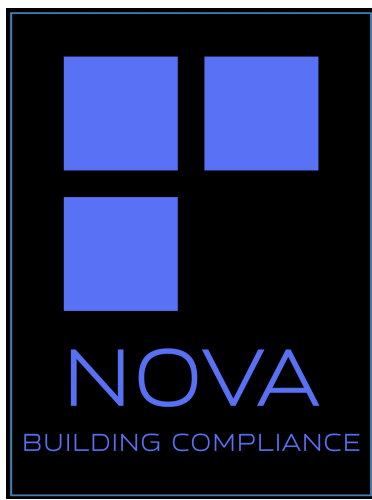




FIRE DOORS

THE ULTIMATE GUIDE

INTRODUCTION

Fire doors
are
engineered
to save
lives and
property

FIRE DOORS IN THE UK

In the UK roughly 3 million new fire doors are manufactured and installed each year.

However, 99% of these doors fail a fire door inspection. A non-compliant installation places lives and property at risk.

Fire doors are manufactured in different ways and have different internal core materials.

Before a fire door is brought to market in the UK it must be tested in a furnace where the door is subject to the heat conditions that would be expected in a fire situation.

SAVE LIVES

It is important that you understand early on that a minor mistake in the installation process can have dangerous consequences. If you install a fire door incorrectly you are putting lives and property at risk as the door may not be able to perform in a fire scenario.

Fire doors are an engineered safety device. When installed correctly they save lives. It is vital that you get the installation correct as it is life critical.

CHANGES IN THE FIRE DOOR INDUSTRY

HACKITT REVIEW

The Grenfell Fire disaster has led to some big changes within the fire safety industry. The Independent Review of Building Regulations and Fire Safety: final report was a report which was commissioned by the government following the Grenfell Tower fire to make recommendations on fire safety.

This document has been widely referred to as the Hackitt Review and it has been a key driver for many changes surrounding fire door safety. The Hackitt Review recommended many changes, particularly regarding high rise residential blocks (HRRBs).

As a result of the Hackitt Review, there has been an increase in fire door awareness. Housing associations and local authorities are now looking for fire door installers to have proof of competency.

NEW LAWS & REGULATIONS

There are new laws and regulations affecting the fire door industry across the UK.

The government has issued new guidance for housing associations and passed the Fire Safety Act and the Building Safety Act into law.

Building a Safer Future

Independent Review of Building
Regulations and Fire Safety:
Final Report

LAWS

WHAT IS THE REGULATORY REFORM (FIRE SAFETY) ORDER 2005?

Fire safety law in England and Wales applies in all buildings except inside people's private dwellings. Premises affected could be things like schools, factories, hotels, offices, and entertainment venues. It also affects the communal areas of a block of flats. The law is called the Regulatory Reform (Fire Safety) Order 2005.

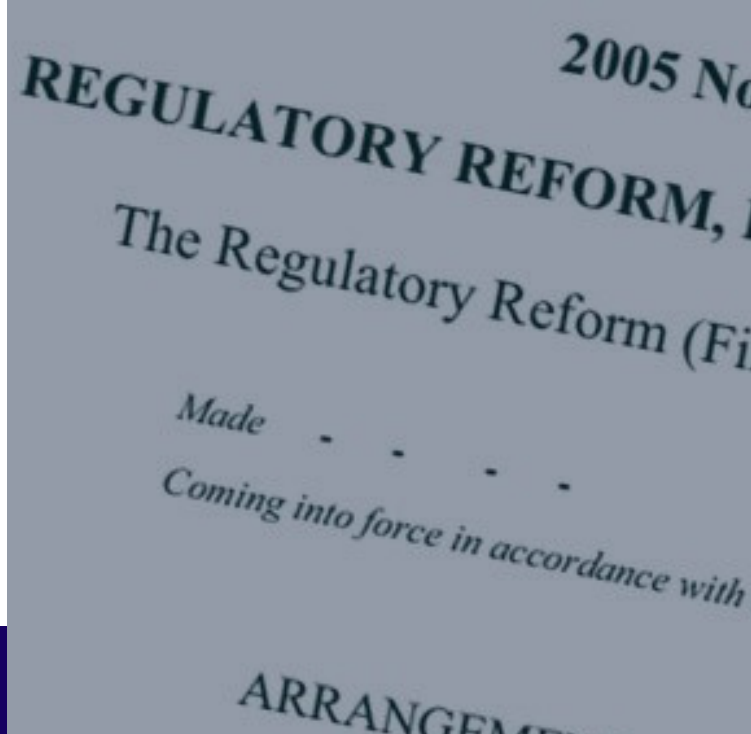
It states that each building needs to have a duty holder or holders who are responsible for mitigating the risk of fire in all non-domestic buildings.

