



Two Post Lift:

TC 248

OPERATION, SERVICE AND SPARE PARTS MANUAL

Translation of the original instructions



Carefully read the instructions in this manual before using the equipment

THE FIRM



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1. DESCRIPTION AND MAIN FEATURES

1.1. Introduction

This manual provides all the necessary information for the correct installation, use, and maintenance of the **Two Columns Lift – TC 248**, designed for professional workshops and body shops.

The lift uses an electro-hydraulic system with two vertical columns connected by a top beam (Figure 1), ensuring stability and full access to the underside of the vehicle.

The structure is made of high-strength steel, with a reinforced carriage and stiffening plates, while the lifting system employs hydraulic cylinders and steel ropes for synchronized movement.

The lift is equipped with mechanical safety locks integrated into the columns and explosion-proof valves on the cylinders to prevent sudden descent in case of pipe rupture.

It is designed for vehicles with long wheelbase and high chassis, thanks to three-section telescopic arms, front and rear, adjustable to fit different lifting points.

Main applications:

- Tire assembly
- Chassis inspection
- Oil change
- General repairs

Designed in compliance with CE standards, this lift is ideal for tire assembly, chassis inspection, oil changes, and general maintenance—especially in service stations and workshops handling large vehicles.

The lift must be operated only by trained and authorized personnel. Improper use may cause damage to the equipment or serious injury. The instructions in this manual must be followed carefully to ensure safe operation, optimal performance, and long service life of the equipment.

WARNING

The manufacturer declines all liability for damage to persons, animals, or property resulting from failure to comply with the instructions in this manual.

The lift must be used exclusively for lifting vehicles within the rated capacity. It is not suitable for lifting people or for use as a parking system.

This manual is an integral part of the product and must be kept in a safe place for the entire life of the machine. Additional copies may be requested from the distributor.

1.2. Warranty

The lift is covered by a 12-month warranty from the date of purchase. The warranty includes the free replacement or repair of defective components, excluding electrical parts, as determined by the authorized technical service department.

The warranty becomes void in the following cases:

- Improper use or overloading of the lift.
- Insufficient maintenance or unauthorized modifications.
- Use of non-original spare parts or accessories.
- Failure to follow the instructions in this manual.

The warranty does not cover indirect damages, transport costs, or consumables. Warranty claims are valid only if the purchaser complies with the terms specified in the supply contract.

1.3. EC certification

The lift complies with the essential safety requirements of the Machinery Directive 2006/42/EC.

It is supplied with:

- CE marking;
- EC Declaration of Conformity;
- Instruction manual.

1.4. Identification

The **Two Column Lift** is provided with manufacturer identification plate containing the following information:

1. Spanesi Logo.
2. CE Logo.
3. Producer Name.
4. Product Name.
5. Model type.
6. Serial number of the Lift.
7. Voltage and frequency of Electric Motor.
8. Dimensions of the lift (minimum and maximum).
9. Year of Production.
10. Pressure of Hydraulic System.
11. Rated Lifting Capacity.
12. Motor current consumption.
13. Net weight of the Lift.
14. Lifting and Lowering Speed.
15. Place of Production.
16. Producer Contact Information.

| | | | |
|-----------------|-------------|--------------------|-------------|
| (1) | | (2) | |
| (3) | | | |
| (4) | | | |
| Model | (5) | Hydraulic pressure | (10) |
| Serial number | (6) | Max Capacity | (11) |
| Voltage | (7) | Current | (12) |
| Dimensions | (8) | Machine Weight | (13) |
| Production Year | (9) | Feed rate | (14) |
| | (15) | | |
| | (16) | | |

1.5. Application

The lift is designed exclusively for lifting motor vehicles to a height suitable for inspection, maintenance, and repair operations.

The lift must be used strictly within the rated capacity indicated on the manufacturer's nameplate. It is not designed for lifting people or for any purpose other than vehicle service..

WARNING

This equipment is not suitable for lifting people. Any use other than that described in this manual is considered improper and strictly prohibited.

The manufacturer declines all liability for damage to people, animals, or property resulting from failure to comply with these instructions.

The lift must be operated only by trained and authorized personnel. Improper use, unauthorized modifications, or failure to follow the safety instructions may result in serious injury or damage.

It is forbidden to:

- Lift people.
- Use the lift as a parking system.
- Exceed the rated capacity indicated on the nameplate.

1.6. Description of the lift

The Two Column Lift is a robust structure designed to ensure stability and safety during vehicle lifting. It consists of two vertical columns (11) connected by a top beam (5) that guarantees synchronized movement and structural rigidity.

The lifting system is electro-hydraulic, with hydraulic cylinders (3) positioned inside the columns generating the lifting force. The simultaneous movement of the sliding carriages (2) is ensured by steel wire ropes (6) that maintain leveling and synchronization.

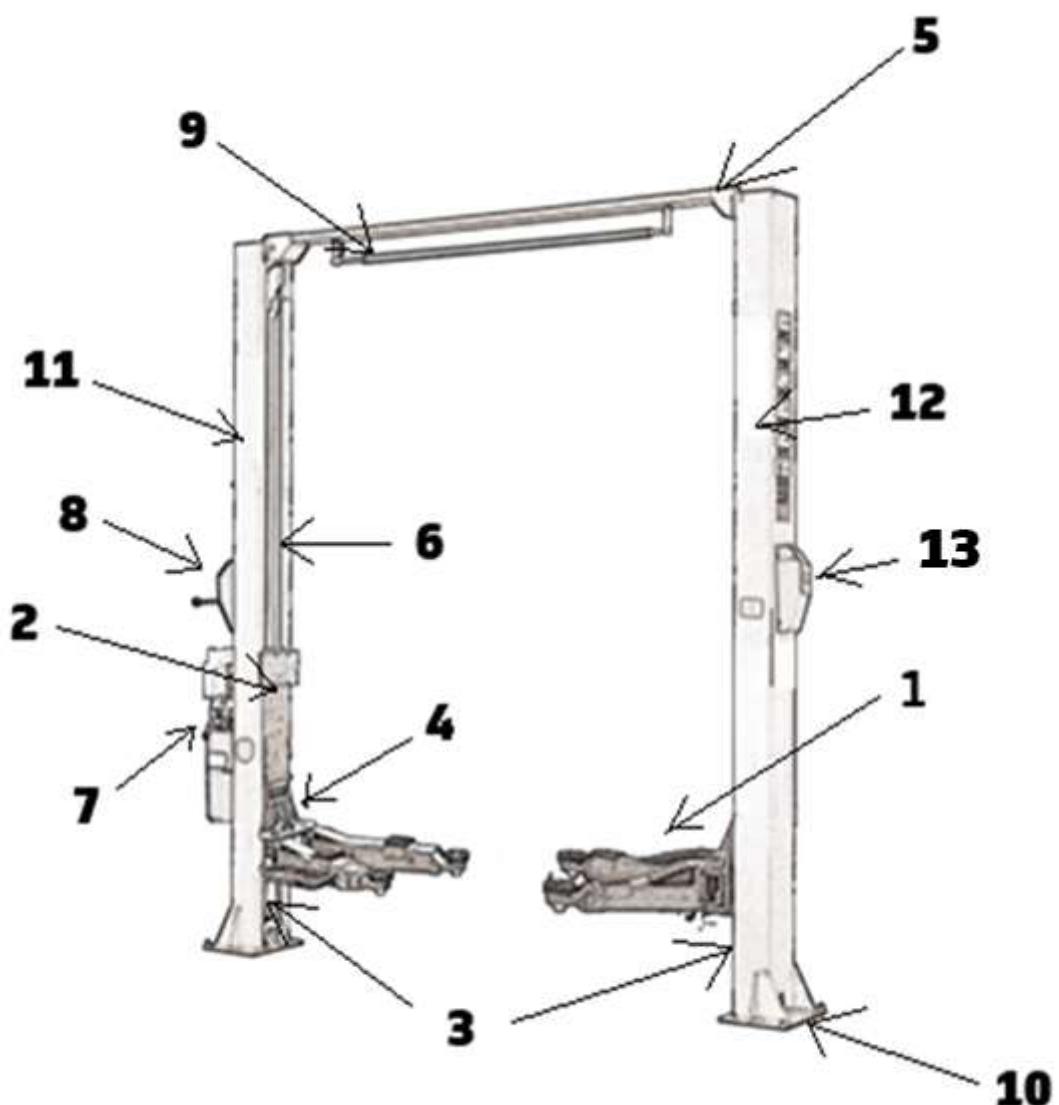
Each column is equipped with mechanical safety locks (4) that automatically engage during lifting, preventing accidental descent. In addition, the system includes explosion-proof valves integrated into the cylinders to block oil flow in case of pipe rupture.

The support arms (1) with adjustable trays allow the lift to adapt to vehicles of different sizes, ensuring stable support at the lifting points.

The pump station (7), located on the main column, controls lifting and lowering operations via dedicated buttons. The manual version includes a manual unlocking system (8), while the electric version integrates a control box (12) with an electromagnetic unlocking system.

Additional components include the limit bar (9) for upper travel stop, base plates (10) with anchor points for secure installation, and all necessary fastening elements

Figure 1 – Lift structure



The main components of the lift include:

1. Support arms with adjustable trays
2. Carriages sliding vertically along the columns
3. Hydraulic cylinders
4. Mechanical safety locks integrated into the columns
5. Top beam for structural stability and synchronization
6. Steel wire ropes for balance and leveling
7. Pump station with control unit
8. Manual unlocking system for manual unlocking type
9. Limit bar
10. Base plates with anchor points for secure installation
11. Main column lift
12. Auxiliary column lift
13. Control box with electric unlocking system for electric version

Figure 2 – Dimensions of the lift

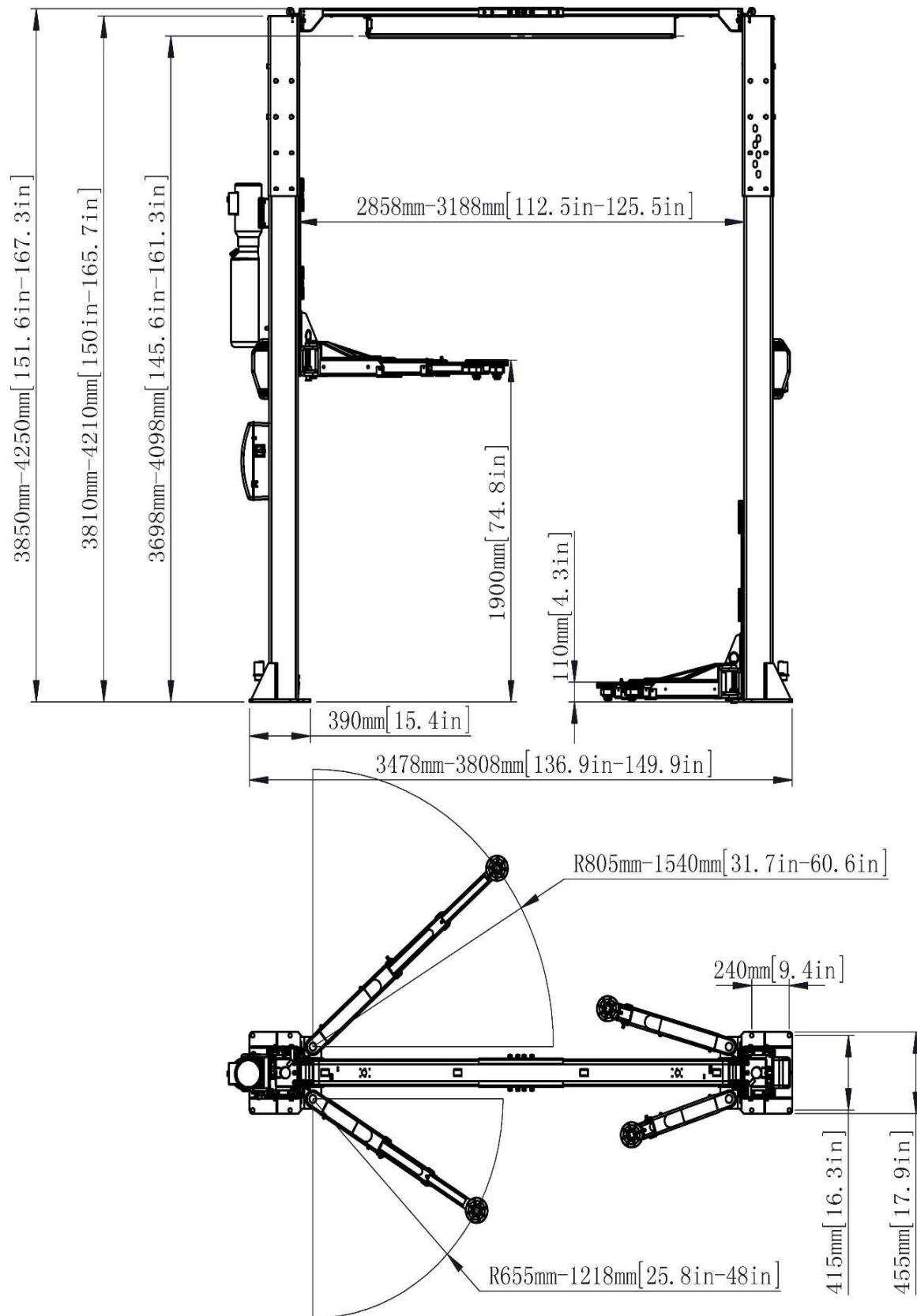
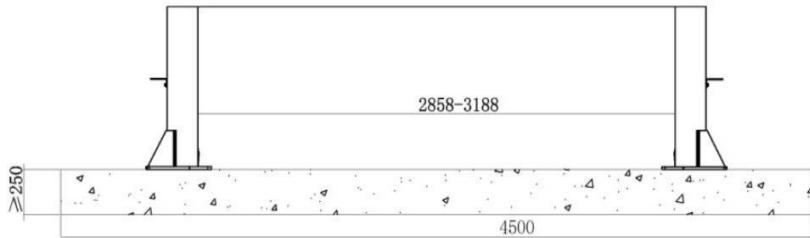
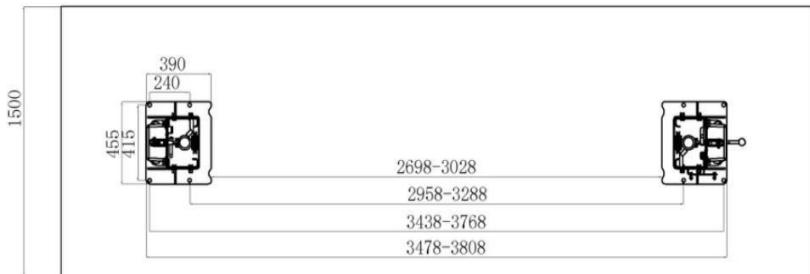


Figure 2 – Concrete foundations



The basis of concrete strength should reach more than 2.1Kg/mm (3000PSI), other wise, can not be installed.



1. The base of two post should in the same foundation.
2. The foundation level of the error is not more than 2 mm.

1.7. Technical specifications

Basic specifications are given in the following table. For more detailed information on the product characteristics, contact Spanesi.

| | |
|--------------------------|--------------------------------------|
| Lifting Capacity | 4,500 kg (9,900 lb) |
| Maximum Lifting Height | <1,900 mm (< 74.8 in) |
| Lift Maximum Height | 3,850 / 4,250 mm (151.6 – 167.3 in) |
| Lift Maximum Width | 3,478 / 3,808 mm (136.9 – 149.9 in) |
| Tray Minimum Height | 100 mm (4 in) |
| Hydraulic pressure | 20 Mpa / 200 bar (2,900 psi) |
| Lift Net Weight | 750 kg (1,650 lb) |
| Motor Power | 2,2 kW |
| Voltage* | 400 V |
| Frequency* | 50 Hz |
| Passway Space | 2500 / 2830 mm (98.4 / 111.4 in) |
| Lifting / lowering speed | 0,035 m/s (0,115 ft/s) |

*: Differents voltages and frequencies are available according to customer's request.

2. SAFETY PRECAUTIONS AND ACCIDENT PREVENTION

2.1. Hazard levels

Operator safety is the primary concern of the machine manufacturer. When designing a new machine, the designer considers all possible hazards and risks associated with its use, adopting all necessary precautions to make the equipment as safe as possible. Although the lift is designed to minimize risks, improper use can cause serious accidents. It is therefore essential to read this manual and this section on safety precautions very carefully, ensuring that you always use the machine correctly and follow the instructions provided:

WARNING

Read the following instructions carefully. Failure to comply may result in permanent injury, harm to other people or animals, or damage to property. SPANESI S.p.A. accepts no liability for direct or indirect damage caused by failure to observe the safety precautions and accident-prevention guidelines set out below.

Pay attention to the hazard warning sign when it appears in this manual and observe all safety measures. There are three levels of hazard warning:

DANGER

Indicates situations where, if operations are not performed correctly, serious injury or death may occur.

WARNING

Indicates situations that, if not properly managed, can cause severe injury or critical consequences.

CAUTION

Indicates situations that, if not properly managed, can cause damage to the machine.

WARNING

Spanesi S.p.A. declines all responsibility for damage to persons, animals, or property resulting from failure to comply with the safety instructions and accident-prevention rules contained in this manual.

2.2. Segnali di allarme



Frequent maintenance required.



Do not push or pull the lifted vehicle.



Use only by trained operators.



If using a support plate, ensure its load capacity is respected.



The vehicle center must be aligned with the plane between the two columns.



Do not strike or damage the control unit.



Unauthorized personnel must stay away from the work area.



Select the support height according to the vehicle model.



It is strictly forbidden to stand under the vehicle during lifting or lowering.



Do not place feet under the carriage during lowering.



Additional support is required when installing or removing heavy components.



Different vehicles require different support positions.

2.3. Installation Safety Instructions

WARNING

Please read this manual carefully before using the equipment. Operate strictly according to the instructions and do not act at will.

- Installation must be carried out only by qualified and authorized personnel.
- Before starting, remove all obstacles around and beneath the lift.
- Verify that the location and available space comply with the lift's requirements, referring to dimensional drawings and foundation plans.
- Check the power supply specifications (voltage and phase) as indicated on the motor nameplate.
- Electrical connection must be performed by a qualified electrician.
- Ensure the motor rotates in the correct direction after connection.
- Perform leveling of the lift without any load.
- Before lifting, correctly position the support trays under the vehicle's lifting points and ensure the vehicle is stable.
- Never stand on or under the lift during installation.
- Do not allow people to remain inside the vehicle while it is being lifted.
- Do not exceed the rated lifting capacity indicated on the nameplate.
- Ensure that the arm locks are fully engaged before lifting.
- Maintain a safe distance from the equipment during lifting.
- Never open the balance valve while the lift is supporting a vehicle.
- When the lift is not used for long periods, lower it completely, remove the vehicle, and disconnect the power supply.

2.4. Operation Safety instructions

WARNING

Pay attention to electrical safety during maintenance or repair operations. If necessary, disconnect the power supply.

Before starting, read carefully and observe all warning signs.

- Only trained and qualified personnel are authorized to perform electrical maintenance and troubleshooting.
- Do not modify or disable safety interlock devices under any circumstances.
- Operate the lift with caution in humid environments to prevent electric shock.
- Before energizing the lift, all personnel must maintain a safe distance.
- Do not open the electrical control box unless strictly necessary for inspection or repair.
- Do not alter the electrical circuit without manufacturer authorization.
- When replacing electrical components, ensure they comply with the required specifications, including wire color coding.
- Do not wear metallic objects such as glasses, necklaces, or chains when working on electrical components.
- Avoid wearing dangling or fragile accessories (rings, watches, bracelets) that could pose a hazard.

2.5. Maintenance Safety Instructions

WARNING

Maintenance operations must be carried out exclusively by specialized and qualified personnel. Maintenance must be performed with the utmost care, following the instructions in this manual and replacing worn or damaged parts. The power supply must be disconnected before performing cleaning or maintenance work on the lift.

To ensure safe maintenance of the two-post lift, observe the following guidelines:

- Never remove or tamper with safety devices.
- Never perform welding, blowtorch cutting, or drilling on the lift structure.
- Never operate the lift if even one safety sign applied by the manufacturer is missing. Safety and hazard signs provide essential accident-prevention instructions and must always be clean and immediately replaced if damaged or detached.
- Never use the lift if it is not properly anchored to the floor.
- Never wet or keep the lift wet (e.g., during floor cleaning or after lifting a snow-covered vehicle).
- Always follow the procedures in this manual to lift the load correctly.
- Use only the recommended oil (see paragraph 4.3 “Hydraulic Oil”).
- Periodically check the tightening and sealing of screws and couplings.
- Regularly verify that safety devices are in perfect condition and functioning correctly.
- If parts of the lift must be raised, use lifting and slinging accessories prescribed by local regulations.
- Immediately remove any oil traces from the floor, as they pose a serious slipping hazard.
- Use only original spare parts for repairs and maintenance.

CAUTION

Keep this manual for the entire operational life of the lift and consult it before any intervention.

2.6. Residual risks

WARNING

Spanesi S.p.A. accepts no liability for damage to persons, animals, or property caused by failure to maintain proper work behavior, good physical and mental condition, concentration, and attention after having carefully read and understood the User and Maintenance Manual.

Despite all safety measures adopted by Spanesi S.p.A., the implementation of integrated control systems and the application of warning signs, some residual risks may persist due to:

- Lack of attention or distraction by the operator or people in the work area.
- Incomplete or incorrect reading of the User Manual.
- Failure to follow the safety instructions in the manual.
- Improper use of Personal Protective Equipment (PPE).
- Altered mental or physical condition of the operator (e.g., alcohol, drugs, medication abuse).
- Health conditions not suitable for work (e.g., low blood pressure, dizziness, fainting).
- Installation of the lift on an uneven or non-compliant floor.

Strict compliance with instructions and safety standards minimizes these risks.

2.7. Clothing

WARNING

Spanesi S.p.A. is not responsible for injuries caused by operators who do not wear PPE or fail to comply with national safety regulations.

Operators must wear Personal Protective Equipment (PPE) during unpacking, assembly, maintenance, and use of the lift, in accordance with applicable laws in the country of use.

Recommended PPE:

- Protective gloves.
- Safety shoes with anti-slip soles.
- Protective glasses.

Correct clothing:

- Work overalls or close-fitting garments suitable for the working environment.

Prohibited clothing and accessories:

- Loose-fitting clothes.
- Scarves, ties.
- Chains, necklaces, earrings.

If the country of use prescribes noise emission limits, wear appropriate hearing protection (earplugs, earmuffs).

2.8. Ecology and contamination

WARNING

The lift must not be used for washing or degreasing vehicles: a dirty and slippery workplace is dangerous for the operator. Before starting cleaning or maintenance work, disconnect the lift from the power supply.

To ensure operator safety and compliance with environmental regulations, adopt correct practices during cleaning, maintenance, and disposal of materials. The following guidelines help prevent contamination and damage to the lift:

- Always clean and dry the lift after use, especially if oil stains are present on components.
- Dispose of hydraulic oil and cleaning materials in accordance with environmental regulations.
- When replacing worn parts or dismantling the lift, comply with anti-pollution laws in the country of use.
- Prevent contamination of the work area in case of oil leaks, following local ecological and safety directives.

If oil stains or leaks are detected at any stage after unloading the machine from the truck, follow all regional and national directives or laws concerning ecology and pollution to avoid contamination of the area. See section 8 “MAINTENANCE” for oil specifications.

2.9. Safety Design

The lift is designed to ensure maximum safety for the operator and the vehicle during all phases of use. The design philosophy is based on redundancy and active protection: each component is engineered to prevent risks even in the event of failure.

The main elements that guarantee this protection are:

- Explosion-proof valves on hydraulic cylinders, which block oil flow in case of pipe rupture, preventing sudden descent.
- Mechanical safety locks integrated into the columns, which automatically engage during lifting and prevent accidental lowering.
- High-strength steel balance ropes, which maintain synchronous movement of the carriages and vehicle stability.

These devices, combined with regular inspections and compliance with operating procedures, form the foundation of lift safety. Design does not eliminate the need for attention: system effectiveness also depends on correct use and periodic maintenance.

3. PACKING, TRANSPORT, STORAGE

3.1. Packing

The lift body is protected by a sturdy steel frame, completely covered with impact-resistant material, which includes all the main structural parts.

The power unit and the electrical control box (for models equipped with it) are packed separately in cardboard boxes and secured to the steel frame to ensure maximum protection during transport.

3.2. Hoisting and Transport

WARNING

In case of adverse weather conditions (rain, snow, storm) during hoisting or transport operations, take appropriate protective measures.

