

INSTRUCTION MANUAL





SECURA SHED

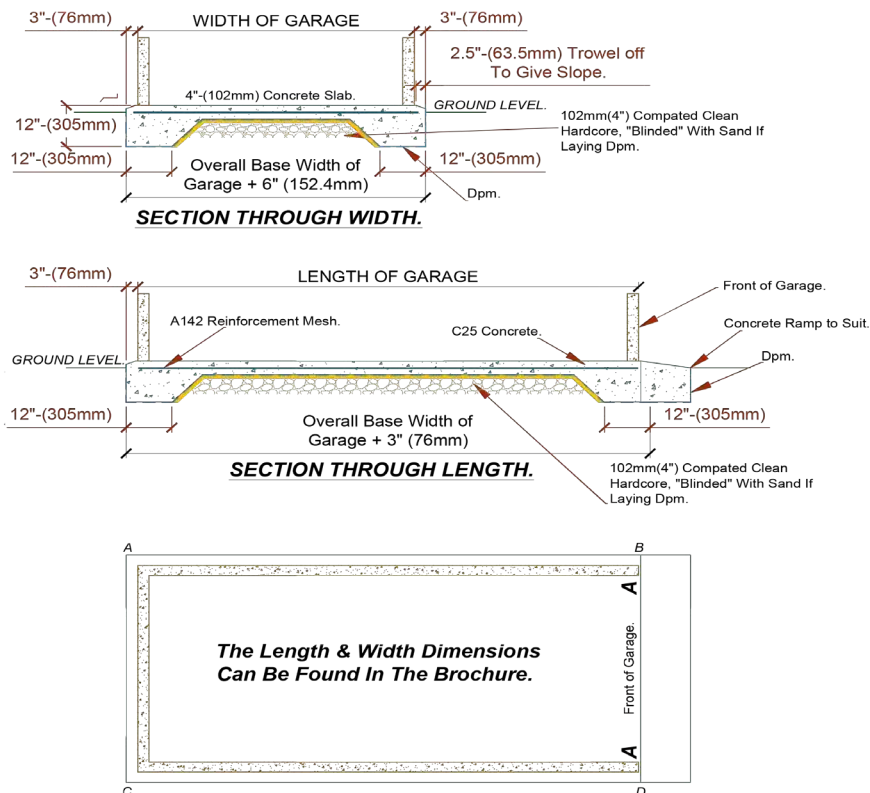
Fixing Accessories

DESCRIPTION	USED FOR	PRODUCT
M8 x 120mm MUSHROOM HEAD BOLT	Securing Panels and Wall Plate Together	
M8 x 140mm MUSHROOM HEAD BOLT	Securing Corner Panel to Wall Panels	
M8 HEX NUT	Securing Panels and Wall Plate Together	
M8 WASHER	Securing Panels and Wall Plate Together	
M8 PLASTIC TAPER WASHER	Securing Panels and Wall Plate Together	
48mm GALV TRUSS HANGER	Securing inter wooden Trusses to the Wall Plate	
30mm GALV TWIST NAIL	Truss Hanger	
M8 x 75 COACH SCREW	Gable Fascia to Wall	
M1500 ANGLE BRACKET	Batten to Gable Fascia	

DESCRIPTION	USED FOR	PRODUCT
40mm POLY TOP PIN	Gutter Board	
No. 10 x 50mm C.S.K WOOD SCREW	Batten to Inter Truss	
28mm BLACK SELA CAP	Roof Sheet	
28 x 6mm BLACK SELA WASHER	Roof Sheet	
No. 10 x 38mm C.S.K WOOD SCREW	Roof Sheet	
M6 x 50mm MUSH HEAD BOLT	Batten to M1500 Angle Brk't	
M6 NUT	Batten to M1500 Angle Brk't	
M6 WASHER	Batten to M1500 Angle Brk't	
WOOD TEK 6.3 x 32 T19	M1500 Angle Brk't to Gable Fascia	
CLEAR SILICONE TUBES	Seal Panels	
BLACK BASE SEAL STRIP	Base of Panels to Concrete Slab	

DESCRIPTION	USED FOR	PRODUCT
30 x 30 x 90 DEG UPVC ANGLE mr	Base of Panels to Concrete Slab	
No. 10 x 50mm C.S.K WOOD SCREW	Batten to Inter Truss	

Ensure that you have a CLEAR and LEVEL base on which to assemble shed.



Concrete Shed Base

Why do I need a concrete base? Can't I use paving blocks or slabs, or just put it on tarmac?

The design of the concrete prefabricated building with panels bolted together requires a strong concrete raft base. Any movement in the base will cause the shed to move.

Responsibility for the concrete base is the customer's responsibility.

The old saying, "a building is as good as its foundations", is as true for your concrete sectional shed as it is for any other type of building. The better the specification of the base, the more peace of mind you will have in the future, if you skimp on the base, you may regret it later!

Concrete base design.

Your concrete base needs to be designed properly to be strong enough not to crack or sink over the lifetime of your shed.

Your shed base should be designed to suit the soil on your site. For instance, if the soil is clay, with the likelihood of movement in the future, you will need to reinforce it, and probably make the raft thicker. If your building is over 30sq m, you will need to gain approval from your local control office, who will require to inspect and approve your concrete shed base plans.

You should thicken the edges of the base to a depth to suit the ground conditions. The thickness of the concrete in the base will also depend on the soil conditions. The concrete mix design should be suitable for a shed base – speak to your supplier and tell them what the concrete is intended for so they can provide the correct mix. A minimum concrete thickness of 100mm (4”) is normally recommended, laid over at least the same thickness of well compacted clean hardcore. The hardcore should be “blinded” with sand if you are going to lay a damp proof membrane (dpm), normally 1200g polythene sheet. Steel reinforcement mesh will further strengthen your base, your builder will advise.

If you intend to store items in your shed once it has been built, we recommend the inclusion of a dpm. Without the dpm there is no guarantee that damp will not spread into the building. Don't forget that the base will need time to “go off” or cure, before we can build on it. Allow at least a week or more in winter.

