

Racold Alpha Pro

Racold Alpha Pro Solar 100 LPD Water Heater User Manual

Model: Alpha Pro

1. INTRODUCTION

This manual provides essential information for the safe and efficient installation, operation, and maintenance of your Racold Alpha Pro Solar 100 LPD Domestic Water Heater. The Alpha Pro range utilizes high energy absorption vacuum tubes (over 1800mm length) to ensure optimal energy absorption and high efficiency. Please read this manual thoroughly before installation and use.

2. SAFETY INFORMATION

- **Professional Installation:** Installation of this solar water heater must be performed by qualified and authorized personnel in accordance with local codes and regulations. Improper installation can lead to hazards and void the warranty.
- **Hot Water Hazard:** The system produces hot water. Exercise extreme caution when using hot water to prevent scalding. Consider installing thermostatic mixing valves if required by local codes.
- **System Pressure:** Do not tamper with the pressure relief valve. Ensure the system is properly vented to prevent over-pressurization.
- **Electrical Safety:** Although primarily solar-powered, ensure any auxiliary electrical components (if present) are installed and maintained by a qualified electrician.
- **Structural Integrity:** Ensure the mounting surface or roof structure can safely support the weight of the filled water heater and its components.

3. PRODUCT OVERVIEW

The Racold Alpha Pro Solar Water Heater is designed for domestic hot water needs, leveraging solar energy for efficient heating. Key features include:

- **Duronox Tank:** Features a specially treated Duronox SS 304 L tank, ensuring durability and resistance against corrosion, particularly suitable for hard water applications up to 1000 ppm, 500 chloride, and 7.5 pH.
- **High-Efficiency Vacuum Tubes:** Racold vacuum tubes are designed to international standards for optimum energy absorption and higher efficiency.
- **Unique Float Valve:** A Racold-exclusive float valve eliminates long air vents, enhancing safety, especially in areas with high wind velocity.
- **Rustproof Construction:** Built with materials resistant to rust for extended product life.

The system typically consists of a storage tank, vacuum tube collectors, and a support structure for outdoor installation.

4. SETUP AND INSTALLATION

The Racold Alpha Pro Solar Water Heater is designed for outdoor installation. Due to the complexity and safety requirements, installation must be carried out by a certified professional. This section provides general guidelines; refer to the detailed installation manual provided with the product for specific instructions.

4.1 Site Selection

Choose a location with maximum exposure to direct sunlight throughout the day, free from shading by trees or buildings. The roof or ground must be structurally sound to support the unit's weight.

4.2 Mounting

The unit is typically wall-mounted or installed on a robust frame. Ensure the frame is securely anchored and the angle of the collectors is optimized for solar gain in your region.

4.3 Plumbing Connections

Connect the cold water inlet and hot water outlet to your domestic plumbing system. Install necessary valves, including a non-return valve on the cold water inlet and a pressure relief valve as per local regulations. Ensure all connections are watertight.

4.4 Filling the System

Once plumbing is complete, slowly fill the system with water, ensuring all air is purged from the pipes and tank. Check for any leaks during this process.

5. OPERATING INSTRUCTIONS

The Racold Alpha Pro Solar Water Heater operates automatically once installed and filled. Sunlight heats the water within the vacuum tubes, which then rises into the insulated storage tank.

- **Initial Heating:** Allow sufficient time for the system to heat water after installation or prolonged periods of non-use. This may take several hours depending on sunlight intensity.
- **Hot Water Usage:** Use hot water as needed. The system will continuously replenish the hot water supply as long as there is adequate sunlight.
- **Auxiliary Heating (if applicable):** If your model includes an electric backup heater for cloudy days or high demand, refer to its specific operating instructions.

6. MAINTENANCE

Regular maintenance ensures optimal performance and longevity of your solar water heater.

- **Vacuum Tube Cleaning:** Periodically inspect and clean the vacuum tubes to remove dust, dirt, or debris that may reduce solar absorption. Use a soft cloth and mild detergent if necessary.
- **Leak Inspection:** Regularly check all plumbing connections and the tank for any signs of leaks. Address any leaks promptly to prevent water wastage and damage.
- **Pressure Relief Valve:** Annually test the pressure relief valve by lifting the lever briefly to ensure it operates freely. Follow manufacturer guidelines for this procedure.
- **Hard Water Areas:** In areas with very hard water, consider periodic descaling of the tank and tubes by a professional to prevent mineral buildup, which can reduce efficiency.
- **Structural Check:** Inspect the support structure and mounting for any signs of corrosion or loosening, especially after severe weather.

7. TROUBLESHOOTING

This section addresses common issues you might encounter with your solar water heater.

- **Insufficient Hot Water:**
 - Ensure vacuum tubes are clean and free from obstructions (e.g., shade).
 - Check for leaks in the system.
 - Verify adequate sunlight exposure.
 - If applicable, check the auxiliary heater for proper function.
- **Water Leaks:**
 - Identify the source of the leak (connections, tank, tubes).
 - Tighten loose connections.
 - For persistent leaks from the tank or tubes, contact customer service.
- **No Water Flow:**
 - Check main water supply valves.
 - Inspect for blockages in pipes.

For issues not resolved by these steps, or for complex repairs, contact Racold customer support or a qualified technician.

8. SPECIFICATIONS

The Racold Alpha Pro Solar 100 LPD Water Heater features robust construction and efficient design. Refer to the diagram and table below for detailed specifications.



Figure 1: Diagram illustrating the Racold Alpha Pro Solar Water Heater with key dimensions (L, W, H) and a table detailing specifications for various models, including capacity, number of tubes, tube specifications, and ideal family size. The 100 LPD model has 10 tubes, a tube specification of Ø58 X 1800, and dimensions L=1965mm, W=1175mm, H=1150mm, suitable for a family of 4.

Racold Alpha Pro Solar Water Heater Specifications (100 LPD Model)

Specification	Detail
Brand	Racold
Model Number	Alpha Pro (SMER01)
Capacity	100 litres (100 LPD)
Power Source	Solar Powered
Tank Material	Duronox SS 304 L Stainless Steel
Number of Tubes	10
Tube Specification	Ø58 X 1800 mm
Dimensions (L x W x H)	1965 mm x 1175 mm x 1150 mm
Mount Type	Outdoor Installation
Included Components	Wire Whip (as per product listing)
Efficiency	High Efficiency
Hard Water Suitability	Up to 1000 ppm, 500 chloride, and 7.5 pH

9. WARRANTY AND SUPPORT

Your Racold Alpha Pro Solar Water Heater comes with a manufacturer's warranty to ensure dependable service.

- **Warranty Period:** The tank comes with a 5-year warranty. Please refer to your warranty card for full terms and conditions, as the warranty typically covers the tank only.
- **Claiming Warranty:** In case of a product defect covered under warranty, contact Racold customer service with your purchase details and product model number.
- **Customer Support:** For technical assistance, service requests, or any queries regarding your product, please refer to the contact information provided in your product documentation or visit the official Racold website.