

Owner's Guide and Installation Instructions



Paloma Room Sealed Gas Space Heaters

Paloma

Models

PRS-150N

PRS-250N

PRS-250CN

PRS-150L

PRS-250L

PRS-250CL



WARNING:

Failure to install the room heater in accordance with the Installation Instructions may result in fire, explosion, serious injury, asphyxiation or lethal carbon monoxide poisoning. The flue pipe (carrying combustion products to outside) and the fresh air hose (ensuring an adequate air supply) MUST be correctly fitted to the room heater.

Installer:

- Use a genuine Paloma room-sealed flue kit when installing this room heater.
- DO NOT use any other type of flue parts.
- Carefully follow the Installation Instructions.

Operator:

- This room heater must be installed ONLY by an authorised person. DO NOT tamper with the flue installation.
- This room heater and the flue system should be serviced every 12 months.
- DO NOT attempt to remove this room heater from its installed position. Contact a qualified technician.

Note: This heater must be installed with a genuine Paloma room sealed flue kit. Failure to install a genuine Paloma room sealed flue kit will result in a potentially unsafe installation and the heater warranty will become null and void.

For installation of the flue kit refer to the installation instructions supplied with the flue kit.

This heater must be installed and serviced by a qualified person.
Please leave this guide with the householder or responsible officer.

**Notice to Victorian Customers from the
Victorian Building Authority**

**This gas space heater must be installed by a licensed person as required by
The Victorian Building Act 1993**

Only a licensed person will give you a Compliance Certificate, showing that the work complies with all the relevant standards. Only a licensed person will have insurance protecting their workmanship for 6 years. Make sure you use a licensed person to install this space heater and ask for your Compliance Certificate.

⚠ Warning: Upon completion of the installation and commissioning of the space heater, leave this guide with the householder or a responsible officer. **DO NOT** leave this guide inside the heater cover or behind the heater, as it may interfere with the safe operation of the space heater or ignite when the heater is turned on.

Heater & Installation Information

Date of installation: _____

Model N°: _____

Serial N°: _____

Installed by: _____

Purchased from: _____

Heater Packing Contents List

Part		Quantity
Heater		1
Back Cover Kit	Top Cover	1
	RH Side Cover	1
	LH Side Cover	1
	Wall brackets	2
	Wall Bracket Screws	2
	Hexagon Bolts	4
	Exhaust Connection Clamp	1
	Air Intake Cable Tie	1
	Control Panel Keys *	2

* PRS-250CN and PRS-250CL commercial models only.

PATENTS

This gas space heater may be protected by one or more patents or registered designs in the name of Rheem Australia Pty Ltd or Paloma Co., Ltd.

® Registered trademark of Rheem Australia Pty Ltd.
™ Trademark of Rheem Australia Pty Ltd.

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HOUSEHOLDER OR RESPONSIBLE OFFICER

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The 'Installation Section' is intended for the installer but may be of interest

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ABOUT YOUR HEATER

HEATER APPLICATION

This room sealed gas space heater is designed for use in a single family domestic dwelling (or commercial premises for PRS-250CN and PRS-250CL commercial models) for the purpose of room heating. Its use in an application other than this may shorten its life and void the product warranty.

MODEL TYPE

Congratulations for choosing a Paloma® room sealed gas space heater. Paloma room sealed gas space heaters are suitable for indoor installation only and require the installation of a genuine Paloma room sealed flue kit.

HOW DO I KNOW IF THE HEATER IS INSTALLED CORRECTLY?

Installation requirements are detailed in the "Installation" section. The heater must be installed:

- by a qualified person, and
- in accordance with the installation instructions, and
- in compliance with Standards AS/NZS 3000 and AS 5601 or AS/NZS 5601.1, as applicable under local regulations, and all local codes and regulatory authority requirements.
- In New Zealand, the installation must also conform with NZS 5261, as applicable under local regulations, and the New Zealand Building Code.

HOW YOUR HEATER WORKS

The heater consists of a gas burner, combustion chamber, heat exchanger, combustion fan and an air circulation fan. Burner combustion air is drawn from outdoors by the combustion fan via the outer flue tube. Hot combustion gases from the burner pass through the heat exchanger and are discharged outdoors via the inner flue tube. The circulating fan draws air from the room in which the heater is located and passes it over the heat exchanger where the air gains heat by convection. The heated air is then circulated back into the room via the heater's front louvres. The gas supply to the burner is controlled by an electronic controller (thermostat) which senses the room air temperature.

The following automatic safety controls are fitted to the heater:

- Filter Clean Warning Device - When the air filter is clogged or hot air outlet is blocked, the filter safety device will switch off the heater and the filter light will flash.
- Flame Failure Device prevents flow of gas to burner if ignition fails or flame goes out.
- Power Failure Device prevents flow of gas to burner if there is a power failure.
- Overheat Safety Device – if the fan stops rotating for any reason the overheat switch shuts off the gas supply.
- Over Current Safety System.
- Air Volume and Combustion Control.

The heater has a humidifier tray located behind the lower front cover. The humidifier tray can be filled with water to raise the humidity level in the room for extra comfort if required (refer to "Humidifier Tray Removal" on page 7).

HOW LONG WILL THE HEATER LAST?

The heater is supported by a manufacturer's warranty (refer to "Warranty" on page 35). There are a number of factors that will affect the length of service the heater will provide. These include but are not limited to the usage pattern and the service and maintenance program.

REGULAR CARE AND SERVICING

The heater must be maintained and serviced in accordance with the Owner's Guide and Installation Instructions. Refer to "Regular Care" on page 7.

PRECAUTIONS

Heat from this appliance may over time affect the appearance of some flooring materials such as carpet, timber, vinyl or cork. It is recommended that a protective mat is positioned in front of the heater that extends a minimum of 750 mm from the front of the heaters louvres to protect floor coverings.

This heater can circulate large volumes of air. If the air in the room contains any cigarette smoke or cooking vapours the circulated air may affect the appearance of carpets, furniture and drapes, etc.

SAFETY

For your safety do not operate the heater before reading this instruction booklet.

⚠ Warning: This heater is designed to be installed in a fixed position with a Paloma room sealed flue kit (supplied separately). The heater must not be operated unless a genuine Paloma room sealed flue kit is installed.

⚠ Warning: The heater air intake hose and exhaust connection must both be connected to an approved Paloma flue system as detailed in these installation instructions and the installation instructions supplied with the flue kit.

⚠ Warning: Ensure that the gas specified on the heater rating label matches the gas supply. Using a different gas type may cause an explosion or cause damage to heater components. Automotive LPG fuel must not be used.

⚠ Warning: The heater uses 240 Volt AC electrical power for operation of the control systems. The removal of cover(s) will expose 240 V wiring. Covers must only be removed by an authorised or qualified person.

⚠ Warning: This heater is only intended to be operated by persons who have the experience or the knowledge and the capabilities to do so. This heater is not intended to be operated by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge.

⚠ Warning: Children should be supervised to ensure they do not interfere with the heater.

⚠ Warning: If the supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid a hazard.

The warranty can become void if internal components are tampered with or if the installation is not in accordance with these instructions.

- DO ensure heater clearances are maintained at all times (refer to “Heater Clearances” table on page 13).
- DO turn the heater OFF at the control panel when unattended or not in use. Do not turn the heater off by switching off at the power point. The power point may be turned off when the fans have stopped cycling.
- DO NOT allow curtains or other combustible materials to come into contact with the heater or encroach on heater clearances. Tie curtains back if required.
- DO NOT use or store **flammable or combustible materials** near the heater. Flammable liquids (such as petrol), newspapers and similar articles must be kept well away from the heater and the flue terminal.
- DO NOT store **chemicals, household cleaners**, etc., near the heater.
- DO NOT use or spray **aerosols, stain removers and household chemicals** in the vicinity of this heater or the flue terminal whilst it is in operation. Gases from some aerosol sprays, stain removers and household chemicals can become flammable or corrosive when drawn into a flame.
- DO NOT place articles on or against this appliance or the flue terminal. Ensure the flue terminal is not obstructed in any way.
- DO NOT permit persons to sleep in the warm air discharge from the heater.
- DO NOT dry articles of clothing on the heater.
- DO NOT place containers of liquid on top of the heater. Spillage can damage the heater and may result in electric shock.
- DO NOT sit on the heater.
- DO NOT allow children to insert items in the heater louvres.
- DO NOT operate heater with panels, covers or guards removed from the heater.
- DO NOT operate the heater without the air filter.
- DO NOT connect to an LPG gas cylinder located indoors.
- DO NOT use the heater if any part is faulty or damaged. Immediately call Rheem Service or Accredited service Agent to arrange for an inspection.
- DO NOT use the heater if any part has been under water. Immediately call Rheem Service or an Accredited service Agent to arrange for an inspection.
- DO NOT modify this appliance.

SAVE A SERVICE CALL

Check the items below before making a service call. You will be charged for attending to any condition or fault that is not related to manufacture or failure of a part.

Note: The heater fans will continue operating for a few minutes after the heater is turned off. This is normal operation.

HEATER NOT OPERATING

- **Is the electricity switched on?**
Ensure the power point is turned on.
- **Is there gas to the heater?**
Try lighting another gas appliance. If there is no gas call your gas provider.
- **Is the heater operating in a timer OFF period?**
Check Timer 1 and Timer 2 settings to ensure they are suitable to enable heating when required (refer to “Timer 1 & Timer 2 Operation” on page 9). For commercial models connected to a central control system; ensure the central command system is operating and that scheduled operating times are correct.
- **Is the child lock on?**
Ensure the child lock is not on (refer to “Child Lock Mode” on page 12).
- **Is the filter light flashing?**
If the filter light is flashing the filter requires cleaning (refer to “Regular Care” on page 7).
- **Is a code displayed on the controller?**
Check the controllers display to see if an error code is displayed. If an error code occurs the heater will 'lock out' and will not operate until the fault has been rectified and the heater is reset. Refer to “Fault Indication” on page 29 for a detailed list of all available codes, their meanings, suggested remedies and heater reset procedure.

HEATER NOT SUFFICIENTLY HEATING ROOM

- **Is the set temperature too low?**
Increase the heaters' set temperature (refer to “Raising or Lowering the Set Temperature” on page 9).
- **Is the room in which the heater is installed too large?**
Do you have the correct size heater for your room size? (Refer to “Heater Maximum Room Size” on page 14).
- **Is the area subjected to drafts?**
Ensure windows and doors are closed and that there are no large gaps on external doors or windows where cold air can enter.

ROOM GETS TOO HOT

- **Is the set temperature too high?**
Decrease the heaters' set temperature (refer to “Raising or Lowering the Set Temperature” on page 9).

HEATER PRODUCES SMOKE AND/OR ODOUR

⚠ Warning: If you smell gas do not operate the heater. Refer to “What to do if you smell gas” on page 8.

- When operated for the first time, the heater may produce smoke and/or odour. This is caused by oils used during manufacture. When operating for the first time ensure the room is well ventilated by opening windows and doors until the smoke and/or odour ceases. After first time use the heater should not produce smoke or odour and if you continue to smell strange odours, shut down the heater immediately and phone your nearest Rheem Service department or Accredited Service Agent to arrange for an inspection.
- The heater will produce a strong odour if the room has been recently painted or if the floors have been waxed or polished. Ventilate room properly before use.

HEATER MAKES NOISES

- The heater will make noises during start up and shut down and the fan may be heard during operation and after the heater stops. A slight hissing sound (gas flow) may also be evident during operation. Heating appliances may also occasionally produce creaking or cracking noises which are caused by expansion and contraction of metallic parts as they are heated or cooled. These noises are all normal noises.

IF YOU HAVE CHECKED ALL THE FOREGOING AND STILL BELIEVE YOU NEED ASSISTANCE, PHONE YOUR NEAREST RHEEM SERVICE DEPARTMENT OR ACCREDITED SERVICE AGENT.

REGULAR CARE

Regular care should be performed by the householder as frequently as required, however the heater and power supply cord should be visually checked for damage before every operation and the air filter should be checked on a weekly basis.

⚠ Warning: If the heater has been operating, ensure it has sufficiently cooled before attempting any maintenance procedure.

- Visually check heater and power supply cord for damage.
- Remove accumulated dust from heater with a vacuum cleaner.
- Wipe external parts with a soft dry cloth. **Note:** Do not use a cleaning cloth, thinners, benzene, acid or alkaline detergents as these products will discolour the paint and plastic components.
- Remove and clean air filter (refer to "Air Filter Removal" on page 7). A vacuum cleaner can be used to remove accumulated dust or if the air filter is very dirty it can be washed in luke warm water with a mild soap solution and then allowed to dry. **Note:** Ensure the filter is dry before reinsertion otherwise the heater may not operate correctly.
- Remove and clean humidifier tray (refer to "Humidifier Tray Removal" on page 7).

