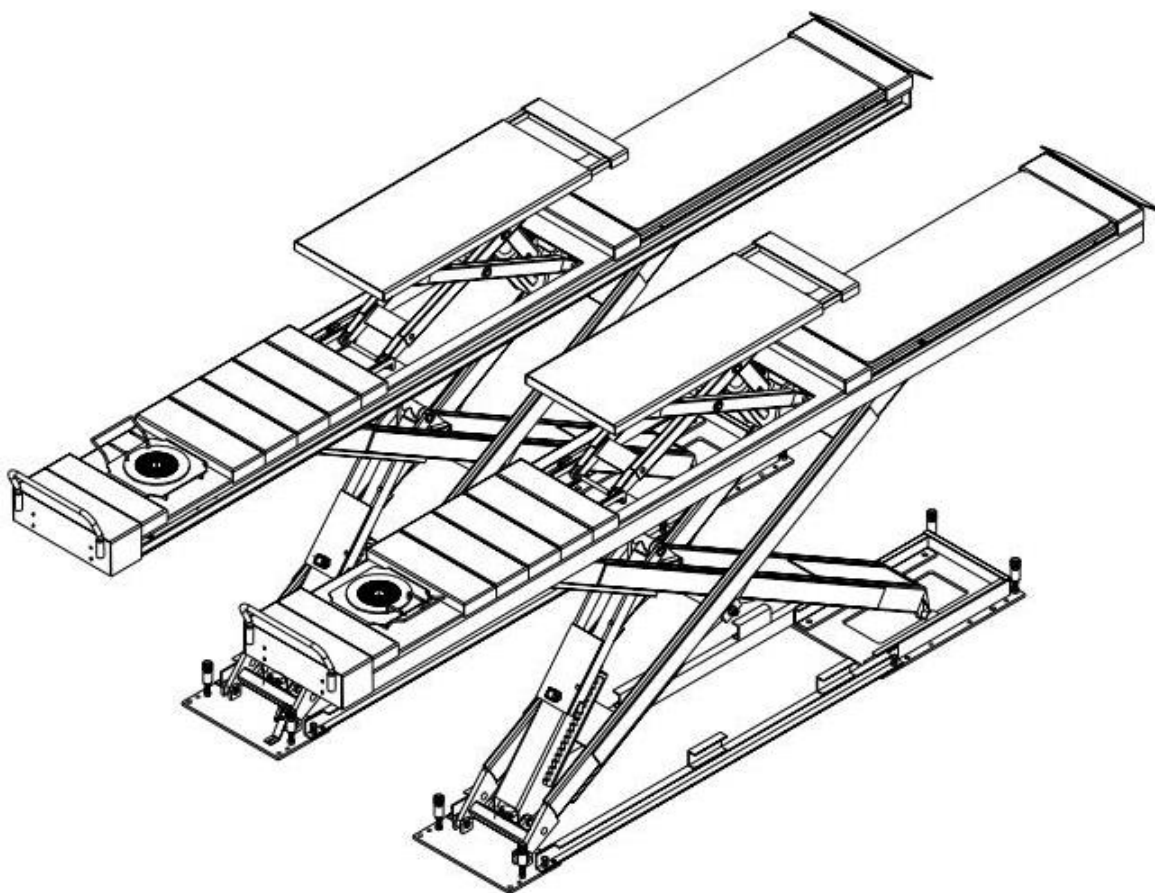
Manual Levelling

Lifting Capacity 4200KG/ 5000KG

**Installation, Operation
and Parts Manual**



EAE



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

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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.

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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.

IMPORTANT NOTES	2
SAFETY NOTES	4
1.1 Operation of lifting platforms	4
1.2 Checking of the lifting platforms	4
1.3 Important safety notices	5
1.4 Warning labels	6
1.5 Potential safety risks	7
1.6 Noise level	7
PACKING, STORAGE AND TRANSPORTATION	8
2.1 The lift was dismantled into 3 parts for transportation	8
2.2 Storage	8
2.3 Lifting and handling	8
PRODUCT DESCRIPTIONS	9
3.1 General descriptions	9
3.2 Construction of the lift	9
3.3 Dimensions	9
3.4 Technical data	11
INSTALLATION INSTRUCTIONS	11
4.1 Preparations before installation	11
4.2 Installation attentions	13
4.3 General Installation Steps	13
4.4 Items to be checked after installation	15
OPERATION INSTRUCTIONS	16
5.1 Precautions	16
5.2 Control panel descriptions	16
5.3 Working flow chart	17
5.4 Operation instructions	17
TROUBLE SHOOTING	19
MAINTENANCE	21
Annex 1, Floor plan for recessed installation	23
Annex 2, Electrical diagrams and parts list	26
Annex 3, Hydraulic diagrams and parts list	31
Annex 4, Pneumatic connections and parts list	35
Annex 5, Mechanically exploded drawings and parts list	36

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 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 option 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.

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 (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 3 parts for transportation

Name	Packed by	Specification	Dimension(cm)	Weight(kg)	Quantity
Control cabinet	Wooden case	6603BWF	51*48*130	84	1
Power side platform	Carton with wooden base	48L.42T	520*65*46	1120	1
		51L.50T	550*65*46	1180	
The opposite platform	Carton with wooden base	48L.42T	520*65*46	1120	1
		51L.50T	550*65*46	1180	

2.2 Storage

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

Stacking the packs

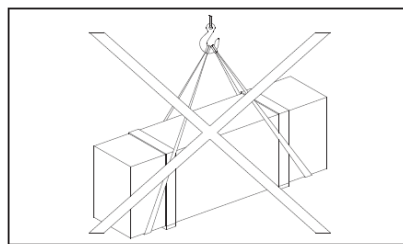
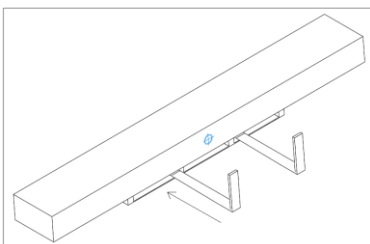
We advise against stacking because the packs are not designed for this type of storage. The narrow base, heavy weight and large size of the packs make stacking difficult and potentially dangerous. If stacking is unavoidable, use all appropriate precautions:

- 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)

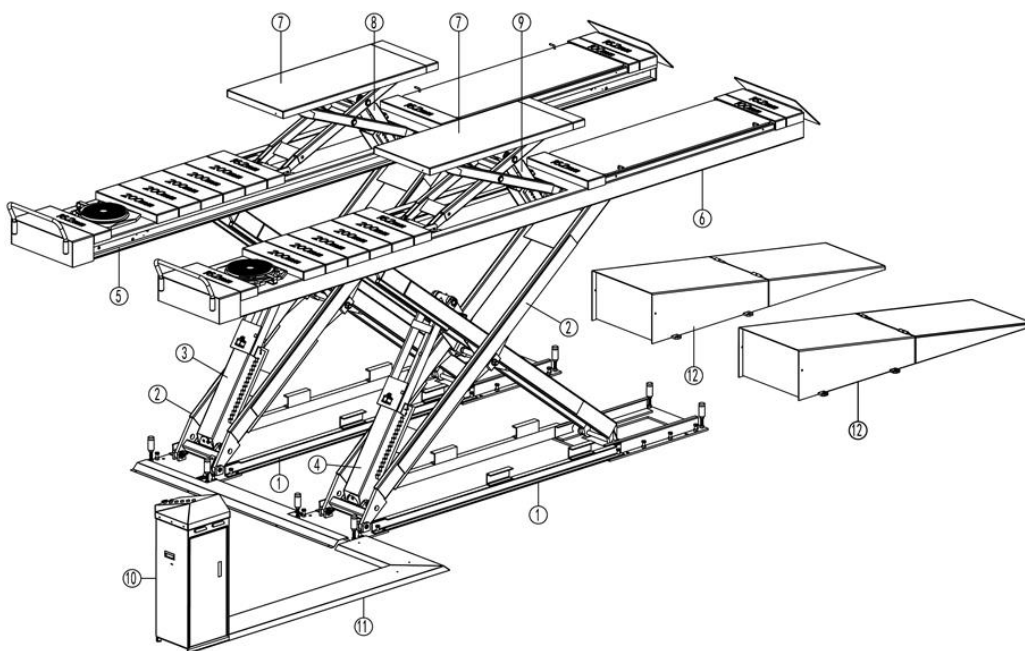
Take special care with the hydraulic power unit, the control panel and the platform cylinder.

PRODUCT DESCRIPTIONS

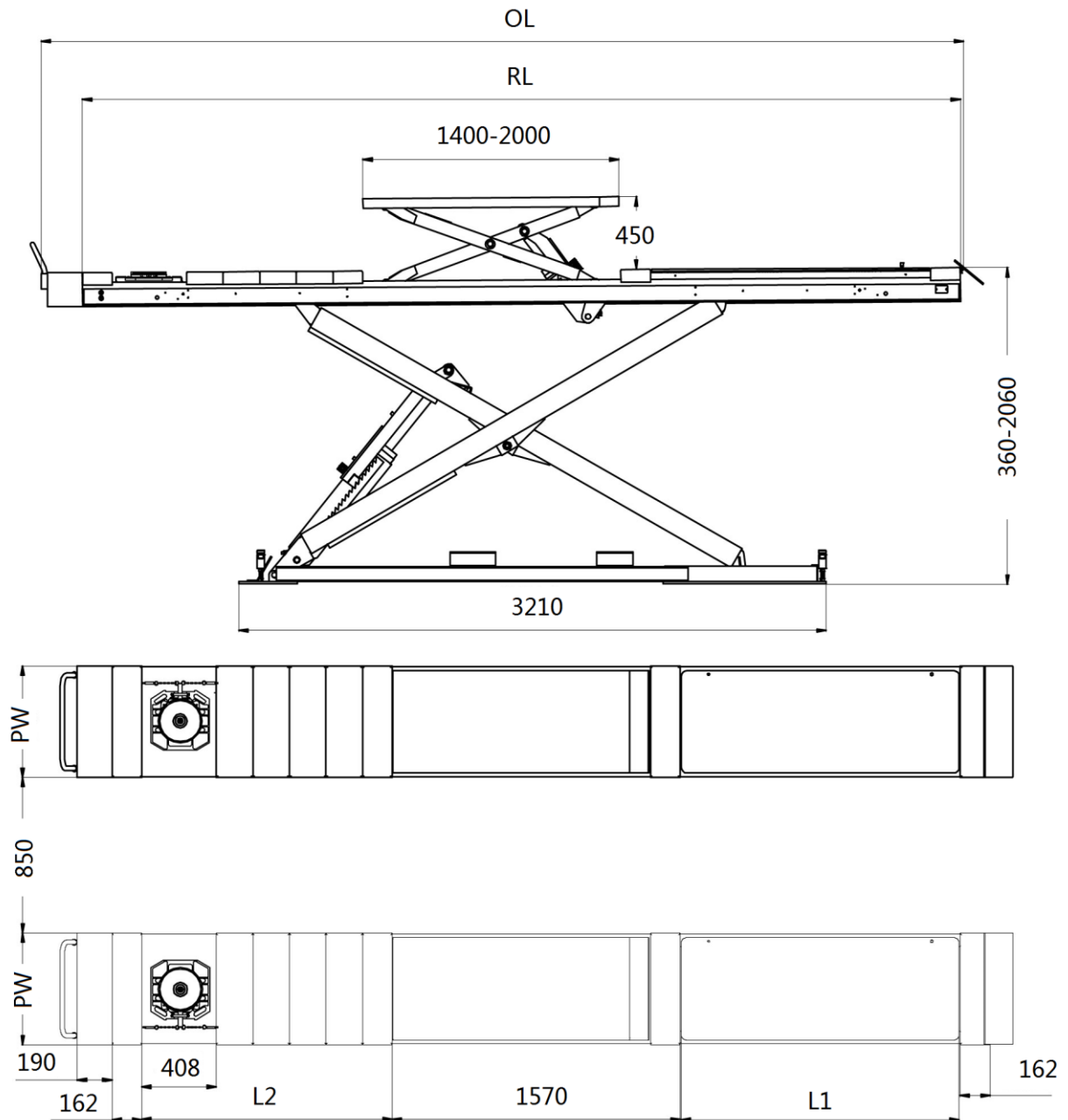
3.1 General descriptions

This is wheel support vehicle lift with auxiliary wheel free lifting device. It is preferably for recessed mounting and is mainly composed by two lifting platforms and a set of power unit. The gear pump works making oil in the pump push upwards the cylinder plunger and thus scissor brackets of the lift rise accordingly. The safety valve in the hydraulic line together with the mechanical safety locking device reduce maximally the hazard of sudden decline of the wheel supporting platform in case of hydraulic leakage. In addition, there safe designs like 24V control voltage, switch for maximum rising height and low-height alarming buzzer which make the lift be safer to work with.

3.2 Construction of the lift



Pos.	Descriptions
1.	Base frame assembly
2.	Support arm assembly
3.	Drive cylinder and mechanical lock assembly
4.	Slave cylinder and mechanical lock assembly
5.	Wheel-support Platform A (Main platform)
6.	Wheel-support Platform B (Secondary platform)
7.	Platform and arm assembly of wheel-free lift
8.	Drive cylinder assembly of wheel-free platform
9.	Slave cylinder assembly of wheel-free platform
10.	Control cabinet
11.	Oil hose covers (optional, for surface mount)
12.	Drive-on ramp (optional, for surface mount)

3.3 Dimensions


Specification	PW	RL	OL	L1	L2
48L	610	4800	5042	1520	1370
51L	610	5100	5342	1520	1570

3.4 Technical data

Specification	*.48L.42T	*.51L .50T
Rated capacity of the main lift	4200kg	5000kg
Applicable wheel track of the main lift	1100~1800mm	1100~1800mm
Applicable wheel base of the main lift	≤4600mm	≤4900mm
Full raised height of the main lift	2060mm	
Initial height of the main lift	360mm	
Full raised time (with rated load)	Approx.50s (3Ph)	
Full lowered time (with rated load)	Approx.50s	
Rated capacity of the wheel free lift	3500KG	
Applicable wheel track of the wheel free lift	1100~1800mm	
Applicable wheel base of the wheel free lift	2100~2800mm	
Full raised height of the wheel free lift	450mm	
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 qualified electricians.* Requirements for power supply cable of the installation site: at least 2.5mm² wire core for 3Ph power and 4.0mm² 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 recessed floor dimensions.

