

Fire Dampers

Product Standard: BS EN 15650 EXAP Standard: BS EN 15682-2 Classification Standard: BS EN 13501-3 Test Standard: BS EN 1366-2

Includes Fire damper = Mechanical spring close damper with thermal link MFD = Motorised fire damper with integrated electrical thermal release All dampers are proven i↔o = fire exposure both sides

Size Fire Stop method Min wall thickness = d Mortar Installation Kit Fire Batt System OTHER

FKA2-EU DoP/FKA2-EU/DE/002

Sizes 200x100 - 1500x800 S = W < 800 x H < 400 L = W > 800 x H > 400

FK2-EU DoP/FK2-EU/DE/002

Sizes 200x100 - 1500x800 S = W < 800 x H < 400 L = W > 800 x H > 400

FKRS-EU DoP/FKRS-EU/DE/004

Ø 100 to Ø 315

05.05.2023 New additions E1 240 S & E1 180 S for FK2-EU EK-JZ in smaller size 200x230 & blade shaft vertical installations

Installation Type

Table with columns for Installation Type, Fire Stop method, and Min wall thickness = d. Rows include WALL-SOLID, WALL-DRYWALL, WALL-SHAFT WALL, WALL-SANDWICH PANEL, WALL-CLT/SOLID WOOD, FLOOR-SOLID SLAB, FLOOR-WOOD BEAM, and FLOOR-SOLID WOOD/CLT.

Table columns for Mortar, Installation Kit, Fire Batt System, and OTHER. Contains performance data for FKA2-EU.

Table columns for Mortar, Installation Kit, Fire Batt System, and OTHER. Contains performance data for FK2-EU.

Table columns for Mortar, Inst Kit, Fire Batt, M-wool, and OTHER. Contains performance data for FKRS-EU.

Table columns for Mortar, Inst Kit, and Fire Batt. Contains performance data for FKR-EU. Includes diagrams for Solid wall, Drywall, Shaftwall, Sandwich panel, Multi-Service Penetration Hilti seal, In corner up to wall & ceiling, Fix to slab with deflection head kit, Mixed types 2 each, Multiple damper arrays, Remote from & under, Pre-formed hollow chamber, Pre-formed hollow stone, Composite, Wooden Beam, CLT/solid wood, Lightweight, and Historical Wooden Beam.

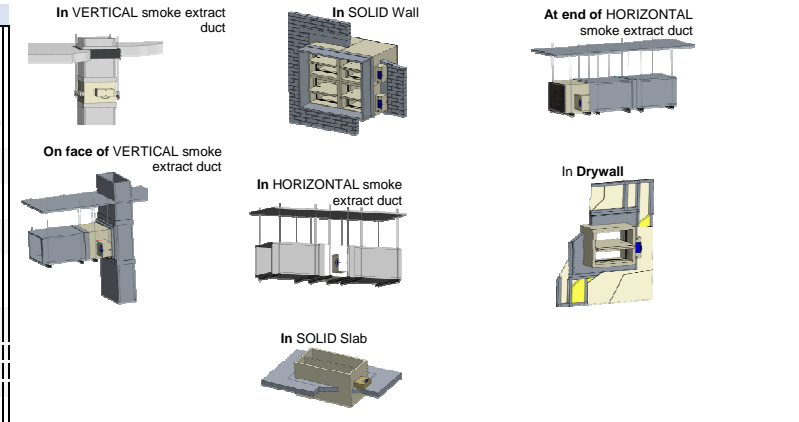
Smoke Control Dampers

Product Standard: BS EN 12101-8 Classification Standard: BS EN 13501-4 Test Standard: BS EN 1366-10 & 2

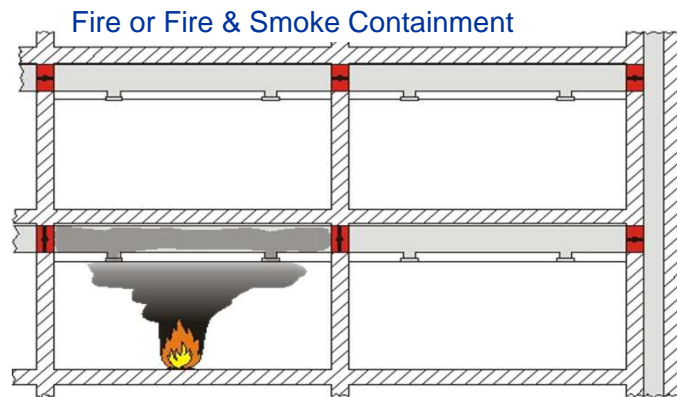
Table with columns for Installation Type and Smoke Control Damper. Rows include WALL-SOLID, WALL-DRYWALL, SHAFT WALL, VERTICAL smoke extract duct, HORIZONTAL smoke extract duct, and FLOOR-SOLID SLAB.

Table for EK-JZ DoP/EK-JZ/DE/004. Sizes 200x230 to 1200x2030. Performance data for various installation types.

Table for EK2-EU DoP/EK2-EU/DE/002. Sizes 200x200 to 1500x800. Performance data for various installation types.



