

INSTANTANEOUS GAS WATER HEATERS
 AGENTS: HSG Distributors CC
 TEL: +27 860 474 347
 FAX: +27 862 684 752

WATER HEATER LOCATION

Location of Paloma Gas Water Heater

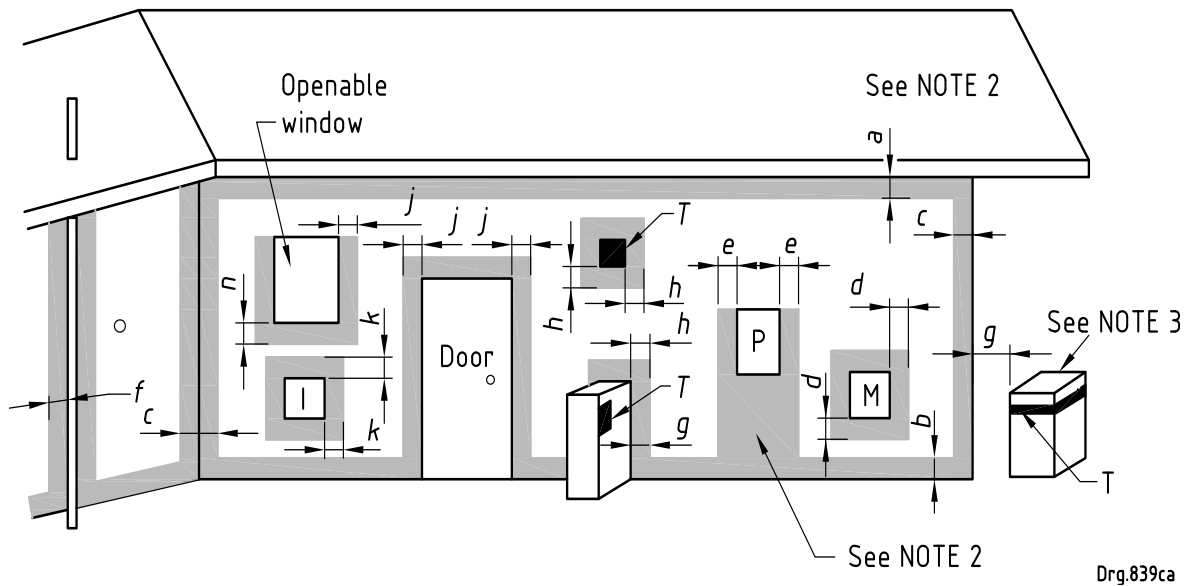
The water heater should be installed close to the most frequently used outlet and its position chosen with safety and service in mind. If this water heater is part of a solar water heater system, it should also be installed close to the solar storage tank. Make sure people (particularly children) will not touch the flue terminal. The flue terminal and air inlet must be clear of obstructions and shrubbery.

Clearance must be allowed for servicing of the water heater. The water heater must be accessible without the use of a ladder or scaffold. Make sure the entire front panel can be removed for service. You must be able to read the information on the rating plate.

The water heater must not be installed in an area with a corrosive atmosphere where chemicals are stored or where aerosol propellants are released. Remember the air may be safe to breathe, but when it goes through a flame, chemical changes take place which may attack the water heater.

No combustible materials or anything that could be a fire risk or any shrubbery growing with 300mm of the unit.

The flue exit terminal must be free from any obstruction with 1,500mm, NO LOUVRE OR OTHER DOORS TO BE INSTALLED IN FRONT OF UNITS.



Key

- T = Flue terminal
- M = Gas meter



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I = Mechanical air inlet

P = Electricity meter or fuse box

Shading indicates prohibited areas for flue terminals

Reference	Item	Minimum clearance (mm)	
		20 l/m	26l/m
A	Below eaves and other overhanging projections:	300	300
B	From the ground, above a balcony or other surface	300	300
C	From a return wall or external corner	500	500
D	From a gas meter (M)	1,000	1,000
E	From an electricity meter or fuse box (P)	500	500
F	From a drain pipe or soil pipe	75	75
G	Horizontally from any building structure or obstruction facing a terminal	500	500
H	From any other flue terminal, cowl, or combustion air intake	300	300
J	Horizontally from any window, door, non-mechanical air inlet, or any other opening into a building with the exception of sub-floor ventilation	300	300
	<ul style="list-style-type: none"> All fan-assisted flue appliances, in the direction of discharge 	1,500	1,500
K	From a mechanical air inlet, extractor including a spa blower		1,000
N	Vertically below an open-able window, non-mechanical air inlet, or any other opening or air vent into a building with the exception of sub-floor ventilation:	1,500	1,500

