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conveyor systems
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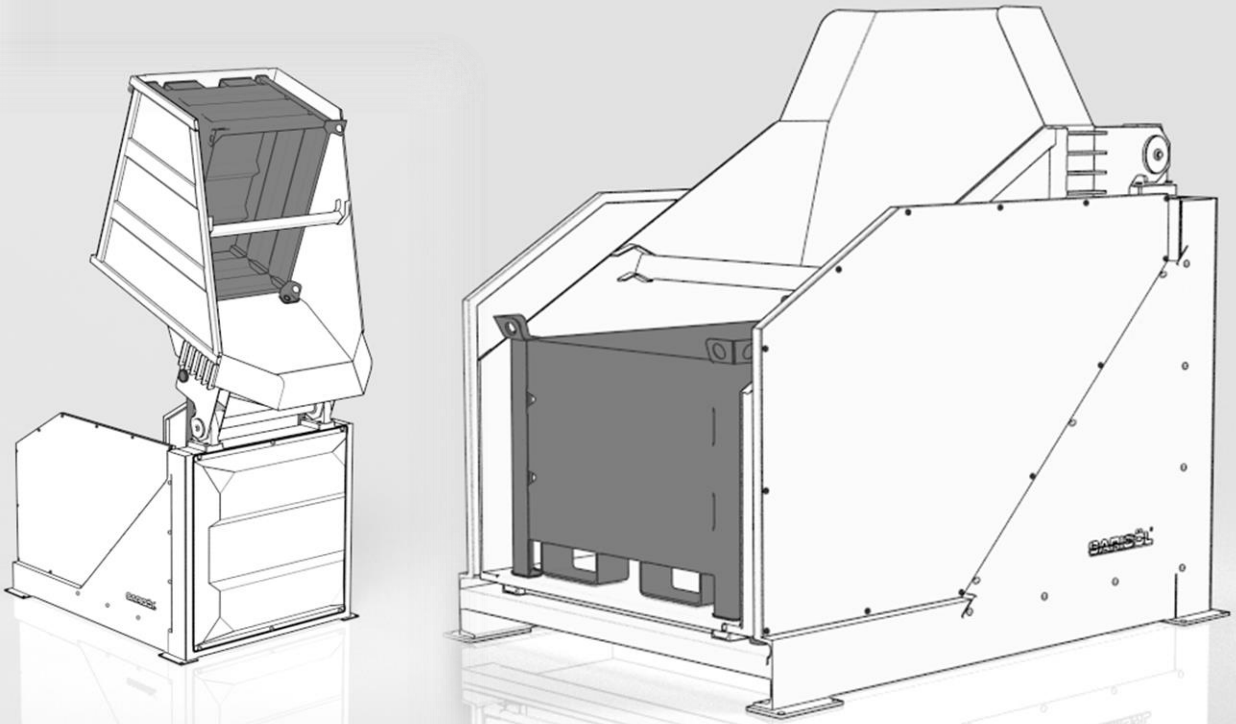

HYDRAULIC CHIP LOADING

User Guide

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Health and Safety

This manual contains instructions for the daily operation of the equipment. It should always be accessible to those working with the equipment. It is important to ensure that:

- The manual and other relevant documents are stored for the entire service life of the equipment.
- The manual and other relevant documents remain with the equipment at all times.
- This manual is passed on to other users of the equipment.
- This manual is updated whenever additions or changes are made to the equipment.
- This manual describes the methods used when operating the equipment.

Safety Code

- Please read the relevant sections of the manual before using the equipment or performing maintenance or service operations.
- Assume all electrical equipment is live.
- Assume all hoses and pipelines are under pressure.
- When servicing and maintaining the equipment or machine, ensure the power supply is turned off, disconnected, and that the pressure in the pipes and hoses is released in a controlled manner.
- Service and maintenance operations must be performed by authorized personnel only.
- Use only spare parts approved by Sarıgöl Konveyör Sistemleri.
- Ensure that the machine is securely mounted and installed according to the instructions before startup.
- Use the machine only as intended.
- In case of abnormal vibration or noise, stop the machine and refer to the manual.
- Electrical installation should only be carried out by a qualified electrician.
- The coolant in the tanks must be drained before any lifting operations are performed.

Contents

General Description

It is used for loading chips from machine tools into existing containers, silos, or centrifuge systems via chip carts. The hydraulic chip loading and unloading elevator features a steel construction body.

These elevators provide the fastest method for transferring chips from the manufacturing unit to the scrap yard, enabling the transfer of chips from the chip carts to the conveyor, silo, or container without the need for a forklift or crane. This process is completed quickly and more safely, enhancing occupational safety.