This includes the common parts of flats, apartments, and houses of multiple occupation (HMOs).

The duty holder is called the 'responsible person' and is typically the person, organisation or company that controls the building. The responsible person must carry out a fire risk assessment and maintain a fire management plan.

The Fire Safety (Scotland) Regulations 2006 and several other important fire safety papers were enacted in Scotland as independent fire service and fire safety laws. In 2010, the Fire Safety Regulations were brought in in Northern Ireland.

Failure to adhere to the terms of the Fire Safety Order can lead to fines and prison sentences.



LAWS

The Fire Safety Order contains two key paragraphs:

Article 17

Article 17 requires the responsible person has 'a suitable maintenance regime to ensure relevant equipment is kept in an efficient state'. This includes fire doors.

Article 18

Article 18 'requires the responsible person to appoint one or more competent persons to assist in undertaking the preventative and protective measures'.

A 'competent person' is defined in the Fire Safety Order as 'someone who has sufficient training, qualifications and experience to assist the Responsible Person to meet some of their duties.'



LAWS CONTINUED

Who is the responsible person?

The term 'Responsible Person' is a legal term and it applies to the person, persons, institution or company that controls the building.

The Responsible Person has a legal duty to mitigate the risk of fire within a property. They must aim to remove or reduce the risks of fire within a building as much as possible. The 'Responsible Person' is required to conduct a fire risk assessment (FRA). Ratings and locations of fire doors should be included in the FRA.



LAWS CONTINUED

WHAT IS THE FIRE SAFETY ACT

The Fire Safety Act when it was passed on 2021 and became enforced in 2023.

Regarding fire doors, the Fire Safety Act has closed a loophole that the Regulatory Reform (Fire Safety) Order 2005 failed to address.

The Fire Safety Act requires that fire doors to individual flats be inspected as part of a fire risk assessment on any building. From now on [in England and Wales) the 'Responsible Person' must commission a fire risk assessment, including a full fire door inspection.



REGULATION 10

GUIDANCE FOR HOUSING ASSOCIATIONS INSPECTING FIRE DOORS

WITH THE FIRE SAFETY REGULATIONS 2022 BECOMING A LEGAL REQUIREMENT IN JANUARY 2023, HERE IS AN EASY GUIDE FOR PROPERTY OWNERS AND OPERATORS OF RESIDENTIAL BUILDINGS.

What are the basics?

The Fire Safety [England) Regulations 2022 will come into force on 23 January 2023 for all multi-occupied residential buildings in England with storeys over 11 metres high. From this date, it became mandatory to undertake quarterly checks of fire doors [including self-closing devices) within the common parts and annual inspections of flat entrance door(s). Responsible persons must ensure that they make 'best endeavours' to conduct these checks.

What does best endeavours mean?

Responsible persons should determine the best approach to engage with residents and get access for checks. This may include agreeing on a date so that doors can be inspected.

REGULATION 10 CONTINUED

How do housing associations ensure staff are sufficiently trained?

All responsible persons should receive relevant training so that they can make sound judgements. UK Fire Door Training has a range of recognised courses that would benefit housing associations that don't want to fall foul of the law.

What if Housing Associations have problems gaining access?

There may be situations in which residents do not allow the responsible person to carry out the checks in full. Therefore residents should be encouraged to allow the checks to go ahead.

If responsible persons are not granted permission, they need to take note of what steps were taken to comply with these regulations and evidence of Resident Engagement Strategies (RES).

Keep records of these attempts as evidence. Without such evidence HAs are likely to face fines and prosecutions.



REGULATION 10 CONTINUED

WHAT ARE THE MINIMUM EXPECTATIONS FOR THE INSPECTION OF FIRE DOORS?

