

FIDs

Self-acting back draught damper
for combustion gases, without
commissioning function



FIRE SAFETY



21/05/2018

www.bevent-rasch.com



BEVENT RASCH

AIR SOLUTIONS – FOR A BETTER TOMORROW



FIDs



Product description

- Sizes Ø 80 to 160 mm
- For mounting on manifold distribution box BRSL

FIDs - Self acting back draught damper

FIDs is a self-acting back draught damper without commissioning functionality, designed to prevent the spread of smoke via the intake air system in ventilation systems.

Use

The back draught damper should be used in combination with a fan in use solution, smoke venting via exhaust air or the like and to maintain its function requires the intake air fan to be operational during the fire. The fire protection functions work for all design fire scenarios that can be expected to occur with traditionally used fire development rates. Planning and fire protection analysis are to be made by fire experts.

Inspection/maintenance

Inspection/maintenance shall occur every third year, during the compulsory ventilation inspection (OVK), cleaning of ducts and for rebuilding.

Certificate of conformity

SC0031-10

Planning

Planning shall be carried out in accordance with the related planning instructions. There is a checklist with items concerning the intake air system, exhaust air system and the ventilation system in general, that must be met. In addition, the ventilation system should be fire protection analysed in its entirety to prevent the spread of combustion gases. This should be conducted by fire experts.

Mounting

FIDs is intended for assembly on manifold distribution box for the installation's intake air system. FIDs can be mounted horizontally or vertically inside or outside the fire compartment.

The manifold distribution box is insulated according to the method for the applicable fire class. The manifold distribution box are ordered separately for adaptation. FIDs and mounted with the associated fittings or are locked directly with screws on the duct. See the installation instructions

Function

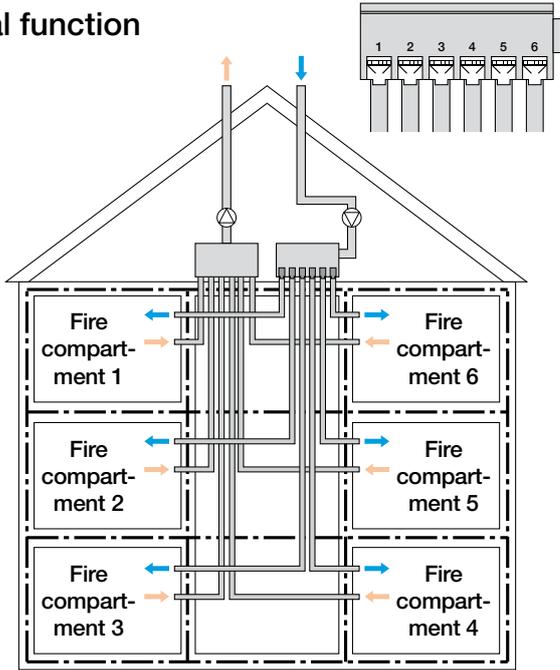
FIDs has a two piece membrane designed for a very low pressure drop and closes very quickly at overpressure in the serviced space.

Dimensions

FIDs is available in sizes Ø 80 to 160 mm.



Principal function



<< Figure 1
Back draught dampers are installed on the manifold distribution box on ducts leading to fire compartments and prevent smoke from spreading to other fire compartments. During normal operation the intake air flow passes through the damper.

