



1000KG POWER HOIST

MODEL NO: **PH1000**

Thank you for purchasing a Sealey product. Manufactured to a high standard, this product will, if used according to these instructions, and properly maintained, give you years of trouble free performance.

IMPORTANT: PLEASE READ THESE INSTRUCTIONS CAREFULLY. NOTE THE SAFE OPERATIONAL REQUIREMENTS, WARNINGS & CAUTIONS. USE THE PRODUCT CORRECTLY AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE AND/OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY. KEEP THESE INSTRUCTIONS SAFE FOR FUTURE USE.



Refer to
instructions



Wear eye
protection



Wear safety
footwear



Wear head
protection

1. SAFETY

1.1. ELECTRICAL SAFETY

- ☐ **WARNING!** It is the user's responsibility to check the following:
- ✓ Check all electrical equipment and appliances to ensure that they are safe before using.
- ✓ Inspect power supply leads, plugs and all electrical connections for wear and damage.
- ✓ Ensure that the insulation on all cables and on the appliance is safe before connecting it to the power supply.
- ✗ **DO NOT** use worn or damaged cables, plugs or connectors.
- ✓ Ensure that any faulty item is repaired or replaced immediately by a Sealey qualified technician.
- ✓ If the cable or plug is damaged during use, switch off the electricity supply and remove from use.
- ✓ Sealey recommend that an RCD (Residual Current Device) is used with all electrical products.
- IMPORTANT:** Ensure that the voltage rating on the appliance suits the power supply to be used and that the plug is fitted with the correct fuse.
- ✗ **DO NOT** pull or carry the appliance by the power cable.
- ✗ **DO NOT** pull the plug from the socket by the cable. Protect the power cable from heat, oil and sharp edges.

1.2. GENERAL SAFETY

- ✓ Trained users only. The operator shall always work in compliance with the operating instructions.
- ✓ The user shall ensure that the operating personnel are given the necessary training.
- ✓ **CAUTION Read all safety regulations and instructions.** Any errors made in following the safety regulations and instructions may result in an electric shock, fire and/or serious injury.
- ✓ Keep manual in a safe place for future use.

1.3. SPECIFIC OPERATIONAL SAFETY

- ✓ The operator shall lift the load from the ground with the minimum speed available at the hoist.
- ✓ The rope shall be tightened and shall not be in the slack-condition when the load is being lifted from the ground.
- ✓ The hoist is not designed to lift loads above the rated capacity of the hoist.
- ✓ Be sure to hoist the loads with lowest speed from the ground. The cable should be tense but not unwound when start loading from the ground.
- ✗ **DO NOT** try to lift fixed or obstructed loads. It is prohibited, to lift a weight crookedly, or to pull it along the floor.
- ✗ **DO NOT** pull loads sideways or from one side. **DO NOT** allow the load to swing.
- ✓ **DO NOT** use the product for any purpose other than that for which it is designed.
- ✗ **DO NOT** exceed maximum capacity of product.
- ✗ **DO NOT** use the product out of doors.
- ✗ **DO NOT** get the product wet or use in damp or wet locations or areas where there is condensation.
- ✗ **DO NOT** clean the product with any solvents which may damage the paint surface or the protective coating.
- ☐ **WARNING!** Excessive inching (e.g. giving short pulses to the motor) shall be avoided.
- ☐ **WARNING!** The hoist is not designed for lifting of persons.
- ✗ **DO NOT** leave the load hanging in the air long-term, to prevent the deformation of the pieces. While the machine is in operation **DO NOT** carry out any repairs or inspections.
- ✗ **DO NOT** lift people or lift loads over people. Falling loads can injure or kill people.
- ✗ **DO NOT** attempt to lift loads that exceed the rated load (see the data plate).
- ✗ **DO NOT** use 2 or more machines to load same object.
- ✗ **DO NOT** remove or cover warning labels and/or tags. These carry important safety information. If unreadable or missing, contact Sealey Service Centre for a replacement.
- ☐ **WARNING!** Excessive inching (e.g. giving short pulses to the motor) shall be avoided.
- ☐ **WARNING!** The hoist is not designed for lifting of persons.
- ☐ **WARNING! DO NOT** stand under the raised load.
- ☐ **WARNING!** If the red indicator mark is visible when unwinding the cable, please stop the cable winch immediately and do not continue to unwind the cable.
- ☐ **WARNING!** It is prohibited, to transport hot molten masses.
- ✗ **DO NOT** use the Emergency Stop button as a routine stopping device. It should only be used to stop the machine in an emergency.

1.3.1. PPE:

- ☐ **WARNING!** Always wear safety equipment (such as rubber gloves, non-slip footwear, hearing and hair protection and etc.) when working.
- ☐ **WARNING!** Never wear loose clothing or jewellery; this could be caught by movable parts of the machine.

2. INTRODUCTION

A large powerful motor capable of a number of lifting tasks, in a garage, workshop, construction and industrial environments. Simple installation using the brackets provided, to suitable square section beams. Thermostatic overload cut-out switch, protecting the motor. Remote control with emergency stop for easy control from a safe distance. Power paint coated steel casing, for added corrosion resistance.

3. SPECIFICATION

Model No:	PH1000
Capacity (Double Cable):	1000kg
Capacity (Single Cable):	500kg
Current:	7.5A
Dimensions:	490 x 185 x 280mm
Group of Mechanisms:	M1
Insulating Grade:	B
IP Rating:	IP54
Lift Height (Double Cable):	6m

Lift Height (Single Cable):	12m
Lift Speed (Maximum):	(Double) 4m/min (Single) 8m/min
Minimum Rope Tensile Strength:	1870N/mm ²
Motor Power:	1600W
Nett Weight:	32.0kg
Plug Type:	3-Pin
Power Supply Cable Length:	1.3m
Rope Diameter:	Ø6mm
Voltage:	230V~50Hz
Work Rate:	S3
A-rated noise emissions	Less than 70dB

