MAKEMU Srl DOMUS 500/750/1000W

MAKEMU Energy DOMUS Vertical Axis Wind Generator User Manual

Models: 500W, 750W, 1000W

1. Introduction

The MAKEMU Energy DOMUS vertical axis wind generator is designed to provide clean, renewable energy for residential applications. Its unique vertical axis design allows it to capture wind from all directions without requiring active orientation, making it suitable for various environments. This manual provides essential information for the safe and efficient installation, operation, and maintenance of your DOMUS wind generator. The DOMUS wind generator is characterized by its compact size, low noise operation, and aesthetic design, making it an ideal solution for home energy generation. It is available in various configurations to meet different energy needs.

Image 1.1: The MAKEMU Energy DOMUS vertical axis wind generator, showcasing its sleek, white design with three vertical blades.

2. Product Dimensions

Understanding the physical dimensions of your DOMUS wind generator is crucial for proper site selection and installation planning.

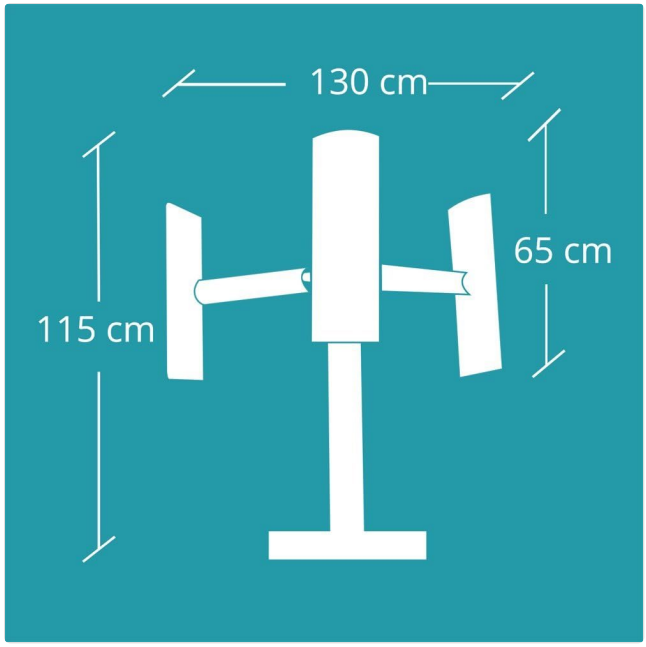

Image 2.1: Diagram illustrating the dimensions of the DOMUS wind generator. The height is 115 cm, width is 130 cm, and the depth of the blades is 65 cm.

3. Setup and Configurations

The MAKEMU Energy DOMUS wind generator offers various configurations to suit different power requirements and integration needs. Each configuration includes specific components for optimal performance.

3.1. Basic Configuration (A)

This configuration provides the core components for wind energy generation.

- **M28 (Rotor 3 Blades):** The primary wind-catching component.
- **M12 (Alternator):** Converts mechanical energy from the rotor into electrical energy.

This configuration does not include mounting poles or power conversion accessories.

Image 3.1.1: Close-up of the M28 rotor with three vertical blades, which capture wind to generate power.

Image 3.1.2: The M12 alternator, a compact black unit with wiring terminals, responsible for converting wind energy into electricity.

3.2. PLUS Configuration (B)

Building upon the Basic configuration, the PLUS configuration adds essential components for power rectification and mounting.

- **DOMUS BASIC:** Includes M28 rotor and M12 alternator.
- **M36 (Rectifier):** Converts the alternating current (AC) from the alternator into direct current (DC).
- **M40 (85 cm Pole):** A base pole for mounting the wind generator.

Image 3.2.1: The M36 bridge rectifier, a small black electronic component with metal terminals, used for converting AC to DC power.

Image 3.2.2: The M40 base pole, an 85 cm tall cylindrical pole with a square base for stable mounting of the wind generator.

3.3. Standard Configuration (C)

The Standard configuration is designed for standalone power systems, providing a complete solution for off-grid applications.

- **DOMUS PLUS:** Includes M28 rotor, M12 alternator, M36 rectifier, and M40 pole.
- **M26 (Controller 12/24V):** Manages the charging of batteries and protects the system from overcharge.
- **M22 (Stand-Alone Inverter):** Converts DC power from the battery bank into usable AC power for household appliances.

