



# Retro-fit Solutions for Upgrading Non-compliant Fire Doors



Solutions for:

Excessive door bottom clearances  
Excessive door perimeter clearances

## About us

Lorient has an international reputation for designing and manufacturing a wide range of innovative door sealing solutions for the containment of fire, smoke, sound and energy.

With 35 years of accumulated knowledge we pride ourselves on offering products that are designed to save lives, preserve property and enhance quality of life. We recognise our responsibility to create well-designed products that will perform; products which are durable and reliable, and which genuinely improve the buildings they protect. By doing so, we can play our part in improving life safety, amenity and reducing building damage and loss.



## Upgrade requirements

It is an unfortunate fact that many fire doors installed within Australian buildings are commonly identified as being non-compliant and are subsequently replaced due to their perimeter clearances falling outside the requirements outlined in **Fire Door Standard AS1905.1 : - Components for the protection of openings in Fire-resistant Walls (Part 1: Fire-resistant Doorsets)**.

In many instances problems are identified during routine fire door maintenance inspections and may be a result of poor installation, building movement, wear and tear, neglect or wilful abuse. However, once a door is deemed non-compliant it must be either repaired or upgraded in an approved manner or completely replaced and re-tagged.

Lorient recognise this common problem and offer a range of approved retro-fit upgrade solutions that may reduce the need for door replacements and associated costs commonly faced by Building Owners, Body Corporate's and Facility Managers alike. These upgrade solutions assist in salvaging fire doors identified with excessive clearances. They incorporate specialised intumescent materials that expand in volume when exposed to elevated temperatures, assisting in maintaining the performance of the door assembly to which they are applied.

Fire door assemblies can now be quickly and economically upgraded on-site, often without the need to remove the door from its hinges.



## Regulatory Requirements

Section C3 The Building Code of Australia (BCA) regulates the 'Protection of Openings' and requires that fire doors are installed in accordance with:

### **AS 1905.1: 2005 : - Components for the protection of openings in Fire-resistant Walls (Part 1: Fire-resistant Doorsets).**

Section 5.5 of AS1905.1: 2005 provides detailed guidance on the allowable clearances around the edges of a fire door as follows:

#### *5.5 Clearances*

##### *5.5.1 General*

*The clearance dimensions required for a fire-resistant doorset shall be in accordance with this Clause unless greater clearance dimensions have been demonstrated on a tested specimen.*

##### *5.5.2 Sill and floor finish*

*Clearances between the bottom of all door leaves and the floor shall be as follows*

- (a) Between the leaf and the top of any floor covering – not less than 3mm and not more than 10mm.*
- (b) Between the leaf and the top of the non-combustible sill –*
  - (i) not more than 10mm\* where there is no combustible floor covering; and*
  - (ii) not more than 25mm\* where there is a combustible floor covering present.*

*(\*NOTE: In essence the maximum gap between the bottom of the door leaf and the adjacent floor covering is 10mm. The 25mm dimension is provided to limit the thickness of carpets and underlays to a maximum thickness of 15mm in total. The intention of this Standard is to not allow a 25mm gap under a door unless carpet is in the process of being installed. This is a temporary measure allowing for certification of the doorset, provided that a note is put in the evidence of compliance schedule and is checked at the first maintenance inspection regime).*



##### *5.5.3 Side-hung door, leaf-to-frame*

*Door leaves side-hung into rebated frames shall be installed to swing clear of the doorframe and shall have mean clearances, in the closed position, between the leaf and the head, and between the leaf and each stile, of not more than 3mm.*

Ensuring doors are installed correctly and remain within these limits can be a challenge for a variety of reasons; inaccurate measurement, poor installation, changes to floor finish materials, building movement or just long term wear and tear can all result in a non-compliant door installation that requires remedial attention.

# Lorient Fire Door Bottom Upgrade



The **Lorient Door Bottom Upgrade (LDBU)** is a cost effective solution that allows doors with excessive door bottom clearances to be simply and quickly upgraded, often without the need to remove the door from its hinges.

This product consists of an angled extruded aluminium profile incorporating a flame retarded silicone rubber gasket and a high performance intumescent sealing strip that is unaffected by moisture (making it suitable for use on doors exposed to exterior conditions).

