



FKR-EU WITH FUSIBLE  
LINK FOR 72 °C OR 95 °C



LONMARK<sup>®</sup>  
PARTNER

WITH TROXNETCOM AS  
AN OPTION



CE COMPLIANT  
ACCORDING TO  
EUROPEAN  
REGULATIONS



ATEX CERTIFICATION



TESTED TO VDI 6022

## FKR-EU

### FOR LARGE DIAMETERS, WITH OR WITHOUT A FLANGE

Large circular fire damper for the isolation of duct penetrations between 2 fire compartments, available in 9 nominal sizes

- Nominal sizes: 315 - 800 mm
- Low differential pressure and sound power level
- Flanges as an option
- Explosion-proof construction (ATEX) as an option
- Optionally available as an upstream shutter of an air transfer unit
- Optional stainless steel casing or powder-coated casing for increased corrosion protection
- Optionally available with thermal insulation to prevent condensation
- Integration into the central BMS with TROXNETCOM

Optional equipment and accessories

- Electric actuator 24 V/230 V
- Release temperature 72/95 °C

Useful additions

- Duct smoke detectors

## General Information



Application

- Fire dampers with CE marking and declaration of performance, for the isolation of duct penetrations between two fire compartments in the event of a fire
- To prevent the propagation of fire and smoke through ductwork to adjacent designated fire compartments

Special features

- Declaration of performance in accordance with European Construction Products Regulation
- Classification according to EN 13501-3 up to EI 120 ( $v_e, h_o, i \leftrightarrow o$ ) S
- Complies with the requirements of EN 15650
- Tested for fire resistance properties in accordance with EN 1366-2 (300 Pa negative pressure)
- Certified mortar-based installation with reduced distances of 40 mm to supporting components or 40 mm between two fire dampers (flange to

flange)

- Surrounding gap dimensions in the mortar-based installation with mortar up to 225 mm permitted
- Hygienic requirements are fulfilled in accordance with VDI 6022-1, VDI 3803-1, DIN 1946-4 and EN 13779, as well as Önorm H 6020 and H 6021 and SWKI
- Corrosion protection according to EN 15650 in connection with EN 60068-2-52
- Closed blade air leakage to EN 1751, class 4
- Casing air leakage to EN 1751, class C
- Low differential pressure and sound power level
- Any airflow direction
- Integration into the central building management system with the international standard fire damper system in accordance with IEC 62026-2 with AS interface is possible

## Classification

- Class of performance up to EI 120 ( $v_e, h_o, i \leftrightarrow o$ ) S according to EN 13501-3

## Nominal sizes

- 315, 355, 400, 450, 500, 560, 630, 710, 800 mm
- L: 495 mm or 550 mm (depending on casing construction)

## Variants

- With fusible link
- With fusible link for use in potentially explosive atmospheres
- With spring return actuator
- With spring return actuator for use in potentially explosive atmospheres
- With cover grille on both sides as an upstream shutter of an air transfer unit

The following applies to Germany:

If fire dampers with a purely mechanical shut-off element are to be used as an upstream shutter of an air transfer unit, the local building regulations must be observed. Usually the use of such upstream shutters of air transfer units is restricted to pressure differential systems.

## Parts and characteristics

- Release temperature 72 °C or 95 °C (for use in warm air ventilation systems)
- Single-handed operation
- Approved installation orientation from 0° to 360°
- Explosion-proof constructions for zones 1, 2, 21, 22

## Attachments

- Limit switch for damper blade position indication
- Spring return actuator for 24 V AC/DC or 230 V AC supply voltage
- Limit switch for damper blade position indication for use in potentially explosive atmospheres
- Spring return actuator for 24 - 230 V supply voltage, for use in potentially explosive atmospheres
- Network module for the integration with AS-i or LON networks
- All attachments can be retrofitted

## Accessories

- Installation block TQ for dry mortarless installation into lightweight partition walls / fire walls with metal support structure and cladding on both sides, as well as timber stud walls, half-timbered and solid wood wall, as well as solid wood and wood beam ceilings
- Cover grilles
- Flexible connectors
- Extension piece

