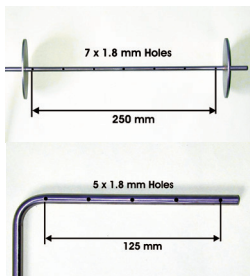


GUIDE TO POSITIONING OF ELECTRONIC COMBUSTION GAS ANALYSER PROBES TO COMPLY WITH BS 7967

Flueless appliances (Type A) cookers

Grill

A 7 HOLE SAMPLING probe should be positioned in the combustion products stream above the outlet grill. If this is not possible then a bent 5 hole sampling probe should be positioned in the combustion products stream close to the outlet duct and its position altered until the highest steady value of CO₂ or lowest steady value of O₂ is obtained. The grill pan should be in place at its highest position.



Oven

Where the combustion products exit from a vertical grille on the front of the cooker (e.g. a built-in cooker), then an angled 5 hole sample probe should be positioned as close as possible to the combustion products outlet duct. If this is not possible then position a standard open ended probe in the combustion products stream within the outlet duct.

Whichever probe is used its position needs to be altered until the highest steady value of CO₂ or lowest value of O₂ is obtained.

Open flued appliances (Type B)

In the absence of specific manufacturer's instructions place a standard probe 200 mm in to the secondary flue via the draught diverter or where no draught diverter is installed, within the combustion products outlet duct until the highest steady value of CO₂ or lowest value of O₂ is obtained. Appliances in compartments should be sampled with the compartment door closed.

Gas fires

A 5 hole sampling probe should be placed at least 200 mm up inside the flue. If this is not practical you can use an open-ended sample probe in the same position. If the selected probe cannot be used without removing the fire then it will be impossible to obtain reliable combustion results and therefore this test cannot be carried out.

Combined gas fire/back boiler units (BBUs)

Insert an open-ended sampling probe via the draught diverter into the secondary flue. The readings shall be taken as follows:

- ❖ When only the fire is operating.
- ❖ When only the boiler is operating.
- ❖ When both the fire and boiler are operating together.



Room sealed appliances (Type C)

In the absence of manufacturer's instructions place an open-ended sampling probe 200 mm inside the combustion outlet duct. Operate the appliance at full rate until the highest steady value of CO₂ or lowest value of O₂ is obtained.

Where the CO/CO₂ ratio exceeds manufacturer's instructions (or in the absence of these, the ratios given below), the continued use of the appliance may constitute a danger and therefore the Gas Industry Unsafe Situations Procedure (IGEM/G/11) must be applied.

For appliances which incorporate an air/gas ratio valve and their chimney/flue passes through a void, reference needs to be made to Gas Safe Register TB 008 (see also Pocket Guide Gas 6).

Appliance Type		CO/CO ₂ Ratio	
		No air gas ratio valve	With air gas ratio valve
Back boiler unit	Boiler unit	0.008	0.004
	In combination with fire	0.020	NA
Central heating boiler (Incl. combination boiler)		0.008	0.004
Circulator		0.010	NA
Gas fire	Flueless (NG)	0.001	NA
	Flueless (LPG)	0.004	NA
	Open flued	0.020	NA
	Room sealed (LFE)	0.020	NA
	Other room sealed	0.008	NA
Water heater - flued and flueless		0.020	NA
Warm air unit		0.008	0.004
Flueless cookers	Cooker oven	0.008	NA
	Cooker hob	Assess flame picture	
	Cooker grill (CE marked)	0.010	NA
	Cooker grill (non-CE marked)	0.020	NA
Range oven (flued)		0.020	NA
Refrigerator (LPG)		0.007	NA
Tumble dryer	Flued	0.010	NA
	Flueless	0.001	NA
Gas lights (LPG)		0.020	NA
NG - Natural Gas LPG - Liquefied Petroleum Gas NA - Not Applicable LFE - Live Fuel Effect			