The concrete base should be square. The shed needs to sit on a base about 75mm (3”) larger all round. When setting out your base, make sure that the shuttering is square. To make sure your base is square, measure the diagonals AD and BC – they should be the same. If not, adjust your shuttering until they are – your base will then be square.

The external dimensions should be 150mm (6”) larger (75mm each side and front and rear) than the size of the building you have bought. If in any doubt, seek advice and confirmation of the size of your building from the company.

The concrete base should be level. There must be no slope from side to side, back to front or front to back. If the base isn't level, the panels may not fit together properly, the roof may not fit, and it may be difficult to lay the necessary concrete fillet. If the fall is to the rear, you may well get puddles forming at the back of the shed.

The base must be higher than the surrounding area. It should stand out of the ground by at least 25mm (1”). If not, water will stand on the base and will leak under the panels.

If the ground slopes down to the base, you should ideally dig out the ground for 150mm (6”) around the base, and dig out a trench 150mm (6”) deep, backfilling with gravel or pea shingle, after retaining the existing ground. Don't forget to take into account surrounding ground levels when you position your personnel door – if the ground is higher than the base, it will catch as you open it. Obvious when you think about it, bit late when you have built the shed!

So, your base should be designed to suit your local conditions. It should be strong enough, flat, square and level, higher than surrounding ground and 150mm (6”) larger than the building size (external dimension).

Finally, your concrete base should be positioned properly. Don't forget that the personal door will project from the side of the building when it is being opened, so position the base so that the door doesn't foul a wall or other building when you open it.

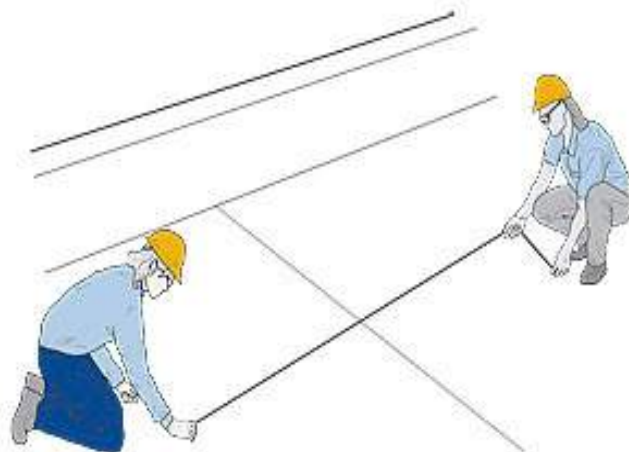
PLEASE LOOK UP! Trees, buildings etc can overhang, branches and gutters can affect the positioning. Just because it fits on the base, doesn't mean it will fit at eaves height!

Don't position the building too close to other buildings or walls, as this can form a water trap – always specify gutters on your shed to minimise the potential for water leaking into your shed. Allow for guttering on your building if you order it – add in 150mm each side (apex) or 125mm to the length (knight) for guttering.

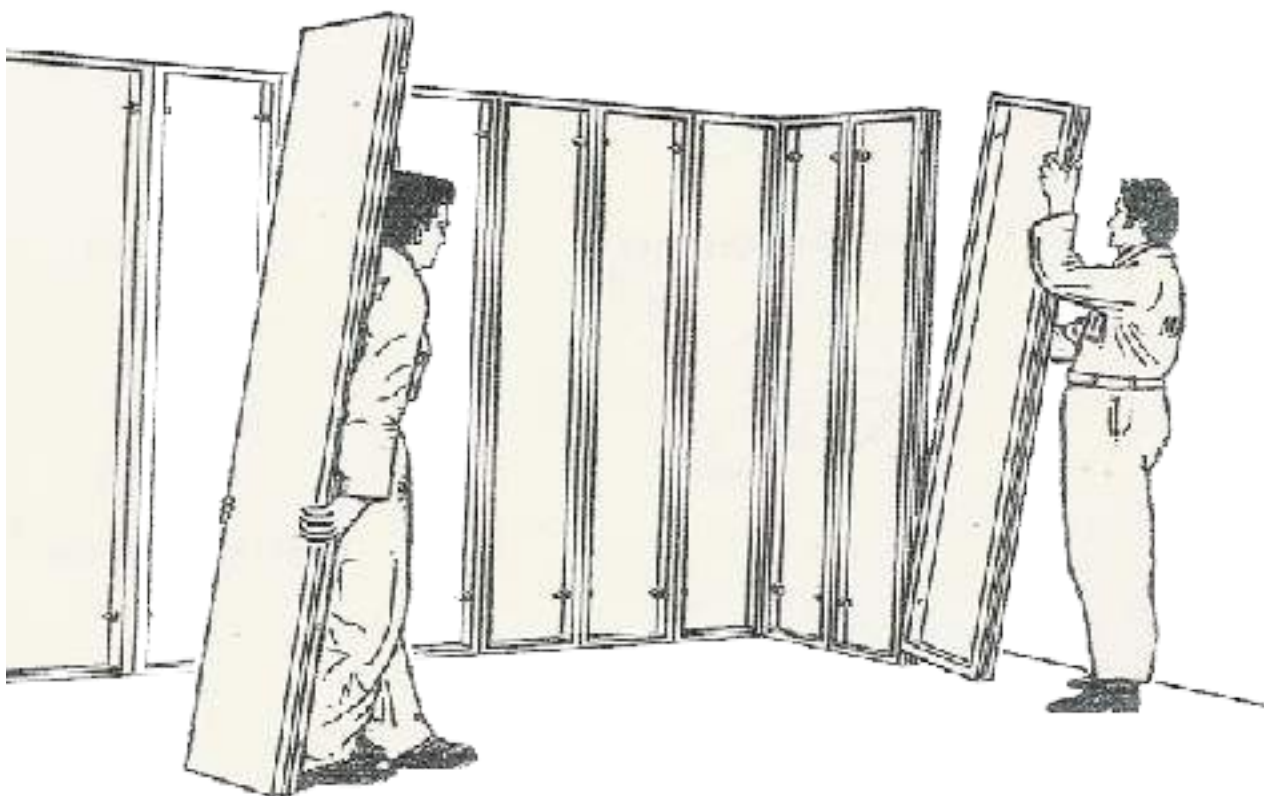
If you are using a local builder to carry out the base works for you, please give him this before he starts work.

