



Raypak

Installation and Operating Instructions

Raypak Water Heaters

Part 1: Safety warning

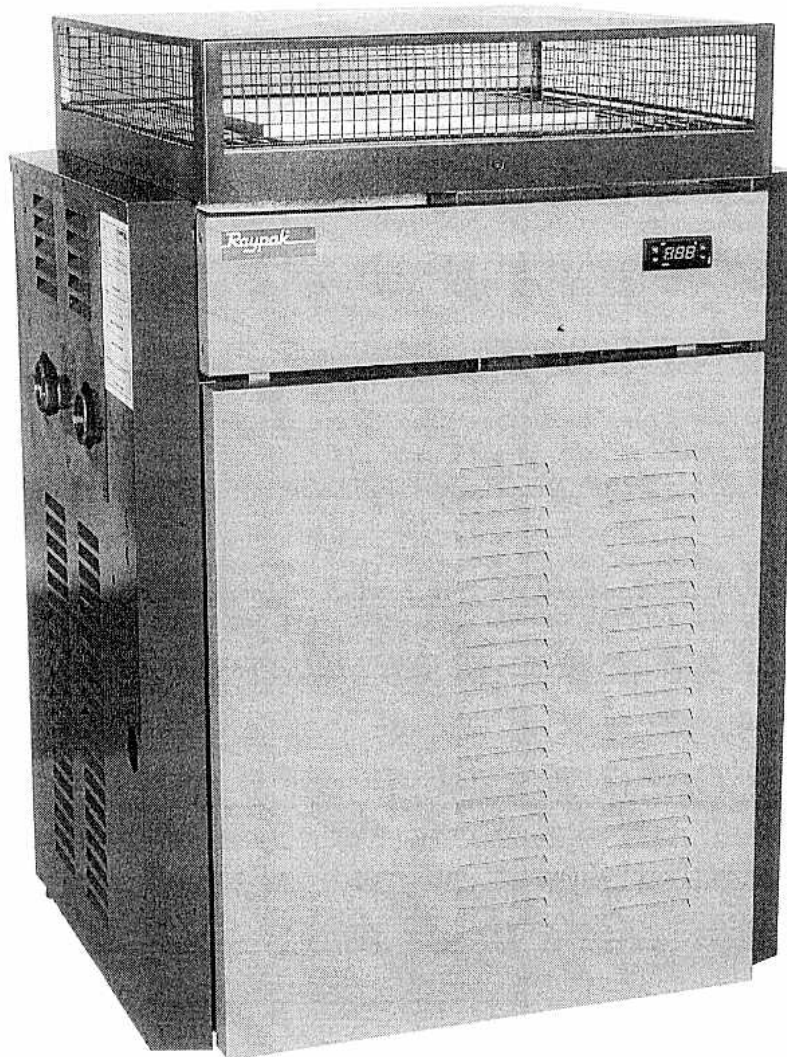
Part 2: Models RB2100 109 & 147 (HL)

**Part 3: RB2100 197, 277, 247 & 427
(BOO and BMM)**

Part 4: Warranty

Raypak Water Heaters

**Part 3: RB2100 197,
277, 247 and 427
(B00 and BMM)**



SECTION I – INSTALLATION INSTRUCTIONS

Installation Instructions

Before commencing installation:

1. Read these instructions in full.
2. Check that the heater with which you have been supplied is suitable for the type of installation and gas available.
3. The gas supply pressure must be between the minimum and maximum as shown on the heater data plate.

General

These instructions are provided to ensure the proper installation and operation of your new Raypak Hot Water Heater.

Should any questions arise regarding the specifications, installation, operation or servicing of this heater, we suggest you contact your local representative or Rheem Australia.

Raypak heaters utilise a finned copper tube heat exchanger with a low water content that results in reduced "stand by" losses. Therefore a water circulator pump of sufficient capacity to suit the heater must be installed in the system.

Raypak RB2100 heaters are Australian Gas Association approved and are designed for either indoor or outdoor installation simply by fitting the appropriate indoor draft diverter or outdoor stackless top. Check that the correct hood for your installation has been supplied.

All electrical, gas piping, gas connection, water piping and flue installation must only be undertaken by a properly authorised person. As well as other requirements as necessary, the installation must comply with local gas (EG AS 5601/AG 601 Gas Installations), water (EG AS 3500) and electrical (EG AS/NZS 3000:2000 codes and/or statutory body codes and regulations).

INSTALLATION PROCEDURES

Heater Location And Clearances etc.

