

PratoErboso JSWm 3AL

Pedrollo JSWm 3-220V Single-Phase Vertical Multi-Impeller Centrifugal Electric Pump

MODEL: JSW_M 3AL

Brand: PratoErboso

1. INTRODUCTION

This manual provides essential information for the safe and efficient operation, installation, and maintenance of your Pedrollo JSWm 3-220V Single-Phase Vertical Multi-Impeller Centrifugal Electric Pump, model JSWm 3AL. The JSW self-priming pumps are designed for pumping clean water, even in the presence of air mixed with the pumped liquid. They are highly recommended for domestic water distribution, especially when coupled with small or medium autoclave tanks, and for irrigation of gardens and vegetable patches.

Please read this manual thoroughly before installation and operation to ensure proper use and to prevent damage or injury.

2. SAFETY INSTRUCTIONS

Always observe the following safety precautions to reduce the risk of injury, electric shock, fire, or damage to the pump.

- **Electrical Safety:** Ensure the power supply matches the pump's specifications (220V). All electrical connections must be performed by a qualified electrician and comply with local regulations. Disconnect power before any maintenance or installation.
- **Water Quality:** This pump is designed for clean water only. Do not use it for flammable, corrosive, or explosive liquids.
- **Installation Environment:** Install the pump in a well-ventilated area, protected from direct sunlight, rain, and freezing temperatures.
- **Operating Temperature:** Ensure the liquid temperature is between -10 °C and +40 °C, and the ambient temperature does not exceed +40 °C.
- **Pressure:** Do not exceed the maximum pump body pressure of 10 bar.
- **Children and Pets:** Keep children and pets away from the pump during operation.

3. PRODUCT OVERVIEW

The Pedrollo JSWm 3AL pump features a robust design for reliable performance. Key components include the pump body, impellers, and electric motor.



Figure 3.1: Overview of the Pedrollo JSWm 3AL Electric Pump. This image displays the blue-colored pump unit, showing the pump housing on the left with visible screws and an inlet/outlet port, connected to the electric motor on the right with cooling fins and an electrical connection box on top. The overall structure is compact and designed for stability.

Pump Body: Constructed from JL250 Cast Iron, ensuring durability and resistance to wear.

Impellers: Made from AISI 304 Stainless Steel, providing excellent corrosion resistance and efficient water handling.

Motor: A 2-pole electric motor with IP X4 protection grade, designed for continuous operation and reliable power delivery.

4. SETUP AND INSTALLATION

Proper installation is crucial for the pump's performance and longevity. Follow these guidelines:

1. **Location:** Choose a stable, level surface for installation. The pump should be as close as possible to the water source to minimize suction lift.
2. **Piping:** Use appropriate diameter pipes for suction and discharge. Ensure all connections are airtight to prevent air ingress, which can affect pump performance. A foot valve with a strainer should be installed at the end of the suction pipe in the water source.
3. **Priming:** Before first use, the pump body and suction pipe must be completely filled with clean water through the priming port. This is essential for self-priming pumps.
4. **Electrical Connection:** Connect the pump to a 220V single-phase power supply. Ensure proper grounding. Refer to the wiring diagram provided with the pump for specific connections. The motor has an IP X4 protection grade.
5. **Protection:** Install appropriate electrical protection devices (e.g., circuit breaker, thermal overload protection) to safeguard the motor.

5. OPERATING INSTRUCTIONS

Once installed and primed, the pump is ready for operation.

- **Starting the Pump:** Ensure the pump is fully primed. Turn on the power supply. The pump should start drawing water.
- **Monitoring:** Observe the pump during initial operation for any unusual noises or vibrations. Check for leaks at connections.

- **Flow Rate and Head:** The pump can deliver a flow rate of up to 160 l/min (9.6 m³/h) and a head of up to 97 m. The manometric suction height is up to 9 m.
- **Stopping the Pump:** Turn off the power supply to stop the pump.
- **Continuous Operation:** The pump is designed for continuous service under specified conditions.

6. MAINTENANCE

Regular maintenance ensures optimal performance and extends the pump's lifespan.

- **Regular Inspection:** Periodically check for leaks, unusual noises, or vibrations.
- **Cleaning:** Keep the pump exterior clean and free from debris. Ensure the motor's cooling fins are not obstructed.
- **Winterization:** In areas prone to freezing temperatures, drain the pump completely to prevent damage from ice expansion.
- **Impeller and Seal Check:** If performance degrades, inspect the impellers for blockages and the mechanical seal for wear. This should ideally be done by a qualified technician.

7. TROUBLESHOOTING

This section addresses common issues you might encounter.

Problem	Possible Cause	Solution
Pump does not start	No power supply; Motor overload protection tripped; Faulty wiring.	Check power connection and circuit breaker; Allow motor to cool and reset protection; Inspect wiring.
Pump runs but no water or low flow	Pump not primed; Air leak in suction line; Suction line blocked; Water level too low.	Re-prime the pump; Check all suction connections for leaks; Clear any blockages; Ensure adequate water source.
Excessive noise or vibration	Air in pump/suction line; Cavitation; Worn bearings; Loose mounting.	Bleed air from system; Check for adequate water supply; Contact service for bearing replacement; Secure pump mounting.

For issues not listed or if solutions do not resolve the problem, contact qualified service personnel.

8. TECHNICAL SPECIFICATIONS

Parameter	Value
Model	JSWm 3AL
Manufacturer	Pedrollo
Voltage	220V
Liquid Type	Clean water
Flow Rate (Max)	160 l/min (9.6 m³/h)
Head (Max)	97 m
Manometric Suction Height (Max)	9 m

Parameter	Value
Liquid Temperature Range	-10 °C to +40 °C
Ambient Temperature (Max)	+40 °C
Max Pump Body Pressure	10 bar
Motor Type	2-pole
Protection Grade	IP X4
Pump Body Material	JL250 Cast Iron
Impeller Material	AISI 304 Stainless Steel
Power Source	Wired Electric

9. WARRANTY AND SUPPORT

For warranty information, please refer to the terms and conditions provided at the time of purchase or contact the seller directly. This product is supplied by PratoErboso Shop.

For technical support, spare parts, or service inquiries, please contact your authorized dealer or the manufacturer's customer service. Always provide the model number (JSWm 3AL) and ASIN (B0DGY17MK9) when seeking assistance.

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