

Security Doors Direct
Operation & Maintenance Manual-
Standard Fire Rated Hinged Steel Doors

14no. pages

Customer:

Site:

Job Reference:

Door References:

Installer's Name (Print):

Installer's Contact Number:

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1). Introduction

General

This door set has been fire tested and is certified by Exova Warrington fire as being capable of providing fire resistance of up to 240 minutes integrity as defined in BS EN 1634-1: 2008, when installed in accordance with the following conditions.

In recognition of this, the door frame carries a prefixed label issued under the terms of the Quality Steel Doors Quality Management System. This label uniquely identifies the door set, the manufacture of which complies with BS: ISO 9001 for quality systems and is subject to on-going surveillance. This label shall not be removed.

It is emphasised that the certification is conditional upon the following instructions being followed in their entirety. Failure to do so will invalidate this approval and may jeopardise the fire performance of the door. Door sets supplied pre-fitted with components may be considered to meet the requirements in respect of those items.

The door set shall not be altered or modified in any way nor should the supplied hardware be changed, removed or additional items (not specified) fitted. To do this may invalidate the certification.

Door Leaf Construction and Dimensions

This document covers steel door sets comprising metallic door leaves with a Dufaylite core and internal steel stiffeners, hung in metal frames and supplied as door sets.

The door sets may be used in single-acting, single or double-leaf, latched or unlatched, metal framed, metal leaf (MM) door sets, at leaf dimensions up to those given herein:

Maximum Permissible Structural Opening Sizes for Latched or Unlatched Single and Double-Leaf Door sets:

Integrity- 60 minutes/ 120 minutes/ 240 minutes

Max. Height- 3000mm/ 3000mm/ 3000mm

Max. Width- 2780mm/ 2780mm/ 2640mm

Subject to Maximum Leaf Area of:

Un-latched single leaf up to 60 minutes, 2.63m² (latched, 3.55m²)

Un-latched single leaf up to 120 minutes, 2.63m² (latched, 3.55m²)

Un-latched single leaf up to 240 minutes, 2.63m² (latched, 3.16m²)

Latched or unlatched double leaf up to 60 minutes, 3.55m²

Latched or unlatched double leaf up to 120 minutes, 3.55m²

Latched or unlatched double leaf up to 240 minutes, 3.16m²

Supporting Construction

Door assemblies are approved to be installed in brick, block, structural steel openings, masonry or plasterboard clad stud with a fire resistance at least equal to that of the door set to be installed. For periods of 60 minutes and above, any steel or timber stud shall be clad on its reveal face with fire protecting board e.g. plasterboard or calcium silicate.

Installation

It is recommended that steel fire door sets are installed by the manufacturer, by his authorised agent under the manufacturers approved quality management system or by a FIRAS accredited installer of fire resisting metal door sets.

Glazed Apertures

All apertures will be factory prepared. No site cutting of apertures is permitted.

All glazing to be factory fitted.

Smoke Seals

CERTIFIRE approved smoke seals for use on un-insulated metal doors may be utilised.

Hinges

Hinges shall be CE Marked for use with fire resisting steel doors.

Lock and Latches

Locks and latches shall be CE Marked for use on fire resisting steel doors and shall be of the relevant grade. Alternative locks/latches which have been CERTIFIRE approved for use in steel door sets are deemed suitable for use. There is no restriction on the type of metallic handles used.

Emergency Exit Devices

Exit devices shall be CE Marked and CERTIFIRE approved for use of fire resisting steel doors.

Self Closing Devices

All unlatched door sets shall be fitted with a surface mounted or concealed overhead door closer. If fitted, the device shall be a CERTIFIRE approved and CE Marked product for the required application and door type. Note: closers with mechanical hold-open mechanisms are not permitted to be used.

Fixing Bolts

A Steel Door Fixing Kit including structural fixings is supplied with each door set.

Miscellaneous

Metallic signage labels, kick plates or push plates may be mechanically fixed to either face of the door leaf.

2). Ironmongery Operating Instructions

Active Leaf or Single Doors- sash lock c/w cylinder and/or thumb turn and lever handles-

The lock is operated by a key inserted into the cylinder, or by rotation of the thumb turn. Neither operation requires the use of any degree of force; as long as the key is carefully inserted it will rotate freely after the first few operations. Initial rotation may feel a little 'gritty' however this is perfectly normal and will disappear with repeat use.