4.1.4 Tools and equipment for installation

Tool name	Specification	Quantity
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, 2500kg	1
Lifting strap	Capacity, 1000kg	2
Lifting strap	Capacity, 2000kg	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.

No.	Name	Specification	Quantity
1	Power side lifting platform assembly	6603B-01	1
2	Secondary lifting platform assembly	6603B-02	1
3	Control cabinet	6603BWF	1
4	Rubber pad	38*120*100	4
5	Expansion bolt	M16*120	16
6	Air hose	D=8	2m
7	Equalizing plate	6603B-A16	16
8	User's Manual		1
9	Key		1
10	Oil tank label		1

4.2 Installation attentions

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

4.2.2 All bolts should be firmly screwed up.

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

4.3 General Installation Steps

Step 1: Dismantle the package and place lifting platforms into recessed pits 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: Avoid scratching the painting surface and hoses.

Attention 2: Before hoisting, make sure the hoses and wires are well protected against damage.

Attention 3: It is necessary to hold the platform during the hoisting process. Irrelevant person is not allowed in installation area.

Step 2: Connect hydraulic system.

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

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

It must be taken adequate care that all fittings are securely tightened. Severe leaking will occur if the hose fittings are not properly tightened.

Step 3: Connect the pneumatic release system

Connect the pneumatic release system by the diagram of air hose connection in Annex 4.

Attention: Do not contaminate the pneumatic components during the connection.

Push upward the button indicated in the following fig and turn the button until the hand of the pressure meter points to the NUMBER "6" .

Push the button down thereafter.



It is suggested to add ISO VG32 mechanical oil into the oil tank.

Adjust the oil dipping quantity using the button on top of the oil cup.



Step 4: Connect electrical wires.

Electrical connection must be done by qualified electricians.

Refer to Annex 2 when fix the electrical system.

Connect the wire connectors for raising and lowering limit switches

Connect the power supply 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 cabinet).

Step 5: Fill with hydraulic oil.

ONLY CLEAN AND FRESH OIL ONLY .Lift must be fully lowered before changing or adding hydraulic oil.

Pour 16 liters anti-abrasion hydraulic oil into the oil 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 HM NO.46 hydraulic oil. Use HM NO.32 hydraulic oil when temperature is below 10 degree Celsius.

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

Step 6: Levelling

Refer to 5.4 operation instructions and turn off SA3 switch.

Check the connection of the hydraulic and electrical system.

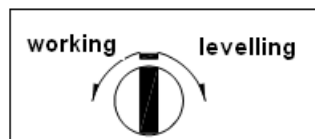
Review operation instructions and get familiar with lift controls by running the lift through a few cycles.

Attention: Level the platforms before connecting max height limit switch because if not, platforms may not rise to the highest position.

The operator needs to know clear which levelling valve controls which platform. This could be judged by the way that the oil hose was connected or by trial raising or lowering.

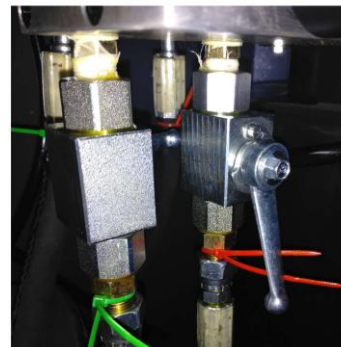
Level the Main-lift


**Transfer-switch 1
on the control panel**



**Transfer-switch 2
in the cabinet**

two valves for levelling
 one for levelling the Main lift
 one for leveling the Wheel-free lift



MASTER platform is the platform which stay farther to the control unit.

SLAVE platform is the platform which stay nearer to the control unit.

Turn on the MAIN power switch and turn the TRANSFER switch on the panel to Main-Lift.

Open the door the cabinet, turn off the OVERRIDE switch and turn the other TRANSFER switch to LEVELING mode.

Turn on the LEVELLING valve for the Main-Lift and push the UP button for about 30 seconds until one of the two platforms begin to rise.

Turn the TRANSFER switch in the cabinet back to WORKING mode and turn off the LEVELING valve for the Main-Lift.

Push the UP button making both platforms rise to the upmost height.

Turn on the LEVELLING valve for the Main-Lift and turn the corresponding transfer switch to LEVELLING mode.

Push the DOWN button to let the SLAVE platform (the platform which is nearer to the control unit) lower completely.

Keep pushing the DOWN button for 5 more seconds to **expel air completely when the SLAVE platform has been entirely lowered.**

Return to the WORKING mode.

Push the DOWN button until the MASTER platform has been lowered completely.

Keep pushing the DOWN button for 5 more seconds to expel air in the MASTER cylinder.

Turn the transfer switch to LEVELLING mode.

After that, push the UP button until the SLAVE platform begins to rise a little bit.

Turn off the LEVELLING valve for the Main-Lift.

Go back to WORKING mode.

Raise and lower the Main-Lift to check synchronization.

The two Main-Lift platforms have been synchronized.

Level the Wheel- Free lift

Turn the TRANSFER switch on the panel to Wheel-Free -Lift.

Turn the TRANSFER switch in the cabinet to working mode.

Push the UP button to raise both platforms to the maximal height and keep pushing the UP button for 20 more seconds.

Push the DOWN button to lower both platforms to bottom position.

Repeat the above steps for 2 or 3 cycles and check the synchronization.

Step 7: Fix base frames with expansion bolts.

- ① Before anchoring, it is necessary to check again the position for each base plates by referring to the dimension scheme as well as the corresponding installation requirements.
- ② Drill holes using D16 carbide tipped masonry drill bit. Make sure to drill vertically down.
- ③ Clean the hole and check again the position of the posts to ensure they are correctly positioned.
- ④ Use a spirit level to check the vertical alignment of the two adjacent base plates. If necessary, place equalizing plates under the base plates. The equalizing plates must be of the same length as the side of the base plate resting on them. Otherwise the load of the base plate will not be transferred evenly to the foundation.
- ⑤ Impact and drive anchoring bolt into hole until nut and washer contact base.
- ⑥ Tighten the nut with torque wrench to 80Nm.

4.4 Items to be checked after installation.

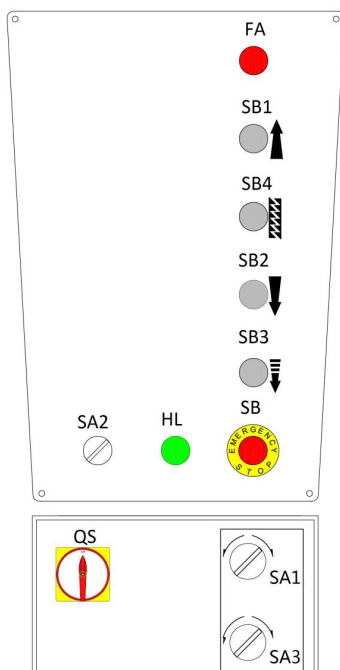
S/N	Check items	YES	NO
1	Screw torque of expansion bolts : 60-80Nm;	√	
2	Rising speed $\geq 20\text{mm/s}$;	√	
3	Noise with rated load $\leq 75\text{dB(A)}$;	√	
4	Grounding resistance: not bigger than 4Ω ;	√	
5	Height difference of the two platform $\leq 5\text{mm}$;	√	
6	Mechanical locks are robust and synchronized when running with rated load ;	√	
7	All control buttons works as "hold to run".	√	
8	The limit switches work well.	√	
9	The grounding wire is connected.	√	
10	The carriage rises and lowers smoothly.	√	
11	There is no abnormal noise when run with load.	√	
12	There is no oil leakage when run with load.	√	
13	The expansion bolts, nuts or circlips are well secured or tightened.	√	
14	The max lifting height can be reached.	√	
15	All Safety advices, name plate and logos are clear.	√	

OPERATION INSTRUCTIONS

5.1 Precautions

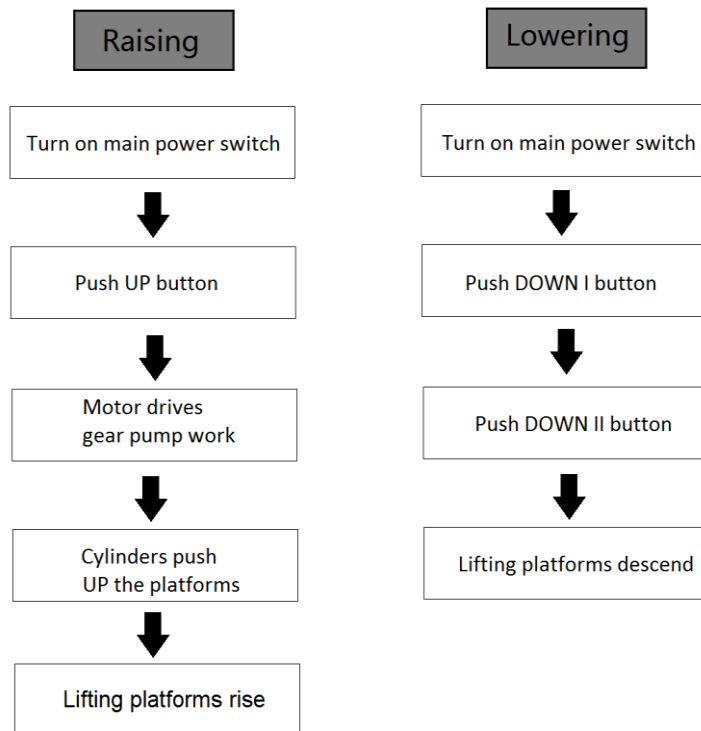
- 5.1.1. Read and digest the complete operation instructions before operating the lift.
- 5.1.2. Only authorized persons are permitted to operate the lift.
- 5.1.3. Do not try to raise the vehicle with excessive length or width.
- 5.1.4. The space above and below the load as well as of the loading carrying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

5.2 Control panel descriptions



POS.	Description	Function
FA	Alarm buzzer	Safety 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
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 switch	Power on /off
SA1	Selection switch	Select working or levelling mode
SA2	Selection switch	Select main lift or wheel free lift
SA3	Selection switch	Select infrared sensor on or off

5.3 Working flow chart



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.

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 lifting platform.

Always lift the vehicle using all four adapters. Never raise just one end, one corner or one side of vehicle.

Turn SA1 to WORKING mode and SA3 to ON before normal use. The normal users are not allowed to open the door of control cabinet.

Using the main lift

Raise the lift

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

1. Make sure that you have read and understood the operation manual before operation.
2. Drive and park the vehicle midway between two platforms.
3. Turn the selection switch on the control panel to "Main lift" and push the "UP" button to raise the lifting platform a little bit off the ground and check the stability of the lifted vehicle.
4. Having raised the vehicle to the expected height, push the "Safety Lock" button to ensure the mechanical safety lock is engaged. Check again the stability before performing maintenance or repair work.

Lower the lift

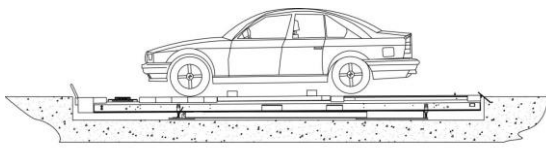
When lowering the lift pay careful attention that all personnel and objects are kept clear.

1. Turn on the power switch.
2. Push "DOWN I" button to lower the lift. It will stop lowering at proper height off the ground.
3. Push "DOWN II" button to continue lowering the platforms which accompanies with safety alarming buzz.

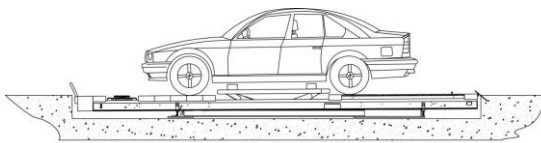
Using the wheel free lift. Lifting capacity: 3500KG

Raise the wheel free lift

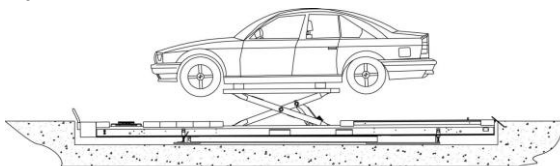
1. Turn the Selection switch on the control panel to "wheel free lift".
2. Place rubber pads under the pick-up positions of vehicle. When it is necessary to use the platform extensions, push "UP" button to raise platforms of the jack a bit over the platforms of main lift and pull out the extensions.



3. Push "UP" button and check again if the rubber pads are directly under the pick-up points of the vehicle when they are very close to the vehicle's chassis.



4. Keep on pushing "UP" button until reaches to the height expected. Full rise of the wheel free lift is 450mm over the platform of main lift.



5. Push the "Safety Lock" button to engage mechanical lock before service work.

Lower wheel free lift

Attention: in case the platform extensions of the jack are used, the operator needs to push them in the when wheels of the serviced vehicle fall on steadily the platforms of the main lift.

1. Turn the selection switch on the control panel to “wheel free lift”.
2. In the case height of the main lift is more than 500mm over the floor, push “DOWN I” button to lower the wheel free lift.
Push “DOWN II” button while the height is less than 500mm. The entire lowering process is accompanied by an audible warning.
3. Remove rubber pads and other tools to provide an unobstructed exit for moving vehicle from the lift area.

Attention: In the case the height difference between the two platforms reached to 6 cm 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 need to ask professional help from maintenance operator to restore the lift to normal working condition.

Restore to the normal working status.

- Open the door of the control cabinet;
- Turn SA3 to OFF status;
- PUSH DOWN I and DOWN II button to fully lower both lifting platforms;
- Level until both platforms are synchronized.
- Turn SA3 to ON status.

