



FIRE CERTIFICATE

FIRE RESISTANT TIMBER  
FIRE DOORS & FRAMES

TO BS 476: PART 22: 1987  
& BS 476: PART 31.1: 1983  
IFCC CERT NO. FRTD497

This product certificate (controlled document no. FQ024) certifies that FORZA DOORS LTD Manufacture in the UK the following fire doors and door assemblies:

**Forza - Moralt 54 & 59mm Fire & Sound core FD30 (S) & FD60 (S)**

and have satisfied the requirements of The IFC CERTIFICATION LTD scheme that includes the testing of products to BS476: Part 22 & BS476: Part 31.1, the inspection of Factory Production Control and continuing surveillance audits and testing of samples of products taken from production.

IFC Certification Ltd +44 (0) 1844 275500 www.ifccertification.com	<b>FD TYPE:</b>	IFC Certification Ltd +44 (0) 1844 275500 www.ifccertification.com	<b>FD TYPE:</b>	<b>FORZA FIRE DOOR NO:</b>		
<b>FD30</b>		<b>FD30s</b>			BS 476: Part 22: 1987 BS 476: Part 31.1: 1983 www.ifccertification.com	
BS 476: PART 22	Please tick	BS 476: PART 22 & BS 476: PART 31.1	Please tick			

IFC Certification Ltd +44 (0) 1844 275500 www.ifccertification.com	<b>FD TYPE:</b>	IFC Certification Ltd +44 (0) 1844 275500 www.ifccertification.com	<b>FD TYPE:</b>	<b>FORZA FIRE DOOR NO:</b>		
<b>FD60</b>		<b>FD60s</b>			BS 476: Part 22: 1987 BS 476: Part 31.1: 1983 www.ifccertification.com	
BS 476: PART 22	Please tick	BS 476: PART 22 & BS 476: PART 31.1	Please tick			

The product specification and field of application to achieve 30 and 60 minutes integrity are detailed in:



Schedule Ref: PAR/11957/01  
FD30 & FD60

Project Ref:

✓ CONTRACTOR'S INSTALLATION STATEMENT

<b>Forza Fire Door no:</b>	<b>Company:</b>	<b>To the Project of works (ref no.):</b>	<b>Date:</b>
has been installed in accordance with the Forza installation guidance by the trained installation team of:	<b>Signed (on behalf of contractor):</b>	<b>At:</b>	<b>Tick here on completion</b> <input type="checkbox"/>

Fire door label: affix to door intumescent strip or frame on install



Fire door label: affix to door intumescent strip or frame on install

✓ CORRECT INSTALLATION MUST BE OBSERVED

- |  |   |
|--|---|
| <input type="checkbox"/> 1. Frame to wall gaps / packing / gap sealant   | <input type="checkbox"/> 5. Smoke seals allow door to shut and fill all gaps    |
| <input type="checkbox"/> 2. Hinges / pivots position & no missing screws | <input type="checkbox"/> 6. Lockset engages / releases                          |
| <input type="checkbox"/> 3. Door to frame & threshold gaps               | <input type="checkbox"/> 7. Closer suitably adjusted to close door              |
| <input type="checkbox"/> 4. Fire seals (intumescent) in position         | <input type="checkbox"/> 8. 'Fire Door Keep Shut' sign visible on door or frame |

# FORZA FD30/FD60 FIRE & SOUND - DOOR & FRAME INSTALLATION GUIDE

## SUPPORTING CONSTRUCTION

The supporting construction may be Timber or Steel stud plasterboard partition, blockwork, brickwork or concrete walls, but shall be of a type that has been tested or assessed to provide in excess of 30/60 minutes fire resistance, at the required size, when incorporating FD30/FD60 door assembly openings. The method of forming the door assembly aperture must be as tested by the partition supplier/manufacturer.

### Timber Frame Installation & Gap Tolerance

Timber door frames must be fixed back to the supporting construction with steel fixings at centres not exceeding 600mm on the vertical edges (minimum 200mm from the top and bottom) and a minimum of one fitted centrally across the width of the frame head of double doors.

Screws shall be of sufficient length to penetrate the supporting construction by at least 40mm, and shall be positioned such that they are not exploited by charring of the frame, irrespective of the direction of fire exposure. Suitably thick packers depending on frame to supporting construction gap shall be used at all fixing positions.