For optimal operation, chip trolleys must adhere to specific standards. With regular maintenance, the elevator can function efficiently and with long-lasting, trouble-free performance.

1. General Description of the Machine and Safety

1.1 Introduction

Pay attention to all the safety and operating warnings in this manual, as they will reduce the likelihood of accidents and extend the machine's lifespan.

Before the installation, operation, and maintenance of the machine, ensure that all relevant personnel (operators, maintenance staff, etc.) have read and understood this user manual.

It is dangerous for unauthorized individuals from outside the workplace to interfere with the device.

Failure to comply with the directives, procedures, or safety warnings in this manual may result in accidents, damage, and injuries.

1.2 General Warning

The system is designed to guard against electrical leakage, component failure, and foreign material ingress. Despite the machine's integrated safety mechanisms, it is essential to adhere to the warning and operating labels affixed to it. Compliance with these labels is required to ensure proper and safe operation.

In addition to the company label containing elevator information, various warning and caution labels are present on the elevator. These labels are intended to guide users on proper behavior and maintenance procedures, highlight potential risks, and alert individuals to potential hazards. It is imperative that these labels remain intact and are not removed under any circumstances.

Safety labels are crucial for ensuring the safe and effective operation of both you and your machinery. If any labels are removed or become detached for any reason, please contact the manufacturer to request replacements. It is essential to adhere to all warning instructions provided.

1.3 Electricity

The drive box is made according to IP 54 protection class. The drive power connection cables are protected by rubber coating steel spiral. Thus, the system, which does not receive dust or water, is protected from external factors. It will prevent the spiral cables protecting the power cables from being cut and broken. Do not use worn, crushed cables, replace them.

When motors or gear motors are in operation, voltage-bearing components, exposed (open plug/terminal block boxes), and moving or rotating parts present significant risks of life-threatening or serious injuries. All relevant documentation must be strictly followed. In the event of a malfunction, the machine should not be restarted, and technical support should be obtained from the manufacturer.

1.4 Hydraulic Lifting System

Elevators are designed for transporting long and short chips, spiral chips from CNC machines, and scrap sheets from presses to scrap containers. They typically consist of three main components: the cab, the elevator chassis, and the chip cart.

The chip cart, filled with semi-finished products or chips, is placed inside the elevator cab. After loading, the chip cart must be secured using the safety chain within the cab. Ensure the surrounding area is clear and safe before operating the elevator. Once the elevator door is closed, the elevator can be operated in the upward direction. It will stop at the maximum point with the assistance of a safety switch, where unloading takes place. After unloading, the elevator can be operated in the downward direction and will stop at the lowest level using the lower safety switch.

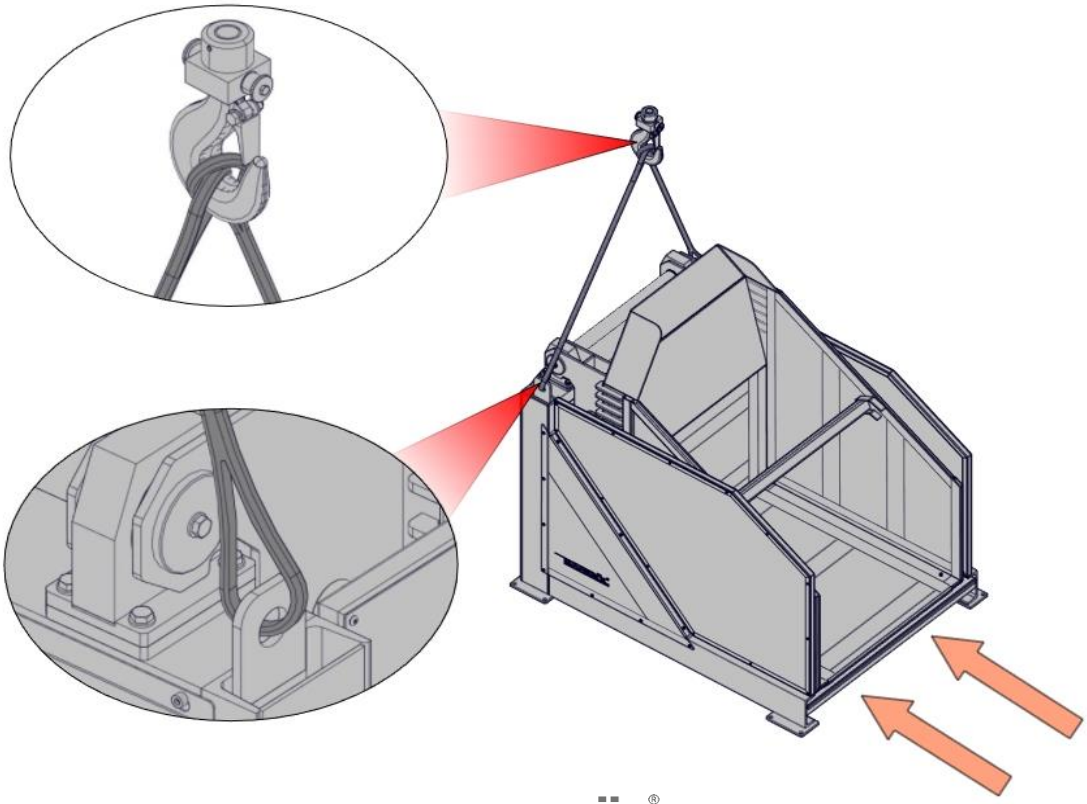
This elevator is intended solely for the transportation of cargo and must not be used for transporting live individuals. It is hazardous to place any body parts or limbs near the elevator while it is in operation.