3.1. THE NOISE PRESSURE VALUE

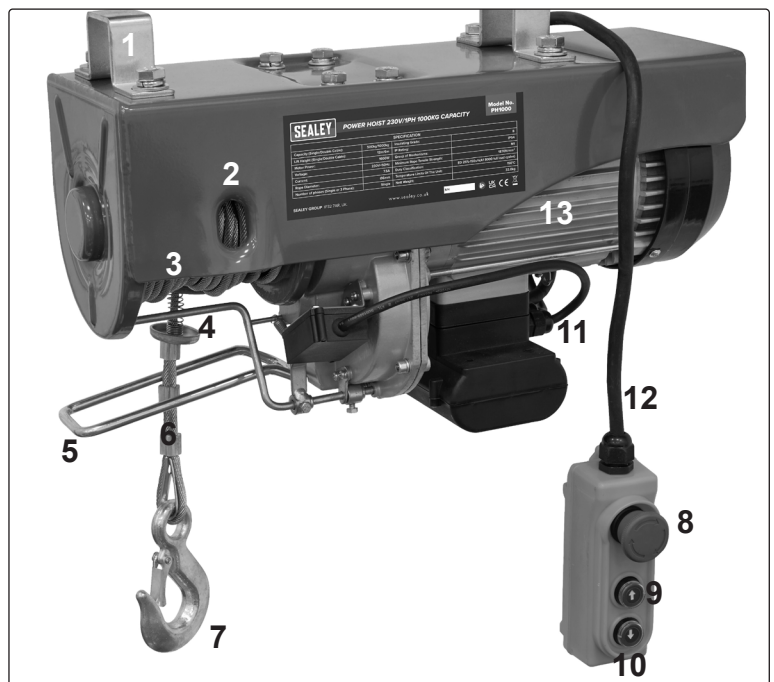
3.1.1. The Sound pressure value only indicates the maximum noise emitted by the machine. Whether the operator requires hearing protection is not certain here. It depends on how much noise reaches the operator's ears, and it also depends on the surrounding environment (such as other sound sources nearby). Even if there is no clear requirement, for the safety of the operator, always wear hearing protection when working.

3.2. INTERMITTENT RATING

This machine is designed for operating type S3 20% - 10 min (periodic intermittent operation). The relative duty cycle is 20%, which means that the device can be operated at rated load for 2.0 minutes during each operating cycle and must then be switched off for 8.0 minutes to cool off. The device can therefore be continuously used for a duration of 20% of the total operating cycle of 10 minutes at rated load.

4. FEATURES

1	Fastening clamp
2	Fastening hole for hook
3	Drum
4	Lever for maximum cable length
5	Automatic stop mechanism lever
6	Steel cable
7	Load Hook
8	Emergency Stop switch
9	Push button to raise
10	Push button to lower
11	Power cable
12	Control cable
13	Motor



5. INSTALLATION

- Ensure the installation site can support the full load capacity.
- Check electrical supply compatibility.
- Verify that the suspension point is structurally sound.

5.1. UNPACKING

5.1.1. After opening the packaging, inspect the frame, the steel cable, the hook and the electric control mechanism for signs of possible transit damage.

5.1.2. Remove the adhesive tape from the drum before using the hoist for the first time.

5.2. ASSEMBLY AND INSTALLATION (figs.1,2,3)

5.2.1. Procedure for correct mounting

The cable hoist is fitted with two fastening clamps (1) with which it has to be fastened to a rectangular tube. The dimensions of the arm must conform with the size of the fastening clamps and must be capable of supporting twice the rated load. We recommend that you seek advice from a qualified technician.

All screws must be tightened correctly. A qualified technician should check the anchoring of the arm before the machine is started.

A) Install the machine on a steel beam. Use only the enclosed installation brackets which can be attached to the top of the mounting casing using the screws, washers, and spring lock washers. The steel beam must be able to withstand at least double the rated lifting capacity of the cable hoist.

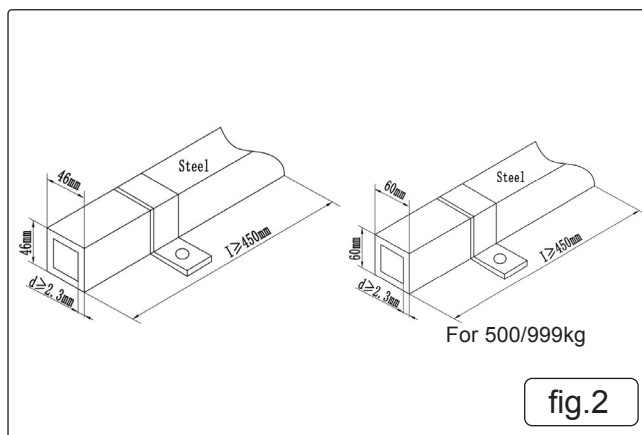
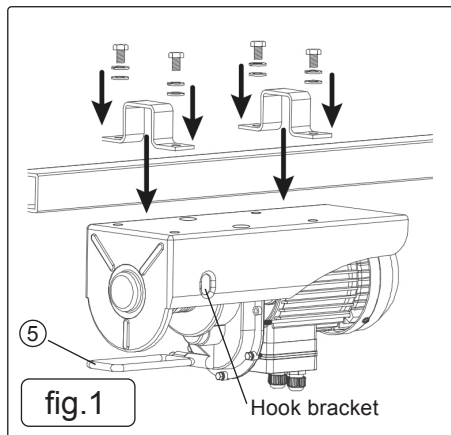
B) The steel beam must have a diameter of 46x46mm, a wall thickness of at least 2.3 mm and a length of at least 450mm.

C) The steel beam must be securely anchored in a wall. The anchor must be installed correspondingly sturdy in order to be able to withstand the load.

D) Please be sure that the cable hoist is installed level and not slanted.

E) The remote control must be easily accessible at all times and must therefore be installed at a distance to be the floor of between 0.8 m and 1.5m.

F) Insert the load hook into the hook bracket of the mounting casing when using the additional load hook with deviating shaft.



5.3. BLOCK AND TACKLE FUNCTION (FIG.5-6)

The cable hoist is fitted with a return roller (15) and an additional hook (16). If these parts are used correctly, the cable hoist can lift twice its rated load.

Fit the return roller (15) and additional hook (16) as shown in Figure 4 – 5. The permanent hook (8) must be attached to the fastening hole (2) (Fig. 6). The load is now raised by two steel cables, which means that the cable hoist can lift twice its rated load. (Fig.7).

