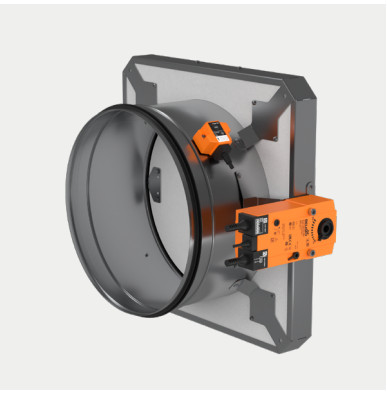
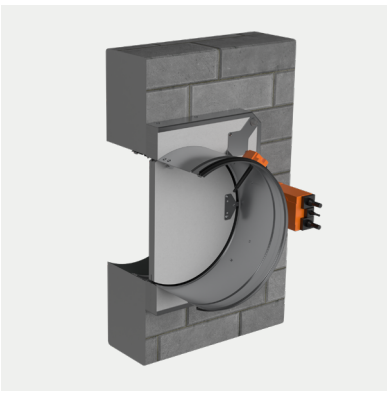
komfovent®



FIRE DAMPER UVAF-M

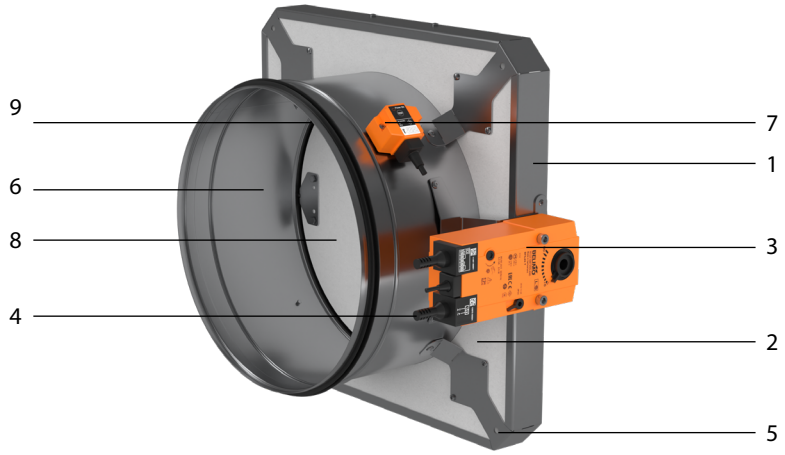
Installation manual



EN

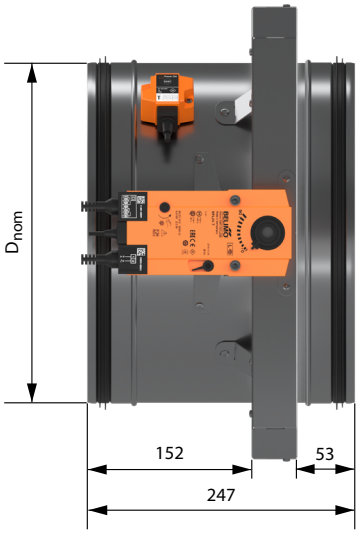
CONTENT

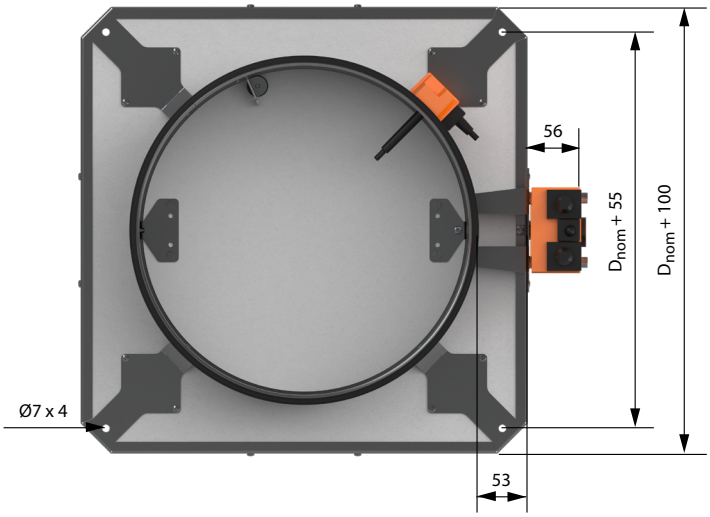
1. DESIGN AND DIMENSIONS



1 – metal collar, 2 – calcium-silicate fire-resistant flange, 3 – 24V / 230V actuator, 4 – connecting wires, 5 – installation holes, 6 – metal casing, 7 – 72 °C thermosensor, 8 – calcium-silicate blade, 9 – casing insulating rubber