The gap between the frame and the supporting construction shall be sufficient to enable mastic and mineral wool or fire door foam to be positioned as per the installation instructions. Mineral wool to be tightly packed in the gap and capped at the perimeters of the frame with intumescent mastic to a minimum depth of 10mm.

Packers shall be used at all fixing positions, although if combustible or thermally softening packers are employed, they must be cut short and capped with a layer of approved mastic and maintain compliance with one of the approved back of frame ceiling methods given within these instructions.

For gap sealing applications, the intumescent mastic should be an approved linear gap joint sealant rated to FD30/FD60, tested and approved between the required substrates to BS EN 1366-4 or BS476: part 20.

No part of the rear of the frame section shall be exposed once installed, and door leaves must not protrude beyond the exposed face of the doorframe.

For standard FD30/FD60 installations there shall be no feature rebates or shadow gaps at the junction of the frame and wall (such features could be assessed on an individual project basis).

The standard door assembly design should be such that single acting leaves are fully flush within the timber frame when closed. The face of leaves in double door assemblies should be flush with each other at meeting stiles when closed.

### Overpanels (Transomed only)

Overpanels shall be secured into the timber frame and transom using steel screws fixed through the rear of the frame members, passing at least 40mm into the center of the overpanel thickness. (Screws must not be fixed through the overpanel into the stops, or vice versa). Screws must be no more than 100mm from each corner of the overpanel, and at maximum 400mm centers, with a minimum of 2no. Screws per overpanel edge. The gap between overpanel and frame and transom should not exceed 3mm.

### Frame & Threshold Gap Tolerance

The gap between the door and the timber frame and double door meeting stiles should be 1.5 - 4.0mm. Gaps under the door should not exceed 6mm for fire performance. If smoke control is also required, a drop down seal should be employed at the threshold in accordance with section 6 of the following Ironmongery Suitability & Installation Guide.

## FD30 & FD60 FRAME SPECIFICATION

Flush Timber Frame Specification FD30 & FD60				
Performance	Material Min. density @ 12% moisture content	Min. frame face width Single acting	Min. frame depth	Min. stop width
FD30	Softwood or hardwood (min) density 470kg/m <sup>3</sup>	32mm	100mm	18mm
FD60	Hardwood (min) density 640kg/m <sup>3</sup>			

The overall frame depth may be increased either in solid form or with the use of extension linings where the joint/biscuit between the main frame and extension does not intrude into the plane of the door thickness.

# FORZA FD30/FD60 FIRE & SOUND IRONMONGERY SUITABILITY & INSTALLATION GUIDE

## 1. Single Axis Knuckle Hinges

Royde & Tucker H207 101 x 28mm Hi-Load concealed bearing butt hinges have been successfully tested. Alternative hinges may be used, subject to compliance with the specifications below.

### Hinge types:

Fixed pin, washered butt, ball bearing butt, lift-off type and journal supported hinges may be used.

### Number of hinges:

3no. per leaf on leaves upto 2299mm high.  
4no. per leaf on leaves over 2300mm high.  
Additional hinges up to a maximum of 5no. per leaf may be installed if preferred or required for mechanical purposes.

### Positions:

The top first hinge must be positioned 120-200mm down from the head of the leaf to

the top of the hinge. The top second hinge to be positioned 200-250mm down from the bottom of the first hinge to the top of the second hinge. Alternatively, an intermediate hinge can be equi-spaced between the top and bottom hinges. The bottom hinge positioned 150-225mm up from the foot of the leaf to the bottom of the hinge. Any additional hinges to be equally spaced.

### Fixings:

Steel screws, as recommended by the hinge manufacturer, but in no case smaller than 4mm diameter having thread for the full length, minimum 31mm long.

### Hinge blade size:

- 2.5-3.5mm thick
- 89-110mm high
- 28-36mm width

These dimensions refer to the blade size, i.e. the part of the hinge that is recessed into the edge of the leaf/frame.

### Hinge materials:

Steel or Stainless Steel No combustible or thermally softening materials to be included.

### Additional protection:

FD30 not applicable, FD60 all hinge blades must be bedded on minimum 1mm thick nonpressure forming intumescent material.

## 2. Mortice Latches /Locks

Where mortice latches or locks are fitted, they should be centred at 1000mm (+/- 200mm) above the bottom of the door leaf, and should comply with the following specifications:

### Latch/lock type:

Mortice latches, tubular mortice latches, sashlocks, deadlocks.

