

## Q-Mark Fire Door Installation Instructions

*Please read through the instructions thoroughly before commencing any work.*

Check the structural opening size against the door set, it is recommended that there is a **5 – 10mm** clearance gap all the way around the outer edge of the frame.

Work in accordance with the sites manual handling policy, it is advised that two persons lift, move, and position the door set.

Place the door and frame in structural opening and then open the door 90° (degrees).

Position a suitable packer beneath the opening edge of the door leaf, ensure the hinge side of the frame is plumb to both internal and external faces using a spirit level.

If the floor is not level, fit packers under the jambs

Pack the hinge side of the frame ensuring the frame is plum and square, check that the leg is not bowed.

The positioning of installation fixings in height must be planned to avoid conflicts with the lock keeps, draught and intumescent fire seals.

### **Maximum of 600mm centres between fixings.**

Figure 3

Figure 1

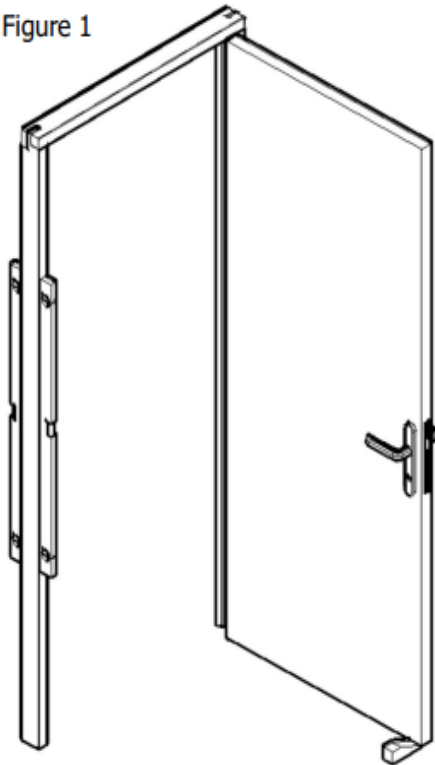
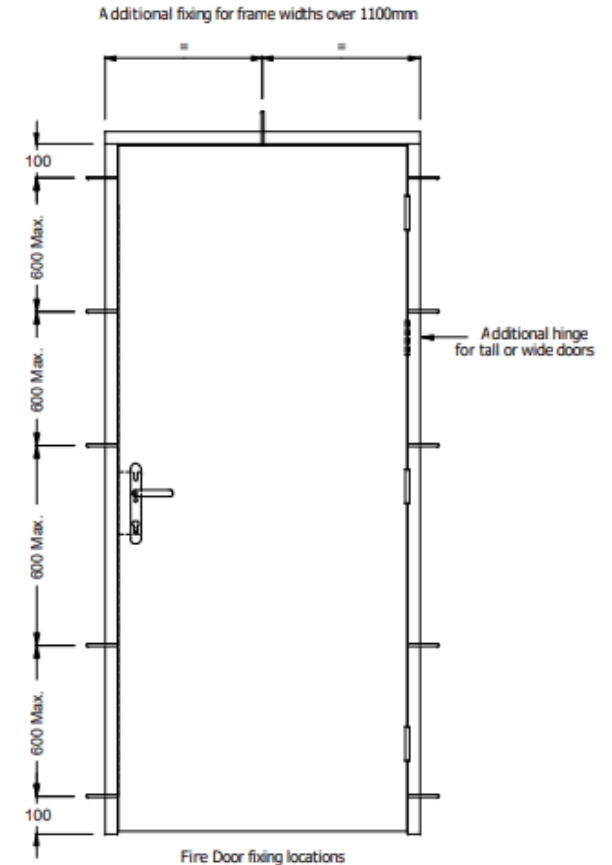
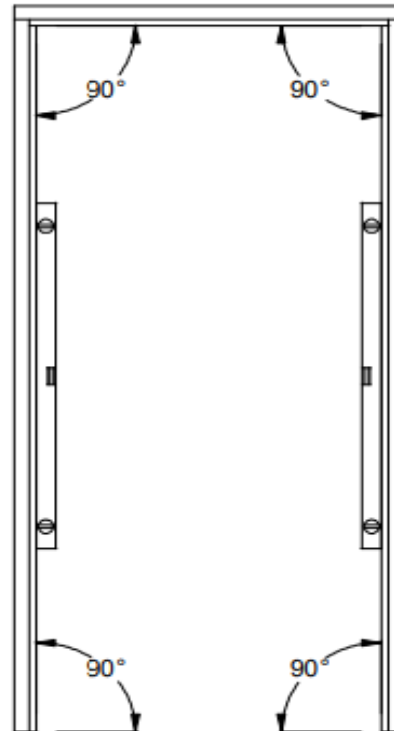


Figure 2



Ensure that frame is plumb, before fixing the hinge side of the door.