TROUBLE SHOOTING

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

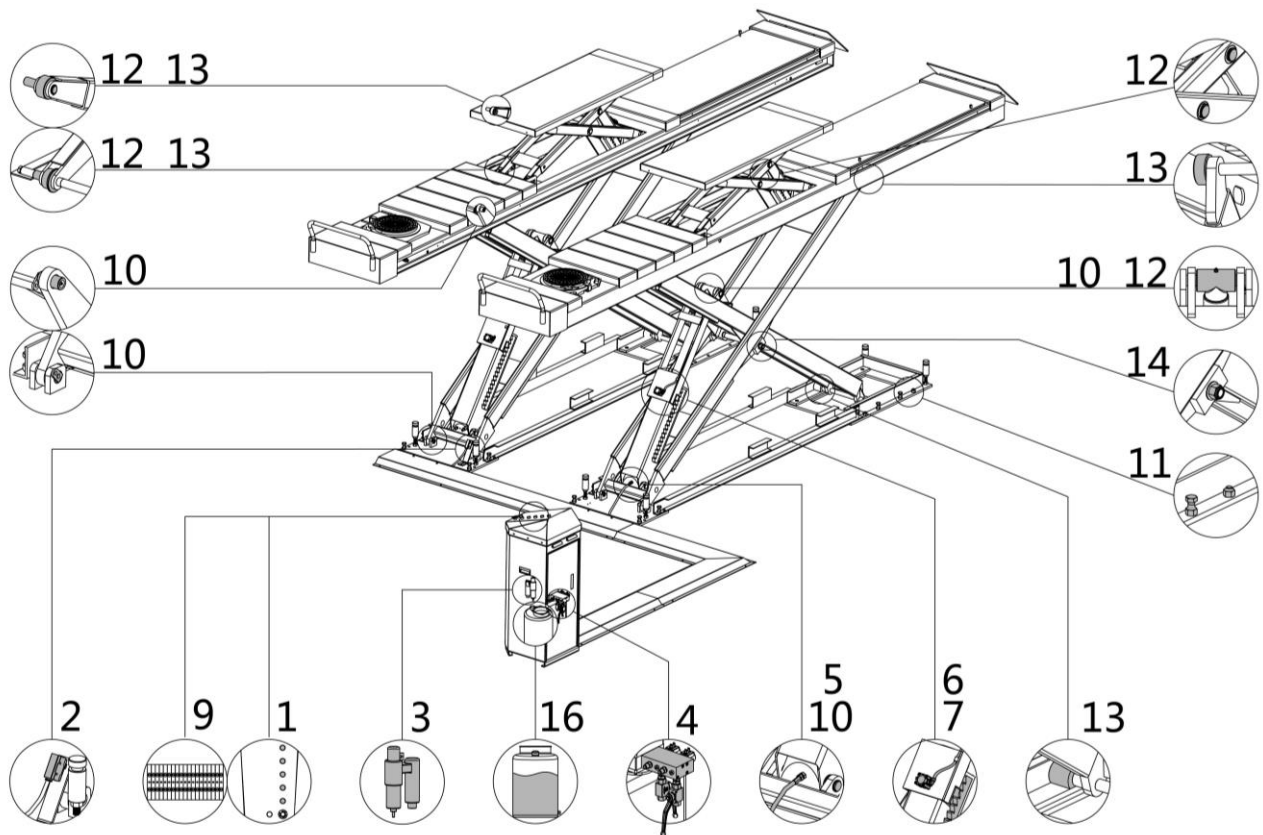
TROUBLES	CAUSES	SOLUTIONS
Motor does not run and will not raise.	Loose wire connection	Check and make a good connection.
	Burnt motor.	Replace it.
	Damaged limit switch or its wire connection is loose.	Adjust or replace the limit switch.
Motor runs but will not raise.	The motor run reversely.	Check the 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.
Platforms go down slowly after being raised.	The cushion valve is not well screwed up or jammed.	Clean or make adjustment
	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.
Raising too slow.	Unloading valve leaks.	Check and adjust the tightness.
	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.
Lowering too slow.	Abraded seal of the cylinder	Replace the seal.
	Jammed throttle valve	Clean or replace it.
	Dirty hydraulic oil	Clean or replace it.
	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.

Lubricate with No.1 lithium base grease.



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. Screw torque :60-80N.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	Rolling wheels and their running tracks	Push the UP and DOWN button to check if the wheel is over-worn or cannot roll. Add grease to ensure smooth running. Change over-worn wheels.	Every 3 months
14	Self-locking nut	Check with torque spanner. The torque should be no less than 330N.m.	Every 3 months
15	Whole Lift	Run 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	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.

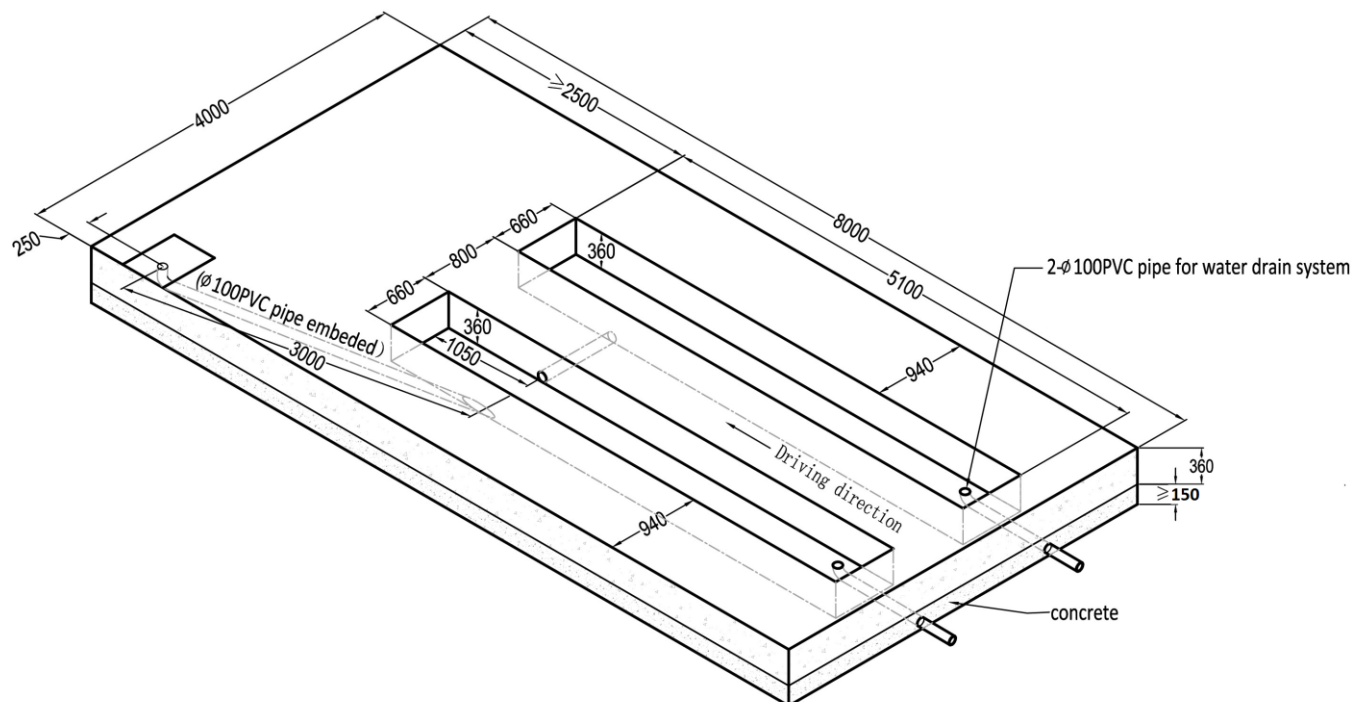
Annex 1, Floor plan for recessed installation

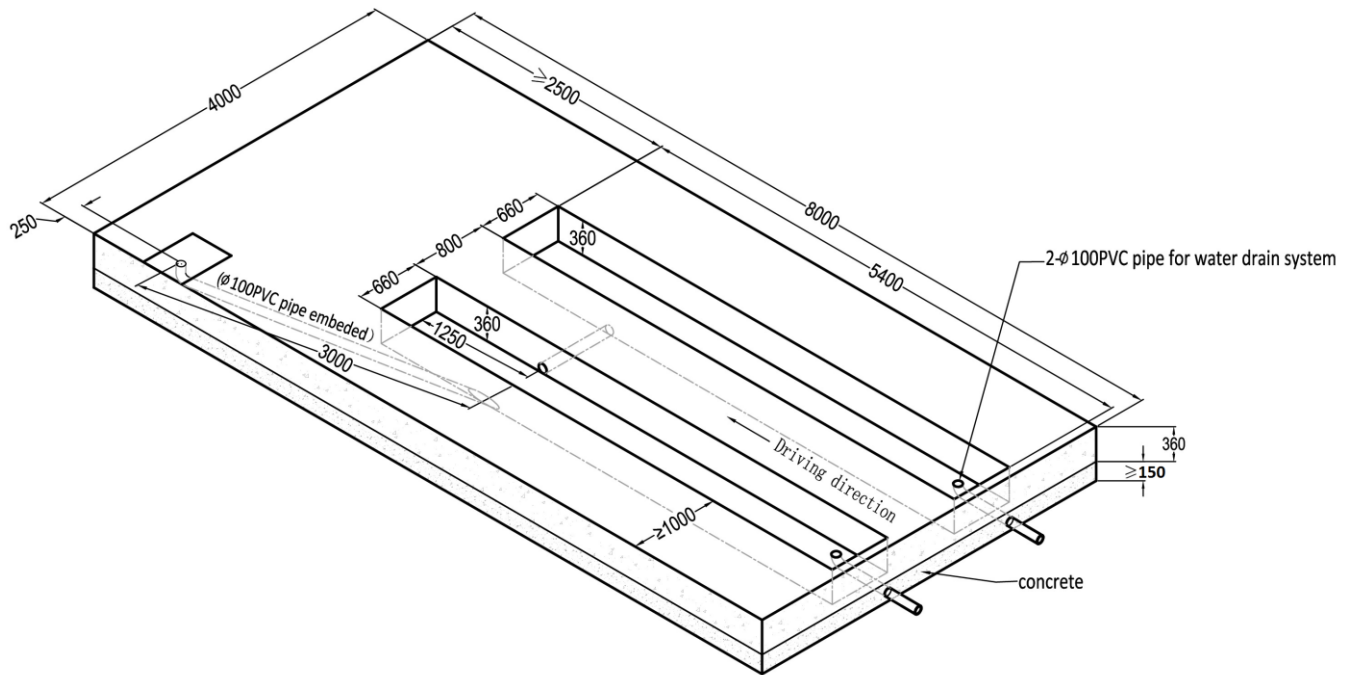
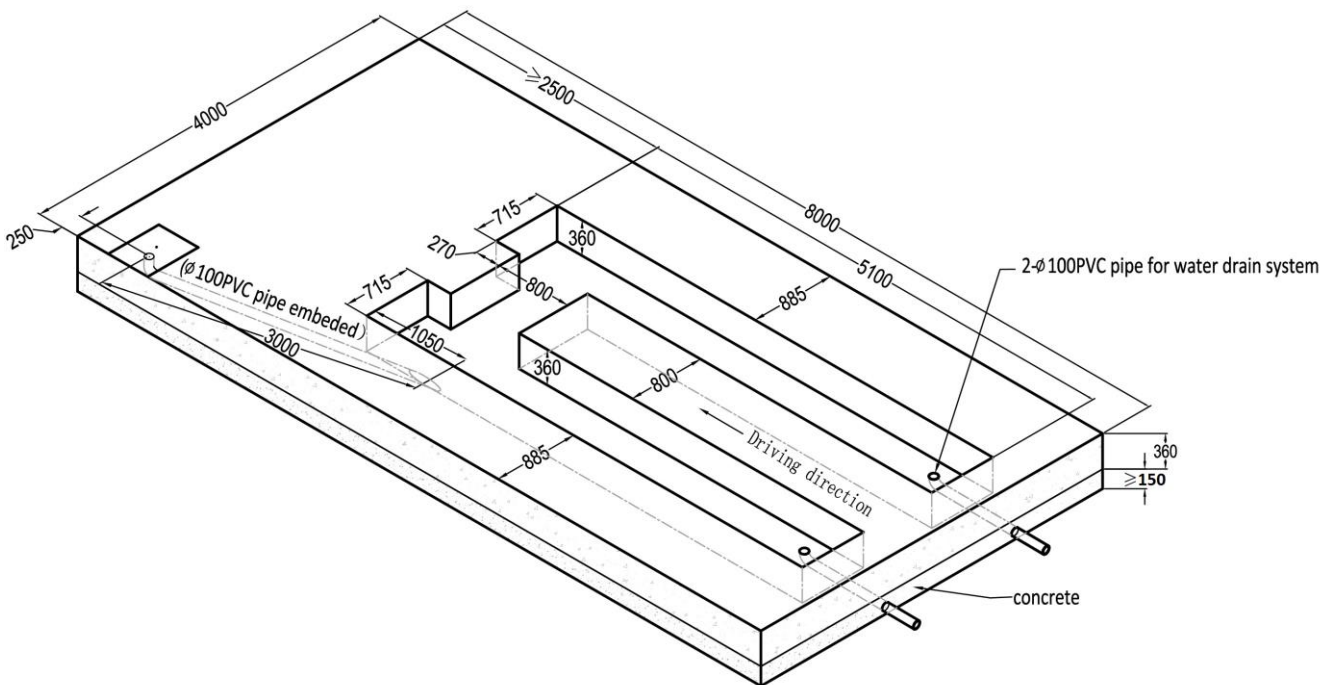
Requirements:

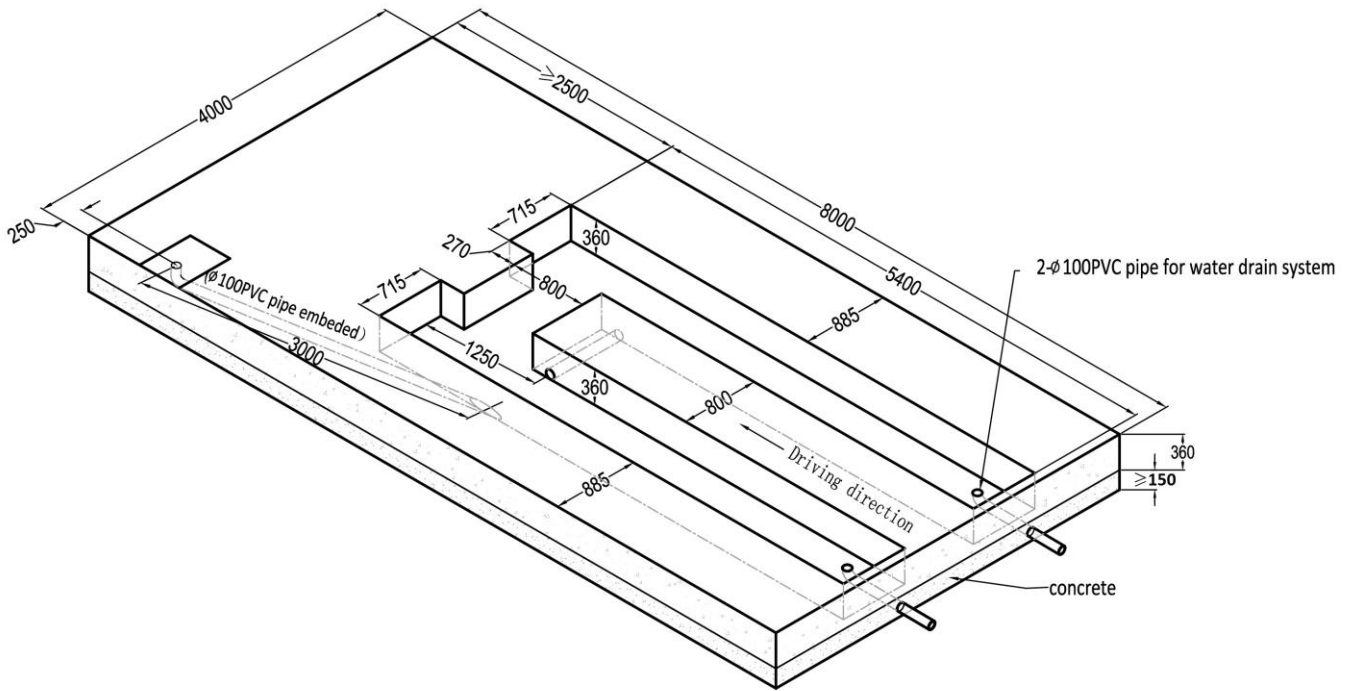
- ① **Indoor installation only.** There must be a clearance of at least 1 meter between the lifting platform and fixed elements (e.g. wall) in all lifting positions. There must also be sufficient space for driving vehicles on and off.
- ② C25/C30 concrete foundation with a minimum thickness of 150mm. Concrete Surface under the base plates: Horizontal and even (Gradients max. 0.5 %).
- ③ Embedded L40 angle iron around the pit for edging.
- ④ Newly built concrete ground must be older than 20days.
- ⑤ In case drain pipes are not available, it is necessary to reserve a water collection pit.
- ⑥ All dimensions are in millimeters.

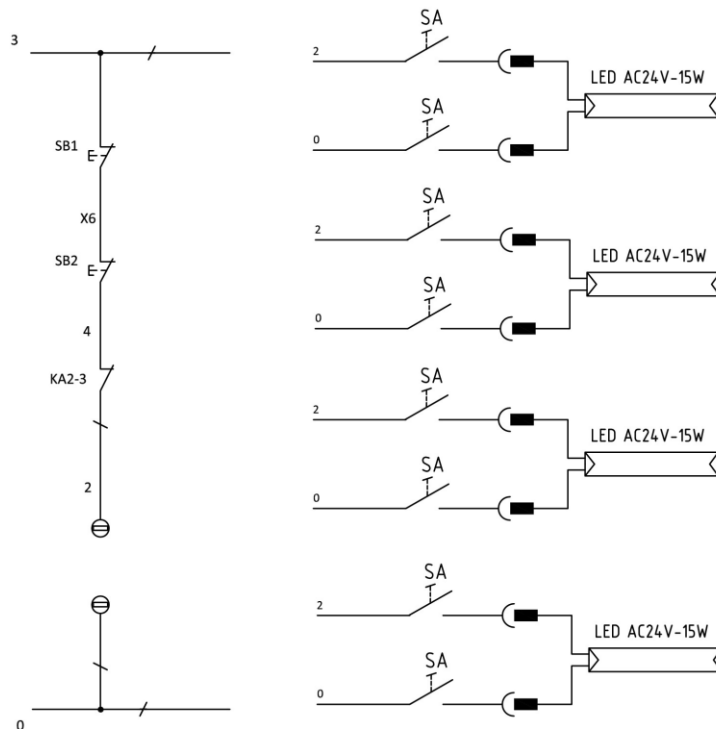
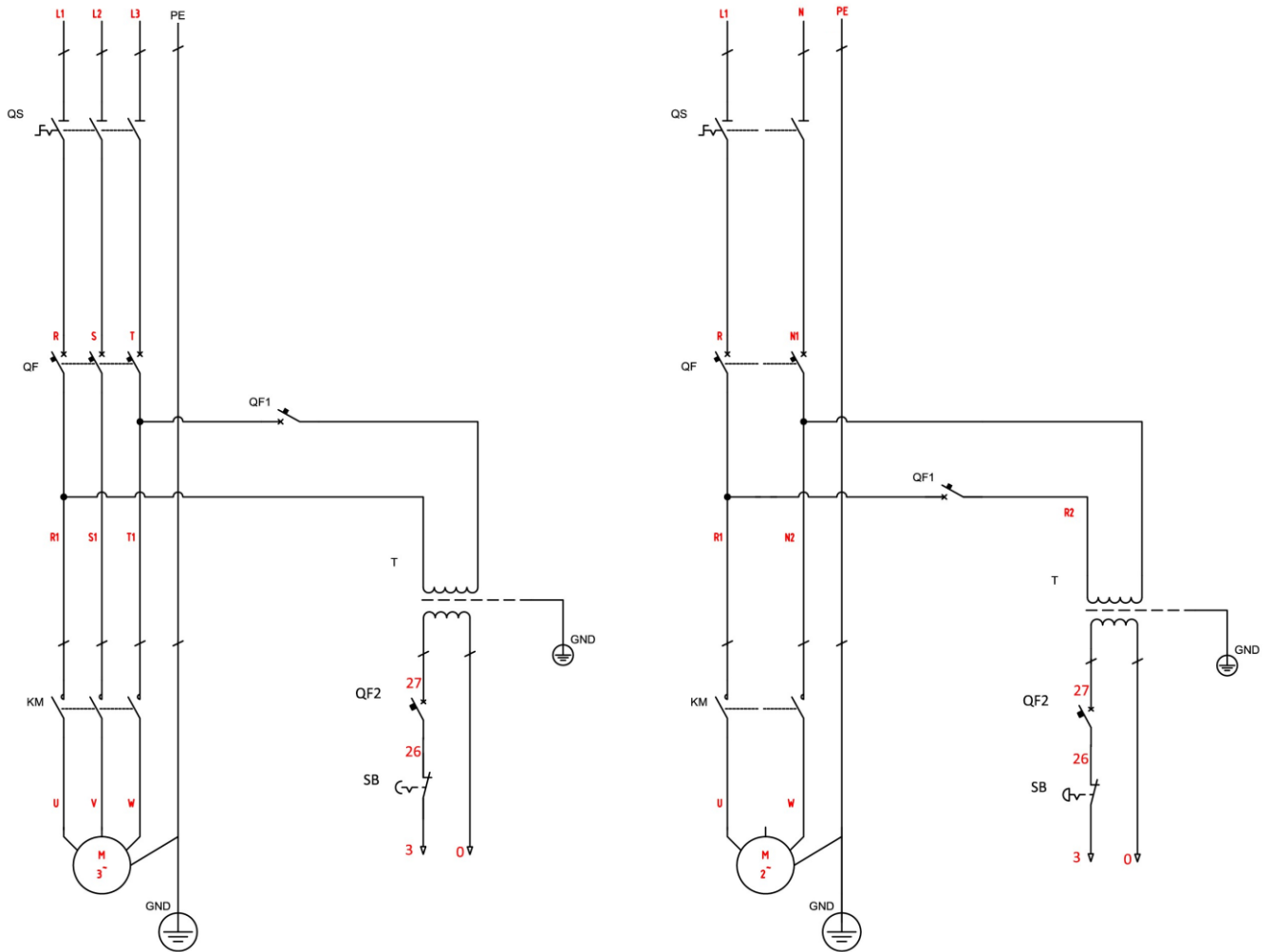
Attention: Please refer to floor plan 48LC and 51LC in case rolling wheel free jacks need to be mounted.

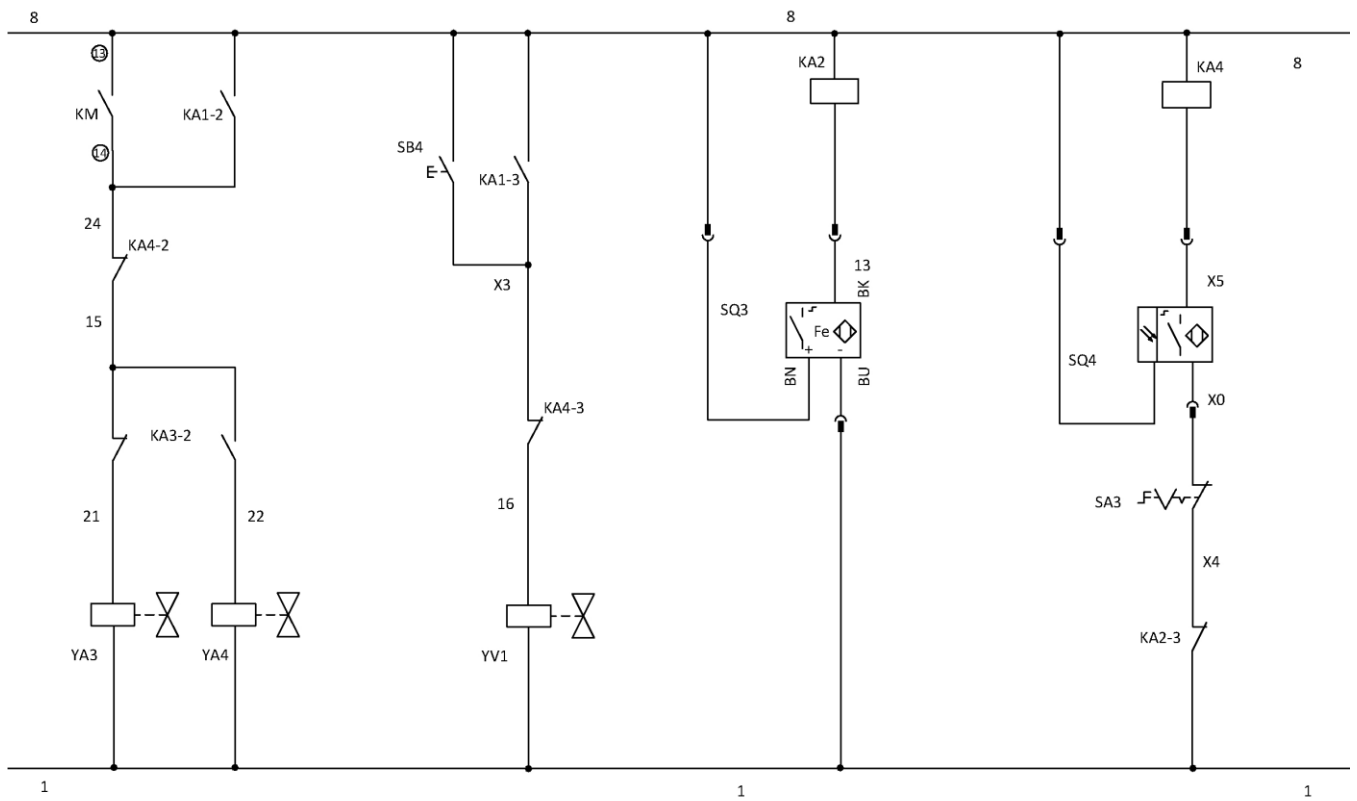
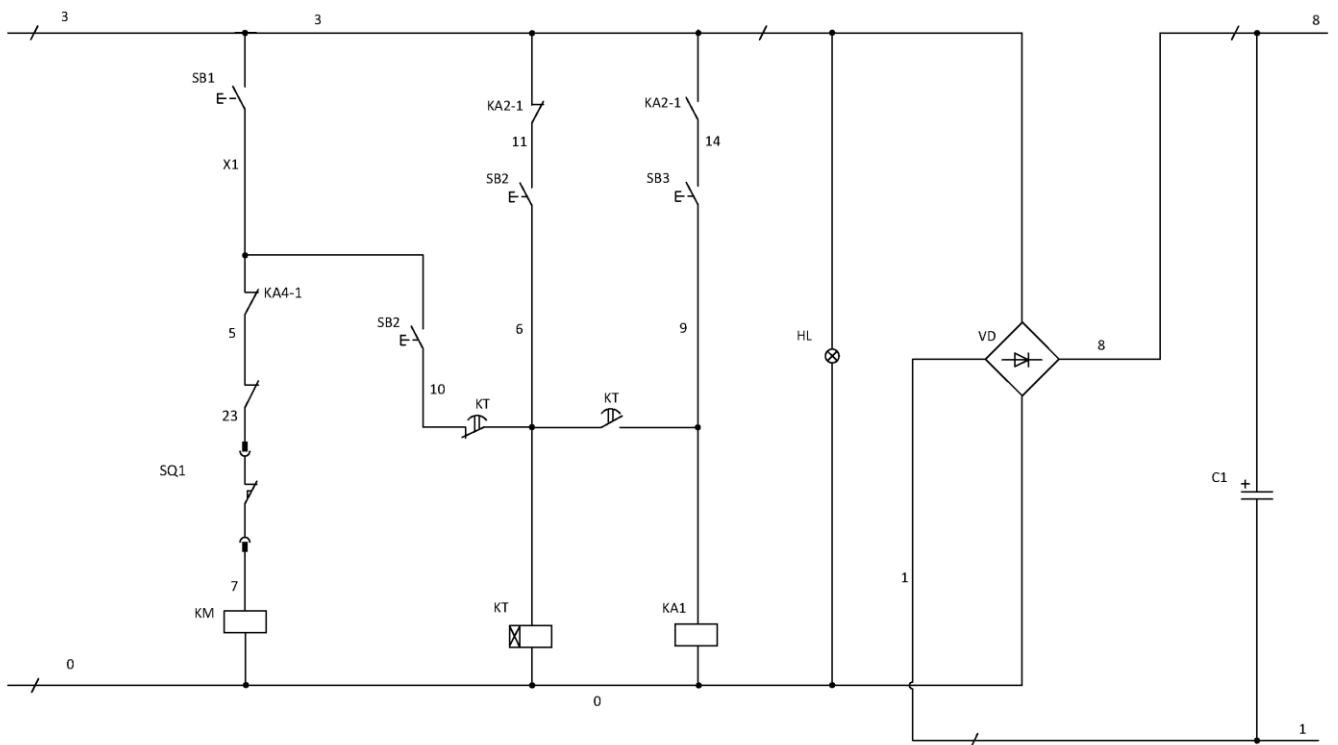
48L:

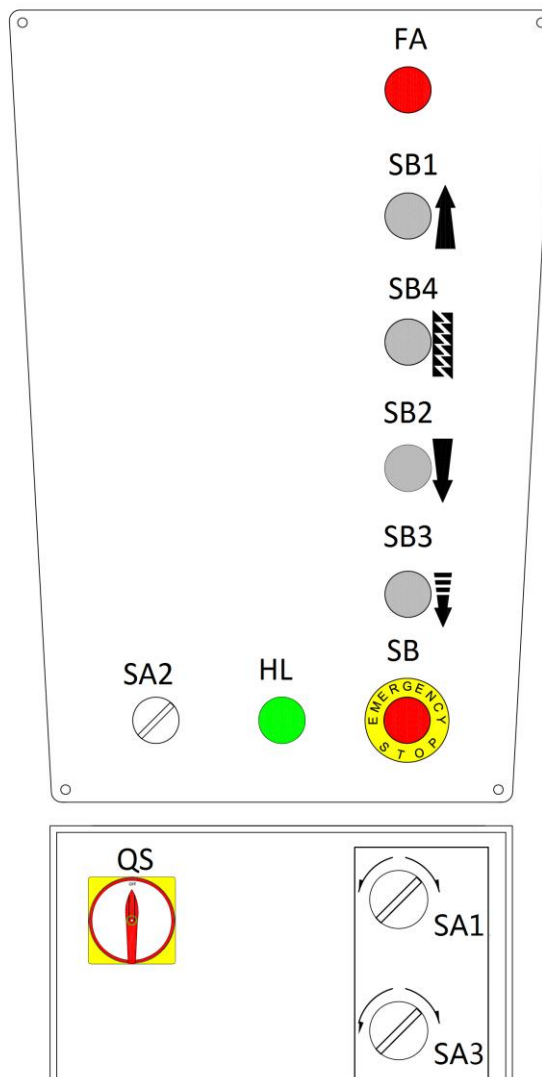
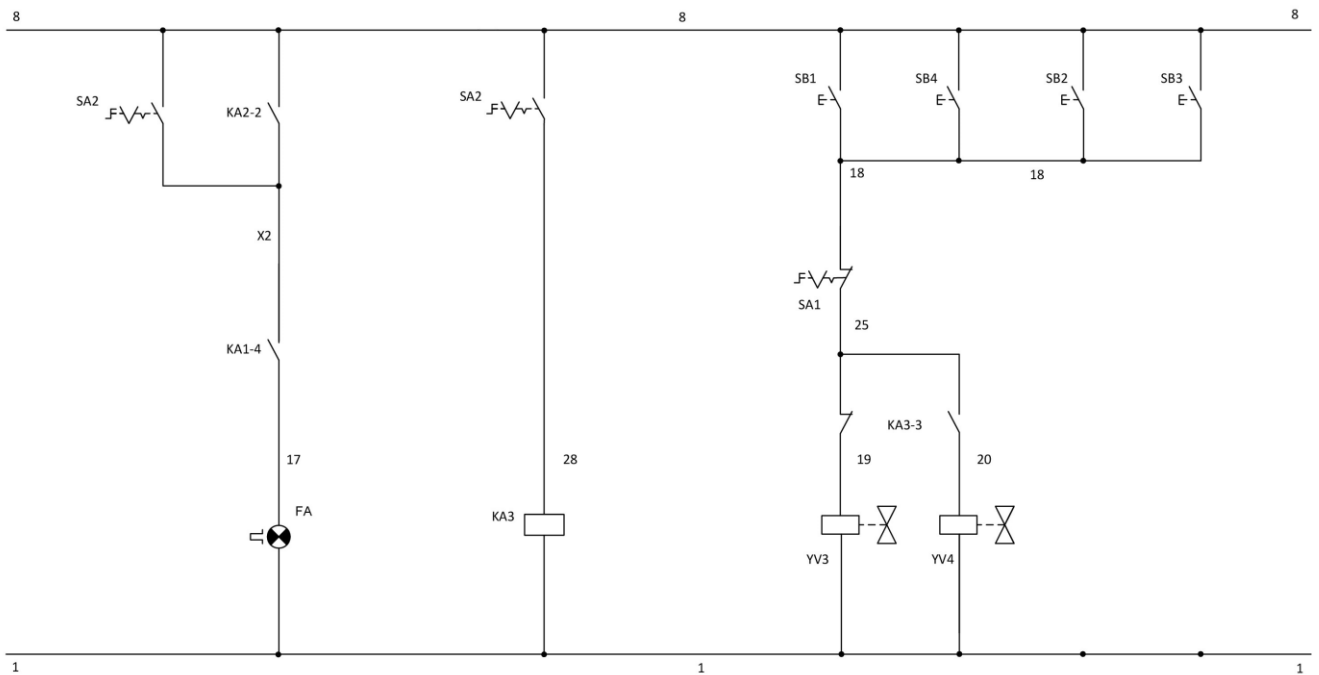


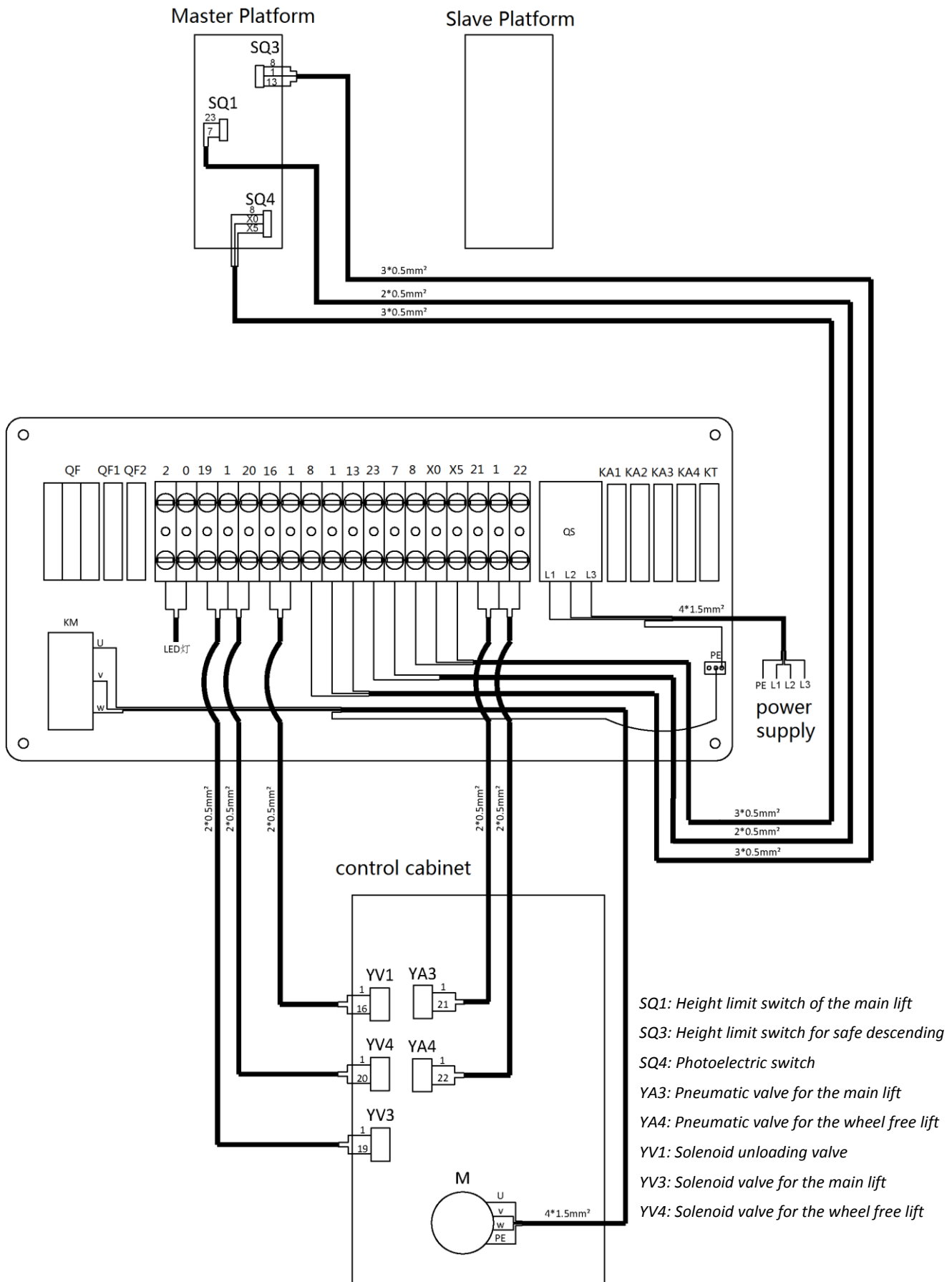
51L:

48LC:


51LC:


Annex 2, Electrical diagrams and parts list


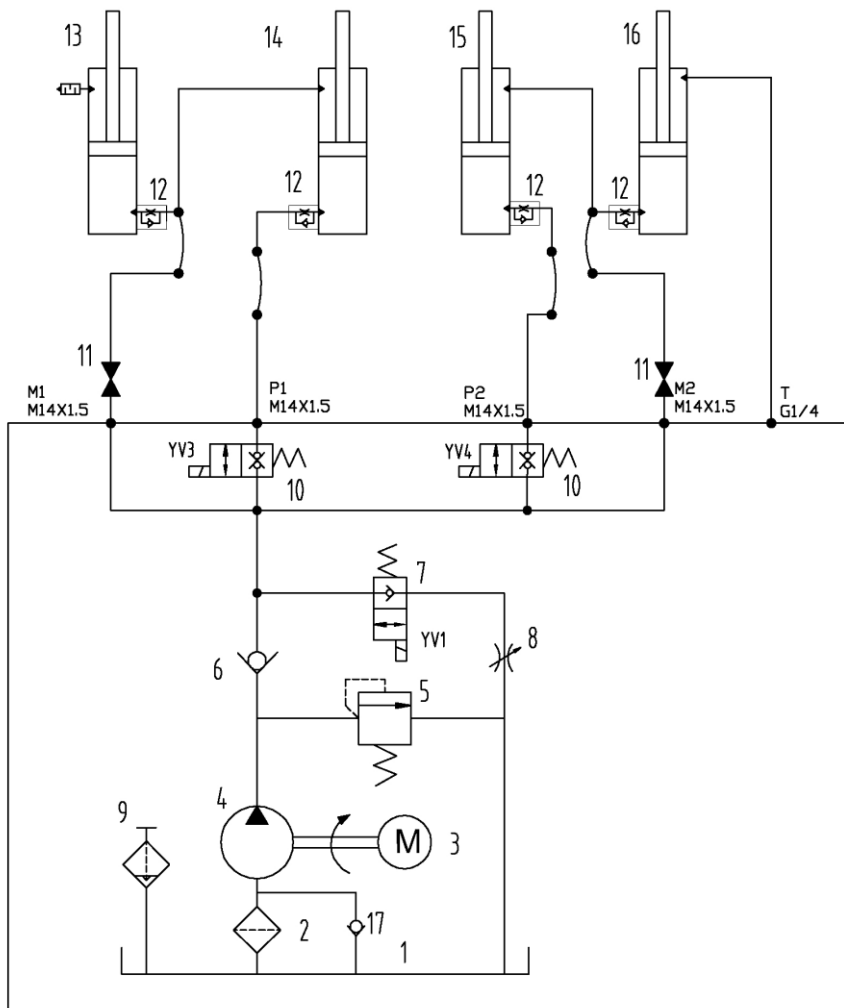




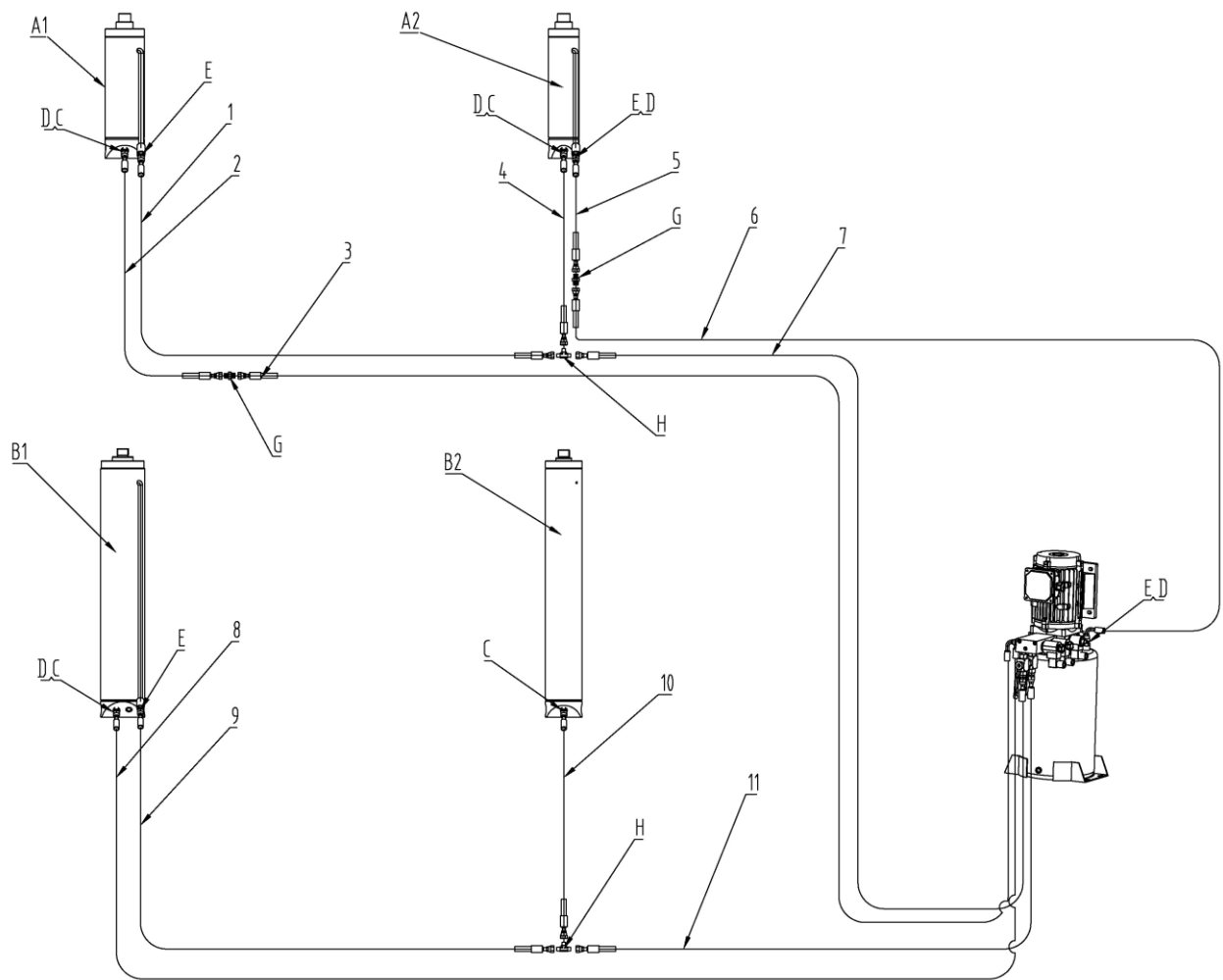


Pos.	CODE	Description	Qty
T	320101128	Transformer (380V-400V-415V)	1
	320101127	Transformer (220V-230V-240V)	1
	320102005	Transformer (400-230V)	1
SQ1	320301003	Limit switch	1
SQ2		no this switch for version with auto-bleeding cylinders	
SQ3	320302002	Proximity switch	1
SQ4	320306025	Photoelectric switch	1
SA2	320303018	Selection switch	1
SA1, SA3	320303019	Selection switch	2
SA	320305002	Rocker switch	4
QS	320304001	Power switch	1
SB3,SB4	320401038	Button	2
SB1,SB2	320401044	Button	2
SB	320402002	Emergency stop	1
	320503002	Ground terminals	1
	320505006	Wire terminal	19
KA2;KA3;KA4	320601001	Relay	3
KA1	320601002	Relay	1
	320601011	Relay holder	4
	320601018	Relay feet fixer	8
KT	320602009	Integrated time relay	1
QF	320801001	Circuit breaker (3Ph)	1
	320802001	Circuit breaker (1Ph)	1
	320801003	Circuit breaker (DUAL)	1
QF1	320803001	Circuit breaker	1
QF2	320803005	Circuit breaker	1
KM	320901011	AC contactor (3.0kW/3.5kW,3Ph ;2.2kW,1Ph)	1
	320901001	AC contactor(2.2kW,3Ph)	1
C	321001004	Capacitor	1
VD	321002001	Bridge rectifier	1
HL	321201001	Power indicator	1
FA	321202001	Alarm buzzer	1

**NOTE: For power supply of other voltages, the transformer is different.
Please check with our customers service people when order spare parts.**

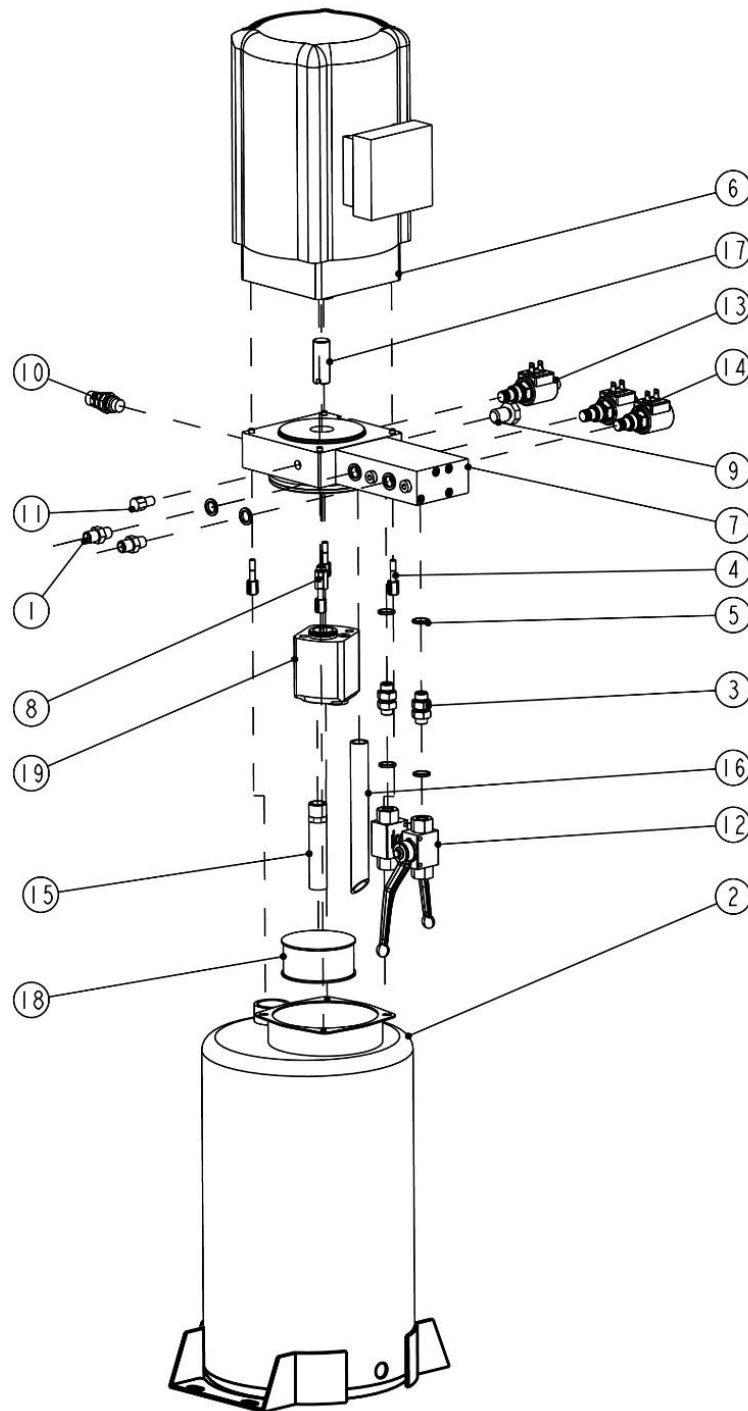
Annex 3, Hydraulic diagrams and parts list


- | | |
|-----------------------------|--|
| 1. Oil tank | 11. 2-way ball valve |
| 2. Filter | 12. Cylinder connector |
| 3. Motor | 13. Master cylinder |
| 4. Gear pump | 14. Slave cylinder |
| 5. Relief valve | 15. Master cylinder of the wheel-free jack |
| 6. Non-return valve | 16. Slave cylinder of the wheel-free jack |
| 7. Unloading solenoid valve | 17. Cushion valve |
| 8. Restrictive valve | |
| 9. Tank cap | |

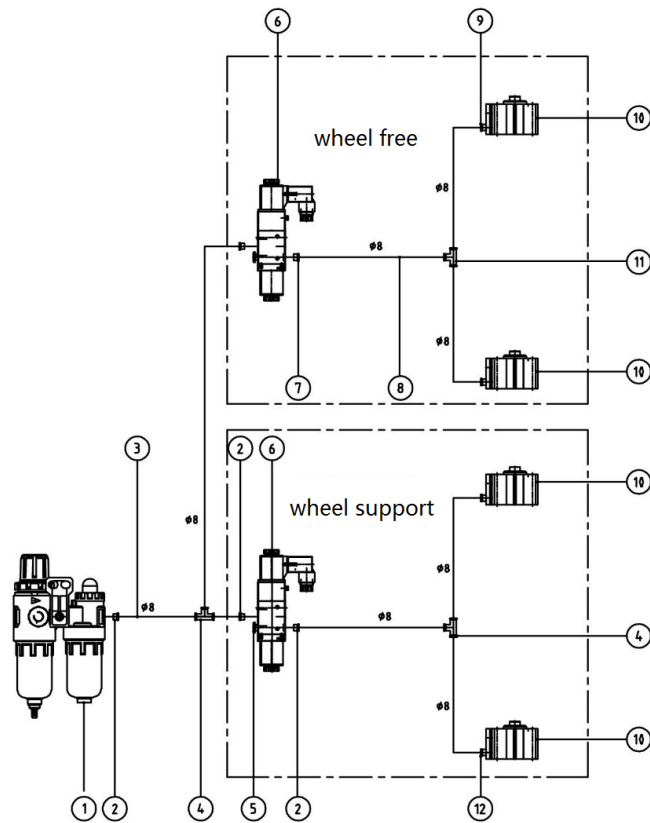


Pos.	CODE	Description	Specification	Qty
1	624002102	Rubber oil hose	L=8100	1
2	624001152	Rubber oil hose	L=6000	1
3	624001153	Rubber oil hose	L=6000	1
4	624001152	Rubber oil hose	L=6000	1
5	624008202	Rubber oil hose	L=6500	1
6	624008203	Rubber oil hose	L=4500	1
7	624001154	Rubber oil hose	L=4500	1
8	624001053B	Oil hose	L=6000	1
9	624001055	Oil hose	L=2000	1
10	624001056	Oil hose	L=350	1
11	624001113	Oil hose	L=4500	1
G	410210191	Straight connector	6603B-A9-B8	2
F	410210181	3-way connector	6603B-A9-B7	2
E	310101010	Straight connector	G1/4---G1/4	4
C	207103025	Composite washer	13_7X20X1_5	8

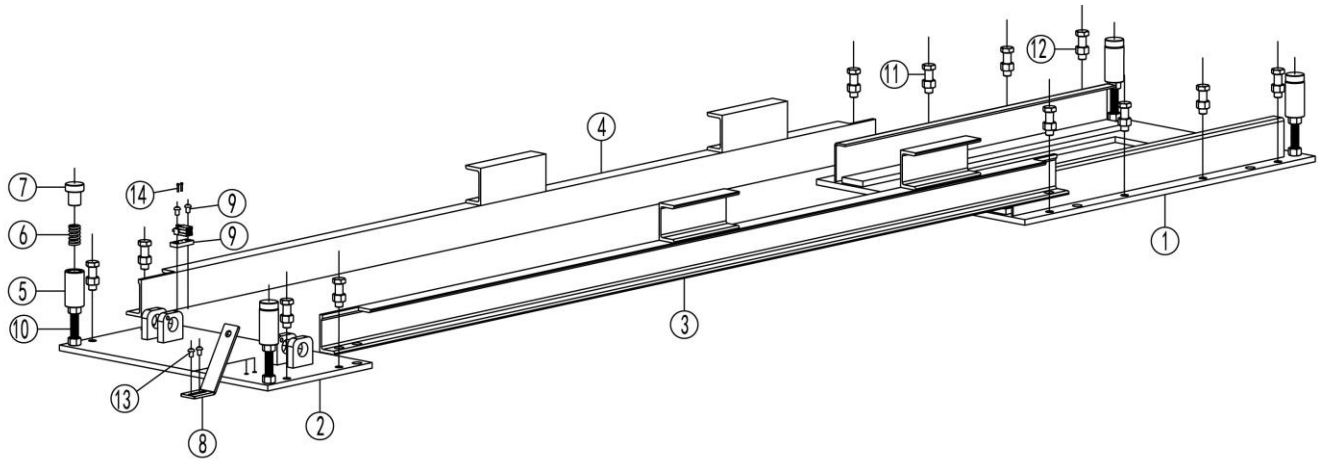
Pos.	CODE	Description	Specification	Qty
D	330305009	Straight connector with restrictive valve	BDPF-G14-G14-I60	4
B2	615021013	Slave cylinder of the main lift	6603-A6-B2	1
B1	615021012	Master cylinder of the main lift	6603-A6-B1	1
A2	625000008	Slave cylinder of the wheel-free lift (Self-bleeding)	YG80/95-45-190	1
A1	625000007	Master cylinder of the wheel-free lift (Self-bleeding)	YG100/115-60-190	1



