NEXDOR

Opening doors for the commercial fitout industry.

22 Tate Drive
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August 2024

Installation of Fire Rated Door Frames

The following points are the responsibility of the trade/person signing off on the installation checklist.

Installation of Fire Rated door frames must be done by a trades person competent to carry out the procedure in accordance with AS 1905.1-2015 and AS 2688-2017. Failure to comply with these standards may result in costly rectification works, a non-compliant doorset and ultimately could result in loss of life in the event of a fire.

1. Metal Fire Rated door frames shall be backfilled to meet the requirements of AS 1530.4.2014 and AS 1905.1-2015
    - AS 1530.4-2014 is the testing standard for Fire Rated doorsets. It requires the measurement of temperature rise on the door frame and the door leaf. As a result, the frame needs to be insulated to meet the temperature rise requirements.
    - Frames shall be filled with the following to meet up to FRL -/120/30.
        - Pyropanel M4 lightweight Mortar
        - Mortar
        - Plasterboard strips
        - Cornice adhesive/Plaster with or without plasterboard.
    - Frames shall be filled with the following to meet FRL -/120/60
        - Pyropanel M4 lightweight mortar
        - Mortar
2. The frames shall be installed in approved Fire Rated wall systems.
    - Frames shall be backfilled as per the build in details.
    - Frames must be supported during backfilling. See below.
    - Frames shall be installed as per the build in details.
    - Any gaps shall be caulked with Lorient Intumescent sealant as per build in details.
    - Fixings shall be in accordance with the tested specimen as set out in build in details.
    - Ensure the structure of the wall is sufficient to support the frame and door in operation. Failure to do so will result in the door operation being compromised resulting in non-compliance.

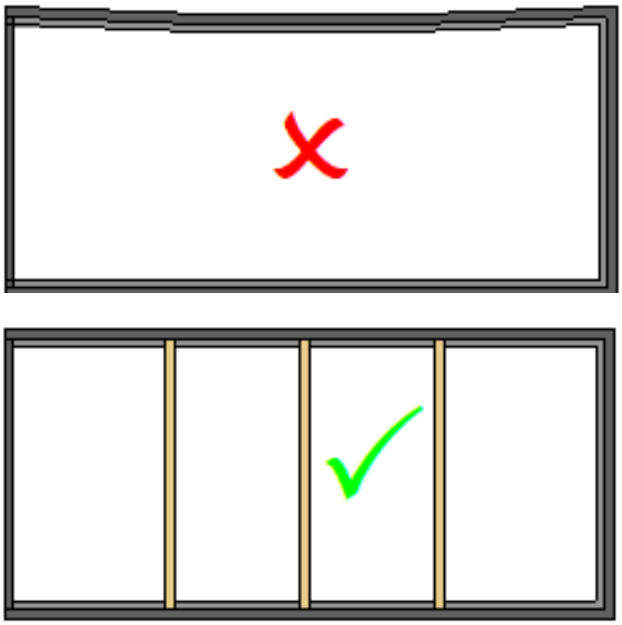
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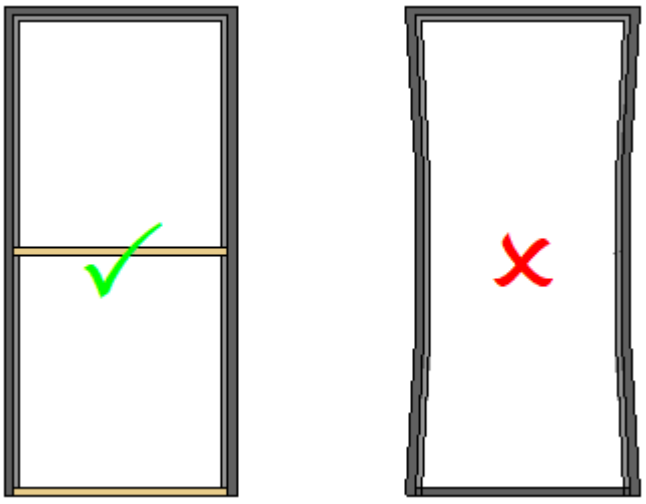
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3. The transport spreaders at the base or the frame are not intended to be used during installation and must be removed. Spreaders need to be removed with a grinder, as twisting or knocking off will deform the frame. The frame must be installed with a timber or equivalent spacer cut to the same reveal width as the top of the frame, installed at the base and middle at a minimum. See below. Timber spacers must support the total width of the frame.



