

# Sunray ExcluLouvre® Louvres 2&3

## Installation instructions

### Handling and care

*Sunray ExcluLouvres*® 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.

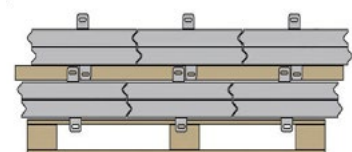
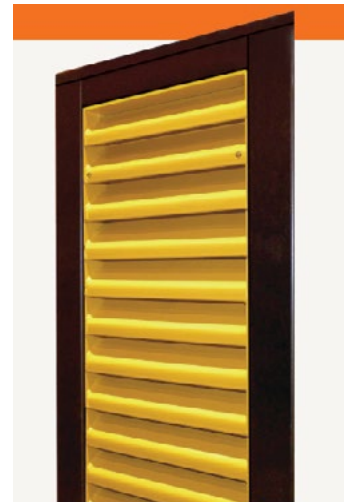
- Do not place objects on top of the door.
- Do not store in exposed places for long periods and protect from inclement weather.
- The protective covering on the door and frame is for protection against dust and finger-marks.
- Please be aware that these louvres may be heavy and should be moved in accordance 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 ExcluLouvres*® are supplied with a fully welded frame or demountable frame dependant on size and requirements. 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 and louvre packaging.



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## 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. Ensure the correct fasteners are selected to suit the opening structures and performance requirements (diagram 1).

- 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).
- Fitting louvre to framework will require an M10 x 20 Kinmar screw and washer.

### 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 4 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

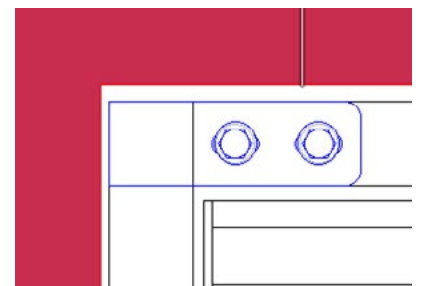


Diagram 2

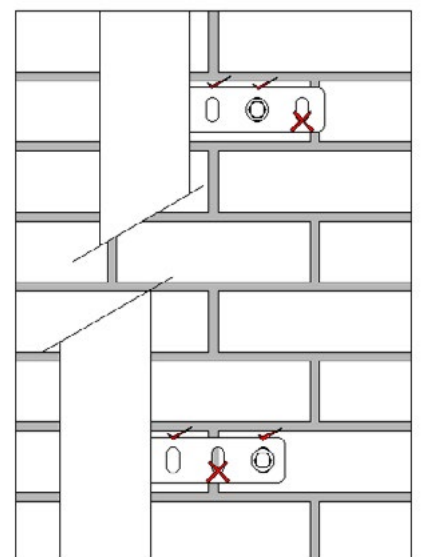


Diagram 3

# Sunray ExcluLouvre® Louvres 2&3

- Sunray also offer a through frame option which requires a fixing in every fixing point (diagram 4).
- The walling louvred system can come multiple banks to for the *ExcluLouvre* walling system. Each bank will have it's own framework and will be fixed together using the trough frame method with the M10 set screw being secured into a CSK nut cert in the previous post (diagram 5).

## For security rating level 2

Timber (hardwood), blockwork, brickwork/ concrete blockwork, steelwork or *ExcluLouvre*® SR2 rated. A minimum of 8 fixings per frame are required with a minimum of 3 fixings on each side (either through frame fixing or anchorage cleats) suitable for the structure you are going to fix into.

## For security rating level 3

Brickwork/concrete blockwork, steelwork or *ExcluLouvre*® 3 SR3 rated. A minimum of 10 fixings per frame are required with a minimum of 3 fixings on each side (either through frame fixing or anchorage cleats) suitable for the structure you are going to fix into.

## Top panel (1 off)

The top panel will be identified on the packaging and will be shorter than the other panels. Panel heights can vary from 100mm to 150mm in increments of 1mm. This is the last panel to be fitted. This panel is pushed in to fit rather than drop fitted and secured from the front using M6 button head security screws (supplied) [diagram 6].

## Top intermediate panel

The top intermediate panel will be identified on the packaging. Panel heights can vary from 250mm to 350mm in increments of 50mm. This panel is the penultimate panel to be fitted (diagram 7).

