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JP Corry Door set installation instructions For Flamebreak FD30 Doors

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Flamebreak FD30 Door and frame installation instructions

The following information will ensure that your door or door set will meet the desired performance. If there is any doubt in process or material to be used please ring JP Corry doors on 02890 243661 where advice will be on hand.

Firestopping

The firestopping requirements between the back of frame and wall are dependent on the gap size between the substrates. Below provides the requirements based on the gap size.

1. **Gap measuring 0-10mm**
   This gap must be sealed to a depth of 10mm with acrylic intumescent mastic fire tested for this application to BS476:PART 22:1987 or BS EN 1634-1. Timber architraves are optional

2. **Gap measuring up to 20mm**
   This gap must be tightly packed with mineral fibre and capped to a depth of 10mm with acrylic intumescent mastic fire tested for this application to BS476:PART 22:1987 or BS EN 1634-1 or full depth PU foam fire tested for this application to BS476:PART 22:1987 or BS EN 1634-1. Timber architraves are optional.

3. **Gap measuring over 20mm**

This would be considered a poor preparation of the structural opening. A timber based or non-combustable subframe up to 50mm thickness can be inserted, bedded on intumescent mastic, fixed to the wall and the gap between the subframe and the wall filled as follows:

Gaps 5 to 10mm filled on both sides with 10mm depth of acrylic intumescent mastic or full depth of expanding PU foam, fire tested for this application to BS 476 Part 22:1987 Or BS EN 1634-1.

Timber architraves of a minimum 18mm thickness must be fitted to both faces and fitted with a 15mm minimum overlap to the door gap.

Note: Guidance for methods of sealing the frame to structural opening gap is also given in BS 8214:2016, “Timber -based fire door assemblies code of practice” which may be referred to and implemented where appropriate.

Packers

Packers can be timber of equal density to the frame, or plywood. Plastic packers can be used if fire tested for this application to BS 476 Part 22 or BS EN 1634-1

Wall types,Structural opening and Fixity

For walls that remain rigid during fire exposure (brickwork or blockwork for example) the opening should be square, plumb and provide a flat surface for installation of the door set.

For flexible wall types such as steel and timber stud partitions, the structural opening must be prepared in line with the test evidence provided by the wall manufacturer, it is permitted to use a timber infill to the steel stud a minimum of 38mm thick to aid fixity unless the evidence for the partition system states otherwise. If fitted, the infill is to run the full length of the door set.

The supporting construction must provide at least the required level of fire resistance designated for the door set design and be a suitable medium to permit adequate fixity.

It must therefore be capable of staying in place and intact for a minimum of 30 minutes. For single leaf door set without side panels, the frame jambs only are to be fixed to the supporting construction using steel fixings at 600mm maximum centres and maximum of 150mm from corner. The fixings must be of the appropriate type for the supporting construction and must penetrate to a minimum depth of 50mm. It is not necessary to fix the frame head, although packers must be inserted.

For all other configurations of door set, the upper horizontal framing section abutting the structural opening must also be secured to the wall using steel fixings at 600mm maximum centres and maximum of 150mm from corner. The fixings must be of the appropriate type for the supporting construction and must penetrate to a minimum depth of 50mm.

In all instances the fixing position must be such that it provides adequate restraint to the element of construction throughout the exposure to fire. This may therefore sometimes necessitate a twin line of fixings.

The minimum number of fixings in height must be:

- Doorset height up to 2000mm = 4 fixings
- Doorset height 2000 – 2500mm 2350mm = 5 fixings
- Add 1No. additional fixing for each further 500mm increase in door height.

Post production (on site) Leaf size adjustments

The Strebord range of door sets may be altered as follows:

Lipping – The post production lipping thickness (hardwood only) may be reduced by 1mm for fitting purposes, providing that the door gaps and intumescent conditions remain as required by this assessment and the minimum limitation in terms of lipping thickness is still maintained

Door Gaps

Door gaps and alignment tolerance must fall within the following range:

Door Gap & Alignment Tolerance Specification

1. **Door edge gaps** – A minimum of 2mm and a maximum of 4mm
2. **Alignment tolerances** – Leaves must not be proud of each other or from the door frame by more than 1mm
3. **Threshold** – 8mm between bottom of leaf and top of floor covering. This is the maximum tolerance for fire resistance only.

