

AL-KO Type 501 Plus (Model 1730003)

AL-KO Type 501 Plus Braked Winch Instruction Manual

Model: Type 501 Plus (1730003)

1. INTRODUCTION

This manual provides essential information for the safe and effective operation, installation, and maintenance of your AL-KO Type 501 Plus Braked Winch. Please read these instructions carefully before using the winch to ensure proper function and to prevent injury or damage. The AL-KO Type 501 Plus is a robust hand winch designed for various lifting and pulling applications, featuring a reliable braking mechanism for controlled load handling.

2. SAFETY INSTRUCTIONS

Always prioritize safety when operating the winch. Failure to follow these instructions can result in serious injury or equipment damage.

- **Read the Manual:** Ensure all operators have read and understood this instruction manual before use.
- **Load Capacity:** Never exceed the maximum rated load capacity of 500 kg. Overloading can cause winch failure and serious injury.
- **Secure Mounting:** Ensure the winch is securely mounted to a stable and appropriate structure capable of withstanding the maximum load.
- **Inspect Before Use:** Before each use, inspect the winch, rope/strap, and all connections for signs of wear, damage, or corrosion. Do not use if any components are compromised.
- **Maintain Control:** Always maintain a firm grip on the handle during operation. The braking mechanism is designed for controlled lowering, but sudden release can be dangerous.
- **Keep Clear:** Keep hands, clothing, and body parts clear of moving parts, especially the drum, rope/strap, and gears.
- **Proper Rope/Strap:** Use only ropes or straps suitable for the winch's capacity and application. Ensure the rope/strap is correctly wound onto the drum.
- **Avoid Shock Loads:** Do not allow loads to drop or create sudden impacts on the winch. Apply tension smoothly.
- **Children and Unauthorized Persons:** Keep children and unauthorized persons away from the winch during operation.
- **Environmental Conditions:** Be aware of environmental factors such as slippery surfaces, poor lighting, or

extreme weather that could affect safe operation.

3. PRODUCT OVERVIEW AND COMPONENTS

The AL-KO Type 501 Plus winch consists of several key components working together to provide reliable lifting and pulling. Familiarize yourself with these parts for safe operation.



Figure 3.1: The AL-KO Type 501 Plus Braked Winch, showing the main body, drum, and detachable handle.

- **Winch Body:** The main frame that houses the internal mechanisms and provides mounting points.
- **Drum:** The cylindrical part around which the rope or strap is wound.
- **Handle:** Detachable crank handle used to operate the winch.
- **Braking Mechanism:** An internal system that automatically holds the load when the handle is released and allows for controlled lowering.
- **Control Knob:** A rotating knob or lever (depending on model) to switch between lifting and lowering modes, or to engage/disengage the brake for controlled descent.