5.4. INSTALLATION AND COMMISSIONING OF THE PRODUCT

5.4.1. Secure the hoist to an overhead beam or gantry using a certified trolley or suspension hook.

5.4.2. Connect the mains supply.

5.4.3. Ensure the control pendant is operational and positioned safely.

5.4.4. Conduct a test run without load to verify functionality.

5.5. CONNECTING THE MACHINE TO POWER SUPPLY

5.5.1. Proper grounding must be established before operation.

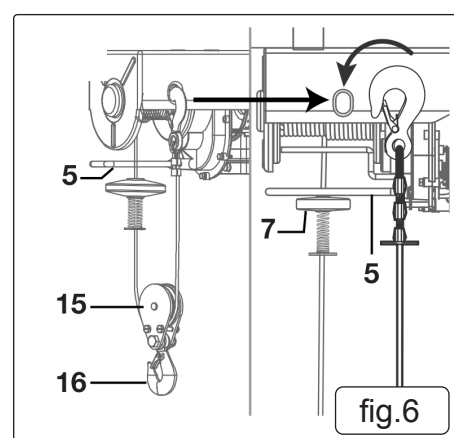
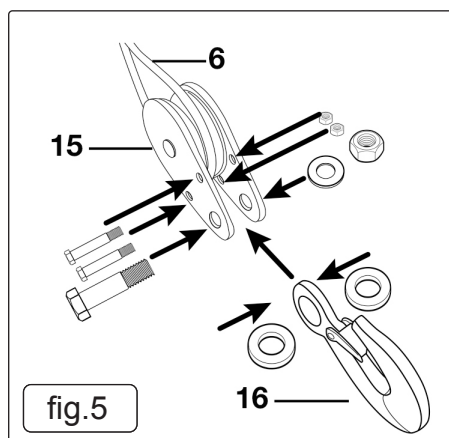
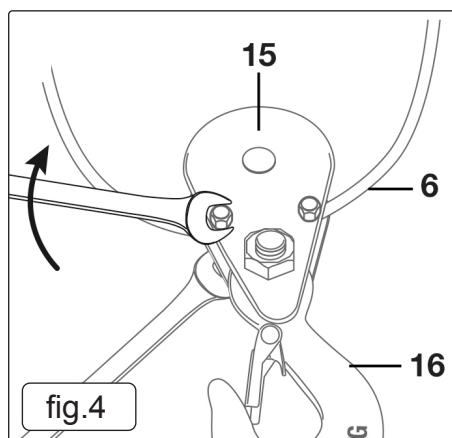
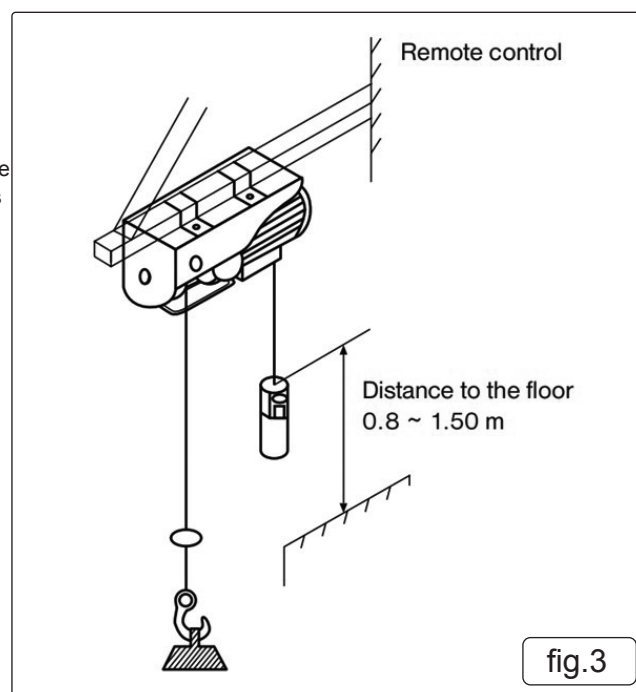
5.5.2. Electrical connections should be performed by a certified electrician.

5.6. PERMISSIBLE CONDITIONS OF USE

5.6.1. LOAD CONDITIONS

The rated load capacity must not exceed 1000kg under normal operation.

Dynamic and static loading should be within design limits.



Shock loading (sudden lifting of a load) should be minimized to avoid excessive stress.

5.6.2. DUTY CYCLE & OPERATING TIME

Ensure your hoist's duty cycle matches your operational needs to avoid overheating and premature wear.

5.6.3. ENVIRONMENTAL CONDITIONS

Standard: -5°C to +40°C

Extreme conditions require special hoists.

Humidity:

- Hoists should be protected in environments above 85% relative humidity to prevent electrical and mechanical failures.

the temperature for transport and storage may be between -25°C and 55°C. The maximum temperature must not exceed 70°C.

5.6.4. Dust & Corrosive Environments:

- Hoists in dusty, humid, or corrosive areas must have IP-rated enclosures (e.g., IP54 or higher). Product has this rating.

Outdoor Use: This Hoist is not permitted for outdoor use.

5.6.5. ELECTRICAL CONDITIONS

- Voltage Tolerance: $\pm 10\%$ of 230V, 50Hz.

- Voltage drop must be $\leq 5\%$ during operation and $\leq 10\%$ during start up.

- Proper grounding & overcurrent protection are mandatory as per BS EN 60204-32.

5.7. BEFORE STARTING THE EQUIPMENT

Before you connect the equipment to the mains supply make sure that the data on the rating plate are identical to the mains data.

- Always pull out the power plug before making adjustments to the equipment.

- Please make no-loading test before start-up operation at first, and please check:

A) The flexibility of up/down operating switch to insure the controlling of the hoisting and lowering of load hook.

B) The flexibility of up limit bracket to make sure the cut-off of circuit.

C) The flexibility of down limit bracket to make sure the cut-off circuit when the steel cable is nearly used up.

D) Any abnormal sounds when start-up operation.

E) The steel rope may be damaged (split or bent) or has reached 20 hours of use. Replace the rope immediately.

- The cable hoist is not suitable for transporting hot and/or molten masses and in addition it is not suitable for use at low temperatures or in aggressive atmospheres.

- It is in mechanical group M1.

- Read and absorb the operating instructions before you use the cable hoist.

- Ensure that the operator knows how the machine works and how it should be operated.

- The user should always operate as set out in the operating instructions.

- The cable hoist is not designed for continuous operation. Its mode of operation is: Intermittent mode without influencing the starting process.

- The rated capacity of the machine does not vary due to the position of the load.

- Please inspect the hook before operation is possible damaged or distortion replace it in time.

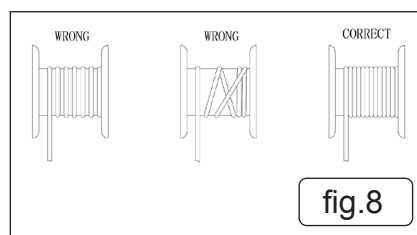
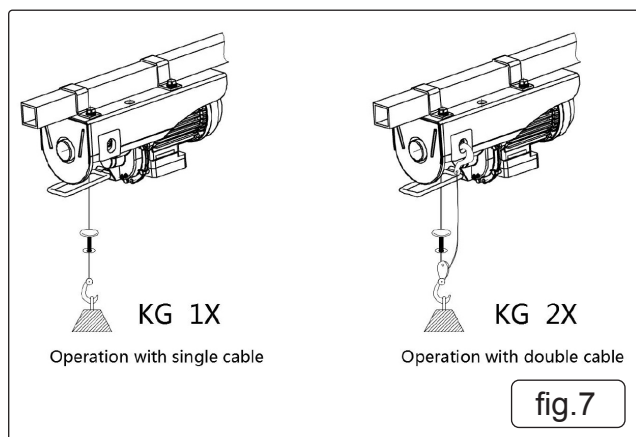
- The service life of the cable hoist is approximately 8000 cycles (excluding wearing parts). When the hoist has completed 8000 cycles, all its mechanical parts must be checked and overhauled.

- Operating with a residual current protective device (Red Emergency Stop button) provides additional protection in hazardous and emergency situations. To resume operation after resolving the issue, reset it by turning the switch head in the direction of the arrow.

- Ensure that there is enough lubricant on all parts. Apply lubricant to the load hook, cable drum shaft, gearbox, and bearings every six months.

