

HEATBASE Ltd FACTSHEET 11

Appliance Location, Combustion & Ventilation air supply

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There are certain places an Appliance should never be installed and other locations that should only be used if there is no other suitable place. The appliance should be sited so as to reduce risks; especially the risk of fire. **If possible, the appliance should be installed at ground floor or basement level, preferably in a boiler room, utility area or kitchen.**

Bathroom, Shower room, Bedroom and sleeping areas: An appliance should only be installed in these locations if there is no other practical alternative, but only room sealed appliances should be used.

If a room sealed appliance is fitted in a bath/shower room the electrical connections should be safe; the appliances outer casing or a compartment constructed around the boiler should enclose any switches and controls so a person using the bath or shower cannot touch them. All electrical works should meet the requirements of BS 7671.

Under stairs: A boiler should only be installed in an under stairs location if there is no other location available and **provided the building is no more than two storeys**. It must be enclosed in a 30-minute fire compartment and be ventilated directly from the outside. The compartment door should have a self-closing mechanism. The door should have a label on it stating it should not be used for storage.

Garage Installations: Only room sealed appliances should be used.

Roof Space Installations: An appliance should not be fitted in a roof space unless there is no practical alternative location. If an appliance has been fitted in a roof space it must meet the following requirements:

1. Sufficient clearance must be allowed for correct maintenance and operation of the system.
2. A flooring area for normal use should be provided under and around the appliance. This should take the form of an oil proof tray with sides at least 75mm high and should incorporate an oil level detector that will shut off the oil supply to the appliance should it become filled with oil or water.
3. If the floor that supports the appliance is combustible, a non-combustible base of at least 12mm thickness should be provided under the boiler.
4. There should be no joints in the oil supply other than those offered protection from the oil proof tray.
5. A means to shut off the oil and power supply should be provided without entering the roof space, in addition to isolation of fuel and power next to the boiler.
6. A permanent means of access to the appliance should be provided such as a retractable loft ladder and a hatch guard rail and a securely fixed protected walk way should be provided to and around the appliance and system components from the loft hatch.
7. Suitable lighting and a power supply should be provided.

External Boilers: An appliance fitted externally should be either:

1. An appliance specifically designed for external use and located on an adequately sized free draining hard surfaced to enable clean and safe maintenance and repair (or)
2. Installed in an enclosure capable of providing permanent weather protection, a water proof fused double pole switch and socket should be provided, and the enclosure should be ventilated to the outside at both high and low level, with the lowest part of the bottom vent at least 300mm above ground level. Pipework should be lagged and frost protection must be provided. The door should have a label on it, stating that it should not be used for storage.

Combustion Air supply:

1. **A Room Sealed balanced flue appliance** does not require any additional air for combustion; **unless the air hose/box has been left disconnected** due to an internal flue gas leak or any other reason.
2. **An Open flued appliance** requires 5.5 square cm of free air space for each KW of the appliances maximum output. Ideally the air should be drawn from outside the building but if this is not possible and it is supplied from another room, this room must also have an airbrick of the same requirements but it must draw the required air from outside the building; **in addition, the air brick to the room where the appliance is should also be increased by a minimum of 50%.**
3. **A vaporising Oil fired cooker** such as an AGA or Rayburn, require a minimum free air supply of 10 square cm.

Ventilation Air supply:

If the appliance is located in a compartment i.e. a room or space partitioned for the purpose of containing plant and equipment or a room or space of insufficient volume that cannot satisfactorily disperse any build-up of latent heat around the plant or equipment; then it will require air for ventilation **in addition** to any air requirements for combustion.

If the air for ventilation is supplied directly from outside the building there must be 2 vents, one positioned at high level and one at low level; the total free air supplied from **each** vent must be 5.5 square cm per KW of the appliances maximum output rating. If the air for ventilation is supplied from a heated space i.e. inside the building there must be 2 vents, one positioned at high level and one at low level; the total free air supplied from each vent must be 11 square cm per KW of the appliances maximum output rating.

Any air supply must be purposely made and have non-closable openings and not be fitted with any obstructions such as fly screens and must not be drawn from or ventilated to a bath/shower room or a bedroom or sleeping area.