



## MICROMAT EC 45-75 Commissioning Guide.

This sheet is intended as a quick reference guide and should be read in conjunction with the installation guide for the boiler supplied by MHG Heating Ltd.

The boiler must be placed in the commissioning mode prior to carrying out any adjustments to the combustion figures.

Once power has been applied to the boiler and it has passed through the venting program. The Small Black button on the fascia panel of the boiler should be pressed twice until 10 Min Low appears in the display window.

Once in this mode the fan speed and thus the output of the boiler can be adjusted with the Green Potentiometer. For a period of 10 minutes.

With the Green Pot set on 60°C the boiler will run on Minimum.  
With the Green Pot set on 20°C the boiler will run on Maximum.

Once the analyzer has been inserted into the heat exchanger via the hole in the top right of the unit, adjustments can be carried out.

It is advisable to check the combustion figures on Low and High fire prior to carrying out any adjustments.

Adjusting the high fire has a marked effect on the low fire figures.  
Where as adjusting the low fire has little effect on the high fire figures.

The Low fire adjustment is carried out via the Cross Headed governor accessed via the large Slotted Head Screw in the center of the gas valve

The High fire adjustment is carried out via the small Slotted Head Screw recessed adjacent to the unused pilot adjuster screw.

The high fire adjustment is a Gate type restrictor.

Therefore turning the screw clockwise will close the gate and thus restrict the quantity of gas passing through to the burner.

The figures which should be achieved are:

LOW FIRE	9.5 %	CO <sub>2</sub>	Natural Gas
	11.5 %	CO <sub>2</sub>	LPG
 HIGH FIRE	 9 %	 CO <sub>2</sub>	 Natural Gas
	11 %	CO <sub>2</sub>	LPG

When a boiler is to be commissioned which burns LPG, the holes in the front of the Air/Gas White mixing box attached to the inlet of the fan should be plugged off.

Once the correct figures have been obtained the Small Green test button should be pressed to allow the boiler to stop operating.

The unit should then be placed in the commissioning mode once again, whilst the figures are rechecked and where necessary readjusted.

Adjacent to the DIP switches, which were previously adjusted to suit the system requirement a Black Service Button is located.

This Service button has two functions:

During the commissioning visit the button is use to set the following:

Maximum Boiler Output in % Value.	20....100% ( 100% = ----)
Maximum internal Pump Duty in % Value.	34....100% ( 100% = ----)
Minimum internal Pump Duty in % Value	34....64%.
Service	0/1

To enter this menu the red Reset button should be pressed at least once followed by a single press on the Service Button.

The screen will show Max Output 85% / 50% (Example)

The figure to the left of the “ / “ is the figure stored in the boilers memory.  
The figure to the right of the “ / “ is the figure which can be changed by the Red Potentiometer on the control fascia.

Once the required value is reached on the right hand side of the “/” the Service Button must be pressed to store the new figure in the memory of the control panel.

The Reset button can be used to scroll through the four options shown above.

The other use of the Service Button is to reset the unit once the annual service has been carried out. This is achieved by pressing and holding the button for at least 9 Seconds

Once the boiler has been fully commissioned as described in the installation manual supplied with the unit, a final check should be carried out to ascertain the security of the connections within the flue system.

The boiler should be placed in the commissioning mode and firing at maximum output.

As the unit is increasing in output the case should be replaced and the Analyzer should be connected to the 5mm silicone tube protruding from the bottom of the back plate of the unit.

*[If problems are being experienced obtaining the correct flue gas emission figures, the following procedure should be followed to rest the gas valve to a common starting point.*

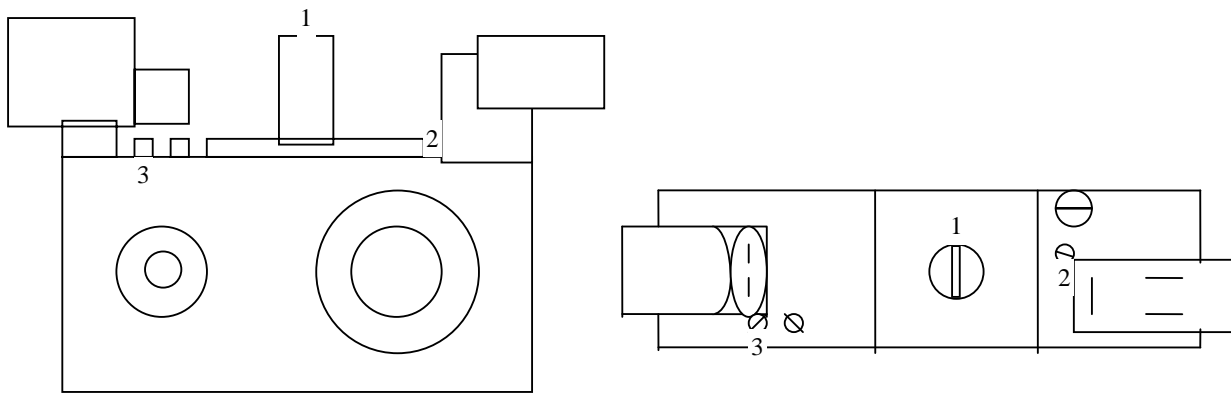
*The high fire adjuster must be fully closed, this is achieved by turning the adjusting screw clockwise. (Care must be taken not to over tighten this screw as this will damage the internal components.)*

*From this fully closed position the screw must be rotated 5 complete turns anti-clockwise.*

*[If ignition is not successful following this adjustment, the low fire adjuster must be used to achieve a stable flame.]*

This tube is intended as a drain for the air inlet duct of the concentric flue system.

If the flue system is leaking products of combustion into the fresh air duct the analyzer will show the concentrations of CO<sub>2</sub>.



### **MICROMAT EC Gas Valve**

- 1 Low Fire Adjustment Point
- 2 High Fire Adjustment Point
- 3 Inlet Gas Pressure Test Point