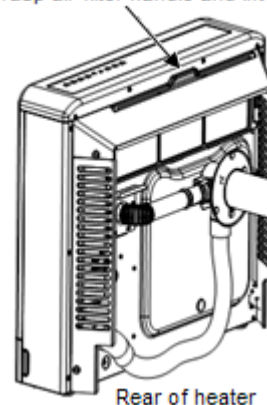
AIR FILTER REMOVAL

⚠ Warning: The heater must not be operated without the air filter. Turn heater OFF before removing air filter.

To remove the air filter: The air filter is located on the top rear of the heater and is removed by grasping the handle on top of the filter and lifting upwards.

To replace the air filter: Insert filter into slot on rear of heater and push fully down into position.

Grasp air filter handle and lift up



HUMIDIFIER TRAY REMOVAL

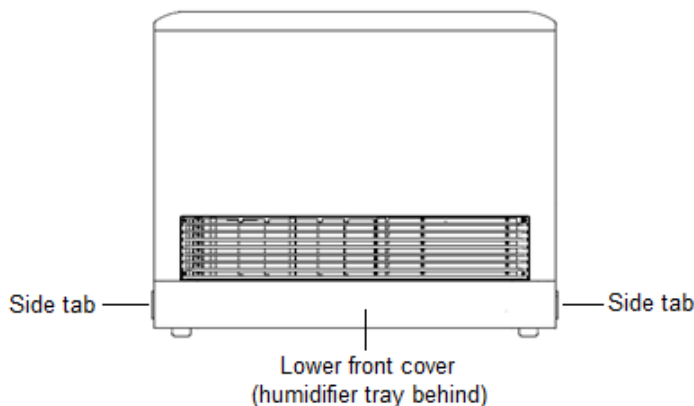
⚠ Warning: Turn heater OFF before removing or replacing humidifier tray.

⚠ Warning: Do not overfill humidifier tray.

The humidifier tray is located on the bottom of the heater and is accessed by removing the heaters front lower cover.

To remove the humidifier tray: Simultaneously depress tabs located on bottom of heater sides and pull lower front cover away from heater. The humidifier tray can then be removed by carefully sliding out from the heater.

To replace the humidifier tray: Reinsert humidifier tray into heater tray receptacle and slide fully into position. The lower front cover can then be replaced by depressing cover tabs whilst sliding the cover into position. Note: The lower front cover is universal i.e. it does not matter which way is up.



SERVICING

⚠ Warning: Servicing must only be performed by authorised personnel.

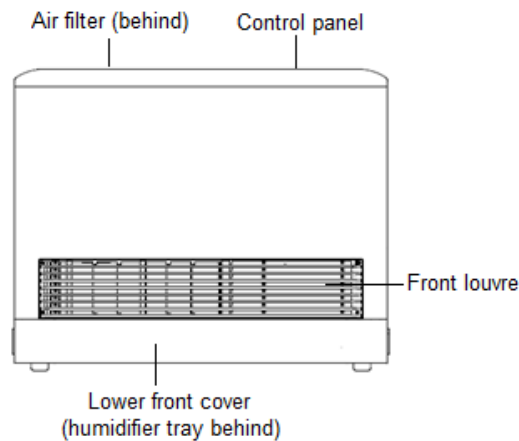
For peak performance it is suggested that the heater be serviced by your nearest Rheem Service Department or Accredited Service Agent annually prior to every winter.

Only genuine replacement parts should be used on this heater.

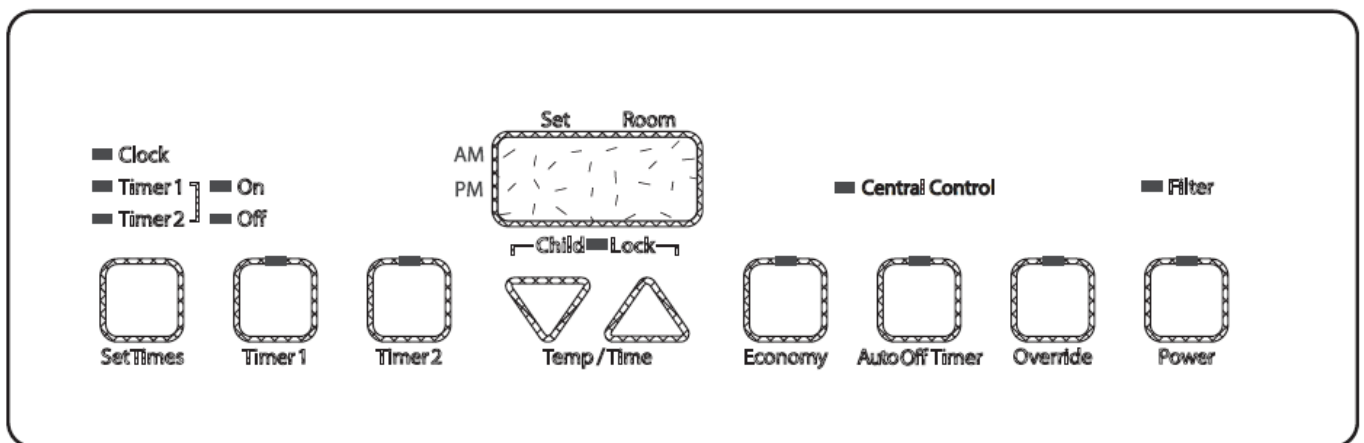
Refer to "Service Procedures" on page 30.

OPERATION

HEATER OVERVIEW



CONTROL PANEL OVERVIEW



Note: 'Central Control' LED is present on PRS-250CN and PRS-250CL commercial models only. Commercial models also have a remote **Power** LED and **Filter** LED located on the top of the heater (refer to "Central Control Connection & Operation – Commercial Models Only" on page 20).

TO TURN THE HEATER ON

⚠ Warning: DO NOT OPERATE THE HEATER IF THE FLUE SYSTEM IS NOT CONNECTED OR IF ANY PART OF THE FLUE SYSTEM IS FAULTY OR DAMAGED. Operation of the heater without the flue system or with faulty or damaged flue components may cause combustion products to be discharged into the room in which the heater is located resulting in serious injury or death. If you smell strange odours, shut down the heater immediately and phone your nearest Rheem Service department or Accredited Service Agent to arrange for an inspection.

⚠ Warning: If you smell gas do not attempt to turn on the heater.

- Switch on the electrical supply at the power point. The heater will perform a self check routine.
- After the self check routine expires, the heater can be turned ON by pressing and releasing the heater '**Power**' button. The LED on the power button will illuminate green and the digital display will indicate the set temperature and room temperature.

The heater will operate automatically when a call for heat occurs (provided the heater is not operating in a timed OFF period) and the LED on the power button will change from green to red once ignition has been successful. **Note:** when first turned on the heater will operate in a pre warm cycle (burner on) for approximately 2 minutes regardless of the set and room temperatures.

What to do if you smell gas?

- DO NOT try to light any gas appliance.
- DO NOT touch any electrical switch.
- TURN OFF the gas supply at the gas meter immediately, call your gas supplier or licensed gasfitter.

NOTE: Some gases are heavier than air and it may be necessary to check for gas leaks at floor level.

TO TURN THE HEATER OFF

- Turn the heater OFF by pressing and releasing the heater '**Power**' button. The burner, digital display and all LED's will extinguish however the fan will continue to operate for a few minutes to cool down the heater and prevent a build up of residual heat (fan run on). **Note:** The power supply should not be turned off during this cool down period as this will prevent the fan from running on.
- The heater may be turned off at the power point when the heater fans stop operating.

RAISING OR LOWERING THE SET TEMPERATURE

The set temperature is the temperature setting the heater will heat the room to. When the heater is turned ON, the heater will automatically operate the burner to heat the room to the desired set temperature. When the room reaches the set temperature the heater will automatically turn the burner OFF.

To Raise the Set Temperature: Press and release the ▲ button once to raise the set temperature by 1°C. Each consecutive press and release of the ▲ button will raise the set temperature in increments of 1°C up to a maximum of 26°C. **Note:** After 26°C a 'H' setting is available. The 'H' setting is for Service procedures only and should not be selected. When setting the temperature to 'H' setting, the heater will monitor any abnormal high room air temperature which is outside the normal temperature selection range. Should high room temperature be detected, the heater will shut down and display error code 16 which will require the heater to be reset and the temperature setting changed to a value from 16 ~ 26 (refer to "Fault Indication" on page 29).

To Lower the Set Temperature: Press and release the ▼ button once to lower the set temperature by 1°C. Each consecutive press and release of the ▼ button will lower the set temperature in increments of 1°C down to a minimum of 16°C. **Note:** before 16°C an 'L' setting is available. The 'L' setting is for Servicing procedures and should not be selected. If set on 'L' the heaters burner will not turn on at room temperatures above 10°C.

SETTING THE TIME

The heater will operate without the time being set however timer function(s) will not operate. Set or change the time as follows:

1. Press and release the '**Set Times**' button once. --:-- (or a previously entered time) will appear on the digital display and the 'Clock' LED and 'AM or PM' will illuminate green.
2. Press and hold down the ▲ or ▼ button. The display will change in 1 minute increments until the next hour is reached at which time the display will then change in 1 hour increments until the button is released. When the button is released the ▲ or ▼ button can then be pressed and released to fine tune the time in 1 minute increments.
3. When the correct time has been entered, press and release the '**Set Times**' button 5 times to accept the setting. The time will be saved and the display will revert to show the current set and room temperatures.

TIMER 1 & TIMER 2 OPERATION

Two on/off timers are available (Timer 1 & Timer 2) and each timer can be programmed to automatically turn the heater ON and OFF. For a timer to operate, the actual time must be set, the timers ON and OFF times must be programmed, the heaters '**Power**' button must be turned on and the timer must be turned on (selected).

Note: PRS series room heaters have a pre-heat function that operates the burner up to one hour prior to the programmed starting time of a timer to warm the room SO THAT THE ROOM REACHES THE REQUIRED TEMPERATURE WHEN THE PROGRAMMED ON TIME IS REACHED. This pre-heat function is automatic and will always occur when the heater is turned on and a timer has been programmed and selected.

Programming Timer 1 and/or Timer 2 operating Times

1. Press and release the '**Set Times**' button twice to enter timer programming mode. The 'Timer 1' LED and 'Timer 1 On' LED will illuminate and the timer 1 'on time' will be shown on the digital display.
2. To program Timer 1 'on time', press and hold down the ▲ or ▼ button. The display will change in 1 minute increments until the next hour is reached at which time the display will then change in 1 hour increments until the button is released. When the button is released the ▲ or ▼ button can then be pressed and released to fine tune the time in 1 minute increments.
3. Press and release the '**Set Times**' button once. The 'Timer 1 Off' LED will illuminate and the Timer 1 'off time' will be shown on the digital display. The Timer 1 'off time' can now be programmed by operating the ▲ and ▼ arrow buttons as previously explained in step 2.
4. Press and release the '**Set Times**' button once. The 'Timer 2' LED and 'Timer 2 On' LED will illuminate and the Timer 2 'on time' will be shown on the digital display. The Timer 2 'on time' can now be programmed by operating the ▲ and ▼ arrow buttons as previously explained in step 2.

5. Press and release the '**Set Times**' button once. The 'Timer 2 Off' LED will illuminate and the Timer 2 'off time' will be shown on the digital display. The Timer 2 'off time' can now be programmed by operating the ▲ and ▼ arrow buttons as previously explained in step 2.
6. Press and release the '**Set Times**' button once. This exits the Timer programming mode and the digital display will revert to show the current set point and room temperatures.

It should be noted that timer times are not required to be programmed and the timer programming mode can be exited at any stage by pressing and releasing the '**Set Times**' button repeatedly until all timer On and Off LED's are extinguished. Also refer to 'Timer Programming Example' on page 10.

Turning Timer(s) ON (selecting a timer)

Before operating a timer ensure the relevant timer operating (ON & OFF) times have been programmed and that the heater is turned on by pressing and releasing the '**Power**' button. The set point temperature should be adjusted to the required temperature and a check should be made to ensure there are no objects in front of the louver to block the air outlet.

To turn a timer on, press and release the relevant timer button(s) (Timer 1 and/or Timer 2 can be selected). The selected timer button LED will illuminate. Note: If the burner is operating the burner will turn off when a timer is turned on unless the current time is within the programmed on time period (including pre-heat period) in which case the burner will continue to operate.

