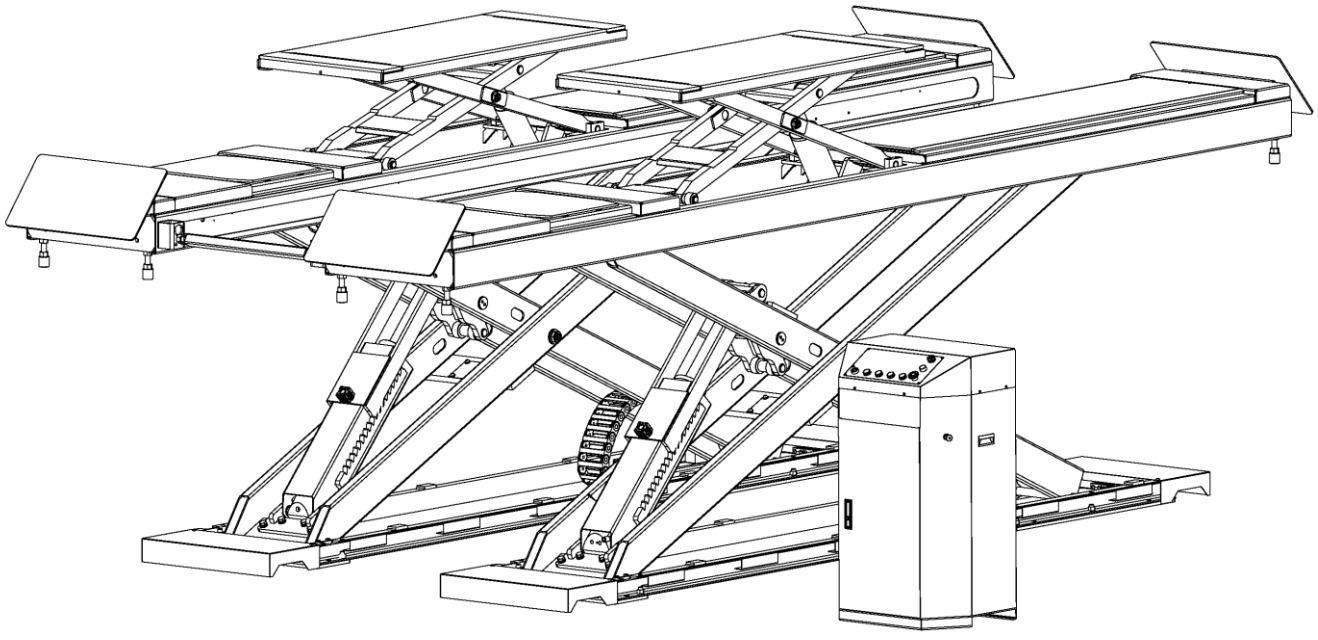
# Model No. EE-HX50BWF.PD8

Long platform scissor lift
Electrical Levelling
Pneumatic Controlled Slip Plate
Lifting Capacity 5000kg

**Installation, Operation and Parts Manual**



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

*DATE: 13/11/2023*

www.eae-ae.com

# IMPORTANT NOTES

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

By using the product you agree the following conditions:

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**Warranty**

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

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

**Liability**

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

**All information in this manual is believed to be correct at time of publication.**
**EAE reserves the right to amend and alter technical data and composition without prior notice.**
**Please confirm at time of ordering.**

# 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.

## 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 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.

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, level and dry and not slippery, 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 grease.

**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 in a proper way.**

## 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.

## 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 2 parts for transportation

| *Name* | *Packed by* | *Dimension(mm)* | *Weight(kg)* | *Quantity* |
|---|---|---|---|---|
| Control cabinet | Wooden case | 700x560x1300 | 170 | 1 |
| 2 lifting platforms | Steel bracket | 5420x700x830 | 2800 | 1 |

The packs must be kept in a covered and protected area in a temperature range 0f -10℃to +40℃. 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:

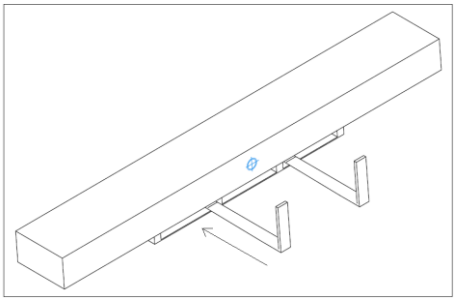
-never stack to more than 2 meters in height.

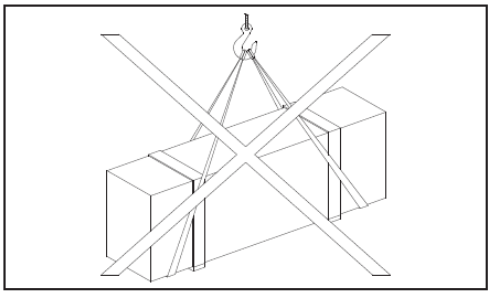
-never make stacks of single packs. Always stack pairs of packs in a cross pattern so that the base is bigger and the resulting stack is more stable. Once the stack is complete, restrain it using straps, ropes or other suitable methods.

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.

## 2.2 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.**

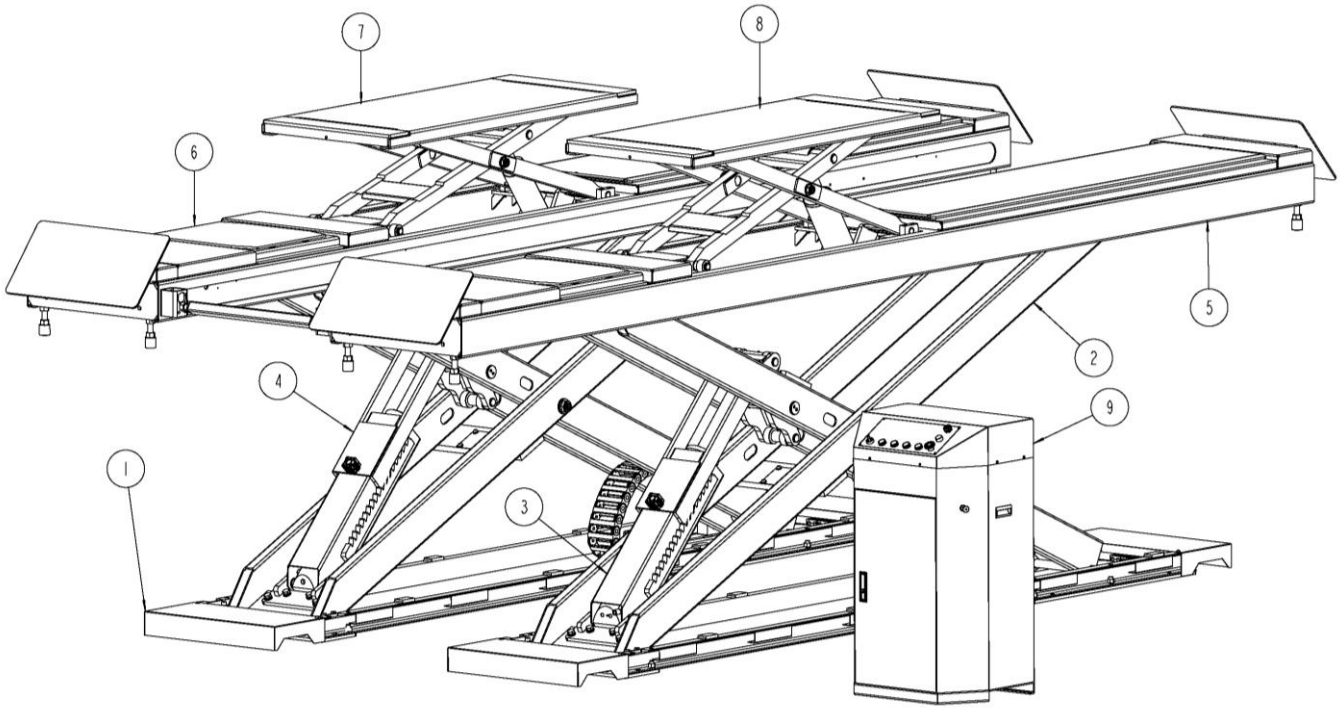
# PRODUCT DESCRIPTIONS

## 3.1 General descriptions

This is heavy duty 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 power and control cabinet. Being hydraulically powered, the gear pump delivers oil to push upwards the pistons of oil cylinders and let the scissor arms of the lift rise accordingly.

The lift is fitted with a PD system with an RF wireless controller so that the PD can be operated whilst under the vehicle allowing inspection of the underside of the vehicle.

## 3.2 Construction of the lift




*1.Base frame assembly*

*2.Scissor arm assembly*

*3.Master cylinder assembly*

*4.Slave cylinder assembly*

*5.Wheel-support platform A assembly*

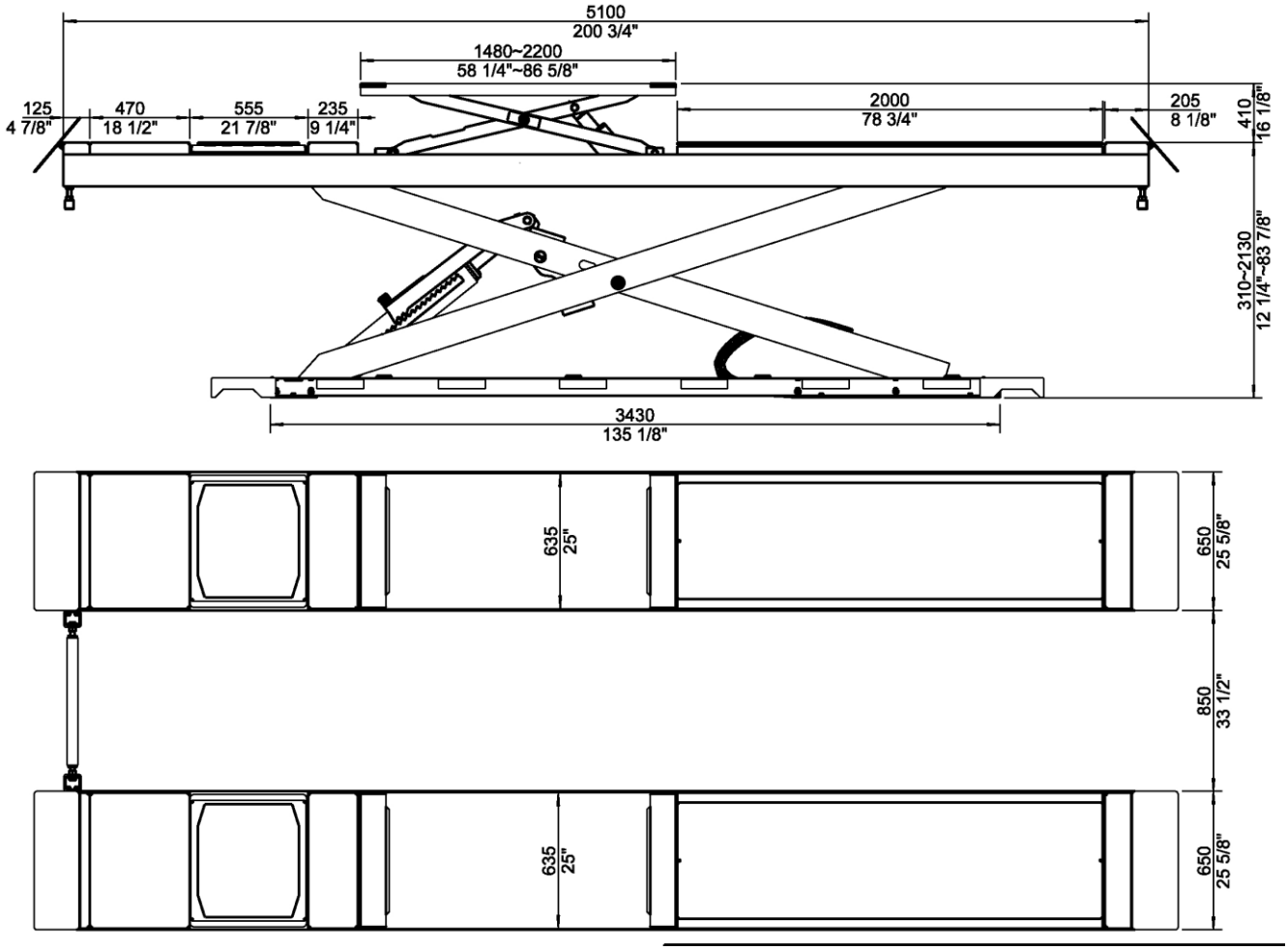
*6.Wheel-support platform B assembly*

*7. Slave wheel-free platform*

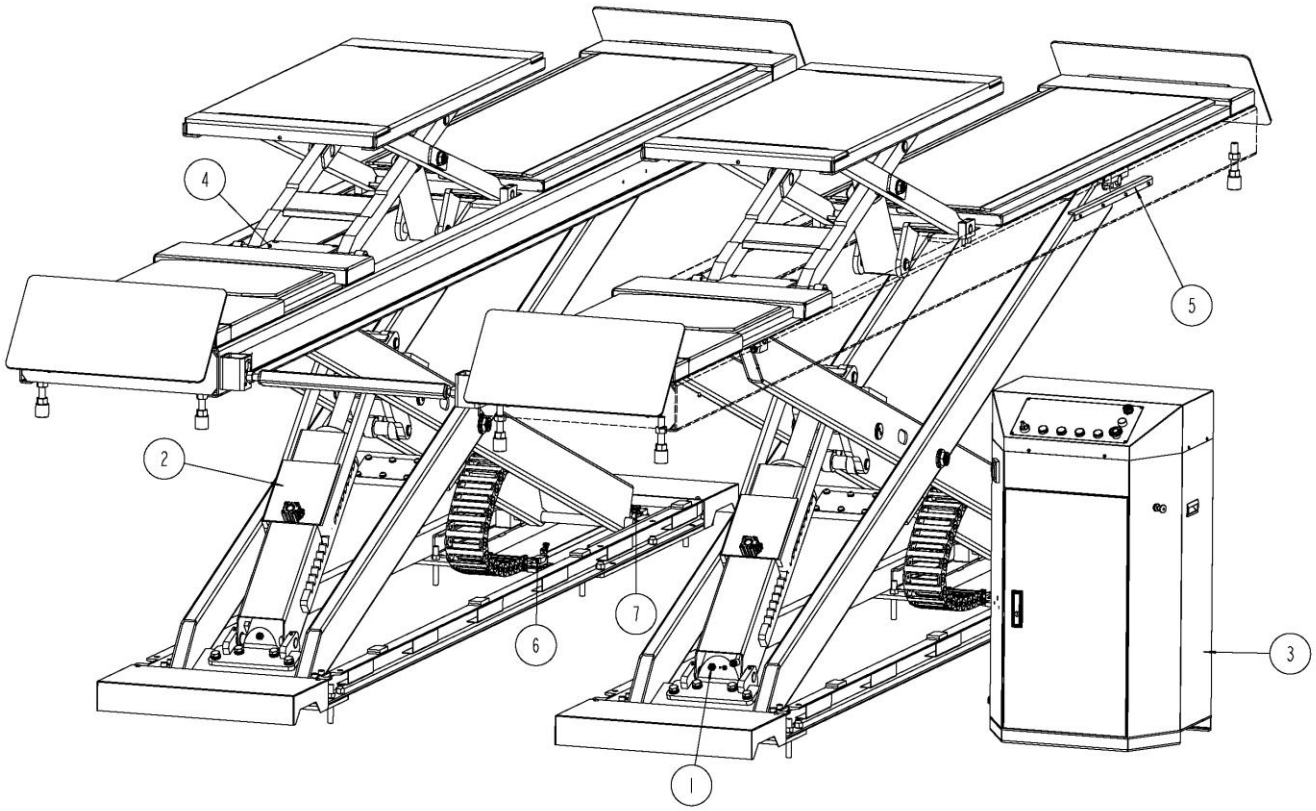
*8. Master wheel-free platform*

*9.Control and power unit*

### 3.3 Dimensions



### 3.4 Safety device descriptions




| NO. | Safety device | Function |
|---|---|---|
| 1 | Restrictive valve | Protect the platform from lowering too faster, in case of leakage in the hydraulic circuit. |
| 2 | Mechanical safety locking unit | Catching device preventing unintentional lowering.<br>Hold still the lifting platform in case of hydraulic leakage. |
| 3 | 24V safe control voltage | Safety voltage for operator. |
| 4 | Protective device against tipping up | Protect the wheel-free platform from tipping up, in case of unbalanced load distribution. |
| 5 | Protection against tipping up | Protect wheel-support platform from tipping up, in case of unbalanced load distribution. |
| 6 | Max height limit switch for main lifting platform | Limit the max. Rise by switching off the control circuit to ensure the platform stop rising at maximum lifting height. |
| 7 | Limit switch for safe lowering | Protective device which stops the movement of the lift for the purpose of feet protection.<br>The lifting platforms automatically stop lowering at a safe height above the ground. Push an additional DOWN II button to restart the lowering movement which is accompanied by an audible warning alerting service persons being away from the moving parts. |

### 3.5 Technical data

| | |
|---|---|
| Rated capacity of the main lift (kg) | 5000 |
| Rated capacity of the wheel-free lifting platform (kg) | 4000 |
| Full raised height of the wheel-support lifting platform (mm) | 2130 |
| Full raised height of the wheel-free lifting platform (mm) | 410 |
| Initial height (mm) | 310 |
| Full raised time (with rated load) | Approx.25s (3.5kWx2,3ph ) |
| Full lowered time (with rated load) | 25-40s (adjustable) |
| Max .Hydraulic working pressure (MPa) | 26 |
| Pneumatic working pressure (bar) | 6-8 |
| Oil tank volume (L) | 28 |

# INSTALLATION INSTRUCTIONS

## 4.1 Preparations before installation

### 4.1.1 Space requirements.

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

### 4.1.2 Foundations and connections

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

- Construction of the foundation following consultation with the manufacturer's customer service or an authorized service agent.
- Routing of the wiring to the installation location. The user must provide fuse protection for the connection. Requirements for power supply cable of the installation site: at least 2.5mm$^2$ wire core for 3Ph power.
  *Attention: electrical connection must be done by licensed technicians.*
- 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 (see Annex 1, floor plan)

C25/30 concrete base with a minimum thickness of 200mm.

Surface: Horizontal and even (Gradients max. 0.5 %).

Newly built concrete ground must be older than 20days.

### 4.1.4 Tools and equipment needed for installation

| Tool Description | Specification | Qty |
|---|---|---|
| Electrical drill | With D16 drill bit. | 1 |
| Open spanner | D17-19mm | 2 |
| Adjustable spanner | At least 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 3000kg | 1 |
| Lifting strap | Capacity,1000 kg | 2 |
| Lifting strap | Capacity,1500 kg | 2 |
| Torque spanner | MD400 | 1 |

### 4.1.5 Checking parts

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

| S/N | Description | Specification | Qty |
|---|---|---|---|
| 1 | Lifting platform | HX50BWF | 2 |
| 2 | Control cabinet | / | 1 |
| 3 | Expansion bolt | M16x120 | 16 |
| 4 | Rubber pad | 38*120*100 | 4 |
| 5 | Installation manual | | 1 |
| 6 | Key of the cabinet | | 1 |
| 7 | Oil tank label | | 1 |
| 8 | **Key fob.** | | 1 |
| 9 | **Inspection torch** | | 1 |

## 4.2 Installation attentions

4.2.1 Tighten all hydraulic and electrical connections.

4.2.2 Tighten all screws, nuts and bolts.

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

## 4.3 General Installation Steps

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

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

Remove the carton and packing films wrapped on the platform.

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

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

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

Raise the platform by using a forklift and 2 lifting straps until the mechanical lock is engaged. Hoist the platform onto the expected installation site.

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

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

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

### Step 4: Connect hydraulic oil hoses.

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

Connect as per the marks attached with the hoses. Don't let any solid substance go into the hydraulic line.

Adequate care must be taken to assure that all fittings and connectors are screwed tight against leakage

### Step 5: Connect the pneumatic release system

Refer to Annex 4.

Screw torque for pneumatic hose connector is 20Nm.

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

Keep the hoses clean during the connection.

Set the pneumatic pressure between 6-8 bars.

Push upward the button indicated in the following fig and turn the button until the hand of the 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 6: Connect the electrical system.

**Refer to electrical connection diagram before making the connection.**

***Attention: electrical system connection must be done by qualified electricians.***

Connect the wire connectors for limit switches and LED lamps.