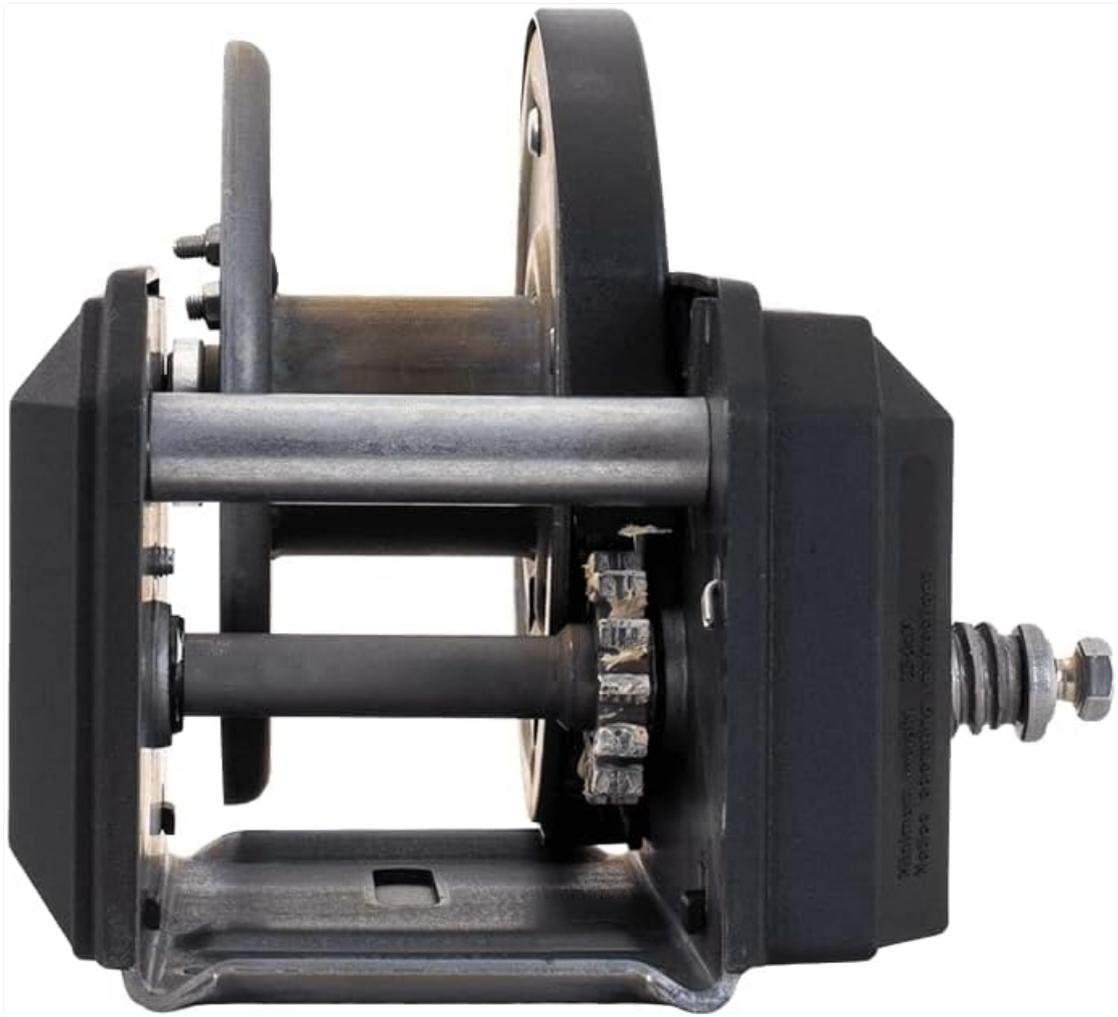


Figure 3.2: Side view illustrating the robust gear mechanism within the winch body, responsible for transmitting power from the handle to the drum.



Figure 3.3: Another side view highlighting the integrated automatic braking system, which ensures the load is held securely when the handle is not actively turned.

4. SETUP AND INSTALLATION

Proper installation is critical for the safe and reliable operation of your AL-KO winch.

4.1 Mounting the Winch

1. **Choose a Location:** Select a mounting location that is structurally sound and can support the maximum load capacity of the winch. Ensure there is sufficient clearance for operating the handle and for the rope/strap path.
2. **Secure Fasteners:** Use appropriate high-strength bolts, nuts, and washers to securely fasten the winch to the mounting surface. Ensure all fasteners are tightened to the manufacturer's recommended torque specifications (if available) or to a secure, firm tightness.
3. **Check Stability:** After mounting, test the stability of the winch by applying a small load and checking for any movement or flexing of the mounting structure.

4.2 Attaching the Rope or Strap

The winch is designed to be used with a suitable rope or strap (not included with this model). Ensure the rope/strap is correctly attached to the drum.

1. **Select Appropriate Rope/Strap:** Use a rope or strap with a breaking strength significantly higher than the winch's maximum load capacity (e.g., a safety factor of 3:1 or 4:1). For this winch, a rope with a diameter of approximately 5 mm or a suitable towing strap is recommended.

2. **Secure to Drum:** Feed the end of the rope/strap through the designated attachment point on the winch drum. Secure it firmly using a knot or fastener appropriate for the rope/strap type. Ensure at least 3-5 wraps of rope/strap remain on the drum when the load is fully extended.
3. **Wind Neatly:** Manually wind the first few layers of rope/strap onto the drum neatly and tightly to prevent tangling and ensure even distribution.