Drill through the frame on the hinge side so that the fixings are in the intumescent groove, the fixings need to pass through the horseshoe packers.

Appropriate Steel Fixings for the frame thickness and that suits the wall substrate must penetrate a **minimum of 40mm** as figures 4a/b below.

Figure 4a FD30 frame

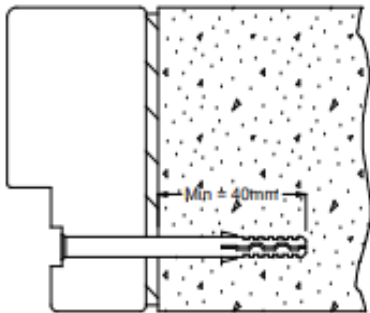
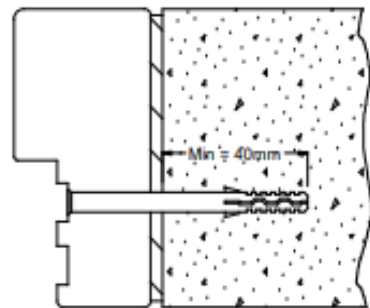


Figure 4b FD60 frame

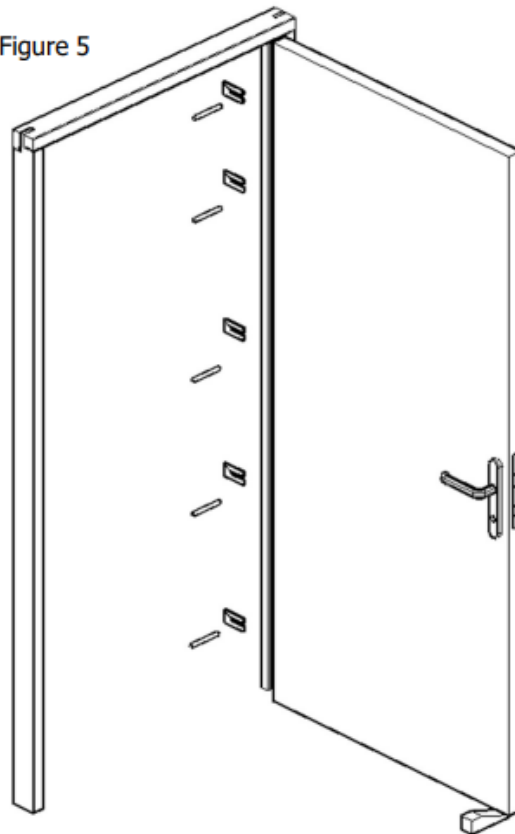


Hardwood and plasterboard packers can be used on FD60 fire rated doors, plastic horseshoe packers can be used on FD30 fire rated doors.

**Note:** *see sealing structural openings*

Drill through the frame into the wall as shown in figure 5 below, then loosely secure each frame fixing into the wall, then tap the horseshoe packers into position, before fully securing each frame fixing check that the frame has not moved out of square and is still plumb.

