

SDS

Multi-blade-type Smoke Damper for Rectangular and Circular Ducts



- Construction based on EN 1366-2 certified FDS fire damper (ES 60/E90w).
- SITAC (Sweden) approval as E 60 'Brandgasspjäll'.
- Possibility of use as EI 60 damper with additional duct insulation (National Building Code, Sweden).
- Installation in separating concrete or masonry walls and ceilings and in lightweight plasterboard walls.
- Option of wall installation in both vertical and horizontal blade direction.
- Manufacture in accordance with the ISO 9001 quality standard.
- External quality control management by VTT, the Technical Research Centre of Finland.
- Suitability for rectangular ducts from size 200 mm x 200 mm to 1500 mm x 800 mm.
- Fire damper casing tightness compliant with EN 1751, Class C.
- Suitability for use in ducts with a maximum pressure of 3300 Pa and maximum air speed of 15 m/s.

Product models and Accessories

- Models equipped with electric spring-return actuator
- Actuator with a visual position indicator
- Damper Power-Off position is closed
- Modular damper casing extension for different wall thicknesses
- Availability of circular connection

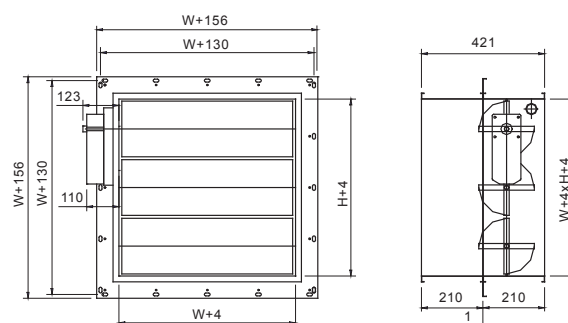
MATERIAL

PART	MATERIAL	NOTE
Casing	Galvanised steel	
Blade	Galvanised steel	
Blade gaskets	Ceramic cloth	
Installation frame	Galvanised steel	
Duct gaskets	Rubber compound	Circular connections

DIMENSIONS

Round connections

D	H	W
630	600	600
800	800	800



Rectangular connections

H/W	200 - 800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
200	X	H	H	H	H	H	H	H	H	H	H	H	H	H	H
300	X	H	H	H	H	H	H	H	H	H	H	H	H	H	H
350	X	H	H	H	H	H	H	H	H	H	H	H	H	H	H
400	X	H	H	H	H	H	H	H	H	H	H	H	H	H	H
450	X	H	H	H	H	H	H	H	H	H	H	H	H	H	H
500	X	H	H	H	H	H	H	H	H	H	H	H	H	H	H
550	X	H	H	H	H	H	H	H	H	H	H	H	H	H	H
600	X	H	H	H	H	H	H	H	H	H	H	H	H	H	H
650	X	H	H	H	H	H	H	H	H	H	H	H	H	H	H
700	X	H	H	H	H	H	H	H	H	H	H	H	H	H	H
750	X	H	H	H	H	H	H	H	H	H	H	H	H	H	H
800	X	H	H	H	H	H	H	H	H	H	H	H	H	H	H
850	V	-	-	-	-	-	-	-	-	-	-	-	-	-	-
900	V	-	-	-	-	-	-	-	-	-	-	-	-	-	-
950	V	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1000	V	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1050	V	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1100	V	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1150	V	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1200	V	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1250	V	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1300	V	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1350	V	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1400	V	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1450	V	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1500	V	-	-	-	-	-	-	-	-	-	-	-	-	-	-

- V Vertical blade direction only
H Horizontal blade direction only
X Both horizontal and vertical blade direction allowed

ACCESSORIES AND PRODUCT MODELS

ACCESSORY	CODE	DESCRIPTION
Mesh on one side	N1	
Mesh on both sides	N2	
Damper casing extension	CE	Length 210 mm

Actuators

Belimo BF 24 HL, operating voltage AC/DC 24 V (no fuse, includes limit switch), B5

Belimo BF 230 HL, operating voltage AC 230 V (no fuse, includes limit switch), B6

Function

The SDS is a motorised rectangular smoke damper that prevents fire and smoke from spreading in ventilation ducts. If the power in the electrical actuator is switched off by the system, the blade closes automatically (Fail-safe Closed).

Setting of the damper is performed from outside the device.

The smoke damper is made of fireproof materials with incombustible ceramic blade gaskets. Once the smoke damper has closed, the blade and sealing close the duct tightly, effectively preventing the spreading of flue gases.

The SDS smoke damper shall be connected to the MSH control and testing system (24-V system). The MSH unit enables the use of smoke detectors in ductwork or in rooms. Alternatively, the SDS smoke damper can be connected to common building automation systems.

Installation

The damper may be installed both on concrete or masonry walls and ceilings and on lightweight walls. The blade direction in wall installation may be either horizontal or vertical.

