

Fitting Instructions For M2M+ and M2M1 doors with Adjusters

EQUIPMENT / TOOLS REQUIRED

- Masonry drill and drills to suit fixings. (Following the minimum fixing standards)
- Pencil or marker pen
- Spirit level
- Steel tape
- Fixings to comply with the minimum fixing standards
- Tools to install fixings, i.e. cordless/corded drills
- Mastic or similar filler

PRE-INSTALLATION CHECKS

- Double check the opening to see if the door frame supplied will fit into the opening
- Area to be cleared of all obstructions
- Open package and check contents against the delivery note
- Check that it is safe to drill around the opening (Electrical cables, gas pipes, etc)

MINIMUM FIXING STANDARDS

For M2M¹ to be certified to LPS 1175 Security Rating 1 the following standard must be applied.

The installation must be directly into substrate and not via an intermediate, such as plasterboard. The perimeter of the door should be made good using mastic or similar.

Into Wood:

Use No. 14 x 50mm hardened steel wood screws (or longer). Must have a minimum of 6 fixings on both frame sides.

Into Block, Bricks and Concrete:

Hilti type fixings 10 x 80/30mm.

Must have a minimum of 6 fixings on both frame sides.

M8 x 75mm type Hex flange head triple thread anchorbolt, or equivalent. Must have a minimum of 6 fixings on both frame sides.

Into Steel:

M8 machine screws drilled and tapped to frame work. Use M8 x 30mm fixings. Must have a minimum of 6 fixings on both frame sides.

Use No. 14 x 50mm (or similar) self tapping screws. Must have a minimum of 6 fixings on both frame sides.

MAINTENANCE /OPERATION INSTRUCTIONS

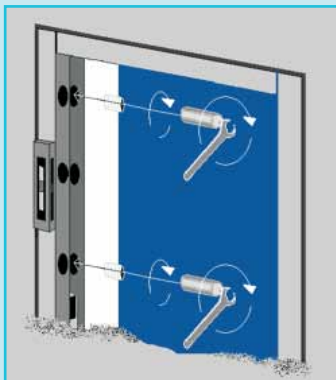
M2M doors require little maintenance. However, the following is recommended to preserve the appearance and smooth operation:-

- All hardware and surfaces to be cleaned on a regular basis by simply wiping with a damp cloth using mild detergents and dusting down with a soft clean cloth.
- The hinges and lock(s) can be lubricated for a smooth operation of the door.
- Do not lean any heavy objects against the door as this can affect the long term functionality of the door.

1

1a) Insert the door and frame into the opening and place the spirit level parallel to the frame.

b) Once the frame is sitting in the opening and is perfectly square, start screwing the adjusters through the tapped holes, so that the frame is secure with the opening. Make sure the top adjusters are fastened first, then the bottom adjusters and finally the middle adjusters. Care must be taken not to distort the frame.



A Hex Tool is supplied to tighten adjusters.

It is important that the **TOP ADJUSTERS**

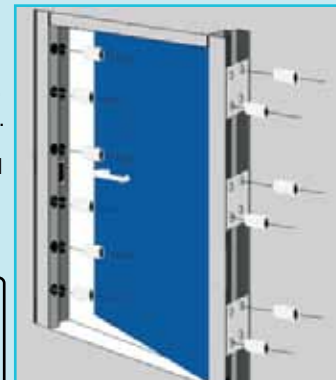
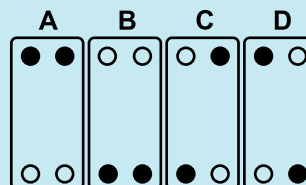
ARE FITTED FIRST as this will give a firm hold between the frame and the wall.

Take care not to distort the frame, especially in the middle, by over tightening the adjusters.

2

There are 12 adjusters supplied per door (additional can be purchased if required) and 24 positions (12 on each side) into which adjusters can be secured.

The adjusters must be arranged using one or more of the following patterns:-



Once the adjusters are installed, open and close the door leaf to test in the frame.



Before the door is shut check that the lock and strike plate are in line.