Insulation performance

Insulation performance may be claimed for a doorset to this design meeting the following:

Partially insulating – Door sets incorporating up to 20% of non -insulating glazing.

Fully insulating/timber frames – Unglazed door sets or door sets including 30 minute insulating glazing IE 15mm Pyrostop or 16mm Pyrobel.

Vision panels - on site fitting or adjustment

Vision panels **must not be fitted on site**. If a requirement is found for vision panels on site please contact us (JP Corry Doors , 028 90 243661 or doors@jpcorry.co.uk) for advice on size and position. We can then price and fit, in our factory, a vision panel which will give the integrity only or integrity and insulation value required for the glass in the door.

Vision panels must **NOT** be adjusted in any way.

Ironmongery details for Flamebreak FD30 door set

For additional information on ironmongery fitting positions please see page 9 of this document. Or to get a stand alone copy of document QMJPC054 RevA "Ironmongery and Vision panel positions taking into account Part M regulations". Contact our office on phone 028 90 2 60212 or email doors@jpcorry.co.uk

(A) Essential hardware for each door configuration

Configuration	Hardware required when using this configuration
LSASD	Latches,hinges,overhead door closer
ULSASD	Hinges, overhead door closer
DASD	Top pivot,bottom strap, floor spring
LSADD	Latch,hinges,overhead door closer,flush bolt,selecter if rebated stile.
ULSADD	Hinges,overhead door closer,flush bolt,selecter if rebated stile.
DADD	Top pivot/bottom strap, floor spring

(B) Latches and locks

The single point latches below are approved.

1. Henderson hardware tubular mortice latch
2. Eurospec Hardware tubular mortice latch
3. Nemef latch
4. Sparka lever operated mortice latch

Alternative latch and lock specifications

1. **Maximum forend and strike plate dimensions**

(a) 235x25mmx4mm thickness

2. **Maximum body dimensions**

(a) 165mm highx100mm widex18mm thickness

3. **Materials** – All parts essential in the locking or latching action must be made from brass.steel or stainless steel with a melting point of 800deg centigrade or above.
4. **Location** – Primary latch location must be between 750mm to 1200mm from the threshold.

Door furniture – Lever handles

The following are approved:

1. Aluminium lever type handle
2. Stainless steel type lever handle

Other handles are permitted if they meet the specification below:

Alternative handles are permitted providing they meet the specification given below:

• Steel, stainless steel, brass, aluminium or bronze are permitted.

• Surface fixings or through fixings are permitted. If through fixed there must be no more than 0.5mm clearance between the hole and the fixing

. • The hole through the leaf to facilitate the spindle must be no greater than 20mm diameter. The design may be either handle on rose or handle on back plate up to the following maximum sizes:

• Handle on rose with a rose diameter up to 54mm.

• Handle on back plate with a back plate size up to 243mm high x 56mm wide.

• Lever handle length 250mm. The handle must be compatible with the lock/latch, such that the closing action of the doorset is not impeded. Alternative escutcheons are permitted providing they meet the specification given below:

• Steel, stainless steel, brass, aluminium or bronze are permitted.

• Surface fixings or through fixings are permitted. If through fixed there must be no more than 0.5mm clearance between the hole and the fixing.

• The escutcheon may be up to Ø52mm overall and up to 8mm thick.

.Cylinders

Tested cylinders

1. ERA BS-L-T-T3535-51
2. Sparka LL1313.MAS
3. Ultion ref:DCBSW3535DT-R177

Alternatively, components with the following specification are also deemed acceptable.

• Where required for use with either single or multi point latches, the cylinder must be constructed of either brass or steel with a melting point in excess of 8000C.

• The cylinder must be compatible with the lock/latch.

• Cylinder dimensions may be up to 33mm high x 17.5mm wide at the maximum dimension and may be of euro profile or oval.

• Single and double cylinders, along with cylinder & turn are permitted.

• Door preparation for single cylinders shall penetrate only half the door thickness.

• Intumescent protection and tightness of fitting: o If the lock body is not protected with an intumescent material, the maximum clearance between leaf and cylinder is 1mm to each edge. o If the lock body is protected with an intumescent material, maximum clearance between leaf and cylinder is 3mm to each edge. o 1mm thick MAP or non-pressure forming graphite intumescent around the cylinder is optionally permitted.

Hinges

Door leaves up to 2300mm high must have a minimum of 3no hinges, over this height four hinges are required. Hinges must comply with the specification below.

