



ASSEMBLY Manual

Kitset/Flatpack

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High Quality Ltd



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SAFETY WARNING

For your safety and to avoid any injury please ensure you have safety gear on during assembly / installation, such as: Protective glasses, gloves, earmuffs, etc.

Tools required:

Electric drill, electric screwdriver, welder (for corner steel posts option), waterproof sealant, rivet gun, self-expansion foam, level, tape measure, clamps, ladder, skill saw, grinder and craft knife.

At least a second person (helper) is needed to ensure easier completion of assembly/installation.

Time allocation:

At least two days are required to complete assembly/installation, additional days may be required depending on DIY skill level/experience.

Construction site:

Allow at least 25 square meters of clearance for construction site, ensuring ground is level with good drainage and no risk of flooding.

If steel base/chassis is placed directly on dirt/grass, ensure there is no risk of subsidence in the soil surface during the rainy season. Treated timber is recommended to be placed under the steel base/chassis to enable ventilation, increase the ground contact area and extend the life of the steel base/chassis.

Assembly guide contents/disclosure:

The contents of this manual aim to compile all the information necessary to complete the assembly/installation of the kitset/flatpack purchased. It does not cover the basic use of power tools or any 'how to' DIY skills/tips.

Instructions and images shown in this manual are generic and may not be a representation of the kitset/flatpack purchased. Due to multiple add-ons/options available to kitset/flatpack users, the user of this manual should skip/ignore any step not relevant to their kit. In some cases, it is not necessary to follow the steps in order, where the user sees more fit due to different circumstances and situations, moving steps around as required may still result in a correctly completed finished pod.

Kitset/Flatpack content:

Different kit sizing and options will mean that not all contents are the same for all kits. In general, a complete standard kit should have the following:

- Steel base/chassis
- Plywood
- Steel angle bars (L-Slots) for steel base (*75mm wide*)
- Corner steel posts (**or OPTIONAL ALUMINUM PILLARS**)
- Steel angle bars (*bracing between pillars – 60mm wide*)
- Perimeter steel plates
- Aluminium interior angle trims
- Exterior aluminium corner angle bars (**ONLY with corner steel post option**)
- Joinery frames and trims (*U channel attachments*)
- Windows/slide door
- Wall & roof panels

Wall panels are coded F for Front, L for left, R for Right, B for Back. Each wall numbering begins from left to right during assembly

- Roof flashings
- Screws

115mm & 75mm for roof, 38mm round head for angle bars to ply, 36mm countersunk for ply to steel base, 18mm high strength for window frames. (75mm roof screws are also used on bracing steel bars – if corner steel post option is chosen)

- Rivets

White on aluminium pillars, silver on steel and wall panels, black on grey colour roof or flashings etc.

- Slide door lock

NOTE: Expanding foam or weatherproof sealant/silicone is not part of material supplied with the kitset/flatpack

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Assembly / installation instructions

BASE PREPARATION

STEP 1 - (ONLY FOR STEEL POST WELDING OPTION)



Figure 1 – Welded steel post

- Remove the left and right pieces of the plywood for easier welding of the corner steel posts.
- Ensure post is vertically level before welding (2.3m posts are at the front/high end of pod).
- Apply galvanized paint or other anti-rust measure on welded points.

STEP 2 – SCREW DOWN PLYWOOD



Figure 2 – plywood placement

- Ensure steel base is placed as flat as possible.
- Attach plywood to steel frame using self-drilling/countersunk head screws supplied.



Figure 3 – Plywood secured

- If plywood has already been attached to steel frame please ensure more screws are added throughout (at 400mm intervals) as seen in Fig. 3, as only a minimum number of screws were used to allow for movement during transport.

