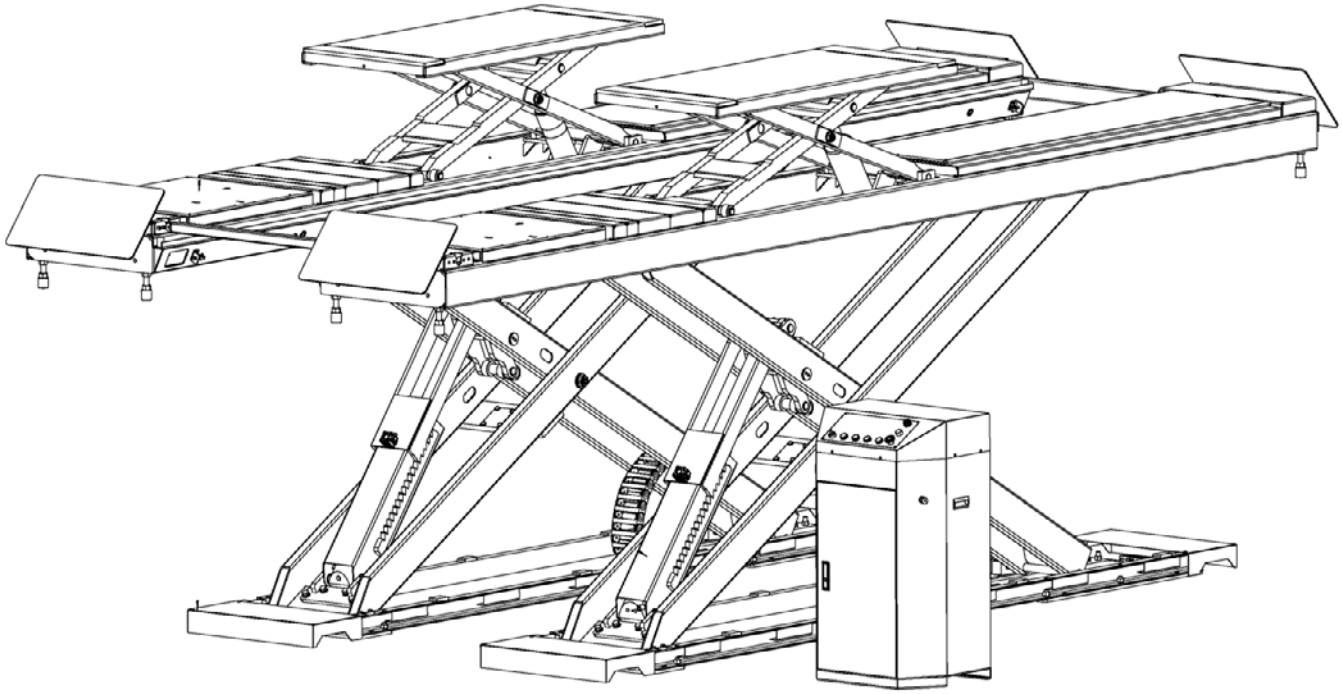
Model No. EE-HX50BWF.PD8N

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

Installation, Operation and Parts Manual

QLINE GARAGE EQUIPMENT By AHCON®



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

DATE: 15/01/2025

www.flex1one.dk

IMPORTANT NOTES

Before start up, connecting and operating Q-LINE 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 Q-LINE 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 Q-LINE 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 Q-LINE 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 Q-LINE.

All information in this manual is believed to be correct at time of publication.
Q-LINE 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	166	1
2 lifting platforms	Steel bracket	5250*780*900	3143	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:

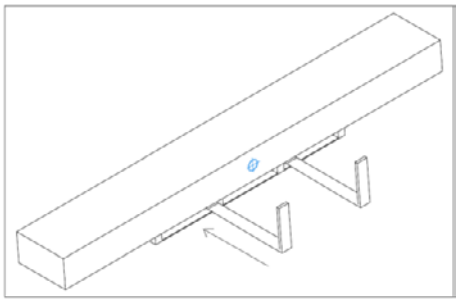
-never stack to more than 2 meters in height.

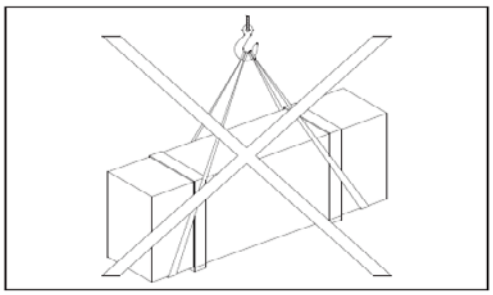
-never make stacks of single packs. Always stack pairs of packs in a cross pattern so that the base is bigger and the resulting stack is more stable. Once the stack is complete, restrain it using straps, ropes or other suitable methods.

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

Version 2, 2024.12

Recommended platform distance	**850mm**
Maximum platform distance	**950mm**

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. 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-support platform from tipping up, in case of unbalanced load distribution.
5	Protection against tipping up	Protect wheel-free 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. 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
Maximum axle load of the PD (kg)	3000
Full raised height of the wheel-support lifting platform (mm) –Version 2, 2024.12	**2130**
Full raised height of the wheel-support lifting platform (mm) –Version 2, 2024.12	**2135**
Full raised height of the wheel-free lifting platform (mm)	410
Initial height of the wheel-support lifting platform (mm) –Version 2, 2024.12	**315**
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)	28
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 3.3 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 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 cured at least for 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	**PD control**		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 shall be done by qualified electricians.

Connect the wire connectors for limit switches and LED lamps (The lamps are optional).

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.

Caution!

In the case that the motor runs but the platform does not move upwards after pushing "UP" button for more than 30 seconds, please correct the sequence order of the motor's wiring by *interchanging the connection of wire L1 with L2 or L3*,

Level the wheel-support platforms

1) Connect the power supply cord 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)

Repeat the above steps until run synchronously.

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 buttons to check the synchronization.

Step 9: 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 10: Install the mechanical connecting bar

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

Step 11: Install the mechanical connecting tube.

Tighten the screws that fix the tube with the rear ends of the platforms.

1.Hex socket cylinder head screw M12x35

2.Spring washer D12

3.Flat washer D12

4.4 Items to be checked after installation.

S/N	Check items	YES	NO
1	Screw torque of expansion bolts : 80-100Nm;	√	
2	Rising speed ≥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

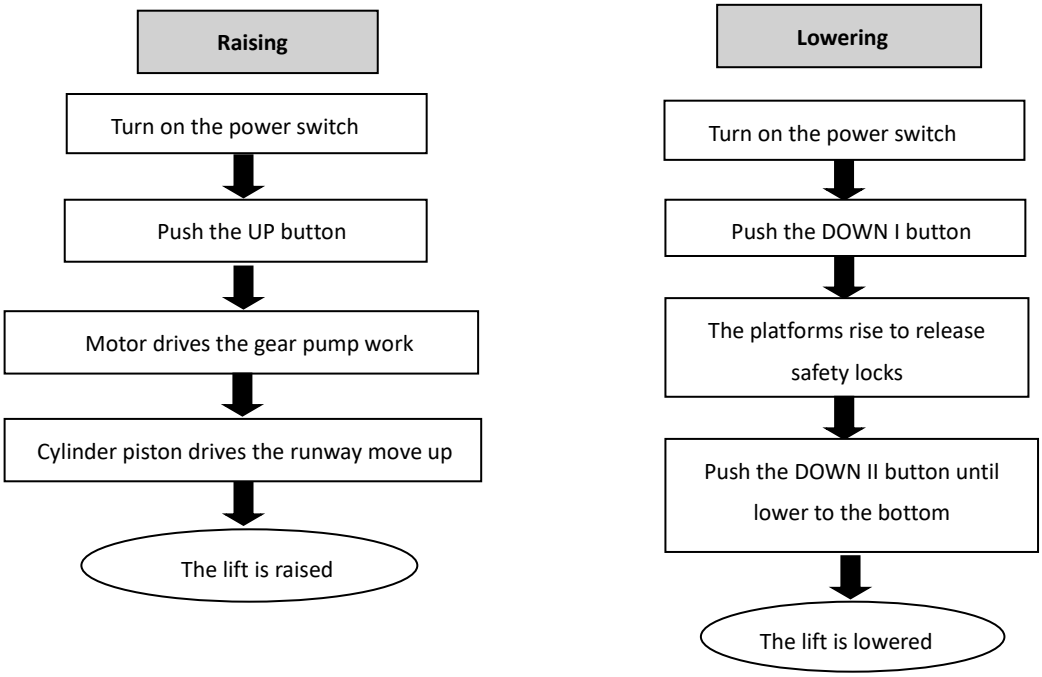
5.1.10 It is forbidden for people to stand in the field of motion during raising or lowering movement.

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 control 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 by the wheel-support platform

Max. Load: 5000KG

Lock the slip plates.

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 by the wheel-free platform

Max. Load: 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

Maximum axle load: 3000KG

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. Use the inspection torch

Pos.1: Charger Pos.2: Port for the charger

Pos.3: Button for the lamp. Push this button to turn on or turn off the lamp.

Pos.4: Start button. Push down to activate control buttons for PD movement.

Pos.5: Stop button. Push down to turn off. Turn anticlockwise to turn on.

Pos.6: Indicating lamp. Flashing red to indicate invalid control. Flashing green to indicate valid control.

Pos.7: Pressing and holding the one of the eight buttons to operate one PD plate for one movement at a time.

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 working solenoid valve does not work electrically.	Check the corresponding wire connection. (Pos.17 in the exploded scheme, coded as YV6 or YV8 in the electrical scheme)
	The working solenoid valve is jammed.	Clean the valve. (Pos.17 in the exploded scheme, coded as YV6 or YV8)
	The spool, attached with the unloading valve, for emergency descent was not screwed tight.	Tighten the spool. (Pos.19 in the exploded scheme, coded as YV0 or YV1)
	Damaged valve spool of the unloading valve.	Replace with a new valve. (Pos.19 in the exploded scheme, coded as YV0 or YV1)
	Damaged cushion valve.	Replace with a new cushion valve. (Pos.7 on the exploded scheme)
	Damaged gear pump.	Replace with a new gear pump. (Pos.8 on the exploded scheme)
	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

TROUBLES	POSSIBLE CAUSES	SOLUTIONS
		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.19 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)
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.
	The spool, attached with the unloading valve, for emergency descent was not screwed tight.	Tighten the spool. (Pos.19 in the exploded scheme, coded as YV0 or YV1) 
	Damaged valve spool of the unloading valve.	Replace with a new valve. (Pos.19 in the exploded scheme, coded as YV0 or YV1)
Lowering too slowly.	Jammed oil hose Any of the connector of for the above hoses was deformed.	Clean or replace it. (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. (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.

TROUBLES	POSSIBLE CAUSES	SOLUTIONS
	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.
	Poor contact of the selection switch for PD and Lift function or the selection switch is damaged.	Check the wire connection. Replace with a selection switch.
	Solenoid valve for PD does not work (due to no electricity or damage).	Check the wire connection. Replace with a new valve.
	Any of oil hose for PD system is leaked.	Check the hoses and replace the leaking hose.

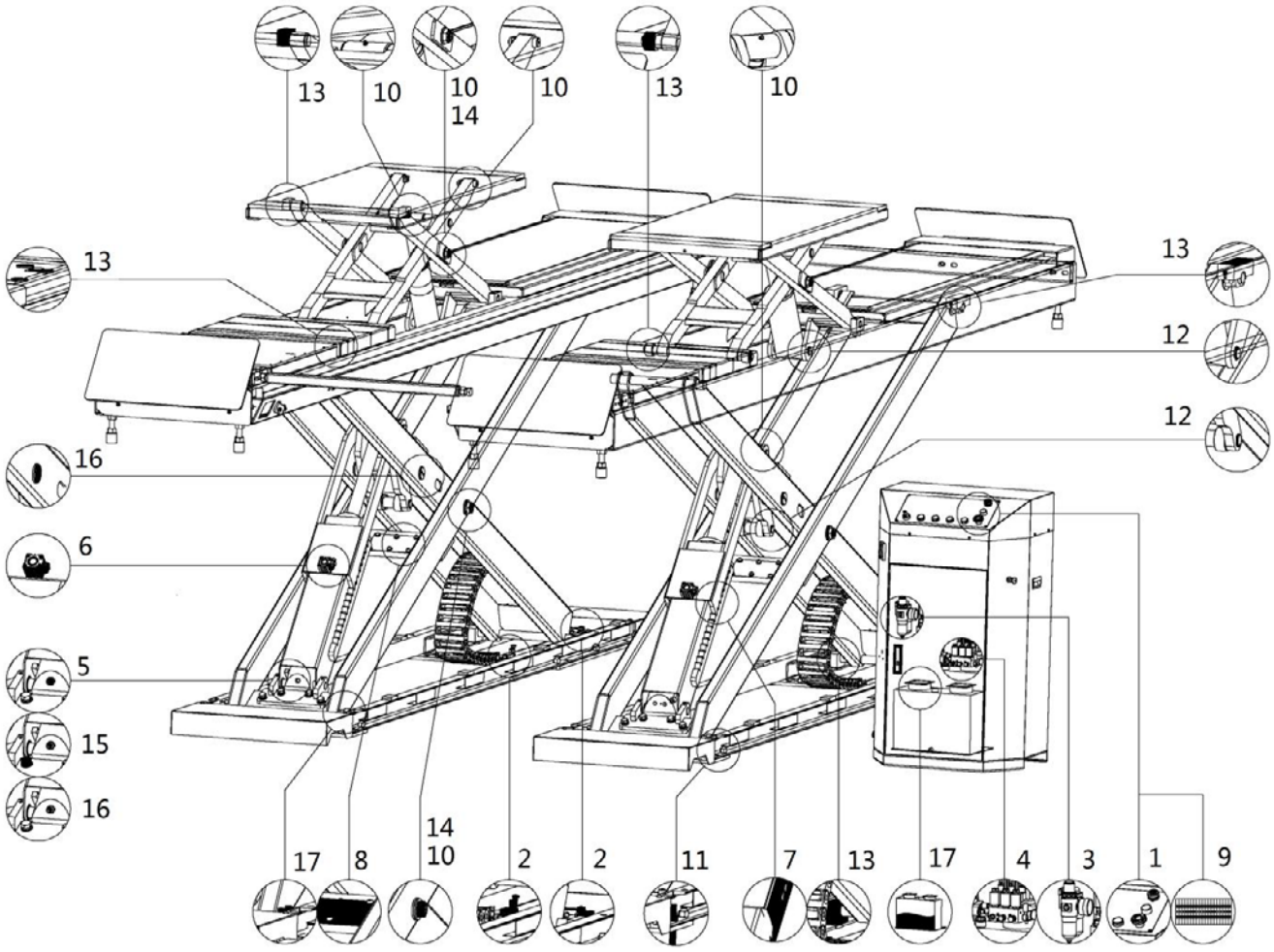
MAINTENANCE

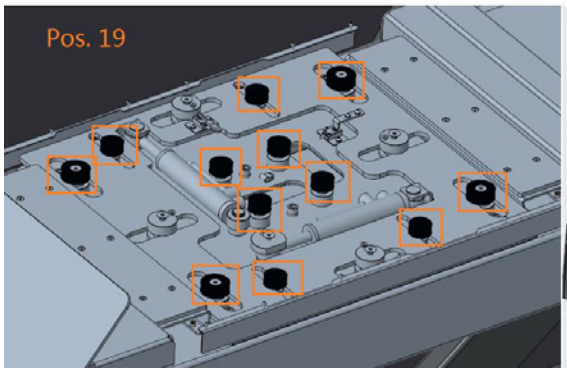
Easy and low cost routine maintenance can ensure the lift work normally and safely.

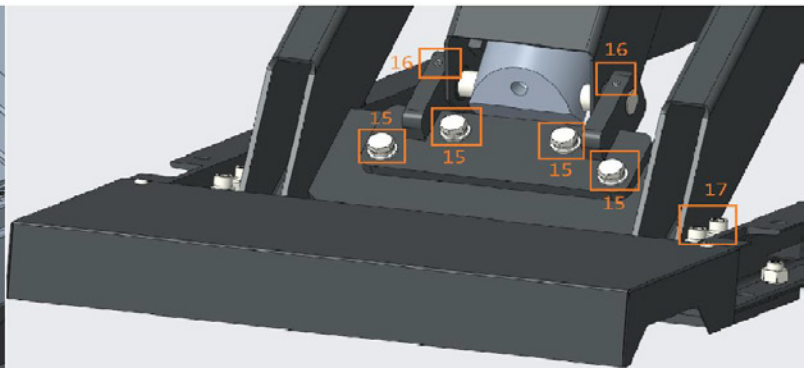
Following are requirements for routine maintenance.

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.







Pos.	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

Pos.	Components	Methods	Period
2	Limit switches for max rise and safe descent	Push the UP button, inspect and ensure the lifting platform stop rising at maximum lifting height. Push the DOWN I button, inspect and ensure the lifting platform stop lowering at a proper level above ground.	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 the valves. Clean or change the valve if any leakage.	Every day
5	Oil hoses and connectors	Inspect the oil hoses and connectors. Assure that there is 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	Push the control buttons and check if both mechanical catches can engage and disengage effectively and synchronously.	Every day
8	Padding plate for the start roller	Add grease onto its surface. Tighten the plate.	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	Nipples for lubrication	Inject lithium grease.	Every 3 months
11	Anchored expansion bolts	Check with torque spanner. 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 and rolling wheels	Add lithium grease onto the tracks on which the blocks and wheels move.	Every 3 months
14	Self-locking nut	Tighten the nuts. The torque shall be no less than 330Nm.	Every 3 months
15	Bolt	Tighten the bolts. The torque should be no less than 190Nm.	Every 3 months
16	Bolt	Tighten the bolts. The torque should be no less than 190Nm.	Every 3 months
17	Bolt	Tighten the bolts. The torque should be no less than 75Nm.	Every 3 months
18	Hydraulic oil	Change the oil 6 months after initial use and once per year thereafter. Inspect the hydraulic oil and change the oil if the oil becomes black or there is dirt in the oil tank.	Every year
19	Supporting pads under the PD covering plates	Add lithium grease onto the pads. Replace over-worn pads.	Every year
	Lifting platform synchronization	Check the synchronization of both lifting platforms. Ensure both platforms ascend and descend synchronously.	Every day
	Whole Lift	Running the lift for several cycles with and without rated	Every 3 months

Pos.	Components	Methods	Period
		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.	