1.5 Tow Hitch

For domestic shipments, elevators are lifted from designated slots where forklift blades can enter, and loading or unloading is performed according to the prescribed procedures. The elevators are equipped with lifting points at two locations to facilitate transportation within the factory. Lifting ropes are attached to these points and connected to the overhead crane for safe and efficient transportation.

Maintain a safe distance from the load during loading and unloading operations. Only authorized personnel should be involved in these activities.

FIGURE 1.5.1



2. Hydraulic Chip Loading Definition and Components

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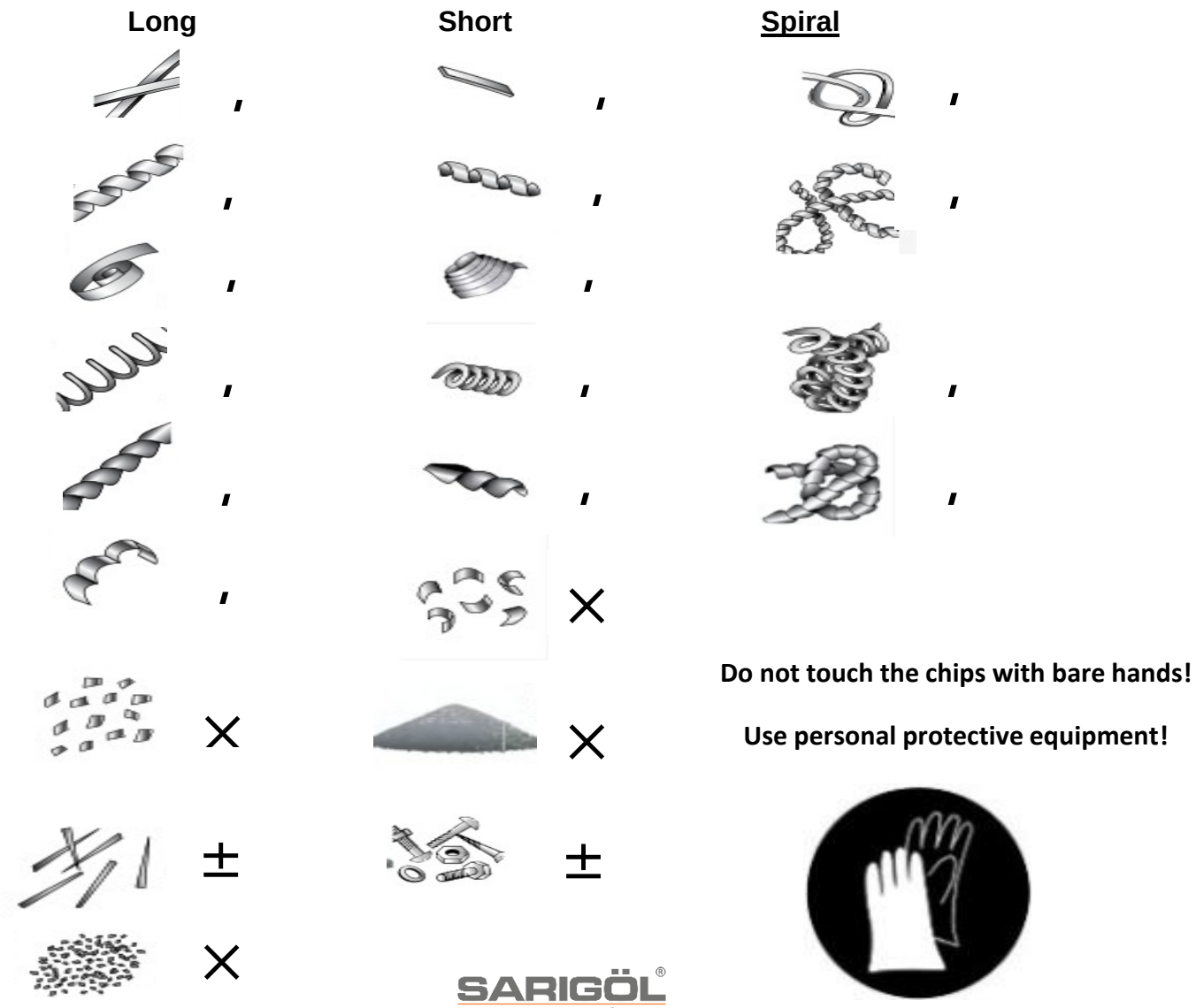
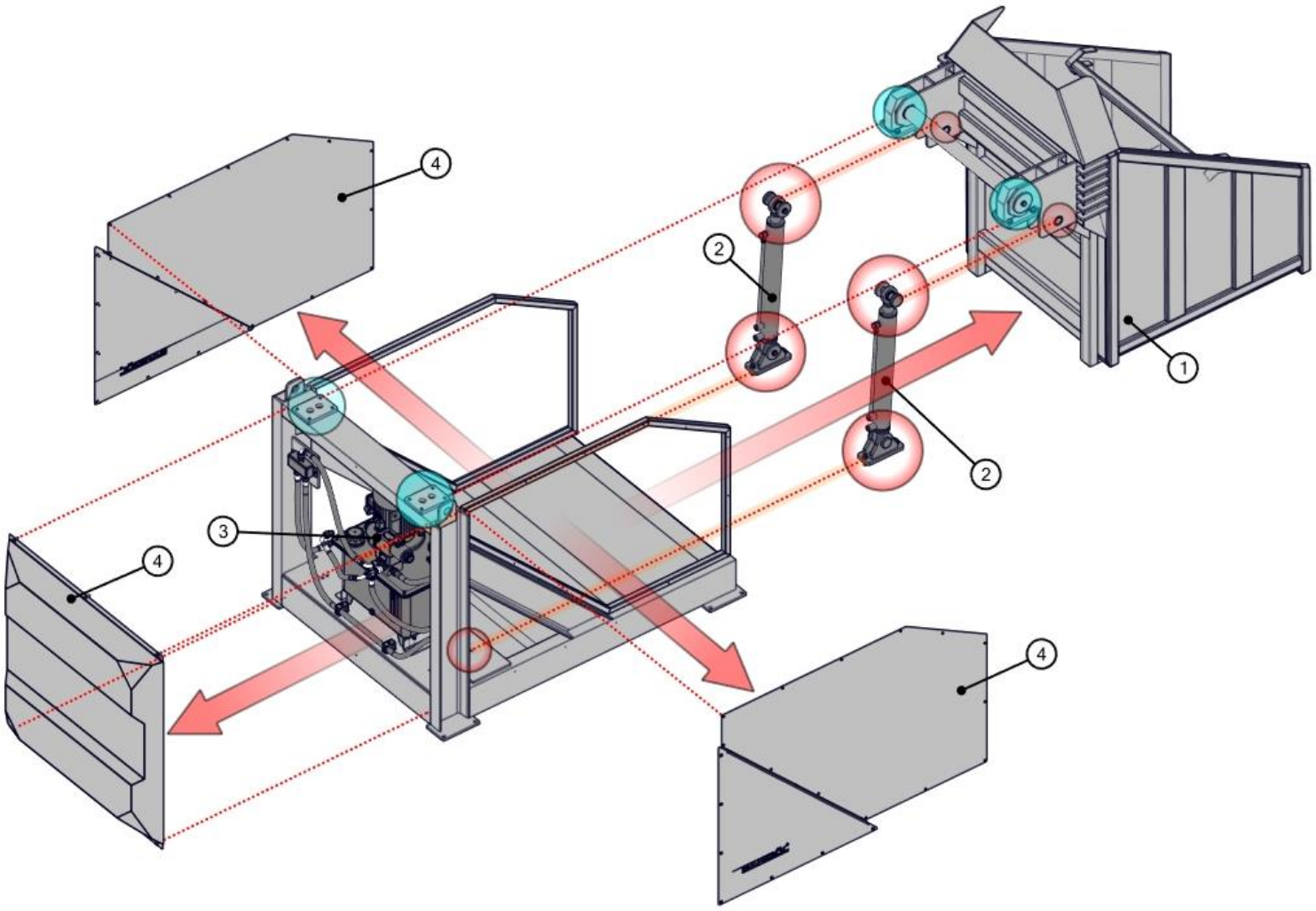
2.1 Suitable Chip Types



Do not touch the chips with bare hands!