1. Royde & Tucker H105 steel butt type hinges
2. Stainless steel butt type hinge
3. Jedo steel bearing butt hinges ref:102
4. Sparka steel bearing butt hinges ref: HG1010.SSS

Top hinge – 120 to 200mm from leaf head to the top of the hinge

Middle hinge – Equal distance between the bottom of the top hinge and the top of the bottom hinge.

Bottom hinge – 150 to 300mm from leaf bottom to bottom of hinge.

Hinge positions for 4no hinges:

Top hinge – 120 to 200mm from leaf head to top of hinge

Second hinge – 200mm below bottom of top hinge to equal distance between top and third hinge

Third hinge – Equal distance between second and bottom hinges

Bottom hinge – 150 to 300mm from leaf bottom to bottom of hinge.

Alternatively, a Certifire approved hinge, approved for 30 minutes in an ITT doorset (i.e. a doorset incorporating Intumescent, Timber leaf and Timber frame), is acceptable providing the higher specification of hardware intumescent protection as required for the inclusion of the hinge within this Field of Application or the Certifire certificate are complied with. For example, if the Certifire Certificate specifies intumescent protection behind the hinge blades and this Field of Application does not require intumescent protection behind the hinge blades, the fitting of the intumescent specified in the Certifire Certificate is required.

NB: Other types of hinges are allowed. If the hinge being proposed is not listed please contact the JP Corry office on 028 90 260212 and we will check it out for you.

Automatic closing

Self closing can be achieved by:

- Overhead face fixed closer
- Concealed overhead closer
- Concealed jamb mounted closer
- Floor springs

Configurations for door closers – **LSASD,ULSASD,ULSADD**

The face fixed door closers that have been successfully tested:

1. Dorma TS71,TS73V,TS83V Overhead type door closers
2. Arrone AR1500
3. Surface mounted Synergy S800 EN2-5
4. Surface mounted Eclipse 28730
5. Rutland UK ts5204, ts9205,ts11205 Overhead type door closers

Alternatively a Certifire approved overhead face fixed closer which is approved for 30 minutes in an ITT doorset (i.e. a doorset incorporating Intumescent, Timber leaf and Timber frame

Note: Door closers must be of sufficient strength and power to ensure the door leaf/leaves fully close into the frame reveal.

If a door closer has been specified and is not on the list above please contact JP Corry on 028 90 260212

Flush bolts for LSADD door sets

Flush bolts may be incorporated centrally into the top and bottom of one meeting edge, providing the following maximum dimensions are not exceeded and the components are fitted opposite the edge fitted with intumescent strips:

• 210mm long x 20mm deep x 20mm wide. Flush bolts must be steel, and the mortice must be as tight to the mechanism as is compatible with its operation. All edges of the mortice of the keep and body must be protected with intumescent gaskets as specified in section 10.2. Alternatively, the hardware manufacturers tested gaskets may be used.

Push plates and kick plates

Components with the following specification are deemed acceptable as in the opinion of Warringtonfire they will not significantly affect the fire resistance performance of the doorset being considered. This is on the basis of the items being surface mounted away from the edge of the door leaf, therefore unlikely to influence the junction between door leaf and frame. Furthermore, they are generally of

lightweight construction, meaning that they are unlikely to destabilise the doorset and therefore cause adverse deflection under test conditions. Lastly, the surface mounted arrangement of the features means no material is removed in terms of the overall thickness of the door leaf beyond the footprint of the item, therefore burn through of the leaf would not be expected.

Approved specification:

• Polymeric or metal face-fixed hardware such as push plates and kick plates up to 1.5mm thick may be surface fitted to the doorset. These items of hardware are permitted up to a maximum of 20% of the door leaf area if mechanically fixed and a maximum of 30% if bonded with a contact or other thermally softening adhesive.

• Plates must not return around the door edges.

• In all cases plates meeting the above specification shall not be applied under glazing beads or door stops.

Panic hardware

Panic hardware is suitable for use on LSASD or LSADD door sets. Certifire approved panic hardware can be fitted as long as there is no removal from the leaf, door frame or door stop and the hardware does not interfere with the closing of the door.

Threshold drop seals

The following types of automatic threshold drop seals may therefore be recessed into the bottom of leaves to this design without compromising the performance of the door set.

The following threshold seals have successfully been tested.

