

SINTEF Building and Infrastructure confirms that

Sealmaster FB Eaves Vent – Flame Trapping Fire Damper

meets the provisions regarding product documentation given in Norwegian building regulations, with properties, fields of application and conditions as stated in this document

1. Holder of the approval

Sealmaster
Dixon International Group Ltd
Brewery Road, Pampisford
Cambridge CB22 3HG
United Kingdom
www.sealmaster.co.uk

2. Manufacturer

Sealmaster, Pampisford, United Kingdom

3. Product description

The Sealmaster FB Eaves Vent is a unit with a reactive fire preventing system for the ventilation of roof constructions. The FB Eaves Vent incorporates technology to prevent flame transmission before a reactive intumescent material completely seals the unit in the event of a fire. The principle design and dimensions are shown in fig. 1.

The lower part consists of a 35 mm high grille with intumescent material based on graphite, protected on all four sides with a 0.7 mm thick perforated stainless steel sheet. The lower grille protrudes 20 mm outside the frame on all four sides in order to facilitate fastening to the underside of the soffit. A 3 mm thick self-adhesive sealing strip is glued to the frame on all four sides, where the outer 1 mm consists of graphite.

The upper part consists of a 35 mm high and 10 mm wide wooden frame with slots for connecting one or two 0.46 mm thick stainless expanded steel rib mesh. This approval is applicable for vents with one steel mesh, described as "3-layer vent".

4. Fields of application

The vent is installed horizontally at the eaves for the ventilation of roof structures in fire class 1, see fig. 2. The vent acts as a firestop for fires from the underside, by preventing flame penetration and blocking the ventilation when the temperature rises.

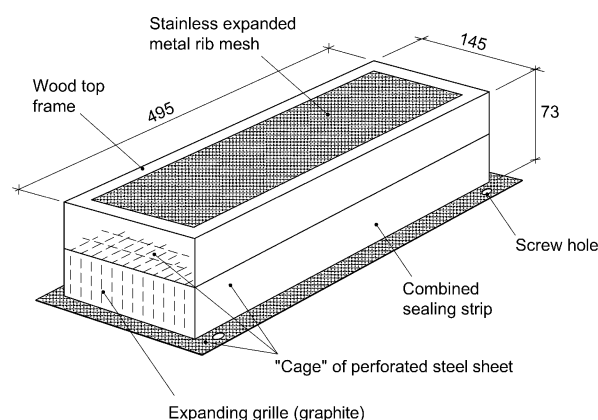


Fig. 1
Sealmaster FB Eaves Vent. Principle design and measures. Gross dimensions including flanges are 185 x 535 x 73 mm.

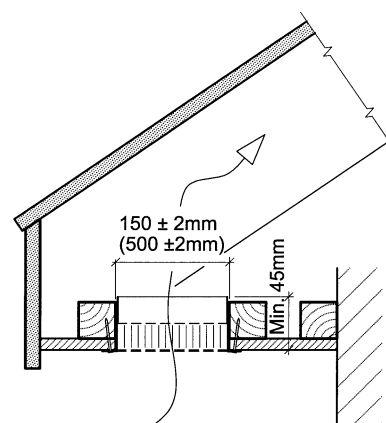


Fig. 2
Principle installation of Sealmaster FB Eaves vent. Also the surrounding soffit design must have an equivalent fire resistance in order to obtain 30 min. fire resistance for the assembled eaves construction.

5. Properties

Fire resistance

The vent, including the prescribed screw fixing, has 30 minutes fire resistance for separating function according to EN 1363-1:1999.

Effective ventilation area

The effective ventilation area is 32 % of the total area, i.e. 23 000 mm².

6. Environmental aspects

Chemicals hazardous to health and environment

The product contains no hazardous substances with priority in quantities that pose any increased risk for human health and environment. Chemicals with priority include CMR, PBT or vPvB substances.

Waste treatment/recycling

The product shall be sorted as residual waste on the building/demolition site. The product shall be delivered to an authorized waste treatment plant for material and energy recovery.

Environmental declaration

No environmental declaration (EPD) has been worked out for the product.

7. Special conditions for use and installation

Design considerations

The necessary ventilation of the roof construction must be determined in each individual case in order to decide the number and positions of vents.

To obtain a fire resistance of 30 min. for the eaves, the soffit construction where the vents are installed must also be designed for a 30 min. fire resistance.

Installation

The vents are installed in an airtight soffit board and a 500 mm ± 2 mm x 150 ± 2 mm opening, normally between roof rafters. The vent shall be fixed to battens on all four sides with minimum four 4.1 mm x 50 mm stainless steel screws. The battens shall be minimum 25 mm wide and with a minimum 45 mm height including the thickness of the soffit board.

Surface treatment

The vent must not be painted.

Maintenance/cleaning

The vent has no moving parts, and does not require special maintenance in order to ensure that it will function in case of a fire. Visual inspection shall be done to ensure that the openings in the perforated steel sheets are not blocked by dust, insects etc.

It is recommended that an inspection is carried out every fifth year on the underside of the vent, and on the top side every tenth year, to decide whether cleaning is necessary. If cleaning is required it may be necessary to remove the vents for access.

8. Factory production control

The production of Sealmaster FB Eaves Vents is subject to supervisory factory production control according to contract with SINTEF Building and Infrastructure concerning SINTEF Technical Approval.

9. Basis for the approval

The approval is primarily based on the verification of properties documented in the following reports:

- The Intumescent Fire Seals Association (IFSA). Information Sheet no. 4. The Aging Performance of Intumescent Seals. January 1997.
- Norges byggforskingsinstitutt. Report O 10007 of 14.02.2002
- Warrington Fire Research Centre Ltd. Report no. 138613 of 23.06.2004
- Warrington Fire Research Centre Ltd. Report no. 136476 of 23.06.2004
- Warrington Fire Research Centre Ltd. Report no. 136507 of 23.06.2004
- BA8 Consulting Engineers Ltd. Report, project no. 228 of 28.06.2004.

10. Marking

The vents shall be marked with manufacturer's product designation and a production number with date of production. The approval mark for SINTEF Technical Approval No. 2405 may also be used.



Approval mark

11. Liability

The holder/manufacturer has sole product responsibility according to existing law. Claims resulting from the use of the product cannot be brought against SINTEF beyond the provisions of Norwegian Standard NS 8402.

12. Technical management

Project manager for this approval is Sigurd Hveem, SINTEF Building and Infrastructure, dep. Architectural engineering, Oslo.

for SINTEF Building and Infrastructure

Hans Boye Skogstad

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Approval Manager