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Moonshan MS-PP-4

Moonshan 3/4 HP Water Pressure Booster Pump (Model MS-PP-4) User Manual

Your guide to installation, operation, and maintenance.

1. INTRODUCTION AND OVERVIEW

This manual provides essential information for the safe and efficient operation of your Moonshan MS-PP-4 3/4 HP Water Pressure Booster Pump. This pump is designed to enhance water pressure for various applications, including household water supply, garden irrigation, and shallow well pumping. It features a durable stainless steel pump head, an intelligent auto ON/OFF pressure switch, and a self-priming system for reliable performance.



Figure 1: Moonshan 3/4 HP Water Pressure Booster Pump and included accessories.

The pump is equipped with a 304 stainless steel pump head for corrosion resistance and an all-copper motor for improved efficiency and longevity. The integrated pressure tank and adjustable pressure switch ensure stable water pressure and prevent frequent cycling.

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Video 1: An overview of the Moonshan 3/4 HP Water Pressure Booster Pump, demonstrating its function in improving home water pressure.

2. SAFETY INFORMATION

Read all safety warnings and instructions carefully before installing or operating this product. Failure to follow these instructions may result in electric shock, fire, serious injury, or property damage.

- **Electrical Safety:** Ensure the power supply matches the pump's voltage (110V AC). Always connect to a grounded outlet. Do not operate with damaged cords or plugs. Disconnect power before servicing.
- **Water Safety:** This pump is designed for clean water applications. Do not use with flammable liquids or in explosive atmospheres. Ensure proper sealing to prevent leaks and electrical hazards.

- **Installation:** Install the pump in a dry, well-ventilated area, protected from freezing temperatures and direct sunlight. Ensure stable mounting to prevent vibration.
- **Operation:** Do not run the pump dry. Ensure the inlet pipe is submerged in water before operation. Keep hands and foreign objects away from moving parts.
- **Maintenance:** Only perform maintenance when the pump is disconnected from power. Refer to the maintenance section for specific procedures.

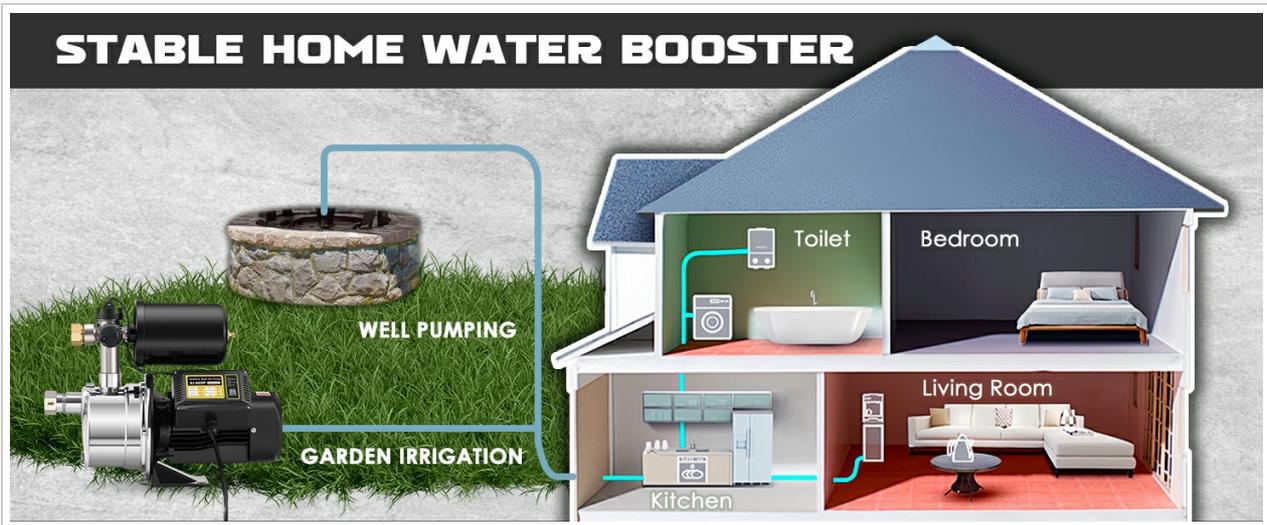


Figure 2: The pump features multiple protection systems, including water shortage and overheat protection, to ensure safe operation.

3. PRODUCT COMPONENTS AND FEATURES

The Moonshan MS-PP-4 pump integrates several key components for optimal performance:

- **304 SUS Pump Head:** Constructed from stainless steel for superior corrosion resistance and durability, ensuring clean water delivery.
- **All-Copper Motor:** Provides higher efficiency, lower energy loss, and reduced heat generation compared to aluminum wire motors, leading to a longer lifespan.
- **Intelligent Pressure Switch:** Automatically senses water pressure and controls pump operation. Cut-in pressure is adjustable.
- **Pressure Tank:** A small integrated pressure tank improves the stability of pump pressurization and reduces frequent machine startups.
- **Dual-Scale Pressure Gauge:** Allows for real-time monitoring of water pressure in both PSI and BAR.
- **Self-Priming System:** Designed for easy setup and operation, capable of drawing water from shallow wells up to 25 feet deep.



All Copper Motor

Compared to aluminum motors, all copper motors have stronger power, faster heat dissipation and longer service time.

Figure 3: Key components of the Moonshan MS-PP-4 Water Pressure Booster Pump.



