

# Sunray Heavy Duty Doorset Single and Multi-Leaf Doorsets

## Installation instructions

### Handling and care

*Sunray Heavy Duty doorsets* can be delivered on a variety of different transportation options. Attention should be taken if being unloaded by forklift to ensure the forks are positioned correctly within the pallet. Position the pallet on even ground making sure there are no objects on the floor which could cause damage the doorset.

- Do not place objects on top of the door.
- 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 inclement weather.
- The protective covering on the door and frame is for protection against dust and finger-marks.
- Please be aware that these doorsets may be heavy and should be moved in accordance with manual handling regulations.



### Storage

Doorsets that are stored for long periods on pallets should be checked regularly to ensure the polystyrene packaging has not been crushed.

- Do not stack unprotected door leaves together.
- If storing upright, ensure the door and frame components are secure and there is no danger of them falling.
- 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.

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## Installation process

*Sunray Heavy Duty doorsets* are manufactured individually to suit project specific requirements. Prior to assembly, check to ensure the unique door numbers marked on each door leaf and frame component match correctly. The identification numbers are stamped on a top hinge (male and female). Before removing the existing doorset, measure the structural opening to ensure the new doorset will fit within the reveals and the handing and ironmongery specification are correct.

## Preparation and fitting within structural opening

Measure the structural opening in various locations to check the width, height, and depth dimensions match those advised as well as being level and square (diagram 1). Ensure the correct fasteners are selected to suit the opening structures and performance requirements.

- Steel structures: M10 x 30mm long hexagon head machine screws, nuts, and washers or (drill & tap).
- Masonry/concrete structures: M10 x 75mm long steel sleeve anchors. (12mm diameter hole required).

### Stage 1 – Frame assembly

Once the correct items have been selected, unpackage the frame components and lay the protected frame on supporting blocks away from dust and debris (check ID numbers, diagram 2).

- Select one jamb and the head member and position together at right angles to each other.
- Insert an M10 x 30mm long machine screw through the hole in the top of the jamb and lug in head and secure, finger tight only and repeat process through second hole. Lay the second jamb down on the floor adjacent to other end of head member and repeat as above.
- Fix threshold to framework via lug and into side framework (diagram 3).
- If frame to large assemble within the opening by pinning side post to structure and bolt as above.

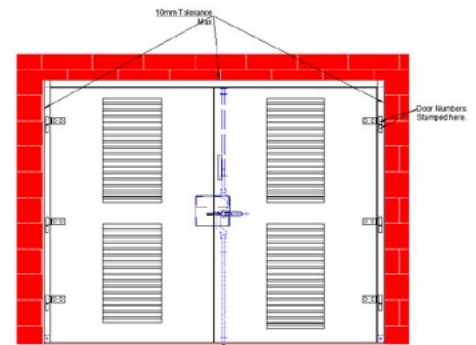


Diagram 1

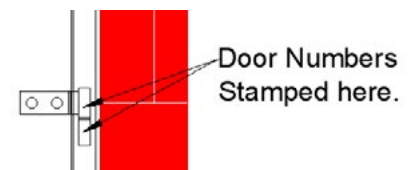


Diagram 2

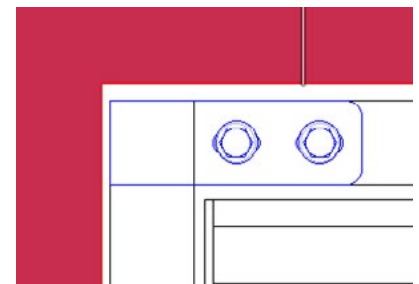


Diagram 3

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## Stage 2 – Frame fitment

Once the frame has been assembled as per instructions above, carefully lift into position within the opening.

- Position frame centrally within structural opening so gaps from the frame to the wall are equal on both sides whilst ensuring frame is plumb and square. The frame location from external face of opening must also be checked to ensure this meets site requirements (as drawing if issued).
- The frame can be fixed via lugs (range from 1 to 4 slot, only 1 fixing is required per lug (must avoid fitting into cement joint see diagram 5)).
- Drill structure with correct drill bit type and size.
- Fix hinge jamb first on single doors if frame configuration allows. Insert fixing (supplied by sunray) into frame and pack as required (use metal shims not supplied).
- Once frame is in position, unpack and inspect door leaf(s), lift in to position adjacent to jamb.
- Lift door leaf and then lower onto the hinges.
- Repeat process with additional leaf on *Sunray's* various multi leaf designs.
- Check doors open and shut correctly and adjust if required (diagram 4).

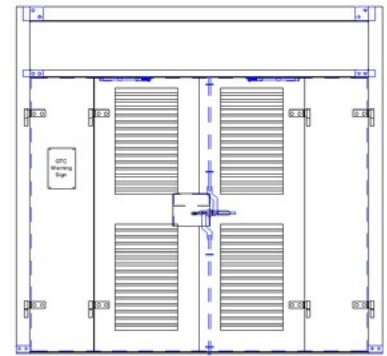


Diagram 4

## Stage 3 – Ironmongery fitment

Fit lock shroud (if applicable), Or alternative locking which was specified and not fitted to the doorsets on delivery in accordance with manufacturer's instructions supplied.