Fire damper UVAF-M is available in six sizes: Ø100, Ø125, Ø160, Ø200, Ø250 and Ø 315 mm





Free cross-sectional area of the open damper should be considered to adjust the airflow for a given air velocity:

Free area, m²	100	120	160	200	250	315
Ø, mm	0,004	0,0075	0,015	0,025	0,04	0,068

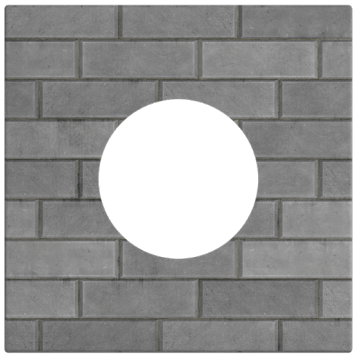
2. INSTALLATION METHODS

2.1. Dry-montage installation in a solid wall (EI 60)

1. Rigid walls can be made of concrete, aerated concrete or plaster.

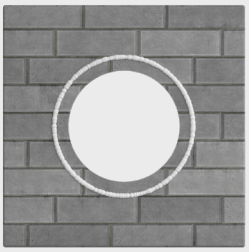
   Minimal required thickness of the wall – 100 mm, minimal fire resistance classification – EI 90.

   Diameter of the prepared installation opening should be 5…10 mm larger than nominal diameter D_{nom} of the UVAF-M damper.



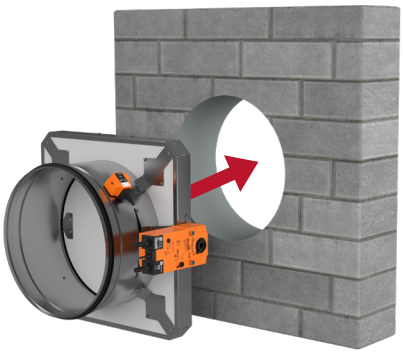
Around the installation opening it is required to apply fire-resistant sealing mastic (fire resistance up to 4 hours) to seal the gap between wall and mounting flange of the damper.

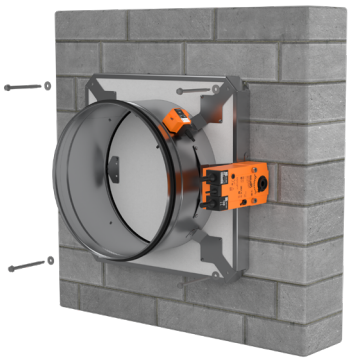
Sealing mastic has to be applied right on the wall around the installation opening at a distance of ≈ 25 mm from its edge. Approximate width of a fire-resistant mastic stripe is around 10 mm (the main requirement is to have enough material to seal the gap).



2. Install the UVAF-M damper to the installation opening before fire-stopping mastic dries, ensuring axle of the damper is located horizontally.

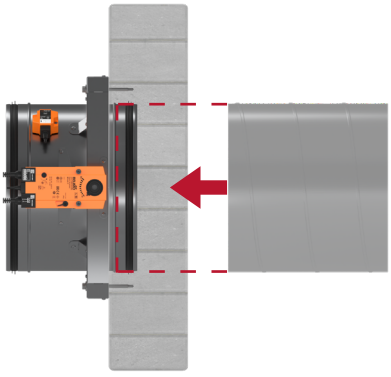
   Using an appropriate fastening (e.g., anchor bolts and washers M6) for solid wall type, build on the fire damper onto the installation opening.





3. It is additionally required to connect a round airduct, using nipple connection of the fire damper casing.

   The airduct must be connected tightly up to the bulge on the damper casing.

