



Fire Damper Type XDMy-UL



Parts and Function

Fire dampers are used as safety related components in ventilation systems to prevent fire from spreading through ducting. During normal operation the damper blades are open to enable air passage through the ventilation system.

If the temperature increases in the event of a fire, the damper blades close. Release is triggered at 74 °C (165 °F).

Functional description

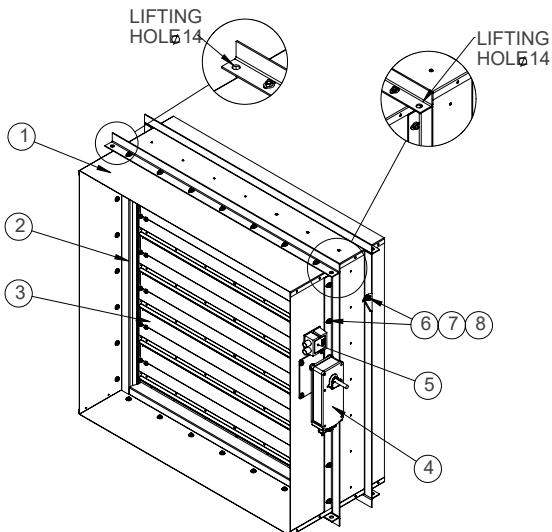
The spring return actuator enables the motorised opening and closing of the damper blades; it can be activated by the central BMS. Motorised fire dampers can be used to shut off ducts on a regular basis. As long as power is supplied to the actuator, the damper blades remain open. The spring return actuator closes the damper when one of the following events occur:

- Temperature in the fire damper > 74 °C
- The power supply is interrupted (power off to close)

As standard, the spring return actuator is equipped with limit switches that can be used to indicate the damper blades position.

Note:

Fire dampers may require approvals for use under building regulations or fire authority regulations. This must be checked and applied for (by others).



Item	Description
1	Sleeve
2	Case
3	Blade
4	Actuator
5	Thermal Trip
6	M6 Hex. Head Bolt
7	M6 Hex. Nut/ Nutsert
8	M6 Washer

Installation

General installation information



Notice

Risk of damage to the fire damper

- Protect the damper from contamination and damage.
- Cover openings and release mechanism (e.g. with plastic) to protect them from mortar and dripping water.
- Do not remove the transport and installation protection (if any) until installation is complete.
- Control elements, electric actuator and inspection access panel must remain accessible for maintenance.
- Loads imposed on the casing or sleeve may impair the function of the damper. Install and connect the damper in such a way that no loads will be imposed on the installed damper.
- Before installation: Perform a functional test, then close the fire damper.
- Protect the damper from moisture and condensation as they may damage the damper.
- When installing the fire damper, the statics of the support structure (wall) must be ensured (by others), even in the event of a fire.
- Ducting must be installed in such a way that it does not impose any significant loads on the damper in the event of a fire.
- The length of the sleeve extending beyond the wall of floor opening should not exceed 406 mm on the side where the actuator is installed, and 152 mm on the opposite side.
- Access panels / doors should be provided to the connecting ductwork next to the damper for inspection or maintenance purpose.
- The electric spring return actuator is wired to the thermal trip device. Power supply connections shall be made to the thermal trip device using wires suitable for at least 75 °C. Refer to individual datasheets for wire designation colours and wiring diagrams.
- Be sure to comply with the relevant local regulations and guidelines.

Damper orientation

The fire damper is certified for vertical installation in a masonry wall with the blades running horizontally.

Allowance for thermal expansion

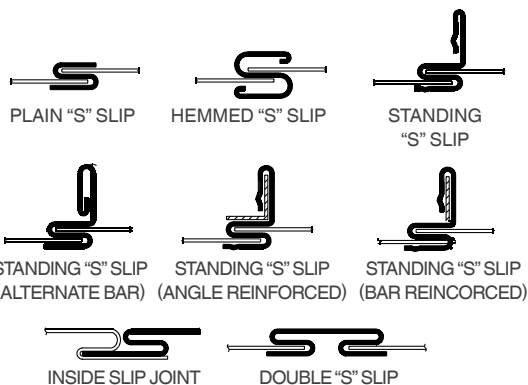
Provision of an expansion gap in the opening between the sleeve and wall that the damper is installed into is critical to the performance of the fire damper in the event of a fire. The minimum expansion gap clearance are as follows:

Galvanized Steel Damper Size B or H (mm)	Minimum expansion clearance (mm)
200 to 533	7
534 to 1016	12

Stainless Steel Damper Size B or H (mm)	Minimum expansion clearance (mm)
200 to 533	10
534 to 1016	19

Duct-sleeve connections (by others)

The connecting ducts must not be continuous, and should terminate at the sleeve. One or more of the breakaway joint types shown below must be used as the connection between sleeve and ducts. No more than two M5 sheet metal screws shall be used on each side and on the bottom, located in the centre of the slip pocket and penetrating both sides of the slip pocket



Along with these breakaway joints used on the top and bottom, flat drive slips (shown below) not exceeding 508 mm in length may also be used on the sides.



Installation with sleeve and retaining angles

Before installation

- Ensure that the opening is reasonably square and level so as to not cause distortion to the damper when installed.
- Ensure that sufficient expansion clearance is provided based on the damper size.
- Check that the wall thickness matches the specification of the damper ordered.

Installation

- The damper should be handled with the sleeve or lifting holes. It should not be lifted using the blades, actuator or linkages.
- Identify the correct orientation of the damper to be installed.
- Release the mounting bolts and remove the retaining angles around the sleeve.
- For vertical installations, the sleeve may rest on the bottom of the opening.
- Place the damper into the opening with the center-line of the blades within the wall.
- Fasten the retaining angles around the sleeve, on both sides of the wall, with the mounting bolts provided.
- The retaining angles should cover the expansion clearance and overlap the wall by a minimum of 25 mm, and need not be welded or fastened to each other at the corners.
- The retaining angles should not be bolted to the wall.
- Inspect the damper to ensure that it is installed free of any distortion, and free of any obstruction to the movement of the blades.

After installation

- Clean the fire damper.
- Remove installation protection, if any.
- Make electrical connections.
- Test the function of the fire damper.
- Connect the ductwork.

