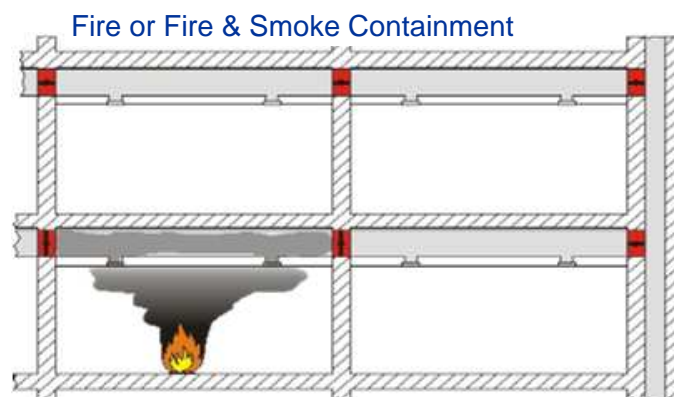




## COMPARTMENTATION or Smoke VENTING & CONTROL - Understand the difference



### Fire Damper - To maintain COMPARTMENTATION

**CLOSE & remain closed**

For use in HVAC systems

Evaluated to

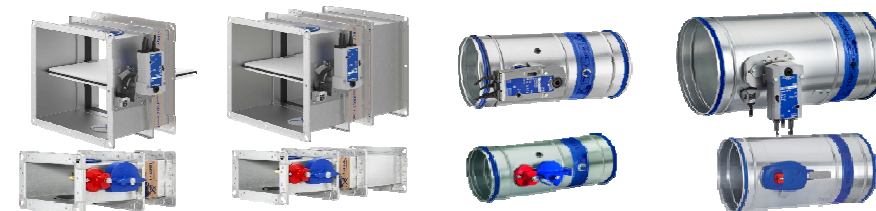
- close & remain closed on thermal activation or from external signal
- be fire resisting to the standard time temperature test curve
- Maintain leakage performance at elevated temperatures and positive pressure

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 – 3<sup>rd</sup> 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

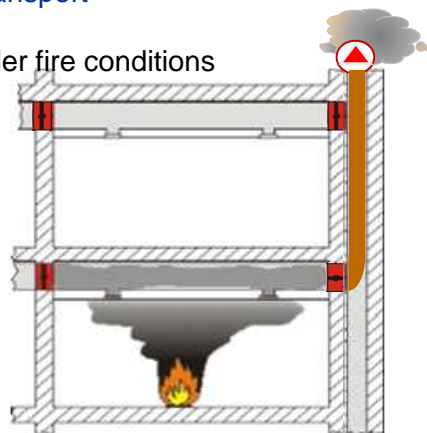
**CLOSED**  
• Fire Integrity  
• Leakage integrity

**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<sub>10,000</sub>/C<sub>mod</sub> classified)

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

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

Code **E<sub>xxx</sub> I<sub>tt</sub> (v<sub>exx</sub> - h<sub>oxx</sub> i↔o) S<sub>xxx</sub> C<sub>xxx</sub> XA<sub>xxx</sub>**

Classification order = Highest, top lowest, bottom Include lower orders

**E** = Fire Integrity

**EI** ..... **multi** = Fire resistant to STTC

**E<sub>600</sub>** .. **single** = 600°C Temp resistant

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

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

S<sub>1500</sub> = +500 to -1500 Pa approved

S<sub>1000</sub> = +500 to -1000 Pa approved

S<sub>500</sub> = +500 to -500 Pa approved

**C** = System type – durability

C<sub>mod</sub> = Combined system using modulating actuator (static balancing) in ventilation mode only

C<sub>10,000</sub> = Combined Smoke control & HVAC system

C<sub>300</sub> = Dedicated Smoke control system emergency only

**A** = Initiation Regime

MA = Automatic Activation, **with** manual intervention

AA = Automatic Activation, without any manual intervention

v<sub>e</sub> = Closed blade vertical

v<sub>ed</sub> = vertical, in duct, v<sub>ew</sub> = vertical, in wall v<sub>edw</sub> = vertical, in shaft & wall

h<sub>o</sub> = Closed blade horizontal

h<sub>od</sub> = horizontal in duct. h<sub>ow</sub> = horizontal in floor h<sub>odw</sub> = horizontal in duct & floor

Fire exposure direction

i↔o = actuator hot and cold side approved