The responsible person should be able to carry out these checks themselves. The best way to gain knowledge over how to conduct a fire door inspection safely would be complete a fire door inspection course. UK Fire Door Training's Fire Door Inspection Course is perfect for this.

The inspection should check the following:

- If there has been any alterations or damage to a door's glazing apertures or air transfer grille
- Check that hinges are free from damage and excessive oil leakage
- Check that seals are in place and undamaged
- Check that the gaps from the door leaf to the frame are 2-4mm
- That the door closes fully against the rebate stop and latches if necessary. It must be able to do this from any angle.
- That there is no visible damage (either deliberate or from wear and tear) to the door or door closer

If any issues are identified from these checks, it might be appropriate to undertake more detailed examinations of doors by a competent person.

REGULATION 10 CONTINUED

What about buildings shorter than 11m?

The regulations do not relieve a responsible person from ensuring general fire precautions are in place.

The Fire Safety Act 2021 has made it clear that any residential building that contains two or more sets of domestic premises is within the scope.

Responsible persons for these buildings below 11 metres tall must put general fire precautions into place, including ensuring all flat entrance doors can provide adequate protection from fires.

Providing information to residents

Responsible persons will also be required to provide residents in all residential buildings with two or more sets of domestic premises with information on fire doors.

They need to give residents information on fire doors. It should explain the importance of keeping doors closed, how fire door compartmentation works, explain that fire doors and self-closing devices should not be damaged or altered with and that any faults or damage need to be raised.

Residents must receive this information when they move into a multi-occupied residential building and then on an annual basis thereon.

APPROVED DOCUMENT B

What is Approved Document B?

In England and Wales, the building regulations affecting fire safety is Approved in Document B. It is broken down into 2 volumes. Volume 1-Dwelling Houses, Volume 2 -Building other than dwelling houses.

Approved Document B explicitly explains where fire doors need to be located within buildings. You can turn to this document to help find answers regarding other fire safety matters .

For example, Approved Document B requires that a building is divided into compartments, protecting escape routes, such as corridors and staircases. In domestic dwellings above two levels, every door leading to the stairwell [at all levels) must be a fire door. Without these doors, fires would quickly spread throughout a building, preventing people from safely evacuating.

Fire Safety

APPROVED DOCUMENT

VOLUME 1 - DWELLINGHOUSES
VOLUME 2 - BUILDINGS OTHER
THAN DWELLING HOUSES

B

B1	Means of warning & escape
B2	Internal fire spread (linings)
B3	Internal fire spread (structure)
B4	External fire spread
B5	Access & facilities for the fire service

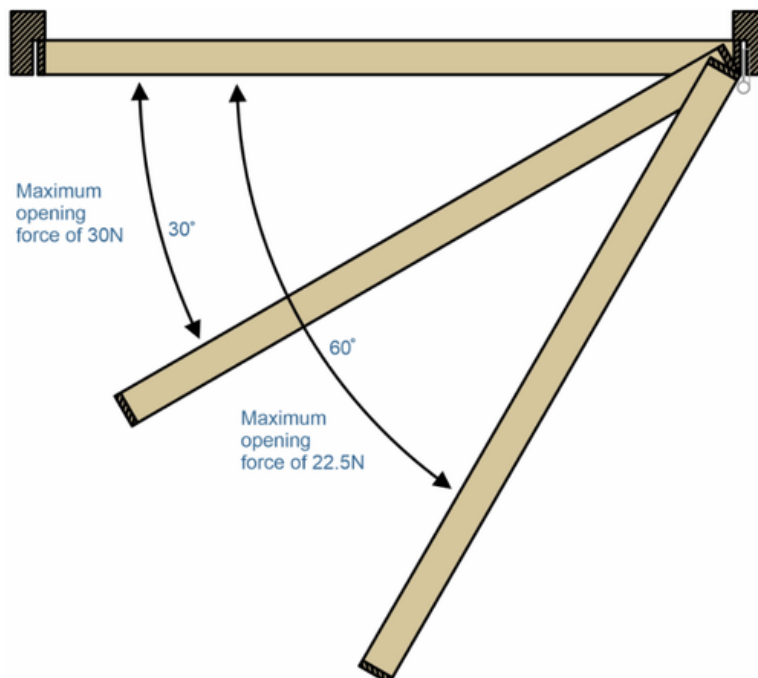
APPROVED DOCUMENT M

What is Approved Document M?

