

# FIRE DOORS

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A well-designed door assembly should be able to fulfil its normal functions of isolation and security without causing too much hindrance to the movement of people and goods. Fire doors play a key role in delaying the spread of fire and smoke, thus saving lives and reducing damage to property and business.

This Digest, which supersedes BRE Digest 320, discusses the role played by fire doors (including smoke control doors), the methods of assessing their performance and the requirements made under regulations and codes of practice. In recent years, the industry has successfully developed door assemblies using widely different forms of design; therefore, it is no longer appropriate to give simplified guidance on their construction. The importance of third-party certification for the manufacture, installation and maintenance of fire doors is highlighted.

The Digest summarises the key performance requirements for fire doors and smoke control doors so will be of interest to specifiers, manufacturers, installers and approval authorities such as building control and insurers. It concludes with a useful list of reference documents.

To provide adequate means of escape in case of fire and/or structural fire protection, different parts of a building may need to be separated by fire-resisting construction. Any openings within these enclosures for the passage of people or large objects will need to be closed off by doors (or shutters) which have a precise function to fulfil in the event of a fire:

- first, the door should prevent excessive transmission of products of combustion which can interfere with the safe use of escape routes
- secondly, it should maintain the effectiveness as a fire barrier of the wall or partition in which it is located.



Figure 1: Fire resistance test to BS 476-22:1987<sup>(1)</sup>

Every fire door or smoke control door is therefore required to act as a barrier to the passage of smoke and fire to varying degrees dependent on its location in the building and the fire hazard associated with the building or room (bearing in mind contents, occupants and use).



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