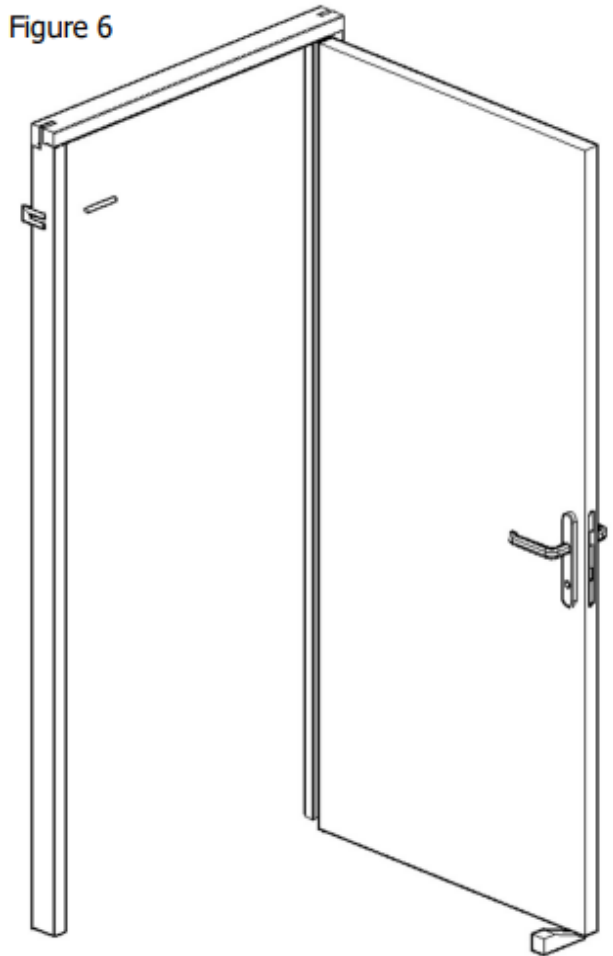
Figure 5



Drill through the frame on the lock side at the top of the frame as below in figure 6 (see figure 3 for dimensions), secure with a frame fixing and horseshoe packer.

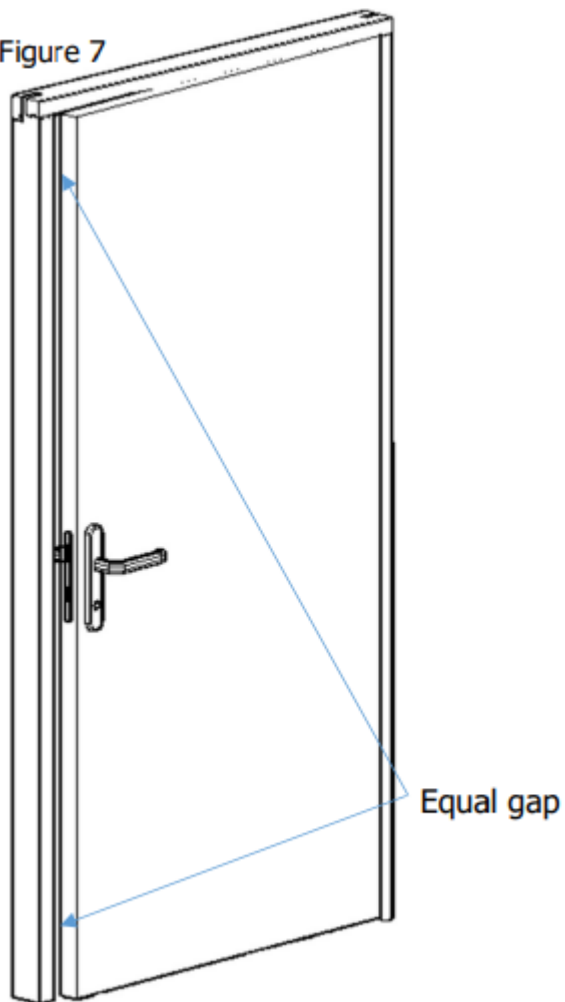
Check that the frame is square and plumb as shown in figure 1 and 2

Figure 6



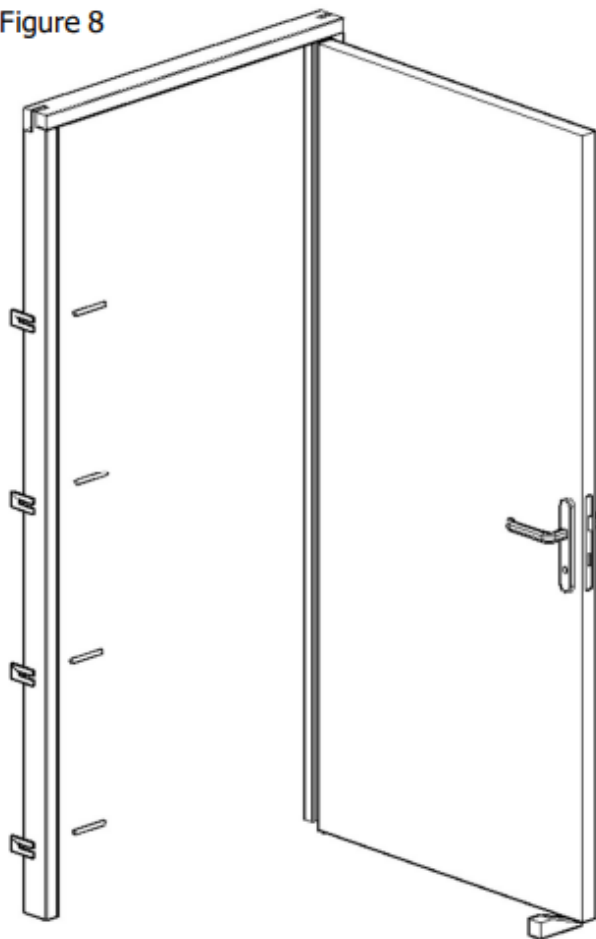
With the door almost closed, align the edge of the door with the edge of the frame, so that the gap is the same from top to bottom of the door.

