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› APUS Tankless Water Heater Instruction Manual (Models AP-AWH-Q20 & AP-ADSF-45M06)

APUS APUS Tankless Water Heater (AP-AWH-Q20 & AP-ADSF-45M06)

APUS Tankless Water Heater Instruction Manual

Models: AP-AWH-Q20 (Gas Unit) & AP-ADSF-45M06 (Electric Unit)

1. INTRODUCTION

This manual provides essential information for the safe installation, operation, and maintenance of your APUS Tankless Water Heater system, which includes a 140,000 BTU propane gas main water heater (AP-AWH-Q20) and a 4500W electric point-of-use primary water heater (AP-ADSF-45M06). Please read this manual thoroughly before installation and use, and retain it for future reference.

The APUS dual water heating system is designed to provide instant and continuous hot water for various household needs, combining the capacity of a whole-house gas unit with the precision of an electric point-of-use heater.

2. SAFETY INFORMATION

WARNING: Improper installation, adjustment, alteration, service, or maintenance can cause property damage, injury, or death. Read the installation, operating, and maintenance instructions thoroughly before installing or servicing this equipment.

- **Professional Installation Recommended:** Both the gas and electric units require professional installation to ensure safety and compliance with local codes.
- **Gas Unit Safety:** The gas unit features 8 protection systems, including freeze protection and overheat safeguards. Ensure proper ventilation and gas line connections.
- **Electric Unit Safety:** The electric unit includes overheating protection, dry-burn prevention, anti-leakage technology, and an internal shockproof design. Ensure proper electrical grounding and wiring.
- **Water Connections:** Always ensure water connections are secure and leak-free.
- **Children and Pets:** Keep children and pets away from the water heater during operation and maintenance.
- **Temperature Settings:** Be mindful of hot water temperatures to prevent scalding.

3. PRODUCT FEATURES

The APUS Tankless Water Heater system offers advanced features for efficient and reliable hot water

delivery:

- **Dual Heat System:** Combines a 140,000 BTU propane gas heater for whole-house use and a 4.5KW electric heater for point-of-use applications, ensuring instant hot water.
- **Instant Hot Water:** The gas unit delivers hot water in 1 second, and the electric unit in 3 seconds, eliminating cold water wait times.
- **Powerful Flow:** The gas unit's built-in booster pump increases flow by 130%, supporting up to 2 showers and 2 sinks simultaneously (6.8 GPM maximum).
- **Precision Temperature Control:** Both systems feature smart self-modulating technology. The gas heater auto-adjusts seasonally ($\pm 1^\circ\text{F}$ accuracy), and the electric unit optimizes power based on flow for consistent temperatures.
- **Space-Saving Design:** Compact units designed for easy installation in various spaces.
- **Advanced Safety:** Equipped with multiple protection systems for safe and reliable operation.
- **Smart Connectivity:** The gas heater can be controlled remotely via a Wi-Fi mobile app for temperature adjustments, preheat scheduling, and alerts.

