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› [Moonshan Instant Hot Water Recirculating Pump \(Model MS-PUMP-5\) User Manual](#)

Moonshan MS-PUMP-5

Moonshan Instant Hot Water Recirculating Pump (Model MS-PUMP-5) User Manual

Model: MS-PUMP-5 | Brand: Moonshan

1. INTRODUCTION

This manual provides comprehensive instructions for the installation, operation, maintenance, and troubleshooting of your Moonshan Instant Hot Water Recirculating Pump, Model MS-PUMP-5. Please read this manual thoroughly before installation and use to ensure safe and efficient operation.

2. IMPORTANT SAFETY INFORMATION

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

- Always disconnect power before installing or servicing the pump.
- Installation must be performed by a qualified plumber or technician in accordance with local plumbing and electrical codes.
- Do not operate the pump if it is damaged or appears to be malfunctioning.
- Ensure all connections are secure and leak-free to prevent water damage.
- This pump is designed for use with standard tank water heaters only. It is **not compatible** with tankless water heater systems.
- Never run the pump dry (without water). This can cause severe damage to the unit.
- Keep children and pets away from the installation area.

3. PACKAGE CONTENTS

Verify that all items listed below are included in your package:

- Instant Hot Water Recirculating Pump
- Adjustable Temperature Bypass Valve (304 Stainless Steel)
- 20-inch Faucet Water Supply Lines
- Wi-Fi Smart Plug
- Adapters with Rubber Washers

- Mounting Clamps
- PTFE Thread Seal Tape
- User Manual (this document)



Figure 3.1: All components included in the Moonshan Instant Hot Water Recirculating Pump kit.

4. PRODUCT SPECIFICATIONS

Specification	Detail
Brand	Moonshan
Model Number	MS-PUMP-5
Material	Stainless Steel
Product Dimensions	6"L x 6"W x 5"H

Power Source	Corded Electric (110V/60Hz)
Max Flow Rate	10.5 GPM
Inlet/Outlet	3/4" NPT
Adjustable Temperature Range	68-140°F (20-60°C)
Pump Power Settings	46W (5.3GPM), 85W (7.9GPM), 100W (10.5GPM)
Weight	9.17 pounds

WATER CONSERVATION

SAVE

Up to **10%** of
your water bill

10,000 Gallons
of water



Figure 4.1: Product dimensions and key specifications.

5. INSTALLATION GUIDE

This recirculating pump system is designed for easy installation with standard tank water heaters. It does not require a dedicated return line.

5.1 Pre-Installation Checklist

- Ensure the main water supply and water heater power are turned off.
- Drain a small amount of water from the hot water line to relieve pressure.
- Confirm you have all necessary tools (e.g., wrenches, pipe thread sealant).
- Verify the system is compatible with your tank water heater. **Not for tankless systems.**

5.2 Pump Installation

1. **Locate Installation Point:** The pump should be installed on the hot water outlet pipe of your tank water heater.
2. **Connect Pump:** Use the quick-install connectors to attach the recirculating pump to the hot water outlet. Ensure the flow arrow on the pump aligns with the direction of hot water flow out of the heater. The union fittings allow for rotation-free installation.
3. **Secure Wiring:** The system features reinforced wiring for heat conditions. Ensure all electrical connections are secure and protected.

