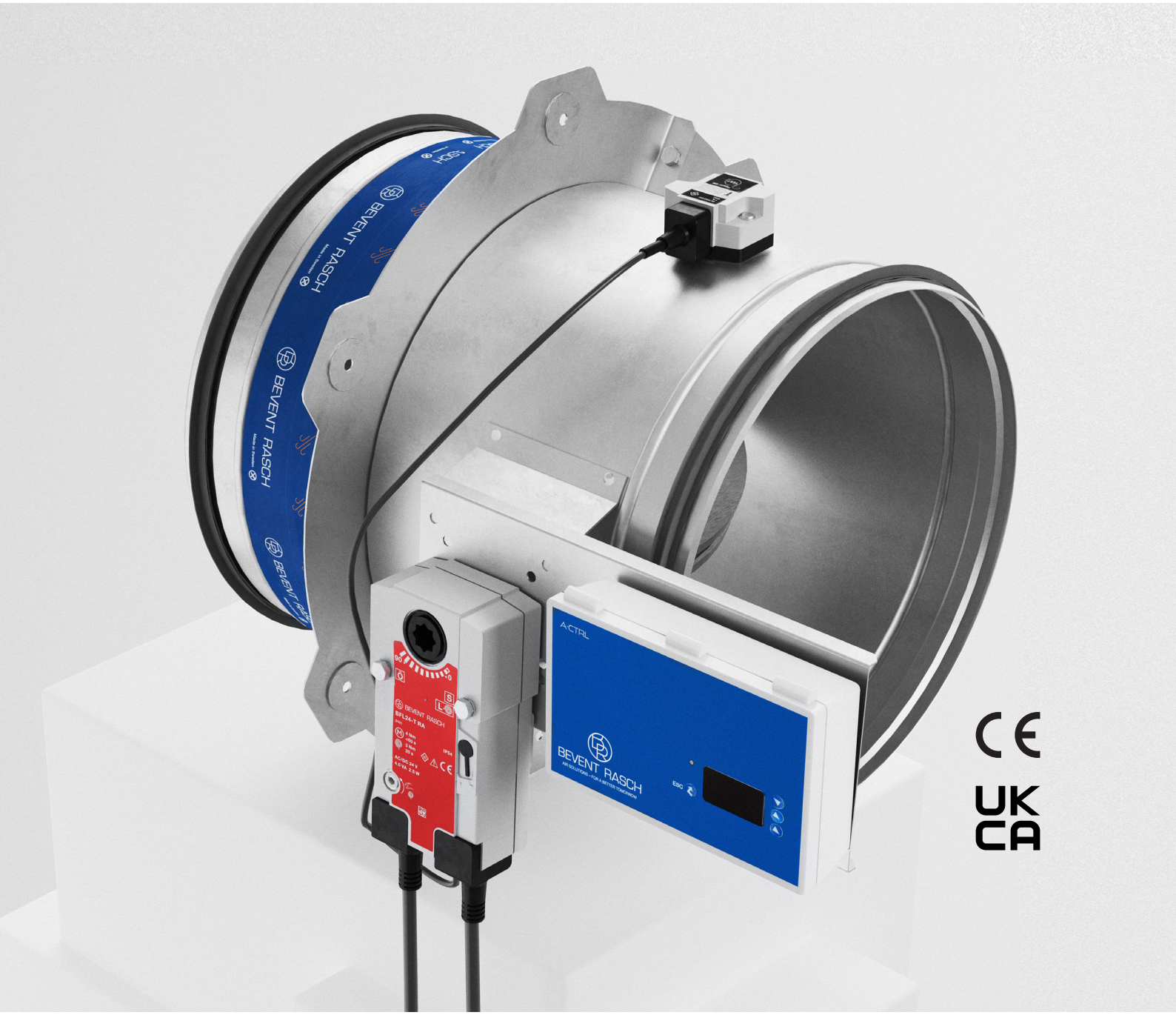
OPTIMUS 60-VAP®

Circular fire/smoke damper with pressure control function

FIRE SAFETY



16/11/2026

www.bevent-rasch.com

BEVENT RASCH

Product description

- Fire resistance class EI60 / EI60S
- Sizes from 100 mm to 630 mm
- Pre-mounted regulating 24 V safety actuator
- Simple pressure regulation, VAP/CAP
- Modbus communication
- CE-marked construction product in accordance with EN 15650:2010

Two dampers in one!

Bevent Rasch has developed a fire/smoke damper in fire resistance class EI60/EI60S, designed for pressure regulation in all types of ventilation systems, while simultaneously providing complete protection against the spread of smoke gases.

Application

Damper for use in combination with walls or floor slabs for fire compartmentalisation of heating, ventilation, and air conditioning installations in buildings. In accordance with the harmonised European standard EN 15650:2010. When installed according to the relevant documentation, installation instructions, and when the damper is used in combination with a smoke detector and monitoring system SIOX or FENIX, the spread of fire and smoke is prevented. No additional measures against the spread of fire and smoke are required.

Since the damper also has a pressure regulation function, both functions are combined in the same unit. This saves time, space, and money during installation, for example in hotels, offices, and retail complexes where multiple functions are required..

Performance

CoCP (Certificate of Constancy of Performance) EN 15650:2010
0402-CPR-C500380

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

For complete classification, see Declaration of Performance.