Step 1

With a **CHALK LINE** mark out the external size of your shed ensuring that it is square, then **APPLY** Black Bitumen tape to the base just inside of the **CHALK LINE**, so you can still see the **CHALK LINE** when your concrete panel is in position.



Step 2



Starting in the **LEFT** hand **REAR CORNER** assemble your corner then using the **HEEL AND TOE** method of assembling assemble 3 panels either way loosely. Using a **SPIRIT LEVEL** upright your panels and tighten the bolts ensuring that the external tops are flush.

Once you have done this **CONTINUE** with the rest of your building keeping it fairly even until all of the concrete is assembled, placing doors and windows where required.

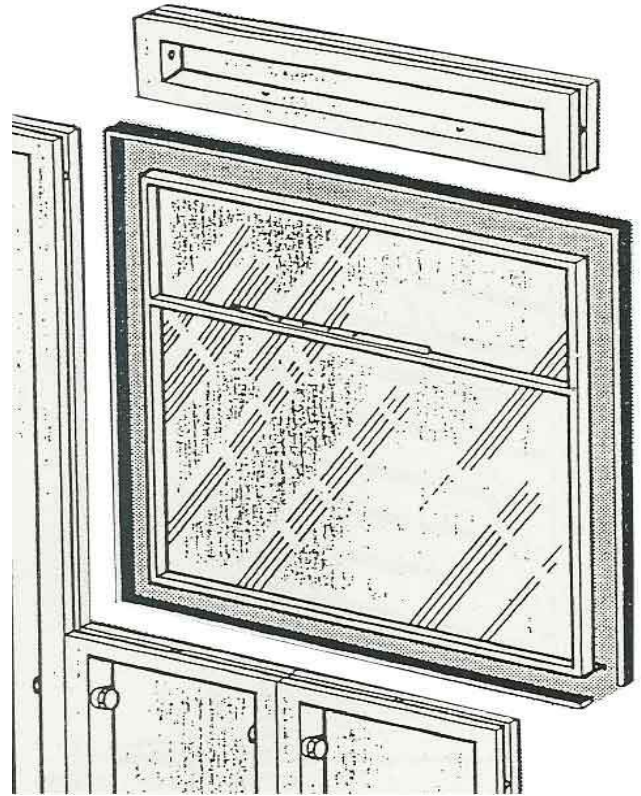
WINDOWS

Where required, a window consists of the frame, two short panels and a lintel. Butt the short panels together and to a standing standard panel. Secure with **Hexagon Head Bolts 4"** (100mm) long, nuts and tapered washers.

Apply a black foam strip 3/4" wide all round the window frame. The strip is self adhesive and although it is compressed, in due course it will expand to form a seal between the frame and the concrete units.

Stand the window on the short panels with the outside face of the panels and the small sill projecting over the short panels. Support the window until the lintel and the adjacent panel are fixed.

Place the concrete lintel on top of the window and secure to the standing standard panel. Secure with **Hexagon Head Bolts 4"** (100mm) long, nuts and tapered washers.

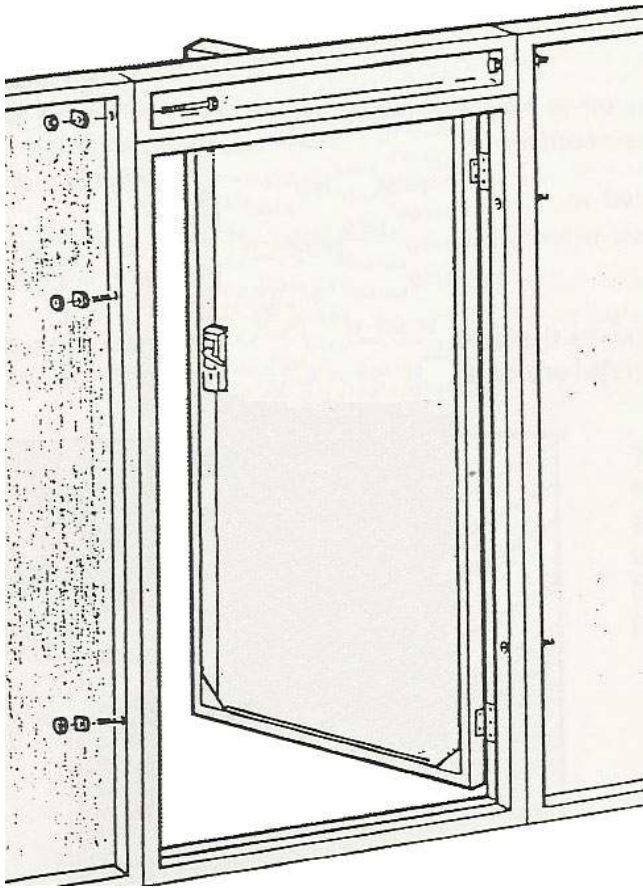


NOTE

There must be at least one standard panel width between windows or between a window and a personal door.

The window handle (*if applicable*) is also fitted at this stage.

DOORS



Fort Knox Personal Access door

Butt the door frame in the required position against the standard panel. Secure to the steel frame with **Mushroom Head Bolts**, nuts and **tapered washers**.

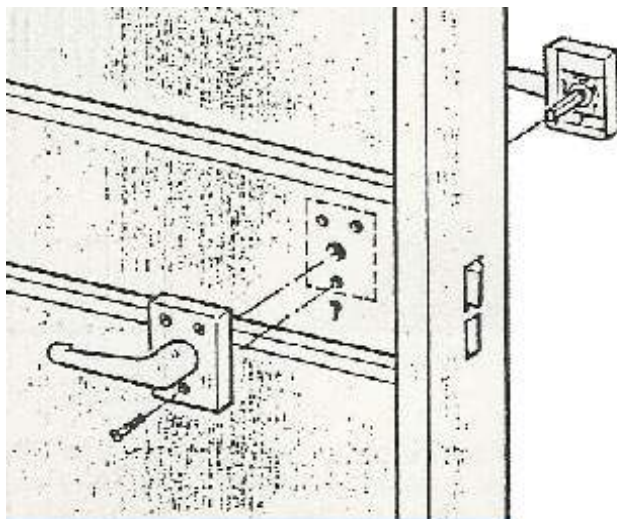
Place a lintel above the frame and fix to the standard panel with **Hexagon Head Bolt 4"** (100mm) long, nuts and **tapered washers**.