The heater should be located so that any possible

water leaks will not cause damage to any adjacent areas or structures. When such locations cannot be avoided, it is recommended that a suitable drain pan, adequately drained by installed underneath the heater. This pan must not restrict any air flow or servicing accessibility.

The heater must be mounted on a level non-combustible base such as a concrete slab, brick pavers etc. Heaters must not be installed on carpeting or vinyl flooring etc.,

Clearances

Clearance from non-combustible materials:

Rear – 150mm Left Hand Side – 300mm*
Front – 60mm Right Hand Side – 150mm
Ceiling – 1200mm

*The normal heater design is with the water pipe entry from the Left Hand Side

Clearance from combustible materials:

	Indoor	Outdoor
Horizontal	100mm	600mm
Vertical	1200mm	Unobstructed

For servicing purposes, try to allow at least 600mm clearance in front of the heater for burner tray removal. Increasing the water pipe entry clearance to 450mm would greatly assist with heat exchanger servicing.

Combustion/Ventilation Air Supply

Indoor model heaters must only be installed in a protective enclosure or properly constructed plant room with adequate ventilation in accordance with AS 5601/AG 601)

The minimum free area provided by each vent shall be as specified in the chart below unless otherwise stated in AS 5601/AG 601.

Minimum free ventilation area in square centimetres.

Model	Area (cm2)	Model	Area (cm2)
197	585	277	825
347	1035	427	1275

Note: The minimum dimension of any opening shall be 6 mm

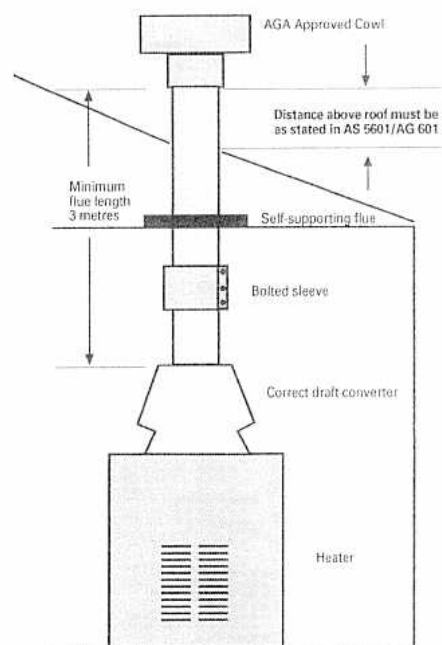
Warning: Air supply to the heater room must not be affected by any mechanical exhaust vents located in other parts of the house or building such as kitchen or bathroom fans, spa blowers etc.

Mechanical exhaust vents may create a negative pressure in the heater room that can become a hazard by asphyxiation, explosion or fire.

Caution: DO NOT store chemicals or flammable materials in the same room or near this heater. Do not use aerosols or flammable sprays near this heater whilst it is in operation (See **Part 1 – For your safety**).

Flue Installation

The correct draft diverter must be fitted to the top of the heater and connected to a properly constructed flue, vented to the outside using only approved fittings.



Reduction of the flue diameter or alteration to the draft hood voids all warranty. Where flueing may be difficult, please contact Rheem Australia for advice. We will have solutions, particularly where a fan assisted flue may be the answer.

Flue Installation (Cont'd)

The weight of the flue must not rest on the heater draft diverter which means that the flue must be self supporting and be fitted with a disconnection section (eg. Bolted Sleeve) to enable the draft diverter and heater top section to easily be removed for servicing purposes.

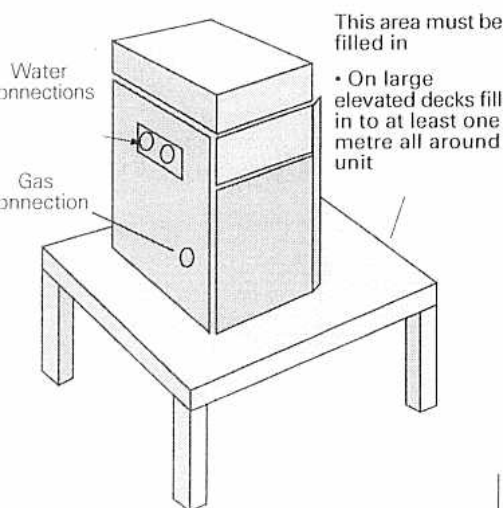
Where practical the flue should run vertically. Lateral (raised above horizontal at one end) is acceptable but the total length of the flue shall not exceed 50% of the total flue height and must be designed to rise no less than 20mm per one metre run.

The flue must be terminated with an approved cowl.

