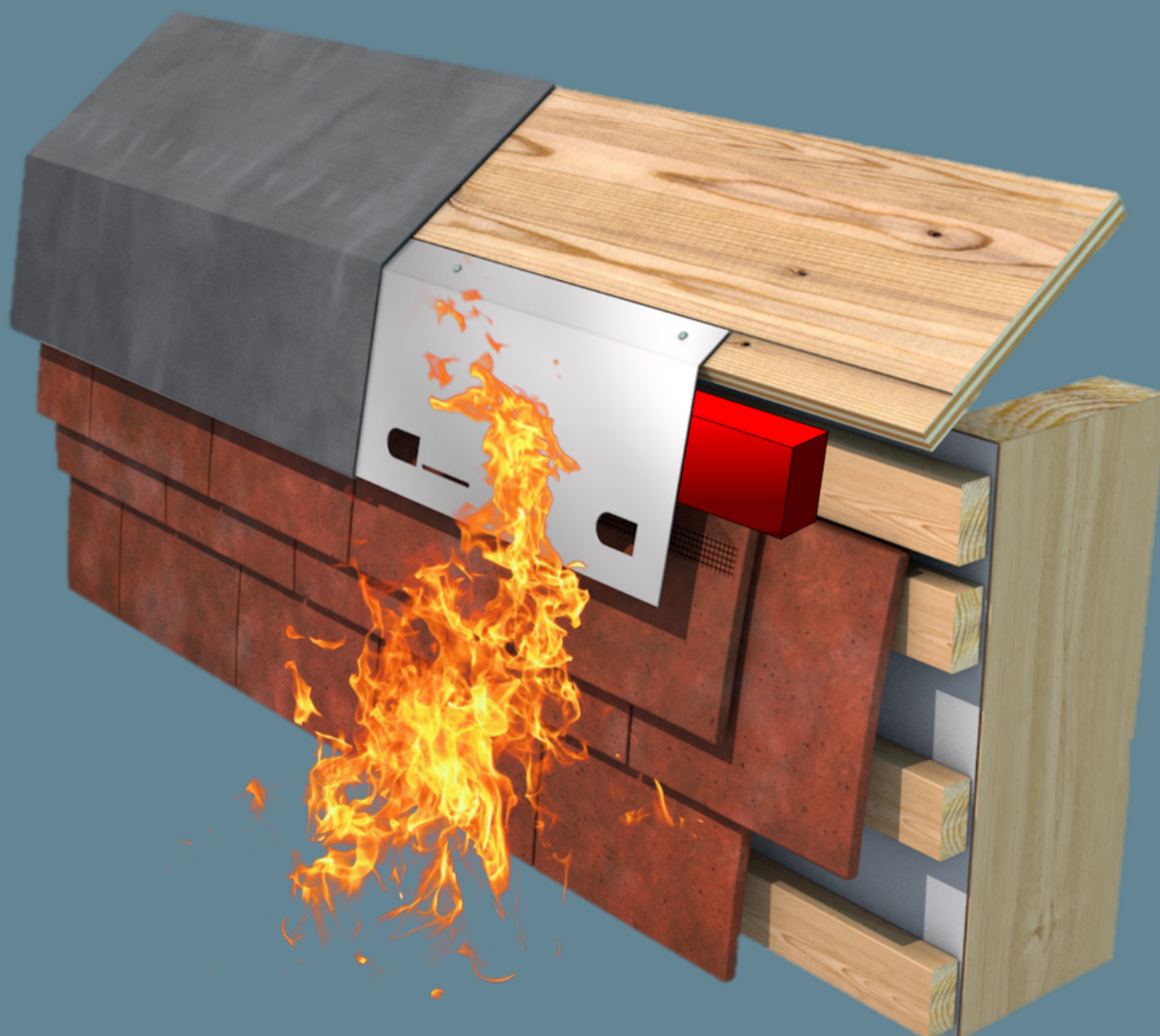


AIRTRAK®-FR

fire resisting ventilators



Ventilation and the spread of fire

Controlling the spread of fire is of all importance. Firstly in saving lives and then also, buildings too. The recently updated Building Regulations Approved Document B covers many aspects relating to the important matter of compartmentation and controlling the spread of fire. However, Building Regulations Approved Document C requires that some roof voids are ventilated in accordance with BS 5250 via continuous air gaps at the edges of these roof voids. This is to control the occurrence of condensation which can be harmful to the building fabric.