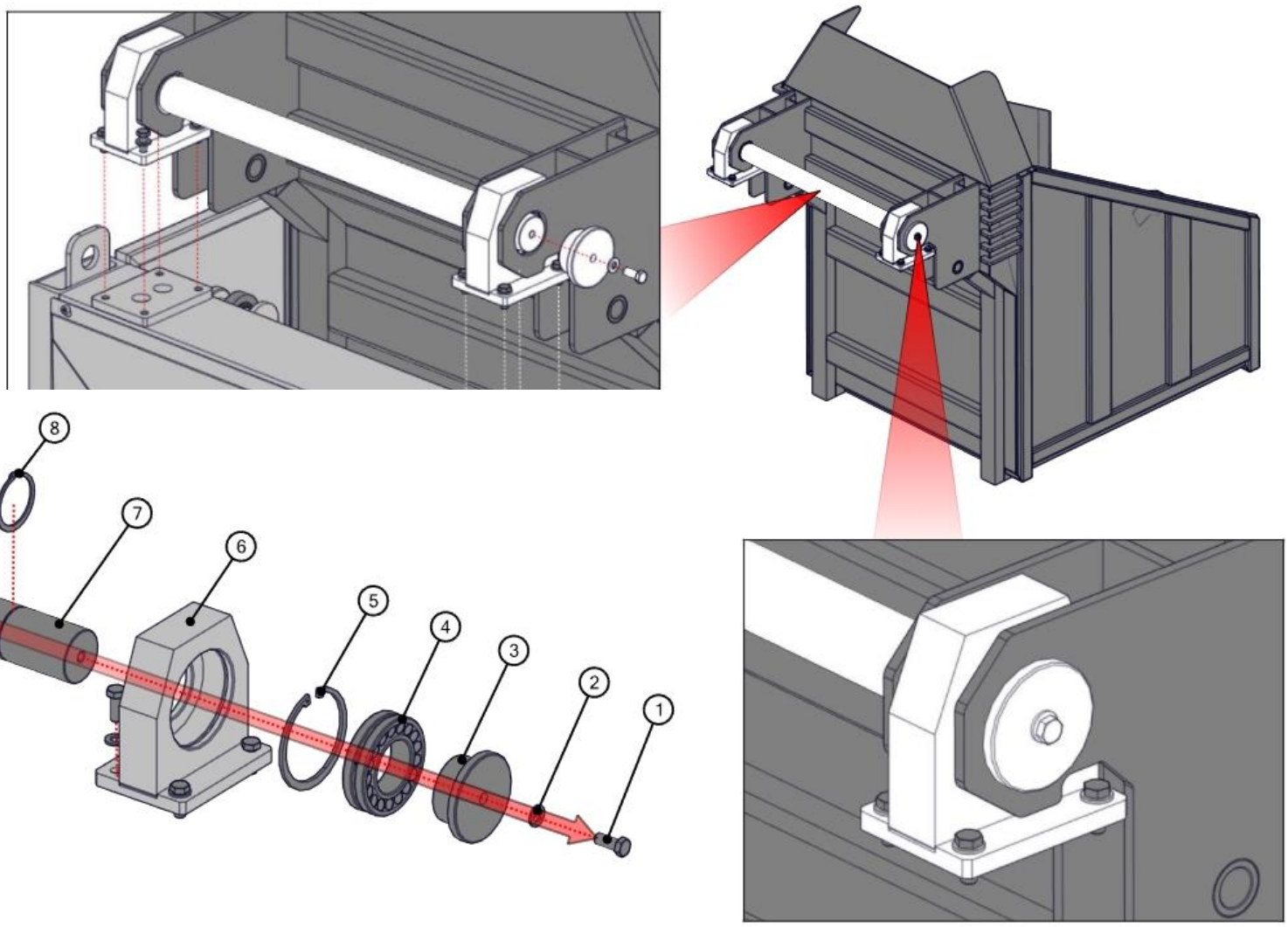
Use personal protective equipment!