Fix the next standard panel and secure to the frame and lintel as for the previous panel.

NOTE: It may be necessary to remove and re-fix the weather strip from the steel frame to gain access for the coach bolts.

It may be necessary to drill through the frame into the concrete to fix the door to the surround.

IF NOT engaging correctly use the 3 sets of 3 allen head bolts on the door hinge to adjust the level until the locks fully engage.



Closure Set

Fit square bar through the hole in the door and locate the handle / lock sets on the ends of the square bar. Fix the handle / lock sets with the screws provided and check operation of the handles and lock.

Step 3

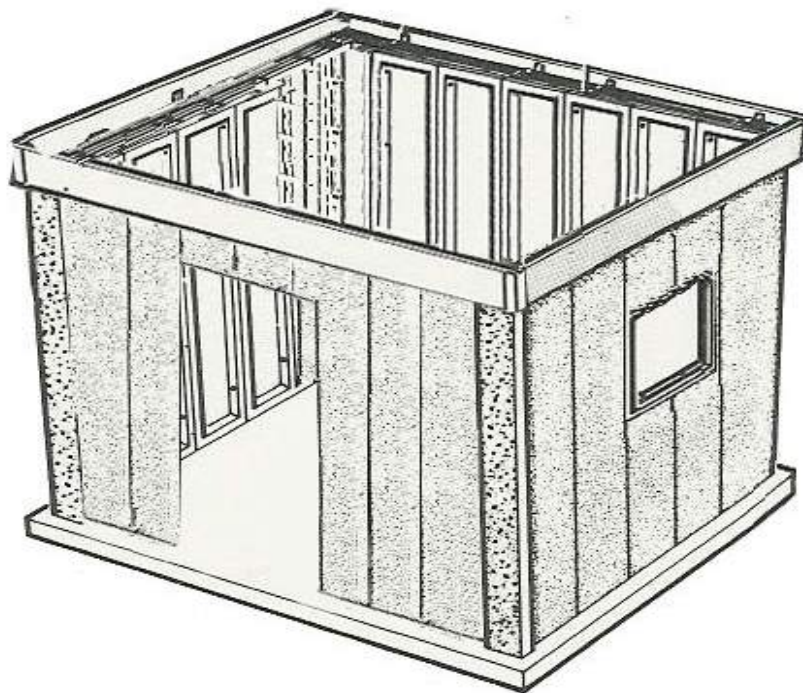
Now that you have assembled your concrete panels you need to put your **FRONT** and **REAR** fascias up so that they are flush with the outside of the building. Once you have done this put the **WALL PLATES** on, keeping them flush with the inside of the panels and allowing an **overhang** on the outside of the building for the fascia boards.

Fascias

General

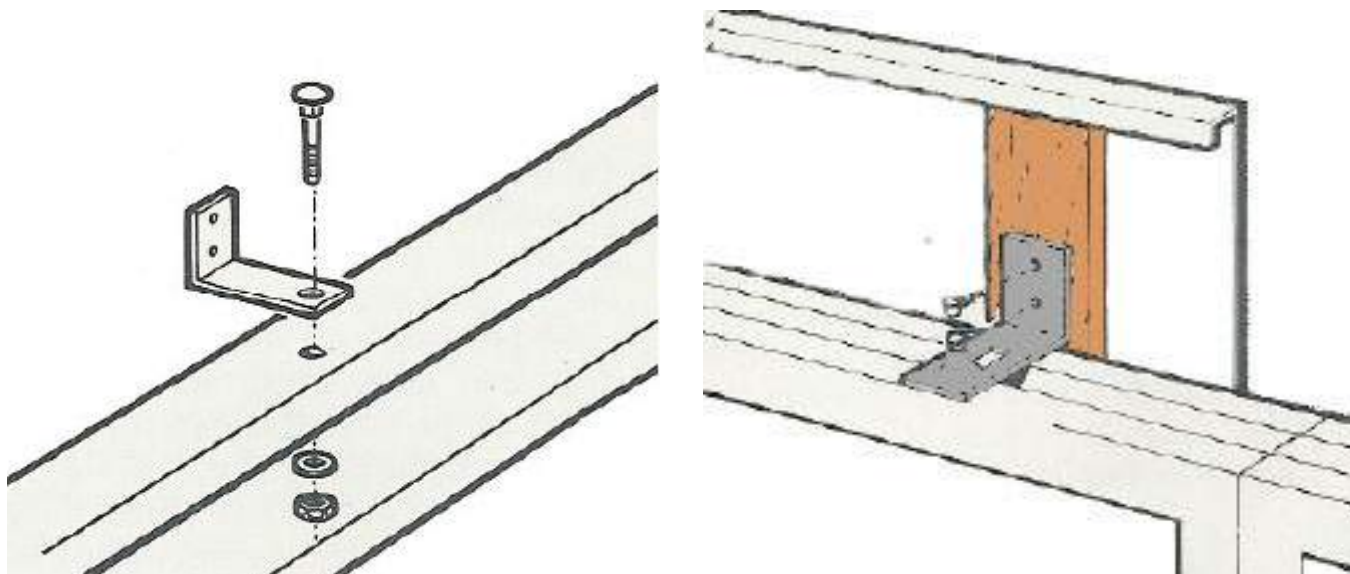
Timber fixing battens are slotted into the back of a fascia and can be slid along the length to align with the metal support brackets bolted to the walls and front lintel of the building. Fixings through each bracket into a batten are made with 5/8" number 8 CSK screws.