5.7.1. Before you start, ensure that the steel cable is correctly wound around the drum and that the spacing between the winds is smaller than the steel cable (Fig. 8).

NOTE: When replace the wire rope, be sure to pull rope into the square hole of rope drum, and then pull it out from the round hole. With that wind the rope two circles and then pull it to the baffle which is side of rope drum and fix it.



6. OPERATION

6.1. MANUAL CONTROLS

6.1.1. **EMERGENCY STOP BUTTON** - Use button in case of an emergency only. Fig.9. Check whether the Emergency Stop button is pressed. Turn the red stop button clockwise to release it.

6.1.2. **Automatic stop mechanism lever (5) fig.6:** When the maximum lifting height has been reached, the cut-out weight presses the lever (5) fig.6 upwards. This trips a limit switch after which the load cannot be raised any further.

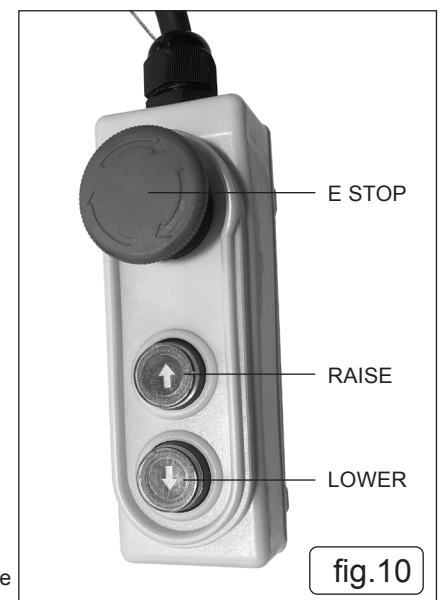
6.1.3. **Lever for maximum cable length:** When the load has reached its lowest possible position, a limit switch is tripped which makes it impossible to lower the load any further. This limit switch also prevents the cable hoist operating in the wrong direction (hook moving in the opposite direction to the arrow shown on the control switch).

6.1.4. The cable hoist will stop if the Emergency Stop switch is pressed.

6.1.5. In an emergency, immediately press the Emergency Stop button to stop the cable hoist. The cable hoist cannot be operated if the Emergency Stop switch has been pressed.

6.1.6. **UP ARROW** - Press Up Arrow to raise. The user should lift the load off the ground at the slowest possible speed. The cable should be taut when the load is raised. Fig.10.

NOTE: The motor (13) in contents graphic for the cable hoist is fitted with a thermostat switch. Whilst the cable hoist is operating, the motor (13) in contents graphic may therefore stop. It will restart automatically when it has cooled down.



- ❑ **WARNING!** The electric cable hoist is not fitted with a rated power limiter. You should therefore not repeat attempts to lift a load if the overload trip is limiting the hoist's operation. In this case the load exceeds the rated capacity of the cable hoist.
- ✖ **DO NOT** leave any suspended loads unsupervised without first taking the appropriate safety precautions.
- 6.1.7. **DOWN ARROW** - Press Down Arrow to lower. Fig.10.
- NOTE:** Ensure that the load is correctly secured to the hook or, if you are using the block and tackle, the additional hook, always maintain a safe distance from the load and the steel cable.
- 6.2. **SETTINGS AND ADJUSTMENTS**
- To ensure safe and efficient operation of your 1000kg power hoist, the following settings and adjustments should be made according to industry standards.
- 6.3. **ELECTRICAL SETTINGS AND ADJUSTMENTS**
- 6.3.1. **a) Voltage and Frequency Settings.**
- Ensure the supply voltage is 230V \pm 10% (50Hz).
- Check voltage drop (\leq 5% during operation, \leq 10% during start up).
- Ensure proper earthing/grounding.
- b) Motor Overload Protection.**
- Set the thermal overload relay according to the motor full load current (FLC \sim 10A).
- If using a soft starter, configure the starting ramp-up time (typically 1-3 sec for smooth starts).
- c) Braking System Adjustment.**
- The electromagnetic brake should engage when power is cut.
- Check and adjust the braking torque (typically 150% of rated torque).
- d) Limit Switch Settings.**
- Upper limit switch:** Prevents hoist from over-lifting. Set slightly above the highest required lifting point.
- Lower limit switch:** Prevents chain/cable slack. Set just above ground level.
- 6.3.2. **MODES AND MEANS FOR STOPPING**
- The stopping modes of a power hoist are critical for safe operation, load control, and system longevity. Stopping this hoist can be achieved through different methods, depending on the application and safety requirements.
- a) Category 0 – Direct (Emergency) Stop (Uncontrolled Stop).**
- Means:** Power is immediately cut off to the motor, and the load stops due to the brake engagement.
- Application:** Emergency stop functions, power failure situations.
- Effect:** Can cause mechanical shock to the hoist system if frequently used.
- Standard Requirement:** Must be manually reset before restarting.
- b) Category 1 – Controlled Stop with Power Available.**
- Means:** The hoist slows down under control before power is cut and the brake is applied.
- Application:** Used when smoother stopping is needed to reduce mechanical stress.
- Effect:** Prevents load swinging, reduces wear on brakes and mechanical components.
- Implementation:** Soft starters, variable frequency drives (VFDs).
- c) Category 2 – Controlled Stop with Power Maintained.**
- Means:** The hoist is actively braked using motor control (e.g., dynamic braking) before stopping. Power is not cut immediately.
- Application:** Precise positioning and high-accuracy lifting (e.g., CNC-controlled cranes).
- Effect:** Allows better control over stopping, avoids sudden braking forces.
- 6.4. **SPECIFIC SAFEGUARDS**
- a) Load Holding Brake (Fail-Safe Electromagnetic Brake).**
- Holds the load securely when power is off.
- Prevents unintended movement during stoppage.
- b) Overload Protection Device.**
- Prevents the hoist from lifting beyond its rated 1000kg capacity.
- Electronic load monitoring system (prevents lifting over 100% load).
- Slip clutch (disengages motor if overloaded).
- c) Upper & Lower Limit Switches.**
- Upper limit switch:** Stops hoist before hitting the top.
- Lower limit switch:** Prevents slack chain or cable formation.
- d) Emergency E Stop**
- Use Emergency Stop to stop the hoist in case of emergencies. Immediately cuts power to the hoist.
- Stops movement within milliseconds.
- Manual reset required** before restarting.
- 6.5. **INTERMITTENT RATING**
- This machine is designed for operating type S3 20% - 10 min (periodic intermittent operation). The relative duty cycle is 20%, which means that the device can be operated at rated load for 2.0 minutes during each operating cycle and must then be switched off for 8.0 minutes to cool off. The device can therefore be continuously used for a duration of 20% of the total operating cycle of 10 minutes at rated load.
- 6.6. **FAULT IDENTIFICATION AND LOCATION FOR REPAIR**

Fault	Possible Causes	Location to Check	Repair Action
Hoist not powering on	<ul style="list-style-type: none"> - Power supply failure. - Blown fuse/circuit breaker. - Faulty control switch. 	<ul style="list-style-type: none"> - Power supply wiring. - Control panel. 	<ul style="list-style-type: none"> - Check main voltage (230V). - Replace fuse or reset breaker. - Test and replace control switch if faulty.