Outdoor Installations

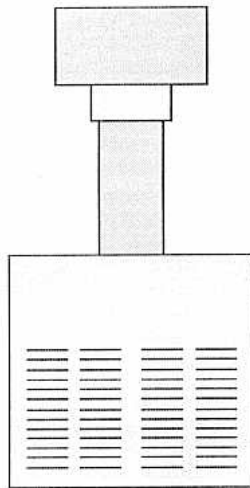
Heaters installed outside must not be inside any roofed structure or under eaves, roof overhangs or pool decking. There must be at least 1500mm between the heater and any window or fresh air opening in any direction.

When installing the heater on a raised base, please make sure that the base material that the heater is sitting on is filled in, (eg. if steel mesh decking is used, a suitable plate material must be used to fill in the perforations. This is very important, as any excessive drafts must not be able to enter the unit from directly underneath.)



High Wind Conditions

The Raypak RB2100 series of heaters and heaters has been subjected to wind tests of up to 90 km/h as part of the AGA approval process. However in



areas where high winds can frequently occur, it may be necessary to locate the heater a minimum of one (1) metre from high vertical walls, or to install a wind break so that the heater is not in the direct wind current.

In areas of constant extreme winds it may be necessary to replace the standard low profile hood with a HIGH WIND TOP in combination with an adaptor panel. This is OPTIONAL and at extra cost.

Hood Conversion

To convert a unit from an outdoor to an indoor configuration.

Remove counter sinks sunk screws from the perimeter of the outdoor hood

Remove outdoor hood and discard.

Install indoor flue connector plate to top of heater and screw in position.

Fit draft diverter diverter over the spigot and sit squarely on flue connector plate.

Gas Supply

The gas supply pipe must be sized to give sufficient pressure for the correct operation of the heater. The gas line must be fitted with an isolation valve.

Caution: The gas supply piping must be isolated from the heater during any pressure testing of the gas line. Dissipate the test pressure before reconnecting to the heater. Failure to follow this procedure may result in damage to the gas valve. (Over-pressured valves are not covered by warranty.)

The heater and its gas connection must be tested for leaks before placing into operation.

Use soapy water and a manometer for leak testing.

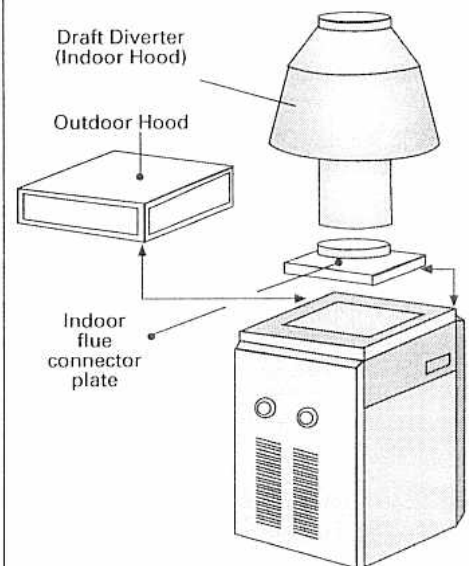
Do not use an open flame to test to gas escapes.

Water Connections And System Piping

The heater must be installed to AS3500.4 and/or local codes.

For atypical piping systems and heating applications it is essential that Rheem be consulted.

Raypak heaters do have some special requirements and if you are not familiar with Raypak products Rheem can save you any unnecessary inconvenience.



The water pipe connections are 38mm BSP.

Do not reduce the pipework size and heater water connections without allowing for any friction loss which will occur.

Low water flow will cause damage to the heater and system components. (See also **Pump Selection**)

Please install pipework to heater using approved fittings and isolating valves that will allow easy disconnection for any future maintenance requirements.

Pump Selection

In order to obtain good hydraulics in your system, you must select the correctly sized water circulating pump.

Refer to the **Flow Rate and Pressure Drop** chart and allow for the system head pressure when sizing the pump.

We recommend that the pump be selected to provide a 150°C to 200°C temperature rise between the heater water inlet and outlet, when the heater is at full firing rate.

If a system water temperature rise in excess of 200°C is required, please contact Rheem for advice.

Systems with multiple zones may require additional pump(s).

Water Flow Rate And Pressure Drop

	10 OC Rise		200C Rise	
300C				
Model	l/sec	kPa	l/sec	
kPa	l/sec	kPa		
197	1.0	3.0	0.7	
3.0	0.5	3.0		
277	1.5	8.0	1.0	
4.0	0.7	3.0		
347	1.9	13.0	1.3	
6.0	0.9	3.0		
427	2.2	17.0	1.5	
8.0	1.1	4.0		

Cold Water Make-up/Supply

Heating Heaters: We recommend that a cold water feed regulator (Pressure Reducing Valve) be installed and set at 50 kPa minimum pressure.