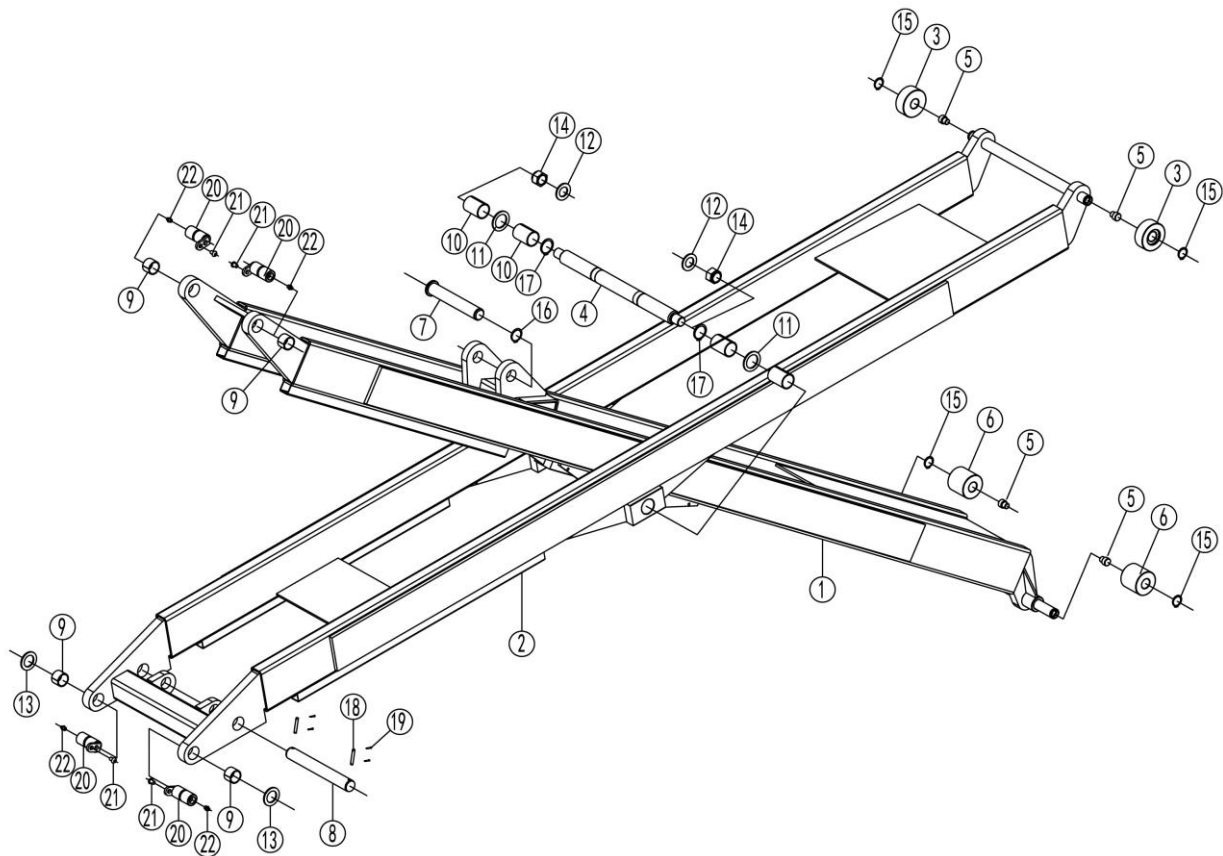
Pos.	CODE	Description	Specification	Qty
1	310101010	Straight connector	G1/4--G1/4	2
2	330405027	Steel oil tank	18L	1
3	310101025	Straight connector	G1/4--G1/4	2
4	202109064	Hex socket cylinder head screw	M6*30	4
5	207103025	Composite washer	13.7*20.00*1.50(BS224)	6
6	320201001	Motor	220V-2.2KW -1PH-50HZ-2P	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
	320204016	Motor	380V-3.0KW-3PH-50HZ-2P	1
	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
7	330101009	Hydraulic block	YF-8	1
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	330307001	Two way ball valve	GE2G1/4111AB	2
13	330308006	YV1-Solenoid unloading valve	DHF06-220H/DC24	1
14	330308008	YV3,YV4-Levelling valve	DHF06-228H/DC24	2
15	330401005	Oil sucking tube	XYGN-L293	1
16	330402001	Oil back tube	YH-D	1
17	330404001	Coupling	YL-A	1
18	330403001	Oil sucking filter	YG-C	1
19	330201004	Gear pump (2.2kW-1Ph)	CBK-F216	1
	330201005	Gear pump (2.2kW-3Ph)	CBK-F220/CBK-2.1F	1
	330201007	Gear pump (3.0kW-3Ph)	CBK-F233	1
	330201001	Gear pump (3.5kW-3Ph)	CBK-F225-G	1

Annex 4, Pneumatic connections and parts list


Pos.	CODE	Description	Specification	Qty
1	321004006	AFC Air filter combination	AFC2000	1
2	310101015	Straight pneumatic hose connector	KLC8-02	5
3	123010201	Air hose	DE8	1
4	310103006	Three way pneumatic connector	KLE-8	2
5	310201003	Silencer	SLM01 R1/8 (M8)	2
6	310401001	Pneumatic directional valve	3V210-08DC24V	2
7	310101015	Straight pneumatic hose connector	KLC8-02	1
8	123010201	Pneumatic hose	DE8	2
9	310102024	Bending pneumatic connector	KLL8-01	2
10	310501001	Pneumatic cylinder	CQ2B32*20	4
11	310103006	Three way pneumatic connector	KLE-8	1
12	310101015	Straight pneumatic hose connector	KLC8-02	2

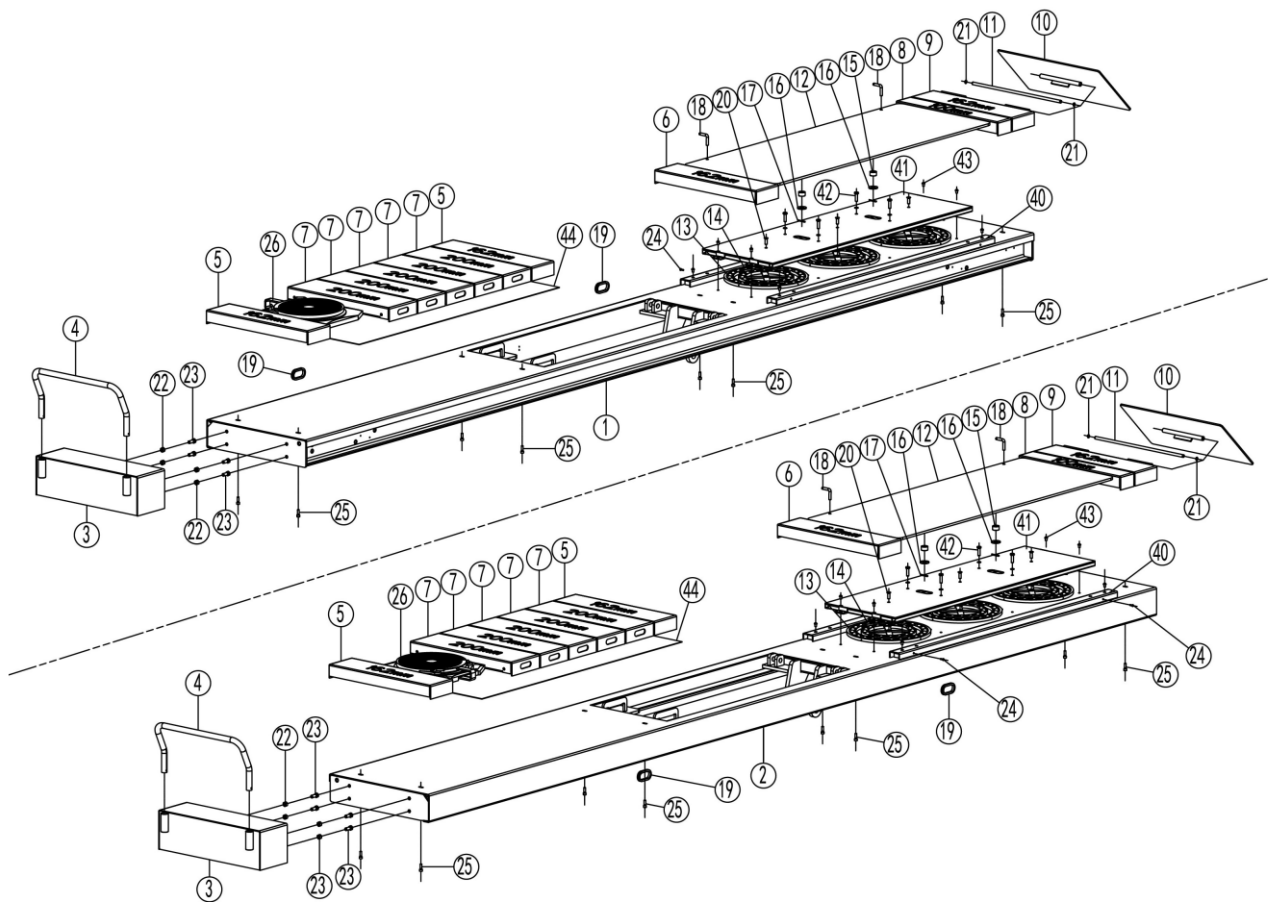
Annex 5, Mechanically exploded drawings and parts list


Pos.	CODE	Description	Specification	Qty
1	614021030B	Big base plate	6603B-A7-B6	2
2	614021032	Small base plate	6603B-A7-B9	2
3	614021029	Base slot A	6603B-A7-B2	2
4	614021031	Base slot B	6603B-A7-B8	2
5	410210151	Cushion holder	6603B-A7-B1-C1	8
6	410211390	Spring	6603B-A7-B1-C2	8
7	410210161	Cushion head	6603B-A7-B1-C3	8
8	410210013	Bracket A for limit switch	6603B-A7-B11	1
9	410310361	Base for the proximity switch	GEG-PD-A1-B8	1
10	208103001	Swivel bolt	M16X120	8
11	201102041	Hex head full swivel screw	M16X50-GB5783	24
12	203101009	Nut	M16-GB6170	40
13	202110004	Hex socket button head screw	M8X12-GB70_2	6
14	202101002	Cross socket cap head screw	M3X15-GB818	2



Pos.	CODE	Description	Specification	Qty
1	614021024	Arm A (4T)	6603B-A5-B2-4T	2
	614021050	Arm A (5T)	6603B-A5-B2-5T	2
2	614021025	Arm B (4T)	6603B-A5-B3-4T	2
	614021051	Arm B (5T)	6603B-A5-B3-5T	2
3	420210050	UP wheel of the main lift	6603B-A5-B4	4
4	410210121	Pin shaft of the main lift	6603B-A5-B5	2
5	420210060B	Pad block	6603B-A5-B6	8
6	420210070	Down wheel	6603B-A5-B8	4
7	410210131B	UP shaft	6603B-A5-B12	2
8	410210141B	Down shaft	6603B-A6-B6	2
9	205101018	Bearing	3025-SF-2X	8
10	205101059	Bearing	3556-SF-2X	8
11	410240031	Washer	6603GN-A10	4
12	204101012	Class C flat washer	D24-GB95	4
13	204101015	Class C flat washer	D30-GB95	4
14	203103011	Non-metallic lock nut	M24-GB889_1	4
15	204301009	Circlip	D25-GB894_2	8
16	204301011	Circlip	D30-GB894_2	2

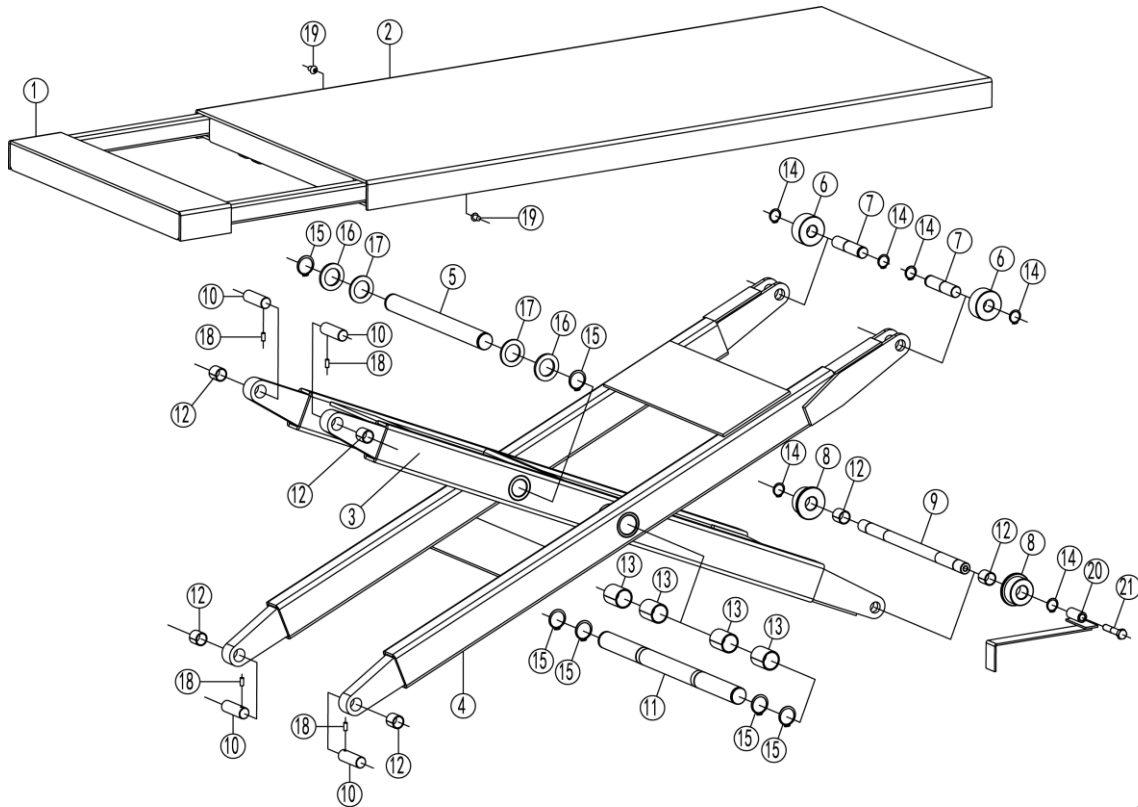
Pos.	CODE	Description	Specification	Qty
17	204301012	Circlip	D35-GB894-1	4
18	206103003	Pin with holes	D6X40-GB880	4
19	206201013	Cotter pin	D1_6X20-GB91	8
20	612021003B	Rotation shaft of the main lift	6603B-A5-B1	4
21	202110004	Hex socket button head screw	M8X12-GB70_2	4
22	208106001	Straight oil cup	M8X1-JB9740_1	4