- Use a crane or forklift to lift the center of the equipment, avoiding contact with unlocked parts.
- The lift body must be hoisted using a nylon sling with a capacity of not less than 2 tons.
- Lift only one piece at a time to avoid imbalance and risk of falling.
- During loading and moving, pay attention to personnel safety and equipment protection.

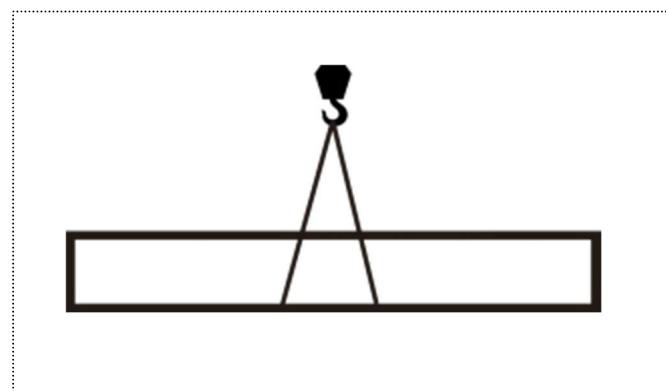


Figure 4 - Lift equipment center



Figure 5 - NO Forklift Sign

Note: Do not use forklift forks directly under the base of the lift unless specified by the manufacturer.

3.3. Storage

- The lift must be placed horizontally during storage.
- Do not stack heavy objects on the equipment.
- Store the lift in a dry environment, away from direct sunlight and protected from moisture.
- Storage temperature: -10°C to $+40^{\circ}\text{C}$.
- If the outer packaging is damaged upon delivery, do not accept the goods and contact the manufacturer or distributor immediately.

WARNING

Be careful when opening the package: keep a safe distance and do not lose small components during unpacking.

4. EQUIPMENT INTRODUCTION

4.1. Features

The two-post clear floor lift uses hydraulic pressure as the lifting power source, while the safety system is mechanical.

The lift offers a simple structure, high performance, advanced technology, easy operation, and safety, making it ideal for workshops and body shops (tire assembly, chassis inspection, maintenance, oil changes, and general checks). It is particularly suitable for heavy and large vehicles.

Main features:

- One-piece steel bending carriage with reinforced plate, strong and durable.
- Front and rear three-section arms, short and long, suitable for long-wheelbase and high-chassis vehicles.
- Adjustable width up to 2830 mm and height from 3900 mm to 4250 mm, ideal for large vehicles.
- Steel wire rope diameter: 11 mm, ensuring high safety for heavy-duty lifting.
- Minimum height of 100 mm, double columns, beam-type lifting, small footprint, easy installation.
- Safety devices: explosion-proof oil pipes, mechanical lock, and self-locking arms with manual or electric control.
- Equipped with a manual pump interface for emergency lowering: in case of power failure, the vehicle can be lowered using the manual pump.

4.2. Operating system

| CAUTIONS |
|---|
| Before starting work, check that the mechanical lock is engaged. If not, press the lock/down button to lower the carriage and lock it. |
| Before lifting the vehicle, make sure the chassis is balanced on the four trays of the support arms and that the lock teeth of the arms and carriage are properly engaged. |
| Always monitor the mechanical lock during operation. If it cannot effectively lock the platform, adjust it immediately to ensure safe operation. |

Lifting procedure:

- After installation, turn on the power and press the UP button.
- When the desired height is reached, release the button: the lift will stop.

Note:

- For manual release models, the UP button is located on the pump station.
- For electric release models, the UP button is on the electric control box.

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Figure 5 – Manual UP/DOWN buttons

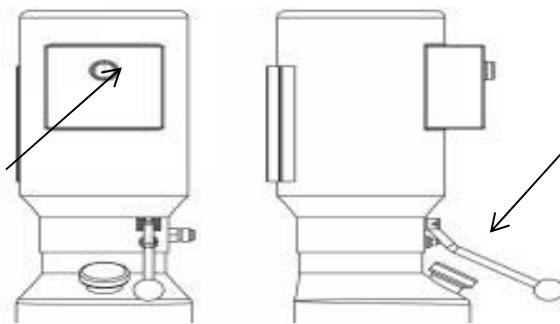


Figure 6 – Manual release

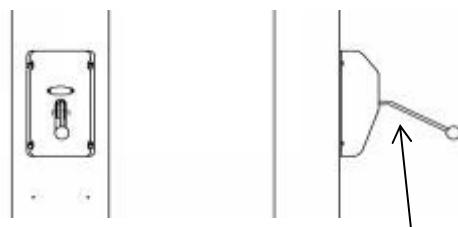
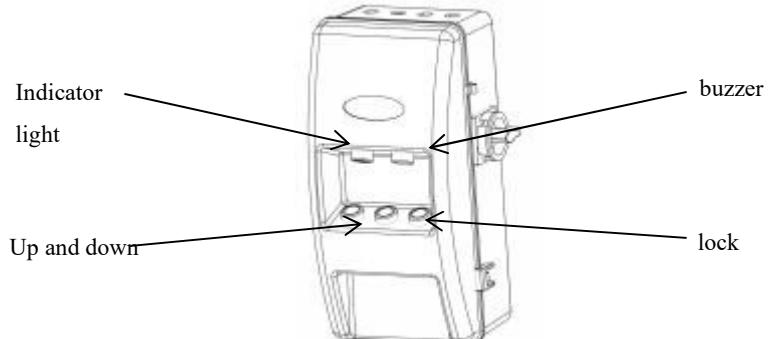


Figure 7 – Electric control console



4.3. Hydraulic oil

WARNING

TC 248 lift is not supplied with hydraulic oil. It is a responsibility of the operator to buy the correct one and fill the tank with it. Follow the instructions below when choosing the oil: Spanesi S.p.A. is not liable for damage caused by use of a not suitable oil for TC 248.

The oil tank capacity is 12 liters.

Fill the tank with N46 (SY1227-84) hydraulic oil, keeping the level between the upper and lower marks on the tank.

5. SAFETY INSTRUCTIONS

5.1. Safety rules

Before using the lift, it is essential to read, understand, and comply with all the instructions provided in this manual. Spanesi S.p.A. assumes no responsibility for damage to persons, animals, or property resulting from failure to observe safety regulations.

DANGER

Please read, understand, and follow the instructions below. Failure to comply may result in serious injury or death. Spanesi S.p.A. will not be liable for any damage to persons, animals, or property caused by failure to observe these safety instructions.

WARNING

When lifting heavy or long-wheelbase vehicles, make sure the arms are fully extended and the pads are positioned under the correct lifting points. Incorrect positioning may cause instability or damage.

Before Use

- *Read the manual carefully and understand the equipment's limits and potential hazards.*
- *Check that the power supply voltage matches the specifications on the motor nameplate.*
- *Connect the power only through a qualified electrician and verify the correct motor rotation direction.*
- *Remove obstacles around and under the platform; keep the work area clean and well-lit.*
- *Do not use the lift in wet, rainy, or extreme temperature conditions.*
- *Do not alter the lifting speed (up/down): it is factory-set to comply with safety standards.*

During Operation

- *Do not allow untrained personnel to operate the lift; keep visitors at a safe distance.*
- *Do not stand on the lift or remain inside the vehicle while it is being raised.*
- *Align the vehicle with the centerline of the lift and balance it on all four support arms.*
- *Ensure the locking teeth of the arms and carriage are fully engaged.*
- *Do not exceed the rated lifting capacity indicated on the nameplate.*
- *Do not force the machine: allow it to operate at its standard speed.*
- *The operator must always face the lift during raising and lowering operations.*
- *Do not use the lift as a parking device or keep the vehicle raised for extended periods.*
- *Always check that the vehicle is stable before starting the lift.*
- *Do not use the lift if it shows signs of malfunction or hazardous conditions.*
- *If the lift has been idle for a long time, perform a full inspection before reuse.*

Clothing and PPE

- *Wear non-slip safety shoes, a helmet, and close-fitting workwear suitable for the operating environment.*
- *Do not wear loose clothing, scarves, ties, necklaces, chains, or jewelry that could get caught.*
- *Secure long hair with a cap or appropriate protection.*

Maintenance and Electrical Safety

- *Do not perform maintenance while the lift is operating or under load.*
- *Always disconnect the power supply before repairing or replacing components.*
- *Do not modify or disable safety devices or electrical circuits.*
- *Never leave the machine unattended: lower the lift completely, remove the vehicle, and disconnect the power when not in use.*

Signage and Checks

- *Read and comply with all warning labels applied to the columns.*
- *Regularly check the proper functioning of safety devices and the tightness of bolts.*
- *Use only spacers and accessories supplied by the manufacturer.*
- *If safety labels or the manual are damaged, request immediate replacement.*

5.2. Safety Design

The lift is engineered to ensure maximum safety for the operator and the vehicle during every phase of use. The design philosophy is based on redundancy and active protection: each component is designed to prevent risks even in the event of failure.

The main safety devices are:

- **Explosion-proof valves on hydraulic cylinders**

Each cylinder is equipped with a safety valve that blocks oil flow in case of hose rupture. This system prevents or slows down sudden vehicle descent, reducing the risk of serious accidents.

- **Mechanical safety locks integrated into the columns**

The mechanical locks engage automatically during lifting and prevent accidental lowering. The lock is disengaged only during controlled lowering. Even in case of hose failure, the risk of falling is significantly reduced.

- **High-strength steel balance cables**

The cables ensure synchronous movement of the carriages and vehicle stability, preventing imbalance during lifting and lowering.

- **Robust structure and limit switches**

The upper beam and columns provide rigidity and stability. The limit switch system prevents lifting beyond the safety limit, protecting both the equipment and the vehicle.

These devices, together with regular inspections and compliance with operating procedures, form the foundation of lift safety. However, design alone does not eliminate the need for caution: system effectiveness also depends on proper use and scheduled maintenance.

ATTENZIONE

The 11 mm steel cable and the explosion-proof hydraulic system are designed to support heavy lifting. However, regular inspection and maintenance are essential to ensure continuous safety and performance.

6. INSTALLATION

6.1. Installation Site Selection

The lift must be installed indoors, in a well-ventilated and well-lit area, free from obstacles, dust, and contaminants.

Do not install near washing areas, storage zones for corrosive solvents or paints, or in locations that do not comply with safety and hygiene requirements established by applicable regulations (minimum distances from walls and equipment, emergency access spaces, clear pathways).

All sources of ignition must be kept away from the installation site; the surrounding environment must ensure suitable conditions.

Environmental requirements:

- Relative humidity: 30–90 %
- Ambient temperature: -5°C to $+40^{\circ}\text{C}$
- Available power supply: 380 V / 220 V, 50 Hz (check the motor nameplate of the supplied model).

Required space:

- Clear height of the room: $\geq 4.4\text{ m}$
(for height-adjustable series KA/KC, maximum height may require $\geq 4.6\text{ m}$)
- Minimum distance from walls or obstacles: $\geq 2\text{ m}$ on the entry/exit sides and around the columns to ensure safe access and operations.
- Area large enough to maneuver the vehicle and position the arms without interference.

WARNING

The site selection must also comply with the foundation requirements described in section 6.2. An installation in a non-compliant location may compromise leveling, stability, and lift safety.

6.2. Foundation Installation Requirements

DANGER

Failure to comply with foundation specifications may cause structural failure, loss of stability, and serious accidents. The installation floor must be level; uneven or irregular surfaces must be corrected. Excessive level errors will affect lift alignment. If the concrete level varies significantly, consider re-pouring the foundation.

The foundation must be made of reinforced concrete with the following characteristics:

- Minimum thickness: ≥ 250 mm
- Strength: ≥ 3000 PSI (≈ 21 MPa)
- Flatness: maximum tolerance ± 5 mm across the entire support surface
- The base must be perfectly level; any irregularities must be corrected before installation.
- If the concrete level exceeds the limits, the foundation must be re-poured.

Operational notes:

- The foundation must be continuous for both columns, avoiding joints that could compromise stability.
- Before drilling for anchor bolts, check the column positions according to the dimensional drawing.
- Clean dust from the holes thoroughly to ensure proper expansion bolt grip.
- Expansion bolt tightening torque: ≈ 80 Nm.

6.3. Main Parts

See figure 1 of paragraph 1.6 “Lift description” as reference for this paragraph.

The lift consists of a robust structure designed to ensure stability and safety during vehicle lifting.

The main components are:

- Support arms with adjustable pads – allow adaptation to different vehicle lifting points.
- Carriages – slide vertically along the columns.
- Hydraulic cylinders – generate the lifting force inside the columns.
- Mechanical safety locks integrated into the columns – automatically engage during lifting to prevent accidental lowering.
- Upper cross beam – ensures structural rigidity and synchronization between columns.
- Steel balance cables – maintain synchronous movement of the carriages and vehicle stability.
- Power unit with control system – manages lifting and lowering operations.
- Manual release system (for manual models) or electromagnetic release system (for electric models).
- Limit bar and limit switch – prevent lifting beyond the maximum height.
- Base plates with anchor points – ensure secure installation on the foundation.

WARNING

Only manufacturers or distributors' authorized professional technical personnel can install the equipment. The installer must have the necessary qualifications. Non-professional installation may cause serious injury to people or equipment.

6.4. Installation tools

The following tools are required to install the lift:

- Hammer drill with Ø18 mm drill bit
- Spanner wrenches: 12–14 mm, 17–19 mm
- Adjustable wrench
- Phillips and flathead screwdrivers
- Hammer
- Tape measure (5 m)
- Plumb bob (leveling tool)
- Chalk for marking

6.5. Equipment in Position

Unpack the lift and carefully check that all parts are present and undamaged, comparing them with the packing list.

According to the foundation drawing, mark on the floor the position of the main and auxiliary columns, correctly distinguishing them: the main column is the one equipped with the base for the pump station installation. Use the base plate of the columns as a template and trace the outline of the installation area with chalk.

Place the columns on a perfectly level surface, ensuring that the distance between the opposite sides of the two columns corresponds to the length of the upper beam (refer to the dimension drawing).

Using the holes on the base plate of the columns as a reference, drill holes about 150 mm deep into the concrete floor with an impact drill. Do not shake or enlarge the holes during drilling to ensure proper anchoring of the expansion bolts. After drilling, thoroughly clean each hole with a vacuum cleaner or wire brush to remove dust.

WARNING

During placement and drilling, prevent the columns from toppling or shifting.

Assemble the expansion bolts leaving 3–5 mm of thread free for the nut, insert them into the holes and strike with a hammer until the spring washer reaches the base of the column. Then, hit the mandrel of the expansion bolt until it is fully locked. Check the vertical alignment of the columns using appropriate measuring tools; if necessary, adjust with shims before final tightening. After adjusting the verticality, tighten the nuts of the expansion bolts to a torque of approximately 80 Nm.

WARNING

Column verticality must be guaranteed. Incorrect installation may compromise the lift's operation or cause serious accidents.

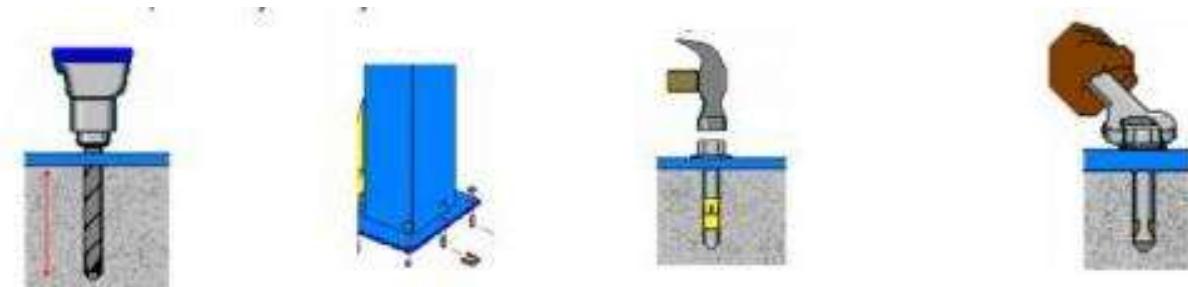


Figure 9 - Expansion Bolt Installation Diagram

Height and Width Adjustments (for adjustable models):

- Height adjustment method: Adjust the height according to the different bolt hole positions of the upper and lower sections of the main and auxiliary columns.
- Width adjustment method: Adjust the width according to the different positions of the bolt holes in the middle of the beam.

6.6. Column Extension Installation and Crossbeam Assembly

Column Extension Installation

The column extension section (2) is mounted on the main column body (1) directly at the factory. This section can be adjusted in two positions:

- Lower position (default)
- Upper position

Customers can choose to keep the extension section in the lower position or adjust it to the upper position according to operational needs. It is important to note that the selected configuration affects the length of the crossbeam:

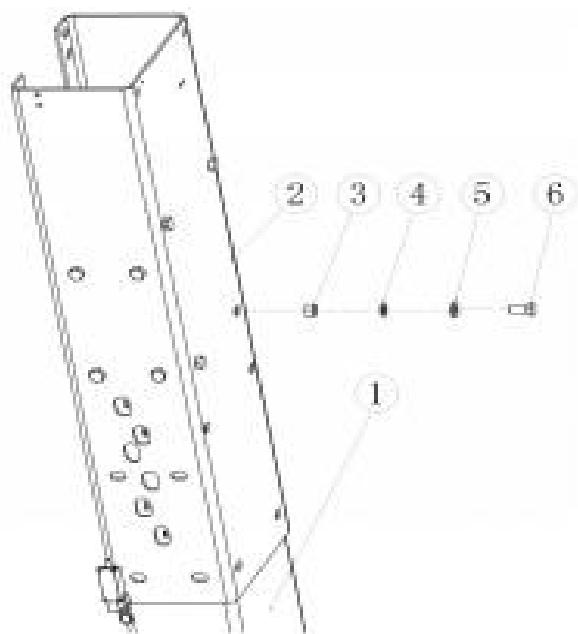
- If the extension is installed in the lower position, the crossbeam shortens to the minimum size.
- If the extension is installed in the upper position, the crossbeam extends to the maximum size.

ONLY THESE TWO INSTALLATION STATES ARE ALLOWED. ANY COMBINATIONS OR ARBITRARY MODIFICATIONS ARE STRICTLY PROHIBITED.

Installation procedure:

1. Position the column extension section in the desired position (lower or upper).
2. Check that the section is properly aligned with the main column body.
3. Secure the section using bolts, nuts, and washers (3)(4)(5)(6), as shown in Figure 10.
4. Check the stability of the structure and ensure all fasteners are properly tightened.

Figure 10 - Column Extension Assembly



6.7. Crossbeam Assembly Instructions

The crossbeam consists of the following elements:

- Crossbeam body (1)
- Crossbeam body (2)
- Steel connecting channel (3)

The crossbeam bodies are inserted through the steel connecting channel and secured with bolts and nuts. During factory installation, the crossbeam is preset to the minimum size position (lower position). The user can later adjust the connecting channel section to the minimum or maximum position according to operational requirements.

Critical note:

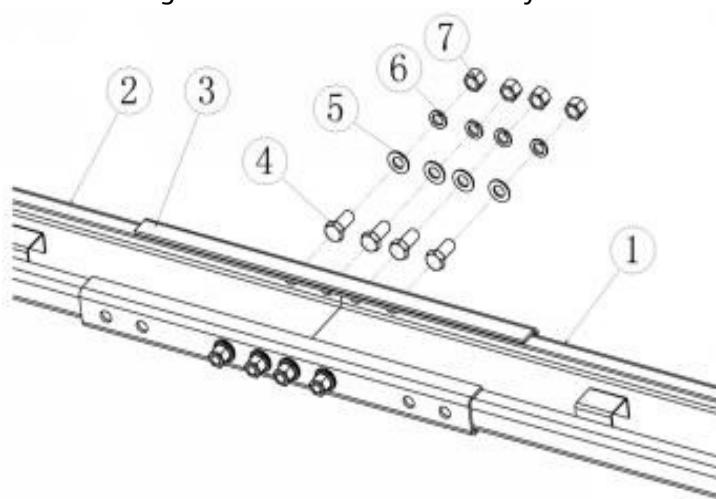
- When the column extension is installed in the lower position, the crossbeam must be set to the minimum size.
- When the column extension is installed in the upper position, the crossbeam must be set to the maximum size.

Only these two configurations are allowed. Intermediate combinations are strictly prohibited.

Installation procedure:

1. Insert the crossbeam bodies through the steel connecting channel.
2. Adjust the connecting channel to the desired position (minimum or maximum size).
3. Secure all components using bolts, nuts, and washers (4)(5)(6)(7).
4. Check that the crossbeam is correctly positioned according to the chosen configuration.
5. Verify stability and fastener tightness to ensure safe installation.

Figure 11 - Crossbeam Assembly



NOTE: When adjusting height and width, it is also necessary to adjust the balance cable by acting on the adjustment nuts to maintain the synchronization of the carriage..

6.8. Crossbeam and Limit Rod Installation Method

Installation of the limit switch and bracket

The limit switch (3) is fixed to the bracket (4) with screws (2), while the bracket (4) is mounted on the crossbeam using screws (5). This end of the crossbeam is connected to the main column, which houses the electrical control box and the pump station.

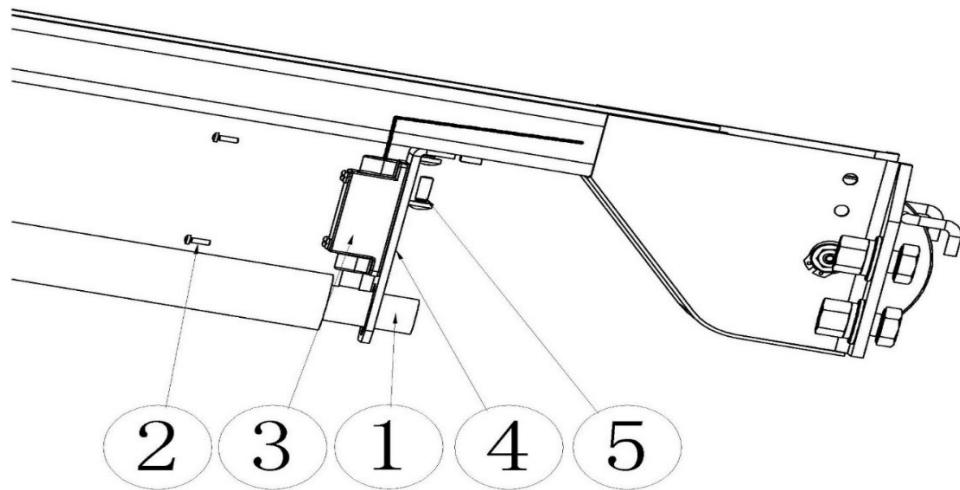
The limit rod (1) passes through the slot of the bracket (4), as shown in Figure 12.

Installation procedure:

1. Fix the limit switch (3) to the bracket (4) with screws (2).
2. Mount the bracket (4) on the crossbeam using screws (5).
3. Insert the limit rod (1) through the slot of the bracket (4).

For details, refer to Figure 12.

Figure 12 – Limit rod installation on crossbeam



| No. | Nome | Quantità |
|-----|---------------------|----------|
| 1 | Limit bar | 1 |
| 2 | Cross Bolt M3x10 | 4 |
| 3 | Limit Switch | 1 |
| 4 | Angle iron | 1 |
| 5 | Cross bolt M6x10 | 4 |
| 6 | Elastic washers Ø 3 | 4 |

ATTENZIONE

During installation, make sure the columns are already secured and in a vertical position. Incorrect installation of the crossbeam can compromise the stability of the lift and cause serious accidents.

Installation of the other end of the limit rod

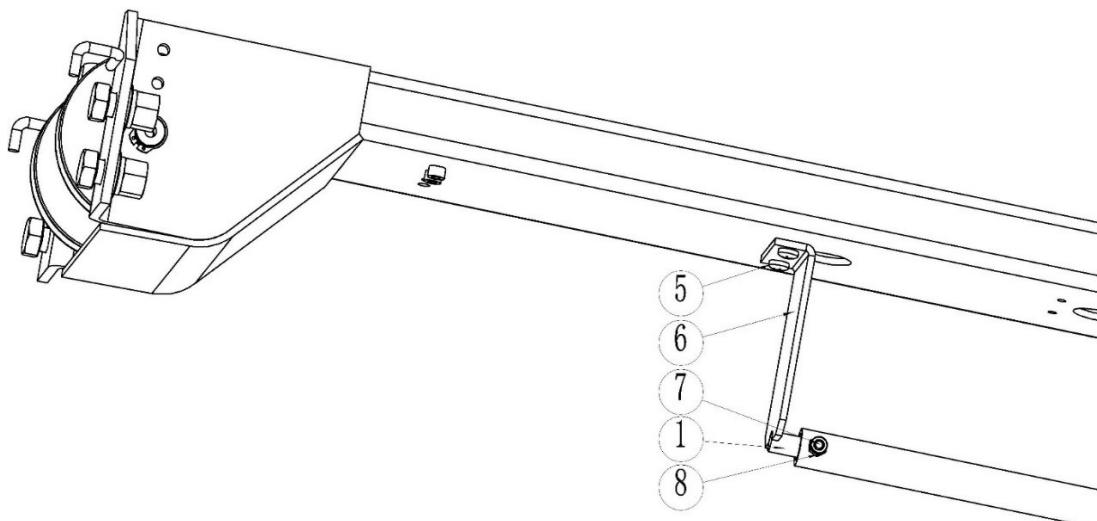
The other end of the limit rod (1) is fixed to the bracket (6) with a bolt (7) and a locknut (8). The bracket (6) is mounted on the crossbeam using screws (5). This end of the crossbeam is connected to the secondary column, which does not house the electrical control box or the pump station.