Figure 4: The all-copper motor provides superior electrical conductivity and heat dissipation.

4. SETUP AND INSTALLATION

The pump is designed for a 2-step installation process. Follow these guidelines for proper setup:

- 1. Placement:** Position the pump on a stable, level surface in a location protected from weather and freezing temperatures. Ensure adequate ventilation.
- 2. Connections:**
 - Connect the inlet pipe (suction line) to the pump's inlet port (typically 1" NPT). Ensure all connections are tight and sealed to prevent air leaks, which can affect priming.
 - Connect the outlet pipe (discharge line) to your water system or garden hose using the 1" NPT connectors.
- 3. Priming (Self-Priming):** While the pump is self-priming, it is recommended to fill the pump casing with water through the priming port before the initial startup to ensure quick and efficient operation.
- 4. Power Connection:** Plug the 20 ft power cord into a standard 110V AC grounded electrical outlet.



Figure 5: Example of pump installation in a household setting.

5. OPERATING INSTRUCTIONS

Operating your Moonshan booster pump is straightforward:

1. **Initial Start-up:** After installation and priming, ensure all connections are secure. Turn on the power. The pump will automatically start to build pressure.
2. **Automatic ON/OFF:** The intelligent pressure switch will automatically turn the pump ON when water pressure drops below the set cut-in pressure (e.g., when a faucet is opened) and OFF when the pressure reaches the desired level (e.g., when the faucet is closed).
3. **Adjusting Cut-in Pressure:** The cut-in pressure can be adjusted using the knob switch on the pressure sensor. Refer to Figure 6 for the location of the adjustment knob. The pump can provide up to 40 PSI additional pressure.
4. **Monitoring Pressure:** Observe the dual-scale pressure gauge to monitor the system's water pressure in real-time.
5. **Water Shortage Protection:** If the inlet pipe runs out of water, the pump will automatically stop working, and an indicator lamp will light up to prevent damage from dry running.

AUTO ON/OFF - INTELLIGENT WATER PRESSURE SENSOR



Figure 6: The pump's auto ON/OFF feature with intelligent water pressure sensing.



Cut-in Pressure Switch

Cut-in pressure can be adjusted between 20 and 30 psi, and the pump can provide up to 40 Psi to additional pressure.

Indicator Lamp

There are 3 indicator lamps on the panel, convenient to display the working status of the pump.



Dual-scale Pressure Gauge

Built-in Pressure Gauge facilitates to observe the situation in the tank in real time.

Figure 7: Details of the cut-in pressure switch, indicator lamps, and dual-scale pressure gauge.

6. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your pump.

- **Regular Inspection:** Periodically check all connections for leaks. Inspect the power cord for any signs of damage.
- **Cleaning:** Keep the pump exterior clean and free from debris. Ensure the motor's heat vents are not

obstructed to allow for proper cooling.

- **Winterization:** If the pump is installed in an area subject to freezing temperatures, it must be drained completely to prevent damage. Disconnect power, open the drain outlet, and allow all water to escape. Store in a dry, frost-free location.
- **Pressure Tank Check:** The small pressure tank is pre-charged. If the pump cycles too frequently, the air charge in the tank may need to be checked and adjusted by a qualified technician.

7. TROUBLESHOOTING

Refer to the following table for common issues and their solutions:

Problem	Possible Cause	Solution
Pump does not start	No power; tripped circuit breaker; motor overload; wiring issue.	Check power connection and circuit breaker. Allow motor to cool if overloaded. Inspect wiring for loose connections (consult a professional if unsure).
Low or no water pressure	Air leak in suction line; clogged inlet/outlet; pump not primed; insufficient water supply.	Check all connections for air leaks. Clean inlet/outlet. Re-prime the pump. Ensure adequate water source.
Pump runs continuously	Leak in plumbing system; pressure switch malfunction; pressure tank issue.	Check for leaks in the system. Inspect pressure switch for proper function. Consult a technician for pressure tank issues.
Pump cycles too frequently	Low air charge in pressure tank; small leak in system.	Check for small leaks. Have the pressure tank air charge inspected and adjusted by a professional.
Water shortage indicator on	No water in the inlet line.	Ensure the water source is available and the inlet pipe is fully submerged. Re-prime the pump if necessary.

8. SPECIFICATIONS

Specification	Value
Brand	Moonshan
Model Number	MS-PP-4
Power Source	Corded Electric
Voltage	110 Volts
Horsepower	3/4 HP

Specification	Value
Maximum Flow Rate	16.8 Gallons Per Minute (1050 GPH)
Maximum Suction Depth	25 Feet
Maximum Pressure	Up to 43 PSI (additional pressure)
Material	Stainless Steel
Product Dimensions (L x W x H)	13" x 6" x 11"
Item Weight	12 Pounds
Included Components	Booster Pump

HIGH WORKING PERFORMANCE



Figure 8: Performance metrics of the Moonshan MS-PP-4 pump.

9. WARRANTY AND SUPPORT

Moonshan provides a one-year warranty for this product, covering manufacturing defects under normal use. For warranty claims or technical support, please contact Moonshan customer service through your purchase platform or the official Moonshan website. Please have your model number (MS-PP-4) and purchase date available when contacting support.

For additional resources and product information, visit the official Moonshan store: [Moonshan Store](#)