3

Once the adjustments are complete, drill and insert fixings down both vertical posts. (Insert fixings to top frame only if required). Double - check door alignment with spirit level and then tighten fixings.

Test the door hardware and adjust the door closer (if present) to the requirements of its instruction booklet, which will be provided.



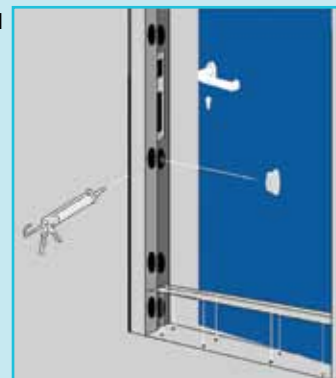
4

To fit the bottom aluminium sill (where applicable), drill and fit to the floor.

Seal around door frame and bottom sill (inside and out) as required.

Fit bungs in frames.

Re-check operation of door. Demonstrate door operation to customer and get the door signed off to customer satisfaction.



Fitting Instructions For M2M+ and M2M1 doors without Adjusters – Single Doors

SURVEYING

Accurate surveying is important for correct installation. Please take good measurements and supply accurate widths and heights for each door to the nearest millimetre.

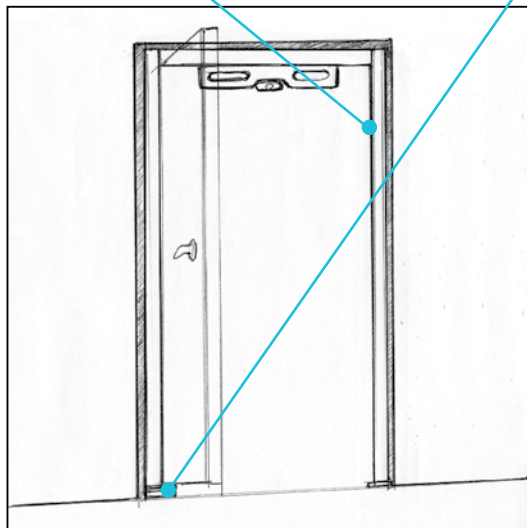
Most steel door manufacturers will make the outside dimensions of the frame 10mm smaller on the width and 5mm smaller on the height. Bradbury follow the same principle so that there is a 5mm tolerance gap on both sides of the frame and above the frame on the height.

Where the opening is not square, it is the installer's responsibility to make the opening square.



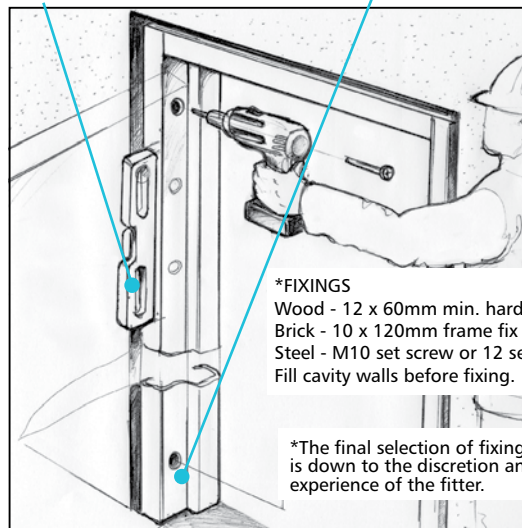
Decide where the door is to be installed. Be aware of any obstructions that will interfere with the opening such as skirting boards, door handles, wall fixings etc. Make sure the structure to which the door will be fitted is strong and solid.

1 Insert door & frame into opening & open 90°.



2 Using packers and a spirit level, raise the lowest side of the frame to level.

3 Level up front face of hinge post, ensuring the top of the frame does not lean in or out of reveal opening.

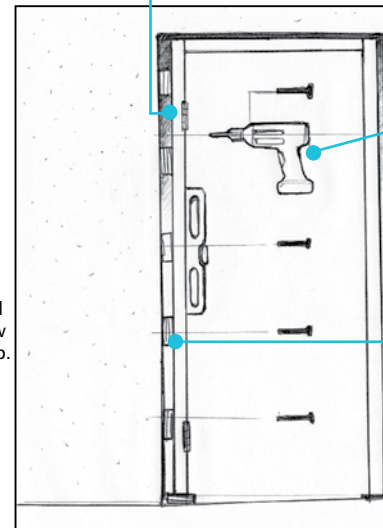


4 Drill and insert fixings into top & bottom fixing holes. **DO NOT TIGHTEN.**

*FIXINGS
Wood - 12 x 60mm min. hard steel
Brick - 10 x 120mm frame fix screw
Steel - M10 set screw or 12 self tap.
Fill cavity walls before fixing.

