

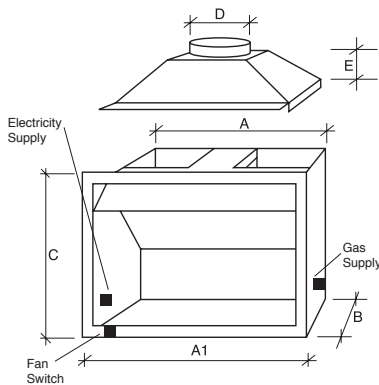


**Installation instructions  
Jetmaster Mark 2 Gas Coal / Pebble  
with Millivolt Control**



## Installation instructions Jetmaster Mark 2 Gas Coal / Pebble

Jetmaster gas coal / pebble burners are fuel effect appliances intended for use in a fireplace suitable for the burning of wood. It is recommended that the Jetmaster gas log be placed in a properly installed Jetmaster Convecter firebox in order to ensure an adequate draught and greater efficiency. The Jetmaster open fire is an approved open fire to burn wood. The following size fireboxes are available for the Type I Burner to be inserted into. The firebox can be installed into an existing fireplace subject to the chimney being the appropriate size and in sound condition. The firebox can also be installed from new with a gather and a flue.



(DIMENSIONS IN MILLIMETERS)

	A	A1	B	C	D	E
500	500	700	350	650	200	200
600	670	700	350	650	200	200
600 LOW	670	700	350	600	200	200
700SH	770	800	350	650	200	200
700SH LOW	770	800	350	600	200	200
700D	770	800	400	700	225	200

**IMPORTANT:** Installation of this appliance should only be carried out by an authorised person in accordance with the manufacturers instructions. All relevant codes and regulations laid down by the gas supply authorities, uniform building regulations and the requirements of local municipal authorities must be observed. The installation should comply with AS5601/AG601 Clauses 5.12.13.2 and 5.12.13.5.

### Model Type I: Decorative Gas Coal / Pebble Fire

500/600/700 MARK 2 GAS COAL / PEBBLE BURNER

**DATA PLATE:** Refer to date place for information in respect of gas pressure, consumption and gas type, Natural or LPG. The data plate is located to the side of the grate.

### Location Requirements

1. The fireplace construction must be non-combustible and in accordance with the current Building Regulations for chimney and fireplace intended for solid fuel use.
  2. The flue and/or chimney should be tested and proven to have an adequate updraft which shall be sufficient to remove all waste products of combustion. A minimum cross-sectional area of 40,000 sq mm is required with a minimum chimney flue height of 3.6 meters. The installer must satisfy himself that the fireplace is functioning properly and a smoke test is recommended. When using a Jetmaster firebox the appropriate diameter flue for the model fireplace should be used.
  3. The appliance must comply with AG601 Gas Installation Code.
  4. In cases where a twin walled metal flue is used and provided such flue shall comply with the clearances specified in AS2918 or manufacturers instructions in respect of clearance to combustibles.
  5. In cases where a metal is used, such flue shall comply with the standards relating to grade, quality and thickness as are current.
  6. An approved flue cowl with a minimum cross-sections of 40,000sq mm shall be affixed to the top of the flue or chimney.
  7. The installer must remove or fix in an open position any damper which may be affixed to or contained in any fireplace.
  8. It should be noted that the Code AS2286 (space heating appliances-secondary guards) requires a dress guard to be affixed to the appliance or fireplace.
  9. Ventilation. Please see final page for specifications regarding ventilation.
- NOTE:** The chimney in which the appliance is installed is not to be considered as a ventilation opening.
10. The appliance shall be installed into a fireplace with a minimum opening of 600mm width and 217mm depth and shall be no greater than 10650mm width and 400mm depth.
  11. Combustible materials to be no closer than 100mm either side of fireplace opening and no closer than 150mm above the opening. The firebox should have a non combustible hearth in front of the firebox.

