fire ventilation systems

FIRE DAMPERS
FANS
CONTROL SYSTEMS
OVERPRESSURE SYSTEMS
fire protection devices

examples of application
Fire dampers and smoke exhaust dampers

**mcr FID PRO**

Single-blade cut-off fire damper and damper for fire ventilation systems

**mcr FID S**

Single-plane cut-off fire damper and damper for fire ventilation systems

**mcr FID C**

Single-plane cut-off damper

**Versions**

- S – cut-off fire damper
- V – for fire ventilation systems (smoke exhaust)
- M – double-function for combined systems

**Control – release**

- KW1 mechanism – activated by a return spring with fusible link rated at e.g. 72°C or remotely by an electromagnet (pulse or power break), reset by means of a lever or additional actuator (Vn= 24V DC or 230V AC).
- RST mechanism – activated by a return spring with fusible link rated at e.g. 72°C, manual re-arming by means of a lever.

**Electrical actuator** – activated by a thermocouple rated at e.g. 72°C or remotely, by supply power decay (power break), remote reset by supplying power (Vn= 24V AC/DC or 230V AC).

**Dimensions** (to the accuracy of 1 mm)

- Round damper: diameter 100 - 315 mm,
- Sleeve, nipple or flange type of execution.

**Fire resistance**

EIS 120, EIS 120 AA – depending on method of manufacturing, as well as method and place of installation.

**Fire resistance**

EIS 90, EIS 90 AA, EIS 120, EIS 120 AA – depending on method of manufacturing, as well as method and place of installation.

**Fire resistance**

EI 120 (ve ho i<–>o)S/ E 120 (ve ho i<–>o)S

**Purpose**

The damper has been designed for separating fire-hazardous zones from safe parts of the building (S version) and assuring appropriate evacuation conditions through fire ventilation (V version) – intake and exhaust damper. Damper can be also used in so-called combined systems (M version).

**Control – release**

- KW1 mechanism – activated by a return spring with fusible link rated at e.g. 72°C or remotely by an electromagnet (pulse or power break), reset by means of a lever or additional actuator (Vn= 24V DC or 230V AC).
- RST mechanism – activated by a return spring with fusible link rated at e.g. 72°C, manual reset by means of a lever.

**Electrical actuator** – activated by a thermocouple rated at e.g. 72°C or remotely, by supply power decay (power break), remote reset by supplying power (Vn= 24V AC/DC or 230V AC).

**Dimensions** (to the accuracy of 1 mm)

- Rectangular damper with insulating separator, in a casing: width 200 – 1500 mm; height 200 – 1500 mm; casing length 296 mm,
- Round damper with insulating separator, in a casing: diameter 125-1000 mm; casing length 296 mm.

**Fire resistance**

EI 120 (ve ho i<–>o)S/ E 120 (ve ho i<–>o)S

**Purpose**

The damper has been designed for separating fire-hazardous zones from safe parts of the building (S version) and assuring appropriate evacuation conditions through fire ventilation (V version) – intake and exhaust damper. Damper can be also used in so-called combined systems (M version).

**Control – release**

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- RST mechanism – activated by a return spring with fusible link rated at e.g. 72°C, manual reset by means of a lever.

**Electrical actuator** – activated by a thermocouple rated at e.g. 72°C or remotely, by supply power decay (power break), remote reset by supplying power (Vn= 24V AC/DC or 230V AC).

**Dimensions** (to the accuracy of 1 mm)

- Width 200 – 800 mm; height 200 – 400 mm; casing length 296 mm.

**Fire resistance**

EI 120 (ve ho i<–>o)S/ E 120 (ve ho i<–>o)S

**Purpose**

The damper has been designed for use in general ventilation systems (intake and exhaust types), at passages through space dividing elements – walls and floors.

**Control – release**

- KW1 mechanism – activated by a return spring with fusible link rated at e.g. 72°C or remotely by an electromagnet (pulse or power break), reset by means of a lever or additional actuator (Vn= 24V DC or 230V AC).
- RST mechanism – activated by a return spring with fusible link rated at e.g. 72°C, manual reset by means of a lever.

**Electrical actuator** – activated remotely, by supplying power (pulse), remote reset by resupply of power (Vn= 24V AC/DC or 230V AC).