Connect the main power supply cable to external electricity supply.

*(For three phase power supply, if the lift doesn't raise and the motor turn in the wrong direction, in such event, interchange the connection of wire L1 with L2 or L3 to correct the phase sequence.*

### Step 7: Fill with hydraulic oil.

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

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

Fill at least 26 liters hydraulic oil into the oil reservoir.

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

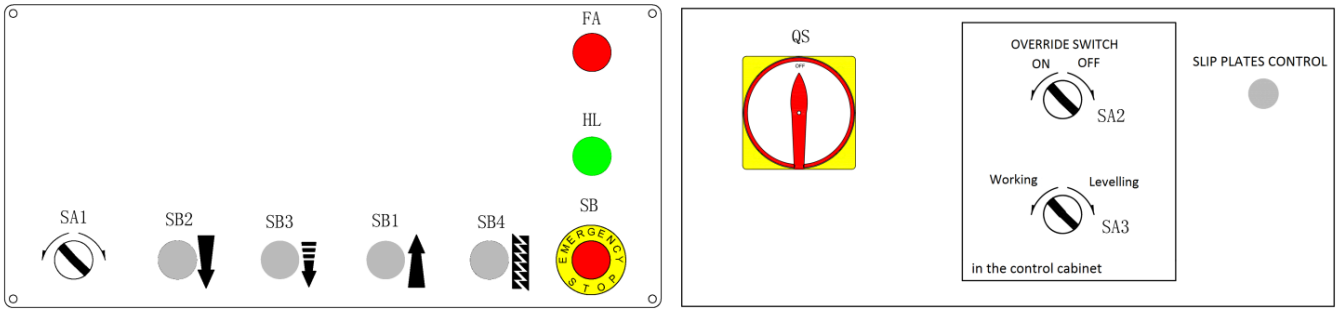
**Change the oil 6 months after initial use and change once per year thereafter.**

### Step 8: Levelling

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

**Refer to 5.2 and get familiar with the function of all control buttons and switches.**

**Attention: Correct the sequence order of the motor's wiring, in the case that the motor runs but the platform does not move upwards after pushing "UP" button for more than 30 seconds.** *Interchange wires U, V in the control cabinet).*




**Level the wheel-support platforms**

1) Connect the power supply and turn on the Main Switch. Turn the switch -SA1 on control panel to wheel-support platform.

2) Open the door of the control cabinet. Turn off the OVERRIDE swtich-SA2 and turn the switch-SA3 to "Levelling" mode. Push the "UP" button until the slave platform raises to the maximal height. After that, push the DOWN button SB2 until it is completely lowered to the bottom position.

3) Turn the switch-SA3 to "Working" mode and push "UP" button to check if both platforms have run synchronously with no obvious height deviation. On condition that asynchronization still exists, turn the switch-SA3 to "Levelling" mode again. Check and adjust the height of the slave platform to make it park at the same level with master platform. (Push the UP button to raise the slave platform in case it is lower than the master platform. Push the DOWN button to lower the slave platform in case it is higher than master platform)

If synchronization is still not achieved, repeat the above levelling steps until synchronization reached.

4) Turn on the OVERRIDE switch -SA2 and turn the switch-SA3 to "Working" mode.

**Level the wheel free platforms**

1) Turn the switch -SA1 on control panel to the wheel-free lift. Turn the switch-SA3 to “Levelling" mode.

2) Push the “UP” button until the slave platform raises to the maximal height. After that, push the DOWN button-SB2 until it is completely lowered to the bottom position.

3) Turn the switch-SA3 to “Working" mode and push “UP” button to check if both platforms have run synchronously with no obvious height deviation. Turn the switch-SA3 to “Levelling” mode again, on condition that asynchronization still exists. Push the UP or DOWN button to adjust the height of the slave platform to make it park at the same level with master platform.

4) Turn the switch-SA3 to “Working" mode and push UP and DOWN button to check the synchronization.

**Step 8: Fix base frames with expansion bolts.**

**Speciation of the bolts: M16x120**

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.

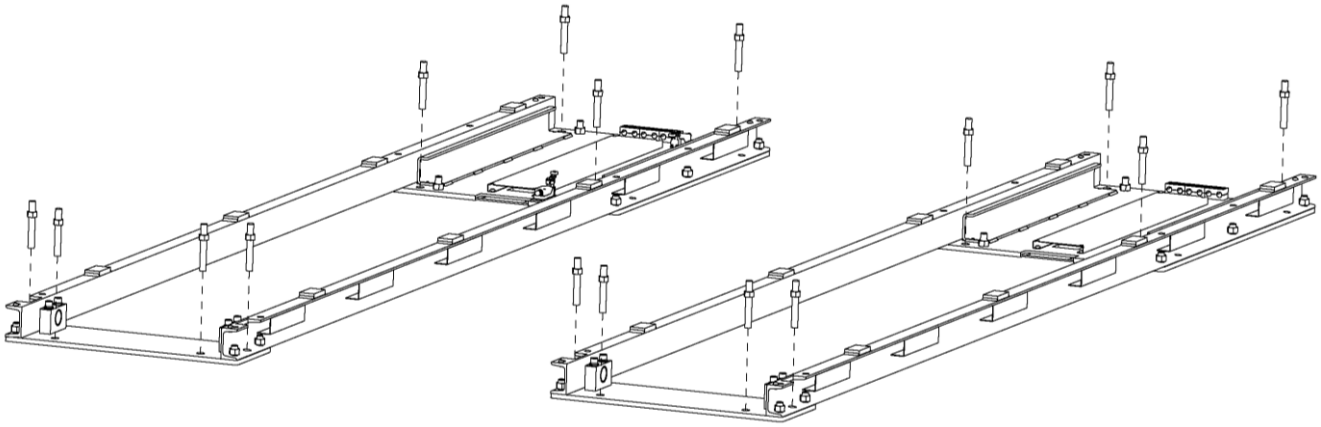
2) Drill holes using D16 carbide tipped masonry drill bit. Make sure to drill vertically down.

3) Clean the hole and check again the position of the base plates to ensure they are correctly positioned.

4) Use a spirit level to check the vertical alignment of the two adjacent base plates.

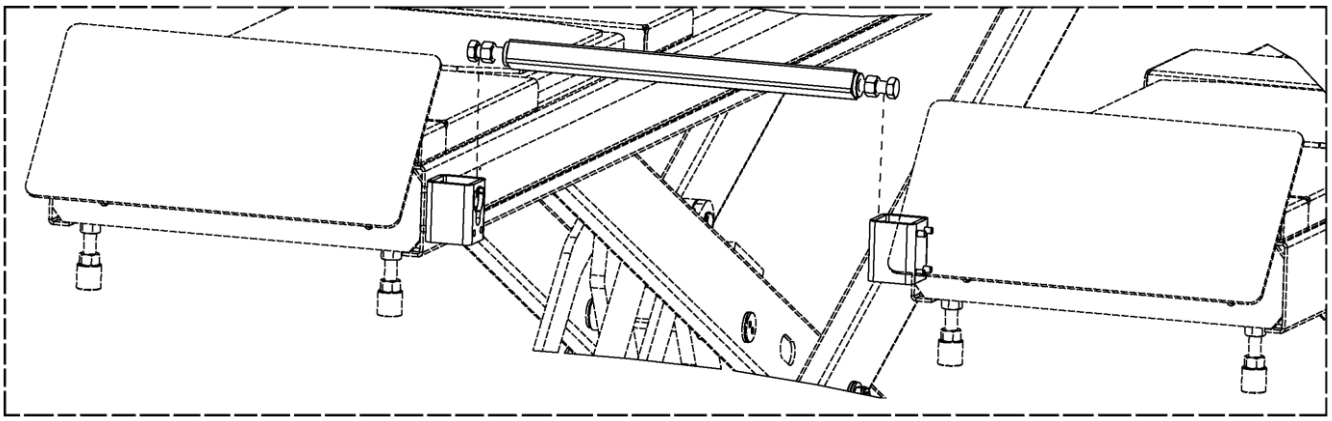
5) Impact and drive anchoring bolt into hole until its nut and washer contacts the base.

6) Tighten the nut with torque wrench to 80Nm.



**Step 9: Install the mechanical connecting bar**

Place the bar into the reserved holders at the front part of the two platforms.



### 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 ≥20mm/s; | √ | |
| 3 | Noise with rated load ≤75dB(A); | √ | |
| 4 | Grounding resistance: not bigger than 4Ω; | √ | |
| 5 | Height difference of the two carriages ≤5mm; | √ | |
| 6 | Mechanical catch unit is 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.

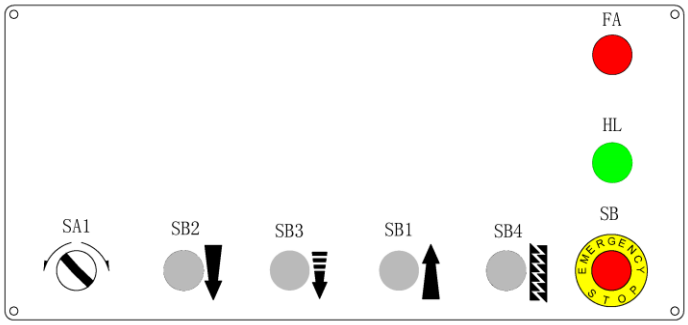
5.1.8 Engage the safety locking mechanism before entering under the raised vehicle.

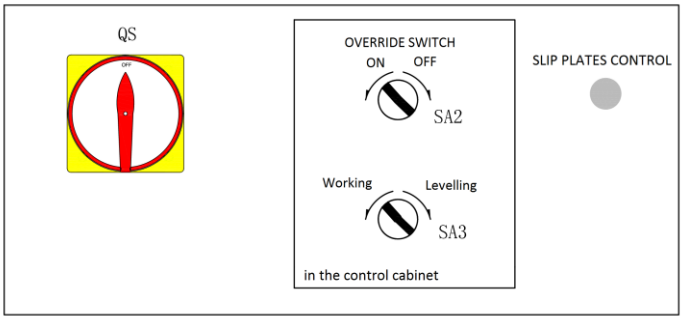
5.1.9 Avoid excessive rocking of vehicle while on the lift

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.

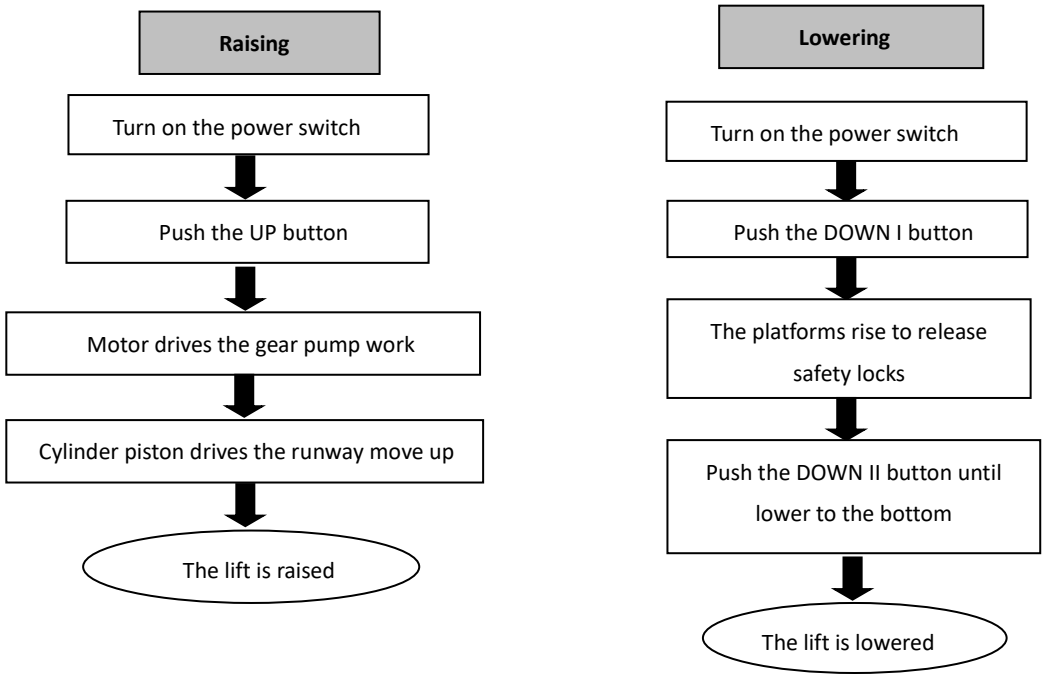
## 5.2 Descriptions of control unit




| POS. | Description | Function |
|---|---|---|
| FA | Alarm buzzer | Audible warning for descent of the final travel |
| HL | Power indicator | Illuminate to show the power is on. |
| SB | Emergency stop | Disconnect the power in emergency cases |
| SB1 | UP button | Control the rising movement |
| SB2 | DOWN button | Control the initial lowering movement |
| SB3 | DOWN button | Control the final lowering movement |
| SB4 | LOCK button | Engage the mechanical locking device |
| SA1 | Selection switch | Select to run the Main lift, PD or Wheel-free jack |
| QS | Main switch | Power on /off |
| SA2 | Selection switch | Turn on or off the synchronization protective device |
| SA3 | Selection switch | Control working or levelling mode |
| | SLIP PLATES CONTROL | Lock or release the slip plates |

## 5.3 Flow chart for operation



## 5.4 Operation instructions

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

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

**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.**

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

*Turn SA3 to WORKING mode and turn on SA2 before normal use. The normal users are not allowed to open the door of control cabinet.*

### 5.4.1 Lift with the wheel-support platform

***Max. Capacity: 5000KG***

**Park the vehicle to be lifted on the platform correctly, making it is positioned against rolling and its steering lock off**

**Make sure the platform is neither loaded too heavy at front nor at rear and center of balance shall be in the moving scope of support arms.**

#### *Raising*

1. Turn on the main power switch.
2. Drive and park the vehicle midway between two platforms.
3. Push the “UP” button to raise the vehicle a bit off the ground and check again the stability of the vehicle.
4. Having raised the vehicle to the expected height, push the “Safety Lock” button to ensure the mechanical safety lock is engaged.
5. Check again the stability before performing maintenance or repair work.

#### *Lowering*

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

1. Push the DOWNI button to lower the lifting platform. It will stop lowering at safety height.
2. Push DOWN II button to continue lowering the platforms which accompanies with an audible warning.
3. Having been lowered completely, remove rubber pads and other tools to provide an unobstructed exit for moving vehicle from the lift area.
4. Drive the vehicle away.

**Attention: In case of excessive height deviation between the two platforms, the synchronization protection device will be activated to stop any raising or lowering movement. In this case the normal operator needs to ask professional help from maintenance operator to restore the lift to normal working condition.**

#### *Methods for restoring the lift to run normally.*

Open the door of the control cabinet;

Turn SA2 to OFF mode;

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

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

Turn SA2 to ON mode.

### 5.4.2 Lift with the wheel-free platform

***Max. Capacity: 4000KG***

#### *Raising*

1. Turn the selection switch (SA1) on the control panel to wheel-free platform.

2. Place rubber pads under the pick-up points 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 going very close to the vehicle’s chassis.

4. Keep on pushing “UP” button until it reaches to the expected height. Full rise of the jack is 450mm over the platform of main lift.

#### *Lowering*

***Attention: in case the platform extensions are used, the operator needs to retract both extensions when four wheels of vehicle get contact with wheel-support platforms.***

1. Turn the selection switch (SA1) on the control panel to wheel-free platform.

2. Push “DOWN I” button on the control panel to lower the jack.

3. Take away rubber pads.

### 5.4.3 Use the play detector

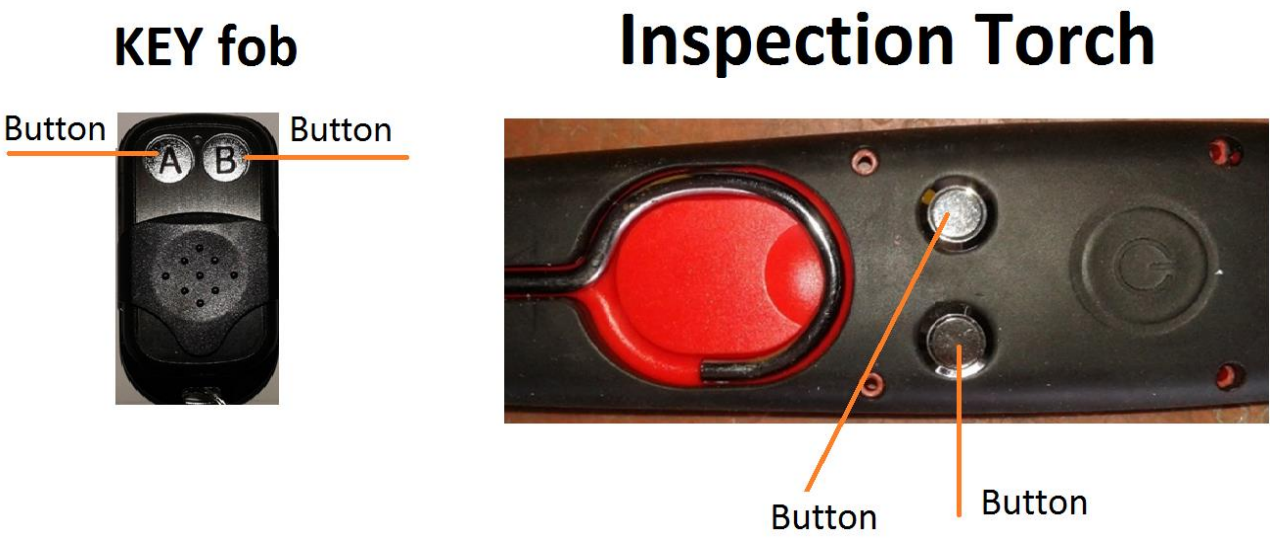
**Turn the selection switch (SA1) on the control panel to the mode of PD**

The PD is designed for powered moving the wheels of the vehicle enabling inspection of suspension and steering joints.

1. Park the vehicle making its front wheels stay centrally on the PD plates, steering lock off and engine running (to enable the power steering system)

2. Raise wheel-support platform to a suitable working height to enable you to clearly view the suspension / steering joints to be inspected and park the lift into the mechanical locking system.

**3. Using either the inspection torch or the key fob.**




Pressing and holding the one of the two buttons will operate the two PD plates at same time.