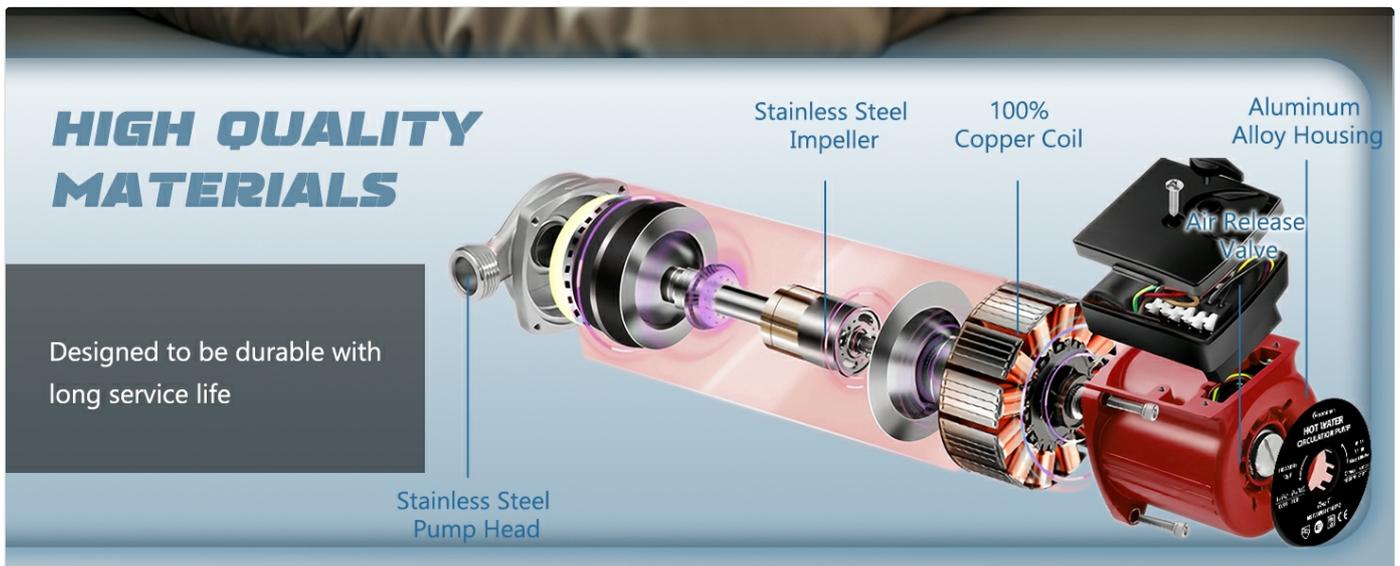


Figure 5.1: Quick-install union fitting for easy pump connection.



Figure 5.2: Upgraded thick wiring for enhanced heat protection.

5.3 Bypass Valve Installation

The adjustable bypass sensor valve should be installed under the sink furthest from the water heater, or at a central point in your hot water loop, to ensure efficient recirculation.

1. **Identify Faucet:** Choose the faucet furthest from your water heater.
2. **Disconnect Supply Lines:** Turn off the water supply to the faucet. Disconnect the existing hot and cold water supply lines from the faucet stems.
3. **Install Bypass Valve:** Connect the bypass valve to the hot and cold water supply lines under the sink using the provided 20-inch faucet water supply lines and adapters. Ensure the valve is oriented correctly (hot to hot, cold to cold). The bypass technology allows cold water to push cooled hot water back to the heater.
4. **Check for Leaks:** Slowly turn on the main water supply and check all connections for leaks.

UPGRADED BYPASS SENSOR VALVE

No vibration noise



Moonshan



Material
304 Stainless Steel



Control Temperature
68-140°F (Adjustable)



Removable Filter Screen



Service Life
Long Last

Old Version

Plastic/Brass

<100°F



Easy Broken

Figure 5.3: Upgraded 304 Stainless Steel Bypass Sensor Valve.

✓ Enjoy instant hot water

✓ Save time and water

Moonshan

**INSTANT HOT WATER
RECIRCULATING PUMP KIT**

2025 Upgraded New Version

RS15/6
110V 60Hz
CLASS: M
TFS6
IP:42

Figure 5.4: Thermal Bypass Technology operation.