Backflow prevention in accordance with AS3600.4 may be required or alternatively a cold feed (header) tank may be used.

The minimum recommended height above the heater for such a tank is five (5) metres. Most systems operate at 100 kPa COLD.

Domestic Hot Water Heaters: These heaters are normally connected to a storage tank and the cold water supply must be fitted with a Pressure Limiting Valve, if the water supply pressure with 250 kPa added exceeds the pressure indicated on the tank.

Piping

Heating Heaters: We recommend that all high points of the system be vented or fitted with automatic air vents.

The design of the system must be such that the heater is provided with adequate water flow and pressure at all times.

On radiator or heating systems where thermostatic valves can vary the water flow, then a suitable by-pass valve or loop must be fitted at the end of the system to keep the heater flow rate at an acceptable level.

IMPORTANT: When installing a new heater to an old system, it is a Raypak requirement that the system and its equipment be inspected and if necessary, drained and flushed out with clean fresh water, before the new heater is connected.

Failure to do this may cause blockages and/or heater damage which is NOT COVERED BY WARRANTY and any damage caused would result in extra costs to repair etc.

IF THERE ARE ANY DOUBTS ABOUT THE SYSTEM, DRAIN AND FLUSH AS A PRECAUTION.

Domestic Hot Water Heaters: If the heater is supplied as part of a package, including the tank and pump, the installation must comply with the drawing provided.

Failure to observe this requirement may result in an ineffective hot water capacity or damage.

For installation of the heater to an existing storage vessel we suggest that advice be sought to eliminate possible problems.

Water Quality

The standard finned copper tube heat exchanger has proved to be very resilient and capable of operating for many trouble free years on most reticulated water supplies.

Should your installation be in an area where "corrosive" or "hard" water is present, it would be advisable to contact Raypak before installation to ensure that the quality of the water is satisfactory.

DAMAGE CAUSED BY "CORROSIVE, HARD OR OTHERWISE POOR QUALITY WATER", IS NOT COVERED BY OUR WARRANTY.

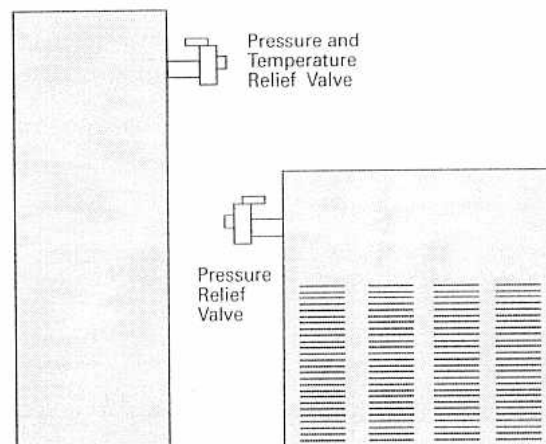
We have produced a Hot Water Manual which will be of assistance, check our website, for your free copy.

Pressure Relief Valve(S)

There are three standard pressure relief valves available, 310kPa, 415kPa and 850 kPa. When sizing the valve, static head pressure must be taken into account to ensure that the PRV will not release during the heat up cycle.

When the heater is connected to a storage cylinder for Domestic Hot Water applications, a correctly sized and pressure rated PTR valve MUST be fitted to the cylinder.

(See also, **High Limit** under **Commissioning**)



Electrical Wiring

Electrical power consumption of the heater is:

240 Volts AC, 50/60 Hz, less than 1 amp.

A normal 10 or 15 amp single phase power circuit should be suitable. Access to the electricals is achieved by removing the cover of the control panel. (See **Location of Controls** section).

The heater must be properly earthed and Raypak highly recommends the installation of an RCD (Residual Current Device) for added electrical safety. If the site is "electrically noisy", a mains filter can be supplied at extra cost, to eliminate any Microzone failures.

The heater must not be able to operate without the circulating water pump running.

The heater (240 Volts) power supply must be "interlocked" via the auxiliary contacts of the pump contactor (relay) etc., or alternatively the power supply for the pump and the heater must operate off the same circuit and isolation switch. (Parallel connection)

A Flow Switch is not an interlock and must not be used as one. If a Microzone control is fitted and the pump control is used, this is recognised as being interlocked with the heater. Any other form of interlocking must be approved by Raypak.

A pump run on timer is required so that at any time that the heater is no longer required the heater shuts off and the pump continues for at least ten (10) minutes.