1. Lorient Polyproducts Ltd LAS8001s (No intumescent required)
2. Norseal NOR810s (No intumescent required)
3. Norseal NOR810 (No intumescent required)
4. Sealed Tight Solutions ST422GT (No intumescent required)
5. Sealed Tight Solutions ST422 (No intumescent required)
6. RP8SI Raven products ltd

Note: In all instances, if a rebated drop seal is fitted to the doorset then flush bolts, if approved, may not be fitted to the bottom of the doorset.

Intumescent required on hardware

When the following intumescent is fitted to the Flamebreak FD30 doorset it will achieve the necessary fire resistance.

Intumescent material required on hardware	
Hardware	Intumescent material required
Hinges	1mm Interdens - Dufaylite Developments Ltd
	1mm Map paper - Lorient Polyproducts Ltd
	1mm Pyrostrip 300 - Mann McGowan
	1mm Thermastrip - Intumescent Seals Ltd
	1mm G30 - Sealmaster Ltd
	1mm NOR910 - Norsound Ltd
	1mm Graphite gasket - Sealed tight solutions
Locks and latches	1mm Interdens - Dufaylite Developments Ltd
(Double door set)	1mm Map paper - Lorient Polyproducts Ltd
	1mm Pyrostrip 300 - Mann McGowan
	1mm Thermastrip - Intumescent Seals Ltd
	1mm G30 - Sealmaster Ltd
	1mm NOR910 - Norsound Ltd
	1mm Graphite gasket - Sealed tight solutions
Locks and latches	1mm Interdens - Dufaylite Developments Ltd
(Single door set)	1mm Map paper - Lorient Polyproducts Ltd
	1mm Pyrostrip 300 - Mann McGowan
	1mm Thermastrip - Intumescent Seals Ltd
	1mm G30 - Sealmaster Ltd
	1mm NOR910 - Norsound Ltd
	1mm Graphite gasket - Sealed tight solutions
Top pivot and bottom straps	2mm Interdens - Dufaylite Developments Ltd
	2mm Map paper - Lorient Polyproducts Ltd
	2mm Therma strip - Intumescent Seals Ltd
	2mm Map paper - Lorient Polyproducts Ltd
	2mm Thermaflex - Intumescent Seals Ltd
	1mm Graphite gasket - Sealed tight solutions
	2mm NOR920 - Norsound Ltd
Flush bolts	2mm Interdens - Dufaylite Developments Ltd
(encasing whole body)	2mm Map paper - Lorient Polyproducts Ltd
	2mm Therma strip - Intumescent Seals Ltd
	2mm Map paper - Lorient Polyproducts Ltd
	2mm Thermaflex - Intumescent Seals Ltd
	1mm Graphite gasket - Sealed tight solutions
	2mm NOR920 - Norsound Ltd

If an item of ironmongery has been specified and is not on the list above please contact JP Corry on

028 90 260212 as there will be a solution available.

Intumescent seals tested for use with Flamebreak FD30 door sets and size parameter

1. LSASD (Latched single action single door) 927x2413mm to 1042x2145mm Pyroplex 1no 15x4mm seal fitted centrally into the leaf edge or frame.
2. ULSASD&DASD (Unlatched single action single door& double action single door) 927x2413mm to 1042x2145mm Pyroplex 1no 15x4mm seal fitted centrally into the leaf edge or frame.
3. LSADD (Latched single action double door) 927x2463mm to 1067x2145mm Pyroplex 1no 15x4mm seal fitted centrally in leaf edge or frame reveal. Meeting stile 2no 10x4mm seals fitted 5mm either side centrally in one door.
4. ULSADD &DADD (Unlatched single action double door & double action double doors) 927x2413mm to 1042x2145mm Pyroplex 1no 15x4mm seal fitted centrally in leaf edge or frame reveal. Meeting stile 2no 10x4mm seals fitted 5mm either side centrally in one door.