Up to one hour prior to the timers programmed ON time the burner will automatically turn on (pre-heat function); the timer button LED will flash and the Power button LED will change from green to red upon successful ignition.

When the timers programmed OFF time is reached, the burner will turn off and the timer button LED will stop flashing but remain on solid (as the timer is still selected). The Power button will revert from red to green when the burner is extinguished.

Notes:

- A timer cannot be selected unless it's ON and OFF times have been correctly programmed.
- Although both timers can be selected, a second timer cannot be selected if it's programmed ON time is within the same programmed time period as the first timer.

Timer Programming Example

The following example details how to set the timer's to automatically operate the heater for a period during the morning and another period during the evening:

Timer 1 ON at 6:00am (heater start at 5:00am to heat the room for 6:00am) and OFF at 9:00am.

Timer 2 ON at 5:00pm (heater start at 4:00pm to heat the room for 5:00pm) and OFF at 10:00pm.

1. Press and release the '**Set Times**' button twice to enter timer programming mode.
2. Use the ▲ or ▼ buttons to adjust Timer 1 (morning) ON time to AM 6:00.
3. Press and release the '**Set Times**' button once.
4. Use the ▲ or ▼ buttons to adjust Timer 1 (morning) OFF time to AM 9:00.
5. Press and release the '**Set Times**' button once.
6. Use the ▲ or ▼ buttons to adjust Timer 2 (evening) ON time to PM 5:00.
7. Press and release the '**Set Times**' button once.
8. Use the ▲ or ▼ buttons to adjust Timer 2 (evening) OFF time to PM 10:00.
9. Press and release the '**Set Times**' button once to exit timer programming mode.
10. Use the ▲ or ▼ buttons to adjust the set temperature to the desired setting.
11. Press and release the '**Power**' button to turn the heater on.
12. Press and release '**Timer 1**' button to turn ON Timer 1.
13. Press and release '**Timer 2**' button to turn ON Timer 2.
14. Ensure there are no objects in front of the louver to block the air outlet.

Turning Timer(s) OFF (deselecting a timer)

To deselect a timer, press and release the selected timer button ('Timer 1' or 'Timer 2' button). The relevant timer button LED will extinguish and the burner will turn on (because the Power button is turned ON). Note: If a second timer was also selected and the current time was outside the timers programmed on period and pre-heat time, the burner would not operate when the first timer is deselected.

Timer Over-Ride Function

The 'Over ride' button can be operated to turn the burner off when the heater is operating in a timer on period or to turn the burner on when the heater is operating in a timer off period.

- If a timer is selected and the heater is operating within a timer programmed time period or pre-heat period (burner on), the timer may be over-ridden and the burner turned off by pressing and releasing the 'Over ride' button. The Over ride button LED will illuminate and flash and the Power button LED will change from red to green after the burner is extinguished.

If the 'Over ride' button is pressed and released once again, the Over ride button LED will extinguish and the burner will operate provided the current time is within the selected timers programmed on period including pre-heat period and provided the set temperature is higher than the room temperature.

- If a timer is selected and the heater is operating outside a timer programmed time period (burner off), the timer may be over-ridden and the burner turned on by pressing and releasing the 'Over ride' button. The Over ride button LED will illuminate and flash, the timer button LED will remain on and the burner will operate provided the set temperature is higher than the room temperature.

If the 'Over ride' button is pressed and released once again, the Over ride button LED will extinguish and the burner will turn off provided the current time is not within the selected timers programmed on period including pre-heat period.

AUTO OFF TIMER OPERATION

The Auto Off Timer can be activated so that the heater will automatically turn OFF after a preset time period.

1. Press and release the 'Power' button to turn the heater on.
2. Press and release the 'Auto Off Timer' button. 1h (1 hour) will be shown on the display and the Auto Off Timer button LED will illuminate.
3. Each consecutive press and release of the 'Auto Off Timer' button will change the OFF time setting up to a maximum of 12h (12 hours).

After a 5 second delay the display will start counting down in hours and minutes and the Auto Off Timer button LED will flash. When the counter reaches zero the heater will automatically turn OFF and all LED's will extinguish.

Notes:

- Possible time settings are 1h, 2h, 3h, 4h, 5h, 6h, 7h, 8h, 10h & 12h.
- The set temperature must be higher than the room temperature for the burner to operate. **Note:** When first turned ON the burner will operate for a period of approximately three minutes regardless of the room and set temperatures.

ECONOMY MODE

Economy mode is designed to increase the efficiency of the heater.

To activate economy mode: Press and release the 'Economy' button. The LED on the economy button will illuminate green and the heater will operate as follows:

- a) If the room temperature reaches the set temperature the economy program is activated and the set temperature is automatically reduced by 1°C after a delay of 30 minutes.
- b) The set temperature is automatically reduced by another 1°C after another 30 minute delay.

This subtle reduction in temperature is not noticed by the user and the set temp is not altered on the display however the efficiency of the heater is increased.

To deactivate economy mode: Press and release the 'Economy' button. The LED on the economy button will extinguish, the heater will exit economy mode and the set temperature will return to the displayed set temperature value.

CHILD LOCK MODE

A child lock mode is available to prevent children interfering with and/or inadvertent operation of the heater controls.

To activate child lock mode: Press and hold down the ▲ and ▼ buttons simultaneously for three seconds then release both buttons. The child lock LED will illuminate green to indicate that the heater is in child lock mode.

To deactivate child lock mode: Press and hold down the ▲ and ▼ buttons simultaneously for three seconds then release both buttons. The child lock LED will extinguish to indicate that the heater is no longer in child lock mode.

Note: If the burner is operating and child lock mode is activated, the 'Power' button can still be pressed and released to turn the heater OFF only.

FILTER LIGHT

The filter light will illuminate and flash if the filter is blocked and requires cleaning (refer to "Regular Care" on page 7).

HUMIDIFIER TRAY

The heater has a humidifier tray located behind the lower front cover. The humidifier tray can be filled with water to raise the humidity level in the room for extra comfort if required (refer to "Humidifier Tray Removal" on page 7).

VERTICAL LOUVRE ADJUSTMENT

The vertical louvers on the heaters front louvre can be adjusted to direct air flow in the required direction by pushing the vertical section to the left or the right. Note: The horizontal louvres are fixed and cannot be adjusted.

SAFETY DEVICES

Various automatic safety devices are fitted to the heater to provide safe operation. For more information refer to 'How Your Heater Works' on page 4.

CENTRAL CONTROL – COMMERCIAL MODELS ONLY

PRS-250CN and PRS-250CL commercial models can be controlled by an external central control system, such as a time clock or BMS, which can be programmed to turn the heater (or group of heaters) ON or OFF at scheduled times. For information on using a central control system refer to "Central Control Connection & Operation – Commercial Models Only" on page 20.

INSTALLATION

INSTALLATION STANDARDS

The heater must be installed:

- by a qualified person, and
- in accordance with the installation instructions supplied with the heater and the installation instructions supplied with the flue kit, and
- in compliance with Standards AS/NZS 3000, AS/NZS 5601.1, as applicable under local regulations, and all local codes and regulatory authority requirements.
- In New Zealand the installation must also conform with NZS 5261, as applicable under local regulations, and the New Zealand Building Code.

PACKAGING

Tape is utilised to hold some components (such as the air filter) in place during transport. All packaging materials including any tape must be removed from the heater prior to its installation.

HEATER APPLICATION

This room sealed gas space heater is designed for use in a single family domestic dwelling (or commercial premises for PRS-250CN and PRS-250CL commercial models) for the purpose of room heating. Its use in an application other than this may shorten its life and void the product warranty.

READ THESE INSTRUCTIONS IN FULL

INSPECTION OF EQUIPMENT

Check the heater and associated equipment for any damage. **DO NOT INSTALL OR OPERATE ANY HEATER THAT HAS BEEN DAMAGED. ANY ADDITIONAL DAMAGE OR FAULTS CAUSED BY UNAUTHORISED START UP MAY NOT BE COVERED BY WARRANTY.**

⚠ Warning: This heater is designed to be installed in a fixed position with a room sealed flue kit (supplied separately). **THE HEATER MUST NOT BE OPERATED UNLESS A GENUINE PALOMA ROOM SEALED FLUE KIT IS INSTALLED.** For installation of the flue kit refer to the installation instructions supplied with the flue kit.

⚠ Warning: Ensure that the gas specified on the heater rating label matches the gas supply. Using a different gas type may cause an explosion or cause damage to heater components. Propane / Butane mixtures such as automotive LPG fuel must not be used.

RATING LABEL

The rating label details the model number, serial number, gas type, burner pressure and electrical specifications of the heater. The rating label is located on the right hand side of the space heater.

HEATER LOCATION & CLEARANCES

This heater is suitable for indoor installation only. The position of the heater should be chosen with safety and service in mind. Make sure people (particularly children) will not touch the flue outlet. Rheem recommends that a flue terminal guard (kit PFK5300) is installed if the flue outlet is in an accessible position or if children are present. The flue terminal must be clear of obstructions and shrubbery.

Heater clearances must be observed at all times.

Heater Clearances			
Front	Left Side	Right Side	Top
1000 mm	500 mm	500 mm	250 mm

The heater must be installed so that it is level and stable. The four feet on the bottom of the heater are height adjustable (by rotating in a clockwise or anticlockwise direction) to facilitate levelling and stabilisation of the heater when installed on an uneven or sloping surface.

The 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 heater.

The heater must be accessible without the use of a ladder or scaffold.

INSTALLATION

The following points must also be observed:

- DO NOT install this heater in areas where spray painting occurs or in areas where there may be lots of fluff, dust or airborne particles such as in hairdressers, workshops etc.
- DO NOT install on an uneven surface unless the heater can be levelled by adjusting the heaters height adjustable feet.
- DO NOT install under shelves or in a confined space. **Note:** This heater is not suitable as a fireplace insert and must not be built into walls, cupboards bookcases etc.
- DO NOT install where the heater may receive splashing water or near another heat source.
- DO NOT connect to an LPG gas cylinder located indoors.
- DO NOT connect the heater to double adapters or power boards. The heater must be directly connected to a 240 Volt 10 Amp GPO.
- DO NOT install under a power point.

Also refer to the installation instructions supplied with the flue kit for important information on flue location.

MINIMUM & MAXIMUM ROOM SIZES

PRS Series Room Sealed Gas Space Heaters do not have a minimum room size requirement because they are room sealed heaters that discharge combustion products to an external position via the flue system.

PRS Series Room Sealed Gas Space Heaters should not to be installed in a room larger than the specified maximum room size. Although the heater can be installed in a room larger than the specified maximum room size the maximum heating capacity of the heater will be exceeded and the heater may not be able to reach or be able to maintain the set temperature.

Specified Maximum Room Size by Heater Model (room length X width) ⁽¹⁾				
	Very Cold	Cold	Cool	Mild
PRS-150N/L	30 m ²	35 m ²	48 m ²	54 m ²
PRS-250N/L	52 m ²	61 m ²	82 m ²	94 m ²
PRS250CN/L	52 m ²	61 m ²	82 m ²	94 m ²

⁽¹⁾ Based on a maximum ceiling height of 2.7 metres (guide only).