COMPARTMENTATION or Smoke VENTING & CONTROL - Understand the difference



Fire Damper - To maintain COMPARTMENTATION
CLOSE & remain closed

For use in HVAC systems

Evaluated to

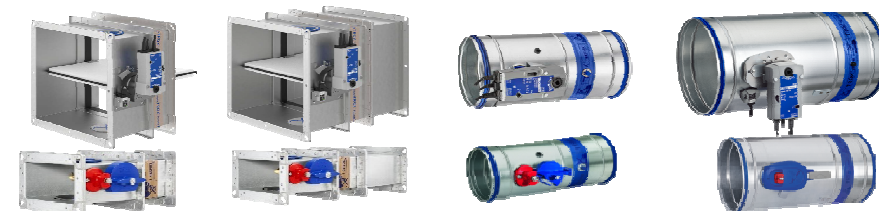
- close & remain closed on thermal activation or from external signal
- be fire resisting to the standard time temperature test curve
- Maintain leakage performance at elevated temperatures and positive pressure

Does **not** require permanent power supply

HVAC system
Fans **shut down** under fire conditions

FD / MFD (motorised leakage rated fire damper)
Not evaluated to open and maintain opening above ambient.
Therefore

NOT proven for smoke venting
NOT compatible for smoke venting systems



Maintain fire (& smoke) integrity of the support construction

UKCA / CE marked to – 3rd party (Notified Body) accredited

- Product Standard - BS EN 15650
- BS EN 15882-2
Test Standard - BS EN 1366-2
Classification Std. - BS EN 13501-3

Code = **E I** tt (ve, ho, i↔o) **S**

- E** = Fire Integrity leakage limited to 360m³/h.m²
- I** = Insulation. Maximum 180 °C 25mm from wall
- S** = Smoke leakage limited to 200m³/h.m²
- ve = vertical
- ho = horizontal
- Fire exposure direction
- i↔o = actuator hot and cold side approved
- i→o = actuator cold side approved
- i←o = actuator hot side approved

Fire Damper variants

- FD = Fusible link fire damper min. **E** classified
- MFD = Motorised fire damper min. **ES** classified
- Electronic thermal device integrated into actuator

Fire Damper essential components

- Fire resistant movable barrier
- Thermal release device
- Automatic Closing device

Smoke Control Damper - To form a PATH from fire compartment to the open air
OPEN and maintain opening or CLOSE & remain closed

- For use in
- Pressurisation systems
 - Pressure relief systems

- Extraction systems
- Ductwork systems
- Cold smoke removal after fire

Evaluated to

- be heat resisting at elevated temperatures (single compartment) or fire resisting to the standard time temperature test curve (multi compartment)
- be applied to automatic or manual intervention systems
- open then close or close then open at elevated temperature
- when open, to maintain cross section area at elevated temperature
- when closed maintain leakage performance at elevated temperature and negative pressure. known maximum leakage to allow sensible fan selection and give a guide to smoke not leaking back through.

Function - Create a path

- Failsafe – stay in position i.e.- OPEN or CLOSED
- Permanent power supply
- NO devices to cause uncontrolled operation
- NO Thermal release
- NO spring return

Smoke Control Damper Variants

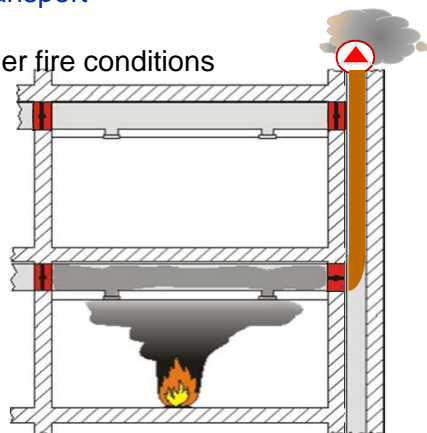
- Elevated temperature - **Single** compartment classified
- Full fire resistance - **Multi** compartment classified
- Classified to match intended system requirements

- CLOSED**
- Fire Integrity
 - Leakage integrity

- OPENED**
- Open against force
 - Maintain open area
 - Stay in position



Heat & Smoke Transport
Smoke Control
Fans **operate** under fire conditions



Smoke Control Damper
Suitable for **combined** HVAC and smoke extract
(when 'S' & C_{10,000}/C_{mod} classified)

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- Product Standard - BS EN 12101-8
Test Standard - BS EN 1366-10 & 2
Classification Std. - BS EN 13501-4

Code **E_{xxx} I** tt (v_{exx} - h_{oxx} i↔o) **Sxxx Cxxx XA xxx**

Classification order = Highest, top lowest, bottom

E = Fire Integrity

- El multi = Fire resistant to STTC
- E₆₀₀ ..single = 600°C Temp resistant

I = Insulation. Maximum 180 °C 25mm from wall

S = Smoke leakage limited to 200m³/h.m²

- S₁₅₀₀ = +500 to -1500 Pa approved
- S₁₀₀₀ = +500 to -1000 Pa approved
- S₅₀₀ = +500 to -500 Pa approved

C = System type – durability

- C_{mod} = Combined system using modulating actuator (static balancing) in ventilation mode only
- C_{10,000} = Combined Smoke control & HVAC system
- C₃₀₀ = Dedicated Smoke control system emergency only

A = Initiation Regime

- MA = Automatic Activation, with manual intervention
- AA = Automatic Activation, without any manual intervention

v_e = Closed blade vertical

- v_{ed} = vertical, in duct, v_{ew} = vertical, in wall v_{edw} = vertical, in shaft & wall

h_o = Closed blade horizontal

- h_{od} = horizontal in duct, h_{ow} = horizontal in floor h_{odw} = horizontal in duct & floor

Fire exposure direction

- i↔o = actuator hot and cold side approved