The latch is retracted by depressing the lever handles, which will return to the latch point by the incorporation of a 'sprung rose'. The latch has a sprung 'beak' and the leaf will slam shut if required, without depressing the lever handles.

Locking is achieved by rotation of the key or thumb turn towards the frame leg nearest the lock. Unlocking is achieved by rotation in the opposite direction.

If the leaf is fitted with a standard door closer, it will automatically close to the frame rebate when released.

If the leaf is fitted with a latching door closer, it will automatically close to the frame rebate when released, and slam shut.

Active Leaf or Single Doors- panic latch/ panic bolt with panic bar-

The latch or bolts are released by depressing the horizontal panic bar. A firm and positive action is required, but no force need be applied. If an outside access device is fitted, the door can be unlocked and opened from the outside of the building.

The outside access device lock is operated by a key inserted into the cylinder; locking is achieved by rotation of the key towards the frame leg nearest the lock. Unlocking is achieved by rotation in the opposite direction.

To release the latch, depress the external lever handle or rotate the knob away from the frame leg nearest the lock

If the leaf is fitted with a standard door closer, it will automatically close to the frame rebate when released.

If the leaf is fitted with a latching door closer, it will automatically close to the frame rebate when released, and slam shut.

If the leaf is fitted with a hold open door closer, the leaf will remain open until manually released.

Inactive Leaf to Double Door Set- panic bolt with panic bar-

The bolts are released by depressing the horizontal panic bar. A firm and positive action is required, but no force need be applied.

Inactive Leaf to Double Door Set – no ironmongery-

Where the door leaf is not part of a fire escape door set it will not normally be fitted with any supplementary ironmongery. However, as a standard feature the leaf will contain flush mounted shoot bolts, fitted at the top and bottom of the leading edge of the leaf.

Manual flush bolts are engaged or disengaged by operation of a catch recessed into the door leaf (accessible only in the leading edge of the leaf when the active door leaf is opened).

If the leaf is fitted with a standard door closer, it will automatically close to the frame rebate when released.

If the leaf is fitted with a latching door closer, it will automatically close to the frame rebate when released, and slam shut.

For a pair of doors (double; leaf & ½) a leaf selector is required to ensure that the inactive leaf closes first, followed by the active leaf, to ensure proper latching and locking of the active leaf ironmongery.

3). Maintenance Instructions

Please note that Quality Steel Doors are engineered to function satisfactorily with the minimum of routine periodic maintenance. However, please implement the following advice periodically to ensure long and quiet enjoyment of your Quality Steel Door:

1. Check leaf and frame for damage.
2. If painted surfaces become chipped or scratched, they should be immediately repaired to prevent the development of rust points.
3. See Section 3 (below) for additional guidance on protecting paint finishes.

4. Wash down the frame rebates to ensure that there is no build up of grit and dust that might damage the capping and leading edge paint finishes.
5. Check door seals are in place and wipe down with a damp cloth if necessary. Replace damaged seals to prevent light and water ingress.
6. Check all mechanical fixings to ironmongery and hinges are securely fixed and not loose.
7. Door hinges are rated for 200,000 cycles; however we recommend regular oiling of the hinge joints with a light grade of machine oil, or Swarfega Duck Oil. After application, wipe up any excess oil to prevent staining or slip hazards.
8. Where rust stain from the hinge pins discolours the hinge leaves, wipe down to remove the rust, and instead of oiling, apply a light coating of Petroleum Jelly to seal the joint and hinge plate.
9. Handles might benefit from light oiling at the joint if they appear stiff. Prior visual inspection is recommended to ensure that there is no binding or damage- i.e. simply oiling a faulty or damaged handle will not repair it or cause it to operate smoothly necessarily.
10. Lock cylinders should only be lubricated with Teflon or Graphite based oil.
11. Inspect thresholds for damage and replace if necessary. This is particularly relevant where ironmongery or shoot bolts rely on the threshold for auto bolting re-engagement or for security keeps.
12. Ensure door closers and friction stays are correctly adjusted to manufacturers' recommendations.

