BSK6

Rectangular Fire damper

FIRE SAFETY

CE

20/06/2024

www.bevent-rasch.com

BEVENT RASCH

Quick facts

- Fire resistance class EI60 / EI60S
- Sizes from 200 x 200 mm to 800 x 800 mm
- Prefitted safety actuator 24V or 230V
- Low weight
- Easy installation
- CE-marked building product according to 15650:2010
- Available in MagiCAD

Use

Damper in combination with walls or joist systems for fire separation of heating, ventilation and air conditioning installations in buildings. In accordance with the harmonised European standard EN 15650:2010. In designs according to associated documents, installation instructions and when the damper is used in combination with smoke detectors and monitoring system (FENIX, MRB3 and MRB), or the like, the spread of fire/combustion gases is prevented. No further action against the spread of fire/combustion gases is required.

Performance

EC certificate according to EN 15650:2010
0402-CPR-SC1299-13

Classification of fire resistance according to EN 13501-3
EI60 (ve ho i <–> o) S

For complete classification, see the Declaration of Performance.

Installation

BSK6 is installed in duct work separating walls or joist systems, according to the adjoining installation instructions. Should not be installed outdoors or in damp areas.

Actuator

BSK6 is always supplied with an electric safety actuator with spring return complete with thermal sensor with pushbutton for local manual operating test. The sensor disconnects the power to the actuator if the temperature exceeds 72°C inside or outside the damper. 24V actuators are always used in connection with the FENIX, MRB3 or MRB monitoring system. Dampers can also be supplied with electric actuator 230V.
Note that the BSK6 damper is always supplied with an actuator.

Activation

According to Boverket's Building Regulations smoke detectors must be verified according to SS-EN 54-7 to activate dampers. The mandatory thermal sensor closes the damper at 72°C according to ISO 10294-4.

Control and monitoring

Dampers for protection against the spread of fire and combustion gases shall be closed via inputs from a smoke detector. Smoke detectors are mounted in ventilation ducts or monitored spaces. Fire dampers, smoke detectors and ventilation units are connected to the FENIX, MRB3 or MRB control unit for a complete ventilation fire protection. FENIX, MRB3 and MRB perform functional checks of the fire protection in accordance with current regulations.
3d party panels also possible. Please check compability first.
See www.bevent-rasch.se for further details.

Size
From 200 x 200 mm to 800 x 800 mm, in steps of 50 mm.

Design
BSK6 is supplied complete with factory mounted, maintenance-free, 24V or 230V electric safety actuator with thermal sensor featuring built-in signal contacts to indicate the damper position. Flanged connections.

Material and surface finish
- Casing and details in hot-dip galvanized steel plate in accordance with environmental class C3.
- Blade sealing of fibre glass reinforced canvas.
- Blades and casing of calcium silicate.

Accessories

BRAS	Connection spigot for spiral duct
RBFS	Extension spigot for wall/joist systems thicker than 280 mm, and in combination with BRAS or wire mesh grilles
RBMP	Assembly plate, excl. refinishing material (RBBM), for installation in plaster structures EI 60 / EI 120
RCKB	Connection box
RCDU	MRB system, max 2 dampers
RCBK4	MRB system, max 4 dampers
RCMU8	MRB system, max 8 dampers
RCKD/-RD	Smoke detectors
BRTR	Wire mesh grille, rectangular
RCTU/RCTC	MRB3 system, max 236 dampers
FENIX2	max 2 dampers
FENIX4 / FENIX+	max 16 dampers

Specification

Example:

Fire damper **BSK6 - 400 - 400 - 1 - 1**

Size
Width x Height (W x H), mm

Material
Galvanized sheet steel = 1
Stainless EN 1.4016 = 3

Actuator
Electric 24V with thermal sensor = 1
Electric 230V with thermal sensor = 3
Electric 24V incl. RCTU = 5

Note. Factory fitted actuator always included.