STEEL ANGLE BARS (L-SLOTS) & STEEL PLATES INSTALLATION

STEP 3 – STEEL ANGLE BARS (L-SLOTS)

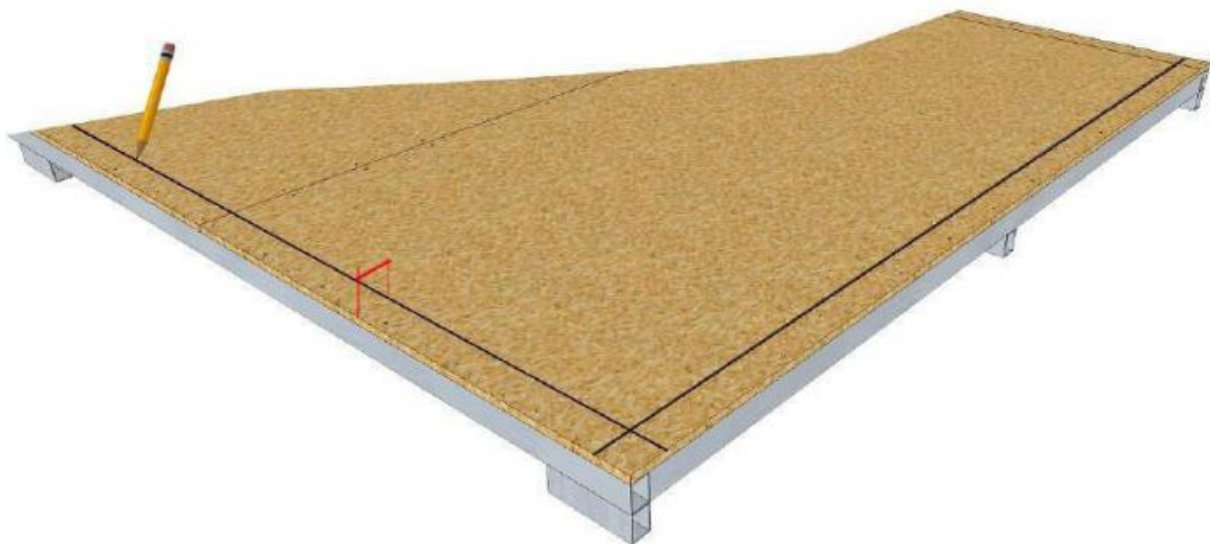


Figure 4 – Steel angle bars positioning

- Pencil mark line around the base of approximately **75mm** from the edge to ensure that the positioning of the angle steel bar edge is flush with plywood edge.



Figure 5 – Steel L-slots & plates

- Place the steel angle bars (long side against plywood – short side facing upwards away from edge).
- If aluminium pillar option is used, ensure that enough space allowance for the pillar from the corner is given when placing the steel angel bar.
- Fix the steel angle bars using the round head screws supplied.



Figure 6 – Steel L-slots for slide door

- Using your 3D plan, locate the position of the slide door.
- Place the steel angle bar upside down on plywood at slide door position as seen on Fig. 6 (Long side facing down flush with edge base/ply), and fix using the rivets supplied.

STEP 4 – STEEL PLATES FIXINGS



Figure 7 – Steel plate fixings

- Place the steel plates around the entire perimeter of the steel base/chassis, ensuring the bottom of the steel plate is flush with the steel base, and fix using rivets supplied, as seen in Fig. 7 & Fig. 8



Figure 8 – Steel plates around perimeter



Figure 9 – Steel plates at corners (steel post option)

- **If the steel corner posts option is chosen**, flush the steel plate with the edge but DO NOT RIVET CLOSE TO CORNER as indicated in Fig. 9, until after walls have been installed to enable easier wall installation.



Figure 10 – Steel plate (Aluminium corner option)

- **If the white aluminium corner pillars option is chosen**, allow for clearance of the aluminium pillars in the corner of the steel base/chassis when install the steel plates as seen in Fig. 10. *(The Aluminium corner can overlap will overlap steel plates)*

WALLS & JOINERY INSTALLATION

Begin wall installation from the back corner, working your way to the front. As each side is completed, ensure that it is square (by confirming the bottom length of the wall is the same as the top length). Wall panels overlap at the tongue of one panel and are riveted together at the tongue at approx. 300mm-400mm intervals.

