FB Cavity Vent

Securo AS **02.01.2018** Version 1.4

Fire rated FB Cavity Vent

Fires that spread through cavities in the construction, for instance in cavities behind the façade cladding, represents a major risk for rapid fire spread. Not only is it difficult for the fire brigade to identify the fire spread, it is usually also complicated to get access to and to extinguish such fire.

FB Cavity Vent applications are used for establishing vented fire barriers in voids or cavities behind the façade, inside fire rated walls and floors or for venting of the attic. FB Cavity Vents provide ample ventilation of the construction while instantly preventing fire spread.

FB Cavity Vent are tested and certified as a fire resistance rated product in fire classes EI30, EI60 and EI90.

Product data

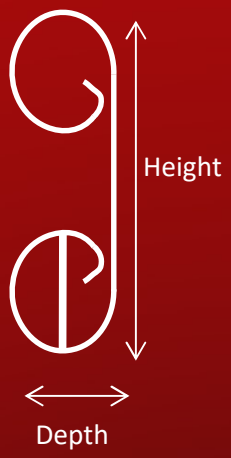
Available in 113 cm and 53 cm length

Depth x Height

23(+3) x 112 (±7)mm

28/30(+3) x 87 (±7)mm

36(+4) x 112 (±7)mm



Fire resistance rating:
EI30, EI60 og EI90

Tested and certified according to:
NS-EN 1366-4:2006

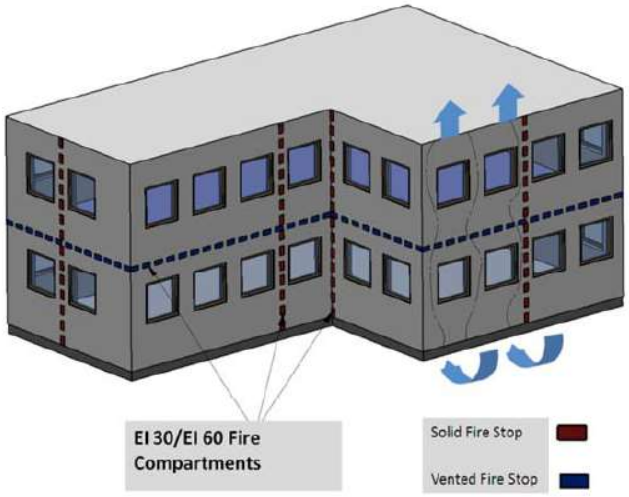
Product Documentation from RISE Fire Research AS:
RISEFR 010-0238

Area of application

The FB Cavity Vent is usually mounted horizontally behind the facade cladding. Vertically solid fire stops can be used. Vented and solid fire stops are normally mounted at fire compartments in the construction.

If solid or vented fire stops are not installed in the cavities, the fires can spread rapidly. Tests have shown that the fire can spread as fast as a hydrocarbon fire, with a speed of 2-8m/min vertically and horizontally.

Hidden fires like this are very complicated to identify and get access to, and can be a major challenge for the fire brigade. The result can be devastating if the fire is allowed to spread to the eaves, attics and roof constructions.



Effective ventilation area

Dimension	m^2
23mm	0,0115
28mm	0,014
36mm	0,018

Table 1 Total effective venting area for FB Cavity Vent

Vented cladding can be designed in many ways and with different types of material. The main principle is the same: The cladding (rain stop) is separated from the back wall (wind stop) with a vented and drained air gap.

Recommendations from, among others, the book Brandsäkra Trähus 2.edition and SINTEF Byggforsk handbook 51 "*Fleretasjes trehus*" that the venting area of the attic should be 1/300 of the attics floor area. This venting area is the total venting area including outlet air.