In England and Wales, the building regulations affecting the accessibility of buildings is Approved Document M.

Regarding fire doors Approved Document M is very clear:

1) Opening force requirements – There needs to be a maximum opening force of 30N for the first 30 degrees of opening and then a maximum opening force of 22.5N between 30 – 60 degrees.



2) Door thresholds – To achieve Part M compliance, for ease of wheelchair access door thresholds should be a maximum of 15mm; the threshold should be chamfered or ramped.

FIRE DOOR CERTIFICATION

What is Fire Door Certification?

You should only use certificated door leaves and components when installing fire doors. The door leaf, frame and all components should be certificated by an independent third party and have traceability to the manufacturer.

There are several third-party certification schemes in the UK such as Certifire, BM Trada Q-Mark, LPCB, Blue Sky and IFC.

Third-party certification of fire door assemblies and doorsets means that the product has been tested to British Standard BS 476-22 or European Standard EN 1634-1. This test must be carried out at a UKAS accredited test facility.

Manufacturing facilities where products are manufactured must have Factory Production Control systems. This ensures that the products are consistently produced to the correct specification. Manufacturers are audited for this process.

Fire doors manufactured under these schemes will carry a label or a plug. This relates to the certification of the door.

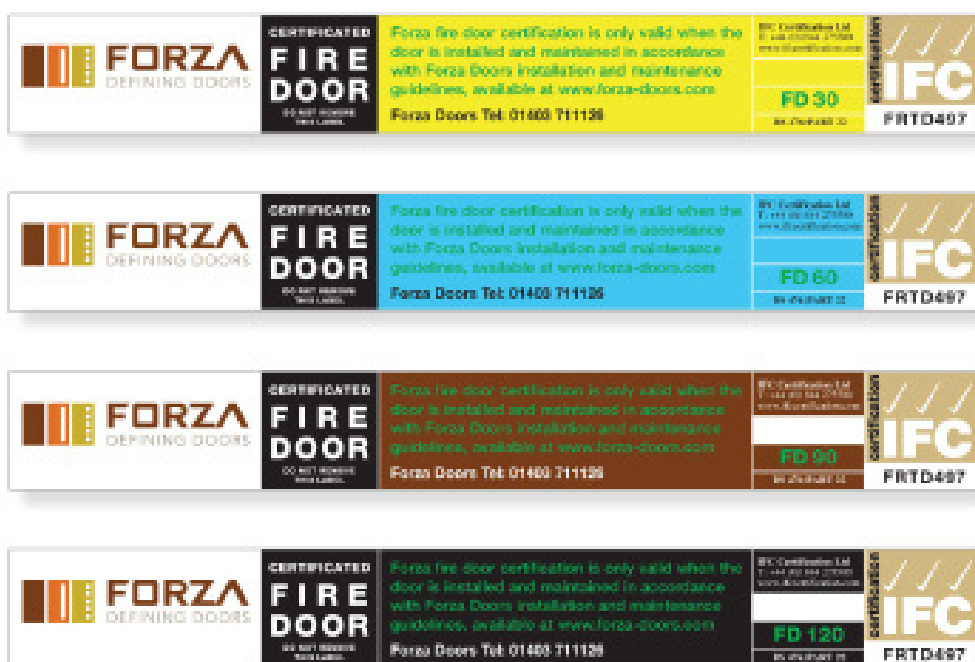
This label or plug relates to a fire door certificate of approval or certificate datasheet. This certificate details all the compatible components and configurations allowed on a particular door.

FIRE DOOR CERTIFICATION CONTINUED

This label or plug relates to a fire door certificate of approval or certificate data sheet. This certificate details all the compatible components and configurations allowed on a particular door.

The certificate of approval will detail everything you can and cannot do with the door. Information denoting the position of hinges, locks, glazing, the types of seals allowed and where they can be installed.

The certificate of approval must be followed to the absolute letter. Failure to do so will invalidate the certification.



