EKOVENT®

EKO-BSV

Self-actuating Backflow Protector

SELF-ACTUATING BACK-FLOW PROTECTOR

EKO-BSV

Quick facts

- Sizes Ø100 – Ø315 mm. Nipple connection according to Swedish standards
- EKO-BSV is available in 5 designs
- Made of galvanized sheet steel
- Type approval SC0800-14
- Fire tested according to EN 1366-2
- Complies with tightness class 2, while the protection meets tightness class C for BSV 2 and BSV5, and tightness class B for BSV1 and BSV4 according to EN 1751:1998.
- Complies with tightness class 2 and pressure class B according to AMA VVS & Kyl 12
- Differential pressure over closed protection can be 2500 Pa, which corresponds to pressure class B
- Meets environmental class C2.

Description

The EKO-BSV self-actuating backflow protector is designed for use in ventilation systems in housing, hotels, and service apartments to prevent the spread of smoke via the intake air system in ventilation systems.

The protection is specially adapted for FT and FTX systems with fans in solution, and the principle is to prevent backflow in the supply air ducts in the event of a fire. EKO-BSV closes quickly in the event of a fire that generates overpressure in the fire cell. It is fully self-actuating and does not need to be connected to a monitoring system. This provides reliable and cost-effective fire protection. Design and fire analytical dimensioning must be performed by fire experts. See also our separate ”Design instructions”.

When EKO-BSV is placed outside the served fire cell it does not need to be depressurized.

How to order EKO-BSV

Self-actuating Backflow Protector EKO-BSV-A-B-C

A – Type

1 = Standard
2 = T-pipe
3 = Insert
4 = Standard with regulation and measuring damper IRIS
5 = T-pipe with regulation and measuring damper IRIS

B – Size

See size table

C – Accessories

1 = Without accessories
2 = Insulated service hatch for T-pipe
3 = Extension pipe EKO-FR for BSV2 and BSV5

Example: EKO-BSV-1-160-1

The self-actuating backflow protector EKO-BSV is designed to withstand high temperatures, allowing it to be placed inside the fire cell itself. The fire properties are tested according to the same test standard as for CE-marked fire dampers. Fire properties corresponding to E90 apply provided that EKO-BSV is mounted in a duct outside the fire-exposed fire cell, applying to both walls and floors.

Type approval

Self-actuating backflow protector EKO-BSV is Type Approved by RISE Certifiering 1002 according to functional requirements in BBR 5:526 and 5:533.

Design

Self-actuating backflow protector EKO-BSV consists of an outer casing and an insert with the backflow closure unit itself, which easily can be dismantled for inspection and maintenance.

Material

EKO-BSV is made of galvanized sheet steel according to corrosivity class C2. It fits circular ducts and has seals at both ends.

Sizes

Self-actuating backflow protector EKO-BSV is manufactured in 6 dimensions, from Ø100 to Ø315 mm.

Accessories

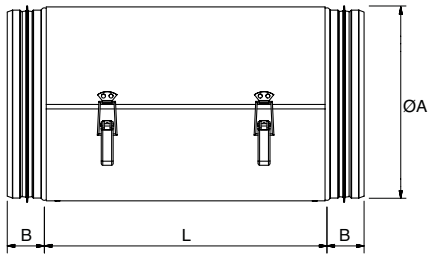
For EKO-BSV2 and EKO-BSV5, it is possible to replace the standard-fitted service hatch with an insulated service hatch and extension pipe EKO-EKO-FR.

Mounting

In order for the Type Approval to apply, assembly must always take place according to the supplied installation instructions. Protection against the spread of fire between fire cells by transferring heat via the ventilation ducts is not reduced with this self-actuating backflow protector, which is why special measures must be taken to solve this.

Technical data EKO-BSV

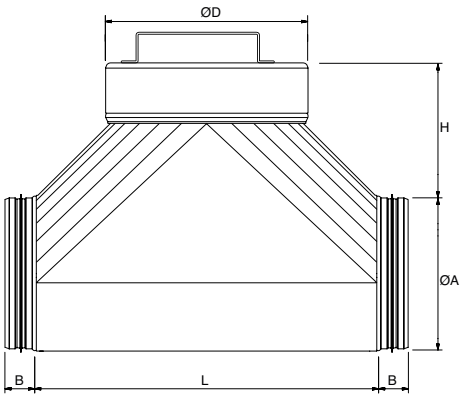
Dimensions EKO-BSV1



Standard sizes and weight

EKO-BSV1	ØA	L	B	Weight (kg)
100	100	185	38	1,0
125	125	215	38	1,3
160	160	250	38	2,0
200	200	295	41	2,7

Dimensions EKO-BSV2

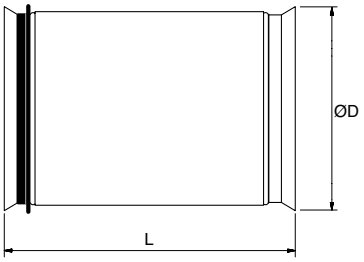


Standard sizes and weight

EKO-BSV2	ØA	ØD	H	L	B	Weight (kg)
100	100	160	180	335	65	1,7
125	125	160	180	390	35	2,0
160	160	200	200	470	35	3,0
200	200	250	200	520	35	4,1
250	250	315	215	625	35	5,6
315	315	400	215	705	35	8,2