Installation options for BSK6

Size	Fire class	Wall of drywall EI90 Group A, SS-EN1363-1	Solid wall	Solid Floor*
200 - 800 mm	EI60S	√	√	√

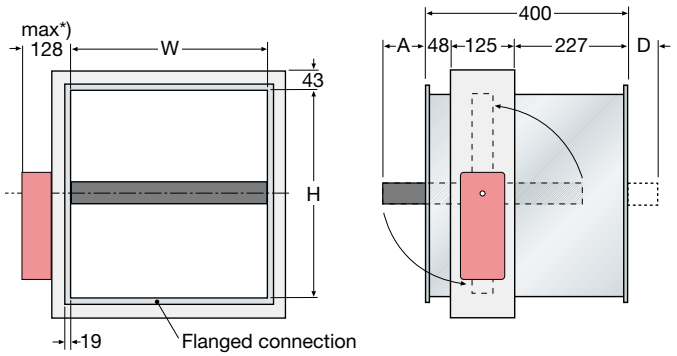
*125 mm lightweight concrete

Product data for BSK6

Size	Pressure class	Casing tightness SS-EN1751	Tightness over damper blades SS-EN1751	2-position actuator On-Off	Regulating actuator 0°-90°	Actuator type
200 - 800 mm	B	B	2	√	√	Belimo BFN-T

Pressure class B: 2500Pa

Dimensions and weight



*) applies to standard design

Dimensions, mm

H	A	D
200	0	0
250	25	0
300	50	0
350	75	0
400	100	0
450	125	0
500	150	0
550	175	0
600	200	20
650	225	45
700	250	70
750	275	95
800	300	120

Weight incl. 24V actuator, kg

H	W												
	200	250	300	350	400	450	500	550	600	650	700	750	800
200	12	13	15	16	17	18	20	21	22	24	25	27	28
250	13	15	16	17	18	20	21	22	24	25	27	28	30
300	15	16	17	18	20	21	22	24	25	27	28	30	32
350	16	17	18	20	21	22	24	25	27	28	30	32	33
400	17	18	20	21	22	24	25	27	28	30	32	33	35
450	18	20	21	22	24	25	26	28	30	32	33	35	36
500	20	21	22	24	25	26	28	30	32	33	35	36	38
550	21	22	24	25	26	28	29	32	33	35	36	38	39
600	22	24	25	26	27	29	30	33	35	36	38	39	41
650	24	25	26	27	29	30	31	35	36	38	39	41	42
700	25	26	27	29	30	31	33	36	38	39	41	42	44
750	26	27	29	30	31	33	34	38	39	41	42	44	45
800	27	29	30	31	33	34	35	39	41	42	44	45	47

Electrical data (values in brackets refer to 230V)

Actuator type	BFN-T
Sizing, max	6 VA
Running time. – motor opening, max; – spring return, max	 60 s 20 s at -10 to +55°C < 60 s at -30 to -10°C
Protection class	IP 54 in all installation positions
Supply voltage	24V~ ±20%, 50/60Hz 24V= ±10% (220-240V~, 50/60Hz)
Design	Imax 8,3A @ 5ms
Ambient temperature	-30° to +50°C
Thermal sensor tripping temperature	72°C
Mode contacts (Load)	1mA...3 (0,5 inductive) A, AC250V
Sound level when opening	< 43 dB (A)
Closing noise level	< 62 dB (A)
Maintenance	Maintenance-free

Wiring diagram

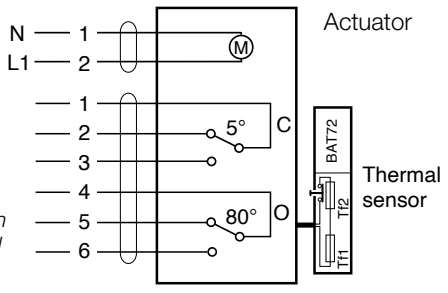
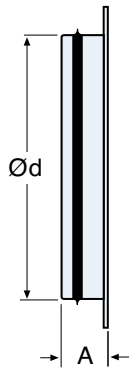


