Speroni CAM 40/22-HL

Speroni CAM 40/22-HL Pressure Booster Pump User Manual

Model: CAM 40/22-HL | Item Model Number: 101155630

1. Introduction

This manual provides essential information for the safe and efficient installation, operation, and maintenance of your Speroni CAM 40/22-HL Pressure Booster Pump. Please read these instructions carefully before using the product and retain them for future reference. This pressure booster unit is designed to increase water pressure in domestic installations.

2. Safety Information

Always observe basic safety precautions to reduce the risk of fire, electric shock, and personal injury.

- Ensure the power supply matches the pump's specifications (230V, 50Hz).
- Do not operate the pump with damaged cables or plugs.
- Keep children and unauthorized persons away from the operating pump.
- Disconnect the power supply before performing any maintenance or repairs.
- Do not pump flammable, corrosive, or explosive liquids.
- The maximum liquid temperature for operation is 35 °C.
- Ensure proper ventilation around the pump during operation.
- Installation should be performed by a qualified professional if you are unsure.

3. Product Overview

The Speroni CAM 40/22-HL is a reliable and quiet single-phase jet pump designed for continuous duty in domestic water pressure boosting applications. It features a robust cast iron construction.

Key Features:

- Single-phase jet pump for reliable performance.
- Suitable for increasing pressure in domestic water systems.
- Maximum liquid temperature: 35 °C.
- Absorbed power: 800 W.
- Maximum flow rate: 60 liters per minute.
- Maximum head: 40 meters.
- Maximum manometric suction height: 8 meters.
- Designed for continuous duty.

Components:

Figure 3.1: Angled view of the Speroni CAM 40/22-HL pump, highlighting the main components including the pump head, pressure tank, pressure gauge, and flexible hose connection.

Figure 3.2: Detail of the pressure gauge, which indicates the current system pressure.

Figure 3.3: Detail of the pressure

switch, responsible for automatically starting and stopping the pump based on pressure demand.

4. Setup

4.1 Unpacking

Carefully remove the pump from its packaging. Inspect for any signs of damage during transit. Report any damage to your supplier immediately.

4.2 Placement

- Place the pump on a stable, level surface to prevent vibration.
- Ensure the installation area is dry, well-ventilated, and protected from frost and direct sunlight.
- Allow sufficient space around the pump for maintenance and ventilation.
- The pump should be as close as possible to the water source to minimize suction lift.

4.3 Plumbing Connection

Connect the pump to your water supply and distribution system. Use appropriate fittings and sealants to ensure watertight connections.

- The suction line should be as short and straight as possible, with a diameter equal to or greater than the pump's suction port.
- Install a foot valve with a strainer at the end of the suction line in the water source to prevent debris entry and maintain prime.
- Install a shut-off valve on both the suction and discharge sides of the pump for isolation during maintenance.
- Ensure all connections are securely tightened to prevent air leaks, which can affect pump performance.

Figure 4.1: Example of a brass fitting for secure plumbing connections.

Figure 4.2: Flexible hose connection,

ensuring proper alignment and reducing vibration.

4.4 Electrical Connection

Connect the pump to a suitable electrical outlet. The pump is supplied with a power cable and plug.

- Ensure the electrical supply is 230 Volts, 50 Hz.
- The electrical circuit should be protected by a residual current device (RCD) for safety.
- Do not use extension cords unless absolutely necessary, and ensure they are rated for outdoor use and the pump's power requirements.

4.5 Priming the Pump

Before initial operation, the pump must be primed to ensure it is filled with water.

1. Open the priming plug located on the top of the pump casing.
2. Fill the pump casing completely with clean water until it overflows.
3. Replace and tighten the priming plug securely.
4. Open a tap in your domestic system to allow air to escape during initial startup.

5. Operating Instructions

5.1 Starting the Pump

Once the pump is primed and all connections are secure:

1. Plug the pump into a grounded electrical outlet.
2. The pump will start automatically when water demand is detected (e.g., opening a tap).
3. Allow the pump to run for a few minutes to ensure all air is expelled from the system. Close the open tap once water flows steadily without air bubbles.

5.2 Normal Operation

The pressure booster pump is designed for automatic operation. It will start when system pressure drops below a set point (due to water demand) and stop when the pressure reaches the upper set point or when water demand ceases.

5.3 Stopping the Pump

To stop the pump for an extended period or for maintenance:

1. Close all water outlets in your domestic system. The pump should stop automatically.
2. Unplug the pump from the electrical outlet to completely disconnect power.