Fault	Possible Causes	Location to Check	Repair Action
Motor running, but hoist not lifting	<ul style="list-style-type: none"> - Overload detected. - Brake failure. - Gearbox damage. 	<ul style="list-style-type: none"> - Load sensor. - Brake system. - Gearbox. 	<ul style="list-style-type: none"> - Reduce load (ensure $\leq 1000\text{kg}$). - Inspect and replace electromagnetic brake. - Check gearbox for worn gears or oil leaks.
Motor hums but does not rotate	<ul style="list-style-type: none"> - Capacitor failure (single-phase motors). - Stuck brake. - Mechanical jam. 	<ul style="list-style-type: none"> - Motor capacitor. - Brake assembly. - Load chain/rope. 	<ul style="list-style-type: none"> - Replace start capacitor. - Clean and adjust brake assembly. - Inspect for chain tangles.
Hoist moves erratically or intermittently	<ul style="list-style-type: none"> - Loose wiring. - Faulty pendant control. - Motor winding damage. 	<ul style="list-style-type: none"> - Electrical connections. - Pendant switch. - Motor. 	<ul style="list-style-type: none"> - Tighten connections. - Replace or repair control pendant. - Test and repair motor windings.
Load drifts down when stopped	<ul style="list-style-type: none"> - Brake slipping. - Worn brake pads. 	<ul style="list-style-type: none"> - Brake system. 	<ul style="list-style-type: none"> - Adjust brake gap. - Replace worn brake linings.
Slow lifting speed	<ul style="list-style-type: none"> - Low voltage supply. - Worn motor. - Overloaded hoist. 	<ul style="list-style-type: none"> - Power supply. - Motor. - Load weight. 	<ul style="list-style-type: none"> - Check voltage drop (should be $\leq 5\%$). - Replace motor brushes if worn. - Ensure load is within rated capacity.
Excessive noise from hoist	<ul style="list-style-type: none"> - Loose motor mounting. - Worn bearings. - Dry gearbox. 	<ul style="list-style-type: none"> - Motor mount. - Bearings. - Gearbox oil level. 	<ul style="list-style-type: none"> - Tighten bolts. - Lubricate or replace bearings. - Check gearbox oil level and refill.
Hoist does not stop at limit	<ul style="list-style-type: none"> - Faulty limit switch. - Wiring fault. - Control relay stuck. 	<ul style="list-style-type: none"> - Upper/lower limit switch. - Electrical panel. 	<ul style="list-style-type: none"> - Adjust or replace limit switch. - Inspect and repair wiring.
Emergency Stop not working	<ul style="list-style-type: none"> - E-stop wiring fault. - Stuck contactor. 	<ul style="list-style-type: none"> - E-stop button. - Control relay. 	<ul style="list-style-type: none"> - Test and replace E-stop button. - Inspect contactor for welding.

6.7. RESTARTING THE MACHINE AFTER AN INTERVENTION

6.7.1. After an intervention (repair, maintenance, or emergency stop), the hoist must be restarted safely to prevent hazards such as uncontrolled movement, electrical faults, or mechanical failure.

1. Pre-Restart Safety Checks

A) Verify the Cause of Intervention

Confirm the original fault has been identified and fully resolved.

Ensure all repair or maintenance work is complete.

If intervention was due to an emergency stop, investigate the root cause before restarting.

B) Check Electrical Safety

Disconnect Lockout/Tagout (LOTO) if applied.

Measure voltage at control panel terminals using a multimeter (should read 230V AC).

Ensure all wiring is secured and no loose connections exist.

Reset overload relays or breakers if they were tripped.

C) Inspect Mechanical Components

Verify that brakes are functional and properly engaged.

Check for correct chain/rope alignment and tension.

Ensure no obstructions in the hoist's path.

Confirm gearbox is properly lubricated.

D) Confirm Limit Switch & Emergency Stop Functionality

Manually test the upper and lower limit switches.

Press the Emergency Stop (E-Stop) button, then reset it.

6.8. RISKS THAT REMAIN AND HOW TO MITIGATE

Risk	Potential Hazard	Mitigation Measures	Standard Compliance
Unintended Load Drop (Brake Failure)	<ul style="list-style-type: none"> - Load may fall if brake fails or wears out. 	<ul style="list-style-type: none"> - Use fail-safe electromagnetic brakes. - Regularly inspect & replace worn brake pads. - Install secondary mechanical brake. 	BS EN 14492-2

Risk	Potential Hazard	Mitigation Measures	Standard Compliance
Electrical Shock or Fire	- Exposed wiring, short circuits, or overload.	- Ensure proper grounding & insulation. - Use thermal overload relays to prevent overheating.	BS EN 60204-32
Overloading & Structural Failure	- Lifting beyond 1000kg damages the motor & structure.	- Use overload limiters to prevent excess load lifting. - Conduct regular load tests (110% of rated load).	BS EN 14492-2
Uncontrolled Movement (Hoist Running When Not Intended)	- Faulty control switches or remote signal interference.	- Use wired emergency stop system. - Check pendant/remote signal reliability.	BS EN 60204-32
Swinging or Unstable Loads	- Causes collisions or injury.	- Use anti-sway control systems. - Train operators in load stabilization techniques.	EN 12100
Falling Load Due to Chain/Wire Rope Failure	- Wear, fatigue, or improper lubrication leads to breakage.	- Conduct weekly inspections. - Replace chain if >10% wear detected.	BS EN 14492-2
Crushing Hazard (Operator in Danger Zone)	- Operator gets caught under a moving load.	- Enforce no-standing-under-load policy. - Use barriers & warning signs.	EN 12100
Lack of Emergency Response Training	- Delayed response during incidents.	- Conduct regular emergency drills. - Ensure operators know E-Stop function.	EN 12100

6.9. SEQUENCE OF OPERATION

The operation sequence of a hoist follows a structured process to ensure safe lifting, movement, and lowering of loads. Below is a step-by-step breakdown of the hoist's typical operation cycle.

- ✓ **Verify Power Supply**
Ensure the main power switch is ON and voltage is stable (230V, 50Hz).
- ✓ **Inspect Load Handling Equipment**
Ensure hook, chain/wire rope, and brake system are in good condition.
Check that limit switches are functioning correctly.
Ensure the path is clear of obstructions.
- ✓ **Confirm Load is Within Capacity**
Ensure the weight does not exceed 1000kg (check load markings).
Verify load balance and secure attachment to prevent swinging.

6.10. USE/MISUSE OF THE HOIST MECHANISM

The hoist mechanism is responsible for lifting, lowering, and positioning loads safely. Below is a detailed breakdown of its components, functions, and correct usage to ensure safe and efficient operation.

