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> TC-Home 18L Tankless Propane Gas Water Heater User Manual

TC-Home 18L

TC-Home 18L Tankless Propane Gas Water Heater User Manual

Model: 18L | Brand: TC-Home

1. INTRODUCTION

This manual provides essential instructions for the safe and efficient operation, installation, and maintenance of your TC-Home 18L Tankless Propane Gas Water Heater. Please read this manual thoroughly before installation and use, and retain it for future reference.



Image 1.1: Front view of the TC-Home 18L Tankless Propane Gas Water Heater. This image displays the compact design and the 18L capacity marking on the unit's front panel.

2. IMPORTANT SAFETY INFORMATION

Failure to follow these safety instructions could result in property damage, personal injury, or death.

- **Ventilation:** Ensure adequate ventilation when the water heater is in use to prevent carbon monoxide buildup.
- **Gas Type:** This unit is designed for LPG (Liquid Petroleum Gas/PROPANE) only. Do not use other gas types.
- **Installation:** Installation must be performed by a qualified professional in accordance with local codes and regulations.
- **Water Pressure:** Do not operate the unit if water pressure is below the minimum requirement (0.025MPa).
- **Freezing Temperatures:** In cold weather, drain the unit completely after use to prevent residual water from freezing and cracking the tank.
- **Leak Detection:** Regularly check for gas and water leaks. Use a soapy water solution for gas leak detection.
- **Children:** Keep children away from the water heater during operation. Hot water can cause severe burns.
- **Power Source:** The automatic electric ignition requires two (2) size 'D' batteries (not included). No mains electrical hook-up is required.

3. PRODUCT FEATURES

The TC-Home 18L Tankless Propane Gas Water Heater incorporates advanced technology for efficient and safe hot water delivery.

- **High Efficiency:** Features an advanced energy-saving combustion technology to minimize gas consumption and operational noise.
- **Low Water Pressure Startup:** Designed to operate effectively even under low water pressure conditions, suitable for areas with limited water supply or high-rise buildings.
- **Safety Protections:** Includes manifold auto protection, ion flame inspection for automatic gas shut-off upon unexpected flameout, and over water pressure protection.
- **User-Friendly Controls:** Equipped with a controller design allowing proper regulation of both cold and warm water flow.
- **Compact Design:** Modern, thin-shaped appearance for aesthetic integration.
- **Automatic Ignition:** Features an automatic electric ignition system powered by two 'D' batteries.
- **Self-Timer:** Incorporates a 20-minute off self-timer for added safety.

4. COMPONENTS AND CONTROLS

Familiarize yourself with the various parts and controls of your water heater.

