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FIELD OF APPLICATION REPORT IFCA/07075 REVISION B

Field of Application of the Fire Resistance of 54mm Thick Moralt Lamincore FD60 Door Leaf Range Installed in Timber Door Frames

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AMENDMENT RECORD

Date	Paragraph	Amendment
23/11/07	Various	Inclusion of test reference CFR0709071 permitting larger glazed apertures, smaller glazing margins, thicker chipboard facings, non-transommed overpanels on single leaves and alternative facing adhesive and intumescent seals
27/02/09	Various	Inclusion of test reference Chilt/RF08097 permitting increased scope without timber insert in leaf head and increased glazed apertures, inclusion of product names, clarification of constructions and addition of FireSound 36 option

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3.4.1 Moralt Fire Door Cross Ply, Chip-faced and MDF

Latched, Single Acting, Single leaf Doorset	LSASD
Latched, Single Acting, Single leaf Doorset + Overpanel	LSASD + OP
Unlatched, Single Acting, Single leaf Doorset	ULSASD
Unlatched, Single Acting, Single leaf Doorset + Overpanel	ULSASD + OP
Double Acting, Single leaf Doorset	DASD
Double Acting, Single leaf Doorset + Overpanel	DASD + OP
Latched, Single Acting, Double leaf Doorset	LSADD ^{Note 1}
Latched, Single Acting, Double leaf Doorset + Overpanel	LSADD + OP ^{Note 1}
Unlatched, Single acting, Double leaf Doorset	ULSADD ^{Note 1}
Unlatched, Single Acting, Double leaf Doorset + Overpanel	ULSADD + OP ^{Note 1}
Double Acting, Double leaf Doorset	DADD ^{Note 1}
Double Acting, Double leaf Doorset + Overpanel	DADD + OP ^{Note 1}

Note 1 Double leaf door assemblies within the scope of this Field of Application Report must have square edged (or slightly rounded) meeting stiles as rebated meeting edges are not permitted.

3.4.2 Moralt Finesse FireSound 36

Latched, Single Acting, Single leaf Doorset	LSASD
Latched, Single Acting, Double leaf Doorset	LSADD ^{Note 2}

Note 2 Double leaf door assemblies within the scope of this Field of Application Report must have square edged (or slightly rounded) meeting stiles as rebated meeting edges are not permitted.

3.2 Maximum Assessable Door Leaf Sizes

The calculated envelopes of assessed leaf dimensions for each mode and configuration covered by this Field of Application report are given in Appendices D and F, based upon use of the intumescent seal specifications shown in Appendices C and E.

Double door assemblies may each be of the same width, up to the maximum width indicated in Appendices D and F. If leaves are both unlatched/unbolted and of unequal width, the smaller leaf must not be more than 250mm narrower than the larger leaf. This is to reduce the level of differential deflection that may otherwise occur with the varying of leaf widths. If the smaller leaf is bolted, then there is no limit on the ratio of leaf widths, (although the large leaf must still be within the limitations in Appendices D and F), since the bolts will restrict deflection irrespective of the leaf width. In any case, the width of the small leaf shall not be less than 300mm, since this will affect its vertical stability relative to that of the larger leaf.

3.3 Transommed and Rebated/Flush Overpanels

Transommed overpanels are permitted across the entire range of Moralt Lamincore FD60 doorset configurations. Flush or rebated overpanels are permissible for inclusion with single and double leaf Moralt Fire Door Chip-faced, MDF and Cross Ply configurations (See Section 3.1.1). The intumescent seal specification around the overpanel perimeter shall be as defined in Appendix D. Lippings shall be in accordance with Section 3.4; transom members shall be in accordance with Section 3.5; glazing shall be in accordance with Section 3.6 and installation shall be as defined in Section 3.8.

The size of overpanels is limited to the full width of the leaf/leaves contained within the doorset and the following maximum height:

Single leaves:	2000mm high
Double leaves:	1500mm high

In all cases, the overpanel must be a single piece panel across the frame width; i.e. a "double door" overpanel shall not be used above double door leaves. Approval of an overpanel size by IFC does not indicate that such a size can be fabricated, this should be checked with the manufacturer, and will be subject to the ability of the supporting construction providing adequate restraint/support.

3.4 Door Leaf and Overpanel Specification

The Moralt Lamincore FD60 door and overpanel construction is a minimum overall 53.5mm thick leaf (excluding any decorative facings) comprising a core constructed from spruce ply veneers orientated perpendicular to the leaf faces which have been faced on either side with various facing materials. No stiles or rails are incorporated in the door leaf design with all four edges lipped with hardwood. Detailed constructional specification are given below for the various leaf constructions included in this Field of Application Report.

The leaf constructions, below, are based upon the test evidence detailed in Appendix F, and define variations and tolerances, where it is considered that these will not adversely affect overall fire resistance. (The constructions details are limited to the information available from the test reports).

3.4.1 Moralt Fire Door Cross Ply, Chip-faced and MDF

Component		Species/Material	Dimensions	Minimum Density
Core		Spruce ply veneers	41.5–46.0mm thick from 4.6mm (+/-1mm) wide lamels	450kg/m ³ <i>Note 3</i>
Stiles and rails		None fitted	–	–
Timber insert in leaf head (where required) <i>Note 4</i>		Section of veneered laminboard recessed into the leaf head for full leaf width under lipping	25mm thick by 30mm deep	450kg/m ³ <i>Note 3</i>
Facings	Cross ply	Ilomba cross grain	3.8mm thick	500kg/m ³ <i>Note 3</i>
	Chip-faced	Chipboard	3.8–6mm thick	680kg/m ³ <i>Note 3</i>
	MDF	MDF	3.8mm thick	750kg/m ³ <i>Note 3</i>
Lippings <i>Note 5</i>	Square edges	Hardwood <i>Note 6</i>	9–20mm thick	650kg/m ³ <i>Note 6</i>
	Rounded edges for double acting leaves		15–20mm with maximum 4mm of profiling	
	Rebate edges at leaf head to overpanel junction of single leaves only		20–25mm with a 12mm deep equal rebate to both the leaf head and bottom edge of overpanel	
Adhesives	Core	Miracol 13F2 (PVAc)	–	–
	Facings	Urea formaldehyde or melamine-urea formaldehyde	–	–
	Lippings	Urea formaldehyde or polyurethane (PU)	–	–
Optional additional decorative finishes		Timber veneer, decorative plastic based laminate, PVC or paint	Maximum 2mm thick	–

Note 3 Nominal stated density.

Note 4 Timber insert to be centrally recessed into the leaf head across the entire width, prior to the application of the lipping (see **Figure 07075B/05** in Appendix B). The insert should be bonded in place with urea formaldehyde adhesive. The insert is only required for inclusion in some leaves, see envelopes of approved leaf size in Appendices D and F.

Note 5 Double leaf door assemblies within the scope of this Field of Application Report must have square edged (or slightly rounded) meeting stiles as rebated meeting edges are not permitted. The radius formed on the leading edge of double acting doors, or single acting double doors, shall not remove more than 2mm thickness of lippings on the door face. The radius of pivot stiles shall suit the pivot/floor spring employed.

Note 6 Lippings to be straight grained hardwood, with minimum measured density 650kg/m³ (measured at 12% moisture content) of appropriate quality in accordance with BS EN 942: 1996. Moisture content to be 10 ± 2% for UK market (or to suit internal joinery moisture content specification of export countries).

3.4.2 Moralt Finesse FireSound 36

Component		Species/Material	Dimensions	Minimum Density
Core		Spruce ply veneers	33.5mm thick from 4.6mm (+/-1mm) wide lamels	450kg/m ³ <i>Note 7</i>
Stiles and rails		None fitted	–	–
Optional timber insert in leaf head		Section of veneered laminboard recessed into the leaf head for full leaf width under lipping	25mm thick by 30mm deep	450kg/m ³ <i>Note 7</i>
Facings		Sasmox gypsum chipboard	10mm thick	1250kg/m ³ <i>Note 7</i>
Lippings <i>Note 8</i>	Square edges	Hardwood <i>Note 9</i>	9–20mm thick	650kg/m ³ <i>Note 9</i>
	Rounded edges for double acting leaves		15–20mm with maximum 4mm of profiling	
Adhesives	Core	Miracol 13F2 (PVAc)	–	–
	Facings	Urea formaldehyde or melamine-urea formaldehyde	–	–
	Lippings	Urea formaldehyde or polyurethane (PU)	–	–
Optional additional decorative finishes		Timber veneer, decorative plastic based laminate, PVC or paint	Maximum 2mm thick	–

Note 7 Nominal stated density.

Note 8 Double leaf door assemblies within the scope of this Field of Application Report must have square edged (or slightly rounded) meeting stiles as rebated meeting edges are not permitted. The radius formed on the leading edge of double acting doors, or single acting double doors, shall not remove more than 2mm thickness of lippings on the door face. The radius of pivot stiles shall suit the pivot/floor spring employed.

Note 9 Lippings to be straight grained hardwood, with minimum measured density 650kg/m³ (measured at 12% moisture content) of appropriate quality in accordance with BS EN 942: 1996. Moisture content to be 10 ± 2% for UK market (or to suit internal joinery moisture content specification of export countries).

3.5 Door Frames

Door frames must be constructed from hardwood with a minimum measured density of 640kg/m³ (measured at 12% moisture content). Timber must be straight grained and of appropriate quality in accordance with BS EN 942: 1996. Moisture content to be 10 ± 2% for UK market (or to suit internal joinery moisture content specification of export countries).

Minimum dimensions: 32mm face width (excluding stop) by 70mm deep with a 12mm deep planted or integral door stop. Door stop to comprise the same material as the door frame and may be either planted and pinned using 40mm steel pins, or integral with the main door frame, providing the minimum frame thickness remains as stated above *Note 10*. For double acting doorsets the frame head must be increased to a minimum thickness of 38mm to accommodate the top pivot assembly with the minimum thickness of the frame jambs remaining at 32mm after scalloping.

Note 10 These dimensions assume that the rear of the frame is protected by the adjacent wall, (and firestopping), and that the frame does not project out from the wall.

The overall frame depth may be increased by the use of extension linings, but the joint between the main frame and the extension lining must not intrude in the plane of the door thickness. Where an integral architrave is used, the face of the door may project beyond the face of the wall, providing the thickness of the architrave is no greater than 10mm and it protrudes at least 15mm beyond the rear face of the door frame. This assumes that the face of the door leaf is flush with the face of the architrave.

Head/jamb joint: Mortice and tenon, or half-lapped joint, head twice screwed to each jamb **or** mitred joint which is glued with a non-thermally softening adhesive and the head twice screwed to each jamb.

Transom members: When a transom is used between a door and an overpanel, the member shall be at least 70 x 38mm, and shall include minimum 12mm thick door stops on both sides (i.e. making a minimum 70 x 62mm thick overall section). The overpanel must always be on the same plane as the door(s) below.

Architraves: Architraves are optional and have no fire performance requirements. (See Section 3.8 regarding wall/frame gaps).

3.6 Glazed Apertures

3.6.1 Glass Types

The doorset design outlined in Section 3.4 of this report has been successfully tested with the inclusion of glazed apertures. The following glass types are approved for use in the doors considered herein, which are compatible with the identified approved glazing systems given in Section 3.6.2, although some restrictions on size may be given in subsequent sections. See also Section 3.6.6 regarding ladder glazing.

The codes used, below, for the glass types, glazing materials, and bead types, (e.g. G1, S1 and B1), are not those used by the respective manufacturers, and are attributed solely by IFC for the purpose of identification and cross-referencing within this assessment.

- G1 5mm thick Firelite (by Southern Ceramics) ^{Note 11}
- G2 6mm thick Pyroshield Fire and Safety (GWPP) (by Pilkington)
- G3 6mm thick Pyran S (by Schott)
- G4 10mm thick Pyrodur (by Pilkington)

Note 11 Limitations apply to the pane size of glass type G1, 5mm thick Firelite, as it does not satisfy the requirements of BS6206. Panes are restricted to a smaller dimension not exceeding 250mm and an area not exceeding 0.5m², each measured between glazing beads, in accordance with the requirements of Approved Document N to The Building Regulations 2000 for England and Wales. (Applicable guidance must be followed in other parts of the UK or other countries).

