

Thincol Thincolesvx5zngqu

Thincol 24V DC Brushless Solar High Temperature Water Pump User Manual

Model: Thincolesvx5zngqu

1. INTRODUCTION

This manual provides essential information for the safe and efficient installation, operation, and maintenance of your Thincol 24V DC Brushless Solar High Temperature Water Pump. Please read this manual thoroughly before using the product and retain it for future reference.

The Thincol 24V DC Brushless Solar High Temperature Water Pump is designed for various water circulation and boosting applications, including solar water heaters, electric water heaters, and general water circulation systems. Its brushless design ensures long life and quiet operation.

2. PRODUCT FEATURES

- **24V High Temperature Resistant:** Designed for high-temperature water circulation, suitable for applications up to 100°C.
- **Brushless DC Motor:** Utilizes electronic commutation for extended lifespan, low noise operation (<35dB), and high efficiency.
- **Amphibious Design:** Can be used both submerged in cold water or in non-diving installations.
- **Energy Efficient:** Operates at DC 24V 18W, providing a maximum flow of 11 L/min and a maximum head of 6 meters.
- **Versatile Applications:** Ideal for hot and cold water pressurization, refrigeration systems, solar heat collection, water heater circulation, floor heating, and fountains.

3. TECHNICAL SPECIFICATIONS

Specification	Value
Rated Voltage	24V DC
Power	18 W

Specification	Value
Rated Current	0.85A (maximum)
Inlet/Outlet Dimensions	1/2" male thread / 20mm
Flow Rate	11 L/min (maximum)
Maximum Lifting Height	6 Meters
Max Fluid Temperature	100°C
Wire Length	80 cm
Noise Level	<35dB (low noise)
Life Expectancy	> 40000 hours
Material	Ceramic (for wear-resistant shaft)
Product Dimensions	4.33"L x 4.33"W x 2.76"H (approx.)
Item Weight	9.9 ounces (approx.)

The pump features a magnetically isolated design where the stator and rotor parts are completely separated, enhancing durability and performance.

4. SAFETY GUIDELINES

- Ensure the power supply matches the pump's rated voltage (24V DC).
- Do not operate the pump dry (without water) as this can cause damage.
- Always disconnect power before performing any installation, maintenance, or troubleshooting.
- Install the pump in a location where it is protected from physical damage and extreme environmental conditions, unless designed for such exposure.
- Ensure all connections are secure and watertight to prevent leaks and electrical hazards.
- Keep children and pets away from the pump during operation.

5. INSTALLATION

Proper installation is crucial for the pump's performance and longevity. Refer to the diagrams below for guidance.

5.1 General Installation Considerations

- The pump is designed for both submersible and non-submersible (in-line) applications.
- Ensure the pump is installed in a manner that allows for easy access for maintenance.
- Use appropriate fittings and sealants to prevent leaks at the inlet and outlet connections.

5.2 Installation Angle and Orientation

Incorrect installation orientation can affect pump performance and lifespan. The pump body should ideally be installed vertically or horizontally with the main body facing down or to the sides, as shown in the correct examples below.

