



FIRE DOOR MAINTENANCE



Standards and Assessment

Introduction

Fire doors are commonly overlooked as an essential part of a commercial or public building maintenance regime. However, fire doors help sub-divide a building into compartments, slowing down the spread of fire and allowing time for occupants to escape. In some applications, the regulations may state that smoke control is also required.



In order to ensure compliance it is important that doors are inspected correctly and maintained. Failure to do so can place property and lives at risk and is likely to result in criminal prosecution.

According to published government figures, in 2011-12 there were 24,100 fires recorded in buildings other than dwellings, resulting in 1200 injuries and 25 deaths. This excludes the unreported fires that have been managed internally. 53% of deaths were related to smoke inhalation.

The legislation around fire door safety is extensive and for good reason. The safety of your staff and premises is of the utmost importance but it is often something that is unknowingly compromised. The 'Fire Door' is the first line of defence between you and the fire and plays a crucial role in restricting the spread of fire and smoke, thus reducing injury, property damage and death.

When you call upon the services of Pro-Servicing Limited, we will quickly establish if the products you have in place have been well maintained and that both you and your premises are fully compliant to Fire Safety Regulations as well as safe. We offer fire door inspections, certification and replacement.



Maintenance

As with any other life-saving product, a fire door should be checked at least every 6 months or more regularly depending on the traffic using the door, to ensure it functions correctly and is ready to use. Fire doors should be considered in exactly the same way as testing a smoke alarm or a fire extinguisher.

It is a legal requirement that fire doors are maintained correctly otherwise you can be prosecuted under the Regulatory Reform (Fire Safety) Order if you fail to do so.

Why Maintain Fire Doors?

As an employer or owner of a business premises, it is your responsibility to ensure the safety of everybody on site, including staff and clients.

A fire door can drastically slow down fire from spreading from room to room. This can greatly improve the chances of stopping the fire in its tracks and preventing further damage.

Failing to maintain or repair any fire door could render it useless and the consequences of this could be catastrophic.

You could render premises insurance invalid by failing to maintain your fire doors.

Regulations

What regulations affect the use of fire doors?

Excluding domestic properties, existing buildings are governed by the requirements of the **Regulatory Reform (Fire Safety) Order: 2005** – otherwise known as the RRO or FSO.

The Regulatory Reform (Fire Safety) Order 2005 ~ FSO, replaced over 70 pieces of fire safety law and came into force in 2006. The responsibility for fire risk assessment in all non-domestic buildings, including the common parts of flats and houses of multiple occupations, falls to the 'responsible person'.

RFO extract: *"Where necessary in order to safeguard the safety of relevant persons the responsible person must ensure that the premises and any facilities, equipment and devices provided are subject to a suitable system of maintenance and are maintained in an efficient state and in efficient working order and in good repair."*

This applies to any door provided as a fire exit and along an escape route or which provides fire containment. In order to satisfy the above regulations it is important that you can demonstrate:

- That regular maintenance is carried out at suitable intervals
- That potentially dangerous defects are remedied in a timely fashion
- That records are kept to document the above

Under the FSO, the responsible person must carry out a fire safety risk assessment and implement and maintain a fire management plan.

The law applies to you if you are:

- responsible for business premises
- an employer or self-employed with business premises
- responsible for a part of a dwelling where that part is solely used for business purposes
- a charity or voluntary organisation
- a contractor with a degree of control over any premises
- providing accommodation for paying guests

Fire doors play a major role in the fire safety and protection of ALL buildings covered by the FSO and in order to ensure compliance it is important that fire doors are inspected correctly and maintained.

Failure to do so can place property and lives at risk and is likely to result in criminal prosecution.

BS EN 12635:2002 – Industrial, Commercial and Garage Doors and Gates – Installation and Use



This is one of a series of supporting standards to BS EN 13241-1:2003 the Product Standard for Industrial, Commercial, Roller and Garage Doors and Gates. It provides guidance on documentation, installation, labelling, handover, operation, use, maintenance and repair of doors, including the requirements for a log book for power operated doors, which are summarised below.

Requirements for a Log Book

BS EN 12635 requires that the log book shall contain the following:

- Name and contact details of the manufacturer
- Unique identification number
- Door location reference (if known)
- Name and contact details of the installer
- Date of completion of installation
- The results of installation verification and testing
- Identification of power unit
- Identification of safety devices
- The results

The above requirements apply particularly to new installations but are essential information for the continued maintenance and safe operation of any door, no matter how old. The log book should also contain clear reference to the operating instructions

for the door, whether included in the log book or as a reference to separate documentation.

On an ongoing basis, there should be space for the recording of:

- All maintenance and repair visits
- Details of the work done
- Details of significant changes or upgrades
- Name, date and signature of responsible person in each instance

Fire Door Sets

There are three main areas that our maintenance and certification concentrates on.

1. Fire Door Frames

Do I need special door frames for fire doors?

Our engineers check your log book to ensure that door frames have been purchased from the door manufacture, or from a company licensed to manufacturer them or via a BWF Approved Fire Door Centre.