*The final selection of fixings is down to the discretion and experience of the fitter.

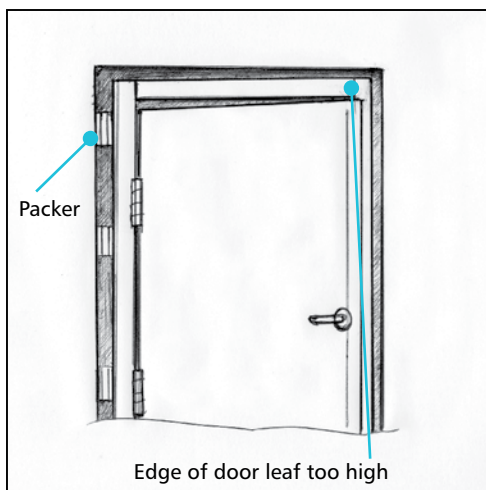
5 Position frame centrally in opening, with hinge post vertical. Place packers close to both fixings - **TIGHTEN FIXINGS.**



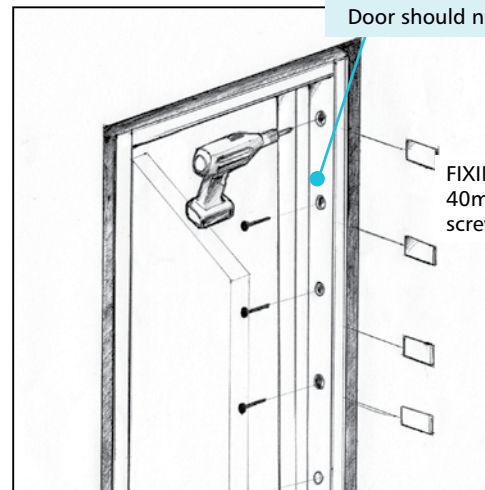
6 Drill the rest of the holes on the hinge post and insert fixings. **DO NOT TIGHTEN.**

7 Place packers between frame & wall, adjacent to fixings. The packing should be tight, but not so much that it would cause the frame to bow. **NOW TIGHTEN FIXINGS.**

8 Close door leaf to test it in frame. If the leading edge of the door leaf is too high, add packing towards the top edge of the hinge post. If low, reduce packing towards top edge of hinge post.



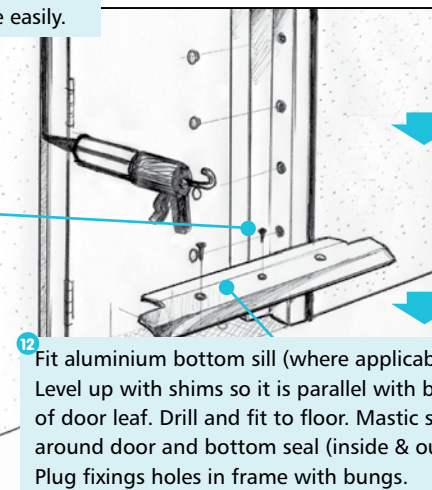
9 Once adjustments are complete, drill & insert fixings into lock post, **BUT DO NOT TIGHTEN.**



10 Insert packers between frame & wall adjacent to each fixing. Tighten fixing. Do not over pack between frame & wall. Door should now open & close easily.

FIXINGS - 10 x 40mm hard steel screw

11 **TEST DOOR HARDWARE**



12 Fit aluminium bottom sill (where applicable). Level up with shims so it is parallel with bottom of door leaf. Drill and fit to floor. Mastic seal around door and bottom seal (inside & out). Plug fixings holes in frame with bungs.