Installation

OPTIMUS 60-VAP is installed at duct penetrations through building components according to the accompanying installation instructions. When installed as an end device, the damper must be fitted with a wire mesh grille. Not recommended for outdoor installation or in damp environments.

Actuator

OPTIMUS 60-VAP is always supplied with an electric safety actuator with spring return, complete with a thermal sensor equipped with a push button for local manual function testing. The sensor cuts the power supply to the actuator if the temperature exceeds 72 °C inside or outside the damper. When used together with monitoring systems SIOX and FENIX, a 24 V actuator is always used.
Note: the damper is always supplied with a safety actuator.

Activation

According to BBR, a smoke detector verified in accordance with SS-EN 54-7 is required for damper activation. The mandatory thermal sensor closes the damper at 72 °C in accordance with ISO 10294-4.

Control and monitoring

When the damper is used as protection against the spread of fire and smoke, it must close via an impulse from a smoke detector or thermal sensor. The thermal sensor must be installed in the ventilation duct close to the damper or in another suitable location. Monitoring of smoke detectors is carried out using Bevent Rasch control units SIOX or FENIX. The control unit performs automatic function testing of dampers every 48 hours and is designed to immediately indicate any malfunction and close the damper, as required by the P-certificate. See further information in the technical section on the website.

The following Bevent Rasch monitoring units can be used:

- SIOX with SX:ACCESS/SX:UNO
- FENIX with 0–10 V unit

Size

Ø100 – 630 mm.

Design

OPTIMUS 60-VAP is supplied complete with a factory-mounted, maintenance-free 24 V electric safety actuator with thermal sensor, including built-in signal contacts for damper position indication. OPTIMUS 60-VAP is prepared for optional 50 mm additional insulation.

The pressure regulator offers six selectable pressure ranges: 0–100, 300, 500, 700, 1000 and 2000 Pa. The CAP (constant air pressure) or VAP (variable air pressure) function is selected via the pressure regulator. In CAP mode, a desired setpoint is defined within the selected pressure range, while in VAP mode, the pressure is regulated between set min. and max. values via an analogue 0/2–10 V signal or through Modbus.

The actuator can be force-controlled into different operating modes via two digital inputs or Modbus. In the event of a power failure, the damper closes by spring return of the actuator.

Materials and surface treatment

– Casing and components in galvanised sheet steel according to environmental class C3
– Duct sealing in EPDM
– Blade sealing in PE/PP
– Blade made of calcium silicate

Accessories

OPTIMUS-SK	Shaft collar
RCKD/-RD	Smoke detectors
SX:UNO/SX:ACCESS	SIOX system, max 200 dampers
FENIX2	max. 2 dampers
FENIX4 / FENIX+	max. 16 dampers

Specification example according to AMA HVAC & Cooling

QJC
Damper for protection against the spread of fire and smoke.

QJC.2
Fire/smoke damper with actuator, CE-approved, fire resistance class EI60 with 24 V safety actuator and thermal sensor, pressure class B. With capability for constant pressure control.

BBGS101-dim
Manufacturer: Bevent Rasch
Type: OPTIMUS60-VAP - 400 - 1 - 0mounte

Specification

Example: **Fire damper**
OPTIMUS60-VAP - 400 - 1 - 0

Size
Nominal diameter Ød, mm

Materials
Galvanised sheet steel = 1
Stainless steel EN 1.4016 = 3

SIOX unit
Wthout SIOX unit = 0
With SIOX unit fitted (SX:UNO) = 6

Note: Factory-mounted actuator always included.

Specification Accessories

Example:
OPTIMUS-SK Shaft collar **OPTIMUS-SK - 400**

Size, Nominal diameter ØD, mm
Note: Required for installation in shaft wall, see installation instructions.

Installation options for OPTIMUS 60-VAP

Size	Fire class	Gypsum wall EI60 Group A, SS-EN1363-1	Solid wall	Floor slab*	Duct	Shaft wall
Ø100 - Ø630	EI60S	√	√	√	√	√

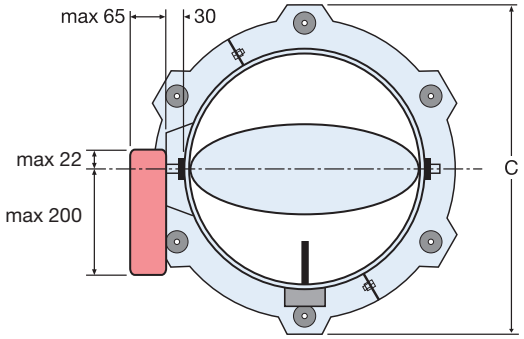
*125 mm lightweight concrete

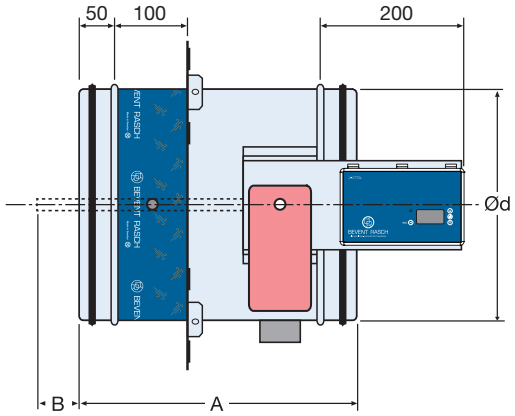
Product data for OPTIMUS 60-VAP

Size	Pressure class	Casing tightness SS-EN1751	lade tightness SS-EN1751	Actuator type
Ø100 - Ø315	B	C	3**	Belimo BFL-SR-T
Ø400 - Ø630	B	C	3	Belimo BFN-SR-T

