

OLONETO Axial Flow Hydroelectric Generator Set

OLONETO Axial Flow Hydroelectric Generator Set - User Manual

Models: 3KW, 5KW, 10KW

Brand: OLONETO

1. INTRODUCTION

This manual provides essential instructions for the safe installation, operation, and maintenance of your OLONETO Axial Flow Hydroelectric Generator Set. This generator is designed for household electricity generation, utilizing a water turbine and a coaxial generator. It features a pure copper wire core and is available in 3KW, 5KW, and 10KW power options. Please read this manual thoroughly before installation and use to ensure optimal performance and safety.

2. SAFETY INFORMATION

WARNING: Failure to follow these safety instructions may result in serious injury, electric shock, or damage to the equipment.

- Always disconnect power before performing any maintenance or installation.
- Ensure proper grounding of the generator to prevent electrical hazards.
- Installation should be performed by qualified personnel familiar with electrical systems and hydraulic power.
- Keep children and unauthorized persons away from the generator and water intake/outlet areas.
- Do not operate the generator if any parts are damaged or missing.
- Protect the generator from extreme weather conditions and ensure adequate ventilation.
- Wear appropriate personal protective equipment (PPE) during installation and maintenance.

3. PRODUCT OVERVIEW

The OLONETO Axial Flow Hydroelectric Generator Set consists of a water turbine and a generator,

designed for efficient power conversion from flowing water. Key components include:

- **Water Turbine:** Composed of water blades, guide covers, bearings, water seals, and main shafts.
- **Generator:** Features a pure copper wire core and is equipped with a voltage stabilizer for automatic voltage regulation.
- **Housing:** Die-cast aluminum alloy shell, providing corrosion resistance and durability.



Figure 3.1: Overview of the OLONETO Axial Flow Hydroelectric Generator Set (yellow model).



Figure 3.2: Dimensions of the OLONETO Hydroelectric Generator. The unit measures approximately 34.5 cm in width and 117 cm in total height, with the submerged section being about 77.5 cm.

4. SETUP AND INSTALLATION

Proper installation is crucial for the performance and longevity of your hydroelectric generator. Consult with a professional for site assessment and installation.

4.1 Site Selection

Choose a location with a consistent water flow and sufficient water level difference (head) as specified in the product specifications for your model (e.g., 4-9m for 8KW, 5-10m for 10KW). The generator should be protected from debris and easily accessible for maintenance.

4.2 Mechanical Installation

1. **Secure Mounting:** Mount the generator securely to a stable foundation at the water outlet point, ensuring it is level and firmly anchored.
2. **Water Intake System:** Install a robust water intake system (e.g., penstock) to direct water flow to the turbine. Ensure the intake is free from obstructions and includes a screen to prevent debris from entering the turbine.
3. **Water Outlet:** Ensure the water can freely exit the turbine without causing backpressure or erosion.



Figure 4.1: Example of a hydroelectric generator installation in a natural stream environment, showing the water intake pipe and generator unit.



Figure 4.2: Collage illustrating different approaches to water channeling and generator placement for hydroelectric power generation.

4.3 Electrical Connection

1. **Wiring:** Connect the generator's output to your electrical system according to local electrical codes and standards. The generator provides single-phase 220V output at 50Hz.
2. **Grounding:** Ensure the generator frame is properly grounded to a reliable earth ground.
3. **Circuit Protection:** Install appropriate circuit breakers and overcurrent protection devices.
4. **Voltage Regulator:** The integrated voltage stabilizer automatically regulates output voltage, making it suitable for various household appliances.

5. OPERATING INSTRUCTIONS

Once installed and electrically connected, operating the generator is straightforward.

1. **Initial Start-up:** Gradually open the water intake valve to allow water to flow through the turbine. The generator will begin to rotate and produce electricity.
2. **Monitoring:** Monitor the output voltage and current using appropriate meters. The integrated voltage stabilizer will maintain a stable output.
3. **Load Connection:** Connect household appliances as needed. The generator is designed to power TVs, computers, washing machines, refrigerators, induction cookers, and air conditioners.
4. **Shut-down:** To stop the generator, gradually close the water intake valve until the water flow ceases and the generator stops rotating.

6. MAINTENANCE

Regular maintenance ensures the longevity and efficient operation of your hydroelectric generator.

- **Debris Removal:** Regularly check and clear any debris from the water intake screen and turbine blades.
- **Bearing Lubrication:** Inspect and lubricate bearings as per manufacturer recommendations (if applicable, specific lubrication points are not detailed in product info, so keep it general).
- **Electrical Connections:** Periodically inspect all electrical connections for tightness and signs of corrosion.
- **Housing Inspection:** Check the die-cast aluminum alloy shell for any signs of damage or corrosion.
- **Water Seals:** Monitor water seals for leaks and replace if necessary.

7. TROUBLESHOOTING

Refer to the following table for common issues and their solutions.

Problem	Possible Cause	Solution
No power output	Insufficient water flow; electrical connection issue; damaged generator component.	Check water intake for blockages; verify all electrical connections; inspect generator for visible damage.
Low power output	Reduced water flow/head; turbine blades fouled; excessive load.	Ensure adequate water flow and head; clean turbine blades; reduce connected load.
Unstable voltage	Fluctuating water flow; issue with internal voltage stabilizer.	Ensure consistent water flow; if problem persists, contact customer support.
Unusual noise or vibration	Debris in turbine; worn bearings; loose mounting.	Shut down immediately; inspect for debris; check mounting bolts; contact support if noise persists.

8. SPECIFICATIONS

The OLONETO Axial Flow Hydroelectric Generator Set is available in various power configurations. Below are general specifications, please refer to your specific model for exact details.

- **Output Power Options:** 3KW, 5KW, 10KW
- **Voltage:** Single phase 220V / 230V
- **Frequency:** 50Hz
- **Speed:** 1500 rpm (typical)
- **Material:** Die-cast aluminum alloy shell, pure copper wire core
- **Features:** Integrated voltage stabilizer, automatic voltage stabilization function

Model Specifics (10KW example):

- **Flow Rate:** 0.24m³/s
- **Water Level Difference (Head):** 5-10m
- **Current:** 45A

- **Product Dimensions:** 18.11"L x 18.11"W x 51.18"H (approx. 46cm L x 46cm W x 130cm H)
- **Item Weight:** 220 lbs (approx. 100 kg)



Figure 8.1: Multiple OLONETO Hydroelectric Generator units, showcasing the standard design.

9. WARRANTY AND SUPPORT

OLONETO products are manufactured to high-quality standards. For any questions, technical assistance, or warranty claims, please contact customer service. Your satisfaction is our greatest wish, and our customer service team is available to answer your inquiries within 24 hours.

Please refer to your purchase documentation for specific warranty terms and conditions.