Chart indicates in the de-energized state

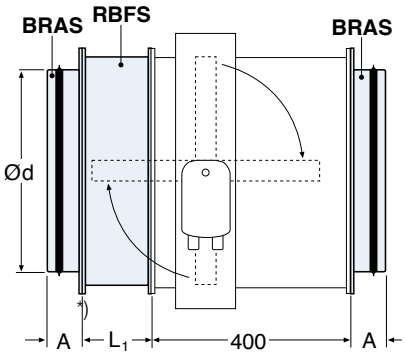
Installation

Connection spigot BRAS

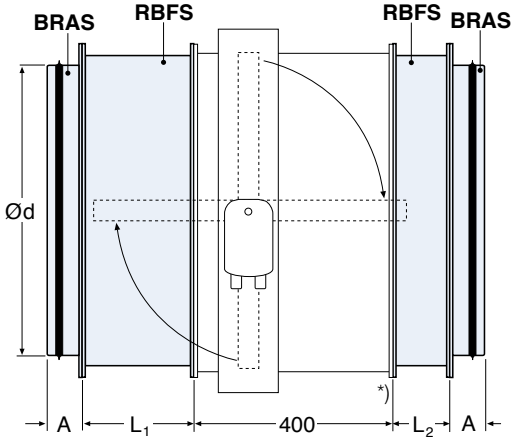


Extension spigot RBFS

BRAS Ød	Min. damper size	A	RBFS L1	RBFS L2
100	200 x 200	50	–	–
125	200 x 200	50	–	–
160	200 x 200	50	–	–
200	200 x 200	50	–	–
250	250 x 250	50	155	–
315	350 x 350	65	155	–
400	400 x 400	80	155	–
500	500 x 500	80	330	–
630	650 x 650	80	330	155
800	800 x 800	80	330	155



Ød = 250 - 500 mm
1 x RBFS required

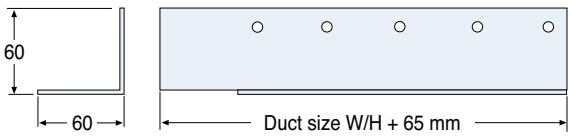


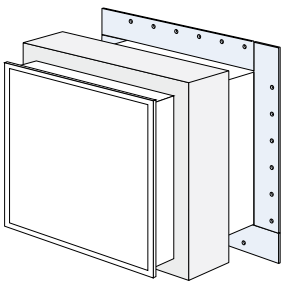
Ød = 630 - 800 mm
2 x RBFS required

*) Length as per the table above

Note. For circular dampers first use the BSKC6 damper.

Assembly plate (incl. in delivery)



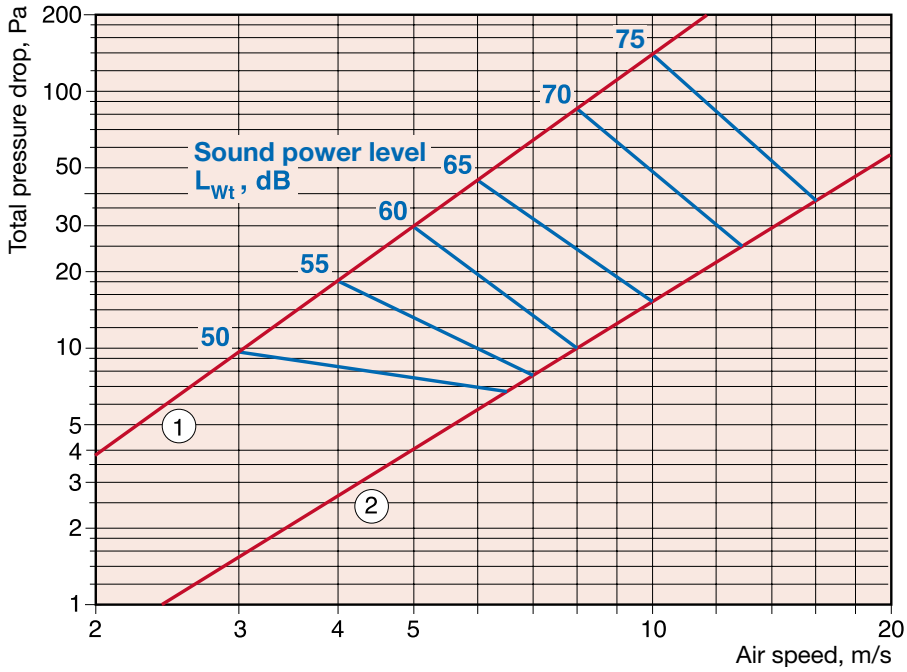


Supplied unassembled

Technical data

Sound data

The speed is calculated on the damper's gross area, i.e. a BSK6 - 400 x 400 has a gross area of 0.16 m².
The specified pressure drop applies to the damper without accessories.



