Speroni HGM 80-2.2

Speroni HGM 80-2.2 Self-Priming Monoblock Water Pump User Manual

Model: HGM 80-2.2 | Part Number: 1833102

1. Introduction

This manual provides essential information for the safe and efficient installation, operation, and maintenance of your Speroni HGM 80-2.2 Self-Priming Monoblock Water Pump. Please read this manual thoroughly before using the pump and retain it for future reference.

The Speroni HGM 80-2.2 is a self-priming monoblock water pump designed for pumping clean water or non-aggressive liquids containing small solid impurities. It is suitable for various applications, including flow irrigation systems in gardening and agriculture, and industrial fittings.

2. Safety Instructions

WARNING: Failure to follow these safety instructions could result in electric shock, fire, serious injury, or death.

- Ensure the pump is installed by a qualified professional in accordance with local electrical and plumbing codes.
- Always disconnect power to the pump before performing any installation, maintenance, or repair work.
- Do not operate the pump with damaged electrical cords or plugs.
- Protect the pump from freezing temperatures. Drain the pump completely if there is a risk of freezing.
- Ensure proper ventilation around the motor to prevent overheating.
- Do not pump flammable, explosive, or corrosive liquids.
- Keep children and unauthorized personnel away from the pump during operation.
- The maximum liquid temperature for home use is 35°C (according to EN 60335-2-41). For other uses, the maximum liquid temperature is 90°C.
- The ambient temperature should not exceed 40°C.

3. Product Features

- **Self-Priming Capability:** The pump self-primes even if partially filled and if the suction hose is completely empty.
- **Integrated Check Valve:** A check valve inside the suction outlet prevents the siphon effect when stopping and ensures automatic re-start.
- **Robust Construction:** Features a cast iron pump body, motor support, and impeller for durability.
- **Efficient Motor:** Equipped with a two-pole induction motor (n = 3450 min-1).
- **Versatile Application:** Suitable for clean or slightly dirty water, flood irrigation, and industrial uses.
- **Stainless Steel Shaft:** Shaft with rotor made from Stainless Steel AISI 304.
- **Mechanical Seal:** Ceramic/Graphite/NBR for reliable sealing.
- **High Protection Rating:** IP 55 protection against dust and water jets.



Figure 1: Speroni HGM 80-2.2 Self-Priming Monoblock Water Pump. This image displays the complete pump unit, highlighting its blue cast iron body, the motor housing with cooling fins, and the electrical connection box on top of the motor. The pump features a visible inlet and outlet, and a priming port on the top of the pump body.

4. Setup and Installation

4.1 Unpacking and Inspection

1. Carefully remove the pump from its packaging.
2. Inspect the pump for any signs of damage during transit. Report any damage to your supplier immediately.
3. Ensure all components listed in the packing list are present.

4.2 Placement

- Install the pump on a firm, level surface to minimize vibration.
- Ensure the location is well-ventilated and protected from direct sunlight, rain, and freezing temperatures.
- Allow sufficient space around the pump for maintenance and air circulation.
- Position the pump as close as possible to the water source to minimize suction lift and friction losses.

4.3 Plumbing Connections

- Connect the suction line to the pump's inlet (3" Port Size). Ensure the suction line is airtight to prevent air leaks, which can affect priming.
- Connect the discharge line to the pump's outlet (3" Port Size).
- Use appropriate pipe fittings and sealants to ensure leak-free connections.
- Install a foot valve with a strainer at the end of the suction line in the water source to prevent debris from entering the pump and to maintain prime.
- Consider installing a gate valve on both the suction and discharge sides for easier maintenance.

4.4 Electrical Connection

- The pump requires a 230V, 15A, single-phase electrical supply.
- Ensure the electrical circuit is protected by a suitable circuit breaker or fuse.
- All electrical wiring must comply with local electrical codes and be performed by a licensed electrician.
- Verify that the power supply voltage matches the pump's requirements.
- Ensure the pump is properly grounded.

5. Operating Instructions

5.1 Priming the Pump

Although the HGM 80-2.2 is self-priming, initial priming is recommended for optimal performance and to ensure the pump starts correctly.

1. Ensure all plumbing connections are secure and leak-free.
2. Open the priming plug on top of the pump body.
3. Fill the pump casing completely with clean water until it overflows from the priming port.
4. Replace and tighten the priming plug.
5. Ensure the suction line is submerged in the water source.

5.2 Starting the Pump

1. Open any valves on the discharge side of the pump to allow water flow.
2. Connect the pump to the electrical supply.
3. Turn on the power switch. The pump should start and begin pumping water.
4. If the pump does not prime within a few minutes, turn it off, re-prime, and check for air leaks in the suction line.

5.3 Stopping the Pump

1. Turn off the power switch to the pump.
2. Close any valves on the discharge side if necessary.

6. Maintenance

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

6.1 General Checks

- Periodically inspect the pump for any leaks, unusual noises, or vibrations.
- Check electrical connections for corrosion or damage.
- Ensure the motor's cooling fins are free from dust and debris.

6.2 Winterization (for cold climates)

- If the pump is exposed to freezing temperatures, it must be drained completely to prevent damage.
- Disconnect power to the pump.
- Open the drain plug (if present) and the priming plug to allow all water to escape.
- Store the pump in a dry, frost-free location if possible.

6.3 Impeller and Seal Inspection

For advanced maintenance, consult a qualified technician. This may involve inspecting the impeller for wear or blockages and checking the mechanical seal for leaks.

7. Troubleshooting

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, check for blockages Contact qualified technician
Pump runs but does not prime or deliver water	Insufficient priming Air leak in suction line Suction line blocked Foot valve clogged or faulty Water level too low	Re-prime the pump completely Check all suction connections for leaks Clear any blockages in the suction line Clean or replace foot valve Ensure adequate water supply
Low flow or pressure	Partial blockage in suction/discharge Air in the system Worn impeller Motor running slow	Check and clear blockages Check for air leaks, re-prime Contact qualified technician Check power supply voltage
Excessive noise or vibration	Cavitation (air in pump) Loose mounting Bearing wear Debris in pump	Check for air leaks, ensure proper priming Tighten mounting bolts Contact qualified technician Inspect and clear pump casing

8. Specifications

Parameter	Value

Parameter	Value
Model	HGM 80-2.2
Part Number	1833102
Voltage	230V
Ampere	15A
Phase	Single
Frequency	60Hz
Nominal Power	3HP / 2.2kW
Input Power	3.3kW
RPM	3450 min-1 (Two-Pole Induction Motor)
Port Size (Inlet/Outlet)	3" / 3"
Performance	264 G/min / 56 ft.
Insulation Class	F
Protection Rating	IP 55
Pump Body Material	Cast Iron
Motor Support Material	Cast Iron
Impeller Material	Cast Iron
Shaft with Rotor Material	Stainless Steel AISI 304
Mechanical Seal	Ceramic/Graphite/NBR
Liquid Temperature (Home Use)	Up to 35°C (EN 60335-2-41)
Max. Liquid Temperature (Other Uses)	90°C
Ambient Temperature	Up to 40°C
Item Weight	71 pounds (32.2 kg)

9. Warranty and Support

For warranty information and technical support, please refer to the documentation provided with your purchase or contact your authorized Speroni dealer or the manufacturer directly. Keep your purchase receipt as proof of purchase.