Pressure class B: 2500Pa
**Size Ø100-Ø125: 2

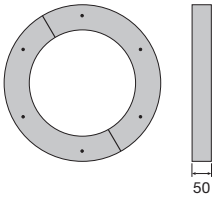
Dimensions and weight





Size Ø mm	A	B	C	Weight, kg
100	375	–	237	3,3
125	375	–	262	3,6
160	375	–	295	4,0
200	375	–	335	4,5
250	375	21	385	5,2
315	375	84	450	6,2
400	477	95	534	10,4
500	477	145	634	13,4
630	477	210	764	17,3

OPTIMUS-SK Shaft ring



If required, the actuator can be rotated 90°.

Actuator - damper size

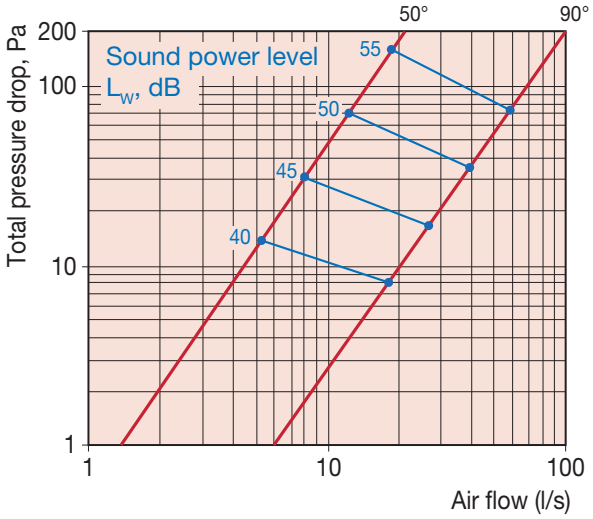
Actuator BFL24-SR-T is supplied for damper sizes Ø100-400 mm.
Actuator BFN24-SR-T is supplied for damper sizes Ø500-630 mm.

Electrical data

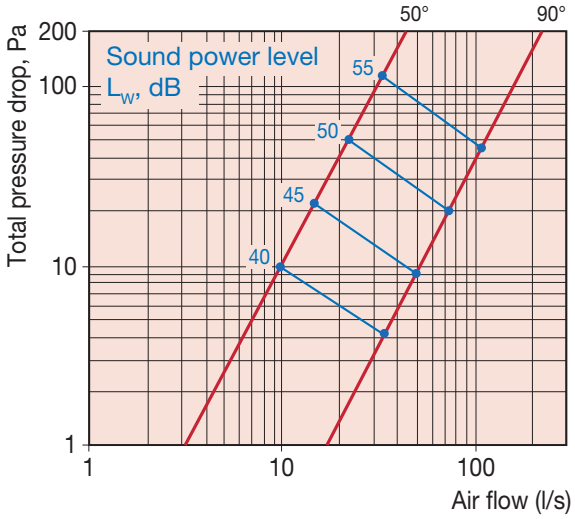
Actuator type	BFL24-SR-T	BFN24-SR-T	A-CTRL (regulator)
Dimensioning, max	6,5 VA	8,5 VA	2,6 VA
Running time; – motor opening, max – spring return, max	60 s 20 s at -10 to +55°C 60 s at -30 to -10°C	60 s 20 s at -10 to +55°C < 60 s at -30 to -10°C	
Protection class	IP 54 in all installation positions		
Supply voltage	24V~ ±20%, 50/60Hz 24V= ±10%, 50/60Hz		
Control signal			DC 0/2-10V modbus
Measurement signal			DC 0/2-10V modbus
Position reversal	2-10V		modbus
Dimensioning	Imax 8,3A @ 5ms		
Ambient temperature	-30° to +50°C		-20° to +50°C
Thermal sensor tripping temperature	72°C		
Position contacts (Load)	1mA...3 (0,5 A inductive) DC 5V…AC250V	1mA...3 (0,5 inductive) A, AC250V	
Sound level when opening	43 dB (A)	< 55 dB (A)	
Sound level when closing	62 dB (A)	< 67 dB (A)	
Maintenance	Maintenance free		

