

Fire and Smoke Damper Testing & Inspection

What are Fire Dampers?

British Standard 9999:2017 Code of Practice for fire safety in the design and use of buildings states “...any grille or opening through the <service duct> enclosure for ventilation purposes should be protected by a fire damper”.

It defines a Fire Damper as a “mechanical device that is operated automatically or manually and is designed to prevent the passage of fire and which, together with its frame, is capable of meeting for a stated period of time the fire resistance criterion for integrity”.

Fire dampers or ‘doors’ are located where ductwork passes through fire compartment walls and floors. They are typically held open by a ‘fusible link’ which BS 9999:2017 defines as a “device that releases a component such as a fire damper or fire shutter at a set temperature”.

Basically, when the fusible link is met by high heat, the link will melt, closing the damper and stopping the spread of fire.

Fire Damper Testing & Inspection

Fire dampers play a crucial role in a building’s fire safety system. The difference between a well maintained, working fire damper and an ill maintained partially working fire damper can be the difference between life and death in the case of a fire.

With the enactment of the Regulatory Reform (Fire Safety) Order 2005, it is now the employer’s responsibility to maintain their fire safety systems.

BS 9999:2017 also states that: *Arrangement’s should be made for all fire dampers to be tested by a competent person on completion of the installation and at least annually, and to be repaired or replaced immediately if found to be faulty. Spring – operated fire dampers, should be tested annually and fire dampers situated in dust-laden and similar atmospheres should be tested much more frequently, at periods suited to the degree of pollution*

Fire Safety Legislation Compliance

Fire dampers are installed within the duct system to prevent the spread of fire. If a fire breaks out and gets into your ventilation system are you sure that the condition of your fire dampers will not prevent them from fulfilling this essential role?

All fire safety systems must be regularly & professionally maintained to ensure the safety of building occupants - a faulty fire damper will not prevent the spread of fire.

Provision of an essential fire safety service should be considered whereby all your fire dampers will be cleaned, lubricated, drop tested and reset to ensure they are in good working order.

Faults such as damaged linkages can also be replaced.

Fire & Smoke Damper Tests in Hospitals and Health Care Properties

Heating and ventilation systems Health Technical Memorandum 03-01: Specialised ventilation for healthcare premises Part B: Operational management and performance verification – gives the following guidance:

1.31 Regular tests, at intervals agreed with the local fire prevention officer, will need to be carried out in order to demonstrate the continuing efficiency of the fire detection and containment systems. These may be in addition to the inspections detailed above. Records of these tests should be kept.

4.13 All fire dampers should be tested as part of the annual verification.

A fire and smoke damper test provides clients with a detailed report including:-

- Photographic evidence
- An inventory of all dampers tested, including location and damper number. Inspection results and, if the damper failed to operate, detailed explanation and suggested corrective action
- A set of drawings detailing the location of all dampers with relevant damper numbers.