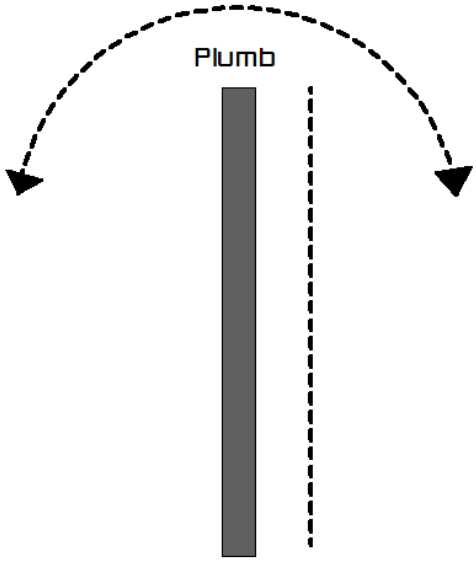
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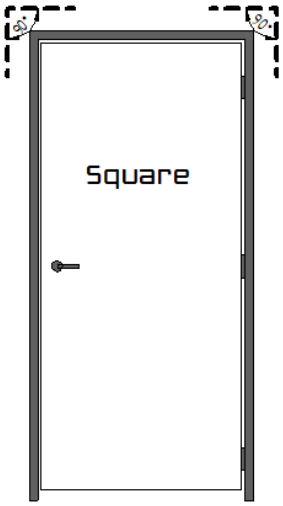
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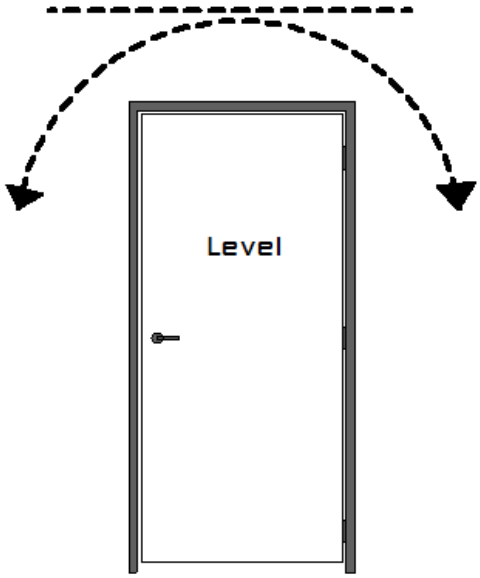
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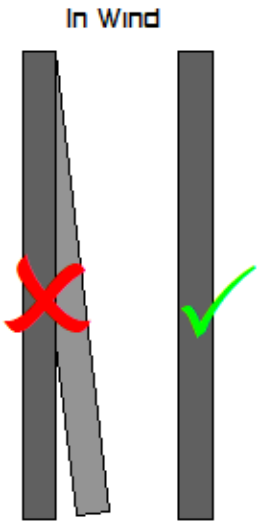
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4. AS 2688-2017 states the following:
    - Doors and frames shall be installed plumb, square, level and in wind.
    - Doors and frames shall be fixed using recognised building practices. Fixings shall not deform the door leaf or frame.









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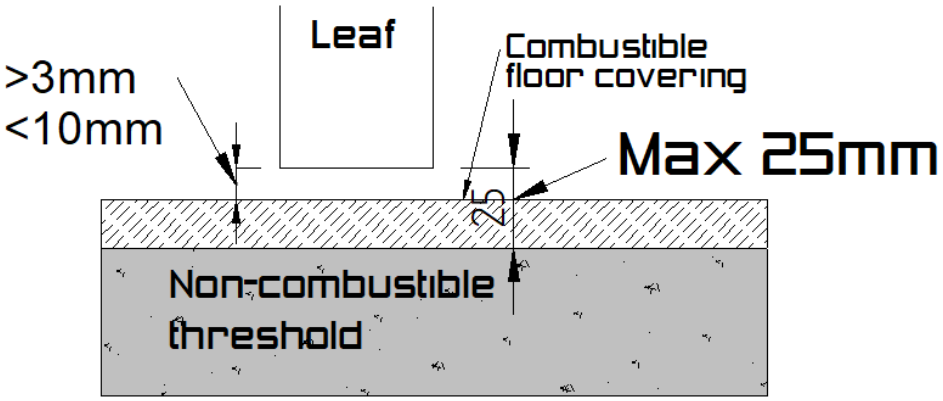
Clearances around Door Leaves

Threshold and floor finish.