Figure 7



Repeat this procedure after each frame fixing point, this will allow for any possible bow or twist of the door leaf.

Figure 8



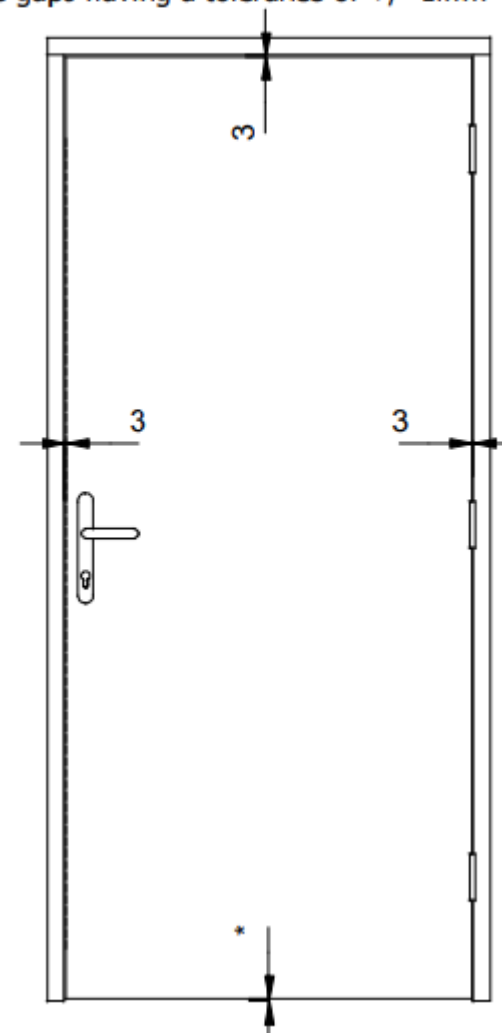
When all fixings are secured, the nominal gaps should be as shown in figure 9.

If fitting a lock (Certifire CE marked) ensure that the relevant intumescent is fitted as per manufacturers instructions.

Check the operation of the lock and adjust the lock keep ensuring that the lock latches correctly.

Figure 9

See below for permitted door gaps with top & side gaps having a tolerance of +/- 1mm

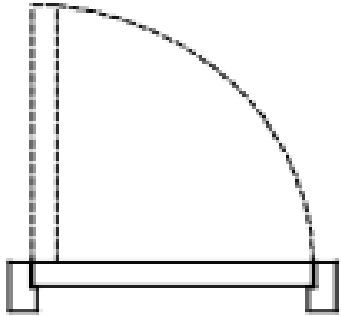


Apply an intumescent mastic sealant between the frame and the structural opening all around the frame.

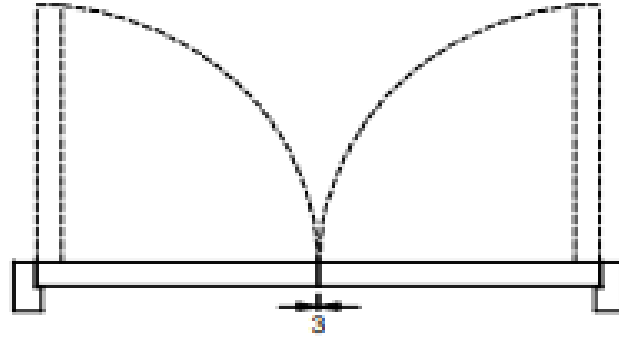
**\*3mm max if smoke rated and no drop seal fitted.**