20-INCH

FAUCET WATER SUPPLY LINES

FOOD GRADE SAFETY



NSF



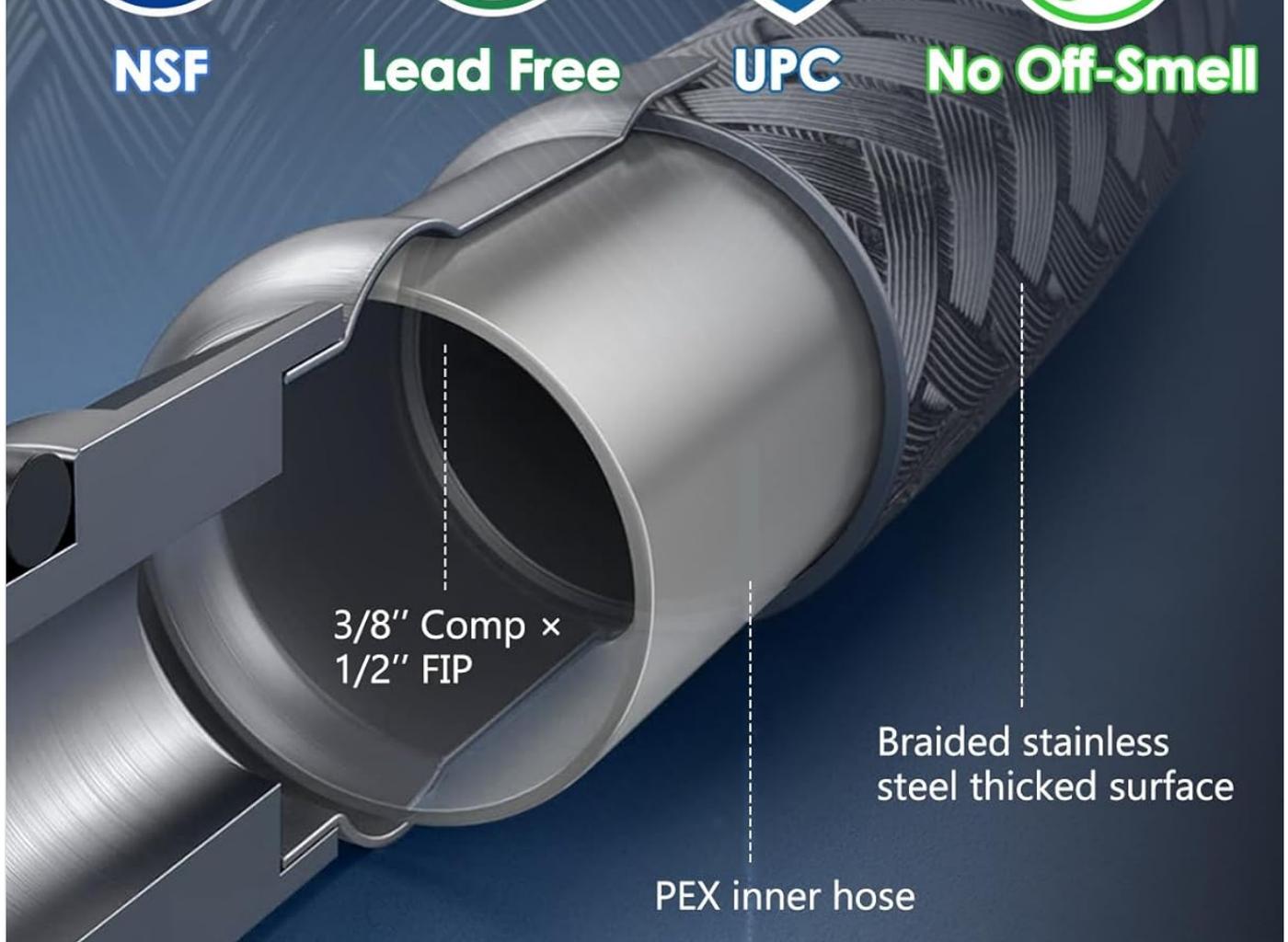
Lead Free



UPC



No Off-Smell



3/8" Comp x
1/2" FIP

Braided stainless
steel thicked surface

PEX inner hose

Figure 5.5: 20-inch Faucet Water Supply Lines.

5.4 System Overview



Figure 5.6: Typical installation diagram for tank water heaters.

6. OPERATING INSTRUCTIONS

6.1 Initial Startup

1. After installation and leak checks, restore power to the water heater and the recirculating pump.
2. Open a hot water faucet until water flows consistently, ensuring air is purged from the lines.

- The pump will begin circulating water.

6.2 Adjusting Bypass Valve Temperature

The bypass valve allows you to set the desired hot water temperature range for recirculation.

- The adjustable temperature range is 68-140°F (20-60°C).
- Rotate the dial on the bypass valve to select your preferred temperature. The valve will open to recirculate water when the line temperature drops below this setting and close when it reaches the set temperature.