For door assemblies that are to satisfy a 30 minute insulation requirement, the following glass types are also approved;

- G5 15mm thick Pyrostop (by Pilkington)
- G6 16mm thick Pyrobel 16 (by AGC Flat Glass)
- G7 20mm thick Pyrobel 16 (by AGC Flat Glass)

Expansion allowance for all glass types shall be as recommended by the glass manufacturer.

3.6.2 Glazing Materials and Systems

The following glazing materials are approved for use in the doors considered herein, which are compatible with the identified approved glass types listed above, although some restrictions on size may be given in subsequent sections.

- S1 25 x 3mm Pyroglaze 60 and Pyroglaze 300 liner ^{Note 12} (use with glass type G1, G2, G3 & G4)
- S2 25 x 3mm Therm-A-Glaze 60 and Therm-A-Line liner ^{Note 12} (use with glass type G1, G2, G3 & G4)
- S3 25 x 4mm Fireglaze and Therm-A-Line liner (use with glass type G1, G2, G3 & G4)
- S4 25 x 4mm Fireglaze 2000 and Therm-A-Line liner (use with glass type G1, G2, G3 & G4)

- S5 18 x 4mm Ceramic fibre tape and Therm-A-Line liner (use with glass type G5, G6 & G7)
- S6 18 x 5mm Closed cell foam and Therm-A-Line liner (use with glass type G5, G6 & G7)
- S7 Lorient System 36 variant to suit glass thickness, including Palusol or Therm-A-Line liner (use with glass type G5, G6 & G7)
- S8 Lorient System 90 Plus including Palusol liner (use with glass type G1, G2, G3 & G4)

Note 12 Pyroglaze 60 and Therm-A-Glaze 60 have not been tested in long apertures, and their ability to contribute to successful performance is not proven. The use of these systems is thus restricted to panes no longer than 1220mm, irrespective of the glass type.

3.6.3 Bead Profiles and Installation

Apertures are created by cutting directly into the door blank, with beads fitted directly to the door core. Alternatively, where quirk beads (beads B2 or B3) are employed, a minimum 9mm thick hardwood lipping must be applied to the aperture perimeter. Timber specification for as defined in Section 3.4.3.

The approved bead sizes and profiles, and relevant fixing details, are shown on the **Figures 07075B/01 to 04** in Appendix A, which also define any limitations upon options of interchangeability with glass types, glazing systems and bead profiles.

Glazing beads shall be formed from good quality, straight grained, hardwood, with 640kg/m³ minimum density (measured at 12% moisture content). Ash is not permitted. Timber must be free of splits, shakes and checks. Moisture content shall be 10 ± 2% for UK market (or to suit internal joinery moisture content specification of export countries).

Expansion gaps suitable for the size and type of glass must be allowed for within the glazing system.

3.6.4 Assessed Aperture Sizes

3.6.4.1 Moralt Fire Door Cross Ply, Chip-faced and MDF

Based upon the size of apertures tested, it is the opinion of IFC that the following limitations apply to glazed apertures in the door leaves considered, herein;

- Maximum area of single aperture - 1.1m² *Note 13*
- Maximum vertical length of aperture - 1600mm *Note 14*
- Maximum horizontal length of aperture - 760mm
- Minimum distance from leaf edge (top) - 100mm
- Minimum distance from leaf edge (sides) - 100mm
- Minimum distance from bottom of leaf - 200mm
- Minimum distance between apertures - 100mm

More than one aperture may be included in each door leaf subject to the individual limitations above.

Note 13 Any aperture(s) for intumescent air transfer grilles, (see Section 3.7.6), must also be included in the total area permitted for apertures given above. Margins between apertures apply whether for glazing or grilles.

Note 14 Refer to Sections 3.6.1 and 3.6.2 regarding limitations upon sizes approved with certain glass and/or seal types.

3.6.4.2 Moralt Finesse FireSound 36

Based upon the size of apertures tested, it is the opinion of IFC that the following limitations apply to glazed apertures in the door leaves considered, herein;

- Maximum area of single aperture - 0.3m² *Note 15*
- Maximum vertical length of aperture - 1200mm
- Maximum horizontal length of aperture - 400mm
- Minimum distance from leaf edge (top) - 190mm
- Minimum distance from leaf edge (sides) - 190mm
- Minimum distance from bottom of leaf - 200mm
- Minimum distance between apertures - 100mm

More than one aperture may be included in each door leaf subject to the individual limitations above.

Note 15 Any aperture(s) for intumescent air transfer grilles, (see Section 3.7.6), must also be included in the total area permitted for apertures given above. Margins between apertures apply whether for glazing or grilles.

3.6.5 Circular Glazing

The leaves are approved for the incorporation of circular glazing, subject to the parameters for margins and total area of glazing per leaf, described in Section 3.6.4 above.

Bead profiles must include a bolection moulding (bead types B1, B4 and B5) and the method of forming the curved beads shall be a tested details, in light of the proprietary nature of curved beads. The glazing system must be one which can be suitably modified to be utilised with curved beads and the associated glass must be approved for use by the manufacturer with curved edges.

Apertures with some straight and some curved edges (such as full semi-circles or rectangular openings with semi-circular top and bottom ends) are also approved, subject to incorporation of the glazing system, bead type and fixing details as outlined above for circular glazing, across the whole of the aperture. The parameters for aperture margins, total area per leaf, and maximum dimensions are to be as described in Section 3.6.4 above.

3.6.5 Ladder Glazing

To create the effect of narrow glazing bars separating multiple apertures within a door leaf, it is permitted to include a single aperture, with mock glazing bars applied to the faces of the pane of glass. In all cases, the sizes and margins of the aperture(s) must be in accordance with Section 3.6.4 above.

The mock beads may only be applied to fully insulating glass types G5 and G6, and may be bonded to the glass/seal using double sided adhesive tape and mechanical fixed to the perimeter bead. The profile/size of mock beads and perimeter bead, and the approved glazing seals, are shown in **Figure 07075B/04** in Appendix A.

3.7 Hardware

Some of the various items of hardware to be used with the proposed doorsets will have a positive contribution to the overall performance ('essential hardware') and others are classed as 'non-essential'. However, in all cases it must be ensured that choice of items, or their installation within the assemblies, does not have a detrimental effect upon their achievement of the required period of fire resistance.

All hardware beyond the scope of the general guidance given below must have been subjected to fire resistance testing, and/or assessed by a notified body, to support its use in doors of a similar construction to that proposed, or third party certification shall be available to support its use on doorsets of the proposed type.

General guidance for all items of hardware is outlined below, based upon the range of items tested.

3.7.1 Hinges

The hinges used in testing were CNS and Royde & Tucker H101 types butt hinges, but other hinges may be used, subject to compliance with the specifications below.

Hinge types:	Fixed pin, washered butt, ball bearing butt or journal supported hinges may be used.
Number of hinges:	3no (1.5 pairs) per leaf. (4no should be used on leaves greater than 2200mm high).
Positions:	Top hinge set 150mm from head of leaf and bottom hinge set 225mm up from the bottom of the leaf. The middle hinge must be equispaced between the top and bottom hinge or 200-250mm below the top hinge. (All positions ± 25 mm).
Fixings:	Steel screws, as recommended by the hinge manufacturers, but in no case smaller than No 8 (3.8mm diameter) by 32mm long, and having thread for the full length. Position of screws (in relation to the door face) in blades of alternative hinge shall be similar to hinges tested with the proposed door type.
Hinge blade sizes:	2.5–3.5mm thick by 100–110mm high by 32–37mm wide. (These dimensions refer to the blade size, i.e. the part of the hinges that are recessed into the edge of the leaves/frame).

Hinge materials: Steel or Stainless Steel. (Aluminium, Nylon or 'Mazac' are not permitted). No combustible or thermally softening materials to be included.

Additional protection: All hinge blades must be bedded on 1mm thick non-pressure forming intumescent material (e.g. Interdens or Intumescent Seals Ltd Therm-A-Strip) and a minimum 10mm width of intumescent seal shall be continuous alongside the hinge blades.

Rising butt, non-cranked butts and spring hinges are not suitable for use on doors approved within the scope of this generic assessment, although may be suitable to form the subject of an individual and specific evaluation.

3.7.2 Mortice latches/locks

The doorset was originally tested with a Legge tubular mortise latch but other mortice locks/latches may be used, subject to compliance with the specifications below.

Mortice latches or locks should be centred at 1000mm (\pm 200mm), above the bottom of the door leaf, and should comply with the following specifications:

Latch/lock types: Mortice latches, tubular mortice latches, sashlocks, deadlocks

Maximum dimensions: Forend plate - 235mm long by 22mm wide
Latch body - 18mm wide (thick)
Strikeplate - 235mm long by 22mm wide

Latches must have no essential part of their structure made from polymeric or other low melting point (<800°C) materials, and should not contain any flammable materials.

The lock/latch body does not require intumescent protection, however, the lock/latch forend and strike plates must be bedded on minimum 1mm thick non-pressure forming intumescent sheet.

Over-morticing is to be avoided; mortices should be as tight as possible to the latch. If gaps around the case exceed 2mm, then these must be made good with intumescent mastic or sheet material. Holes for spindles should be kept as small as is compatible with the operation of the hardware.

Where apertures are specified, and are positioned such that locks/latches are included in the margin between the aperture and the door edge, care must be taken to ensure that the effective door 'stile' is not weakened by the mortice. It is a condition of this Field of Application Report that, except where tubular latches are employed, the margin must be at least 75mm 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.

3.7.3 Bolts

Unless specific fire test evidence is available, all bolts shall be steel. The following limitations and protection apply;

- Maximum size of flush bolt is 250mm long by 20mm wide and 18mm deep.
- The body of the bolt should be bedded on minimum 1mm thick non-pressure forming intumescent material.
- Edge fixed bolts shall be positioned centrally in leaf thickness (the intumescent seals defined in Appendices C and E shall be fitted in the active leaf).
- Where there is an interruption in the intumescent seal in the door leaf or frame at the head, additional 1mm thick non-pressure forming intumescent material should be included.
- Face fixed flush bolts shall be fixed so that there is a minimum of 50mm between the bolt and the door edge.
- Surface mounted barrel bolts shall not exceed 400mm in length, but there is no limitation on their width. They shall be fixed so that there is a minimum of 50mm between the bolt and the door edge. Screws for fixing bolts must be at least 25mm long, and have thread for the full screw length.

3.7.4 Door closers

Each hinged door leaf must be fitted with a self-closing device unless they are normally kept locked shut and labelled as such with an appropriate sign which complies with BS5499: Part 1: 1990. The closer used in the test was not specified but other closers may be used, subject to compliance with the specifications below.

- Face-fixed overhead door closer (and accessories such as soffit brackets) that have been tested, assessed or otherwise approved for use on unlatched FD60 cellulosic door leaves in timber frames may be used. Any accessory that is located within the door reveal must have appropriate test or assessment evidence. 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.
- This report does not approve the use of concealed overhead or jamb mounted closers.

It is essential that the closers are of the correct power rating for the width and weight of the doorsets (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.

3.7.5 Floor springs and accessories

Floor springs and accessories (straps and top pivots) are necessary for double acting assemblies. A Dorma BTS80 floor spring unit in conjunction with a Dorma top pivot (ref. 8066) has been successfully tested with this design of door leaf. Other floor springs and accessories are approved, subject to having appropriate test or assessment evidence for use on timber door assemblies, and the following limitations;

- Incorporation of any intumescent gasketry used in the test.
- Continuation of at least 20mm (total width) of the intumescent edge seals in the leaf or frame head (as applicable); either 10mm along both sides of the top strap/pivot for double acting straps, or 20mm on one side for single acting straps.
- If intumescent edge seals are in the door frame, then 2mm thick intumescent sheet must also be included to the sides of the mortice for top straps in the door.
- There should be no removal of timber or intumescent strip in the leaf stiles.

3.7.6 Non-essential hardware items

Letter plates: These must be tested, assessed or otherwise approved for use in 54mm thick (or less) timber/cellulosic FD60 doors. They must be fitted in accordance with the manufacturer's instructions, including all intumescent liners and flaps. Plates must not be less than 100mm away from the leaf edge, or any other aperture.

Note 16 The installation of such items in a door leaf may compromise its performance as a smoke control doorset.

Push plates, kick plates, etc: Plastic, pvc or metal plates may be surface-mounted to the doorsets, but, if more than 800mm in length by nominally 200mm wide, they must be attached in a way that would prevent them distorting the door leaf, e.g. glued with thermally softening adhesive or screwed with short aluminium screws 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.

