

FIRE DOOR LISTING PROGRAM

Customer: Wolman Wood and Fire Protection GmbH
 Class: Fire Doors
 Location: Sinzheim, Germany
 Website: <https://www.wolman.biz>

Listing No. F411-1
 Project No. F411-1 Edition 10

Effective Date: October 12, 2012
 Last Revised Date: December 15, 2023

Standards:	CAN/ULC S104 UL 10B UL 10C NFPA 252 ASTM E90	<i>Standard Method for Fire Tests of Door Assemblies. Fire Tests of Doors Assemblies. Fire Tests of Doors Assemblies. Standard Methods of Fire Tests of Door Assemblies. Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements</i>
	ASTM E1425	<i>Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements</i>

Product: 90-minute Rated Positive Pressure Fire Doors

Markings: See [FD001 - Fire Door Labeling requirements](#)

Models **90-MINUTE LAMINATED CORE PANEL AND FLUSH DOORS**

MAXIMUM DOOR SIZES:

Minimum 1-3/4" Thickness

Swing Type:	Maximum Dimensions		Panel Type:	Latching:
	Width:	Length:		
Single Swing	3'6" (1067 mm)	9'0" (2743 mm)	Flat or Raised	Single or 2 Point
	4'0" (1219 mm)	7'0" (2134 mm)		
Standard Pairs	7'0" (2134 mm)	8'0" (2438 mm)	Flat or Raised	3 or 4 Point
	8'0" (2438 mm)	7'0" (2134 mm)		
	7'0" (2134 mm)	9'0" (2743 mm)	Flush only	
Double Egress Pairs	See Below			

Minimum 2-1/4" Thickness

Swing Type:	Maximum Dimensions		Panel Type:	Latching:
	Width:	Length:		
Single Swing	3'6" (1067 mm)	10'0" (3048 mm)	Raised only	1 or 2 point
	4'0" (1219 mm)	10'0" (3048 mm)	Raised only	2 point
	3'0" (914 mm)	8'0" (2438 mm)	Flat or Raised	2 Point
Standard Pairs	8'0" (2438 mm)	10'0" (3048 mm)	Raised only	4 point (surface mounted)
	6'0" (1829 mm)	8'0" (2438 mm)	Flat or Raised	4 Point
Double Egress Pairs	8'0" (2438 mm)	10'0" (3048 mm)	Raised only	4 point (surface mounted)

Note: All door constructions can be built as flush doors using flush faces, and flush doors can be V-Grooved. Door thickness may be increased to 2" or 2 1/4" by adding face material. All door constructions can be made as shallow arch construction.

Temperature rise

- @30 min = 250°F MAX where lights do not exceed 100 in²
- @60 min = 450°F MAX where lights do not exceed 100 in²

LATCHING METHODS

Single Point Latching – Cylindrical or Mortise latches and deadbolts, or rim type fire exit hardware for single swing doors, or active leaf of pairs when permitted.

Two Point Latching – Surface mount or Concealed vertical rod exit devices for single swing doors. Concealed vertical rod exit devices require special door construction.

Three Point Latching – Single point latch for active leaf of standard pairs, Surface mount manual, or Mortise type or manual or automatic flush bolts, or surface mount vertical rod exit devices for inactive leaf of standard pairs.

Four Point Latching - Surface mount or concealed vertical rod exit devices for both leaves of pairs. Concealed vertical rod exit devices require special door construction.

COMPONENTS (SEE APPENDIX B AND UL DIRECTORY FOR APPROVED HARDWARE):

Latch Sets (Listed and labeled for use in composite doors rated for 90 minutes, evaluated to UL 10C)

- Cylindrical Latches
 - Maximum 2-1/8" diameter bore
 - Maximum 2-3/4" backset
 - Minimum 1/2" Throw
- Mortised Latch
 - Mortise pocket must be lined with Interdens intumescent on both sides of mortise case.
 - Cardlocks

Deadbolts (Listed and labeled for use in composite doors rated for 90 minutes, evaluated to UL 10C)

- Maximum 2-1/8" diameter bore.
- Maximum 2-3/4" backset
- Located a minimum of 3-1/2" centerline to center-line above the latch set
 - Interconnected Deadbolts are allowed.