**Attention: Allow to charge for 3 hours before initial use, always replace the torch back to its holder to have it charged when not in use.**

**Attention: The remote control works within a radius of 5.7m from the main control cabinet.**

# TROUBLE SHOOTING

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

| TROUBLES | POSSIBLE CAUSES | SOLUTIONS |
|---|---|---|
| Motor does not run and will not raise. | Damaged max-rise limit switch or its wire is disconnected. | Reconnect the wire or the replace with a new limit switch. |
| | Synchronization protective device is activated. | Turn off the overriding switch and level the platforms. |
| | Damaged buttons for raising or lowering. Disconnected wires. | Reconnect the wire or replace with a new button. |
| | Burnt-out motor. | Replace with a new motor. |
| Motor runs but will not raise. | The motor run reversely due to phase-sequence error. | Correct the phase-sequence. |
| | The corresponding solenoid valve does not work electrically. | Check the corresponding wire connection. (Pos.3 in the exploded scheme, coded as YV6 or YV8 in the electrical scheme) |
| | The corresponding solenoid valve is jammed. | Clean the valve. (Pos.3 in the exploded scheme, coded as YV6 or YV8 in the electrical scheme) |
| | Damaged cushion valve. | Replace with a new cushion valve. (Pos.12 on the exploded scheme ) |
| | Damaged gear pump. (Pos.13 on the exploded scheme ) | Replace with a new gear pump. |
| | Loose relief valve on the hydraulic block or the valve is jammed. | Tighten or clean the valve. |
| | No hydraulic oil or insufficient hydraulic oil. | Add enough oil. |
| | Untightened hose-connectors or ruptured hoses. | Tighten corresponding hose-connectors. Replace the ruptured hoses. NO.1 hose for the wheel-support platform, No.1,2 and 5 hose for the wheel-free platform in the scheme ) |
| Platforms go down slowly after being raised. | Damaged non-return valve. | Replace it. |
| | Loose-installed solenoid unloading valve on the hydraulic block or the valve is jammed and leaked. | Tighten the valve. Clean the valve. (Pos.7 in the exploded scheme) |
| | Untightened hose connectors or leaking hoses. | Tighten corresponding hose-connectors. Replace the hoses. (NO.1 hose for the wheel-support platform, No.1,2 and 5 hose for the wheel-free platform ) |

| TROUBLES | POSSIBLE CAUSES | SOLUTIONS |
|---|---|---|
| Raising too slow. | Over-worn gear pump | Replace with a new pump. |
| | Loose oil-sucking pipe | Tighten the pipe. |
| | Jammed filter | Clean or replace it. |
| | Unclean and old hydraulic oil | Change with fresh oil. |
| Lowering too slowly. | Jammed oil hose<br>Any of the connector of for the above hoses was deformed. | Clean or replace it.<br>(No.1 hose for wheel-support platform, No.1,2 and 5 hose for the wheel-free platform) |
| | Jammed connector of the master cylinder | Clean or replace it.<br>(Connector D in the scheme). |
| | Jammed solenoid unloading valve. | Clean or replace it. |
| PD fails to run | Jammed or squeezed oil hose. | Clean the hose. Replace the hose. |
| | The valve for shifting Lift to PD failed to work due to no electricity or damage. | Check the wire connection. Replace with a new valve.<br>(No.10 hose on the oil hoses scheme for PD). |
| | Poor contact of the selection switch for PD and Lift function or the selection switch is damaged. | Check the wire connection.<br>Replace with a selection switch. |
| | Solenoid valve for PD does not work (due to no electricity or damage). | Check the wire connection.<br>Replace with a new valve. |
| | Any of oil hose for PD system is leaked. | Check the hoses and replace the leaking hose. |

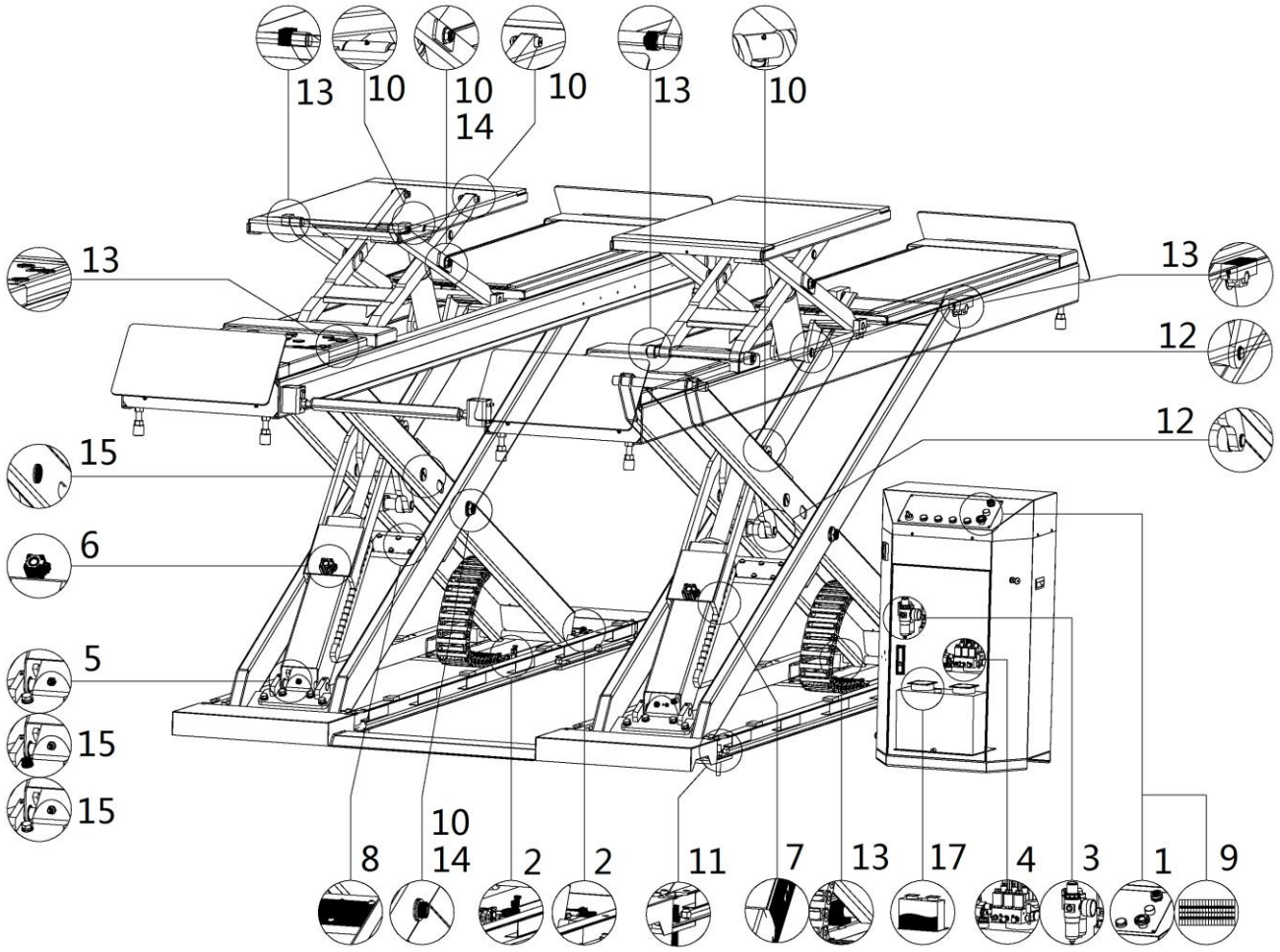
# MAINTENANCE

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

Following are requirements for routine maintenance.

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

**Lubricated moving parts with NO.1 lithium grease before use.**




| 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.<br>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 |

| S/N | Components | Methods | Period |
|---|---|---|---|
| 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 |
| 8 | Padding plate for the start roller | Check its tightness and add grease. | Every 1 month |
| 9 | Terminals in the control unit | Open the control unit, inspect the wire terminals and tighten them if any terminals had 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.<br>Screw torque:80Nm | Every 3 months |
| 12 | Circlip on the shaft | Check and ensure it is in the slot of the shaft. | Every 3 months |
| 13 | Sliding blocks | Add grease onto the tracks for sliding blocks | Every 3 months |
| 14 | Self-locking nut | Check with torque spanner. The torque should be no less than 330N.m. | Every 3 months |
| 15 | Fixation holder of the wheel free jack | Check with torque spanner. The torque should be no less than 55N.m. | Every 3 months |
| 16 | Lifting platform synchronization | Check the synchronization of both lifting platforms. Ensure both platforms ascend and descend synchronously. | Every day |
| 17 | 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 |
| 18 | Whole Lift | Running the lift for several cycles with and without rated load. The lift can run steadily and smoothly with no abnormal noise. Check the synchronization of both lifting platforms. Ensure both platforms ascend and descend synchronously. | Every 3 months |

*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

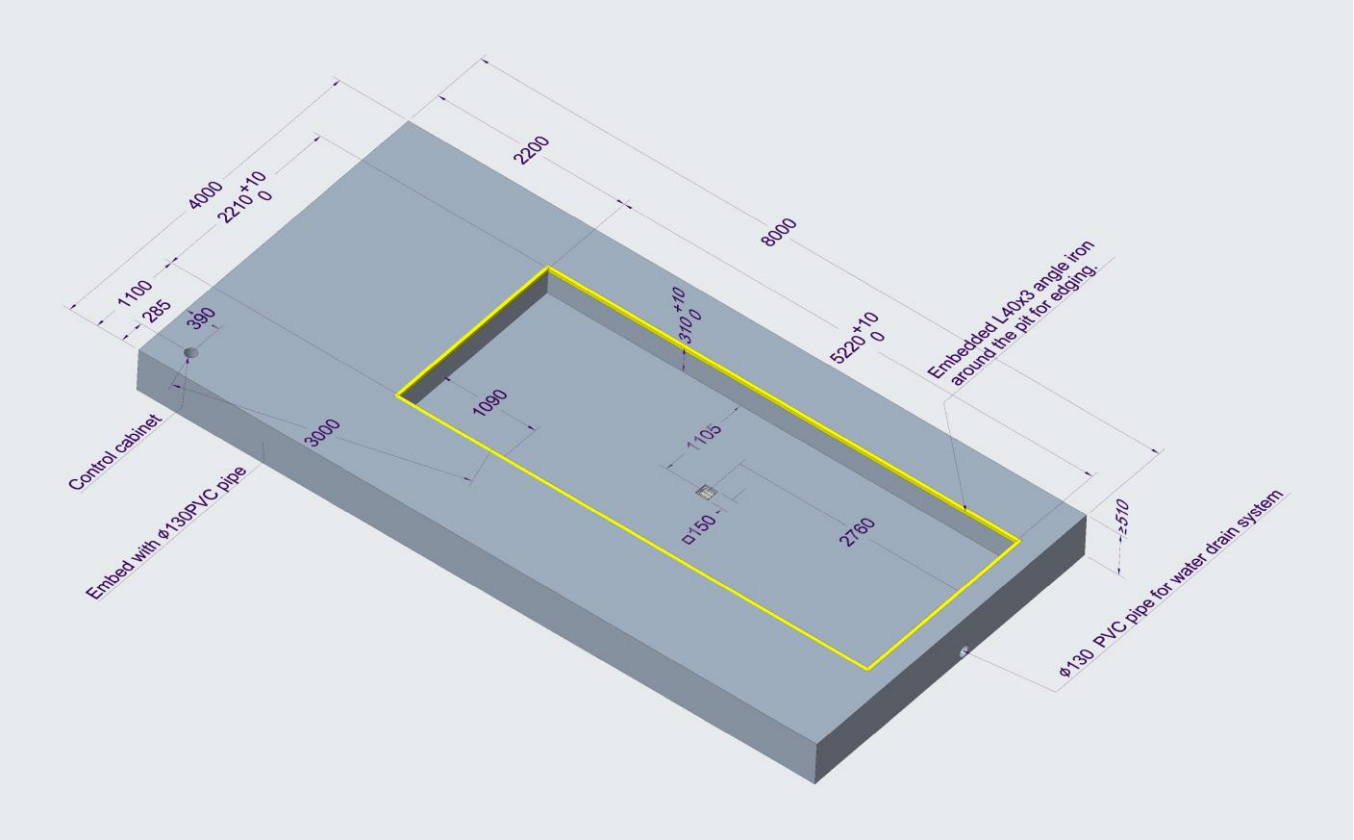
**Requirements:**

C25-C30 concrete base with a minimum thickness of 250mm.

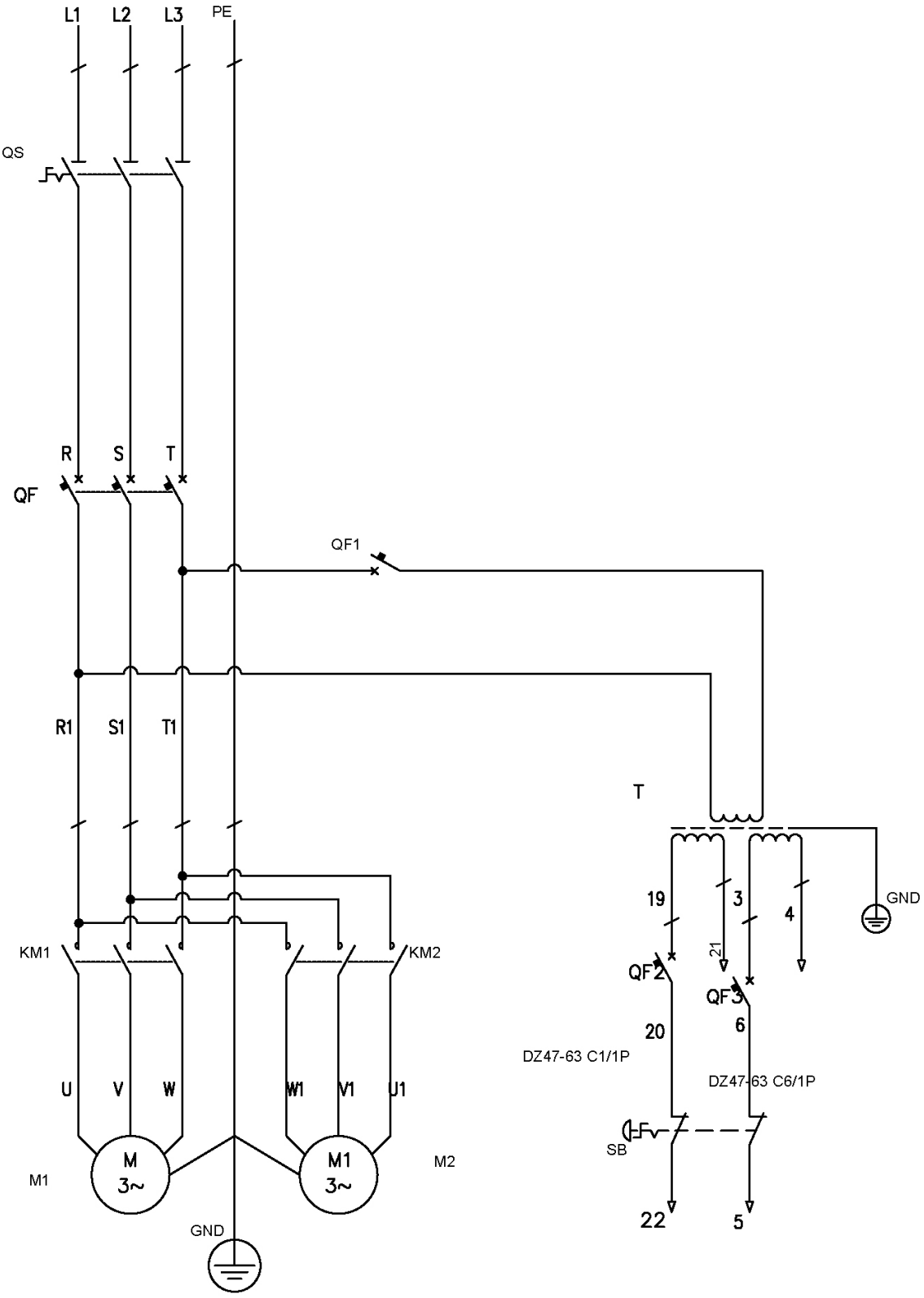
Surface: Horizontal and even (Gradients under the base plate max. 0.5 %)

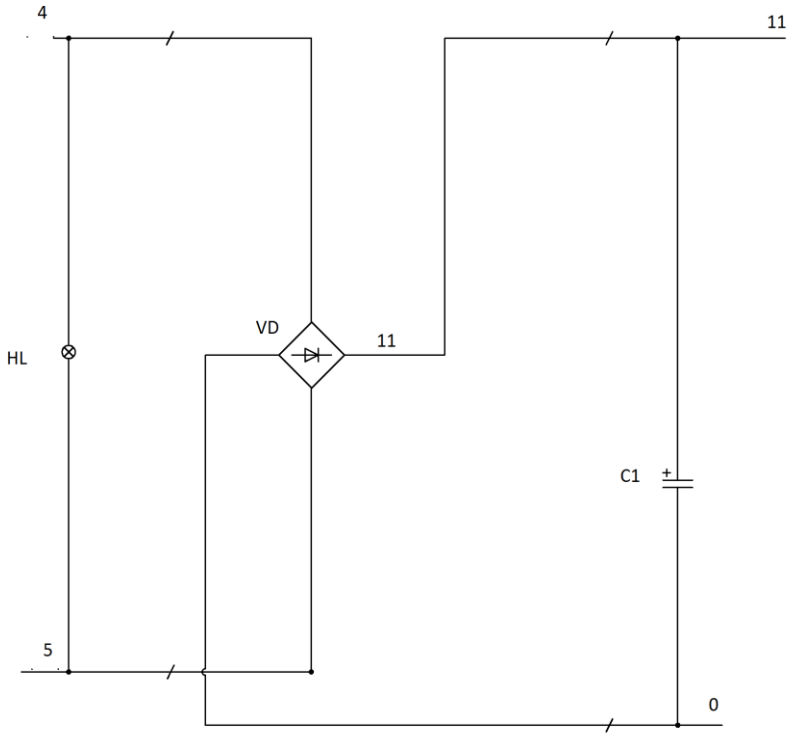
Newly built concrete ground must be older than 20days.

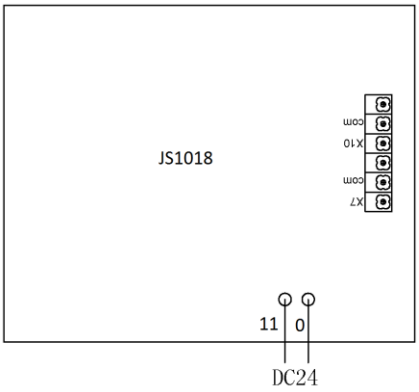
**Floor Plan for recessed installation**

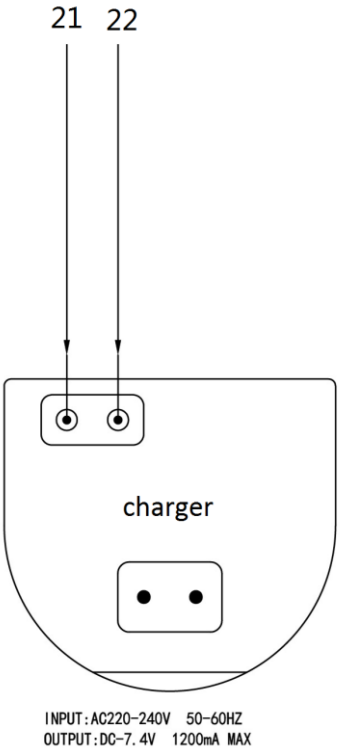


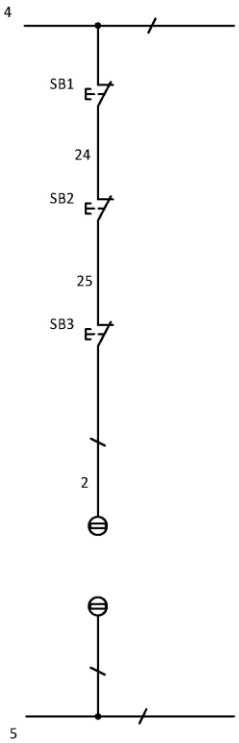
**Annex 2, Electrical schemes and parts list**