Installation procedure:

1. Fix the end of the rod to the bracket (6) with bolt (7) and locknut (8).
2. Mount the bracket (6) on the crossbeam using screws (5).

For details, refer to Figure 13.

Figure 13 – Limit rod installation on crossbeam



Connecting the crossbeam to the columns

After installing the crossbeam, the main column (1) and the secondary column (2) must be connected and secured with bolt (3), nut (6), and washers (4)/(5).

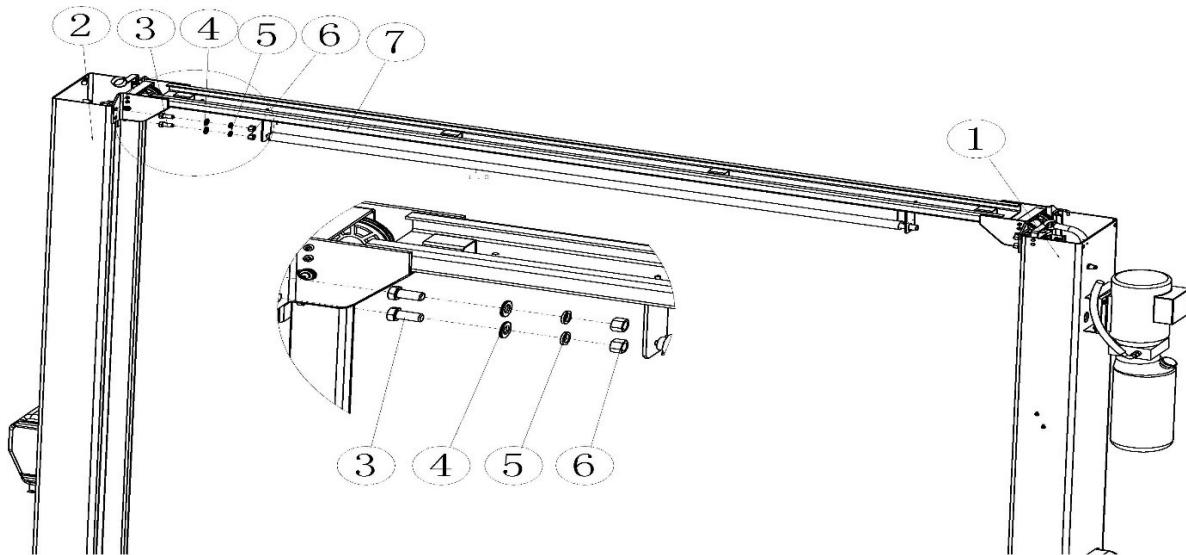
Note: The end of the crossbeam (7), where the limit switch is installed, must be connected to the main column (1).

Installation procedure:

1. Connect the main column (1) and the secondary column (2).
2. Secure the columns with bolt (3), nut (6), and washers (4)/(5).
3. Check that the end of the crossbeam (7) is correctly connected to the main column (1).

For details, refer to Figure 14.

Figure 14 – Crossbeam installation on columns



6.9. Steel Balance Cable Installation Method

To install the steel balance cables, the lifting arms must be in the lowest position. Both cables must be adjusted to have uniform tension:

- One cable maintains synchronization during lifting.
- The other maintains synchronization during lowering.

Cable tension must be adjusted so that, when pressed laterally, the displacement does not exceed 50 mm. Fine adjustment should be performed during the vehicle lifting process.

At the factory, one end of each steel cable is pre-installed on the main and secondary columns.

Installation procedure:

1. Connect the main and secondary columns to the lift crossbeam.
2. Install the other end of the steel cables, passing them through the pulleys on the crossbeam.
3. Secure the steel cables in the remaining mounting holes on the sliding platform (as indicated by the arrow).
4. Lock the two nuts on the threaded part of the steel cables to prevent loosening or detachment during use.

For details, refer to Figures 15a and 15b.



Figure 15a – Detail of steel cable routing

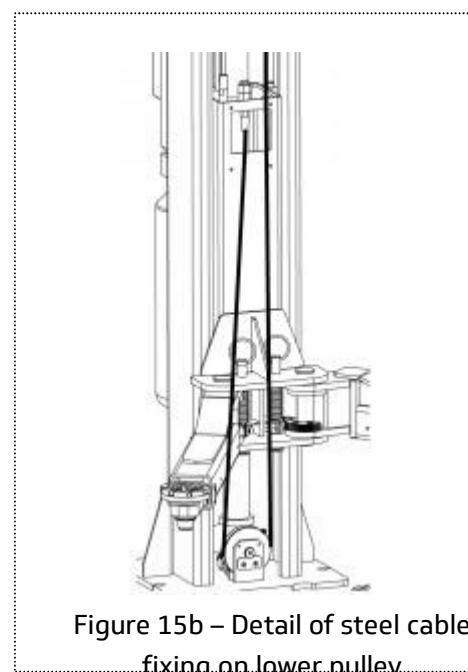


Figure 15b – Detail of steel cable fixing on lower pulley

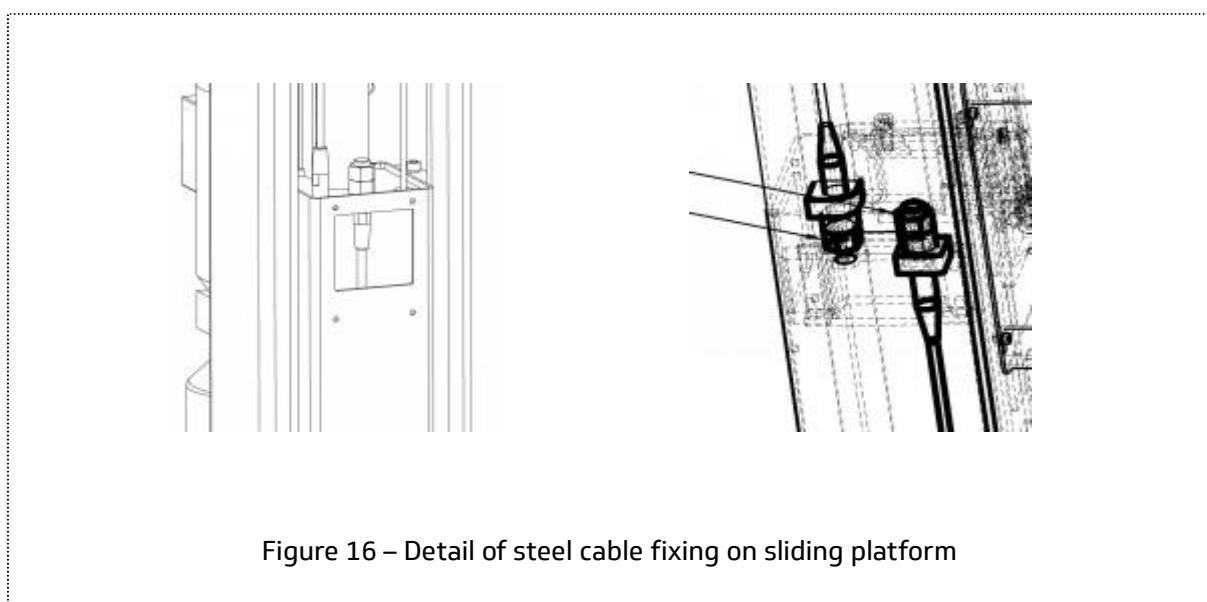


Figure 16 – Detail of steel cable fixing on sliding platform

The adjustable two-post lift with free floor has two adjustment positions for the steel cables, corresponding to installation dimensions:

- Lowest / Narrowest
- Highest / Widest

Important note: When adjusting the lift, column height and crossbeam width must be adapted simultaneously:

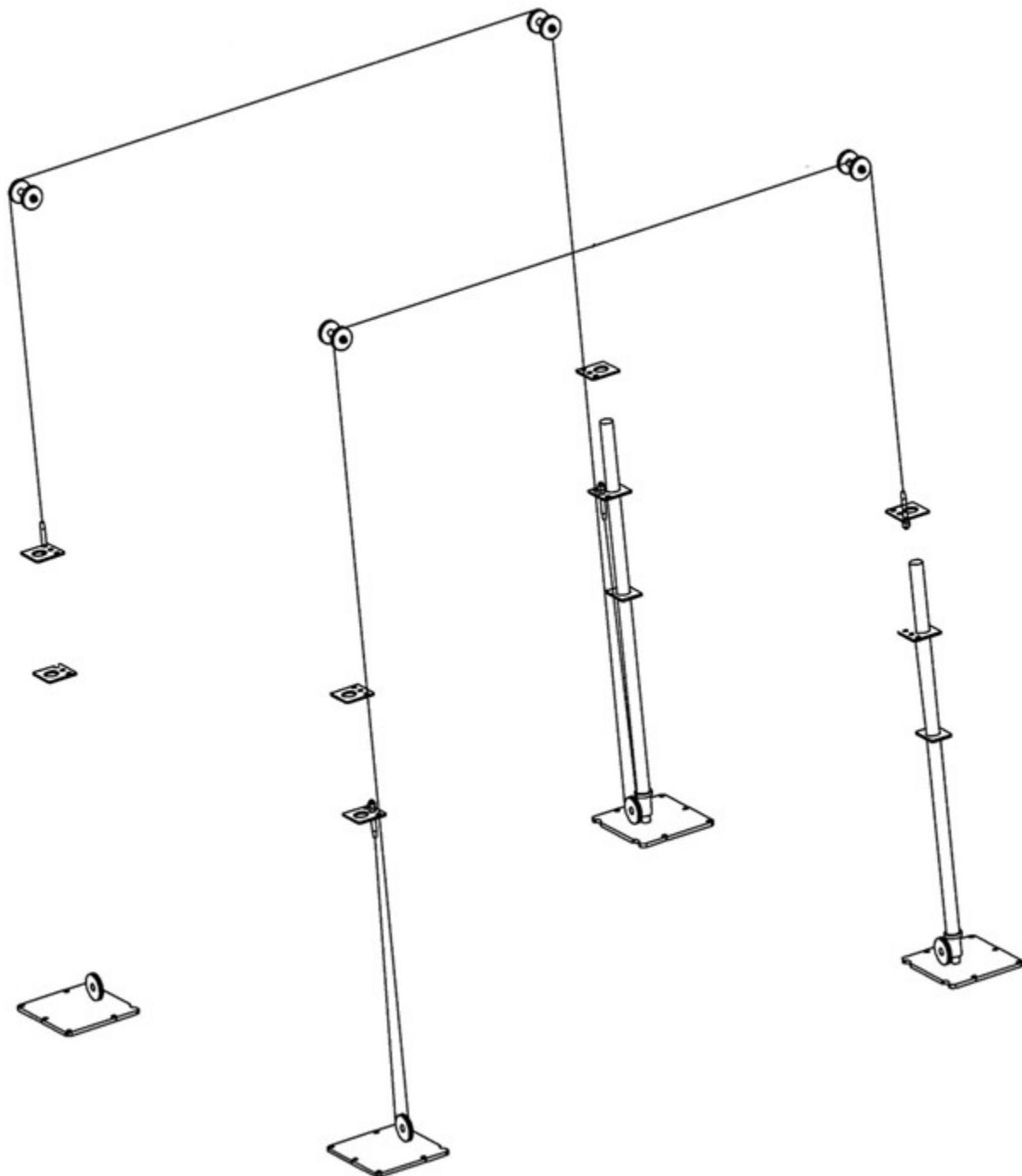
- Columns in the highest position → crossbeam at maximum size.
- Columns in the lowest position → crossbeam at minimum size.

When the lift is in the highest and widest position, the steel cables must be installed as follows:

- The end that does not pass through the pulley must be fixed to the upper fixing plate of the sliding platform.
- The factory pre-installed end, which passes through the pulley, must be fixed to the lower fixing plate of the sliding platform.

For details, refer to Figure 17.

Figure 17 – Cable installation with column at maximum height



WARNING

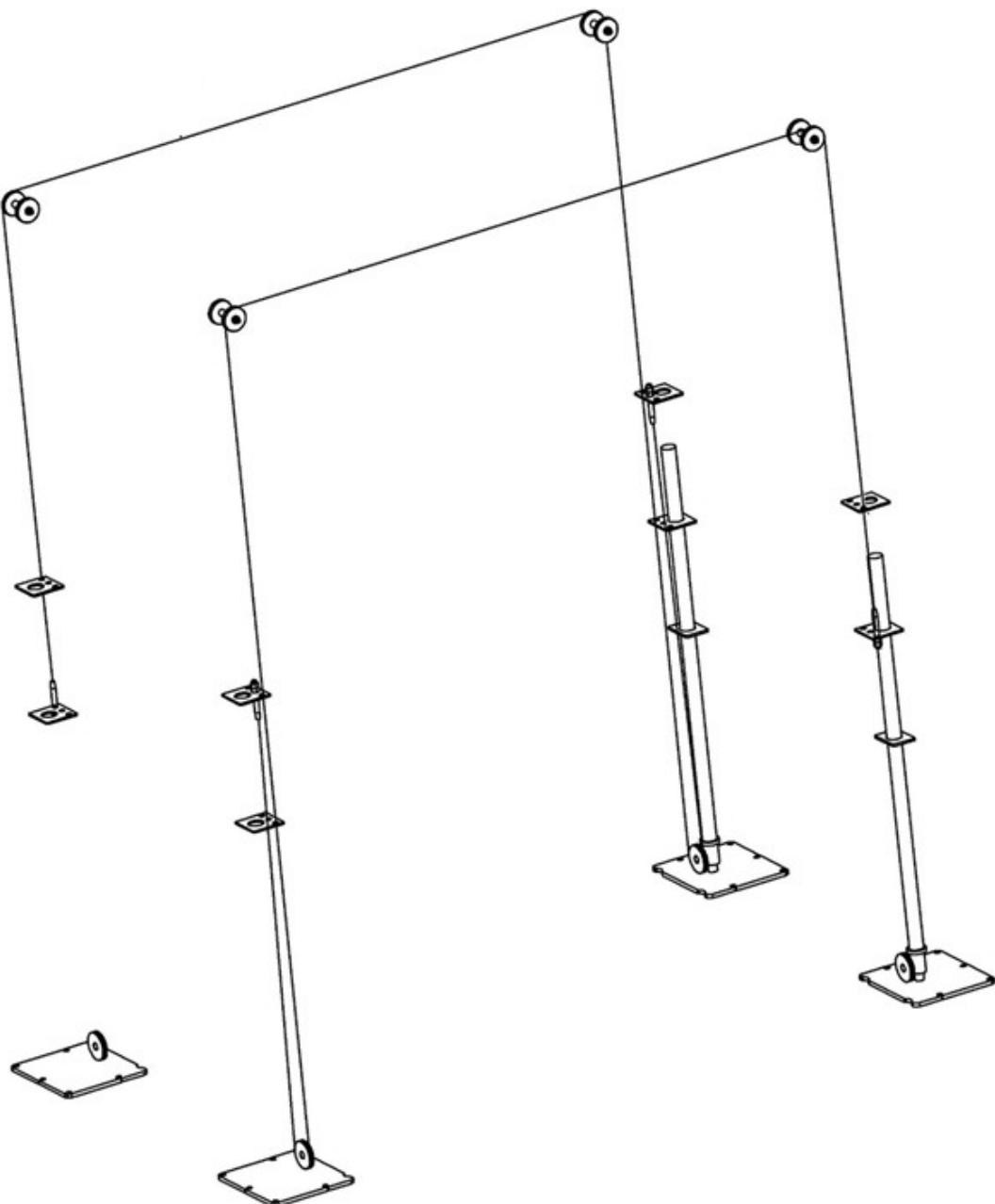
When adjusting the tension, make sure the cables are neither too tight nor too loose. The tension must be such that, when pressing the cable manually, the deformation does not exceed 20 mm.

When the lift is in the lowest and narrowest position, the steel cable must be installed as follows:

- The cable that does not pass through the pulley is fixed to the lower fixing plate of the slide.
- The cable that bypasses the pulley is fixed to the upper fixing plate of the slide.
- The pulley end is already factory pre-installed.

For details, refer to Figure 18.

Figure 18 – Cable installation with column at minimum height



After completing installation, check cable tension and carriage synchronization. If necessary, adjust the tension nuts to maintain proper synchronization.

Quick Check Method

1. With the lift unloaded and fully lowered, grasp the two exposed sections of the cables above the carriages: they should come closer with moderate effort.
2. If the carriage on the main column rises before the auxiliary column, tighten the nuts on the lifting balance cable.
3. If the carriage on the main column lowers before the auxiliary column, tighten the nuts on the lowering balance cable.
4. Always follow the principle of symmetrical adjustment.

6.10. Circuit System Installation

This phase concerns the assembly of the pump station, the electrical connection, and the installation of hydraulic lines. The operation must be carried out by qualified personnel, in compliance with electrical and hydraulic safety standards.

WARNING

Confirm the supply voltage, number of phases, and other parameters indicated on the motor nameplate.

The electrical connection must be performed by a professional electrician.

Ensure that the motor rotates in the correct direction after connection.

For 220 V motors, the power cable section must not be less than 4.0 mm²; for 380 V motors, not less than 2.5 mm².

Install an independent circuit breaker on the external distribution board of the lift.

Check that the grounding wire of the pump station is in good condition.

Installation Procedure

1. Pump Station Mounting

Install the pump station at the base of the main column and secure it with hexagon bolts and anti-vibration rubber pads.

Note: On manual unlocking models, the pump base is located at the bottom of the main column; on electric unlocking models, it is located at the top.

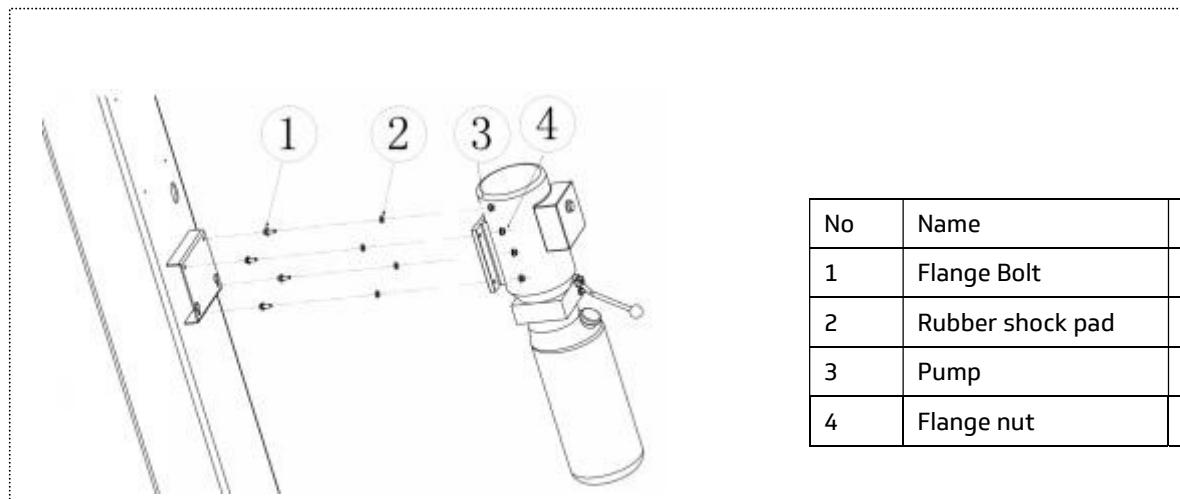


Figure 19 – Pump Station

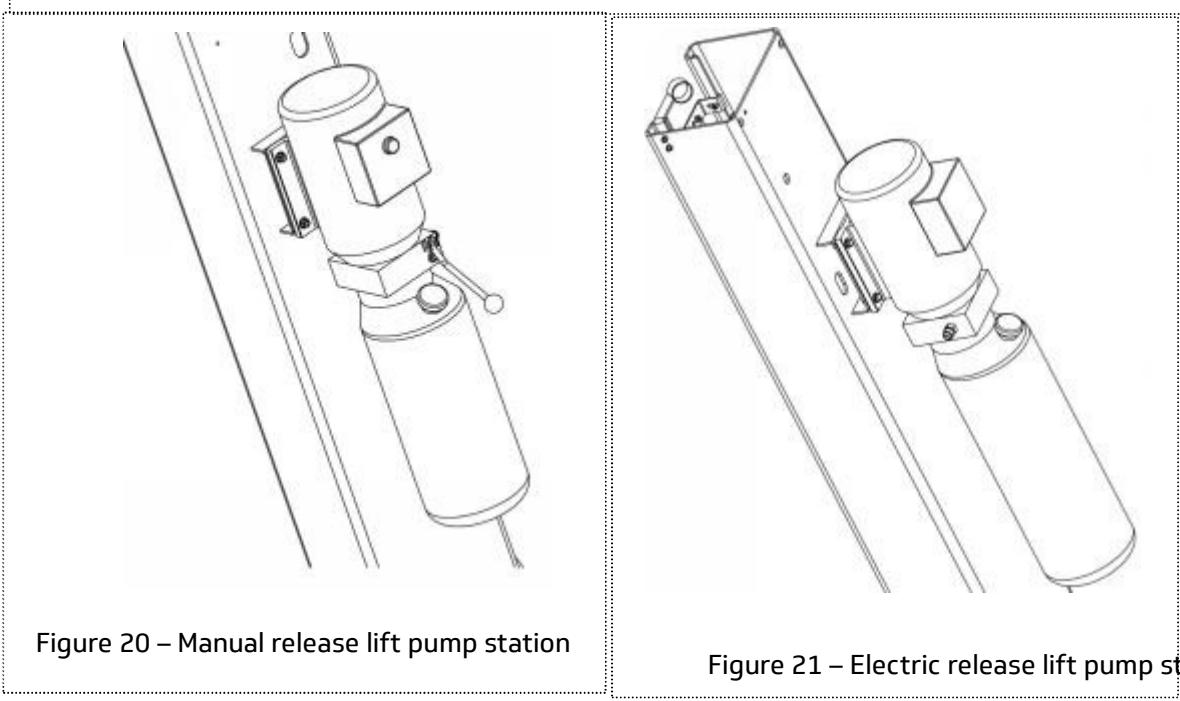


Figure 20 – Manual release lift pump station

Figure 21 – Electric release lift pump station

2. Electrical Connection

Connect the power cable of the pump station to the main power supply.

Install the circuit inside the electric control box following the wiring diagram and electrical schematic.

Route the main cable through the lower hole of the control box and connect it to the internal isolator.

Note: This step applies only to electric unlocking models; it is not required for manual unlocking models.