Dimensioning diagram

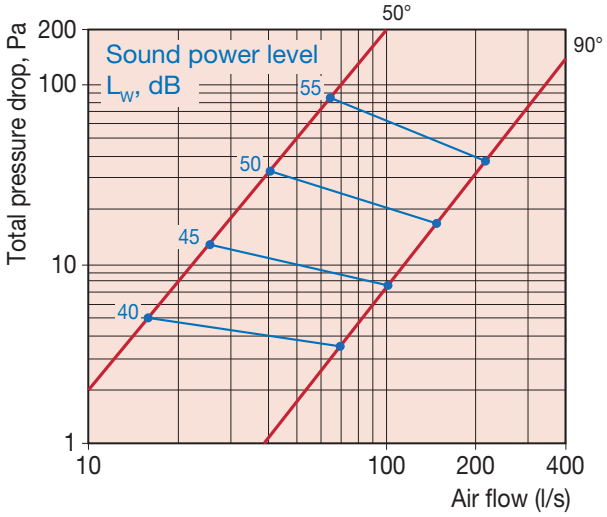
Size - 100



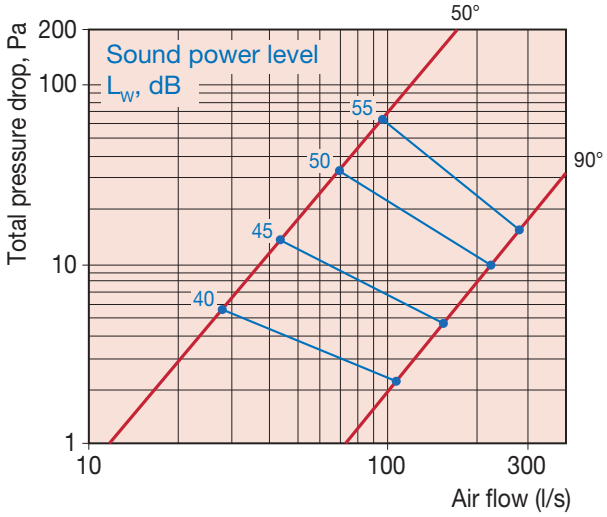
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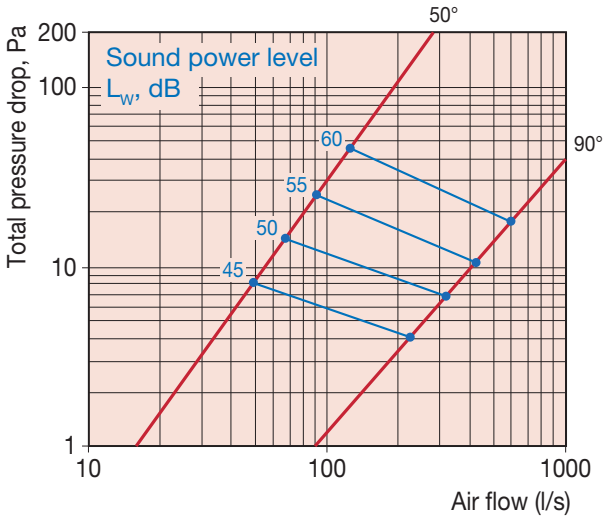
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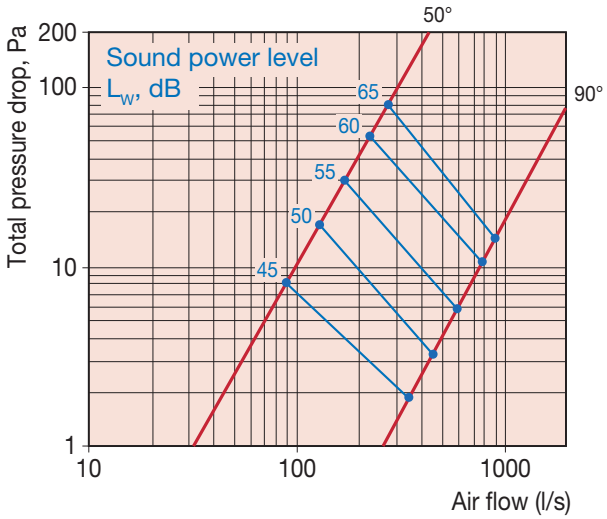
Size - 200



Size - 250

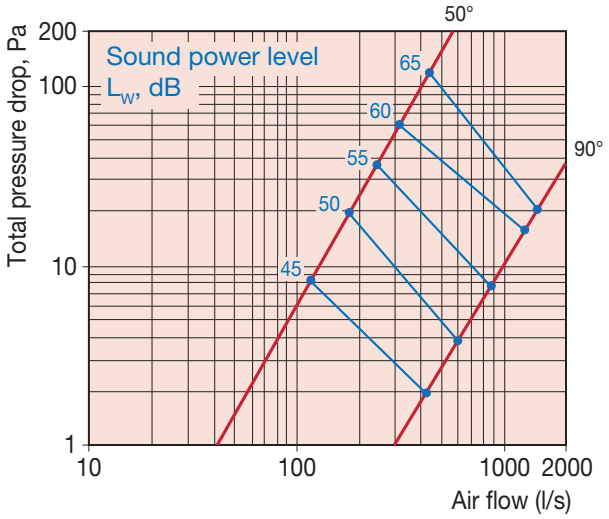


Size - 315

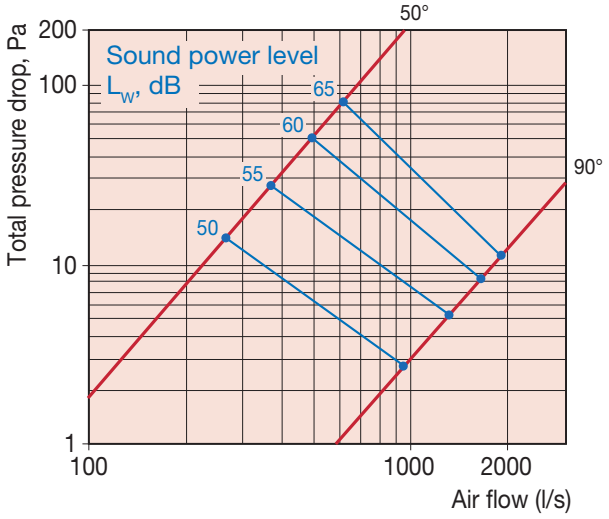


Dimensioning diagram contd.

