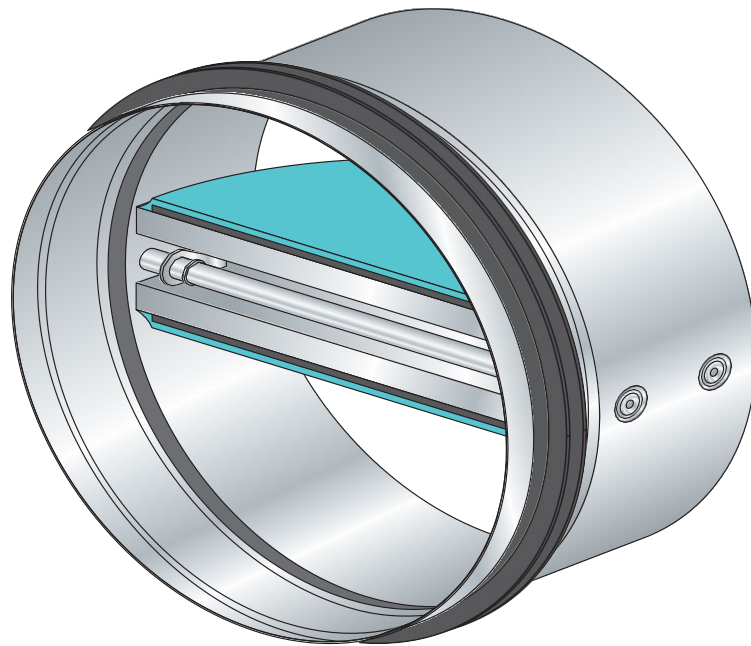


Assembly and operating instructions

geba Fire Dampers EAV as of EN 15650

as insertion fire damper for use in ventilation and air-conditioning
systems of buildings



Tested according to EN 1366, Part 2



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General Instructions



This assembly and operating manual describes the fire damper of the EAV variant. To ensure the complete functionality of the fire damper, it is absolutely necessary to read the supplied assembly and operating manual before any use and to follow the instructions listed therein. At the time of delivery, the manual is to be handed over to the system operator. The system operator is to attach the manual to the system documentation. Malfunctions or damages resulting from failure to follow this manual or failure to comply with legal regulations do not lead to liability claims against the manufacturer. This assembly and operating manual is intended for planners, developers, and operators of systems in which fire dampers are to be integrated. Additionally, the manual is intended for persons who carry out the following tasks:

- transport and storage,
- installation,
- commissioning, operation and maintenance
- decommissioning, dismantling, and disposal.

In addition to this assembly and operating manual, the applicable standards and technical regulations must be observed.

Instructions for cleaning and connecting ventilation elements, according to VDI 6022 Sheet 1 Table 2 b): "according to DIN EN 12097: maximum screw length 13 mm or resulting projection of screws and rivets of maximum 12 mm. To avoid injuries to maintenance personnel, a distance of one meter from access and cleaning openings should be maintained. In any case, cleaning and maintenance work must not be obstructed."

CE-marking and labelling:

 0432	}	CE-marking
 Bartholomäus GmbH Bachstraße 10 89607 Emerkingen Bartholomäus GmbH 23 0432-CPR-00920-01	}	manufacturer data
DIN EN 15650:2010 Brandschutzklappe EAV fire dampers EAV	}	year of marking EG-Certificate of Conformity
DIN EN 15650:2010 Brandschutzklappe EAV fire dampers EAV	}	European Standard Product description Type/Model
Nominal activation/sensitivity conditions - Load capacity of the temperature-sensitive sensor fulfilled - Trigger temperature of the temperature-sensitive sensor fulfilled	}	information according to applicable properties
Trigger delay (response time): - closing time fulfilled		
Operational reliability: - cyclic testing 50 cycles		
Fire resistance: - Maintenance of cross-section		
- Room closure E EI 90 - Thermal insulation I (v _e , i <---> o) - Smoke leakage S S..... - Mechanical strength (under E) fulfilled - Cross-section (under E) fulfilled		
Durability of trigger delay - Temperature-sensitive sensor trigger temperature, and load capacity fulfilled Durability of operational reliability - Testing of the opening and closing cycle NPD	}	▶ see page 4