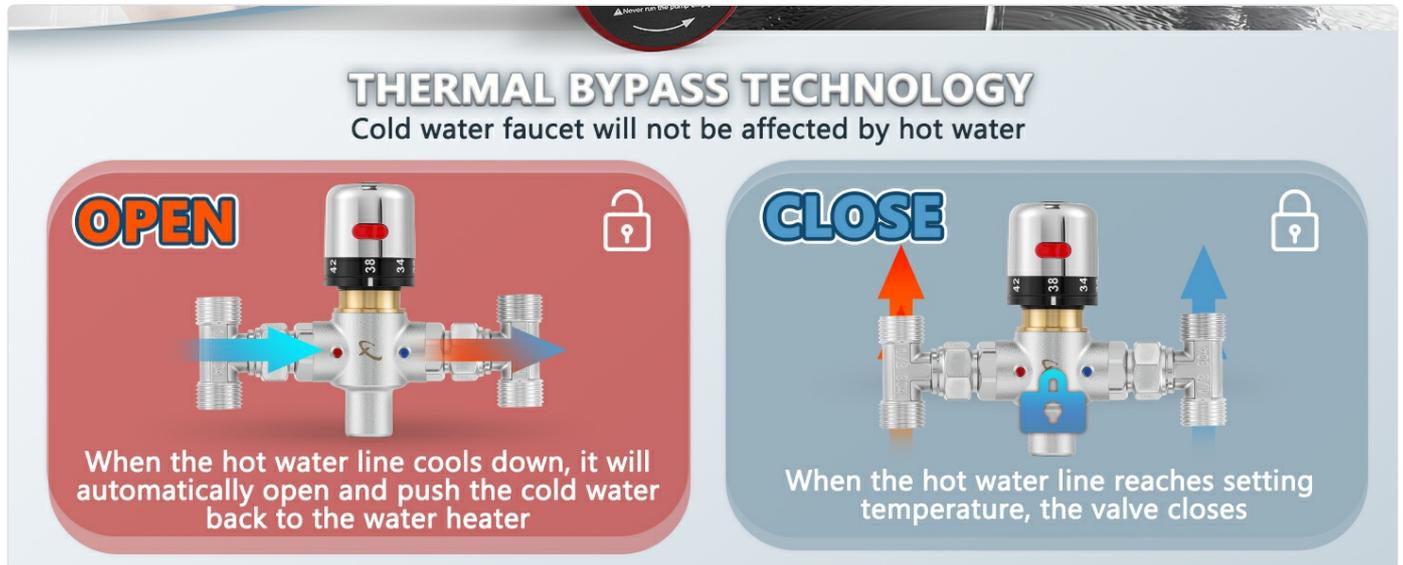


Figure 6.1: Bypass valve temperature setting range.

6.3 Pump Speed Control

The recirculating pump features three speed settings to adjust flow rate and power consumption:

- Setting 1:** 46W (5.3 GPM) - Lower power, suitable for smaller homes or less frequent hot water demand.
- Setting 2:** 85W (7.9 GPM) - Medium power, balanced performance.
- Setting 3:** 100W (10.5 GPM) - Higher power, for faster hot water delivery or larger plumbing systems.

Adjust the switch on the pump housing to select the desired speed.

3 -SPEED CONTROL

With Different Flow Rate



Figure 6.2: Pump 3-speed control settings.

6.4 Wi-Fi Smart Plug Operation

The included Wi-Fi Smart Plug allows for scheduled operation, optimizing energy use and hot water availability.

1. **Connect Smart Plug:** Plug the recirculating pump into the Wi-Fi Smart Plug, then plug the smart plug into a standard electrical outlet.
2. **App Setup:** Download the compatible smartphone application (refer to smart plug instructions for specific app

details). Follow the in-app instructions to connect the smart plug to your 2.4GHz Wi-Fi network.

3. **Schedule Operation:** Use the app to program daily or weekly start/stop cycles for the pump. This allows you to have instant hot water during peak usage times (e.g., mornings) and conserve energy when not needed. The smart plug also offers voice control (via Alexa or Google Home), timing/countdown functions, power failure memory, and energy monitoring.

10A WI-FI SMART PLUG

Cut Energy Costs – Pump Only Runs When Needed

**2.4GHZ
WIFI**

- APP Remote Control
- Voice Control (Alexa or Google Home)
- Timing/Countdown/Schedule Function
- Power Failure Memory
- Sharing Function
- Energy Monitoring

Figure 6.3: Wi-Fi Smart Plug features.