## Installation: Fitting the Gas Grate

1. Check unit is suitable for intended gas supply.
2. The position of the gas control and inlet is on the right hand side and is 3/8" B.S.P. female connection for L.P.G. A 1/2" regulator is supplied when fitting to natural gas. Check that the chimney is clear prior to fitting.
3. In an existing fireplace or Jetmaster firebox (if being used) drill a 15mm hole through the right hand side of the fireplace(as you face it) at a point of 85mm from the base and 85mm from the rear wall(if providing stop cock in firebox).85mm from front wall (if stop cock is outside firebox).
4. Cut and debur both ends of pipe. Fit the end to the gas supply point and turn on for approximately 5 seconds to clear the pipe of any dirt or grit. Fit the other end to the gas unit.
5. The regulator is included on the S.I.T.control on the unit.
6. Turn on the gas and check all connections for leaks using soapy water or approved method. Fix any leaks.
7. Possible carbon deposition may occur on the appliance incorporating live fuel effect.

## Adjusting Pressure, Pilot and Low Fire

1. All settings are set to operate at appropriate pressures (see data plate). Test point is located on gas valve.
2. Check low fire if adjusted correctly.
3. The pressure can be measured on the gas valve and the regulator adjusted to the appropriate pressure (see data plate affixed to side of the appliance.)

## Lighting Instructions

### PILOT FLAME IGNITION

Locate control knob on right hand side of valve. Depress and turn control knob (FIG 1) to the ★ PILOT position (FIG 4). Depress the control button and ignite with piezo igniter (FIG 2) whilst keeping control knob firmly depressed for 20 seconds. Check that pilot stays lit. If it goes out repeat ignition procedure.

### MAIN BURNER IGNITION

Depress and turn control knob anti-clockwise from ★ PILOT position to the ☞ ON position (FIG 5). The burner will not ignite if the rocker switch is depressed in the OFF position (FIG 3). To light main burner press rocker switch to ON position (FIG 3).

### TO TURN MAIN BURNER OFF WITH PILOT REMAINING BURNING

Depress rocker switch to OFF position. (FIG 3)

Main burner can also be turned off by the use of control knob. This is done by turning control knob clockwise to ★ PILOT position (FIG 8). Control knob will need to be turned back to ☞ ON position (FIG 5) to light main burner.

### TO TURN MAIN BURNER OFF OR ON WITH OPTIONAL WALL SWITCH

Pilot must be burning.

Control knob is in the ☞ ON position. (FIG 5)

Rocker switch is in the OFF position. (FIG 3)

Wall switch can now be activated.

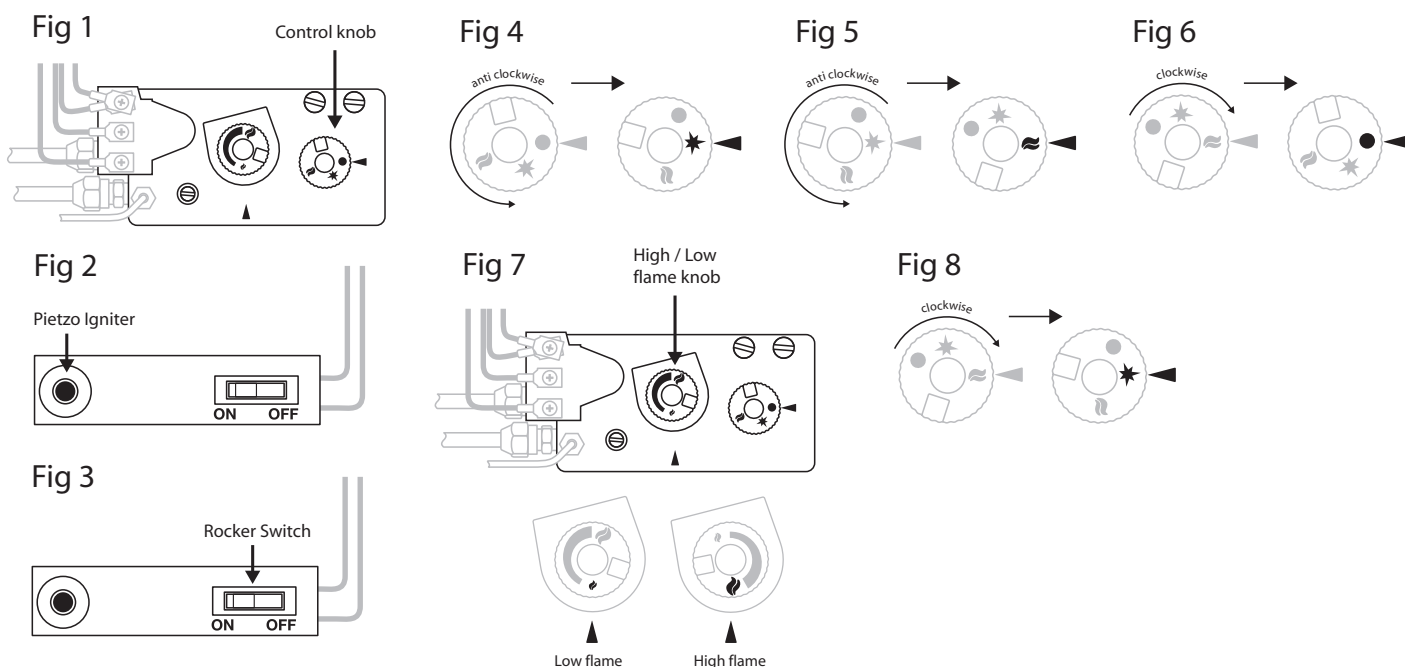
Important! Wall switch can only be activated if rocker switch is in off position.