STEP 5 – WALL PANELS

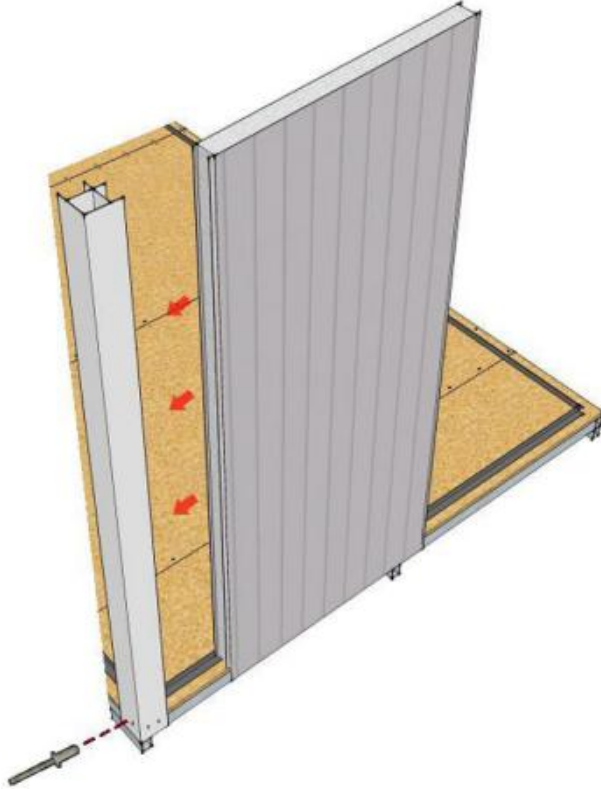


Figure 11 – Riveting aluminium pillar to base

- **If the white aluminium corner pillars option is chosen**, position the pillar in the corner, rivet bottom over steel base and begin inserting wall panels as shown in Fig. 11.
- **If the steel corner posts option is chosen**, begin inserting the wall panels.



Figure 12 – Clamping corners



Figure 13 – Clamping wall panels

- Whether steel or aluminium corner option is used, clamping wall panel edge to corner and between panels, helps in aligning the walls to ensure walls are square before riveting, as shown in Fig. 12 & Fig. 13.

Note: When reaching a wall panel that joins to a window or slide door, pre-assembly of the window frame/trims and inserting into the wall panel is required before moving to the next wall panel.

STEP 6 – JOINERY INSTALLATION

Slide door and window frames will require assembly before being inserted into the wall panels.

Note: Slide doors & windows have 4 pieces constituting the frame, however the windows have 4 mitre-cut trims (U-channel attachments) to the frame while the slide door has only 3 mitre-cut trims (U-channel attachments).



Figure 14 – Window frames (side and bottom)

- Locate the side and bottom plate of the frames, mark, silicone and screw using screws supplied as shown in Fig. 14.