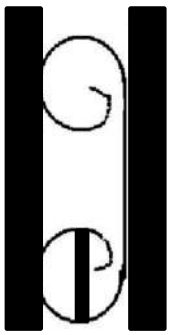
Article Numbers

FBO		
Dimension	Fire Rating	Article no.
23mm – 113 cm length	EI30	FBH-23-1000-30
23mm – 53 cm length	EI30	FBH-23-500-30
23mm – 113 cm length	EI60	FBH-23-1000-60
23mm – 53 cm length	EI60	FBH-23-500-60
23mm – 113 cm length	EI90	FBH-23-1000-90
28mm – 113cm length	EI30	FBH-28-1000-30
28mm – 53 cm length	EI30	FBH-28-500-30
28mm – 113 cm length	EI60	FBH-28-1000-60
28mm – 53 cm length	EI60	FBH-28-500-60
28mm – 113 cm length	EI90	FBH-28-1000-90
36mm – 113 cm length	EI30	FBH-36-1000-30
36mm – 53 cm length	EI30	FBH-36-500-30
36mm – 113 cm length	EI30-30	FBH-36-1000-30-30
36mm – 113 cm length	EI60	FBH-36-1000-60
36mm – 53 cm length	EI60	FBH-28-500-60
36mm – 113 cm length	EI90	FBH-36-1000-90

Mounting

The FB Cavity Vent must be handled with caution. Avoid exposing the vent for knocks or other external influence that can cause the vent to bend, dent or damage at the ends. This may weaken the vents performance in a fire.

The FB Cavity Vent is mounted with three stainless steel screws, 4,5x35mm, per meter. The tube with intumescent material shall be placed downwards, with the Intumescent material centered vertically in the tube to allow air flow.



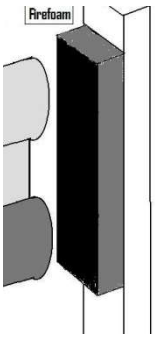
It's very important that the vent is mounted in a solid and stable construction on both sides, to be able to prevent fire spread. See picture.

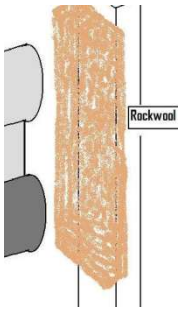
Note

- Do not bend or dent the FB Cavity Vent
- The tube with the intumecent material shall be mounted downwards, with the Intumescent material centered vertically in the tube to allow air flow.
- The vent should be mounted in a light squeeze between solid materials without any gaps where flames could pass by the vent.

- To adjust the length of the FB cavity Vent you can use an angle grinder or circular saw with metal cutting blade.

Mounting – End against stud



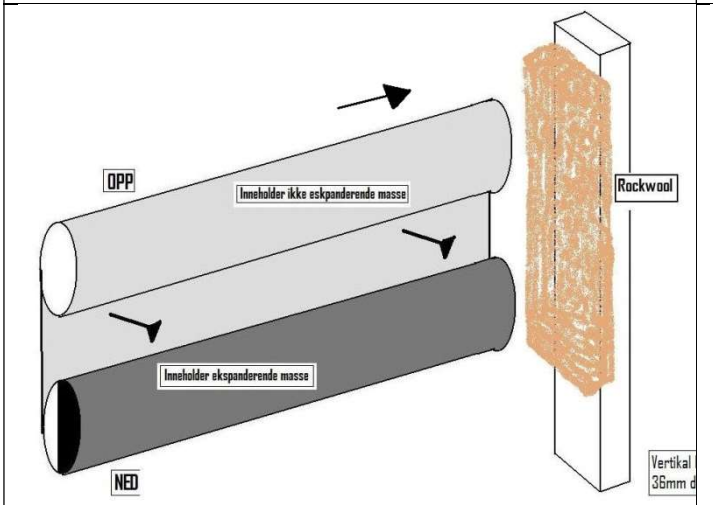


In the gap between the FB Cavity Vent and the stud, it should be used Rockwool or FireFoam. Between the under boards in board on board system you must use Rockwool or Firefoam to seal the gaps.

Mounting – Cavity Vent (53 cm), between studs

If Cavity vents are mounted between studs/battens, it's important to ensure that it does not become deformed during the mounting. If a 36mm cavity vent is squeezed between to studs or forced into a gap of 36mm, there is a danger for deformation of the product and the product will not perform as documented. Therefor install the product as shown in the illustrations under.

1.