Pull handles: These may be fixed to the doorsets, provided that the fixing points are no greater than 500mm apart. Pull handles that are fixed through the leaf should use clearance holes as close fitting as possible to the bolt.

Intumescent air transfer grilles: These must be tested, assessed or otherwise approved for use with 54mm thick (or less) timber/cellulosic FD60 doors. They must be fitted fully in accordance with the manufacturer's instructions, including all intumescent liners and cloaking grilles/beads. They must be no larger than that for which test or assessment evidence exists. (See Section 3.6.4 for restrictions on maximum size and placement of any apertures). These restrictions also apply to grilles, which must also be included in the total area permitted for apertures given in Section 3.6.4.

Note 17 The installation of such items in a door leaf may compromise its performance as a smoke control doorset.

Security viewers: These may be fixed into the proposed doors, subject to the following limitations, unless specific fire test evidence exists to the contrary;

- Viewers must not exceed 15mm outer diameter, and be made from brass or steel
- Holes bored through the door must be lined with 1mm thick non-pressure forming intumescent mastic, or sheet material, and be no greater than 1mm larger than the bore of the viewer
- The viewer must include an effective shutter/cover plate

Dropseals: Lorient IS8010 threshold dropseals can be fitted into the bottom edge of fire rated door leaves, providing that they are encased in minimum 1mm thick low-pressure intumescent material and are positioned centrally within the door thickness.

3.8 Installation, Supporting Construction and Door Edge Gaps

The frames must be fixed back to the supporting construction with steel fixings at centres not exceeding 600mm; this applies to jambs and head. Screws shall be of sufficient length to penetrate the wall by at least 40mm, and shall be positioned such that they are not exploited by charring of the frame, irrespective of the direction of test exposure; (this may necessitate a twin line of screws). Packers shall be used at all fixing positions, although if combustible packers are employed, these must be protected by a layer of firestopping (see below), aligned near to each face of the door frame.

The supporting construction may be either timber or steel stud plasterboard clad partition, blockwork, brickwork or concrete walls, but shall be of a type that has been tested or assessed to provide in excess of 60 minutes fire resistance at the required size when incorporating doorset openings. If fitted into timber or steel stud partitions, the method of forming the doorset aperture must be as tested by the partition and/or doorset manufacturer.

Note 18 Reference to steel stud partitions is in the context of permanent elements, such as those designed and proven by the plasterboard manufacturers – this report does not approve use of the proposed doorsets in proprietary 'demountable' partitions, which must be subject to a full and independent appraisal of the particular system and doorsets therein.

No part of the rear of the frame section shall be exposed once installed, (except for integral architraves) and the leaf must be flush with the face of the wall. There shall be no feature rebates or shadow gaps at the junction of the frame and wall.

The fire stopping between the supporting construction and timber frames should follow the recommendations of Table 3 in BS8214: 1990, "Code of practice for fire door assemblies with non-metallic leaves", using a product proven in such timber applications, and with reference to the correct depth of seal to suit the width of gap between wall and frame. The firestopping shall be positioned on the plane of the door leaf; (unless combustible packers are employed).

The gap between the door and the frame should be 2 – 4mm. Gaps under the door(s) should not exceed 6mm for fire performance, although, if smoke control is also required, these gaps should only be 3mm, or smoke seals should be included in accordance with BS8214 (see also Section 3.10 regarding suitability of smoke seals).

The doorset design should be such that the leaves are fully flush within the frame when in the closed position. They may however be set back from the exposed face of the frame if required.

Overpanels shall be secured into the frame using steel screws fixed through the rear of the frame members, passing at least 40mm into the centre line 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 centres, with a minimum of 2 screws per overpanel edge. The gap between overpanel and frame should be no greater than 1mm.

3.9 Intumescent Seals

Lorient Polyproducts Ltd Type 617 or Palusol type seals and Intumescent Seals Ltd Therm-A-Seal may be employed across the complete range of door sizes and configurations approved herein. Intumescent protection is required for specific items of building hardware and this has been detailed in Section 3.7.

The intumescent seal specifications, widths, and positions are shown in Appendices C and E, based upon tested details.

3.10 Ambient Temperature Smoke Seals

Smoke seals, or combined intumescent/smoke seals (using the intumescent products approved in Section 3.9), that have been tested to BS476: Part 31: Section 31.1: 1983 and shown not to leak by more than 3m³/m/hr at 25Pa may be used in conjunction with the proposed doorsets to provide smoke control.

The orientation of the seals, door edge gaps, degree of building hardware interruption, and leaf configuration, will need to be as tested to BS476: Part 31: Section 31.1: 1983 to achieve the desired level of smoke control, unless these conflict with the intumescent seal widths and positions as shown in Appendix B, in which case, the latter shall take precedence.

Test evidence to BS476: Part 22: 1987 shall be available to demonstrate that the smoke seals will not adversely affect the overall fire resistance of timber doorsets, when fitted in the proposed arrangements.

4. CONCLUSION

It is the opinion of International Fire Consultants Ltd that, if the proposed 54mm thick Moralt Lamincore door leaf range installed in timber frames were manufactured and installed in accordance with the requirements of this Field of Application Report, the leaf sizes are within the envelope of approved dimensions/sizes given for the configuration outlined in Appendices D and F, and the hardware, glazing details, and intumescent seal specification are in accordance with the recommendations of this report, then the assemblies, as described, would satisfy the integrity criteria for 60 minutes when tested for fire resistance to the conditions of BS476: Part 22: 1987.

5. LIMITATIONS

This assessment addresses itself solely to the ability of the proposed assemblies described to satisfy the criteria of the fire resistance test and does not imply any suitability for use with respect to other unspecified criteria.

This document only considers the doorset constructions described herein, and assumes that the surrounding construction will provide no less restraint than the tested assembly, and that it will remain in place and be substantially intact for the full fire resistance period.

Where the constructional information in this report is taken from details provided to IFC and/or fire resistance test reports referenced herein, it is therefore limited to the information given in those documents. It is necessarily dependent upon the accuracy and completeness of that information. Where constructional or manufacturing details are not specified, or discussed herein, it should not, therefore, be taken to infer approval of variation in such details from those tested or otherwise approved.

Where the assessed constructions have not been subject to an on-site audit by IFC, it is the responsibility of anyone using this report to confirm that all aspects of the assemblies fully comply with the descriptions and limitations herein.

Any materials specified in this report have been selected and judged primarily on their fire performance. IFC do not claim expertise in areas other than fire safety. Whilst observing all possible care in the specification of solutions, we would draw the reader's attention to the fact that during the construction and procurement process, the materials used should be subjected to more general examination regarding the wider Health and Safety, and CoSHH Regulations.

This Report is provided to the sponsor on the basis that it is a professional independent engineering opinion as to what the fire performance of the construction/system would be should it to be tested to the named standard. It is IFC's experience that such an opinion is normally acceptable in support of an application for building approvals, certainly throughout the UK and in many parts of Europe and the rest of the world.

However, unless IFC have been commissioned to liaise with the Authorities that have jurisdiction for the building in question for the purpose of obtaining the necessary approvals, IFC cannot assure that the document will satisfy the requirements of the particular building regulations for any building being constructed.

It is, therefore, the responsibility of the sponsor to establish whether this evidence is appropriate for the application for which it is being supplied and IFC cannot take responsibility for any costs incurred as a result of any rejection of the document for reasons outside of our control. Early submittal of the Report to the Authorities will minimise any risks in this respect.

6. VALIDITY

This assessment has been prepared based on International Fire Consultants Ltd's present knowledge of the products described, the stated testing regime and the submitted test evidence. For this reason anyone using this document after February 2014 should confirm its ongoing validity.

Prepared by:



David Cooper BEng (Hons) AUS
Senior Engineer
International Fire Consultants Ltd. (IFC)

Checked by:



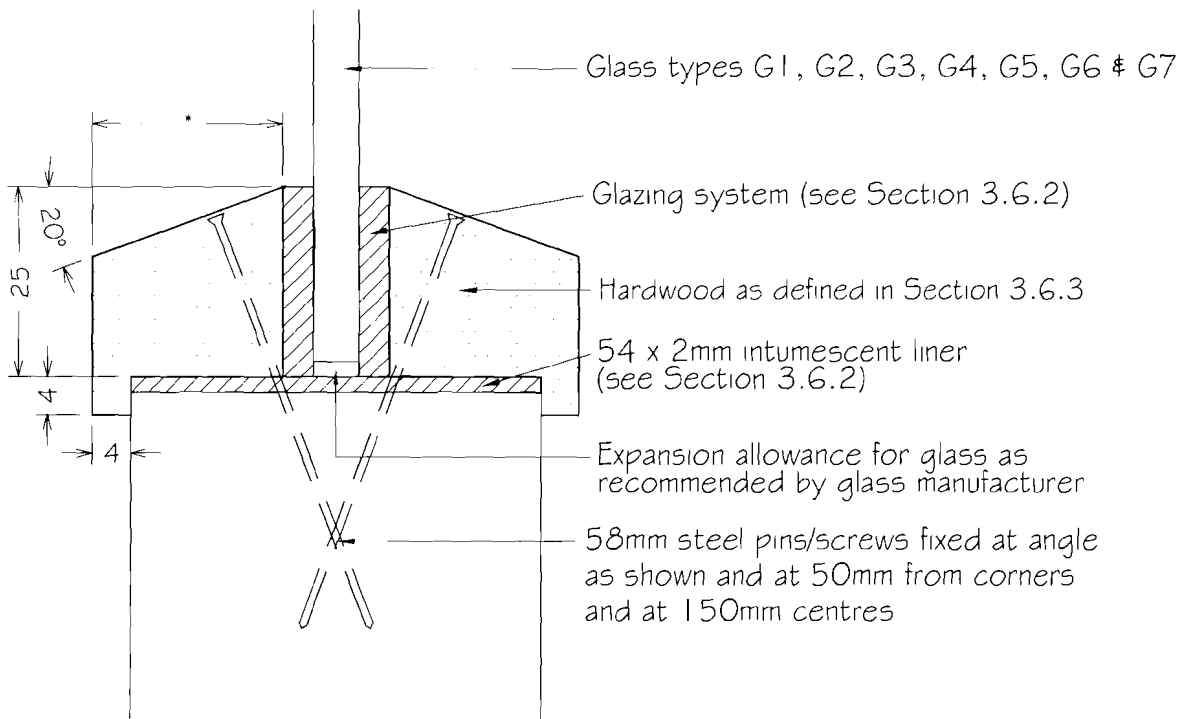
David J Ive MIWSc
Senior Engineer
International Fire Consultants Ltd. (IFC)

APPENDIX A

Glazing Details

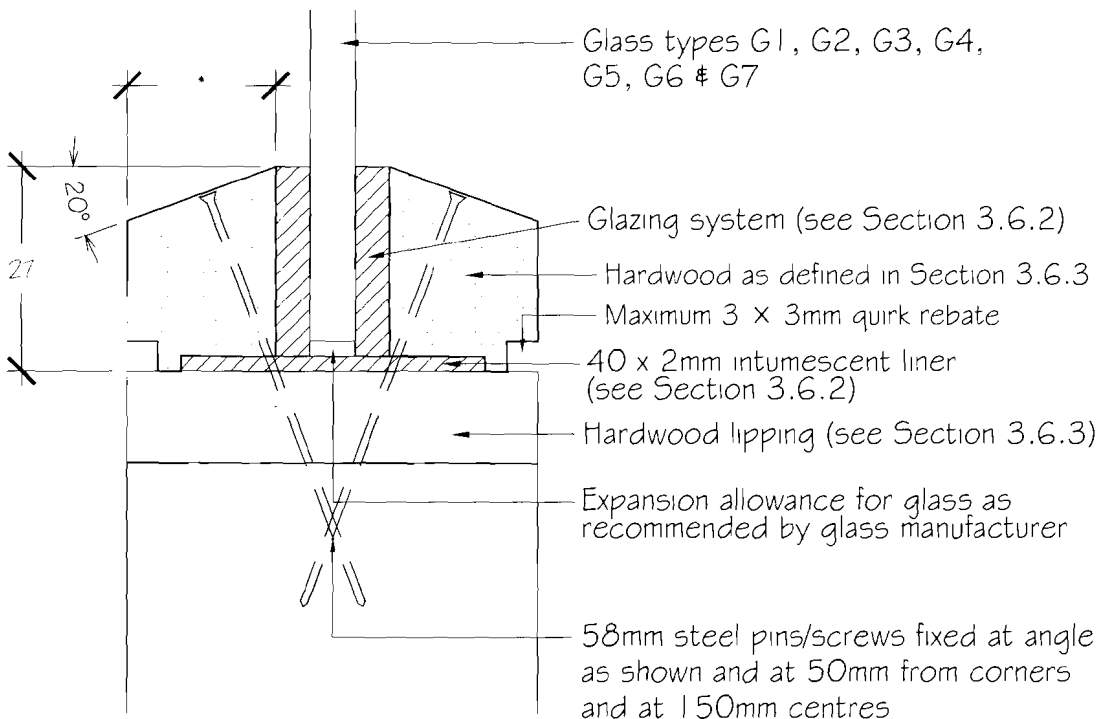
Figures 07075B/01 to 04

***The figures in this Appendix are not included
in the sequential page numbering of this report***



BEAD DETAIL B1

*Bead size is dependant upon glass/seal thickness



BEAD DETAIL B2

*Bead size is dependant upon glass/seal thickness

Refer to text of Report for details of glass and seal types

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Field of Application Report
IFCA/07075 Revision B
Moralt Tischlerplatten
FD60 Field of Application