6. Maintenance

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

6.1 Regular Checks

- **Check for Leaks:** Periodically inspect all connections for water leaks. Tighten or reseal as necessary.
- **Monitor Pressure Gauge:** Observe the pressure gauge during operation to ensure it is within expected ranges.

- **Listen for Unusual Noises:** Any unusual sounds may indicate a problem requiring attention.
- **Inspect Power Cable:** Check the power cable for any signs of damage or wear.

6.2 Cleaning

- Keep the exterior of the pump clean and free from dust and debris to ensure proper motor cooling.
- If a foot valve with a strainer is used, periodically clean the strainer to prevent blockages.

6.3 Winterization

If the pump is installed in an area subject to freezing temperatures, it must be drained to prevent damage.

1. Disconnect the pump from the power supply.
2. Close the shut-off valves on both the suction and discharge lines.
3. Open the drain plug on the pump casing and the priming plug to allow all water to drain out.
4. Store the pump in a dry, frost-free location if it is to be removed.

7. Troubleshooting

This section provides solutions to common issues you might encounter.

Problem	Possible Cause	Solution
Pump does not start	No power supply Motor overload protection tripped Pressure switch malfunction	Check power connection and circuit breaker. Allow motor to cool, then reset if applicable. Consult a qualified technician.
Pump runs but no water or low flow	Pump not primed Air leak in suction line Foot valve or strainer blocked Water source depleted	Re-prime the pump (Section 4.5). Check and tighten all suction line connections. Clean foot valve and strainer. Ensure adequate water supply.
Pump cycles frequently	Small leak in the system Pressure tank pre-charge pressure incorrect Pressure switch settings incorrect	Inspect plumbing for leaks. Check and adjust pressure tank air charge (consult manual or technician). Adjust pressure switch settings (consult manual or technician).
Excessive noise or vibration	Cavitation (air in pump) Loose mounting bolts Bearing wear	Ensure pump is fully primed and no air leaks. Tighten mounting bolts. Consult a qualified technician.

8. Specifications

Technical data for the Speroni CAM 40/22-HL Pressure Booster Pump.

Specification	Value
Model	CAM 40/22-HL
Item Model Number	101155630
Brand	Speroni
Power Source	Electric
Voltage	230 Volts
Frequency	50 Hz
Absorbed Power	800 W
Maximum Liquid Temperature	35 °C
Maximum Flow Rate	60 Liters per minute
Maximum Head (Prevalence)	40 Meters
Maximum Manometric Suction Height	8 Meters
Material	Cast Iron
Color	RAL 5010 Blue
Product Dimensions (L x W x H)	54.2 x 27 x 48 cm
Item Weight	16.5 Kilograms
Product Type Name	Electropump

Performance Curve:

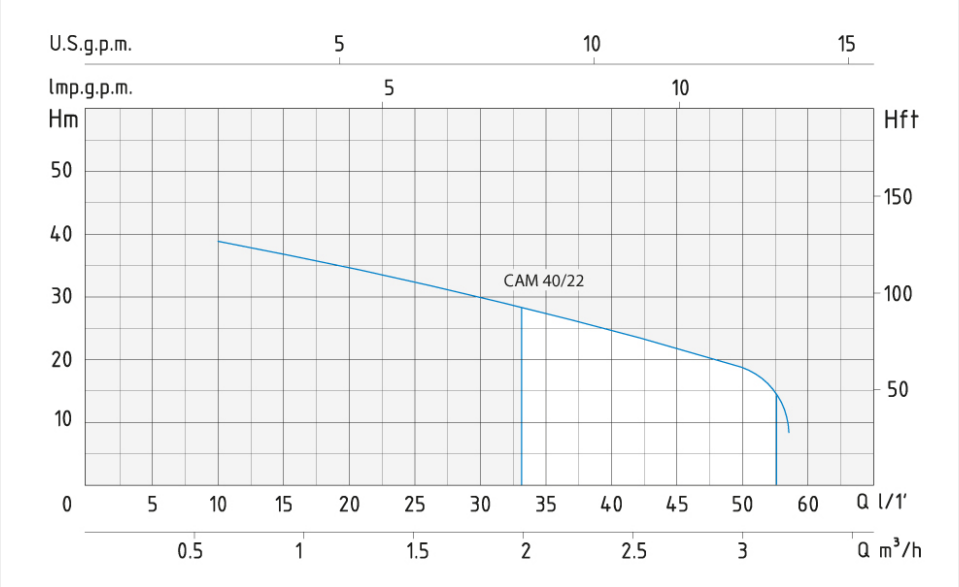

Figure 8.1: Performance curve illustrating the relationship between flow rate (Q) and head (H) for the CAM 40/22-HL model.

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. Keep your proof of purchase for warranty claims.