## Intermediate panels

(Quantity to suit required height) The intermediate panels will be identified on the packaging. Panel heights can vary from 150mm to 350mm in increments of 50mm. Standard panel height = 250mm. Fit all standard height panels before fitting any non-standard height panels. These panels will tend to make up most of the assembly and fit easily on top of the bottom panel and on top of each other (diagram 8).

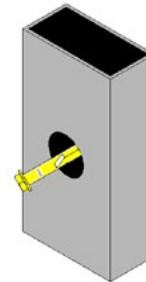


Diagram 4

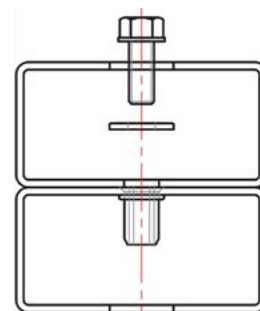


Diagram 5

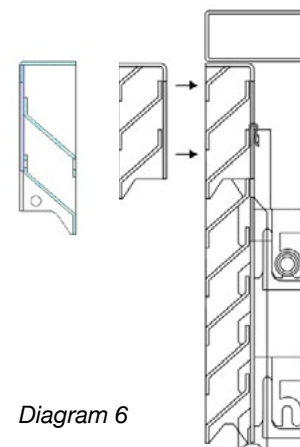


Diagram 6

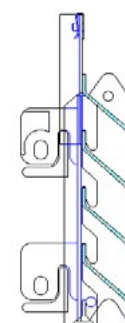


Diagram 7

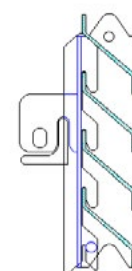


Diagram 8

# Sunray ExcluLouvre® Louvres 2&3

## Bottom panel (1 off)

The bottom panel will be identified on the packaging. Fit this panel first. This will slot into position. Ensure the panel is square, level and even. Only use supplied M10 security set screws when assembling the panels otherwise the security rating will be invalid (diagram 9).

## Fitting from front or rear

When fitting from the front ensure that the chimney nuts are fitted to the brackets on the top intermediate panel. Using the PZ3 driver through the hole in the front of the louvre blade locate and tighten the M6 security screws.

Once the *ExcluLouvre*® 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 (diagram 10).

## 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.

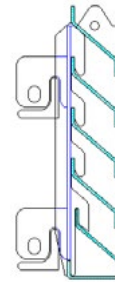


Diagram 9

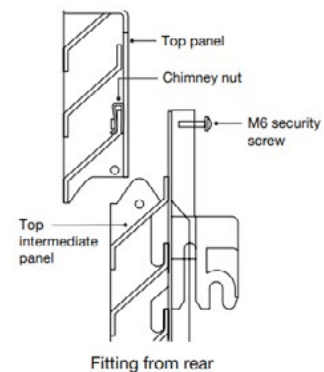
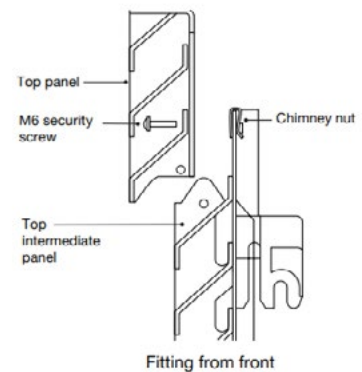


Diagram 10

# Sunray ExcluLouvre® Louvres 2&3

## Operation, safety, maintenance and repair instructions

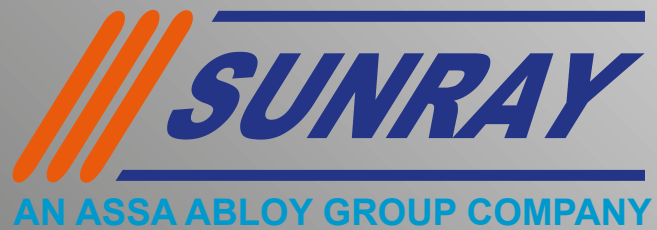
### FAILURE TO COMPLY WITH THESE INSTRUCTIONS WILL INVALIDATE OUR WARRANTIES

#### Quarterly maintenance

1. The *ExcluLouvres* 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 ExcluLouvre® 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



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