DUAL HEAT SYSTEM

Perfect combo for instant hot water

AP-ADSF-45M06

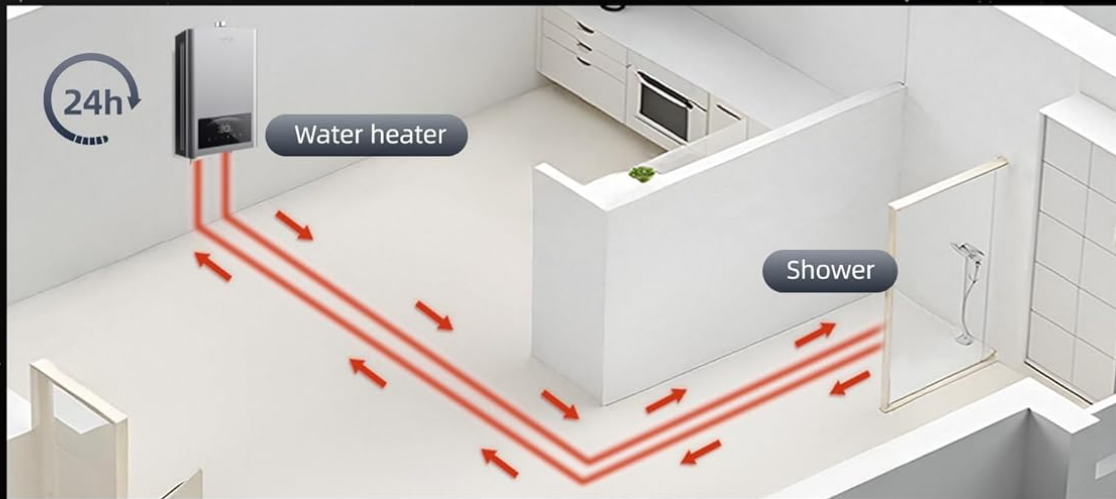
AP-AWH-Q20



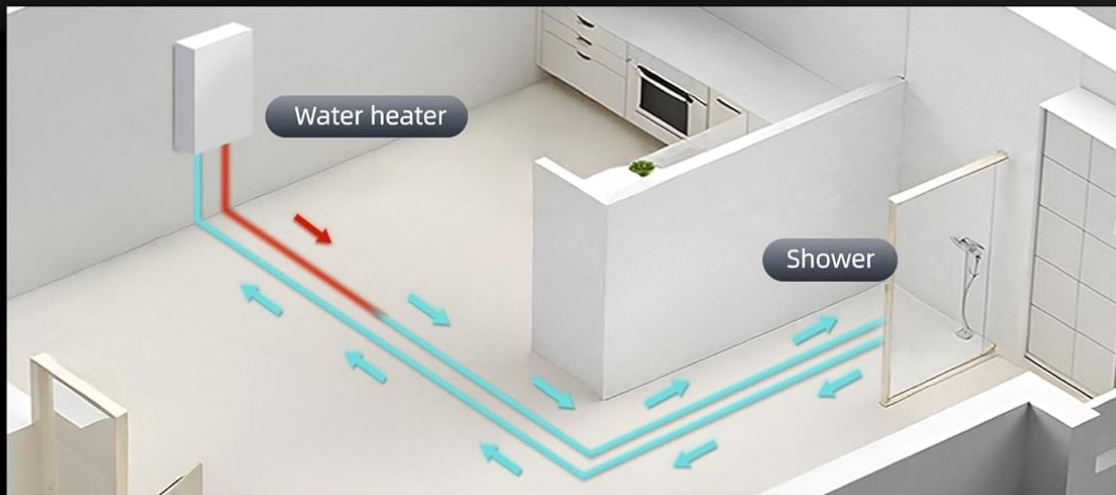
Figure 3.1: Dual Heat System setup, illustrating the gas unit (AP-AWH-Q20) in a garage and the electric unit (AP-ADSF-45M06) in a kitchen.

0-SEC HOT WATER

Delivers hot water instantly with zero cold-water delay



With Hot Water Recirculation



Without Hot Water Recirculation

Figure 3.2: Illustration of 0-second hot water delivery with recirculation versus delayed delivery without recirculation.

CONSTANT HOT WATER FLOW

$\pm 1^{\circ}\text{F}$ Ensures a Comfortable Water Experience

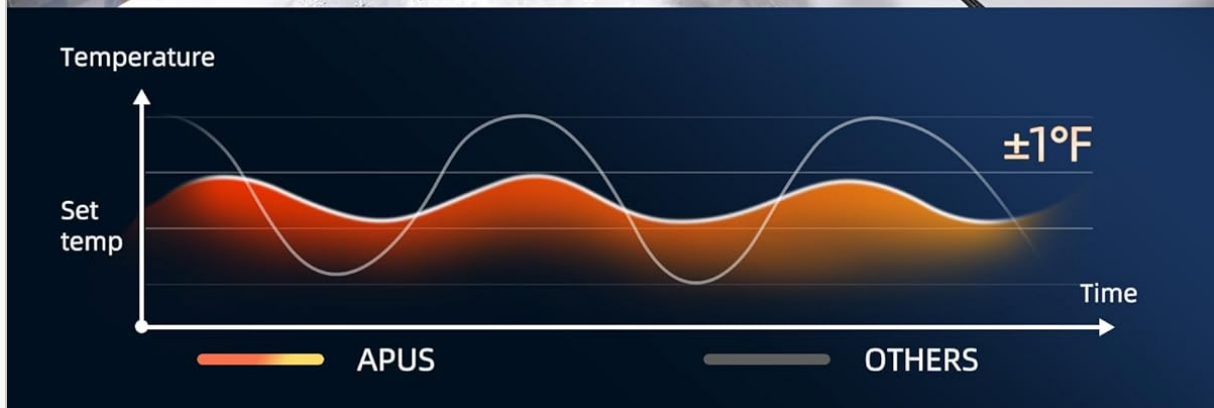


Figure 3.3: Demonstrates constant hot water flow with a temperature stability of $\pm 1^{\circ}\text{F}$, ensuring a comfortable water experience.

4. INSTALLATION

Installation of both the gas and electric water heaters should be performed by a qualified professional in accordance with all local and national plumbing and electrical codes.

4.1 Gas Unit (AP-AWH-Q20) Installation

- **Dimensions:** The compact gas heater measures approximately 21.3" (H) \times 13.6" (W) \times 7.1" (D).
- **Connections:** Installs with standard 1/2" NPT connections for water inlet, water outlet, and gas inlet.
- **Mounting:** Comes with pre-drilled holes for wall mounting. Ensure the mounting surface is capable of supporting the unit's weight when full of water.

- **Ventilation:** Proper ventilation is crucial for gas appliances. Follow all local codes for venting.



Figure 4.1: Gas unit dimensions and connection points for installation.