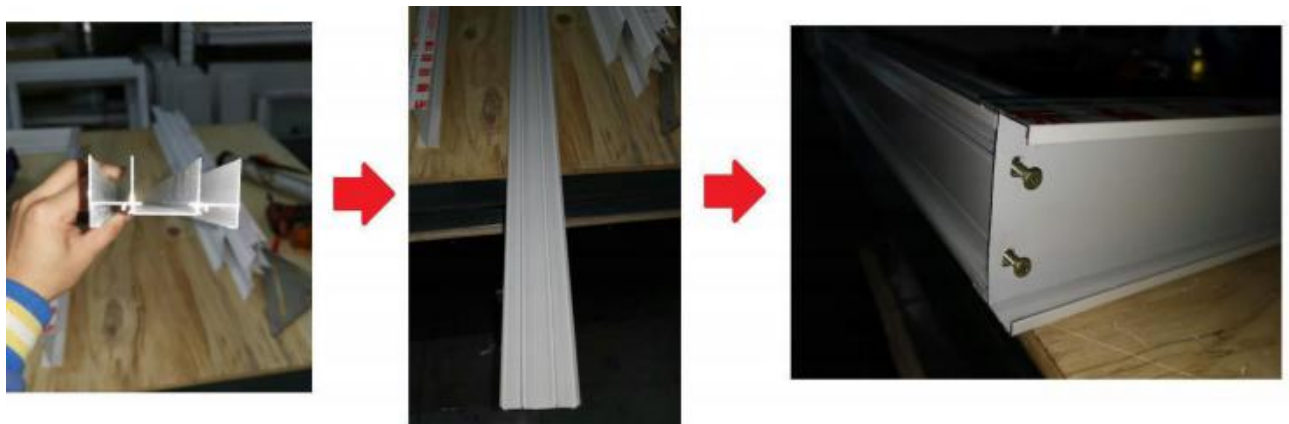


Figure 15 – Window frames (Top plate)

- Locate the top side of the frames (with two middle tracks as seen in Fig. 15.), position and screw.



Figure 16 – Window trims

- Clip the window frame trims (U-Channel attachments) on to the window frames, with the mitre-cut angle facing away from the frames.
- Drill and rivet on corner as shown in Fig. 16.

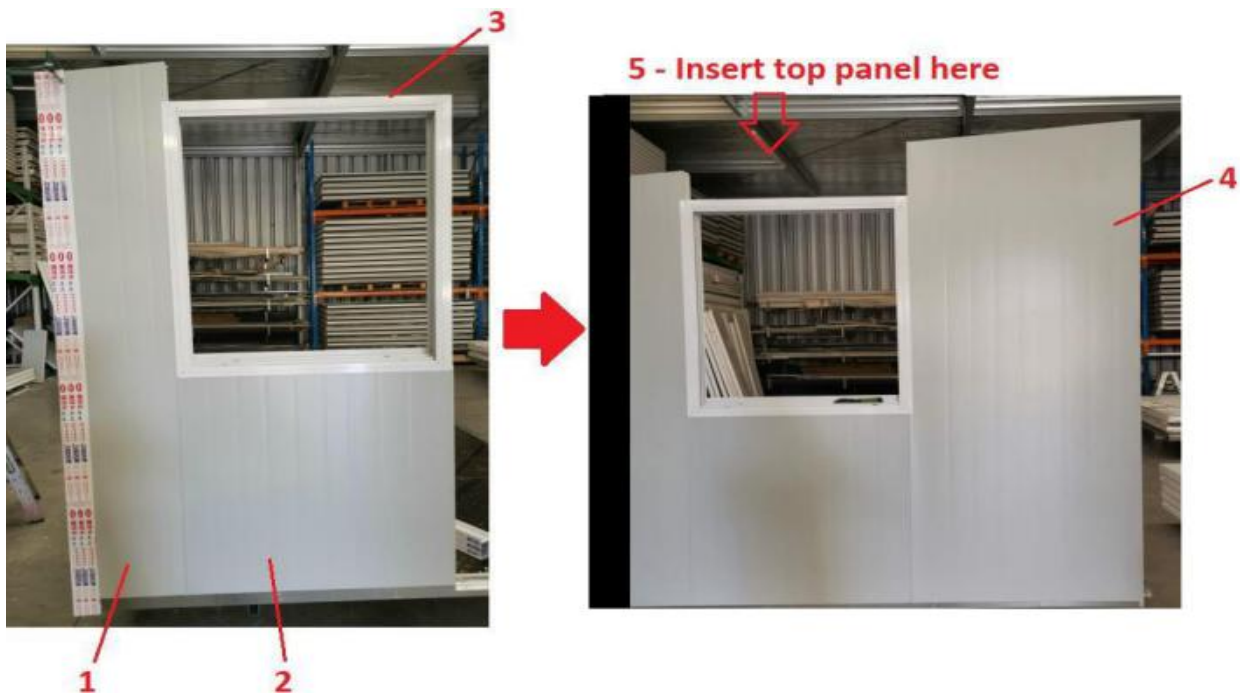


Figure 17 – Wall with frame insert

- Slot window/slide door frame into wall panel, slot the next SIDE joining wall panel and then insert from the TOP the quarter above window panel as shown in Fig. 17.

