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› Konecranes CLX Electric Chain Hoist User Manual

KONECRANES CLX Electric Chain Hoist 230/3/60V

Konecranes CLX Electric Chain Hoist User Manual

Model: CLX Electric Chain Hoist 230/3/60V

1. INTRODUCTION

This manual provides essential information for the safe and efficient operation, installation, and maintenance of your Konecranes CLX Electric Chain Hoist. Please read this manual thoroughly before operating the hoist to ensure proper use and to prevent injury or damage.

The Konecranes CLX Electric Chain Hoist is designed for industrial lifting applications, offering reliable performance and durability. This specific model is a 1/2 Ton capacity unit, operating on 230/3/60V power, featuring two speeds (16/5 FPM), a heavy-duty H4 rating, single fall chain configuration, a self-adjusting brake, and a lifetime lubricated gearbox.

2. SAFETY INSTRUCTIONS

Safety is paramount when operating lifting equipment. Adhere to all local, state, and federal regulations, as well as company safety policies. Failure to follow these instructions may result in serious injury or death.

2.1 General Safety Precautions

- Only trained and authorized personnel should operate this hoist.
- Inspect the hoist, chain, hook, and controls before each use for any signs of wear, damage, or malfunction.
- Never exceed the rated load capacity of 1/2 Ton (1000 lbs or 500 kg).
- Ensure the load is properly balanced and secured before lifting.
- Keep hands and body clear of the load and moving parts during operation.
- Do not use the hoist to lift people.
- Do not operate the hoist if the chain is twisted, kinked, or damaged.
- Ensure adequate lighting in the work area.
- Disconnect power before performing any maintenance or repairs.

2.2 Electrical Safety

- Verify that the power supply matches the hoist's requirements (230V, 3-phase, 60Hz).

- Ensure proper grounding of the hoist and electrical system.
- Do not operate the hoist with damaged power cords or control cables.

3. PRODUCT COMPONENTS AND FEATURES

The Konecranes CLX Electric Chain Hoist is comprised of several key components designed for robust and reliable lifting operations.



Figure 3.1: Front view of the Konecranes CLX Electric Chain Hoist, showing the main body, chain, hook, and the attached pendant control unit.



Figure 3.2: An elevated perspective of the CLX Hoist, highlighting its compact design and the robust housing.



Figure 3.3: View from below the hoist, clearly showing the load chain exiting the hoist body and connecting to the yellow load hook, rated for 500 kg.