Frequency of use is the major determining factor in making a risk assessment for the frequency of periodic maintenance. For up to 20 cycles a day, conduct maintenance at least every 6 months; for up to 50 cycles a day, conduct maintenance monthly. Re-assess this periodically based on local conditions. Regardless of frequency of maintenance one of the most important routine tasks to ensure quiet enjoyment of the door set is to sweep the floor in front of the door regularly to remove swarf, grit and obstructions that might score or scuff the bottom capping and damage the paint finish and capping metal when the door leaves swing in operation.

4). Maintenance of Finishes

Where doors are supplied in a primed finish, they must be final site painted in 5no. calendar days to prevent degradation of the protective value of the primer coat.

Follow these additional rules for Polyester Powder Coated doors and frames:

Cleaning

A cleaning routine must be established based on risk assessment. Doors in low risk environments (for example, low traffic, secure internal areas) may require less frequent cleaning- perhaps every 6 months. In higher risk areas (for example, high traffic, and external public areas) a weekly or even daily cleaning routine might be necessary.

The purpose of cleaning is to remove grit and abrasive substances that might score the door or ironmongery, and liquids or chemicals that might stain or erode the paint finishes.

A soft brush, sponge or chamois leather should be used in conjunction with a mild cleaning solution. As with car cleaning, regularly refresh with clean water to prevent re-applying grit and dirt to the door being washed.

Be sure never to use abrasive cleaners; nor solvents, acids, alkalis or bleach or chlorine based chemicals.

Repairs to Scratches or Chips

Always entrust the following repair advice to a Competent Person, and use automotive quality products. Any painting should be done in a well ventilated area.

Mask off the door and frame surrounding the repair area, taking particular care to protect hardware and ironmongery.

Rub down the damaged area using 150 grade dry production sandpaper. Make sure to sand slightly beyond the extremities of the area to be repaired, and so as to leave a ridge free prepared area.

Use a grey coloured spray cellulose primer to prepare the area to be repaired. Leave the primer to dry before progressing any further.

Use a light grade dry production sand paper to key the surface of the primed area, prior to using a lint cloth to remove all local surface dust from the area to be repaired.

Apply a single spray cellulose top coat in a light and free flowing motion. Leave the new paint to dry as required, applying further coats to achieve the desired finish.

After application of the final top coat, leave the paint to harden overnight before allowing free access to the repaired area.

Repairs to Indentations

Always entrust the following repair advice to a Competent Person, and use automotive quality products. Any painting should be done in a well ventilated area.

Rub down the damaged area using 80 grade dry production sandpaper. Make sure to sand slightly beyond the extremities of the area to be repaired, and so as to leave a ridge free prepared area.

Apply a filler compound to the indentation, smoothing off so as to be reasonably flush to the required surface level surrounding the indentation. Leave the filler to dry to the manufacturer's recommendations.

Then rub down and repeat this process until a smooth, level repair is completed.

Mask off the door and frame surrounding the repair area, taking particular care to protect hardware and ironmongery.

Rub down the repaired area using 150 grade dry production sandpaper. Make sure to sand slightly beyond the extremities of the area to be re-painted, and so as to leave a ridge free prepared area.

Use a grey coloured spray cellulose primer to prepare the area to be re-painted. Leave the primer to dry before progressing any further.

Use a light grade dry production sand paper to key the surface of the primed area, prior to using a lint cloth to remove all local surface dust from the area to be re-painted.

Apply a single spray cellulose top coat in a light and free flowing motion. Leave the new paint to dry as required, applying further coats to achieve the desired finish.

After application of the final top coat, leave the paint to harden overnight before allowing free access to the repaired area.

5). Warranty

All Steel Doors are offered with a full 12 month warranty for paint finishes and manufacturing defects, under normal operational use.

Conditions of Warranty:

1. The Warranty Period is 12 months from the date of purchase or delivery, whichever is the later date.
2. Warranty is only valid on the UK Mainland.
3. Operation of this warranty does not affect the Purchaser's Statutory Rights.