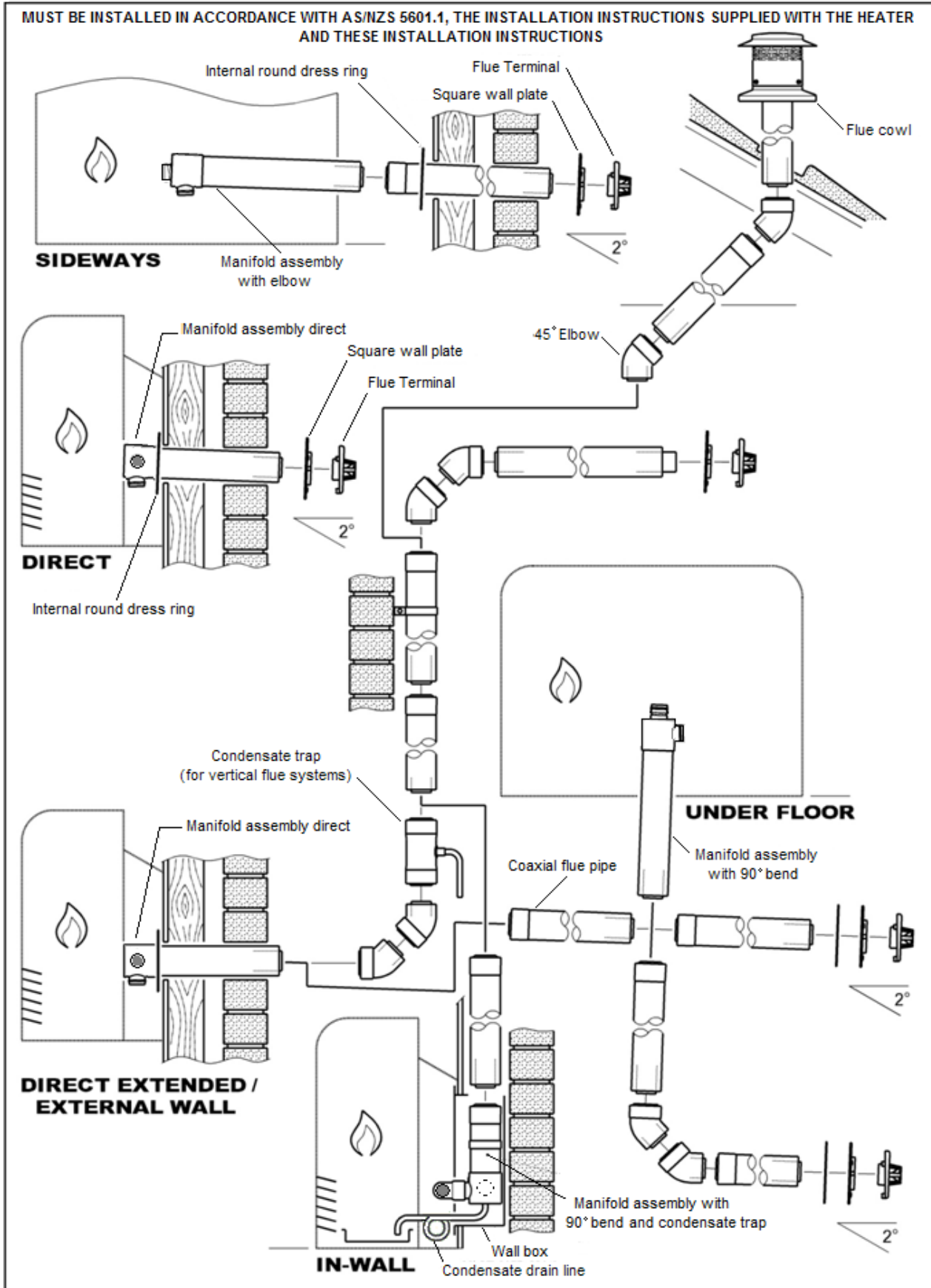
HEATER INSTALLATION PROCEDURE

1. Determine heater and flue location (refer to "Heater Location" on page 13 and "Flue Location" on page 16).
2. Install flue kit (refer to the installation instructions supplied with the flue kit). **Note:** During this step the flue penetration holes will be cut and the back cover kit mounting brackets fixed to the wall.
3. Connect heater exhaust (refer to "Connecting Heater Exhaust" on page 21).
4. Connect heater air intake (refer to "Connecting Heater Air intake" on page 22).
5. Connect heater gas connection (refer to "Gas Connection" on page 18).
6. Connect heater electrical connection (refer to "Electrical Connection" on page 19).
7. Install heater back cover kit (refer to "Heater Back Cover Kit Installation" on page 23).
8. Commission heater (refer to "Commissioning" on page 25).

FLUEING

THE HEATER MUST NOT BE OPERATED UNLESS A GENUINE PALOMA ROOM SEALED FLUE KIT IS INSTALLED. The following information is provided here as a guide only; for installation of the flue kit refer to the installation instructions supplied with the flue kit.

The diagram below illustrates the type of flue kit configurations that are available.



FLUE LOCATION

The location of the flue terminal must comply with the requirements of AS/NZS 5601.1 Clause 6.9 and figure 6.2 which are summarised in the “Installation Standards & Requirements” section on page 16.

The following warnings also apply to the location of the flue system:

⚠ Warning: DO NOT flue into another room and do not flue into an external garage or shed.

⚠ Warning: DO NOT flue into a natural draught flue, chimney or fireplace.

⚠ Warning: DO NOT position the flue terminal near flammable materials.

⚠ Warning: Any horizontal flue terminal installed in areas subject to snow must terminate a minimum of 1.5 metres above ground level or any structure that may accumulate snow to prevent the flue terminal from becoming blocked.

This heater does not require additional ventilation when correctly installed with a Paloma room sealed flue kit.

INSTALLATION STANDARDS & REQUIREMENTS

The flue kit must be installed:

- by a qualified person, and
- in accordance with these installation instructions and the in installation instructions supplied with the room sealed gas space heater, and
- in compliance with Standards AS/NZS 3000, AS/NZS 5601.1, as applicable under local regulations, and all local codes and regulatory authority requirements.
- In New Zealand the installation must also conform with NZS 5261, as applicable under local regulations, and the New Zealand Building Code.

This heater is a fan assisted heater; therefore the fan assisted flue dimension clearances detailed in AS/NZS 5601.1 must be used.

The location of the flue terminal must comply with the requirements of AS/NZS 5601.1 Clause 6.9 and figure 6.2 which are summarised here as a guide only. It is the installers' responsibility to ensure that the current version of the relevant standard is used.

AS/NZS 5601.1 CLAUSE 6.9 AND FIGURE 6.2 SUMMARY

AS/NZS 5601.1 clause 6.9.1 states that the termination point of an open flue shall be located in relation to any associated building and to neighbouring structures so that wind from any direction is not likely to create a downdraught in the flue or chimney and that except where clause 6.9.3 applies, a flue terminal shall;

- (a) be at least 1 m horizontally from a neighbouring structure; or
- (b) if less than 1 m horizontally from a neighbouring structure, be at least 500 mm above that structure;
- (c) be at least 1.5 m from any opening into a building; and
- (d) be at least 200 mm from another flue terminal.

AS/NZS 5601.1 clause 6.9.2 states that where a flue is to terminate above a roof;

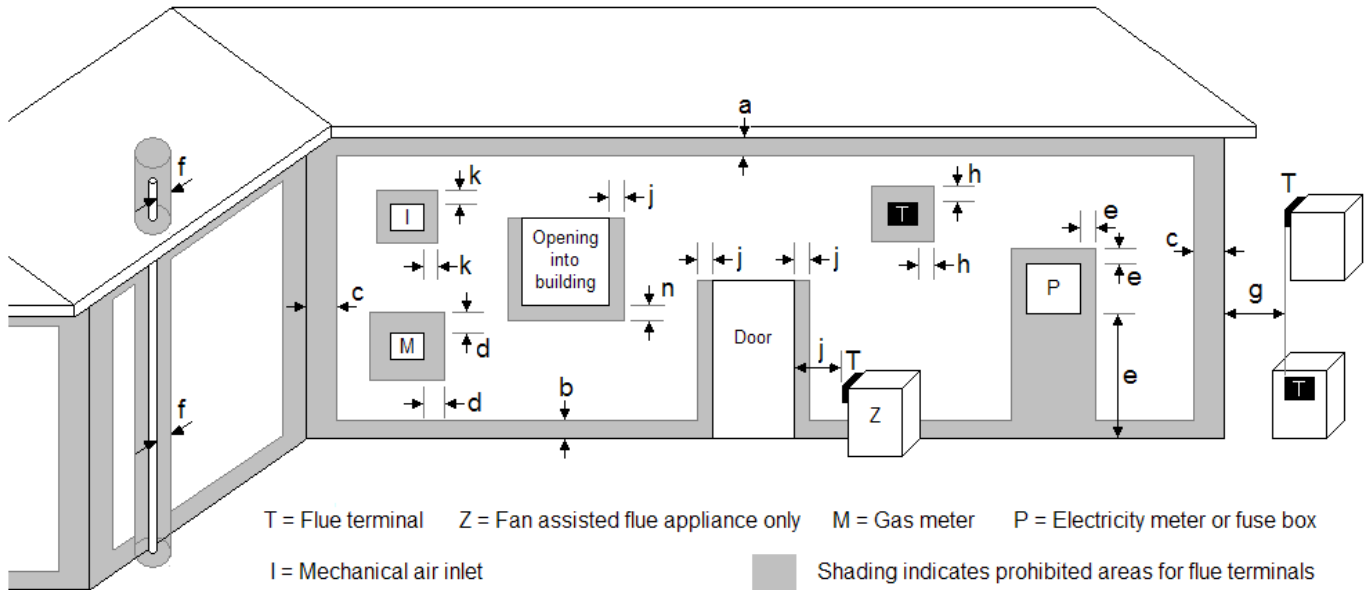
- (a) The end of the flue shall be at least 500 mm from the nearest part of the roof.
- (b) If the roof is designed for personal or public use, the end of the flue shall be at least 2 m above the roof level and 500 mm above any surrounding parapet and be supported.
- (c) The end of the flue shall be at least 200 mm from the nearest part of any chimney.

NOTES: Distances stated are measured before the cowl is fitted to the end of the flue.

AS/NZS 5601.1 clause 6.9.3 states that the location of the flue terminal of a fan assisted flue appliance must comply with the requirements clause 6.9 and figure 6.2 which is reproduced on the following page as a guide only.

AS/NZS 5601.1 Figure 6.2 flue terminal location guide.

All dimensions are measured to the nearest part of the flue terminal.



Ref	Item	Minimum Clearances (mm)	
		Natural Draught	Fan Assisted
a	Below eaves, balconies and other projections:		
	• Appliances up to 50 MJ/h input • Appliances over 50 MJ/h input	300 500	200 300
b	From the ground, above a balcony or other surface *	300	300
c	From a return wall or external corner * (refer to note 2)	500	300
d	From a gas meter (M)	1000	1000
e	From an electricity meter or fuse box (P) (refer to note 1)	500	500
f	From a drain pipe or soil pipe	150	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 *	500	300
j	Horizontally from an openable window, door, non-mechanical air inlet or any other opening into a building with the exception of sub-floor ventilation (refer to note 2):		
	• Appliances up to 150MJ/h input *	500	300
	• Appliances over 150MJ/h input up to 200 MJ/h input *	1500	300
	• Appliances over 200MJ/h input up to 250 MJ/h input *	1500	500
	• Appliances over 250 MJ/h input *	1500	1500
	All fan assisted flue appliances, in the direction of discharge	-	1500
k	From a mechanical air inlet, including a spa blower (refer to note 2)	1500	1000
n	Vertically below an openable window, non-mechanical air inlet or any other opening into a building with the exception of sub floor ventilation:		
	• Space heaters up to 50MJ/h input	150	150
	• Other appliances up to 50 MJ/h input	500	500
	• Appliances over 50MJ/h input and up to 150 MJ/h input • Appliances over 150MJ/h input	1000 1500	1000 1500

* Unless appliance is certified for closer installation.

Notes:

1. Prohibited area below electricity meter or fuse box extends to ground level.
2. Where dimensions c, j or k cannot be achieved, an equivalent horizontal distance measured diagonally from the nearest discharge point of the terminal to the opening may be deemed by the Technical Regulator to comply.
3. Refer to AS/NZS 5601.1 clause 6.9.4 for restrictions on a flue terminal installed under a covered area.
4. Refer to AS/NZS 5601.1 figure J3 for clearances required from a flue terminal to an LP gas cylinder. A flue terminal is considered a source of ignition.
5. For appliances not addressed above, acceptance should be obtained from the Technical Regulator.

GAS CONNECTION

All gas work must be carried out by a qualified person and in accordance with the Australian Gas Installations Standard AS 5601 or AS/NZS 5601.1, and local authority requirements.

CONNECTION SIZES

Model	PRS-150	PRS-250 & PRS250C
Gas Connection Size	R $\frac{1}{2}$ /15	R $\frac{1}{2}$ /15

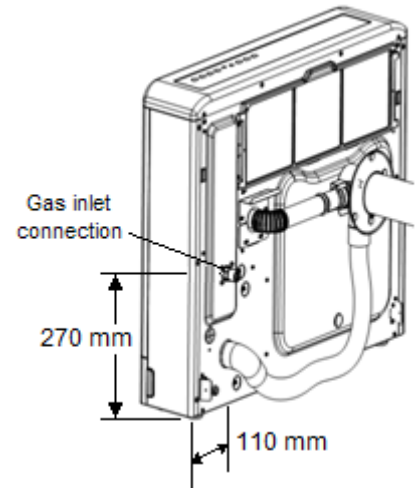
GAS INLET

The pipe work must be cleared of foreign matter before connection and purged at the heater gas isolator before attempting to light the heater. If this procedure is not performed, an ignition failure (code 11) may result on initial start up.