If a Microzone is installed and the pump control is used, this run on is included in the program. A Raypak "Economaster" is available at extra cost for all other heaters.

For servicing purposes we suggest that the isolation switch be installed close to the heater. If there is any control wiring etc., which is not isolated by this switch then a suitable warning label must be affixed to the heater which will also direct the service person to the isolation switch for that particular wiring, (eg. more than one isolation switch is required to turn off the power supply, extra switch(es) on switchboard etc.)

Caution: Do not locate cables in front of or underneath the burner. Please consult Rheem for advice if unsure.

Where cables or conduit, trunking etc. are to be mounted on the heater casing, please keep at

least 10mm air gap from the heater casing to eliminate possible overheating.

Do not locate cables etc. where they will restrict access covers, doors etc.

If a Microzone or any other PLC device is installed as part of the heater control etc. please observe the requirements for suitably screened data cable when utilising the communication areas of these devices. Failure to do so will result in malfunctions and/or damage to the device, which will cause inconvenience to the user.

Failure of, or damage caused to the Microzone or any other heater component due to incorrect wiring is NOT covered by our warranty and any repairs will be at extra cost.

There are many variations to the types of controls available and also RUN 7 FAIL indication can be supplied.

Advice on remote location of reset button and failure indication is available from your local representative or from Raypak.

Commissioning

Warning: commissioning must only be undertaken by a properly authorised and appropriately licensed person who is familiar with safe commissioning procedures. Check if the commissioning may require inspection by the gas supply authority.

1. Check that all necessary approvals and appropriate documents have been obtained.
2. Ensure that the heater is clean and the surrounding area is clear of all combustible and flammable materials.
3. Remove all liquids and chemicals from the plant room and check that combustion air openings are not obstructed. Chemicals must not be stored in the plant room. This is extremely dangerous and may damage the heater.
4. Fill the system with water and expel any air as required.
5. Purge all air from gas supply piping.

Caution: Liquid Propane Gas is heavier than air and sinks to the ground, exercise extreme care in lighting heater in confined areas.

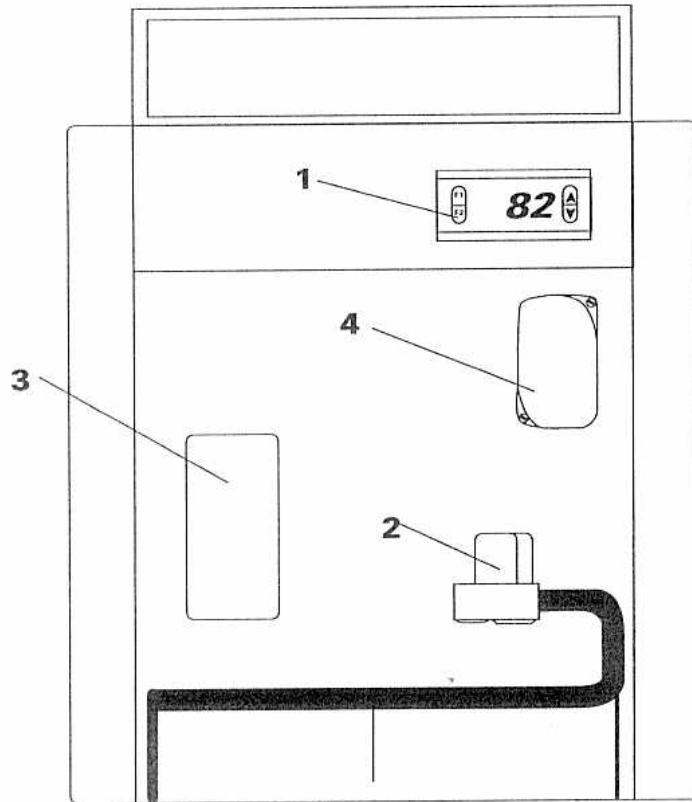
6. Test ALL gas connections for leaks, using soapy water and a manometer (NOT A NAKED FLAME).
7. Conduct a visual inspection of the heater and

equipment for any damage or installation problems and report as necessary

8. Check that the correct power supply is available and the circulation pump is electrically interlocked with the heater.
9. Check that the ventilation to the plant room complies with the requirements, of AS 5602/AG601 and local authority regulations.
10. If mechanical ventilation is provided, check its operation and any interlocks.
11. Check that the flue complies with the appropriate regulations and is fitted with an approved termination cowl.
12. Check that the gas supply is isolated and with the main gas valve isolation switch turned off, check the heater gas train and components for gas escapes.
13. Start the circulation pump and verify the flow switch operation (if fitted), then test the operation of the heater with no gas flow to confirm its operation up to the lockout status, then turn off the power.
14. Open the gas supply valve, switch on the power to fire the heater.
15. When the unit fires and reaches high fire, set the burner gas pressure to that shown on the data plate which is located on the front of the heater.
16. Verify that the high limit and any other safety devices are operating correctly.
17. Check that the flue is operating correctly or if there is evidence of down draft etc. Report as necessary.
18. Check operation of any water pressure relief valves etc. and set up the controls to desired settings.
19. Ensure that the customer is supplied with this manual and you have demonstrated the operation of the unit etc.
20. It is quite normal for the heater to produce some smoke and possibly condensation for the first thirty (30) minutes of firing from new.