Technical Data EKO-BSV

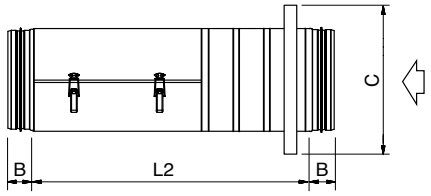
Dimensions EKO-BSV3



Standard sizes

EKO-BSV3	L	ØD
100	125	98
125	155	123
160	190	158
200	240	198

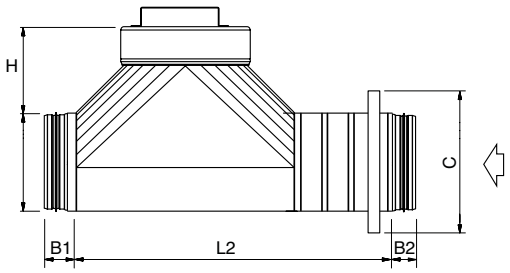
Dimensions EKO-BSV4



Standard sizes and weight

EKO-BSV4	L2	C	B	Weight (kg)
100	325	165	38	1,9
125	355	188	38	2,3
160	385	231	38	3,4
200	435	284	41	4,4

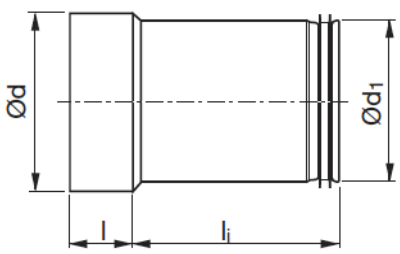
Dimensions EKO-BSV5



Standard sizes and weight

EKO-BSV5	L2	C	B1	B2	H	Weight (kg)
100	475	165	65	38	180	2,6
125	530	188	35	38	180	3,0
160	605	231	35	38	200	4,4
200	660	284	35	41	200	5,8
250	765	335	35	41	215	8,2
315	845	409	35	41	215	11,7

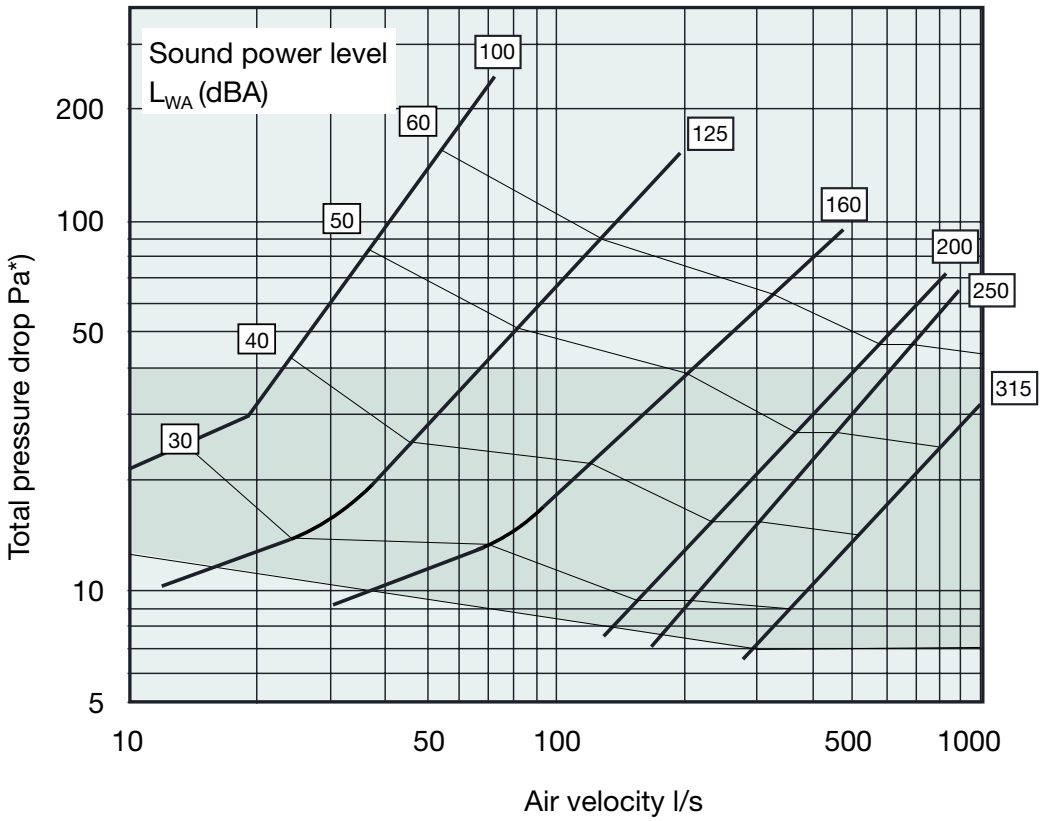
Dimensions EKO-FR



Standard sizes and weight

EKO-FR	$Ød_1$	L	l	l_1	m (kg)
100	160	150	40	127	0,25
125	160	150	40	127	0,31
160	200	150	40	127	0,49
200	250	150	60	192	0,90
250	315	150	60	182	1,11
315	400	300	80	242	2,65

Dimensioning Diagram



*) Darker shaded area indicates the recommended pressure drop range.

EKO-BSV	Centre Frequency (Hz)							
Octave band	63	125	250	500	1k	2k	4k	8k
Correction, $K_{OK\ 90°}$	7	7	4	-3	-6	-10	-12	-21
Tolerance ± dB	–	3	2	1,5	1,5	1,5	1,5	3

Sound power levels, pressure drop and air flow measured on a fire damper according to ISO 5135.
Standard deviation (tolerance) in accordance with EN ISO 3741:2010.

*) Measurement accuracy ± 5 Pa.