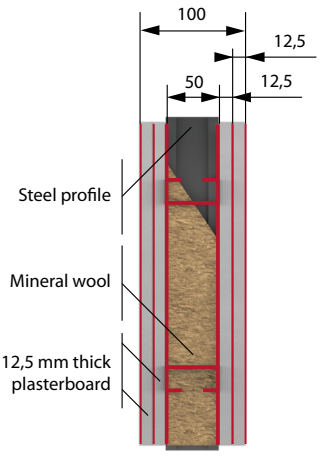


2.2. Dry-montage installation in a flexible wall (EI 60)

1. Flexible wall used for the installation of the damper should be standard min. 100 mm thick plasterboard stud wall.

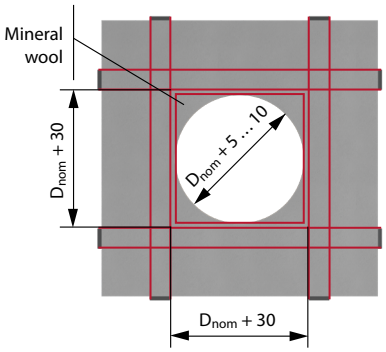
   The wall construction is composed of a steel frame covered on both sides with two layers of gypsum plasterboards type F, each with thickness 12.5mm.

   The wall is insulated with 50 mm stone wool (minimal density 100 kg/m^3).



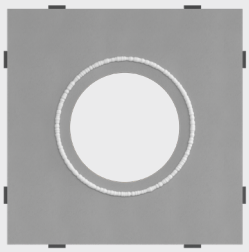
2. Diameter of the prepared installation opening should be 5…10 mm larger than nominal diameter D_{nom} of the UVAF-M damper.

   Around the installation opening additional steel stud frame should be established by providing the internal size of the frame is D_{nom} + 30 mm. Area inside the metal frame should be filled with 50 mm stone wool (minimal density 100 kg/m^3).



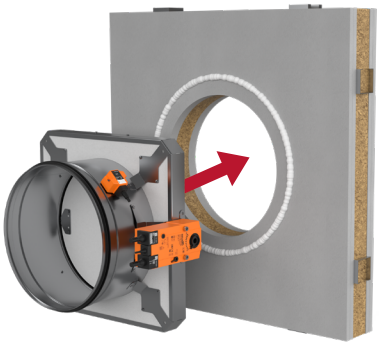
Around the installation opening it is required to apply fire-resistant sealing mastic (fire resistance up to 4 hours) to seal the gap between wall and mounting flange of the damper.

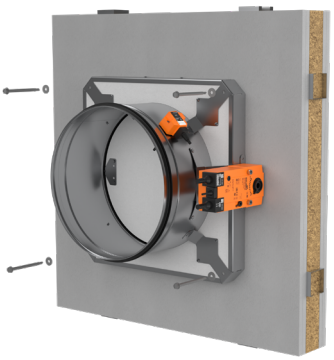
Sealing mastic has to be applied right on the wall around the installation opening at a distance of ≈ 25 mm from its edge. Approximate width of a fire-resistant mastic stripe is around 10 mm (the main requirement is to have enough material to seal the gap).



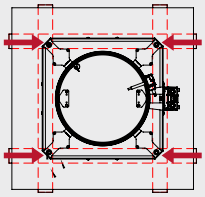
3. Install the UVAF-M damper to the installation opening before fire-stopping mastic dries, ensuring axle of the damper is located horizontally.

   Using an appropriate fastening (self-tapping screws and washers for Ø7 mm holes) for dry wall type, build on the fire damper onto the installation opening.



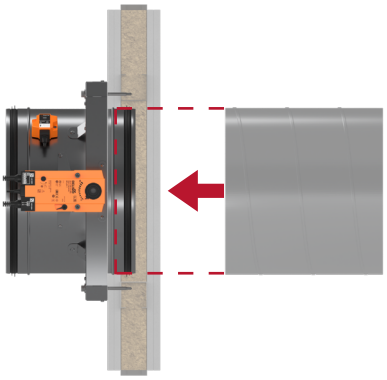


Make sure fastenings are fixed to the steel frame mounted specifically for this around the installation opening.