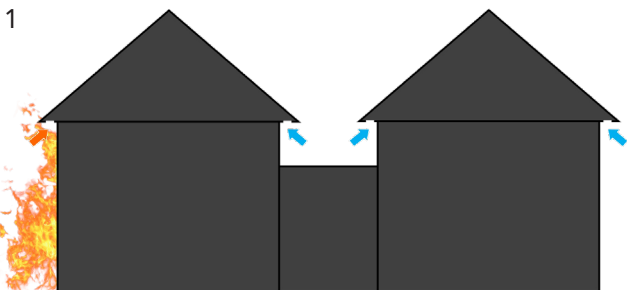
These ventilation air gaps are in some circumstances 25mm wide and present a pathway through which flames and heat can travel. Fire can spread quickly through these air gaps by means of direct contact and convection.

Fire can spread through ventilation gaps in both directions; from an external fire to inside the building or roof void and also, from an internal fire to an adjacent building.

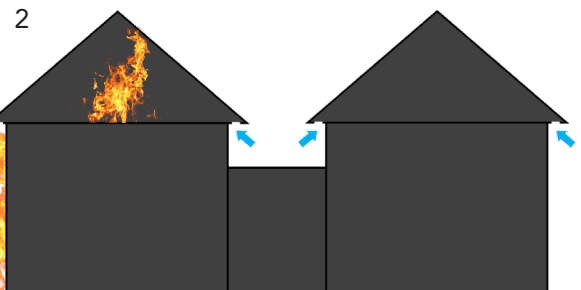


“ Fire and smoke spread in concealed spaces within buildings can present both a life risk to occupants and fire-fighters, and cause widespread damage...One such concealed space is the roof void and concealed fire spread within roof voids...”

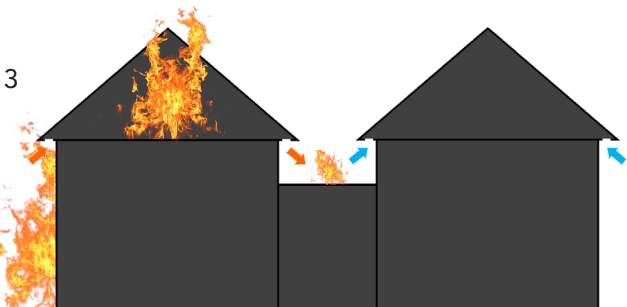
BRE (2015) *Fire compartmentation in roof voids*. Available at: www.bre.co.uk (Accessed: 11 March 2020)



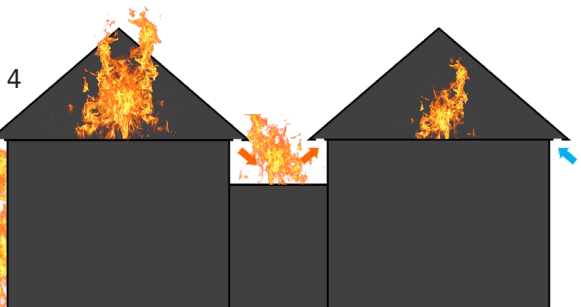
Ventilation gaps in roofs can facilitate the spread of fire...



...from outside a building to inside a roof void.



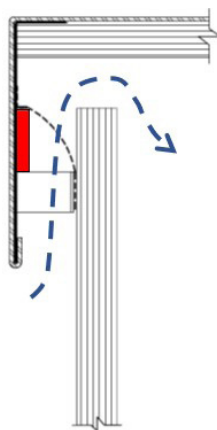
And from inside a building...