2.2 Hydraulic Chip Loading Components



BUBLE NO	GROUPS
1	Cabin Lifting group
2	Hydraulic lifting group
3	Hydraulic coolant tank group
4	Cover group

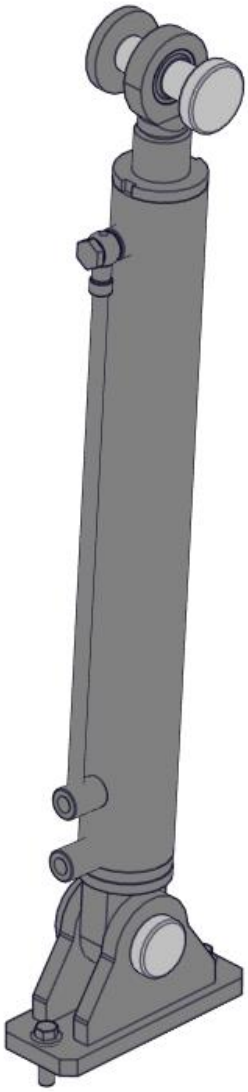
2.2.1 Cabin Lifting Group

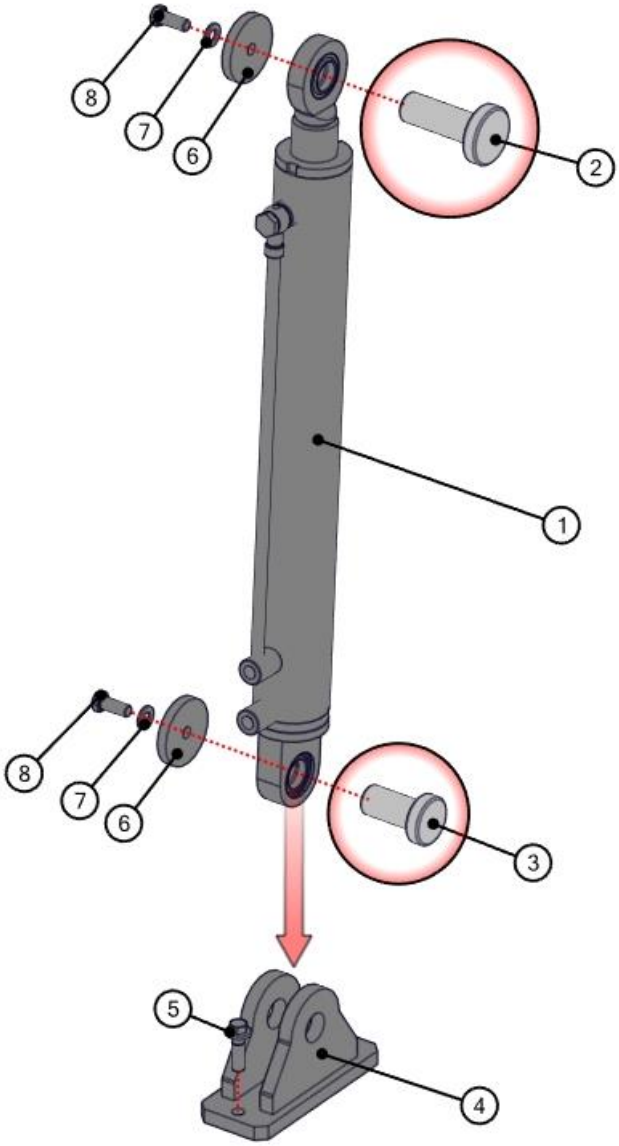


BALLOON NO	PART NO	DEFINITION	PIECE
1	150-01-0056	BOLT (M12X30)	2
2	150-01-3178	METRIC FLAT WASHER DIN125 (M12)	2
3	150-01-0547	LIFTING PIVOT-PIN	2
4	150-01-3073	BEARING (SKF 22212 SERIES)	2
5	150-01-2801	INTERNAL CIRCLIP (DIN 472/110)	2
6	150-01-2874	BEDDING PARTS	2
7	150-01-0811	LIFTING SHAFT	1
8	150-01-3055	EXTERNAL CIRCLIP (DIN 471/60)	2

Hydraulic Chip Loading Definition and Components

2.2.2 Hydraulic Lifting Group





BUBLE NO	PART NO	DEFINITION	MİKTAR
1	150-01-3417	HYDRAULIC CYLINDER	2
2	150-01-0811	LIFTING CABIN UPPER CONNECTION SHAFT	2
3	150-01-0811	LIFTING CABIN LOWER CONNECTION SHAFT	2
4	150-01-1192	HYDRAULIC CYLINDER FLOOR CONNECTION CENTER	2
5	150-01-0048	BOLT DIN6921 (M12X40)	4
6	150-01-3091	WASHER	4
7	150-01-3178	METRIC FLAT WASHER DIN125 (M12)	4
8	150-01-0056	BOLT DIN 933 (M12X30)	4

3. INSTALLATION AND ASSEMBLY

3.1 Hydraulic Loading Installation, Joints and Start-up

To transport the elevator to its installation location using a forklift, the forklift should lift the elevator by accessing the lifting slots at the bottom. Alternatively, if a crane is used, the elevator should be lifted by securing it with ropes attached to the lifting eyes.