ADDITIONAL REQUIREMENTS FOR FITTING FIRE RATED DOORS

- All fixings and hardware must be steel (no plastic)
- Fixings to the main structural surround should comprise of steel screws of sufficient length to penetrate the main structure by a minimum of 30mm, although 120mm is recommended. (Plastic rawl plugs are not acceptable)
- Steel screws to be inserted at a maximum of 500mm centres
- Fixing holes may be covered using steel or plastic plugs
- Any packers / shims used during installation must be made from steel
- Gaps between the opening and frame should be less than 5mm and sealed with an appropriate acrylic mastic / calk. Any gaps larger than this must be filled with steel

Double Doors

- An overlap of 18mm covering the passive door leaf (anti-pry strip) is required
- The passive door must be fixed top and bottom and the active leaf have a centre latch as minimum

Glazing

- Glazing cannot be any closer than 200mm from the edge of the door
- 0.17m² maximum area of glazing per leaf

Fitting Instructions For M2M+ and M2M1 doors without Adjusters – Double Doors

SURVEYING

Accurate surveying is important for correct installation. Please take good measurements and supply accurate widths and heights for each door to the nearest millimetre.

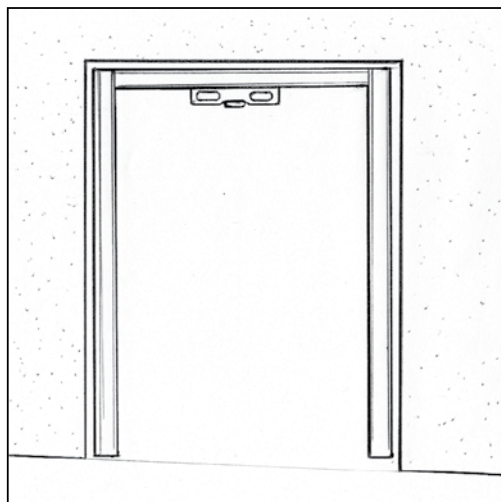
Most steel door manufacturers will make the outside dimensions of the frame 10mm smaller on the width and 5mm smaller on the height. Bradbury follow the same principle so that there is a 5mm tolerance gap on both sides of the frame and above the frame on the height.

Where the opening is not square, it is the installer's responsibility to make the opening square.

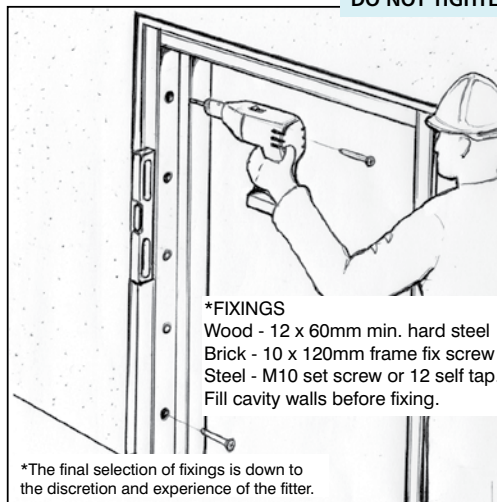


Decide where the door is to be installed. Be aware of any obstructions that will interfere with the opening such as skirting boards, door handles, wall fixings etc. Make sure the structure to which the door will be fitted is strong and solid.

- 1 Assemble door frame, using fixing blocks & screws. Insert frame into opening & check to see which side of frame is higher.

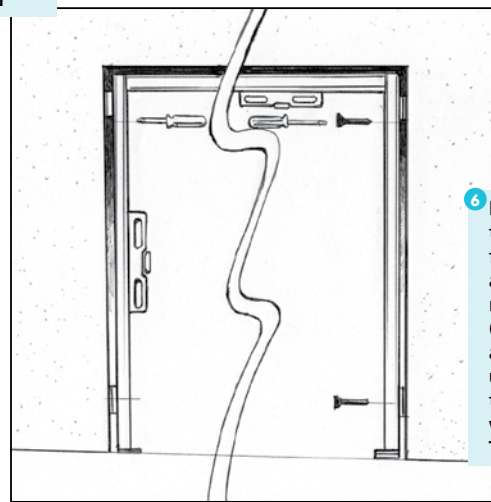


- 2 Level up front face of hinge post, ensuring the top of the frame does not lean in or out of reveal opening.