### TO TURN PILOT AND MAIN BURNER OFF

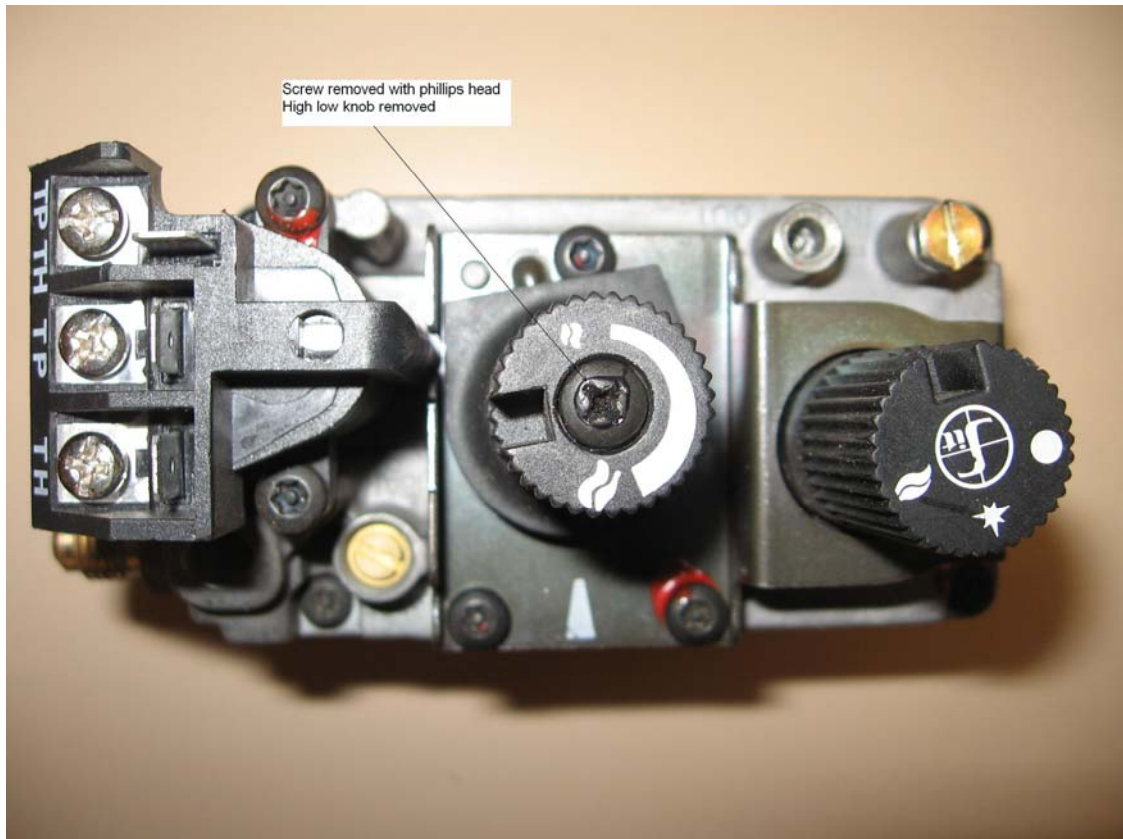
Depress and turn control knob clockwise from ☞ ON position (FIG 5) or ★ PILOT position (FIG 4) to the ● OFF position (FIG 6).