Installation Angle



**Horizontal Installation
Main Body Of The Pump, Up**



**The Pump Body Installed
Left And Right**



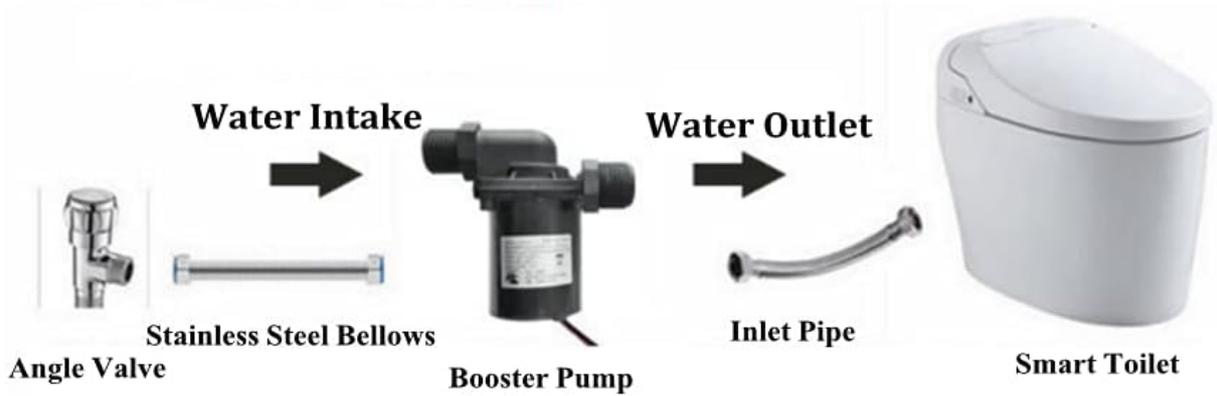
**Horizontal Installation
Main Body Of The Pump, Down**

Image Description: This diagram illustrates various pump installation angles. It shows an incorrect horizontal installation where the main body of the pump is facing up (marked with an 'X'). Correct installations include the pump body installed left and right, and horizontal installation with the main body of the pump facing down (both marked with a checkmark). This ensures proper water flow and prevents air pockets.

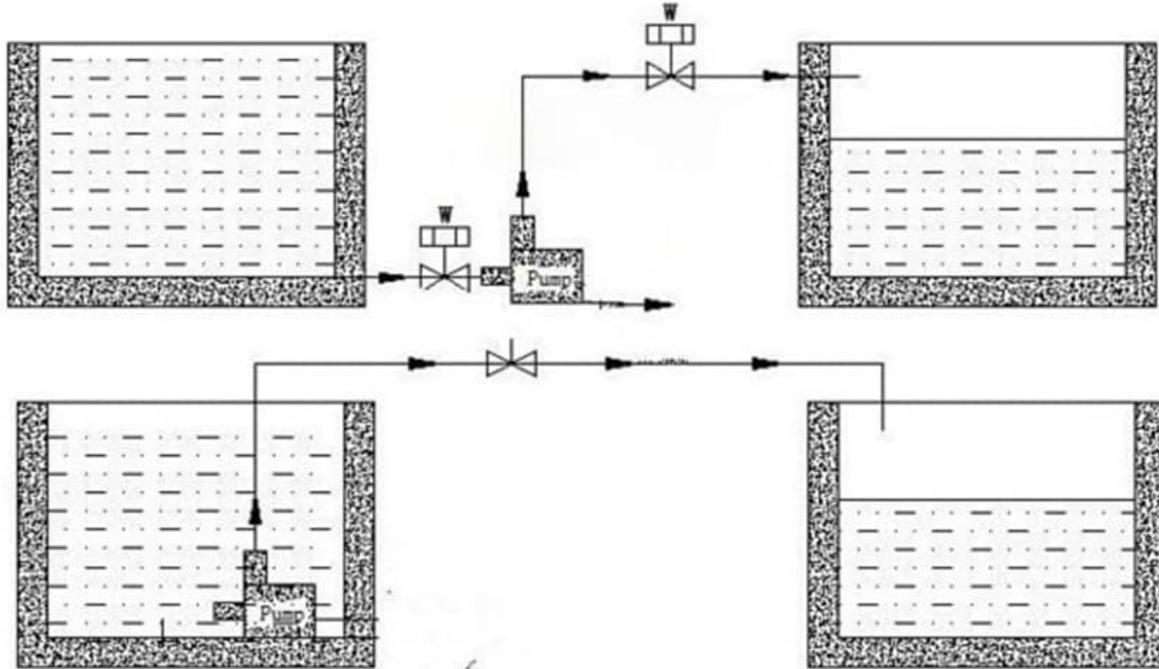
5.3 Submersible and Non-Diving Installation Methods

The pump supports both submerged and non-submerged setups, offering flexibility for various applications.