NOTE 1 - All distances are measured to the nearest part of the terminal

NOTE 2 - Prohibited area below electricity meter or fuse box extends to ground level

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The water heater must not be installed in an area with a corrosive atmosphere where chemicals are stored or where aerosol propellants are released. Remember the air may be safe to breathe, but when it goes through a flame, chemical changes take place which may attack the water heater.

No combustible materials or anything that could be a fire risk or any shrubbery growing within 300mm of the unit. The flue exit terminal must be free from any obstruction within 1,500mm



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GAS INLET & SUPPLY LINES

The gas connection is made at the underside of the water heater, as marked on the unit. The pipe work must be cleared of foreign matter before connection and purged before attempting to operate the water heater. The gas safety isolation valve must be readily accessible and installed directly under the unit. **The correct gas piping size is critical**, DN20 (3/4") gas line must be connected to the unit, and must come from a similar or larger sized supply feed.

WATER PIPE SIZES

The pipe sizing for hot water supply systems should be carried out by persons competent to do so, choosing the most suitable pipe size to ensure adequate flow for each individual application. Reference to the technical specifications of the water heater and local regulatory authority requirements must be made. To achieve true mains pressure operation, the cold water line to the water heater should be the same size or bigger than the hot water line from the water heater. The minimum recommended pipe size is DN20. Please ensure a shut off valve is installed on the cold water inlet to the unit and that hot and cold water are connected correctly to the unit where marked. Paloma units require a minimum water pressure of 80kpa (0,8 bar) to operate. It is recommended that a Non-Return valve be installed on the hot water pipe exiting the unit, and conex fittings installed to water heater for service and repair purposes.

ELECTRICAL CONNECTION

The water heater is supplied with a 1,0 metre lead and plug and requires a permanent weatherproof 240 V 50 Hz general purpose outlet (GPO) to be located within 1.2 metres of the installation. The GPO must be clear of the flue exhaust, draining water, gas supply pipe and water connections. The water heater will only operate on a sine wave at 50 Hz.

Devices generating a square wave cannot be used to supply power to the water heater.

COMMISSIONING

All water heaters are tested and adjusted before dispatch from the factory, however further adjustments may become necessary because of local conditions.

TO TURN ON THE WATER HEATER

Open all of the hot taps in the house (don't forget the shower).

Open the cold water isolation valve fully at the inlet to the water heater. Air will be forced out of the taps.

Close each tap as water flows freely from it.

Check the pipe work for leaks.

Open the gas isolation valve fully.

Check the gas pipe work for leaks.

Plug in the water heater at the power outlet and switch on the electrical supply.

Turn on a controller, if one is fitted, by pressing the on / off button.



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The light in the on/off button and the priority light (standard controller) or ACTIVE light (Deluxe controller) will both glow.

Open a hot tap.

The water heater will operate automatically.

Check to ensure the flow from each connected hot tap is sufficient to operate the water heater.

The minimum operating flow rate for all models is 2.5 litres per minute.

The automatic water governor incorporated in the water heater is not adjustable.

To complete the installation, it is necessary to check the gas supply pressure at the inlet to the water heater

GAS INLET PRESSURE

IMPORTANT - CHECK (1); The **static** gas supply pressure to be measured at the inlet to the water heater with the water heater and all other gas burning appliances in the premises turned **OFF**. The minimum gas supply pressure must be:

Natural Gas 1.95kPa LPG 2.75kPa

If this minimum cannot be achieved, it may indicate the meter, gas supply line, gas cylinder/s or regulator to the water heater is undersized. It is important to ensure that an adequate gas supply pressure is available to the water heater.

IMPORTANT - CHECK (2); The **operating** gas pressure to be measured at the inlet to the water heater with the water heater and all other gas burning appliances in the premises turned **ON**. The minimum gas supply pressure must be:

Natural Gas 1.05kPa LPG 1.40kPa

If this minimum cannot be achieved, it may indicate the meter, gas supply line, gas cylinder/s or regulator to the water heater is undersized. It is important to ensure that an adequate gas supply pressure is available to the water heater when other gas burning appliances on the same gas supply, are operating.