### TO TURN MAIN BURNER HIGHER OR LOWER

Turn high / low flame knob to obtain high or low fire (FIG 7).



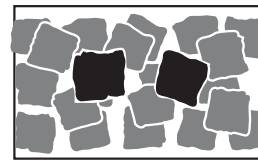
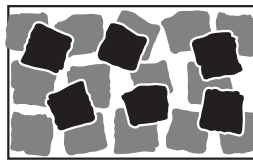
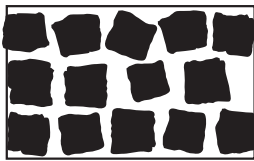
## HOW TO ADJUST GAS PRESSURE



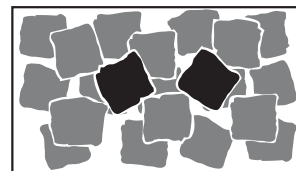
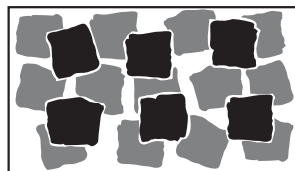
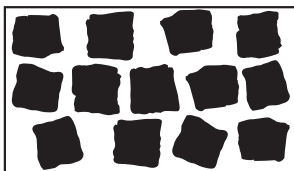
# Installation instructions Jetmaster Mark 2 Gas Coal / Pebble

## Laying the fire

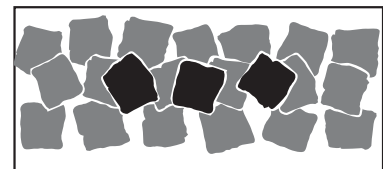
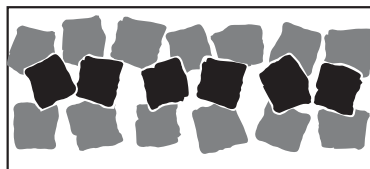
- Unpack the coals/pebbles contained in a clear plastic bag and lay a row of coals/pebbles on the vermiculite along the back of the burner tray leaving approximately 12-15mm between them.
- Leave spaces at the edges to allow free flow of gas.
- Place a further row of coals/pebbles directly in front of the first row but staggered so that the second row of coals are behind the gaps of the first row leaving approximately 12-15mm between the rows of each coal/pebble.
- Lay further rows of staggered coals/pebbles depending on the size of the basket grate.
- Once the bottom layer is completed, build up 2-3 tiers of coals in a honeycomb pattern to form an elongated pyramid.
- Lay the coals/pebbles so that some irregularity to the pile through which the flames may lick, is created.
- Your aim is to build “windows” into the fire through which the radiant effect may show but at the same time, not leaving such large gaps between the coals/pebbles that excessive air may enter and “damp down” the red glow.
- After the fire has been alight for 15 minutes, you may wish to add the odd coal/pebble or even relay the fire completely. Allow to cool before touching the coals/pebbles.
- Experience will enable you to obtain a pleasing appearance with suitable heat output, but please bear in mind that it is important to maintain the general pattern described above and indicated in illustrations.