An isolation valve and disconnection union must be installed to allow servicing and removal of the heater. Refer to AS/NZS 5601 or AS/NZS 5601.1 for the correct pipe sizing.

⚠ Warning: Before pressure testing the gas supply system always isolate and disconnect the heater after the isolating valve to prevent the risk of serious damage to the heater. Warranty does not cover damage of any nature resulting from failure to observe this precaution. Refer to the heaters rating label for gas types and pressures.

The heater gas connection must be leak tested before operating the heater. Test the heater gas connection for leaks using soapy water. **DO NOT USE A NAKED FLAME.**



ELECTRICAL CONNECTION

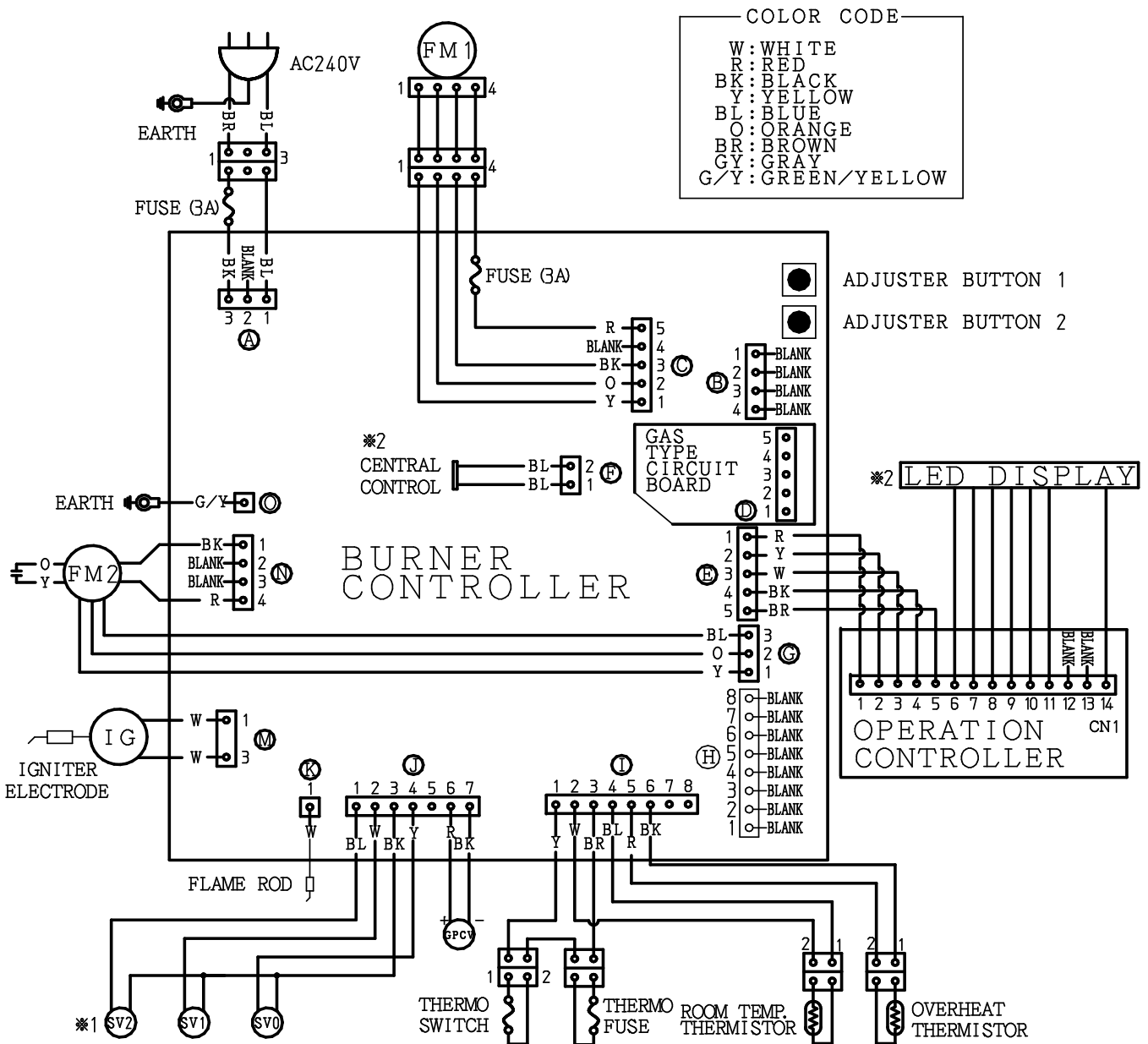
The electrical installation must comply with AS/NZS 3000, AS/NZS 5601 or AS/NZS 5601.1 and any local requirements.

This heater is equipped with a 10A 3 pin plug socket which requires a 10 amp general purpose outlet (GPO) that is connected to a 240V AC 50 Hz M.E.N. (multiple earthed neutral) mains power supply.

The GPO should be located in an accessible position beside the heater.

- The GPO must be located **within** 1200 mm from the left hand side of the heater or 1600 mm from the right hand side of the heater to facilitate cord connection without the use of an extension cable.
- DO NOT connect the heater to double adapters or power boards.
- DO NOT install the heater under a power point.

WIRING DIAGRAM



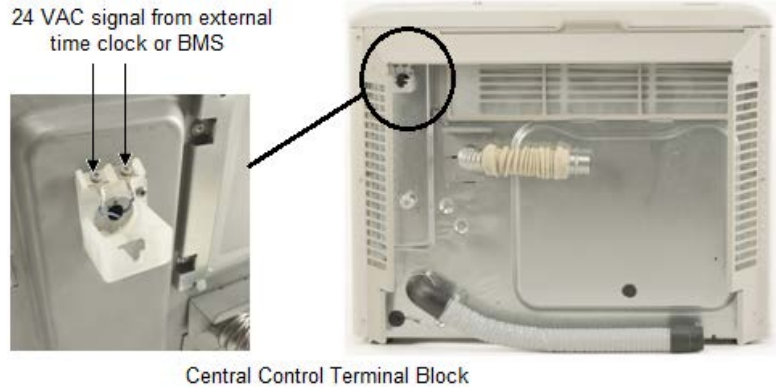
- GPCV: GAS PROPORTIONAL CONTROL VALVE
SV0: GAS INLET SOLENOID VALVE
SV1: GAS SOLENOID VALVE1
*1 SV2: GAS SOLENOID VALVE2
- *1 FOR PRS-400N/L/CN/CL MODEL ONLY
*2 FOR PRS-250CN/CL PRS-400CN/CL MODEL ONLY
- FM1: COMBUSTION FAN MOTOR
FM2: CIRCULATING FAN MOTOR

CENTRAL CONTROL CONNECTION & OPERATION – COMMERCIAL MODELS ONLY

PRS-250CN and PRS-250CL commercial models can be controlled by an external central control system, such as a time clock or BMS, which can be programmed to turn the heater (or group of heater's) ON or OFF at scheduled times.

The heater will operate in central control mode when a 24 VAC command signal is received from the time clock or BMS

A terminal block is located on the rear of the heater to facilitate this connection as depicted opposite.



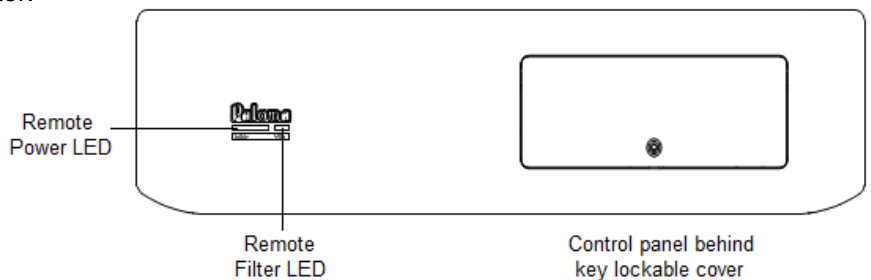
When the 24 VAC central control signal is present, the heater will operate in central control mode and the following will occur:

- The 'Central Control LED' on the control panel will illuminate (refer to "Control Panel Overview" diagram on page 8 for LED location).
- If the control panel cover is locked to prevent control panel operation: The heater will automatically turn ON and operate according to the heaters current set temperature provided the heater is turned on at the power point and the heater's **Power** button is on.
- If the control panel cover is unlocked: The heater will automatically turn ON and operate according to the heaters current set temperature provided the heater is turned on at the power point and the heater's **Power** button is on. All functions except set temperature adjustment (▼ and ▲ buttons), **Economy** button and on/off operation (**Power** button) will be disabled. **Note:** If a disabled button is pressed whilst the heater is in central control mode, the 'Central Control LED' will flash.

When not operating in central control mode, the heater can be operated as normal provided access can be gained to the control panel i.e. the control panel is unlocked.

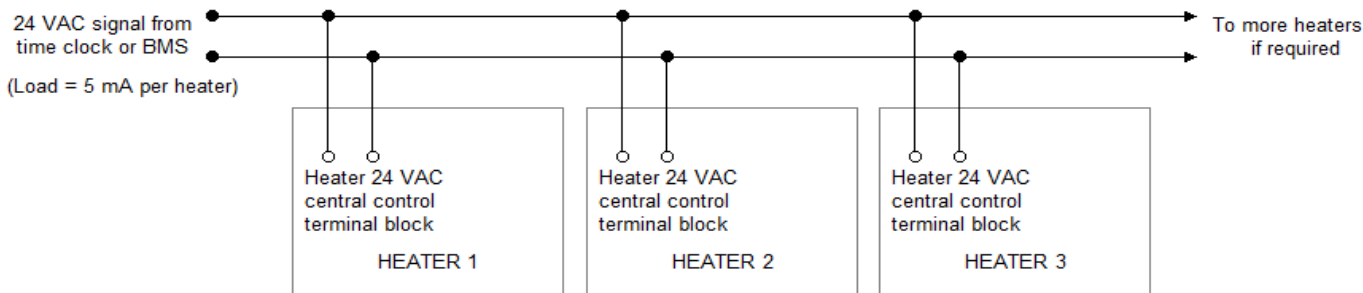
Notes:

- The 24 VAC power supply must be supplied from an isolated power supply or isolation type transformer.
- Minimum command signal wire size for system cable lengths up to 100 metres is 1.5 mm². Command signal wiring for groups of heaters or for system cable lengths greater than 100 metres must be sized to allow for a maximum 12% voltage drop and in any case must be not smaller than 1.5 mm².
- External time clock, BMS and external central control wiring is not supplied with the heater and is to be supplied and installed by the installing contractor.
- Commercial models have a remote **Power** LED and **Filter** LED located on the top of the heater to facilitate viewing of these indicators whilst the control panel key lockable cover is closed/locked.



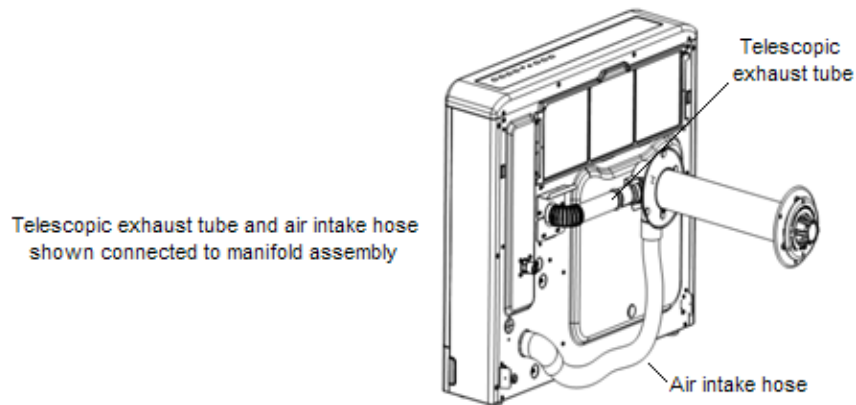
Controlling a Group of Heaters

The central control system can control a group of two or more heaters by connecting the 24 VAC command signal wiring in parallel with each heater as depicted below. There is no limit to the number of heaters that can be connected/controlled in this manner provided the central control system can meet load requirements (5 mA per heater @ 24 VAC ±25%).

