**Specification text for CE-marked [RF-t] fire dampers**

**Description**

To maintain the required fire resistance when penetrating a compartment wall, the ventilation duct network shall be equipped with rectangular or round **[RF-t]** fire dampers that have a CE performance declaration in accordance with the harmonized European product standard EN 15650 and the European Regulation (EU) No. 305/2011.

The fire dampers must have at least the same fire resistance (EI-S) as the building component in which they are installed.

 **Properties**

* Tested according to EN 1366-2 with classification according to EN 13501-3 (EI-S);
* Maintain their full functionality, i.e preventing the spread of smoke and fire through ventilation ducts, after exposure to the salt mist test in accordance with European standard EN 60068-2-52.
* Equipped with mechanisms that comply with cyclic tests as per Annex C of the EN 15650 standard and have at least an IP42 classification as specified by the EN 60529 standard;
* Standard equipped with an ATC3-classification (=C-classification) for air tightness according to the EN 1751 standard and comply with the leakage loss requirements in compliance with EN 1366-2 and/or EN 1751.
Fire dampers with a diameter > 315mm or > 800mm x 600mm have at least an ATC4-classification (=B-classification) according to EN1751;
* Equipped with sensors for the thermal safety of the mechanisms, complying with the required reaction temperature and mechanical load requirements according to ISO 10294-4:2001,4.2 standard;
* Designed with minimal pressure losses, among others by keeping the damper blade thickness as low as possible, and keep the transmission mechanism outside the tunnel (for diameter ≤ 315mm or b/h ≤ 800x600mm);
* Free from asbestos;
* The round fire dampers are equipped with rubber sealing rings to ensure an airtight connection to ventilation ducts;
* Provided with valid classification documents and performance declarations (DoP) that are freely accessible;
* Provided with the consistent BIM models;

**Type**

Built-in **[CR60 / CR120 / CR2 / CU-LT / CU2]**
Surface-mounted **[CR-S / CR60 1S / CR120 1S / CU-LT 1s]**
Remote-controlled **[CR60 / CR120 / CU-LT]**

**Fire resistance**

**[EI60S / EI90S / EI120S]**

 **Damper blade thickness**

**Round Fire Dampers**

 Diameter ≤315mm (CR60/CR120) **[20mm]** Diameter (CRS) **<** diameter 400mm **[14,5mm]** ≥ diameter 400mm **[25mm]**
 Diameter > 315mm (CR2) **[50mm]
Rectangular Fire Dampers**

 BxH ≤800x600mm (CU-LT) **[25mm]** BxH >800x600mm (CU2) **[45mm]**
 **Transmissions**

Fusible Link or Thermal Fuse

* The fire damper is standardly equipped with a fusible link mechanism that closes the damper as soon as the temperature in the duct exceeds 72°C;
* The proper functioning of the fire damper can be periodically tested via manual release and manual reset;

Motor / Actuator

* The fire damper is equipped with a motorized control system through an automatic, remotely controlled mechanism combined with a fusible link or thermal fuse;
* The power consumption of the motor in standby mode must be as low as possible and must not exceed 0,28W (24V) or 0,57W (230V);
* The motor can be manually reset using a 9V battery;
* The damper position is visible by an integrated and visible indicator;
* When using a bus network, the motor contains an integrated field module (see further details);

**Bus system**

- The motor is equipped with an integrated field module that enables communication via a bus network with a master controller. The status of the bus communication and the damper is indicated by 3 LEDs (red/orange/blue);

- The motor is fitted with 3 cables (24/230V power supply, bus-in, bus-out). The bus network can be wired using standard electrical cabling, without the need for shielding or specific cable types;

- Each motor module has a unique address and requires no addressing or configuration;

- A maximum of 100 fire dampers can be connected to each bus network, with a maximum bus network length of 1000 meters, without the need for signal boosters;

- The master controller must be capable of remotely detecting and locating wiring errors. It must also feature an integrated BACnet IP output to enable direct communication with the building management system;

**Options**

* **[Unipolar/bipolar beginning and end-of-range switch (FDCU / FDCB)]**
* **[Pre-assembled installation block (type IFW)]**
* **[Inspection shutter that does not adversely affect fire resistance]**
* **[Epoxy coating for environments exposed to vapours, acids, or high humidity (e.g., swimming pools)]**

**- [Explosion-proof mechanisms for environments with a high explosion risk (ATEX-approved)]**

 **Installation**

* Fire dampers must always be installed according to the manufacturer's installation instructions,based on the type of wall/floor, sealing, and required fire resistance.

- The fire damper can – if applicable – be installed as close as possible to the wall or ceiling (= minimum distances) and is certified accordingly:
 **Round fire dampers**
  ≥ 30 mm from the ceiling or wall
  ≥ 30 mm between two fire dampers
 **Rectangular fire dampers**
  ≥ 25 mm from the ceiling
  ≥ 50 mm from the wall
  ≥ 50 mm between two fire dampers