BRACINGS

STEP 7 – CORNER ALUMINIUM ANGLE BAR (ONLY FOR STEEL POST CORNER OPTION)

Before beginning this step ensure walls are square and corners are vertically upright at right angle.



Figure 18 – Aluminium external corner angle bar

- Place the wide aluminium angle bar over the corner as shown in Fig. 18 and rivet.

STEP 8 – TOP BRACINGS



Figure 19 – Aluminium pillar ‘corner to corner’ steel angle bar bracing

- Ensure the walls are square before attempting this step.
- **If the white aluminium corner pillars option is chosen**, place the steel angle bar from ‘corner to corner’ overlapped by the aluminium pillar lip and rivet as shown in Fig. 19.



Figure 20 – Steel post ‘corner to corner’ steel angle bar bracing

- **If the steel corner posts option is chosen**, place the steel angle bar from ‘corner to corner’, screw into the wall panel/steel post and rivet the along the edge of the wall panels as shown in Fig. 20. *(Mitre-cutting angle bars as seen is good practice but not necessary)*

ROOFING

STEP 8 – ROOF PANELS

Roof panels are placed on the walls in sequence where they overlap at the top (ridges) and underneath at the ceiling point (tongue), refer to Fig. 21.

On standard size kits (2.4m wide pods), a 2.9m roof panel length will have an overhang of 500mm, which is generally positioned 300mm overhanging the front side of the pod and 160mm to the back. This may be adjusted to the user's preference or as available depending on the width of the pod.

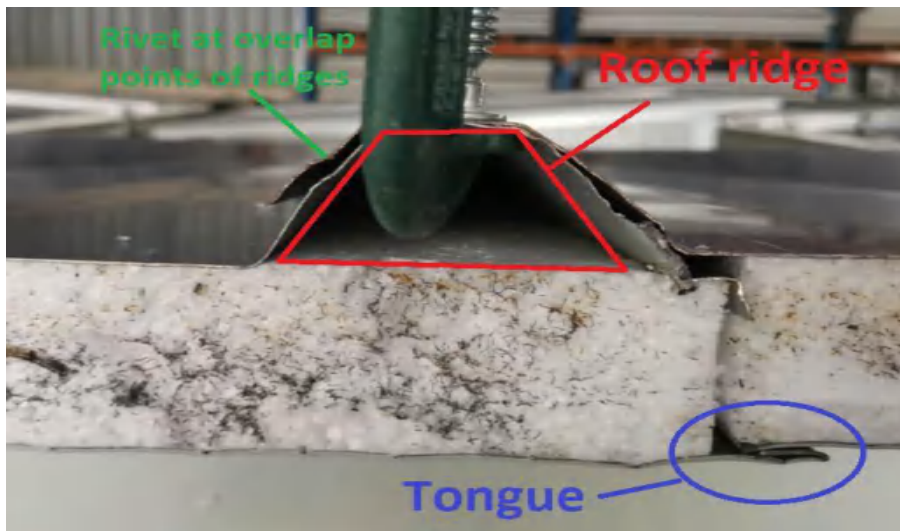


Figure 21 – Roof panels

- Begin by check the total width of the roof panels when joined, to determine the overall overhang available for the short sides of the pod. (Note: Most kits will have a 'half roof panel' that will require a trim of the width on the edge to enable the attachment of roof flashing, be sure to take this into account when taking the measurement – refer to roof flashing step if required)
- Use the measurement to determine where to position the first panel over the edge of the pod. Join the remainder roof panels, ensuring they are positioned as straight as possible (refer to Fig. 22) to enable easier installation of roof flashing.



