Frame Installation, Supporting Construction and Door Edge Gaps

The frames must be fixed back to the supporting construction with steel fixings at centres not exceeding 600mm on the vertical edges (minimum 200mm from the top and bottom), and a minimum of one fitted centrally across the width of the frame head of double doors. Screws shall be of sufficient length to penetrate the wall by at least 40mm, and shall be positioned such that they are not exploited by charring of the frame, irrespective of the direction of test exposure; (this may necessitate a twin line of screws). Packers shall be used at all fixing positions, although if combustible packers are employed, these must be protected by a layer of firestopping (see below) aligned near to each face of the door frame.

The supporting construction may be timber or steel stud plasterboard partition, blockwork, steel stud demountable partition, brickwork or concrete wall, but shall be of a type that has been tested or assessed to provide in excess of 30/60 minutes fire resistance, at the required size, when incorporating fd30/fd60 doorset openings. If fitted into timber or steel stud partitions, the method of forming the doorset aperture must be as tested by the partition and/or doorset manufacturer.
No part of the rear of the frame section shall be exposed once installed, (except for integral architraves) and leaves must not protrude beyond the exposed face of the doorframe.

There shall be no feature rebates or shadow gaps at the junction of the frame and wall with steel or aluminium frames. (Project specific features may be assessed on an individual basis)
In timber frames shadow gap details may be included in the supporting construction or in a frame extension at the interface of the frame and wall as detailed in Summary drawing(s) reference FZD0098/0099/0101/0102

The fire stopping between the supporting construction and timber frames should follow the recommendations of Table 2 in BD8214: 2008, "*Code of practice for fire door assemblies*", using a product proven in such timber applications, and with reference to the correct depth of seal to suit the width of gap between wall and frame. The firestopping shall be positioned on the plane of the door leaf (unless combustible packers are employed).

The gap between the door and the frame or between meeting stiles (and between double doors and overpanel where applicable) should be 1.5-4mm. Gaps under the door(s) should not exceed 6mm for fire performance, although, if smoke control is also required, these gaps should only be 3mm, or smoke seals should be included in accordance with BS8214.

The doorset design should be such that single acting leaves are fully flush within the frame when closed and double acting doors should be centred on the frame depth. The face of leaves in double doorsets should be flush with each other at meeting stiles when closed.

Overpanels shall be secured into the frame using steel screws fixed through the rear of the frame members, passing at least 40mm into the centre of the overpanel thickness. (Screws must not be fixed through the overpanel into the stops, or vice versa). Screws must be no more than 100mm from each corner of the overpanel, and at maximum 400mm centres, with a minimum of 2no. Screws per overpanel edge. This specification applies to overpanels used with or without a transom. The gap between overpanel and frame should not exceed 3mm.

Method of head/jamb jointing

The following methods of jointing may be used for the construction of flush or rebated Frames suitable for Fd30 and Fd60 fire door applications.

Butt Joint. Glued with non-thermally softening adhesive & head twice screwed to each jamb.

Mortice and tenon . Head twice screwed to each jam

Half Lapped. Head twice screwed to each jamb

Mitred .Glued with non-thermally softening adhesive & head twice screwed to each jamb.

Architraves : are optional and have no fire performance requirements .

Frame Installation, Supporting Construction and Door Edge Gaps

The frames must be fixed back to the supporting construction with steel fixings at centres not exceeding 600mm on the vertical edges (minimum 150mm from the top and bottom), and a minimum of one fitted centrally across the width of the frame head of double doors. Screws shall be of sufficient length to penetrate the wall by at least 40mm, and in timber shall be positioned such that they are not exploited by charring of the frame, irrespective of the direction of test exposure; (this may necessitate a twin line of screws). Packers shall be used at all fixing positions, although if combustible packers are employed, these must be protected by a layer of firestopping (see below) aligned near to each face of the door frame.

The supporting construction may be timber or steel stud plasterboard partition, blockwork, steel stud demountable partition, brickwork or concrete wall, but shall be of a type that has been tested or assessed to provide in excess of 90/120 minutes fire resistance, at the required size, when incorporating FD90/FD120 doorset openings. If fitted into timber or steel stud partitions, the method of forming the doorset aperture must be as tested by the partition and/or doorset manufacturer.
No part of the rear of the frame section shall be exposed once installed, (except for integral architraves) and leaves must not protrude beyond the exposed face of the doorframe.

There shall be no feature rebates or shadow gaps at the junction of the frame and wall (Project specific features may be assessed on an individual basis)

The fire stopping between the supporting construction and frames should be as tested or using a product proven in such applications , and with reference to the correct depth of seal to suit the width of gap between wall and frame, with architraves as required, for the required period of fire resistance. . The fire stopping shall be positioned on the plane of the door leaf (unless combustible packers are employed).

The gap between the door and the frame or between meeting stiles (and between double doors and overpanel where applicable) should be 2 -3.5 mm. Gaps under the door(s) should not exceed 6mm for fire performance, although, if smoke control is also required, these gaps should only be 3mm, or smoke seals should be included in accordance with BS8214.

The doorset design should be such that leaves are fully flush within the frame when closed. The face of leaves in double doorsets should be flush with each other at meeting stiles when closed.

Transommed overpanels shall be secured into the frame using steel screws fixed through the rear of the frame members, passing at least 40mm into the centre of the overpanel thickness. (Screws must not be fixed through the overpanel into the stops, or vice versa). Screws must be no more than 100mm from each corner of the overpanel, and at maximum 400mm centres, with a minimum of 2no. Screws per overpanel edge. The gap between overpanel and frame should not exceed 3mm.

Method of head/ jamb jointing
Mortice and tenon , head twice screwed to each jamb .

Architraves : are optional and have no fire performance requirements