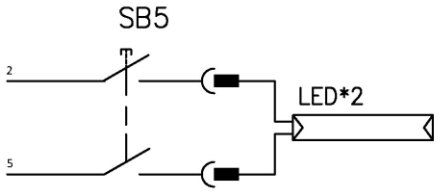


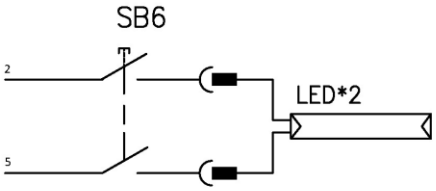

4
11
HL
VD
11
C1
+
5
0

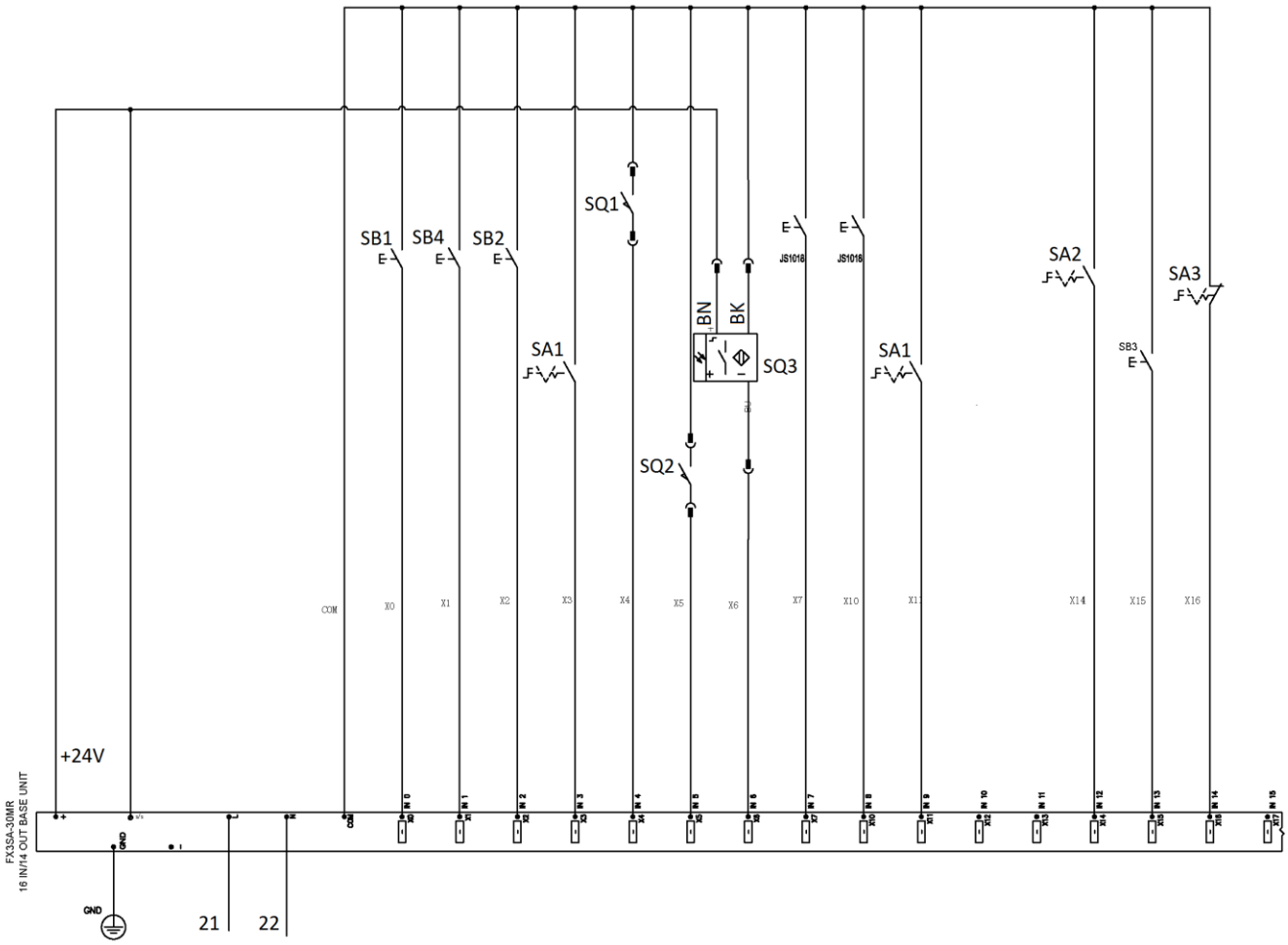

JS1018
com
X10
com
X7
11
0
DC24


21
22
charger
INPUT:AC220-240V 50-60HZ
OUTPUT:DC-7.4V 1200mA MAX

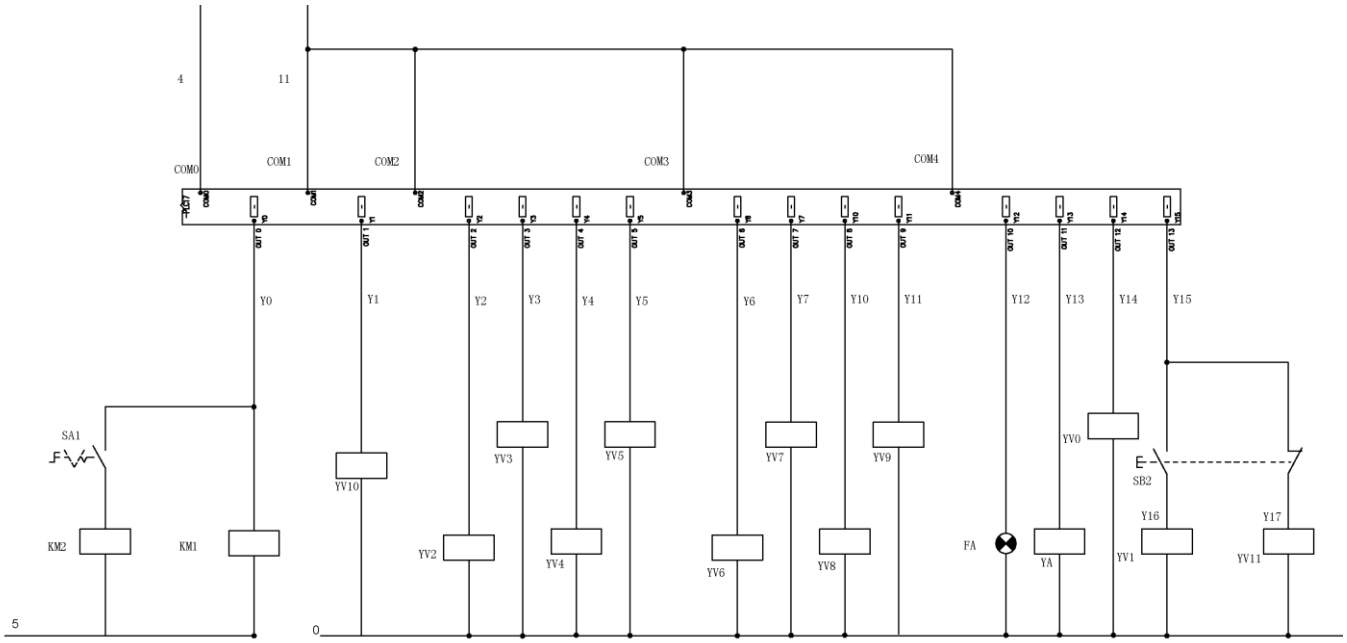

4
SB1
24
SB2
25
SB3
2
5


SB5
2
LED*2
5

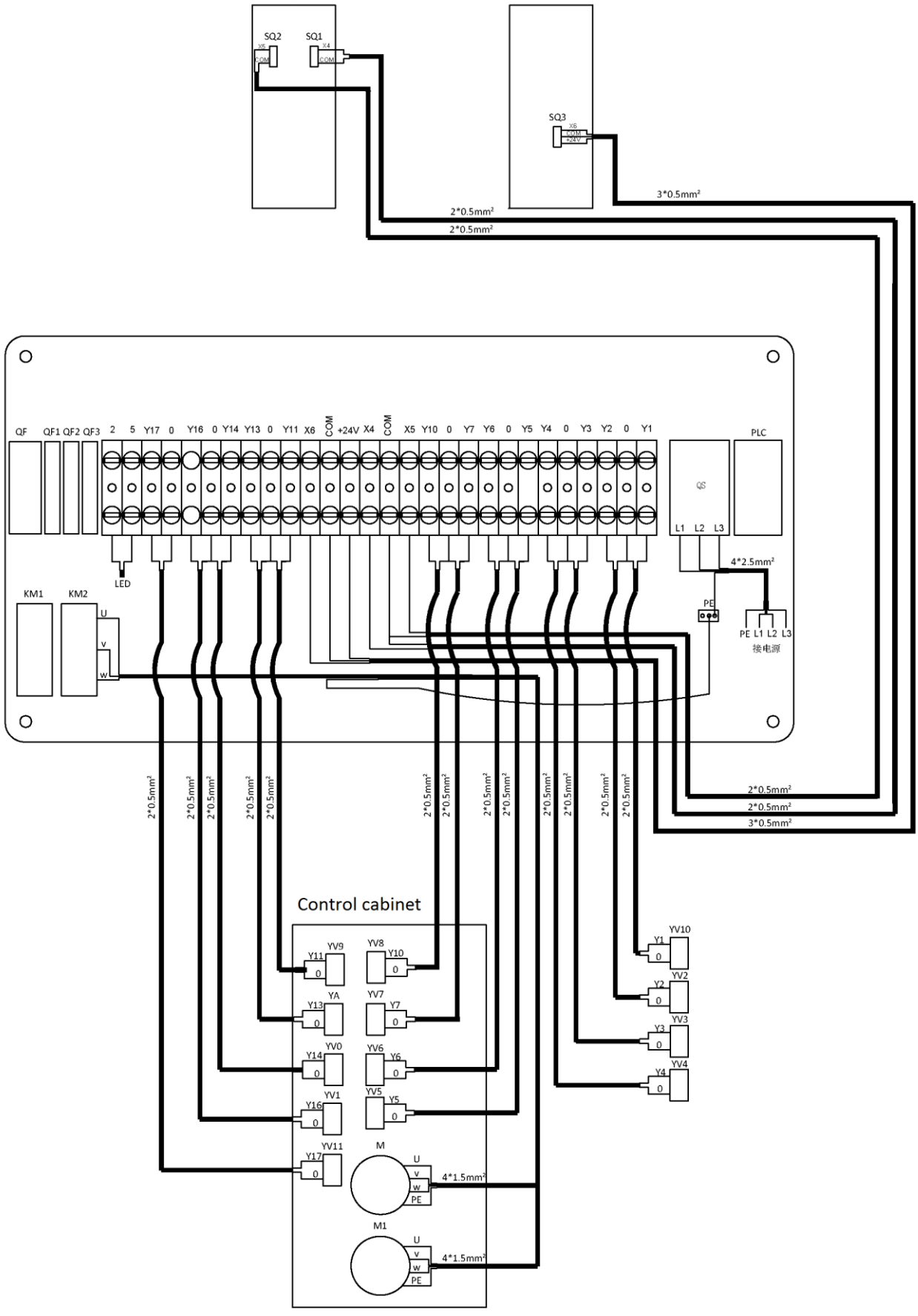

SB6
2
LED*2
5



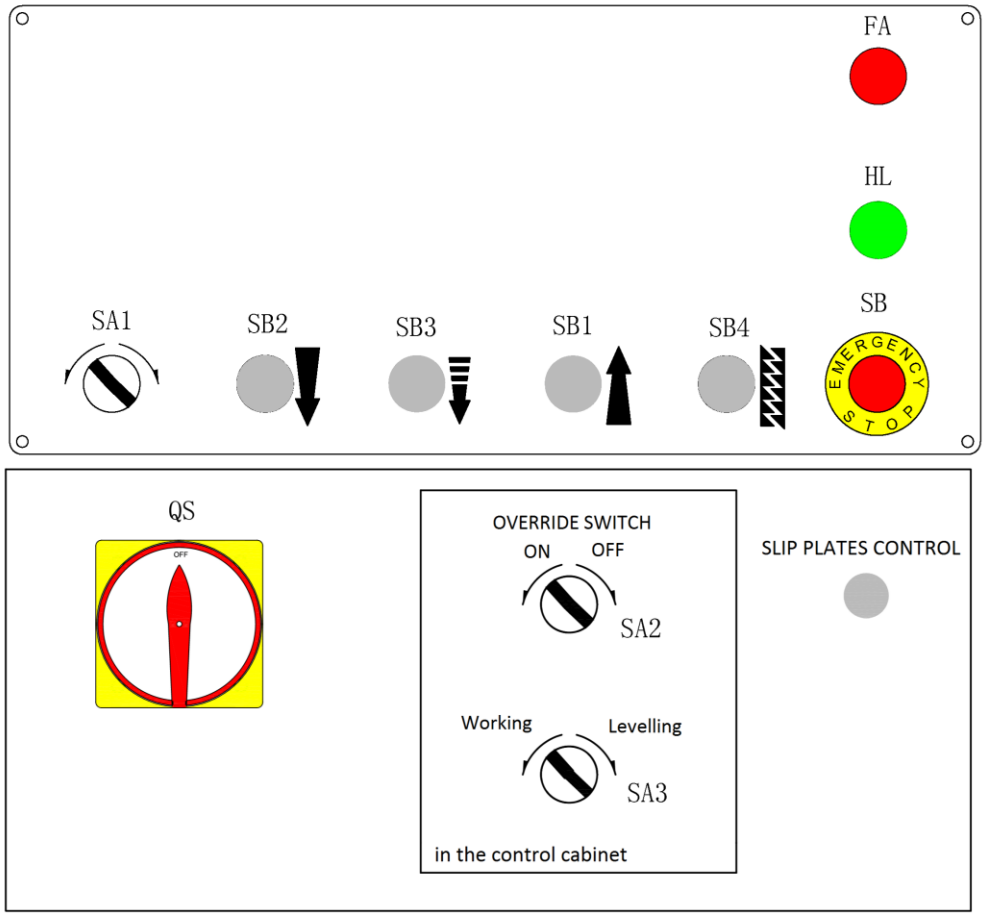

Update the following diagram



Update the following diagram



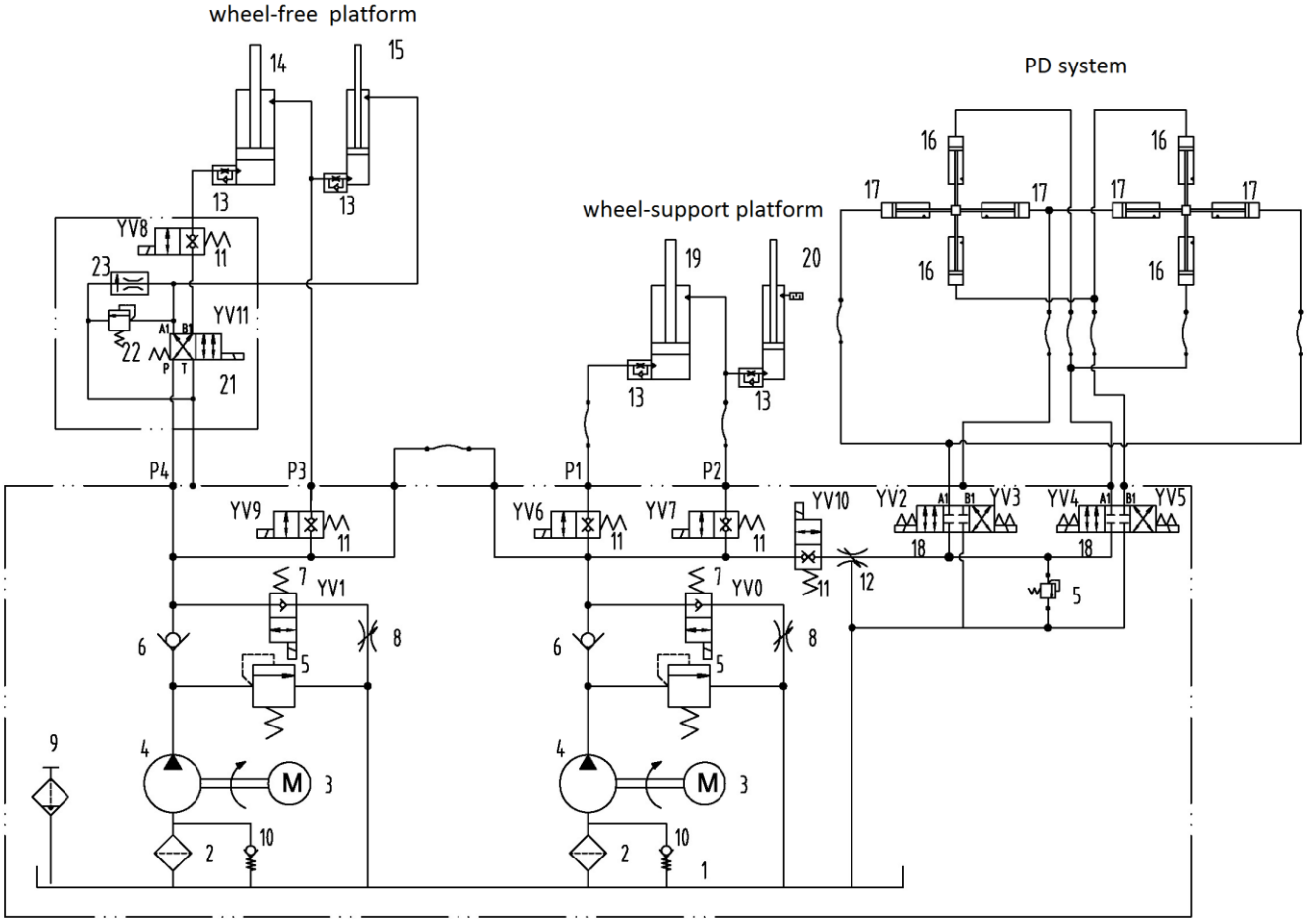
| | | | |
|---|---|---|---|
| *SQ1* | *Limit switch for max rise* | *YV4* | *Solenoid valve for PD* |
| *SQ2* | *Limit switch for safe descent* | *YV5* | *Solenoid valve for PD* |
| *SQ3* | *Photoelectric switch* | *YV6* | *Solenoid valve for the main lift* |
| *YA* | *Pneumatic solenoid valve* | *YV7* | *Levelling solenoid valve for the main lift* |
| *YV0* | *Solenoid unloading valve 1* | *YV8* | *Solenoid valve for the wheel-free lift* |
| *YV1* | *Solenoid unloading valve 2* | *YV9* | *Levelling solenoid valve for the wheel-free lift* |
| *YV2* | *Solenoid valve for PD* | *YV10* | *Solenoid valve for shifting lifting to PD* |
| *YV3* | *Solenoid valve for PD* | | |



| Code in the scheme | P-code | Description | Specification | Qty |
|---|---|---|---|---|
| T | 320104104 | Transformer | JBK5-160VA 380V400V415V-220V40VA 24V120VA | 1 |
| QF | 320801003 | Circuit breaker(3Ph) | CDB6iC25/3P（CB-60A C25） | 1 |
| QF1 | 320803003 | Circuit breaker(3Ph) | CDB6iC3/1P | 1 |
| QF2 | 320803001 | Circuit breaker | CDB6iC1/1P（CB-60A C1） | 1 |
| QF3 | 320803005 | Circuit breaker | CDB6iC6/1P(CB-60A C6) | 1 |
| KM1 KM2 | 320901011 | AC contactor | CJX2-1810/AC24V(CDC6i-1810/AC24V) | 2 |
| QS | 320304001 | Power switch | LW26GS-20-04 | 1 |
| SQ1 SQ2 | 320301011 | Limit switch | TZ8108 | 2 |
| SQ3 | 320306025 | Photoelectric switch | CGY18E-R2NA | 1 |
| SA1 | 320303023 | Selection switch (3P ) | NP2-ED38C | 1 |
| SA2 SA3 | 320303018 | Selection switch (2P ) | NP2-ED23C | 2 |
| SB1 SB2 SB3 SB4 | 320401041 | Button | NP2-EA15（CDLA6H-EA15） | 4 |
| SB | 320402010 | Stop button | NP2-BS544(CDLA6H-BS544) | 1 |
| PLC | 321301004 | PLC | FXIS(3SA)-30MR16in14out | 1 |
| | 321003005 | Remote control (**key fob**) | 1027DC12V | 1 |
| | 793220006 | Remote control (with torch and charger) | | 1 |
| JS1018 | 321003007 | Receiver | JS1018 DC24V | 1 |
| C | 321001004 | Capacitor | 4700UF/50V | 1 |
| VD | 321002001 | Bridge rectifier | KBPC5A-35A | 1 |
| HL | 321201001 | Indicating lamp | ND16-22DS-2 | 1 |
| FA | 321202001 | Alarm buzzer | AD118-22SM/R/AC/DC/24V | 1 |
| SB5 SB6 | 320307034 | Metal button | LANB00(22mm AC24V) | 2 |
| LED | 321201021C | Led lamp | AC24-15W-16cm | 4 |