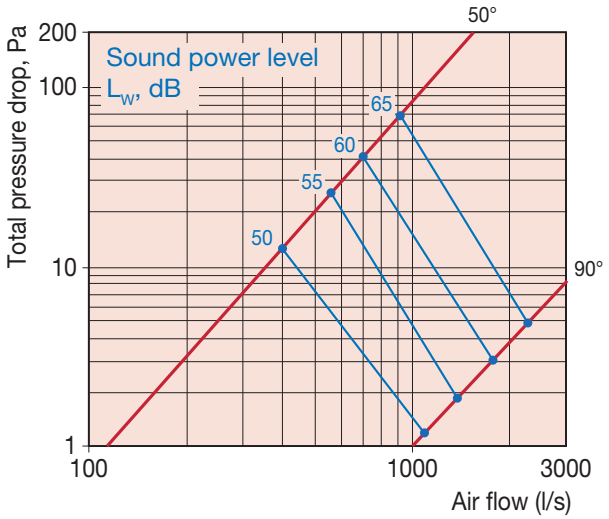
Size - 400



Size - 500



Size - 630



Sound data

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

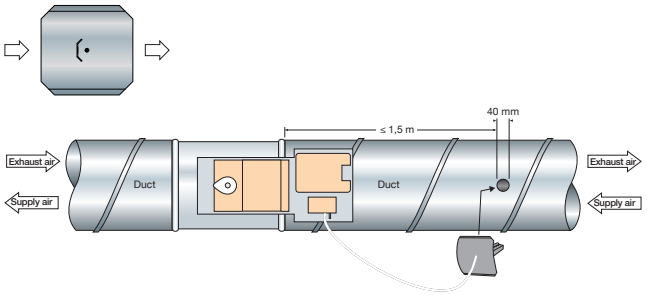
$L_{wok} = L_{Lwt} + K_{ok}$

Correction, K_{ok}

Size Ø mm	Centre Frequency Hz							
	63	125	250	500	1000	2000	4000	8000
100	-4	-6	-7	-12	-17	-24	-26	-33
125	-5	-5	-8	-14	-22	-25	-27	-35
160	-5	-4	-8	-13	-17	-20	-28	-34
200	-3	-6	-10	-14	-15	-19	-27	-40
250	-1	-11	-15	-20	-22	-23	-29	-37
315	-2	-8	-11	-12	-13	-19	-23	-29
400	-2	-8	-14	-12	-15	-22	-30	-41
500	-2	-8	-13	-13	-15	-21	-28	-36
630	0	-15	-23	-23	-28	-35	-41	-48
Tol. ± dB	2	3	4	4	6	7	9	9

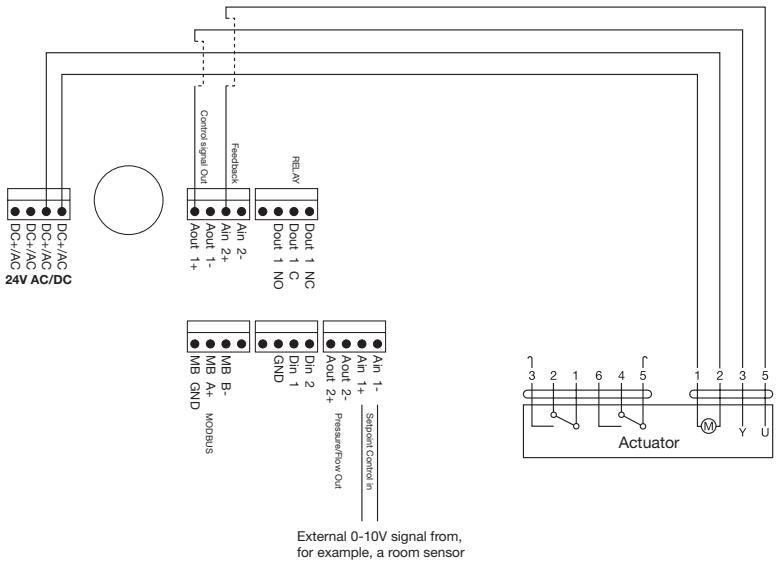
Installation

The pressure sensor shall be mounted in a representative position in the duct with the arrow pointing in the airflow direction. The measuring hose must be securely connected to the duct and to the pressure sensor on the damper.
If the damper is installed in an exhaust duct, the measuring hose shall be connected to the negative port of the static pressure sensor.

