

Fire Dampers



Product Standard: BS EN 15650 EXAP Standard: BS EN 15882-2 Classification Standard: BS EN 13501-3 Test Standard: BS EN 1366-2

Includes Fire damper = Mechanical spring close damper with thermal link MSFD = motorised smoke leakage rated fire damper with integrated electrical thermal release All dampers are proven i↔o = fire exposure both sides

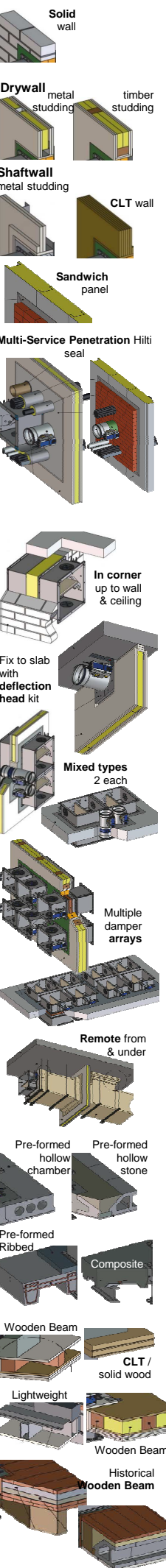
FKA2-EU DoP/FKA2-EU/DE/002 MSFD Sizes 200x100 - 1500x800 S = W < 800 x H < 400 L = W > 800 x H > 400

FK2-EU DoP/FK2-EU/DE/002 MSFD Sizes 200x100 - 1500x800 S = W < 800 x H < 400 L = W > 800 x H > 400

FKRS-EU DoP/FKRS-EU/DE/004 MSFD Ø 100 to Ø 315

FKR-EU DoP/FKR-EU/DE/004 MSFD Ø 315 to Ø 800

Main performance table with columns for Installation Type, Fire Stop method, and various fire test ratings (EI, EI 90 S, EI 120 S, EI 180 S, EI 240 S) for different damper models and wall types.



Always refer to damper DoP, Installation manual and Product Datasheet available on www.troxuk.co.uk

Smoke Control Dampers



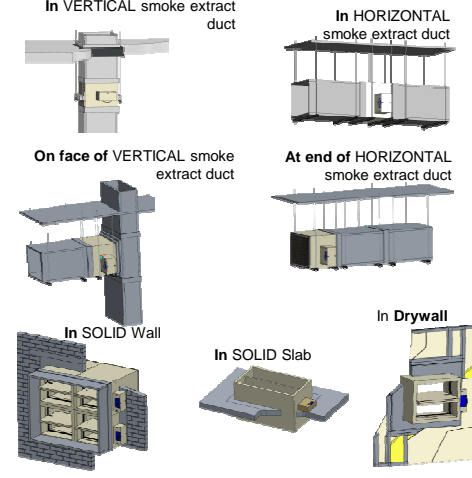
Product Standard: BS EN 12101-8 Classification Standard: BS EN 13501-4 Test Standard: BS EN 1366-10 & 2

EK-JZ DoP/EK-JZ/DE/004 Sizes 200x230 to 1200x2030

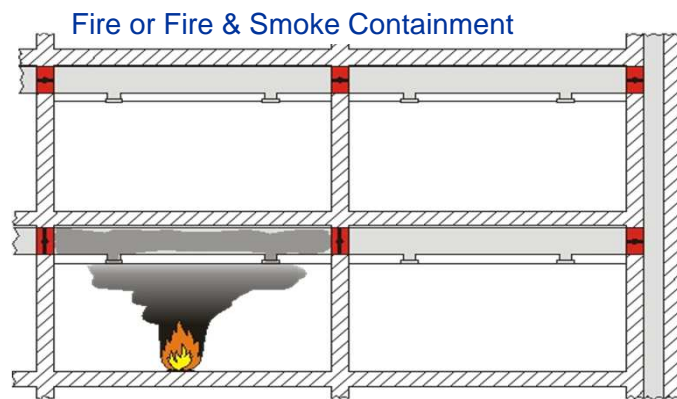
EK2-EU DoP/EK2-EU/DE/002 Sizes 200x200 to 1500x800

EKA-EU DoP/EKA-EU/DE/001 Sizes 200x200 to 1500x800

Smoke Control Damper performance table with columns for Installation Type, Fire Stop method, and various fire test ratings (EI, EI 90, EI 120, EI 150, EI 180, EI 240) for different damper models and wall types.



COMPARTMENTATION or Smoke VENTING & CONTROL - Understand the difference



Fire Damper - To maintain COMPARTMENTATION
CLOSE & remain closed

For use in HVAC systems

Evaluated to

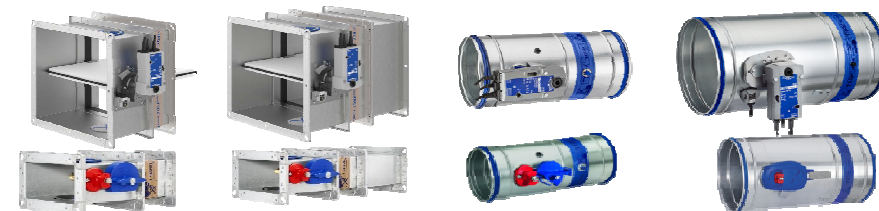
- close & remain closed on thermal activation or from external signal
- be fire resisting to the standard time temperature test curve
- Maintain leakage performance at elevated temperatures and positive pressure

Does **not** require permanent power supply

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

Fire Damper / MSFD (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
- MSFD = 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

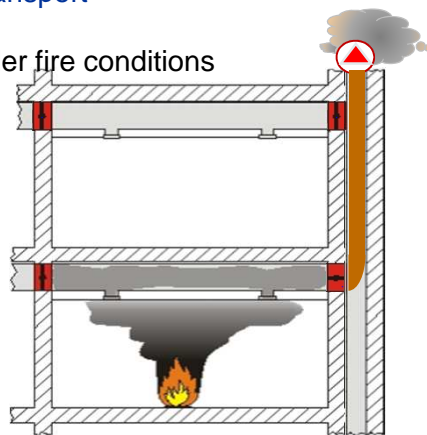
- Elevated temperature - **Single** compartment classified
- Full fire resistance - **Multi** compartment classified
- Classified to match intended system requirements

- 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

- EI 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