
INTRODUCTION TO FIRE DOORS

This section is presented for a better understanding of single or pair fire-rated door configurations.

Two types of fire-rated door may be specified:

- positive pressure
- and neutral or negative pressure

Lambton Doors label under I.T.S. Warnock Hersey as a listed flush wood door manufacturer. We comply with all current fire door requirements meeting ASTM E-2074 for Category A Positive Pressure door and all standards for Negative or Neutral Pressure door.

All fire doors meet the requirements of recognized fire door tests and bear certifying labels.

Doors may be either negative/neutral or positive pressure depending on local codes. To identify whether the doors you need are negative/neutral or positive pressure here are a few key phrases to look for:

Positive Pressure

UL 10-C
UBC 7-2-1997
ASTM 2074-00

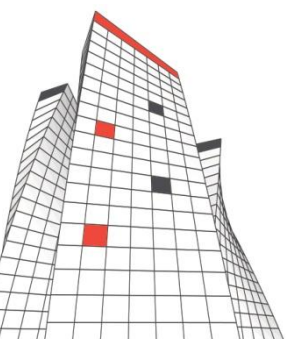
Negative/Neutral Pressure

UL 10-B
UBC 7-2-1994
ASTM-152

Phrases that do not distinguish negative/neutral or positive pressure:

- NFPA 101 Life Safety Code®
- UL 1784 Air Leakage Test for Door Assemblies
- NFPA 252 Standard Methods of Fire Tests of Door Assemblies
- NFPA 80 Standard for Fire Doors and Other Opening Protectives
- NFPA 105 Standard for the Installation of Smoke Door Assemblies and Other Opening Protectives
- UBC With no date given could be either positive or neutral

It is good practice to refer to the technical sheet of single rated doors before pricing any fire-rated options included in this section. Note also that drawings shown in this section are only representative of different configurations and are not to scale. All drawings shown and specifications are subject to change without notice.



NEGATIVE / NEUTRAL PRESSURE

This section is presented for a better understanding of Negative/Neutral Pressure fire-rated door configurations.

Lambton Doors label under I.T.S. Warnock Hersey as a listed flush wood door manufacturer. We comply with all current fire door requirements meeting all standards for Negative/Neutral Pressure door and ASTM E-2074 standard for Positive Pressure Category A door.

All fire doors meet the requirements of recognized fire door tests and bear certifying labels.

To identify whether the doors you need are Negative/Neutral Pressure here are the key phrases to look for:

- Neutral Pressure
- Negative Pressure
- Tested at atmospheric pressure
- UL 10-B – Fire Test
- UBC 432 – UBC Fire Test
- ASTM E-152 – Test Method
- UBC 7-2-1994 – UBC Fire Test
- CAN S - 104

POSITIVE PRESSURE

This section is presented for a better understanding of Positive Pressure fire-rated door configurations.

LAMBTON DOORS label under I.T.S. Warnock Hersey as a listed flush wood door manufacturer complying with all current fire door requirements meeting ASTM E-2074 standard for Positive Pressure Category A and all standards for Negative/Neutral Pressure.

All fire doors meet the requirements of recognized fire door tests and bear certifying labels.

To identify whether the doors you need are positive pressure here are the key phrases to look for:

- Positive Pressure
- Shall meet Positive Pressure requirements
- After 5 minutes into the test, Neutral Pressure plane should be at 40"
- Intumescent seals – not indicating positive pressure, but implying it is
- UL 10-C - Fire Test
- NFPA 5000 – Code
- UBC 7-2-1997 – UBC Fire Test
- ASTM 2074-00 – Fire Test
- IBC 2000 or IBC 2003 – International Building Code

Category A doors

No additional edge-sealing system required.

This category includes doors without an edge-sealing system between the door and the frame. It also includes doors with a sealing system incorporated, concealed or visible, into the edge of the door. Meeting edges of pairs may require an astragal or edge sealing system.

Category B doors

Additional edge-sealing system required per the 2002 ITS Directory of Listed Building Products.

This category includes doors with an edge-sealing system applied to the labeled frame or door. The application of the edge-sealing system does not require any machining of the frame or door.

What is positive pressure?

Positive pressure testing simulates real fire conditions.

As heat develops within the source area, pressure within an enclosed room begins to build relative to the pressure outside the room. The pressure continues to increase until the availability of oxygen relative to fuel causes the fire to reach equilibrium. This typically will occur when the pressure of the top 2/3 of the room is greater than the outside pressure and the pressure of the bottom 1/3 of the room is less than the outside pressure. The transition between the higher and lower pressure is referred to as the neutral pressure plane.

In the positive pressure zone the smoke, hot gases and flames are forced through any openings in the door assembly.