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:

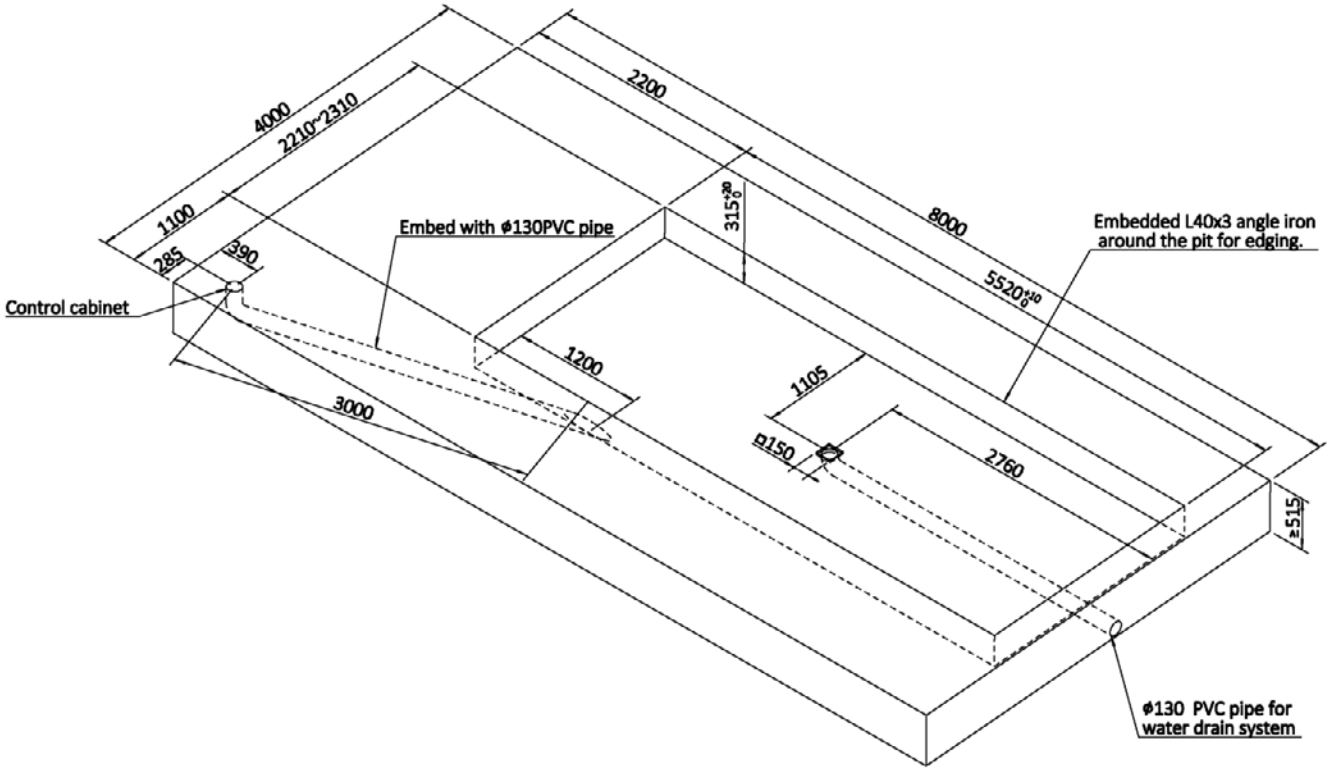
C25-C30 concrete base with the least thickness being 200mm.

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

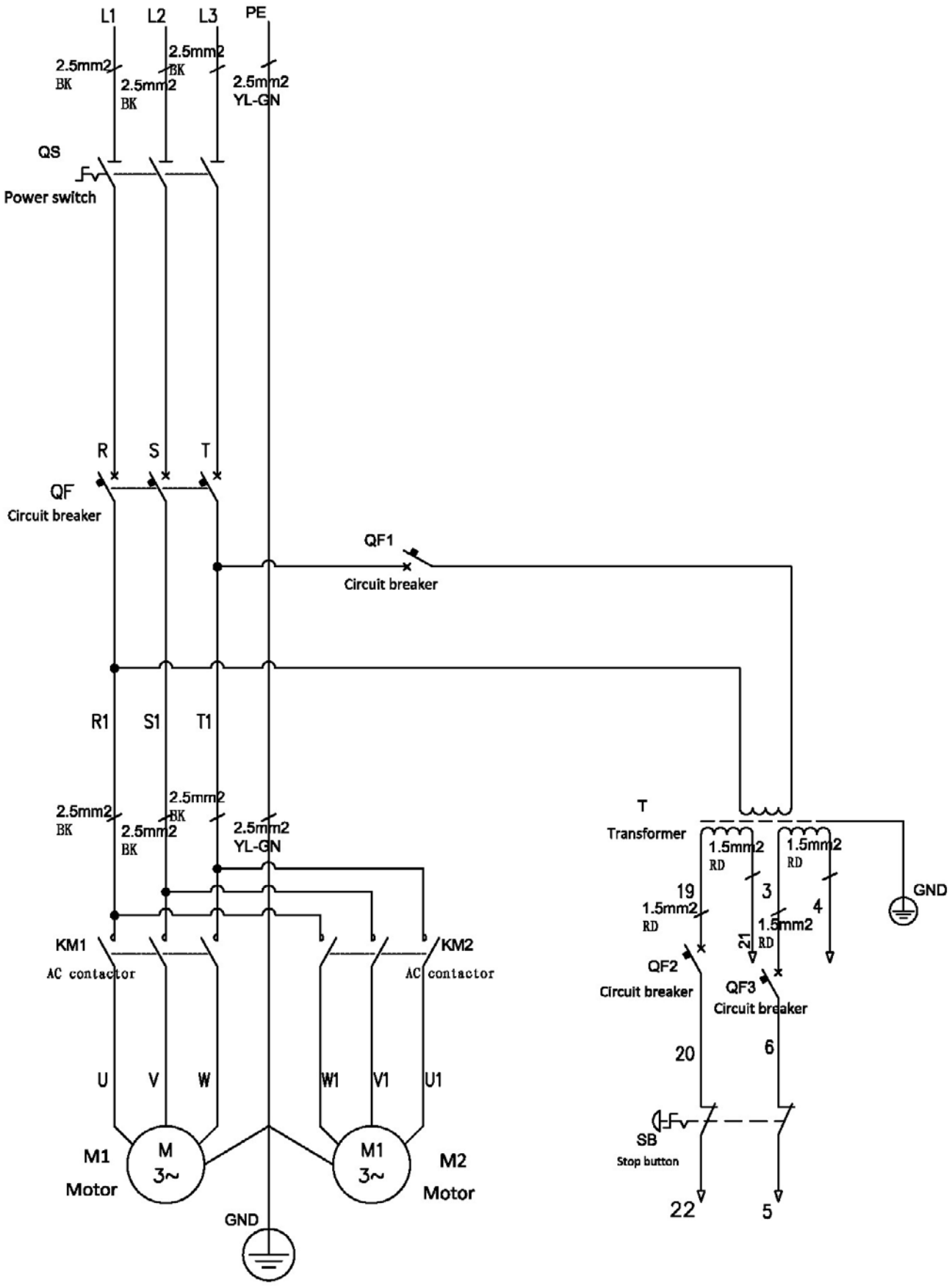
Newly built concrete ground must be older than 20days.

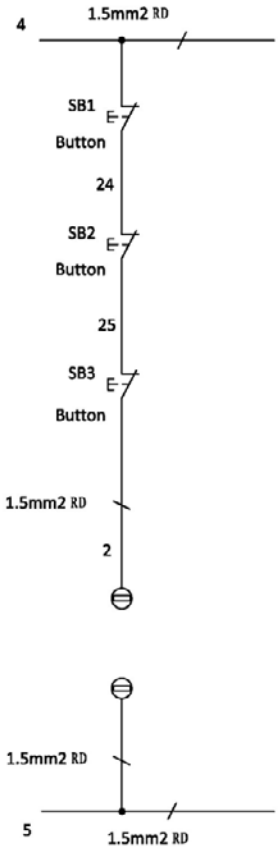
Floor Plan for recessed installation

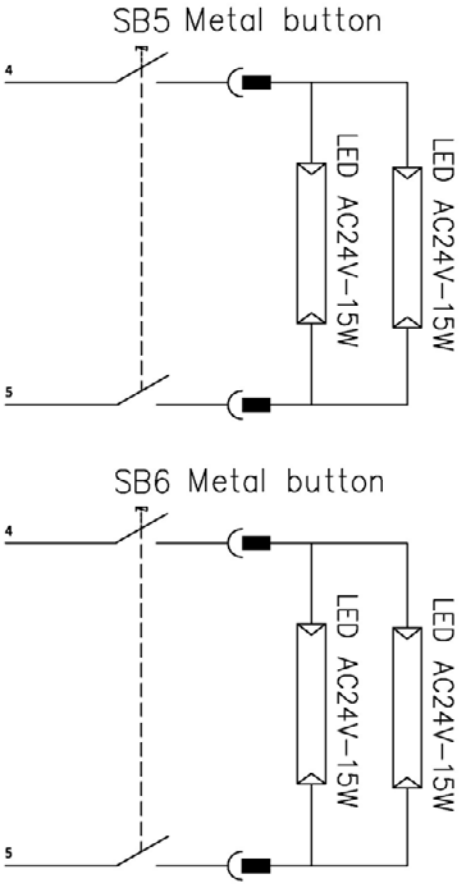
Version 2, 2024.12

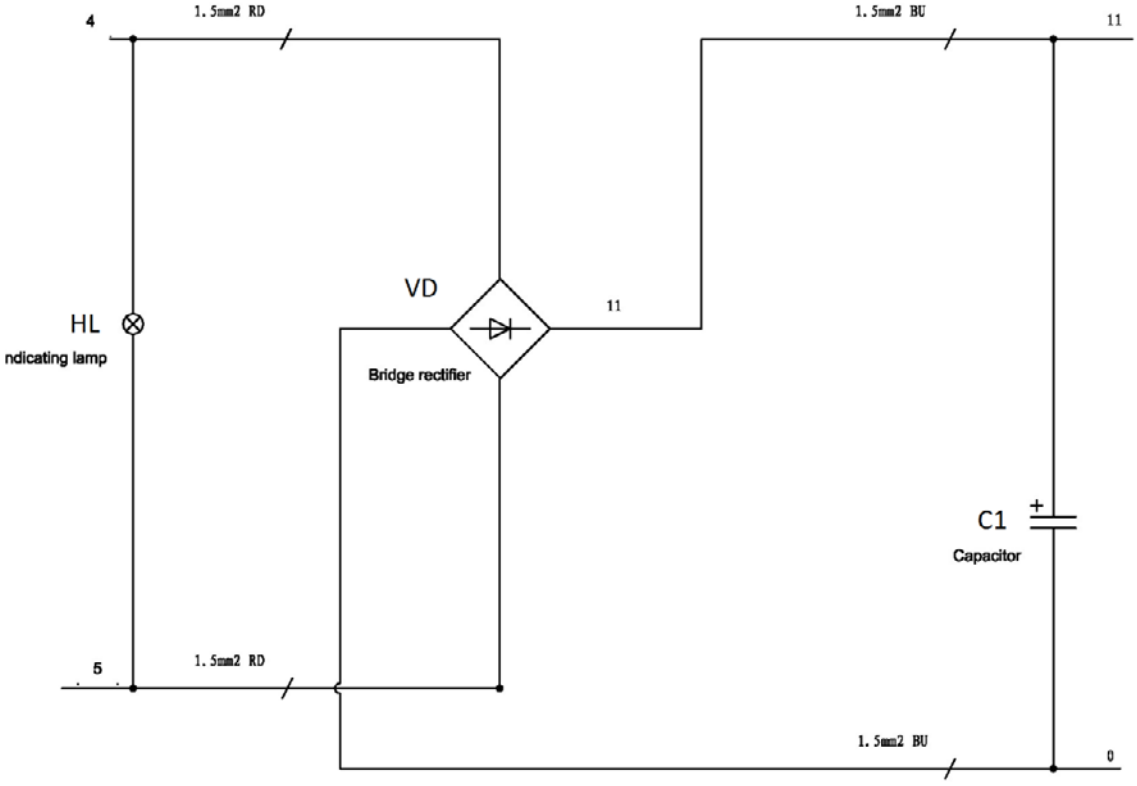


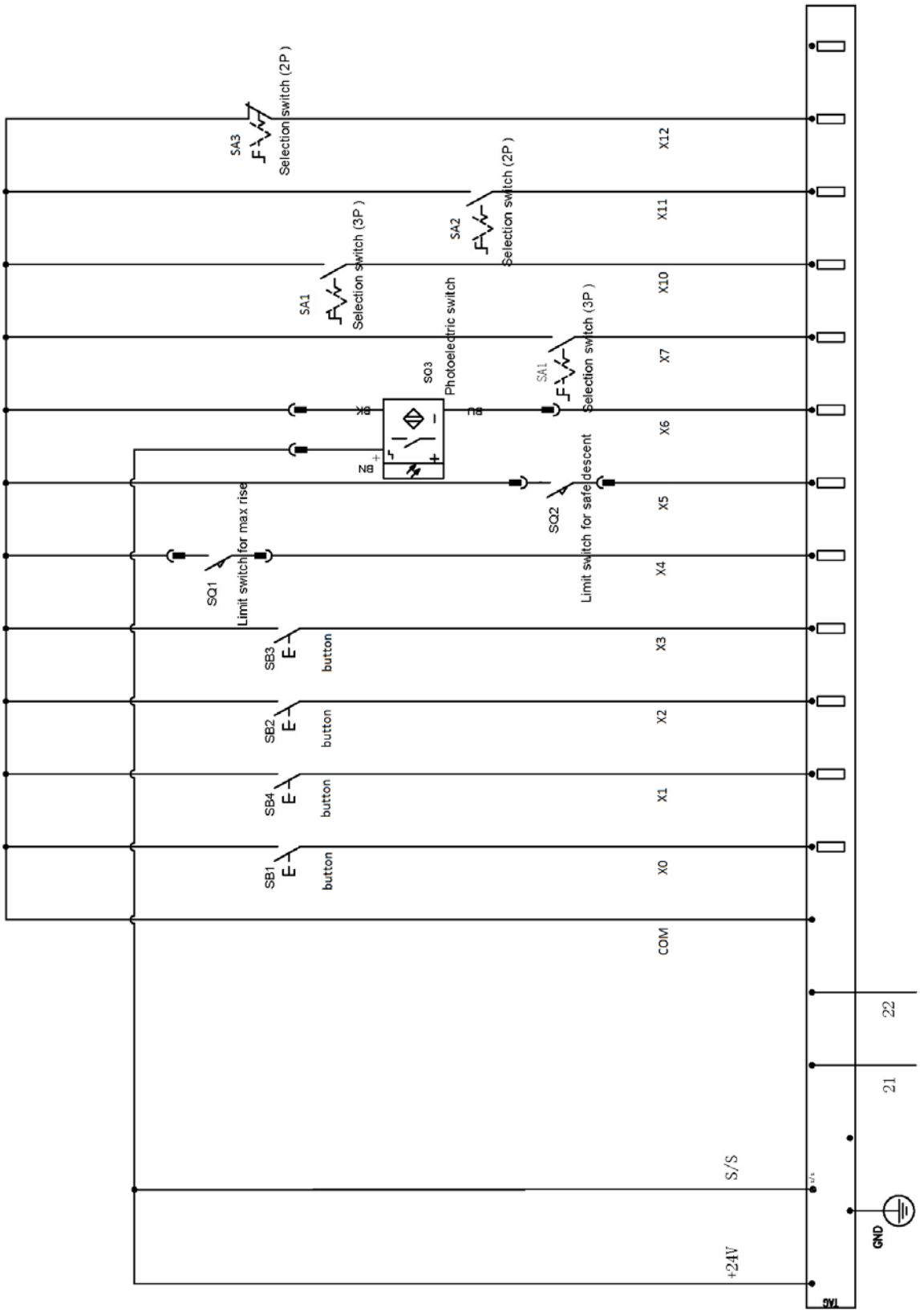
Annex 2, Electrical schemes and parts list