Figure 22a – Electrical connection
(manual model)

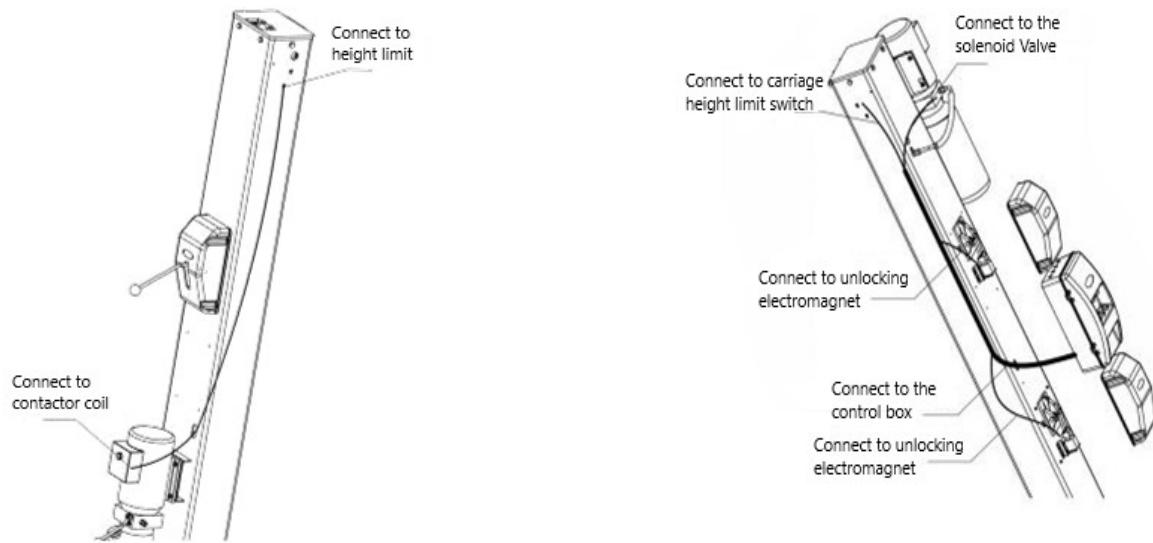


Figure 22b – Electrical connection (electric model)

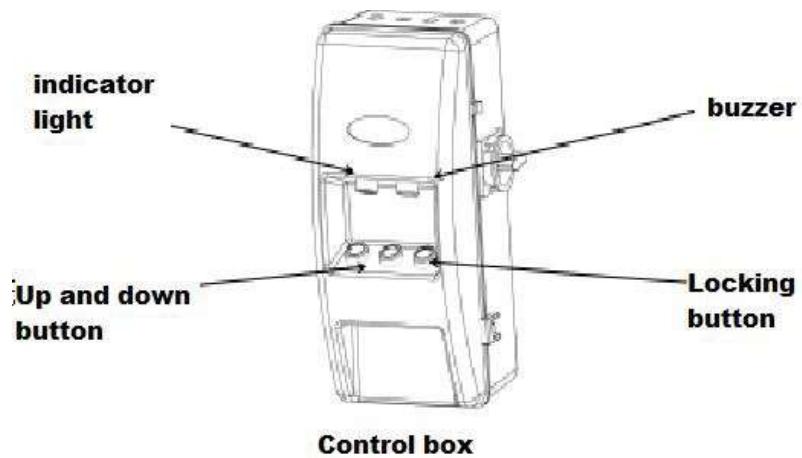


Figure 23 – Control Box

3. Limit Switch Installation (Optional)

Mount the oil cylinder limit switch on the top of the main column and secure it with screws.

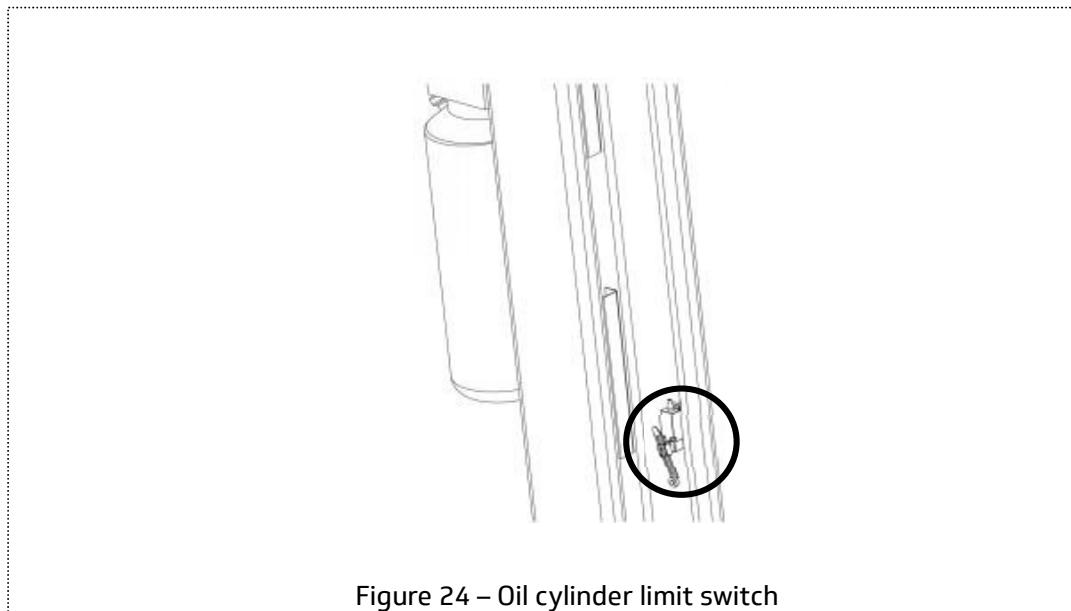


Figure 24 – Oil cylinder limit switch

4. Electromagnet Installation (Electric Models Only)

The unlocking electromagnet must be fixed to the main column and connected to the unlocking rod. Then, the electromagnet wire is inserted inside the column and connected to the electrical control box.

Installation procedure:

1. Fix the unlocking electromagnet to the main column using hexagonal screws.
2. Insert the electromagnet wire into the column through the circular slot.
3. Pass the wire through the circular slot of the electrical control box.
4. Connect the electromagnet wire to the time relay.

For details, refer to Figure 25

DANGER

Do not tilt the electromagnet during installation.

There must be a 1–2 mm gap between the damping rubber column (at the base of the movable iron core) and the lower end of the electromagnet coil, as shown in the figure.

This gap is essential to prevent the core from jamming and to avoid malfunction of the electric unlocking system.

Incorrect installation can cause serious safety hazards and damage to the equipment.

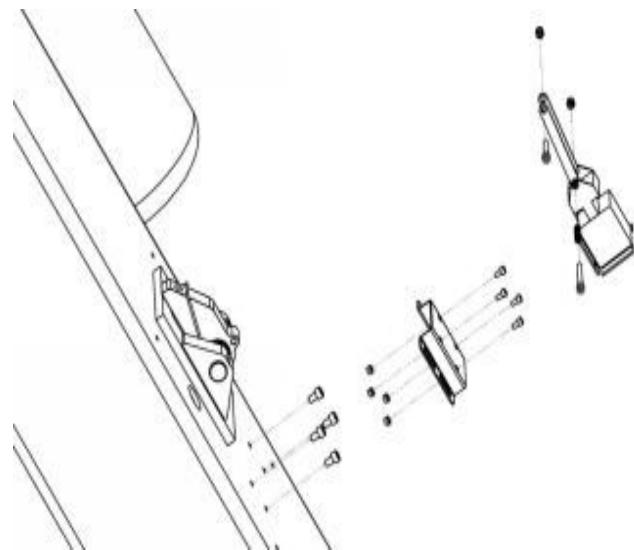


Figure 25 – Electromagnet installation

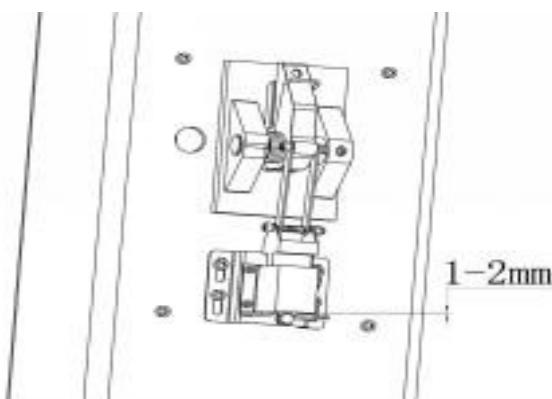


Figure 26 – Electromagnetic valve connection

5. Contactor Control Coil Connection

Connect the control coil of the pump station contactor according to the provided wiring diagram.

6. Pump Station Test

After adding standard hydraulic oil (N46), briefly press the UP button and check that oil flows from the outlet within 5 seconds.

If no oil flows, the motor is rotating in the wrong direction: reverse any two phases of the power supply to correct the rotation.

6.11. Release Cable Installation

This operation applies only to the manual release model. For electric release models, the release cable is not required.

The release cable connects the locking mechanisms of the two columns, allowing simultaneous unlocking of the safety devices. Installation must be carried out with the lift fully lowered and the carriages in the bottom position.

Installation Procedure

1. Bracket Installation

Secure the release pulley bracket on the main and auxiliary columns using the supplied hexagon screws. Ensure the brackets are firmly anchored and perfectly aligned.

2. Routing the Release Cable

Insert one end of the cable into the designated hole of the active plate welded on the main column and tighten it securely.

Route the cable under the lower pulley of the bracket, then inside the main column, continuing to the upper pulley.

Pass the cable through the upper beam to the nylon pulley on the auxiliary column bracket, then down to the lower pulley of the same column.

Finally, fix the other end of the cable to the passive unlocking plate welded on the auxiliary column, tightening firmly to ensure proper tension.

3. Adjustment and Check

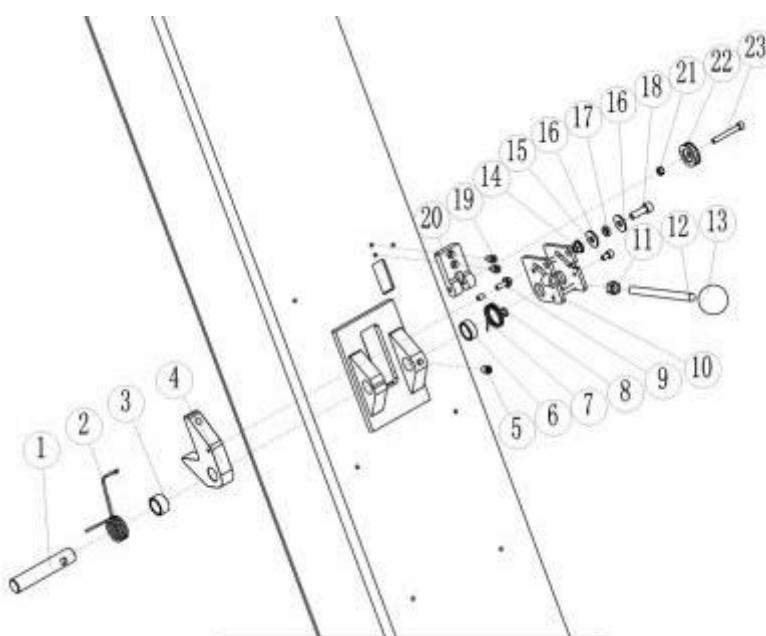
After installation, manually operate the unlocking system to verify smooth movement and simultaneous opening of both locks.

If necessary, adjust the cable tension by acting on the fixing nuts, maintaining symmetrical adjustment between the two columns.

Important Note:

Correct positioning of the release cable is essential for operator safety. Incorrect installation may compromise the locking system and cause serious hazards.

Figure 27 - Main column



| | | |
|----|----------------------------|---|
| 1 | Sub-lock shaft | 1 |
| 2 | torsional spring-Manual | 1 |
| 3 | Mechanical lock spacer 14 | 1 |
| 4 | Turntable plate -manual | 1 |
| 5 | Jack bolt | 1 |
| 6 | Mechanical lock spacer 10 | 1 |
| 7 | Auxiliary torsional spring | 1 |
| 8 | Jack bolt | 1 |
| 9 | Flange bolts | 1 |
| 10 | Active turn plate weldment | 1 |
| 11 | Hex nuts | 1 |
| 12 | Mechanical lock handle | 1 |
| 13 | Handle ball | 1 |
| 14 | Flange nut | 1 |
| 15 | Socket head cap screws | 1 |
| 16 | flat washer | 2 |
| 17 | Small pulley spacer | 1 |
| 18 | Socket head cap screws | 1 |
| 19 | Socket head cap screws | 2 |
| 20 | Pulley bracket | 1 |
| 21 | Hex nuts | 1 |
| 22 | Nylon small pulley | 1 |
| 23 | Socket head cap screws | 1 |

| No. | Item | QTY. |
|-----|--|------|
| 1 | Mechanical lock shaft - vice | 1 |
| 2 | Mechanical lock spacer 14 | 1 |
| 3 | Torsion Spring - Manual | 1 |
| 4 | Hexagon jackscrew M6X10 | 1 |
| 5 | Big turning plate - manual | 1 |
| 6 | Big turning plate shock absorber | 1 |
| 7 | Flange bolts M6x16 | 1 |
| 8 | Passive turning plate weldment | 1 |
| 9 | Mechanical lock spacer 10 | 1 |
| 10 | Turning plate auxiliary torsion spring | 1 |
| 11 | Socket head cap screws M6X20 | 1 |
| 12 | Lock tooth return spring | 1 |
| 13 | lock teeth | 2 |
| 14 | Hexagon lock nut M6 | 1 |
| 15 | Hexagon jackscrew M10X12 | 1 |
| 16 | Hex nuts M6 | 1 |
| 17 | Pulley Bracket | 1 |
| 18 | nylon pulley | 1 |
| 19 | Socket head cap screws M6X10 | 2 |
| 20 | Socket head cap screws M6X45 | 1 |

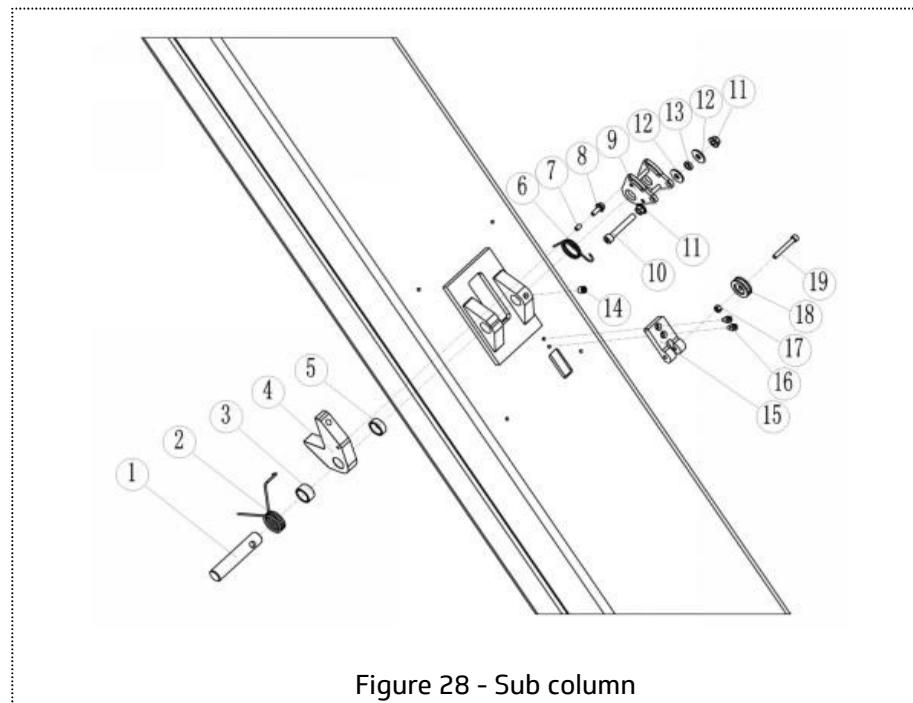


Figure 28 - Sub column

6.12. Connecting oil pipes

This phase concerns the connection of hydraulic pipes between the pump station and the oil cylinders of the main and auxiliary columns. The operation must be carried out by qualified personnel, in compliance with hydraulic safety standards.

Figure 29 - Oil pipe connection diagram (standard model)

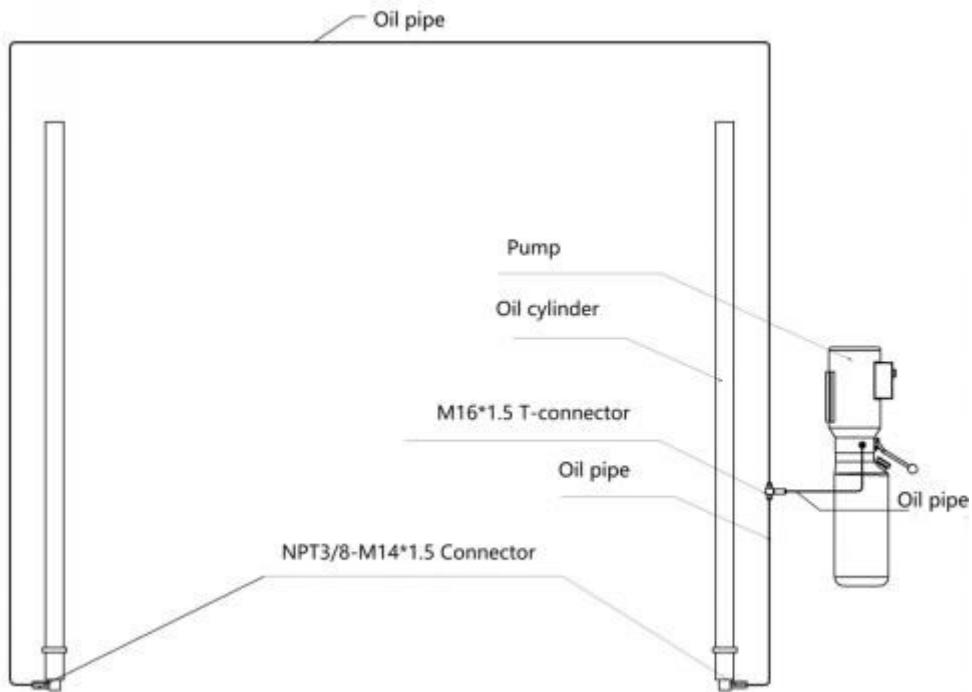
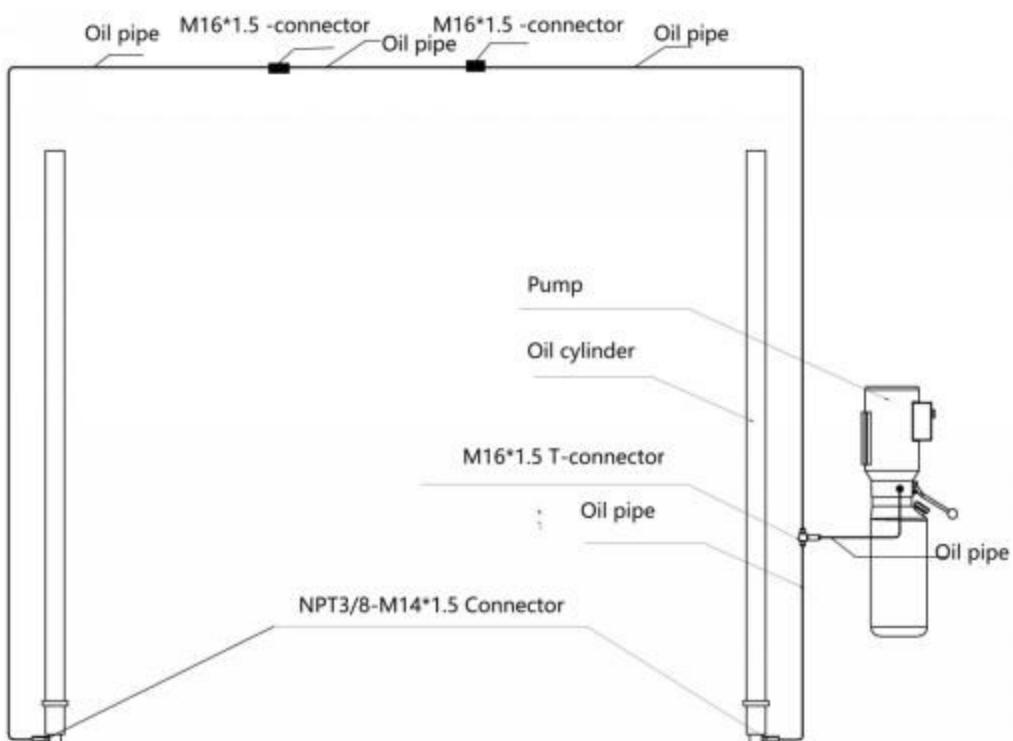


Figure 30. - KA/KC.Clear.floor: oil.pipe.installation



1. Pump Station Oil Pipe Connection

Connect one end of the short hose to the pump outlet using an adjustable right-angle fitting, and the other end to the T-connector on the main column (circular hole).

Ensure the fitting is properly tightened and the hose is free from bends or twists.

2. Oil Cylinder Oil Pipe Connection

Connect the oil pipe between the cylinder of the main column and the cylinder of the auxiliary column:

- Pull one end of the pipe out from the main column.
- Route the pipe through the upper beam using the designated slots.
- Continue through the auxiliary column down to the lower straight fitting.

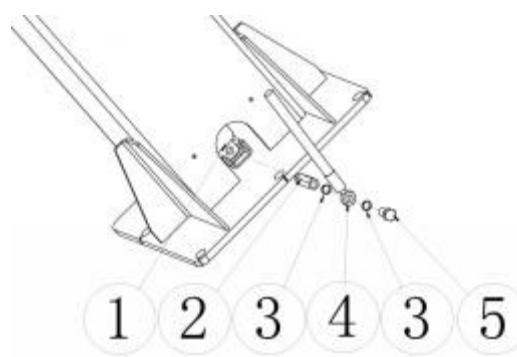
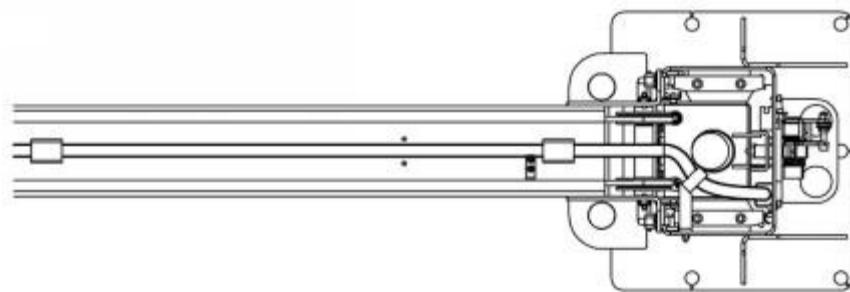


Figure 31 - Auxiliary Cylinder

| No. | Name | QTY |
|-----|--------------|-----|
| 1 | Oil cylinder | 2 |
| 2 | Connector | 2 |
| 3 | Washer | 4 |
| 4 | Oil pipe | 1 |
| 5 | Hollow bolt | 2 |

WARNING

Protect the oil pipe joints from dust and impurities during installation to prevent blockages.

Arrange the pipes in a straight line without bends to ensure proper oil flow.

After installation, check that all connections are tight and that there are no leaks.

3. Precautions for Installing the Oil Pipe on the Adjustable Beam (KA/KC)

Models with an adjustable upper beam include an additional short hose in the accessory kit.

The decision to extend the short hose on the connection between the main and auxiliary cylinders on the beam depends on the height and width settings.

6.13. Installation of bracket and other parts

The arms of different lengths must be inserted into the horizontal slots of the carriage, following the approximate dimensions shown in Figure 2.

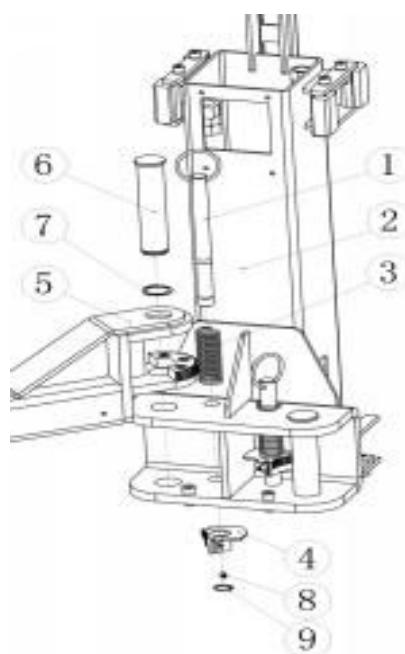
Installation procedure:

1. Insert the arms (5) of different lengths into the horizontal slots of the carriage (2).
2. Align the holes of the horizontal slots of the carriage with the holes of the arm pins (6).
3. Insert the arm pin (6) from top to bottom.
4. Install the shaft with the retaining ring (7) using circlip pliers.
5. Ensure that the gears (4) fit securely.

The other parts of the carriage assembly (1, 3, 4, 8, 9) are already pre-installed.

For details, refer to Figure 32.

Figure 32 - Installation diagram of arms



| No. | Name | QTY |
|-----|------------------------------|-----|
| 1 | locking shaft | 4 |
| 2 | Carriage | 2 |
| 3 | Spring | 4 |
| 4 | Gear | 4 |
| 5 | Arm | 4 |
| 6 | Pin | 4 |
| 7 | Retaining ring | 4 |
| 8 | Adjustement screw | 4 |
| 9 | Locking shaft retaining ring | 4 |

ATTENZIONE

Check that the arms are correctly inserted and that the pins are locked with retaining rings.

Ensure that the springs and gears are positioned according to the dimensioned drawing.

Do not use the lift if the arms are not fully secured.

Protect the oil pipe joints from dust and impurities during assembly to prevent blockages.