Hinges (Listed and labeled for rated opening)

- Hinges as per NFPA 80.

Fire Exit Devices (Listed and labeled for use in composite doors and evaluated to UL 10C)

- Surface Mounted Vertical Rod Fire Exit Device.
- Rim Type Fire Exit Devices.
- Through-bolts are required.
- Concealed Vertical Rod
 - Permitted in 2-1/4" thick flat or raised panel doors
 - Maximum door pairs size 72" x 96" (width x height).

Door Closers (Listed and labeled for rated opening)

- Surface Mounted Door Closers are required to be mounted with through-bolts
- Concealed Door Closers - Closer track only permitted in doors, [Not permitted in Double Egress Doors] Concealed closers that mount in the door hinge edge permitted.

Surface Mounted Protection Plates

- Max 12" High.

Louvers

- Listed Louvers permitted to be installed in 1 3/4" door section thickness, and below

latch level.

Metal Edges/Astragals (Listed and labeled for rated opening)

- Metal edges and Z-Astragal set for meeting edges of pairs (not required).

Viewers (Listed and labeled for rated opening)

- Maximum size of 1" diameter.
- Multiple viewers located a minimum of 12" on center.
- Viewers located a minimum 5-1/2" away from edges of doors
- Installed in 1 3/4" door section thickness.

Glass Lights

- Glazing material shall be listed and labeled for rated opening, light kit and door type.
- Glazing installed in accordance with NFPA 80, and the listed light kit frame installation instructions.
- Maximum 1080 sq. in. area (Max. Dimension of 36") with Listed Steel Lite Kit (Listed for use in composite doors and evaluated to UL 10C), using Listed ceramic glazing
- Maximum 600 sq. in. area (Max. Dimension of 30") with Listed 'Z' channel using Listed ceramic glazing.

Plant-Ons

- MDF or solid wood plant-on moldings may be applied to one or both sides of a door.
- Adhesive and/or mechanical fasteners with a maximum penetration of 3/4".
- Moulding may not be applied closer than 3-1/2" to edge of door, edge of light or edge of hardware cutout.

Electric Raceway

- Allowed.

Concealed Vertical Rod

- Permitted in 2-1/4 inch door thickness only.

Door Bottoms Seals [Double Egress Doors - Surface mounted only]

- Surface Mounted Snap-In in dual durometer vinyl with bulb and fins or with all fins
- Semi-mortised, or full-mortised bottom seals may be used [See Figure 2].
- Cutout dimensions are restricted to 1" wide and 1-3/4" deep x full width of the door.

Door Flush Bolts (Listed and labeled for rated opening)

- Concealed manual or automatic flush bolts.
- Cutout dimensions limited to 1" wide x 8-1/2" long x 2" deep.
- One layer of Wolman Palusol SW 20-1 on each side of the flush bolt pocket.

Surface Mounted Hardware

- Permitted

Sound Transmission Classification (STC) Ratings for 90-minute Rated Doors

Ratings below are based on testing a 3'0 by 7'0 door installed in a Wolman composite wood frame, using (3) 4 1/2" x 4" hinges and a single point cylindrical latch. Single flat panel recessed panel doors were tested. Ratings will vary for differing sizes and panel design or hardware configurations. The sealed rating is based on the gap around the door sealed with putty, while the operable rating is a fully operational door with seals installed. All the threshold, weatherstrip and seal products were supplied by Legacy Manufacturing, Bronx, NY.

Recessed Single Panel Door, 1 3/4" thick, 5/8" thick panel, SWR 90-1 or SWR 90-2 cores

STC Ratings		
Sealed	Operable	Seals/Weatherstrip Components Required
35	36	Threshold – 3665 Series Auto Door Bottom – 7763 (surface applied) Head and Jamb Acoustical Seals applied to stops - 5574 Series Finned gasket installed in door rabbet - 505175 Bk

Notes: *Refer to QAI evaluation report F411-1 and the applicable test reports for test assembly configurations used for fire endurance testing.*

Refer to the [QAI FD002 - Fire Door Guidelines for general guidelines of fire door assemblies](#)

Final acceptance of the product in the intended application is to be determined by the authority having jurisdiction (AHJ).

Product is to be installed in accordance with the manufacturer's published installation instructions by qualified installing personnel.

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