

Sunray Stackable Louvres

Installation instructions

Handling and care

Sunray Stackable Louvres 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 louvres.

- Do not place objects on top of the louvres.
- 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 louvres may be heavy and should be moved in accordance with manual handling regulations.



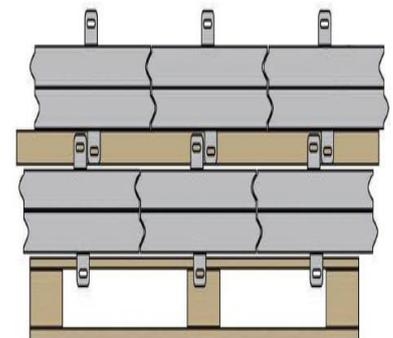
Storage

- Louvres and framework 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 louvres together.
- 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 lose the fixings supplied.



Installation process

Sunray Stackable Louvres are supplied with a full/part frame or purely as a standalone stackable system. Prior to assembly, check to ensure the unique product numbers marked on each section of frame component matches correctly. The identification numbers are stamped on each piece of the frame.



Sunray Stackable Louvres

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).
- (If into framework) M8 x 20 machine screw and washer.
- If louvre straight into masonry M8 x 80mm sleeve anchor (M10 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).

- 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.
- If frame is too large, start to assemble within the opening by pinning each side post to structure and bolt remaining frame together following instructions above (diagram 2).

Stage 2 – Frame fitment (if applicable)

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 framework has 2 different fixing options methods, Lugs (range from 1 to 8 slot lugs or a through frame fixing, only 1 fixing is required per lug (must avoid fitting into cement joint, see diagram 3).



Diagram 1

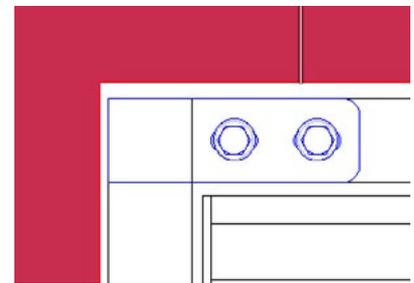


Diagram 2

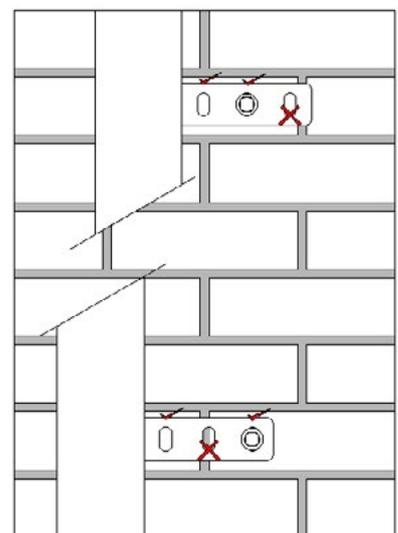


Diagram 3

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- Sunray also offer a through frame option which requires a fixing in every fixing point (diagram 4).
- One frame is in place select the bottom section of stackable louvre.
- Place bottom section (diagram 5a) on either on the frame support or the finished floor. The frame will be fitted with countersunk open-end rivets for bolting the panels in place through the lugs using M8 hexagonal head set screws and washers (supplied).
- Then select the middle stackable section (diagram 5b) then stack onto of bottom stack then fix as above, repeat depending how high the louvre is.
- Finally select the top stack (diagram 5c) and place on top of the previous section via lugs to the rear or if there is no access then the stackable will be prep for Sunray front face fixing method (diagram 5d).

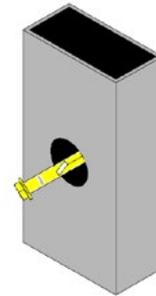


Diagram 4

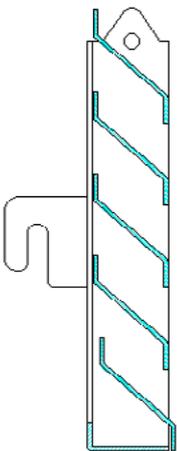
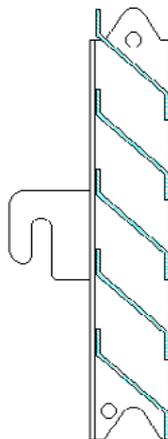
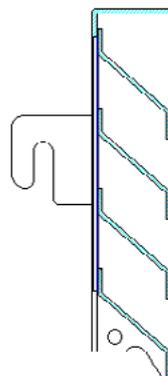


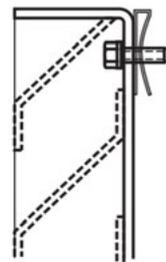
Diagram 5a



5b



5c



5d

Stackable without framework

Follow the same process, and depending on the structure you are fixing into will determine fixing type. For steel work still use the M8 set screw still (diagram 6), but for masonry use an M8 sleeve anchor (requiring an M10 hole).