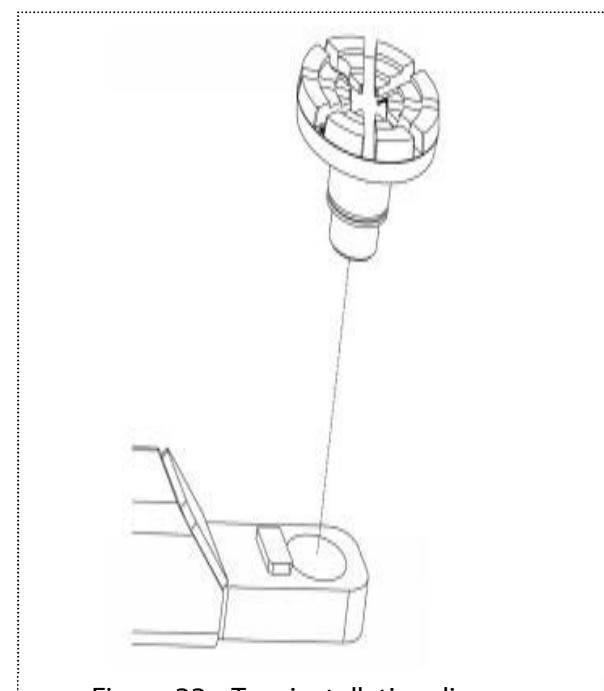


Figure 33 - Tray installation diagram

6.14. On board test and adjustment

WARNING

Operate strictly according to the operating procedures; do not operate the lift arbitrarily.

During lifting, due to different vehicle center of gravity positions, the center of gravity should be as close as possible to the plane formed by the two columns.

During initial installation, do not reverse the motor rotation to avoid damaging the oil pump.

Every half month, check comprehensively for loose screws, especially the three rear expansion bolts on the column base plate.

Use high-pressure anti-wear hydraulic oil produced by certified manufacturers.

Always monitor the oil level to prevent damage caused by oil pump idling.

Frequently check the mechanical safety lock to ensure reliability.

The hydraulic valve and system pressure are factory-set; the user must not adjust them. Any consequences will be borne by the user.

When performing repair work, the mechanical safety lock must be active and effective.

CAUTION

Preparation Before Test

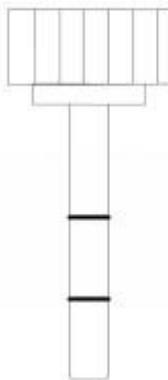
Ensure that:

- Columns are vertical, arms are horizontal, and anchor bolts are tightened.
- Power supply voltage matches the motor nameplate.
- Electrical wiring is correct and properly grounded.
- Hydraulic lines are correctly connected.
- The work area has sufficient space.
- Arm lock is engaged and column lock works normally.

Test Procedure

1. Fill Hydraulic Oil
 - Oil tank capacity: **12 L**. Fill with **N46 (SY1227-84)**; the oil level must be between the two marks (upper and lower lines) on the tank scale (oil cap).
 - **Seasonal note:** In winter (low temperature/high viscosity), 32#–40# high-pressure anti-wear oil may be used; in summer, replace promptly with the specified grade. Under the same temperature and load, the lower the grade, the faster the equipment lowers.

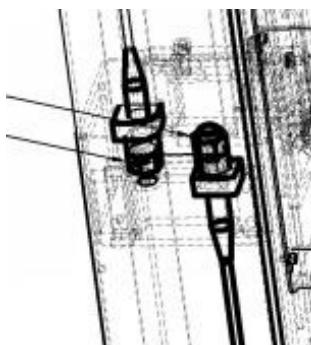
Figure 34 – Tick mark



Perform the Test

- Press UP: the carriages should rise. Repeat several full lift/lower cycles to reach maximum and minimum positions. Measure the height of both carriages: if not equal, adjust the nuts at both ends of the two steel cables until the heights match; maximum allowable error: 5 mm.
- During testing, observe vibrations/noise, check for oil leaks, monitor pump station motor operation and electrical components. Perform 2–3 full-load tests; if no abnormalities occur, the lift can be put into service.

Figure 35 – Steel wire adjusted nut



Commissioning Tips:

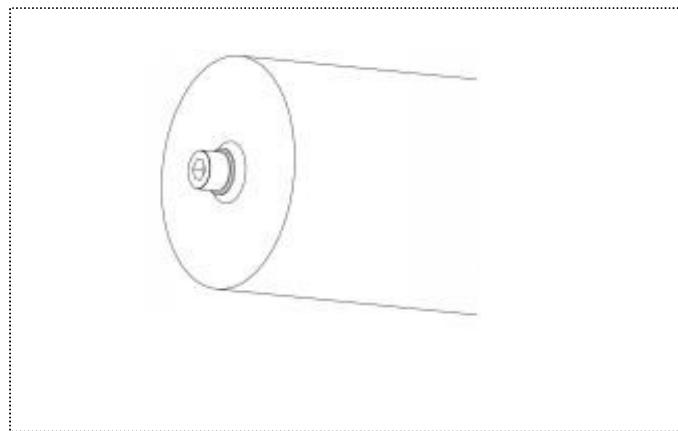
- Bleed air: Raise and lower the carriages, loosen the vent bolt at the top of each cylinder until the sound stops, then tighten; repeat 2–3 times.
- Check carriage level at points A and B; difference \leq 5 mm..

6.15. Operazione di livellamento

Leveling ensures safety and proper operation. After the on-board test, verify that the carriages are synchronized and the working platform is level. Criteria and tolerance are based on the installation and commissioning instructions.

Operational note: Leveling must be performed only after the cylinders have been fully bled according to the procedure described in section 6.14.

Figure 36 – Oil cylinder vent



Leveling Procedure

1. Raise the lift to maximum height without load.
2. Measure the distance between the floor and reference points on each carriage (A and B if indicated).
3. If a height difference is detected, adjust the tension of the balance cables by acting on the adjustment nuts at both ends until the heights match. Recommended tolerance: ≤ 5 mm.
4. Repeat a full lift/lower cycle and recheck the level; continue adjusting until synchronization and levelness are achieved.

ATTENZIONE

Do not perform adjustments with a vehicle loaded.

When adjusting column height, beam width must be adjusted simultaneously; these parameters must not be adjusted separately, otherwise the balance cables cannot be installed correctly.

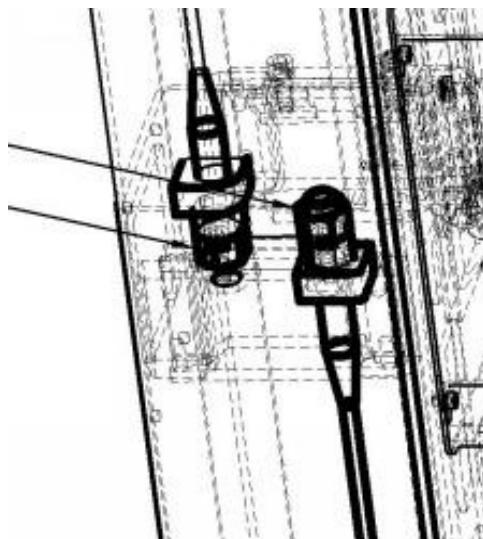
Recommended Quick Check:

- *With the lift unloaded and fully lowered, grasp the two exposed cable sections above the carriages: they should move closer with moderate effort.*
- *If the carriage on the main column rises first, tighten the nuts of the rising balance cable (adjustable on both columns).*
- *If it lowers first, tighten the nuts of the lowering balance cable (adjustable on both columns).*
- *Cable tension should be adjusted so that, when pressed by hand, the rope deflects no more than 20 mm.*
- *After adjustment, both nuts must be securely locked (tightened back).*

WARNING

After adjustment, both nuts must be securely locked (tightened back).

Figure 37 – Wire rope nut



7. OPERATION AND MAINTENANCE

WARNING

To ensure efficiency and proper functioning of the lift, it is essential to follow the instructions below, performing cleaning and routine maintenance to guarantee optimal functionality and performance. Cleaning and routine maintenance operations must be carried out by authorized personnel, according to the instructions provided and in complete safety.

The operator will assume responsibility for any negative consequences and accidents caused by improper use or violation of operating precautions!

This lift is specifically designed to handle vehicles with long wheelbases and high chassis. Always make sure to correctly position the support arms and rubber pads before lifting such vehicles.

DANGER

Pay attention to safety during use!

Users must check that the mechanical lock operates reliably and normally. It is strictly forbidden to stand under or near the vehicle and perform maintenance work during the lifting process if the mechanical lock is not fully engaged!

7.1. Operating Mode and Precautions

To ensure safety, strictly follow the operating procedures below:

Start-up and Initial Checks

- i. Switch on the main power switch. The power indicator light must turn on.
- ii. Briefly press the UP button to check that both carriages rise evenly. If not, adjust the steel rope nuts.

Locking System Check

- i. For manual lifts: operate the lowering lever.
- ii. For electric lifts: press the lock button.
- iii. Ensure the locking mechanism works correctly and that the locking teeth fully engage with the rack.

Lowering Procedure

- i. For manual lifts: press and hold the UP button for 3–5 seconds, then press and hold the lowering lever until the carriages reach the lowest position.
- ii. For electric lifts: press the DOWN button to fully lower the platform.

Vehicle Positioning

- i. Drive the vehicle onto the lift.
- ii. Rotate the rubber pads on all four support arms to the same height.
- iii. Lift the carriage locking pin to disengage the internal and external locking teeth.
- iv. Adjust the support arms to align with the vehicle's lifting points.
- v. Ensure carriages and arms are fully lowered before starting the lifting process.

Vehicle Lifting

- i. Position the rubber pads under the correct lifting points on the vehicle chassis.
- ii. Press the UP button to raise the vehicle approximately 100 mm.
- iii. Check balance and stability. If the vehicle is stable, continue lifting to the desired height.
- iv. Monitor for any vibrations or imbalance during lifting.

Locking During Operation

- i. Engage the locking mechanism:
 - a. Manual: press the lowering lever.
 - b. Electric: press the lock button.
- ii. Ensure the locking plates on both columns fully engage with the racks.

DANGER

Locking operation is mandatory!

Unlocking and Shutdown Procedure:

- i. Fully lower the carriages to the lowest position.
- ii. Observe the vehicle during descent to ensure it remains balanced and does not oscillate excessively.
- iii. If all operations are normal, the lift is considered correctly installed. You may proceed with maintenance and periodic tests.

DANGER

Always monitor both sides of the platform during lifting. If they are not synchronized, stop lifting immediately and resolve the issue before continuing.

- iv. After maintenance, ensure there are no obstacles under or around the lift.
- v. Once unlocked, press the DOWN button to lower the vehicle evenly to the ground, then remove it from the platform.
- vi. Switch off the ignition switch.
- vii. Turn off the main power supply to complete the operation.

8. MAINTENANCE

CAUTION

Perform maintenance in accordance with the instructions shown on the magnetic sticker of the “Lift Maintenance Manual.”

The maintenance intervals listed are indicative and refer to normal operating conditions. Actual conditions vary depending on service type, usage frequency, and dust levels in the environment. For heavy-duty use, increase the frequency of interventions. Always use the same type of lubricant previously employed for refills, oil changes, or greasing. Before lubrication, thoroughly clean the grease points with compressed air to prevent contamination of the lubricant with dust, dirt, or foreign particles.

WARNING

Keep the lift clean and tidy. It is forbidden to place materials or objects on or under the platform: during lifting/lowering phases, they may fall or be crushed, causing equipment damage and operator injury.

Comply with the laws in force in the country of use regarding the handling and disposal of products used for cleaning and maintenance, following the manufacturer's instructions.

At the end of the machine's service life, comply with anti-pollution regulations in force in the country of use.

8.1. Hydraulic and Electrical Lines

- Keep hydraulic hoses and electrical cables clean to prevent aging and damage (cracks, abrasions, hardening).
- Periodically check for absence of rubbing, bends, and crushing on hoses, and ensure wiring is intact and properly secured.

8.2. Hydraulic Oil — Replacement and Checks

- Oil replacement: after the first 3 months of operation, then every 6–12 months depending on use.
- Draining: during draining, completely remove the used oil.
- Refilling: keep the oil level between the two red marks on the tank (level indicator).
- Periodic check: regularly check the level; if it drops below the indicator, refill up to the centerline.

WARNING

Do not introduce foreign objects into the oil tank: this may damage the suction pump.

8.3. Oil Filter — Cleaning and Replacement

- Cleaning every 3 months:
 - Wash with kerosene;
 - Remove surface impurities with a brush.
- Inspection: if the filter is damaged, replace it immediately.

WARNING

Avoid deforming or tearing the filter element during cleaning; a damaged filter cannot ensure proper filtration.

8.4. Steel Ropes and Pulleys

- Maintenance frequency: every 3–6 months depending on use; for lifts frequently used with heavy vehicles, increase to every 2–3 months.
- Lubrication: apply grease to steel ropes and pulleys.
- Inspections:
 - Check for broken wires or fractures on the rope;
 - Check wear on the pulley groove and the condition of self-lubricating bearings.

WARNING

If fractures are found on the rope, replace it immediately.

If the play of the self-lubricating bearing exceeds 0.5 mm, replace the bearing immediately.

8.5. Columns and Sliding Blocks

- Column verticality: every 6 months, check vertical alignment; if out of tolerance, realign and tighten nuts to ≈ 80 Nm.
- Guide lubrication: after testing, apply grease evenly on the contact surface between sliding blocks and inner column; the layer thickness must be ≥ 0.5 mm. During regular use, clean and reapply grease every 3–6 months.

- Sliding block replacement: after 2–3 years of use, replace sliding blocks.

Brief procedure:

- 1 Remove the M10×30 fixing screws on the plate;
- 2 Remove the fixing plate;
- 3 Screw an M10×30 screw into a hole in the sliding block and extract the block;
- 4 Insert new blocks, reposition the plate, and tighten the hex screws.

8.6. Functional Checks During Operation

- During use, monitor:
 - Abnormal oscillations of the lift;
 - Noise or vibrations;
 - Oil leaks;
 - Proper functioning of the motor and electrical components.
- In case of anomalies, stop use and proceed with diagnosis and restoration according to the manufacturer's procedures.

8.7. Safety and Environmental Requirements

- Keep the work area free of oil on the floor (slip hazard); clean any traces immediately.
- Use original spare parts for repairs and maintenance.
- When lifting machine parts, use lifting accessories and slings compliant with local regulations.

8.8. Frequency Summary

- Hydraulic oil: replace at 3 months (first time), then every 6–12 months depending on use; level between the two red marks.
- Oil filter: clean every 3 months; replace if damaged.
- Ropes/pulleys: lubricate and inspect every 3–6 months; every 2–3 months for heavy use; replace rope immediately if fractured; replace bearing if play > 0.5 mm.
- Columns: check verticality every 6 months; tighten to ≈ 80 Nm.
- Sliding blocks: replace after 2–3 years; lubricate every 3–6 months, grease layer ≥ 0.5 mm.

9. TROUBLESHOOTING

| WARNING |
|--|
| Before any intervention, disconnect the power supply and ensure the lift is fully lowered and unloaded. Diagnosis and repair operations must be carried out by qualified personnel. |
| Do not attempt repairs without electrically isolating the lift. |
| Do not modify electrical or hydraulic circuits without the manufacturer's authorization. |
| Use only original spare parts. |
| If anomalies cannot be resolved, contact the manufacturer or an authorized distributor. |

Fault Table and Solutions

| Phenomenon | Possible Cause | Solution |
|--|--|--|
| 1. The two carriages do not lift synchronously | Uneven tension of steel ropes | Adjust the rope tension nuts (check and adjust periodically) |
| 2. Motor does not run | No power supply or loose wiring | Verify power is on and check connection tightness |
| 3. Motor runs weakly | Motor phase loss | Check electrical connection and restore phase |
| 4. Motor runs but lifting is weak | Wiring reversed; insufficient oil level; suction pipe disconnected; clogged filter | Correct wiring; refill oil; secure pipe; clean filter |
| 5. Automatic lowering after lifting | Check valve, directional valve, or pressure relief valve dirty or damaged | Clean valves; replace if damaged |

| Phenomenon | Possible Cause | Solution |
|--|---|--|
| 6. Safety lock does not work | Locking plate out of position; return spring detached | Reposition plate; reinstall spring |
| 7. Heavy load does not lift or descends slowly | Damaged decompression valve or valve not closing properly | Clean relief valve; replace if defective |
| 8. Oil leakage at joints | Loose seal | Seal with tape; tighten fittings and nuts |
| 9. Motor or electrical component failure | Electrical faults or damaged wiring | Disconnect power; have checked and replaced by a qualified electrician |
| 10. Other abnormal phenomena | Unidentified causes | Stop using and contact technical service |

10. ELECTRICAL SYSTEM

10.1. Warnings and Requirements

Electrical work, including installation, troubleshooting, and repairs, must be carried out exclusively by qualified personnel skilled in electrical and electronic diagnostics.

- Before any intervention, disconnect the power supply and lock the main switch.
- Do not open the electrical control box unless strictly necessary for checks or maintenance.
- Do not alter or bypass safety interlock devices and do not modify circuits without the manufacturer's authorization.
- Read and comply with all warning labels on the control box.
- Exercise extreme caution in humid environments to avoid leakage or accidental grounding risks.
- Use original spare parts and respect cable color coding.
- During electrical work, do not wear metallic objects (metal-frame glasses, necklaces, rings, watches, bracelets).

Wiring Requirements

- Ensure the correct connection according to the three-phase or single-phase version.
- Before installation, confirm voltage, phase, and other parameters on the motor nameplate; connect the power supply through a qualified technician; verify the motor rotation direction is correct.
- Tighten each terminal with adequate torque to prevent loose connections and equipment damage.
- Route cables to avoid rubbing on edges and sharp bends.
- Minimum sections: $\geq 2.5 \text{ mm}^2$ for power supply, $\approx 1.0 \text{ mm}^2$ for control circuits.

Grounding

- The ground conductor must be properly secured; ground resistance must be less than 10Ω .

10.2. Electrical Diagram and Operation

Figure 38a - Three-phase electrical diagram

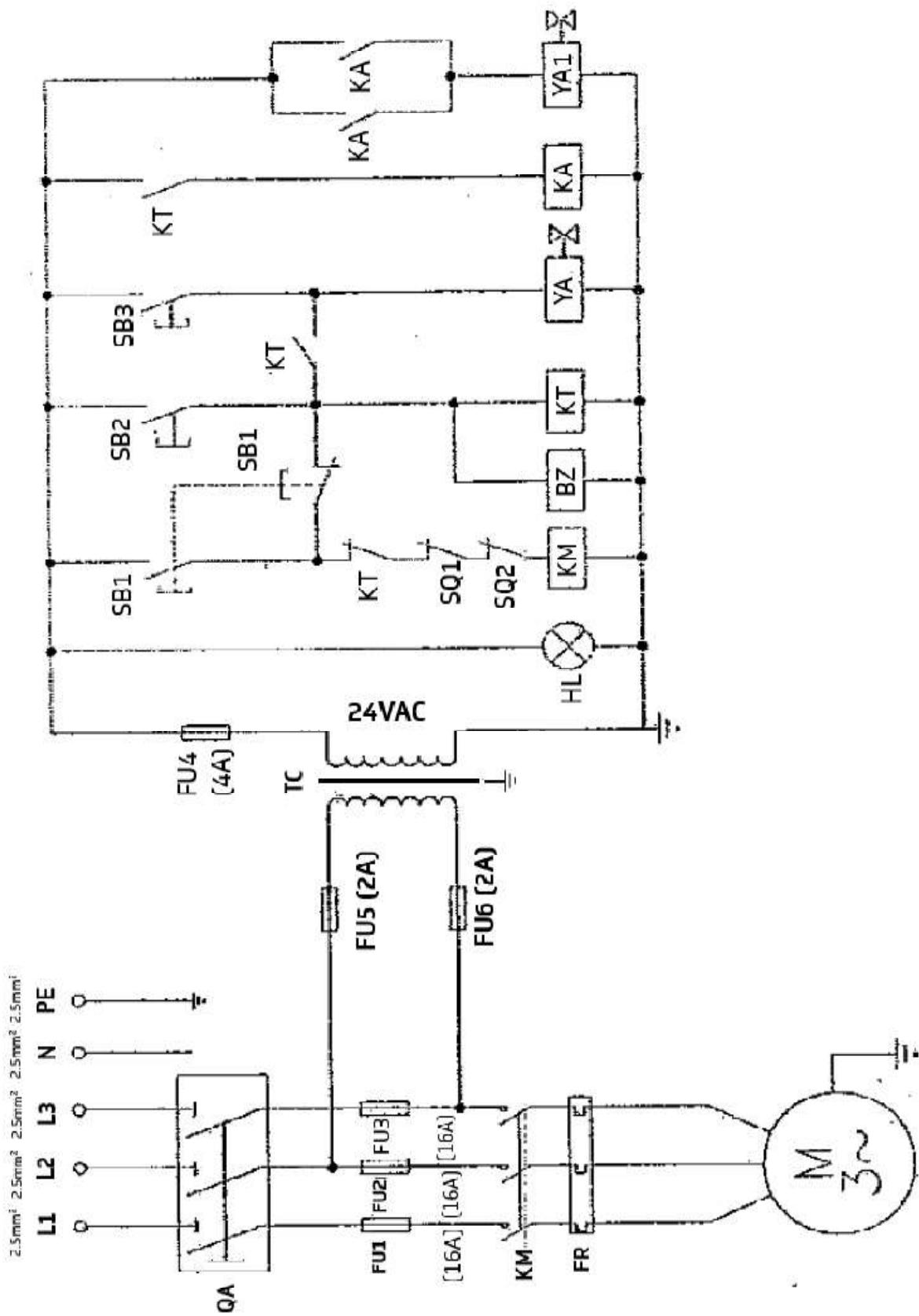
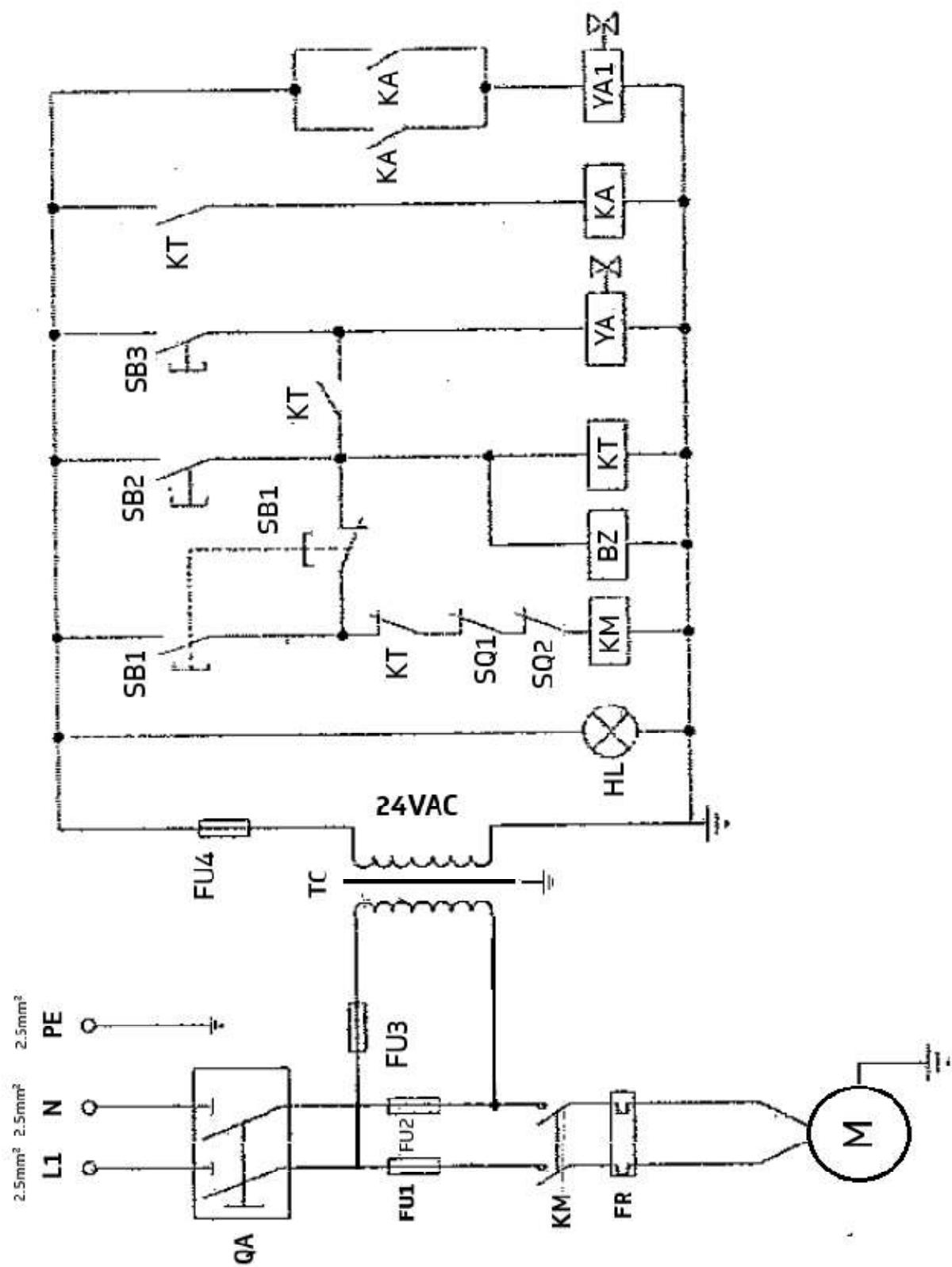


Figure 38b – Single-phase electrical diagram



Description and Operating Logic

The electrical system consists of two branches: power and control.