Door set configurations allowed dependant on the hinge type and the product field of application (FoA)

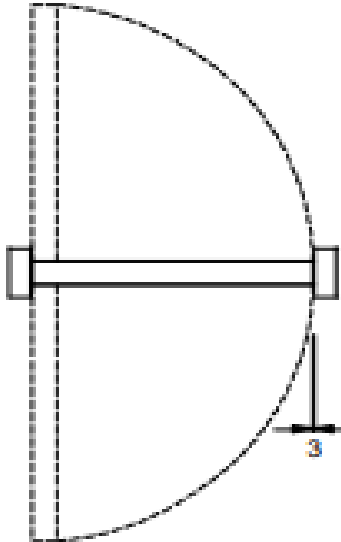
Single Leaf single acting



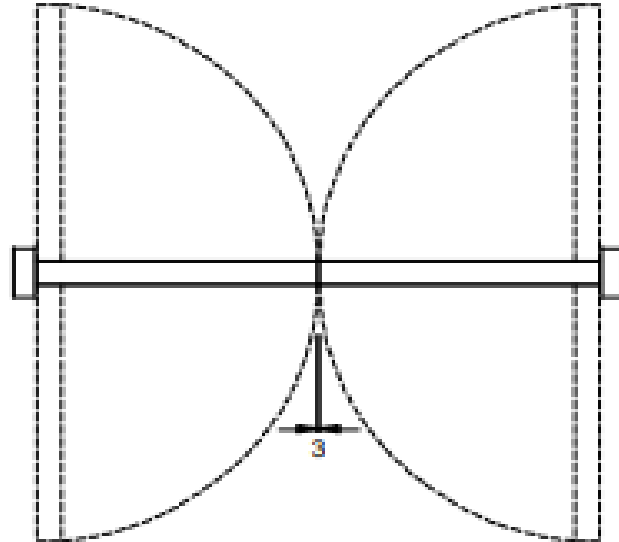
Double Leaf single acting



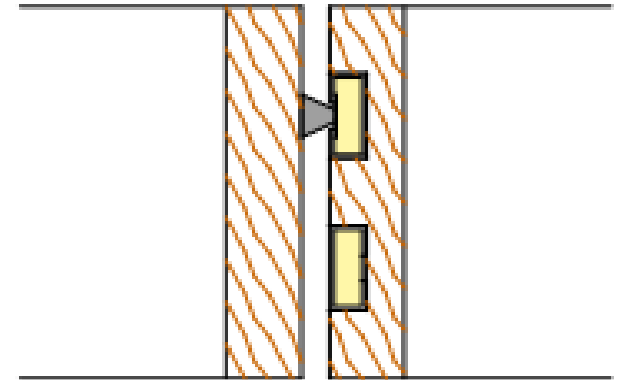
Single Leaf double acting



Double Leaf double acting



At the meeting stiles of double doors, the brush seal must touch the opposite door to create a smoke seal



## Sealing structural openings

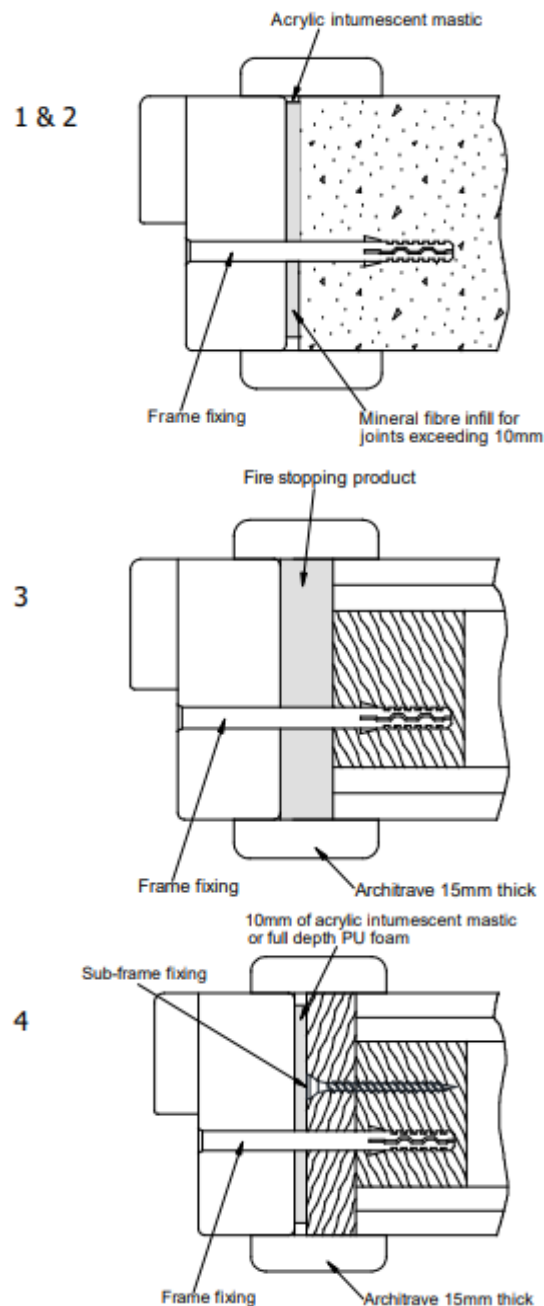
The door frame to structural opening must be protected by using one of the following methods and as shown in BS 8214:2016 clause