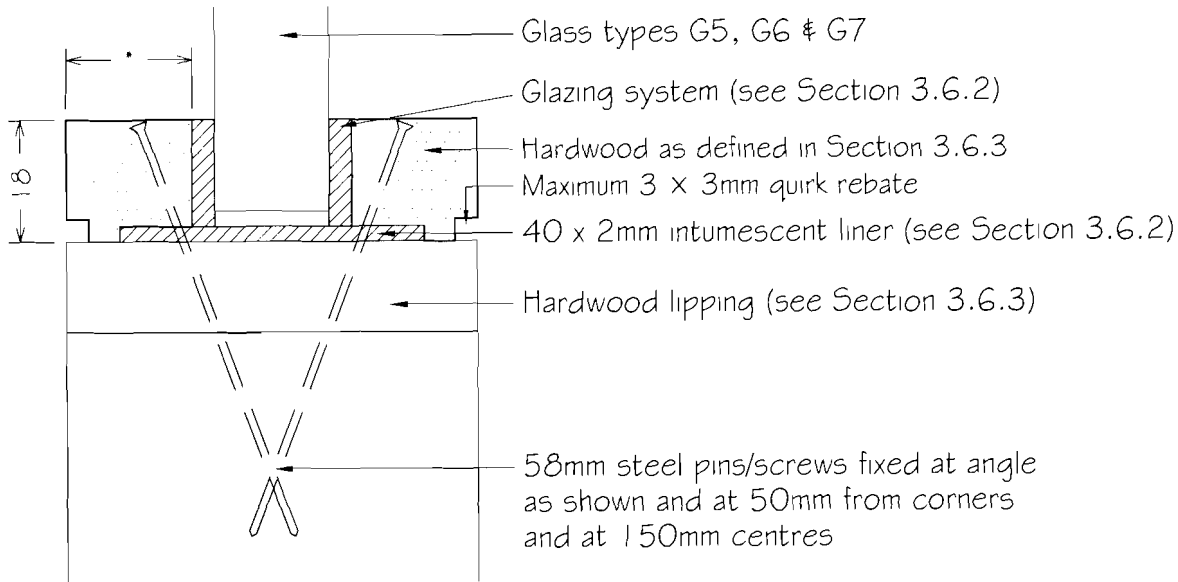
Glazing Details
Sheet One of Four

Job number : 9404

Drawn by : CSP Checked by : DJC

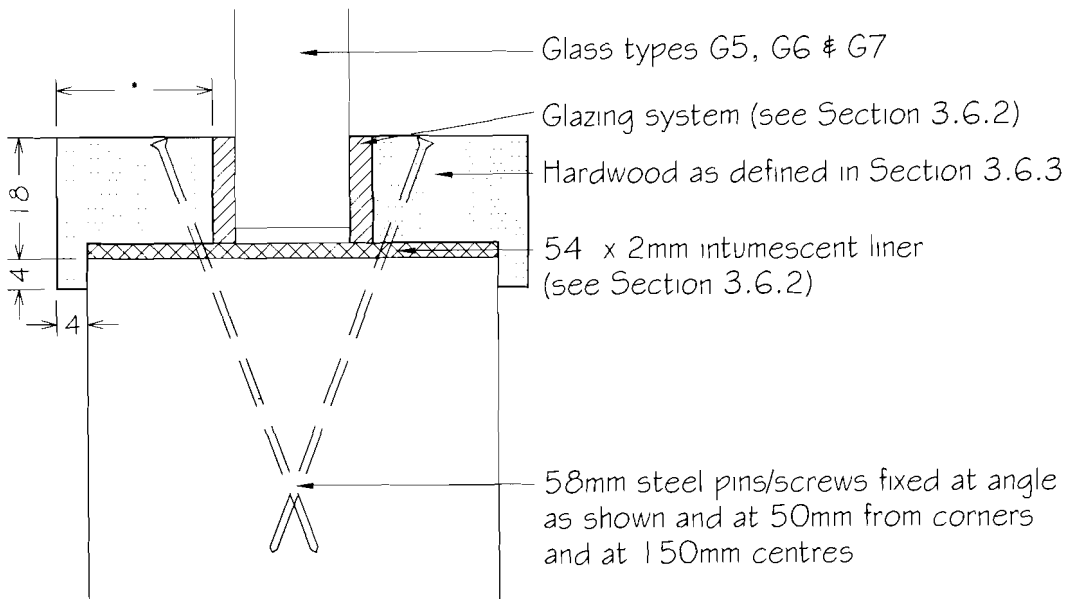
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07075B/01



BEAD DETAIL B3

*Bead size is dependant upon glass/seal thickness



BEAD DETAIL B4

*Bead size is dependant upon glass/seal thickness

Refer to text of Report for details of glass and seal types

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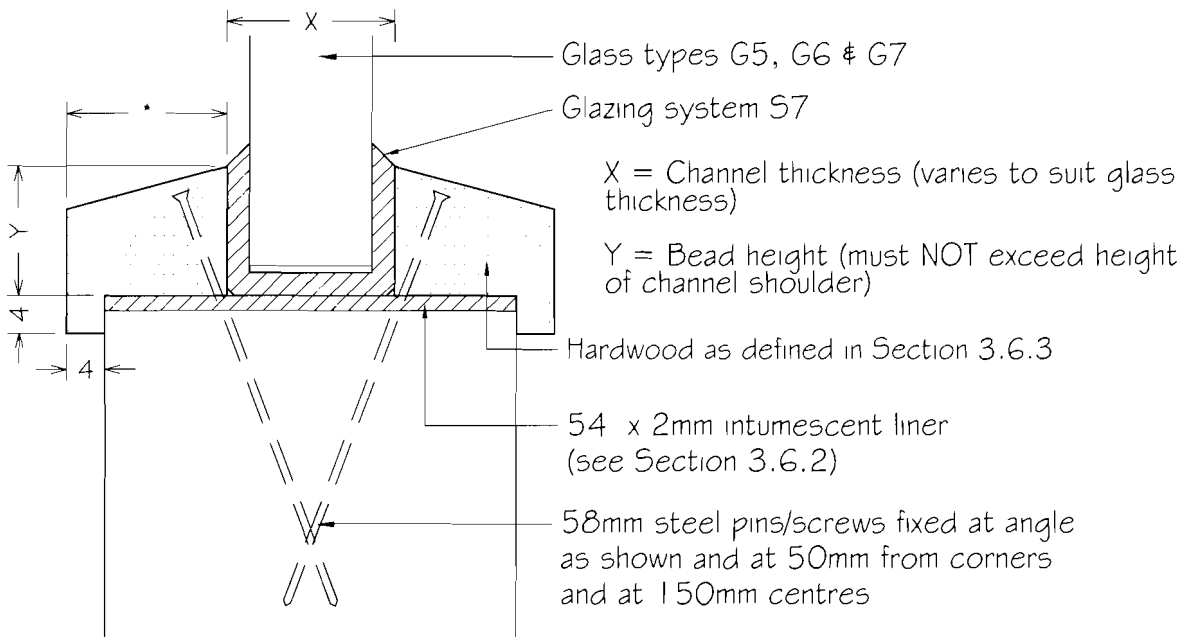
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Glazing Details
 Sheet Two of Four

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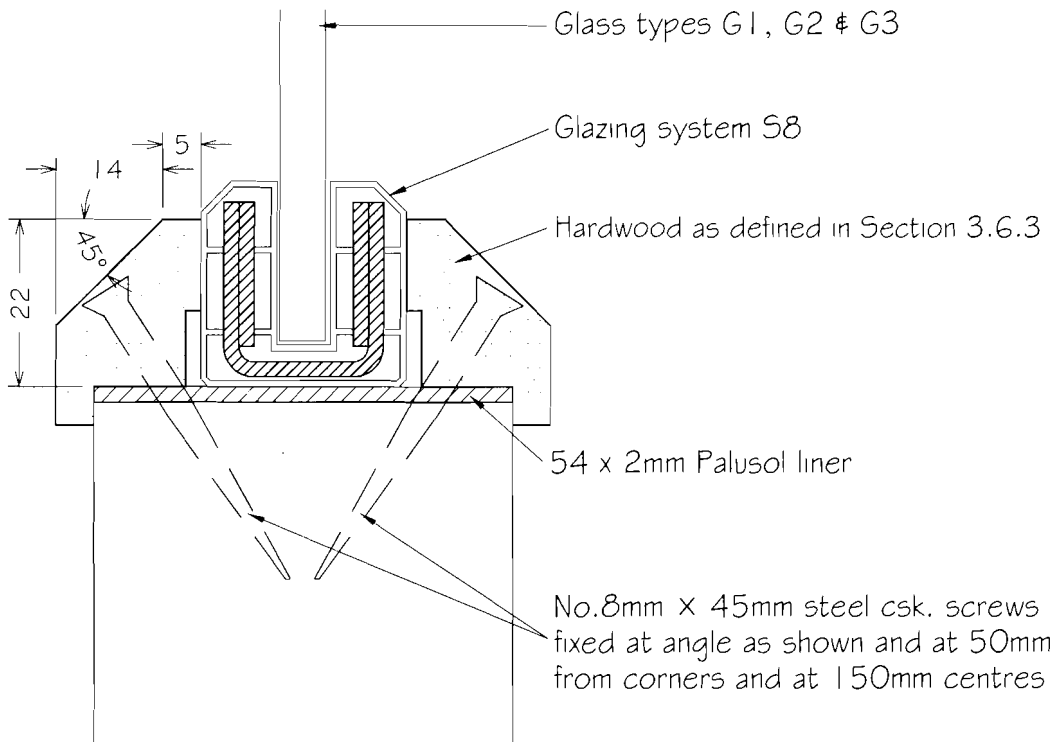
07075B/02



BEAD DETAIL B5

To be used in conjunction with glazing system S7 only

*Bead size is dependant upon glass/seal thickness



BEAD DETAIL B6

Refer to text of Report for details of glass and seal types

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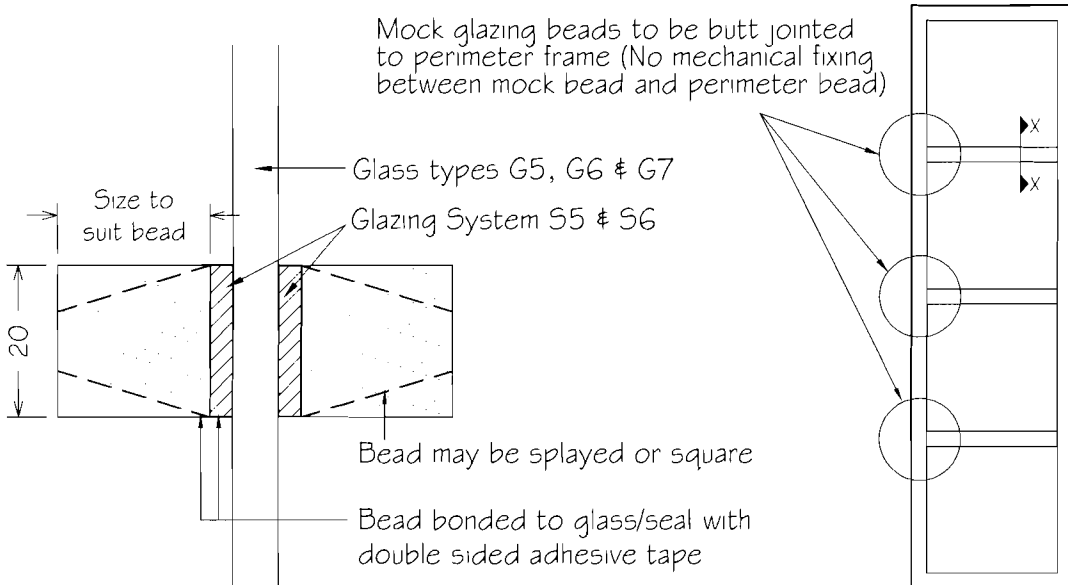
Glazing Details
 Sheet Three of Four

