

## 'BLACK HOLE' VENTILATION

'Black Hole' ventilation products provide the answer to the dangerous practice of ventilators being blocked off by occupiers who are trying to stop draughts. This is an important risk to safety. While this works to reduce draughts, the ventilator may not pass the required amount of air when the appliance is operating. It is important that a spillage test is carried out as specified by the British Standard and Corgi good practice.

### 'BLACK HOLE' BENEFITS

#### **Stops wind blasting in**

The air flow within the duct is slowed down by the change of direction and by the vortices formed, reducing draughts to a minimum.

#### **Stops light showing through**

The occupier cannot see through the ventilator.

#### **Stops light shining out**

Night flying insects like moths, crane flies and mosquitoes are not attracted in.

#### **Absorbs outside noise**

Reduces the penetration of traffic noise. The internal construction works as a sound baffle.

#### **Practical**

Allows air to be pulled through by the appliance when it is operating.

#### **Safe**

With draught and light annoyance problems eliminated, the occupier will not be tempted to block off the vent.

## THE 'BLACK HOLE' MAGIC EXPLAINED

As outside wind pressure increases, a normal ventilator lets a lot of air through, causing draughts.

Inside the Stadium 'Black Hole' ventilator, vortices are formed behind the internal blades as the incoming air is forced to change direction. The gap that the air is able to pass through narrows. As wind pressure increases, the vortices grow. The total air flow is reduced and it finally tumbles and slows to a trickle, which cuts down annoying draughts.

However, when a heating appliance is operating, air is drawn through the vent and actually speeds up within the constricted air flow between the vortices. This maintains the correct amount of air in the room or compartment to allow the fuel to burn efficiently and flue gases to escape.

When the appliance is not working, incoming air is reduced to a minimum, even when wind levels are high. The actual physical difference is that of the air blown or drawn. The energy of the blown air (wind) is quickly dissipated by the restriction of the internal shape and the vortices, while drawn air will flow smoothly round the vortices.