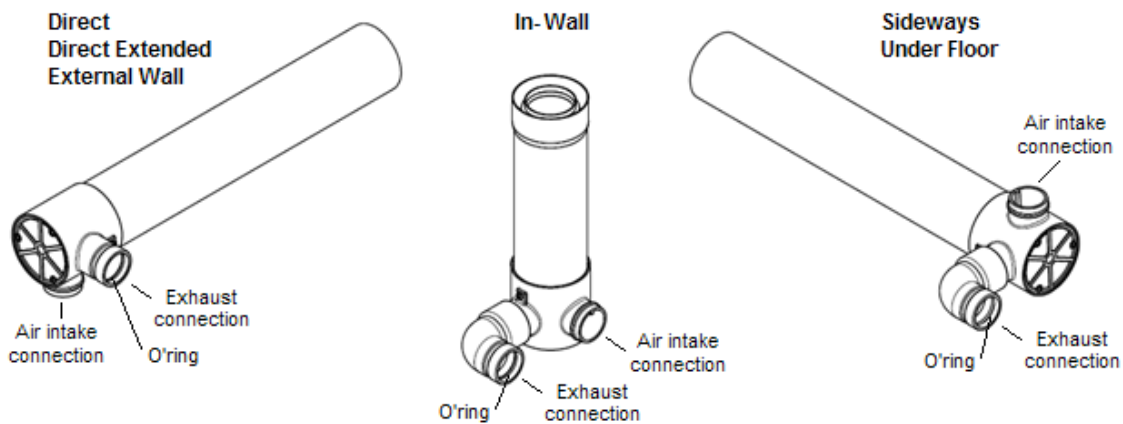


CONNECTING HEATER EXHAUST & AIR INTAKE

Heater Connections



Manifold Assembly Connections

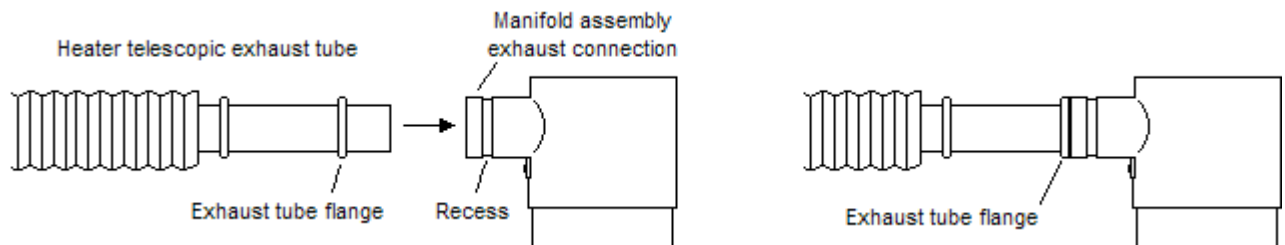


CONNECTING HEATER EXHAUST

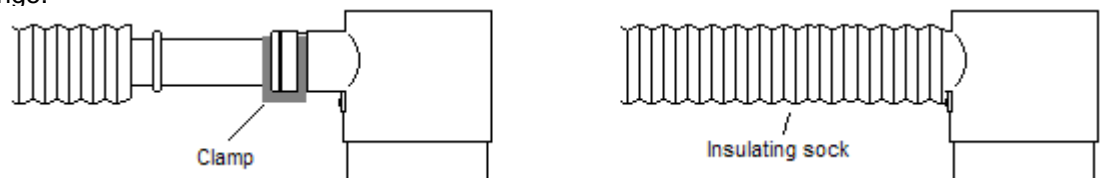
⚠ Warning: The exhaust connection MUST be made in accordance with these instructions using only genuine Rheem or Paloma parts. Failure to adhere to these instructions may cause combustion products to be discharged into the room in which the heater is located resulting in serious injury or death.

⚠ Warning: Ensure manifold assembly exhaust connection o'ring is in position before assembly. The o'ring is located inside the exhaust connection and is orange/red in colour (refer to "Manifold Assembly Connections" diagram above).

1. **Lubricate manifold assembly exhaust connection internal o'ring with silicone grease supplied with flue kit.**
2. Push heater telescopic exhaust tube into manifold assembly exhaust connection until telescopic exhaust tube flange contacts exhaust connection. Note: The manifold assembly exhaust connection may have an elbow fitted (depending on kit type). If an elbow is present it can be rotated to facilitate tube connection.



3. Place clamp (supplied in standard heater back cover kit) over connection ensuring one arm of clamp fits in recess on manifold assembly exhaust connection and other arm of clamp fits on outer edge of heater telescopic exhaust tube flange.

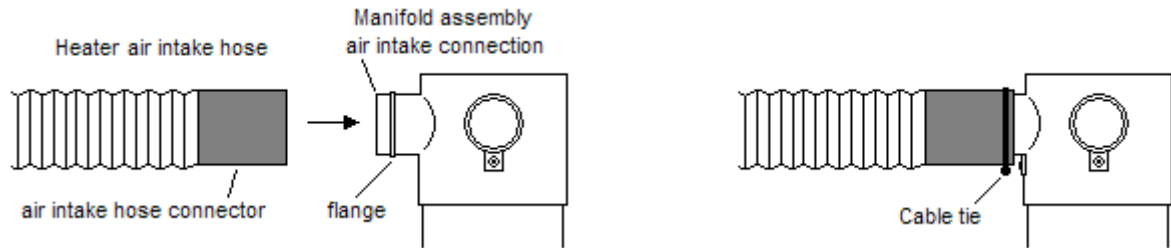


4. **Ensure exhaust tube insulating sock is fully extended over exhaust tube.**

CONNECTING HEATER AIR INTAKE

⚠ Warning: Ensure air intake hose is not stretched or kinked.

1. Push heater air intake hose over manifold assembly air intake connection until recess inside air intake hose connector is located over flange on manifold assembly air intake connection.
2. Secure connection with cable tie (supplied in heater standard back cover kit).
3. **Ensure heater air intake hose does not contact exhaust tube.**



HEATER BACK COVER KIT INSTALLATION

The heater back cover kit is supplied with the heater. The back cover kit attaches to the rear of the heater and the top cover rear edge is located over the two back cover kit wall brackets (to locate and mount back cover kit wall brackets refer to the installation instructions supplied with the flue kit).

Sideways and under floor installations require an Extra Wide Back Cover Kit (kit PWSK001) which is utilised instead of the standard back cover kit supplied with the heater.

STANDARD BACK COVER KIT CONTENTS (Supplied with Heater)			
	Item	Description	Quantity
	A	Top Cover	1
	B	RH Side Cover	1
	C	LH Side Cover	1
	D	Wall Brackets	2
	E	Wall Bracket Screws	2
	F	Hexagon Bolt	4
	G	Exhaust Connection Clamp	1
	H	Air Intake Cable Tie	1
	N/A	Control Panel Keys *	2

* PRS-250CN and PRS-250CL commercial models only.

EXTRA WIDE BACK COVER KIT CONTENTS (Kit PWSK001 – For Sideways & Underfloor Installations)			
	Item	Description	Quantity
	A	Top Cover	1
	B	RH Side Cover	1
	C	LH Side Cover	1
	D	Heater Side Replacement Brackets	2
E	Screws 8g X 14	8	
<p>Note: Use wall brackets and wall bracket screws from standard back cover kit supplied with heater.</p>			

STANDARD BACK COVER KIT INSTALLATION

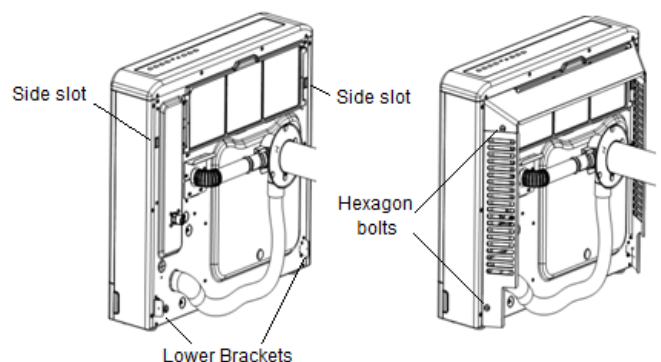
Warnings:

⚠ Warning: Before installing the back cover kit, ensure the heaters exhaust tube and air intake hose are firmly connected.

⚠ Warning: Ensure that nothing (including air intake hose) is in contact with metallic parts of the heaters exhaust tube. Reposition telescopic exhaust tube insulating sock if required.

Procedure:

1. Align LH side cover screw hole over hole in heater lower bracket and insert cover location tab into heater side slot.
2. Fasten LH side cover to lower bracket with hexagon bolt.
3. Align RH side cover screw hole over hole in heater lower bracket and insert cover location tab into heater side slot.
4. Fasten RH side cover to lower bracket with hexagon bolt.
5. Align top cover over top of LH & RH side covers and the two wall brackets.
6. Fasten top cover to side covers with hexagon bolts.



EXTRA WIDE BACK COVER KIT INSTALLATION

Warnings:

⚠ Warning: Before installing the back cover kit, ensure the heaters exhaust tube and air intake hose are firmly connected.

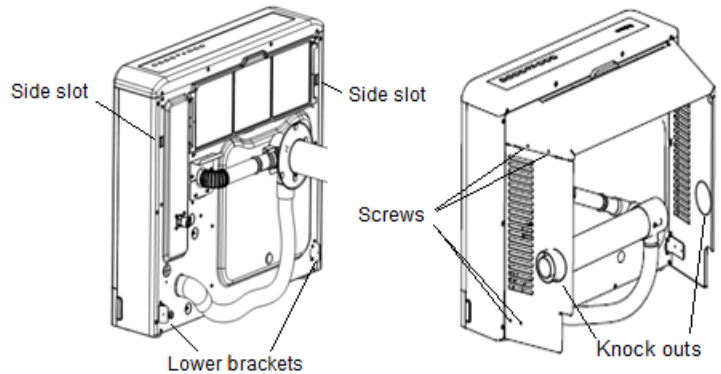
⚠ Warning: Ensure that nothing (including air intake hose) is in contact with metallic parts of the heaters exhaust tube. Reposition telescopic exhaust tube insulating sock if required.

Notes:

If installing a Sideways Flue System, knock out the large hole on the relevant side cover, disconnect coaxial flue pipe from manifold assembly, insert flue pipe through cover and reconnect and silicone seal flue pipe to manifold assembly when performing step 2 or 4 of the following procedure.

Procedure:

1. Remove two lower brackets on rear of heater and replace with brackets supplied in Extra Wide Back Cover Kit (fix new brackets using existing heater bracket screws).
2. Align LH side cover screw holes over holes in heater lower bracket and insert cover location tab into heater side slot.
3. Fasten LH side cover to lower bracket with two screws.
4. Align RH side cover screw holes over holes in heater lower bracket and insert cover location tab into heater side slot.
5. Fasten RH side cover to lower bracket with two screws.
6. Align top cover over top of LH & RH side covers and the two wall brackets.
7. Fasten top cover to side covers with four screws (two on each side).



COMMISSIONING

COMMISSIONING MUST ONLY BE UNDERTAKEN BY A PROPERLY QUALIFIED PERSON.

COMMISSIONING PROCEDURE

1. Ensure the position of the heater complies with the installation requirements of this manual, AS/NZS 5601.1 and local authority requirements.
2. Ensure the flue system and the location of the flue terminal complies with the installation requirements of this manual, the manual supplied with the flue kit, AS/NZS 5601.1 and local authority requirements.
3. Ensure the flue system is correctly assembled, secured and that nothing is obstructing the flue cowl/terminal. Also ensure the flue system does not have any leaks.
4. Ensure the heater is suitable for the type of gas available (refer to the heaters rating label which is located on the right hand side of the heater).
5. Ensure heater clearances have been maintained (refer to "Heater Clearances" table on page 13) Note: Curtains may need to be tied back.
6. Ensure the heater is correctly installed and is level and stable. The four feet on the bottom of the heater are height adjustable (by rotating in a clockwise or anticlockwise direction) to facilitate levelling and stabilisation of the heater – adjust feet height if required.
7. Perform a gas inlet pressure test at the gas inlet to the heater (refer to "Gas Inlet Pressure Test" on page 26).
8. Reconnect heater gas inlet connection, ensure the heaters gas isolation valve is turned on and test for gas leaks using soapy water. **DO NOT USE A NAKED FLAME.**
9. Set heater 'flue type' setting according to the type of flue system installed (refer to 'Setting Heater Flue Type' on page 26).
10. Adjust burner gas pressure according to heater model and gas type (refer to "Adjusting Burner Gas Pressure" on page 27).
11. Plug heater into power point and switch ON power point.
12. Turn on heater and verify operation (refer to "To Turn the Heater ON" on page 8).
13. Explain to the householder or responsible officer the functions and operation of the heater.

⚠ Warning: Upon completion of the installation and commissioning of the heater, leave this guide with the householder or a responsible officer. **DO NOT** leave this guide inside the heaters cover or behind the heater, as it may interfere with the safe operation of the heater or ignite when the heater is turned on.