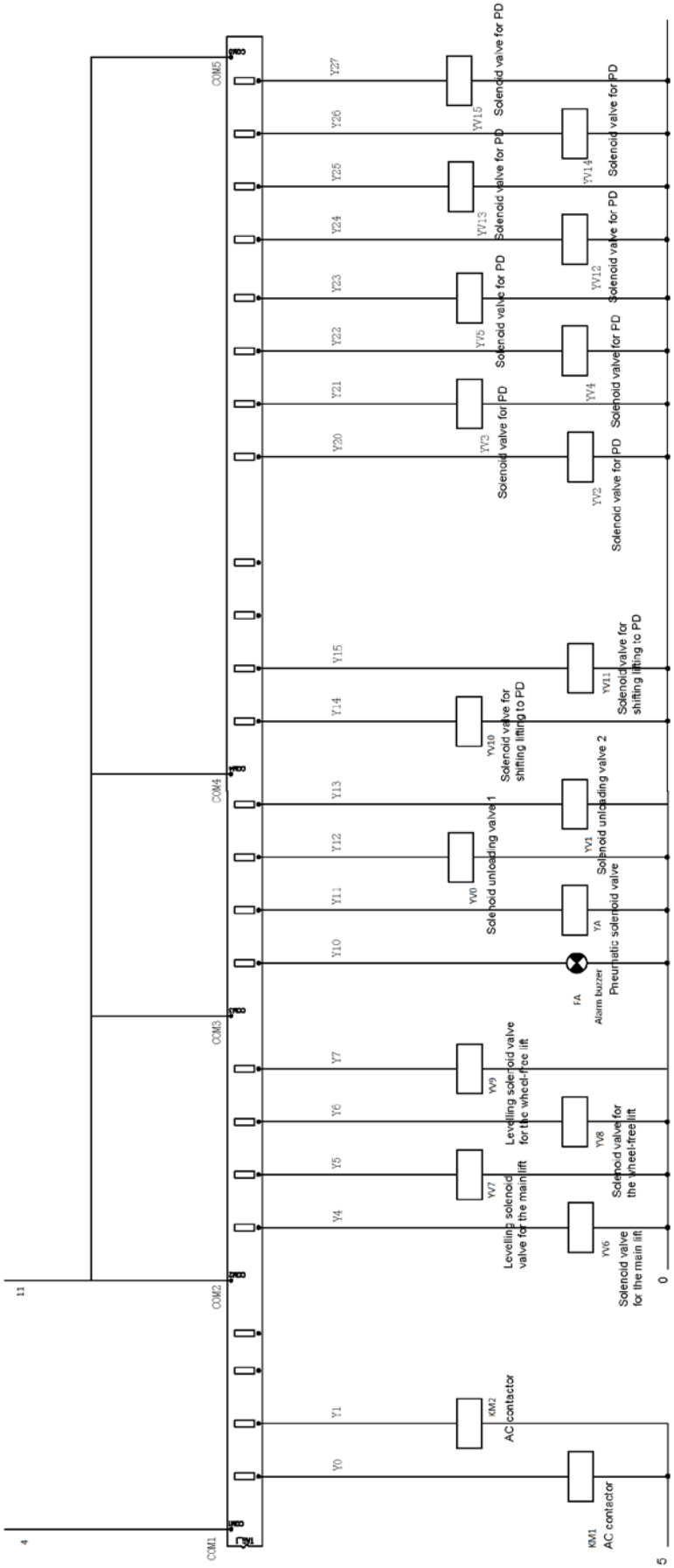


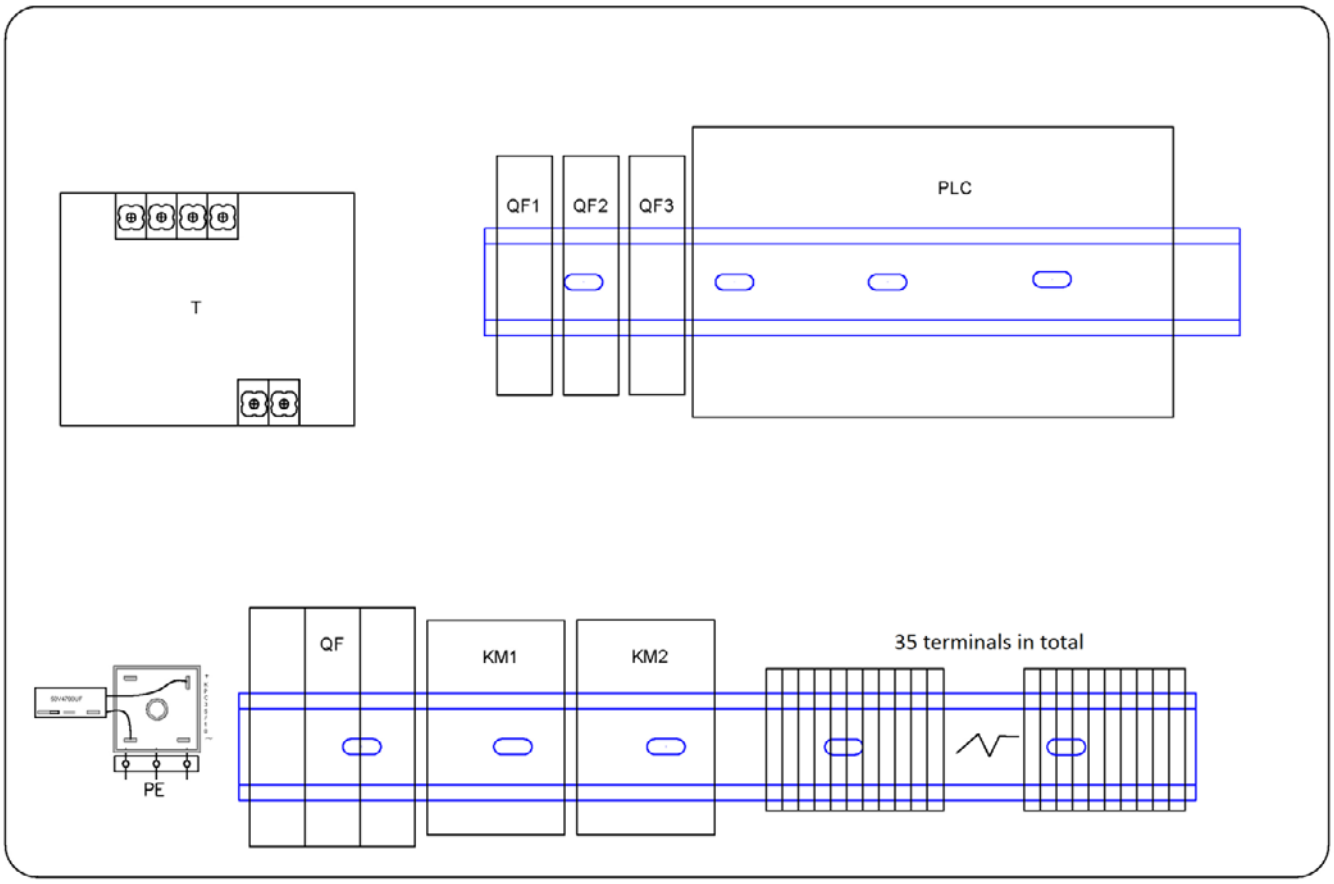

4
1.5mm2 RD
SB1
Button
24
SB2
Button
25
SB3
Button
1.5mm2 RD
2
1.5mm2 RD
5
1.5mm2 RD

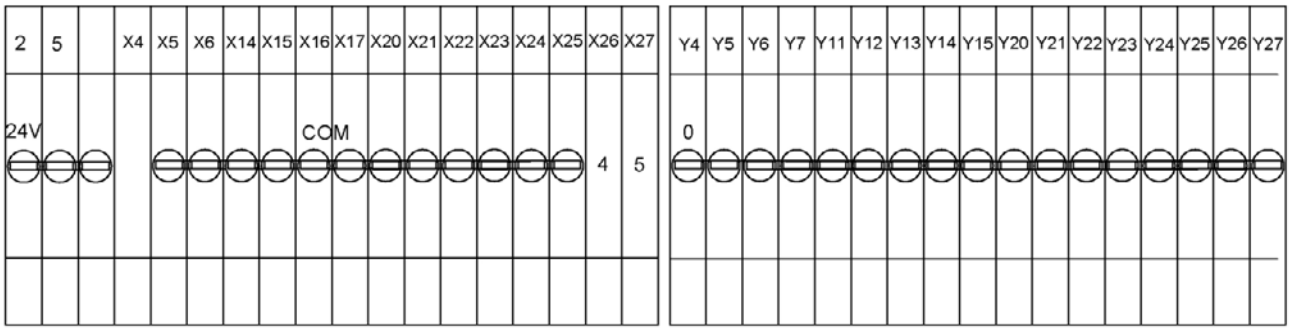

SB5 Metal button
4
5
LED AC24V-15W
LED AC24V-15W
SB6 Metal button
4
5
LED AC24V-15W
LED AC24V-15W

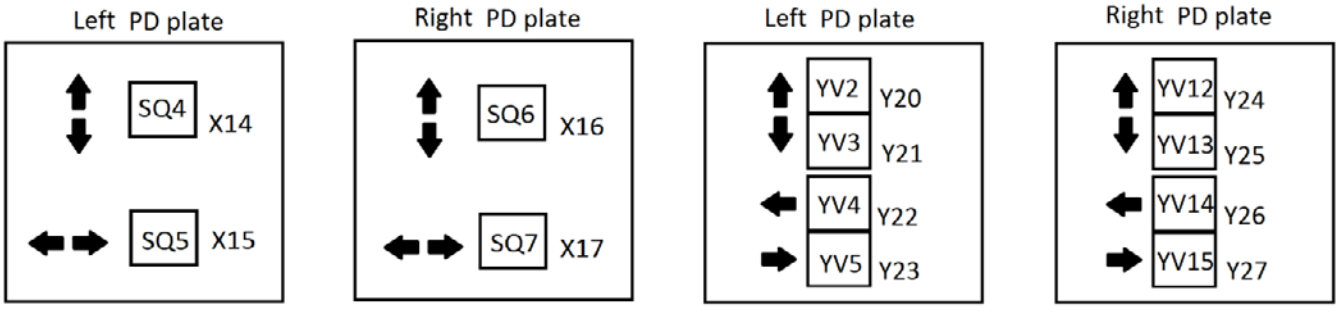

4
1.5mm2 RD
1.5mm2 BU
11
VD
11
HL
ndicating lamp
Bridge rectifier
C1
Capacitor
5
1.5mm2 RD
1.5mm2 BU
0


SA3
Selection switch (2P)
SA2
Selection switch (2P)
SA1
Selection switch (3P)
SQ3
Photoelectric switch
SA4
Selection switch (3P)
SQ2
Limit switch for safe descent
SQ1
Limit switch for max rise
SB3
button
SB2
button
SB4
button
SB1
button
X12
X11
X10
X7
X6
X5
X4
X3
X2
X1
X0
COM
S/S
+24V
GND
22
21


COM5
COM4
COM3
COM2
COM1
Y27
Y26
Y25
Y24
Y23
Y22
Y21
Y20
Y15
Y14
Y13
Y12
Y11
Y10
Y7
Y6
Y5
Y4
Y1
Y0
YV15 Solenoid valve for PD
YV14 Solenoid valve for PD
YV13 Solenoid valve for PD
YV12 Solenoid valve for PD
YV5 Solenoid valve for PD
YV4 Solenoid valve for PD
YV3 Solenoid valve for PD
YV2 Solenoid valve for PD
YV11 Solenoid valve for shifting lifting to PD
YV10 Solenoid valve for shifting lifting to PD
YV0 Solenoid unloading valve 1
YV1 Solenoid unloading valve 2
YA Pneumatic solenoid valve
FA Alarm buzzer
YV9 Levelling solenoid valve for the wheel-free lift
YV8 Solenoid valve for the wheel-free lift
YV7 Levelling solenoid valve for the main lift
YV6 Solenoid valve for the main lift
KM2 AC contactor
KM1 AC contactor
11
4
0
5

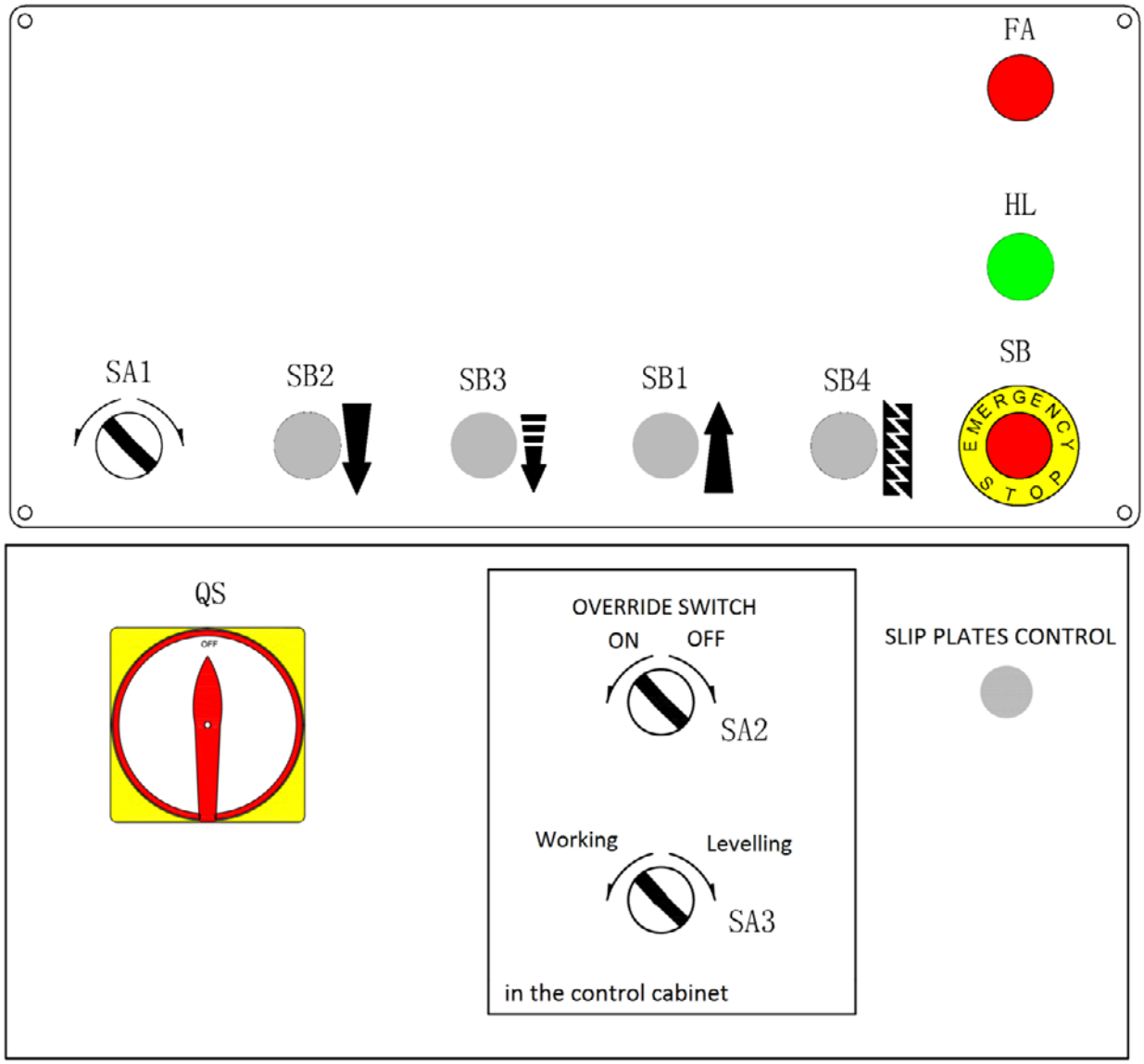






Code in the scheme	Component name	Wire code	Descriptions
LED	Lamp (OPTIONAL)	2, 5	Lighting
SQ1	Limit switch for max rise	X4, COM	Stop risng movement at max height
SQ2	Limit switch for lowering	X5, COM	Stop lowering movement

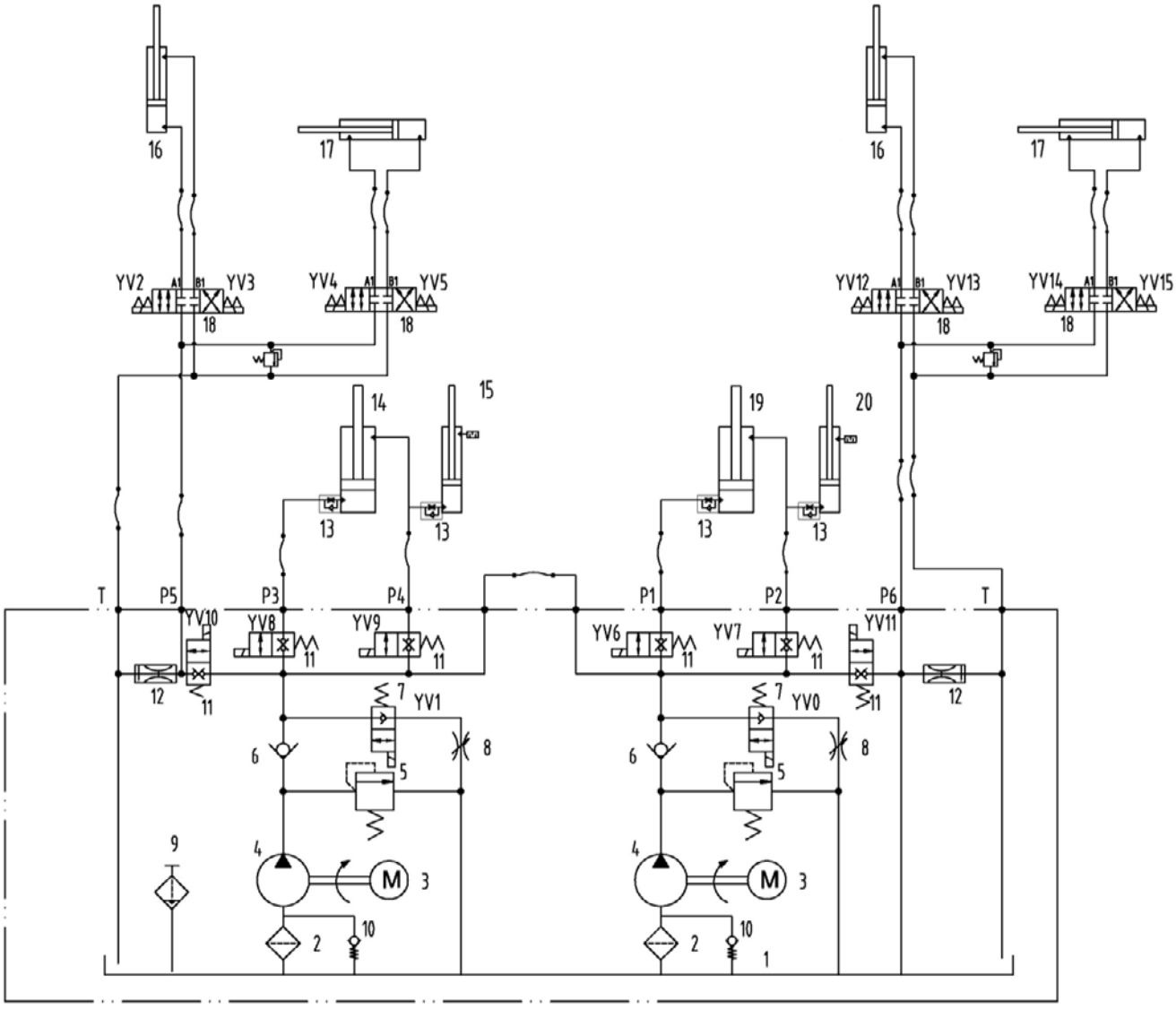
Code in the scheme	Component name	Wire code	Descriptions
SQ3	Photoelectric switch	X6, COM, 24V	Synchronization detecting
SQ4	PD sensor switch	X14, COM, 24V	Limit the longitudinal movement (forward and backward) for the left PD plate.
SQ5	PD sensor switch	X15, COM, 24V	Limit the transversal movement (left and right) for the left PD plate.
SQ6	PD sensor switch	X16, COM, 24V	Limit the longitudinal movement (forward and backward) for the right PD plate.
SQ7	PD sensor switch	X17, COM, 24V	Limit the transversal movement (left and right) for the r PD plate.
XDQS-M0S8	Wireless controller	4,5, COM ,X20, X21,X22,X23,X24,X25,X26,X27	Control PD movements
YA	Pneumatic solenoid valve	Y11, 0	Control the pneumatic line
YV0	Unloading solenoid valve	Y12, 0	Control the lowering of the wheel-support platform
YV1	Unloading solenoid valve	Y13, 0	Control the lowering of the wheel-free platform
YV2	PD solenoid valve 1	Y20, 0	Control left PD plate for moving forward
YV3	PD solenoid valve 2	Y21, 0	Control left PD plate for moving backward
YV4	PD solenoid valve 3	Y22, 0	Control left PD plate for moving left
YV5	PD solenoid valve 4	Y23, 0	Control left sPD plate for moving right
YV12	PD solenoid valve 5	Y24, 0	Control right PD plate for moving forward
YV13	PD solenoid valve 6	Y25, 0	Control right PD plate for moving backward
YV14	PD solenoid valve 7	Y26, 0	Control right PD plate for moving left
YV15	PD solenoid valve 8	Y27, 0	Control right PD plate for moving right
YV6	LIFT working solenoid valve	Y4,0	Control the wheel-support platform. It works under normal lifting and lowering mode.
YV7	LIFT levelling solenoid valve	Y5, 0	Control the wheel-support platform. It works under levelling mode.
YV8	Working solenoid valve	Y6, 0	Control the wheel-free platform. It works under normal lifting and lowering mode.
YV9	Levelling solenoid valve	Y7, 0	Control the wheel-free platform. It work under levelling mode.
YV10	*Solenoid valve*	Y14, 0	Switch between LIFT mode and PD mode for the left side PD
YV11	*Solenoid valve*	Y15, 0	Switch between LIFT mode and PD mode for the right side PD