4. It is additionally required to connect a round airduct, using nipple connection of the fire damper casing.

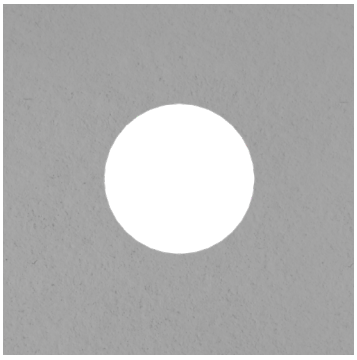
   The airduct must be connected tightly up to the bulge on the damper casing.



2.3. Dry-montage installation in a solid ceiling slab (EI 60)

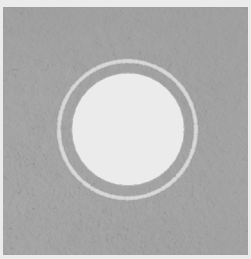
1. Construction of a ceiling slab for the horizontal installation should be made of min. 150 mm thick a solid reinforced concrete or hollowed reinforced concrete, minimal fire resistance classification – EI 120.

   Diameter of the prepared installation opening should be 5…10 mm larger than nominal diameter D_{nom} of the UVAF-M damper.



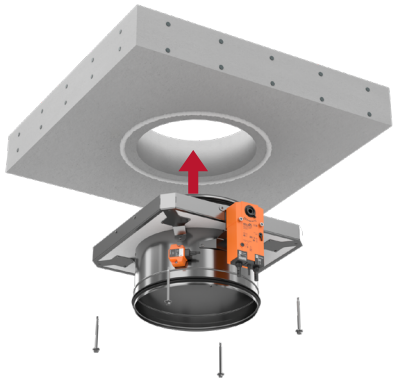
Around the installation opening it is required to apply fire-resistant sealing mastic (fire protecting silicone with minimal reaction to fire D-s1,d1) to seal the gap between ceiling and mounting flange of the damper.

Sealing mastic has to be applied right on the ceiling panel around the installation opening at a distance of ≈ 25 mm from its edge. The approximate width of a fire-resistant mastic stripe is around 10 mm (the main requirement is to have enough material to seal the gap).



2. The UVAF-M damper has to be installed to the installation opening before fire-stopping mastic dries.

   Using an appropriate fastening (e.g., anchor bolts and washers M6) for solid ceiling type, build on the fire damper onto the installation opening.



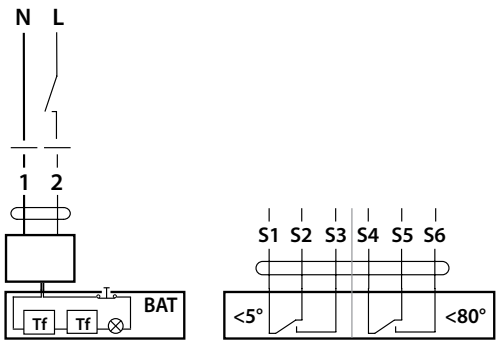
3. Both positions of the fire damper below or above the ceiling panel are permitted.

2.4. Connection of the BFL230-T / BFL24-T actuator

The fire damper is equipped with spring-return actuator, combined with thermosensor for 72 °C triggering temperature.

Wiring diagrams

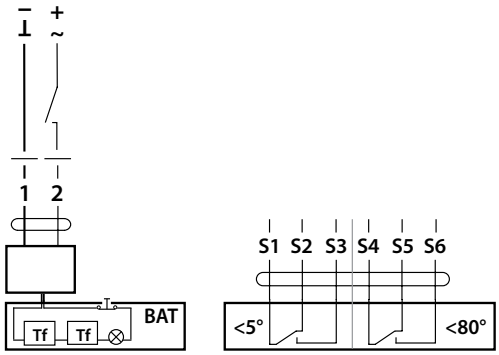
AC 230 V, open/close **Auxiliary switch**



Cable colors:

1 = blue
2 = brown
S1 = violet
S2 = red
S3 = white
S4 = orange
S5 = pink
S6 = grey
Tf: Thermal fuse

AC/DC 24 V open/close **Auxiliary switch**



Cable colors:

1 = black
2 = red
S1 = violet
S2 = red
S3 = white
S4 = orange
S5 = pink
S6 = grey
Tf: Thermal fuse

3. SAFETY REQUIREMENTS

Protective gloves must be worn

Protective gloves protect hands against abrasion, oily environment, sharp metal parts and contact with hot surfaces.