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

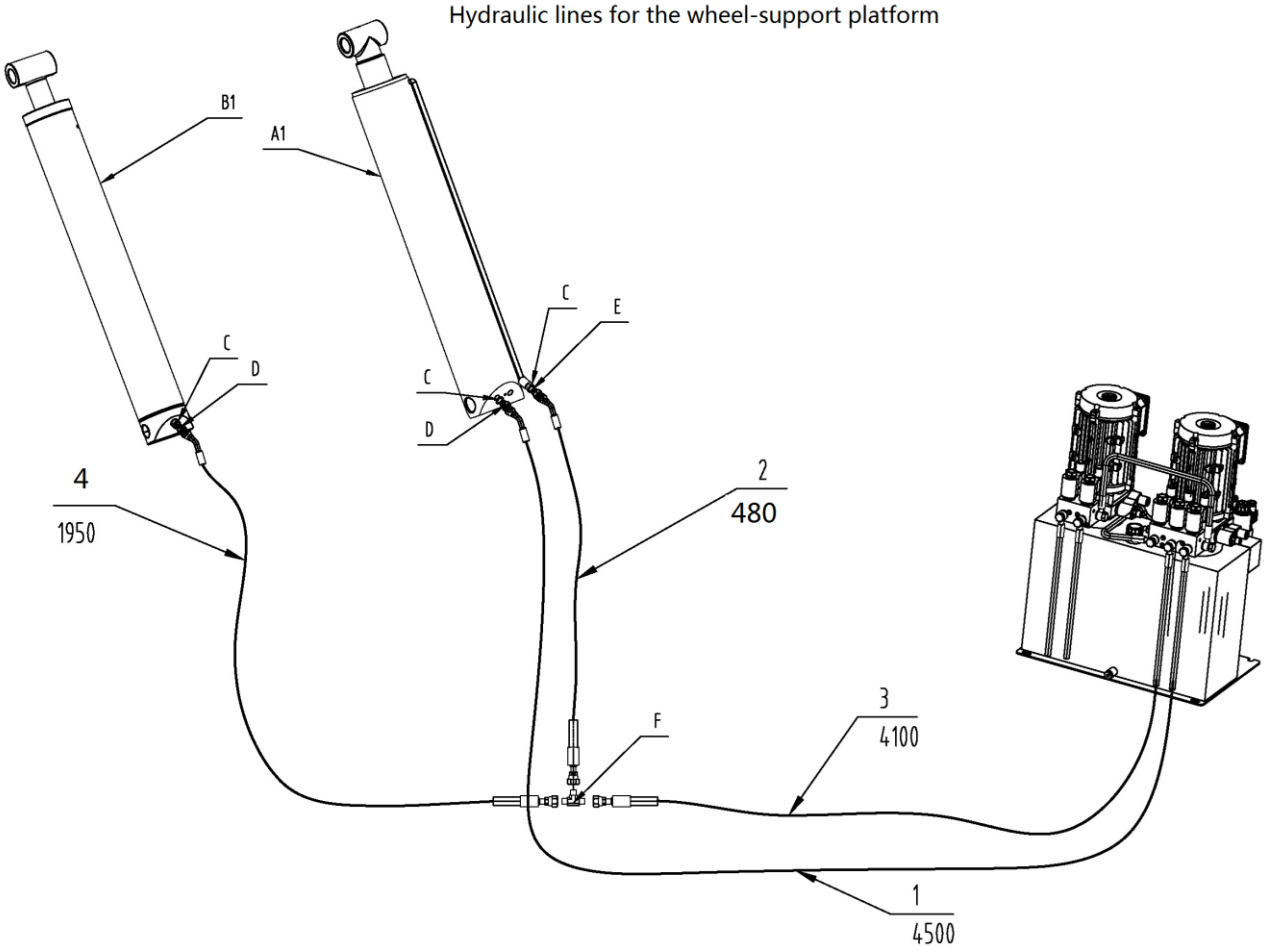
## Annex 3, Hydraulic schemes and parts list




| | | | |
|---|---|---|---|
| 1 | Steel oil tank | 11 | Valve spool for the solenoid valve |
| 2 | Filter | 12 | Restrictive valve |
| 3 | Motor | 13 | Straight connector with restrictive valve |
| 4 | Gear pump | 14 | Master cylinder of WF |
| 5 | Relief valve | 15 | Slave cylinder of WF |
| 6 | Non-return valve | 16 | PD cylinder |
| 7 | Solenoid unloading valve assembly | 17 | PD cylinder |
| 8 | Restrictive valve | 18 | Solenoid valve (3P4W) |
| 9 | Oil tank lid | 19 | Master cylinder of WS |
| 10 | Cushion valve | 20 | Slave cylinder of WS |
| 21 | Solenoid valve | 22 | Relief valve |
| 23 | Pressure compensating valve | | |

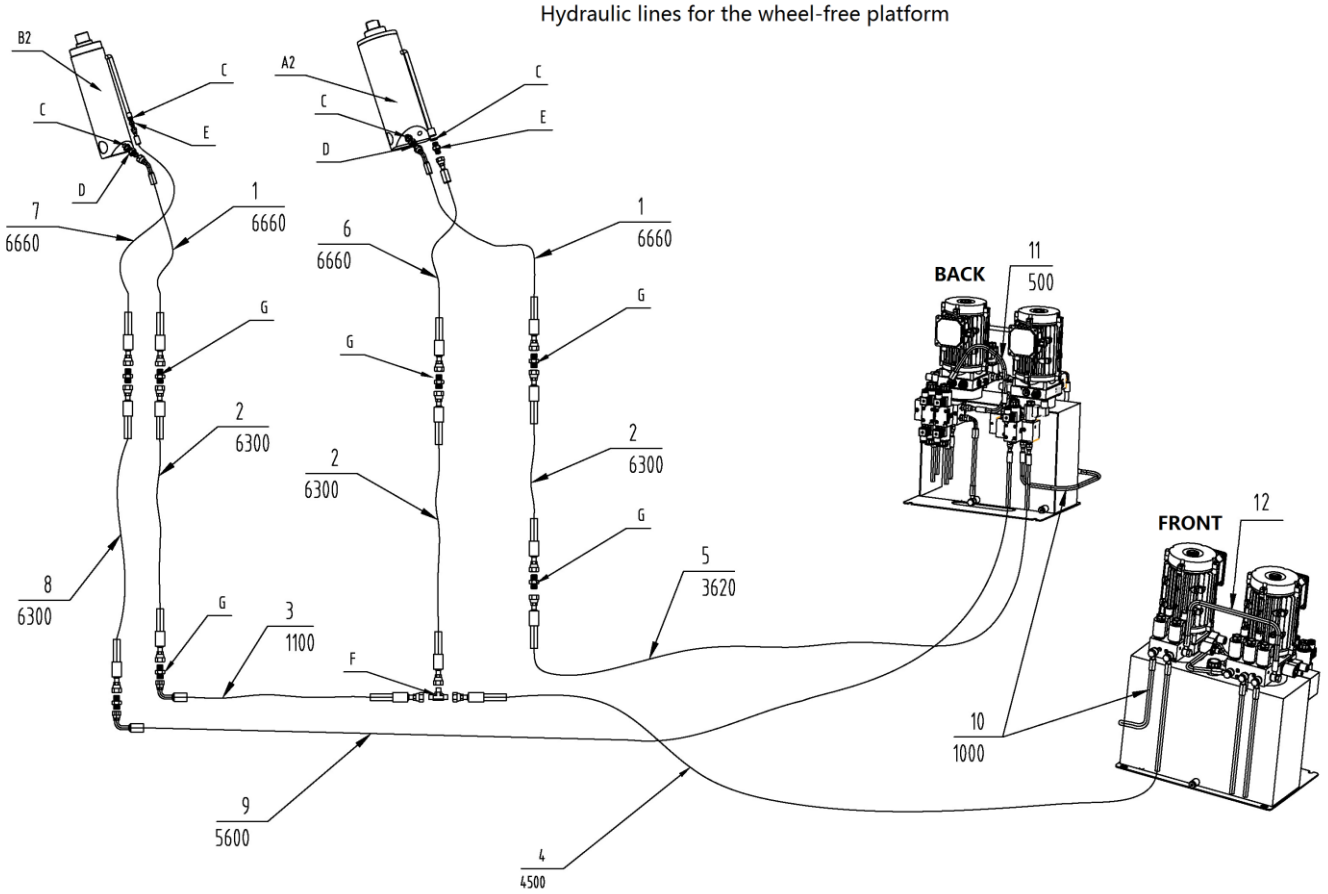
**The following hydraulic lines are for control cabinet positioned on the left side (face the cabinet at the rear end of the platform).**

Hydraulic lines for the wheel-support platform



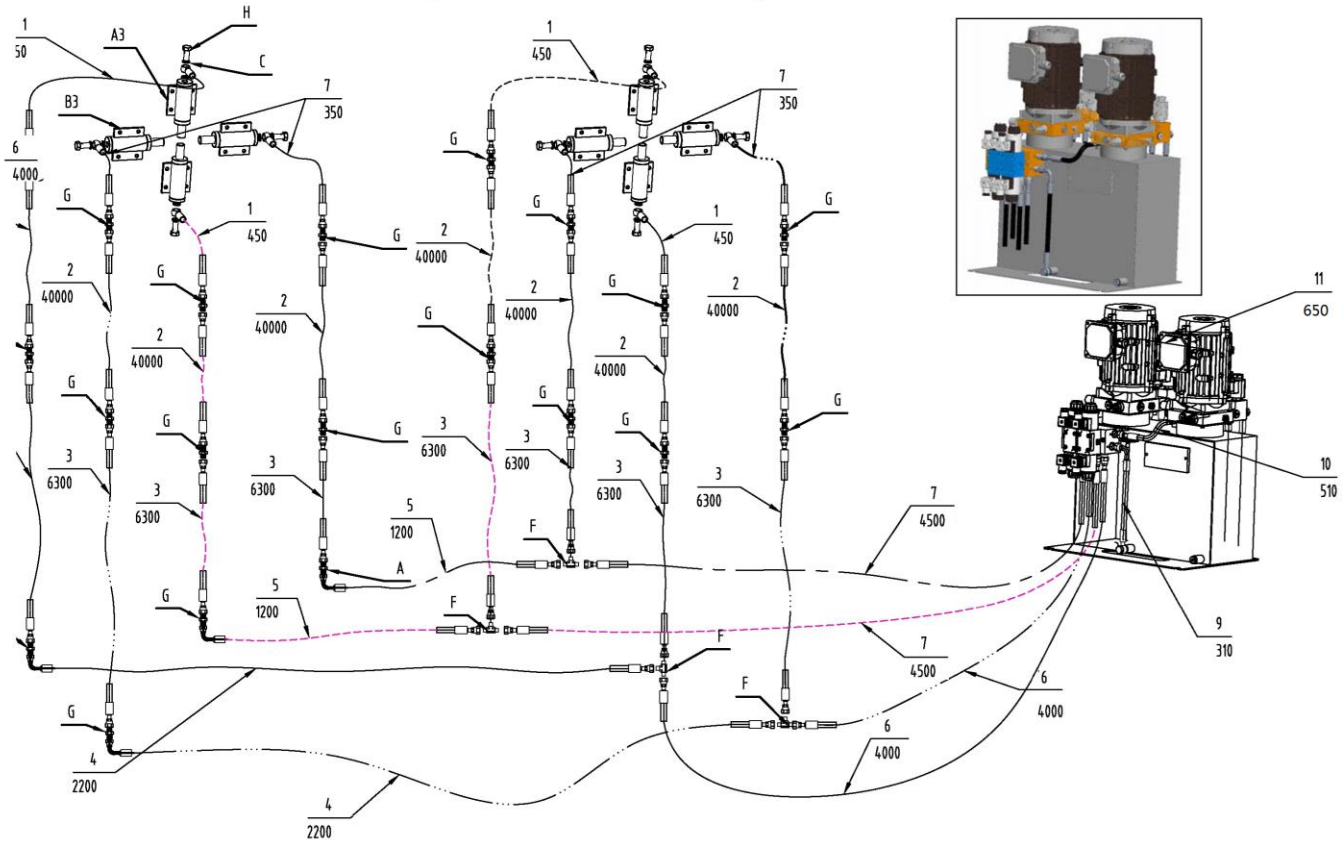

| Pos. | Code | Component descriptions | Specification | Qty |
|---|---|---|---|---|
| 1 | 624008156 | Oil hose | L=4500mm | 1 |
| 2 | 624008157 | Oil hose | L=480mm | 1 |
| 3 | 624008158 | Oil hose | L=4100mm | 1 |
| 4 | 624008159 | Oil hose | L=1950mm | 1 |
| A1 | 615068516 | Master cylinder | YG120-140-67-645 | 1 |
| B1 | 615068517 | Slave cylinder | YG100-114-50-645 | 1 |
| C | 207103025 | Composite washer | 13_7X20X1_5 | 3 |
| D | 330305009 | Straight connector with restrictive valve | BDPF-G14-G14-I60 | 2 |
| E | 310101010 | Straight connector | G1/4---G1/4 | 1 |
| F | 410210181 | Three-way connector | 6603B-A9-B7 | 1 |

Hydraulic lines for the wheel-free platform



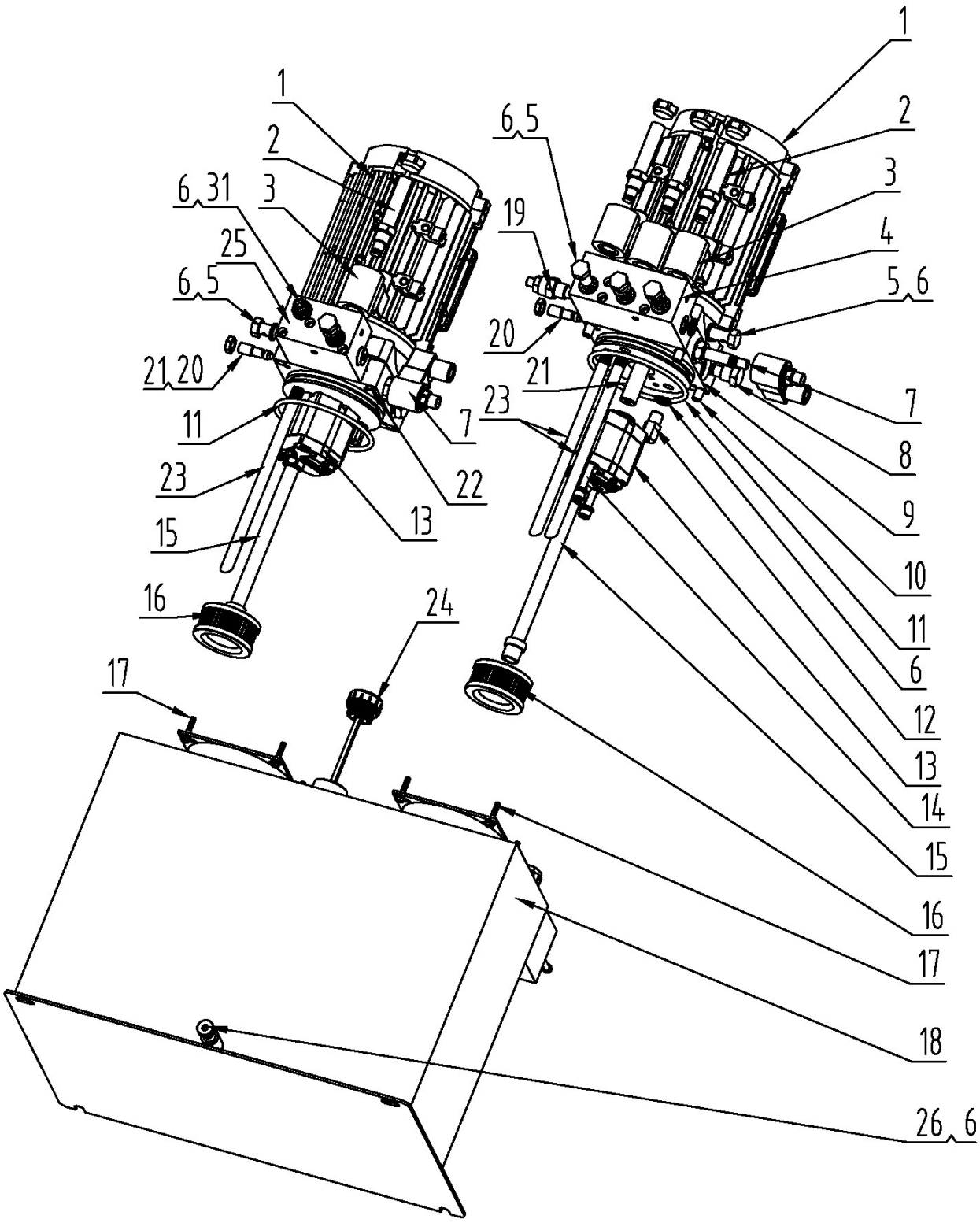

| Pos. | Code | Component descriptions | Specification | Qty |
|---|---|---|---|---|
| 1 | 624008161 | Oil hose | L=6660mm | 2 |
| 2 | 624008163 | Oil hose | L=6300mm | 3 |
| 3 | 624008166 | Oil hose | L=1100mm | 1 |
| 4 | 624008165 | Oil hose | L=4500mm | 1 |
| 5 | 624001128 | Oil hose | L=3620mm | 1 |
| 6 | 624008162 | Oil hose | L=6660mm | 1 |
| 7 | 624008248 | Oil hose | L=6660mm | 1 |
| 8 | 624008249 | Oil hose | L=6300mm | 1 |
| 9 | 624008189 | Oil hose | L=5600mm | 1 |
| 10 | 624008250 | Oil hose | L=1100mm | 1 |
| 11 | 624008251 | Oil hose | L=600mm | 1 |
| 12 | 624008160 | Oil hose | L=650mm | 1 |
| A2 | 615026701 | Master cylinder | HX6-SMCYL | 1 |
| B2 | 625000040 | Slave cylinder | YG80-95-45-150-KS | 1 |
| C | 207103025 | Composite washer | 13_7X20X1_5 | 4 |
| D | 330305009 | Straight connector with restrictive valve | BDPF-G14-G14-I60 | 2 |
| E | 310101010 | Straight connector | G1/4---G1/4 | 2 |
| F | 410210181 | Three-way connector | 6603B-A9-B7 | 1 |
| G | 410210191 | Straight connector | 6603B-A9-B8 | 7 |

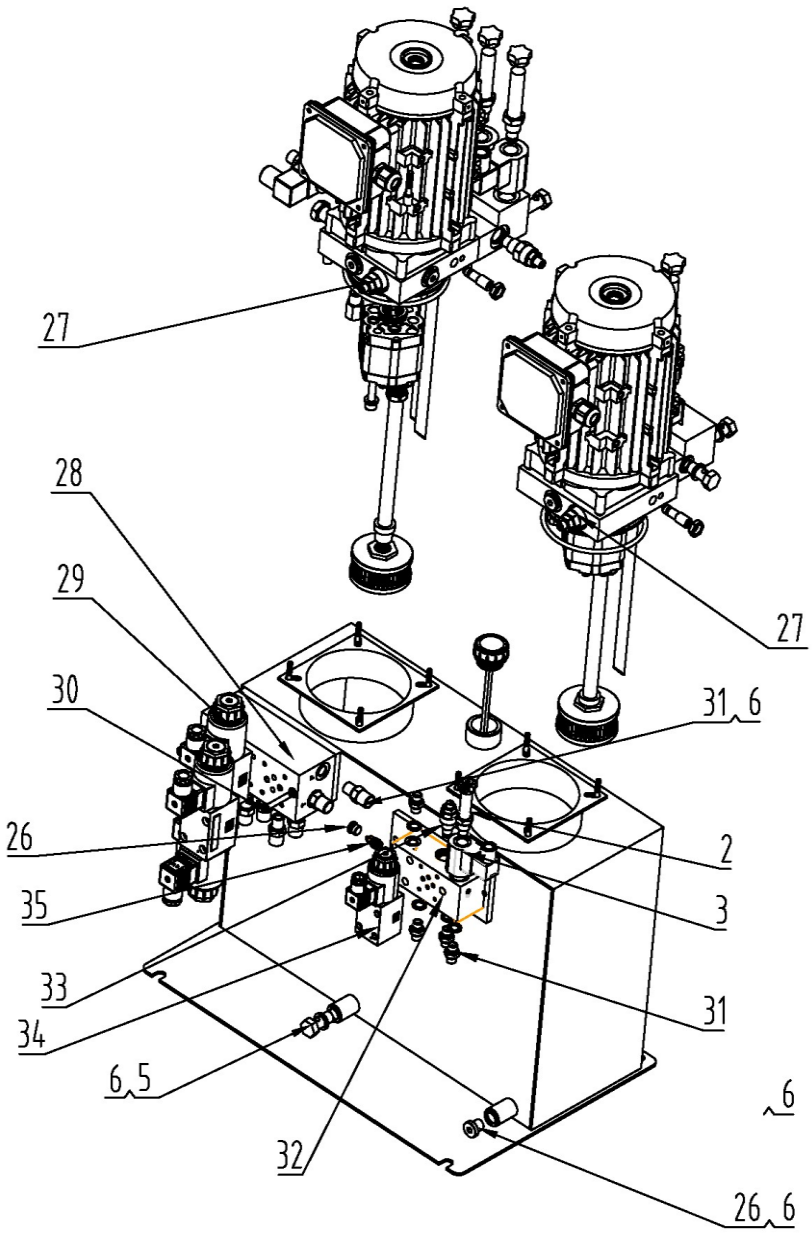
Hydraulic lines for the PD system




| Pos. | Code | Component descriptions | Specification | Qty |
|---|---|---|---|---|
| 1 | 624008168 | Oil hose | L=450mm | 4 |
| 2 | 624008169 | Oil hose | L=4000mm | 10 |
| 3 | 624008170 | Oil hose | L=6300mm | 8 |
| 4 | 624008172 | Oil hose | L=2200mm | 2 |
| 5 | 624008171 | Oil hose | L=1200mm | 2 |
| 6 | 624008164 | Oil hose | L=4000mm | 1 |
| 7 | 624008174 | Oil hose | L=4500mm | 2 |
| 8 | 624008167 | Oil hose | L=350mm | 4 |
| 9 | 624008175 | Oil hose | L=310mm | 1 |
| 10 | 624008176 | Oil hose | L=510mm | 1 |
| 11 | 624008160 | Oil hose 650 | L=650mm | 1 |
| A3 | 625000004 | PD8 cylinder 1 | YG30-40-20-53-59 | 1 |
| B3 | 625000018 | PD8 cylinder 2 | YG30-40-20-53-70 | 1 |
| C | 207103025 | Composite washer | 13_7X20X1_5 | 16 |
| F | 410210181 | Three-way connector | 6603B-A9-B7 | 5 |
| G | 410210191 | Straight connector | 6603B-A9-B8 | 20 |