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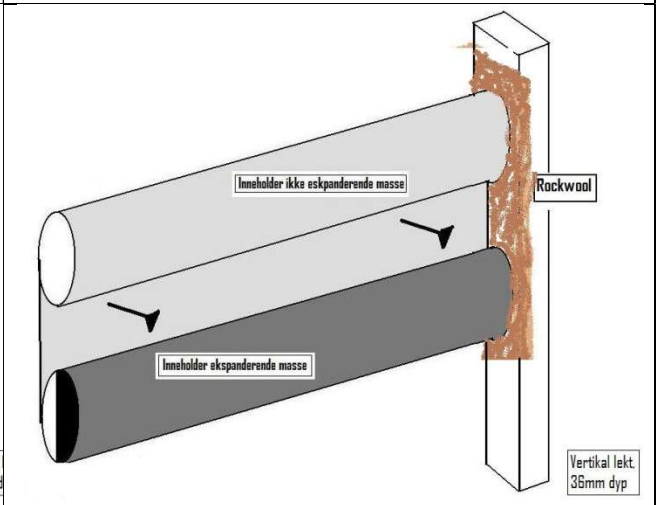

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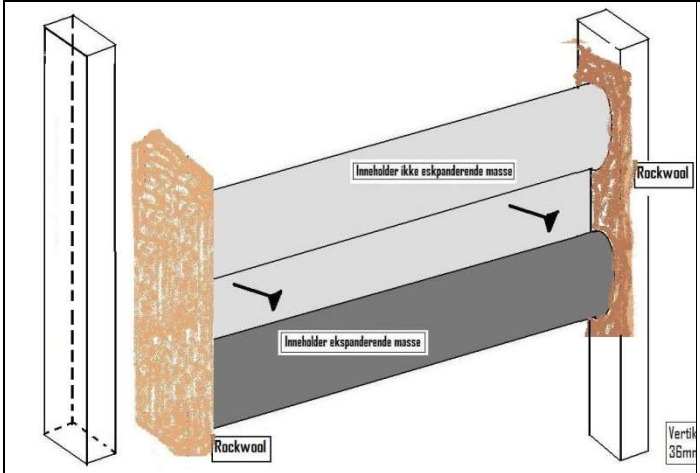
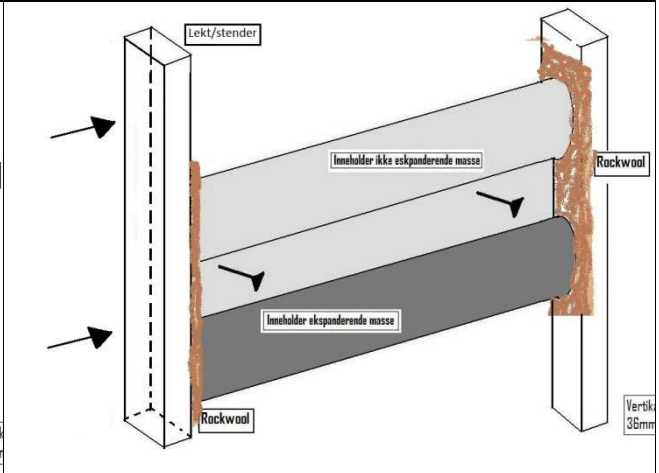
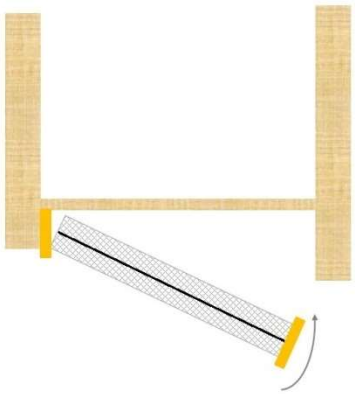


4.



Mounting between existing studs

Seen from abow

1.	2.
	