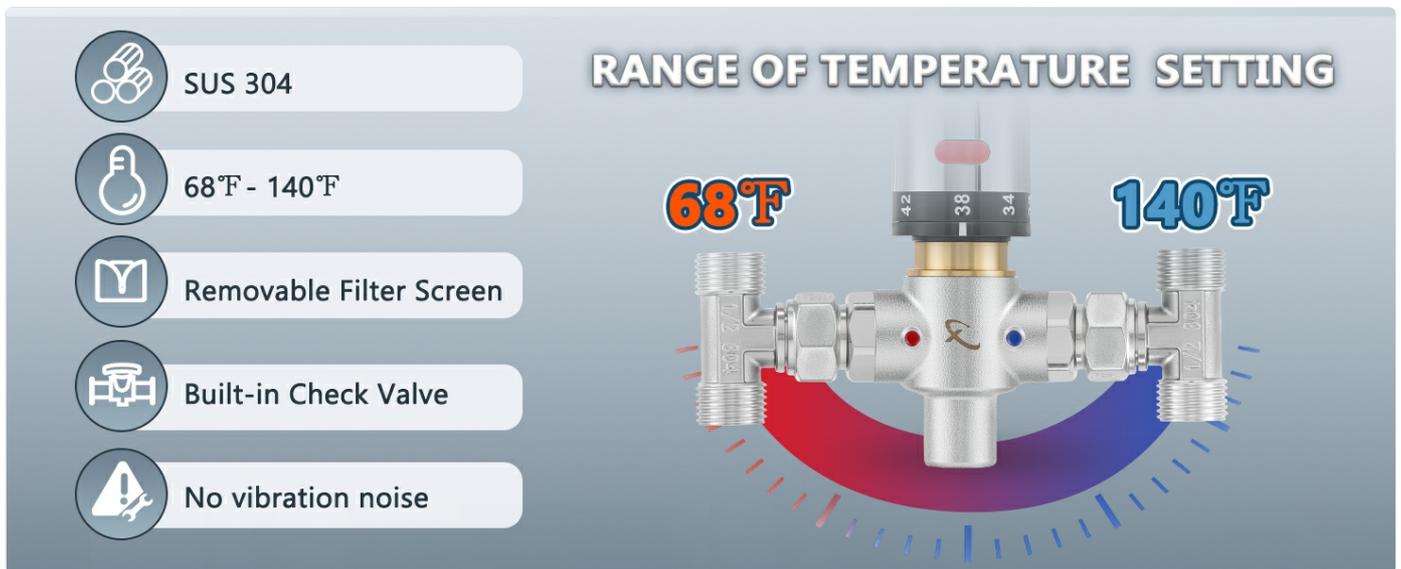


Figure 6.4: Scheduling pump operation with the Wi-Fi Smart Plug.

7. MAINTENANCE

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

- **Filter Screen Cleaning:** The bypass valve includes a removable filter screen. Periodically inspect and clean this screen to prevent debris buildup, which can affect performance. Turn off water supply before removing and cleaning the screen.
- **Leak Checks:** Regularly inspect all connections for any signs of leaks. Address any leaks immediately to prevent water damage.
- **General Cleaning:** Keep the exterior of the pump and smart plug clean and free of dust and debris. Use a soft, damp cloth for cleaning. Do not use abrasive cleaners.
- **Winterization (if applicable):** In cold climates, ensure pipes are adequately insulated to prevent freezing, especially if the pump is installed in an unheated area. The system helps prevent frozen pipes by circulating warm water.

8. TROUBLESHOOTING

Refer to the table below for common issues and their solutions.

Problem	Possible Cause	Solution
No hot water or delayed hot water.	Pump not receiving power. Bypass valve temperature set too low. Air in the system. Pump speed setting too low for demand. Filter screen clogged.	Check power connection to pump and smart plug. Ensure smart plug schedule is active. Increase the temperature setting on the bypass valve. Purge air by opening a hot water faucet until flow is consistent. Increase pump speed setting. Clean the removable filter screen in the bypass valve.
Pump is running but no hot water.	Bypass valve malfunction. Incorrect installation (e.g., pump flow direction). Water heater issue.	Inspect bypass valve for proper function. Verify pump installation and flow direction. Check your water heater for proper operation.