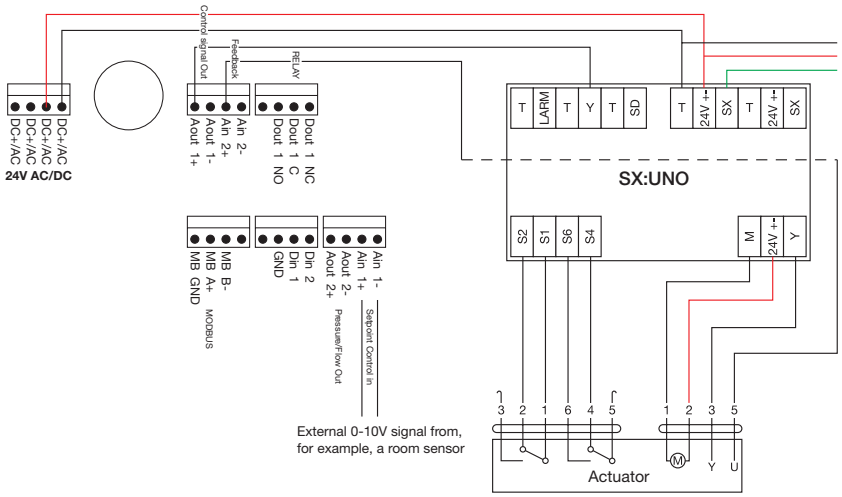


Wiring diagram

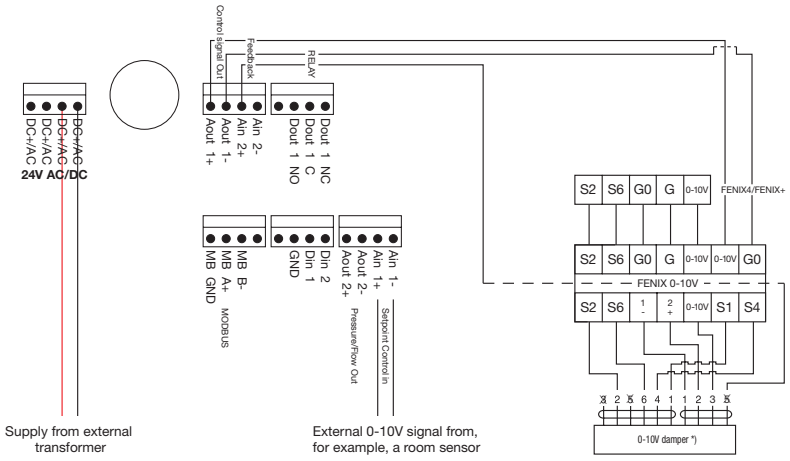
Option 1
– Connection to parent system



Option 2
– Connection to SX:UNO



Option 3
– Connection to FENIX

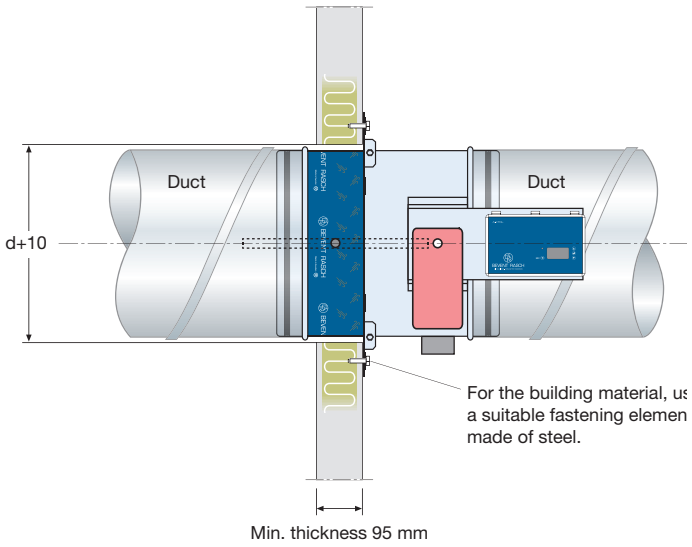


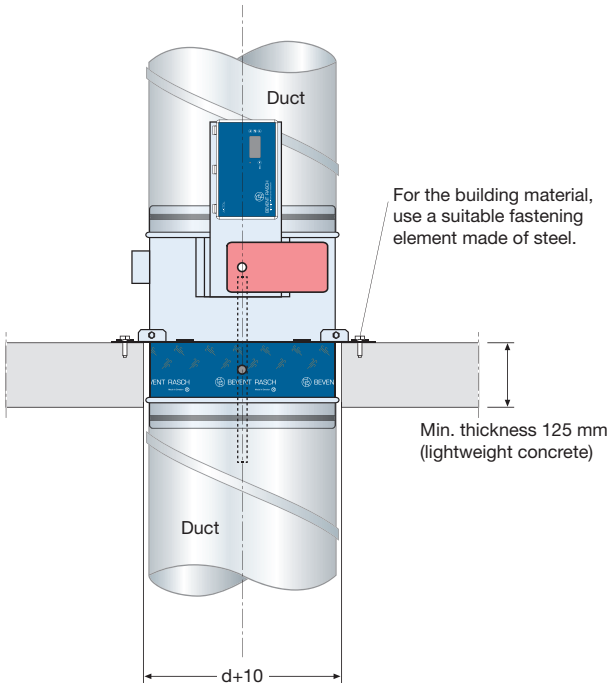
NOTE!
When connecting several VAV units to the same transformer, it is important that all system phases are connected to ( ) and all system neutrals are connected to ( )⊥

In the event of an alarm or function test, the 24 V supply must be disconnected!