Hydraulic power unit

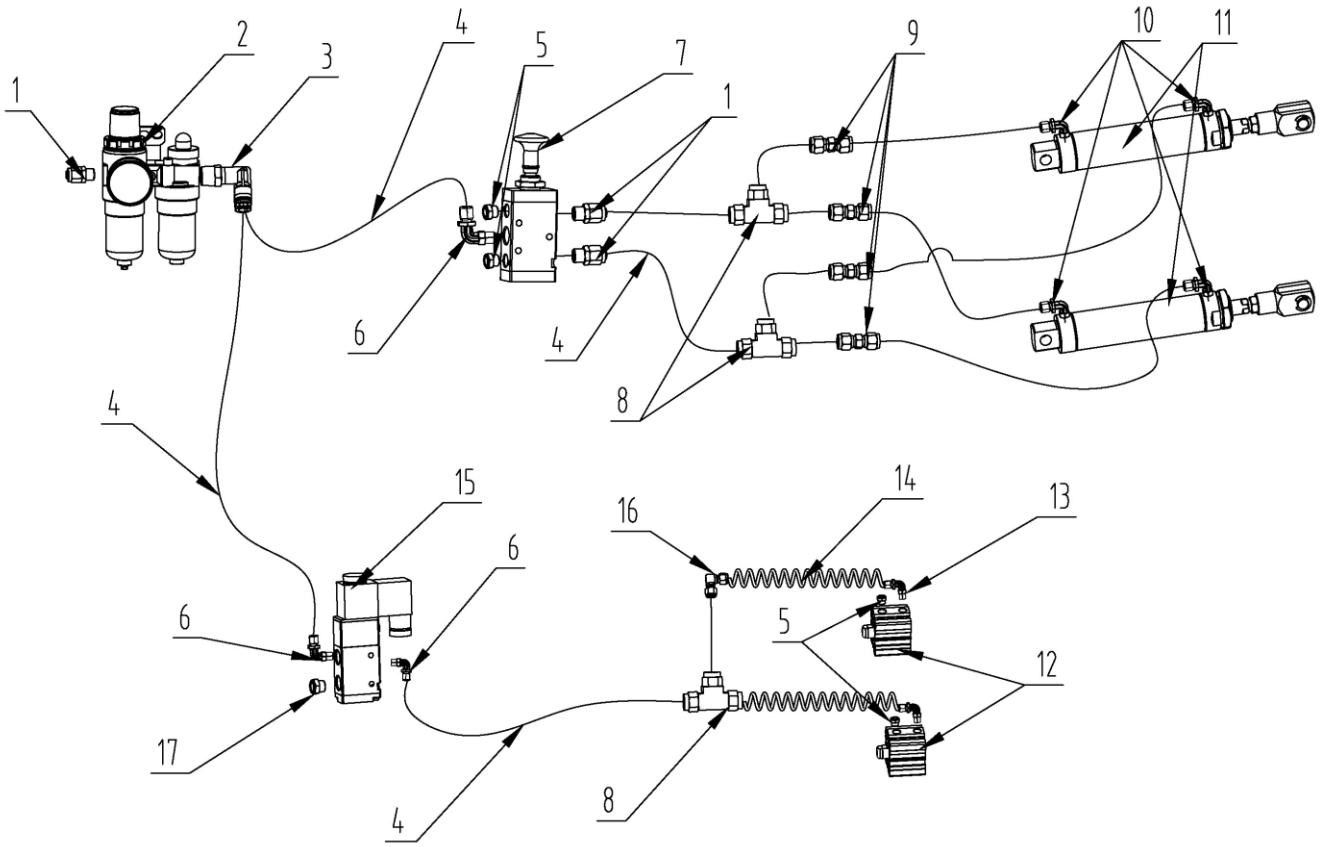





| Pos. | Code | Component descriptions | Specification | Qty |
|---|---|---|---|---|
| 1 | 320203001 | Motor | 380V-3.5KW-3PH-50HZ-2P | 2 |
| 2 | 330308040 | Valve spool for the solenoid valve | LSV-08-2NCSP-LM | 5 |
| 3 | 330308039 | Solenoid coil | HC-C-16-D24 | 5 |
| 4 | 330105038 | Hydraulic block | LA50292 | 1 |
| 5 | 410281130 | Cylinder connector | CJ-A12-B5-C10 | 8 |
| 6 | 207103025 | Composite washer | 13_7X20X1_5 | 16 |
| 7 | 791150005 | Solenoid unloading valve assembly | DC24V | 2 |
| 8 | 330302006 | Non-return valve | DF08-01-00 | 2 |
| 9 | 330105039 | Hydraulic block | LA50291 | 1 |

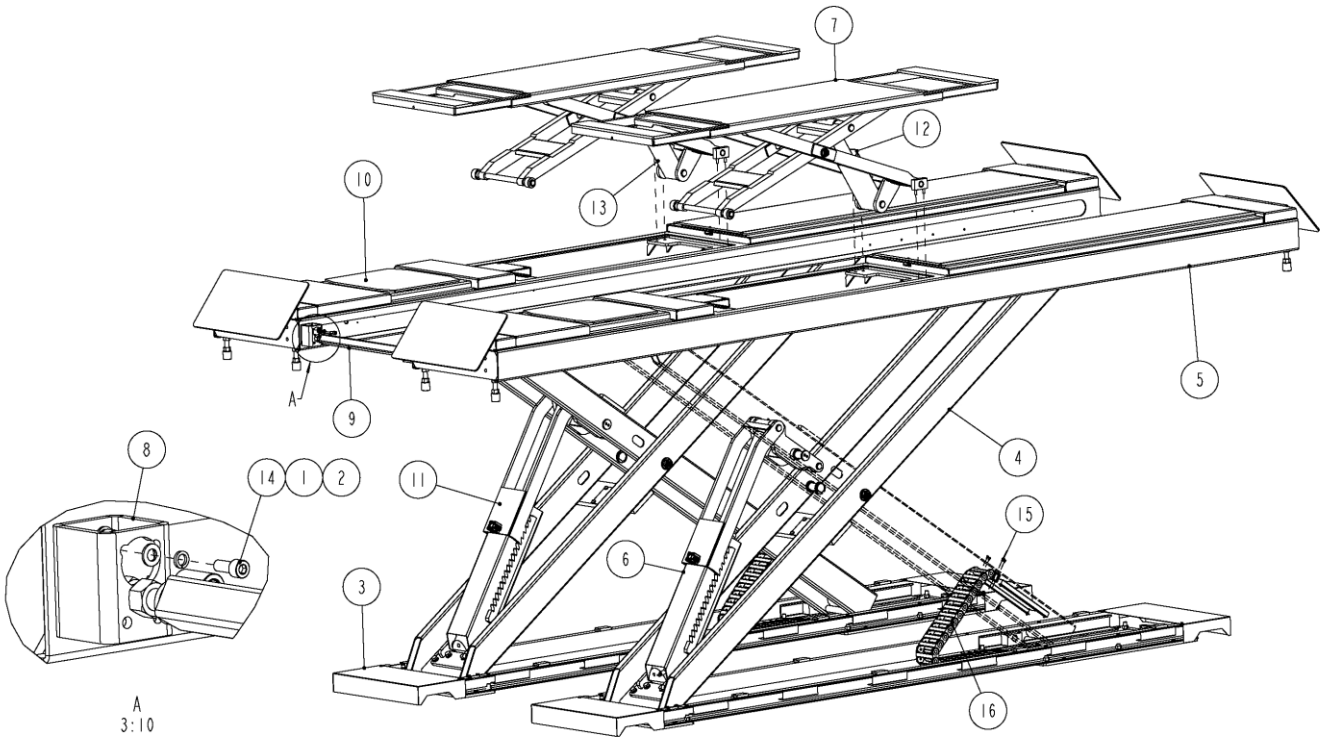
| Pos. | Code | Component descriptions | Specification | Qty |
|---|---|---|---|---|
| 10 | 202109064 | Hex socket cylinder head screw | M6x30-GB70_1 | 8 |
| 11 | 207101166 | Type O seal ring | 110*5 | 2 |
| 12 | 202109144 | Cushion valve | M5x18 | 2 |
| 13 | 330201015 | Gear pump | CBK-F233-G | 2 |
| 14 | 202109072 | Hex socket cylinder head screw | M8x85-GB70_1 | 4 |
| 15 | 330401002 | Oil-sucking pipe | YX-BL=230 | 2 |
| 16 | 330403001 | Filter | YG-C | 2 |
| 17 | 201103001 | Hex flange head bolt | M5x25-GB5789 | 8 |
| 18 | 330405071 | Steel oil tank | 28L | 1 |
| 19 | 330305022 | Restrictive valve | LNV2-08 | 1 |
| 20 | 330305023 | Restrictive valve | M12X1 | 1 |
| 21 | 330404007 | Coupling | 46mm（LBZ-T202BK-1） | 2 |
| 22 | 330105041 | Hydraulic block | LA10081 | 1 |
| 23 | 330402001 | Oil-back pipe | YH-D | 3 |
| 24 | 330502013 | Oil tank lid | YBZ-BT-M30*2-B | 1 |
| 25 | 330105075 | Hydraulic block | LA50692 | 1 |
| 26 | 210101004 | Hex socket flat head fitting | G1/4 | 1 |
| 27 | 330304007 | Relief valve | YF08-40 | 2 |
| 28 | 330105042 | Hydraulic block | LA10161 | 1 |
| 29 | 330308011 | Solenoid valve (3P4W) | DHF06-340/DC24 | 2 |
| 30 | 202109026 | Hex socket cylinder head screw | M6X60-GB70_1 | 2 |
| 31 | 310101010 | Straight connector | G1/4---G1/4 | 6 |
| 32 | 330105076 | Hydarulic block | LA50651-B | 1 |
| 33 | 330304015 | Relief valve | RV-08-36 | 1 |
| 34 | 330308051 | Solenoid valve | 4WE6Y6X/ED24LL | 1 |
| 35 | 330308041 | Pressure compensating valve | IFC-6T-4 | 1 |

## Annex 4, Pneumatic schemes and parts list

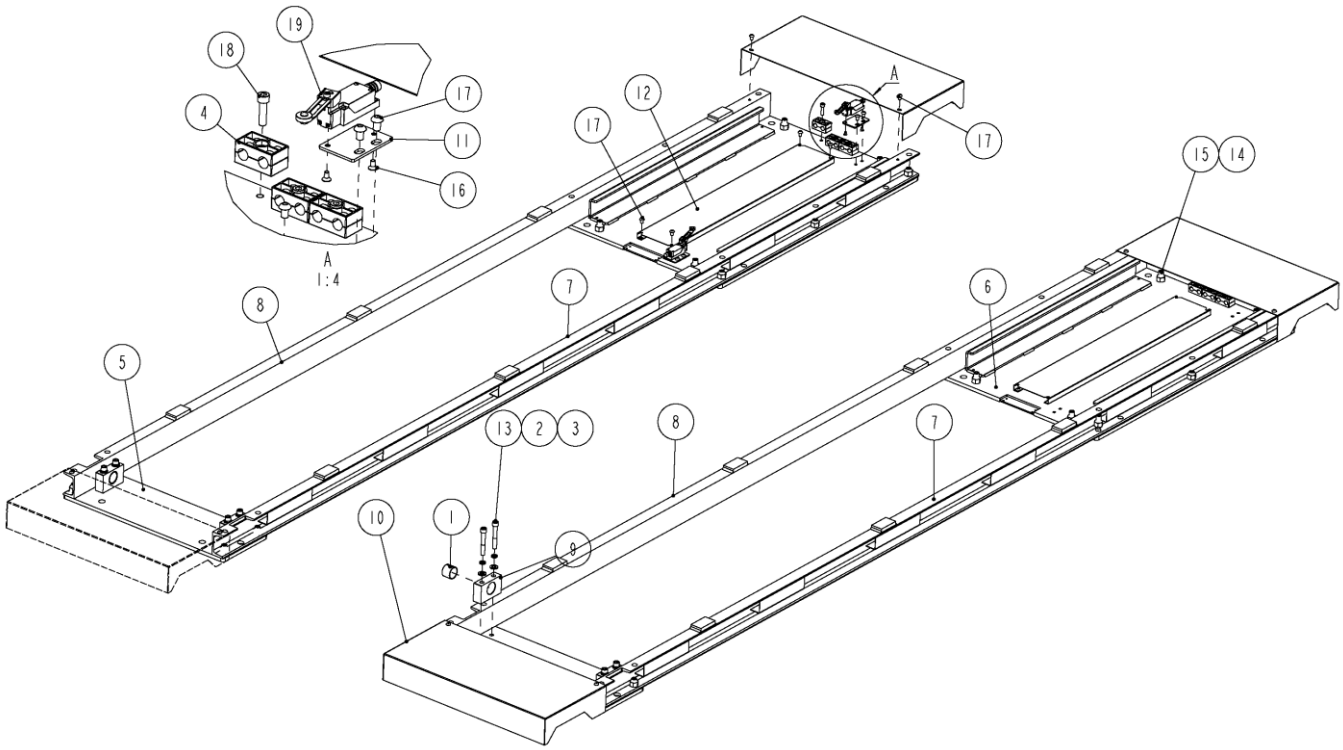



| Pos. | Code | Component descriptions | Specification | Qty |
|---|---|---|---|---|
| 1 | 310101015 | Straight connector | KLC8-02 | 3 |
| 2 | 321004006 | Air filter combination | AFC2000-M | 1 |
| 3 | 310103008 | Three-way elbow connector | PX8-M14S | 1 |
| 4 | 123010201 | Air hose | D=8 | |
| 5 | 310201003 | Silencer | SLM01-R1-8 | 4 |
| 6 | 310102015 | Elbow connector | KLL8-02 | 3 |
| 7 | 330301002 | Pull valve | 4L210-08 | 1 |
| 8 | 310103006 | Three-way connector | KLE-8 | 3 |
| 9 | 310101055 | Straight connector | KLU-8 | 4 |
| 10 | 310102024 | Elbow connector | KLL8-01 | 4 |
| 11 | 310502001 | Pneumatic cylinder | MA40X100SCA | 2 |
| 12 | 310501001 | Pneumatic cylinder | CQ2B32X20-A | 2 |
| 13 | 310102024 | Elbow connector | KLL8-01 | 2 |
| 14 | 310601001 | Spiral hose | CL-0850-6 6M | 1 |
| 15 | 310401001 | Pneumatic solenoid valve | 3V210-08DC24V | 1 |
| 16 | 310102026 | Elbow pneumatic connector | KLV-8 | 1 |
| 17 | 310201002 | Silencer | SLM02-R1-4-M12 | 1 |

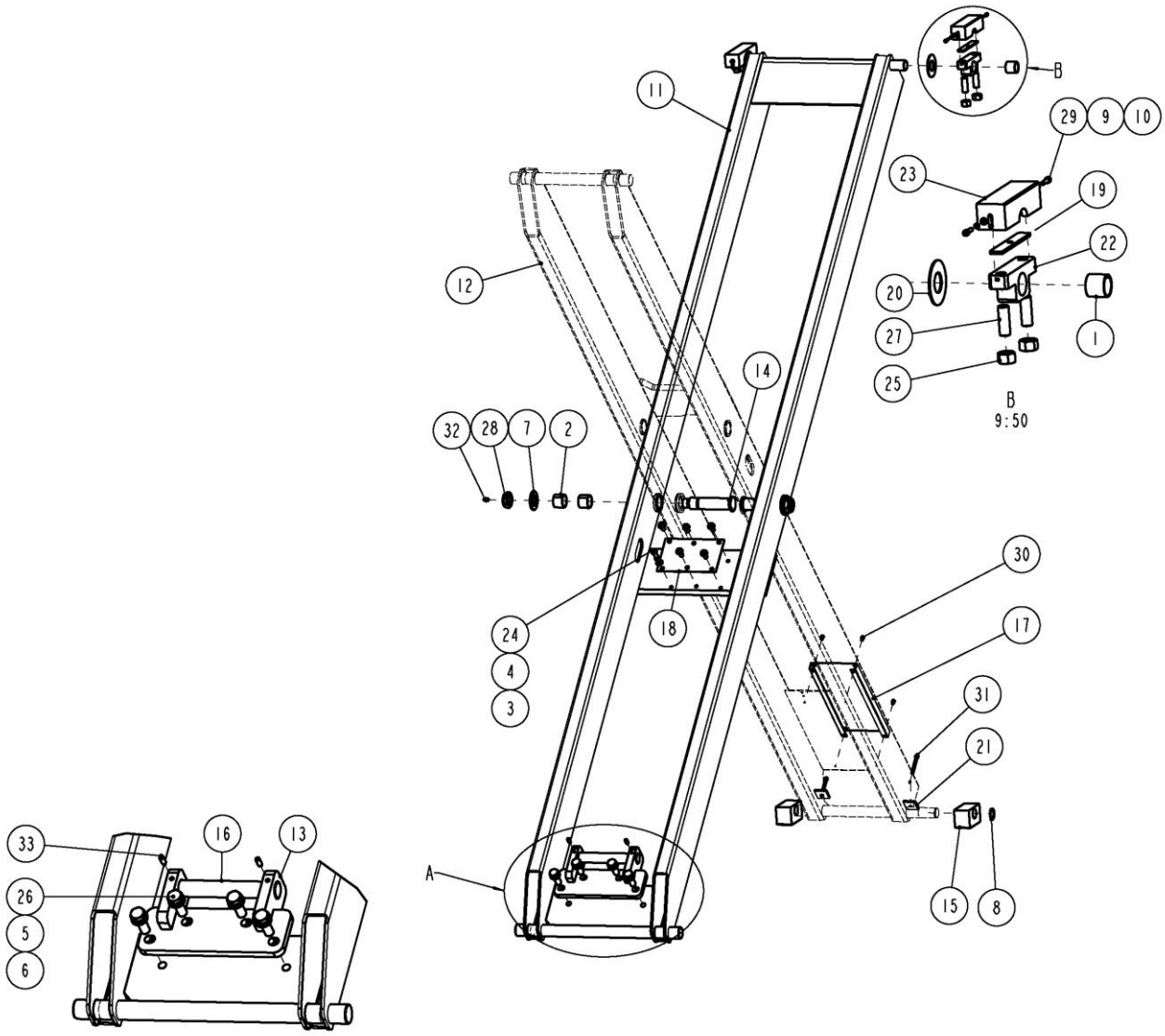
## Annex 5, exploded drawings and parts list for the mechanical parts




| Pos. | Code | Component descriptions | Specification | Qty |
|---|---|---|---|---|
| 1 | 204201005 | Spring washer | D10-GB93 | 8 |
| 2 | 204101006 | Flat washer | D10-GB95 | 8 |
| 3 | 615068568 | Base plate | HX50-A1 | 1 |
| 4 | 615068569 | Support arm | HX50-A2 | 2 |
| 5 | 615068570 | Platform A | HX50-A3 | 1 |
| 6 | 615068573 | Master cylinder | HX50-A4 | 1 |
| 7 | 615068575 | Wheel-free lift | HX50-A5 | 2 |
| 8 | 614901661 | Holder for the support rod | HX50-A8 | 2 |
| 9 | 615068605 | Middle support rod | HX50-A9 | 1 |
| 10 | 615068571 | Platform B | HX50-A3B | 1 |
| 11 | 615068574 | Slave cylinder | HX50-A4B | 1 |
| 12 | 615060140 | Master cylinder of the wheel-free lift | HX6-A5 | 1 |
| 13 | 615060150 | Slave cylinder of the wheel-free lift | HX6-A5B | 1 |
| 14 | 202109042 | Hex socket cylinder head screw | M10X25-GB70_1 | 8 |
| 15 | 202109007 | Hex socket cylinder head screw | M5X8-GB70_1 | 16 |
| 16 | 208108013 | Plastic chain cover | VBP31_F103_R55_N22 | 2 |