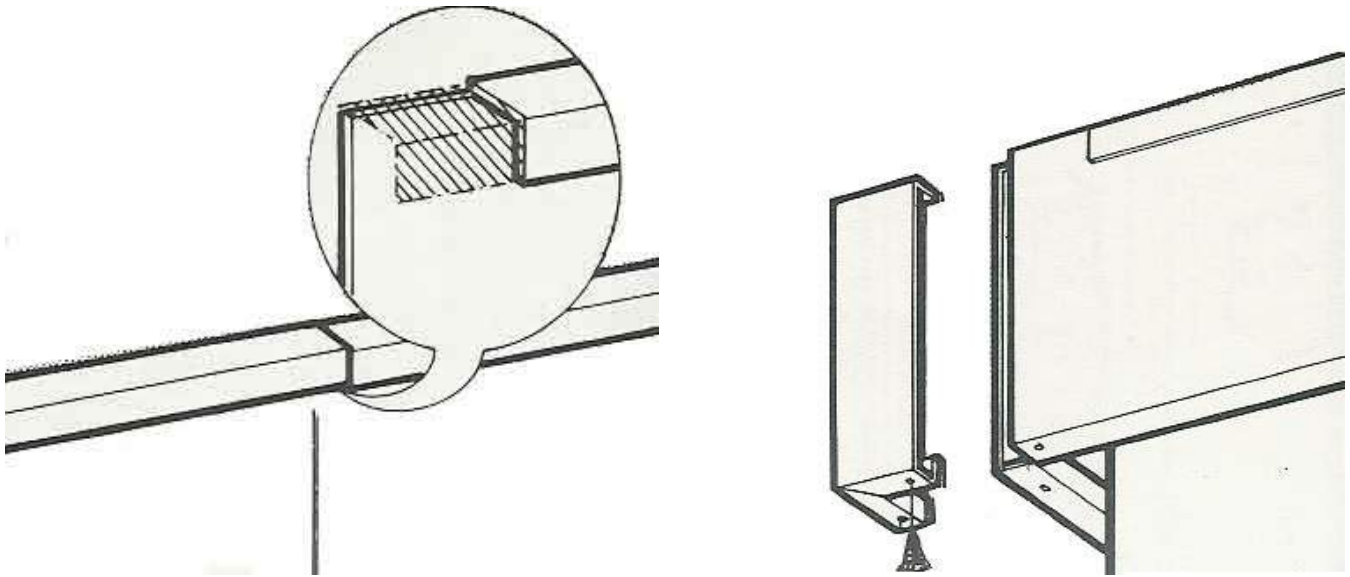
Where two or more pieces of fascia are required to make up the necessary length, an overlap will occur and it will be necessary, to neatly cut away the top edge of the hidden fascia with a hacksaw.



Front Fascia

Space four fascia brackets (**S41**) along the front lintel one at each end and the other two evenly spaced between them - fastening with one 65mm **Coach Bolt** per bracket.





Ensure that the lintel and purlin units are correctly positioned, firmly seated and securely fixed before proceeding.

Offer up the front fascia to the brackets, the bottom edge of the fascia level with the bottom edge of the lintel and an equal amount of projection of post at each side. Secure through the brackets into the battens.

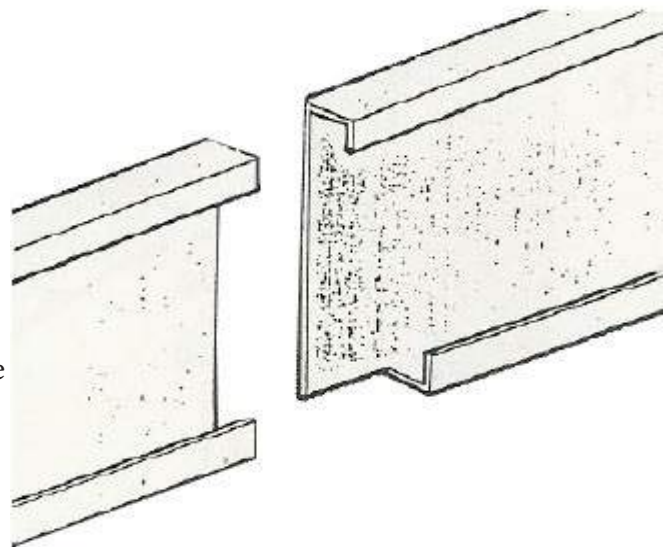
Side Fascia

Fix angle brackets 3" (75mm) from each end of the timber furring on both side walls. As for the front timber furring, allow approximately 1/2" (12mm) overhang of each bracket from the furring piece.

Space remaining brackets between fixed brackets and secure in a similar manner.

Where two or more fascia pieces are required to make up a length, it is necessary at their overlap to carefully cut the bottom of the lower fascia to allow it to slide inside the upper fascia.

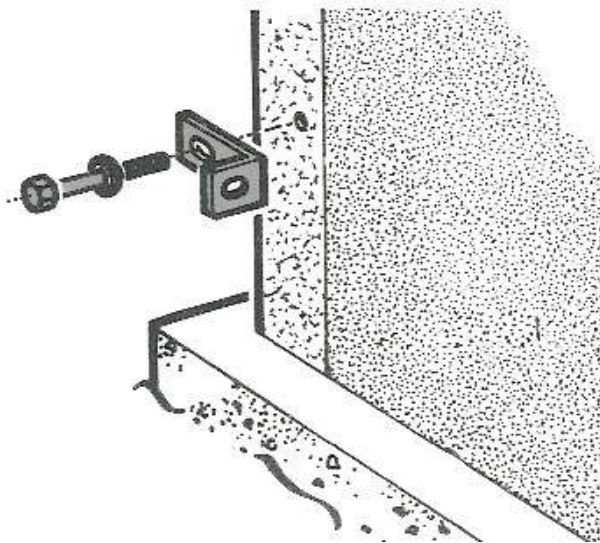
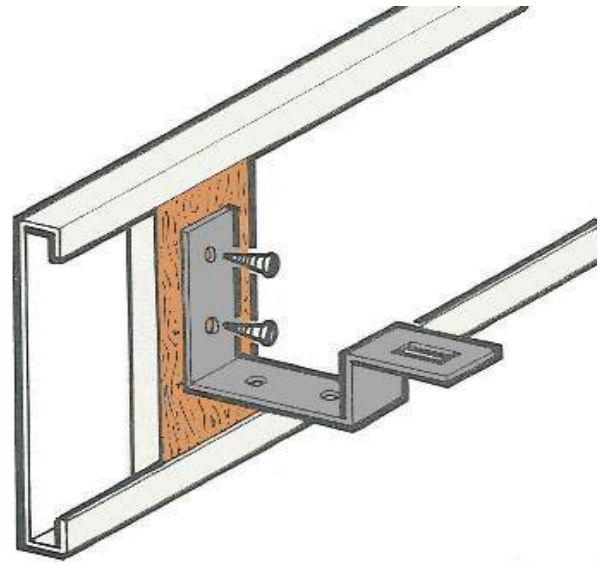
Fit wooden battens to the fascia to correspond with the positions of the brackets. Offer up the side fascia to the brackets and secure as for the front fascia.



