

Ventilating Heat Producing Appliances

Don't Take a Chance!

In 2000 British Standards reviewed and reissued BS 5440-2 *Installation and maintenance of flues and ventilation for gas appliances of rated input not exceeding 70 kW net (1st, 2nd and 3rd family gases) Part 2: Specification for installation and maintenance of ventilation for gas appliances.*

Amongst the changes in this document was the introduction of an industry standard for calculating what was to be called the **equivalent free area** of ventilators - specifically those containing anti-draught properties (usually a system of internal baffles within a duct or cavity liner) as the previous system of simple physical measurement was found to be inaccurate due to the aerodynamic characteristics of the baffles. As a result clear **equivalent free areas** should now be published in manufacturer's literature.



Rytons TCL18000 AirLiner® features anti-draught baffles

Still confused about equivalent free area?

Eight years after its introduction, is there still confusion in the industry over the difference between **equivalent free area** and free area and where products with either calculation can be used?

A recent straw poll carried out by Rytons Sales Office has highlighted that worryingly some installers and suppliers are still not clear on the difference between **equivalent free area** and free area calculations and in which situation it is safe to use which figure. Reasons for this included lack of explanation, a reliance on manufacturers to present accurate information to them and difficulty identifying suitable products from manufacturers' literature.

Why is there still confusion?

Rytons believe confusion can be caused by the sheer number of different through wall ventilation options available from manufacturers – different size liners, core vents of different diameters, vents with removable baffles, straight through sleeves



A small selection of Rytons vents for heat producing appliances

Rytons aim

To offer choice but to make the choice simple - that's why:-

- **All** Rytons through-wall ventilators for heat producing appliances have **equivalent free areas** independently tested by Advantica and the Building Research Establishment; giving installers and suppliers assurance that the air space published is accurate and verifiable.
- **All** Rytons through-wall AirLiner® cavity liners in sizes '9x3', '9x6' and '9x9' contain anti-draught baffles ensuring the best possible performance is available as standard.
- Rytons through-wall AirCore® core ventilators (both 127mm and 151mm diameter) are available with fixed anti-draught baffles or a straight through tube. All ventilators are coded and boxed separately so there's no fitting or removal of baffles on site.

What do official governing bodies think?

HETAS says, "It is very important to select the correct vent for the job. This means the actual air that can be provided through the vent in order to meet the requirements of Building Regulations and Standards. Installers should take care to ensure they are using a ventilator with an air provision based on 'Equivalent Area' rather than "Free Area". We are supportive of manufacturers who provide the right information with their products in order to assist our engineers in making the right choices."



Jim Lambeth, Technical Manager for the **Solid Fuel Association** says, "What is important to note is the actual air which can be transported through the vent not its physical size. Installers should take care to ensure they note the ventilator's 'Equivalent Area', sometimes also known as 'Effective Free Area', rather than simply 'Free Area' often quoted in sales literature."

Carbon Monoxide Poisoning

According to industry figures, carbon monoxide poisoning has killed 50 people in the UK since the beginning of 2006.

The gas installers' registration body CORGI said 218 people also suffered injuries caused by the 'silent killer'.

According to CORGI one of the three causes of carbon monoxide forming is lack of ventilation.

Don't take a chance!

When venting a heat producing appliance only use products with a published and verifiable **equivalent free area**



HETAS is the Competent Persons Scheme for solid fuel, wood and biomass fuels/appliances.