Once the elevator is at the installation site, stabilize it in position. The stabilized elevator should then be secured by lowering it to the ground through the holes in the foot sections.

After installation, connect the elevator to the electrical supply by making the appropriate connections to the control switch or panel input. Perform a test run of the elevator by operating it up and down in idle mode.

Ensure the elevator door is fully closed before starting the elevator. The elevator will not operate if the door is open. Additionally, if the door is opened while the elevator is running, the motor will automatically stop.

A proper grounding line must be present in the elevator's working area. Do not energize the elevator without ensuring it is properly grounded. Grounding errors can lead to serious accidents and injuries. Always use the standard yellow-green cable for the grounding wire; do not substitute with cables of other colors.

Verify the electrical connections and motor current, as loose connections can pose significant hazards. Ensure that the elevator operates in the correct direction.

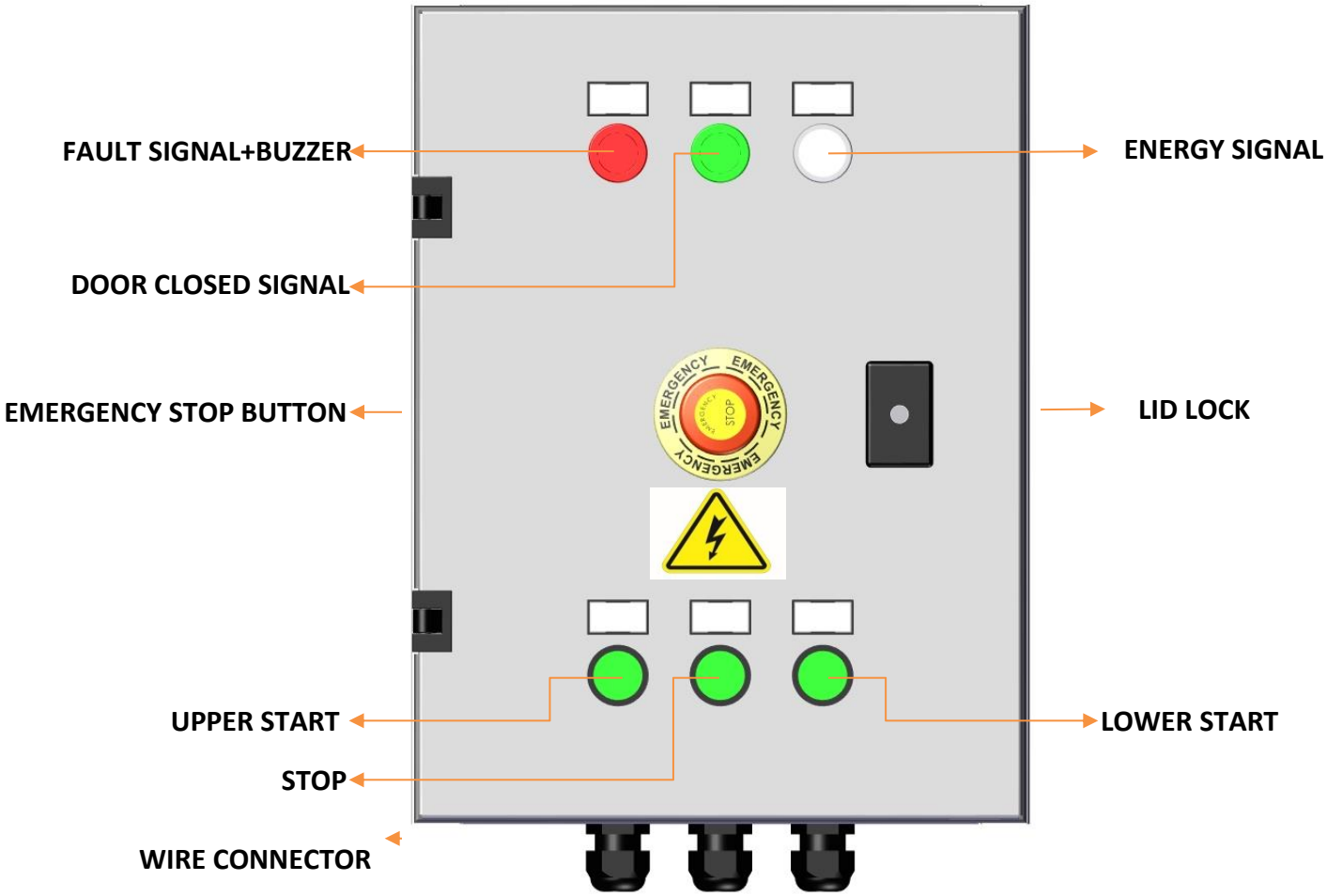
3.2 Control Panel

When the elevator panel is first powered on, if the 'Phase Protection Relay Active' LED is illuminated, it indicates that the phase sequence is correct and the electrical panel is ready for operation.