Safety and Use:

The described work on the fire damper may only be carried out by qualified personnel. The following regulations and guidelines must be observed for all work on the fire damper:

- Equipment and Product Safety Act
- Operational Safety Ordinance
- Building Code Regulations
- Accident Prevention Regulations (BGV A1, BGV A3)

The fire damper EAV is a safety component specially developed for fire protection.

Certifications and Standards

- Fire damper according to EN 15650 : 2010
- Performance certificate 1322-CPR-xxxxxxx
- Declaration of Performance DoP/EAV/xxxxxxx
- Classification according to DIN EN 13501-3:2009

Solid wall wet installation (mortar) $d^* \geq 100$ mm:

EI 90 (v_e i <--> o) S

Lightweight wall with metal stud wet installation (mortar) $d^* \geq 100$ mm:

EI 90 (v_e i <--> o) S

- Tested according to DIN EN 1366-2
- Leakage of dampers according to EN 1366-2

All other relevant standards and regulations for fire protection must be observed..

*d: wall/ceiling thickness

Intended Use

The fire damper is used as a thermal shut-off device to prevent the transmission of fire and smoke through the air duct. The fire damper can be used in supply and exhaust air systems, with or without heat recovery. Intended installation locations are solid walls and lightweight partitions. Installation is possible horizontally with any air direction. Connection of air ducts made of combustible or non-combustible materials, also on one side with covering grille. In Europe, the use without double-sided pipe connection is possible, provided that there are no national requirements to the contrary. The fire damper type EAV has the performance class DIN EN 13501-3:2007 + A1:2009 under the condition of intended installation and operation. In addition, the general maintenance guidelines DIN 31051 and EN 13306 apply.

Prohibited Use

The fire damper must not be used under the following conditions:

- Use as a smoke exhaust damper
- Use in hazardous areas
- Use outdoors without sufficient protection against weather influences
- Use in exhaust air systems of commercial kitchens
- Use in ventilation systems in which the function is impaired by heavy soiling, extreme humidity or chemical contamination.

Changes to the fire damper and the use of spare parts that have not been approved by Bartholomäus GmbH are prohibited.

Residual Risks

Fire dampers from geba undergo strict quality controls during production. In addition, a functional test is carried out before delivery.

Damage during transport or installation may impair the function. The proper, undamaged condition of the fire damper must be checked before installation and during commissioning.

Transport and Storage

Checking the Delivery

Check the delivery immediately upon receipt for transport damage and completeness. In case of transport damage or incomplete delivery, inform the carrier and your supplier immediately. The following items should be included in a complete delivery:

- Fire damper
- If applicable, attachments/accessories
- Installation and operating instructions

Transportation on the construction site

Transport of the fire damper in its shipping packaging as far as possible to the location.

Storage

When storing fire dampers, please note the following points:

- Protect the fire damper from dust and dirt.
- Protect it from moisture and direct sunlight.
- Do not expose the fire damper (even packaged) directly to the weather.
- Do not store the fire damper below -40°C or above 50°C .

Packaging

Dispose of packaging materials properly after unpacking.



Caution!

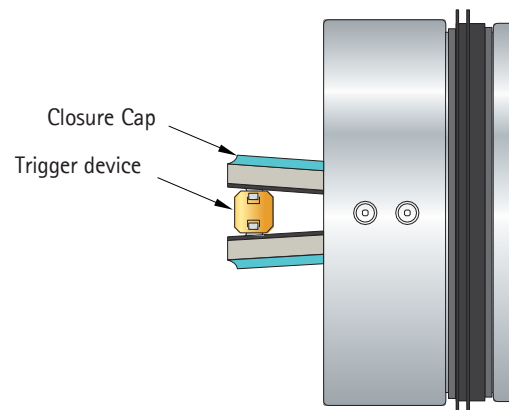
Risk of injury on edges and sheet metal parts.
Wear protective gloves during transport and installation.