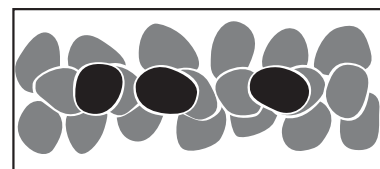
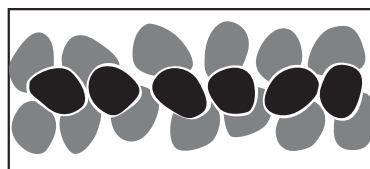
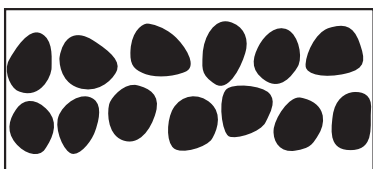
MARK 2 COALS 440 / 500 - 390 X 240



MARK 2 COALS 600 - 460 X 260



MARK 2 COALS 700 - 580 X 260



MARK 2 PEBBLES 700 - 580 X 260

# Installation instructions Jetmaster Mark 2 Gas Coal / Pebble

## Commissioning Procedure

Installed correctly the burner should not emit any fumes into the room. The following procedure should be undertaken to test that the unit is operating correctly.

1. After unit has been operating for a short period a smoke match, smoke tube, carbon dioxide analyser or similar should be directed at the top opening of the unit.
2. This procedure should be undertaken with the following conditions in the room:
  - Open or closed windows
  - Operation of extraction/exhaust fans, range hoods etc
  - Operation of other gas appliances
  - Operation of optional appliance fan at any speed.
3. Should any spillage be detected the cause must be rectified before allowing commissioning of unit.

## User Instructions

1. **WARNING NOTE:** Properly installed and operated this appliance will not leak gases. Persistent fume emission must not be tolerated. If fume emission does exist, then the following immediate action should be taken.
  - A. Open doors and windows to ventilate room.
  - B. Turn the fire off.
  - C. Check for flue blockage and clear if necessary.
  - D. Do not attempt to relight the burner until the cause of the emission has been identified and rectified. Should assistance or advice be required contact nearest agent or Jetmaster.
  - E. The gas grate is recommended for use in a Jetmaster firebox which has been designed to ensure a proper draw and to eliminate emission spillage.
2. Initially the Jetmaster coal / pebble fire may burn with a slightly blue flame. After approximately 20 minutes the fire will settle down and burn with a yellow flame.
3. As with all gas appliances your gas coal / pebble fire should be regularly serviced. We recommend once each year. Contact your nearest Jetmaster authorised agent to provide service. The routine for an authorised person to follow has been set out in an attached leaflet.
4. **PLEASE NOTE:** Only coals / pebbles provided by Jetmaster should be used with this appliance.

5. **DO NOT** place articles on or against this appliance.  
**DO NOT** use or store flammable materials near this appliance.  
**DO NOT** spray aerosols in the vicinity of this appliance whilst it is in operation.  
Primarily a decorative appliance not certified as a space heater.
6. The appliance is a live fuel effect product designed to operate with luminous flames and may exhibit slight carbon deposition.

## Warranty

Provided the appliance has been correctly installed according to instructions, Jetmaster guarantee the cost of replacing parts and the labour in connection therewith for a period of 12 months from the date of installation. Should the appliance be subject to a service contract the replacement of the parts and the service involved in such replacement shall be at no charge to the owner and the Warranty shall be extended to 3 years (provided of course the appliance had been continuously serviced by an approved Jetmaster agent).

## SPECIFICATIONS

NAME OF APPLIANCE: JETMASTER GAS COAL MARK 2  
KEMLAN GAS COAL MARK 2  
WITH MILLIVOLT IGNITION

MANUFACTURED BY: JETMASTER FIREPLACES AUSTRALIA PTY LTD.

CERTIFICATE NO. 4958

LABORATORY REPORTS: 511285, 511286, 511389.

DATE: MAY 1994

The gas fire is a Type 1 Decorative gas coal fire with imitation coals or pebbles (700MK2P/C and 800MK2P/C) placed over a bed of vermiculite contained within a metal tray. It is designed to fit into an existing masonry fireplace or equivalent approved open fireplace. The gas fire consists of an outer decorative grate which houses a mild steel burner tray. A front plate is provided to cover controls.