FIRE DOOR RATINGS

In the UK Fire doors are tested to either BS 476-22 or EN 1634-1. This test also tells us the rating of the fire door.

The number denotes the number of minutes that a door can hold back fire. E.g. FD60 is 60 minutes.

Fire doors typically have the following ratings FD30, FD60, FD90, FD120. Higher ratings are available and can be manufactured but they are exceedingly rare and highly specialist products.

In most public buildings fire doors need to resist fire and smoke. These products are tested to BS 476-31.1 or EN 1634-3.

The way we can tell if a fire door is both a fire and the smoke-controlled door is the suffix 's'. See table below:

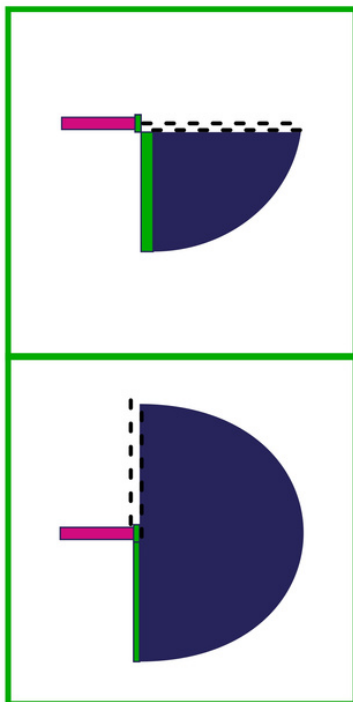
	Fire Only	Fire and Smoke
30 minutes	FD30	FD30S
60 minutes	FD60	FD60S
90 minutes	FD90	FD90S
120 minutes	FD120	FD120S

FIRE DOOR CONFIGURATIONS

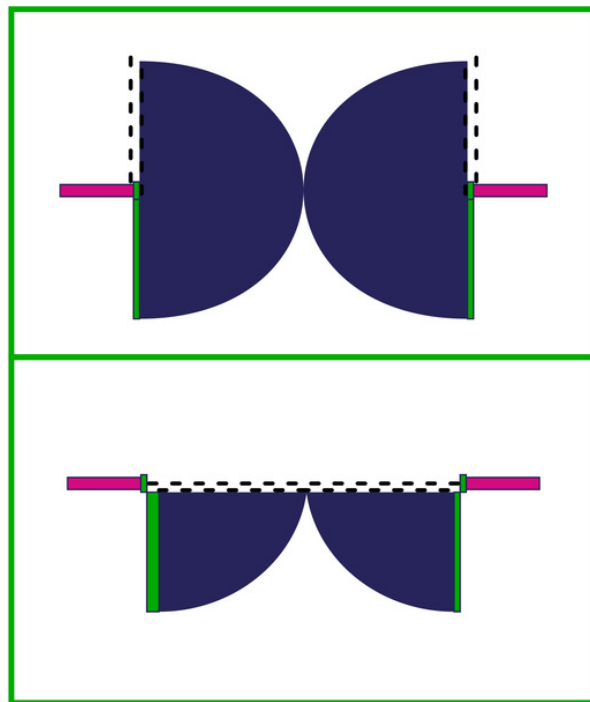
Fire doors can be installed in a range of configurations. Different door configurations are more suited to different environments.

For example, most office doors, flat or hotel entrance doors are single leaf, single acting. Whereas a large factory or a hospital with heavy pedestrian traffic and large equipment being transported are more likely to have double leaf, double-action configurations.