- Power branch:

The power supply (L1-L2-L3-N-PE or L1-N-PE) enters through QA (main switch). Lines are protected by FU1-FU3 (16 A). The motor (M 3~ or M ~) is controlled by contactor KM and protected by FR (thermal relay).

- Control branch (24 VAC):

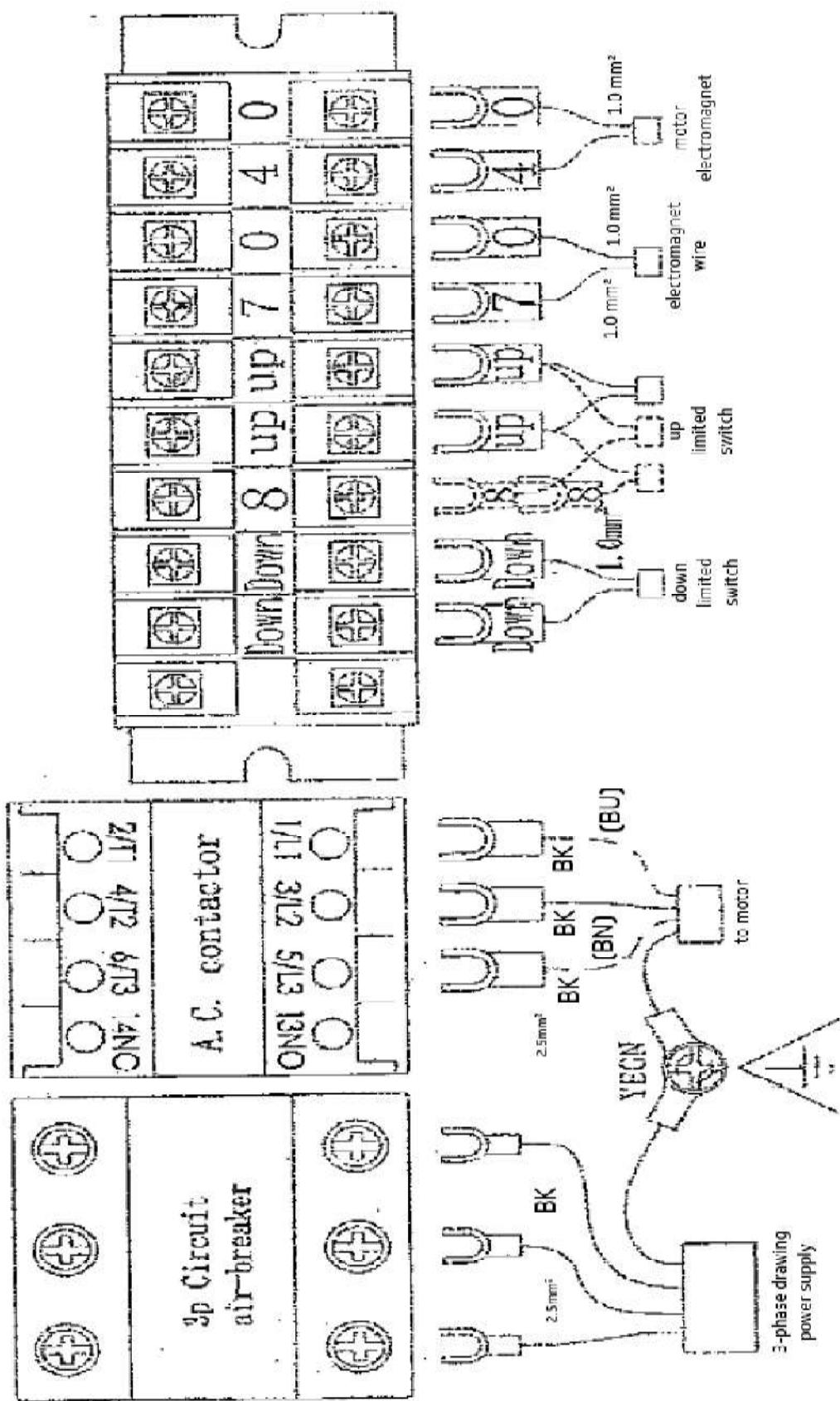
The transformer TC powers the auxiliary circuit, protected by FU4 (4 A) and FU5/FU6 (2 A). Pushbuttons SB1 (UP), SB2 (DOWN), and SB3 (LOCK) send commands, managed by KA (intermediate relay) and KT (time-delay relay). Limit switches SQ1/SQ2 stop travel at end positions. Electromagnet YA1 enables mechanical unlocking. HL (indicator light) and BZ (buzzer) provide signals..

Operating Sequence

1. Enable: close QA; check fuses and grounding $<10 \Omega$.
2. Lifting: press SB1; if SQ2 is not active and FR has not tripped, KM closes and the motor starts lifting. Automatic stop at SQ2.
3. Lowering: press SB2; if SQ1 is not active and FR has not tripped, the motor starts lowering. Automatic stop at SQ1.
4. Locking: SB3 activates platform locking, involving KT, KA, and YA1.
5. Safety: FR intervention, limit switch activation, or QA/FU opening interrupt the operation.

10.3. Wiring Diagram

Figura 39 – Wiring Diagram



Terminal Table

| Terminal | Function |
|----------|--------------------------|
| Down | Lowering button |
| Up | Lifting button |
| Lock | Platform lock |
| SQ1 | Lower limit switch |
| SQ2 | Upper limit switch |
| YA1 | Electromagnet |
| KM | Contactor coil |
| HL / BZ | Indicator light / Buzzer |

Cable Sections:

- Power: 2,5 mm².
- Control: 1,0 mm².

NOTES:

1. Confirm voltage, phase, and parameters on the nameplate; check motor rotation direction.
2. Secure each terminal properly to avoid damage.
3. Ground resistance <10 Ω.

10.4. Tabella unica componenti

| Symbol | Description | Notes |
|-----------------|----------------------------------|----------------------|
| QA | Main switch | Isolation |
| QF | Circuit breaker | General protection |
| FU1–FU3 | Power fuses (16 A) | Motor lines |
| FU4 | Auxiliary fuse (4 A) | Control circuit |
| FU5/FU6 | Secondary fuses for TC (2 A) | 24 VAC protection |
| KM | AC contactor | Motor control |
| FR | Thermal relay | Overload protection |
| M 3~ / M ~ | Three-phase / single-phase motor | Actuator |
| TC | 24 VAC transformer | Control power supply |
| SB1 / SB2 / SB3 | UP / DOWN / LOCK pushbuttons | Operator controls |
| SQ1 / SQ2 | Lower / upper limit switches | Travel stop |
| KA | Intermediate relay | Logic |
| KT | Time-delay relay | Timing |
| YA1 | Electromagnet | Unlocking |
| HL | Indicator light | Visual signal |
| BZ | Buzzer | Acoustic signal |
| PE | Ground bar | Resistance <10 Ω |

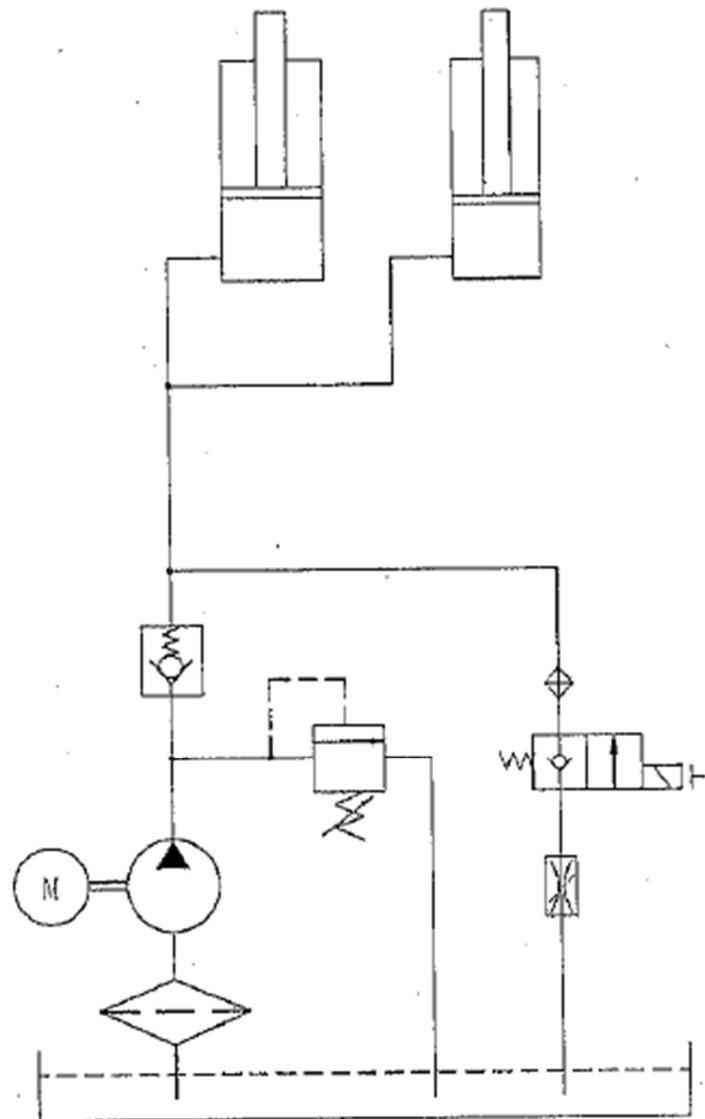
11. HYDRAULIC SYSTEM

11.1. Safety Rules

- Work on the hydraulic system must only be carried out by qualified personnel.
- Do not disassemble pumps, valves, or other hydraulic components without authorization.
- Do not modify the pressure setting: exceeding the nominal pressure can cause damage and injuries.
- Pipes must not come into contact with sharp edges, cutting objects, or corrosive substances.
- Immediately replace damaged hoses or hoses with aged rubber.
- Use hoses with a nominal pressure ≥ 2 times the operating pressure.
- Before any intervention, release residual pressure from the circuit.

11.2. Hydraulic Diagram

Figure 41 — Hydraulic system diagram



11.3. Hydraulic Circuit Operation

The lift's hydraulic circuit is designed to ensure safe and synchronized lifting and lowering of the platforms. The main components are:

- Electric motor (M): drives the hydraulic pump.
- Hydraulic pump: generates the pressure required for lifting.
- Oil tank: contains the hydraulic fluid.
- Oil filter: retains impurities and protects the circuit.
- Check valve: prevents oil from returning to the pump.
- Safety (relief) valve: limits the maximum circuit pressure.
- Lowering valve: allows oil to return to the tank during lowering.
- Hydraulic cylinders: lift the platforms.

Lifting phase

1. The operator activates the lifting command: the electric motor (M) drives the hydraulic pump, which draws oil from the tank.
2. Pressurized oil passes through the filter and reaches the check valve, which prevents return flow to the pump.
3. Pressure pushes oil into the hydraulic cylinders, raising the platforms.
4. The safety valve intervenes if pressure exceeds the nominal value, discharging oil back to the tank to prevent overloads.

Holding phase

- When the lift is stationary in the raised position, the check valve keeps oil in the cylinders, preventing unintended lowering.
- Pressure remains stable thanks to valve sealing.

Lowering phase

1. The operator activates the lowering valve (solenoid valve or manual control).
2. The valve opens the return circuit, allowing oil to flow from the cylinders to the tank.
3. Lowering is controlled: speed is regulated by the valve and line diameter..

11.4. Main Components

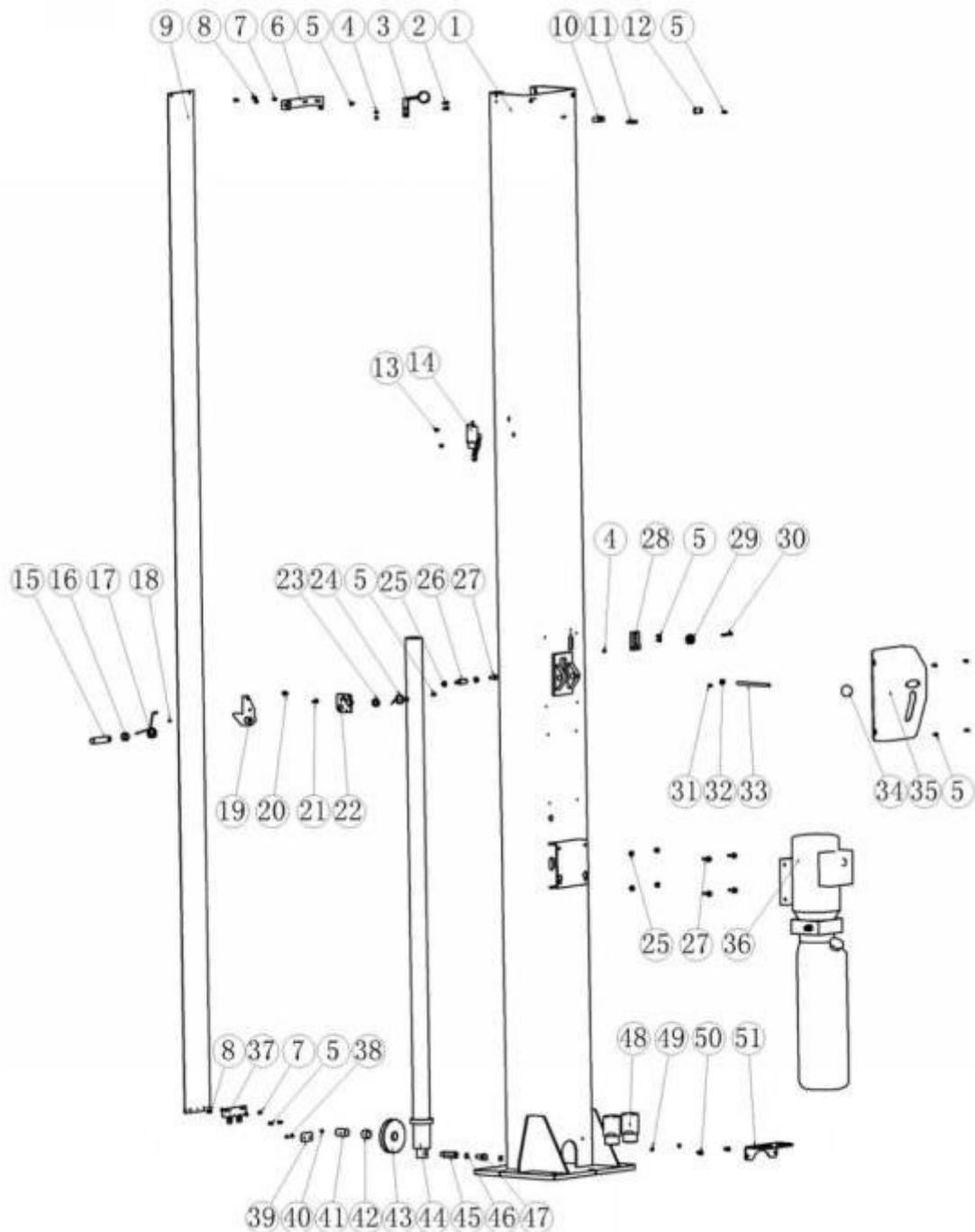
| Component | Function |
|---------------------|--------------------------------|
| Electric motor (M) | Drives the pump |
| Hydraulic pump | Generates pressure for lifting |
| Oil tank | Contains hydraulic fluid |
| Oil filter | Retains impurities |
| Check valve | Prevents oil return |
| Safety valve | Limits maximum pressure |
| Lowering valve | Allows oil return to the tank |
| Hydraulic cylinders | Lift the platforms |

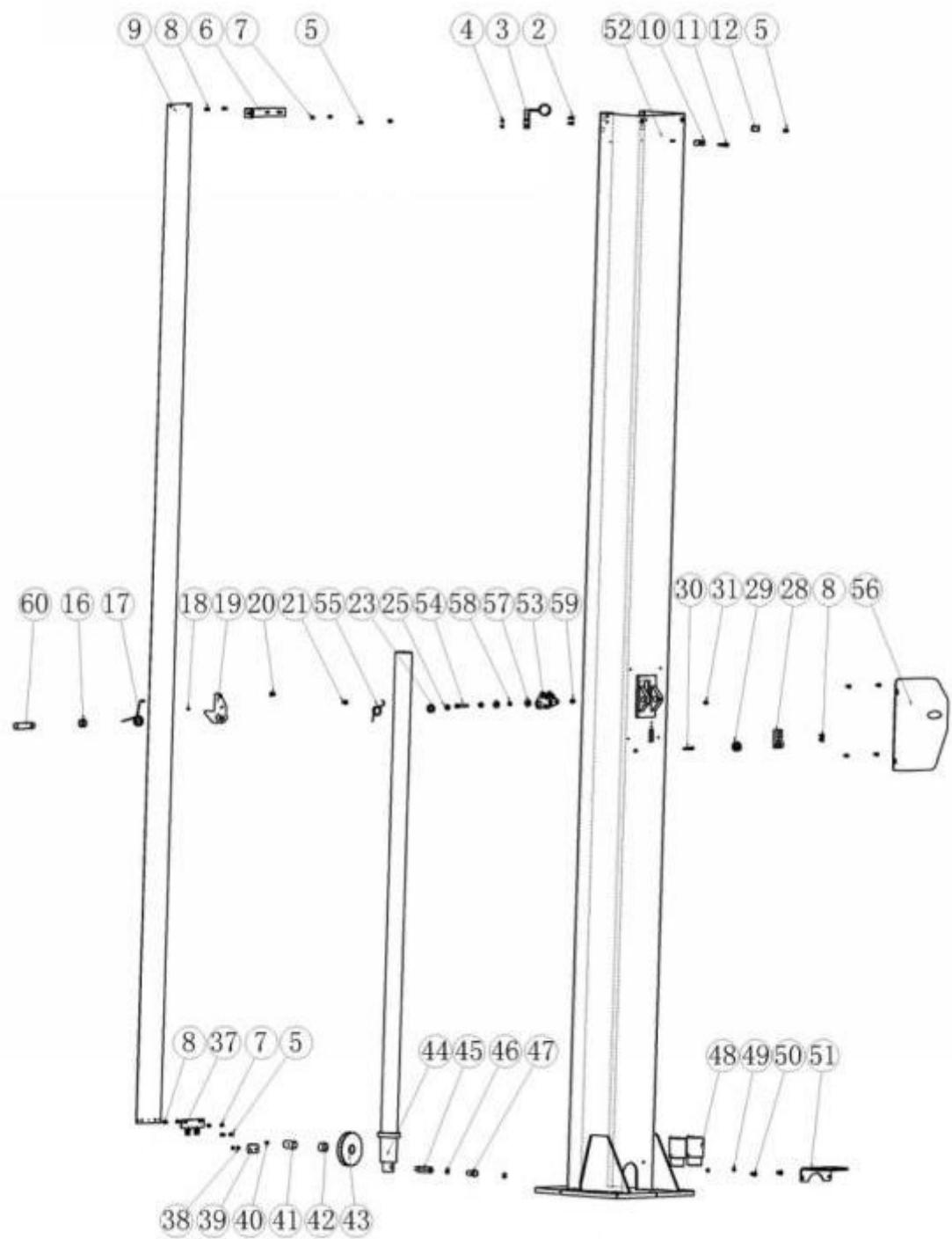
12. PACKING LIST

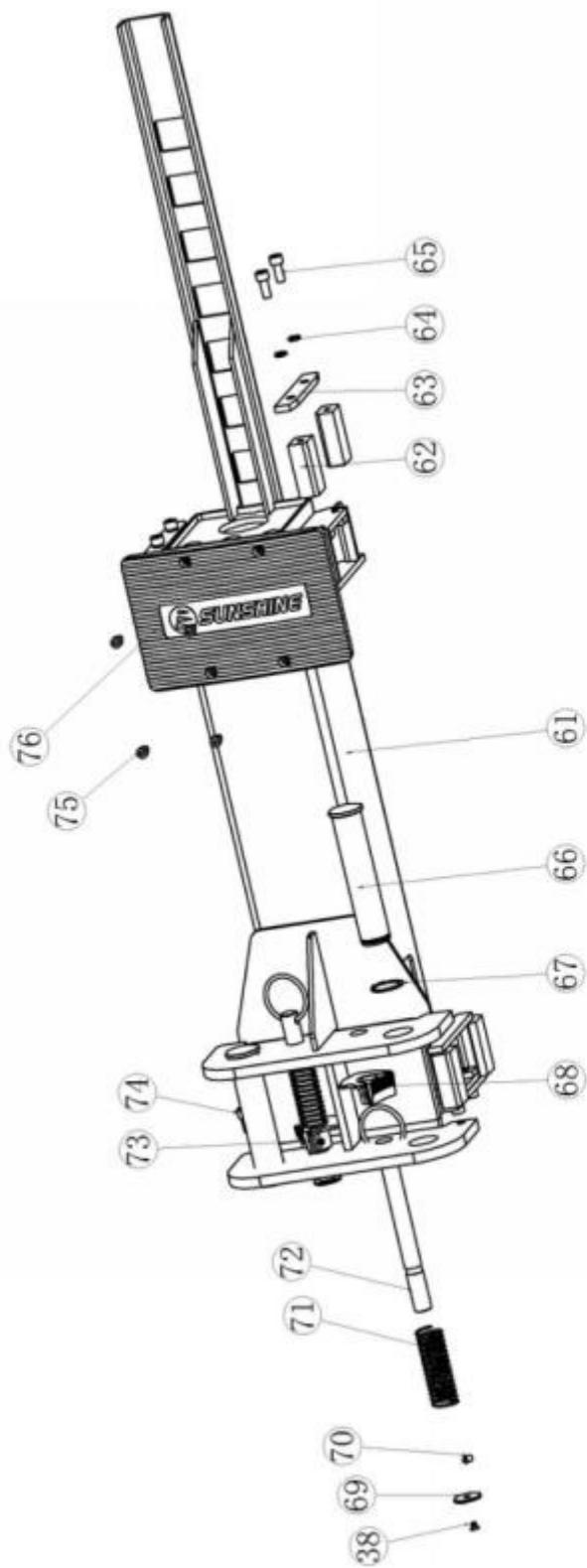
| No. | Technical Name (IT) | Quantity | Notes |
|-----|--|----------|-------|
| 1 | Column | 2 | |
| 2 | Crossbeam (complete assembly) | 1 | |
| 3 | Lifting arms (assembly) | 4 | |
| 4 | Arm pin | 4 | |
| 5 | Height extensions / lifting pads | 4 | |
| 6 | Rubber pads | 4 | |
| 7 | Steel rope (balancing assembly) | 2 | |
| 8 | Carriage (complete assembly) | 2 | |
| 9 | Upper column section | 2 | |
| 10 | Crossbeam connection plate | 1 | |
| 11 | Oil pipe kit | 1 | |
| 12 | Power unit (complete assembly) | 1 | |
| 13 | Electrical control box (complete assembly) | 1 | |
| 14 | Combined air/electric socket | 1 | |
| 15 | Small parts carton (standard fasteners) | 1 | |
| 16 | Expansion bolts | 10 | |
| 17 | Inspection report | 1 | |
| 19 | Packing list | 1 | |