4. Prior to using any Quality Steel Door, please read the instructions under Section 1). Ironmongery Operating Instructions.
5. Prior to using any Quality Steel Door, please read the instructions under Section 2). Maintenance Instructions.
6. Prior to using any Quality Steel Door, please read the instructions under Section 3). Maintenance of Finishes.
7. Warranty will be voided if there is evidence of a failure to follow the Operating or Maintenance Instructions.
8. Warranty will only apply to the purchaser of the doors, no transfer or assignment would be accepted.
9. Warranty will be voided if there is evidence of unauthorised repair during the Warranty Period.
10. Warranty does not cover accidental damage, misuse, damage caused by improper installation, or alterations after installation.
11. Any liability under the Warranty is limited to the replacement of faulty parts or powder coated metal work, on an ex-works basis. No consequential loss will be accepted.

6). Installation Instructions

The door sets shall be mechanically fixed to wall constructions having a fire resistance of at least the same period as the door set.

*** Please note that fixings are supplied to allow installation of the door set to brick, block or concrete openings, or door posts constructed from timber or steel, or composites thereof.***

DOOR SETS SHOULD ONLY BE INSTALLED BY A COMPETENT PERSON (I.E. OPERATIVES TRAINED AND EXPERIENCED IN THE TYPICAL PROCEDURES OUTLINED).

As a general note it should be re-iterated that the door set should be installed with at least one structural fixing in the head of the frame (single doors) and two structural fixings in the head of the frame (double doors).

Tools & Components Required

- Packing Kit (supplied with each door, including long reach 5mm steel bit, long reach 6mm masonry bit and T30 Torx driver head).
- Mains voltage or battery drill (with hammer action as appropriate).
- Socket and ratchet set or cordless drill/driver extension piece with hex socket driver head.
- Spirit level.
- Screwdriver set or screwdriver bits for cordless drill/driver.
- Sharp knife (to remove packaging).

Single Door- Method Statement (For Installation)

Receive delivery, unload door set and distribute to the working frontage.

Check quantities and labels on packaging against delivery notes/ drawings and instructions.

Remove packaging carefully, using a sharp knife as necessary.

Dispose of packaging responsibly, first ensuring that there are no keys or other loose items mixed up in the rubbish.

Remove the Steel Door Fixing Kit from the frame jamb where it has been stored for convenience. Check all the necessary fixings/ grommets/ etc. are present.

Measure the structural opening and ensure the door set selected is correct for the opening, cross referencing to drawings as necessary.

Assemble the door frame and ensure the corner locating bolts are securely tightened up. Attach the door leaf to the door frame with the hinges (using the fixings provided). With the leaf propped open at 90 degrees to the door frame, walk the assembly into the opening.

Determine the line of the door in the depth of the reveal and set the door frame out using the adjustable Screw-In Fixings. With the door frame in approximately the correct final position, firstly, ease the Frame Cappings off the Frame Jambs so that they fit loosely against the edges of the structural reveal. Then, centralise the door frame to the width of the reveal by even adjustment of the Screw-In Fixings using the adjustor tool from the Packing Kit; ease the Frame Cappings into

position as necessary to ensure an even take up. Do not over tighten the Screw-In Fixings or the Frame Cappings will be distorted.

Check with a spirit level on the head of the door frame, to see if one frame leg needs packing up to compensate for an uneven floor. If necessary, ease off the Screw-In Fixings on the side to be lifted, and adjust and pack for level accordingly.

For outward opening doors a fixing point is provided at the top and bottom of both of the accessible and the hidden frame jamb rebates. These 8 adjustable Screw-In Fixings can be used to set the door frame in the reveal. There are spare adjustable Screw-In Fixings in the Steel Door Fixing Kit, which can be used to augment the reveal fixings or fix the head as necessary. In each frame jamb there are a total of 7 frame fixing straps, pre-tapped to take the adjustable Screw-In Fixings. Consequently they can be moved around the different frame fixing straps to ensure the maximum/optimum frame fixing points can be used.

THIS MUST BE ASSESSED PRIOR TO OFFERING THE FRAME INTO FINAL POSITION BECAUSE THE ADJUSTORS MUST BE INSERTED INTO THE FRAME FROM THE 'OUTSIDE'.

Using the adjustor tool from the Steel Door Fixing Kit, make any necessary final adjustment to the Screw-In Fixings to support the frame in position, keeping any pressure on the structure finger tight at this stage.

Check the frame is square and plumb prior to proceeding. Adjust as necessary.

