

Wall and Underfloor Ventilation FAQs

Why are vents required on gas/oil heating appliances?

For heating appliances with open flued units the vents are normally for supplying air for combustion so that the burner will burn and the flue will operate correctly allowing all fumes to escape, thus preventing dangerous fumes which can poison the occupants. Vents are also used on both balanced/open flued units to keep the appliance cool and avoid overheating. Vents could be through the compartment door or through a wall. It is not acceptable to vent one room into another room to supply air; in this situation ventilation needs to be doubled for each room. The appliance manufacturer will recommend the ventilation requirements for an appliance and this will be stated on the appliance paperwork.

What is the meaning of a requirement for "Free Air" or "Equivalent Free Air"?

These are different measurements of air which pass through wall ventilation units. 'Free Air' is a basic vent set with an outside vent / brick / cowl which may have a cowl mounted over if required. Any connecting duct must be without a baffle. The ventilation measurement is the sum total of the gaps on either end vent at the smallest gap. If one vent allows 100cm² and the other allows 80cm² then the set is said to have a free area of 80cm² i.e. always the smallest. 'Equivalent free area' is a measured flow through the vent under test procedures. This is required if there is a baffle in the duct or liner. As a rule of thumb the Equivalent free area is normally about two-thirds that of the basic Free Area (Air).

For underfloor ventilation which Building Regulations and Standard apply? Are there key facts and figures we should know about the relevant Regulations?

The NHBC recommend fitting vents on opposite walls 2m apart with a minimum of 45cm from any corner. This creates a cross flow of air. If fitted above the damp proof course a cavity tray should be used. Ventilation bricks must meet BS 493:1995+A1:2010 the Specification for airbricks and gratings for wall ventilation.

A little more about passive ventilation, basically the wind pressure outside changes all the time thus air will either blow into the vent or is sucked out depending on the pressure either way. As with roof ventilation it's best to fit on two opposite sides so to create a cross flow of ventilation.

Does the insulation retaining clip work with all kinds of insulation? I'm assuming it's rigid insulation boards only but all thickness and material types? (E.g. PIR, XPS, etc)

The insulation retaining clip will work with all fibre and rigid insulation. The clip secures insulation against the inner leaf of the cavity; it grips the wall tie and holds the insulation in place. The clip will suit most styles and sizes of wall ties and applications.

Why is the spacing of weep vent installation different if the long or short end faces out when the air volume capacity through the body of the unit is the same?

The spacing does not differ if the long or short end faces out; the option is just for aesthetics. The short end is less visible when installed but no matter which end is used the weep vent does the same job. It allows any water which has seeped through the brickwork and runs down the inner wall of the cavity to escape and air to ventilate the cavity. Weep vents should be spaced at no greater than 90cm centres. To meet NHBC guidelines it is recommended to site the weep vent at every 45cm maximum with at least two per opening above doors and windows.