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> [Pedrollo PLURIJET M4/80-N Self-Priming Multi-Stage Water Pump Instruction Manual](#)

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Pedrollo PLURIJET M4/80-N Self-Priming Multi-Stage Water Pump Instruction Manual

Model: PLURIJET M4/80-N | Brand: Pedrollo

1. INTRODUCTION

This manual provides essential information for the safe and efficient installation, operation, and maintenance of your Pedrollo PLURIJET M4/80-N self-priming multi-stage water pump. Please read these instructions carefully before use and retain them for future reference.

The PLURIJET series offers a new, more compact, and robust design. It is recommended for applications requiring a quiet and high-performance self-priming pump.



Figure 1: Pedrollo PLURIJET M4/80-N Self-Priming Multi-Stage Water Pump. This image shows the overall design of the pump, highlighting its compact and robust construction.

2. TECHNICAL CHARACTERISTICS

- Completely renewed range with a new design.
- Improved hydraulic performance for higher efficiency.
- Reduced energy consumption.
- One of the quietest models in the centrifugal pump series.
- Enhanced priming capabilities.

3. INSTALLATION AND USE

The PLURIJET pumps are suitable for use with clean water, even when air is present, and with liquids that are not chemically aggressive towards the materials from which the pump is made. Due to their quietness, reliability, and low energy consumption, they are recommended for domestic and civil applications such as water supply systems, pressure boosting, and irrigation.

3.1. Application Limits

- Liquid temperature: from -10 °C to +40 °C
- Ambient temperature: up to +40 °C
- Manometric suction lift: up to 9 m (HS)
- Maximum working pressure: 6 bar
- Continuous service: S1

4. SETUP

Proper setup is crucial for optimal performance and longevity of the pump. Ensure the pump is installed in a dry, well-ventilated area, protected from direct sunlight and frost.

4.1. Electrical Connection

Connect the pump to a single-phase 230 V, 50 Hz power supply. Ensure the electrical installation complies with local regulations and safety standards. The power cable is not included and must be appropriately sized for the pump's power requirements (0.55 kW / 0.75 HP).

4.2. Hydraulic Connection

Connect the suction and delivery pipes to the pump's threaded ports. Ensure all connections are watertight to prevent air ingress, which can affect priming and pump performance. Use appropriate sealants and fittings.

4.3. Priming the Pump

Before first use, or after any period of disuse, the pump must be primed. Fill the pump body completely with clean water through the dedicated filling port until water overflows. Close the filling port securely before starting the pump.

5. OPERATING INSTRUCTIONS

Once installed and primed, the pump is ready for operation. Ensure the suction line is submerged in water and free from obstructions.

5.1. Starting the Pump

Switch on the power supply to the pump. The pump will begin to draw water. Monitor the pressure gauge (if installed) to

ensure proper operation. The pump is designed for continuous service (S1).

5.2. Stopping the Pump

To stop the pump, switch off the power supply. For prolonged periods of disuse, especially in freezing conditions, drain the pump completely to prevent damage.

6. MAINTENANCE

Regular maintenance ensures the longevity and efficient operation of your Pedrollo pump.

6.1. Routine Checks

- Periodically check for leaks around connections.
- Ensure the pump is free from excessive vibration or unusual noises.
- Verify that the ventilation openings on the motor are clear.

6.2. Winterization

In areas subject to freezing temperatures, drain the pump and associated piping completely to prevent damage from ice expansion. Store the pump in a dry, frost-free location if possible.

7. TROUBLESHOOTING

This section provides solutions to common issues you might encounter with your pump.

Problem	Possible Cause	Solution
Pump does not start	No power supply, motor overload, seized impeller	Check power connection and circuit breaker. Allow motor to cool. Inspect impeller for obstructions.
Pump runs but does not deliver water	Pump not primed, air leak in suction line, suction lift too high, clogged suction filter	Re-prime the pump. Check all suction connections for leaks. Verify suction lift is within limits. Clean suction filter.
Reduced flow or pressure	Partial blockage, worn impeller, air in system	Check for blockages in pipes. Inspect impeller for wear. Bleed air from the system.
Excessive noise or vibration	Cavitation, foreign object in pump, worn bearings	Ensure adequate water supply to prevent cavitation. Inspect pump for foreign objects. Contact service for bearing replacement.

8. SPECIFICATIONS

Detailed technical specifications for the Pedrollo PLURIJET M4/80-N pump.