Drill into the fixing substrate using the appropriate long reach drill bit, directly through the clearance hole in the adjustable Screw-In Fixings and the Frame Cappings. Replace the drill bit with the T30 Torx driver bit for the Frame Fixing Screws; insert and tighten up the fixings.

Check the frame is square and plumb, adjusting the Screw-In Fixings as necessary, and re-adjusting the structural fixings as required.

The door leaf should now be operated to ensure that it swings free and that the lock/ironmongery engages correctly. Adjust as necessary.

Fix the threshold if required; bed in with intumescent sealant to seal against water ingress. Fix the ironmongery floor/threshold keeps as required. Insert the grommets to blank the frame fixing holes. Set up and adjust the door closer as required.

Double Door- Method Statement (For Installation)

Receive delivery, unload door set and distribute to the working frontage.

Check quantities and labels on packaging against delivery notes/ drawings and instructions.

Remove packaging carefully, using a sharp knife as necessary.

Dispose of packaging responsibly, first ensuring that there are no keys or other loose items mixed up in the rubbish.

Remove the Steel Door Fixing Kit from the frame jamb where it has been stored for convenience. Check all the necessary fixings/ grommets/ etc. are present.

Measure the structural opening and ensure the door set selected is correct for the opening, cross referencing to drawings as necessary.

Assemble the door frame and ensure the corner locating bolts are securely tightened up.

Determine the line of the door in the depth of the reveal and set the door frame out using the adjustable Screw-In Fixings. With the door frame in approximately the correct final position, firstly, ease the Frame Cappings off the Frame Jambs so that they fit loosely against the edges of the structural reveal. Then, centralise the door frame to the width of the reveal by even adjustment of the Screw-In Fixings using the adjustor tool from the Packing Kit; ease the Frame Cappings into position as necessary to ensure an even take up. Do not over tighten the Screw-In Fixings or the Frame Cappings will be distorted.

Check with a spirit level on the head of the door frame, to see if one frame leg needs packing up to compensate for an uneven floor. If necessary, ease off the Screw-In Fixings on the side to be lifted, and adjust and pack for level accordingly.

For outward opening doors a fixing point is provided at the top and bottom of both of the accessible and the hidden frame jamb rebates. These 8 adjustable Screw-In Fixings can be used to set the door frame in the reveal. There are spare adjustable Screw-In Fixings in the Steel Door Fixing Kit, which can be used to augment the reveal fixings or fix the head as necessary. In each frame jamb there are a total of 7 frame fixing straps, pre-tapped to take the adjustable Screw-In Fixings. Consequently they can be moved around the different frame fixing straps to ensure the maximum/optimum frame fixing points can be used.

THIS MUST BE ASSESSED PRIOR TO OFFERING THE FRAME INTO FINAL POSITION BECAUSE THE ADJUSTORS MUST BE INSERTED INTO THE FRAME FROM THE 'OUTSIDE'.

Using the adjustor tool from the Packing Kit, adjust the Screw-In Fixings to support the frame in position, keeping any pressure on the structure finger tight at this stage.

Check the frame is square and plumb prior to proceeding.

Drill into the fixing substrate using the appropriate long reach drill bit, directly through the clearance hole in the adjustable Screw-In Fixings and the Frame Cappings. Replace the drill bit with the T30 Torx driver bit for the Frame Fixing Screws; insert and tighten up the fixings.

Check the frame is square and plumb, adjusting the Screw-In Fixings as necessary, and re-adjusting the structural fixings as required.

Hang the door leaves, connecting the hinges to the frame with the screws provided.

The door leaves should now be operated to ensure that they swing free and that the lock/ironmongery engages correctly. Adjust as necessary.

Check that the flush bolts on the inactive leaf engage into the head receiver in the frame and into the threshold/floor sockets as required.

Fix the threshold if required; bed in with intumescent sealant to seal against water ingress. Fix the ironmongery floor/threshold keeps as required. Insert the grommets to blank the frame fixing holes. Set up and adjust the door closer as required.

Side and Over Panels- Method Statement (For Installation)

*** Please read this section in full and ensure it is understood prior to commencing installation of any of the components.

*** It is important to understand the way that the side panel /over panel/ door set is orientated and how it is intended to fill the structural opening.