## CAPACITY

Model	Gas Type	Gas Cons MJ/H Min/Max	Injector	T.P.P.Kpa
500MK2	NG	30/39	3.0	1.00
500MK2	LPG(propene)	30/39	1.65	2.75
600MK2	LPG(propene)	30/39	1.65	2.75
600MK2	NG	30/39	3.0	1.00
700MK2	LPG(propene)	30/39	1.65	2.75
700MK2	NG	30/39	3.0	1.00
700MK2P/C	LPG(propene)	39/55	2.0	2.75
700MK2P/C	NG	39/55	3.55	1.00
800MK2P/C	NG	39/55	3.55	1.00
800MK2P/C	LPG(propene)	39/55	2.0	2.75
800MK2	NG	30/39	3.0	1.00
800MK2	LPG(propene)	30/39	1.65	2.75

OVERALL DIMENSIONS: See drawings supplied

400/500 Grate *		600 Grate	*700 Grate	*800 Grate
Width	390mm	460mm	580mm	740mm
Height	210mm	210mm	210mm	210mm
Depth	240mm	260mm	260mm	320mm
Weight	9kg	12kg	15kg	18kg

\* 400 Burner is the same as 500 Burner but does not have two decorative legs on the outer grate. Note, workings are identical.

\*700 Burner is the same as the 800 Burner. 800 burner has wider decorative grate.

### MARKING

Data plate will be affixed to the left hand side of the unit on the external decorative grate. Other details i.e. name plates, lighting instructions and temporary labels will be affixed to the inside of the front cover plate.

### CONSTRUCTION

#### GENERAL:

The gas fire consists of 4.5mm gauge steel bars welded onto a 4.5mm gauge mild steel frame to provide the appearance of a solid fuel basket grate. A 1.6mm gauge folded mild steel tray is located within the basket grate. It is welded to the back of the grate and attached to the front by means of two lugs. A space of 10mm exists between the front of the burner and the grate and 30mm between the sides. The frame of the gas grate extends down on the sides providing the support for the tray and houses the controls under the burner.

A cast iron venturi tapered mixing tube is welded to the base of the tray through which gas is introduced. (see drawings for size) Gas is dispersed evenly around the burner by means of a 2mm gauge mild deflector plate. Four bolt heads are welded to the base of each tray. The plate with four 10mm holes is inserted in to the upturned bolts and secured to the base with the nuts. Clearance from base to deflector plate is 5mm.



## GAS SYSTEM

Gas inlet connection:	Flared $\frac{1}{2}$ " inlet and is located on the right hand side of the gas grate.
Regulator:	Beckley Type A.G.A. App. No. 4688(Nat gas only) 3/B BSP Female for LPG Bromic Type BMWF1A A.G.A. App. No. 5149
Piping:	5/16" aluminium tube with flared fittings. Thickness of pipework is 19 guage.
Gas control:	A simplosit S.I.T. H-O.500.017 model (AGA approval No. 3531) is located under the burner tray.
Burner:	A folded mild steel tray with deflector plate. A cast iron venturi tapered mixing tube is welded to the base through which gas is introduced.
Pilot:	S.I.T. Pilot assembly OxypilotN.G.No.9418.Oxypilot L.P.G.9603. $\frac{1}{4}$ " B.S.P. connection. Thickness of pipe is 19 guage $\frac{1}{4}$ " aluminium.Pilot located on the right hand side.
Pilot Turn off Value:	Effibi mini valve A.G.A. No. 5301.
Pressure Test Point:	$\frac{1}{4}$ " diameter nipple located behind the outlet of the gas valve.Inlet pressure is measured on outlet point located on regulator.
Injector:	Details - Section drawing.

## CONVERSION DETAILS

Remove injectors by unscrewing nuts in venturi. Replace with injector specified on date plate. The appropriate injector must be used (see data plate).

Replace pilot assembly to appropriate gas.

Pilot assembly must be replaced with appropriate models.

