
Title

Field of Application for:
Moralt Laminesse FireSound
54mm & 59mm Doorsets
For: 30 or 60 Minutes Fire
Resistance
Proprietary Information redacted.

Report No.:

WF409922 Revision B

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Prepared for:

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10.9.11.2 Cableways

Cableways were also successfully tested in DMT-D0-50-1010, cableways are to be used to route cables around the door leaf to operate electronic hardware. The cableway will be routed from a cable loop fitted at the jambs of a doorset to the relevant item of hardware (e.g. a lockset or electronic strike).

The cableway must be installed as detailed below.

- Groove the edge of the door core with a 10mm wide channel located centrally, to a depth of 12mm prior to installation of lippings. This groove should run from the lock/keep location in the closing/meeting stile, down the stile, along the bottom of the door then back up the hanging stile to the cable loop location. The groove may be machined above the location for a dropseal if one is to be fitted, as tested.
- Install the cable, protected with Mann McGowan Pyrostrip 500FSA-10x 2mm, into the groove.
- Infill the groove with hardwood, bonded in place with PU adhesive.
- The bottom of the groove must be no closer than 100mm from glazed apertures.
- The door core can then be lipped and calibrated in the usual manner.

11 Installation




11.1 General

This section considers the installation of doorsets. This section considers:

- the door frame and architrave installation position relative to the wall
- the fire stopping between the frame and the wall.
- the fixing requirement including packers.
- the requirements for door edge gaps
- the trimming of door edges.

11.2 Door Frame Installation

The following figures indicate the acceptable door frame installations. Please note that the firestopping element is provided in the below 3D models as a generic red coloured seal. For further clarification of the approved firestopping systems see section 11.3.


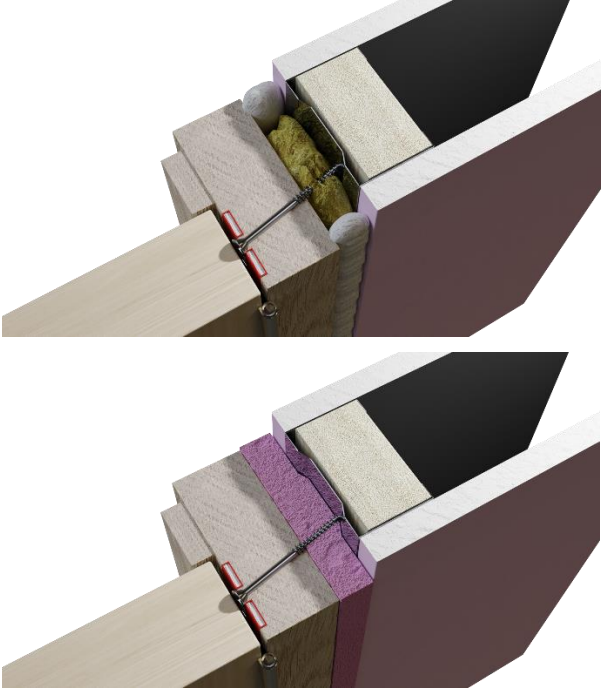
Permitted Installations	
	<p>Instances where the door frame and the wall of the same depth such that architraves are fitted flush to both faces. Note that the minimum door frame section size (width and depth) must be as per the requirements noted in this report – see door frame section.</p> <p>Architraves requirements are documented in the firestopping section of this report.</p>
	<p>Instances where the wall thickness is greater than the door frame depth.</p> <p>In this scenario timber architraves of minimum 18mm thick must be fitted to both faces, fitted with a minimum 15mm overlap to the door gap, other than when the architrave abuts the wall.</p>
	<p>Split frames are permitted providing that both frame sections are secured to the wall in accordance with section 11.5. Furthermore, the main frame section (from which the door is hung) must be constructed to at least the minimum door frame section size (width and depth) as per the requirements noted in this report – see door frame section. The extension piece must be constructed using the same timber species as the main frame section.</p>

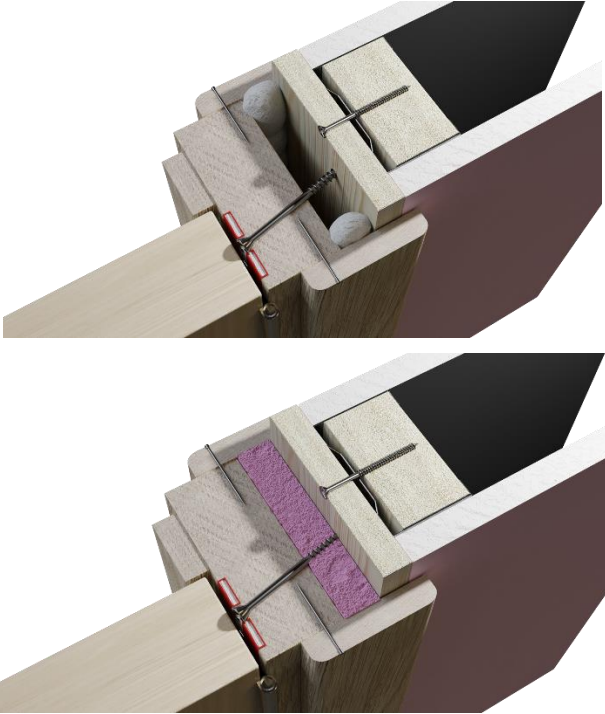
Note:

The drawings are provided as a generalised illustration of the door frame installation only; actual installation must be as per the text within this document specifies.

