FyreWerks FC-90, 90-minute Door Specifications

90-minute doors can be built in two ways:

Category "A", NO ADDITIONAL EDGE-SEALING SYSTEM REQUIRED. This category includes doors with FyreWerks FyreEdge intumescent built into the edge of the door.

Category "B", ADDITIONAL EDGE-SEALING SYSTEM REQUIRED. This category includes doors evaluated with an intumescent applied to the frame – either surface applied or "built in". FyreEdge is not required under this category.

Maximum Sizes – (Finished Door)

Single Swing	48 inches wide by 96 inches high
Minimum Thickness	1-3/4 inches +/- 1/16 inch

Core — FyreWerks FC-90, 90 minute core

Minimum Core Thickness	5/8" +/- 1/32"

Intumescent Edge

FyreWerks FyreEdge ¼" x 3/8" straddling the core on both stiles and in routed grooves straddling the core on top of door. (see drawings for details)
Maximum hardwood over the face = ¼" after trim

Palusol Type 100: 2 mm by 3/8" straddling the core on both stiles and in routed grooves straddling the core on top of door. (see drawings for details)
Maximum hardwood over the face = ¼" after trim

Door Faces

Medium Density Fiberboard

9/16" thickness MDF – may be routed for single panel style or a variety of panel configurations. (see sample drawings).
MDF thickness may be reduced up to 1/16" to accommodate veneer or HPL.

Hardwood or engineered lumber

Minimum density 26 pcf, 9/16" thickness.
Wood thickness may be reduced by 1/16" to accommodate veneer or HPL.

May be routed as per sample drawing.

Veneer
1/16” wood veneer

Decorative Laminate
0.050 inch high pressure laminate meeting N.E.M.A. LD-3, GP-50 Requirements (HPL).

Adhesives

Press times, pressures, temperatures, roll design, and spread rates should comply with the adhesive manufacturer’s recommendations.

Any adhesives approved for 90-minute wood or composite fire door constructions are allowed.

Note: Follow adhesive manufacturer’s instructions and bulletins for mixing, application rates, pressing parameters, and safe use practices.

Hardware Preparation

Preparation shall be made in accordance with NFPA 80, Para. 1-3.5. Only hardware listed for use with wood fire doors may be installed. Hardware not listed below must be approved, in writing, by Intertek Testing Services.

Hinges	Per NFPA 80, Table 2-4.3.1 Continuous Hinges Pivot Hinges
Latch sets	Minimum latch bolt throw shall be 1/2” unless otherwise noted. Cylindrical – Maximum bore 2-1/8”. Maximum backset 5”. Mortise – Lock mortise shall not exceed lock case dimensions by more than 1/8”. Pre-Assembled
Fire Exit Devices	Surface mounted vertical rod. Rim-type surface mounted.

Deadlock	Cylindrical with a maximum 2-18” diameter bore located a minimum of 5” above latch cutout.
Flush bolts	Mortised manual. Surface mounted manual. Mortised automatic – DCI 960, 962
Automatic Door Bottoms	Mortised or Surface mounted.
Closing Devices	Surface mounted.
Viewers	Listed viewers may be used.
Protection Plates	Plates of brass, bronze, steel, aluminum, polycarbonate or decorative laminate may be installed on one or both sides of the door.
Louvers	Vented louvers are allowed. Contact FyreWerks for details.
Electric Raceways	See attached drawings.

Plant-Ons

Use of molding as a plant-on on 45/60 minute labeled doors may be applied to one or both sides of door.

Maximum Width	1-3/4 inches
Maximum Height	¾ inches
Material	Wood – Douglas fir or denser, MDF.
Attachments	Adhesive and/or mechanical fasteners with a maximum penetration into the door ¾ inch spaced not more than 12 inches on center
Spacing	Minimum spacing from edge of door or lite, 4 inches.
Maximum Area Of Molding	Not to exceed 20% of face area of door.

Vision Panels

1. Glazing shall be permitted with a maximum area not exceeding 100 square inches.

   Maximum Length 25” (vision area)

   Maximum Width 10” (vision area)

2. No lites cutout shall come within 5 inches of a door edge or 2 inch from any other cutout in the door. Lites may be installed in panels with minimum distance to edge of panel = 2”

3. Any 90-minute rated glazing is allowed.