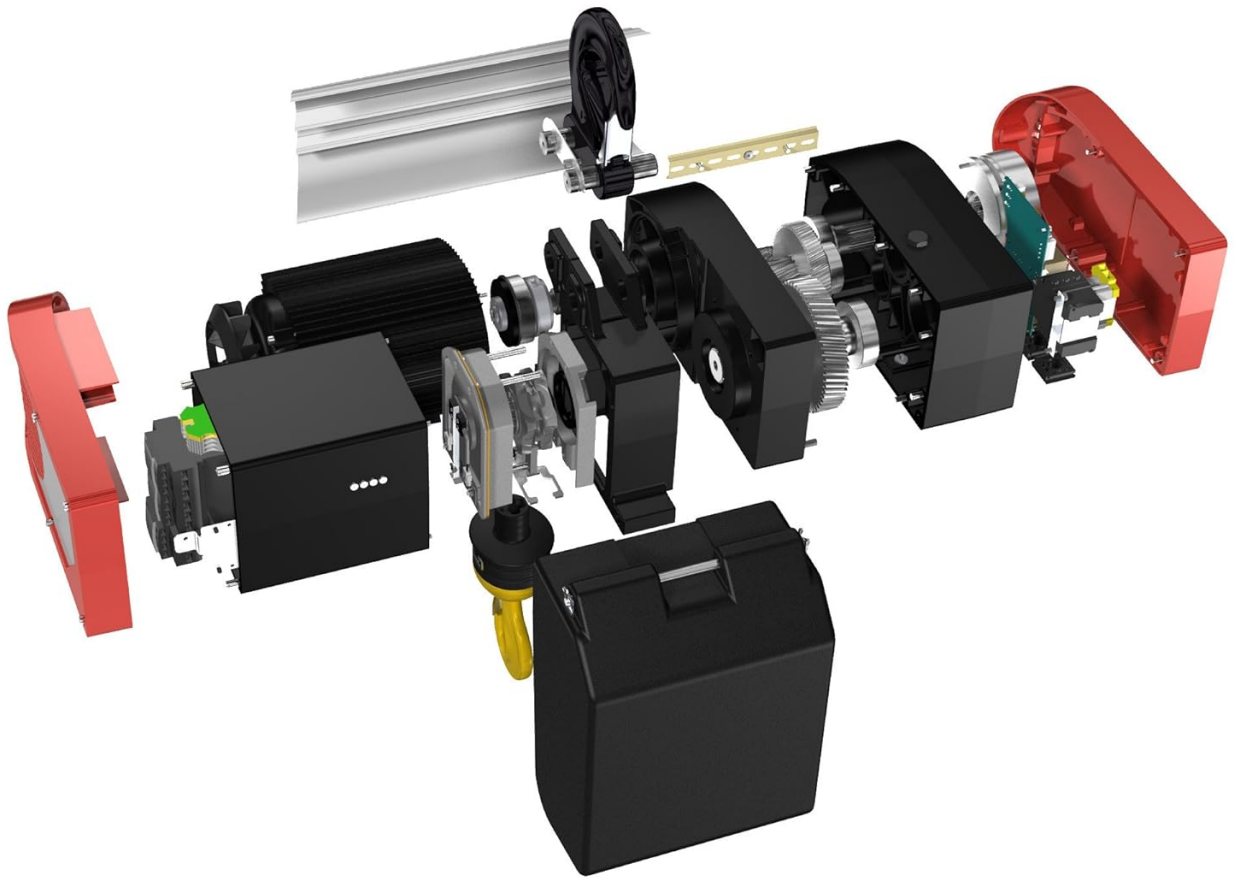


Figure 3.4: An exploded diagram illustrating the internal components of the CLX Hoist, including the motor, gearbox, brake, and electrical housing.

