



## Fitting Instructions for Defender Xtreme Levels 1-3 Steel Hinged Doors

### General Information

All door sets are individually made so check that the ID numbers match on the frame and the door leaf. Identification numbers are etched at the top hinge of each leaf and in the same top hinge of the frame.

Before removing the existing door set please make sure that the new door will fit the opening by checking the sizes ordered against the new door. You should also check that the new door set is correct to what you have ordered.

If any access control system is used it should be a passive version and have a minimum of 5000 codes.

For powered locking, cable exit from door frame must be adjacent to the cable loop, cable cannot exit the frame away from the door loop position.

#### Tools Required for Installation

- Spirit Level
- Shims / Batten packers
- 13mm & 17mm Socket & Ratchet
- Drill and 10 & 12mm masonry drill bits
- Screwdriver Set
- Mastic/Silicone sealant
- Allen Key 6mm
- Allen Key 8mm

### General Care

#### Handling

Door sets are usually delivered on a curtain-sided vehicle and we recommend using a forklift truck to unload. Care must be taken when unloading, especially with a forklift that the forks are positioned correct, and where possible they should extend past the pallet.

Lift the pallet a few inches to ensure the balance is correct, tilt slightly towards the driver and reverse clear of the lorry, slowly lower the pallet to the floor, lay the pallet on even ground making sure there are no objects on the floor that will damage the door. Nothing should be placed on top of the door, even though the door is made of steel it can still be damaged if care is not taken. There are a few simple points to remember: -

- Please be aware that these doors are heavy, we recommend two men for doors up to 2100mm high and three men for doors above 2100mm high.
- The doors must not be used as a table or seated bench whilst stored on a pallet.
- Take care not to damage the handles or anything that protrudes on the surface.
- Do not store in exposed places for long periods and protect from weather.
- The protective coverings on the doors are for protection against dust and finger marks.

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### Storage

Door sets on pallets which are being stored for long periods should be checked regularly that the polystyrene has not been crushed and no damage to the doors has occurred.

Do not store un-protected doors on top of each other.

If storing upright, make sure the doorsets are secure and there is no danger of them toppling over. Ensure they are stored well away from moving vehicles e.g. forklift trucks, cranes or where they are likely to be hit by foreign objects.

Take care not to damage the door hardware.

## Installation

### Preparation and fitting to the Structural Opening

Measure the structural opening at several points to check that it is square and level, and is to the correct dimensions as ordered.

The substrate should offer equivalent resistance to attack as that afforded by the doorset

Please observe the correct fixings for the correct structures (as below).

Xtreme 1 & 2	Steel Substrates – M8x60 High Tensile Socket Head Bolt Brick, Concrete and Block Substrates – M8x80 Concrete Bolts or 10x80 Sleeve Anchor Timber – 8x60 Multi Fix Bolt (Timco)
Xtreme 3	Steel Substrates – M10x60 High Tensile Socket or Hex Head Bolt Brick, Concrete and Block Substrates – M10x80 Concrete Bolts or 12x80 Sleeve Anchor Timber – 10x60 Multi Fix Bolt (Timco)

*The fixings must be able to support the weight of the door, the wrong type of fixing can prevent the frame from being seated correctly and cause future problems.*

1. Remove the door from the pallet and remove all packaging.
2. Remove the keys from the frame.
3. Offer the frame up to the opening, assuming it fits ok. You must then position the hinge side jamb to the wall, level the jamb from front to back until square.

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4. Firstly, fix the top hole and then the bottom.
5. Then position the strike side jamb and fix the top hole only.
6. Door must now be hung on the hinges. Close the door and adjust the bottom leg to suit the door.
7. Make sure the door leaf is free to swing with no obstructions on the floor, if necessary, remove obstructions from the floor or jack up the leg of the jamb with shims until the door passes the obstacle.
8. When you're happy that the door is hanging correctly, fix the bottom hole then continue with the rest of the fixings.
9. Check all gaps around the door are, 3mm to the top of the leaf and 3mm to the hinges and 5mm to the strike side.
10. Fit the door seal (if needed).
11. Plug the large holes with grommets supplied.
12. Finely tune if required by adjusting the hinges with hinge packers.
13. When totally satisfied that the door is fitted correctly, apply mastic internally and externally to create a good seal.

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### Troubleshooting

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
Doors do not fit in the frame.	Wrong door being offered.	Check the identification number on the top of each leaf and in the top hinge of the frame. They should be identical.
Doors will not close.	Mortar fouling closing surface. Foreign object between leaf and hinge jamb.	Clean and re-try. Clear and re-try.
Doors will not shut to frame at the top and/or bottom.	Frame out of square.  Door bent.	Correct by shimming as necessary.  Straighten it; place the door on two blocks, one at the top and one at the bottom, so the bow is facing up. Place pressure on the bow until the bend is out and check with a straight edge, then re-fit.
Drop bolts will not engage in the frame.	Debris fouling receiving hole.  Frame not level or square.	Clean out and re-try.  Re-align by shimming as necessary.
Door leaves not level at centre.	Frame not level and/or square.	Re-align by shimming as necessary.
Panic furniture not operating correctly.	Frame/Mullion/Transom misaligned causing stress on panic furniture.  Panic furniture not on correct doors.	Remove frame section and re-fit square and level, re-fit panic furniture.  Swap panic furniture with other door (see labelling on boxes).
Nemef Triple Locks Top and/or Bottom bolt doesn't line up. Unable to lock the door.	Frame not level and/or square.  Centre strike plate not filed enough.	Re-align by shimming as necessary.  File and re-try.
Maglocks do not work (SL 500).	No Power.  All other queries refer to manufacturers troubleshooting guide.	Check power supply to Maglock is sufficient. Incorrect power supply used (24 Volt ~ 2amp required).