11.3 Firestopping

The firestopping requirements between the back of frame and wall are dependent on the gap size between the substrates. The table below provides the requirements based upon the gaps size. Please note that in the 3D depictions noted below show the application where a door frame is of the same depth as the overall wall thickness.

Gap (mm)	Requirement	3D model depiction
0 – 2	In practice, unlikely to occur, but if present, must be sealed with architraves, as below, fitted over a bead of acrylic intumescent sealant, tested as below.	N/A
3 – 10	Gap must be sealed on both sides with a 10mm depth of acrylic intumescent mastic, fire tested for this application to BS 476: Part 22: 1987 or BS EN 1634-1. Timber architraves of a minimum 15mm thick must be fitted to both faces, fitted with a minimum 15mm overlap to the door gap.	
10 – 20	Gap must be tightly packed with mineral fibre capped on both sides with a 10mm depth of acrylic intumescent mastic, fire tested for this application to BS 476: Part 22: 1987 or BS EN 1634-1 or full depth expanding PU foam, fire tested for this application to BS 476: Part 22: 1987 or BS EN 1634-1. Architraves are optional	

Gap (mm)	Requirement	3D model depiction
Over 20	<p>This would be considered a poor preparation of the structural opening. A timber based or non-combustible subframe up to 50mm thick can be inserted and fixed to the wall bedded on intumescent mastic, the gap between door frame and subframe filled as follows:</p> <p>Gaps 5 to 10mm filled on both sides with 10mm depth of acrylic intumescent mastic or full depth expanding PU foam, fire tested for this application to BS 476: Part 22: 1987 or BS EN 1634-1.</p> <p>Timber architraves of a minimum 15mm thick must be fitted to both faces, fitted with a minimum 15mm overlap to the door gap.</p>	

11.4 Packers

Packers can be timber of equal density to the frame, or plywood or plastic packers if fire tested for this application to BS 476: Part 22: 1987 or BS EN 1634-1.

11.5 Wall Types, Structural Opening & Fixity

11.5.1 Wall Types

The following wall types are approved for this doorset design:

- a) Plasterboard clad timber stud partitions
- b) Plasterboard clad steel stud partitions including timber lining.
- c) Masonry constructions.

Wall types a & b above must have supporting fire resistance test evidence which demonstrates that it is capable of staying in place and intact for a minimum of 30 or 60 minutes, as appropriate, supporting a doorset design.

Wall type c above must be determined to be able to provide at least the same level of fire resistance of the doorset design.

All wall types detailed above shall provide a suitable medium to permit adequate fixity, it is anticipated that for:

- Plasterboard clad timber stud partitions, the timber stud will be of sufficient dimensions such that the fixing for the door frame penetrates into solid timber.
- Plasterboard clad steel stud partitions will include a timber lining of sufficient dimensions such that the fixing for the door frame penetrates into solid timber.
- Masonry constructions are anticipated to be constructed of a solid block or brickwork to receive the fixings.

Note: Other tested solutions to achieve adequate fixity may be detailed within the above noted supporting fire resistance test evidence.

11.5.2 Structural Opening

For all wall types the structural opening shall be square, plumb and provide a flat surface for installation of the doorset.

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.

11.5.3 Fixity

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.

For single leaf doorset without sidepanels, 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 doorset, 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.

11.6 Post Production (Onsite) Leaf Size Adjustment

The Laminesse FireSound 54mm and 59mm range of doorsets may be altered as follows:

Leaf Size Adjustment Specification	
Element	Reduction
Lipping	The post-production lipping thickness 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

11.7 Door Gaps

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

Door Gap & Alignment Tolerance Specification	
Location	Dimension
Door edge gaps	A minimum of 2mm and a maximum of 4mm
Alignment tolerances	Leaves must not be proud of each other or from the door frame by more than 1mm.
Threshold / Bottom edge of the leaf	8mm between bottom of leaf and top of floor covering. <ul style="list-style-type: none">This is the maximum tolerance for fire resistance only.

12 Insulation Performance

Insulation performance may be claimed for a doorset to these designs meeting the following:

12.1 30 Minutes Performance

Type	Details
Partially insulating	Doorsets incorporating up to 20% of non-insulating or partially insulating glazing
Fully insulating	Unglazed doorsets or doors fitted with 30 minute fully insulating glass (see note in section 6.3)

12.2 60 Minutes Performance

Type	Details
Partially insulating	Doorsets incorporating up to 20% of non-insulating or partially insulating glazing
Fully insulating	Unglazed doorsets or doors fitted with 60 minute fully insulating glass (see note in section 6.4)

13 Conclusion

If Laminesse FireSound 54mm or 59mm doorsets, constructed in accordance with the specification documented in this field of application, were to be tested in accordance with BS 476 Part 22:1987, it is our opinion that they would provide a minimum of 30 or 60 minutes integrity and insulation (subject to section 12), as appropriate.