5. OPERATING INSTRUCTIONS

Follow these steps for safe and effective operation of your AL-KO Type 501 Plus winch.

5.1 Attaching the Handle

Insert the winch handle into the drive shaft. Ensure it is fully seated and secure before operation.

5.2 Lifting a Load

1. **Connect Load:** Securely attach the hook or end of the rope/strap to the item you wish to lift or pull. Ensure the connection is robust and cannot accidentally detach.
2. **Engage Winch:** Turn the control knob to the 'HEBEN' (LIFT) position if applicable, or simply begin cranking the handle clockwise.
3. **Crank Handle:** Turn the handle clockwise to wind the rope/strap onto the drum, thereby lifting or pulling the load. Apply steady, even pressure.
4. **Automatic Brake:** The automatic braking system will engage when you stop turning the handle, holding the load in position.

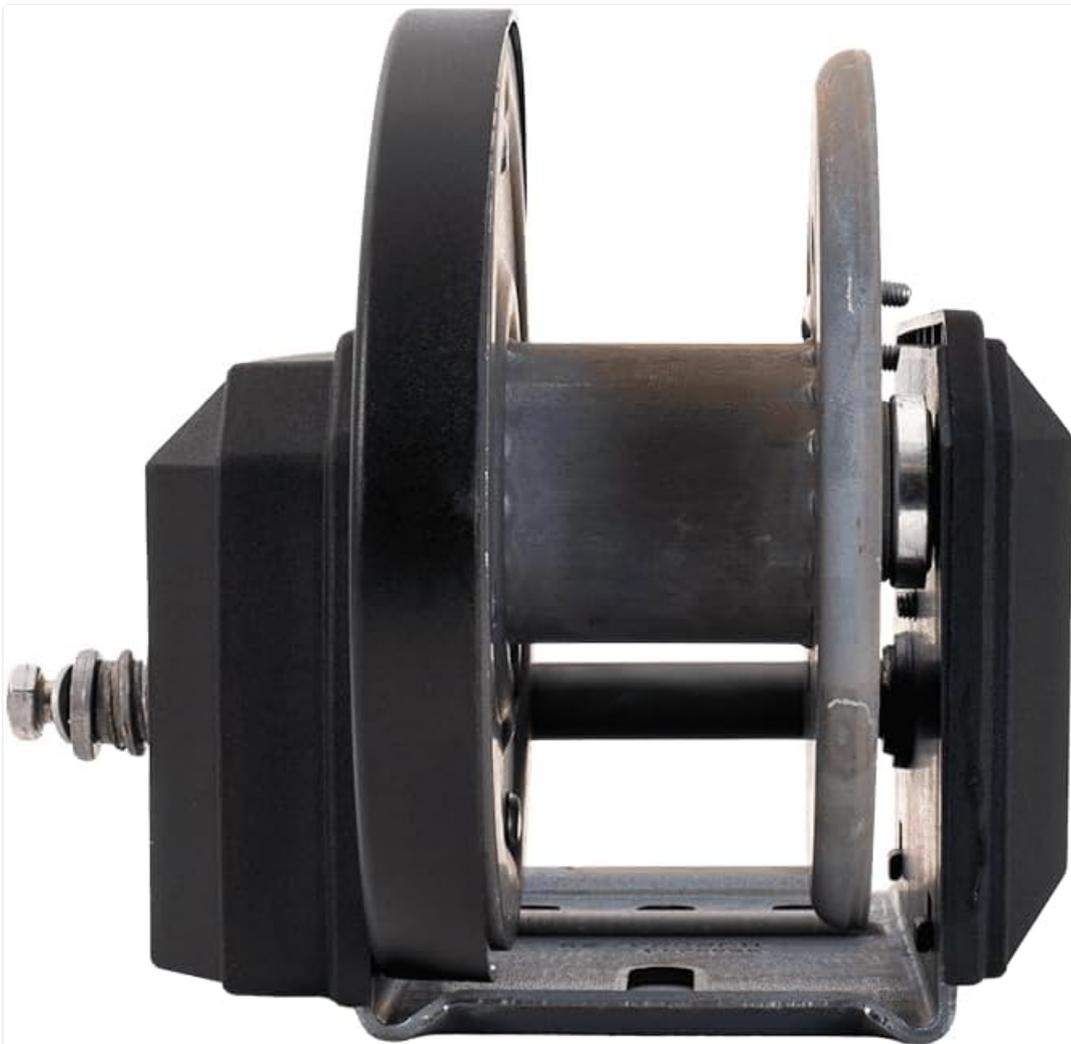


Figure 5.1: The winch with the handle attached, ready for winding the rope or strap to lift a load.

5.3 Lowering a Load

1. **Engage Lowering:** Turn the control knob to the 'SENKEN' (LET DOWN) position. This disengages the full brake and allows for controlled lowering.
2. **Control Descent:** Slowly turn the handle counter-clockwise to unwind the rope/strap and lower the load. Maintain control of the handle at all times. The braking mechanism will still provide resistance for a controlled descent.
3. **Release Load:** Once the load is fully lowered and stable, detach the hook or rope/strap.



Figure 5.2: Detail of the control knob, indicating the 'SENKEN' (Let Down) and 'HEBEN' (Lift) positions for managing load movement.

6. MAINTENANCE

Regular maintenance ensures the longevity and safe operation of your AL-KO winch.

- **Cleaning:** Keep the winch clean and free from dirt, debris, and corrosive substances. Wipe down the exterior with a damp cloth.
- **Lubrication:** Periodically apply a light coat of grease or appropriate lubricant to moving parts such as gears and bearings. Avoid over-lubrication, which can attract dirt.
- **Inspection:** Regularly inspect the winch for any signs of wear, damage, loose fasteners, or corrosion. Pay close attention to the drum, gears, handle attachment, and mounting points.