① Damper Height < 400 mm

② Damper Height ≥ 400 mm

Correction of sound power level, L_W, for different sizes use curves ① - ② according to: $\mathbf{L_W = L_{Wt} + K_1}$

Damper height mm	Damper area, m²				
<200 as per①	-	0,08	0,16	0,28	-
≥400 as per②	0,08	0,16	0,32	0,64	1,28
K_1	-3	0	3	6	9

Correction of sound power level, L_{ok}, in octave band $\mathbf{L_{Wok} = L_W + K_{ok}}$

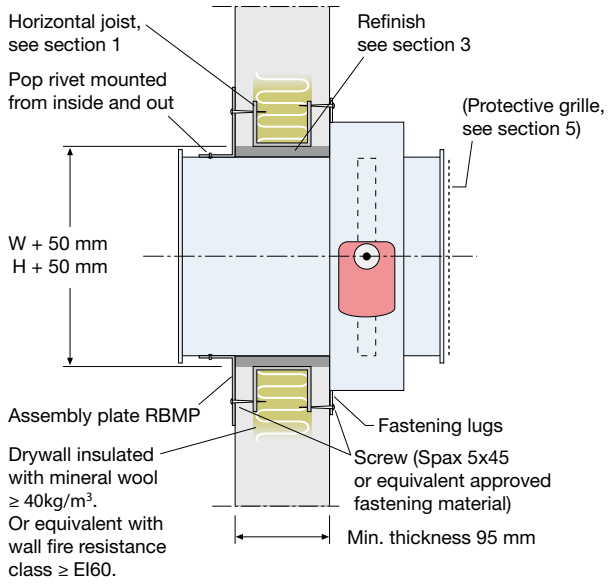
Correction, K_{ok}

Opening angle	Centre frequency Hz							
	63	125	250	500	1000	2000	4000	8000
90°	-1	-11	-18	-23	-26	-28	-32	-38
Tol. ± dB	1	2	3	4	6	6	6	6

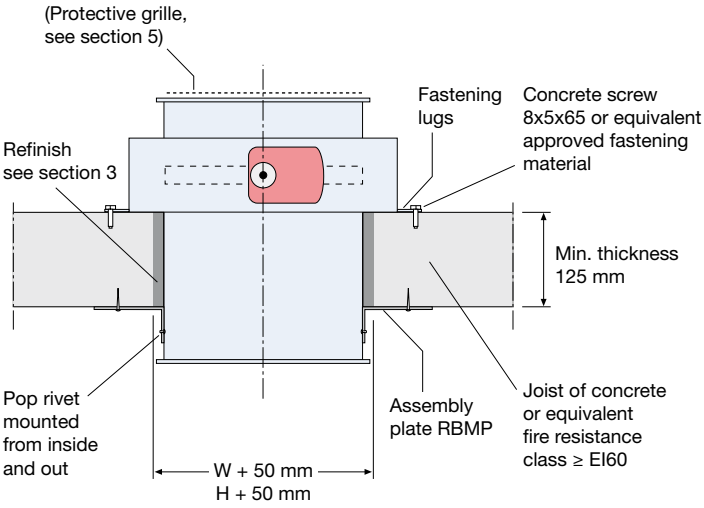
Installation instruction

Building element (wall or joist structure) in fire resistance class EI60.
Damper's fire resistance class: EI60 (ve ho i <-> o) S.
EC certificate 0402-CPR-SC1299-13

Option 1



Option 2



Options 1 and 2

1. Aperture equivalent to damper dimensions + 50 mm, is produced in the building element.
   When mounted in a drywall, horizontal metal joists 45x45 mm shall be applied as a frame in the wall structure.

2. The damper is secured flat and tight using fire stopping sealant (Intumex AN) against the wall/joist structure with the fastening lugs, which are opened out.
   When mounted in drywall, Spax screws shall be screwed in to the joists.

3. Make sure the gap between damper and wall is 25 mm all around. Sealing is carried out by caulking with mineral wool, min 40 kg/m^3.

4. Fit the assembly plates RBMP on to the building element, using appropriate fastening material.
   When mounted in drywall, Spax screws shall be screwed in to the joists. Attach the assembly plates on to the damper, using stainless steel pop rivets through the prepunched holes in the assembly plates.
   Mount the pop rivets from the inside and out. Make sure nothing is obstructing the movement of the damper blade.

5. If fire damper is not connected to the duct system, fit non-combustible grilles designed for the damper on the unconnected sides. Connection piece RBFS may be needed from sizes 600 mm or larger.
   The minimum distance between the damper blade in the open position and the grille is 50 mm.

6. Install the thermal sensor with the sensor body in the air stream without obstructing the movement of the damper blade.

7. Install the duct system according to applicable requirements.

8. Install the duct system according to applicable requirements. Make sure that the connected duct system does not impact on the damper in the event of a fire load.

- *Minimum distance between dampers must be 200 mm.*
- *Minimum distance to joist structure/wall must be 75 mm.*
- *Horizontal installation of the damper spindle.*

13-0272_ENG / June 2024 teamfront.se