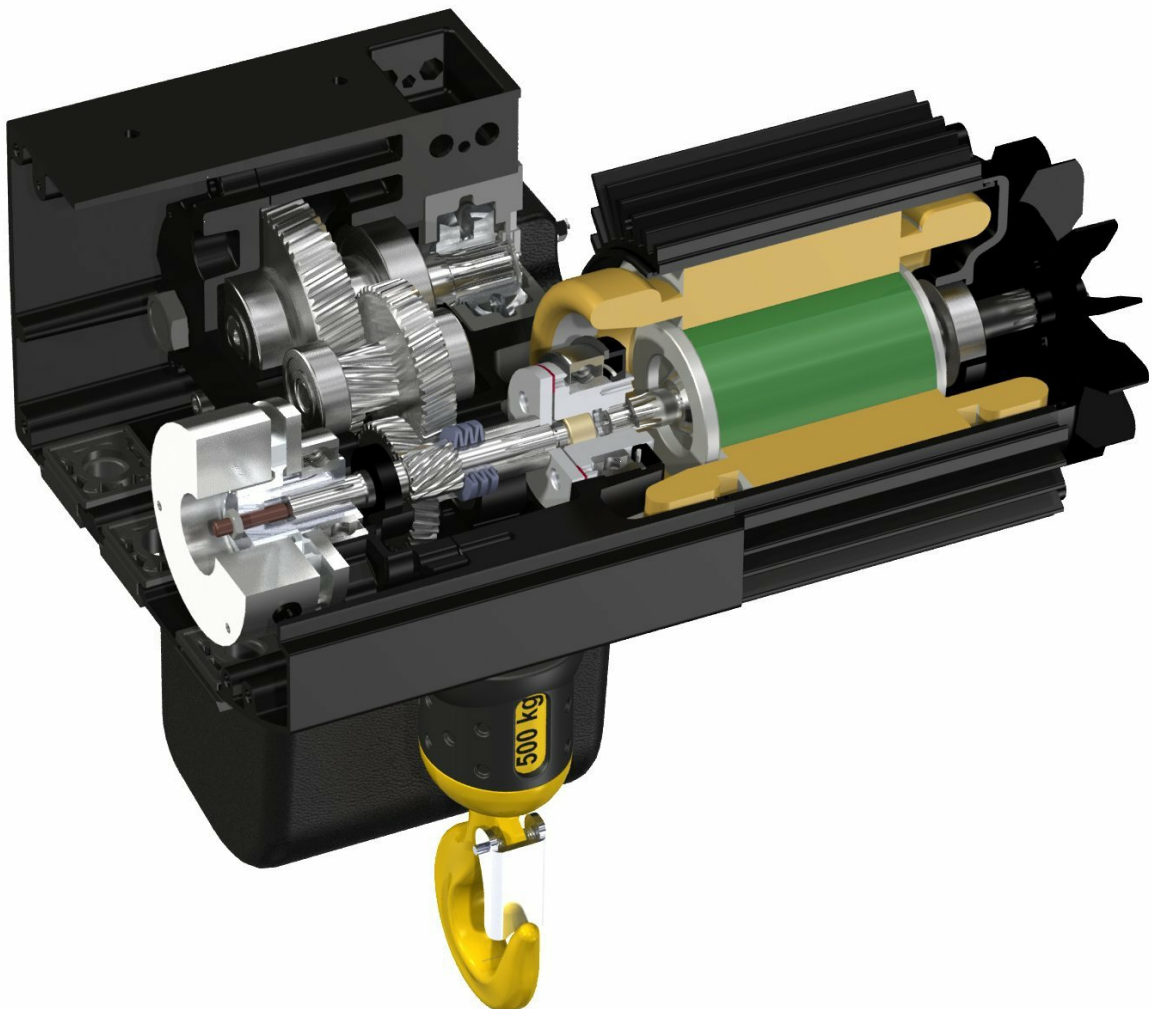


Figure 3.5: A cutaway view showing the internal motor and gear assembly, highlighting the precision engineering of the drive system.



Figure 3.6: The CLX Hoist integrated into a monorail system, demonstrating its application in overhead material handling. Note: Monorail system is not included with the hoist.



Figure 3.7: The CLX Hoist shown with an optional trolley attachment, which allows for horizontal movement along a beam. Note:

Key Features:

- **Robust Design:** Quality components designed and manufactured by Konecranes for industrial lifting.
- **Dual Speed Operation:** Offers both 16 FPM (feet per minute) for fast lifting and 5 FPM for precise positioning.
- **Self-Adjusting DC Brake:** Ensures reliable and consistent braking performance with minimal maintenance.
- **Lifetime Lubricated Gearbox:** Reduces maintenance requirements and extends the lifespan of the hoist.
- **Plug and Play Electric:** Simplifies electrical connection and setup.
- **Heavy Duty H4 Rating:** Indicates suitability for demanding industrial applications with frequent use.

4. INSTALLATION AND SETUP

Proper installation is crucial for the safe and effective operation of your CLX Electric Chain Hoist. If you are unsure about any step, consult a qualified professional.

4.1 Pre-Installation Checklist

- Verify the structural integrity of the mounting point (e.g., beam, monorail, jib crane) can support the hoist's weight plus the maximum rated load with an adequate safety factor.
- Ensure the power supply (230V, 3-phase, 60Hz) is readily available and correctly wired to a suitable disconnect switch.
- Confirm adequate clearance for the hoist, load, and operator.
- Unpack the hoist carefully and inspect for any shipping damage.

4.2 Mounting the Hoist

1. Attach the hoist to the designated mounting point (e.g., hook, trolley, or fixed suspension) securely. Ensure all fasteners are tightened to the manufacturer's specifications.
2. If using a trolley, ensure it moves freely and smoothly along the beam without binding.
3. Verify the hoist is level and plumb to prevent uneven chain wear and operational issues.

4.3 Electrical Connection

1. Ensure the main power supply is OFF and locked out before making any electrical connections.
2. Connect the hoist's power cable to the appropriate power source, following all local electrical codes. The CLX hoist features "plug and play" electrical connections for simplified wiring.
3. Verify proper grounding.
4. Once connections are complete, secure all electrical covers.

4.4 Initial Test Run

1. With no load attached, turn on the power supply.
2. Test the UP/DOWN functions using the pendant control. Observe the chain movement and ensure it operates smoothly in both directions.
3. If equipped with a trolley, test the traverse (left/right) functions.
4. Listen for any unusual noises or vibrations. If any are present, immediately shut off power and investigate.

5. OPERATING INSTRUCTIONS

Follow these guidelines for safe and effective operation of your Konecranes CLX Electric Chain Hoist.

5.1 Pre-Operation Check

- Visually inspect the hoist, chain, hook, and pendant control for any damage, wear, or obstructions.
- Ensure the load chain is free of twists or kinks.
- Confirm the area below and around the load is clear of personnel and obstacles.