Pump making unusual noise.	Air in the system. Pump running dry. Debris in pump impeller.	Purge air from the system. Ensure water supply is fully open and pump is not running without water. Contact customer support for assistance.
Wi-Fi Smart Plug not connecting.	Incorrect Wi-Fi network (only 2.4GHz supported). Weak Wi-Fi signal. Incorrect app setup.	Ensure your router is broadcasting a 2.4GHz network. Move the smart plug closer to your Wi-Fi router or use a Wi-Fi extender. Refer to the smart plug's specific instructions for app pairing.

If you encounter issues not listed here or if the problem persists, please contact Moonshan customer support.

9. WARRANTY INFORMATION

The Moonshan Instant Hot Water Recirculating Pump (Model MS-PUMP-5) comes with a **One-Year Limited Warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use.

The warranty does not cover:

- Damage caused by improper installation, misuse, abuse, or neglect.
- Damage caused by unauthorized repairs or modifications.
- Normal wear and tear.
- Damage from external causes such as accidents, natural disasters, or power surges.

Proof of purchase is required for all warranty claims. Please retain your receipt.

10. CUSTOMER SUPPORT

For technical assistance, warranty claims, or any questions regarding your Moonshan Instant Hot Water Recirculating Pump, please contact our customer support team:

- **Email:** support@moonshan.com
- **Phone:** 1-800-XXX-XXXX
- **Website:** Visit the [Moonshan Store on Amazon](#) for more information and product updates.

Please have your model number (MS-PUMP-5) and date of purchase ready when contacting support.

11. WATER CONSERVATION

The Moonshan Instant Hot Water Recirculating Pump system is designed to significantly reduce water waste by eliminating the wait for hot water. By recirculating cooled water back to the water heater, it helps save up to 10,000 gallons of water per year and can reduce your water bill.

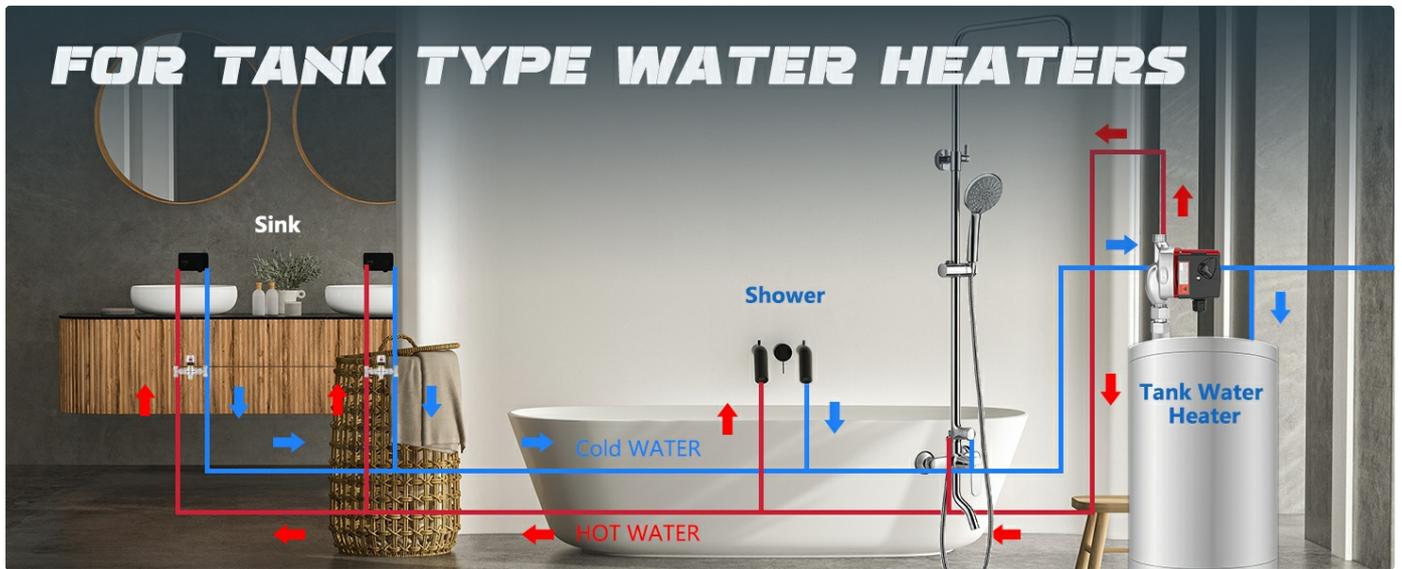


Figure 11.1: The system helps conserve water and reduce utility costs.