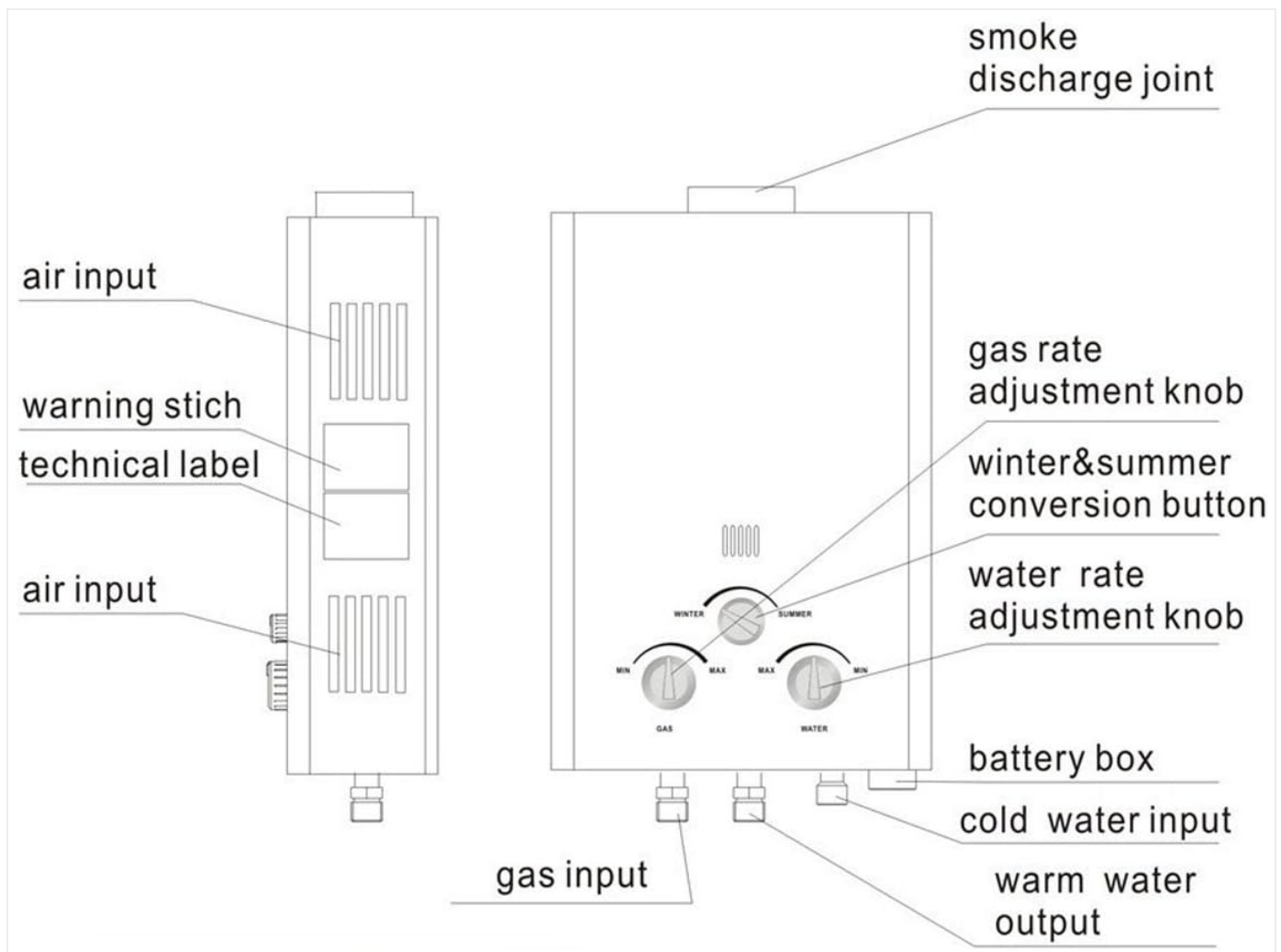


Image 4.1: Diagram illustrating the main components and controls of the water heater, including gas rate adjustment knob, winter/summer conversion button, water rate adjustment knob, battery box, cold water input, warm water output, gas input, air input, smoke discharge joint, warning sticker, and technical label.

- **Gas Rate Adjustment Knob:** Controls the gas flow to adjust heating intensity.
- **Winter & Summer Conversion Button:** Optimizes gas consumption based on seasonal temperature changes.
- **Water Rate Adjustment Knob:** Regulates the water flow through the unit.
- **Battery Box:** Houses the two 'D' batteries for ignition.
- **Cold Water Input:** Connection point for the cold water supply.
- **Warm Water Output:** Outlet for heated water.
- **Gas Input:** Connection point for the LPG supply.
- **Smoke Discharge Joint:** Outlet for exhaust gases.



Image 4.2: Close-up view of the ON/OFF switch, gas inlet, water output, and water inlet connections at the bottom of the unit.

5. SETUP AND INSTALLATION

Proper installation is crucial for the safe and efficient operation of your water heater. It is highly recommended that installation be performed by a certified professional.

5.1. Mounting the Unit

1. Select a suitable wall location, ensuring adequate clearance around the unit for ventilation and maintenance.
2. The unit dimensions are approximately 16.5" (W) x 25.5" (H) x 7" (D).
3. Securely mount the unit to a sturdy wall structure using appropriate fasteners.



Image 5.1: Side view of the water heater showing its dimensions: 16.5 inches wide, 7 inches deep, and 25.5 inches high.



Image 5.2: Rear view of the water heater, highlighting the mounting brackets at the top and bottom for secure wall installation.

5.2. Gas Connection

1. Connect the LPG (Propane) supply to the gas input (G 1/2") on the unit.
2. Ensure the gas pressure is set to 2800Pa. A gas pressure regulator is recommended.
3. Use the provided gas inlet interface link method for a secure connection.

Gas inlet interface link method:

Step 1:



Step 2:



Step 3:



Step 4:



Image 5.3: Step-by-step guide for connecting the gas inlet interface. This image shows the components (nut, washer, adapter) and the sequence for proper assembly to ensure a leak-free gas connection.

5.3. Water Connections

1. Connect the cold water supply to the Water Inlet (G1/2").
2. Connect the hot water distribution line to the Water Outlet (G1/2").
3. Ensure all water connections are tight and leak-free.

5.4. Exhaust Vent Installation

1. Install the 4.3" flue duct to the smoke discharge joint.
2. Ensure the exhaust system is properly sealed and vented to the outside, away from windows or air intakes.
3. Refer to the installation diagram for recommended clearances and pipe routing.



Image 5.4: Close-up of the exhaust vent, showing the protective grille and the connection point for the flue duct.