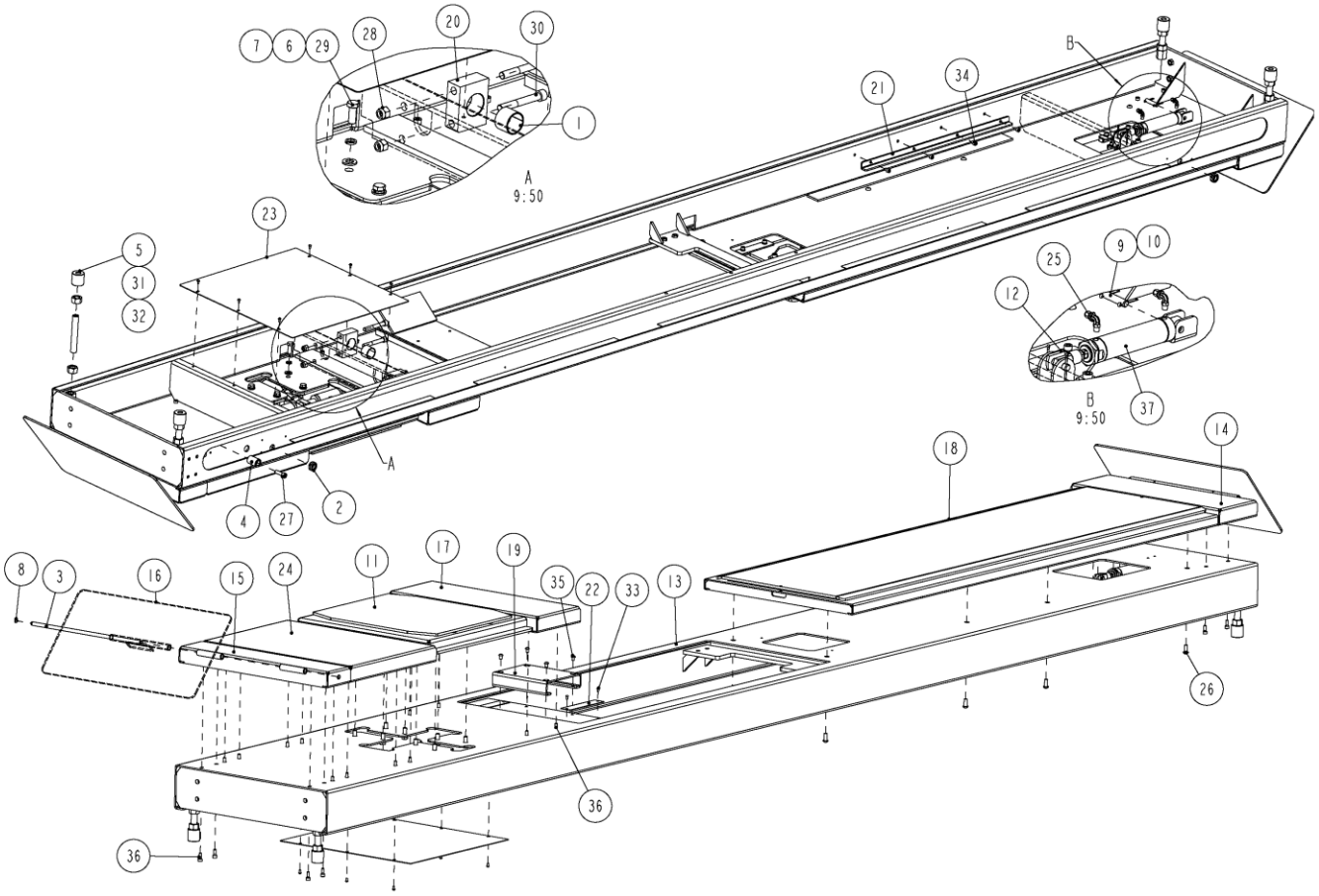

| Pos. | Code | Component descriptions | Specification | Qty |
|---|---|---|---|---|
| 1 | 205101109 | Bearing | 3530-SF-1X | 4 |
| 2 | 204201006 | Spring washer | D12-GB93 | 8 |
| 3 | 204101007 | Flat washer | D12-GB95 | 8 |
| 4 | 208101039 | Double-hole hose clamp | GJTXG1-214 | 6 |
| 5 | 410911254 | Small base plate | HX50-A1-B1 | 2 |
| 6 | 614901627 | Large base plate A | HX50-A1-B2 | 2 |
| 7 | 614901628 | Connecting slot beam A | HX50-A1-B3 | 2 |
| 8 | 614901629 | Connecting slot beam B | HX50-A1-B4 | 2 |
| 9 | 410911203 | Bottom support holder | HX50-A1-B6 | 4 |
| 10 | 410911204 | Base cover | HX50-A1-B7 | 4 |
| 11 | 410911381 | Holding plate for limit switch | HX50-A1-B8 | 2 |
| 12 | 410911200 | Oil hose cover | HX50-A1-B10 | 2 |
| 13 | 202109154 | Hex socket cylinder head screw | M12X80-GB70_1 | 8 |
| 14 | 203101009 | Type I hex nut | M16-GB6170 | 28 |
| 15 | 202205002 | Flat head locking screw | M16X50-GB77 | 28 |
| 16 | 202111001 | Hex socket flat head screw | M5X10-GB70_3 | 4 |
| 17 | 202110004 | Hex socket button head screw | M8X12-GB70_2 | 20 |
| 18 | 202109031 | Hex socket cylinder head screw | M8X30-GB70_1 | 6 |
| 19 | 320301011 | Limit switch 8108 | TZ8108 | 2 |




| Pos. | Code | Component descriptions | Specification | Qty |
|---|---|---|---|---|
| 1 | 205101020 | Bearing | 3030-SF-1X | 2 |
| 2 | 205101109 | Bearing | 3530-SF-1X | 4 |
| 3 | 204201005 | Spring washer | D10-GB93 | 6 |
| 4 | 204101006 | Flat washer C | D10-GB95 | 6 |
| 5 | 204201010 | Spring washer | D16-GB93 | 4 |
| 6 | 204101009 | Flat washer C | D16-GB95 | 4 |
| 7 | 204101015 | Flat washer C | D30-GB95 | 2 |
| 8 | 204301011 | Circle | D30-GB894_2 | 2 |
| 9 | 204201002 | Spring washer | D5-GB93 | 4 |
| 10 | 204101003 | Flat washer | D5-GB95 | 4 |
| 11 | 614901630 | Outer arm | HX50-A2-B1 | 1 |
| 12 | 614901631 | Inner arm | HX50-A2-B2 | 1 |

| Pos. | Code | Component descriptions | Specification | Qty |
|---|---|---|---|---|
| 13 | 614901632 | Bottom cylinder holder | HX50-A2-B3 | 1 |
| 14 | 410911214 | Central shaft of the arms | HX50-A2-B4 | 2 |
| 15 | 420680133 | Lower sliding block | HX50-A2-B5 | 2 |
| 16 | 410911215 | Lower cylinder shaft | HX50-A2-B7 | 1 |
| 17 | 410911216 | Hose cover | HX50-A2-B9 | 1 |
| 18 | 410911206 | Wheel padding plate | HX50-A2-B10 | 1 |
| 19 | 410911454 | Adjustable padding plate | HX50-A2-B12 | 2 |
| 20 | 410911452 | Large washer | HX50-A2-B13 | 2 |
| 21 | 410911716 | Space plate | HX50-A2-B15 | 2 |
| 22 | 410911455B | Adjustable padding plate | HX50-A2-B11_1 | 2 |
| 23 | 420680134B | Upside siliding block | HX50-A2-B6_1 | 2 |
| 24 | 202110012 | Hex socket button head screw | M10X25-GB70_2 | 6 |
| 25 | 203101009 | Type I hex nut | M16-GB6170 | 4 |
| 26 | 201103007 | Hex head full threaded bolt | M16X45-GB5783 | 4 |
| 27 | 202205002 | Flat head locking screw | M16X50-GB77 | 4 |
| 28 | 203103016 | Hex locking nut | M27X3-GB6172_1 | 2 |
| 29 | 202109011 | Hex socket cylinder head screw | M5X20-GB70_1 | 4 |
| 30 | 202109007 | Hex socket cylinder head screw | M5X8-GB70_1 | 4 |
| 31 | 202109026 | Hex socket cylinder head screw | M6X60-GB70_1 | 2 |
| 32 | 208106001 | Oil injection cup | M8X1-JB9740_1 | 2 |
| 33 | 202208010 | Hex socket cylinder head locking screw | M8X20-GB79 | 2 |

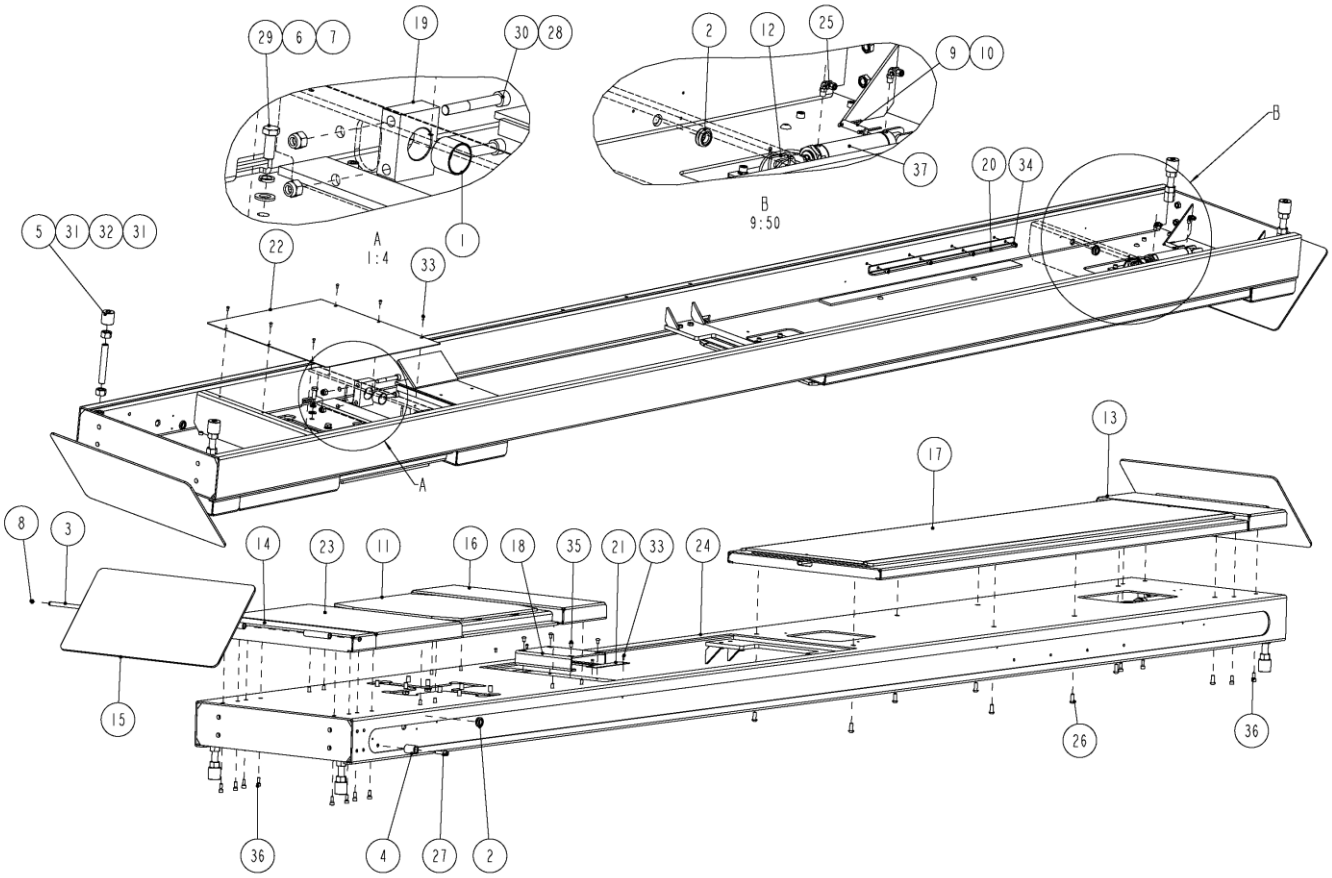
**Platform A assembly**




| Pos. | Code | Component descriptions | Specification | Qty |
|---|---|---|---|---|
| 1 | 205101109 | Bearing | 3530-SF-1X | 2 |
| 2 | 420040020 | Protective ring Φ20 | 6254E-A22 | 2 |
| 3 | 410250211 | Shaft of the ramp | 6604V2-A4-B12 | 2 |
| 4 | 420260040 | Limit block | 6605B-A21 | 1 |
| 5 | 420260010 | Adjustable nylon block | 6605B-A1-B8 | 4 |
| 6 | 204201006 | Spring washer | D12-GB93 | 8 |
| 7 | 204101007 | Flat washer | D12-GB95 | 8 |
| 8 | 204301002 | Circle | D12-GB894_1 | 4 |
| 9 | 206103005 | Pin with hole | D12X55-GB880 | 1 |
| 10 | 206201008 | Cotter pin | D4X30-GB91 | 2 |
| 11 | 615068567 | PD8 assembly | EE-PD8-50 | 1 |
| 12 | 310304002 | Y connector | F-M12X125-Y | 1 |
| 13 | 614901633 | Platform A | HX50-A3-B1 | 1 |
| 14 | 614901635 | Fixed box 205mm | HX50-A3-B2 | 1 |
| 15 | 614901636 | Fix box 125mm | HX50-A3-B3 | 1 |
| 16 | 614901637 | Small ramp | HX50-A3-B4 | 2 |

| Pos. | Code | Component descriptions | Specification | Qty |
|---|---|---|---|---|
| 17 | 614901638 | Fix box 235mm | HX50-A3-B6 | 1 |
| 18 | 615068572 | Slip plate assembly | HX50-A3-B7 | 1 |
| 19 | 410911291 | Limit plate for the wheel-free lift | HX50-A3-B8 | 1 |
| 20 | 410911223 | Upper support holder | HX50-A3-B9 | 2 |
| 21 | 410911383 | Anti-overturning upper plate | HX50-A3-B10 | 2 |
| 22 | 410911218 | Anti-wear plate | HX50-A3-B11 | 2 |
| 23 | 410911219 | Covering plate for PD | HX50-A3-B12 | 1 |
| 24 | 614901634 | Box 470mm | HX50-A3-B13 | 1 |
| 25 | 310102024 | Quick elbow pneumatic connector | KLL8-01 | 2 |
| 26 | 202110012 | Hex socket button head screw | M10X25-GB70_2 | 8 |
| 27 | 202109044 | Hex socket cylinder head screw | M10X35-GB70_1 | 1 |
| 28 | 203103008 | Hex locking nut | M12-GB889_1 | 4 |
| 29 | 201102027 | Hex head full threaded bolt | M12X30-GB5783 | 8 |
| 30 | 202109155 | Hex socket cylinder head screw | M12X90-GB70_1 | 4 |
| 31 | 203101012 | Hex nut | M20-GB6170 | 8 |
| 32 | 202205005 | Hex socket flat head locking screw | M20X140-GB77 | 4 |
| 33 | 202110003 | Hex socket button head screw | M6X12-GB70_2 | 10 |
| 34 | 202109148 | Hex socket cylinder head screw | M8X10-GB70_1 | 8 |
| 35 | 202110004 | Hex socket button head screw | M8X12-GB70_2 | 4 |
| 36 | 202109029 | Hex socket cylinder head screw | M8X20-GB70_1 | 20 |
| 37 | 310502001 | Pneumatic cylinder | MA40X100SCA | 1 |

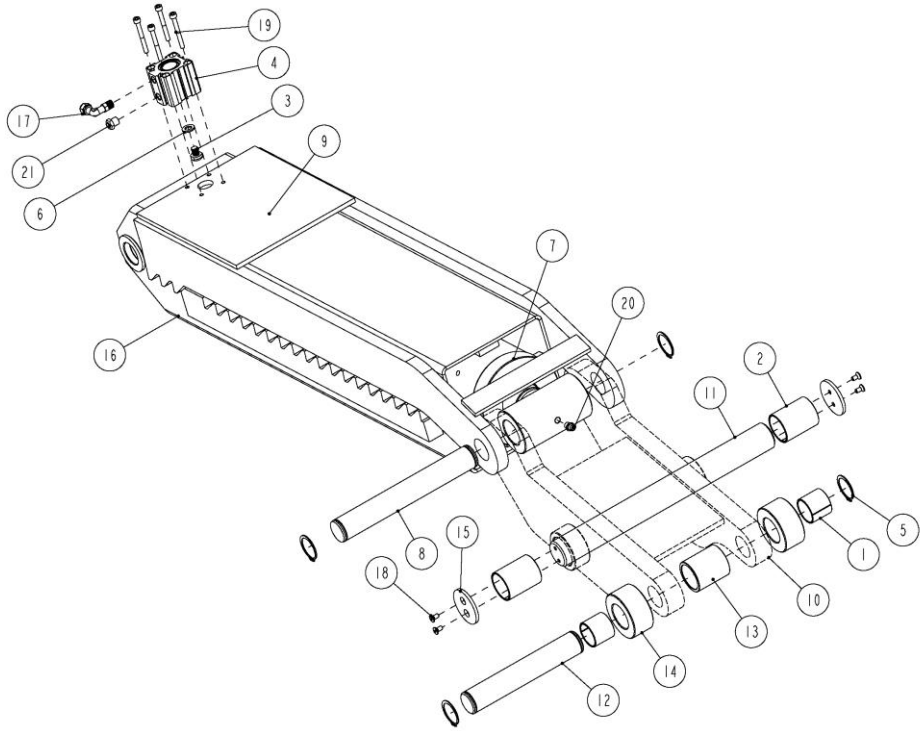
**Platform B assembly**




| Pos. | Code | Component descriptions | Specification | Qty |
|---|---|---|---|---|
| 1 | 205101109 | Bearing | 3530-SF-1X | 2 |
| 2 | 420040020 | Protective ring Φ20 | 6254E-A22 | 2 |
| 3 | 410250211 | Shaft of the ramp | 6604V2-A4-B12 | 2 |
| 4 | 420260040 | Limit block | 6605B-A21 | 1 |
| 5 | 420260010 | Adjustable nylon block | 6605B-A1-B8 | 4 |
| 6 | 204201006 | Spring washer | D12-GB93 | 8 |
| 7 | 204101007 | Flat washer | D12-GB95 | 8 |
| 8 | 204301002 | Circle | D12-GB894_1 | 4 |
| 9 | 206103005 | Pin with hole | D12X55-GB880 | 1 |
| 10 | 206201004 | Cotter pin | D3X45-GB91 | 2 |
| 11 | 615068567 | PD8 assembly | EE-PD8-50 | 1 |
| 12 | 310304002 | Y connector | F-M12X125-Y | 1 |
| 13 | 614901635 | Fixed box 205mm | HX50-A3-B2 | 1 |
| 14 | 614901636 | Fix box 125mm | HX50-A3-B3 | 1 |
| 15 | 614901637 | Small ramp | HX50-A3-B4 | 2 |
| 16 | 614901638 | Fix box 235mm | HX50-A3-B6 | 1 |
| 17 | 615068572 | Slip plate assembly | HX50-A3-B7 | 1 |

| Pos. | Code | Component descriptions | Specification | Qty |
|---|---|---|---|---|
| 18 | 410911291 | Limit plate for the wheel-free lift | HX50-A3-B8 | 1 |
| 19 | 410911223 | Upper support holder | HX50-A3-B9 | 2 |
| 20 | 410911383 | Anti-overturning upper plate | HX50-A3-B10 | 2 |
| 21 | 410911218 | Anti-wear plate | HX50-A3-B11 | 2 |
| 22 | 410911219 | Covering plate for PD | HX50-A3-B12 | 1 |
| 23 | 614901634 | Box 470mm | HX50-A3-B13 | 1 |
| 24 | 614901639 | Weld platform B | HX50-A3B-B1 | 1 |
| 25 | 310102024 | Quick elbow pneumatic connector | KLL8-01 | 2 |
| 26 | 202110012 | Hex socket button head screw | M10X25-GB70_2 | 8 |
| 27 | 202109044 | Hex socket cylinder head screw | M10X35-GB70_1 | 1 |
| 28 | 203103008 | Hex locking nut | M12-GB889_1 | 4 |
| 29 | 201102027 | Hex head full threaded bolt | M12X30-GB5783 | 8 |
| 30 | 202109155 | Hex socket cylinder head screw | M12X90-GB70_1 | 4 |
| 31 | 203101012 | Hex nut | M20-GB6170 | 8 |
| 32 | 202205005 | Hex socket flat head locking screw | M20X140-GB77 | 4 |
| 33 | 202110003 | Hex socket button head screw | M6X12-GB70_2 | 10 |
| 34 | 202109148 | Hex socket cylinder head screw | M8X10-GB70_1 | 8 |
| 35 | 202110004 | Hex socket button head screw | M8X12-GB70_2 | 4 |
| 36 | 202109029 | Hex socket cylinder head screw | M8X20-GB70_1 | 20 |
| 37 | 310502001 | Pneumatic cylinder | MA40X100SCA | 1 |

