

The New AirFlow Pressure Relief Vent



The New AirFlow AF-D or AF-W Pressure Relief Vent is designed to operate as a light weight solution to duct mounted and wall mounted general purpose pressure relief for all areas of a building. The shutters are manufactured in the UK from high quality steel with special powder coated finish or where required a medical quality sterile finish. The vents open from pressures as low as 10 Pascals and can be set to all requirements. The standard unit provides a 4 hour fire rating above 20 Pa and can be fitted with the FDF damper if fire ratings are required below 20Pa. The units provide a high air flow with low resistance.

The AF is supplied with a 40mm flange on both sized of the damper to enable simple duct mounting where as the AF-W is provided with a flange for flush mounting.

The units are supplied as standard in RAL9010 White finish but can be provided in any standard RAL colour.

Features and Benefits

- 100% Efficiency at 10 Pascal's
- Performance Tested Free Vent Area
- High Quality Construction
- Dynamic Co-efficient effect 1.1
- Life Time Guarantee
- Pressure setting can be site adjustable.
- Wall, Duct and Ceiling Mounted Versions Available





Applications

Operating Theatres



The “AirFlow” Vents are used to maintain the positive pressurisation of such areas as operating theatres and isolation rooms. This is to protect them from the ingress of infectious agents passing through from openings. These types of areas have high airflows due to the nature of the environment to aid with hygiene and infection control. APS have a track record in working in these types of applications and the appropriate documents which include Health Technical Memorandum (HTM 03-01) which superseded HTM 2025 and the Isolation Room design (HBN4 Supplement 1)

Clean Rooms



The “AirFlow” Vents utilised within the cleanrooms of healthcare, pharmaceutical, industrial and commercial applications for successful room differential pressure control.

All cleanrooms should be either classified or non - classified. All classified areas should conform to an appropriate standard. This classification is based upon geographic location and usage.

Isolation Rooms

When following the guidelines of HBN4 Supplement 1 Isolation facilities in acute settings the “AirFlow” vents are used to maintain the positive pressurisation lobby ensuring that air from the corridor does not enter the isolation room, and that air from the room does not escape into the corridor. This basic but effective design enables the suite to be used for both source and protection isolation without the need for switchable ventilation or special training for staff. Importantly it also provides safe isolation for those patients whose exact condition is unknown.

Pressurised Stairwells



Vent Size Selector

Selection Factors	
Pa	Factor
10	6.40
12	5.98
13	5.52
14	5.41
15	5.23
20	4.50
25	4.00
30	3.70
35	3.40

To calculate the size of vent required for a set volume flow please refer to the Selector Factor chart and follow the calculation below:-

Volume flow x Factor x vent blade size:-

Example 220l/s (0.22m³/s @ 15Pa =

$$220 \times 5.23 = 1150.6 \text{mm} \div \text{blade length, say } 500 = 2.3012 \text{ blades}$$

Vent size suitable = 500x300 vent

Off the shelf sizes 300, 500, 700 & 1000 supplied on 100mm height increments.

Standard vent supplied to fit walls from 1mm to 380mm in depth.