**Dimensions** (to the accuracy of 1 mm)

- Width 200 – 800 mm; height 200 – 400 mm; casing length 296 mm.

**Fire resistance**

EI 120 (ve ho i<–>o)S/ E 120 (ve ho i<–>o)S

**Purpose**

The damper has been designed for separating fire-hazardous zones from safe parts of the building (S version) and assuring appropriate evacuation conditions through fire ventilation (V version) – intake and exhaust damper. Damper can be also used in so-called combined systems (M version).
### fire dampers and smoke exhaust dampers

<table>
<thead>
<tr>
<th>mcr WIP</th>
<th>mcr DOR</th>
<th>mcr FS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>louver damper, cut-off type and for fire ventilation systems</strong></td>
<td><strong>door-type smoke exhaust and air-intake damper</strong></td>
<td><strong>louver transfer damper</strong></td>
</tr>
</tbody>
</table>

**Fire resistance**
- EIS 60, EIS 60 AA, E 120, ES 120 – depending on method of manufacturing, as well as method and place of installation.
- EIS 120 AA
- E 120
- ES 120

**Versions**
- **S** – cut-off fire damper
- **V** – for fire ventilation systems (smoke exhaust)
- **M** – double-function for combined systems
- **T** – transfer damper

**D1** – single-leaf damper
**D2** – double-leaf damper

**Range of application**
The damper has been designed for separating fire-hazardous zones from safe parts of the building (S version) and assuring appropriate evacuation conditions through fire ventilation (V version) – intake and exhaust damper. It can be also used in so-called combined systems (M version), as a transfer damper (T version) and at the end of ventilation ducts.

**Purpose**
The damper has been designed for use in fire ventilation ducts as outlet damper (smoke exhaust) and as inlet damper for evacuation needs (intake of fresh air).

**Control – release**
- **KW1 mechanism** – activated by a return spring with fusible link rated at e.g. 72°C or remotely by an electromagnet (pulse or power break), manual reset by means of a lever or additional actuator (Vn = 24V DC or 230V AC).
- **RST mechanism** – activated by a return spring with fusible link rated at e.g. 72°C, manual reset.
- **Electrical actuator** – activated by a thermocouple rated at e.g. 72°C or remotely, by supply power decay (power break), remote reset by supplying power (Vn = 24V AC/DC or 230V AC).
- **EM 24 D mechanism** – remotely activated by an electromagnet (pulse supply Vn = 24V AC/DC, manual reset.

### Limitations

**Purpose**
The damper is intended for unducted mounting, in partitions – as a transfer damper for transmission of air between rooms.

**Control – release**
- **Spring mechanism** – activated by a return spring with fusible link rated at e.g. 72°C, manual reset.
- **Electromagnetic release** – activated by a thermo element (e.g. 72°C) or remotely, by lack of supplying power (power break Vn = 24V AC/DC or 230V AC), manual reset.
<table>
<thead>
<tr>
<th><strong>mcr MONSUN</strong></th>
<th><strong>mcr PASAT</strong></th>
<th><strong>mcr ZIPP</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Duct mounted axial smoke exhaust fan</strong></td>
<td><strong>Exhaust roof fan</strong></td>
<td><strong>Cut-off fire valve</strong></td>
</tr>
<tr>
<td><strong>CE – according to EN 12101-3</strong></td>
<td><strong>CE – according to EN 12101-3</strong></td>
<td></td>
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</tbody>
</table>

**Fire resistance**
- **F400** - 400°C for 120 min.
- **F300** - 300°C for 60 min.
- **F200** - 200°C for 120 min.

**Fire resistance**
- **F400** - 400°C for 120 min.
- **F300** - 300°C for 60 min.
- **F200** - 200°C for 120 min.

**Fire resistance**
- **EIS 120**

**Versions**
- Long casings (LC).
- Single or double speed motors.

**Versions**
- Single or double speed motors.

**Versions**
- – vertically mounted
- – horizontally mounted

**Purpose**
The fan has been designed to remove smoke and hot air from enclosed interiors during fire. It facilitates evacuation of people and protects the building structure and its fittings against high temperature, it also prevents the fire spreading to the neighbouring fire compartments. The fan may be used in comfort and industrial ventilation systems as an exhaust or venting fan.