4.2 Electric Unit (AP-ADSF-45M06) Installation

- **Dimensions:** The ultra-slim electric heater measures approximately 8.7" (H) x 6.5" (W) x 2.6" (D).
- **Placement:** Ideal for under-sink or tight spaces in apartments, kitchens, or commercial setups.
- **Connections:** Uses standard 1/2" NPT pipe fittings for water inlet and outlet.
- **Electrical Wiring:** Requires a dedicated double-pole breaker. Refer to the wiring diagram and specifications below.

INSTALLATION DIAGRAM

Wiring Specification for Installation

Double-pole Breaker

Breaker is not provided



Wattage	Voltage	Breaker	Cable Required	Pipe Fitting
4.5kW	220-240V	25-30A	12 AWG	1/2" NPT

Tips: Professional Installation Recommended

Figure 4.2: Electric unit wiring diagram and electrical specifications. Professional installation is recommended.

Table 4.1: Electric Unit Electrical Specifications

Parameter	Specification
Wattage	4.5 kW
Voltage	220-240V
Breaker Required	25-30A (Double-pole)
Cable Required	12 AWG
Pipe Fitting	1/2" NPT

5. OPERATION

5.1 Gas Unit (AP-AWH-Q20) Operation

- **Wi-Fi App Control:** Control the gas heater remotely using the Wi-Fi mobile app (Works with Tuya Smart).
- **Temperature Adjustment:** Set desired water temperatures between 95°F and 140°F via the app.
- **Scheduling:** Schedule preheat times and receive alerts through the app.
- **Automatic Modulation:** The unit automatically adjusts its heating output based on seasonal changes to maintain consistent water temperature.



Figure 5.1: Remote operation of the gas unit via the Wi-Fi mobile app.

5.2 Electric Unit (AP-ADSF-45M06) Operation

- **LED Touchscreen Display:** The unit features a responsive LED touchscreen for direct control.
- **Temperature Control:** Adjust the desired water temperature between 85°F and 131°F using the touchscreen.
- **Temperature Unit Switch:** Easily switch between Celsius (°C) and Fahrenheit (°F) display.
- **Flow Optimization:** The unit optimizes power consumption based on water flow to ensure efficient heating.



Figure 5.2: LED touchscreen display for setting temperature on the electric unit.

6. MAINTENANCE

Regular maintenance ensures the longevity and efficient operation of your APUS Tankless Water Heater system. It is recommended to have a qualified technician perform annual inspections and maintenance.

- **Flushing:** Periodically flush both units to remove mineral buildup, especially in areas with hard water. Refer to specific flushing instructions for tankless water heaters.
- **Inspect Connections:** Regularly check all water and gas connections for leaks.
- **Clean Exterior:** Wipe down the exterior of the units with a soft, damp cloth. Do not use abrasive cleaners.
- **Ventilation (Gas Unit):** Ensure the gas unit's ventilation system is clear of obstructions.
- **Filter Cleaning (if applicable):** Some models may have inlet filters that require periodic cleaning. Consult your installer or APUS support for details.

7. TROUBLESHOOTING

If you encounter issues with your APUS Tankless Water Heater, refer to the following general troubleshooting steps. For complex problems or error codes, contact a qualified technician or APUS customer support.

- **No Hot Water:** Check power supply (electric unit), gas supply (gas unit), and water flow. Ensure the unit is turned on and temperature settings are correct.
- **Inconsistent Temperature:** Verify water flow rate is within the unit's operating range. Check for mineral buildup that might restrict flow. Ensure proper temperature settings.
- **Error Codes:** If an error code appears on the display, consult the specific error code guide (usually provided with the unit or available online) or contact support.
- **Leaks:** Immediately shut off water and gas/power supply to the affected unit. Contact a professional plumber.
- **Low Water Pressure:** Check household water pressure and ensure inlet filters are not clogged.

8. SPECIFICATIONS

8.1 Gas Unit (AP-AWH-Q20)

- **Heating Capacity:** 140,000 BTU
- **Fuel Type:** Propane Gas
- **Maximum Flow Rate:** 6.8 GPM (Gallons Per Minute)
- **Temperature Range:** 95°F–140°F (via app)
- **Connections:** 1/2" NPT (Water Inlet, Water Outlet, Gas Inlet)
- **Dimensions (H x W x D):** 21.3" x 13.6" x 7.1"
- **Heat Exchanger:** Oxygen-free copper

8.2 Electric Unit (AP-ADSF-45M06)

- **Power:** 4.5 KW
- **Voltage:** 220-240V
- **Breaker Requirement:** 25-30A Double-pole
- **Cable Requirement:** 12 AWG
- **Temperature Range:** 85°F–131°F (via touchscreen)

- **Connections:** 1/2" NPT (Water Inlet, Water Outlet)
- **Dimensions (H x W x D):** 8.7" x 6.5" x 2.6"
- **Heating Element:** Corrosion-resistant cast aluminum

9. WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries, please refer to the warranty card included with your product or visit the official APUS website. Please have your model number (AP-AWH-Q20 or AP-ADSF-45M06) and purchase date available when contacting support.

APUS WATER EQUIPMENT

For further assistance, please visit the APUS Store on Amazon or their official website.