9.4.1 tables

1. Joints up to 10mm must be sealed on both sides as shown, with a 10mm depth of acrylic intumescent mastic. 15mm thick architraves overlapping at least 15mm each side
2. Gaps between 10mm and 20mm must be tightly packed with mineral fibre/ceramic fibre capped on both sides with a 10mm depth of acrylic intumescent mastic
3. Joints up to 20mm must be tightly packed with mineral fibre/ceramic fibre capped on both sides with a 10mm depth of acrylic intumescent mastic, with 15mm thick architraves overlapping at least 15mm each side
4. Timber based or non-combustible sub-frame up to 50mm thick, with gaps up to 10mm between components filled on both sides with 10mm depth of acrylic intumescent and 15mm thick architraves overlapping at least 15mm each side

Architraves are to be manufactured from the same timber as the door set frame or of a density and approved species that meets the

required fire rating



Acrylic intumescent, must be tested to EN 1366 part 4, BS 476 Part 22, BS 476 part 20 or BS EN 1634-1. Integrity to be as fire door set or higher as stated in BS 8214:2016 clause 9.4.2

Mineral fibre/ceramic fibre to meet Euro class A1 or A2 to EN13501-1 and heat resistant to at least 1000° C.

Note: Expanding foam is only suitable for FD30 fire doors, specification of fire foam must be as per BS 8214:2016 clause 9.4.2

Q-Mark Fire Rating Identification Plugs are fitted on the top edge of the door.

Fit the intumescent strips which are supplied loose into the frame grooves, ensure that the intumescent is cut and profiled neatly around the keeps and hinges, the intumescent strips must be fitted to obtain the products fire rating

If a Drop Seal is fitted adjust as required by adjusting the end button on the drop seal

Fit a face fix overhead door closer as per manufactures instructions, and integral door closers if required are to be supplied and premachined by Concept Doors Ltd. Integral door closers must be fitted with the intumescent kit if supplied with the closer

All Door Closers, Hinges and Locks must be CE marked Locks, Keeps, Shoot Bolts and Butt Hinges must be fitted with intumescent kits

**Note: Modifications to glazing is strictly prohibited and all other modifications are not permitted to door assemblies and door sets, unless allowed within the product Field of Application.**

**FD30 - Door lipping can be trimmed by 2mm if door edge has no ironmongery or product preparation**

**FD60 - Door lipping can be trimmed by 2mm if door edge has no ironmongery or product preparation**

**FD90 - No Modifications or additions are allowed**

**FD120 - No Modifications or additions are allowed**

**Note: See Sealing Structural Openings**

Q-Mark plugs denote the period of fire resistance, the approval of elements including intumescent and glazing

Q-Mark plugs are positioned on the top edge of the door if fitted or prepared for.

If a door blank is supplied with no hinges or preparation the plug or plugs are fitted centrally in the top edge of the door

**Note: A Gold inner can only be supplied and fitted by a Certified Q-Mark installer**

**Note: Concept Doors Ltd does not take any responsibility or endorse the use of any product(s) in the fitting of door sets. Concept Doors Ltd strongly recommends that installation of fire doors should be carried out by qualified installers.**