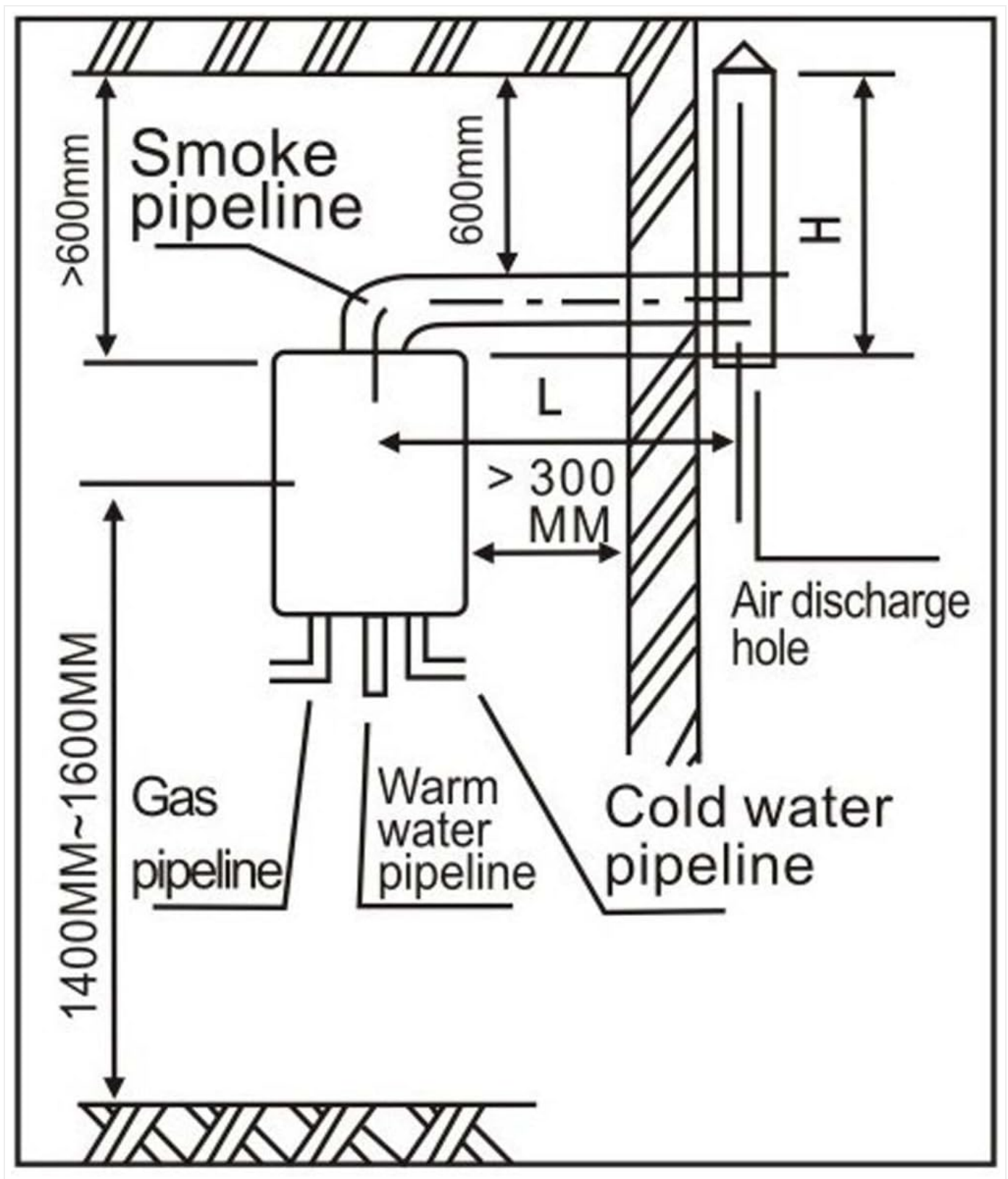


Image 5.5: Detailed installation diagram showing recommended distances for the smoke pipeline (flue duct), gas pipeline, warm water pipeline, and cold water pipeline, along with the air discharge hole. Minimum clearances are indicated.

5.5. Battery Installation

1. Open the battery compartment (refer to Image 4.1).
2. Insert two (2) size 'D' batteries, ensuring correct polarity.
3. Close the battery compartment securely.

6. OPERATING INSTRUCTIONS

Follow these steps to operate your TC-Home 18L Tankless Propane Gas Water Heater.