Regulator is required to be fitted to a natural gas appliance. For LPG the appliance regulator requires removal.

Note pressures on data plate for natural and LP gas and adjust accordingly. The test point is located on the SIT valve.

## HEATING SYSTEM.

Vermiculite: Is varied in size. (grade 4) Average size is approximately 3-5mm in diameter.

Coals/pebbles: Coals/pebbles are ceramic fibre coated with a glaze and silicate. Refer to attached drawing.

500MK2 COAL AMOUNT 22

600MK2 COAL AMOUNT 22

700MK2 COAL AMOUNT 22

800MK2 COAL AMOUNT 22

700MK2P/C COAL/PEBBLE AMOUNT 22

800MK2P/C COAL/PEBBLE AMOUNT 22

## **GENERAL GUIDE FOR SET-UP OF NOVA MV SYSTEM.**

- 1). Bleed all air from gas lines.
- 2). With the main burner functioning, adjust the inlet pressure regulator to supply gas to the appliance within the design parameters of the appliance manufacturer.
- 3). Make certain that the thermocouple and thermo-generator are fully inserted and tightened into their receptacles in the pilot head. The thermocouple should be threaded into the valve hand-tight, plus  $\frac{1}{4}$  turn with a wrench.
- 4). Verify that the system is wired properly, and that all connections are clean and tight. Thermo-generator leads are connected to the TPTH and TP connections of the main operator. Thermostat and wall switch wires are connected to the TPTH, and TH terminals of the valve.
- 5). Turn OFF/PILOT/ON knob to the PILOT position and depress knob, while lighting the pilot with a match or piezo ignitor.
- 6). Continue to hold the knob down until enough current is generated to engage the safety magnet. (Mill-Volt Plus systems use a thermocouple to power the safety magnet, Millivolt systems utilise power from the thermo-generator).
- 7). After the pilot has been lit for approximately three minutes, and only the thermo-generator wires connected to the main operator head, measure the voltage across TPTH and TP. This open circuit voltage should be between 500mV and 750mv. Tune the pilot adjustment screw until the mV reading falls within these parameters. (Counter clockwise increases the mV reading, clockwise decreases)
- 8). With the pilot adjusted properly, place a jumper wire between TPTH and TH. Take mV reading across the TPTH and TP terminals on the valve. This closed circuit voltage should remain above 300mV.
- 9). Remove jumper wire from the TPTH and TH connections, and re-connect the thermostat and wall switch wire to the same terminals. Take the closed circuit voltage as described in the previous step. This closed circuit should remain above 175mV.
- 10). Rotate OFF/PILOT/ON knob to the ON position. Main burner will light.
- 11). Verify operation of the thermostat and wall switch by cycling each individually, while observing the main burner operation.
- 12). Rotate the OFF/PILOT/ON knob to the OFF position. Both the pilot and main burner will be extinguished.

<b>PROBLEM</b>	<b>POSSIBLE CAUSE</b>	<b>SOLUTION</b>
Pilot will not light	No gas	1)Bleed air from gas line. 2)Check stop cocks are in on position.(No blockage in line)
	Wrong inlet pressure	Adjust inlet pressure with main burner running.(see diagram)
	Defective spark electrode.	Replace electrode if the insulator is cracked or the tip is corroded. Verify that the spark gap between the pilot and the electrode is correct.
	Defective piezo wire.	Replace piezo wire if insulation is damaged , or the wire is broken or corroded.
	Safety interlock function engaged.	Allow thermocouple to cool until the mV drops below the hold in requirements of the safety magnet,(30 seconds or less). Re-light pilot.
Pilot will not hold	Wrong inlet pressure.	Adjust inlet pressure with main burner running (see diagram).
	Pilot adjustment screw not properly adjusted.	Refer to item # 7 in the set-up guide.(also see diagram)
	Thermocouple or thermo-generator not properly inserted into the pilot housing.	Refer to item #3 in the set-up guide.(see diagram)
	Thermocouple or thermo-generator has film build-up on tip.	With the thermocouple and thermo-generator tips cool, clean the upper 3/8" with a very fine emery cloth.
	Electrical resistance too high.	Using a very fine emery cloth, clean thermo-generator and thermocouple connections at valve. Tighten thermocouple into valve hand tight, plus ¼ turn with a wrench.
	Defective thermocouple(mV Plus systems)	Verify that thermocouple is not kinked or damaged. Check open circuit voltage of thermocouple. Voltage should be between 18mV and 28mV. If voltage is less than 14mV, replace thermocouple.
	Defective thermo-generator.(Millivolt system)	Refer to item # 7 in the set-up guide.