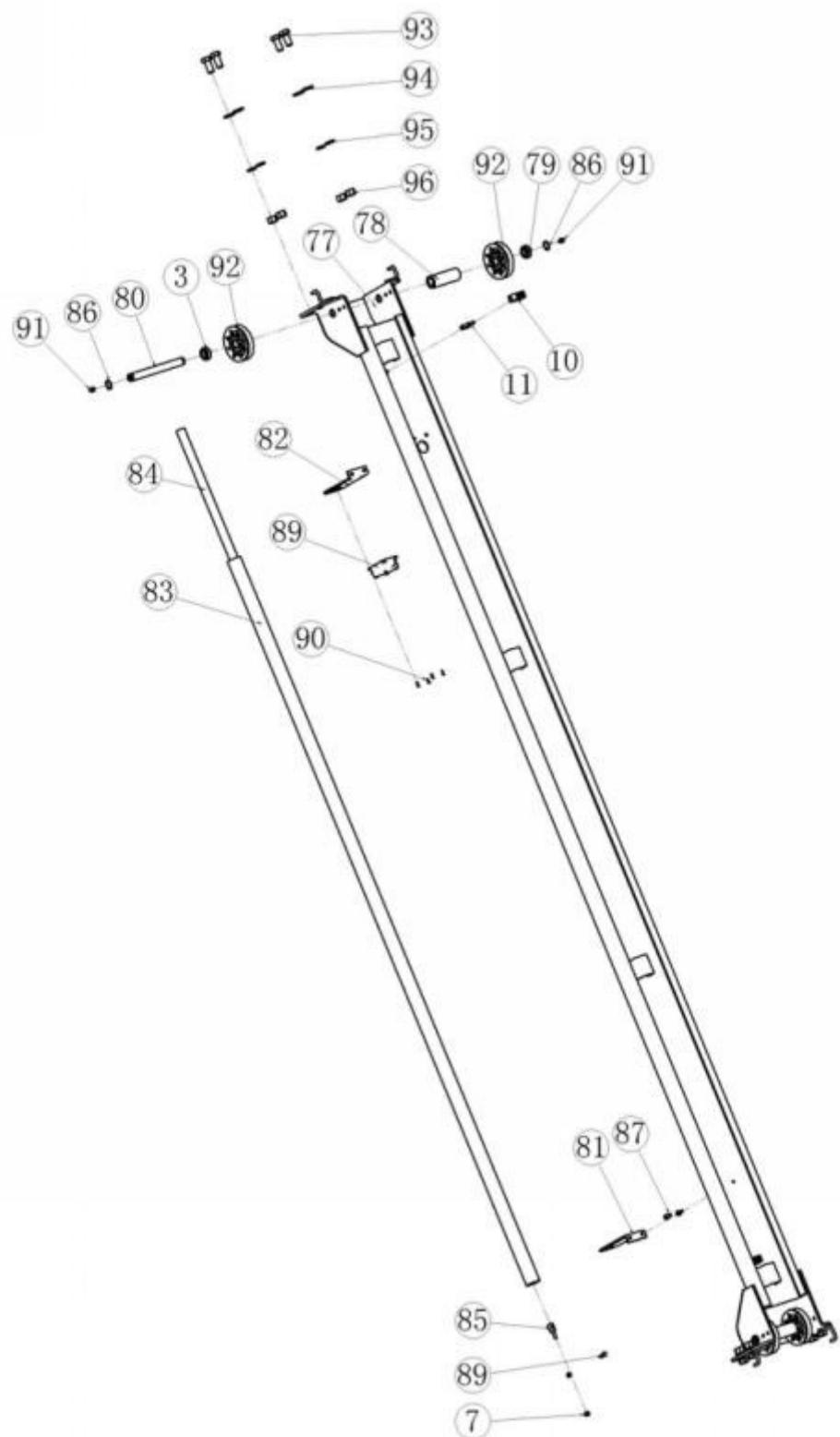
13. EXPLOSIVE DIAGRAM

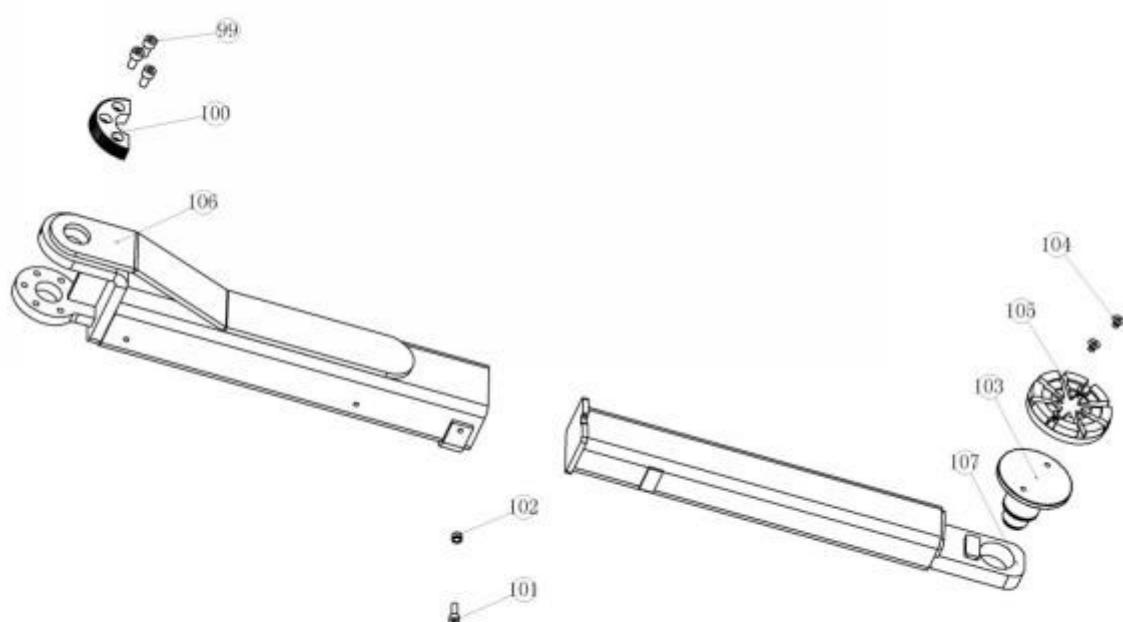
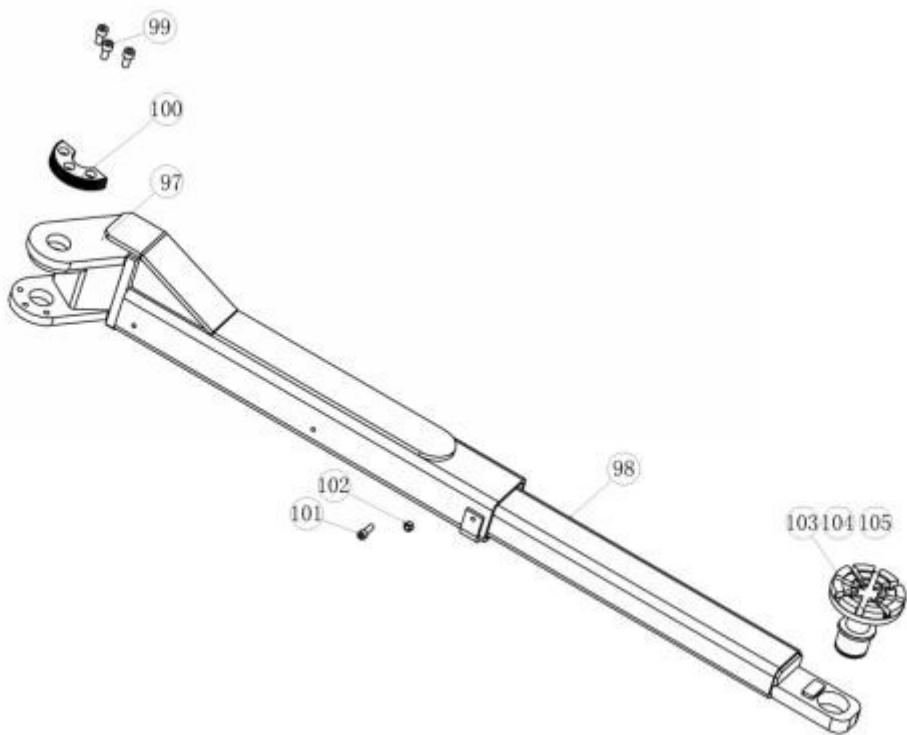
13.1. Two-post Lift











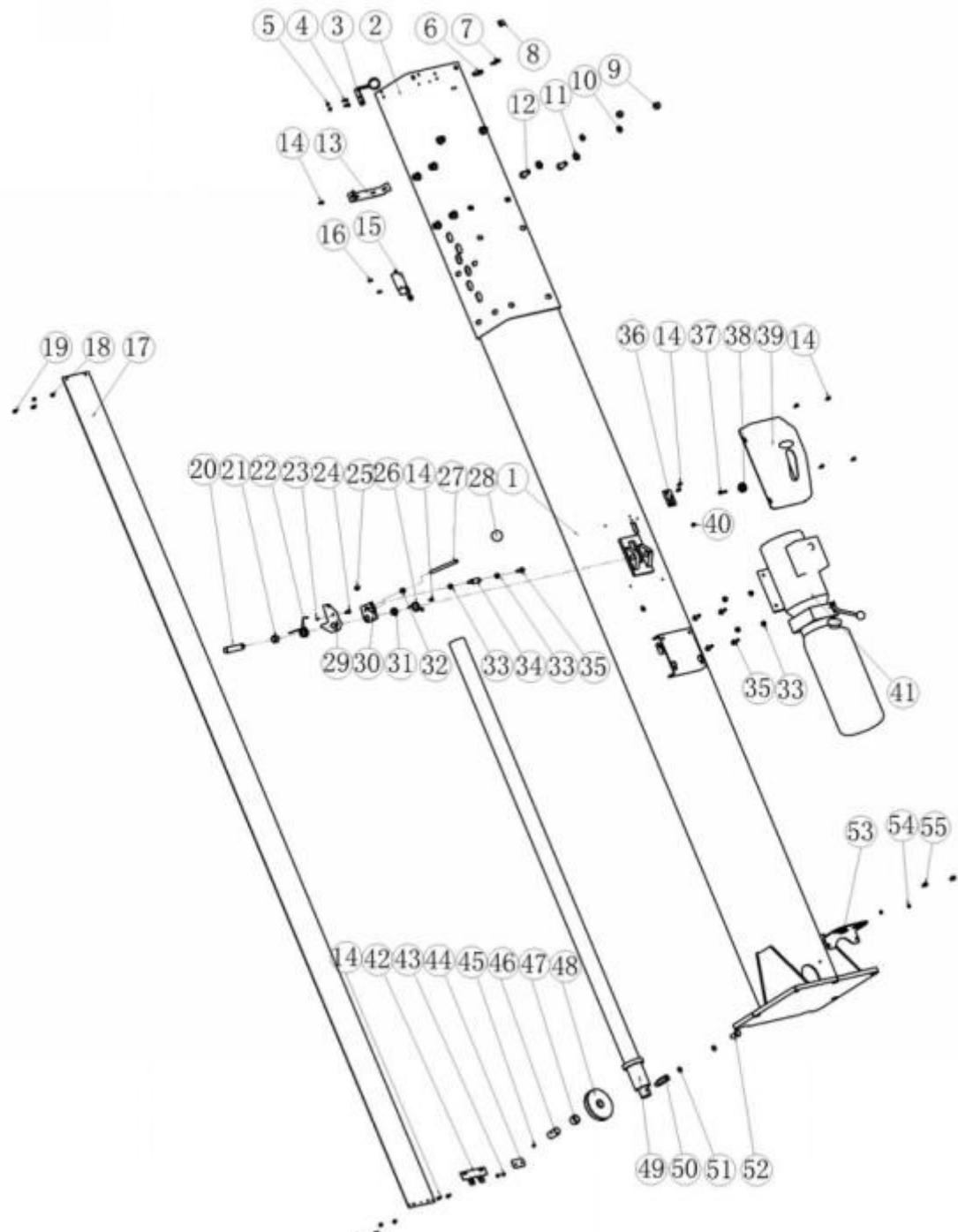
| No. | Code | Name | Specs. | Q.ty |
|-----|-------------|---|--------|------|
| 1 | 91013110100 | master column-35A (Optional) | | 1 |
| 2 | 12020301020 | hex bolt (Optional) | M6×20 | 4 |
| 3 | 91013111000 | pipe bracket (Optional) | | 2 |
| 4 | 12010101002 | hex nut (Optional) | M6 | 6 |
| 5 | 12020301032 | inner hex head screw (Optional) | M6×10 | 31 |
| 6 | 91013112400 | cylinder curtain top bracket (Optional) | | 2 |
| 7 | 12010500001 | hex nut (Optional) | M6 | 10 |
| 8 | 12020301028 | inner hex head screw (Optional) | M6×12 | 8 |
| 9 | 16030401132 | cylinder curtain top bracket (Optional) | L=3680 | 2 |
| 10 | 21013110600 | lock fixing plate | | 4 |
| 11 | 12020301007 | inner hex head screw | M6×25 | 8 |
| 12 | 91030161305 | pipe clip | | 2 |
| 13 | 12030400007 | hex bolt | M5×12 | 2 |
| 14 | 11110300004 | limited switch | ME8108 | 1 |
| 15 | 91013110300 | lock pin | | 1 |
| 16 | 91013110400 | lock bush 14 | | 2 |
| 17 | 91013112000 | spring | | 2 |
| 18 | 12020400015 | inner hex screw | M6×10 | 2 |
| 19 | 21013111300 | lock plate | | 2 |
| 20 | 21011110800 | lock plate cushion | | 2 |
| 21 | 12030400001 | hex bolt | M6×16 | 2 |
| 22 | 21013110400 | turning plate-3.5A | | 1 |
| 23 | 91013110500 | lock bush 10 | | 2 |
| 24 | 91013112500 | spring | | 1 |
| 25 | 12010103002 | hex nut | M8 | 9 |
| 26 | 21013000900 | steel rope fixing bolt | | 2 |
| 27 | 12030400005 | hex bolt | M8×30 | 5 |
| 28 | 21013110500 | pulley bracket | | 2 |
| 29 | 21010300007 | nylon roller | | 2 |
| 30 | 12020301101 | inner hex head screw | M6×45 | 2 |
| 31 | 12020400007 | inner hex screw | M10×12 | 2 |
| 32 | 12010101004 | hex nut | M10 | 1 |

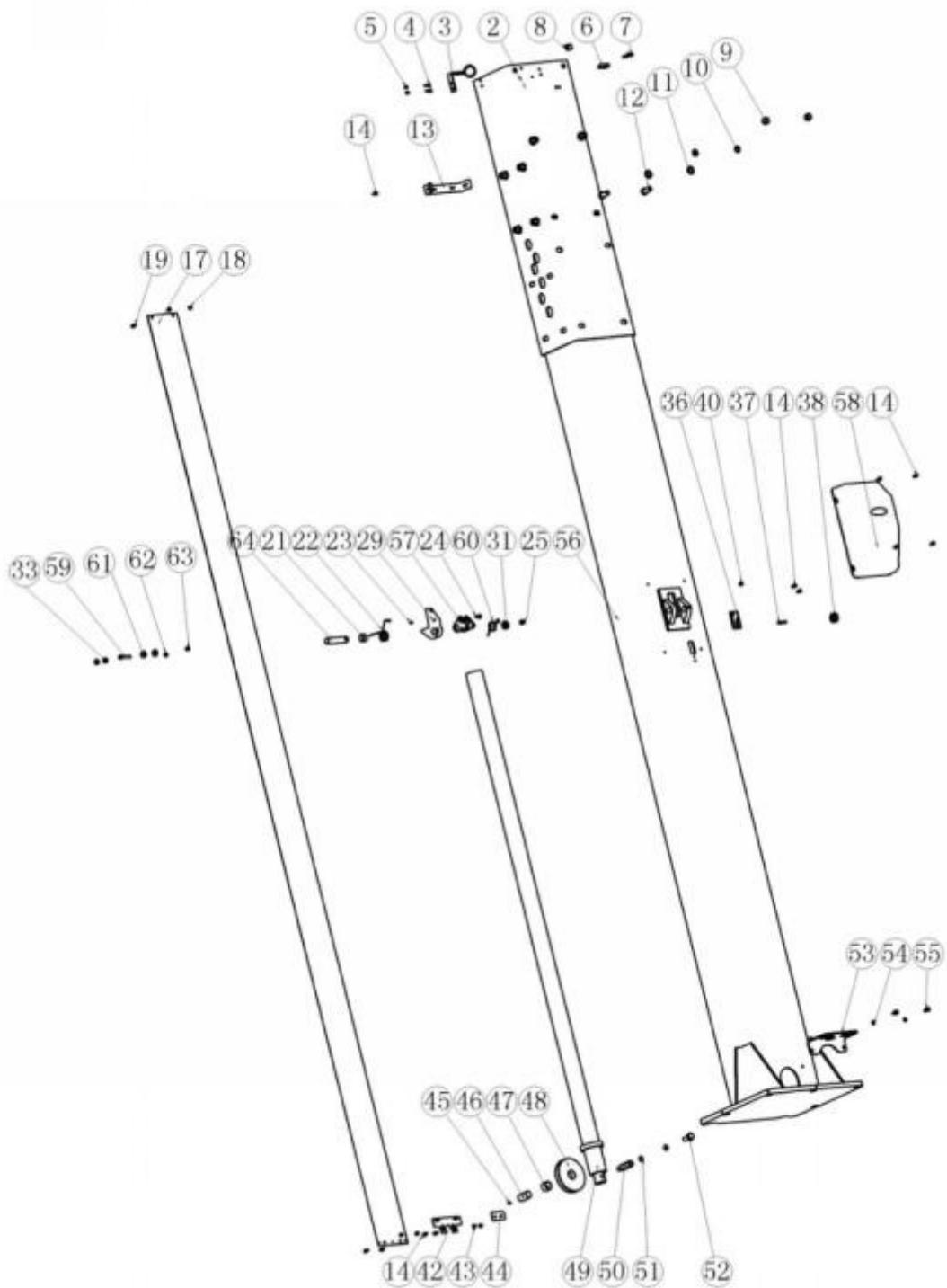
| | | | | |
|----|-------------|---|------------------------|----|
| 33 | 21013111000 | lock handle | | 1 |
| 34 | 12100100001 | lock handle ball | | 1 |
| 35 | 21013100002 | lock cover-master column-3.5A | | 1 |
| 36 | 14020502065 | power unit | | 1 |
| 37 | 91013112300 | cylinder curtain bottom bracket (Optional) | | 2 |
| 38 | 12020201029 | cross head screw (Optional) | M6×8 | 4 |
| 39 | 91015331500 | pulley shaft fixing plate | | 2 |
| 40 | 14020100001 | greese nipple | φ8 | 2 |
| 41 | 91015331400 | bottom pulley | | 2 |
| 42 | 13010100016 | self lubrication bearing | 302519 | 2 |
| 43 | 91013111100 | bottom pulley | | 2 |
| 44 | 14020406002 | cylinder | | 2 |
| 45 | 15030100024 | connetor | NPT3-8 转 M14×1.5-68 | 2 |
| 46 | 12130100001 | washer | φ14 | 4 |
| 47 | 15030100013 | hollow bolt | M14×30 | 2 |
| 48 | 91015331200 | height adaptor | | 4 |
| 49 | 12050203005 | elastic washer | φ8 | 4 |
| 50 | 12020301013 | inner hex screw | M8×12 | 4 |
| 51 | 91011111000 | height adaptor bracket | | 2 |
| 52 | 91013112100 | slave column-35A | | 1 |
| 53 | 21013111500 | lock plate | | 1 |
| 54 | 12020301050 | inner hex screw | M8×55 | 1 |
| 55 | 21013111100 | spring | | 1 |
| 56 | 91013200002 | lock cover | | 1 |
| 57 | 12050202006 | washer | φ8 | 2 |
| 58 | 21010200021 | roller bush | | 1 |
| 59 | 12010500008 | nut | M8 | 1 |
| 60 | 21023111600 | lock pin | | 1 |
| 61 | 91013120100 | carriage | | 2 |
| 62 | 91011120700 | sliding block | | 16 |
| 63 | 91011120110 | fixing plate | | 8 |
| 64 | 12050203003 | elastic washer | φ10 | 16 |
| 65 | 12020202007 | inner hex screw | M10×25 | 16 |

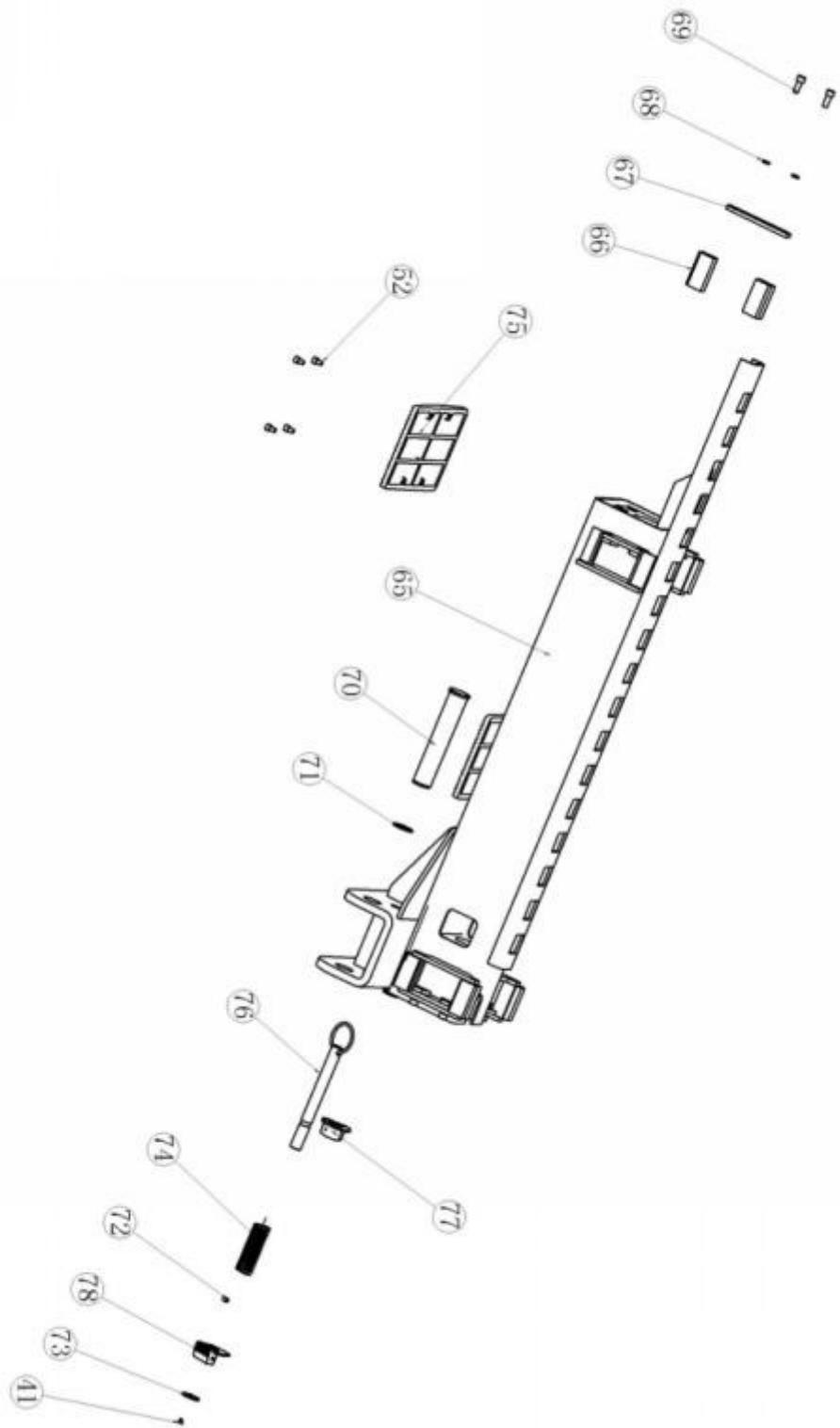
| | | | | |
|----|-------------|----------------------|----------|-----------------------|
| 66 | 91011120600 | shalf | | 4 |
| 67 | 12090100026 | shalf washer | φ38 | 4 |
| 68 | 21013121100 | gear A | | 2 |
| 69 | 91013121000 | plate | | 4 |
| 70 | 12020301048 | inner hex screw | M8×12 | 4 |
| 71 | 91013121200 | gear spring | | 4 |
| 72 | 91013120400 | gear lock pin | | 4 |
| 73 | 21013121200 | gear B | | 2 |
| 74 | 12020301042 | inner hex screw | M12×20 | 2 |
| 75 | 12020301013 | inner hex screw | M8×12 | 8 |
| 76 | 21013120300 | rubber pad | | 2 |
| 77 | 91013140100 | beam | | 1 |
| 78 | 91013140300 | top pulley bush | | 2 |
| 79 | 91013140400 | top pulley bush 10.5 | | 4 |
| 80 | 91013140500 | top pulley bush pin | | 2 |
| 81 | 91013140600 | bracket A | | 1 |
| 82 | 91013140700 | bracket B | | 1 |
| 83 | 11240000014 | tube | | 1 |
| 84 | 91013140800 | limited bar | | 1 |
| 85 | 91013140900 | limited bar bracket | | 1 |
| 86 | 12090100012 | elastic washer | φ18 | 4 |
| 87 | 12020102003 | cross head screws | M6×16 | 4 |
| 88 | 12030100017 | hex bolt | M6×30 | 1 |
| 89 | 11110300002 | limited switch | LX19-001 | 1 |
| 90 | 12020101017 | cross head screws | M3×10 | 4 |
| 91 | 14020100003 | greese nipple | M8 | 4 |
| 92 | 21010300236 | nylon roller | | 4 |
| 93 | 12030100031 | hex bolt | M14×30 | 8 |
| 94 | 12050201011 | flat washer | φ14 | 8 |
| 95 | 12050203006 | spring washer | φ14 | 8 |
| 96 | 12010101006 | hex nut | M14 | 8 |
| 97 | 91013130100 | arm | | left 1 and right 1 |
| 98 | 91013130400 | end arm part | | 1 |
| 99 | 12020301042 | inner hex screw | M10×20 | 12 |