- 60 minute fire doors - Frames should be made of hardwood with a density greater than 650 kg/m³
- 30 minute fire doors – frames or linings can be made of softwood, with a minimum density of 450 kg/m³ (or to match the density and frame dimensions given in the manufacturer's installation instructions)

General Information

Fire door frame or lining

Frame or lining thickness would usually be tested at a minimum 30 mm (finished size, excluding stops) or the thickness given in the manufacturer's installation instructions, to ensure hinge screws hold securely.

Considerations for the supporting construction for a fire door frame

The frame or lining should be constructed into a brick, block or masonry wall or an appropriate timber stud/ plasterboard lined partition capable of being equal to the rating of the door assembly. Any voids between the frame / lining and the wall should be infilled with mineral fibre or intumescent paste.

Seals in the door frame

ALL fire doors MUST be fitted with the appropriate seals.

Where possible, the seals should be fitted to the frame. Intumescent seals MUST be used as recommended by the door leaf manufacturer. Seals can be inserted into the door leaf if the manufacturer's test specifications allow this.

Gaps are required around a door and its frame

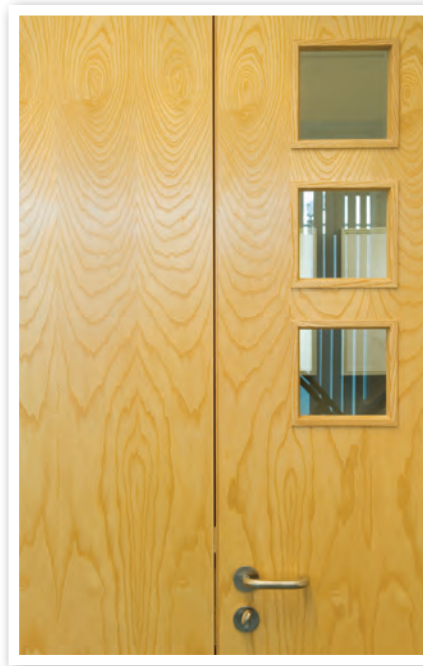
The gap between the door and the frame is extremely important and must be suitable for the intumescent seal fitted. In general the gap should not exceed 3mm along the 2 long edges and across top of the door leaf.

The gap at the bottom of the door is usually around 10mm* for non-smoke conditions BUT 3mm when smoke seals are required.

Fire Door Seals

ALL fire doors MUST be fitted with the appropriate seals.

Fire seals are designed to expand under heat, and fill the gaps between the door leaf and frame, thereby preventing the passage of smoke and fire to other parts or compartments of the building.



Intumescent seals may be placed into grooves machined in the two vertical sections and top edge of the door frame. When exposed to heat, intumescent seals expand to many times their original size, sealing the gap between the door and the frame and aiding containment of the fire.

The materials contained in the seals (such as sodium silicate or graphite), differ between seal manufacturers and expand at different rates. It's important to use the same type of seals around the door, when installing or replacing seals.

Smoke Seals

You can obtain combined Intumescent and Smoke Seals. These are designed to provide additional protection to prevent the passage of cold smoke. In some circumstances, smoke seals are a Building Regulation requirement.

Uninterrupted intumescent strips should be fitted into the frame or lining, where possible. If this cannot be achieved, the intumescent seals may be fitted into the door edge. The recommended seal size for most modern 30 minute doors, other than doorsets, is 15mm x 4mm. The recommended seal size for most modern 60 minute fire doors is 20mm x 4mm, or two 10mm x 4mm.

Intumescent seals MUST be used as recommended by the door leaf manufacturer.

Fire Door Components

Essential Ironmongery

Essential Ironmongery such as hinges, closers, locks and latches should be CE marked and CERTIFIRE Approved and are vital to the fire resistance performance of the door assembly.

Hinges

Hinges (or butts) must comply to annex B of BS EN 1935 - MUST be CERTIFIRE Approved.

Usually 1½ pairs made of metal with melting point above 800°C.

Rising butt or spring hinges are NOT permitted.

Closers

Closers (on non-latched doors) MUST be CERTIFIRE Approved. There are two types:

- Face-fixed overhead closers fixed to the face of the door or frame which automatically closes the leaf from fully open position
- Concealed / spring closers which are concealed in the door leaf and use a spring to close door from open position.

Latches

Mortice or tubular mortice must comply with BS EN 12209. These may be lockable or un-lockable types depending on door requirements.

Knob set

Latches and knobs which have an integral locking and / or latch mechanism.

Where fitted, latches and knob sets MUST be CERTIFIRE Approved.

Handles, knobs, spyholes are NOT classed as 'Essential Ironmongery' but are still vital to the fire resistance performance of the door.

You must still refer to fire door manufacturer's instructions before fitting such components.

Letterplates / letterboxes on a fire door?

You can, but they MUST be tested and CERTIFIRE Approved.

You must also check that the door has been certificated for use with letterplates / letterboxes.

Check the fire door manufacturer's instructions, or if in doubt, contact the door manufacturer.

Slots for letterboxes should NOT be cut on site. This work should only be carried out by licensed converters under the BWF-CERTIFIRE Scheme.



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