Figure 22 – Roof panels positioned as straight as possible

- Rivet the roof panels together at the angled overlapping point of the ridges as shown in Fig. 21, at 300mm-400mm intervals. Apply weatherproof sealant / silicone over all roof rivets.

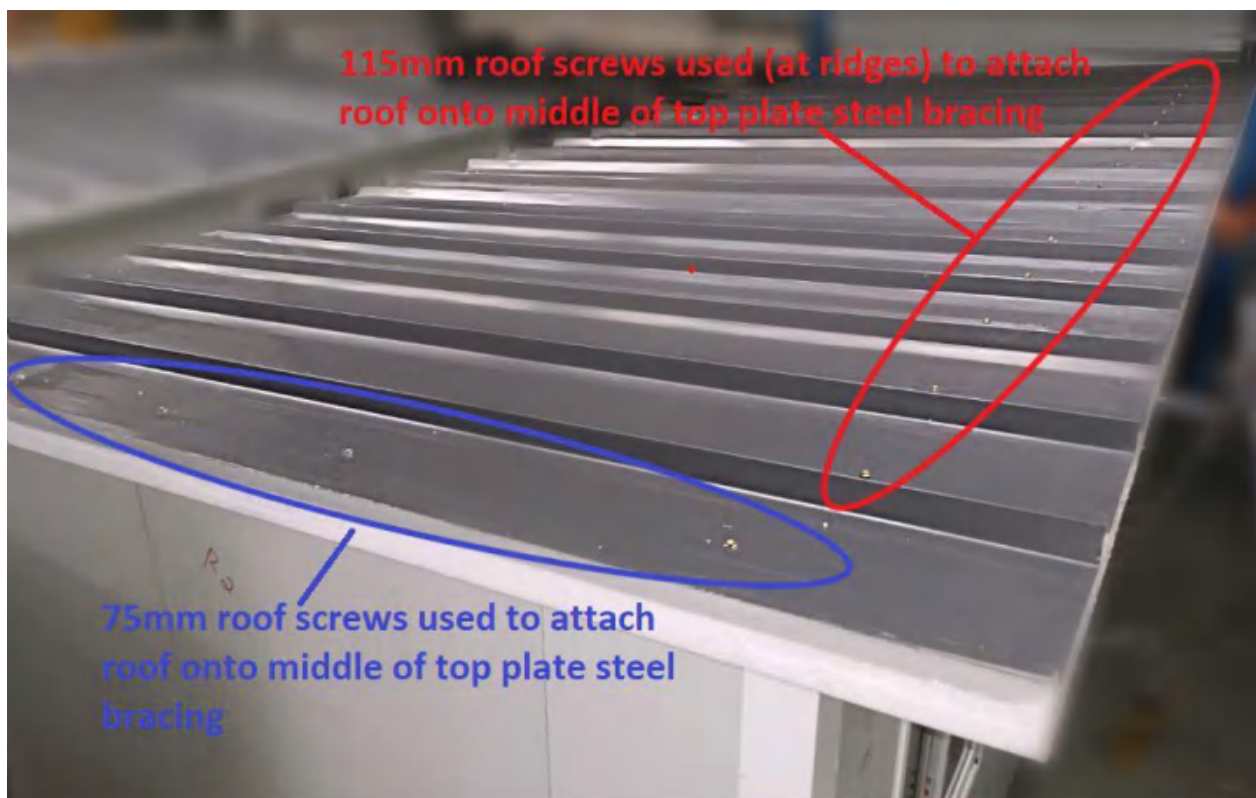


Figure 23 – Roofing panels attached to bracings

- Determine the correct position and screw down the roof to the top plate bracings, using the appropriate length screws as shown on Fig. 23.
- Ensure that the 115mm screws are used on the ridges (front and back – long sides) and 75mm roof screws are used on the short sides.
- It is good practice to pre-drill the steel on the top side ONLY of the roof panel, apply silicone, and then screw down the roof to ensure weather tightness at screw point penetration.
- Rivet the underside of the roof panels (ceiling) in the interior of the pod at the tongue overlap points.