Protective industrial helmet must be worn

Industrial helmets protect the head against impact from objects falling from above, by resisting and deflecting blows to the head.

Protective boots must be worn

Protective boots protect the foot from falling objects or compression and prevent slipping on a slippery floor.

Incorrect use might cause dangerous situations

The local regulations for health and safety at work and general safety regulations to be applied.

Personal protective equipment must be worn for such types of work: fire damper electrical installation, fire damper mechanical connection to the air duct system (ductwork) and any type of service or maintenance works.

It is important to correctly use the fire damper in prescribed way only:

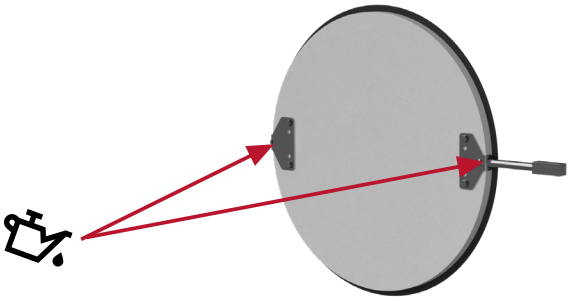
- Fire damper is permitted to use in exhaust or supply air systems.
- Not allowed to operate the fire damper if it do not comply with manufacturer's installation requirements specified in this instruction.
- Any changes or modifications of the fire damper are strictly prohibited, except for using manufacturer's provided replacement parts.
- Qualified staff only are allowed to replace parts or service the fire damper.

4. INSTALLATION TIPS

Before starting installation process any fire damper shall be inspected for damages by responsible person!

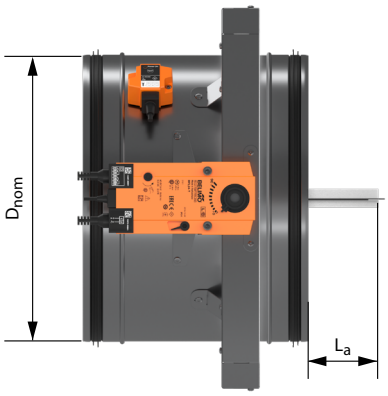
The pre-installation process must include the following steps:

1. Check if the blade is closing without additional resistance by cutting off the supply and returns into the open position by restoration of power supply. If sticking occurs, lubricate rotation points as shown below using a suitable amount of lubricating agent:



2. Please consider that fire dampers starting with Ø200 mm have exposition of the blade into the duct within a certain distance:

D_{nom}, mm	L_a, mm
100	0
120	0
160	0
200	13
250	38
315	71



3. Fire dampers are originally delivered with closed blade. **If a fire damper has been installed with an open blade, this may cause incomplete closing of the blade or even damage!** Blade position can be controlled by referring to marks located on the actuator's casing: 0˚ is equivalent to Closed position, 90˚ is equivalent to Open position:

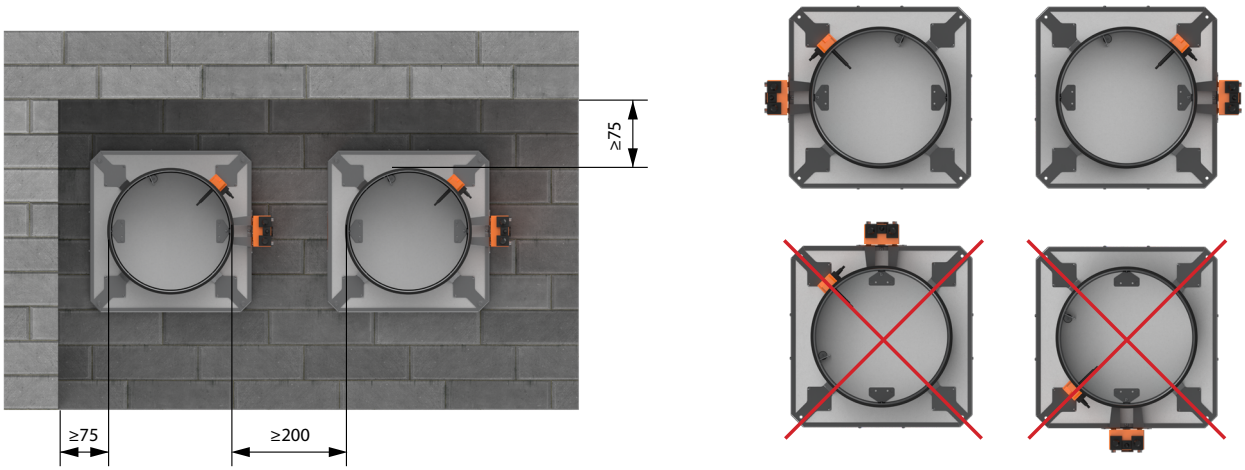
a – Without power supply, the actuating mechanism can be operated manually by compressing the spring using included hand crank and fixing it in required position. It can be unlocked manually or automatically by applying the supply voltage.