	Defective safety magnet.(mV Plus systems)	Verify operation of safety magnet in the following manner. (A) Depress and hold pilot button. (B) Verify open-circuit thermocouple voltage as described in previous step. (C) Reconnect thermocouple to valve. (D) Measure the Millivoltage between the solder button on the base of the safety magnet, and the valve body. If the mV reading is above 6mV for vented appliances, and the safety magnet does not hold, replace the valve. (E) If closed circuit mV reading is the same as the open circuit reading, the coil is electrically open. Replace the valve.
	Defective Safety Magnet.(Millivolt system)	Verify operation of safety magnet in the following manner. (A) Remove all wires from the terminals TPTP and TP. If the voltage is above 110mV and the safety magnet does not hold , replace the valve.
	Pilot injector blocked.	Replace injector with a new injector of the exact size and type.
Pilot drops out	Wrong pilot injector	Replace the injector with a new injector supplied specifically for the appliance and gas type in question.
	Oxypilot activated	Examine flue system. Repair as necessary.
No gas to main burner with pilot running.	Low gas pressure to appliance.	Adjust inlet pressure with the main burner running.(see diagram).
	Control knob not in ON position.	Rotate OFF/PILOT/ON control knob to the ON position.
Thermostat/wall switch will not cycle main burner.	Thermostat not in ON position.	Turn thermostat ON, and adjust temperature control to call for heat.
	Thermo-generator output voltage not within design parameters.	Refer to item #7 in the set-up guide. If unable to meet minimum requirements, replace thermo-generator.

	Defective thermostat or thermostat wiring.	(A) With the pilot adjusted properly, (Set-up section, step#7), place a jumper wire between TPTH and TH. Take a mV reading across the TPTH and TP terminals on the valve. This closed circuit voltage should not fall below 300mV. Record reading. (B) Remove jumper wire from the TPTH and TH connections, and reconnect the thermostat wires to the same terminals. Take the closed circuit voltage as described in the previous step. If the mV reading drops below 150mV, excessive resistance exists in the thermostat circuit, and must be isolated and eliminated.
	Defective wall switch	Repeat the above troubleshooting items covered under “Defective thermostat or thermostat wiring”, except substitute the words “wall switch” where the word “thermostat” appears in the instructions.
	Excessive wire resistance	Make certain that all mV connections are made using wire of the proper size.
	Valve wired wrong.	Thermo-generator leads must be connected to the TPTH and TP connections of the main operator. Thermostat wires must be connected to the TPTH, and TH terminals of the valve.
Main burner lights in the PILOT position	Main operator coil Defective	Verify electrical resistance of main operator coil in the following manner. (A) Remove all wires from operator head. (B)With an Ohm meter, measure electrical resistance between TPand TH terminals. If the resistance does not fall within specification, replace valve.
	Debris on seat of main valve.	Replace valve.
	Main seat blown out as a result of exposing LPG gas valve to unregulated line pressure in excess of 15PSI	Replace valve.



## **OPEN GAS FIRES**

### ***ROOMS WITH GAS OPEN FIRES REQUIRE FRESH AIR VENTS AS PER GAS REGULATIONS***

Rooms with gas open fires require fresh air vents as per **Clause 6.10.9.5** in **AS/NZS5601.1: 2013**

One or more ventilation openings with a combined free ventilation area of not less than the equivalent cross sectional area of the flue cowl shall be provided for each decorative flame effect fire, and circulations based on clause 6.4.4.