Job number : 9404

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07075B/03



MOCK GLAZING BEAD (Section X-X)

TYPICAL ELEVATION

LADDER DETAIL for use with bead detail B1 or B4 only

Refer to text of Report for details of glass and seal types

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Glazing Details
Sheet Four of Four

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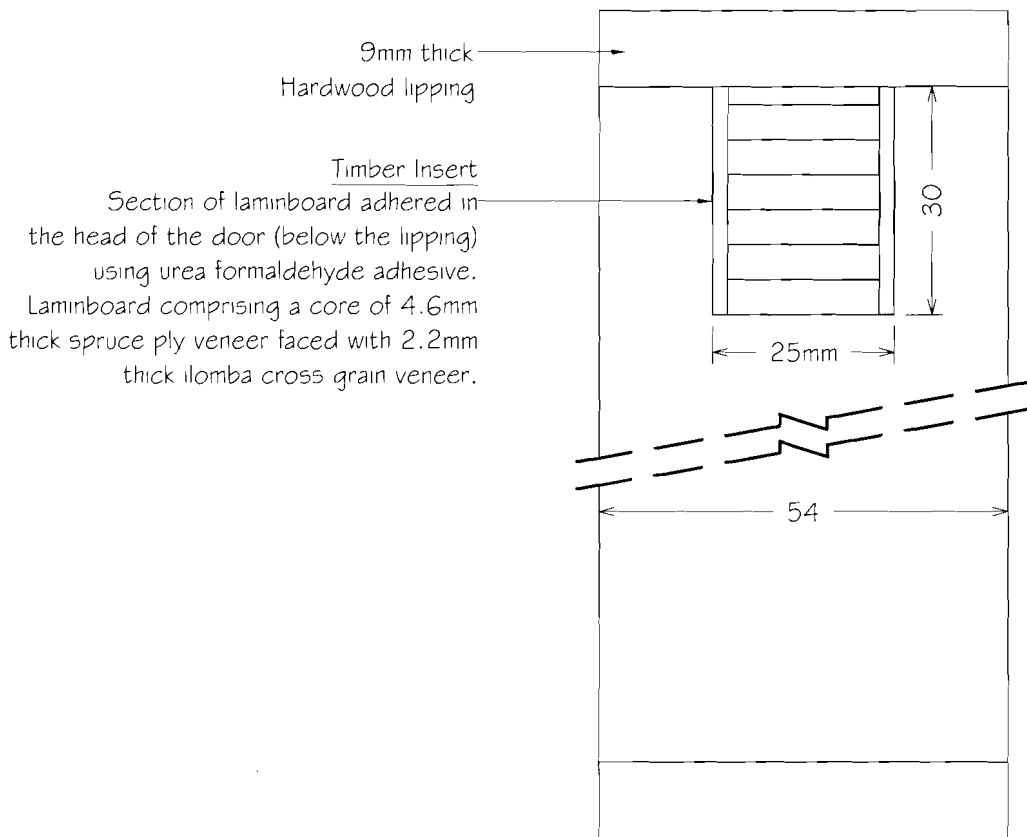
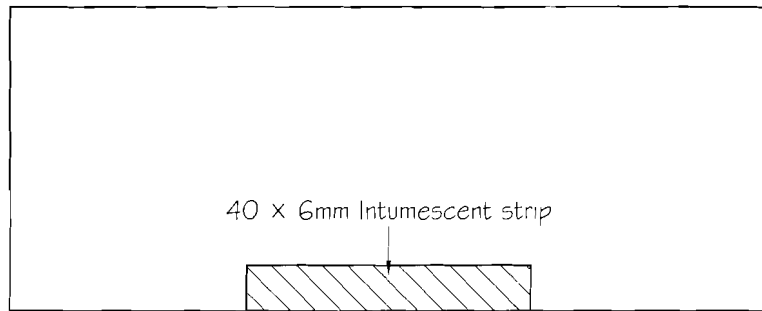
07075B/04

APPENDIX B

Timber Insert Detail

Figure 07075B/05

***The figure in this Appendix is not included
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Moralt Tischlerplatten
FD60 Field of Application

Timber Insert Detail

Job number : 9404

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Not To Scale | February 2009

07075B/05

Note:

The timber insert is required to be fitted in leaves where specified in Appendices D and F

APPENDIX C

Assessed Intumescent Seal Specification for Moralt Fire Door Cross Ply, Chip-faced and MDF

**Intumescent Seal Specifications for
Moralt Fire Door Cross Ply, Chip-faced and MDF**

Location	Reduced Specification	Standard Specification
Hanging and closing edge (stiles/jambs)	2no 15 x 4mm strips, centrally fitted, spaced 10mm apart, fitted in the leaf edge or frame reveal	2no 15 x 4mm strips, centrally fitted, spaced 10mm apart, fitted in the leaf edge or frame reveal
Head (single and double leaves)	2no 15 x 4mm strips, centrally fitted, spaced 10mm apart, fitted in the leaf edge or frame reveal	1no 40 x 6mm strip centrally fitted in the leaf edge or frame reveal
Head (single leaves with flush overpanel)	N/A	2no 15 x 4mm strips, centrally fitted, spaced 10mm apart, fitted in the leaf head or bottom of the overpanel
Head (single leaves with equally rebated overpanel)	N/A	2no 15 x 4mm strips, one strip centrally fitted in the rebate in the leaf head and the other strip centrally fitted in the other rebate in the bottom of the overpanel
Meeting edges (double leaves)	2no 15 x 4mm strips, centrally fitted, spaced 10mm apart, fitted in the edge of one leaf only	2no 15 x 4mm strips, centrally fitted, spaced 10mm apart, fitted in the edge of one leaf only
Interface between overpanel and frame/transom	2no 15 x 4mm strips, centrally fitted, spaced 10mm apart, fitted in the overpanel edge or frame reveal	2no 15 x 4mm strips, centrally fitted, spaced 10mm apart, fitted in the overpanel edge or frame reveal

Notes:

- i) *Lorient Polyproducts Ltd Type 617 or Palusol type seals and Intumescent Seals Ltd Therm-A-Seal may be employed across the complete range of door sizes and configurations approved herein.*
- ii) *Type 617 or Therm-A-Seal intumescent seals may generally be fitted in door/overpanel edges or frame reveals but Palusol type intumescent seals must be fitted in the frame reveals.*

APPENDIX D

**Assessed Leaf Size Envelope for Moralt
Fire Door Cross Ply, Chip-faced and MDF**

Figure 07075B/06 to 11

***The figure in this Appendix is not included
in the sequential page numbering of this report***

Standard Intumescent Seal Specification with Timber Insert at Head of Leaf		
	A	B
Width	898	1166
Height	3145	2609
Reduced Intumescent Seal Specification with Timber Insert at Head of Leaf		
	C	D
Width	834	1082
Height	2806	2328

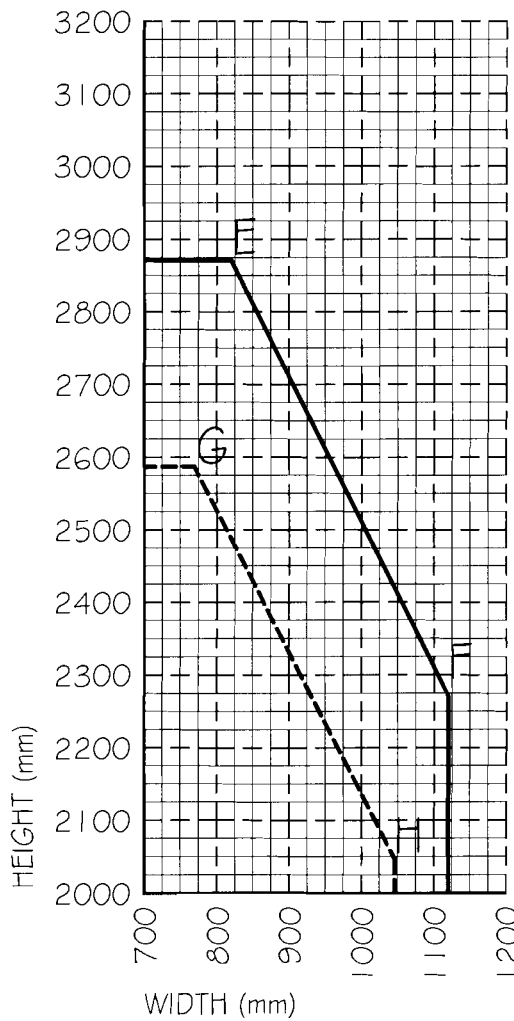
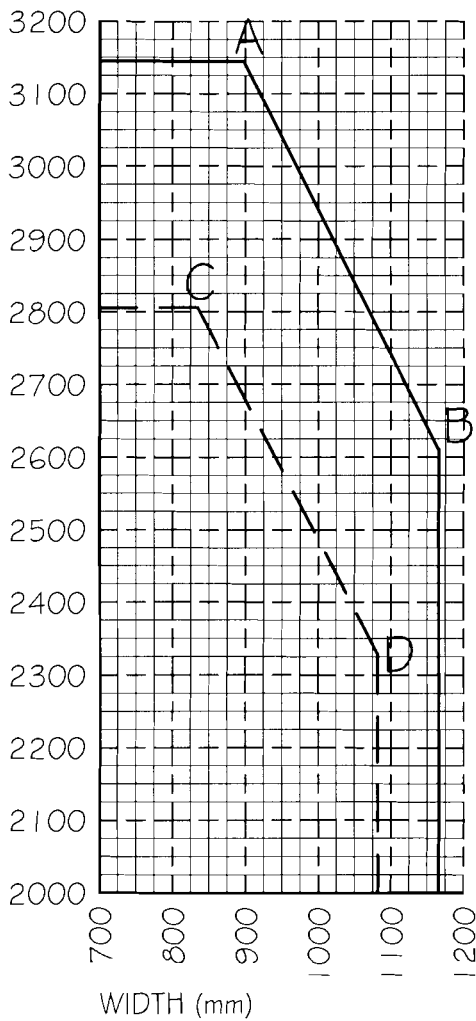
Standard Intumescent Seal Specification with No Timber Insert at Head of Leaf		
	E	F
Width	820	1120
Height	2871	2271
Reduced Intumescent Seal Specification with No Timber Insert at Head of Leaf		
	G	H
Width	766	1046
Height	2587	2046

**Moralt Fire Door Cross Ply
Chip-faced and MDF**

PROPOSED CONFIGURATION:

LATCHED
SINGLE ACTING
SINGLE LEAF
TRANSOMED OVERPANEL ONLY

LEAF SIZE ENVELOPE POINTS



Note:
These sizes relate to the door leaf.
Sizes for overpanels are defined in
Section 3.3 of the Report.

This figure must be read in conjunction
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Field of Application IFCA/07075
Revision B
Moralt Tischlerplatten
FD60 Field of Application

Envelope of Approved Leaf Sizes
Latched Single Leaf

Job number : 9404

Drawn by : CSP | Checked by : DJC
Not To Scale | February 2009

07075B/06

ENVELOPE OF APPROVED LEAF SIZES

The above graph represents the envelope of approved leaf sizes for the proposed door leaf configuration.

Any combination of leaf width and height that falls within the graph axes and the solid line on the graph above are approved.

POINTS A, C, E & G represent the maximum leaf height and its associated width.