1. **Ensure Connections:** Verify that all gas and water connections are secure and that the gas supply is open.
2. **Install Batteries:** Confirm that two 'D' batteries are correctly installed in the battery box for ignition.
3. **Turn On Water Supply:** Open the cold water inlet valve to allow water to flow into the unit.
4. **Power On:** Locate the ON/OFF switch (refer to Image 4.2) and switch the unit to the 'ON' position.
5. **Adjust Settings:**
 - Use the **Water Rate Adjustment Knob** to set the desired water flow. Higher flow rates may result in slightly lower temperatures.
 - Use the **Gas Rate Adjustment Knob** to control the flame intensity and thus the water temperature.
 - Select **Winter** or **Summer** mode using the conversion button to optimize gas usage based on ambient temperature.
6. **Initiate Hot Water:** Open a hot water faucet. The unit will automatically ignite and begin heating water.
7. **Monitor Temperature:** The unit may feature a digital display for water temperature (if applicable to your model). Adjust knobs as needed to achieve desired output temperature.
8. **Shut Down:** To turn off the unit, close the hot water faucet. The unit will automatically cease operation. For extended periods of non-use, switch the ON/OFF button to 'OFF' and close the main gas supply valve.

7. MAINTENANCE

Regular maintenance ensures the longevity and safe operation of your water heater.

- **Battery Replacement:** Replace 'D' batteries annually or when the ignition becomes inconsistent.
- **Cleaning:** Periodically clean the exterior of the unit with a soft, damp cloth. Do not use abrasive cleaners.
- **Ventilation Check:** Ensure the exhaust vent is clear of obstructions and the area around the unit is well-ventilated.
- **Water Drainage (Cold Weather):** In regions prone to freezing, completely drain the water from the unit after each use or before extended periods of non-use. This prevents damage from freezing water.
- **Professional Inspection:** It is recommended to have the unit inspected by a qualified technician annually to ensure optimal performance and safety.

8. TROUBLESHOOTING

Refer to this section for common issues and their potential solutions. If problems persist, contact a qualified technician.

Problem	Possible Cause	Solution
Unit does not ignite.	<ul style="list-style-type: none">◦ Low or no water pressure.◦ No gas supply or low gas pressure.◦ Dead or incorrectly installed batteries.◦ ON/OFF switch is in 'OFF' position.	<ul style="list-style-type: none">◦ Check water supply and pressure.◦ Verify gas tank is open and has sufficient gas; check regulator.◦ Replace batteries; ensure correct polarity.◦ Switch unit to 'ON'.

Problem	Possible Cause	Solution
Water is not hot enough.	<ul style="list-style-type: none"> ◦ Gas rate too low. ◦ Water flow rate too high. ◦ Incorrect season mode (e.g., Summer mode in cold weather). 	<ul style="list-style-type: none"> ◦ Increase gas rate using the knob. ◦ Decrease water flow rate using the knob. ◦ Switch to Winter mode.
Water leaks from connections.	<ul style="list-style-type: none"> ◦ Loose connections. ◦ Damaged seals or fittings. ◦ Unit damaged by freezing. 	<ul style="list-style-type: none"> ◦ Tighten connections. ◦ Replace damaged parts. ◦ Inspect unit for cracks; if damaged, unit may need replacement.
Unit shuts off unexpectedly.	<ul style="list-style-type: none"> ◦ Lack of water flow. ◦ Gas supply interrupted. ◦ Overheating protection activated. ◦ 20-minute self-timer activated. 	<ul style="list-style-type: none"> ◦ Ensure continuous water flow. ◦ Check gas supply. ◦ Allow unit to cool; check for proper ventilation. ◦ This is normal operation; restart if needed.

9. SPECIFICATIONS

Feature	Detail
Brand	TC-Home
Model	18L
Capacity	18 L/min (4.8 GPM)
Gas Type	LPG (Propane)
Thermal Input	36 KW
Heat Output	36 Kilowatts
Efficiency	≥80.8%
Working Temperature	-8 to 45°C
Temperature Rise	25°C
Minimum Working Water Pressure	0.025 MPa
Gas Pressure	2800 Pa
Vent Type	4.3" Flue Duct
Gas Pipe Connection	G 1/2"
Water Inlet/Outlet Connection	G 1/2"
Ignition	Automatic Electric Ignition (2 x 'D' batteries)
Electrical Requirement	DC3V (Batteries only, no mains power)

Feature	Detail
Product Dimensions (W x H)	16.5" x 25.5"
Item Weight	8.5 KG (18.7 pounds)
Cover Material	Cold Rolled Sheet
Certification	ISO 9001:2000

10. WARRANTY AND SUPPORT

Specific warranty details for your TC-Home 18L Tankless Propane Gas Water Heater may vary. Please refer to the documentation included with your purchase or contact TC-Home customer support for detailed warranty information and technical assistance.

For support, please visit the official TC-Home website or contact their customer service department.