Rear Fascia

Temporarily fix one bracket to the top of the panels at each end of the rear wall with 65mm **Coach Bolts** and space the remaining two brackets evenly between them.

Offer up the fascia to the brackets, aligning the height at each end with the side fascias, and establish the location of the battens and their bracket fixing holes. Withdraw the fascia and remove brackets from the wall. Secure the brackets to the fascia in the positions marked.



Corner Pieces

Where two fascias meet at a corner, fit the corner trim, drill two 1/8" diameter holes through the bottom edge of the trim and the fascia and secure with two 1/2" No. 8 **self tapped screws**. The galvanized corner capping should be fitted after the flashings have been secured.

Decide at which rear corner the downpipe is to be fitted as the guttering, when finally secured should be given a slight fall to the downpipe position.

Lay out the gutter components on the fascia in their correct order and using a string line to determine the fall available, position the front vinyl gutter brackets accordingly, securing each with two 5/8" No. 8 screws at not more than 3" centres to a batten.

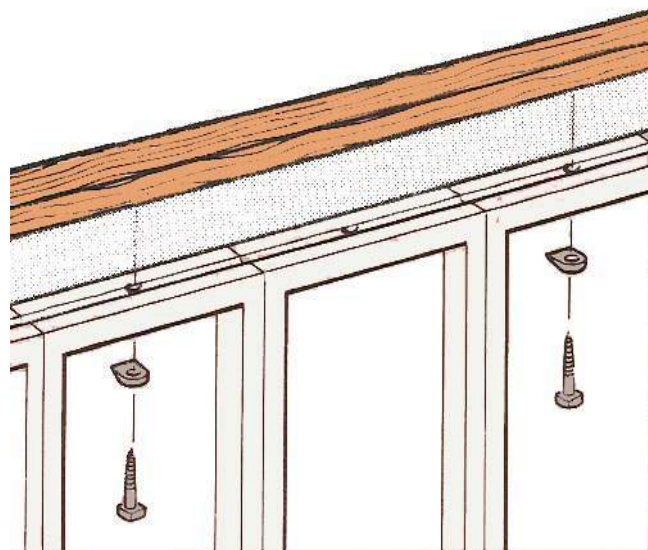
Bolt the complete fascia assembly to the rear wall and clip the length of guttering into the vinyl brackets, cutting to correct length where necessary with fine-toothed hacksaw. Where it has been necessary to cut a gutter to length, notches should be made at the ends to accommodate the gutter joint straps.

Wall Plate

Temporarily position a timber wall plate 3 3/8" (85mm) wide by 2" (50mm) deep on top of both flank walls. Each wall plate should be extended the full length of the wall and trimmed inwards approx 1" (25mm) from each to allow for the end trusses.

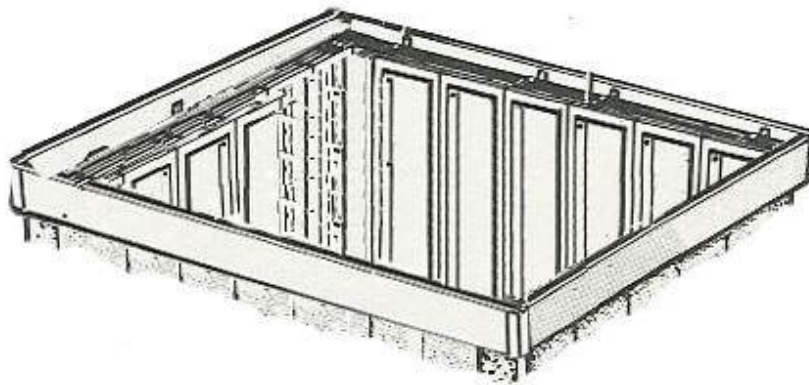
Note that each wall plate may be supplied as two separate pieces which are butted together on assembly.

Mark fixing hole positions in the timber through the holes in the tops of the panels at 2' 8" (800mm) intervals. Remove the wall plates and drill pilot holes 3/16" (4.5mm) diameter, into the timber approx. 1 1/2" (41mm) deep. Reposition the wall plate and fix with **coach screws** 3" (75mm) long and **tapered washers**.



Step 4

Attach your internal **ROOF TRUSSES** into position using the **COACH SCREWS** at **4ft INTERVALS** then prop them up so they are upright and attach your **TIMBER PURLINS** to the roof.

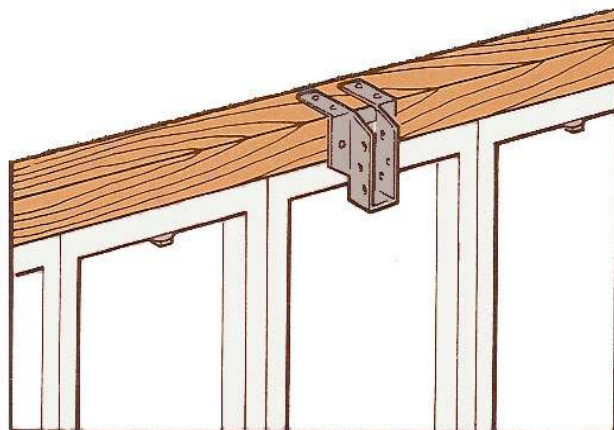


Truss Hangers

Place truss hangers on wall plate equidistantly along the wall plates at a maximum distance of 3'4" (1m) apart.