*** The essence of this understanding is that the side panel/ over panel should be installed to ensure that the door set is fitted tight up to the side panel/ over panel. That is, any tolerance in the structural opening is mitigated by the installation first of the side panel/ over panel.

*** This should then lead to a much tidier opening into which to install the door set than would be the case if the door set was being installed into a typical structural opening.

*** So, the pre-measurement of the door set (with the appropriate Frame Cappings fitted) over frame dimensions as a check is critical prior to commencement of installation.

Receive delivery, unload the side/over panels and distribute to the working frontage.

Check quantities and labels on packaging against delivery notes/ drawings and instructions.

Remove packaging carefully, using a sharp knife as necessary.

Dispose of packaging responsibly, first ensuring that there are no other loose items mixed up in the rubbish.

Remove the Side & Over Panel Fixing Kit from where it will be safely stored in one of the frame jambs for convenience. Check all the necessary fixings/ grommets/ etc. are present.

Measure the structural opening and ensure the door set selected is correct for the opening, cross referencing to drawings as necessary.

After measurements are taken, the side panel/ over panel can be installed. It can be stripped down to facilitate manual handling if required. Therefore, if necessary, disconnect the fixing bolts from the

corner and intermediate brackets to remove the panel section. Alternatively, the structural fixing holes are in the exposed frame face and can be accessed without stripping down the panel at all.

Determine the line of the side panel/ over panel in the depth of the reveal and set the side panel/ over panel out using the adjustable Screw-In Fixings. With the side panel/ over panel frame in approximately the correct final position, firstly, ease the Frame Cappings off the side panel/ over panel frame jambs so that they fit loosely against the edges of the structural reveal. Then, centralise the side panel/ over panel frame to the width of the reveal by even adjustment of the Screw-In Fixings using the adjustor tool from the Steel Door Fixing Kit; ease the Frame Cappings into position as necessary to ensure an even take up. Do not over tighten the Screw-In Fixings or the Frame Cappings will be distorted.

Check with a spirit level on the head of the side panel/ over panel frame, to see if one frame leg needs adjustment to ensure a level finish to facilitate the door frame installation. If necessary, ease off the Screw-In Fixings on the side to be lifted or dropped, and adjust accordingly.

Using the adjustor tool from the Steel Door Fixing Kit, adjust the Screw-In Fixings to support the frame in position, keeping any pressure on the structure finger tight at this stage.

Check the frame is square and plumb prior to proceeding.

Re-check all measurements at this stage, bearing in mind the concept of the installation of the side panel/ over panel to ensure a much tidier opening into which to install the door set than would be the case if the door set was being installed into a typical structural opening.

Drill into the fixing substrate using the appropriate long reach drill bit, directly through the clearance hole in the adjustable Screw-In Fixings. Replace the drill bit with the T30 Torx driver bit for the Frame Fixing Screws; insert and tighten up the fixings.

Check the frame is square and plumb, adjusting the Screw-In Fixings as necessary, and re-adjusting the structural fixings as required.

If necessary, re-fit the side/over panel section to its' frame with the fixing bolts supplied, using the corner and intermediate brackets.

For installations with side and/or over panels, an "S Capping" is provided to aid in jointing between the door frame and side/over panel frames. This is factory fitted to the side/over panel and should not require adjustment.

For Fire Rated Doors each side or over panel must have an "S Capping" between its' own frame and the adjacent door set frame.

Proceed to install the single door set or double door set, following the method statements detailed earlier in this document.

Additional Intumescent Sealing

After the installation of the door set is complete, additional intumescent sealing should be considered.

Although the Frame Cappings can be adjusted at the point of installation to minimise any gap where the door frame interfaces with the surrounding structure, any remaining gaps greater than 10mm should be fire-stopped using non-combustible materials- e.g. rock wool, and fire clay or intumescent sealant as appropriate.

Intumescent sealing is required to prevent the leakage of combustible gases that might result in flaming through what is otherwise a mechanically sound installation.

FOR THE AVOIDANCE OF DOUBT THE INTUMESCENT SEALING IS TO BE APPLIED TO BOTH FRAME FACES (i.e. inside and outside, or in other terms either side of the line that is the fire compartmentalisation formed by the door set).