STEP 9 – ROOF FLASHINGS

There are 3 types of roof flashing, these are: -

1- 80mm U-channel flashing (*For front long side and in some instances the short side*) – Refer to Fig. 25

2- L shaped flashing (*For short side*) – Refer to Fig. 26

3- 45mm double folded U channel flashing (*For back long side*) – Refer to Fig. 27

Note: Depending on the pod size, the roof panels on the short side of the pod may end at either the ridge (80mm high) or low end (50mm high).

- Begin by placing the 80mm U-channel flashing on the roof panels at the front long side of the pod.



Figure 24 – End roof panels adjustment



- Adjust the roof ending panels, depending on the panel end type and flashing in your kit, by either: -
 - Using a skill saw to cut at the beginning of the ridge as shown in Fig.24, and cover with 80mm U-channel flashing as seen in Fig. 25, or
 - Using a skill saw to cut off the tongue (if any) and cover with L shaped flashing as shown in Fig.26



Figure 25 – U Channel flashing



Figure 26 – L shaped flashing



Figure 27 – 45mm double folded U-channel flashing

- Tuck the 45mm double folded U-channel flashing into roof panel at the back long side of the pod as shown in Fig. 27.



Figure 28 – Roof flashing riveting

- Using the black rivets supplied, drill and rivet at all the required points of the roof flashing at minimum intervals of 300-400mm as shown on Fig. 28.

FINISHING

STEP 10 – EXPANDING FOAM



Figure 29 – Expanding foam application

- Apply expanding foam on any gaps and specifically around the interior of the ceiling and at roof ridge ends at the back of the pod as shown in Fig. 29.
- Once dry, cut off excess using a craft knife.



Figure 30 – Interior aluminium angle trims

- Place and rivet the interior aluminium angle trims to the ceiling perimeter of the pod.
- If the steel post option is chosen, vertical aluminium trims require placement and riveting in each corner.



Figure 31 – Weatherproof sealant / silicone application

- Apply weatherproof sealant/silicone to all exterior/interior gaps seen on the pod and specifically to the areas shown by a red line on Fig. 31, to ensure weather tightness is achieved.
- Apply weatherproof sealant/silicone over any roof rivet points to ensure no rusting occurs.

STEP 13 – INSERTING WINDOWS & SLIDEDOORS



Figure 32– Slide door adjustment points

- The slide door and window panels can be inserted into the frames by tilting forward at a 15 to 30-degree angle, pushing upwards into frame track and then resting on bottom track.
- Adjust the height of the doors and windows as required by tightening/loosening the screws on the bottom sides of the panels as shown on Fig. 32.

STEP 14 – Windows and Door adjustment & Lock Installation



1. Put the the short window into the Frame



2. Put the another piece into the Frame



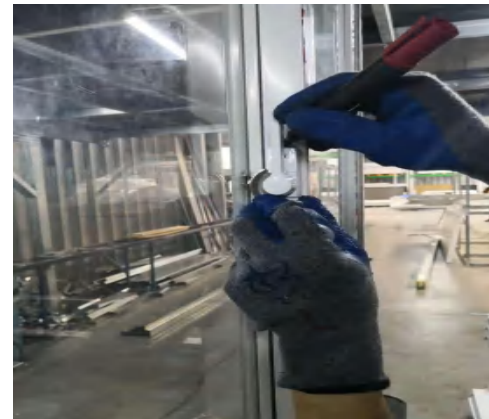
3. The piece with hook must be outside



4. Check there is any gap between the Window with the Frame



5. Use this screw to adjust the height for window lock Until the gap has been minimized



6. Make the position for the internal



7. Use the 4.2mm drill bit to drill a hole



8. Use the white rivets to fix the lock to the window

The Sliding door installation is same as window. Please contact us if you have any further question.

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