WARNING: Should overheating occur or the fans fail to shut off, turn off the gas isolation valve adjacent to the heater and then examine the unit or call Rheem for advice.

Location of Controls



1. Digital Thermostan (if fitted)
2. Gas Control Valve
3. Data Plate
4. High Limit

Operating Controls:

Your new Raypak heater will have either MODULATING or ON/OFF controls.

Modulating Controls:

"MM" model heaters are fitted with a modulating gas control valve. The purpose of this valve is to adjust the gas firing rate according to the required heating load and is usually installed on a heating system with radiators or a fan coil.

The temperature of the system water is controlled by matching the dial to the number, which corresponds to the charts below.

For the Robertshaw valve:-

Dial No.	Lo	1	2	3	4	5	6	7	8	Hi
Temp. C°	43	49	55	62	68	74	80	86	93	99

For the Honeywell modusnap valve:-

Dial No.	1	2	3	4	5	6	7	8	9
Temp. C°	66	70	74	78	83	87	91	95	99

High Limit Control

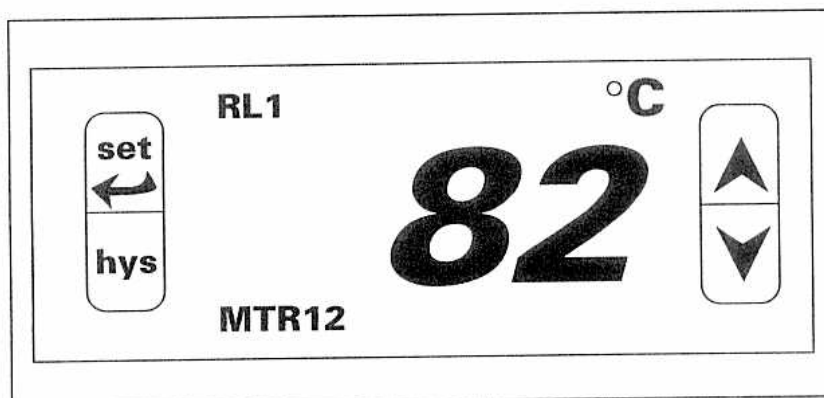
All heaters are fitted with a manual reset high limit switch. This control will shut down the heater in the event of a fault with the temperature control

NOTE: The temperature of the high limit control and thermostat will be set up by the installer at the time of commissioning, to suit the individual requirements of your system. Further adjustments should not be necessary or should not be altered without consultation with your installer.

In the event of an overheat of the system water

temperature, the high limit will trip. This will shut off the heater. Should frequent resetting be necessary, a service technician should be called to check the system.

SECTION II – OPERATING INSTRUCTIONS



S thermostat which is programmed to operate in heating mode

ON/OFF controls

"00" model heaters are fitted with an adjustable controlling thermostat with its sensor located in the inlet side of the heater header, monitoring the system water temperature which in turn operates the heating cycle. This type of control is used where the system load is constant (eg. hot water supplied from a storage tank or in floor slab heating.)

The water temperature is controlled by setting the thermostat "set point".

NOTE: If your heater is supplied with a storage tank and a tank thermostat, the heater thermostat should be set slightly higher than that of the tank thermostat.

Instructions For Use Of LAE Electronic Thermostats

Raypak uses the MTR12T1RES thermostat, which is programmed to operate in the heating mode.

The only adjustments that should normally be required are: -

- 1 Set Point (set): - Which is the water temperature that you require
- 2 Differential (hys): - The difference between the thermostat turning OFF and then ON again when the temperature has fallen. (eg. 10°C would be ideal for a hot water heater.

To Adjust the Set Point: -

- Turn on the power supply to the heater.
- The digital display will show the actual water temperature.

- Press the "set" button, L1 will be displayed for 2 seconds.
- Then the Set Point temperature will be displayed.
- By pressing the "UP" or "Down" button, you can set the desired temperature.