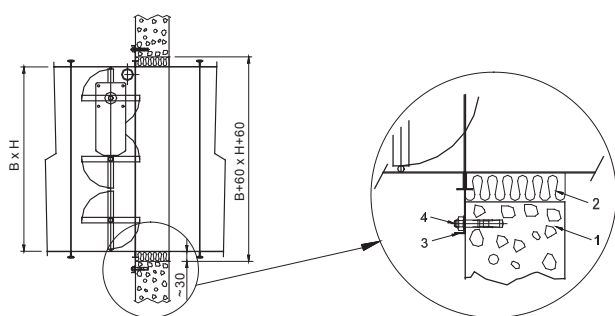
The correct operation of the smoke damper must be ensured before and after installation.

Set the fire damper by turning the shut-off blade to the desired position with the aid of the indicator handle.

The damper shall be cleaned after installation.

Detailed installation instructions, as well as an installer's installation certificate form, are supplied with each product. See also the section 'Documents' for detailed installation guidance.

Installation in concrete or masonry walls and ceilings or lightweight plasterboard walls

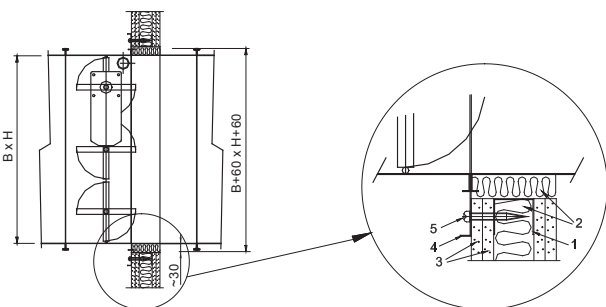


INSTALLATION DRAWING in concrete & masonry walls the same as FDS

Installation opening: product size + 60 mm in both horizontal and vertical direction

1. Concrete or masonry wall
2. Rock wool, specific weight min. 40 kg/m³.
3. Installation flange
4. Anchor screw

INSTALLATION DRAWING in lightweight wall the same as FDS



Installation opening: product size + 60 mm in both horizontal and vertical direction

1. Installation frame; steel or wood
2. Plasterboard
3. Rock wool, specific weight min. 40 kg/m³.
4. Self drilling screw

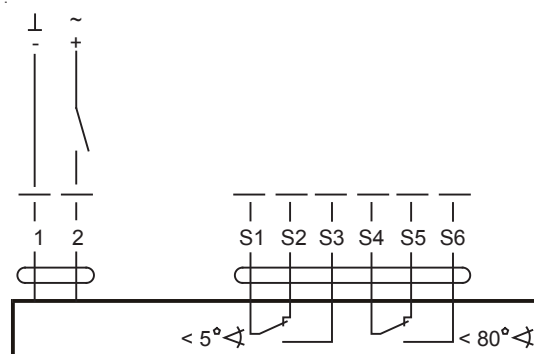
An opening is always left in the separating element for the fire damper; the size of the installation opening is about $W + 60 \text{ mm} \times H + 60 \text{ mm}$.

A supporting frame shall be installed around the opening of the lightweight wall.

All products come with an installation flange, which is used to fasten the fire damper with screws to the concrete surface or to the supporting frame within the lightweight wall (see installation drawings).

The gap between the damper and the separating element is subsequently filled with noncombustible wool, after fixing of the damper.

Electric actuator wiring diagram



BF24 HL
BF230 HL

Servicing

No regular maintenance is required for the product. Regular testing with the MSH control and testing system is recommended.

Upon failure during testing of the smoke damper, a Halton representative shall be connected to ensure appropriate operation of the product.

Suggested specifications

Multi-blade-type smoke damper SDS for rectangular and circular ducts with electric spring-return actuator and position indicator (Construction based on certified fire damper FDS; ES60/E90w; EN 1366-2). The Power-Off damper position shall be closed.

The casing and blades of the smoke damper shall be made of galvanised steel and the blade gaskets made of incombustible material.

The smoke damper shall be approved for both separating concrete or masonry walls and ceilings and installation in lightweight plasterboard walls. The damper shall be approved for wall installation in both horizontal and vertical blade direction.

The smoke damper shall be installed in a separating wall by screws without the need for an additional installation frame or grouting.

Product code

SDS/S-W-H-D

S = Type of duct connections

- R Rectangular connections
- C Circular connections

W = Width

S=R: 200, +50, ..., 1500

H = Height

S=R: 200, 300, +50, ..., 800

D = Connection size

S=C: 630, 800

Specifics and accessories

RE = Release type

- B5 BF24 HL (electric)
- B6 BF230 HL (electric)

AC = Accessories

- CE Casing extension of 210 mm, for structural thickness > 200 mm
- N1 Safety mesh, 1 side, installed in actuator side
- N2 Safety mesh, 2 sides

Code example

SDS/R-200-200 , RE=B5, AC=N1