Component code	Code	Description	Specification	Qty
T	320102017	Transformer	JBK5(BK)-200VA 400V230V-220V100VA 24V100VA	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 (1Ph)	CJX2-1810/AC24V(CDC6i-1810/AC24V)	2
SQ1 SQ2	320301011	Limit switch	TZ8108	2
SQ3	320306025	Photoelectric switch	CGY18E-R2NA	1
SQ4 SQ5 SQ6 SQ7	320307063	Proximity switch- Version 2, 2024.12	CJF10-05NA	4
SA1	320303023	Selection switch (3P)	NP2-ED38C	1
SA2 SA3	320303018	Selection switch (2P)	NP2-ED23C	2
QS	320304001	Power switch	LW26GS-20-04	1

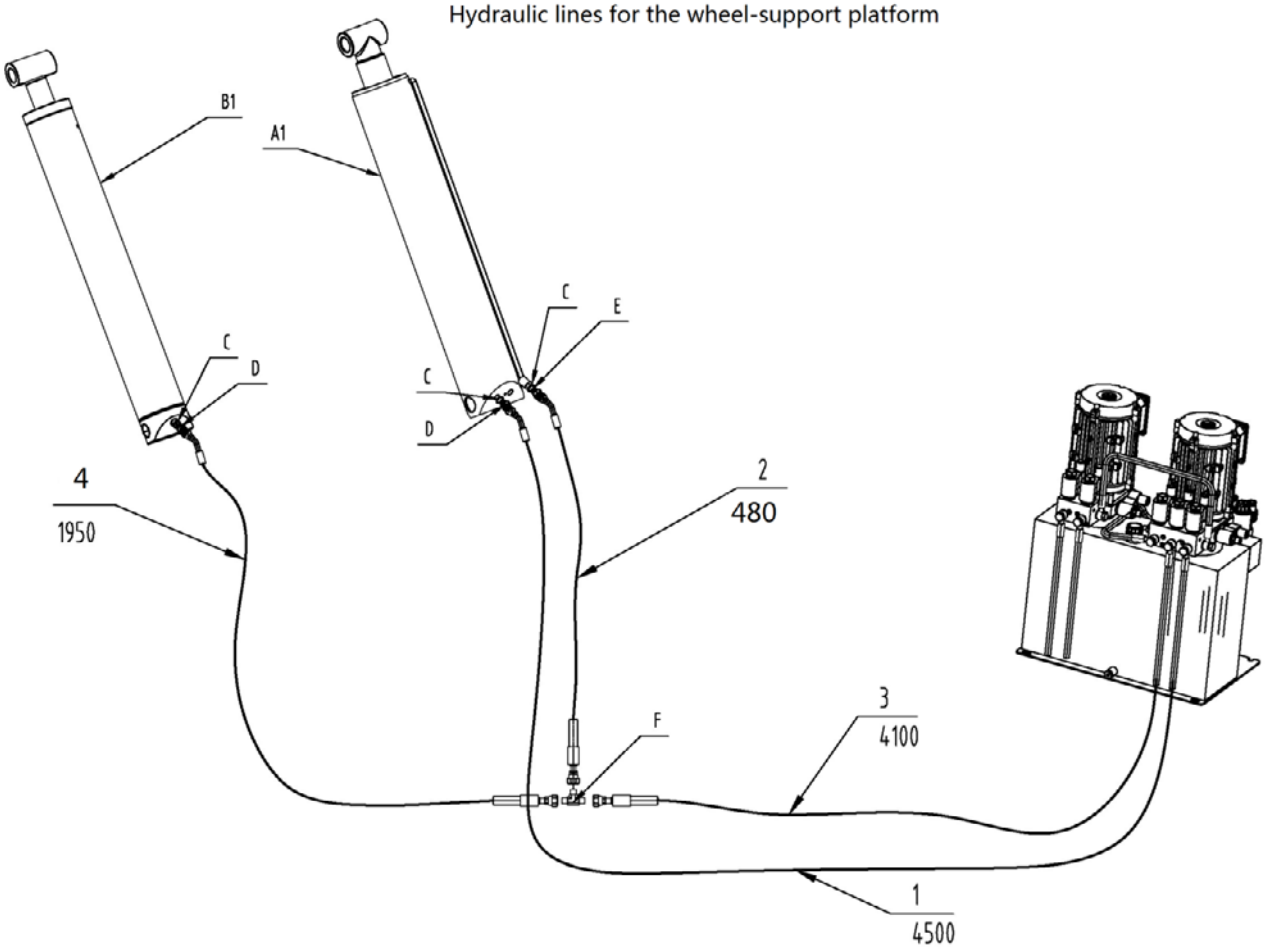
Component code	Code	Description	Specification	Qty
SB1 SB2 SB3 SB4	320401041	Button	NP2-EA15(CDLA6H-EA15)	4
SB	320402010	Stop button	NP2-BS544(CDLA6H-BS544)	1
PLC	321301031	PLC	FX3U-48MR/ES-A	1
C	321001004	Capacitor	4700UF/50V	1
VD	321002001	Bridge rectifier	KBPC5A-35A	1
	321004162	PD control	XDQS-M0S8	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 (OPTIONAL)	LANB00(22mm AC24V)	2
LED	321201021C	Led lamp (OPTIONAL)	AC24-15W-16cm	4

Annex 3, Hydraulic schemes and parts list



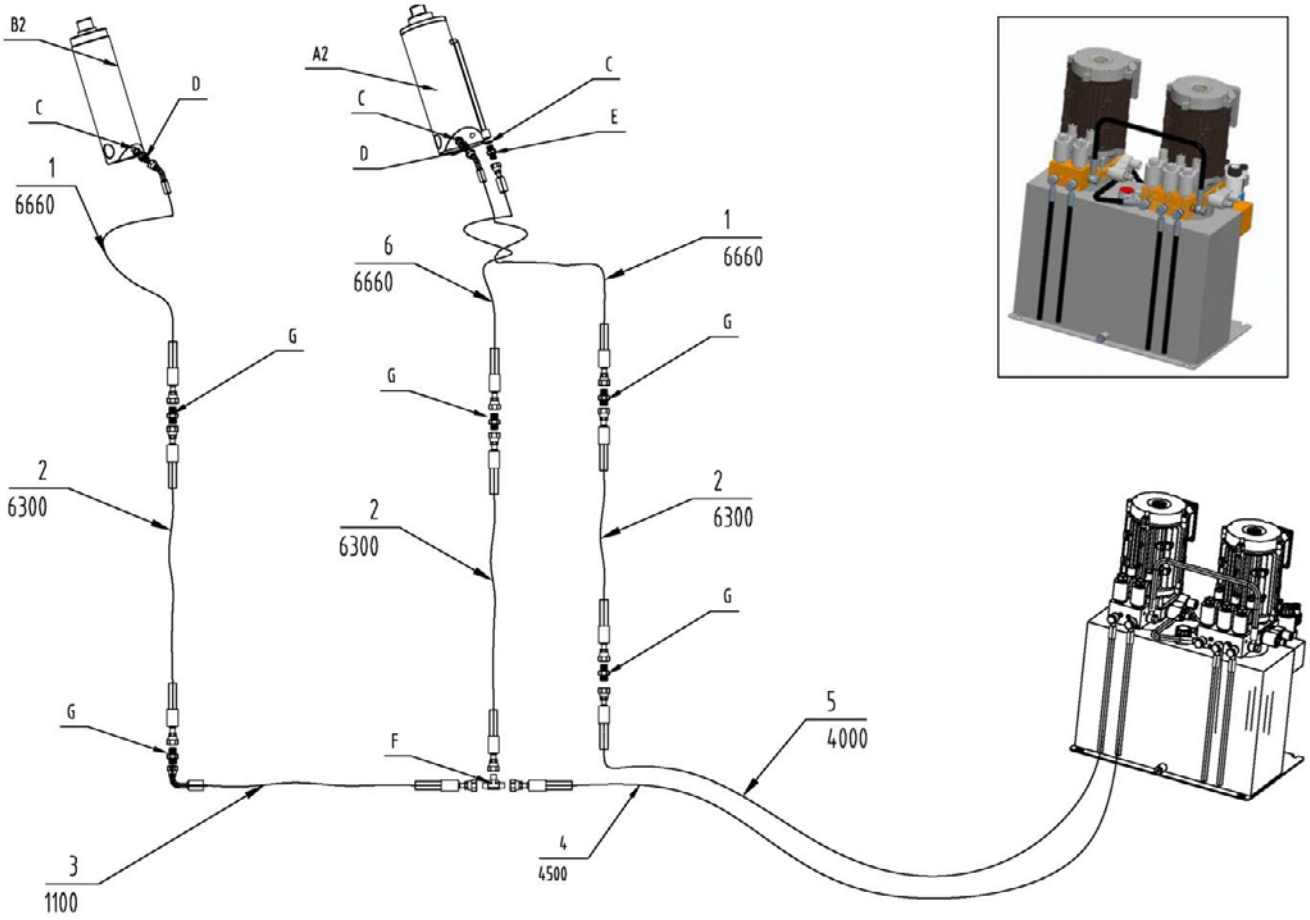
1	Steel oil tank	11	Solenoid valve
2	Filter	12	Balance valve
3	Motor	13	Straight connector with restrictive valve
4	Gear pump	14	Master cylinder of WF
5	Relief valve	15	Slave cylinder of WF
6	Non-return valve	16	PD cylinder (Left and right movement)
7	Unloading solenoid valve assembly	17	PD cylinder (Front and rear movement)
8	Restrictive valve	18	Solenoid valve (3P4W)
9	Oil tank lid	19	Master cylinder of WS
10	Cushion valve	20	Slave cylinder of WS

Hydraulic lines for the wheel-support platform



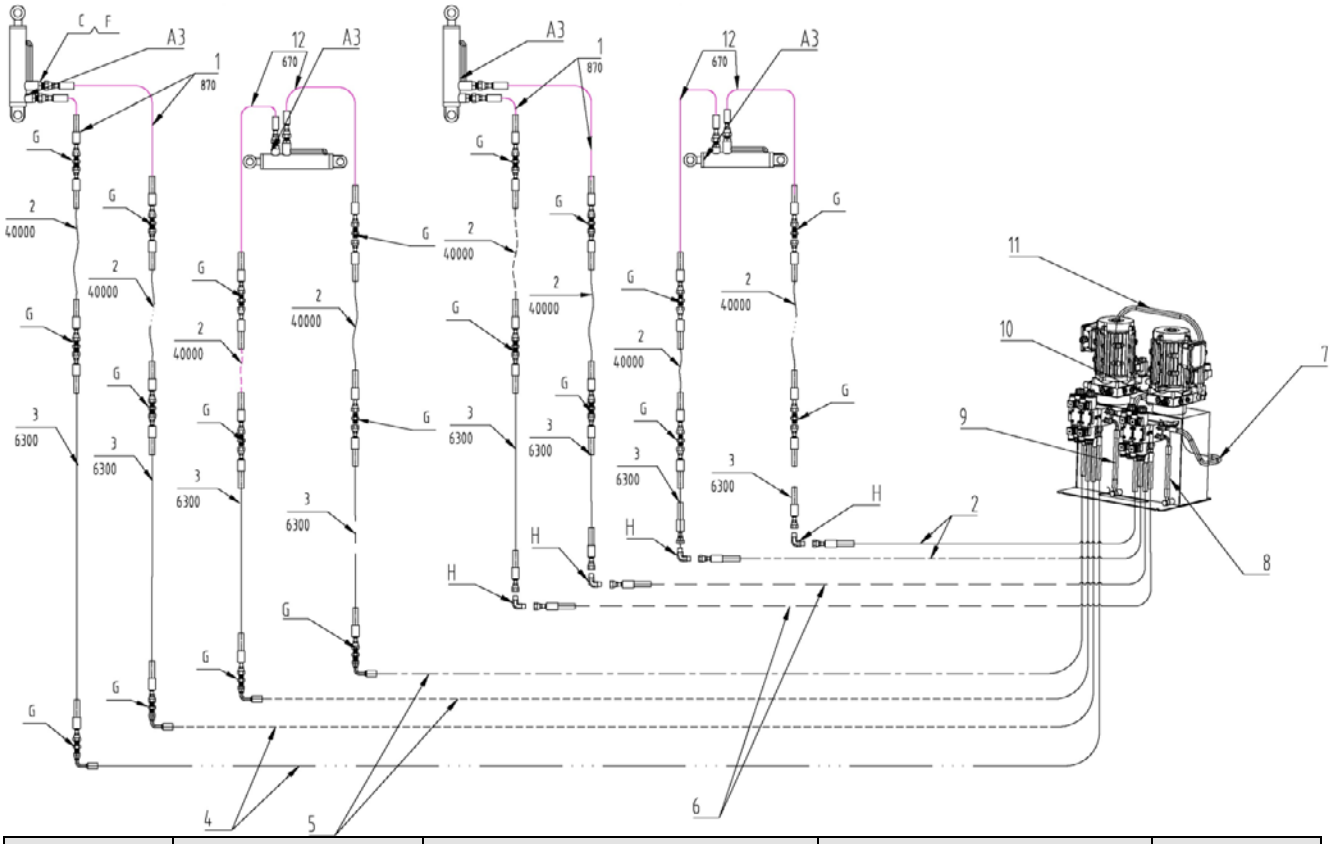
Pos.	Code	Component descriptions	Specification	Qty
1	624008156	Oil hose	L=4500mm	1
2	624008157	Oil hose	L=480mm	1
3	624008158	Oil hose	L=4100mm	1
4	624008159	Oil hose	L=1950mm	1
A1	615068516	Master cylinder	YG120-140-67-645	1
B1	615068517	Slave cylinder	YG100-114-50-645	1
C	207103025	Composite washer	13_7X20X1_5	3
D	330305009	Straight connector with restrictive valve	BDPF-G14-G14-I60	2
D	330600017	Transfer connector with restrictive valve Replace 330305009	G1/4-G1/4-2mm	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