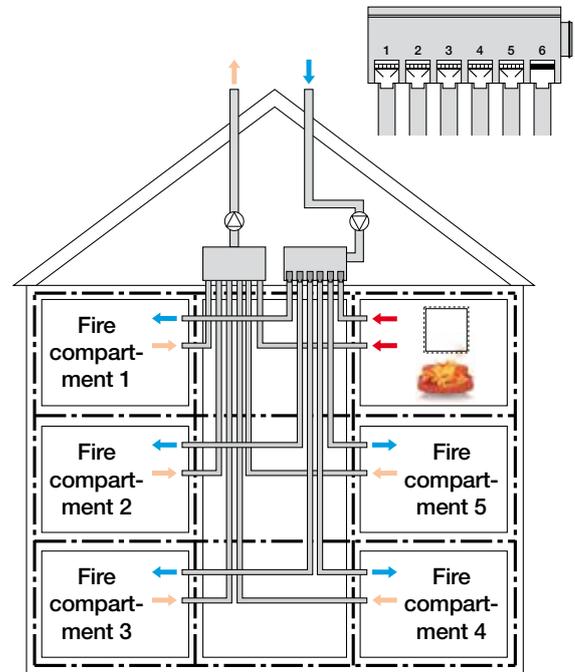
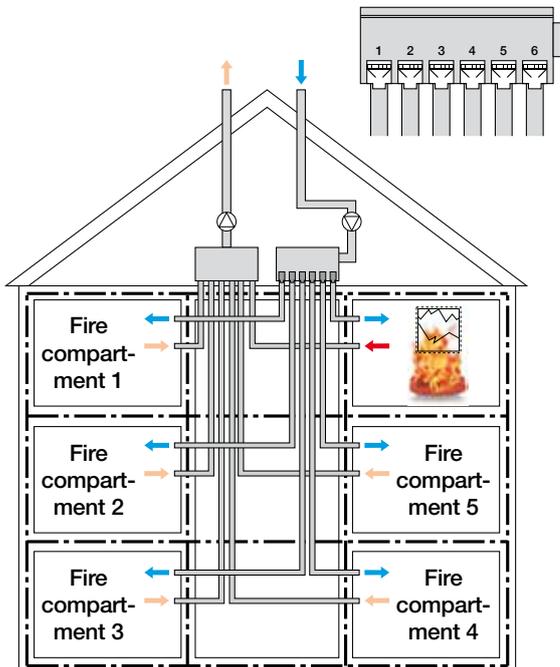


Figure 2 >>
In the figure, when the fire creates overpressure (in fire compartment 6 in the figure), the back draught damper in the intake air duct will close. Smoke is extracted out via the installation's exhaust air system.



<< Figure 3
When the overpressure in the fire compartment subsides, the damper opens again. Now the fire compartment is ventilated primarily via the normal flow and the fan's counter pressure prevents the smoke from spreading to the intake air side.



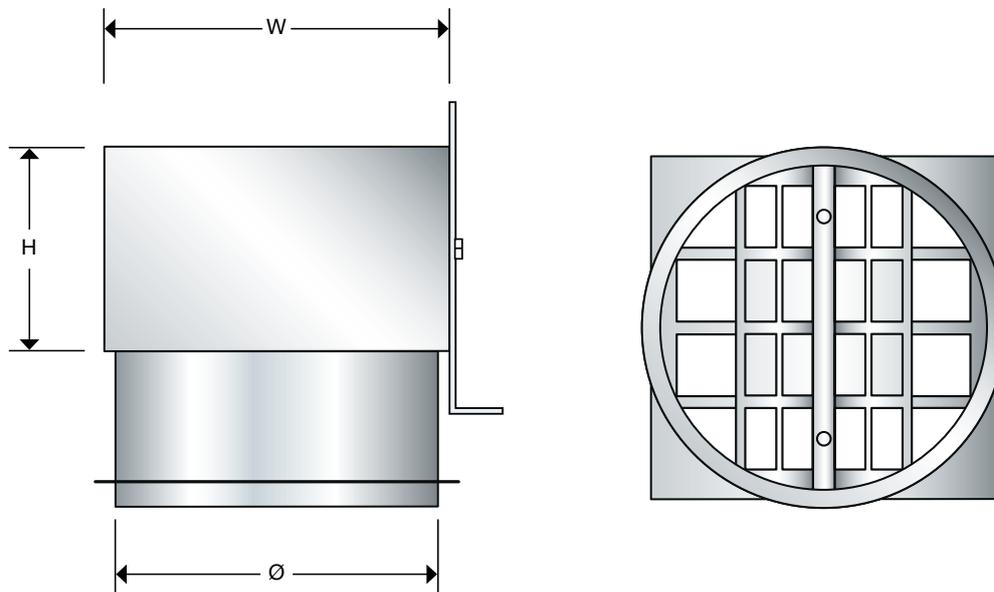
Specifications

Examples:

Self-acting back draught damper FIDs - 125

Size _____

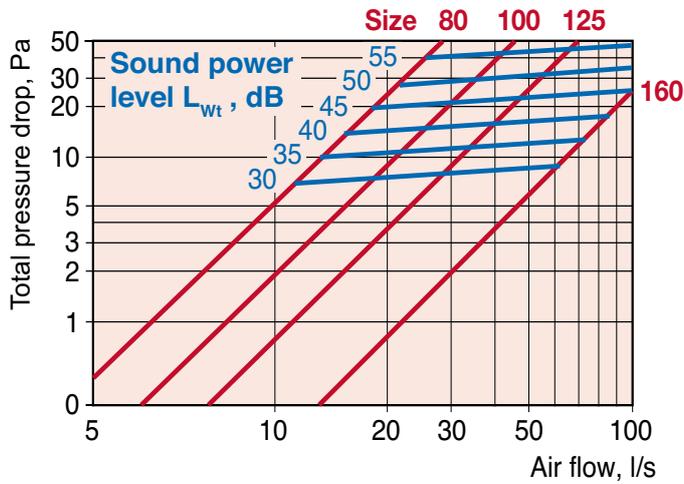
Dimensions and weight



Size Ø	H	W	Weight kg
80	51	84	0,2
100	60	104	0,3
125	71	129	0,4
160	85	164	0,6



Size chart



Sound data

Correction of sound power level, L_{Wok} , in octave band

$$L_{Wok} = L_{Wt} + K_{ok}$$

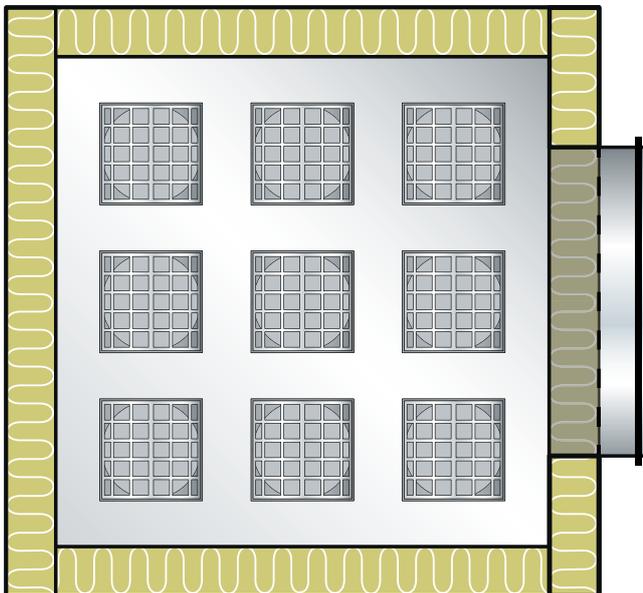
Correction, K_{ok}

Mid frequency Hz							
63	125	250	500	1000	2000	4000	8000
-12	-5	-4	-9	-12	-23	-30	-23

Reduction of the sound power level with A-filter

Mid frequency Hz							
63	125	250	500	1000	2000	4000	8000
-26	-16	-9	-3	0	1	1	-1

Principle placement in manifold distribution box BRSL



Examples:

Manifold distribution box BRSL size 600x600.
With insulation equivalent to fire class EI30.
Accommodates 9 pcs. FIDs Ø100.

For info about manifold distribution box BRSL,
see www.bevent-rasch.com