POINTS B, D, F & H represent the maximum leaf width and its associated height.

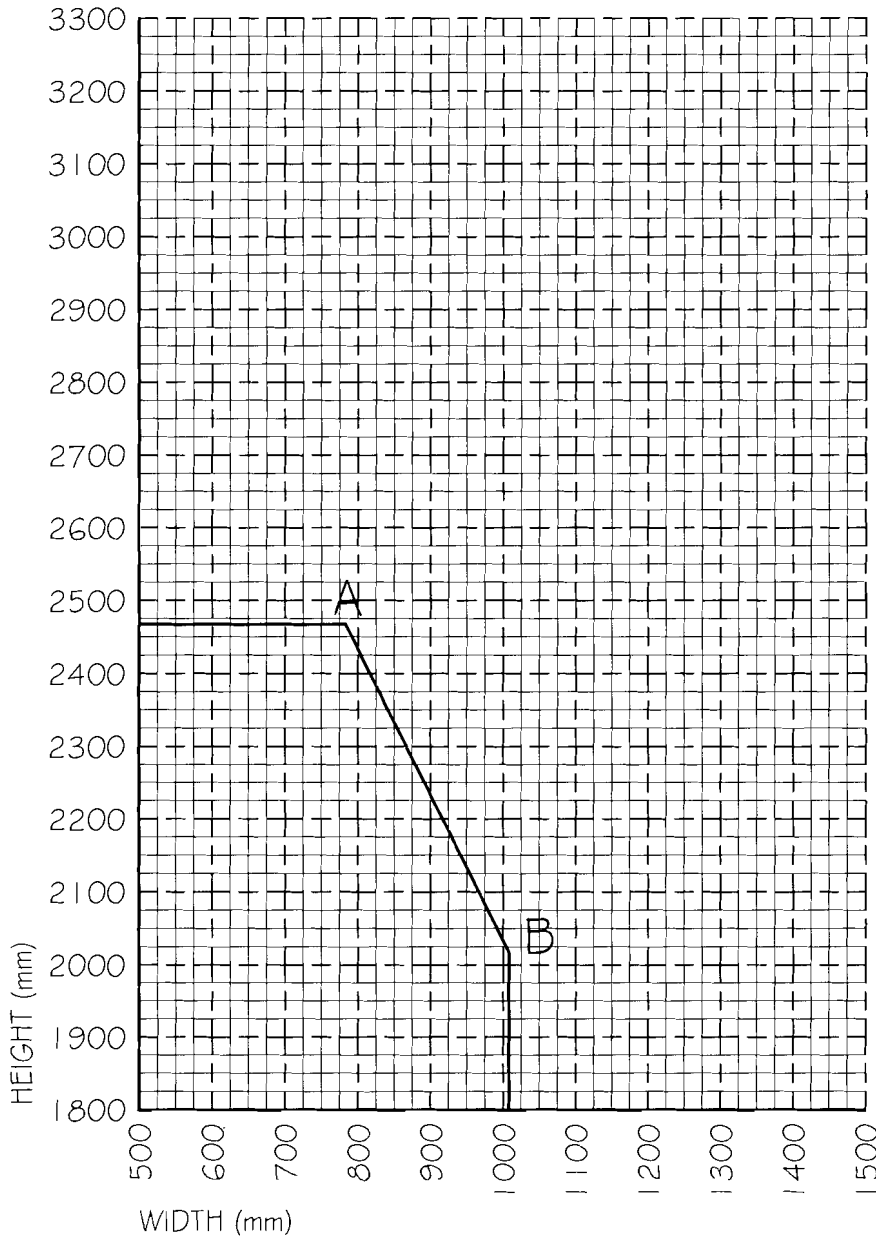
	Standard Intumescent Seal Specification with Timber Insert at Head of Leaf	
	A	B
Width	783	1008
Height	2467	2017

LEAF SIZE ENVELOPE POINTS

**Moralt Fire Door Cross Ply
Chip-faced and MDF**

PROPOSED CONFIGURATION:

LATCHED
SINGLE ACTING
SINGLE LEAF
FLUSH or REBATED OVERPANEL



ENVELOPE OF APPROVED LEAF SIZES

The above graph represents the envelope of approved leaf sizes for the proposed door leaf configuration.

Any combination of leaf width and height that falls within the graph axes and the solid line on the graph above are approved.

POINT A represents the maximum leaf height and its associated width.

POINT B represents the maximum leaf width and its associated height.

Note:

These sizes relate to the door leaf.
Sizes for overpanels are defined in Section 3.3 of the Report.

This figure must be read in conjunction with International Fire Consultants Ltd's. Field of Application Report IFCA/07075 Revision B which contains full details of the assessed doorset construction.

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Field of Application IFCA/07075
Revision B

Moralt Tischlerplatten
FD60 Field of Application

Envelope of Approved Leaf Sizes
Latched Single Leaf
Flush or Rebated Overpanel

Job number : 9404

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07075B/07

Standard Intumescent Seal Specification with Timber Insert at Head of Leaf		
	A	B
Width	881	1144
Height	3084	2559
Reduced Intumescent Seal Specification with Timber Insert at Head of Leaf		
	C	D
Width	817	1061
Height	2751	2282

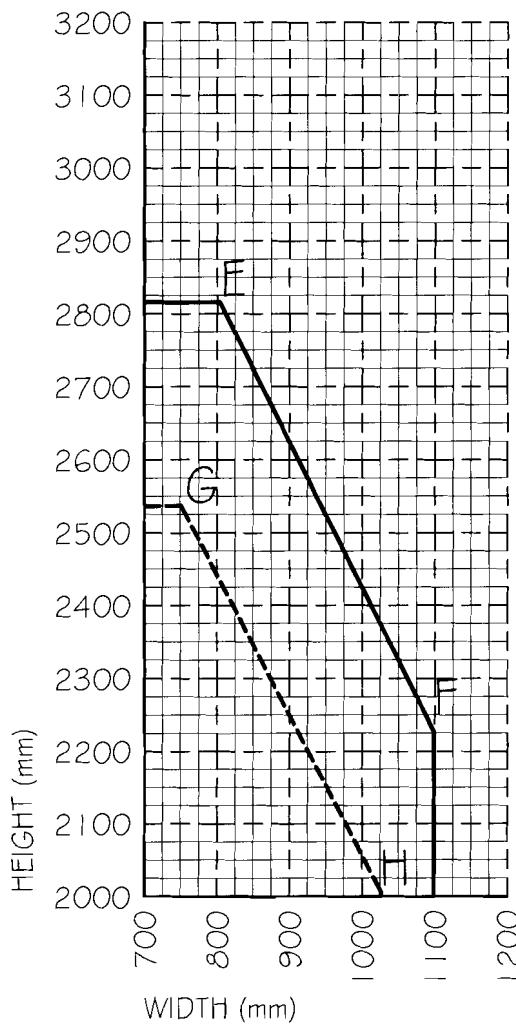
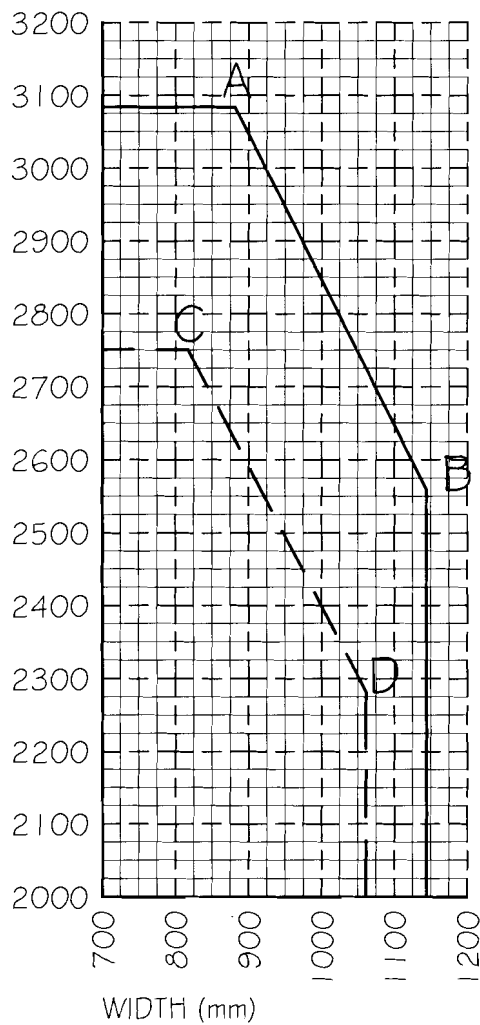
Standard Intumescent Seal Specification with No Timber Insert at Head of Leaf		
	E	F
Width	804	1099
Height	2816	2227
Reduced Intumescent Seal Specification with No Timber Insert at Head of Leaf		
	G	H
Width	751	1026
Height	2537	2006

Moralt Fire Door Cross Ply Chip-faced and MDF

PROPOSED CONFIGURATION:

UNLATCHED
SINGLE or DOUBLE ACTING
SINGLE LEAF
TRANSOMED OVERPANEL ONLY

LEAF SIZE ENVELOPE POINTS



Note:
These sizes relate to the door leaf.
Sizes for overpanels are defined in
Section 3.3 of the Report.

This figure must be read in conjunction
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ENVELOPE OF APPROVED LEAF SIZES

The above graph represents the envelope of approved leaf sizes for the proposed door leaf configuration.

Any combination of leaf width and height that falls within the graph axes and the solid line on the graph above are approved.

POINTS A, C, E & G represent the maximum leaf height and its associated width.

POINTS B, D, F & H represent the maximum leaf width and its associated height.

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FD60 Field of Application

Envelope of Approved Leaf Sizes
Unlatched Single Leaf

Job number : 9404
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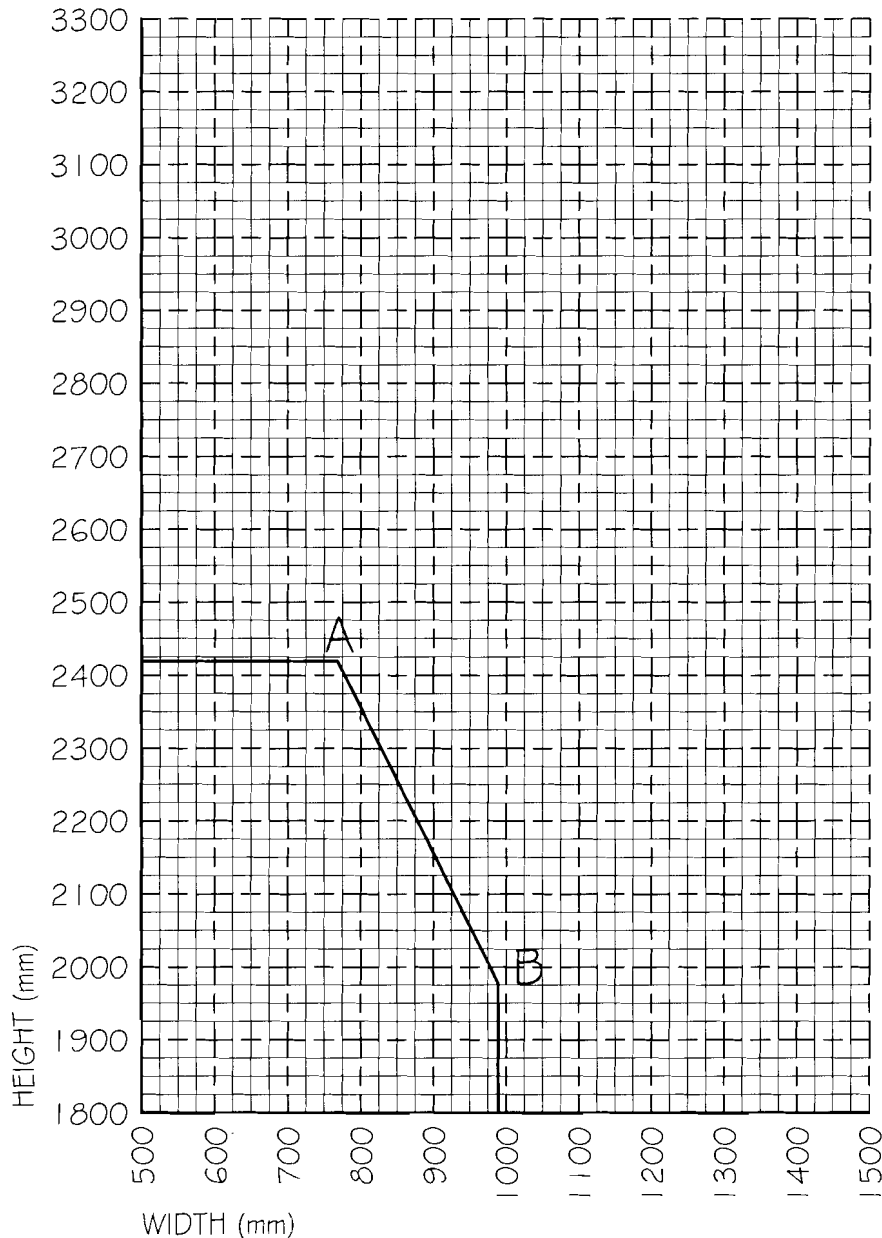
Standard Intumescent Seal Specification with Timber Insert at Head of Leaf		
	A	B
Width	768	989
Height	2419	1978

LEAF SIZE ENVELOPE POINTS

Moralt Fire Door Cross Ply Chip-faced and MDF

PROPOSED CONFIGURATION:

UNLATCHED
SINGLE ACTING
SINGLE LEAF
FLUSH or REBATED OVERPANEL



Note:
These sizes relate to the door leaf.
Sizes for overpanels are defined in Section 3.3 of the Report.