6.10.1. MISUSE OF THE HOIST

Misusing a hoist can lead to serious accidents, equipment damage, and regulatory non-compliance.

6.10.2. HOW TO PREVENT HOIST MISUSE

- Ensure Operators Are Trained & Certified.
Operators must understand weight limits, load positioning, and safety protocols.
Training should include hands-on hoist operation and emergency procedures.
- ✓ **Enforce Pre-Use Safety Inspections**
Inspect chains, hooks, brakes, and controls before each use.
Report and tag faulty equipment immediately.
- ✓ **Display Clear Operational Guidelines**
Post warning signs near the hoist.
Use load charts to show maximum capacity.
- ✓ **Use the Right Equipment for the Task**
Use a trolley system for lateral movement.
Use a certified man-lift, not a hoist, for personnel lifting.

6.11. LIMITS OF THE HOIST

A 1000kg power hoist has defined operational, mechanical, and safety limits to ensure safe and efficient use. Exceeding these limits can lead to equipment failure, accidents, or regulatory violations.

6.12. KEY OPERATIONAL LIMITS

Limit Type	Description	Risk If Exceeded	Preventive Measures
Load Capacity	Max lifting capacity: 1000kg.	- Overloading can cause motor burnout, chain/wire rope failure, or structural damage.	- Always check load weight before lifting. - Use overload protection systems.
Lifting Height	Maximum lift height (varies by model).	- Lifting beyond limit can cause cable tangling, loss of control, or rope slippage.	- Ensure adequate rope/chain length. - Use limit switches to prevent overtravel.

Limit Type	Description	Risk If Exceeded	Preventive Measures
Duty Cycle (Operating Time vs. Rest Time)	Hoist motor cannot run continuously; must follow rated work cycle (e.g., 40% ED at 10 min cycles).	- Overuse can lead to motor overheating and failure.	- Follow manufacturer's rated duty cycle. - Allow cooling periods between operations.
Speed Limits	Fixed or variable lifting/lowering speeds.	- Excess speed may cause load instability or excessive swing.	- Use smooth and controlled speed adjustments.
Side Loading Limit	Hoist is designed for vertical lifting only.	- Side forces can cause hook bending, rope/chain fraying, or trolley derailment.	- Do not pull or drag loads horizontally. - Use a trolley system for lateral movement.
Operational Temperature Range	Typically -10°C to 40°C.	- Extreme temperatures can affect motor performance and lubrication.	- Use in a controlled environment. - Check oil/lubrication viscosity in cold/hot conditions.

7. MAINTENANCE

7.1. STEEL CABLE

7.1.1. A check must be made every 30 cycles, as shown in Fig.11 or showing, to find whether the entire steel cable Fig.12 is in good condition. If it is damaged, it must be replaced by a steel cable of the type specified in the technical data.

7.1.2. NATURE OF INSPECTIONS FOR SAFETY FUNCTIONS

IMPORTANT. Always ensure that the machine is not connected to the mains supply before you start any servicing work.

In the following: One cycle means one raising and lowering movement of a load. Periodic inspection means an inspection after 100 cycles.

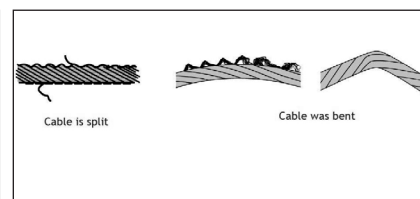
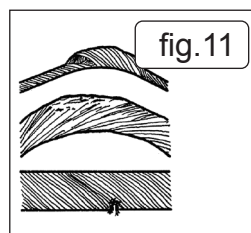
Test periodically that the limit switches on the cable hoist are in correct working order. **Conduct this test as follows:** When the cable has reached the maximum height, the lever on the automatic stopping mechanism will be actuated. The motor must then stop. (Test without a load).

When the steel cable has been unwound as far as possible, the lever for the maximum cable length will be actuated. The motor must then stop.

Inspect the mains cable and the control cable periodically.

7.2. LIST OF NECESSARY SAFETY CHECKS

- The steel cable and return roller must be greased every 200 cycles.
- Check every 1000 cycles whether the screws for the fastening clamps and return roller are properly tightened.
- Check every 1000 cycles whether the hooks and return roller are in good condition.
- Check before using the cable hoist whether the Emergency Stop button and push buttons are in perfect working order.
- Check the braking system every 1000 cycles. If the motor makes any unusual noises or cannot raise the rated load, it is possible that the braking system requires an overhaul:
- Replace damaged or worn parts and keep the service documentation relating to this in a safe place.
- Please contact Sealey Service Centre for any unscheduled maintenance work.



7.3. FREQUENCY OF INSPECTIONS FOR SAFETY FUNCTIONS

Component / Safety Function	Inspection Type	Frequency	Inspection Focus
Load Chain / Wire Rope.	Visual & Functional.	Daily (Before Use).	- Check for wear, corrosion, deformation, or broken strands. - Ensure proper lubrication. - Confirm smooth movement without snags.
Hooks & Load Attachment Points.	Visual.	Daily (Before Use).	- Look for cracks, deformation, excessive wear. - Ensure the safety latch is functional.
Braking System.	Functional Test.	Weekly.	- Test if brake holds load properly. - Listen for unusual noises (signs of wear).
Limit Switches (Upper & Lower).	Functional Test.	Weekly.	- Verify switches stop movement at limits. - Ensure no bypassing or tampering.
Emergency Stop (E-Stop) Button.	Functional Test.	Weekly.	- Press E-Stop to ensure immediate halt of all hoist functions. - Reset and verify normal operation resumes correctly.

Electrical Controls & Wiring.	Visual & Functional.	Monthly.	
Load-Limiting & Overload Protection Devices.	Load Test.	Every 6 Months.	- Confirm overload limiters prevent operation beyond max capacity. - Verify sensors are not bypassed or malfunctioning.
General Structural Integrity.	Comprehensive Inspection.	Every 6 Months.	- Check frame, mounting bolts, and overall hoist structure. - Look for signs of metal fatigue, cracks, or corrosion.
Full Load Test (With Max Rated Capacity).	Certified Inspection.	Annually.	- Conduct a test lift with 1000kg under controlled conditions. - Verify motor, brakes, and hoist mechanism performance.

7.4. **MAINTENANCE OPERATIONS, INCLUDING DRAWINGS AND DIAGRAMS, THAT DO NOT REQUIRE A PERSON WITH TECHNICAL KNOWLEDGE OR SKILL**

7.4.1. These maintenance tasks can be performed by an operator without specialized technical knowledge. They focus on preventing wear and ensuring safe operation without requiring disassembly or advanced repairs.