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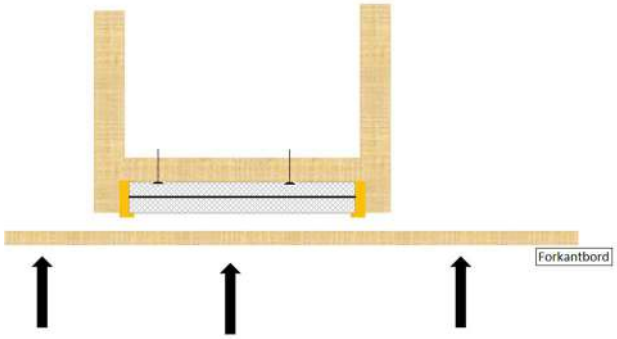
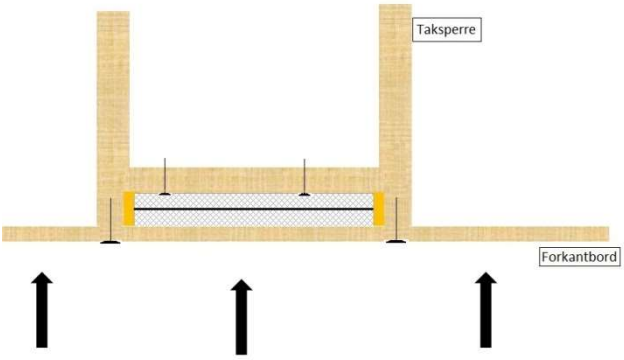
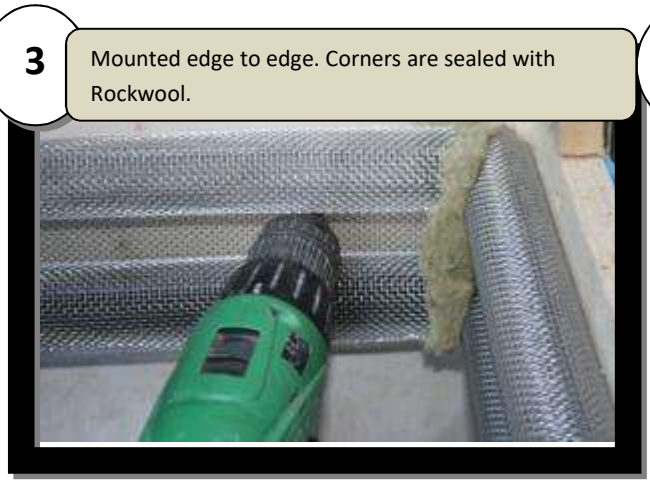
	

The images below shows mounting behind vertical cladding.

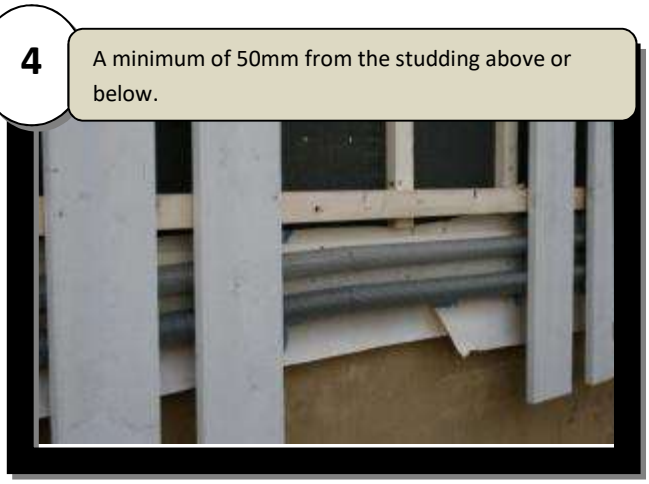
1 Wall ready for mounting at sill.