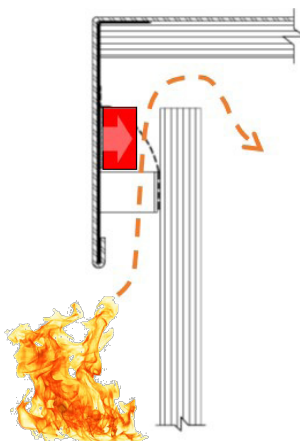
...to an adjacent building

The AIRTRAK®-FR system

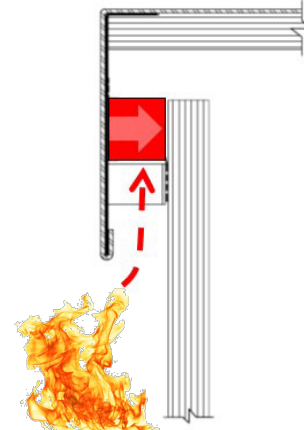
To augment the standard range of AIRTRAK Roof Void Ventilators, Nicholson have developed and tested the AIRTRAK-FR range of ventilators which can be used to control the potential spread of fire through ventilation gaps. The AIRTRAK-FR ventilators incorporate an intumescent seal which activates in the instance of fire or at temperatures of 180-200°C. These ventilators will effectively close off ventilation apertures up to 25mm and help to control the spread of fire.



In normal conditions, the Airtrak-FR ventilator allows passive ventilation of the roof void providing the equivalent of 25mm ventilation.



The presence of heat or fire starts to activate the intumescent seal, closing off the air gap.



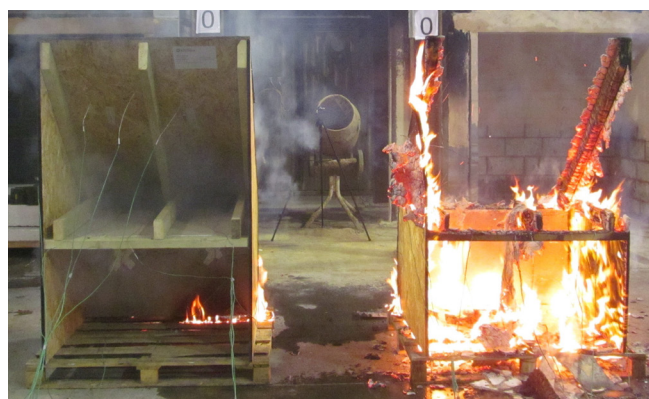
The intumescent seal is fully activated preventing passage of fire from outside the building into the roof void.

Testing the AIRTRAK®-FR system

The AIRTRAK-FR system has been independently tested by the BRE who conducted a controlled test in their Burn Hall facility at Watford. This test clearly demonstrated the effectiveness of the AIRTRAK-FR system to stop the spread of fire through ventilation voids as the pictures below show.



The test was designed to simulate a fire at the eaves of a ventilated roof. This image shows the view from outside the building where the fire was started.



This image shows the inside view after a 30 minute test. the rig on the left was fitted with an AIRTRAK-FR ventilator, while the rig on the right was fitted with a standard roof void ventilator.

Watch the AIRTRAK-FR video



Conclusion from BRE test report

“ The presence of the AIRTRAK-FR system with intumescent seal as tested will delay the fire spread to a ventilated roof void from a fire located outside...will delay the spread of fire from inside a ventilated roof void to adjacent building elements...”

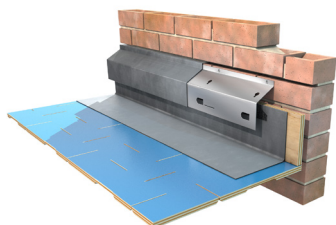
(BRE Global, Report no P113992-1000 5th August 2019)

The AIRTRAK®-FR range of ventilators

Use the PDF and DWG icons to download files for each product.