This figure must be read in conjunction with International Fire Consultants Ltd's. Field of Application Report IFCA/07075 Revision B which contains full details of the assessed doorset construction.

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<p>Field of Application IFCA/07075 Revision B Moralt Tischlerplatten FD60 Field of Application</p>	
<p>Envelope of Approved Leaf Sizes Unlatched Single Leaf Flush or Rebated Overpanel</p>	
<p>Job number : 9404</p>	
<p>Drawn by : C5P</p>	<p>Checked by : DJC</p>
<p>Not To Scale</p>	<p>February 2009</p>
<p>07075B/09</p>	

ENVELOPE OF APPROVED LEAF SIZES

The above graph represents the envelope of approved leaf sizes for the proposed door leaf configuration.

Any combination of leaf width and height that falls within the graph axes and the solid line on the graph above are approved.

POINT A represents the maximum leaf height and its associated width.

POINT B represents the maximum leaf width and its associated height.

Standard Intumescent Seal Specification with Timber Insert at Head of Leaf		
	A	B
Width	951	1060
Height	2854	2636
Reduced Intumescent Seal Specification with Timber Insert at Head of Leaf		
	C	D
Width	882	983
Height	2546	2351

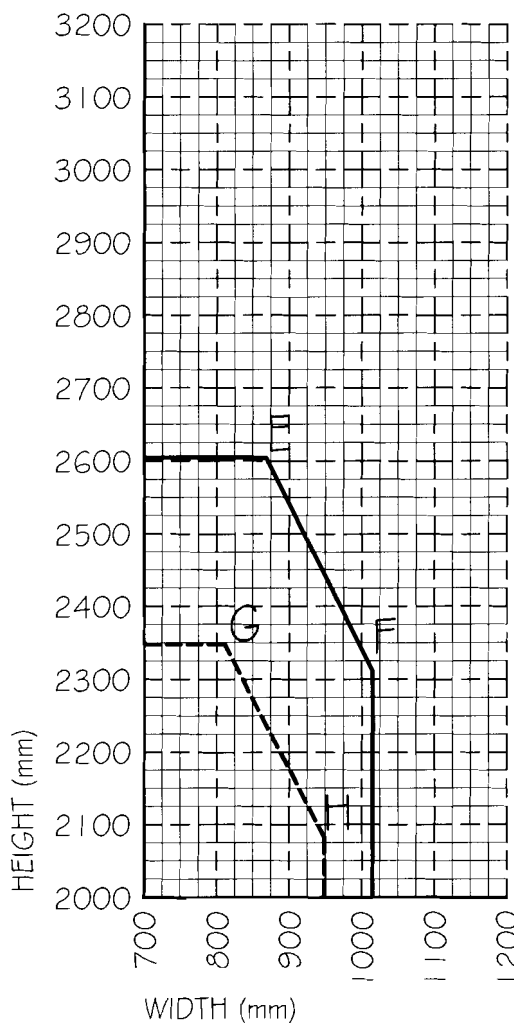
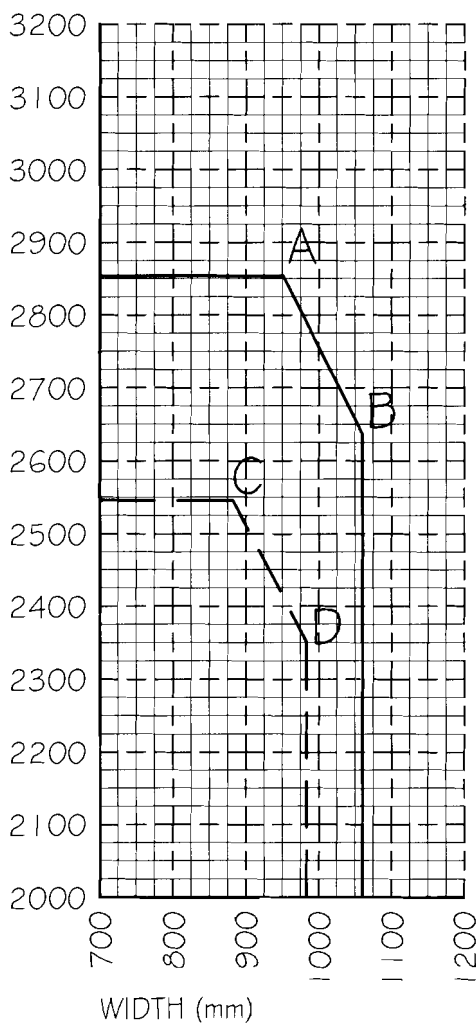
Standard Intumescent Seal Specification with No Timber Insert at Head of Leaf		
	E	F
Width	868	1015
Height	2605	2311
Reduced Intumescent Seal Specification with No Timber Insert at Head of Leaf		
	G	H
Width	811	948
Height	2348	2083

Moralt Fire Door Cross Ply Chip-faced and MDF

PROPOSED CONFIGURATION:

LATCHED
SINGLE ACTING
DOUBLE LEAF
FLUSH MEETING STILES
TRANSOMED OVERPANEL ONLY

LEAF SIZE ENVELOPE POINTS



Note:
These sizes relate to the door leaf.
Sizes for overpanels are defined in Section 3.3 of the Report.

This figure must be read in conjunction with International Fire Consultants Ltd's. Field of Application Report IFCA/07075 Revision B which contains full details of the assessed doorset construction.

ENVELOPE OF APPROVED LEAF SIZES

The above graph represents the envelope of approved leaf sizes for the proposed door leaf configuration.

Any combination of leaf width and height that falls within the graph axes and the solid line on the graph above are approved.

POINTS A, C, E & G represent the maximum leaf height and its associated width.

POINTS B, D, F & H represent the maximum leaf width and its associated height.

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Contractors must check all dimensions.
Any discrepancies must be reported before work proceeds.
Only work to dimensions stated on drawing.

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Field of Application IFCA/07075
Revision B

Moralt Tischlerplatten
FD60 Field of Application

Envelope of Approved Leaf Sizes
Latched Double Leaf

Job number : 9404

Drawn by : CSP | Checked by : DJC

Not To Scale | February 2009

07075B/10

	Standard Intumescent Seal Specification with Timber Insert at Head of Leaf	
	A	B
Width	941	1049
Height	2825	2610
	Reduced Intumescent Seal Specification with Timber Insert at Head of Leaf	
	C	D
Width	874	974
Height	2520	2328

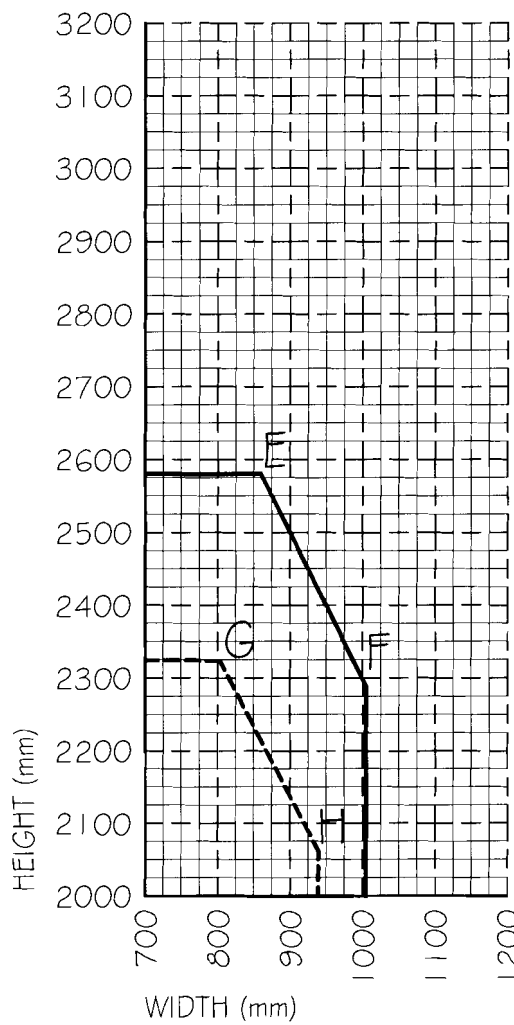
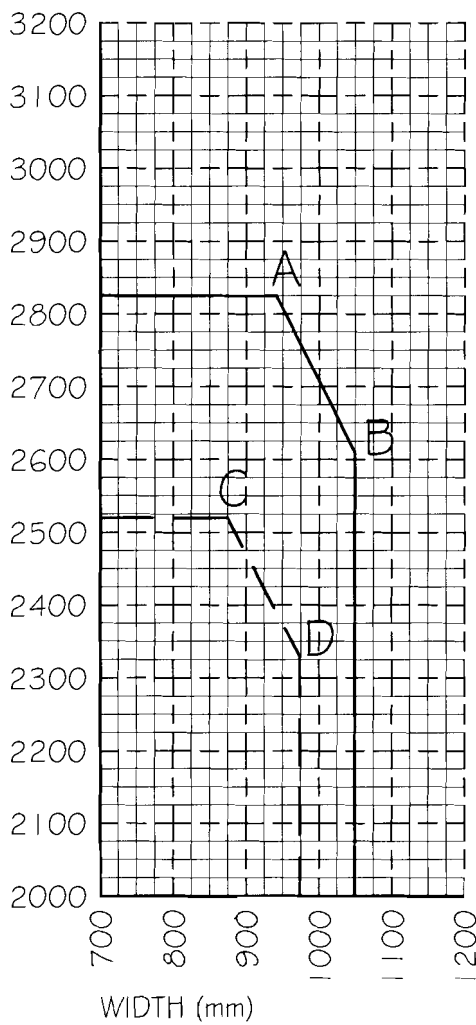
	Standard Intumescent Seal Specification with No Timber Insert at Head of Leaf	
	E	F
Width	860	1005
Height	2580	2288
	Reduced Intumescent Seal Specification with No Timber Insert at Head of Leaf	
	G	H
Width	803	939
Height	2324	2062

**Moralt Fire Door Cross Ply
Chip-faced and MDF**

PROPOSED CONFIGURATION:

UNLATCHED
SINGLE or DOUBLE ACTING
DOUBLE LEAF
TRANSOMED OVERPANEL ONLY
FLUSH MEETING STILES

LEAF SIZE ENVELOPE POINTS



Note:
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Sizes for overpanels are defined in Section 3.3 of the Report.

This figure must be read in conjunction with International Fire Consultants Ltd's. Field of Application Report IFCA/07075 Revision B which contains full details of the assessed doorset construction.

ENVELOPE OF APPROVED LEAF SIZES

The above graph represents the envelope of approved leaf sizes for the proposed door leaf configuration.

Any combination of leaf width and height that falls within the graph axes and the solid line on the graph above are approved.

POINTS A, C, E & G represent the maximum leaf height and its associated width.

POINTS B, D, F & H represent the maximum leaf width and its associated height.