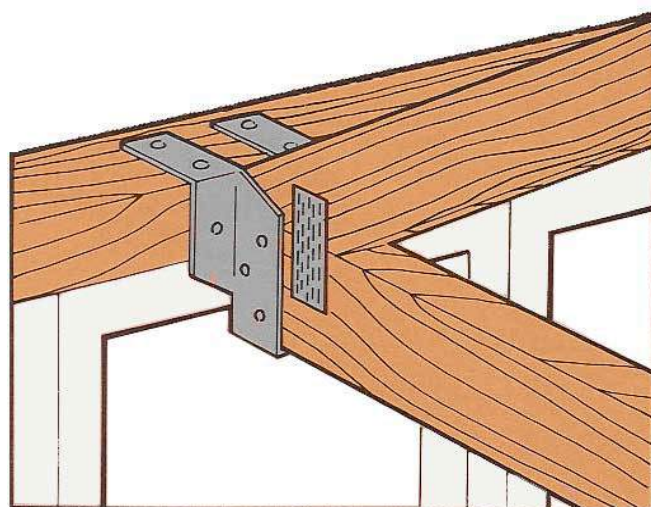
Ensure hangers on opposite walls are in line to ensure the intermediate trusses will be square to the walls.

Fix truss hangers by nailing **square twisted nails 1 1/2"** (40mm) long into the tops of the wall plates. The inside face of each truss hanger must be flush with the inside face of the wall plate.



Intermediate Trusses

Lower intermediate trusses into truss hangers and fix in position with **square twisted nails 1 1/2"** (40mm) long.



Purlin Brackets

Fix purlin brackets in **FOUR** positions on each end truss using studs and nuts provided. The brackets are fixed on the sloping sides only.

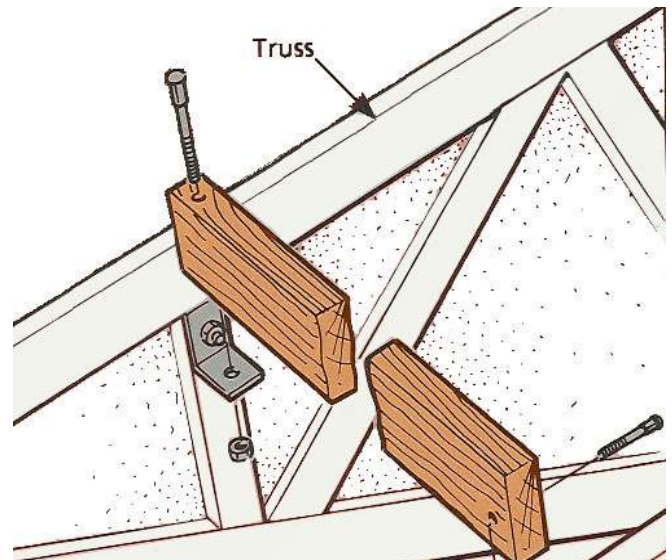
DO NOT fix brackets to the tower studs at the bottom of the truss at this stage.

If desired, purlin brackets may be fixed before end trusses are erected

Fixing Purlins

Fit purlins between end trusses and portal frames and between intermediate portal frames, to rest on the respective brackets. Purlins may need to be trimmed to length to ensure a proper fit. Mark through holes in the brackets and drill 1/2" (12mm) diameter clearance holes through the purlins.

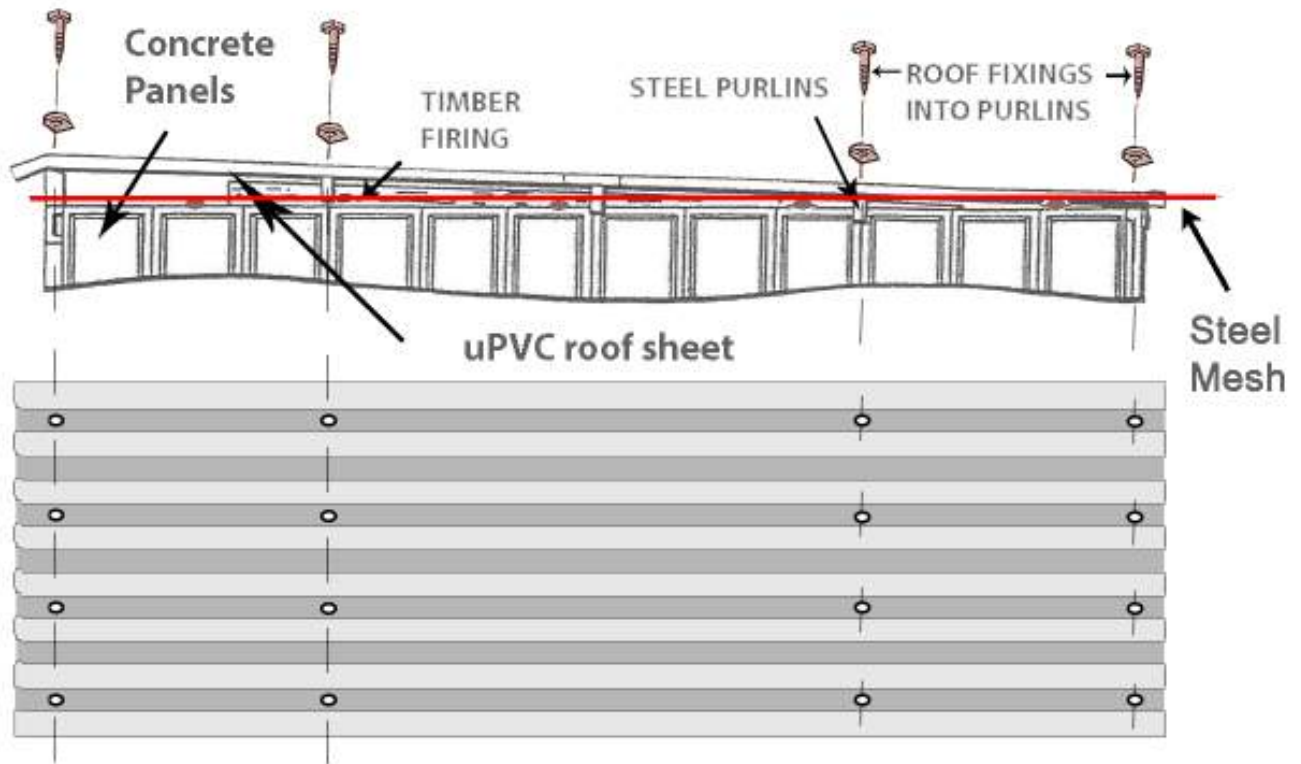
Fix purlins to the **TRUSS** and **PORTAL FRAME BRACKETS** with **coach bolts** 5" (125mm) long and nuts (truss) and 3" (75mm) long and nuts (portal frame).



