

Doorpac fact sheet 7

Fire Door frames

Manufacturers & Suppliers of Internal Doorsets,
Glazed Apertures & Screens and Joinery Products

Including:

- The difference between frame, lining and casing
- Specifying door frames
- Installing a fire door frame
- Re-using existing frames

The old custom and practice of 'knocking up' fire door frames, hanging a fire door leaf and believing that the results constituted a valid fire door installation was never correct, undoubtedly placing property and lives at risk. The best way to ensure that a fire door is installed using the correct frame is by purchasing a fire door frame from the door leaf manufacturer, preferably as part of a door set, or from a company certificated to produce fire door frames for that manufacturer's door. This ensures that you get a fully compatible and certificated end product.

What is the difference between a fire door frame, fire door lining and fire door casing?

Door Frame: A component delivered pre-assembled into which a door leaf can be hung. A frame is usually rebated to create the door stop.

Door Lining: A kit of components usually consisting of two stiles and a head which when assembled on site can accept a door leaf.

Once a door leaf is fitted, door stops will need to be added.

Door Casing: Similar to a door lining, except that the door stops are created by pre-rebating the components.

All should be grooved to take an intumescent seal.

Ensuring the Correct Specification:

It is very important to specify all fire door components correctly. A fire door is more than just a door leaf. The door frame, hinges, ironmongery, seals and the glass in vision panels must all be selected, from installation instructions, to ensure that the door assembly design is properly fire resistant and that all the components work when used in combination.



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How to recognise a BWF - CERTIFIRE fire door frame

Specifying Fire Door Frames:

Frame Material: 30 minute fire door frames can be made from softwood or hardwood with a minimum density of 510kg/m³.

60 minute fire door frames should always be made from hardwood with a minimum density of 650kg/m³.

Densities less than this are acceptable if stated in the door leaf manufacturer's installation instructions. To ensure the proposed species of timber used in a door frame is compatible with the tested design, you should check the suitability of different species with the fire door manufacturer. MDF is now also widely used for 30 minute fire door frames; however, it is important to check the installation instructions, as MDF cannot be used with all manufacturers' doors.

Frame Dimensions: Minimum dimensions will be dictated by the fire test report, but as a general principle, the frame must be thick enough to take the full length of the screw used. Although frames of 30mm thickness are preferred, they may vary according to installation instructions.

Door Stops: It is generally accepted that intumescent seals should be used with all fire doors. Their use ensures that the selection of door stops is no longer critical from a fire performance perspective. Stops of 12mm are typical, but may vary according to installation instructions.

Seals: Unless the intumescent seal is located in the door edge, it should be fitted into the frame. To facilitate fitting, the frame should be grooved to the size of the seal specified. Generally a 15mm x 4mm seal will be acceptable for a 30 minute fire door. 60 minute doors require a higher seal specification, which may involve using two seals fitted in tandem. It is important to check the correct seal specifications on the door's installation instructions. If smoke seals are required, separate or combined seals may be used.

The Door Leaf and Frame Gap: The internal dimensions of a frame should be such that the gap left between the frame and the door leaf, when fitted, meets the requirements of the fire installation instructions. Generally, this gap is 3mm, but where smoke seals are used, it may be necessary to increase the gap to facilitate the operation of the doors.

Installing a Fire Door Frame:

Installations should only be carried out by competent professionals. Please contact the BWF or visit www.warringtonfire.net for a full list of approved installers.

Under the BWF-CERTIFIRE Scheme, all fire doors and doorsets are supplied with specific and comprehensive installation instructions from their manufacturers. These must be followed exactly if certification is to remain valid.

The frame must be fixed securely to the surrounds, with gaps generally not exceeding 10mm between the frame and the wall, which must be filled with suitable material such as intumescent mastic or mineral fibre. The frame can be rebated to create a stop or the stop may be planted and either pinned or pinned and glued.

Re-using Existing Frames:

There may be circumstances where fitting new frames is not possible or practicable. If existing frames are to be re-used, a number of additional steps may be necessary:

1. Grooving an existing frame to take an intumescent seal is possible, but can be difficult. Grooving the door leaf is an alternative option, although care must be taken to ensure that the fire door label is not damaged.
2. The architraves must be removed on at least the hanging side of the frame. This enables inspection of the joint between the frame and wall to ensure adequate sealing (just as for new frames, the gap between the frame and wall must be fully sealed).
3. The thickness of the frame should be checked to ensure it meets the requirements of the installation instructions, and guidance sought if undersize.

Fire doors which fail cost lives and property!

The BWF-CERTIFIRE Fire Door & Doorset Scheme has developed a specification for a standard fire door frame, which is compatible with a majority of FD30 fire doors manufactured under the scheme. All fire door frames manufactured to the standard frame specification and manufactured under the BWF-CERTIFIRE Fire Door & Doorset Scheme can be identified by the label (images 1–4) on each frame. To find out which companies are licensed and certificated to manufacture compatible fire door frames, please refer to the Scheme Directory, the BWF website or contact the BWF