

## 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 11

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

Standards:	CAN/ULC S104 UL 10B UL 10C NFPA 252 ASTM E90  ASTM E1425	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 Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements
------------	--	--

Product: 60-minute Rated Positive Pressure Fire Doors

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

Models: **60-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	4'0" (1219 mm)	8'0" (2438 mm)	Flat or Raised, Glazing	Single Point 2 Point
	3'6" (1067 mm)	9'0" (2743 mm)		
Full Arched Top Single Swing	3'6" (1067 mm)	8'0" (2438 mm)	Flat or Raised	
Standard Pairs	8'0" (2438 mm)	7'0" (2134 mm)	Flat or Raised, Glazing	3 or 4 point
	7'0" (2134 mm)	8'0" (2438 mm)		
Double Egress Pairs	7'0" (2134 mm)	8'0" (2438)	Flat or Raised	4 point

Note: All door constructions can be built as flush doors using flush faces, and flush doors can be V-grooved as per Manufacturing Specifications. Door thickness may be increased to 2" or 2 1/4" by adding face material.

**Minimum 2-1/4" Slab Thickness**

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

**Temperature rise**

- @30 min = 250°F MAX where lites do not exceed 100 in<sup>2</sup>
- @60 min = 450°F MAX, or 250 °C MAX, where lites do not exceed 100 in<sup>2</sup>

**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 and are acceptable per the manufacturing specifications.

**Three Point Latching** – Single point latch for active leaf of standard pairs, Surface mounted manual, or mortise type or manual or automatic flush bolts 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 requires special door construction and is acceptable per the manufacturing specifications (not for double egress pairs).

**CATEGORY "A" AND "B" DOORS**

- **CATEGORY "A"** doors contain intumescent in the door vertical edges and header. The top of door will be marked "CATEGORY A" or "CATEGORY B".
- **CATEGORY "B"** doors and doors conforming to **CAN/ULC S104 (Canada)** do not require the door edge intumescent for single swing door applications, intumescent is optional. For doors swinging in pairs, intumescent is required at the meeting edges only.

**Category A doors are to be matched with Category A or Category B labels. Category B doors can only bear labels outlining door for use in Category B applications.**

**Latch Sets** (Listed and labeled for use in wood or composite doors rated to 60 minutes and evaluated to UL 10C)

- Cylindrical Latches
  - Maximum 2-1/8" diameter bore.
  - Maximum 2-3/4" backset.
  - Minimum 1/2" throw.
- Mortised Latch
- Carlock Type Mortise latches - see Appendix B for some Listed units.

**Deadbolts** (Listed and labeled for use in wood or composite doors rated to 60 minutes and 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, Table 6.4.3.1.
- Listed Concealed hinges; SOSS #218 or TECTUS are allowed.
  - Pocket dimensions machining per manufacturer's instructions.

**Fire Exit Devices** (Listed and labeled for rated opening)

- Surface Mounted Vertical Rod Fire Exit Device.
- Rim Type Fire Exit Devices.
- Through-bolts are required
- Concealed Vertical Rod Fire Exit Device [See Figure 5], requires special door construction.
- CVR construction is also required for flush bolt extensions.

**Door Closers** (Listed and labeled for rated opening)

- Surface Mounted Door Closers are required to be mounted with through-bolts unless optional reinforcements are noted in marking on the top of the door.
- Concealed Door Closers

**Surface Mounted Protection Plates**

- Permitted

**Louvers**

- Listed louvers shall be located below the latch elevation.

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

- Metal edges and Z-Astragal set for meeting edges of pairs optional (not required).
- Metal edges not permitted for positive pressure Category A doors.

**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.
- Shall be located in 1 3/4" thick door section

**Glass Lights** (Listed and labeled for rated opening)

- Permitted for single swing doors or standard pairs, not for double egress.
- 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 1296 sq. in. area (Max Dimension of 54") with Listed Steel Lite Kit or '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.

**Door Bottoms Seals** (Listed and labeled for rated opening)

- 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 for details].
- Cutout dimensions are restricted to 1" wide and 1-3/4" deep x full width of the door.

**Electric Raceway**

- Permitted.

**Door Flush Bolts** (Listed and labeled for rated opening)

- Surface mounted or Mortise, manual or automatic flush bolts. Cutout dimensions limited to 1" wide x 8-1/2" long x 2" deep.

**Concealed Vertical Rods** (Listed and labeled for rated opening)

- Permitted.

**Door Veneers and Inlays (Optional)****Flush Doors:**

- Plastic Laminate (up to 1/16" thick).
- Wood Veneer (up to 1/16" thick).
- Metal Foil (up to 1/16" thick).
- Paper Finish (up to 1/16" thick).
- Fiberglass Reinforced Polymer (FRP) (up to 1/16" thick).
- Vinyl (up to 1/16" thick).
- Lead (up to 1/32" thick).

**Recessed Panel Doors:**

- Plastic Laminate (up to 1/16" thick).
- Wood Veneer (up to 1/16" thick).
- Metal Foil (up to 1/16" thick).
- Paper Finish (up to 1/16" thick).
- Glass Mirror (up to 1/4" thick).

**Surface Mounted Hardware**

- Permitted

## Sound Transmission Classification (STC) Ratings for 60-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, SW 60-1 core

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.*

The materials, products or systems listed herein have been qualified to bear the QAI Listing Mark under the conditions stated with each Listing. Only those products bearing the QAI Listing Mark are considered to be listed by QAI. No warranty is expressed or implied, and no guarantee is provided that any jurisdictional authority will accept the Listing found herein. The appropriate authorities should be contacted regarding the acceptability of any given Listing. Visit the QAI Online Listing Directory located at [www.qai.org](http://www.qai.org) for the most up to date version of this Listing and to validate that this QAI Listing is active. Questions regarding this listing may be directed to [info@qai.org](mailto:info@qai.org). Please include the listing number in the request.

\*\*\*