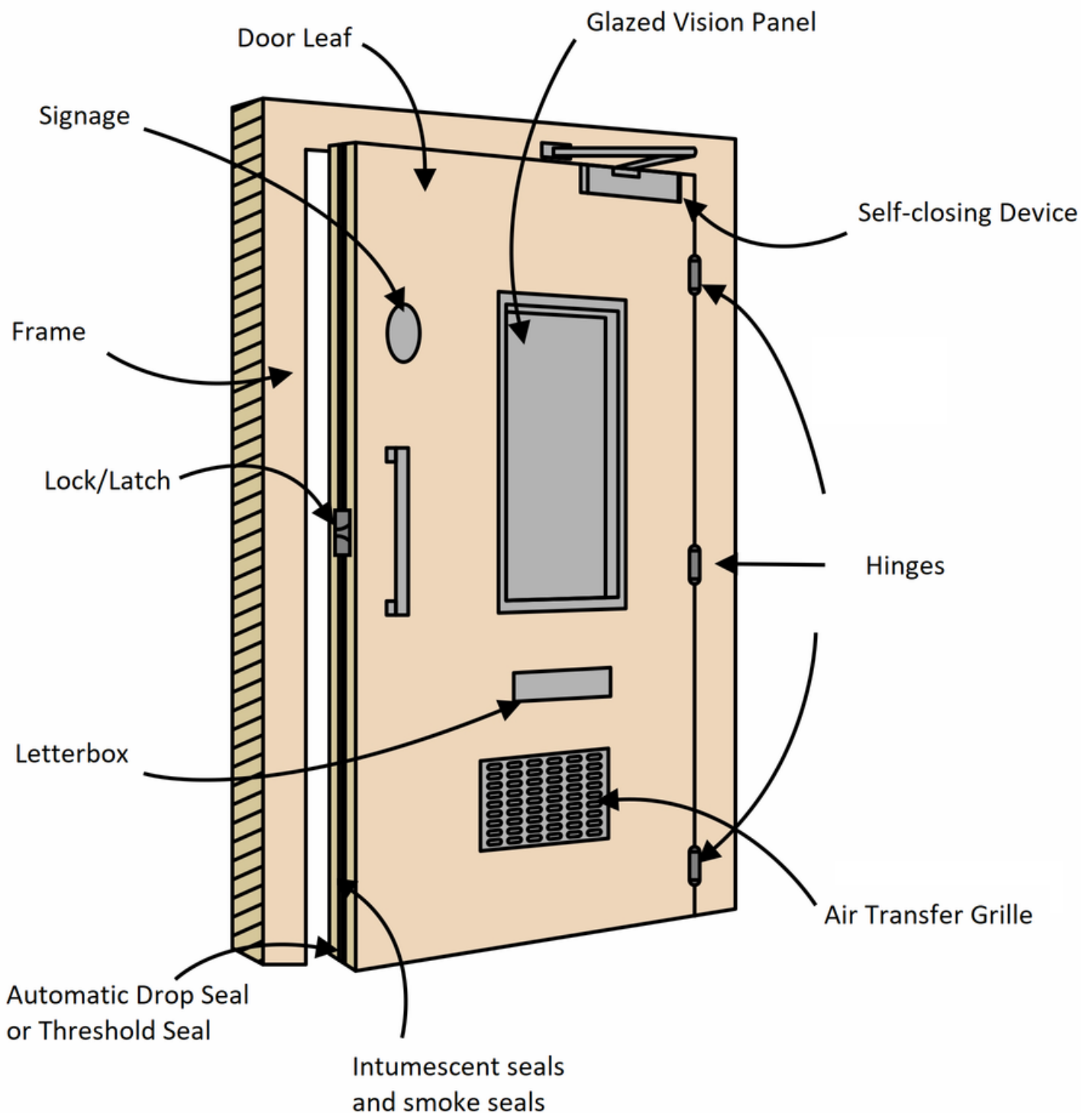
Single



Double



FIRE DOOR ANATOMY



FIRE DOOR TOLERANCES

	Tolerance	Comment
Door to frame gaps	2-4 mm	Always check with the manufacturer's data sheet. However, generally 2-4 mm gaps are acceptable.
Threshold Gap FD30 or FD60 (floor to bottom of door)	6-10 mm	Depends on manufacturer's instructions. Generally the wider the door the smaller the threshold gap.
Threshold Gap FD30s or FD60s (floor to bottom of door)	3 mm	All FD30s or FD60s doors require a 3 mm threshold gap. If this cannot be achieved then a drop seal or a threshold plate will need to be installed.
Frame Fixings	350-500 mm centres, 100-150 mm from the corners with 50 mm penetration into the construction.	In the case of double doors a frame fixing will also be required at the head
Glazing Bead Fixings	150 mm centres	N/A
Signage	1500 mm in height	Eye level for the average person
Closing Time	3 - 25 seconds	N/A