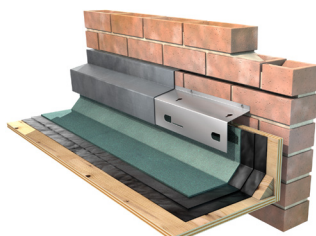


AB1-FR



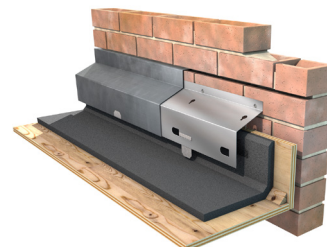
Abutment Ventilator for lead membrane and liquid applied roof covering

AB2-FR



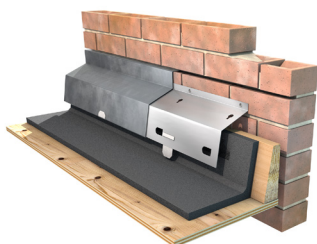
Abutment Ventilator for hard metal roofing including zinc and copper

AB3-FR



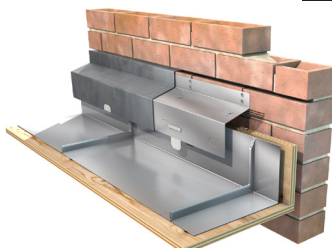
Abutment Ventilator for asphalt - vertical kerb

AB4-FR



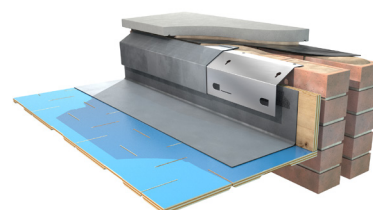
Abutment Ventilator for asphalt - splayed kerb

AB5-FR



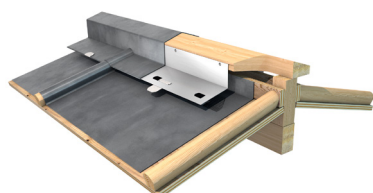
Abutment Ventilator for hard metal roofing including zinc and copper

AB6-FR



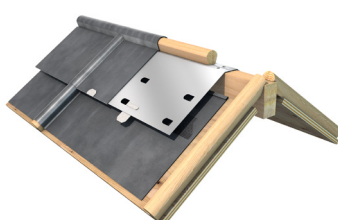
Parapet abutment ventilator

BRV1-FR



Between Roll Ventilator up to 30°

BRV2-FR



Between Roll Ventilator over 30°

CL-FR



Cladding ventilator

The AIRTRAK®-FR range of ventilators

Use the PDF and DWG icons to download files for each product.



