



Technical Approval

SINTEF NBLAs confirms that

FB Air Transfer Vent - Fire Damper

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

This document is an English version of the Norwegian document No. 20187 / NBL 030-0277 dated 22.11.2011

1. Holder of the approval

Securo AS
 Neptunveien 6
 7650 Verdal
 Norway
 www.securo.no

2. Manufacturer

Securo AS, Verdal, Norway

3. Product description

The FB Air Transfer Vent - Fire Damper (FB Vent) is a passive vent designed for use in fire resistance rated partition walls. The vent does not contain any moving parts, detector activating system or cabling. The vent prevents fire spread by combining a steel grille blocking flames during the first minutes, and an intumescent material that swells and blocks the opening when the vent is exposed to flames or hot smoke gases. FB Vent can be made in sizes up to 600 x 600 mm.

Detailed product design and principle design of installation details are described in "Standard Construction Details for FB Vent belonging to SINTEF Technical Approval No. 20187". The version of the construction details filed at SINTEF at any time is a formal part of the approval.

4. Fields of application

The FB Vent can be used in walls with gypsum boards or in concrete walls in rooms with for ventilation through internal or external fire resistance rated partitions. See cl. 5 for more details.

5. Properties

Fire Resistance

The FB Vent has achieved a fire resistance in walls with gypsum boards and in concrete walls with thickness ≥ 100 mm as shown in Table 1, verified by type tests as specified in cl. 8.



Fig. 1
 FB Vent (picture from www.securo.no).

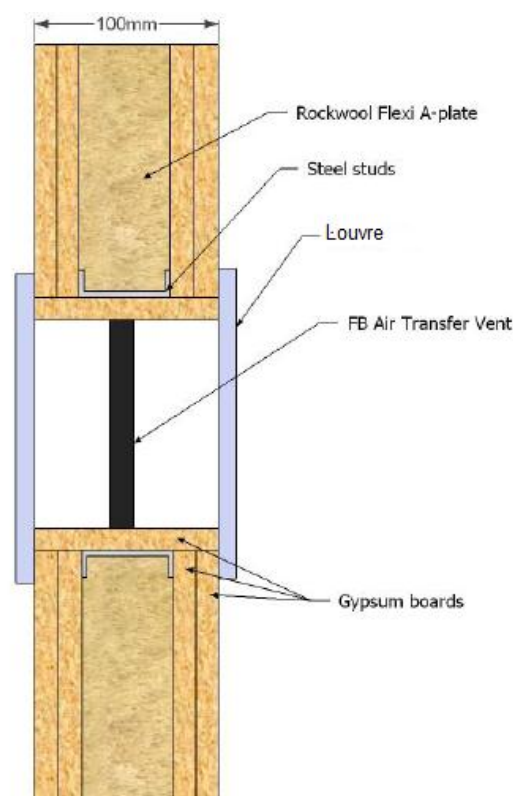


Fig. 2
 Installation principle for the FB Vent in walls with gypsum boards (cf. specimen A - G in Table 1) used in the test at SINTEF NBL as.

Table 1

Fire resistance of the FB Vent depending on the vent dimensions and type of louvre on the exposed and/or the unexposed side of a wall with gypsum boards or concrete wall with thickness ≥ 100 mm.

Test specimen. Type of louvre (see Table 2)	Dimensions of FB Vent (H x W) (mm)	Fire Resistance (minutes)
A: Trox Auranor OVA louvre on the unexposed and the exposed side	590 x 590	60
B: Trox Auranor LOF-S louvre on the unexposed and the exposed side.	80 x 790	90
C: Flexit steel louvre on the unexposed and the exposed side	215 x 215	60
D: Flexit flap-valve, plastic, on the exposed side, Flexit steel louvre on the unexposed side.	136 x 136	60
E: Trox Auranor OVA Louvre on the unexposed and the exposed side.	190 x 590	60
F: Flexit flap-valve, plastic, on the unexposed side, Flexit steel louvre on the exposed side.	136 x 136	90
G: Flexit steel louvre on the unexposed and the exposed side	136 x 136	60

The FB Vent installed in min. 100 mm thick walls with gypsum boards or in concrete walls, with louvre combinations A, C, D, E and G as shown in Table 1, has 60 minutes fire resistance. These combinations can be used in walls where fire resistance EI 30 or EI 60 is required in the building regulations (TEK).