To Adjust the differential: -

- Turn on the power supply to the heater
- The digital display will show the actual water temperature
- Press the "hys" button, HY1 will be displayed for 2 seconds.
- Then the valve will be displayed. (It must be a negative value.)
- Press the "UP" or "DOWN" button to set your desired differential.
- This is adjustable from 1 to 25 and relates to 1°C to 25°C.

Raypak may have programmed this thermostat to avoid any "nuisance" failures as: -

vSP – (Min Set Point) 0°C - the heater won't operate if the water temperature is below setting.

^SP – (Max Set Point) 95°C - the device turns off the heater if the temperature exceeds the setting

rt! – (RL1 Rest Time) 0 min
- there is no delay in relay operation

PF1 – (Probe Failure) OFF
- if the Probe (water sensor) fails, the relay will turn off the heater.

AJD – (Probe Offset) 0°C

- the relay operates on actual temperature of the sensor.

HY1 – (Mode) -25

- the negative value programs the device for heating.

To change the parameter(s): -

- Turn off the power supply
- Press and hold the "^" and "v" keys and then turn the power supply on.
- "Par" should be displayed
- Release the "^" and "v" keys.
- To access the required parameter and its setting press the "set" key.
- To change the value press the "^" or "v" key as required.
- To save this new value press the "set" key.

Should you require any further information please read the instruction sheet supplied with the unit or contact Rheem Australia.

Safety Issues

What If You Can Smell Gas?

Safety Instructions

Don't try to light any gas appliance.

Don't touch or operate any electrical switch.

Turn off the gas supply at the gas meter or isolation point.

Call your gas supplier or qualified gasfitter from a neighbour's telephone.

Use only your hand to turn the pilot gas control knob. Never use any tools.

If the knob will not turn by hand, do not try to repair it. Call a qualified service technician.

Force or attempted repair may result in a fire or explosion.

Do not use this heater if any part has been under water.

Call a qualified service technician immediately to replace any part or control system that has been under water.

Always keep the heater clean and the surrounding area clear of all combustible and flammable materials.

Remove any dangerous liquids and chemicals from the plant room and check that the combustion air openings are not obstructed.

Chemicals must not be stored in plant rooms. This is extremely dangerous and also very damaging to the heater.

If you don't know what to do. Ring for assistance.

Lighting Procedure

1. STOP. Read the safety information.
2. Turn heater ON/OFF power isolation switch to the "OFF" position.
3. Turn "OFF" any other electrical power to the heater. (If required)
4. Turn the gas supply valve, fitted next to the heater "OFF"
5. Wait 5 minutes to clear out any gas

STOP! If you smell gas, follow safety instructions. If you do not smell any gas continue...

6. This heater is equipped with an ignition device which automatically lights the burners.

Don't attempt to light the burner by hand.

7. Turn the gas supply valve to the "ON" position.
8. Turn on all electrical power to the heater (If required).
9. Set the thermostat or temperature control to the desired temperature setting and turn the heater ON/OFF switch to the "ON" position.
10. The heater will go through its light up sequence. If the heater fails to light, turn off the power supply, wait one (1) minute, turn the power supply back on and the light up sequence will recommence. If the heater still does not light, turn off the gas and the power supply and contact Rheem Service for assistance.

To Turn Off The Heater

1. Turn the heater ON/OFF power isolation switch to the "OFF" position.

Emergency Shut-down

2. Turn "OFF" the power supply to the heater
3. Turn "OFF" the gas isolation valve fitted close to the heater or the main gas supply.

After Start-up

Warning! Should overheating occur or the gas supply fail to shut off, turn off the gas isolation valve located adjacent to the heater, turn off the power supply switch and call for assistance.

Visual Inspection

Danger! Observe the following.

Keep the heater area free from chemicals, combustibles and flammable materials.

Do not obstruct the flow of ventilation air into the plant room

Regularly clean the heater cabinet air louvres of any dust, lint and debris.

Failure to follow these safety precautions can cause fire, explosion, or asphyxiation.

With the heater turned on and heating, remove the door (if fitted) and make a visual check of the burners. The flame should be blue with a well defined pattern.

A yellow or floating flame indicates restricted air openings, incorrect orifice size or possible excessive draft. Continual yellow flames indicate some restriction of the combustion air openings.

A bright orange, luminous flame is not normal and can cause sooting under prolonged operation.

Look for any indication of soot. The presence of soot accumulation would indicate an abnormal operating condition.

Should any abnormalities occur, turn the heater off and contact your installer or service organisation.

WARNING: Operation of the heater when faulty will result in rapid and severe damage to the heater, which is not covered by our warranty.