## Useful additions

- Duct smoke detector RM-O-3-D

- Duct smoke detector with airflow monitor RM-O-VS-D

#### Construction features

- Rigid, circular casing with spigot connections suitable for circular ducts. Spigots with lip seal on both ends, suitable for commercially available circular ducts to EN 1506 or EN 13180; alternatively with flanges on both ends. Flanges, to EN 12220
- Suitable for the connection of ducts, cover grilles or flexible connectors
- The release mechanism is accessible and can be tested from the outside
- Remote control with spring return actuator

#### Materials and surfaces

##### Casing:

- Galvanised sheet steel
- Galvanised sheet steel, powder-coated RAL 7001
- Stainless steel 1.4301

##### Damper blade:

- Special insulation material
- Special insulation material with impregnation

##### ODA construction:

- Damper casing made of galvanised sheet steel with powder coating and thermal insulation, damper blade made of special insulating material with impregnation (only in conjunction with spring return actuator)

##### Other components:

- Damper blade shaft in stainless steel
- Plastic plain bearings
- Seals of elastomer

The design variants with a stainless steel or powder-coated casing fulfil increased requirements in terms of corrosion protection. Detailed listing on request.

#### Standards and guidelines

- Construction Products Regulation
- EN 15650 Ventilation for buildings – Fire dampers
- EN 1366-2 Fire resistance tests for service installations – Fire dampers
- EN 13501-3 Fire classification of construction products and building elements
- EN 1751 Ventilation for buildings – Air terminal devices
- 2006/42/EC – Machinery Directive

#### Supply package

If attachments and accessories are supplied from the factory with the fire dampers, they are already taken into account in the order code. Depending on the installation situation, supplementary materials for assembly and fixing may be needed to ensure proper installation, e.g. mortar, screws, mineral wool, etc. Such materials are not included in the supply package, unless they are expressly described as included in the supply package. The selection of additional attachments or accessories as well as the identification and provision of materials for assembly and fixing is the responsibility of those involved in the building project and must be done taking into account the required classification.

#### Maintenance

- The functional reliability of the fire damper must be tested at least every six months; this has to be arranged by the owner of the ventilation system; functional tests must be carried out in compliance with the basic maintenance principles stated in EN 13306 and DIN 31051. If 2 consecutive tests, one 6 months after the other, are successful, the next test on the fire damper can be conducted one year later.
- A functional test involves closing the damper blade and opening it again; with a spring return actuator this can be done via remote control

- Fire dampers must be included in the regular cleaning schedule for the ventilation system
- For details on functional tests, maintenance and inspection refer to the installation and operating manual

#### Technical data

- Nominal sizes: 315 to 800 mm
- Casing lengths: 495 and 550 mm
- Volume flow rate range: up to 6000 l/s / up to 21600 m<sup>3</sup>/h
- Differential pressure range: up to 2000 Pa
- Temperature range: -20 - 50 °C
- Upstream velocity\*: Standard construction ≤ 8 m/s, construction with spring return actuator ≤ 12 m/s, construction with explosion-proof actuator ExMax/RedMax-15-BF TR ≤ 10 m/s

\* Data applies to uniform upstream and downstream conditions for the fire damper

#### Incorrect use

- without specially approved attachments in areas with potentially explosive atmospheres
- as a smoke control damper
- outdoors without sufficient protection against the effects of weather
- in atmospheres where chemical reactions, whether planned or unplanned, may cause damage to the fire damper or lead to corrosion

#### The following applies to Germany

- Do not use it in extract air systems in commercial kitchens
- Do not use it as an air transfer damper
- Do not use in combined penetration seal
- Do not use in fire protection block bulkhead.
- Approvals under building regulations may be required for the use of upstream shutters of air transfer units. This must be checked and applied for by others.
- Flame-resistant, non-dripping building materials (elastomeric foams) must at least correspond to fire rating class C - s2, d0 according to the specifications of MVV TB (since 2019/01). The applicable national building regulations must be adhered to

**FKR-EU CONVERSION FROM MANUAL OPERATION TO OPERATION WITH EXPLOSION-PROOF ACTUATOR**

**FKR-EU- CONVERSION TO AN EXPLOSION-PROOF LIMIT SWITCH**

**FKR-EU MOUNTING LIMIT SWITCH**

**FKR-EU CONVERSION FROM MANUAL OPERATION TO OPERATION WITH EXPLOSION-PROOF ACTUATOR**