Installation instructions without packing & post-sealing

Installation in wall, floor or slab
Damper fire resistance class: EI 60 (ve) i <–> o [VH] S CMOD.
EC Certificate 0402-CPR-C500380





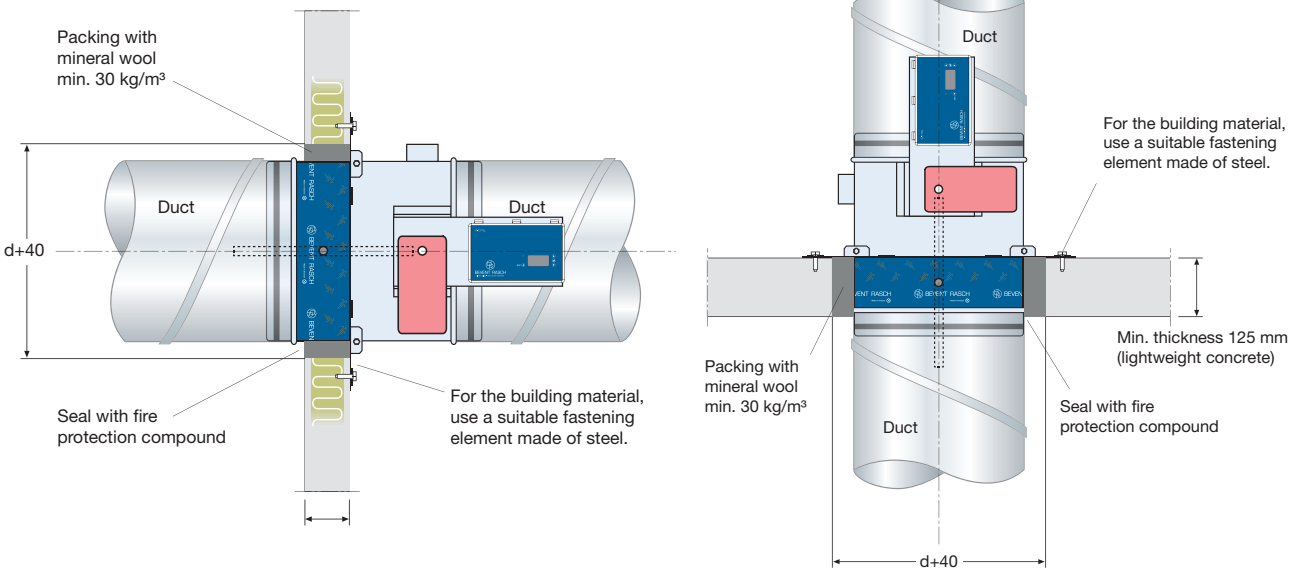
– Installation from one side
– No fire sealant
– No mineral wool packing
– No post-sealing

1. Cut an opening for the required size (d + 10 mm).
2. Fix the damper to the duct and secure the mounting flange flush against the building component. Use suitable fasteners for the building material in question. Ensure that the damper's shape is not affected during installation.
3. If required, the damper can be rotated after installation by loosening the screws in the mounting flange. Rotate the damper to the desired position and tighten the screws. The actuator can also be rotated to the desired position.
4. When installing without duct connection, the damper must be fitted with a non-combustible grille. Note that from size Ø250 mm and upwards, the damper blade extends outside the casing in the open position.
5. The duct system shall be suspended according to applicable requirements. Ensure that hangers and the duct system do not interfere with the movement of the damper blade.

- *Damper for installation in walls, floors or slabs.*
- *Minimum distance between dampers shall be 200 mm.*
- *Minimum distance to adjacent construction shall be 75 mm.*
- *Free positioning of the damper shaft.*

Installation instructions with packing & post-sealing

Installation in wall, floor or slab
Damper fire resistance class: EI 60 (ve) i <–> o [VH] S CMOD.
EC Certificate 0402-CPR-C500380