Product description

Fire dampers of the EAV series are used as safety components within the ventilation system. The fire damper is used to prevent the spread of fire and smoke through the air duct. During operation, at normal temperature, the fire damper is open to ensure air flow in the ventilation system.

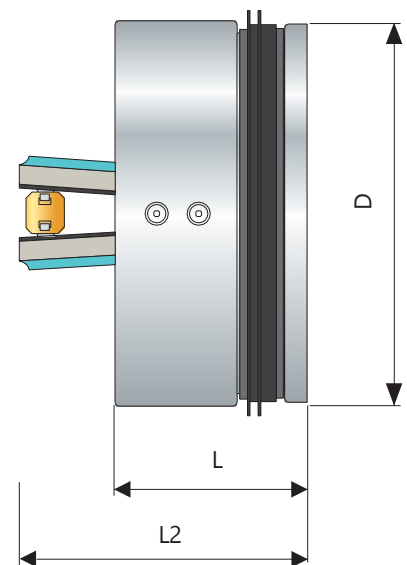
Functional Description

The fire damper contains a thermal release device, which triggers at a temperature above 72°C . The pre-tensioned closure flaps swivel from the „open“ to the „closed“ position. Maintenance-free stainless steel double torsion springs serve as the drive.



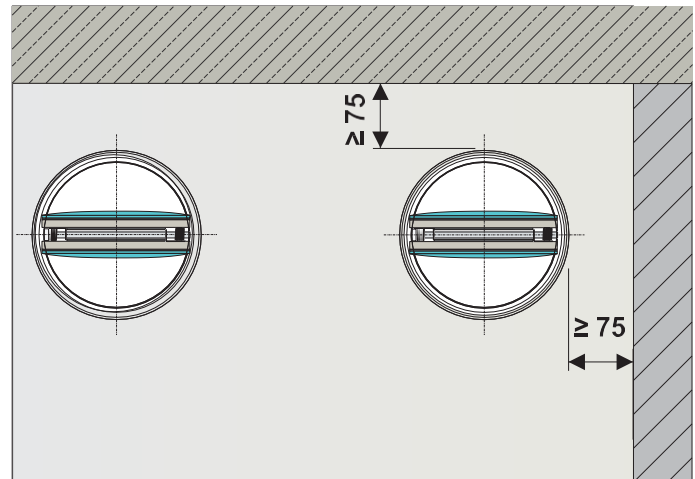
Dimensions

dimensions DN in mm	100	125	160
D	98	123	158
L	79	79	79
L2	90	102	119
Weight in kg	0,4	0,5	0,6



Distance to be maintained from load-bearing components

	Y
Ceiling	≥ 75 mm
Wall	≥ 75 mm



Important Information



Warning!

Malfunction of the fire damper due to dirt or damage. Before installation, clean any dirt from the fire damper. Protect the fire damper from dirt and damage during installation.



Caution!

Risk of injury from edges and sheet metal parts. Wear protective gloves during transport and installation.

Connection of ventilation ducts

Installation can be done horizontally with any air direction. Suitable for installation in solid walls, in lightweight walls with metal framework.

In case of frame construction, use elastic connectors for absorption of shear forces and for expansion compensation. Connection of air ducts made of flammable or non-flammable materials, also with one-sided covering grilles. In Europe, installation without double-sided pipe connection is possible unless there are national requirements against it.

Permissible mortar for wet installation

The cavities between the fire damper and the wall must be completely filled with mortar over the entire wall/ceiling thickness. Air pockets must be prevented.