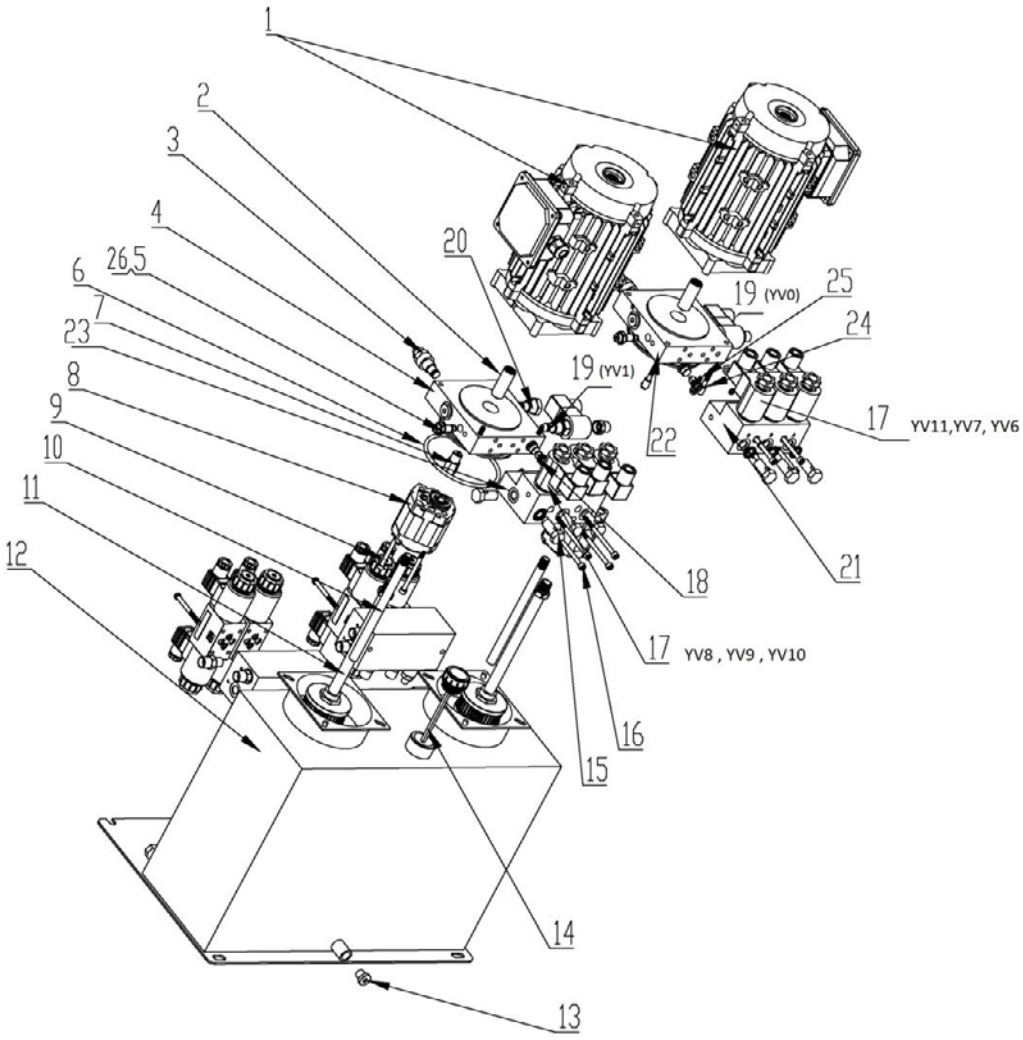
Pos.	Code	Component descriptions	Specification	Qty
1	624008161	Oil hose	L=6660mm	2
2	624008163	Oil hose	L=6300mm	3
3	624008166	Oil hose	L=1100mm	1
4	624008165	Oil hose	L=4500mm	1
5	624008164	Oil hose	L=4000mm	1
6	624008162	Oil hose	L=6660mm	1
A2	615026701	Master cylinder	HX6-SMCYL	1
B2	625000040	Slave cylinder (Version 2, 2024.12)	YG80-95-45-150-KS	1
C	207103025	Composite washer	13_7X20X1_5	3
D	330305009	Straight connector with restrictive valve	BDPF-G14-G14-I60	2
D	330600017	Transfer connector with restrictive valve Replace 330305009	G1/4-G1/4-2mm	2
E	310101010	Straight connector	G1/4---G1/4	1
F	410210181	Three-way connector	6603B-A9-B7	1
G	410210191	Straight connector	6603B-A9-B8	5

Hydraulic lines for PD8N –Version 2, 2024.12

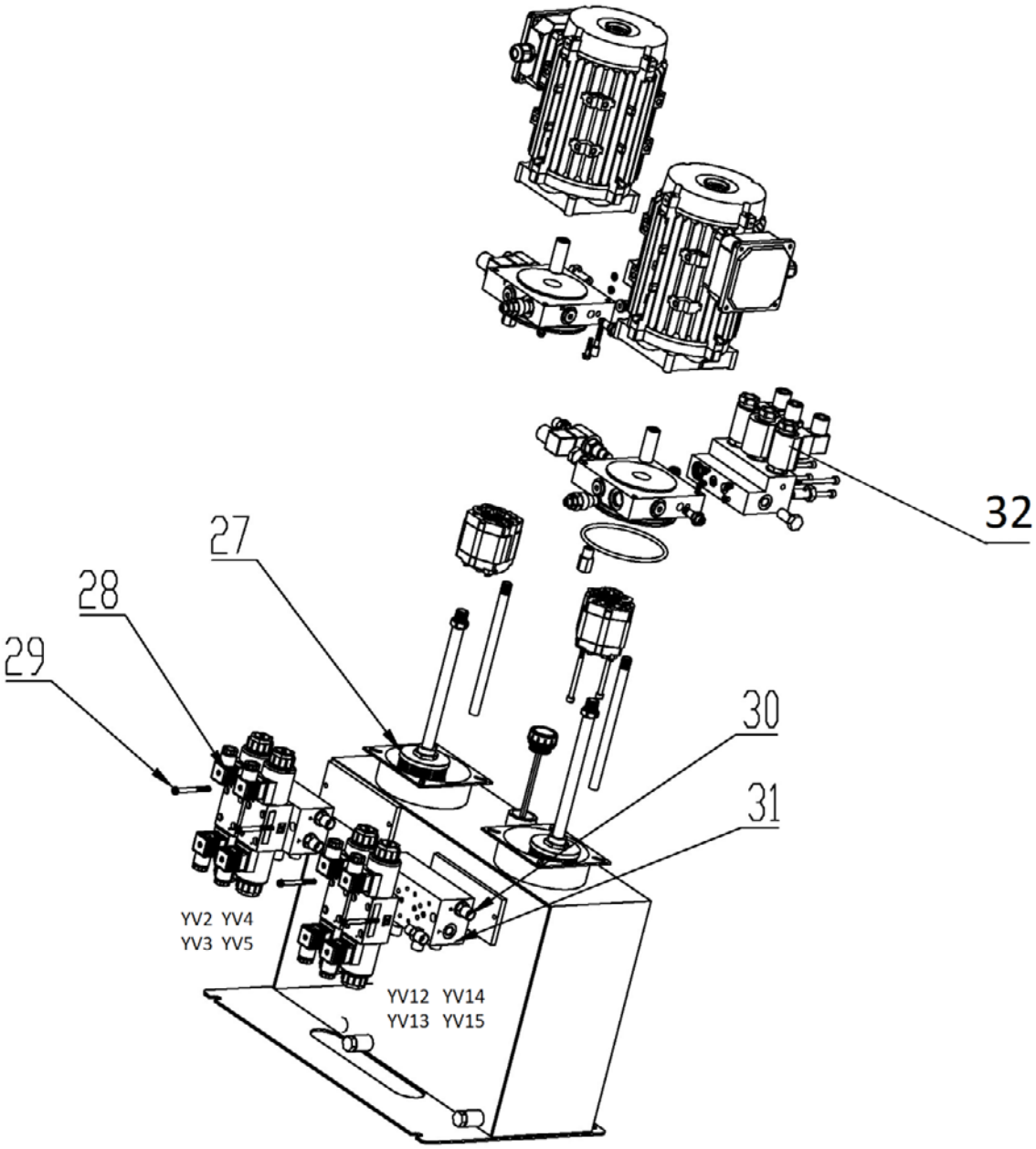


Pos.	Code	Component descriptions	Specification	Qty
1	624008267	Oil hose (Version 2)	L=870mm	4
2	624008169	Oil hose	L=4000mm	10
3	624008170	Oil hose	L=6300mm	8
4	624008190	Oil hose	L=6100mm	2
5	624008189	Oil hose	L=5600mm	2
6	624008174	Oil hose	L=4500mm	2
7	624008192	Oil hose	L=1100mm	1
8	624008191	Oil hose	L=270mm	1
9	624008175	Oil hose	L=310mm	1
10	624008176	Oil hose	L=510mm	1
11	624008204	Oil hose	L=950mm	1
12	624008205	Oil hose	L=670mm	1
A3	625000015	PD8 cylinder 1 (Version 2)	YG30-40-18-100-ZY	4
C	207103025	Composite washer	13_7X20X1_5	16
F	310101010	Straight connector	G1/4---G1/4	8
G	410210191	Straight connector	6603B-A9-B8	16
H	310102035	Right-angled connector	EW-G1/4SR-G1/4 I60	4

Hydraulic power unit



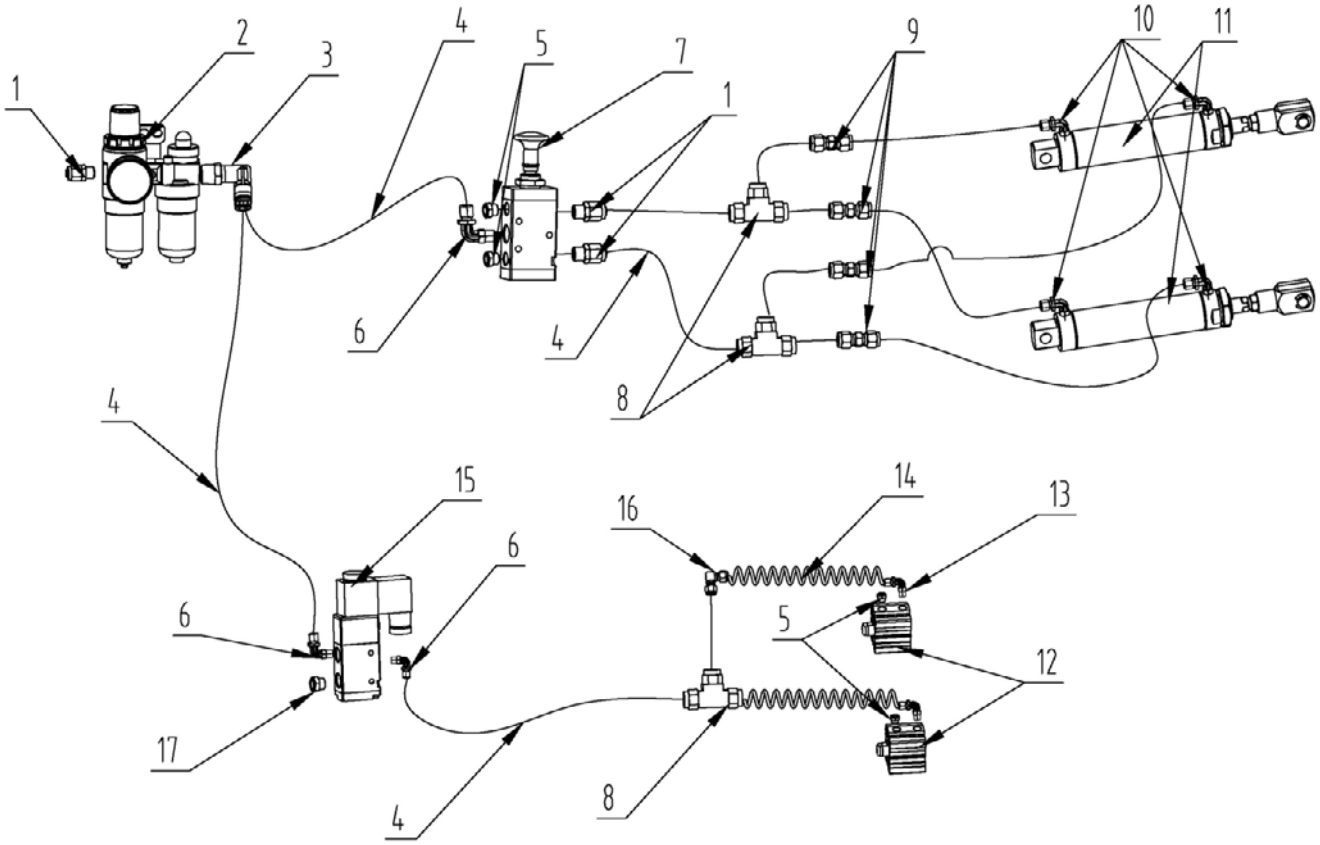
Code in the scheme	Component name	Wire code	Descriptions
YV0	Unloading solenoid valve	Y12, 0	Control the lowering of the wheel-support platform
YV1	Unloading solenoid valve	Y13, 0	Control the lowering of the wheel-free platform
YV6	LIFT working solenoid valve	Y4,0	Control the wheel-support platform. It works under normal lifting and lowering mode.
YV7	LIFT levelling solenoid valve	Y5, 0	Control the wheel-support platform. It works under levelling mode.
YV11	Solenoid valve	Y15, 0	Switch between LIFT mode and PD mode for the right side PD
YV8	Working solenoid valve	Y6, 0	Control the wheel-free platform. It works under normal lifting and lowering mode.
YV9	Levelling solenoid valve	Y7, 0	Control the wheel-free platform. It work under levelling mode.
YV10	Solenoid valve	Y14, 0	Switch between LIFT mode and PD mode for the left side PD



Code in the scheme	Component name	Wire code	Descriptions
YV2	PD solenoid valve 1	Y20, 0	Control left PD plate for moving forward
YV3	PD solenoid valve 2	Y21, 0	Control left PD plate for moving backward
YV4	PD solenoid valve 3	Y22, 0	Control left PD plate for moving left
YV5	PD solenoid valve 4	Y23, 0	Control left sPD plate for moving right
YV12	PD solenoid valve 5	Y24, 0	Control right PD plate for moving forward
YV13	PD solenoid valve 6	Y25, 0	Control right PD plate for moving backward
YV14	PD solenoid valve 7	Y26, 0	Control right PD plate for moving left
YV15	PD solenoid valve 8	Y27, 0	Control right PD plate for moving right

Pos.	Code	Component descriptions	Specification	Qty
1	320203005	Motor	400V-3.5KW 3PH-50HZ-2P	2
2	330404007	Coupling	46mm（LBZ-T202BK-1）	2
3	330304007	Relief valve	YF08-40	2
4	330105049	Hydraulic block	LA50351	1
5	330305022	Restrictive valve	LNV2-08	1
6	207101166	Type O seal ring	110*5	2
7	202109144	Cushion valve	M5x18	2
8	330201015	Gear pump	CBK-F233-G	2
9	202109072	Hex socket cylinder head screw	M8x85-GB70_1	4
10	330402001	Oil-back pipe	YH-D	4
11	330401002	Oil-sucking pipe	YX-BL=230	2
12	330405071	Steel oil tank	28L	1
13	210101004	Hex socket flat head fitting	G1/4	1
14	330502013	Oil tank lid	YBZ-BT-M30*2-B	1
15	410281130	Cylinder connector	CJ-A12-B5-C10	8
16		Hex socket head bolt	M6x85	8
17	330308040	Valve spool for the solenoid valve	LSV-08-2NCSP-LM	6
18	330308041	Balance valve	IFC-6T	2
19	791150005	Solenoid unloading valve assembly	DC24V	2
20	330302006	Non-return valve	DF08-01-00	2
21	330105050	Hydraulic block	LA50352	1
22	330105051	Hydraulic block	LA50361	1
23	330105052	Hydraulic block	LA50362	1
24	202109064	Hex socket cylinder head screw	M6x30-GB70_1	8
25	201103001	Hex flange head screw	M5x25-GB5789	8
26	330305023	Nut for locking the restrictive valve	M12X1	2
27	330403001	Filter	YG-C	2
28	330308044	Solenoid valve (3P4W)	DSG-02-3C2-DL-DC24	4
29	202109026	Hex socket cylinder head screw	M6X60-GB70_1	4
30	310101010	Straight connector	G1/4---G1/4	4
31	330105042	Hydraulic block	LA10161	2
32	330308039	Solenoid coil for valve spool (pos.17-330308040)	HC-C-16-D24	6

Annex 4, Pneumatic schemes and parts list

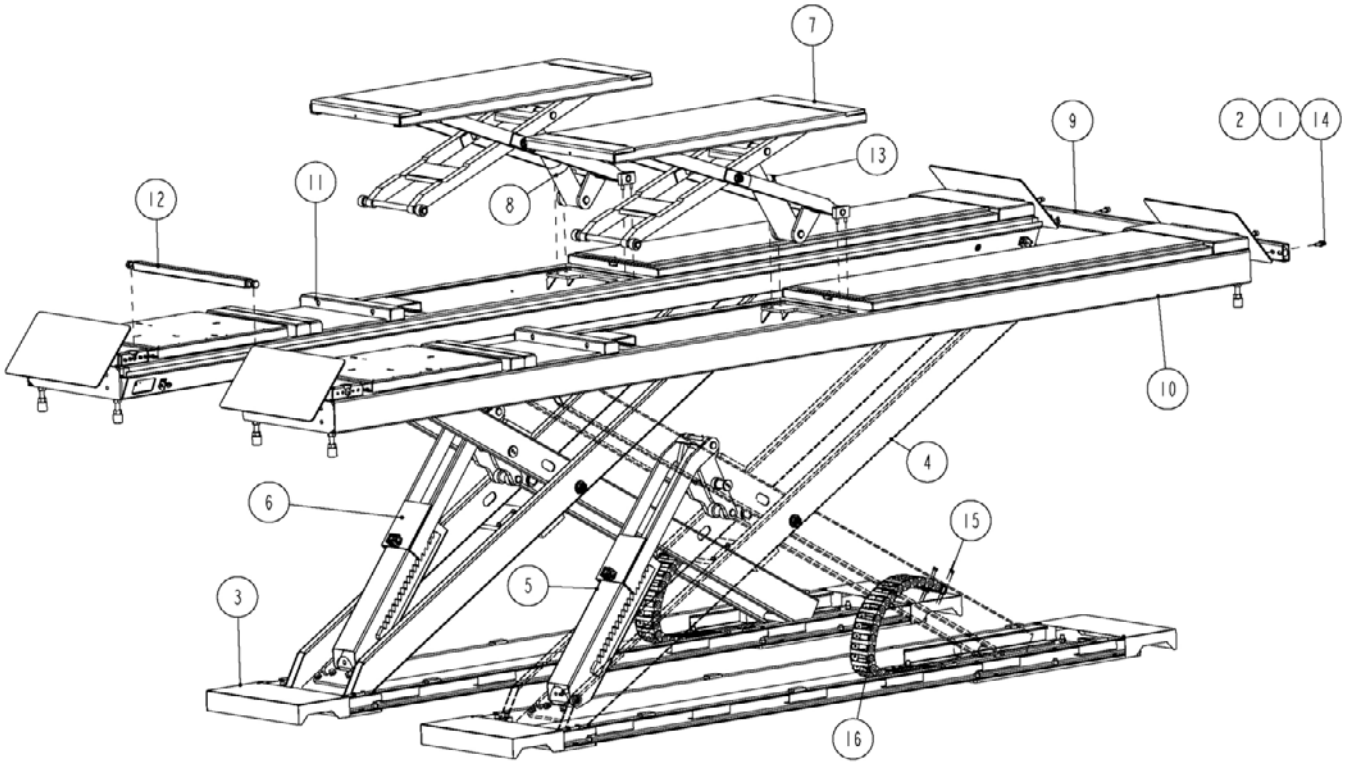


Pos.	Code	Component descriptions	Specification	Qty
1	310101015	Straight connector	KLC8-02	3
2	321004006	Air filter combination	AFC2000-M	1
3	310103008	Three-way elbow connector	PX8-M14S	1
3	310303001	Three-way connector Replace 310103008	TKN-PD8-02	1
4	123010201	Air hose	D=8	
5	310201003	Silencer	SLM01-R1-8	4
6	310102015	Elbow connector	KLL8-02	3
6	310302002	Right angle connector Replace 310102015	TKN-PH8-02	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
10	310302001	Right angle connector Replace 310102024	TKN-PH8-01	4
11	310501001	Pneumatic cylinder	CQ2B32X20-A	2
12	310501001	Pneumatic cylinder	CQ2B32X20-A	2
13	310102024	Elbow connector	KLL8-01	2
13	310302001	Right angle connector	TKN-PH8-01	4