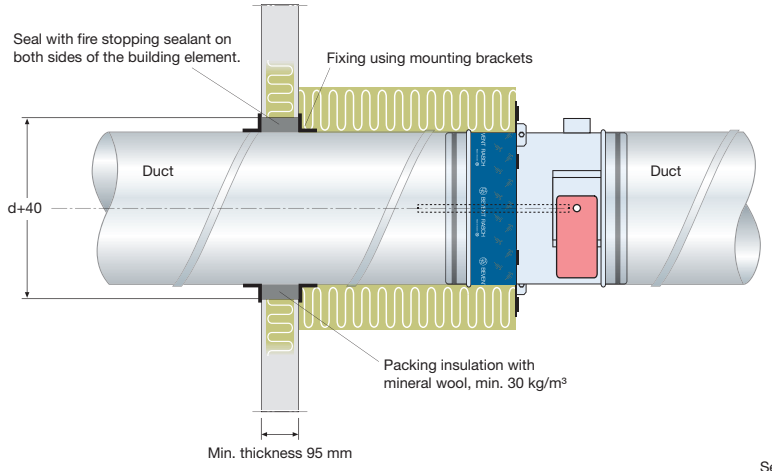


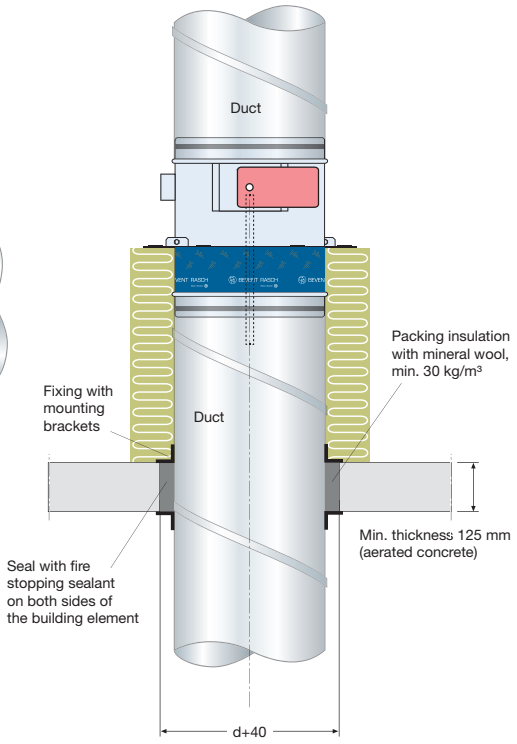
1. Cut an opening for the required size (max. d + 40 mm).
2. Fix the damper to the duct and secure the mounting flange flush against the building component. Use suitable fasteners for the building material in question. Ensure that the damper's shape is not affected during installation.
3. If required, the damper can be rotated after installation by loosening the screws in the mounting flange. Rotate the damper to the desired position and tighten the screws.
   The actuator can also be rotated to the desired position.
4. Fill the gap between the damper casing and the building component with packing insulation, mineral wool min. 30 kg/m³, and seal with fire protection compound.
5. When installing without duct connection, the damper must be fitted with a non-combustible grille. Note that from size Ø250 mm and upwards, the damper blade extends outside the casing in the open position.
6. The duct system shall be suspended according to applicable requirements. Ensure that hangers and the duct system do not interfere with the movement of the damper blade.

- *Damper for installation in walls, floors or slabs.*
- *Minimum distance between dampers shall be 200 mm.*
- *Minimum distance to adjacent construction shall be 75 mm.*
- *Free positioning of the damper shaft.*

Installation Instructions

Installation in Ductwork
Fire Resistance Classification of the Damper: EI 60 (ve ho) i↔o [VH] S CMOD.
EC Certificate: 0402-CPR-C500380



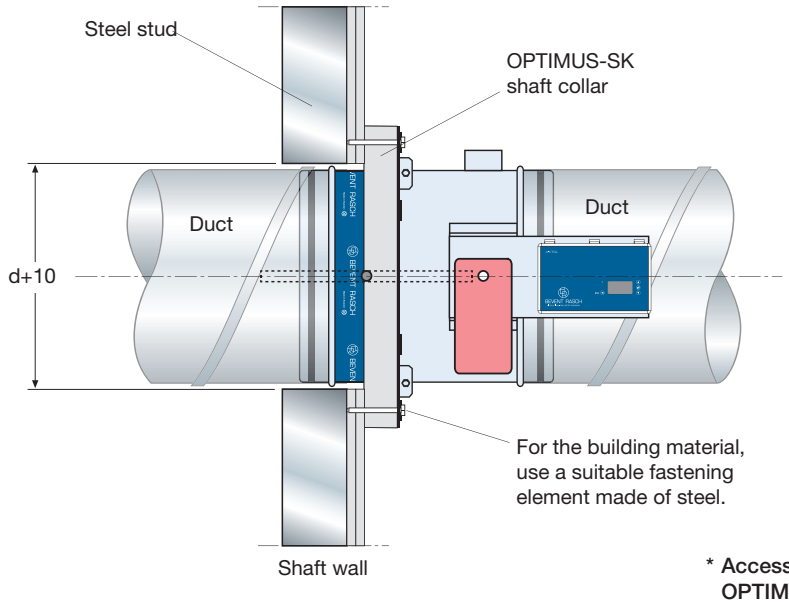


1. Cut an opening of the required size (max. d + 40 mm).
2. Fill the gap between the duct and the building element with packing insulation, mineral wool min. 30 kg/m³. Seal both sides of the building element with a fire stopping sealant. The duct shall be secured with four mounting brackets on each side of the building element.
3. When installed without a duct connection, the damper shall be fitted with a non-combustible grille.
4. Insulate the duct from the building element up to the damper mounting flange using a type-approved insulation system rated EI60 for horizontal ducts and EI120 for vertical ducts, such as Rockwool Conlit Fire Mat or equivalent.
5. The duct system shall be suspended in accordance with applicable requirements. Ensure that hangers and ductwork do not deform the damper or interfere with the movement of the damper blade.

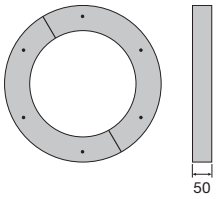
- *Damper for installation in horizontal or vertical duct systems.*
- *Minimum distance between dampers: 200 mm.*
- *Minimum distance to adjacent structures: 75 mm.*
- *Damper shaft may be positioned freely.*

Installation instructions

Installation in shaft wall
Damper fire resistance class: EI 60 (ve) i <–> o [VH] S CMOD.
EC Certificate 0402-CPR-C500380



* **Accessory:**
OPTIMUS-SK SHAFT COLLAR



– No sealant
– No mineral wool packing
– No post-sealing

1. Cut an opening for the required size (d + 10 mm).
2. Install the accessory Optimus-SK shaft collar between the damper's mounting flange and the wall. Secure the damper with suitable fasteners for the building material in question. Ensure that the damper's shape is not affected during installation.
3. If required, the damper can be rotated after installation by loosening the screws in the mounting flange. Rotate the damper to the desired position and tighten the screws.
   The actuator can also be rotated to the desired position.
4. When installing without duct connection, the damper must be fitted with a non-combustible grille.
5. The duct system shall be suspended according to applicable requirements. Ensure that hangers and the duct system do not interfere with the movement of the damper blade.

- *Damper for installation in shaft wall.*
- *Minimum distance between dampers shall be 200 mm.*
- *Minimum distance to adjacent construction shall be 75 mm.*
- *Free positioning of the damper shaft.*