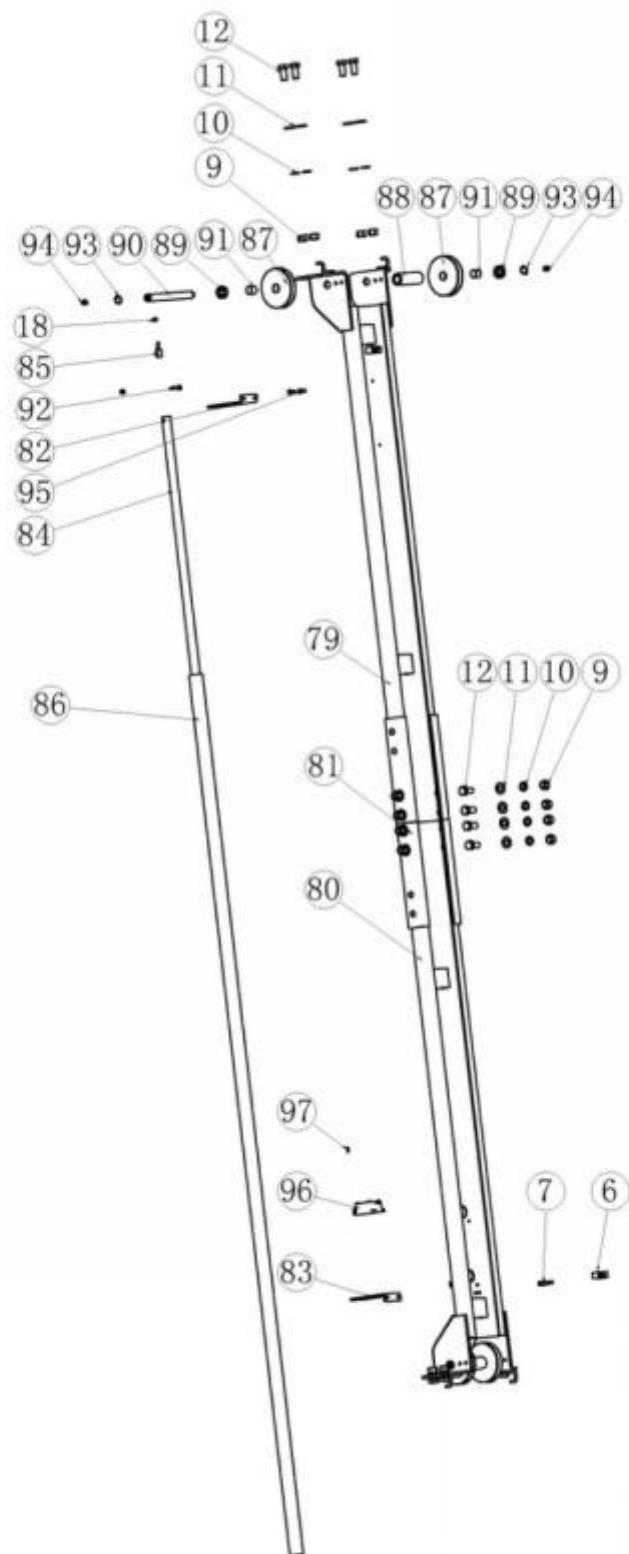
| | | | | |
|-----|-------------|---------------------|-------|---|
| 100 | 21013130700 | gear | | 4 |
| 101 | 12020301017 | inner hex screw | M8×25 | 4 |
| 102 | 12010101003 | hex nut | M8 | 4 |
| 103 | 21010200020 | rubber pad assembly | | 4 |
| 104 | 12020201013 | cross head screw | M8×12 | 8 |
| 105 | 16060400021 | rubber pad holder | | 4 |
| 106 | 91013130300 | 2-steps arm | | 2 |
| 107 | 91013130200 | 1st-step arm | | 2 |

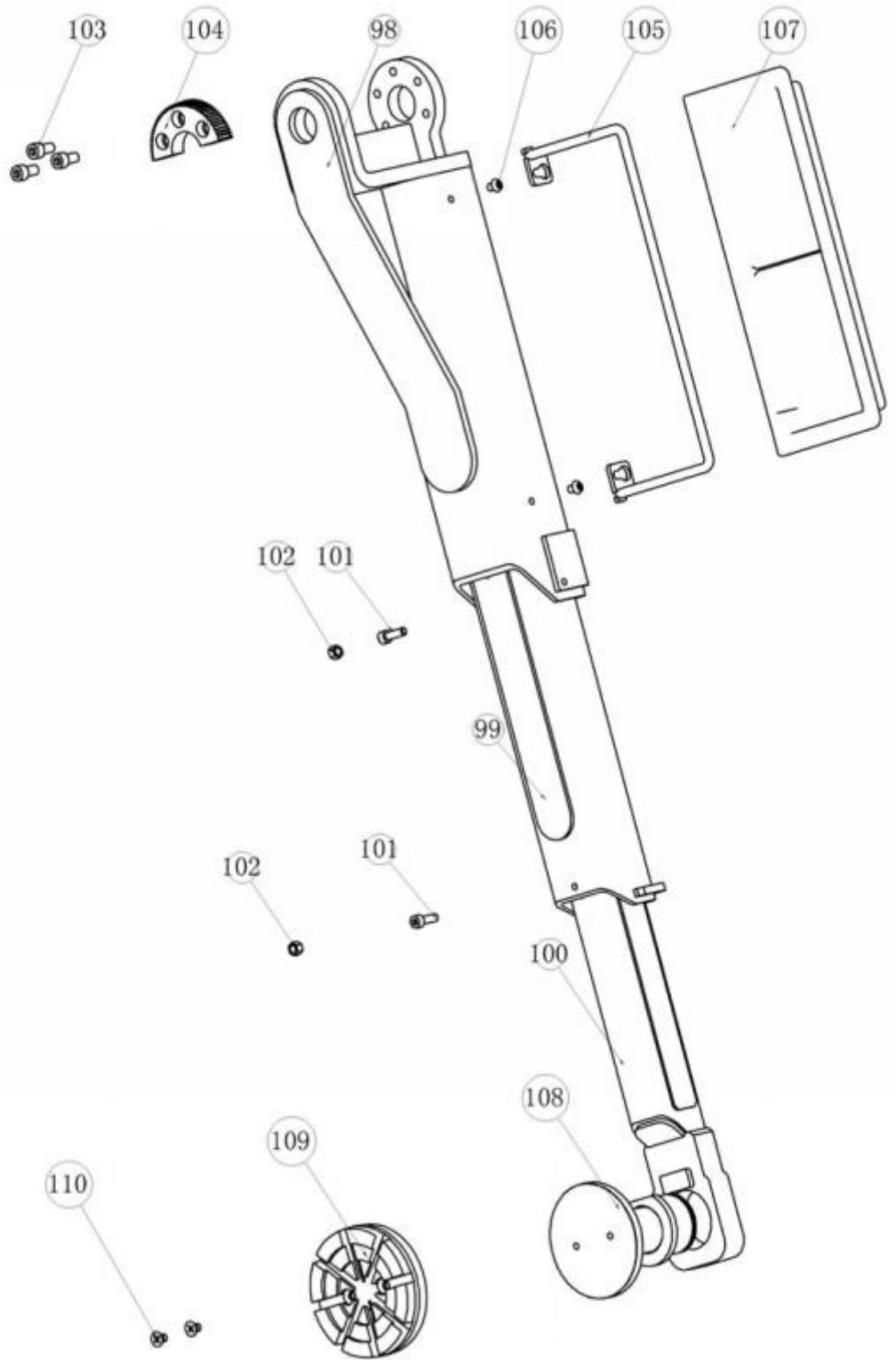
13.2. Width and height adjustable clear floor two post lift

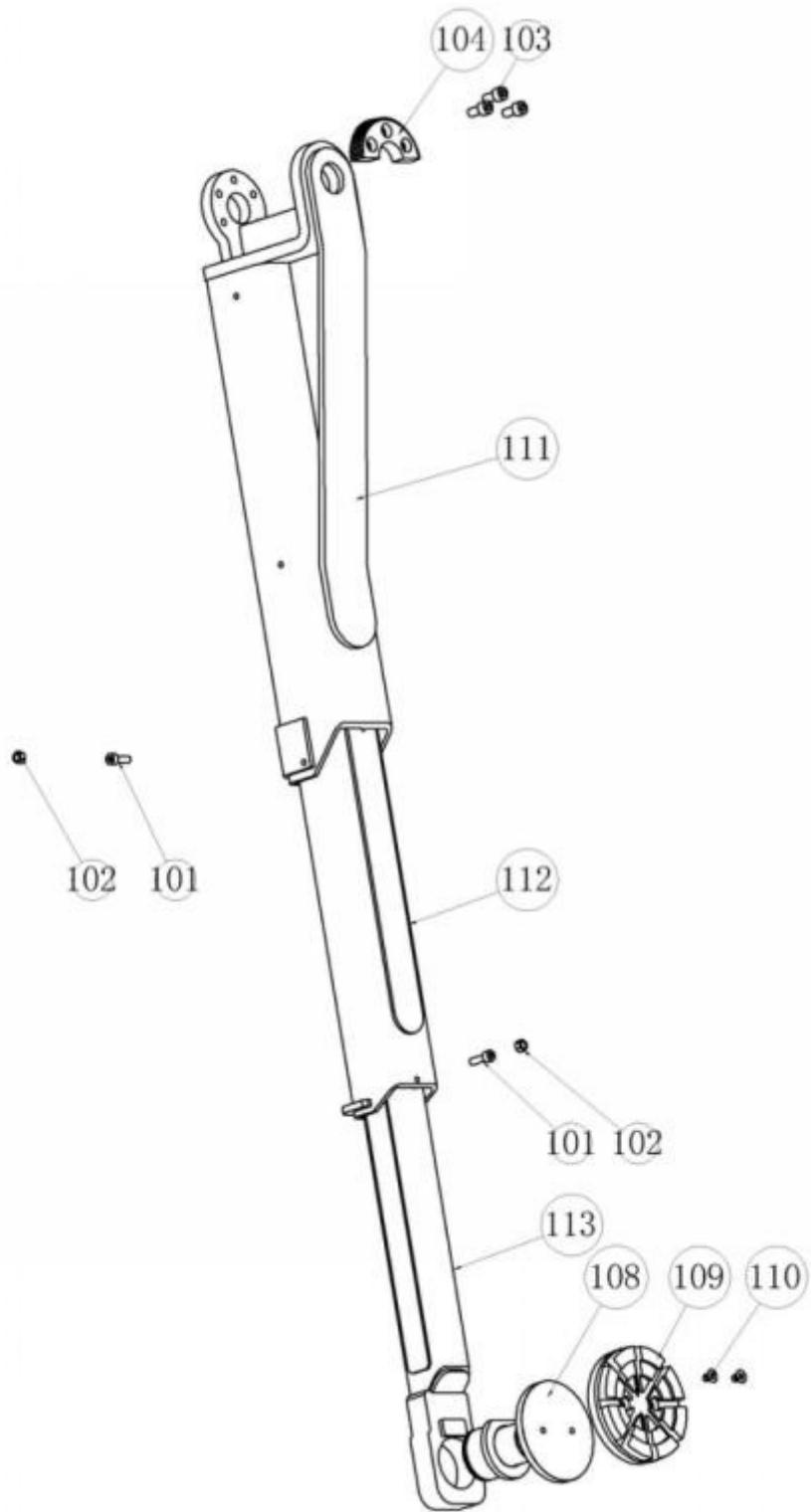












| No. | Code | Name | Specs. | Q.ty |
|-----|-------------|--|--------|------|
| 1 | 91015210100 | Column-Main-45KA | | 1 |
| 2 | 91015210300 | 45KA column upper section | | 2 |
| 3 | 91013111000 | Oil pipe bracket | | 2 |
| 4 | 12020301020 | Hex head bolt | M6×20 | 4 |
| 5 | 12010101002 | Hex nut | M6 | 6 |
| 6 | 21013110600 | Cable fixing plate | | 4 |
| 7 | 12020301007 | Hexagon socket head cap screws | M6×25 | 8 |
| 8 | 91030161305 | Pipe clip | | 2 |
| 9 | 12010101006 | Hex nuts | M14 | 40 |
| 10 | 12050203006 | Spring washer | φ14 | 40 |
| 11 | 12050201011 | Flat washer | φ14 | 40 |
| 12 | 12030100031 | Hex head bolt | M14×30 | 40 |
| 13 | 91013112400 | Curtain upper bracket-clear floor (Optional) | | 2 |
| 14 | 12020301032 | Hexagon socket head cap screws (Optional) | M6×10 | 17 |
| 15 | 11110300004 | Limit switch (Optional) | ME8108 | 1 |
| 16 | 12030400007 | Flange hex head bolt (Optional) | M5×12 | 2 |
| 17 | 16030401133 | Curtain (Optional) | L=3420 | 2 |
| 18 | 12010500001 | Hexagon lock nut (Optional) | M6 | 10 |
| 19 | 12020301028 | Hexagon socket head cap screws (Optional) | M6×12 | 8 |
| 20 | 91013110300 | Mechanical lock shaft | | 1 |
| 21 | 91013110400 | Mechanical lock spacer 14 | | 2 |
| 22 | 91013112000 | Torsion spring - manual | | 2 |
| 23 | 12020400015 | Hexagon socket set screw | M6×10 | 2 |
| 24 | 12030400001 | Hexagon head flange bolt | M6×16 | 2 |
| 25 | 21011110800 | Large rotating plate cushion | | 2 |
| 26 | 91013112500 | Auxiliary return spring | | 1 |
| 27 | 31013111000 | Mechanical lock lever | | 1 |
| 28 | 12100100001 | Handle ball | | 1 |
| 29 | 21013111300 | Large turn board | | 2 |
| 30 | 21013110400 | Active transfer board -3.5A | | 1 |
| 31 | 91013110500 | Mechanical lock spacer 10 | | 2 |
| 32 | 12010101004 | Hex nut | M10 | 1 |

| | | | | |
|----|-------------|--|---------------------|---|
| 33 | 12010103002 | Hexagon flange nut | M8 | 6 |
| 34 | 21013000900 | Active wire rope fixing bolt | | 2 |
| 35 | 12030400005 | Hexagon head flange bolt | M8×30 | 5 |
| 36 | 21013110500 | Pulley bracket | | 2 |
| 37 | 12020301101 | Hexagon socket head cap screws | M6×45 | 2 |
| 38 | 21010300007 | Nylon small pulley | | 2 |
| 39 | 21013100002 | Mechanical lock cover - main -3.5A | | 1 |
| 40 | 12020400007 | Hexagon socket set screw | M10×12 | 2 |
| 41 | 14020502065 | Power unit | | 1 |
| 42 | 91013112300 | Curtain lower bracket - clear floor (Optional) | | 2 |
| 43 | 12020201029 | Cross recessed countersunk head screw (Optional) | M6×8 | 4 |
| 44 | 91015331500 | Bottom pulley shaft fixing plate (Optional) | | 2 |
| 45 | 14020100001 | OiL Cup | φ8 | 2 |
| 46 | 91015331400 | Bottom pulley shaft | | 2 |
| 47 | 13010100016 | Self lubricating bearing | 253019 | 2 |
| 48 | 91013111100 | Bottom pulley | | 2 |
| 49 | 14020406002 | Oil cylinder | | 2 |
| 50 | 15030100024 | Internal and external straight joint | NPT3-8viaM14×1.5-68 | 2 |
| 51 | 12130100001 | Composite mat | φ14 | 4 |
| 52 | 15030100013 | Hollow bolt | M14×30 | 2 |
| 53 | 91011111000 | Height adaptor bracket | | 2 |
| 54 | 12050203005 | Spring washer | φ8 | 4 |
| 55 | 12020301013 | Hexagon socket head cap screws | M8×12 | 4 |
| 56 | 91015210200 | Column-sub-45KA | | 1 |
| 57 | 21013111500 | Passive turn board assembly | | 1 |
| 58 | 91013200002 | Electromagnet cover | | 1 |
| 59 | 12020301011 | Hexagon socket head cap screws | M8×20 | 1 |
| 60 | 91013112500 | Auxiliary return spring | | 1 |
| 61 | 12050202006 | Large flat pad | φ8 | 2 |
| 62 | 21010200021 | Small pulley spacer | | 1 |
| 63 | 12010500008 | Locknut | M8 | 1 |
| 64 | 21023111600 | Mechanical lock shaft - vice | | 1 |
| 65 | 91015220100 | 4.5Tclear floor carriage | | 2 |

| | | | | |
|----|-------------|---|----------|----|
| 66 | 91011120700 | slider block | | 16 |
| 67 | 91011120110 | Press plate | | 8 |
| 68 | 12050203003 | Spring washer | φ10 | 16 |
| 69 | 12020202007 | Hexagon socket head cap screws | M10×25 | 16 |
| 70 | 91015120900 | Shaft pin-45 | | 4 |
| 71 | 12090100026 | Shaft retaining ring | φ38 | 4 |
| 72 | 12020301048 | hexagon socket set screw | M8×12 | 4 |
| 73 | 91013121000 | Baffle | | 4 |
| 74 | 91013121200 | Carriage lock spring | | 4 |
| 75 | 21013120300 | Carriage protection rubber | | 4 |
| 76 | 21013120301 | Carriage lock pin - gantry | | 4 |
| 77 | 21013121100 | Internal gear A | | 2 |
| 78 | 21013121200 | Internal gear B | | 2 |
| 79 | 91015240100 | Beam A welding | | 1 |
| 80 | 91015240200 | Beam B welding | | 1 |
| 81 | 91015240300 | Connecting channel | | 1 |
| 82 | 91013140600 | Angle iron A | | 1 |
| 83 | 91013140700 | Angle iron B | | 1 |
| 84 | 91013140800 | Limit bar | | 1 |
| 85 | 91013140900 | Limit bar joint | | 1 |
| 86 | 11240000014 | Soft rubber sleeve | | 1 |
| 87 | 91013140200 | Upper pulley | | 4 |
| 88 | 91013140300 | Upper pulley spacer | | 2 |
| 89 | 91013140400 | Upper pulley spacer 10.5 | | 4 |
| 90 | 91013140500 | Upper pulley shaft | | 2 |
| 91 | 13010100021 | Self lubricating bearing | 201819 | 4 |
| 92 | 12030100017 | Hex head bolt | M6×30 | 1 |
| 93 | 12090100012 | Shaft circlip | φ18 | 4 |
| 94 | 14020100003 | Straight-through oil cup | M8 | 4 |
| 95 | 12020102003 | Cross recessed pan head screw (combination) | M6×16 | 4 |
| 96 | 11110300002 | Limit switch | LX19-001 | 1 |
| 97 | 12020101017 | Cross recessed pan head screw (combination) | M3×10 | 4 |
| 98 | 91015730100 | Arm R600 | | 2 |
| 99 | 91015740100 | Telescopic arm middle section R600 | | 2 |

| | | | | |
|-----|-------------|---|--------|----|
| 100 | 91015730300 | Telescopic arm end section R600 | | 2 |
| 101 | 12020301017 | Inside hexagon column head screw | M8×25 | 8 |
| 102 | 12010101003 | Hex nut | M8 | 8 |
| 103 | 12020301042 | Hexagon socket head cap screws | M10×20 | 12 |
| 104 | 21013130700 | External gear | | 4 |
| 105 | 21013130600 | Handle (Optional) | | 2 |
| 106 | 12020301074 | Inside hexagonal flat head screw (Optional) | M8×10 | 4 |
| 107 | 16060400028 | Tool box (Optional) | | 2 |
| 108 | 21010200039 | M36 Tray | | 4 |
| 109 | 16060400026 | Round tray | | 4 |
| 110 | 12020201013 | Cross recessed countersunk head screw | M8×12 | 8 |
| 111 | 91015730400 | Arm R750 | | 2 |
| 112 | 91015730500 | Telescopic arm middle section R750 | | 2 |
| 113 | 91015730600 | Telescopic arm end section R750 | | 2 |

14. EC DECLARATION FACSIMILE



SUNSHINE Yantai Haide Science and Technology Co., Ltd.

Tel: 0086 535 6853129 Add: NO.14 Wuxi Road, Development Zone, Yantai city, Shandong, P. R. China

EC Declaration of Conformity



THE EQUIPMENT WHICH ACCOMPANIES THIS DECLARATION IS IN CONFORMITY WITH

EUDIRECTIVE(S):

2006/42/EC Machinery Directive

MANUFACTURER:

Name: Yantai Haide Science and Technology Co., Ltd.

Address: NO.14 Wuxi Road, Development Zone, Yantai city, Shandong, P. R. China

DECLARE UNDER OUR SOLE RESPONSIBILITY THAT THE FOLLOWING EQUIPMENT:

TWO POST LIFT

Capacity 4500kg, Two column type chassis supporting column lift with load bearing arm extension and electrical safety lock, hydraulic supporting system.

MODEL: model

SERIAL NUMBER: serialn

25 mean the year, E mean the month of May, 42 mean the the Production serial number, Z mean the operator for Assembly.

TO WHICH THE PRESENT DECLARATION REFERS, SUITS THE ESSENTIAL HEALTHAND SAFETY REQUIREMENTS LAID DOWN IN DIRECTIVE 2006/42/EC AND THEFOLLOWING LEGISLATIVE RULES AND PRODUCT HARMONIZED NORMS:

- DIRECTIVE 2014/30/EU (ELETTROMANGETIC COMPATIBILITY)
- DIRECTIVE 2006/42/EC (MACHINES SECURITY)
- DIRECTIVE 2014/35/EU (LOW VOLTAGE)



SUNSHINE

Yantai Haide Science and Technology Co., Ltd.

Tel: 0086 535 6853129 Add: NO.14 Wuxi Road, Development Zone, Yantai city, Shandong, P. R. China

THE FOLLOWING NORMATIVE DOCUMENTS AND TECHNICAL SPECIFICATIONS HAVE BEEN

USED TO VERIFY THE COMPLIANCE WITH THE LEGISLATIVE RULES:

EN 1493:2010
EN 60947-5-1/AC:2020
EN ISO 12100:2010
EN ISO 683-2:2018
EN 60204-1:2018
EN ISO 13850:2015

EN ISO 13857:2019
EN ISO 13849-1:2015
EN ISO 3746:2010
EN IEC 61000-6-2:2019
EN ISO 11202:2010
EN ISO 4414:2010

EN ISO 13854:2019
EN ISO 4413:2010
EN 10025-2:2019
EN IEC 61000-6-4:2021
EN ISO 683-1:2018

Place: Yantai

Production Date: _____

AUTHORISED SIGNATORY OF MANUFACTURER:

Yantai Haide Science and Technology Co., Ltd.

*Mr. Zhang Niankun
General manager*

Signatory:

FOR MD ANNEX IV MACHINERY

A sample of this machinery has been presented to a Notified Body for CE Marking No. 2834:

CCQS, Certification Services Limited

Block 1, Blanchardstown Corporate Park, Ballycoolin Road, Blanchardstown, Dublin 15, D15 AKK1,

Ireland.

who has issued an EC type-examination certificate.

The number is CE-MC-220301-007-16-5A, date 2022.07.

*The equipment in respect of which this declaration is made conforms to the example to which that
certificate relates, and that certificate remains valid."*

Manufactured by: Yantai Haide Science and Technology Co., Ltd.

Imported and distributed by: Spanesi S.p.A.

This manual has been adapted by Spanesi S.p.A. for the European market.
Spanesi is not the manufacturer within the meaning of Directive 2006/42/EC



Spanesi S.p.A.

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