How to identify the fire rating of a door from the colour of the plug insert

Description of the door	Plugs that should be fitted to the door
Non fire rated door with no work	NO PLUG!
Non fire rated door glass added	NO PLUG!
Non fire rated Re-sized leaf	NO PLUG!
Std door only with glass added FD30	Yellow outer and orange inner.
Re-sized FD30 leaf – no glass	Yellow outer and red inner.
Re-sized FD30 leaf no glass, but seals routered to edges	Yellow outer and green inner.
Re-sized FD30 Leaf with glass fitted	Yellow outer and red inner, Yellow outer and orange inner.
As above with seals routered to edges of door.	Yellow outer and green inner, Yellow outer and orange inner.
FD30 full door set with ironmongery and intumescent supplied and fitted including all intumescent seals for ironmongery	Yellow outer and Silver inner.
FD60 Std leaf with glass fitted	Blue outer and orange inner
FD60 leaf re-sized	Blue outer and red inner
FD60 re-sized with glass fitted	Blue outer and red inner, Blue outer and orange inner
FD60 leaf re-sized and seals routered	Blue outer and green inner
FD60 re-sized, with glass fitted and seals routered to edges of door.	Blue outer and green inner, Blue outer and orange inner
FD60 full door set with ironmongery and intumescent supplied and fitted including all intumescent seals for ironmongery	Blue outer and silver inner

JP Corry Ironmongery and Vision panel positions taking into account Part M Regulations.

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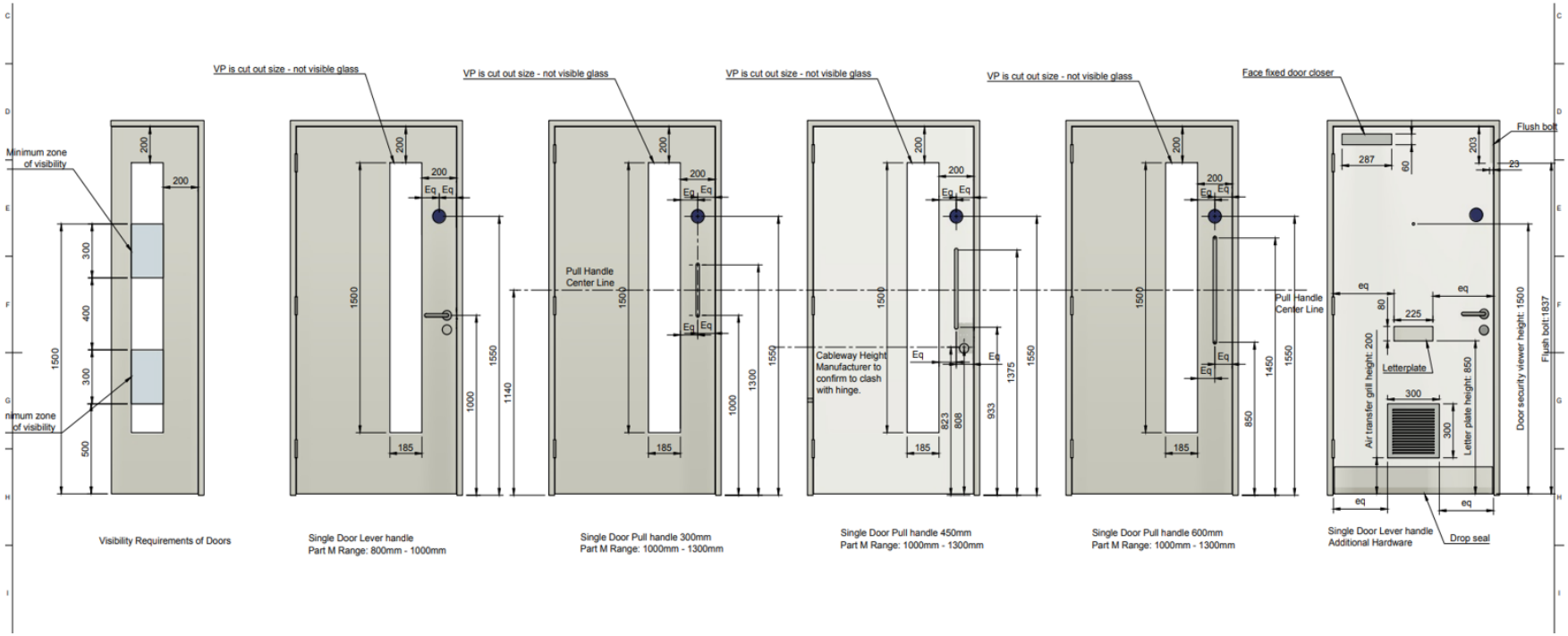

NB: If there is any doubt as to how to install a door or door set please consult the Field of Application document or consult JP Corry Doors on 028 90 243661. Never adjust a door set in size or replace any element without consulting JP Corry Doors.