Coresponding has the FB Vent installed with louvre combinations B and F in Table 1 a 90 minutes fire resistance, and these combinations can be used in walls where fire resistance EI 30, EI 60 or EI 90 is required in the building regulations (TEK)..

In all cases the FB Vent shall be installed in accordance with the "Standard Construction Details for FB Vent belonging to SINTEF Technical Approval No. 20187".

Direct Flame Impingement





The FB Vent resists immediate exposure by flames, and may prevent fire spread in the open state prior to the intumescent material has swelled out and blocked the vent completely.

Smoke

Standard FB Vent will not prevent spread of relatively cold smoke in the open state.

Table 2

Type of louvres that can be used in combination with the FB Vent.

Louvre no.	Type of louvre	Location	
I	Flexit, steel louvre	exterior	
II	Flexit flap-valve, plastic	interior	
III	Trox Auranor OVA louvre	interior	
IV	Trox Auranor LOF-S louvre	interior	

6. Special conditions for use and installation

Design considerations

In cases in which it is important to prevent smoke spread, it must be taken into consideration that the FB Vent will not block smoke spread in the open state. Contact the supplier for more information concerning alternative solutions when required.

Installation

The FB Vent shall be installed in the middle of a wall aperture of a wall with gypsum boards, see Fig. 2. FB Vent shall be fixed to the wall with screws and a fire resistance rated sealant. Louvres are installed on both sides of the wall opening.

Otherwise the FB Vent shall be installed according to installation details shown in "Standard Construction Details for FB Vent belonging to SINTEF Technical Approval No. 20187".

Maintenance

The FB Vent does not contain any moving parts, and does not need special maintenance in order to function in case of fire. To ensure air passage a visual inspection of the vents should be performed regularly in order to prevent that the perforated steel plates are not blocked with dust, insects etc. Hence, it is recommended to carry out inspection and necessary cleaning each fifth year. The louvres are then dismantled, and if necessary the FB Vent is cleaned by a vacuum-cleaner or by blowing.

7. Factory production control

The product shall have at least one annual, external factory production control according to a written agreement with SINTEF NBL.

8. Basis for the approval

- SINTEF NBL as. Test report 103011.24, dated 2010-05-27, according to NS-EN 1366-3:2009.
- SINTEF NBL as. Test report NBL A10109, dated 2010-10-21.
- Securo AS. Drawing no.:
 Securo FB wall vent 590 x 590.
 Main assy vent 590 x 590.
 Vent assembly 590 x 590, sheet 1 and 2.
 Main assy vent 80 x 790.
 Vent assembly 80 x 790, sheet 1 and 2.
 Main assy vent 215 x 215.
 Vent assembly 215 x 215, sheet 1 and 2.
 Main assy vent 136 x 136.
 Vent assembly 136 x 136, sheet 1 and 2.
 Main assy vent 190 x 590.
 Vent assembly 190 x 590, sheet 1 and 2.
 All drawings are dated 2011-03-10.

9. Marking

The product shall be marked with TG 20187 or NBL 030-0277, product name, manufacturer and traceable time of production. The labelling shall have good visibility.

for SINTEF NBL as



Asbjørn Østnor
 Department Manager, Testing and documentation



Approval mark

10. 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 NBL as beyond the provisions of Norwegian Standard NS 8402.

SINTEF NBL as may withdraw an approval if irregularities or misuse are observed and instructions in writing from NBL has not been followed.

11. Technical management

Project manager for this approval is Jan P. Stensaas, SINTEF NBL as, Trondheim.

for SINTEF Building and Infrastructure



Steinar K. Nilsen
 Head of SINTEF Certification