If no fault signals are present on the electrical panel and the elevator door closed indicator is lit, pressing the "Up Start" button will initiate upward movement of the elevator. The elevator can be stopped at any desired point by pressing the "Stop" button.

Upon reaching the maximum height, the elevator will activate the upper limit switch, causing it to halt and remain stationary for 10 seconds. After this pause, the elevator will automatically begin descending. As the elevator approaches the lower floor, the lower limit switch will activate, bringing the cabin to a stop at the loading position.

Supply Voltage: 380V, 50Hz
Control Supply: 24V DC



3.3 Hydraulic Loading Safety Check

During loading, the elevator door will be open, so the door closed signal lamp on the dashboard will not be illuminated. After installation is complete, ensure that the door is properly closed by verifying that the signal lamp is lit. The elevator will not operate until the door closed signal lamp is illuminated.

The elevator is equipped with two emergency stop buttons—one located on the elevator body and another on the dashboard—to halt operation in case of an emergency.

If the elevator fails to restart after loading or unloading, check the door closed signal lamp. If the door is closed but the signal lamp is not illuminated, the elevator is in a safety mode. In this case, perform the following checks:

- Verify the emergency stop button is not engaged.
- Ensure the elevator door is properly closed.
- Check the safety switches for proper operation.

4. MAINTENANCE

4.1 Weekly Maintenance

- Maintenance intervals, beyond routine cleaning and weekly upkeep, will vary depending on working conditions. The primary components requiring periodic maintenance include the upper and lower level sensors and the door safety sensor.
- Ensure all accessories on the elevator are properly lubricated.
- Verify that all bolt connections are secure.
- Check that all sensors on the elevator are functioning correctly.

4.2 Monthly Maintenance

- Monthly maintenance of the elevator should be performed routinely.
- Inspect all valves on the hydraulic unit to ensure proper operation.
- Check the hydraulic oil level and top up if necessary.
- Replace critical components, such as sealing seals, over time. Address any leaks promptly.
- Protect hydraulic circuit elements from external influences such as water, humidity, and impact.
- Inspect all safety switches and replace any that are not functioning properly.
- Verify the operation of the hydraulic pistons.
- If you notice any signs of wear, breakage, or damage, promptly notify the manufacturer.

Alternatively, you can request service by contacting our company.

MAINTENANCE

4.3 Troubleshooting

WARNING!
Before performing any corrective actions, ensure the unit is powered off and electrically isolated. Electrical maintenance and repairs must be conducted by personnel with the appropriate qualifications.

TROUBLE	PROBABLE CAUSE	INCUMBENT ON
5.4.1 Hydraulic motor failure	Thermic anomaly Overload Phase	Thermic check Current check Phase check
5.4.2 Valve trouble	Valve failure	Please checked valves Change the valve
5.4.3 Hydraulic cylinder trouble.	Valve failure Switch failure	Please checked valves Please checked switch Please checked oil pressure
5.4.4 Oil leak	Hydraulic pipes leaked Junction point leaked	Please checked hyraulic pipes and Junction point. Please changed deformed parts.
5.4.5 Hydraulic cylinders work in different directions	Valve junction points way connected wrong.	Please checked junction points way valves.
5.4.6 Sounds coming from the cabin lifting group	Bearing has failure	Please change bearings.

5 About the Malfunctions

5.1 General Instructions

The information in this booklet has been compiled based on experiences gathered from service work and factory tests. The symptoms and causes of malfunctions are documented according to reports from our service partners and the findings of service technicians.

A thorough visual inspection is the first step when encountering any issues. Proper diagnosis of faults can prevent further damage during repairs.

Initial Steps:

1. Check all electrical connections for any signs of looseness.
2. Inspect components that may have been affected by short circuits or overheating.

If the problem persists after attempting the solutions provided in this booklet, please contact our company for further assistance.

Entrusting all fault resolutions, maintenance, and repairs to our company is the most effective way to ensure the safety and efficiency of your conveyor and operations. Attempting repairs without proper knowledge can lead to incorrect outcomes, unnecessary downtime, or costly damages.

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Pazarsuyu Köyü 2. OSB 5. Cad. No:11 Bulancak / GİRESUN / TÜRKİYE

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