COMMISSIONING TESTS & ADJUSTMENT PROCEDURES

GAS INLET PRESSURE TEST

IMPORTANT – Check the gas supply pressure at the gas inlet to the heater with all other gas burning appliances in the premises operating (burners alight). The minimum gas supply pressures are:

- Natural Gas: 1.13 kPa
- Propane: 2.75 kPa

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

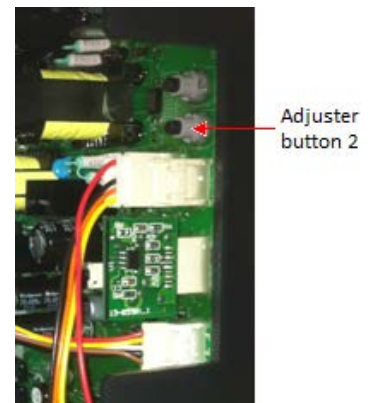
The maximum gas pressure must NOT exceed 3.5 kPa.

SETTING HEATER FLUE TYPE

The controller must be set according to the heater flue type at time of commissioning. Combustion fan speed is automatically adjusted according to the flue type setting to aid combustion.

Perform the following procedure to set the heater flue type:

1. **Ensure heater is unplugged from power point.**
2. Remove four screws retaining front louvre. Two screws are located on left hand side of louvre and two screws are located on right hand side of louvre. Screws are accessed through louvres.
3. Remove front louvre by pulling louvre away from heater.
4. Remove lower front panel by simultaneously depressing tabs located on bottom of heater sides and pulling lower front panel away from heater.
5. Remove two screws retaining front panel (screws are located on bottom corners of front panel).
6. Remove front panel as follows: Slide front panel to the right, push it down to disengage retaining tabs and then pull panel away from heater.
7. Plug heater into power point and switch power point ON.
8. Press and hold controller '**Adjuster Button 2**' for two seconds and release the button when the control panel display shows the current flue configuration setting ('00', '01' or '02').
9. Press and release the ▲ or ▼ button to change the flue type setting according to the installations flue configuration (refer to 'Flue Type Setting Table' on page 26).
10. Press and hold '**Adjuster Button 2**' for two seconds and release the button when the control panel display goes blank. The flue type setting has now been set.
11. **Isolate power supply to heater by unplugging heater from power point.**
12. Reassemble heater in reverse order of steps 6 ~ 2.



Flue Type Setting Table (Shaded area = Required flue type setting)									
No. of Bends*	Total Flue Length (metres)								
	1	2	3	4	5	6	7	8	9
0	00	00	00	01	01	01	02	02	02
1	00	00	01	01	01	01	02	02	02
2	00	00	01	01	01	02	02	02	02
3**	00	01	01	01	01	02	02	02	02

* Two 45° bends = 1 bend.

** Vertical flue terminations only. Flue systems with a horizontal flue termination must not have more than two bends.

Paloma factory setting is '00'.

ADJUSTING BURNER GAS PRESSURE

The gas pressure delivered to the burner by the heaters gas proportional control valve must be adjusted for both its low and high rate and must be adjusted according to the heater model and gas type.

A dual port differential type manometer is required to adjust the burner gas pressure. One manometer hose (P1) is connected to the gas valve test point and the second manometer hose (P2) is connected to the inner case test point which is located on the burner injector manifold plate.

The burner gas pressure is the gas valve test point pressure (P1) minus the inner case test point pressure (P2).

Adjustment Procedure

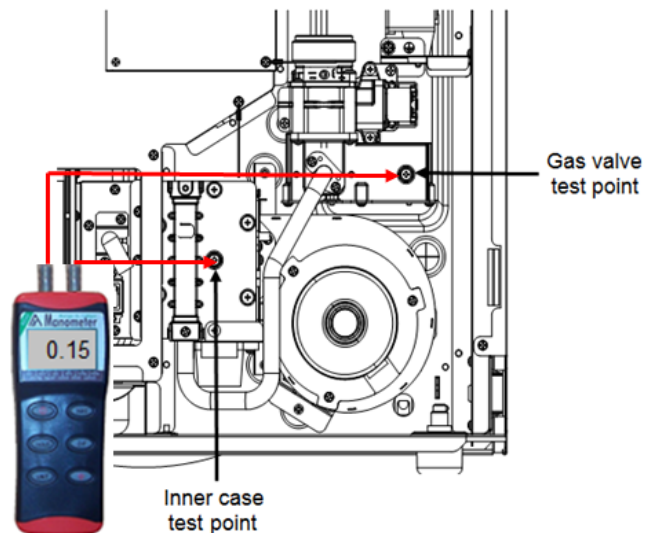
The burner pressure for both the low and high rate can be adjusted by performing the following procedure:

Note 1: Ensure inlet gas pressure is within specification before attempting to adjust burner gas pressure.

Note 2: If any button is not operated for a period of 20 seconds, the controller will automatically exit burner adjustment mode however any changes made will be saved.

Note 3: Familiarise yourself with the burner adjustment procedure and settings required before attempting to perform the procedure.

1. **Ensure heater is not plugged into power point.**
2. Remove four screws retaining front louvre. Two screws are located on left hand side of louvre and two screws are located on right hand side of louvre. Screws are accessed through louvres.
3. Remove front louvre by pulling louvre away from heater.
4. Remove lower front panel by simultaneously depressing tabs located on bottom of heater sides and pulling lower front panel away from heater.
5. Remove two screws retaining front panel (screws are located on bottom corners of front panel).
6. Remove front panel as follows: Slide front panel to the right, push it down to disengage retaining tabs and then pull panel away from heater.
7. Remove screw and washer from gas valve test point located on gas valve assembly and attach first manometer hose (P1) to test point.
8. Remove screw and washer from inner case test point located on burner injector manifold plate and attach second manometer hose (P2) to test point.
9. Plug heater into power point and switch power point on.
10. After burner has ignited, wait for at least 15 seconds then push and hold down '**Adjuster Button 1**' on the controller. The control panels digital display will now change to show 'H' (for high) flashing in the 'Set' window and 'L' (for low) flashing in the 'Room' window. Do not release Adjuster button 1 until directed to in step 13.
11. The burner low gas pressure **MUST** be adjusted first. To adjust the burner low gas pressure, press and release the ▲ or ▼ button. The digital displays 'Room' window will now display a setting between 01 ~ 39 and the heater will automatically operate on low. This number can now be changed by pressing and releasing the ▲ or ▼ buttons. Higher number = more gas pressure and lower number = less gas pressure. The burner low gas pressure can be viewed on the manometer and finetuned to match the specifications in the burner gas pressure table shown at the end of this procedure.



Adjuster button 1



12. The burner high gas pressure can now be adjusted. To adjust the burner high gas pressure, press and release the 'Timer 1' or 'Timer 2' button. The digital displays 'Set' window will now display a setting between 01 ~ 39 and the heater will automatically operate on high. This number can now be changed by pressing and releasing the 'Timer 1' or 'Timer 2' buttons. Higher number (Timer 2 button) = more gas pressure and lower number (Timer 1 button) = less gas pressure. The burner high gas pressure can be viewed on the manometer and finetuned to match the specifications in the burner gas pressure table shown at the end of this procedure.



- 13. Release 'Adjuster Button 1'.
- 14. Press and release the 'Set Times' button to exit burner gas pressure adjustment mode. The digital display will revert to show the current set point and room temperatures and any burner gas pressure adjustments made will be automatically saved.
- 15. Turn heater off and replace gas valve test point screw and washer and inner case test point screw and washer.
- 16. Operate heater and check for gas leaks.
- 17. **Isolate power by unplugging heater from power point.**
- 18. Reassemble heater in reverse order of steps 6 ~ 2.

Burner Gas Pressure Table			
Gas Type	Model	Burner Pressure Low Rate	Burner Pressure High Rate
NG	PRS-150N	0.08	0.34
	PRS-250N	0.08	0.53
	PRS-250CN	0.08	0.53
LPG	PRS-150L	0.10	0.52
	PRS-250L	0.11	0.73
	PRS-250CL	0.11	0.73

⚠ Burner Gas Pressure = Gas valve test point pressure (P1) minus inner case test point pressure (P2).

Note: The burner high and low rate gas pressures indicated in the "Specifications Table" on page 31 are **gas valve test point pressures (P1 only) at minimum flue length**. When adjusting the burner gas pressure, the P1 minus P2 formula and gas pressures detailed in the "Burner Gas Pressure Table" shown above must be utilised to cater for the flue length of the particular installation.

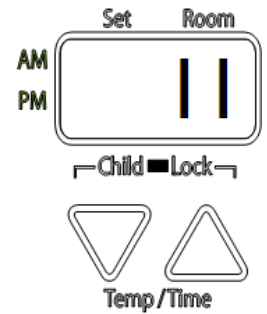
FAULT INDICATION

The heater is equipped with self diagnostic capabilities. If a fault is detected, the control panel display will show a two digit code in the 'Room' area and the power LED will flash red. In the example opposite the control panel display shows fault code 11.

If an error code occurs the heater will 'lock out' and will not operate until the fault has been rectified and the heater is reset.

To Reset the Heater: Switch the heater off at the power point, wait ten seconds then switch the power point back on. If the fault persists, phone your nearest Rheem Service department or Accredited Service Agent to arrange for an inspection.

The following table details available codes and their meanings:



Code	Fault Condition
11	Ignition failure (flame rod signal not detected during ignition period)
12	Flame failure (flame rod signal lost 5 times during normal burner operation)
14	Overheat condition – Thermistor detects > 120°C (105°C PRS-150) and/or thermo switch contacts open (@120°C) and/or thermo fuse blows (blows @ 216°C)
16	Room temp too high (room temp thermistor detects > 30°C continuous for 10 minutes)
24	Power switch failure (faulty control panel)
31	Room temperature thermistor abnormal (open circuit or closed circuit)
33	Overheat thermistor abnormal (open circuit or closed circuit)
34	Overheat thermistor abnormal (abnormal temperature drop detected)
51	Gas valve failure (solenoid valve SV0 circuit failure)
61	Combustion fan abnormal (FM1 < required speed ± 20%)
62	Circulating fan abnormal (FM2 < 320 rpm)
71	Gas solenoid valve circuit abnormal (faulty controller internal circuitry)
72	False flame detected (flame rod signal detected prior to ignition period)
73	Faulty or missing gas type card
76	Communication fault between control panel and controller
80	Gas valve failure (solenoid valve SV1 circuit failure)

Possible Causes and Suggested Remedies:

- Code 11 or 12 can be indicative of incorrect gas pressure or no/intermittent gas supply. Check other gas appliances to see if they are operating.
- If code 14 occurs, try cleaning the air filter (refer to "Regular Care" on page 7).
- If code 16 occurs, reset the heater and check to ensure that the desired set temperature is set from 16 ~ 26°C **and is not set on 'H'** (refer to "Raising or Lowering the Set Temperature" on page 9).

For all other faults (or if a fault persists) phone your nearest Rheem Service department or Accredited Service Agent.

SERVICE PROCEDURES

ONLY AN AUTHORISED PERSON MAY REPAIR OR SERVICE A GAS APPLIANCE

For peak performance it is suggested that the space heater be serviced by your nearest Rheem Service Department or Accredited Service Agent annually or prior to every winter.

Only genuine replacement parts should be used on this heater and flue system.

⚠ Warning: DO NOT OPERATE THE HEATER IF THE FLUE SYSTEM IS NOT CONNECTED OR IF ANY PART OF THE FLUE SYSTEM IS FAULTY OR DAMAGED. Operation of the heater without the flue system or with faulty or damaged flue components may cause combustion products to be discharged into the room in which the heater is located resulting in serious injury or death. If you smell strange odours, shut down the heater immediately and phone your nearest Rheem Service department or Accredited Service Agent to arrange for an inspection.