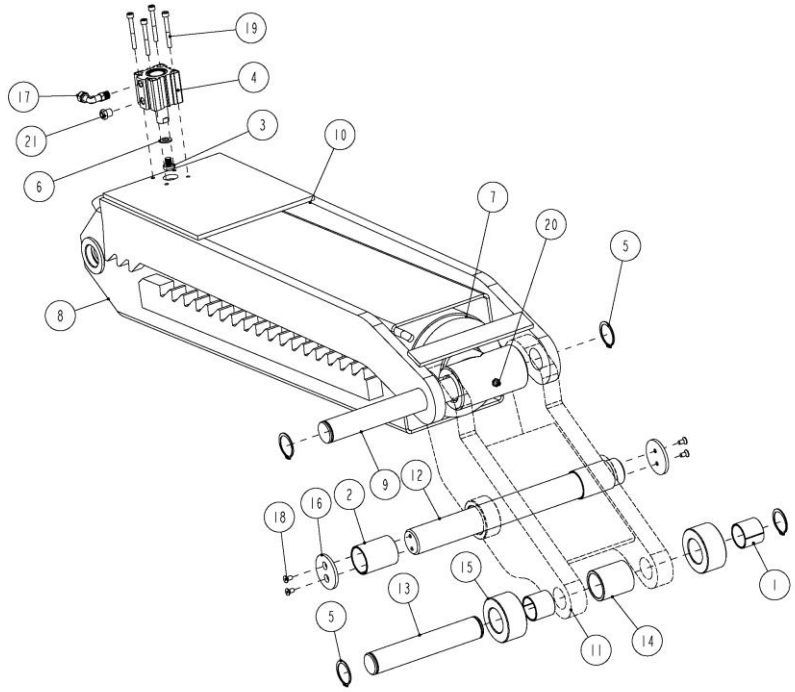
**Slave cylinder and latch assembly for the wheel-support platform**




| Pos. | Code | Component descriptions | Specification | Qty |
|---|---|---|---|---|
| 1 | 205101020 | Bearing | 3030-SF-1X | 2 |
| 2 | 205101030 | Bearing | 3550-SF-2X | 2 |
| 3 | 420420010 | Adjustable head | 66035-A03-B09 | 1 |
| 4 | 310501001 | Pneumatic cylinder | CQ2B32X20-A | 1 |
| 5 | 204301011 | Circlip | D30-GB894_2 | 4 |
| 6 | 204101005 | Flat washer | D8-GB95 | 1 |
| 7 | 410911226 | Upper shaft of oil cylinder | HX50-A4-B2 | 1 |
| 8 | 614901641 | Welded large side plate | HX50-A4-B3 | 1 |
| 9 | 614901642 | Start plate | HX50-A4-B4 | 1 |
| 10 | 410911229 | Central plate for the start plate | HX50-A4-B5 | 1 |
| 11 | 410911230 | Shaft for rolling wheel | HX50-A4-B6 | 1 |
| 12 | 410911231 | Spacer sheath for the start plate | HX50-A4-B7 | 1 |
| 13 | 410911232 | Rolling wheel | HX50-A4-B8 | 2 |
| 14 | 410911380 | Stop plate for shaft | HX50-A4-B9 | 2 |
| 15 | 614901643 | Welded secondary safety ratchet | HX50-A4B-B1 | 1 |
| 16 | 310102024 | Quick elbow pneumatic connector | KLL8-01 | 1 |
| 17 | 202111001 | Hex socket flat head screw | M5X10-GB70_3 | 4 |
| 18 | 202109014 | Hex socket cylinder head screw | M5X45-GB70_1 | 4 |
| 19 | 208106001 | Straight grease injection cup | M8X1-JB9740_1 | 1 |
| 20 | 310201003 | Silencer | SLM01-R1-8 | 1 |

| Pos. | Code | Component descriptions | Specification | Qty |
|---|---|---|---|---|
| 21 | 615068517 | Slave cylinder for wheel-support platform | YG100-114-50-645 | 1 |

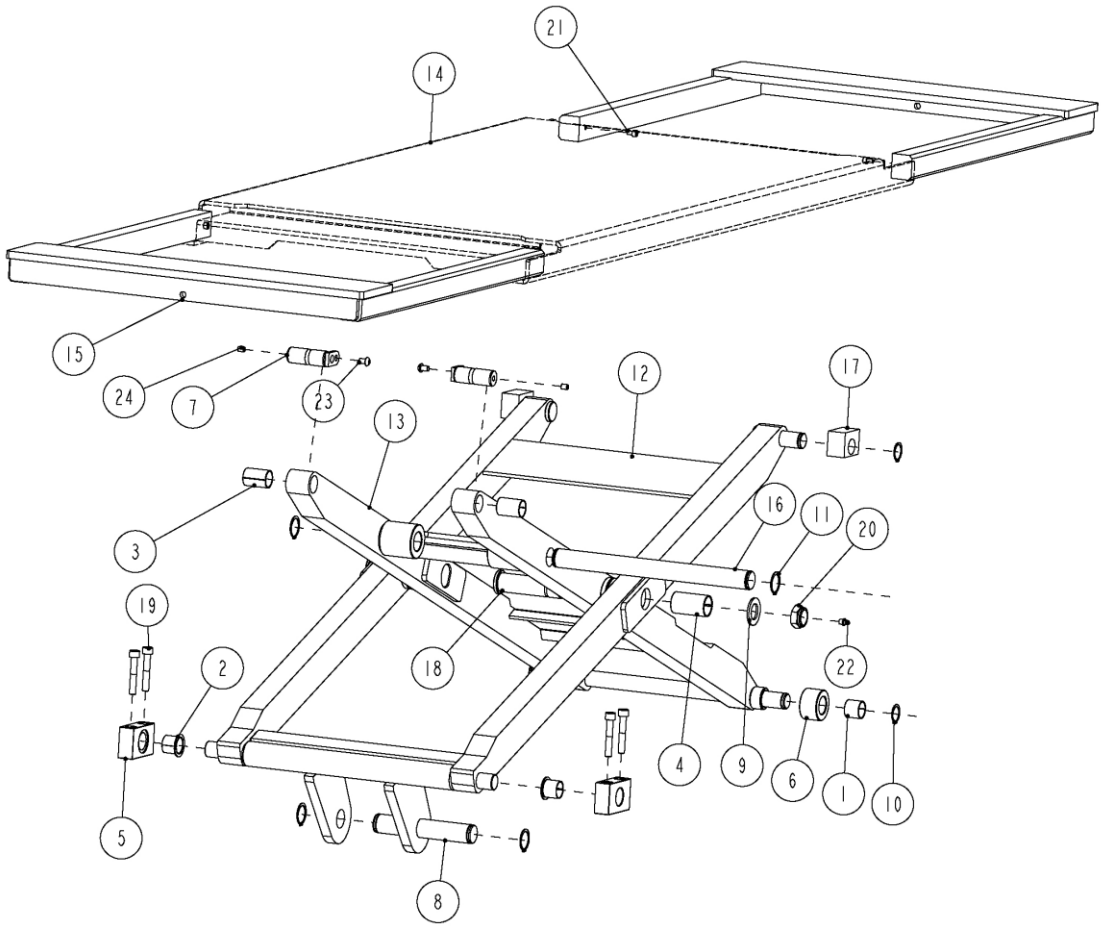
**Master cylinder and latch assembly for the wheel-support platform**




| Pos. | Code | Component descriptions | Specification | Qty |
|---|---|---|---|---|
| 1 | 205101020 | Bushing | 3030-SF-1X | 2 |
| 2 | 205101030 | Bushing | 3550-SF-2X | 2 |
| 3 | 420420010 | Adjustable head | 66035-A03-B09 | 1 |
| 4 | 310501001 | Pneumatic cylinder | CQ2B32X20-A | 1 |
| 5 | 204301011 | Circlip | D30-GB894_2 | 4 |
| 6 | 204101005 | Flat washer | D8-GB95 | 1 |
| 7 | 614901640 | Mechanical lock assembly for the master platform | HX50-A4-B1 | 1 |
| 8 | 410911226 | Upper cylinder shaft | HX50-A4-B2 | 1 |
| 9 | 614901641 | Large side plate | HX50-A4-B3 | 1 |
| 10 | 614901642 | Start rolling plate | HX50-A4-B4 | 1 |
| 11 | 410911229 | Middle shaft of the start rolling plate | HX50-A4-B5 | 1 |
| 12 | 410911230 | Shaft of the rolling wheel | HX50-A4-B6 | 1 |
| 13 | 410911231 | Spacer sheath of the start rolling plate | HX50-A4-B7 | 1 |
| 14 | 410911232 | Rolling wheel | HX50-A4-B8 | 2 |
| 15 | 410911380 | Stop chip for the shaft | HX50-A4-B9 | 2 |
| 16 | 310102024 | Quick elbow pneumatic connector | KLL8-01 | 1 |
| 17 | 202111001 | Hex socket flat head screw | M5X10-GB70_3 | 4 |
| 18 | 202109014 | Hex socket cylinder head screw | M5X45-GB70_1 | 4 |
| 19 | 208106001 | Straight grease injection cup | M8X1-JB9740_1 | 1 |

| | | | | |
|---|---|---|---|---|
| 20 | 310201003 | Silencer | SLM01-R1-8 | 1 |
| 21 | 615068516 | Master cylinder of the wheel-support platform | YG120-140-67-645 | 1 |

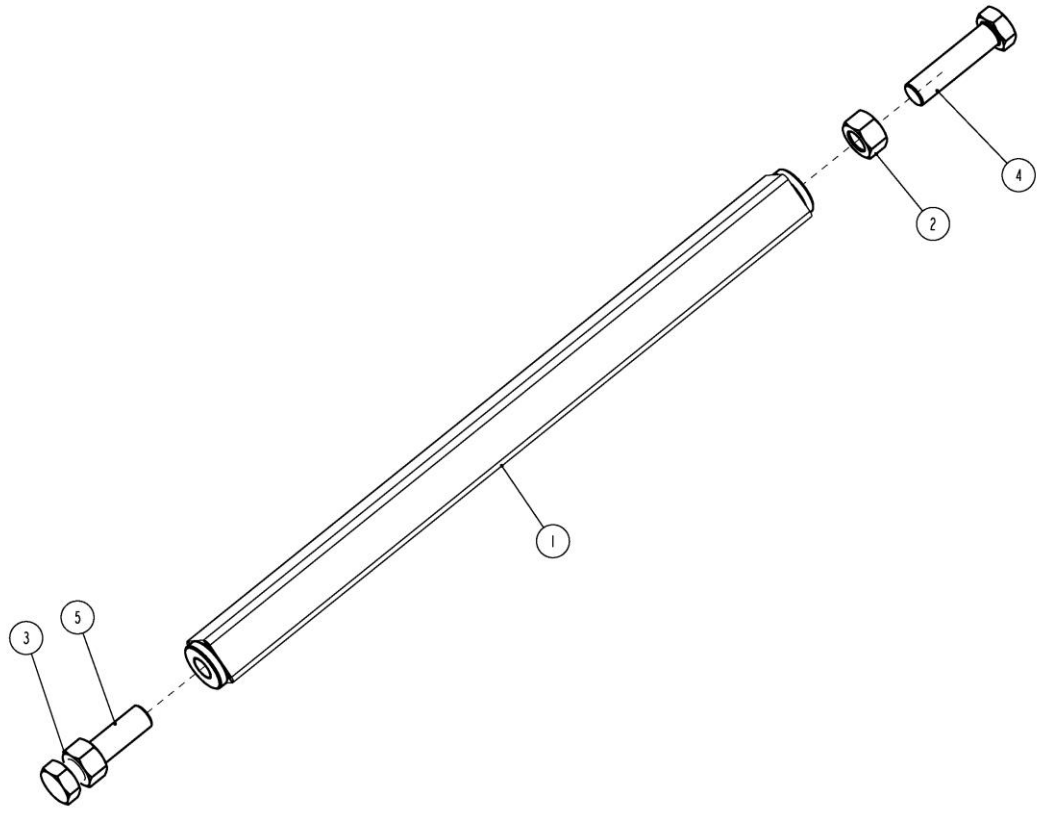
**Wheel-free platform**



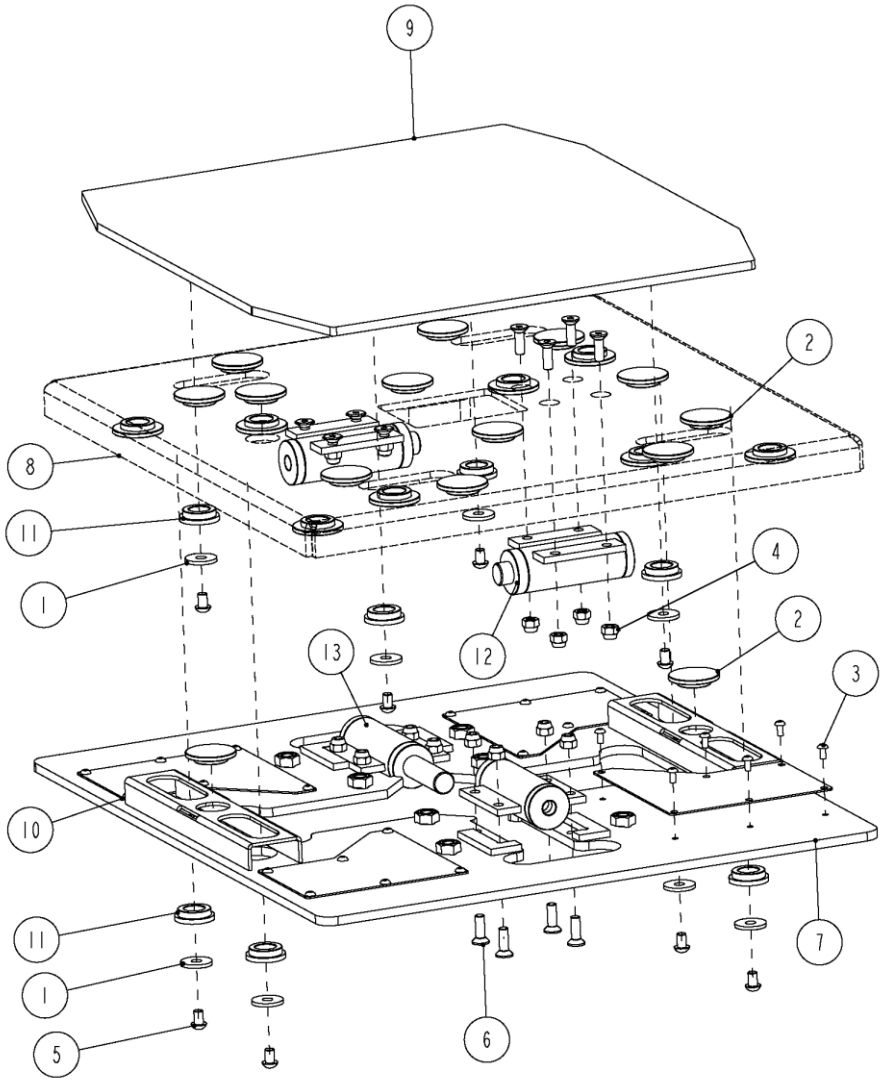

| Pos. | Code | Component descriptions | Specification | Qty |
|---|---|---|---|---|
| 1 | 205101010 | Bushing | 2525-SF-1X | 2 |
| 2 | 205103003 | Flange bushing | 2525F | 2 |
| 3 | 205101094 | Bushing | 2540-SF-1X | 2 |
| 4 | 205101024 | Bushing | 3055-SF-1X | 2 |
| 5 | 410276701 | Bottom holder | 6435BWF-C03-20 | 2 |
| 6 | 410276711B | Rolling wheel | 6435BWF-C03-21 | 2 |
| 7 | 612019504 | Weld Revolving shaft assembly | 65012-A1-B5 | 2 |
| 8 | 410254541 | Lower cylinder shaft for the wheel-free lift | 6604V2-A7-B7 | 1 |
| 9 | 204101012 | Flat washer | D24-GB95 | 2 |
| 10 | 204301009 | Circlip | D25-GB894_2 | 4 |
| 11 | 204301011 | Circlip | D30-GB894_2 | 4 |
| 12 | 614901644 | Outer support arm of the wheel-free lift | HX50-A5-B1 | 1 |
| 13 | 614901645 | Inner support arm of the wheel-free lift | HX50-A5-B2 | 1 |
| 14 | 614901646 | Platform of the wheel-free lift | HX50-A5-B3 | 1 |

| Pos. | Code | Component descriptions | Specification | Qty |
|---|---|---|---|---|
| 15 | 614901647 | Platform extension | HX50-A5-B4 | 2 |
| 16 | 410911239 | Upper cylinder shaft for the wheel-free lift | HX50-A5-B5 | 1 |
| 17 | 420680135 | Upper sliding block for the wheel-free lift | HX50-A5-B6 | 2 |
| 18 | 410911240 | Middle shaft of the support arm | HX50-A5-B7 | 2 |
| 19 | 202109153 | Hex socket cylinder head screw | M10X60-GB70_1 | 4 |
| 20 | 203103018 | Hex locking nut | M24X3-GB6172_2 | 2 |
| 21 | 202109018 | Hex socket cylinder head screw | M6X10-GB70_1 | 4 |
| 22 | 208106001 | Straight grease injection cup | M8X1-JB9740_1 | 2 |
| 23 | 202110004 | Hex socket cylinder head screw | M8X12-GB70_2 | 2 |
| 24 | 208106002 | Press-fit grease injection cup | M8YP-JB9740_4 | 2 |

**Connection bar assembly**




| Pos. | Code | Component descriptions | Specification | Qty |
|---|---|---|---|---|
| 1 | 614901682 | Middle support rod | HX50-A9-B1 | 1 |
| 2 | 203101012 | Hex nut | M20-GB6170 | 1 |
| 3 | 203101020 | Hex nut (counter-clockwise screw ) | M20-LH-GB6170 | 1 |
| 4 | 201101105 | He head bolt | M20X80-GB5783 | 1 |
| 5 | 201101104 | He head bolt (counter-clockwise screw ) | M20X80-LH-GB5783 | 1 |




| Pos. | Code | Component descriptions | Specification | Qty |
|---|---|---|---|---|
| 1 | 204104203 | Large washer | D8-GB5287 | 8 |
| 2 | 420310020C | Nylon pad | GEG-PD-A1-B5 | 22 |
| 3 | 202110001 | Hex socket button head screw | M5X8-GB70_2 | 24 |
| 4 | 203103006 | Locking nut | M8-GB889_1 | 16 |
| 5 | 202110004 | Hex socket button head screw | M8X12-GB70_2 | 8 |
| 6 | 202111035 | Hex socket flat head screw | M8X25-GB70_3 | 16 |
| 7 | 614901648 | Base plate | PD8-50-A1-B1 | 1 |
| 8 | 614901649 | Central box | PD8-50-A1-B2 | 1 |
| 9 | 612901650 | Upper covering plate | PD8-50-A1-B3 | 1 |
| 10 | 410911244 | Stainless steel pad plate | PD8-50-A1-B4 | 4 |
| 11 | 420680136 | Nylon sheath | PD8-50-A1-B5 | 8 |
| 12 | 625000004 | PD cylinder 1 | YG30-40-20-53-59 | 2 |
| 13 | 625000018 | PD cylinder 2 | YG30-40-20-53-70 | 2 |