Service Assistance

Service must only be undertaken by properly authorised personnel.

It is a requirement that the heater be serviced at least once per year.

Where it is used in a specific application (eg. heating), it would be practical to perform the service at the commencement of the heating season, or at any time there may be an indication of a problem.

This service should include the cleaning of the gas burners, inspection of waterways and checking of all controls for correct operation.

It is important and very often will save time if you state the model number, serial number and type of gas used. This information will be found on the heater data plate. Contact Rheem Australia to arrange a service call. Contact details are included on the back of this manual.

Service Procedures

Recommended Service Procedures

It is a Raypak requirement that all Raypak supplied equipment be serviced at least annually.

In some installations, due to the appliance location and/or workload it may be necessary to perform a service every six months.

Recommended Service Procedure For Annual Service

Isolate gas, electricity and water as required
Remove access covers and door (s) as required.
Disconnect and remove Burner Tray.
Dismantle and clean pilot assembly(ies), including injector(s)
Clean and re-align electrode(s) and/or flame rod(s) and/or thermocouple(s).
Clean main burner injectors and burner bars as required.
Inspect, make any minor repairs and clean combustion chamber.
Report on any major combustion chamber damage.
Inspect external area of heat exchanger, clean fins and repair if minor.
Check water seal area and report any damage.
Operate Pressure Relief Valve (if fitted) manually to check that the drain is clear and the valve reseals.
POOL HEATERS: Remove and test Unitherm Governor(s), replace if faulty.
Refit Burner Tray and reconnect gas train etc.
Perform gas soundness tests to the gas train.
(Any failures must be reported and repaired before



re-commissioning appliance).
Check all air vents and louvres, clean as required.
Restore gas, electricity and water as required.
Recommission unit, check and prove the operation of all safety devices.
Check and monitor the operation of the appliance for at least ten (10) minutes.
Refit access covers and doors as required
Clean and remove any dust and debris from the appliance and its immediate area.

Recommended Service Procedure For Six Monthly Service

Isolate gas, electricity and water as required
Remove access covers and door (s) as required.
Visually inspect main burner and pilot, check operation if needed.
If necessary, remove Burner Tray and service as required. (Refer to Annual Service instructions)
Check over the appliance thoroughly and report any damage immediately.
POOL HEATERS: Remove and test Unitherm Governor(s), - (If faulty, Unitherm Governor(s) must

be replaced before re-commissioning appliance)
Check the heat exchanger and water seal are and, if necessary, report any damage.
Check all air vents and louvres, clean as required
Restore gas, electricity and water as required
Check operation of ignition system and all safety devices.
Check operation and calibration of all temperature control devices.
Check operation (and monitor the operation) of appliance for at least ten (10) minutes.
Refit access covers and doors as required
Clean and remove any dust and debris from the appliance and its immediate area.
ONLY A SUITABLY LICENSED PERSON MAY PERFORM ANY REPAIRS, SERVICE AND/OR COMMISSIONING OF GAS APPLIANCES.

Service Procedures

Inspection And Maintenance Procedures

It is good practice to make periodic inspections of the heater, checking the items listed below.

It is recommended that the homeowner or user check the heater after the first and third month of operation and on a regular basis afterwards.

It is also recommended to have a qualified service organisation check the heater at least once per year, preferably at the start of the heating season, or at any time there may be an indication of a problem.

DANGER: Keep the heater area free from chemicals, combustibles and flammable materials. Do not obstruct the flow of ventilation air into the heater room. Failure to follow these safety precautions can cause fire, explosion, or asphyxiation.

Clean the main burners and heater cabinet air louvres of dust, lint and debris. With the burner in operation, make a visual check of the burner flame and the pilot flame. Yellow flames indicate

some restriction of the combustion air openings.

A bright orange, luminous flame is not normal and can cause sooting under prolonged operation. Should this condition be observed, contact your qualified service organisation to correct the problem.

Look for any indication of soot. The presence of soot accumulation would indicate an abnormal operating condition. This should be investigated and corrected by a qualified service organisation.

Service Assistance

A properly authorised person only must undertake Service. It is recommended that the heater should be serviced at least once per year, preferably at the start of each heating season.

This service should include the cleaning of the gas burners, inspection of waterways, and checking of all controls for correct operation.

It is important and very often will save time if you state the model number, serial number and type of gas used.

This information will be found on the heater data plate. Your local Raypak distributor will arrange for your service or recommend a qualified service organisation.

Rheem Australia will arrange a service for your Raypak Water Heater.

Australia Service: 131 031

New Zealand Service: 0800 697 335