If the Troubleshooting table does not solve your problem please contact **Samson** directly who will, whenever possible, attempt to solve your installation problems on the telephone.

# **OPERATION, SAFETY, MAINTENANCE, AND REPAIR INSTRUCTIONS**

## **Defender Xtreme LPS-Rated Steel Hinged Doors**

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## Steel Hinged Doors

### O & M Manual

#### **FAILURE TO COMPLY WITH THIS MANUAL WILL INVALIDATE MANUFACTURERS WARRANTY**

#### Quarterly Maintenance

1. HINGES and ALL working parts MUST be lubricated with lanolin solution.
2. Check door leaf and frame for damage.
3. Check the door leaf alignment. Ensure door leaf does not scrape the ground and has an optimum clearance of 6mm.
4. Check locks, cylinders, latches, handles, panic hardware, closure, friction stays and any other ironmongery for loose fixings, smooth operation and security. Retighten or lubricate if necessary.
5. Cylinder should only be lubricated with either Teflon or Graphite based oil.

WD40 or similar penetrative oil must not be used.

#### **ALL IRONMONGERY NEEDS TO BE REGULARLY CHECKED.**

#### **FAILURE TO DO SO WILL INVALIDATE MANUFACTURERS WARRANTY**

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### O & M Manual

#### Maintenance of Ironmongery

##### Hinges

Check that there is no visible wear on the hinge. Any dark marks or stains around the hinge knuckle could indicate wear and impending failure, meaning that the hinges should be replaced as soon as possible. Hinges must be lubricated every 3 months.

#### **FAILURE TO DO SO WILL INVALIDATE MANUFACTURERS WARRANTY.**

##### Door Closure Devices / Friction Stays

Check that the door-closing device is operating correctly. Ensure that the doors are not being wedged open. Open the door fully and check it closes without binding on the floor. Open the door approximately 5 degrees and again check that it closes fully, overcoming any latch or seals. Check door-closing speed to be approximately 10 seconds from 90 degrees and ensure that the door does not slam. Adjust speed as necessary.

**FRICION STAYS** must be checked and tensioned when fitting the doorset. Location and climate must be taken into account when adjusting the resistance level of the friction stay.

#### **FAILURE TO CORRECTLY TENSION THE STAY WILL RESULT IN THE MANUFACTURERS WARRANTY BEING INVALIDATED.**

##### Electro-Magnetic Hold Open and Swing Free Devices

Make sure that any electro-magnetic hold-open device is operating correctly and releases immediately when power is removed.

##### Locks, Lever Handles and Cylinders

Check that the levers fully return to their horizontal position after use and that the latch bolt is engaging smoothly and completely into the strike. Wipe any metal dust deposits off the latch bolt and strike plate. Check cylinder throws the latch / deadbolt smoothly into receiver. Adjust, tighten or lubricate as required.

#### **FAILURE TO DO SO WILL INVALIDATE MANUFACTURERS WARRANTY.**

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## All Ironmongery

Make sure that all fixings are secure. Ensure hinges, closers, friction stays, locks, and any other hardware are lubricated / maintained at the required intervals. Seal **MUST BE FITTED** correctly to door frame. Our tolerances are calibrated for **OUR** seal only.

**FAILURE TO DO SO WILL INVALIDATE MANUFACTURERS WARRANTY.**

## O & M Manual

## Safety Instructions

1. Keep openings clear at all times.
2. Do not lean ladders on the door or support frame.
3. Do not operate an obviously damaged or unsecured door. If the door is found to be damaged, do not use the door and place a warning notice stating `Do Not Use`. Ensure a damaged door is checked by a qualified engineer before operating.
4. Open and close the door using only the handles fitted.

**FAILURE TO DO SO WILL INVALIDATE MANUFACTURERS WARRANTY.**



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## Steel Hinged Doors

### O & M Manual

#### General Maintenance

To ensure safe, reliable operation regular inspection and maintenance is essential.

The frequency of maintenance depends on the amount of use.

Door cycles per day	Recommended Inspection and Maintenance frequency
Up to 15	Every 6 months
Up to 30	Every 4 months
Up to 40	Every 2 months
Up to 50	Every 5 weeks
Over 50	Every 2 weeks

Pre-finished doors can be easily cleaned using mild household detergents or washing up liquid with warm water.

DO NOT use any chemicals solvents, bleach or abrasive type cleaners, which will affect the paint finish.

**FAILURE TO COMPLY WITH THIS MANUAL WILL INVALIDATE THE WARRANTY.**

**MANUFACTURERS WARRANTY OF ONE YEAR IS ONLY VALID IF THE DOORSET HAS BEEN PROFESSIONALLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THIS MANUAL.**