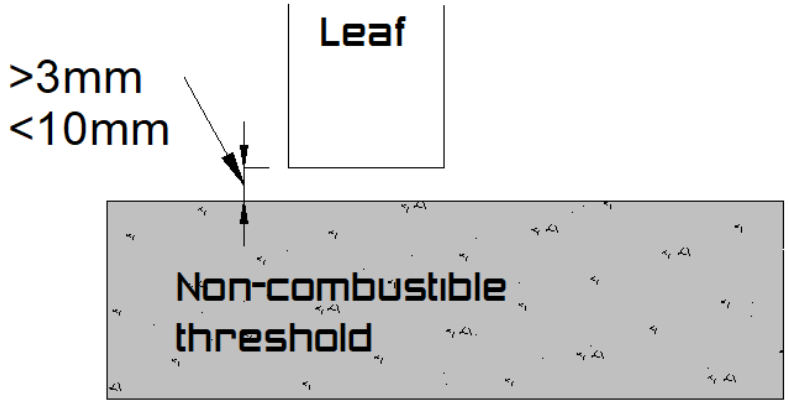
As per AS 1905.1-2015, clearances between the bottom of the door and the floor shall be as follows:

1. Between the leaf and the top surface of the floor including and floor coverings shall be:
    a. Not less than 3mm (when closed and during opening).
    b. Not greater than 10mm (when closed).
2. Between the leaf and the top of the non-combustible threshold shall not be more than 25mm. (Uneven floors should be rectified by the trade responsible to ensure the door does not bind when opening and that the gaps are compliant when closed.

With combustible floor covering



Without combustible floor covering



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Leaf to frame - side hung.

Side hung door leaves in rebated frames shall be installed to swing clear of the frame and have mean clearances, in the closed position, between the leaf & frame head and between the leaf & both frame stiles, of not more than 3mm. (measurements should be taken not more than 750mm apart and a minimum of 3 measurements per vertical edge and a minimum of 2 measurements on the horizontal edge) The mean is calculated as follows e.g. (measurement 1 + measurement 2 + measurement 3 etc.)/ number of measurements.

Leaf to stop – side hung.

Side hung door leaves hung in a rebated frame shall have mean clearances from the face of the door leaf to the door stop of not more than 3mm and shall not be more than 5mm in any location. (An exception is made for Euroseal frames as these require 4mm gaps as tested).

Double acting doorsets.

Clearances shall be as per the tested specimen. Contact Nexdor Systems as this changes based on the frame and hardware being used.

Note: refer to our FIRE-DOOR-TRIMMING Tech sheet.

Hardware

Before installing any hardware, please ensure that it is compliant with the Fire Door that you have. Hardware is required to be tested or assessed to comply with the door build. Even if the hardware is labeled with e.g. 2-hour fire rated, it is not compliant unless it has been tested with the core and build type that you have.

Fire doors are handed, there is a hinge side and a latch side. The top hinge side will be labeled.

Double doors require meeting stile seals to be compliant.

Resources

NEXDOR-SYSTEMS-FR-PLASTERBOARD-WALLS-BUILD-01
NEXDOR-SYSTEMS-MASONARY-WALLS-BUILD-02
NEXDOR-SYSTEMS-SPEEDPANEL-WALLS-BUILD-02B
NEXDOR-SYSTEMS-GAP-AROUND-FIRE-DOORS-BUILD-03
NEXDOR-SYSTEMS-FIRE-DOOR-INSTALL-GUIDE-BUILD-04
NEXDOR-SYSTEMS-KNAUF-INTRWALL-SHAFTLINER-WALLS-BUILD-05