Fitting of double bank louvres

If the opening is larger than the maximum size then a double bank system will be supplied (diagram 7).

The selection of stacks will remain the same i.e. 2 bottom stacks, but a middle supporting box section will have to be installed to accept the middle fixings.

Stiffening

If the panels are over a pre-defined width, a stiffening strap or straps will be used. These are welded to the louvre blades. There will be an M8 hexagonal head set screw in place which will need to be removed before fitting the panels (diagram 8). This must be replaced and tightened upon assembly.

Once the doorset has been installed satisfactorily, and 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 (diagram 9).

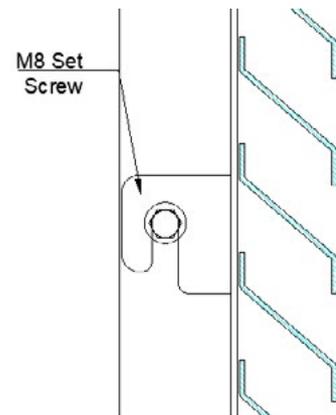


Diagram 6

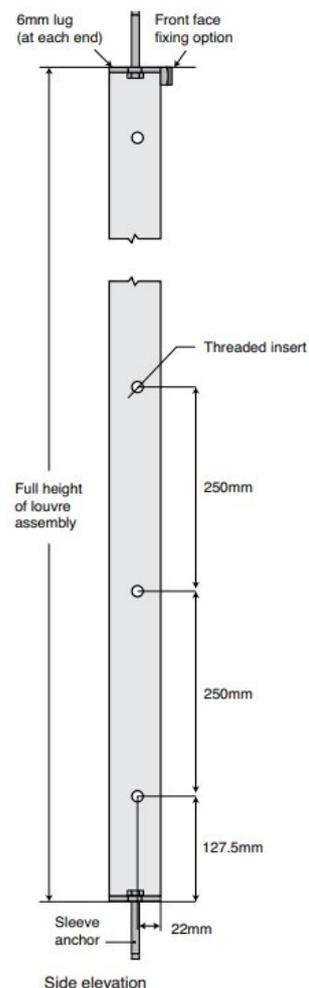
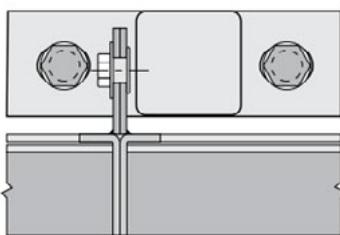


Diagram 9



View from above

Diagram 7

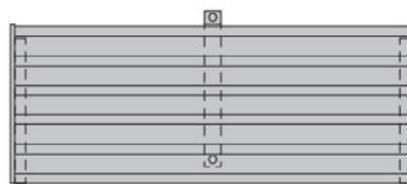


Diagram 8

Sunray Stackable Louvres

Operation, safety, maintenance and repair instructions

FAILURE TO COMPLY WITH THESE INSTRUCTIONS WILL INVALIDATE OUR WARRANTIES

Quarterly maintenance

1. The louvres should be checked to see if free from dents and scratches. 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. Polyester powder coated louvres 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.

Sunray Stackable Louvre® troubleshooting

Problems	Possible cause	Corrective action
Louvres do not fit into frame/or opening	Wrong louvres selected	Check packaging for ID numbers
	Louvres incorrect size	Contact <i>Sunray</i>
Top louvre will not fit in frame	Stacks not fitted correctly	Loosen fixing bolts up each side then compress louvres ensuring each section is tight together then re tighten
On double bank middle lugs not lining up with nut certs	Centre post fitted incorrectly either upside down or 50mm wrong side of centre	Remove fixings and offer post into the correct position then re-fix

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.



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