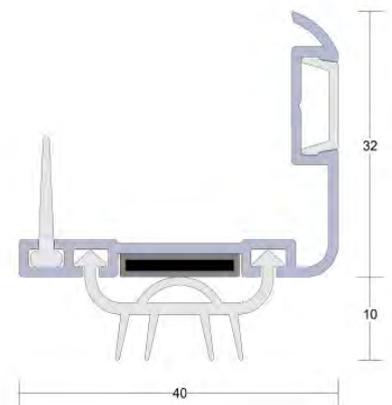
The LDBU is simply screw fixed to the bottom of the door and incorporates a snap-fit cover strip that conceals the screw fixings.

The Lorient LDBU may be used on various manufacturers 35mm thick (mini) doors and 48mm thick (maxi) doors, and can accommodate a door bottom clearance of up to and including a maximum of 24mm as detailed below.



Door type	Single leaf	Double leaf	Max gap size under door	Fire rating
E-core 35mm Mini	Yes	N/A	22mm	-/120/30
E-core 45mm Maxi	Yes	Yes	22mm	-/240/30
Firecore 35mm Mini	Yes	N/A	24mm	-/90/30
Firecore 45mm Maxi	Yes	Yes	24mm	-/90/30
Pyropanel 35mm FR Mini	Yes	N/A	20mm	-/120/30
Pyropanel 45mm FR Maxi	Yes	Yes	20mm	-/120/30

*(Contact our technical department regarding approvals for other manufacturers or historical door types)*



## Key features of LDBU

- Economical, cost-effective solution
- Simple and quick retro-fit installation
- Moisture resistant intumescent material suitable for exterior applications
- Concealed screw fixings
- Gasket reduces smoke, acoustic and draft infiltration under the door
- Fire ratings up to 4 hours
- Gap clearances up to 24mm.

## Sizes

- 820mm, 920mm, 1220mm lengths (lengths can be trimmed on-site to suit door dimension).

## Colours

- Silver extrusion with grey silicone rubber gaskets and snap-fit cover strip.

# Lorient Fire Door Perimeter Upgrade



The **Lorient Door Perimeter Upgrade (LDPU)** allows doors with excessive door perimeter clearances to be quickly and easily upgraded.

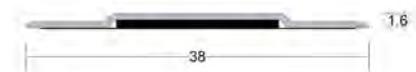
These thin, low profile seals are only 1.6mm thick and comprise of a high performance intumescent sealing strip covered with a 38mm wide decorative facing. The seal is simply applied in continuous lengths to the door frame rebate and is retained in place with its own aggressive self-adhesive backing. Being thin and flexible the strip is easily cut to length on site with scissors, allowing assemblies to be quickly upgraded often without the need to remove the leaf from its hinges.

The Lorient LDPU may be used on various manufacturers 35mm thick (mini) doors and 48mm thick (maxi) doors, and can accommodate a door perimeter clearance of up to and including a maximum of 8.7mm as detailed below.



Door type	Single leaf	Double leaf	Max gap size across head of door	Max gap size down the jambs	Fire rating
E-core 35mm Mini	Yes	N/A	8.7	6.5	-/120/30
E-core 45mm Maxi	Yes	Yes	8.7	6.5	-/240/30
Firecore 35mm Mini	Yes	N/A	7	7	-/240/30
Firecore 45mm Maxi	Yes	Yes	7	7	-/240/30
Pyropanel 35mm FR Mini	Yes	N/A	6.5	6.5	-/120/30
Pyropanel 45mm FR Maxi	Yes	Yes	6.5	6.5	-/240/30

*(Contact our technical department regarding approvals for other manufacturers or historical door types)*



## Key features of LDPU

- Economical, cost-effective solution
- Simple and quick retro-fit installation
- Moisture resistant intumescent material suitable for doors in exterior applications
- Fire ratings up to 4 hours
- Gap clearances up to 8.7mm.

## Sizes

- 1m, 2.1m, 2.75m lengths.
- Single door pack (2 x 2.1m, 1 x 1m)
- Long single door pack (2 x 2.75m, 1 x 1m)
- Double door pack (3 x 2.1m)
- Long double door pack (2 x 2.75m, 1 x 2.1m).

## Colours

- White.

For further information about Lorient products  
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