Image 3.3.1: The M26 solar charge controller, a rectangular unit with multiple terminals and a digital display, designed for 12V/24V systems.

Image 3.3.2: The M22 stand-alone inverter, a red rectangular device with power cables and clamps, used to convert DC power to AC power for off-grid use.

3.4. GRID CONNECTED Configuration (D)

This configuration is for systems that connect to the utility grid, allowing you to feed excess power back into the grid.

- **DOMUS PLUS:** Includes M28 rotor, M12 alternator, M36 rectifier, and M40 pole.
- **M26 (Controller 12/24V):** Manages the charging of batteries and protects the system from overcharge.
- **M34 (GRID Inverter):** A grid-tie inverter that synchronizes with the utility grid and feeds generated power into it.

Image 3.4.1: The M34 grid-connected inverter, a silver rectangular unit with a power cord and terminals, designed to integrate the wind generator with the electrical grid.

4. Operating Instructions

Once installed, the DOMUS wind generator operates automatically, converting wind energy into electricity. For optimal performance and safety, consider the following:

- **Wind Conditions:** The vertical axis design allows for efficient operation in varying wind directions. Performance will vary based on wind speed.
- **Monitoring:** If your system includes a controller (M26), monitor its display for system status, battery charge levels, and power output.
- **Safety Shutdown:** In extreme weather conditions (e.g., very high winds, severe storms), it is advisable to implement a safety shutdown procedure if your system allows for it, to prevent damage. Consult your controller's specific manual for details.
- **Power Output:** The generator's output (500W, 750W, or 1000W) is its maximum rated power. Actual output will depend on prevailing wind conditions.

5. Maintenance

Regular maintenance ensures the longevity and efficient operation of your MAKEMU Energy DOMUS wind generator.

- **Visual Inspection (Monthly):** Check the rotor blades, mounting pole, and all visible connections for any signs of wear, damage, or looseness. Ensure no debris is obstructing the blades.
- **Cleaning (As Needed):** Clean the blades and main body with a damp cloth to remove dirt, dust, or salt buildup, which can affect aerodynamic efficiency. Avoid abrasive cleaners.
- **Electrical Connections (Annually):** With power disconnected, inspect all electrical connections for corrosion or looseness. Tighten as necessary.
- **Bearing Check (Annually):** Listen for unusual noises from the generator head, which could indicate bearing wear. Contact a qualified technician if concerns arise.
- **Battery Maintenance (For Standalone Systems):** If using batteries, follow the battery manufacturer's maintenance guidelines, including checking water levels (for flooded batteries) and terminal cleanliness.

Warning: Always disconnect power before performing any maintenance on electrical components.

6. Troubleshooting

This section provides basic troubleshooting steps for common issues. For complex problems, contact customer support.

Problem	Possible Cause	Solution
No power output	No wind or insufficient wind speed	Wait for adequate wind conditions.
	Loose or corroded electrical connections	Inspect and tighten all connections. Clean any corrosion.
	Controller or inverter fault	Check controller/inverter display for error codes. Consult their respective manuals.
Unusual noise during operation	Loose components (blades, mounting)	Inspect and tighten all structural components.
	Worn bearings in alternator	Contact a qualified technician for inspection and replacement.
Reduced power output	Dirty blades or obstructions	Clean blades. Remove any obstructions around the generator.
	Degraded battery performance (Standalone systems)	Check battery health and charge levels. Consider battery replacement if necessary.

7. Specifications

Key technical specifications for the MAKEMU Energy DOMUS wind generator.

- **Manufacturer:** MAKEMU Srl
- **Model Reference:** DM
- **Product Dimensions:** 65 x 130 x 115 cm (Width x Height x Depth)
- **Product Weight:** 14 kg
- **First Available Date:** February 21, 2020
- **Origin:** Made in Italy

8. Warranty and Support

For warranty information, please refer to the documentation provided at the time of purchase or contact MAKEMU Srl directly. Keep your proof of purchase for any warranty claims.
For technical support, spare parts, or further assistance, please contact MAKEMU Srl customer service. Provide your product model and serial number (if applicable) when seeking support.
Manufacturer: MAKEMU Srl