Pos.	Code	Component descriptions	Specification	Qty
		Replace 310102024		
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

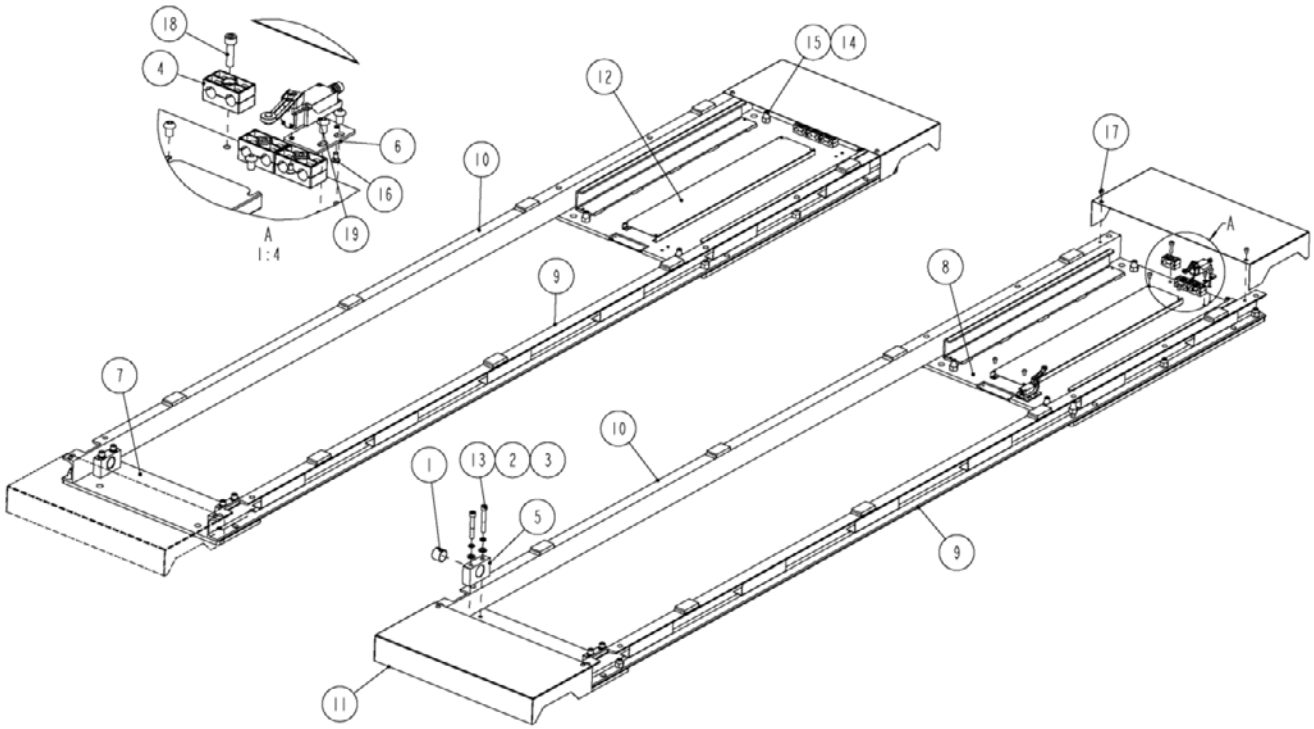
Annex 5, Mechanically exploded drawings and parts list

Version 3, 2025.1



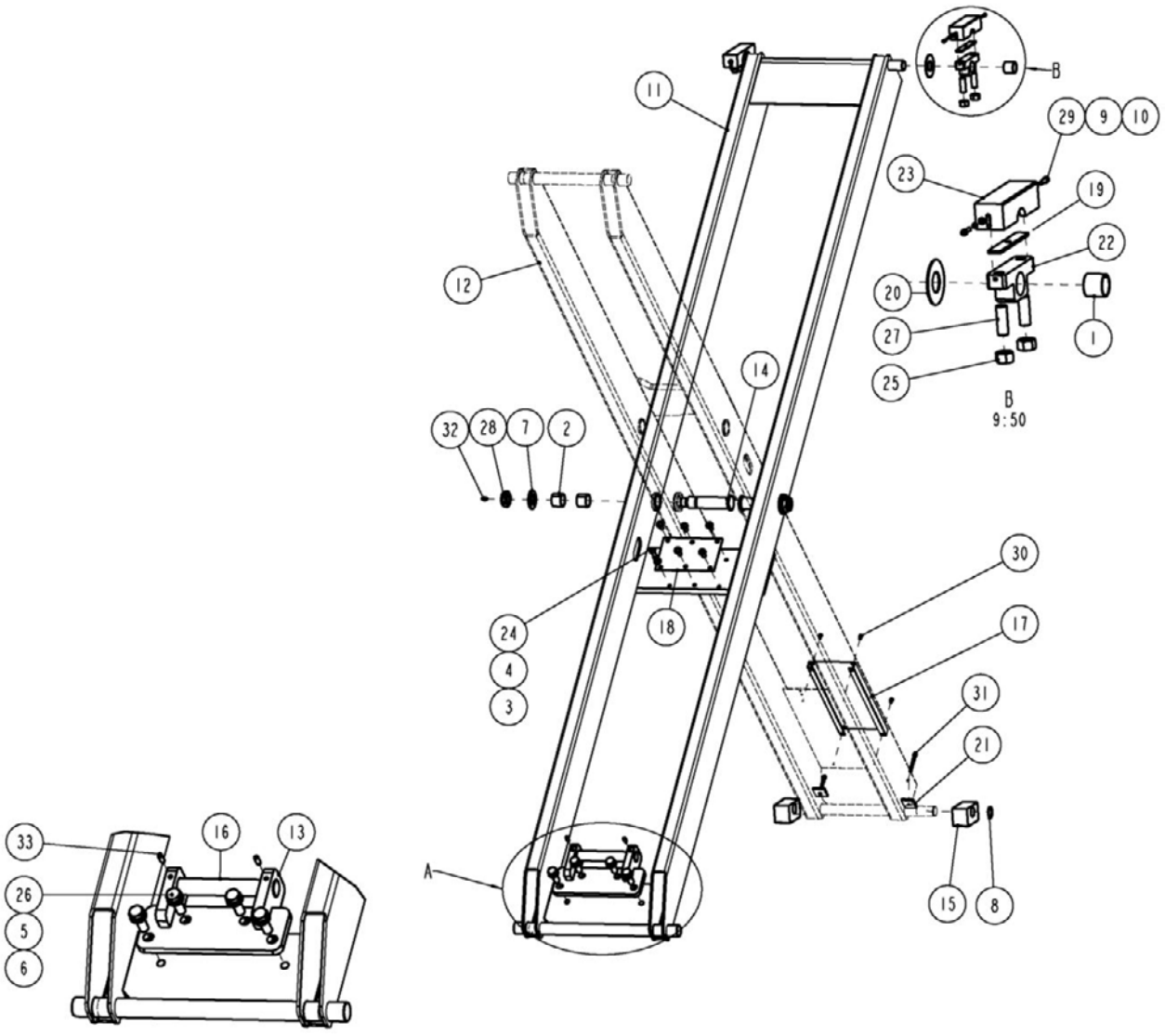
Pos.	Code	Component descriptions	Specification	Qty
1	204201006	Spring washer	D12-GB93	4
2	204101007	Flat washer	D12-GB95	4
3	615068625	Base frame assembly （hot galvanized ）	HX50X-A1	1
4	615068569	Support arm assembly	HX50-A2	2
5	615068573	Master cylinder	HX50-A4	1
6	615068574	Slave cylinder	HX50-A4B	1
7	615068799	Wheel-free lift assembly	HX50-A5C	2
8	625000040	Slave cylinder of the wheel-free lift (Replace 615026702)	HX50-A6B	1
9	410911587	Support tube	HX50X-A10	1
10	615068822	Platform A assembly (Version 2)	HX50X-A3E-54L	1

Pos.	Code	Component descriptions	Specification	Qty
11	615068823	Platform B assembly (Version 2)	HX50X-A3F-54L	1
12	615068824	Support tube assembly	HX50X-A9L	1
13	615026701	Master cylinder of the wheel-free lift	HX6-A5	1
14	202109053	Hex socket cylinder head screw	M12X35-GB70_1	4
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	410911203	Bottom support holder	HX50-A1-B6	4
6	410911381	Holding plate for limit switch	HX50-A1-B8	2
7	410911530	Small base plate	HX50X-A1-B1	2
8	612901627	Large base plate A	HX50X-A1-B2	2
9	612901628	Slot steel connection A	HX50X-A1-B3	2
10	612901629	Slot steel connection B	HX50X-A1-B4	2
11	410911529	Base plate cover	HX50X-A1-B7	4
12	410911528	Hose cover	HX50X-A1-B10	2

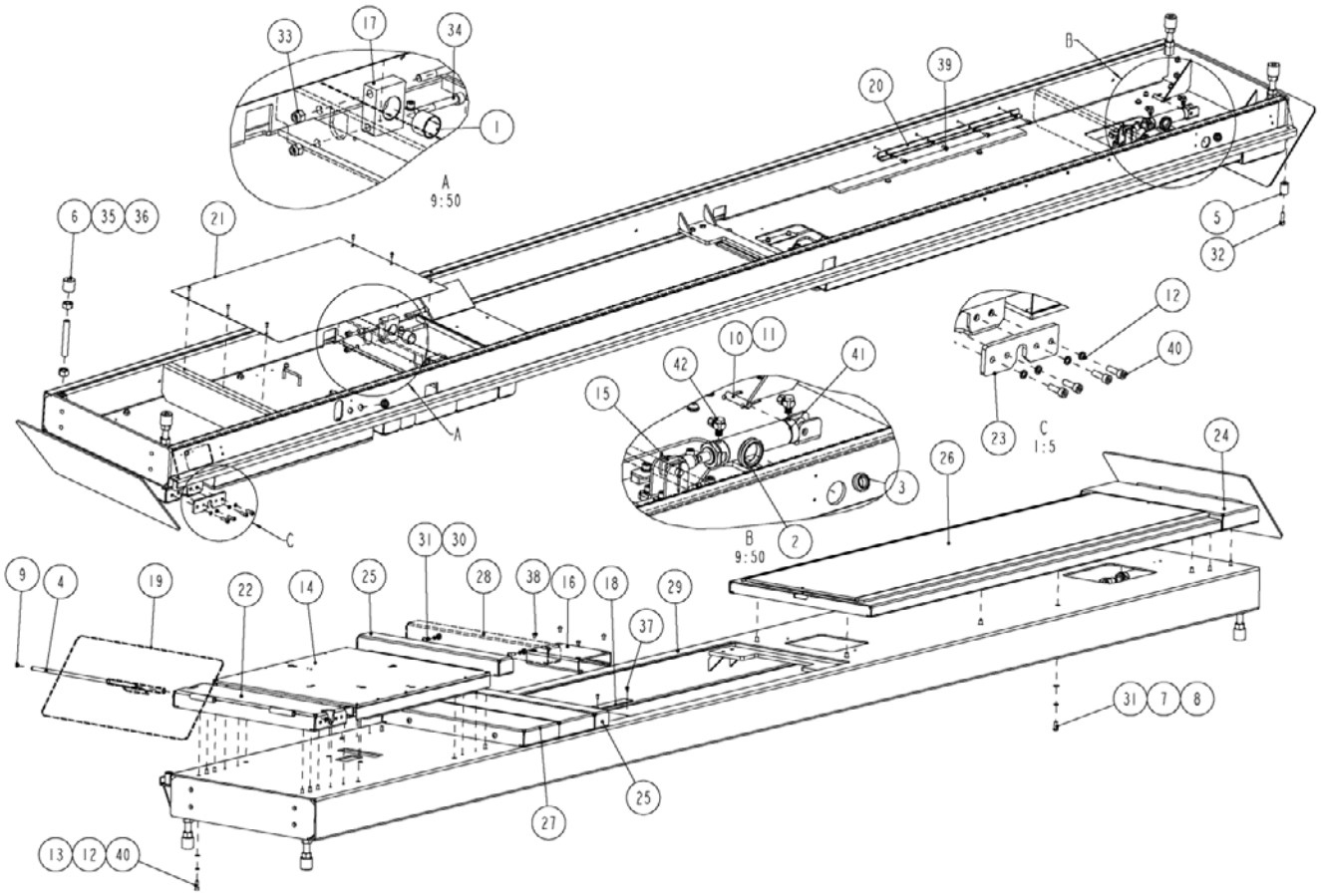
Pos.	Code	Component descriptions	Specification	Qty
13	202109099	Hex socket cylinder head screw	M12X80-GB70_1	8
14	203101009	Type I hex nut	M16-GB6170	28
15	202205002	Flat head locking screw	M16X50-GB77	28
16	202111001	Hex socket flat head screw	M5X10-GB70_3	4
17	202110004	Hex socket button head screw	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

Pos.	Code	Component descriptions	Specification	Qty
6	204101009	Flat washer C	D16-GB95	4
7	204101015	Flat washer C	D30-GB95	2
7	204101014	Flat washer C Replace 204101015	D27-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
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 nipple	M8X1-JB9740_1	2
33	202208010	Hex socket cylinder head locking screw	M8X20-GB79	2

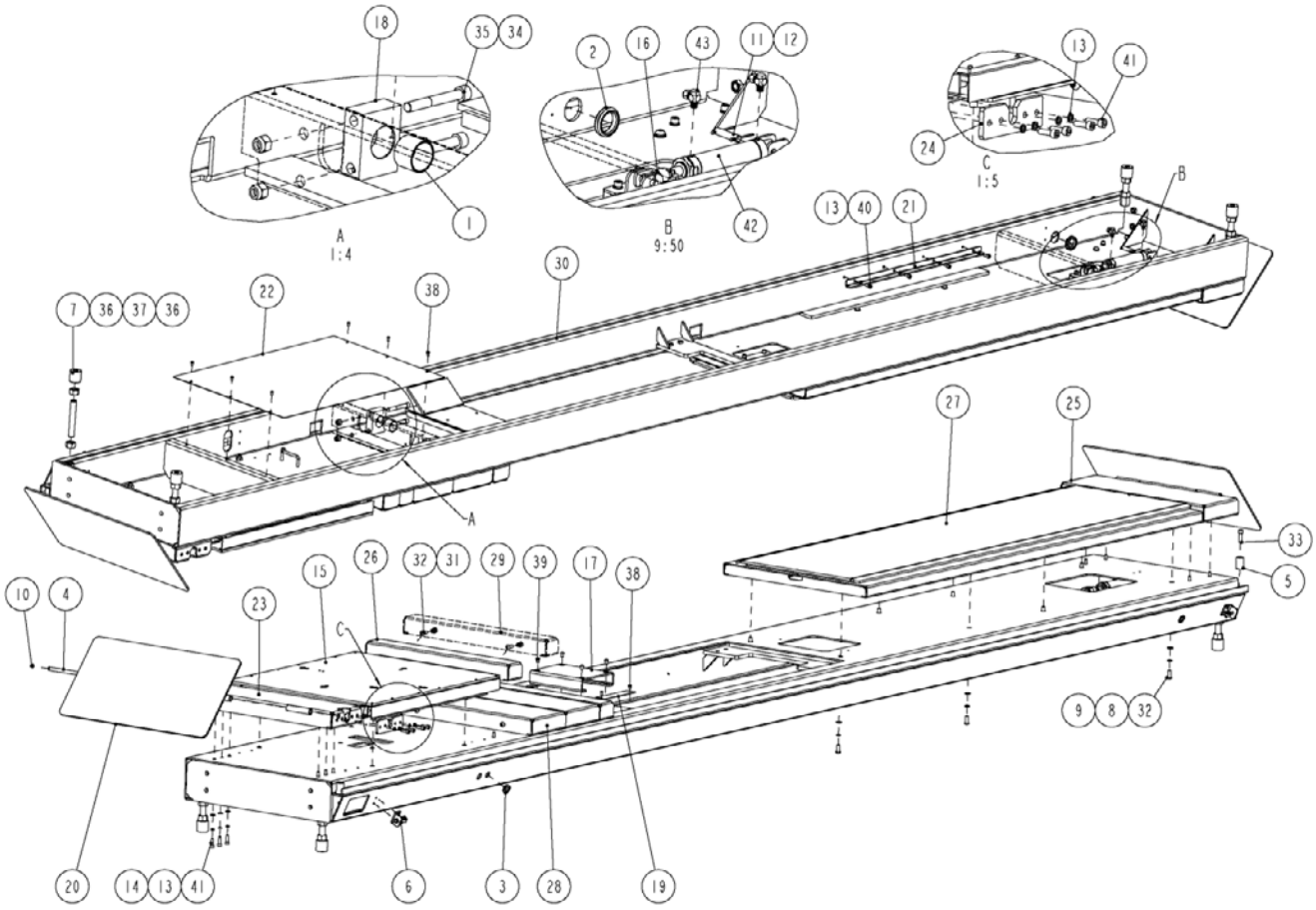
Platform A assembly - Version 3, 2025.1



Pos.	Code	Component descriptions	Specification	Qty
1	205101109	Bearing	3530-SF-1X	2
2	420040030	Protective ring Φ40	6254E-A21	1
3	420040020	Protective ring Φ20	6254E-A22	2
4	410250211	Shaft of the ramp	6604V2-A4-B12	2
5	420260040	Limit block	6605B-A21	2
6	420260010	Adjustable nylon block	6605B-A1-B8	4
7	204201005	Spring washer	D10-GB93	8
8	204101006	Flat washer	D10-GB95	8
9	204301002	Circle	D12-GB894_1	4
10	206103005	Pin with hole	D12X55-GB880	1
11	206201008	Cotter pin	D4X30-GB91	2
12	204201004	Spring washer	D8-GB93	26
13	204101005	Flat washer	D8-GB95	14
14	615068792	PD8N assembly	EEPD8N1	1
15	310304002	Y connector	F-M12X125-Y	1
16	410911291	Limit plate for the wheel-free lift	HX50-A3-B8	1
17	410911223	Upper support holder	HX50-A3-B9	2