CP-FR



Change of Pitch Ventilator

EA100/120/150-FR



EA100-FR



EA120-FR



EA150-FR



Eaves Ventilator

EA100-FR 100mm downstand

EA120-FR 120mm downstand

EA150-FR 150mm downstand

IL100/145/180-FR



IL100-FR



IL145-FR



IL180-FR



Inline Ventilator

IL100-FR 100mm girth

IL145-FR 145mm girth

IL180-FR 180mm girth

LB20/30/45-FR



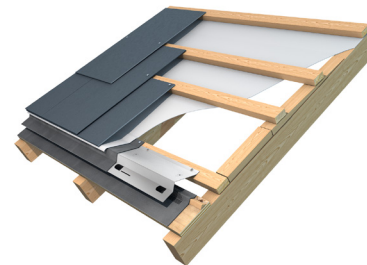
LB20-FR



LB30-FR



LB45-FR



Eaves Ventilator

LB20-FR for slated roofs 20°-29°

LB30-FR for roof pitch 30°-44°

LB45-FR for roof pitch 45° and over

MV150/200/225-FR



MV150-FR 60°-90°



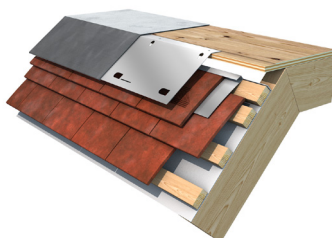
MV200-FR 45°-59°



MV200-FR 35°-44°



MV225-FR 30°-34°



Mansard Ventilator for tiled roofs

MV150-FR roof pitch 60°-90°

MV200-FR roof pitch 45°-59°

MV200-FR roof pitch 35°-44°

MV225-FR roof pitch 30°-34°

MV150/200/225-FR



MV150-FR 60°-90°



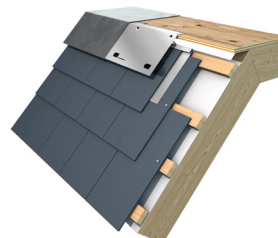
MV200-FR 45°-59°



MV200-FR 35°-44°



MV225-FR 25°-34°



Mansard Ventilator for slated roofs

MV150-FR roof pitch 60°-90°

MV200-FR roof pitch 45°-59°

MV200-FR roof pitch 35°-44°

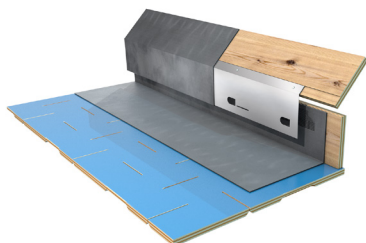
MV225-FR roof pitch 25°-34°

The AIRTRAK®-FR range of ventilators

Use the PDF and DWG icons to download files for each product.



PE100/120/150-FR



Pitched Eaves Ventilator
PE100-FR 100mm downstand
PE120-FR 120mm downstand
PE150-FR 150mm downstand



PE100-FR

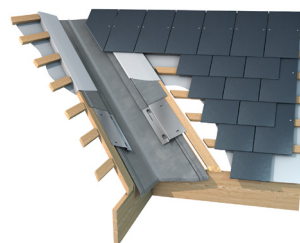


PE120-FR



PE150-FR

PV10/10M/25/25M-FR



Pitched Valley Ventilator
PV10-FR 5mm for slated roofs
PV10M-FR 5mm for tiled roofs
PV25-FR 25mm for slated roofs
PV25M-FR 25mm for tiled roofs



PV10-FR



PV10M-FR



PV25-FR



PV25M-FR

RTV-FR



Ridge Tile Ventilator
RTV-FR for tiled roofing
RTV-FR for slated roofing

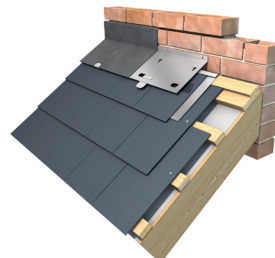


RTV-FR tiled



RTV-FR slated

VA200/250-FR



Ventilated Apron for Slated Roofs
VA200-FR for pitch 35°-65°
VA200-FR for pitch 25°-34°
VA250-FR for pitch 20°-24°



VA200-FR 35°-65°

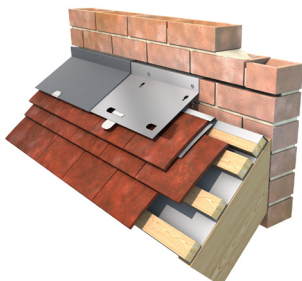


VA200-FR 25°-34°



VA250-FR 20°-24°

VA200-FR



Ventilated Apron for Tiled Roofs
VA200-FR for pitch 45°-65°
VA200-FR for pitch 30°-44°



VA200-FR 45°-65°



VA200-FR 30°-44°

VR200/250-FR



Ventilated Ridge for Slated Roofs
VR200-FR for pitch 35°-65°
VR200-FR for pitch 25°-34°
VR250-FR for pitch 20°-24°



VR200-FR 35°-65°



VR200-FR 25°-34°



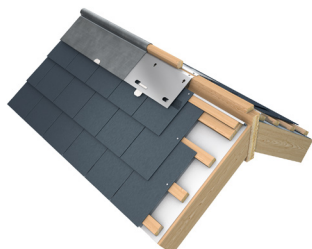
VR250-FR 20°-24°

The AIRTRAK®-FR range of ventilators

Use the PDF and DWG icons to download files for each product.



VR200-**FR**



Ventilated Ridge for Tiled Roofs

VR200-FR for pitch 45°-65°

VR200-FR for pitch 30°-44°



VR200-FR 45°-65°



VR200-FR 30°-44°

VT18/25-**FR**



Ventilated Trim

VT18-FR for 18mm plywood

VT25-FR for 25mm plywood



VT18-FR



VT25-FR



Unit 13, Wireless Station Park, Chestnut Lane, Bassingbourn, SG8 5JH

t: 01763 295828
e: info@nicholsonsts.com
w: www.nicholsonsts.com