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Field of Application IFCA/07075
Revision B
Moralt Tischlerplatten
FD60 Field of Application

Envelope of Approved Leaf Sizes
Unlatched Double Leaf

Job number : 9404
Drawn by : C5P Checked by : DJC
Not To Scale February 2009

07075B/11

APPENDIX E

Assessed Intumescent Seal Specification for Moralt Finesse FireSound 36

**Intumescent Seal Specifications for
Moralt Finesse FireSound 36**

Location	Standard Specification
Hanging and closing edge (single leaves) stiles/jamb	2no 15 x 4mm strips, centrally fitted, spaced 10mm apart, fitted in the leaf edge or frame reveal
Head	1no 40 x 6mm strip centrally fitted in the leaf edge or frame reveal
Meeting edges (double leaves)	2no 15 x 4mm strips, centrally fitted, spaced 10mm apart, fitted in the edge of one leaf only

Notes:

- i) Lorient Polyproducts Ltd Type 617 or Palusol type seals and Intumescent Seals Ltd Therm-A-Seal may be employed across the complete range of door sizes and configurations approved herein.*
- ii) Type 617 or Therm-A-Seal intumescent seals may generally be fitted in door edges or frame reveals but Palusol type intumescent seals must be fitted in the frame reveals.*

APPENDIX F

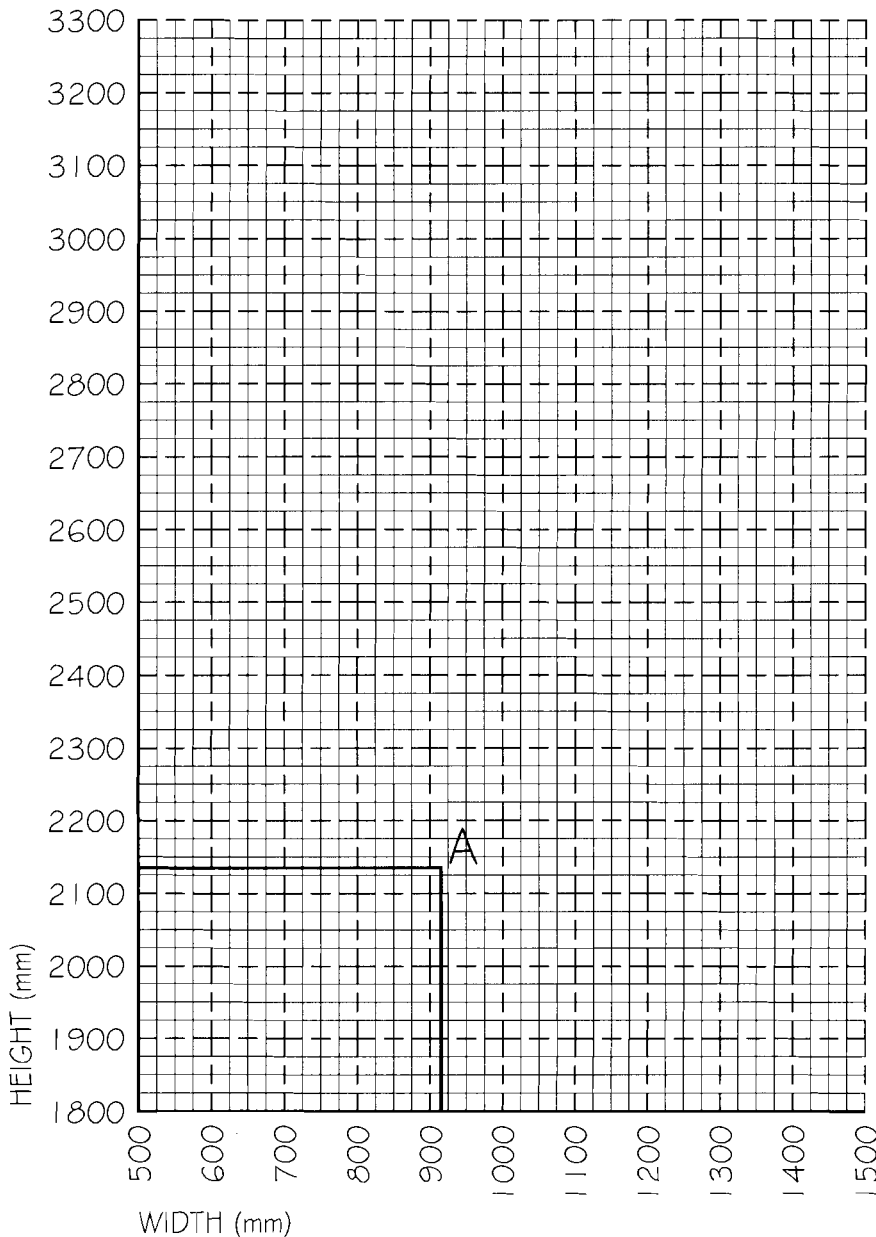
Assessed Leaf Size Envelope for Moralt Finesse FireSound 36

Figure 07075B/12 to 13

*The figure in this Appendix is not included
in the sequential page numbering of this report*

	Standard Intumescent Seal Specification with Timber Insert at Head of Leaf
	A
Width	915
Height	2135

LEAF SIZE ENVELOPE POINTS



ENVELOPE OF APPROVED LEAF SIZES

The above graph represents the envelope of approved leaf sizes for the proposed door leaf configuration.

Any combination of leaf width and height that falls within the graph axes and the solid line on the graph above are approved.

POINT A represents the maximum leaf height and width.

Moralt Finesse FireSound 36

PROPOSED CONFIGURATION:

LATCHED
SINGLE ACTING
SINGLE LEAF
TRANSOMED OVERPANEL ONLY

Note:

These sizes relate to the door leaf.
Sizes for overpanels are defined in
Section 3.3 of the Report.

This figure must be read in conjunction
with International Fire Consultants
Ltd's. Field of Application Report
IFCA/07075 Revision B which
contains full details of the assessed
doorset construction.

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Field of Application IFCA/07075
Revision B
Moralt Tischlerplatten
FD60 Field of Application

Envelope of Approved Leaf Sizes
Latched Single Leaf

Job number : 9404

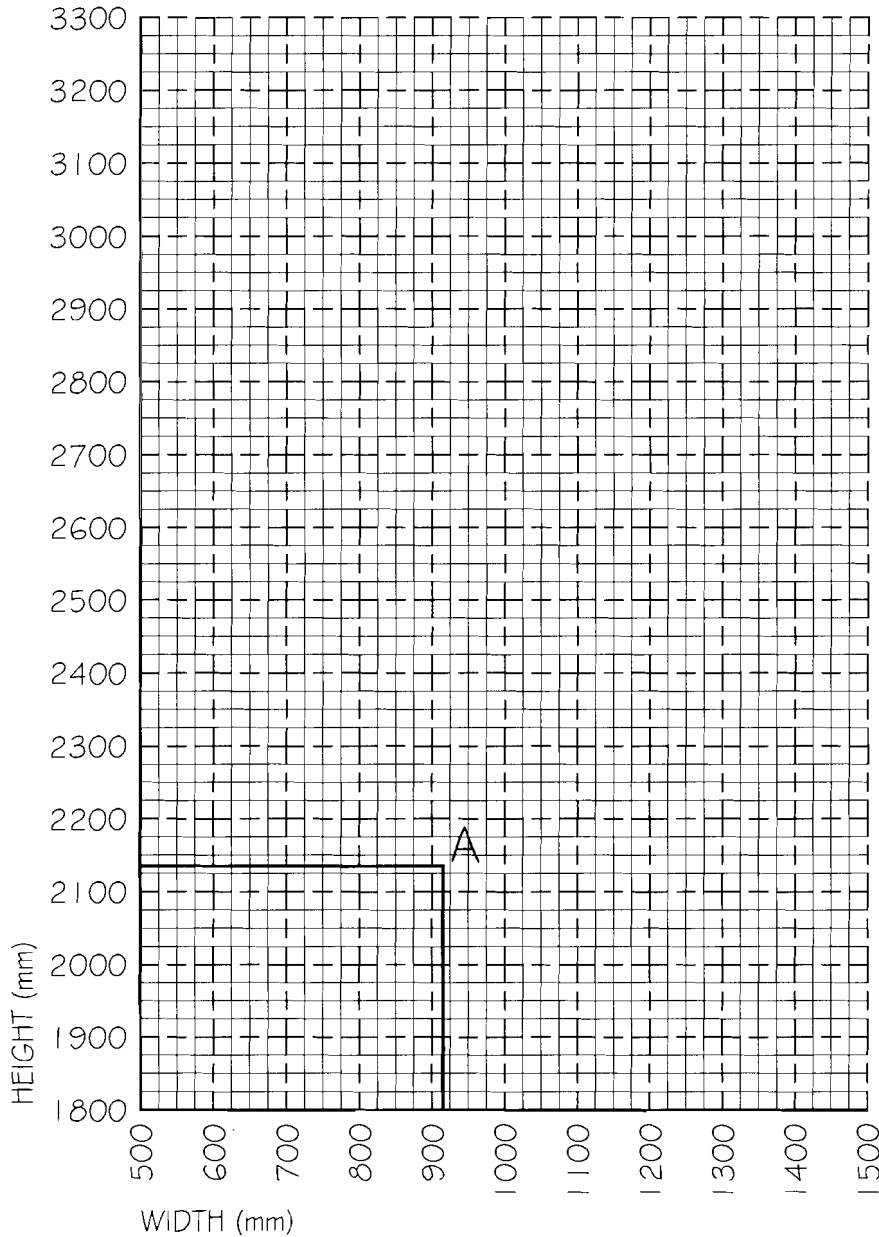
Drawn by : C5P | Checked by : DJC

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07075B/12

	Standard Intumescent Seal Specification with Timber Insert at Head of Leaf
	A
Width	915
Height	2135

LEAF SIZE ENVELOPE POINTS



ENVELOPE OF APPROVED LEAF SIZES

The above graph represents the envelope of approved leaf sizes for the proposed door leaf configuration.

Any combination of leaf width and height that falls within the graph axes and the solid line on the graph above are approved.

POINT A represents the maximum leaf height and width.

Moralt Finesse FireSound 36

PROPOSED CONFIGURATION:

LATCHED
SINGLE ACTING
DOUBLE LEAF
FLUSH MEETING STILES
TRANSOMED OVERPANEL ONLY

Note:

These sizes relate to the door leaf.
Sizes for overpanels are defined in Section 3.3 of the Report.

This figure must be read in conjunction with International Fire Consultants Ltd's. Field of Application Report IFCA/07075 Revision B which contains full details of the assessed doorset construction.

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Field of Application IFCA/07075
Revision B
Moralt Tischlerplatten
FD60 Field of Application

Envelope of Approved Leaf Sizes
Latched Double Leaves

Job number : 9404

Drawn by : CSP Checked by : DJC
Not To Scale February 2009

07075B/13

APPENDIX G

Summary of Fire Test Evidence

Summary of Fire Test Evidence

Test Report	Configuration Tested	Leaf Sizes	Test Standard	Integrity
RF07055	DADD	2600mm high x 950mm wide x 54mm thick	BS476: Part 22: 1987	61 minutes (glazing) 72 minutes (leaf perimeter)
J 85454/1	LSASD	2145mm high x 926mm wide x 54mm thick	BS476: Part 22: 1987	66 minutes
CFR0709071	ULSASD + OP	1728mm high * (+ 100mm overpanel) x 950mm wide x 54mm thick	BS476: Part 22: 1987	61 minutes
Chilt/ RF08097	ULSADD	2400mm high x 950mm wide x 54mm thick	BS EN1634-1: 2000	20 minutes (glazing) ** 50 minutes (base) ** 59 minutes (leaf perimeter)

DADD = Double Acting, Double leaf Doorset
 LSASD = Latched, Single Acting, Single leaf Doorset
 ULSASD + OP = Unlatched, Single Acting, Double leaf Doorset + Overpanel
 ULSADD = Unlatched, Single Acting, Double leaf Doorset

* *The furnace pressure in this test was adjusted to simulate a 2040mm tall leaf.*

** *The integrity failures at the glazing and base of the leaves were due to mechanisms associated with testing to BS EN1634-1: 2000, and it is the opinion of International Fire Consultants Ltd that they would not have occurred had the same test was carried out to BS476: Part 22: 1987. It is on this basis that the results of this test have been included within the analysis of this Field of Application Report.*

Note:

Where appropriate, fire test evidence from glass, hardware, and intumescent seal manufacturers has also been considered when preparing this Field of Application Report.