2 FB Cavity Vent fixed with 3 screws per meter

3 Mounted edge to edge. Corners are sealed with Rockwool.



4 A minimum of 50mm from the studding above or below.

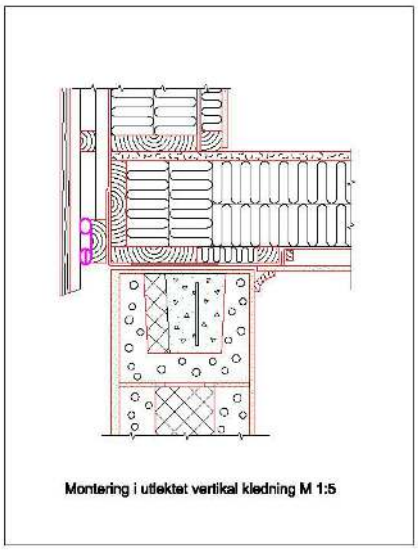


5 To adjust the length of the Vent you can use an angle grinder or circular saw with metal cutting blade

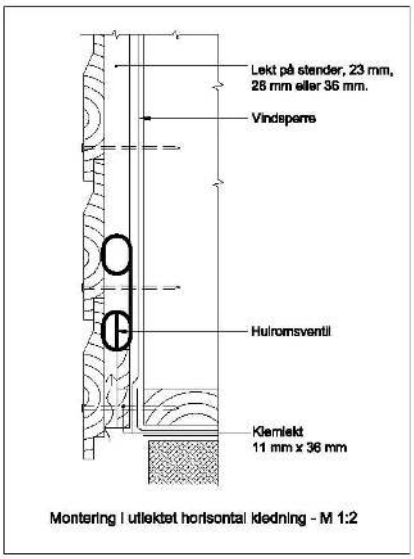
6 Gap sealed with Rockwool or Firefoam

Mounting examples

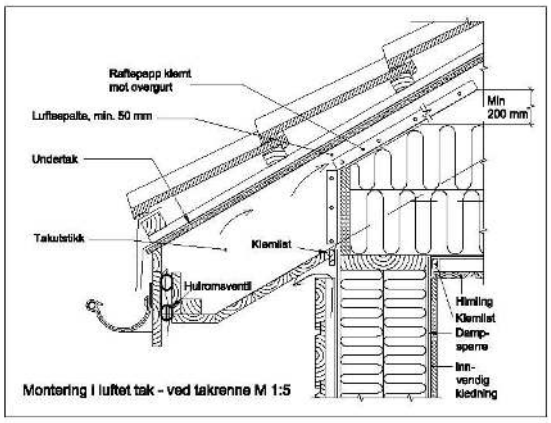
Vertical cladding



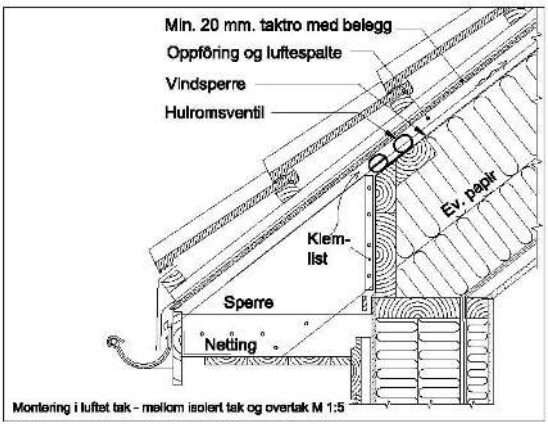
Horizontal cladding



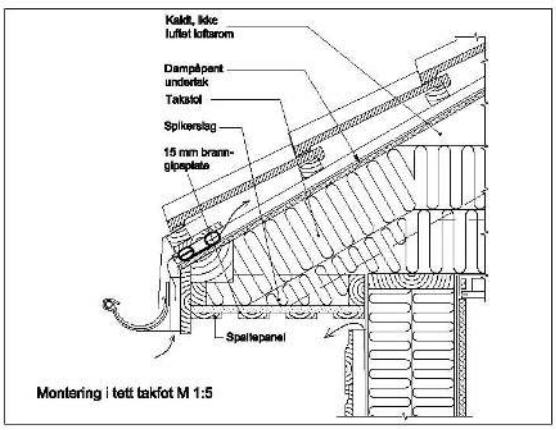
In the eave at the gutter



Between isolated and vented roof



Isolated eave



Maintenance

FB Cavity Vent contains no moving parts and requires no special maintenance to ensure the function in case of fire.

Declaration of Content

FB Cavity Vent consists of woven wire mesh (AISI304) and Therm A Flex intumescent material (Graphite in PVA binder).

Environment

Waste should be recycled.

FB Cavity vents are made of stainless steel and can be sold as scrap iron. This recycling makes the vents an environmental friendly alternative. The intumescent material can be disposed as residual waste.

References

Sintef Byggforsk details: *520.308 Exterior walls and roofs of wooden houses with 30 minutes fire resistance.*

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