Pos.	CODE	Description	Specification	Qty
1	614901231	Wheel-support platform A (48L,left, main, no track for rolling jacks)	6603BWF-A4-B11-48LA	1
	614901233	Wheel-support platform A (51L,left, main, no track for rolling jacks)	6603BWF-A4-B11-51LA	1
2	614901232	Wheel-support platform B (48L,right,secondary,no track for rolling jacks)	6603BWF-A4-B11-48LB	1
	614901234	Wheel-support platform B (51L,right,secondary,no track for rolling jacks)	6603BWF-A4-B11-51LB	1

Pos.	CODE	Description	Specification	Qty
1	614901239	Wheel-support platform A (48L,left, main, with track for rolling jacks)	6603BWF-A4-B11-48LCB	1
	614901241	Wheel-support platform A (51L,left, main, with track for rolling jacks)	6603BWF-A4-B11-51LCB	1
2	614901240	Wheel-support platform B (48L,right,secondary,with track for rolling jacks)	6603BWF-A4-B11-48LCB	1
	614901242	Wheel-support platform B (51L,right,secondary,with track for rolling jacks)	6603BWF-A4-B11-51LCB	1
3	614021009	Box A	6603B-A4-B1	2
4	410210173	Wheel retainer	6603B-A4-B2	2
5	614021010	Box C	6603B-A4-B3	4
6	614021011	Box D	6603B-A4-B4	2
7	610801611	Portable box-200mm (48L)	6603B-A4-B51-00	8
7	610801611	Portable box-200mm (51L)	6603B-A4-B51-00	10
8	410210053	Box B-100mm(only for 51L.50T)	6603B-A4-B6	2
9	614021023	Box F -162mm	6603B-A4-B14	2
10	614042008	Drive-on ramp	66035-A03-B02	2
11	410210111	Shaft A	6603B-A4-B9-C4	2
12	614021017	Side slip plate (48L/51L)	6603B-A4-B7-48L	2
13	420270100	Rotor ball holder	6435B-A4-B20	6
14	420270110	Rotor ball	6435B-A4-B21	240
15	420210030	Nylon sheath	6603B-A4-B7-C4	4
16	410250011	Washer	6604B-A1-B5	4
17	206201011	Cotter pin	D4X50-GB91	4
18	410250221B	Bolt	6604B-A16	4
19	420250050B	Hose protective sheath	6604B-A17	4
20	202103024	Cross socket flat head screw	M10X25-GB819-1	6
21	204301002	Circlip	D12-GB894_1	4
22	203101007	Hex nut	M12-GB6170	8
23	201102027	Hex head full swivel screw	M12X30-GB5783	8
24	202110003	Hex socket button head screw	M6X16-GB70_2	4
25	202109030	Hex socket cylinder head screw	M8X25-GB70_1	16
26	615027049	Turn table (optional)	615027049	2
40	614901667	Plate (48L/51L)	6603B-A4-B11-C36	4

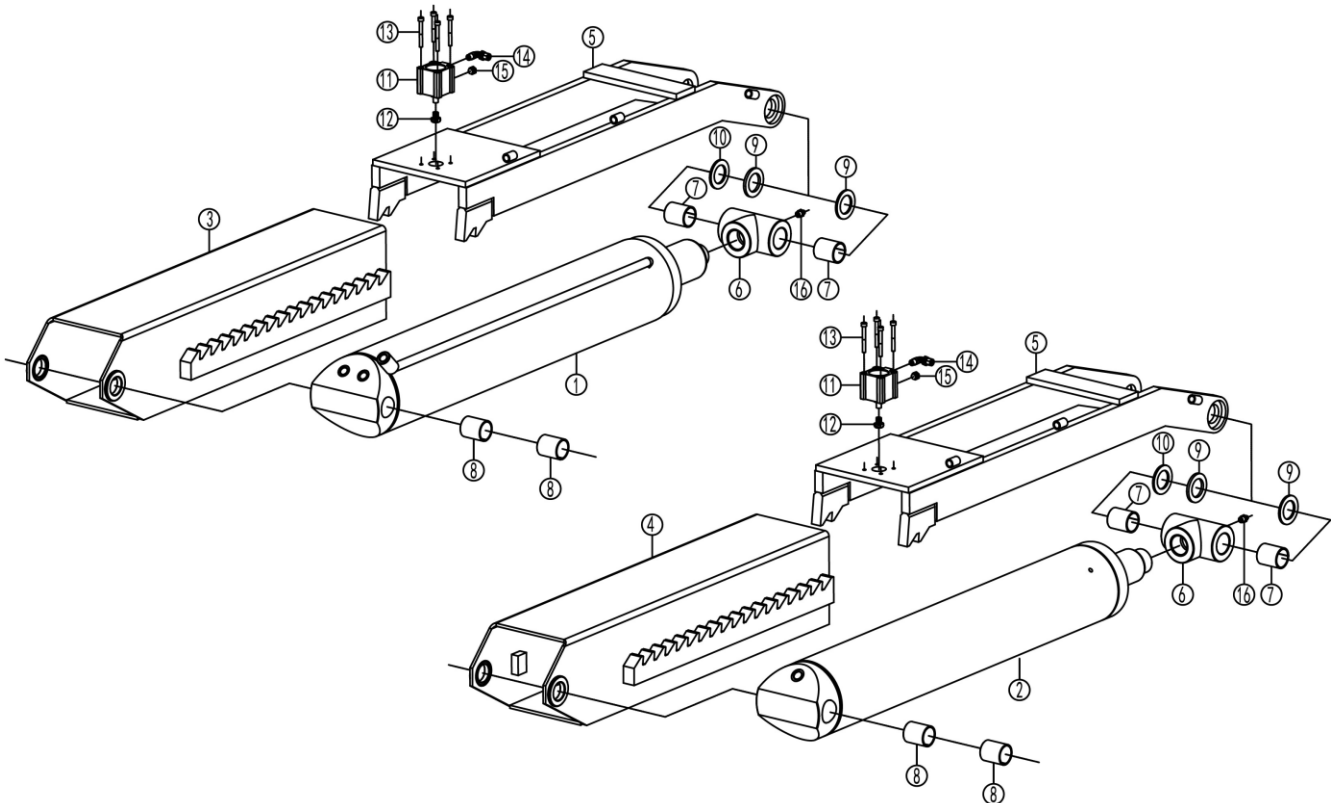
Pos.	CODE	Description	Specification	Qty
41	614901261	Pad plate(48L/51L)	6603B-A4-B12-48L	2
42	201102015	Hex head full threaded screw	M8X40	8
43	202110005	Hex socket button head screw	M8X20	8
44	420680092	Magnetic pad (570*1205*1) (48L)	6603B-A4-B42	2
	420680093	Magnetic pad (570*1405*1) (51L)	6603B-A4-B43	2



Pos.	CODE	Description	Specification	Qty
1	614901617	Platform extension of the wheel free lift	6603B-A1S-B1	2
2	614901618	Platform of the wheel free lift	6603B-A1S-B2	2
3	614021004B	Arm A of jack	6603B-A2-B1	2
4	614021005B	Arm B of jack	6603B-A2-B2	2
5	410210021	Up shaft	6603B-A2-B3	2
6	420210010B	Up wheel	6603B-A2-B4	4
7	410210031C	Shaft A	6603B-A2-B5	4
8	410210041B	Down wheel	6603B-A2-B6	4
9	410210051C	Shaft B	6603B-A2-B7	2
10	410210071	Rotor shaft A	6603B-A2-B9	8
11	410210081	Pin shaft	6603B-A2-B10	2
12	205101005	Bearing	2022-SF-1X	12

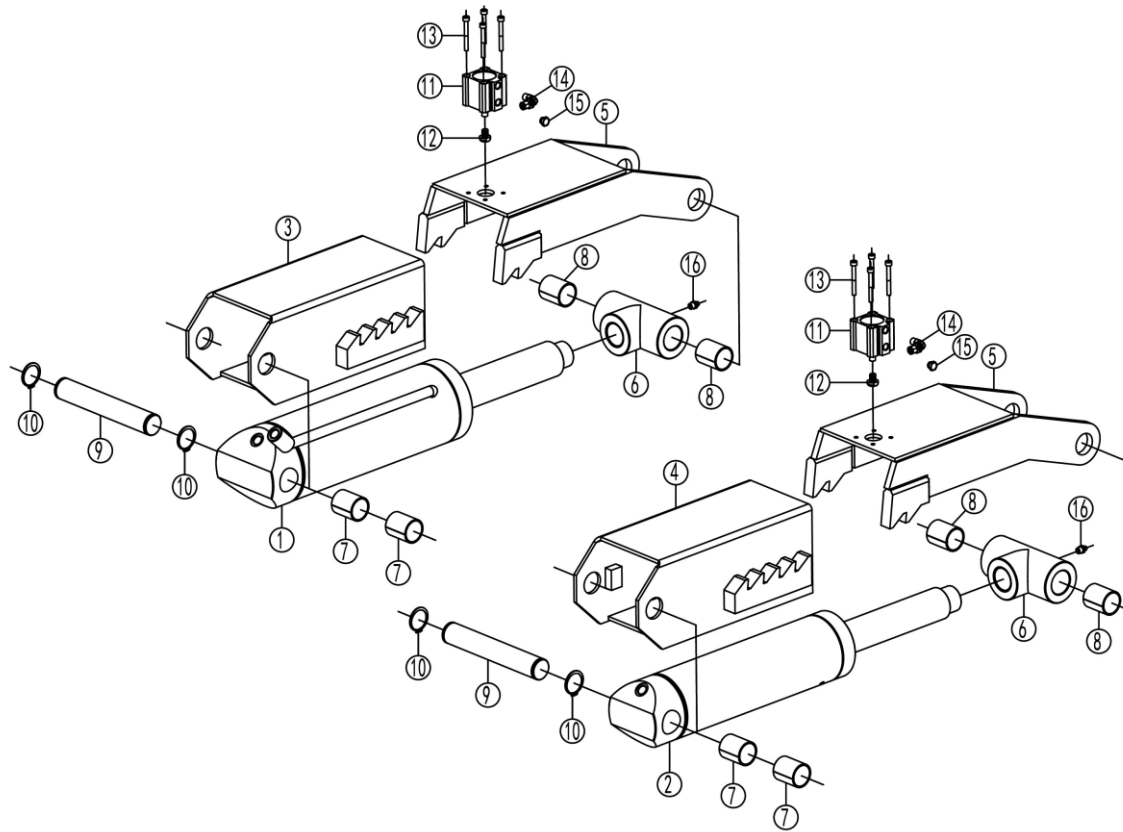
Pos.	CODE	Description	Specification	Qty
13	205101023	Bearing	3050-SF-1X	8
14	204301007	Cliclip D20	D20-GB894_2	12
15	204301011	Circlip	D30-GB894_2	12
16	410190101	Thin space washer	6501-A2-B8	4
17	410200181	Washer	6503-A5-B7	4
18	202208002	Hex socket cylinder head tapping screw	M6X16-GB79	8
19	202110004	Hex socket button head screw	M8X12-GB70_2	4
20	614021060B	Plate for limit switch (no this part for version with self-bleeding cylinders)	6603B-A10	1
21	201102023	Hex head full swivel screw (no this part for version with self-bleeding cylinders)	M10x50-GB5783	1

cylinders and locks for the main lifting system



Pos.	CODE	Description	Specification	Qty
1	615021012	Master cylinder	6603-A6-B1	1
2	615021013	Slave cylinder	6603-A6-B2	1
3	614021026	Drive cylinder sheath	6603B-A6-B3	1
4	614021027	Slave cylinder sheath	6603B-A6-B4	1
5	614021028B	Mechanical safety lock	6603B-A6-B5	2
6	410212100	Three way connector	6603B-A6-B8	2
7	205101021	Bearing	3040-SF-2X	4
8	205101023	Bearing	3050-SF-1X	4
9	410200181	Washer	6503-A5-B7	4
10	410190101	Thin space washer	6501-A2-B8	2
11	310501001	Air cylinder	CQ2B32X20	2
12	420420010	Adjustable head	66035-A03-B09	2
13	202109014	Hex socket cylinder head screw	M5X45-GB70_1	8
14	310102024	Bending pneumatic connector	KLL8-01	2
15	310201003	Muffler	SLM01-R1-8	2
16	208106001	Straight oil cup	M8X1-JB9740_1	2

cylinders and locks for the wheel-free lifting system



Pos.	CODE	Description	Specification	Qty
1	625000007	Master cylinder of wheel-free jack (self-bleeding)	YG100/115-60-190	1
2	625000008	Slave cylinder of wheel-free jack (self-bleeding)	YG80/95-45-190	1
3	614021006	Sheath of drive small cylinder	6603B-A3-B3	1
4	614021007	Sheath of salve small cylinder	6603B-A3-B4	1
5	614021008	Safety lock of the jack	6603B-A3-B6	2
6	410212090	Three way connector	6603B-A3-B8	2
7	205101021	Bearing	3040-SF-2X	4
8	205101023	Bearing	3050-SF-1X	4
9	410210091	Down shaft	6603B-A3-B7	2
10	204301011	Circlip	D30-GB894_2	4
11	310501001	Air cylinder	CQ2B32X20	2
12	420420010	Adjustable head	66035-A03-B09	2
13	202109014	Hex socket cylinder head screw	M5X45-GB70_1	8
14	310102024	Bending pneumatic connector	KLL8-01	2
15	310201003	Muffler	SLM01-R1-8	2
16	208106001	Straight oil cup	M8X1-JB9740_1	2