PLEASE NOTE: ALL PALOMA UNITS ARE CORRECTLY SET AND INDIVIDUALLY TESTED BY THE MANUFACTURER. NO INTERNAL ADJUSTMENTS SHOULD BE MADE TO THE GAS BURNER PRESSURES

Gas Inlet Test Point Pressure

To check the gas inlet pressure:

1. Close any hot taps and ensure the burners are not operating.



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2. Close the gas isolation valve at the gas inlet to the water heater.
3. Locate the gas inlet test point on the gas connection to the water heater.
Remove the test point screw and washer from the test point orifice.
Connect the manometer.
4. Open the gas isolation valve fully at the gas inlet to the water heater.
5. Observe the gas pressure reading on the manometer. If the manometer reading is between the minimum and maximum gas pressure ratings on the rating label, no adjustment is required. If the manometer reading is below the minimum gas pressure rating on the rating label, then either the gas pipe to the water heater is undersized and needs to be rectified or adjustment is required at the gas regulator. If the manometer reading is above the maximum gas pressure ratings on the rating label, then adjustment is required at the gas regulator.
6. Switch on the electrical supply at the power outlet to the water heater if it is not already switched on and turn on a controller, if one is fitted, by pressing the on / off button.
7. Open a hot tap fully and ensure the burners are fully ignited. It may be necessary to open a second tap.
8. Turn on all other gas burning appliances in the house which are on the same gas supply.
9. Observe the gas pressure reading on the manometer. If the manometer reading is between the minimum and maximum gas pressure ratings on the rating label, no adjustment is required. If the manometer reading is below the minimum gas pressure rating on the rating label, then either the gas pipe to the water heater is undersized and needs to be rectified or adjustment is required at the gas regulator. If the manometer reading is above the maximum gas pressure ratings on the rating label, then adjustment is required at the gas regulator.
10. Turn off the other gas burning appliances in the house.
11. If an adjustment was made during Step 9, repeat this procedure from Step 5.
12. Close the hot tap(s).
13. Close the gas isolation valve at the inlet to the water heater.
14. Remove the manometer and refit and tighten the test point screw and washer.
15. Open the gas isolation valve fully at the gas inlet to the water heater.
16. Open a hot tap again so the burners ignite.
17. Test for gas leaks.
18. Close the hot tap.
19. Remove and clean the water filter under unit on Cold Water inlet (filters on taps should be cleaned at this time also)



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QUICK REFERENCE INSTALLATION GUIDE

Location

1. Unit should be positioned to ensure efficient delivery of hot water to taps
2. Position to comply with gas regulations
3. Unit must be located outdoors in a well ventilated area, **no obstruction of flue exit within 1,5m**
4. Air intake at bottom of unit must be clear from obstruction and in area where little dust etc can enter unit

LPG Gas Installations

1. 48kg cylinders to be used (coastal applications - 19kg cylinders may be used for Paloma 20 l/m units)
2. 4kg/hr changeover regulator @ 2,8kpa
3. ¾" (DN20) Gas piping from regulator to cylinders.
4. 12:16 PEX pipe **should not** be used EXCEPT where High Pressure-Low Pressure gas installation has been specified

Any variations to this should be discussed with retailer or local agent/gas installer

Natural Gas Installations

1. ¾" (DN20) gas supply line to unit, feeding from same or larger size gas pipe to be used
2. Check static and operating pressures as outlined above

Any variations to this should be discussed with retailer or local agent

Plumbing installations

1. 80kpa minimum to 1000kpa maximum water pressure to be supplied to unit
2. Recommended 3/4" (DN20) water piping. n.b. - ½" (DN15) is sufficient where necessary
3. It is recommended that a Non-Return valve be installed on the hot water outlet of the unit
4. A water shut-off valve must be installed on the cold water inlet
5. It is recommended that conex type compression fittings are used for final connections on the unit
6. For solar back-up installations, water of not more than 75 degrees centigrade can be fed through the unit
7. All filters, including tap filters should be cleaned regularly for optimal performance

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