ANNUAL SERVICE PROCEDURE

1. Visually inspect heater for damage.
2. Visually inspect power supply cord to ensure it is not cracked or damaged and is in good working order.
3. Remove air filter on rear of heater and wash filter in luke warm water with a mild soap solution (refer to "Air Filter Removal" on page 7).
4. Remove and clean humidifier tray (refer to "Humidifier Tray Removal" on page 7).
5. Check air intake and exhaust connections at rear of heater to ensure they are sound and firmly connected.
6. Check flue system; ensure all visible flue components are sound and that the flue system including the flue terminal is not obstructed or blocked in any way.
7. If a condensate trap is installed, check to ensure the condensate drain line is not blocked. **NOTE:** If the flue system is a Vertical In-Wall system, the condensate drain tube from the condensate trap to the heater humidifier tray must be formed in a 80 ~ 90 mm loop (90 mm max) that has been filled with water to trap flue gasses (refer to 'In Wall' illustration on page 15). Check to ensure this loop is filled with water and that the loop is fixed in a vertical position as depicted. Ensure tubing forming this loop is not kinked, has fall to heater humidifier tray and does not prevent humidifier tray removal. Also ensure tube is not touching any exhaust components.
8. Remove front panel and vacuum accumulated dust and foreign matter from outside and inside of heater.
9. Check and adjust burner gas pressure (refer to "Adjusting Burner Gas pressure" on page 27).
10. Wipe external parts with a soft dry cloth. **Note:** Do not use a cleaning cloth, thinners, benzene, acid or alkaline detergents as these products will discolour the paint and plastic components.
11. Check and confirm correct operation.

DO NOT return the heater to service where an unsafe condition exists.

⚠ Warning: Operation of the heater when faulty or incorrectly adjusted will result in rapid and severe damage which is not covered by warranty.

DIMENSIONS AND TECHNICAL DATA

SPECIFICATIONS

	PRS-150N	PRS-150L	PRS-250N PRS-250CN	PRS-250L PRS-250CL
Output (kW)	3.4	3.4	5.9	5.9
Maximum heating capacity (Maximum room size)	Refer to "Minimum & Maximum Room Sizes" on page 14			
Electrical supply voltage	220 ~ 250 Volts AC 50Hz			
Gas connection	R $\frac{1}{2}$ /15			
Min inlet gas pressure (kPa)	1.13	2.75	1.13	2.75
Max inlet gas pressure (kPa)	3.5			
Burner gas pressure low rate (kPa)	0.11	0.15	0.13	0.16
Burner gas pressure high rate (kPa)	0.53	0.73	0.69	0.95
Number of injectors	2	2	3	3
Main burner injector orifice diameter (mm)	1.6	1.15	1.6	1.15
Pilot burner injector orifice diameter (mm)	N/A			
Temperature settings	16 ~ 26°C (selectable in 1 °C increments)			
Ignition	Continuous direct spark			

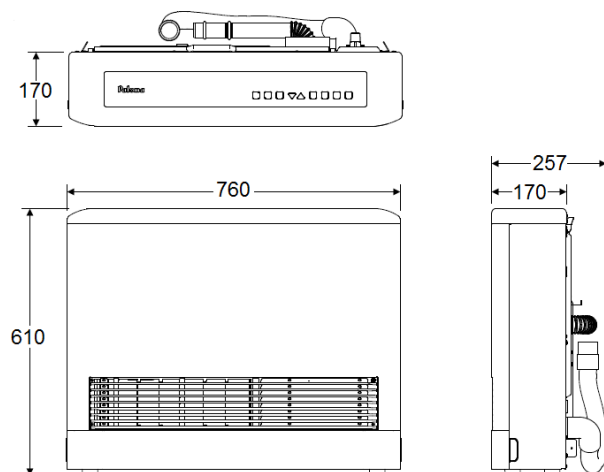
PERFORMANCE

		PRS-150N	PRS-150L	PRS-250N PRS-250CN	PRS-250L PRS-250CL
AS4553 Efficiency Star rating		4.8			
Nominal gas consumption (MJ/h)	Low	6	6	9	9
	High	15.0	15.0	25.0	25.0
Electrical consumption (W)	Standby	1	1	1	1
	Low	25	25	27	26
	High	41	44	57	58

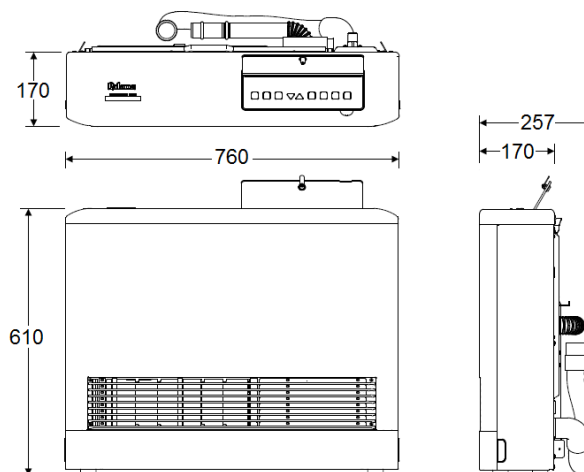
Note: Electrical consumption for central control connection 5 mA per heater @ 24 VAC \pm 25% (PRS-250CN & PRS-250CL commercial models only).

DIMENSIONS & WEIGHT

	PRS-150	PRS-250 & PRS-250C
Height (mm)	610	610
Width (mm)	760	760
Depth (mm)	257	257
Nominal flue diameter (internal/external mm)	50/75	50/75
Packaged weight (kg)	31	31



PRS-150 & PRS-250



PRS-250C

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WARRANTY

PALOMA SPACE HEATER WARRANTY – AUSTRALIA ONLY

PALOMA GAS SPACE HEATER MODELS PRS-150N, PRS-150L, PRS-250N, PRS-250L, PRS-250CN & PRS-250CL

1. THE PALOMA/RHEEM WARRANTY – GENERAL

- 1.1 This warranty is given by Rheem Australia Pty Limited ABN 21 098 823 511 of 1 Alan Street, Rydalmere New South Wales.
- 1.2 Rheem offer a trained and qualified national service network who will repair or replace components at the address of the gas space heater subject to the terms of the Paloma/Rheem warranty. Rheem Service, in addition can provide preventative maintenance and advice on the operation of your space heater. The Rheem Service contact number is available 7 days a week on 131031 with Service personnel available to take your call from 8am to 8pm daily (hours subject to change).
- 1.3 For details about this warranty, you can contact us on 131031 or by email at warrantyenquiry@rheem.com.au (not for service bookings).
- 1.4 The terms of this warranty and what is covered by it are set out in sections 2 and 3 and apply to Paloma gas space heaters manufactured after 1st January 2014.
- 1.5 If a subsequent version of this warranty is published, the terms of that warranty and what is covered by it will apply to gas space heaters manufactured after the date specified in the subsequent version.
- 1.6 The application of the Paloma/Rheem warranty is dependent on payment for the gas space heater being made in accordance with Rheem's Standard Terms and Conditions of Sale.

2. TERMS OF THE RHEEM WARRANTY AND EXCLUSIONS TO IT

- 2.1 The decision of whether to repair or replace a faulty component is at Paloma/Rheem's sole discretion.
- 2.2 If you require a call out and we find that the fault is not covered by the Paloma/Rheem warranty, you are responsible for our standard call out charge. If you wish to have the relevant component repaired or replaced by Rheem, that service will be at your cost.
- 2.3 Where a failed component is replaced under this warranty, the balance of the original warranty period will remain effective. The replacement does not carry a new Paloma/Rheem warranty.
- 2.4 Where the space heater is installed outside the boundaries of a metropolitan area as defined by Rheem or further than 25 km from either a regional Rheem branch office or an Accredited Rheem Service Agent's office, the cost of transport, insurance and travelling between the nearest branch office or Rheem Accredited Service Agent's office and the installed site shall be the owner's responsibility.
- 2.5 Where the space heater is installed in a position that does not allow safe or ready access, the cost of that access, including the cost of additional materials handling and/or safety equipment, shall be the owner's responsibility. In other words, the cost of dismantling or removing cupboards, doors or walls and the cost of any special equipment to bring the space heater to floor or ground level or to a serviceable position is not covered by this warranty.
- 2.6 This warranty only applies to the original and genuine Paloma/Rheem space heater in its original installed location and any genuine Paloma/Rheem replacement parts.
- 2.7 The Rheem warranty does not cover faults that are a result of:
 - a) Accidental damage to the space heater or any component (for example: (i) Acts of God such as floods, storms, fires, lightning strikes and the like; and (ii) third party acts or omissions).
 - b) Misuse or abnormal use of the space heater.
 - c) Installation not in accordance with the Owner's Guide and Installation Instructions or with relevant statutory and local requirements in the State or Territory in which the space heater is installed.
 - d) Repairs, attempts to repair or modifications to the space heater by a person other than Rheem Service or a Rheem Accredited Service Agent.
 - e) Faulty plumbing or power supply.
 - f) Failure to maintain the space heater in accordance with the Owner's Guide and Installation Instructions.
 - g) Transport damage.
 - h) Fair wear and tear from adverse conditions (for example, corrosion).
 - i) Cosmetic defects.
 - j) Where it is found that the fault with the space heater is related to the installation or is due to the failure of electric or gas supplies.
- 2.8 Subject to any statutory provisions to the contrary, this warranty excludes any and all claims for damage to furniture, carpet, walls, foundations or any other consequential loss either directly or indirectly caused incorrect installation, workmanship or other modes of failure.
- 2.9 If the gas space heater is not sized in accordance with the guidelines in the Owner's Guide and Installation Instructions, any resultant fault will not be covered by the Rheem warranty.
- 2.10 The Rheem warranty is not applicable if the installation of the gas space heater is carried out by an installer not approved by Rheem or a person who is considered authorised and qualified to do so in the opinion of Rheem.
- 2.11 Terms of this warranty are effective from date of purchase and the attending service technician reserves the right to verify this date by requesting a copy of the purchase invoice prior to commencement of any warranty work.
- 2.12 Rheem reserves the right to transfer functional components from defective appliances if they are suitable.
- 2.13 Rheem reserves the right to have the installed product returned to the factory for inspection and repair.
- 2.14 Regular care, cleaning and routine maintenance is not covered by this warranty.

3. WHAT IS COVERED BY THE PALOMA WARRANTY FOR THE GAS SPACE HEATERS DETAILED IN THIS DOCUMENT

3.1 Rheem will repair or replace a faulty component of your Paloma gas space heater if it fails to operate in accordance with its specifications as follows:

Domestic Applications – Paloma Gas Space Heater Models PRS-150N, PRS-150L, PRS250N & PRS-250L		
What components are covered	The period in which the fault must appear in order to be covered	What coverage you receive
Heat Exchanger	Years 1 to 10	Repair and/or replacement of the faulty component – Full repair or replacement cost in the first year, reducing by 10% per year thereafter.
Fans	Years 1 to 2	Component repair or replacement cost
All other components	Year 1	Component repair or replacement cost
Labour	Year 1	Repair and/or replacement of the faulty component, free of charge

Commercial Applications – Paloma Gas Space Heater Models PRS-150N, PRS-150L, PRS-250N, PRS-250L, PRS-250CN & PRS-250CL		
What components are covered	The period in which the fault must appear in order to be covered	What coverage you receive
Heat Exchanger	Year 1	Component repair or replacement cost
Fans	Year 1	Component repair or replacement cost
All other components	Year 1	Component repair or replacement cost
Labour	Year 1	Repair and/or replacement of the faulty component, free of charge

4. ENTITLEMENT TO MAKE A CLAIM UNDER THIS WARRANTY

- 4.1 To be entitled to make a claim under this warranty you need to:
 - a) Be the owner of the space heater or have consent of the owner to act on their behalf.
 - b) Contact Rheem Service without undue delay after detection of the defect and, in any event, within the applicable warranty period.
- 4.2 You are **not** entitled to make a claim under this warranty if your space heater:
 - a) Does not have its original serial numbers or rating labels.
 - b) Is not installed in Australia.
 - c) Do not possess a copy of the original invoice.

5. HOW TO MAKE A CLAIM UNDER THIS WARRANTY

- 5.1 If you wish to make a claim under this warranty, you need to:
 - a) Contact Rheem on 131031 and provide owner’s details, address of the space heater, a contact number, date of installation, proof of purchase and the date of manufacture and serial number (from the rating label on the space heater).
 - b) Rheem will arrange for the space heater to be tested and assessed on-site.
 - c) If Rheem determines that you have a valid warranty claim, Rheem will repair or replace faulty parts or components or the space heater in accordance with this warranty.
- 5.2 Any expenses incurred in the making of a claim under this warranty will be borne by you.

6. THE AUSTRALIAN CONSUMER LAW

- 6.1 Our goods come with guarantees that cannot be excluded under the *Australian Consumer Law*. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.
- 6.2 The Paloma/Rheem warranty (set out above) is in addition to any rights and remedies that you may have under the *Australian Consumer Law*.

RHEEM AUSTRALIA PTY LTD, A.B.N. 21 098 823 511, www.paloma.com.au
For Service Telephone 131 031 AUSTRALIA or 0800 657 335 NEW ZEALAND

NOTE: Every care has been taken to ensure accuracy in preparation of this publication. No liability can be accepted for any consequences which may arise as a result of its application.