1. Basic Maintenance Operations

A) Daily Pre-Use Checks

- ✓ Inspect Load Chain / Wire Rope.
Look for twists, kinks, wear, or broken strands.
Ensure proper lubrication (if dry, apply a light coat of chain oil).
- ✓ Check Hooks & Safety Latches.
Ensure the hook is not bent or cracked.
Verify the safety latch closes fully.
- ✓ Test Emergency Stop (E-Stop) Function.
Press the E-Stop button and confirm the hoist stops immediately.
Reset the E-Stop and verify normal operation resumes.
- ✓ Check Pendant / Remote Control.
Look for damaged cables or worn-out buttons.
Ensure controls respond correctly (Up, Down, Stop).

7.5. Proper lubrication is crucial to ensuring the smooth and safe operation of hoists, particularly for ropes, chains, gearboxes, bearings, and hooks, as these components endure significant wear and stress. Below is a detailed guide for the correct lubrication of these components.

1. LUBRICATION OF ROPES (WIRE ROPES)

Purpose:

To reduce wear, prevent corrosion, and maintain the flexibility of the wire rope.

Lubricants:

Lubricant Type: Use wire rope lubricants that provide protection against corrosion and wear while offering proper penetration into the rope strands.

Penetrating Lubricants: Designed for deep penetration into the strands of the rope.

Grease-Based Lubricants: Grease with high adhesive properties for long-lasting protection.

Lubrication Procedure:

1. Clean the Rope: Remove dirt, debris, and old lubricant using a wire brush or a suitable cleaning agent. This ensures that the new lubricant penetrates effectively.

2. Apply Lubricant: Apply lubricant evenly along the length of the rope. Use a brush, spray, or dip method (depending on rope size and type).

3. Work in the Lubricant: After applying, work the lubricant into the strands by gently manipulating the rope or running it through sheaves.

4. Check Coverage: Ensure that all strands of the rope, including those near the core, are well-coated.

Lubrication Frequency:

General Rule: Lubricate wire ropes every 3 months, or more frequently if the rope is exposed to harsh environmental conditions (e.g., high humidity, saltwater, extreme temperatures).

If the hoist operates continuously or in harsh conditions, lubrication may be required as often as once a month.

Signs that Ropes Need Lubrication:

Visible signs of rust or corrosion.
Rope feels stiff or exhibits increased friction during operation.
Excessive wear on the rope strands or kinks.

7.6. **TEST AND INSPECTION INTERVALS**

1. Pre-Use Checks (Daily or Before Each Shift)

- ✓ **Who?** Trained operator.
- ✓ **What to check?**
Visual inspection for damage (wire ropes, chains, hooks, and slings).
Control functions (start/stop, emergency stop, limit switches).
Brakes & holding mechanisms (no unusual sounds or slipping).
Load test (light load) to confirm smooth operation.

7.7. FREQUENCY AND METHOD OF FUNCTIONAL TESTING

Functional testing ensures that the hoist operates safely and efficiently under normal working conditions. Below are the recommended testing intervals and methods.

Test Type	Frequency	Who Performs it?	Purpose
Pre-Use Check (Operational Test)	Daily or before each shift.	Trained operator.	Ensure safe operation before use.
Routine Functional Test	Weekly.	Competent maintenance staff.	Detect early signs of failure.
Thorough Examination	Every 6 or 12 months (LOLER, EU standards).	Qualified inspector.	Verify full functionality & compliance.
Load Testing	Annually or after major repairs.	Certified inspection engineer.	Ensure mechanical integrity under load.
Major Inspection	Every 10 years.	Specialist or manufacturer.	Full dismantling & life cycle assessment.

7.8. GUIDANCE ON THE ADJUSTMENT, MAINTENANCE AND REPAIR

Regular maintenance and proper repairs are essential to ensure the longevity and safe operation of your 1000kg lifting hoist. Contact Sealey Service Centre.

7.9. PROCEDURES FOR SECURING A HOIST MACHINE FOR SAFE MAINTENANCE

Securing a hoist machine for maintenance is essential to ensure the safety of personnel working on or around the equipment.

1. Preparation for Maintenance

A. Notify and Isolate the Hoist

Notify relevant personnel (operators, supervisors, etc.) that maintenance will take place to prevent accidental use.

Isolate the hoist from the power supply:

Switch off the power at the main disconnect or circuit breaker.

Lock and tag out the power switch using a Lockout/Tagout (LOTO) procedure, ensuring that only authorized personnel can restore power.

Verify no live power is present by checking the electrical system with a voltage tester.

B. Ensure Clear Access to the Hoist

Remove any obstacles around the hoist to ensure a clear, safe working space.

Use appropriate warning signage (e.g., "Maintenance in Progress" signs) to alert others to the potential hazards.

7.10. PERFORMING MAINTENANCE ON THE MACHINE AND IT'S FITTINGS (SERVICE AND EMERGENCY REPAIR)

Proper servicing helps prevent breakdowns, reduce wear, and ensure safety. (See next page for maintenance frequency)

7.11. ADJUSTMENTS AND MAINTENANCE OPERATIONS TO THE PRODUCT

Proper adjustments and maintenance are essential for safe operation, optimal performance, and longevity of a 1000kg lifting hoist.

Below is a detailed guide covering routine maintenance, key adjustments, and troubleshooting procedures.

Component	Daily	Weekly	Monthly	Annually
Load Chain / Wire Rope	Inspect for wear, lubrication.		Deep clean.	Replace if needed.
Hook & Safety Latch	Check for damage.			Replace if worn.
Brakes	Function test.			Replace pads if worn.
Limit Switches	Test stopping points.		Adjust settings.	Replace if faulty.
Electrical Wiring & Controls	Visual inspection.			Full electrical test.
Gearbox & Bearings	Check for leaks, noise.		Top-up lubrication.	Full service.
Bolts & Fasteners	Tighten if needed.			Replace if loose/worn.

7.12. REPAIR OF THE MACHINE

Proper repair procedures are essential to restore the safe and reliable operation of a 1000kg lifting hoist.

Contact Sealey Service Centre.

7.13. IDENTIFICATION OF END OF SERVICE

Knowing when to retire a lifting hoist is essential to prevent accidents and ensure safe and efficient operation. Below are the key indicators that a hoist has reached the end of its service life and should be replaced.

1. Criteria for Determining End of Service

Severe Structural Wear or Deformation.

Excessive chain or wire rope elongation beyond manufacturer limits.

Permanent deformation of the hook, drum, or load-bearing components.

Cracks, corrosion, or deep gouges in load-bearing parts.

Excessive wear on gear teeth leading to slipping or grinding noises.

A hoist with any of these structural issues should be retired immediately.

7.14. PROCEDURE OF END OF SERVICE

When a lifting hoist reaches the end of its service life, it must be safely decommissioned and disposed of to prevent accidents, ensure compliance with safety regulations, and avoid unauthorized use.

1. Decision to Retire the Hoist

A hoist should be taken out of service if it:

- ✓ Fails safety inspections or load tests.
- ✓ Has excessive wear, cracks, or deformation in key load-bearing components.
- ✓ Has repeated failures despite regular repairs and maintenance.
- ✓ Exceeds its manufacturer-defined service life.
- ✓ Has obsolete or unavailable replacement parts.

