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› [Moonshan Instant Hot Water Recirculating Pump System with Adjustable Bypass Valve and Timer \(Model MS-RP-2\) - User Manual](#)

Moonshan MS-RP-2

Moonshan Instant Hot Water Recirculating Pump System

Model: MS-RP-2

INTRODUCTION

This manual provides essential information for the installation, operation, and maintenance of your Moonshan Instant Hot Water Recirculating Pump System. This system is designed to deliver hot water to your faucets quickly, reducing water waste and improving convenience. It features an upgraded adjustable stainless steel bypass valve kit and a programmable timer for efficient operation.

Note: This recirculating pump is designed for indoor use only with standard tank water heaters and is not compatible with tankless water heaters.

PRODUCT OVERVIEW



Figure 1: Complete Moonshan Instant Hot Water Recirculating Pump System components, including the pump, adjustable bypass valve, and hoses.

The Moonshan Instant Hot Water Recirculating Pump System includes:

- Hot Water Recirculating Pump with Upgraded Timer
- 304 Stainless Steel Adjustable Bypass Sensor Valve Kit
- 20-inch PEX Faucet Supply Lines (Lead-Free, Non-Toxic, No Off-smell)
- Necessary adapters, rubber washers, and clamps for installation

UPGRADED BYPASS SENSOR VALVE

No vibration noise



Moonshan



Material
304 Stainless Steel



Control Temperature
68-118°F (Adjustable)



Removable Filter Screen



Service Life
Long Last

Old Version

Plastic/Brass

<100°F



Easy Broken

Figure 2: The upgraded bypass sensor valve, made from 304 stainless steel, designed for durability and adjustable temperature control (68-118°F).

20" LONGER PEX FAUCET SUPPLY LINES

3/8 Comp x 1/2 FIP



Lead Free



Non-Toxic



No Off-smell

- PEX food grade inner hose
No off-smell
Food grade safety

- Stainless Steel Braid
Explosion-proof
Flexible



Figure 3: The included 20-inch PEX faucet supply lines, featuring food-grade inner hose and stainless steel braid for flexibility and safety.

SETUP AND INSTALLATION

The following steps outline the installation process for the Moonshan Instant Hot Water Recirculating Pump System. A complete kit is provided to facilitate straightforward setup.

Video 1: Installation guide for the Moonshan Instant Hot Water Recirculating Pump System, demonstrating each step from preparation to final power-up.

1. **Step 1: Close the Water Supply Line.** Locate the main water supply valve to your water heater and turn it off to prevent water flow during installation.
2. **Step 2: Drain the Hot Water.** Open a hot water faucet in your home to drain any remaining hot water from the pipes. This relieves pressure and prevents spills.
3. **Step 3: Install the Recirculating Pump onto the Water Heater.** Connect the recirculating pump to the hot water outlet of your tank water heater. Ensure connections are secure and leak-free.
4. **Step 4: Close both the Hot and Cold Water Stop Valves below the Sink.** At the furthest faucet from the water heater where the bypass valve will be installed, close both the hot and cold water supply valves under the sink.
5. **Step 5: Install the Sensor Valve.** Install the adjustable bypass sensor valve between the hot and cold water supply lines under the sink. Follow the directional arrows on the valve for correct flow. Connect the PEX faucet supply lines to the sensor valve and the faucet.
6. **Step 6: Reopen the Hot and Cold Water Stop Valves.** Once the sensor valve is installed, reopen the hot and cold water stop valves under the sink.
7. **Step 7: Reopen the Water Supply Line.** Slowly reopen the main water supply valve to your water heater. Check for any leaks at all connection points.
8. **Step 8: Plug in the Power.** Plug the recirculating pump into a standard electrical outlet. The system is now ready for operation.



Figure 4: Schematic diagram illustrating the installation of the recirculating pump on the hot water outlet of a tank water heater and the bypass sensor valve under a sink.

OPERATING INSTRUCTIONS

The Moonshan Recirculating Pump features an upgraded programmable timer for customized operation.



Figure 5: The programmable timer offers three modes: Always On, Timer Mode, and Always Off, allowing users to set specific operating

schedules.

- **Timer Control:** Use the intelligent timer to set specific schedules for the pump to start and stop. This allows you to have hot water available during peak usage times, such as mornings or evenings, without continuous operation.
- **Adjustable Temperature:** The bypass sensor valve allows for temperature adjustment between 68-118°F. This enables precise customization to your desired hot water temperature.
- **Instant Hot Water:** Once configured, the system circulates hot water through your pipes, ensuring hot water is available at the faucet within seconds, eliminating waiting time and reducing water waste.



Figure 6: Setting the programmable timer to align with desired hot water availability, such as for cooking or showering.

MAINTENANCE

Regular maintenance ensures optimal performance and longevity of your recirculating pump system.

- **Filter Screen:** The sensor valve includes a replaceable filter screen on the hot water port. Periodically inspect and clean this filter screen to prevent impurities and particles from clogging the valve and reducing flow.
- **System Inspection:** Regularly check all connections for leaks. Ensure the pump and valve are free from debris or damage.
- **Winterization:** The system helps prevent hot water pipes from freezing. However, in extremely cold conditions, ensure proper insulation and consider additional measures if the system is not in continuous use.



Figure 7: Location of the replaceable filter screen within the sensor valve, designed to block impurities and reduce maintenance.

TROUBLESHOOTING

If you encounter issues with your recirculating pump system, refer to the following common troubleshooting steps:

Problem	Possible Cause	Solution
No hot water or slow hot water delivery	Pump not running; Timer set incorrectly; Clogged filter screen; Closed water valves	Check power connection; Verify timer settings; Clean filter screen; Ensure all water valves are open.
Pump making unusual noise	Air in the system; Debris in pump; Loose connections	Bleed air from the system; Inspect pump for debris (consult professional if needed); Tighten connections.
Leaks at connections	Loose fittings; Damaged washers	Tighten all fittings; Replace damaged rubber washers.

If problems persist, contact customer support for assistance.

SPECIFICATIONS

Feature	Detail
Brand	Moonshan
Model Number	MS-RP-2
Material	Stainless Steel
Style	Tank Type (for Tank Water Heaters only)
Power Source	Corded Electric (110V)
Item Weight	8.47 pounds
Product Dimensions	5.9 x 5.5 x 5.9 inches
Max. Flow	8.4 GPM
Max. Pressure	1.0 MPa
Adjustable Temperature Range (Bypass Valve)	68-118°F
Included Components	Recirculating pump, adjustable temperature sensor valve, 20-inch PEX supply lines, adapters, rubber washers.

DIMENSIONS



Input: 110V	Max.flow: 8.4GPM
Power: 100W	Max.pressure: 1.0MPa
Inlet/outlet: 3/4"NPT	Weight: 5Lbs

All necessary components are included : Lead-free recirculating pump, Adjustable temperature sensor valve, 20-inch PEX supply lines, adapters with rubber washers.

Figure 8: Visual representation of the pump's dimensions and a summary of its technical specifications.

WARRANTY AND SUPPORT

The Moonshan Instant Hot Water Recirculating Pump System comes with a **1-year warranty** from the date of purchase, covering manufacturing defects and malfunctions under normal use.

For technical support, troubleshooting assistance, or warranty claims, please contact Moonshan customer service. Refer to your purchase documentation for specific contact details.

Additional protection plans may be available through your retailer. Please check with your point of purchase for details on extended coverage options.

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