

Installation of Moralt Firesmoke 44 & 54 FD30 Doorsets Under Chilt/A13058

Doorset must be installed with reference to the current revision of Chilt/A13058

Please read all the instructions prior to starting installation.

The Doorsets are delivered to site palletised to suit your build program. Typically, 6 to 7 Doorsets per pallet. To help secure and protect the Doorset during transit, each unit is covered in bubble wrap and braced.

Doorsets are palletised “head to toe” so that any pre-fitted ironmongery is not damaged during transit.

Each Doorset is clearly labelled so that the Joiner can quickly identify its correct location.

When moving doorsets on site care must be taken to ensure the door leaf is adequately supported in its frame to prevent damage to the locking mechanism or the leaf itself. Transportation bracing should only be removed once the doorset is in place and ready for installation. Please see our separate guide for handling doorsets on site.

The structural opening into which the fire resistant FD30 doorset is to be fitted must be suitable for the application & robust in its construction in order to achieve a secure installation for the doorset throughout its lifetime. Please refer to the current revision of Chilt/A13058 for more information with regards to the supporting construction and fire stopping.

Please note: Doorset fixing screws must be steel, must suit the opening structure and must securely penetrate the opening structure to a minimum of 50mm depth.

Prior to Installation

Prior to offering the doorset up to the opening, check the dimensions of the opening and compare to the overall frame dimensions for the doorset. The dimensions of the opening should be at least 10mm greater than the width and height of the doorset. Take several measurements of the width and height to ensure that the dimensions are constant. Do not force the doorset into position as distortion or damage may occur.

Prior to fitting the doorset the distance between the bottom of the door and the end of the frame jambs should be checked to ensure that when the doorset is installed the correct gap is achieved between the bottom of the door and the top of the finished floor level. For fire doors with smoke control this gap should be no more than 3mm if a drop down seal isn't fitted. Where a dropdown seal is fitted or the door is a fire door without smoke control the maximum gap permitted is 8mm. The frame jamb length should be adjusted to ensure the correct gap is achieved. If the floor level under the jambs is not level it may be necessary to pack under the jambs so that the doorset is level once installed. If packing is required, the maximum threshold gaps given above cannot be exceeded.

The doorset should be installed as a complete unit. Use the door as a template to “square” the door frame position, removing it only to allow for final fixing, decoration, or protection. The Quick2Gap guide pads between door and frame should be left in situ while fitting and only removed once the frame has been fitted squarely into the opening. Note; the gaps between the door leaf and frame once installation is complete should be 2 – 4mm. Gaps greater than 4mm will invalidate fire test certification. Achieving a 3mm gap is recommended to allow for future movement.

Prior to installation remove the transit braces and bubble wrap.

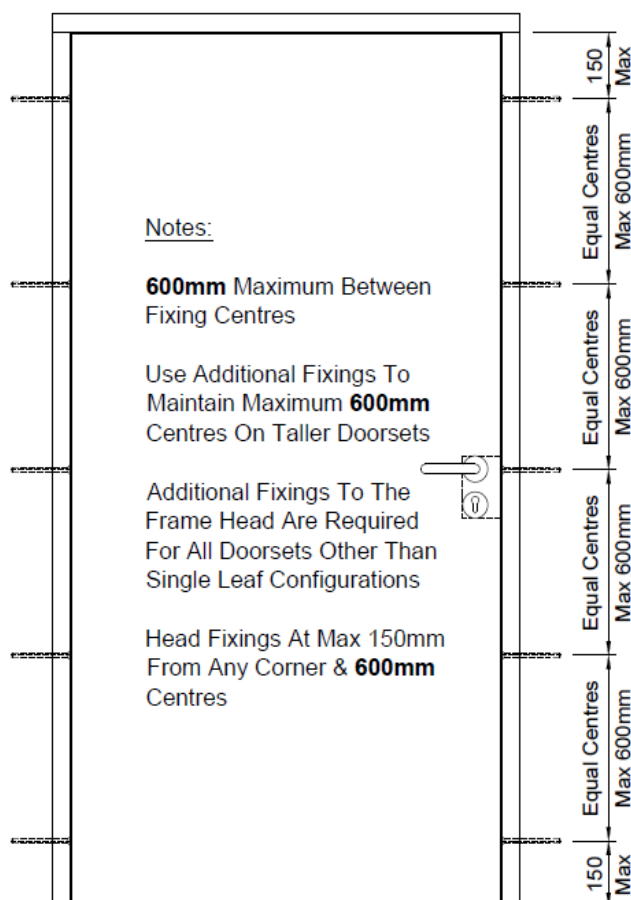
Installation

Position the Doorset within the structural opening ensuring the doorset fits comfortably within the opening and flush to the wall.