Smart toilet water flow pressurization



Submersible Pump Installation Method



Non-Diving Installation Method

Image Description: This image displays three different installation scenarios. The top section shows a 'Smart toilet water flow pressurization' setup, detailing the connection from an angle valve to stainless steel bellows, then to the booster pump, and finally to the smart toilet via an inlet pipe. The middle section illustrates a 'Submersible Pump Installation Method' with the pump fully immersed in a water tank. The bottom section depicts a 'Non-Diving Installation Method' where the pump is installed outside the water tank, drawing water from it.

For submersible applications, ensure the pump is fully immersed in water to prevent dry running and aid in cooling. For non-diving (in-line) installations, ensure the pump is positioned below the water source or properly primed to avoid airlocks.

6. OPERATION

The Thincol water pump is designed for continuous operation in various water circulation and boosting systems. Once installed correctly and connected to a 24V DC power source, the pump will begin to circulate water.

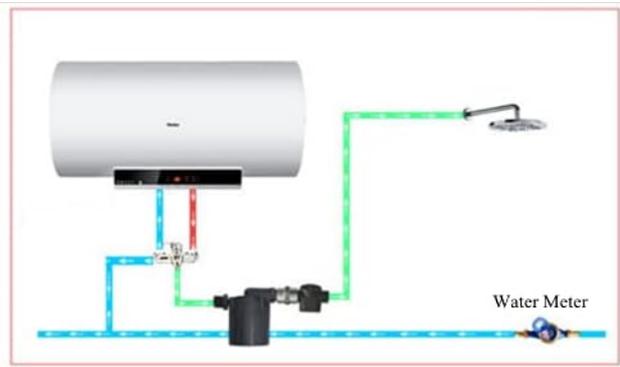
6.1 Typical Applications

This pump is suitable for a wide range of uses, including:

- Solar water heater boosting
- Electric water heater boosting
- Gas water heater pressurization
- General hot and cold water pressurization
- Refrigeration systems
- Water circulation systems
- Solar heat collection cycles
- Solar temperature difference cycles
- Water heater water pipe cycles
- Solar floor heating and general floor heating systems
- Fountains and other decorative water features



Solar Water Heater Booster



Electric Water Heater Booster



Gas Water Heater Pressurization

-  Hot And Cold Mix
-  Cold Water
-  Hot Water

Methods



Image Description: This image illustrates the pump's application in various water heating systems. It shows diagrams for 'Solar Water Heater Booster', 'Electric Water Heater Booster', and 'Gas Water Heater Pressurization', indicating how the pump integrates into the hot and cold water lines to boost pressure. A legend clarifies the color coding for hot water, cold water, and hot and cold mix.