### Maximum dimensions:

- Forend plate: 235mm long x 25mm wide x 3mm thick.
- Latch body: 165mm high x 100mm wide x 15mm thick.
- Strike plate: 180mm high x 26mm wide (excluding tongue).

### Additional protection:

FD30 single doorsets - none required.  
FD30 double doorsets - 1mm thick monoammonium phosphate e.g. Interdens or Therm-A-Strip intumescent sheet material under the lock/latch forend and strike plate.

FD60 single and double doorsets - 1mm thick mono-ammonium phosphate e.g. Interdens or Therm-A-Strip intumescent sheet material encapsulating the lock/latch body and under the forend and strike plate.

Latches must have no essential part of their structure made from polymeric or other low melting point (<800c) materials, and should not contain any flammable materials. Overmorticing is to be avoided; mortices should be as tight as possible to the latch. If there are gaps around the case, not exceeding 2mm, then these must be made good with intumescent mastic or sheet material. Holes for spindles or cylinders should be kept as small as is compatible with the operation of the hardware.

Where glazing apertures are also incorporated, and are positioned such that locks/latches are included in the margin between the aperture and door edge. It is a condition of this certification that, the margin must be at least 50mm wider than the lock/ latch mortice. If the mortice latch/lock is fitted in line with a 'rail' between two apertures, no part of the lock mortice shall be closer than 50mm to the edge of any aperture.

### 3. Door Closers

Where required by regulatory guidance or specific fire strategy each hinged door leaf must be fitted with a self-closing device unless it is normally kept locked shut and labelled as such with an appropriate sign which complies with BS5499-10:2014.

It is essential that all closers fulfill the requirements of BS EN 1154: 1997 and are of the correct power rating for the width and weight of the door assemblies (minimum power size 3). They must be fitted according to the manufacturer's instructions and be adjusted so that they are capable of fully closing the door leaf, against any friction imposed by the latch (and smoke seals if fitted) from any position of opening. A variety of closers may be used, subject to compliance with the specifications below:

### 3.1 Face Fixed:

Surface-mounted door closers must have been fire tested or assessed by IFC for use on unlatched FD30 or FD60 timber doors hung within timber frames. The Arrone surface-mounted closer -AR1500 has been tested and approved.

In addition, where areas of uninsulated glazing are adjacent to the closer, the selected closer type must have been tested on the unexposed face of an uninsulated steel door, or a fully glazed door fitted with uninsulating glass, to demonstrate that the closer does not emit flammable fluids onto the glass face that would otherwise cause integrity failure before the required period of fire resistance.

### 3.2 Concealed Overhead Closers:

The Geze Boxer concealed door closer - 2-4 Model is suitable for inclusion in FD30 & FD60 door assemblies.

These are 'slide arm' type closers with the closer morticed into the head of the leaf and a single arm and roller acting in a slide channel morticed into the frame head. The closer is installed in a relatively deep mortice in the door head with the slide channel in a mortice in the frame head.

- Inclusion of the intumescent gasket kit as tested and supplied by the Manufacturer, encasing the closer body & closer arm slide body.
- When using in doors with vision panels the top margin between the leaf head and the aperture must be at least 200mm.

All closers fitted in accordance with the closer manufacturer's instructions must be adjusted so that they are capable of fully closing the door leaf, against any friction imposed by the latch and any smoke or acoustic seals if fitted, from any position of opening.

### 4. Bolts

All surface mounted and flush face fixed bolts must be steel or stainless steel.

- Maximum size of flush bolt - 250mm long x 20mm wide x 25mm deep.
- The body of the Bolt to be bedded on 1mm thick mono-ammonium phosphate e.g. Interdens or Therm-A-Strip intumescent sheet material.
- Flush bolts edge fixed shall be positioned centrally in the leaf.

### 5. Pull handles (Steel or Aluminium)

These may be surface fixed or boltthrough to the door assemblies, provided that the fixing points are no greater than 1500mm apart. Pull handles that are fixed through the leaf should use clearance holes as close fitting as possible to the noncombustible bolt and be lined with a 1mm thick graphite-based or monoammonium phosphate e.g.

Interdens or Therm-A-Strip intumescent sheet material.

### 6. Dropseals:

Fully morticed automatic drop threshold seals may be fitted. For FD30, no intumescent protection is required. For FD60, the body of the automatic drop seal must be encased in 1mm thick graphite based or mono-ammonium phosphate e.g. Interdens or Therm-A-Strip intumescent sheet material and morticed central to the thickness of the door core.