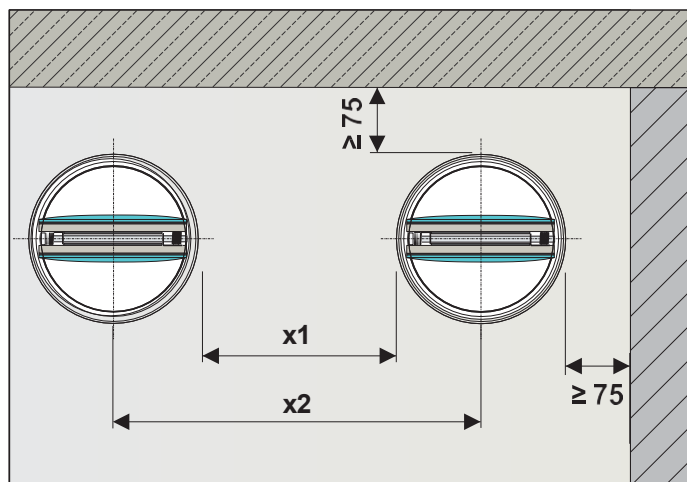
Permissible mortar:

- DIN 1053: Group II, IIa, III, IIIa or fire protection mortar Group II, III
- EN 998-2: Class M 2.5 to M20 or fire protection mortar of class M 2.5 to M 20
- Alternatively equivalent mortar to above. Standards, gypsum mortar

Load-bearing constructions according to DIN EN 1363-1:2012 section 7.2.2

- Solid construction with high bulk density: masonry or solid concrete with a total density of $\geq 850 \text{ kg/m}^3$ according to section 7.2.2.1
- Solid construction with low bulk density: aerated concrete with a total density of $(650 \pm 200) \text{ kg/m}^3$ according to section 7.2.2.2
- Lightweight construction: lightweight wall with metal framework, with plasterboard cladding, according to section 7.2.2.4

Distances - EAV to EAV



X1 EAV-EAV	Solid wall	Lightweight wall**
	≥ 200 mm	≥ 200 mm
X2 Centredistance	Solid wall	Lightweight wall**
	≥ DN + 200 mm	≥ DN + 200 mm
DN 100	300 mm	300 mm
DN 125	325 mm	325 mm
DN 160	360 mm	360 mm

Installation	Gap S*	Distance to load-bearing components
Solid wall	≤ 50 mm	≥ 75 mm
Lightweight wall with metal stud**	≤ 50 mm	≥ 75 mm

**Lightweight wall with metal stud:

- Lightweight walls with metal studs and double-sided cladding, classified according to EN 13501-2 or a comparable national classification
- Lightweight walls with metal studs and double-sided cladding made of gypsum fiber boards or gypsum or cement-bound panel building materials (wall thickness ≥ 100 mm, distance between metal studs ≤ 625 mm)
- Connection of air duct with elastic connector