5.2 Lifting a Load

1. Attach the load securely to the hook. Ensure the load is centered and balanced. Do not side-pull or drag loads.
2. Use the pendant control to slowly lift the load a few inches off the ground. Check for stability and proper attachment.
3. For the CLX hoist, the pendant control typically has buttons for UP (fast speed), DOWN (fast speed), and often a separate button or half-press for slow speed (creep speed). Use the slow speed (5 FPM) for precise positioning and the fast speed (16 FPM) for general lifting.
4. Lift the load smoothly, avoiding sudden starts or stops.
5. Guide the load as necessary, maintaining a safe distance.
6. Lower the load slowly and precisely to its destination. Ensure the landing area is clear.
7. Once the load is safely placed, unhook it and raise the hook to a safe, clear position.

5.3 Emergency Stop

In case of an emergency, immediately press the red mushroom-head emergency stop button on the pendant control. This will cut power to the hoist and stop all movement.

6. MAINTENANCE

Regular maintenance is essential to ensure the longevity and safe operation of your Konecranes CLX Electric Chain Hoist. Always disconnect power before performing any maintenance.

6.1 Daily/Shiftly Checks

- Inspect the load chain for wear, corrosion, nicks, gouges, or distortion.
- Check the hook for deformation, cracks, or excessive throat opening. Ensure the safety latch operates correctly.
- Examine the pendant control for damage to the casing or cables. Test all buttons for proper function.
- Listen for unusual noises during operation.

6.2 Monthly/Quarterly Checks

- Inspect the hoist body for loose fasteners, cracks, or damage.

- Check the electrical connections for tightness and signs of overheating.
- Examine the chain guide and sprockets for wear.
- Verify the brake's functionality and stopping distance. The CLX hoist features a self-adjusting DC brake, reducing manual adjustment needs.

6.3 Lubrication

The CLX hoist features a lifetime lubricated gearbox, meaning it does not require periodic lubrication under normal operating conditions. However, the load chain should be lightly lubricated periodically with a suitable chain lubricant to reduce wear and corrosion.

6.4 Professional Inspection

It is recommended to have the hoist inspected by a qualified Konecranes service technician or certified inspector at least annually, or more frequently depending on usage and environmental conditions, to ensure compliance with safety standards and optimal performance.

7. TROUBLESHOOTING

This section provides solutions to common operational issues. For problems not listed here, or if solutions do not resolve the issue, contact Konecranes support.

Problem	Possible Cause	Solution
Hoist does not operate (no movement).	No power supply; Emergency stop engaged; Overload protection tripped; Damaged control cable/pendant.	Check power connection and circuit breaker; Release emergency stop button; Reduce load if overloaded and reset; Inspect and replace damaged components.
Hoist operates slowly or intermittently.	Low voltage; Motor overheating; Worn brake; Excessive load.	Verify correct voltage; Allow motor to cool; Inspect brake (though self-adjusting, severe wear can occur); Ensure load is within rated capacity.
Unusual noises during operation.	Worn gears; Misaligned chain; Foreign object in chain path; Motor bearing issue.	Immediately stop operation. Inspect chain and sprockets. Contact qualified service personnel for internal inspection.
Load chain twists or kinks.	Improper load attachment; Side pulling; Worn chain guide.	Ensure load is centered and lifted vertically. Avoid side pulling. Inspect and replace worn chain guide.

8. TECHNICAL SPECIFICATIONS

Parameter	Value
Model	CLX Electric Chain Hoist
Capacity	1/2 Ton (1000 lbs / 500 kg)
Voltage	230V, 3-Phase, 60Hz
Lifting Speed (Fast)	16 FPM (Feet Per Minute)
Lifting Speed (Slow)	5 FPM (Feet Per Minute)
Duty Cycle	H4 (Heavy Duty)
Chain Fall	Single Fall
Brake Type	Self-Adjusting DC Brake
Gearbox	Lifetime Lubricated
Product Dimensions	28 x 18 x 24 inches
Product Weight	106 Pounds
Manufacturer	Konecranes

9. WARRANTY INFORMATION

The Konecranes CLX Electric Chain Hoist comes with a **2-year equipment warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use and service.

The warranty does not cover damage resulting from:

- Improper installation or operation.
- Unauthorized modifications or repairs.
- Failure to perform recommended maintenance.
- Abuse, misuse, or neglect.
- Normal wear and tear of consumable parts (e.g., chain, hook latch).

For warranty claims, please retain your proof of purchase and contact Konecranes customer support.

10. CUSTOMER SUPPORT

For technical assistance, spare parts, or service inquiries, please contact Konecranes directly.

Konecranes Official Website: www.konecranes.com

Please have your hoist's model number and serial number ready when contacting support to expedite assistance.