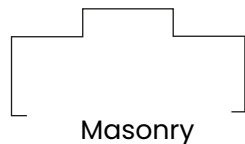


## LABELED FRAMES

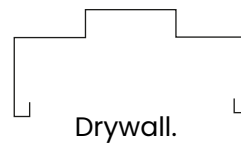
In the field of safety and construction, structural integrity and fire protection are fundamental aspects that cannot be overlooked. In this context, fire doors are essential components to ensure the safety and protection of lives and properties in the event of an adverse incident. Fortis Doors has stood out as a leader in the manufacturing of fire doors that meet the highest standards of quality and safety.

This document focuses on the fire doors manufactured by Fortis Doors, which have been meticulously evaluated, labeled, and certified by Underwriters Laboratories (UL), a recognized authority in the safety industry. We will explore not only the quality and effectiveness of these fire doors but also the installation processes in both masonry walls and drywall systems, ensuring proper and safe application in a variety of construction contexts.

Throughout this document, we will analyze in detail the technical characteristics of Fortis Doors fire doors, as well as the recommended procedures for their installation in different types of walls, with a special focus on masonry walls and drywall. Additionally, we will highlight the key advantages and considerations that construction professionals should take into account when selecting, specifying, and installing UL-certified fire doors from Fortis Doors.



Masonry



Drywall.

According to UL classifications, fire-rated swing doors can be rated to withstand up to 3 hours of fire exposure. Achieving this resistance requires specifying the use of steel of different gauges depending on the desired duration of protection. For example, UL recommends using 18-gauge steel for doors with a maximum rating of 1-1/2 hours, while for doors with a resistance of up to 3 hours, the use of 16, 14, or even 12-gauge steel is allowed.

It is crucial to consider the maximum size of the door opening to ensure its effectiveness. Specific dimensions, such as 4'-0" x 7'-0" for a single door and 8'-0" x 7'-0" for a double door, must be met to ensure structural integrity and fire performance. Additionally, options for the door's front facing are

established, with a minimum of 1" on masonry walls and 1-1/4" on stud walls, with a maximum of 4" under all conditions.

The anchors used in the installation of these doors are also critical for their proper functioning. Specifically, for hollow metal or wood doors with thicknesses of 1-3/8" or 1-3/4", UL guidelines must be followed to ensure secure and fire-resistant fastening.

In addition to the guidelines for masonry and stud walls, it is important to consider specifications for drywall walls, which are common in commercial and residential construction. These walls also require specific considerations to ensure the

safety and effectiveness of fire doors.

For drywall walls, additional guidelines must be followed to ensure proper installation of fire doors. This may include using reinforcements or metal plates to provide stability and structural strength around the door frame. Furthermore, it is essential to use appropriate anchors that securely fasten to the metal frame or wood beams behind the drywall to ensure secure and fire-resistant attachment.

UL specifications and other authorities may also include specific requirements for door penetration through drywall, such as the use of intumescent sealing materials to prevent the spread of fire and smoke through gaps between the door and the wall.

It is essential for contractors and installers to follow all these guidelines to ensure compliance with fire safety standards and to ensure maximum protection in case of emergency. By considering specifications for masonry walls, studs, and drywall, proper installation and optimal functionality of fire doors can be ensured in a variety of construction environments.

## **GUIDE FOR CHOOSING THE LABEL AND FIRE RESISTANCE OF FRAMES AND DOORS**

### **Determine the fire resistance requirements:**

Evaluate local regulations and building standards to establish the minimum fire resistance duration needed for fire doors.

### **Consult UL recommendations:**

UL sets standards for fire door certification. Refer to UL's specific recommendations for desired fire resistance duration (e.g., 90 minutes, 120 minutes, 180 minutes) and specifications for proper installation.

Consider the gauge of the material: The gauge of the door's wing material varies based on its fire resistance duration. For instance, 90-minute doors are gauge 20, while 180-minute doors are gauge 18. The frame will always be gauge 16, with a fire resistance duration of 180 minutes, regardless of the door's duration.

### **Evaluate installation conditions:**

Ensure that the installation of the fire door complies with UL recommendations. This includes aspects such as proper sealing around the door, using fire-resistant hardware, and correctly installing intumescent sealing to ensure tightness during a fire.

List of conditions to consider for each fire resistance duration according to UL:

#### **Fire doors with 90-minute fire resistance:**

- Wing of the door is gauge 20.
- Frame is gauge 16 with a fire resistance duration of 180 minutes.
- Proper installation of intumescent sealing and fire-resistant hardware.

#### **Fire doors with 120-minute fire resistance:**

- Wing of the door is gauge 18.
- Frame is gauge 16 with a fire resistance duration of 180 minutes.
- High-quality intumescent sealing and fire-resistant hardware.

**Fire doors with 180-minute fire resistance:**

- Wing of the door is gauge 18.
- Frame is gauge 16 with a fire resistance duration of 180 minutes.
- Durable intumescent sealing and hardware designed to withstand high temperatures for extended periods.