**Purpose**
The fan has been designed to remove smoke and hot air from enclosed interiors during fire. It facilitates evacuation of people, it also prevents the fire spreading to the neighbouring fire compartments. The fan may be used in comfort ventilation systems.

**Purpose**
The valve has been designed for assembly at the end of ventilation ducts and is used for separating fire-hazardous zones from safe parts of the building as well as for transferring air through building partitions.

**Technical data**
Available in 10 sizes:
- from D355 mm to D1000 mm.
- Standard air output up to 100000 m³/h.
- Compression of up to 1800 Pa.

**Technical data**
Available in 7 sizes:
- from D315 mm to D710 mm.
- Standard air output up to 32000 m³/h.
- Compression of up to 1800 Pa.

**Technical data**
Available in 4 sizes:
- D100 mm, D125 mm, D160 mm, D200 mm.

**Accessories**
- Mounting feet for horizontal installation SW,
- protective wire fan guard on rotor or motor side SO,
- vibration compensators – flexible connectors,
- **F400** class KD,
- counterflanges for duct installation PK,
- back draft dampers KS,
- shock absorbers KA,
- control automatics OM.

**Accessories**
- PDN base,
- vibration compensator KD,
- back draft damper KS-V,
- protective wire fan guard SO.

**Control – release**
**RST mechanism** – activated by a return spring with fusible link rated at e.g. 72°C, manual reset.

**Emz mechanism** – activated by a return spring with fusible link rated at e.g. 72°C or remotely by an electromagnet (pulse and power break
\[ V_n = 24V \text{ DC or } 230V \text{ AC}, \] manual reset.


overpressure systems for vertical evacuation paths

The overpressure bleed damper has been designed for the maintenance of the desired pressure differences before and behind its partition and is implemented as a pressure relief damper in overpressure systems of staircases. It can also be used in any room protected against smoke by establishing overpressure.

The fan has been designed for air intake in overpressure systems of vertical evacuation paths (stairways), it can be implemented in systems designed for comfort ventilation as well.

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The fan has been designed for air intake in overpressure systems of vertical evacuation paths (stairways), it can be implemented in systems designed for comfort ventilation as well.

mcr PL1
overpressure and bleed damper, product in compliance with EN 12101-6

mcr CJHCH
axial-flow intake and exhaust fan with casing insulated acoustically

mcr OMEGA
control and power supply unit for fire ventilation and overpressure systems

The overpressure bleed damper has been designed for the maintenance of the desired pressure differences before and behind its partition and is implemented as a pressure relief damper in overpressure systems of staircases. It can also be used in any room protected against smoke by establishing overpressure.

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mcr Omega control unit – controls and supplies power to overpressure protection systems for vertical evacuation paths including air intake fans, airflow regulating dampers actuators and overpressure damper sets, as well as other devices in the system.

Overpressure system:
1. inspection and measurement elements
2. smoke sensors
3. alarm buttons
4. supervision station
5. FAS control unit
6. mcr Omega control unit
7. pressure relief sets** (roof or wall type)
8. intake-air sets* (roof or wall type)
9. exhaust air* (roof or wall type)

*/ location and quantity depending on air demand of the system

Arrangement and quantity of each system element depend on the requirements, construction and location of the protected staircase, lobby, lift shaft, etc.

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<table>
<thead>
<tr>
<th>type of device</th>
<th>mcr FID PRO</th>
<th>mcr FID S</th>
<th>mcr FID C</th>
<th>mcr WIP</th>
<th>mcr DOR</th>
<th>mcr FS</th>
<th>mcr ZIPP</th>
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<td>ventilation and air-conditioning ducts at penetrations through fire partitions</td>
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<td>50 mm</td>
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<td>200–400</td>
<td>120–1020</td>
<td>300–1250</td>
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<td>296–390</td>
<td>296–390</td>
<td>135</td>
<td>125</td>
<td>154–202</td>
<td>130</td>
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</tbody>
</table>
FIRE PROTECTION SYSTEMS

- fireproof partitions
- smoke and heat exhaust systems
- fire ventilation systems
- fire protection of building structures

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