Pos.	Code	Component descriptions	Specification	Qty
18	410911218	Anti-wear plate	HX50-A3-B11	2
19	612901637	Welded small ramp	HX50X-A3-B4	2
20	410911569	Upside plate for overturn prevention	HX50X-A3-B10	2
21	410911573	PD covering plate	HX50X-A3-B16	1
22	612901985	Fixed box-175mm	HX50X-A3-B22	1
23	410912581	Holding plate for the support tube	HX50X-A3-B23	1
24	612069001	Fixed box-205mm	HX50X-A3C-B2	1
25	612069003	Fixed box-80mm	HX50X-A3C-B5	2
26	615068798	Slip plate assembly	HX50X-A3C-B7	1
27	612901989	Flexible box-200mm	HX50X-A3C-B13	2
28	612069004	Flexible box-70mm	HX50X-A3C-B14	1
29	612901986	Welded Platform A	HX50X-A3E-B1-54L	1
30	203101006	Hex nut	M10-GB6170	6
31	202110012	Hex socket button head screw	M10X25-GB70_2	14
32	202109044	Hex socket cylinder head screw	M10X35-GB70_1	2
33	203103008	Hex locking nut	M12-GB889_1	4
34	202109155	Hex socket cylinder head screw	M12X90-GB70_1	4
35	203101012	Hex nut	M20-GB6170	8
36	202205005	Hex socket flat head locking screw	M20X140-GB77	4
37	202110003	Hex socket button head screw	M6X12-GB70_2	10
38	202110004	Hex socket button head screw	M8X12-GB70_2	4
39	202109028	Hex socket cylinder head screw	M8X16-GB70_1	8
40	202109030	Hex socket cylinder head screw	M8X25-GB70_1	18
41	310502001	Pneumatic cylinder	MA40X100SCA	1
42	310302001	Right angle connector	TKN-PH8-01	2

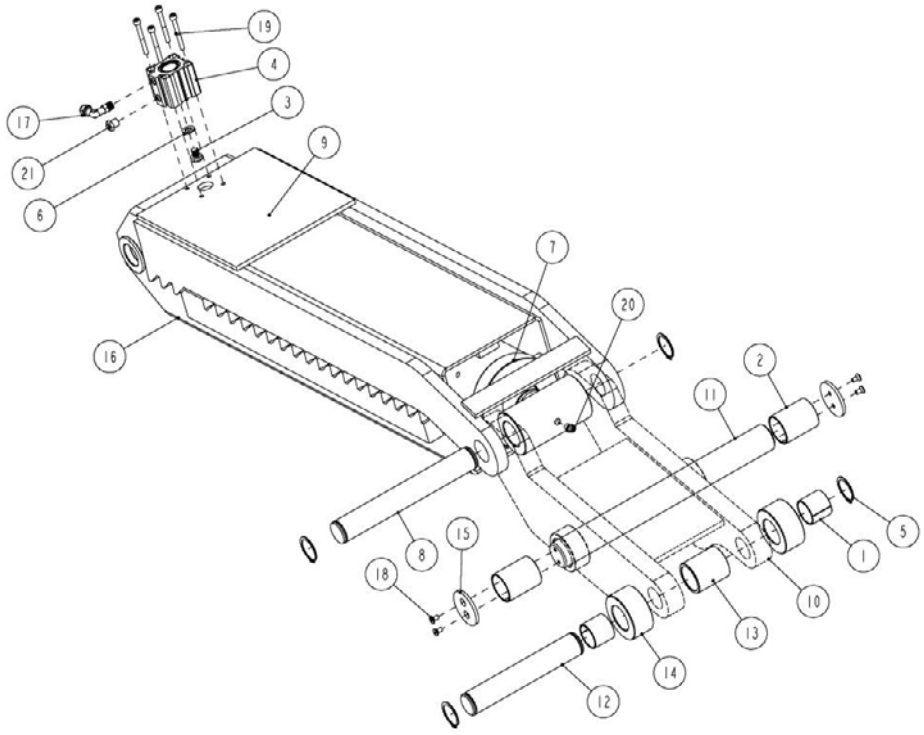
Platform B assembly - Version 3, 2025.1



Pos.	Code	Component descriptions	Specification	Qty
1	205101109	Bearing	3530-SF-1X	2
2	420040030	Protective ring Φ40	6254E-A21	1
3	420040020	Protective ring Φ20	6254E-A22	2
4	410250211	Shaft of the ramp	6604V2-A4-B12	2
5	420260040	Limit block	6605B-A21	2
6	615026012	Assembly for rope tightening	6605B-A22	2
7	420260010	Adjustable nylon block	6605B-A1-B8	4
8	204201005	Spring washer	D10-GB93	8
9	204101006	Flat washer	D10-GB95	8
10	204301002	Circle	D12-GB894_1	4
11	206103005	Pin with hole	D12X55-GB880	1
12	206201004	Cotter pin	D3X45-GB91	2
13	204201004	Spring washer	D8-GB93	26
14	204101005	Flat washer	D8-GB95	14
15	615068792	PD8N assembly	EEPD8N1	1
16	310304002	Y connector	F-M12X125-Y	1

Pos.	Code	Component descriptions	Specification	Qty
17	410911291	Limit plate for the wheel-free lift	HX50-A3-B8	1
18	410911223	Upper support holder	HX50-A3-B9	2
19	410911218	Anti-wear plate	HX50-A3-B11	2
20	612901637	Welded small ramp	HX50X-A3-B4	2
21	410911569	Upside plate for overturn prevention	HX50X-A3-B10	2
22	410911573	PD covering plate	HX50X-A3-B16	1
23	612901985	Fixed box-175mm	HX50X-A3-B22	1
24	410912581	Holding plate for the support tube	HX50X-A3-B23	1
25	612069001	Fixed box-205mm	HX50X-A3C-B2	1
26	612069003	Fixed box-80mm	HX50X-A3C-B5	2
27	615068798	Slip plate assembly	HX50X-A3C-B7	1
28	612901989	Flexible box-200mm	HX50X-A3C-B13	2
29	612069004	Flexible box-70mm	HX50X-A3C-B14	1
30	612901987	Welded platform B	HX50X-A3F-B1-54L	1
31	203101006	Hex nut	M10-GB6170	6
32	202110012	Hex socket button head screw	M10X25-GB70_2	14
33	202109044	Hex socket cylinder head screw	M10X35-GB70_1	2
34	203103008	Hex locking nut	M12-GB889_1	4
35	202109155	Hex socket cylinder head screw	M12X90-GB70_1	4
36	203101012	Hex nut	M20-GB6170	8
37	202205005	Hex socket flat head locking screw	M20X140-GB77	4
38	202110003	Hex socket button head screw	M6X12-GB70_2	10
39	202110004	Hex socket button head screw	M8X12-GB70_2	4
40	202109028	Hex socket cylinder head screw	M8X16-GB70_1	8
41	202109030	Hex socket cylinder head screw	M8X25-GB70_1	18
42	310502001	Pneumatic cylinder	MA40X100SCA	1
43	310302001	Right angle connector	TKN-PH8-01	2

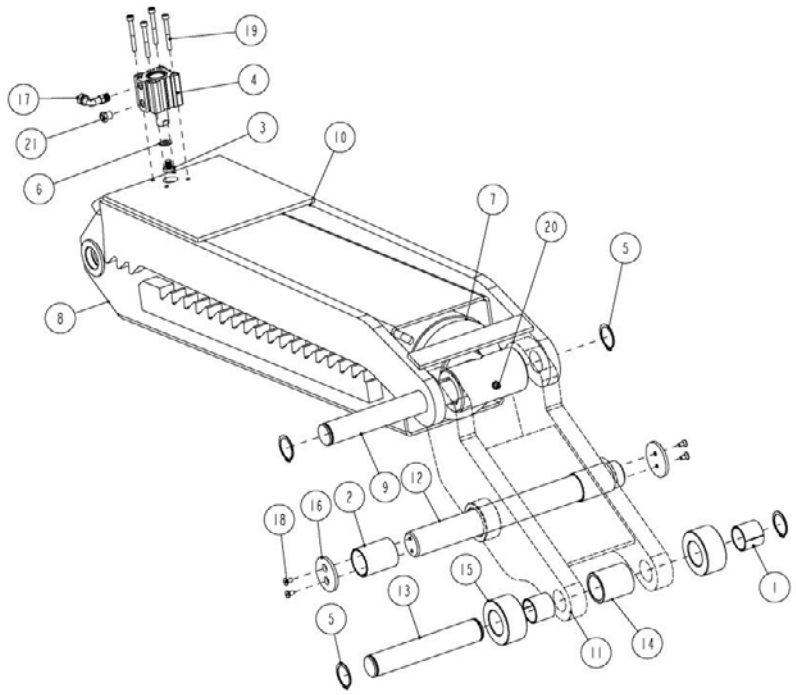
Slave cylinder and latch assembly for the wheel-support platform



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
16	310302001	Right angle connector Replace 310102024	TKN-PH8-01	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

Pos.	Code	Component descriptions	Specification	Qty
20	310201003	Silencer	SLM01-R1-8	1
21	615068517	Slave cylinder for wheel-support platform	YG100-114-50-645	1

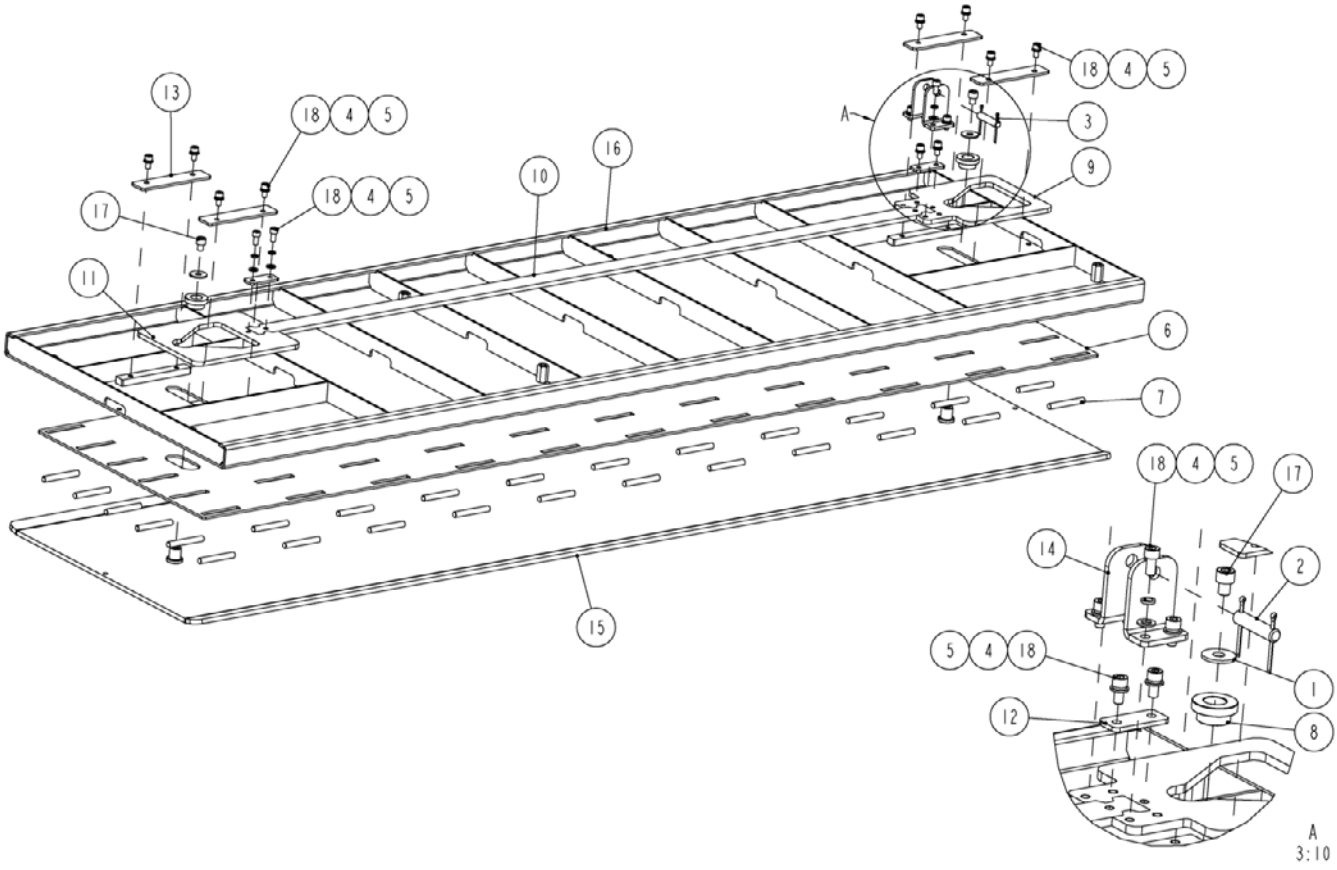
Master cylinder and latch assembly for the wheel-support platform



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
16	310302001	Right angle connector Replace 310102024	TKN-PH8-01	

Pos.	Code	Component descriptions	Specification	Qty
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

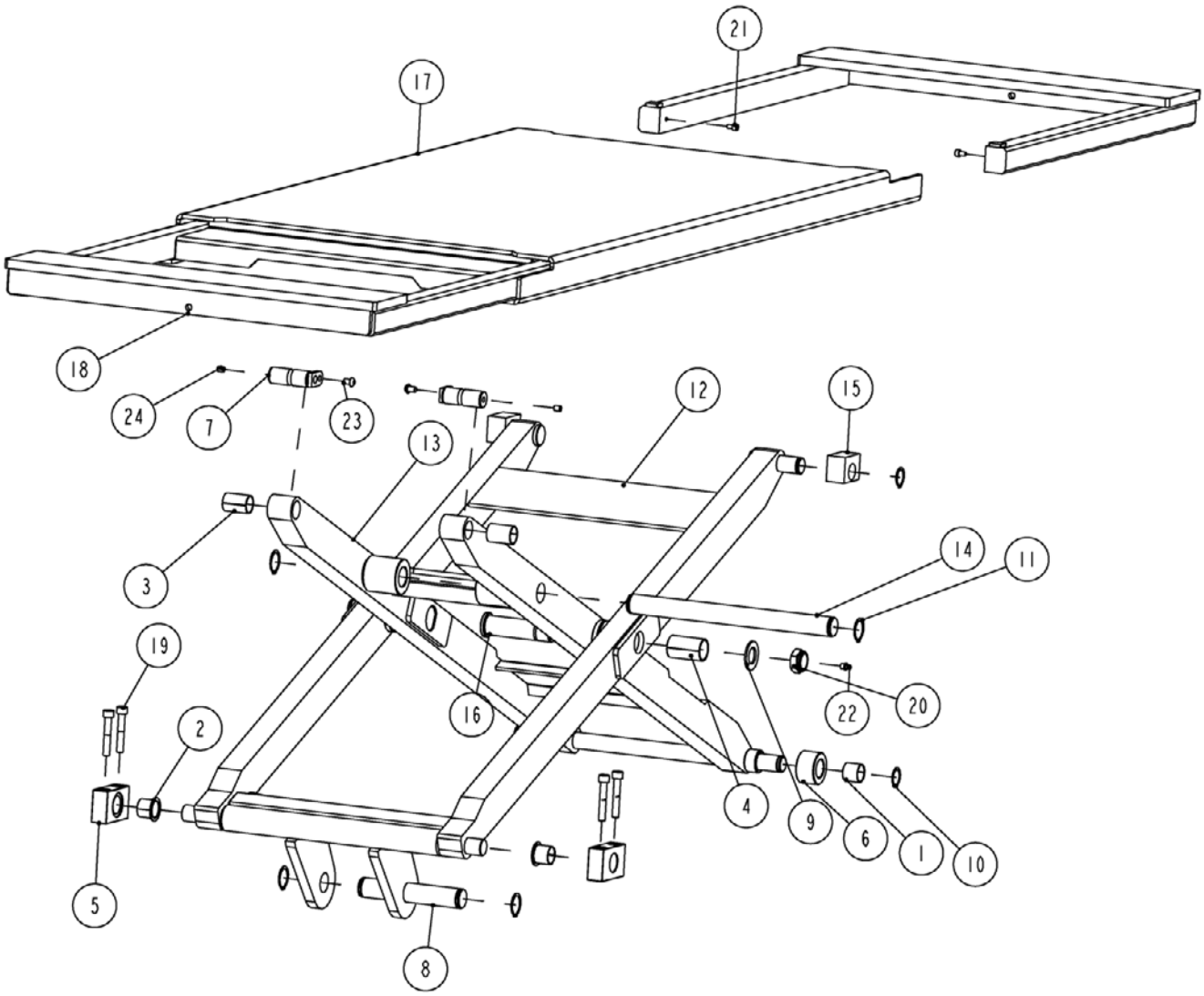
Slip plate assembly - Version 2, 2024.12