- Lorient LAS8001si
- Athmer Schall Exl. 15/30 WS
- Mann McGowan DD-1703ACU
- Sealed Tight Solutions STS422
- Norsound NOR810, 810S & 810dB+

### 7. Panic Hardware (Panic Bars & Pads)

Panic devices (Bars to EN1125 and Pads to BS EN 179) may be used.

- The device to be fully surface mounted
- The door leaf shall be considered in its unlatched configuration
- The installation of panic hardware which includes a battery pack or requires the addition of a cableway through the door of frame is not approved

### 8. Electronic Locks, Latches & Handlesets (battery-operated)

- Assa Abloy Signature MPA 4G RFID
- Assa Abloy Vingcard Essence RFID
- ONITY Advance Trillium RFID + Euro
- 5470H (FD30 only)

Must be bedded on minimum 2mm thick non- pressure forming intumescent material.

### 9. Cable Loops

- Assa Abloy EA280

Must be bedded on minimum 2mm thick non- pressure forming intumescent material.

### 10. Non-Essential Hardware Items

Push Plates & Kick Plates: Steel, Aluminium or PVC plates may be surface-mounted to the door assemblies, with maximum dimensions not exceeding 0.4m<sup>2</sup> in any orientation. To be mechanically fixed with maximum 25mm long, or glued with a thermally softening adhesive and fitted in such a way so they will not be prevented from falling away by being trapped under door stops, glazing beads or handle escutcheons etc.

Must not return onto the leaf edges or over sail glazing beads and must be surface fixed only and not be recessed into the leaf face.

**PLACE THIS SIGNED CERTIFICATE IN THE BUILDING FIRE SAFETY MANUAL**

(BS9999:2017 - Section9. Annex H)

# SMOKE AND INTUMESCENT SEALS

## Ambient Temperature Smoke Seals

Separate smoke seals or combined intumescent / smoke seals that have been tested in accordance with BS EN 1634-3:2004 (ambient temperature) or BS476: part 31 : section 31,1:1983 and demonstrated not to leak by more than 3m<sup>3</sup>/m/hr at 25Pa, may be used in conjunction with Forza door assemblies to provide smoke control.

To achieve the required level of smoke control the orientation of the seals and degree of hardware interruption, door edge gaps and leaf configuration must be as tested.

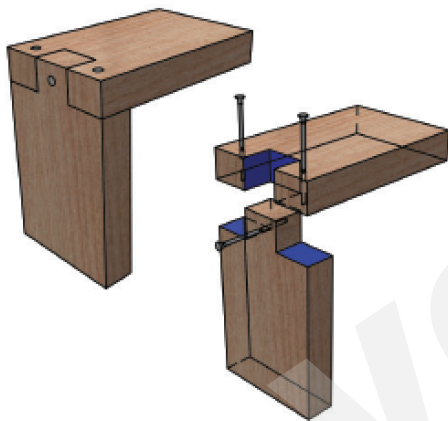
Test evidence to BS 476: part 22:1987 shall demonstrate that the smoke seals will not adversely affect the overall fire resistance of FD30 & FD60 timber or mineral core door assemblies when fitted in the proposed arrangements. The threshold gap should be sealed by an automatic drop down seal with a leakage rate as tested above.

## Intumescent Seal Specification

Factory prepared machined grooves to both leaf edge and frame will accommodate the required intumescent for either FD30 & FD60 door assemblies.

## DOOR FRAME - JOINT OPTIONS FD30 & FD60

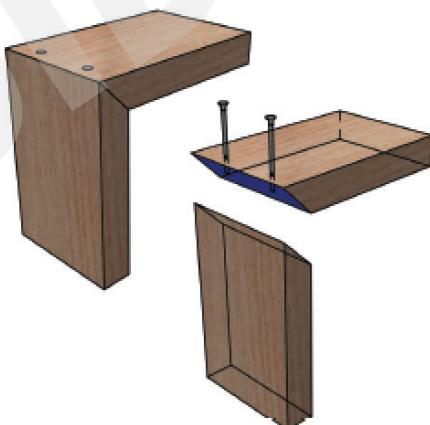
### MORTICE & TENON OPEN JOINT



### FLAT HALF-LAP JOINT



### MITRED JOINT



### BUTT JOINT