- Select the door stays fit in location shown on the drawing supplied a point of order.
- Once fitted, check opening and closing operation to ensure all items are functioning correctly and lock bolts, flush bolts, and barrel bolts (as appropriate) align within keeps.
- Panic bar set up shown in diagram 6 for when doorset is closed then opened.
- Once verified, tighten all frame and ironmongery fasteners and re-check door operation.
- If stackable/plan Overpanel has been supplied, please offer into position and fix to framework via the fixing points in the panel with the M10 fixings supplied.

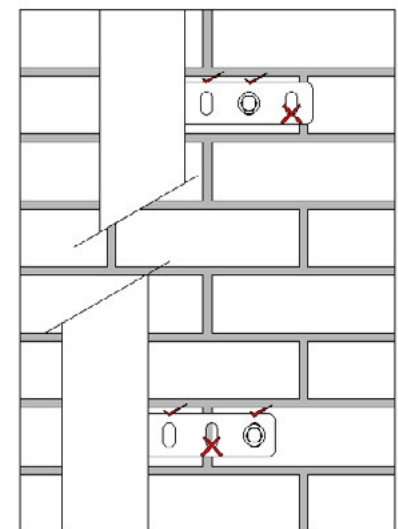


Diagram 5

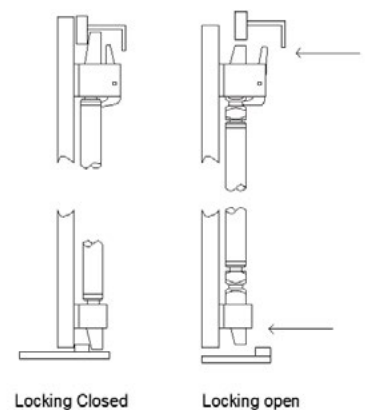


Diagram 6

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- Once the doorset has been installed satisfactorily, apply a bead of silicone sealant to all joints between frame and structural opening on external side or (internal if required). Mastic depth should be a minimum of 50% of joint width.

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## Operation, safety, maintenance and repair instructions

### **FAILURE TO COMPLY WITH THESE INSTRUCTIONS WILL INVALIDATE OUR WARRANTIES**

#### **Quarterly maintenance**

1. The door leaf(s) should be checked to ensure it opens freely without binding, is correctly aligned with the frame and is free from dents and scratches. Door openings should be kept clear of obstructions to ensure the opening and closing motion is not impeded. Check frame rigidity within structural opening and tighten wall anchors if found necessary. Damage to powder coated finishes should be repaired immediately. Please contact *Sunray Engineering Ltd* for recommendations before embarking on damage rectification procedures.
2. *Sunray Heavy Duty doors® doorsets* are fitted with low maintenance hinges with nylon bushes fitted to the female hinge to result in zero maintenance.
3. Check locks, latches, handles, panic hardware, overhead door stays and any other ironmongery for loose fixings, smooth operation, and security. Re-tighten or lubricate if necessary.
4. If applicable, cylinders must not be lubricated using spray lubricants like WD-40®. Such fluids can attract dust and detritus that may hinder smooth operation. Cylinders should be maintained with a periodic application of proprietary powdered graphite into the key way and around the turn. This is available from most locksmiths. Repair of cylinders is a specialist task and should be referred to *Sunray Engineering Limited* during the first year and to a qualified locksmith thereafter.

#### **N.B. All ironmongery must be checked regularly**

5. Polyester powder coated doors and frames should be cleaned every three months using warm water and a mild household cleaning detergent such as washing up liquid. The wash cloth should be wrung out and damp only so as not to soak the surface. Dry off with a soft clean cloth to avoid scratching the finish. This procedure will remove harmful deposits and help to maintain the finish. Liquid cleaning products, bleach or polishes containing solvents must not be used.

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## Sunray Heavy Duty Door troubleshooting

Problems	Possible cause	Corrective action
Doors do not fit in frame	Wrong door leaf selected	Check the ID numbers to ensure they are all the same numbers
Doors will not drop onto hinges	Male and/or female hinges bent	Re-align
	Frame bowed	Shim frame to bring square
Doors will not close	Obstructions fouling closing area	Clear/remove objects
Door leaf(s) will not shut to frame at top and/or bottom	Frame out of square	Correct by shimming as required
	Door bent in storage	Straighten or contact Sunray
	Hinges damaged	Re-align
Barrel bolts or locking bars not engaging fully	Debris fouling receiving holes	Clean out or re-drill holes
	Frame not level or square	Re-shim frame to correct frame alignment
Door leaves not level in centre	Frame not level or square	Correct by shimming
	Nylon spacer missing	Fit new nylon spacer
Panic furniture not operating correctly	External locking not fitted correctly	Remove and refit ensuring square drive fitted correctly
	Panic furniture fitted incorrectly	Refer to manufactures fitting instructions

### Safety instructions

1. Keep opening clear at all times.
2. Do not lean anything on doors or frame.
3. Do not operate a damaged or unsecured door. If the door is found to be damaged, do not use 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.

### General maintenance

To ensure safe and reliable operation, regular inspection and maintenance is essential. Failure to comply with *Sunray Engineering Limited's* operation, safety, maintenance, and repair instructions will invalidate the product warranty. The manufacturer's warranty of one year is only valid if the above maintenance and professional installation has been carried out. For additional information please refer to our website.



**Sunray Doors**

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