Pos.	Code	Component descriptions	Specification	Qty
1	201104001	Large washer	D10-GB96	2
2	206103005	Pin with hole	D12X55-GB880	1
3	206201004	Cotter pin	D3X45-GB91	2
4	204201004	Spring washer	D8-GB93	16
5	204101005	Flat washer	D8-GB95	16
6	420680139	Ball holder	HX50-A3-B7-C2	1
7	420680144	POM roller	HX50-A3-B7-C4	66
8	420680142	Spacer sheath	HX50-A3-B7-C5	2
9	410911367	Limit plate A	HX50-A3-B7-C6	1
10	410911406	Transmission bar	HX50-A3-B7-C7	1
11	410911407	Limit plate B	HX50-A3-B7-C8	1

Pos.	Code	Component descriptions	Specification	Qty
12	410911377	Connecting block	HX50-A3-B7-C9	2
13	410911379	Pressure plate	HX50-A3-B7-C11	4
14	410912470	Pneumatic cylinder holder	HX50-A3C-B7-C10	2
15	612901663	Slip plate	HX50X-A3-B7-C3	1
16	612069005	Holder of the slip plate	HX50X-A3C-B7-C1	1
17	202110018	Hex socket cylinder head screw	M10X12-GB70_1	2
18	202109028	Hex socket cylinder head screw	M8X16-GB70_1	16

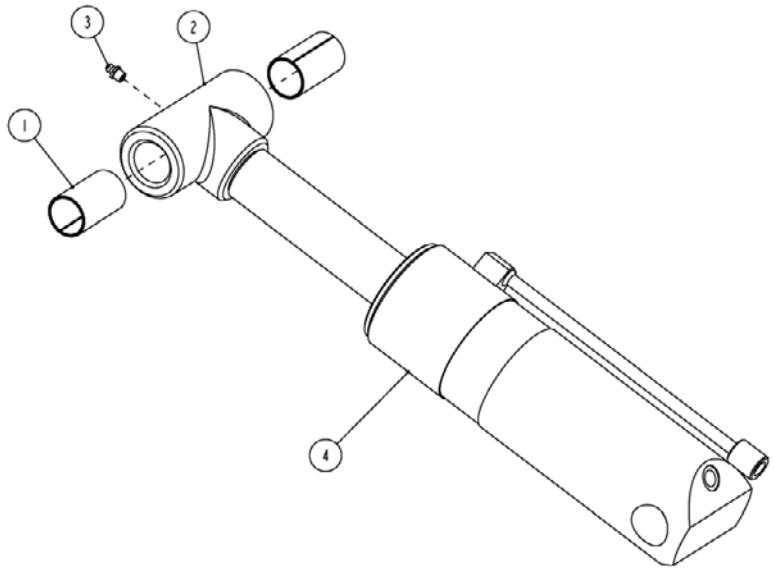
Wheel-free platform- Version 2, 2024.12



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

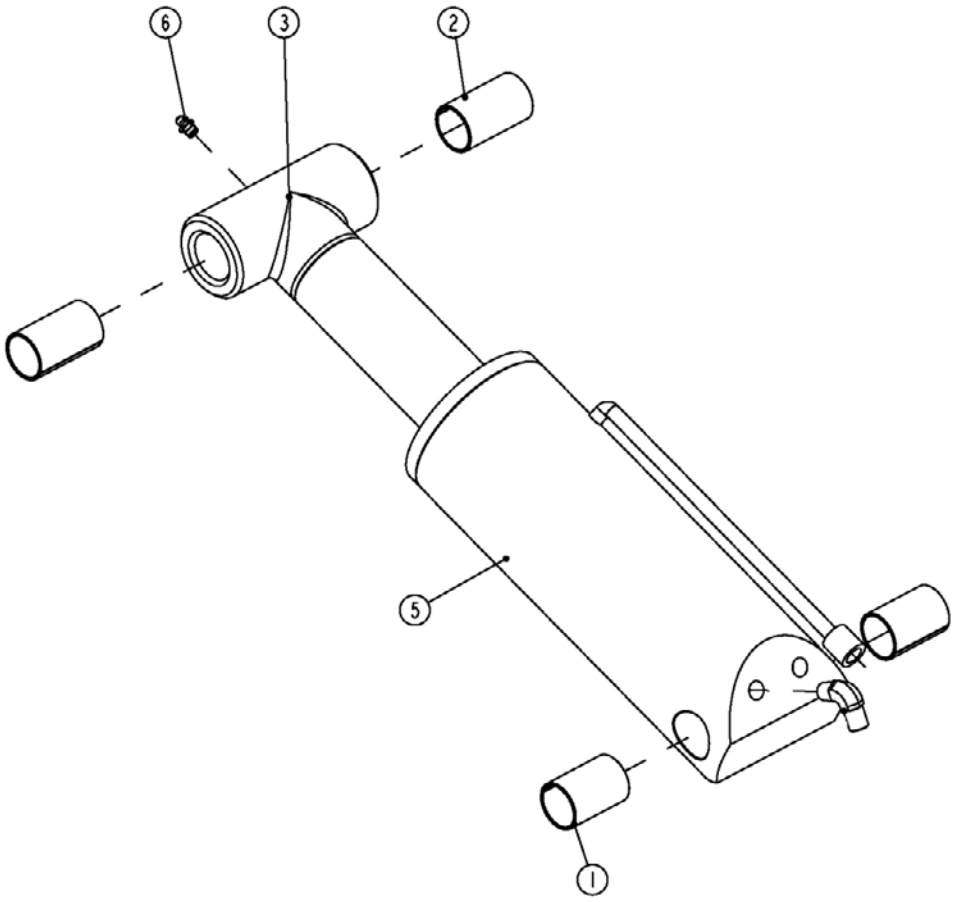
Pos.	Code	Component descriptions	Specification	Qty
4	205101024	Bushing	3055-SF-1X	2
5	410276701	Bottom holder	6435BWF-C03-20	2
6	410276711B	Rolling wheel	6435BWF-C03-21	2
7	612019504	Weld Revolving shaft assembly	65012-A1-B5	2
8	410254541	Lower cylinder shaft for the wheel-free lift	6604V2-A7-B7	1
9	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	410911239	Upper cylinder shaft for the wheel-free lift	HX50-A5-B5	1
15	420680135	Upper sliding block for the wheel-free lift	HX50-A5-B6	2
16	410911240	Middle shaft of the support arm	HX50-A5-B7	2
17	612069006	Welded platform assembly	HX50-A5C-B3	1
18	612069007	Welded extending platform assembly	HX50-A5C-B4	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

Slave cylinder assembly for wheel-free platform - Version 2, 2024.12



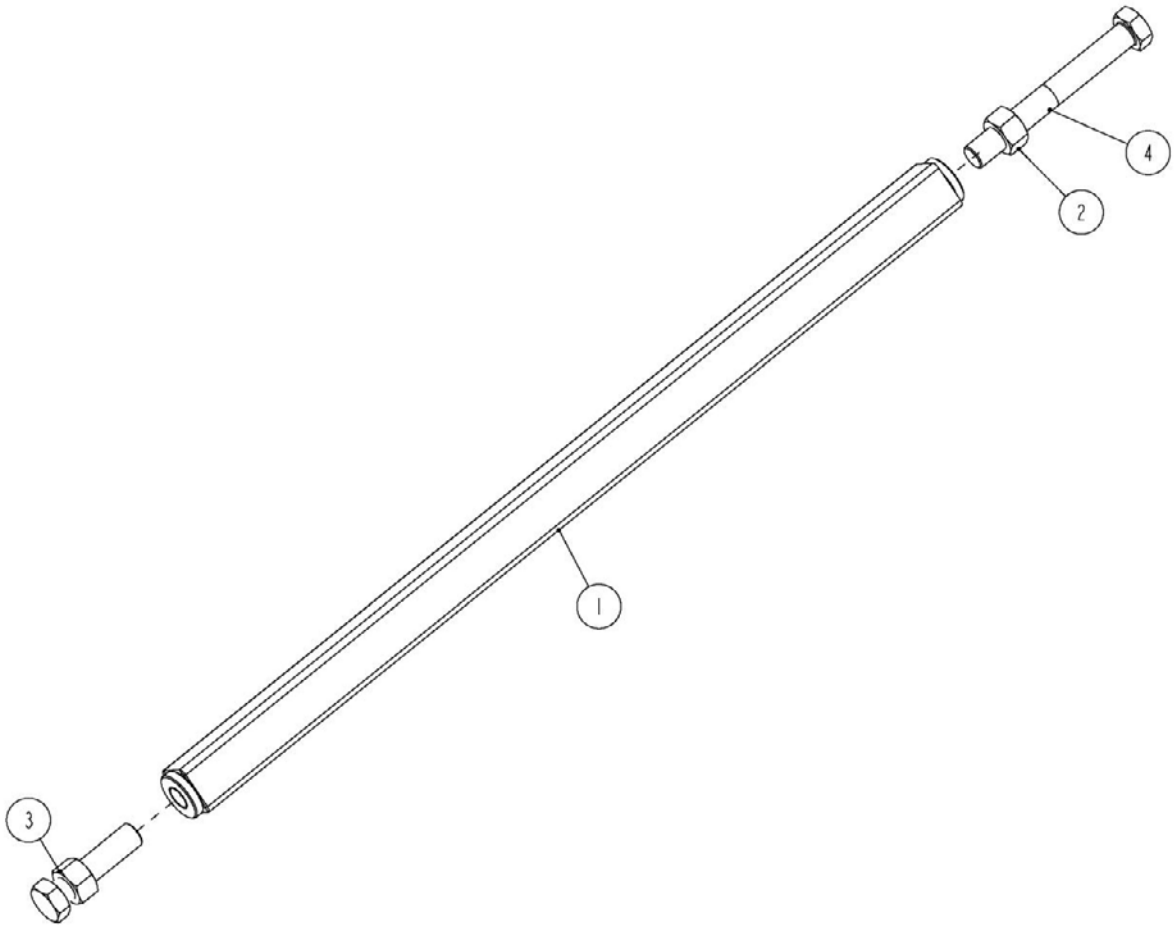
Pos.	Code	Component descriptions	Specification	Qty
1	205101025	Bearing	3058-SF-2X	2
2	410212090	T shape cylinder connector	6603B-A3-B8	1
3	208106001	Grease injection cup	M8X1-JB9740_1	1
4	625000040	Slave cylinder of the wheel-free platform	YG80-95-45-150-KS	1

Master cylinder assembly for wheel-free platform



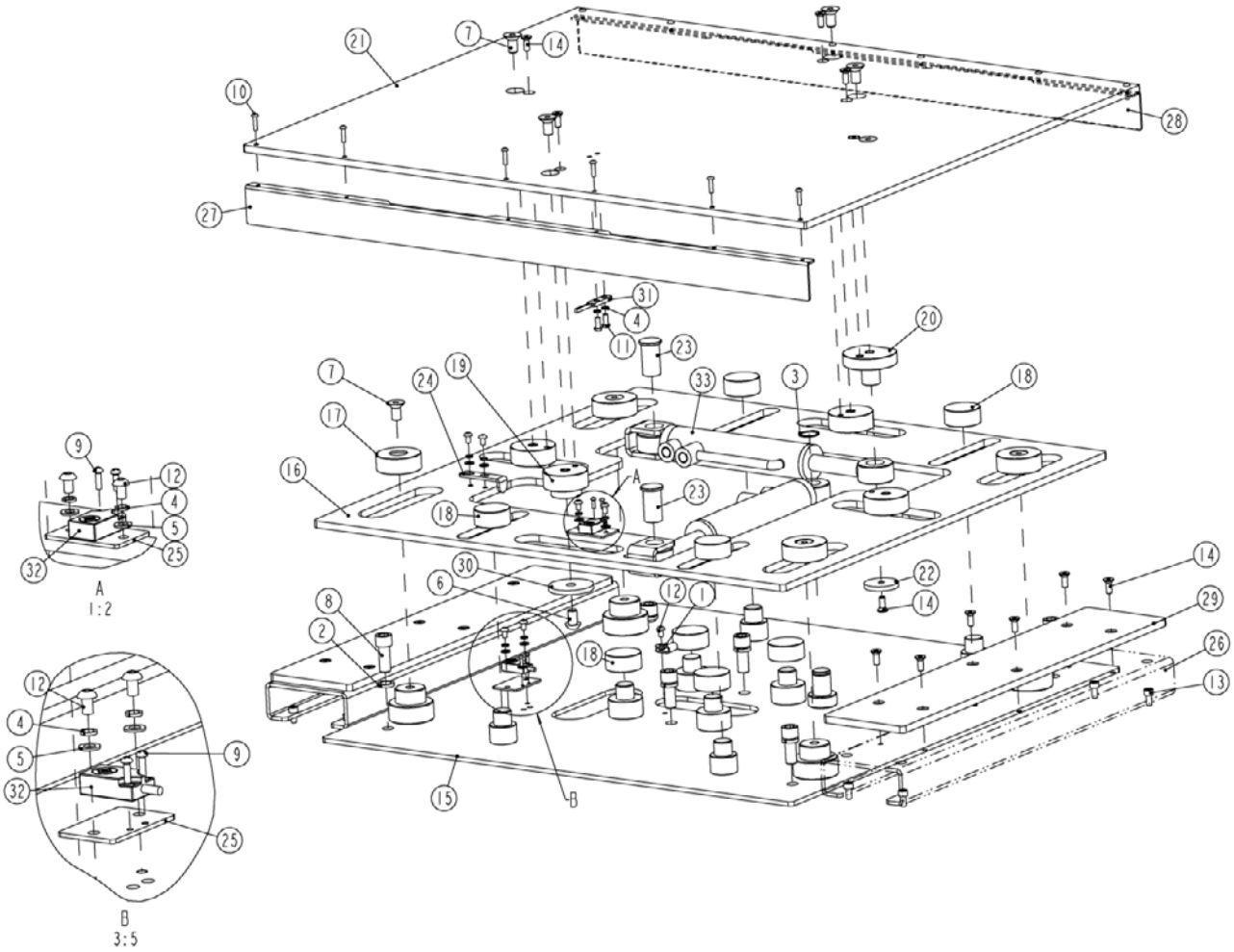
Pos.	Code	Component descriptions	Specification	Qty
1	205101023	Bearing	3050-SF-1X	2
2	205101025	Bearing	3058-SF-2X	2
3	410212090	T shape cylinder connector	6603B-A3-B8	1
5	615026701	Master cylinder of the wheel-free lift	HX6-SMCYL	1
6	208106001	Grease injection cup	M8X1-JB9740_1	1

Connection bar assembly - Version 2, 2025.1



Pos.	Code	Component descriptions	Specification	Qty
1	612901988	Support rod	HX50X-A9L-B1	1
2	203101012	Hex nut	M20-GB6170	1
3	203101020	Hex nut (counter-clockwise screw)	M20-LH-GB6170	1
4	201101106	Hex head bolt	M20X160-GB5783	1
5	201101104	He head bolt (counter-clockwise screw)	M20X80-LH-GB5783	1

PD8N assembly - Version 2, 2024.12



Pos.	Code	Description	Specification	Qty
1	208101032	Clamp with rubber pad	D6	1
2	204201006	Spring washer	D12-GB93	6
3	204301007	Type B clip	D20-GB894_2	1
4	204201002	Spring washer	D5-GB93	8
5	204101003	Flat washer	D5-GB95	6
6	202110017	Hex socket button head screw	M10X16-GB70_2	4
7	202111031	Hex socket flat head screw	M10X20-GB70_3	9
8	202109085	Hex socket cylinder head screw	M12X30-GB70_1	6
9	202101040	Cross socket cap head screw	M3X10-GB818	4
10	202110010	Hex socket button head screw	M4X16-GB70_2	12
11	202101022	Cross socket cap head screw	M5X12-GB818	2
12	202110001	Hex socket button head screw	M5X8-GB70_2	7
13	202109019	Hex socket cylinder head screw	M6X12-GB70_1	8

Pos.	Code	Description	Specification	Qty
14	202111037	Hex socket flat head screw	M6X16-GB70_3	18
15	612031008	Bottom base frame	PD8N1-A01	1
16	612031009	Middle plate	PD8N1-A02	1
17	420680192	Fixed pad block	PD8N1-A03	4
18	420680193	Support pad block	PD8N1-A04	8
19	410912440	Guiding block	PD8N1-A05	4
20	410912441	Cylinder shaft A	PD8N1-A06	1
21	410912576	Surface plate	PD8N1-A07B	1
22	410912442	Fixed washer	PD8N1-A08	1
23	410912443	Cylinder shaft B	PD8N1-A09	2
24	410912444	Chip for sensor	PD8N1-A10	1
25	410912445	Plate for installing the sensor	PD8N1-A11	2
26	410912446	Support bar	PD8N1-A12	2
27	410912447	Cover A	PD8N1-A13	1
28	410912448	Cover B	PD8N1-A14	1
29	420680194	Anti-abrasive plate	PD8N1-A15	2
30	410912449	Washer	PD8N1-A16	4
31	410912450	Block for sensor	PD8N1-A18	1
32	320307063	Proximity switch	CJF10-05NA	2
33	625000015	Cylinder	YG30-40-18-100-ZY	2