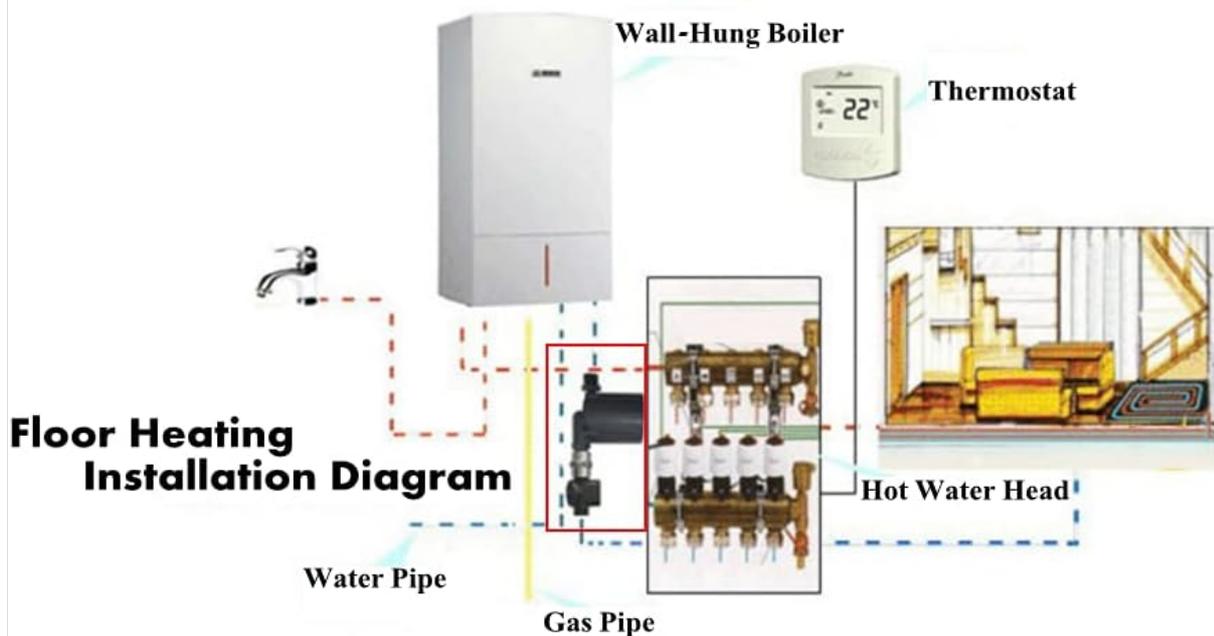


Image Description: This image presents two installation diagrams. The top diagram shows a 'Heating Installation Diagram' with the pump integrated into a system circulating water to radiators. The bottom diagram illustrates a 'Floor Heating Installation Diagram', detailing the pump's role in circulating hot water through a floor heating manifold system, connected to a wall-hung boiler and thermostat.

6.2 Power Connection

Connect the 24V DC power adapter (not included) to the pump's power input cable. Ensure the polarity is correct. The pump is designed for low power consumption and quiet operation.



Image Description: A close-up view of the pump's power input connector, showing the standard DC barrel jack for connecting to a 24V DC power source.

7. MAINTENANCE

The Thincol brushless pump is designed for minimal maintenance due to its durable ceramic shaft and brushless motor. However, periodic checks can help ensure optimal performance and extend its lifespan.

- **Regular Inspection:** Periodically check the pump and connections for any signs of leaks, damage, or wear.
- **Cleanliness:** If used in environments where debris or sediment might be present, periodically clean the pump's inlet to prevent blockages. Disconnect power before cleaning.
- **Avoid Dry Running:** Never operate the pump without water. Dry running can cause overheating and permanent damage to the motor and seals.
- **Temperature Monitoring:** While designed for high temperatures, ensure the operating temperature does not exceed 100°C.

8. TROUBLESHOOTING

If you encounter issues with your pump, refer to the following common problems and solutions:

- **Pump Not Starting:**
 - Check if the 24V DC power supply is connected correctly and providing power.
 - Ensure the power adapter is functioning.

- Verify that there are no blockages in the pump's inlet or outlet.
- **Low Flow Rate or Pressure:**
 - Check for blockages in the pipes or pump inlet/outlet.
 - Ensure the water level is sufficient for submersible applications or that the pump is properly primed for non-submersible use.
 - Inspect for air leaks in the suction line if applicable.
- **Unusual Noise:**
 - Air in the system can cause noise; ensure the pump is properly primed.
 - Check for debris inside the pump. Disconnect power and carefully inspect.
 - Ensure the pump is securely mounted and not vibrating against other surfaces.
- **Pump Overheating:**
 - The pump may be running dry; ensure it has a continuous water supply.
 - Check for excessive back pressure or blockages in the discharge line.
 - Ensure ambient temperature is within operating limits.

If problems persist after attempting these solutions, contact customer support.

9. WARRANTY AND SUPPORT

Specific warranty details are not provided in the product information. For warranty claims or technical support, please contact your retailer or the manufacturer, Thincol, directly. Please have your model number (Thincolesvx5zngqu) and purchase information available when contacting support.