- 3 Drill and insert fixings into top & bottom fixing holes on the higher frame post. **DO NOT TIGHTEN**

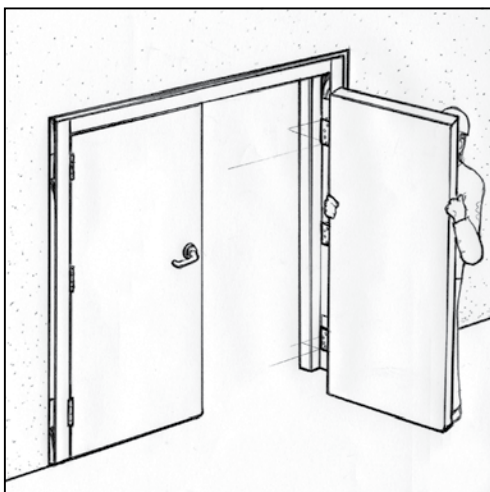
- 4 Position frame centrally in opening with 1st hinge post vertical. Place packers close to both fixings. **TIGHTEN FIXINGS.**



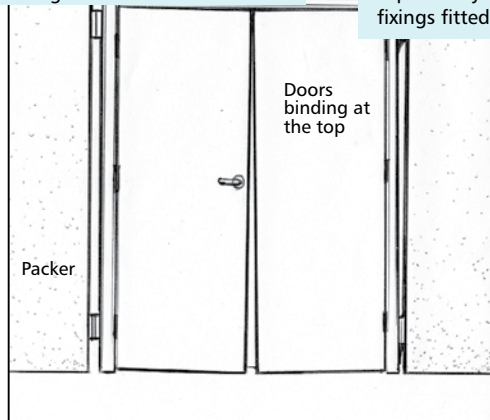
- 5 Raise up lower frame by placing packers under the lower hinge post. Ensure it is level by using a spirit level under top sill.

- 6 Drill & insert fixings top & bottom of frame, inserting appropriate packers next to fixings (between hinge post and aperture). Level up front face of this post (as above with spirit level). **TIGHTEN FIXINGS.**

- 7 Hang doors on frame. Close doors to check they shut correctly and are hanging level. Test door hardware.

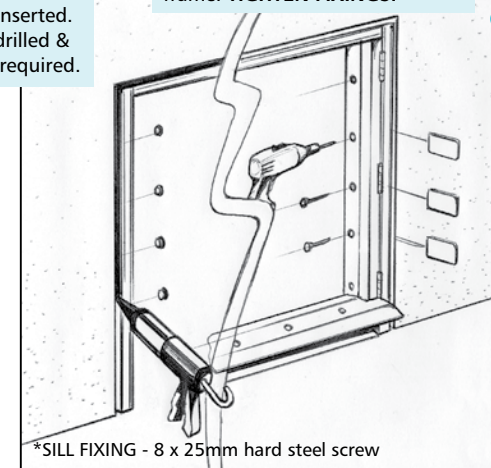


- 8 If the doors bind at the top, remove some of the packing (from both sides) at the top of the frame & tighten screw fixings. If the door leafs are binding at the bottom, remove some of the packing from the bottom.



- 9 Once the doors are positioned & working satisfactorily, the remaining holes (on both posts) can be drilled and the fixings inserted. Top sill may be drilled & fixings fitted as required.

- 10 Place packers between frame and reveal, adjacent to each fixing. Ensure the frame is not over packed as this will distort the frame. **TIGHTEN FIXINGS.**



- 11 **TEST DOOR HARDWARE**

- 12 Fit aluminium bottom sill (where applicable). Level up with shims so it is parallel with bottom of door leaf. Drill and fit to floor. Mastic seal around door and bottom sill (inside & out). Plug fixing holes in frame with bungs.

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