



Fire Door Installation Requirements

NFPA 80, Fire Doors and Windows, 1995 Edition, requires that all fire doors and frames be prepared under an inspection service.

- I. All components of an opening must have a certification label or certification mark to identify as a fire rated component. This identification **MUST** be applied at the point of manufacture or at an authorized machining distributor.
FIELD LABELING OF ANY COMPONENT BY ANYONE OTHER THAN THE INSPECTION AGENCY SHALL VOID THE LABEL.
- II. The lowest rating of any component determines the rating for the total assembly. (I.e. if a 1 hour door is installed in a 20-minute frame, the maximum rating for the total assembly would be 20 minutes.
- III. The clearance between the door and the frame and between meeting edges of doors swinging in pairs shall not exceed 1/8". The clearance under the bottom of the door shall be as follows.
 - A. The clearance between the bottom of the door and a raised noncombustible sill shall not exceed 3/8".
 - B. Where there is no sill, the clearance between the bottom of the door and the floor shall not exceed 3/4".
 - C. The clearance between the bottom of the door and the rigid floor tile shall not exceed 5/8".
 - D. The clearance between the bottom of the door and the nominal surface of floor coverings shall not exceed 1/2".
- IV. Job site modification is restricted to the following.
 - A. Function holes for mortise locks, and mounting holes for hardware not to exceed 1" in diameter.
 - B. Holes for labeled viewers.
 - C. Protection plates and preparation for surface mounted hardware.
 - D. A maximum of 3/4" undercutting of BOOK HEIGHT doors.
 - E. Pilot holes **MUST** be drilled for all screw applications.
- V. Fire doors, with wood, particle board, or mineral core are manufactured with the same size top & bottom rails, so that either end of the door can be the top. If there is an exception, the rails will be identified, and the top of the door must not be trimmed.
- VI. Positive pressure assemblies require the following.
 - A. To qualify for smoke & draft assemblies (PER UBC STD 7-2 1997) the doors must have the secondary "S" label and installed with listed gasketing that meets (UBC STD 7-2 177 Part 2) for 20 Minute only.
 - B. Approved intumescent smoke seals must be applied to the sides and top of the frame, and to the meeting edge of the inactive leaf of doors hung in pairs.
 - C. See installation instructions provided with the approved intumescent smoke seals which are used.
- VII. Latchsets must have a minimum throw of 1/2" NFPA 80 Table 2-8.2.3 states that the latch throw for pairs must be 3/4". The minimum latch throw is stated on the certification label.
- VIII. Hinges to be installed per NFPA 80 Table 2-8-1-1. Two hinges are required for a 60" high door and one additional hinge is required for each additional 30" or fraction thereof. The size and thickness of the hinges are covered in the table.
- IX. Closers attached to mineral composite or particle board core doors usually must be through bolted. An exception to this would be when the doors have interior blocking that would permit the closers to be attached with screws.

- X. When vision lites are installed in a fire door, the cutout must be done at the manufacturing facility or machining facility. Cutting the door for lites in the field is not allowed unless the preparation is performed under an inspection and labeling program. Only certified fire rated glass which is installed in approved frame shall be used. Only glazing labeled for fire may be used, and must be installed in accordance with their individual listing.
- XI. Fire doors equipped with automatic louvers shall be used only for protecting openings in required enclosures where the opening is not a means of egress or otherwise located so that products of combustion flowing through the opening could jeopardize the use of exits prior to the operation of the louver. Twenty-minute fire rated doors are not permitted to have louvers.
- XII. Wrap around steel edges with an astragal must be applied to meeting edges of pairs, unless the certification label specifically states that they are not needed. Twenty-minute doors can usually be installed in pairs with metal steel meeting edges without an astragal. Steel meeting edges should be 18 or 20 gauge, with a minimum lap of 1". Attachment should be with 3/4" No. 8 screws, 12" on center. Mortised edge guards are not allowed unless included in the individual listing.
- XIII. Certification labels are attached at the point of manufacturer or under an inspection service and **MUST NOT** be removed or replaced except by authorized representatives of the inspection agency. Labels will be applied on the hinge stile at eye level.



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