Where pre-drilled fixing holes are not present in the frame jambs the fixing screws should be positioned within 150mm of the bottom of the frame head and 150mm from the bottom of the jamb with intermediate fixings spaced equally at a maximum of **600mm** centres. The minimum number of fixings in the height is 4nr per jamb. Use additional fixings as the door height increases to ensure the 600mm maximum fixing centres are maintained. For single leaf doorsets, it is not necessary to fix the frame head, although packers must be inserted.

Additional fixings in the frame head are required at 150mm in from any corner and **600mm** maximum centres for all other configurations of doorsets. The fixings must be steel, of the appropriate type for the structural opening and penetrate to minimum depth of 50mm. See diagram below.

Frame Fixing Positions



From the push side use a drill to make a clearance hole in the top frame fixing point on the hinge side and then a suitable bit to drill to the required depth into the opening structure.

Loosely secure the hinge side jamb within the opening using the top frame fixing point.

Adjust the position of the doorset to ensure the hinge jamb is level in each plane and then drill and loosely fix the remaining fittings along the hinge jamb.

Insert packers between the frame and the wall at the fixing points. Note; the packers should be the same width as the frame section less allowance for appropriate fire stopping. This will avoid the frame distorting. Packers can be timber of equal density to the frame, plywood or plastic if tested for this application to BS476: Part 22 or BS EN 1634-1.

Tighten the fixings along the hinge jamb.

The Quick2Fit Pads –fitted around the edge of the door will indicate where further adjustment is required. The Joiner can use a wedge between the frame and wall whilst inserting/removing packers to adjust the gap between the door and frame, if needed.

Once the Quick2Fit Pads are touching the frame on the hinge side, drill, fit and pack the fixings on the latch side jamb, whilst ensuring the doorset is level in each plane and the 3mm gap is maintained.

Once all the fixings are secured, double check the doorset is level in each plane and the 3-4mm gap has been maintained. Adjust if required.

Depending on site conditions additional fixings maybe required.

It is also important to ensure that a full width packing piece is placed immediately behind the lock striker plate where it is positioned in the frame.

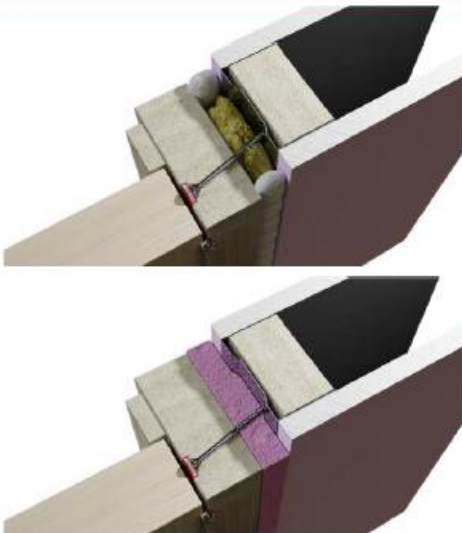
When screwing home the fixings taking care not to over tighten the fixing as this may cause damage or distortion to the frame.

The gap between the door frame and supporting structure can now be filled in accordance with the tables below.

After fixing is complete, ensure that the door will make full and uniform contact with the smoke / acoustic seals. Check the diagonals and ensure that no distortion or twisting has occurred during installation. Check also that the door does not “bind” on the frame when it is being opened or closed. Check the locking system operates smoothly, if needed the keeps can be adjusted.

Fire Stopping

Fire stopping requirements between the back of the frame and the structural opening are dependent on the gap size between the substrates. The table below provides the requirements based upon the gap size. Note; the illustrations show the application where the 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 18mm 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. Timber architraves of a minimum 18mm thick must be fitted to both faces, fitted with a minimum 15mm overlap to the door gap.	

Gap (mm)	Requirement	3D model depiction
Over 20	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: 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. Timber architraves of a minimum 18mm thick must be fitted to both faces, fitted with a minimum 15mm overlap to the door gap.	 

Following installation of the Doorset

Once the doorset has been installed any seals, door closer and door stops can be fitted.

Please see our separate guide on intumescent, smoke and acoustic seals to ensure the correct seals are fitted in the correct location.

Prior to fitting the door closer please ensure the fixing screws provided are suitable for the materials the closer is being fitted to. Additional packing may also be required within the structural opening to provide a secure fixing point for the closer.

Once the floor finishes have been installed then any floor threshold can be fitted if required and/or the drop down threshold adjusted.

Please note, some movement within timber door leaves may occur after installation.

Unfinished doorsets should be painted immediately after installation using a good quality paint system in accordance with the paint manufacturer's instructions.

Further information is contained in the Operating and Maintenance Manual.