Step 5

Now attach your uPVC fascia boards to the outside of your building, making the two ends flush with your front and rear fascia, then can.

Step 6



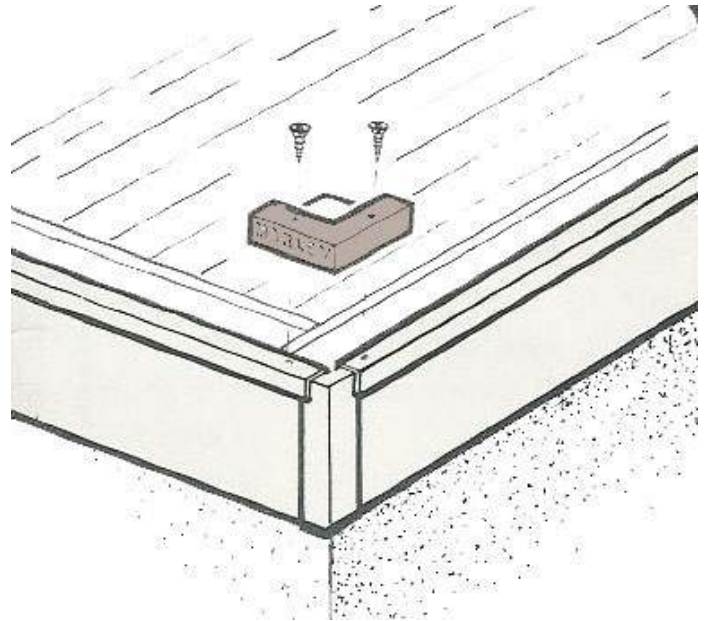
Roof Fixing Steps

1. Angled profile always sits to the front of the building with steel mesh fitted underneath.
2. Timber Wall Plate sits to sides, front & rear on top of the concrete panels, the angled firing strips are fitted to the sides with the slope from front to rear. The internal purlins are fitted across the width of the building. The uPVC fascia boards are fitted to the timber wall plates.
3. The roof sheets are fitted standing from the front left hand side. Both sides when completed should have a full corrugation overlap over the side of the building / fascia.
4. The roof sheets are lined to the front of the building and at each position of the front & rear wall plates and the internal purlins, roof fixings and washers are screwed down from the top of the roof into the supports. Do not overtighten as this may distort the roof sheet. **Each roof fixing should be fixed through the high point of the corrugation profile.**
5. A small pilot hole should be made with a drill to make sure the entry point for the fixing lines up with the support.
6. The fixings should be entered approx. every fourth corrugation across the width of the roof sheet. The next roof sheet should sit on top of the first sheet with at least a two corrugation overlap. The fixings should be applied through the high point of where the roof sheets overlap once the second sheet has been added.
7. Continue with the roof sheets until the width of the building has been reached, try to match the side overlap over the right hand side of the building keep the roof looking symmetrical.
8. Upon completion of screwing the roof fixings into the supports the fixing caps should be fitted over the fixing and washer to seal the fixing.

Flashing

Clip one length of **GALVANIZED** flashing to the top edge of the front fascia with the 7" flap horizontally on the roof sheeting and secured to the top edge of the fascia with **self-tapping screws**.

Drill 10mm (3/8") diameter fixing holes through the flashing and the roof sheeting to hook bolt the roofing to the front rafter.



Step 7

Once you have completed your roof attach the **FASCIA** to the overhead using the screws provided.

Step 8

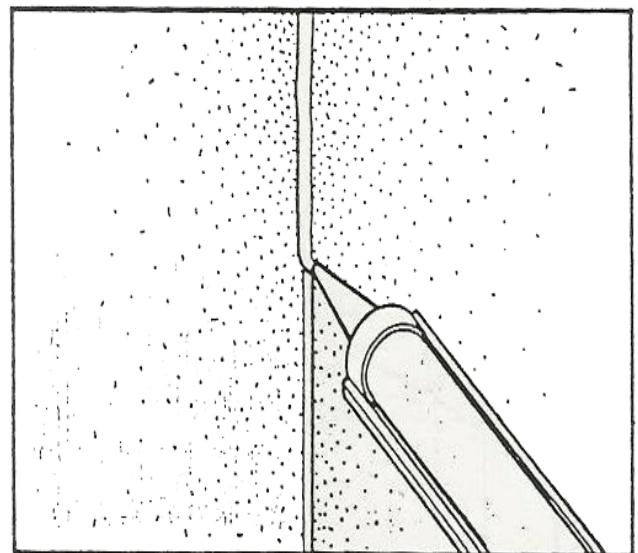
Exterior finish - Joints

Ensure joints are clear then seal external joints between panels by applying mastic with the gun provided. Cut the nozzle of the cartridge so that a bead of approximately 1/4" (6mm) is delivered.

After applying to the outside of all joints press finishing granules into the surface of the mastic.

NOTE

If the outside walls are to be separately finished with a textured weather coating, **DO NOT** apply a mastic filling.



Internal finish - Joints

Silicone all internal joints with clear silicone