FACT CARD 11

Fact Card 11 – Fire Door Frames

Giving you the facts about fire door frames

Do I need special door frames for fire doors?

The practice of manufacturing a door frame on-site or in a workshop, hanging a door and belieivng the result constituted a valid fire door installation has never been correct.

Door frames, to go with certificated fire doors, should conform to the requirements stated on the door leaf's data sheet. Frames certificated to meet the requirements of specified door leaves can be purchased from the door leaf manufacturer, a company licensed to manufacture the door frames or a distributor.

Types of door frame or lining

- 30-minute fire door frames or linings can be made from various timbers and timber-based materials. They must match the species, type and density, profile and frame dimensions given in the door leaf's data sheets and confirmed in the manufacturer's installation instructions.
- Standard BWF Fire Door Alliance "CERTIFIRE" 30-minute fire door frames are suitable for use with all BWF Fire Door Alliance CERTIFIRE certificated FD30 door leaves manufactured within the scheme but only those.
- 60-minute fire door frames should be made of hardwood that achieves the required minimum density. There is no such thing as a "Standard" 60-minute fire door frame. The frame to be used for 60-minute fire doors can only be as stated on the door leaf's data sheet.

You should check the suitability of different timber species for doorframes since some species such as Ash, Beech and Iroko are **not** accepted within the scope of many door leaf manufacturer's certification.

How is a door stop installed?

Door stops, that limit the movement of single-acting door assemblies, can be cut out of the solid frame (a rebate is produced to form a stop for the door) or 'planted'.

The planted section should be fixed by pinning or gluing and pinning, the stop to the frame.

How thick should my fire door frame or lining be?

Fire door frames should be of the material types, density and dimensions, including the size of the stop, stated on the fire door leaf's data sheet.

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Can I use the existing door frames?

Fitting new fire doors into existing frames is risky because the existing frame may not be fit for purpose or compatible with the certification of the new fire door leaf. If you are fitting new fire doors and components into existing frames there are a number of checks that should be made on the frame before taking the decision to only upgrade the door leaf. If it is not compatible, then certification becomes invalid.

The existing frame must be checked to see that it is in accordance with the frame specification detailed on the door leaf's data sheet to ensure that it is compatible.

Specification to check includes:

That the correct installation, including adequate fire stopping, is in place in the gap between the existing frame and the wall (behind the architrave). This is particularly important when upgrading an existing door that was not originally fire rated as the frame would have been installed without consideration to fire resistance. ☐

That material removed from the door frame for previous ironmongery will not affect the certification of the new fire door leaf or ironmongery. ☐

The following characteristics must be checked to ensure that the existing frame conforms with the requirements of the door leaf's data sheet. ☐

The material, e.g. softwood, hardwood or MDF, density, and the moisture content ☐

The overall size and profile of the body of the door frame. ☐

The overall size and profile of the door stop ☐

What considerations are there for the supporting construction for a fire door frame?

Fire door frames should be fitted into partition walls that have at least the same proven fire resistance as the resulting fire door assembly. Not all fire door assemblies suit all forms of partition which can be stable (e.g. timber stud partitions and masonry walls) or unstable (e.g. steel stud partitions). This will be identified on the manufacturer's CF certificate. The gap between the frame and the partition must be sealed with appropriate fire stopping materials that should also control the movement of smoke if this is required. Guidance on appropriate materials is given in BS 8214:2016 or can be provided by the door leaf manufacturer.

Do I fit seals into the frame or door?

ALL fire doors must be fitted with the appropriate seals. Seals can be fitted to the frame or the edge of the fire door leaf.

The type of seals that can be fitted will be stated on the door leaf's data sheet.

What gaps are required around a door and its frame?

The limitations on the size of gap that is permitted between the door leaf and the frame is extremely important and is documented on the door leaf manufacturer's data sheet.

In general the gap should be between 2mm and 4mm along the two long edges and across top of the door leaf – to facilitate checking of the gap on site, a BWF Fire Door Alliance Scheme Gap Testers are available to purchase on request here.

The gap at the bottom of the door is usually around 8mm to 10mm* when providing fire resistance. When smoke control is also required this gap should be reduced to 3mm (following the guidance in BS 8214:2016) unless a smoke seal is employed to close the gap when the requirements for the seal when fitted to the door leaf should be followed.

* Check the door manufacturer's installation instructions and the door leaf's data sheet.

For more information on the installation of fire door frames check with the frame and/or door manufacturer and download the Fire Door Installation Guide from the BWF Fire Door Alliance website

Disclaimer:

Note: Whilst every effort has been made to ensure the accuracy of advice given, the BWF cannot accept liability for loss or damage arising from the use of the information supplied in this publication.

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