Once a hoist is deemed unfit for use, it must not be operated again.

- 7.15. INFORMATION FOR EMERGENCY SITUATIONS**
operation method in the event of an accident or breakdown
 If a 1000kg lifting hoist experiences an accident or breakdown, immediate and proper action is necessary to ensure safety, prevent further damage, and comply with regulatory requirements.
- 1. Immediate Actions in Case of an Accident or Breakdown**
A. If a Load is Suspended in the Air
- ✗ **DO NOT** Attempt to Lower the Load Manually.
 - ✓ Activate the Emergency Stop Button (E-Stop) on the hoist.
 - ✓ Secure the surrounding area to prevent personnel from standing beneath the suspended load.
 - ✓ Assess the cause of failure (electrical issue, mechanical failure, brake problem, etc.).
 - ✓ Notify a qualified hoist technician immediately.
 - ✓ Never attempt to free a jammed hoist without professional assistance.
- 7.16. LOAD LIFTING ATTACHMENTS AND SLINGS**
 The used load lifting attachments shall have a rated capacity of at least 2 times (fixing point) the total load (load, load lifting attachment) actually suspended.
 The used slings shall have a rated capacity of at least 2 times the total load (load) actually suspended.
 Loads shall be attached only with positive-locking means.
- 7.17. TRANSPORT, HANDLING, AND STORAGE OF THE MACHINE**
- 7.17.1. Position centre of gravity**
 Why Centre of Gravity (CoG) Matters in Hoisting? The CoG is typically near the center of the hoist body, slightly toward the motor side, as the motor is usually the heaviest component.
 The Centre of Gravity (CoG) of a load is the point where its weight is evenly distributed in all directions. Proper positioning of the CoG during lifting operations is critical to:
- ✓ Prevent load tilting or swinging.
 - ✓ Ensure stability and control.
 - ✓ Reduce stress on the hoist and rigging components.
 - ✓ Prevent accidents and load drops.
- 7.18. STORAGE CONDITIONS OF THE MACHINE**
 Proper storage of a lifting hoist is essential to prevent corrosion, mechanical damage, and degradation of electrical and moving components. Below are the recommended storage conditions to ensure the hoist remains in optimal condition when not in use.
- 1. General Storage Requirements.**
- ✓ **Dry & Ventilated Environment.**
 Store in a clean, dry, and well-ventilated area to prevent rust and moisture build up.
 Avoid areas with high humidity or exposure to direct sunlight.
 - ✓ **Temperature Control:** Ideal storage temperature: -10°C to 40°C. Avoid extreme temperatures that can damage electrical components and lubrication.
 - ✓ **Protection from Contaminants:** Keep away from dust, chemicals, and corrosive substances. Cover with a protective dust cover when stored for long periods.
- 7.19. CORRECT HANDLING AND TRANSPORTATION**
 Proper handling and transportation of a lifting hoist are essential to prevent damage, ensure safety, and maintain operational efficiency.
- HANDLING THE HOIST SAFELY**
- ✓ **Before Moving the Hoist:**
 Inspect the hoist for any loose or protruding parts.
 Ensure chains, ropes, or slings are properly secured to prevent tangling.
 Check for any leaks (hydraulic or lubrication) and clean if necessary.
 Disconnect power supply and secure control cables before transport.
 - ✓ **LIFTING THE HOIST PROPERLY:**
 Always use designated lifting points (as specified in the manual).
 Use a forklift, crane, or hoist for lifting heavier units.
 Ensure balanced lifting to prevent tilting or swinging.
 - ✗ **DO NOT** lift the hoist by its chains, wire ropes, or electrical cables.
 Avoid dragging the hoist across the floor, as this may damage its housing or electrical components.
- TRANSPORTATION GUIDELINES**
- A. Manual Handling (Small Portable Hoists)**
 For hoists that can be manually carried:
- ✓ Use correct lifting posture (bend knees, keep back straight).
 - ✓ Use two-person handling if necessary.
 - ✓ Secure loose parts to prevent damage during movement.
- B. Transporting by Vehicle (Forklift, Pallet, or Crate)**
 Use a wooden pallet or transport crate for stability.
- ✓ Strap or chain the hoist securely to prevent shifting during transit.
 - ✓ Protect sensitive components (control pendant, electrical connectors) from impact.
 - ✓ Store upright if required (check the manufacturer's guidelines).
 - ✗ **DO NOT** stack heavy loads on top of the hoist to prevent structural damage.
- 3. Unloading & Installation**
- ✓ Unload with care—use a hoist, crane, or forklift for lifting.
 - ✓ Inspect the hoist before installation to ensure no transport damage.
 - ✓ Check for oil leaks, electrical integrity, and loose components before first use.
 - ✓ If stored, follow proper storage conditions (dry, dust-free, and covered).
- Never operate a hoist that has visible damage from transportation.
- 7.20. CLEANING**
 Keep all safety devices, air vents and the motor housing free of dirt and dust as far as possible.
 Wipe the equipment with a clean cloth or blow it with compressed air at low pressure.

We recommend that you clean the device immediately each time you have finished using it.

Clean the equipment regularly with a moist cloth and some soft soap.

- ✖ **DO NOT** use cleaning agents or solvents; these could attack the plastic parts of the equipment. Ensure that no water can seep into the device.

8. TROUBLESHOOTING

Common Malfunction	Cause	Solution
After a power loss the brakes do not hold or the machine slips down.	<ul style="list-style-type: none">• The gap between the brakes is too large.• The brake spring is ripped.• The brake disk is locked.• The brake disk is at the start Already dirty.	<ul style="list-style-type: none">• Allow the machine to be repaired from a qualified repair service.
The noise of the machine becomes louder.	<ol style="list-style-type: none">1. Badly oiled.2. After a long use, the cogwheel and bearings are damaged.3. Badly installed or dent.	<ol style="list-style-type: none">1. Oil/Grease machine officially.2. Change the cogwheel or bearings.3. Check installed parts.
The rope winch has too much voltage.	<ol style="list-style-type: none">1. Earthed error or no earthed.2. The internal connectors are touching the housing.	<ol style="list-style-type: none">1. Checked earthed wires and properly connect them.2. Check all internal connections.
End-switch is not functioning.	<ol style="list-style-type: none">1. The end-switch is defect.2. End-switch is blocked.	<ol style="list-style-type: none">1. Switch off or change.2. Check, repair, and change End switch.



ENVIRONMENT PROTECTION

Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycling centre and disposed of in a manner which is compatible with the environment. When the product becomes completely unserviceable and requires disposal, drain any fluids (if applicable) into approved containers and dispose of the product and fluids according to local regulations.



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NOTE: It is our policy to continually improve products and as such we reserve the right to alter data, specifications and component parts without prior notice.

IMPORTANT: No Liability is accepted for incorrect use of this product.

WARRANTY: Guarantee is 12 months from purchase date, proof of which is required for any claim.

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