Characteristic	Value
Model	PLURIJET M4/80-N
Power Supply	Single-phase 230 V, 50 Hz
Power (kW)	0.55 kW

Characteristic	Value
Power (HP)	0.75 HP
Flow Rate (Q)	5 ÷ 80 L/min (up to 4.8 m ³ /h)
Head (H)	50 ÷ 10 m (max 50m)
Suction	1"
Pump Body Material	AISI 304 Stainless Steel
Impeller Material	Noryl
Liquid Temperature Range	-10 °C to +40 °C
Ambient Temperature	Up to +40 °C
Max. Working Pressure	6 bar
Insulation Class	F
Protection	IP X4
Manufacturer Reference	43PJA5084A1

8.1. Characteristic Curves and Performance Data

Refer to the following graph for detailed performance characteristics (Head vs. Flow Rate) at 50 Hz, n=2900 1/min, HS=0m.



Figure 2: Characteristic Curves and Performance Data. This graph illustrates the relationship between head (H in meters) and flow rate (Q in L/min or m³/h) for various PLURIJET models, including the M4/80-N.

8.2. Construction Characteristics

Key components and their materials:

- **Pump Body:** Stainless steel AISI 304, with threaded ports in compliance with ISO 228/1.
- **Motor Backplate:** Stainless steel AISI 304.
- **Impellers:** Noryl FE1520PW.
- **Diffusers:** Noryl FE1520PW with anti-wear ring.
- **Motor Shaft:** Stainless steel EN 10088-3 - 1.4104.
- **Mechanical Seal:**
 - Seal Model: AR-13
 - Shaft Diameter: Ø 13 mm
 - Stationary Ring Material: Ceramic
 - Rotational Ring Material: Graphite
 - Elastomer: NBR
- **Bearings:**
 - PLURIJETm 3/60, 3/80, 3/100, 4/80-N: 6202 ZZ - C3 (6201 ZZ)
 - PLURIJETm 4/100-N: 6203 ZZ (6203 ZZ)
- **Capacitor (Single-phase 230V or 240V):**
 - PLURIJETm 3/60-N: 10 µF 450 VL (25 µF 250 V)
 - PLURIJETm 3/80-N: 12.5 µF 450 VL (25 µF 250 V)
 - PLURIJETm 4/80, 3/100-N: 14 µF 450 VL (25 µF 250 V)
 - PLURIJETm 4/100-N: 20 µF 450 VL (60 µF 300 V)
- **Electric Motor:**
 - PLURIJETm: Single-phase 230 V - 50 Hz with thermal overload protector built into the winding.
 - PLURIJET: Three-phase 230/400 V - 50 Hz.
 - Pumps fitted with the three-phase motor option offer IE2 (IEC 60034-30) class high performance.
 - Stator and rotor are made out of magnetic sheet with low iron loss.
 - Insulation: F class.
 - Protection: IP X4.

8.3. Dimensions

Refer to the diagram and table below for the physical dimensions of the pump.



Figure 3: Dimensional Drawing. This diagram provides a detailed view of the pump's dimensions (in mm), including various measurements labeled 'a', 'b', 'h1', 'h2', 'h3', 'n', 'n1', 'w', 'z', 's'.

Model		Ports		Dimensions (mm)								
Single phase	Three phase	DN1	DN2	a	b	h1	h2	h3	n	n1	w	z
PLURIJETm 3/60-N	PLURIJET 3/60-N	1"	1"	113	357	182	102	51	183	126	87	9
PLURIJETm 3/80-N	PLURIJET 3/80-N	1"	1"	113	357	182	102	51	183	126	87	9
PLURIJETm 4/80-N	PLURIJET 4/80-N	1"	1"	113	357	182	102	51	183	126	87	9
PLURIJETm 3/100-N	PLURIJET 3/100-N	1"	1"	113	357	182	102	51	183	126	87	9
PLURIJETm 4/100-N	PLURIJET 4/100-N	1"	1"	138	411	202	102	51	183	126	87	9

Note: The table above includes dimensions for various PLURIJET models. The PLURIJET M4/80-N shares dimensions with other models as indicated.

9. WARRANTY AND SUPPORT

For warranty information, please refer to the documentation provided with your purchase or contact your authorized Pedrollo dealer. Keep your proof of purchase for warranty claims.

For technical support, spare parts, or service, please contact your local Pedrollo service center or the retailer from whom you purchased the pump. Provide the model number (PLURIJET M4/80-N) and serial number (if applicable) when seeking assistance.