- **Rope/Strap Condition:** Inspect the rope or strap for fraying, cuts, kinks, or other damage. Replace immediately if any damage is found.
- **Storage:** When not in use, store the winch in a clean, dry environment, protected from extreme temperatures and direct sunlight.

7. TROUBLESHOOTING

If you encounter issues with your AL-KO Type 501 Plus winch, refer to the following common problems and solutions.

- **Winch is difficult to crank:**
 - Check if the load exceeds the maximum capacity.
 - Inspect for obstructions in the gear mechanism or drum.
 - Lubricate moving parts as per maintenance instructions.
- **Load slips or does not hold:**
 - Ensure the control knob is correctly set for lifting/holding.
 - Inspect the braking mechanism for wear or damage. Do not use if the brake is faulty.
 - Ensure the rope/strap is properly wound and not slipping on the drum.
- **Rope/Strap tangles on drum:**
 - Ensure the rope/strap is wound neatly and under tension.
 - Avoid sudden jerks or slack in the line during operation.

If problems persist, contact AL-KO customer support or a qualified service technician.

8. SPECIFICATIONS

Key technical specifications for the AL-KO Type 501 Plus Braked Winch.



Figure 8.1: The AL-KO Type 501 Plus Winch alongside a technical data sheet, providing detailed specifications and dimensions.

Specification	Value
Model Number	1730003

Specification	Value
Brand	AL-KO
Maximum Load Capacity	500 kg
Hand Force	200 N
Minimum Load	25 kg
Gear Ratio	3.75:1
Drum Capacity (Rope Ø 5 mm)	20 m
Drum Capacity (Towing Strap)	7 m
Item Weight	4 kg
Material (Fasteners)	Carbon Steel
Country of Origin	Germany

9. WARRANTY AND SUPPORT

AL-KO products are manufactured to high quality standards. This product is covered by the manufacturer's warranty, details of which can be found on the official AL-KO website or by contacting customer service. For further technical support, spare parts, or to download additional manuals, please visit the official AL-KO website:

www.alko-tech.com/manuals

When contacting support, please have your model number (1730003) and purchase information ready.