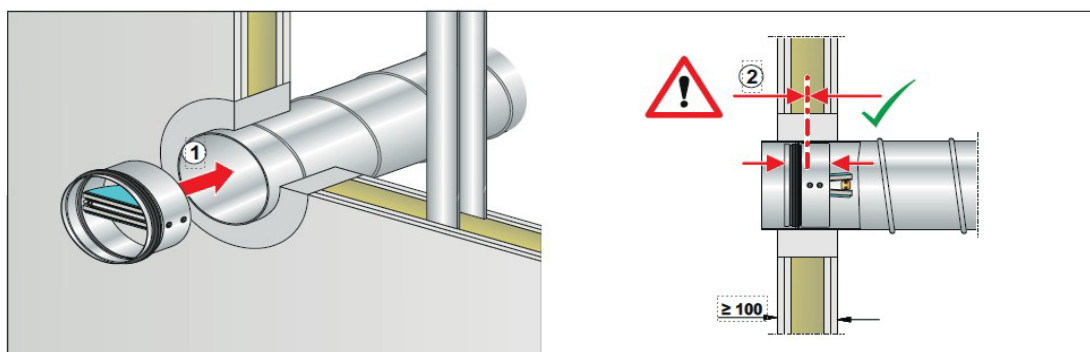
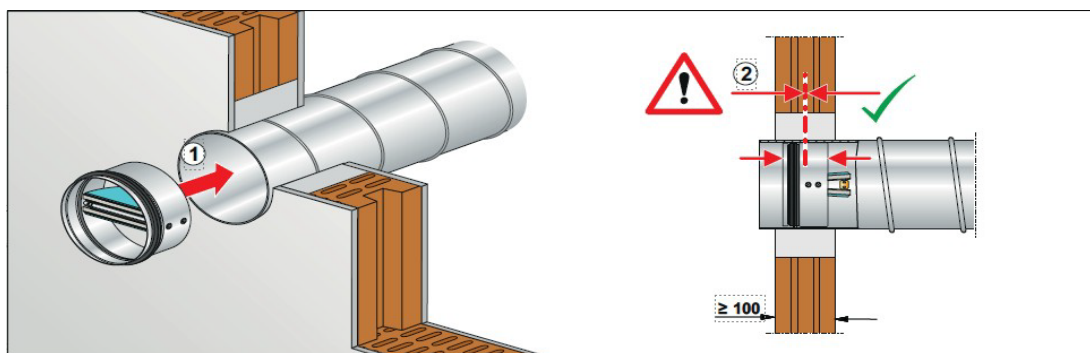
Installation in solid wall

Basics/Data

- Performance class EI 90 (ve i ↔ o) S
- Distance between dampers ≥ 200 mm
- Distance between the fire damper and load-bearing components ≥ 75 mm

Steps

1. Create opening in the wall
2. Install spiral duct
3. Fill in the surrounding gap „S“ ≤ 50 mm with permissible mortar (page 6) in full wall thickness.
4. Insert the fire damper EAV with a horizontal axis position. The axis of the damper should be positioned in the center of the wall.

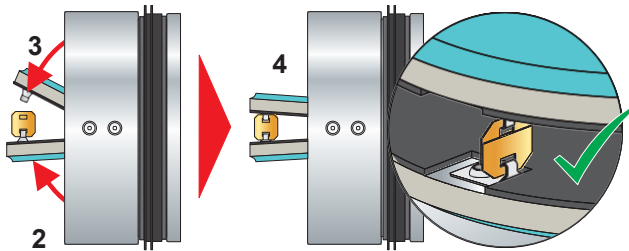
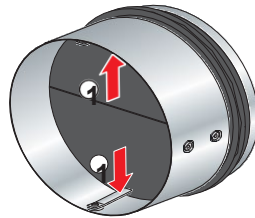
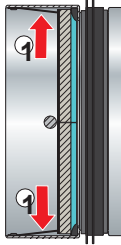


Commissioning/Functional testing

The EAV fire damper is delivered with closed closure caps. Before inserting the EAV, these caps must be placed in the open position.

Steps:

1. Release the lock.
2. Open the closure gap
3. Hang in the fusible link.
4. Check the fusible link.



Maintenance

Maintenance is carried out according to the prescribed inspection intervals. The assessment of the obtained inspection data is carried out by a competent employee. This data must be handed over to the customer in paper form or digitally on a data carrier. If the duct is found to be dirty, the duct must be cleaned, and the EAV must also be cleaned in the process.

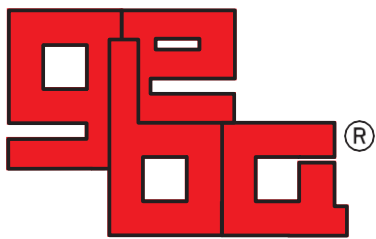
Decommissioning

1. Switch off the ventilation system.
2. Switch off the power supply.

Dismantling

3. Remove air ducts.
4. Close the fire damper.
5. Remove the fire damper.

geba brandschutz



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