b – Striker to lock the position of the blade.

4. Cover the main mechanism (if delivered uncovered) in the process of damper installation with plastic film or another material to protect it against clogging with construction dust and materials.

It is highly recommended to install the fire dampers in a way that completely prevents excess load on the dampers and transfer any load from ducts or supporting constructions!

5. The distance between multiple fire dampers installed close to each other shall not exceed 200 mm, as well as damper must not be installed closer than 75 mm to the walls, ceiling or other partitions, but it is recommended to leave the access space to actuating mechanism at least 300 mm. **The axle of the damper blade may be located only horizontally!**



6. Selection of the montage fastening shall be conducted depending on type of the supporting construction (e.g., aerated concrete, drywall, masonry wall) and also based on the weight of the damper:

Ø, mm	m, kg
100	3.3
120	3.7
160	4.3
200	5.0
250	6.0
315	7.4

7. When fire damper is fully installed and verified, make sure it is left in its normal working position with blade OPEN. The position of the blade can be defined using pointer mounted on the actuator:

   0° - CLOSED blade

   90° - OPEN blade

8. Please consider that all EU and local working safety and Fire safety standards must be observed during the installation process.

SELF-TEST IS REQUIRED AFTER THE COMPLETION OF THE FIRE DAMPER INSTALLATION!

If any of the following issues observed after the fire damper installation, it is strictly prohibited to accept it into operation:

- Inspection hatch (where incorporated into the casing of the damper or into the connecting duct) is inaccessible;
- Blade of the fire damper is locked in open position;
- Casing or flange of the fire damper have been damaged during installation process;
- The fire damper is fitted without observing the requirements of this instruction;
- Fasteners used during installation process prevent closing of the fire damper blade;
- The damper is installed remotely from the wall or ceiling;
- Construction waste or dust left on the surfaces of the damper;
- Actuator is disconnected or mounted loose on shaft;
- Wires run through the fire damper.

5. PERIODICAL INSPECTIONS

It is a mandatory requirement of EN 15650 standard that all fire dampers must be checked at least twice a year. *Below is KOMFOVENT recommended maintenance inspection checklist.*

Year of inspection	Year 1		Year 2		Year 3		Year 4		Year 5	
Date of inspection	*01.01.21*									
Inspected by										

Installation date:

Checked by / date:

Accepted by / date:

RECORDS OF THE FIRE DAMPER PERIODICAL INSPECTIONS

Fire damper ref. No.		*01*		
Location		*Server room 121*		
Damper type and size		*UVAF-M-315*		
Mounted in wall (w) or slab (s) thickness		*W100*		
Access to the damper compliant		*Yes*		
Installation in acc. to manufacturer's instructions		*Yes*		
Correct operation of the fire damper		*Yes*		
Damper cleanness (accumulated dust, grease)		*No*		
Lubricate all moving Parts (done/not done)		*Done*		
Damper condition (corrosion, rust)		*No*		
Thermosensor was replaced		*No*		
Damages or modifications		*No*		
Blade and sealing material is undamaged		*Yes*		
Wiring of the end switches is undamaged and connected		*Yes*		
Wiring of the actuator is undamaged and connected		*NA*		
Pass/fail blade drop test		*Pass*		
End switches indicate blade closing		*Yes*		
Fire damper left in OPEN position		*Yes*		
Year of inspection	**1**	*x*		
	2			
	3			
	4			
	5			
Comments				

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2023-02