

FIRATCO

Gable Homesheds[™]

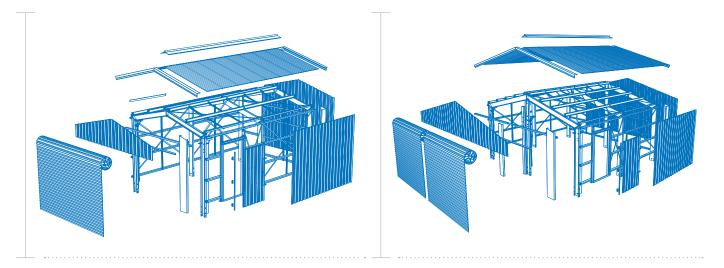
BEFORE YOU START

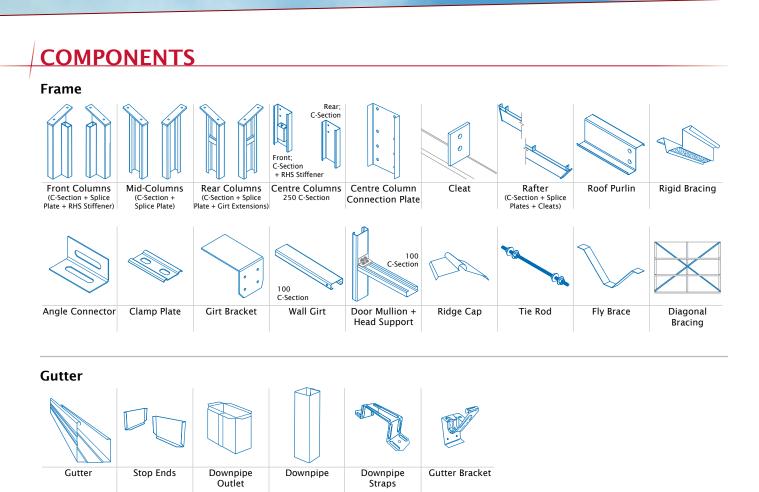
Council Approval

It is important to contact your local Council before building your Stratco Cyclonic (Region D) Gable Homeshed. You will have already received a Council Detail Sheet from Stratco, it is important to include a plan view of your Homeshed on this form. This view can be copied from Figure 1 on the bottom of page four of this installation guide. You must include the distances from the boundaries and existing buildings. Architectural drawings including shed elevations will also be provided for council application.

Before Starting

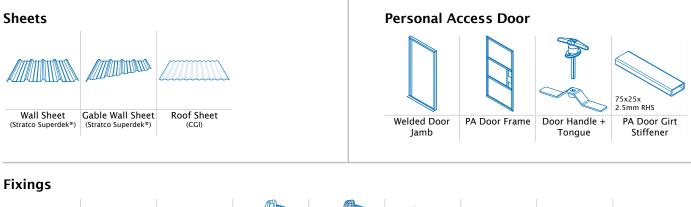
Confirm that all of the material listed on the delivery document has been supplied. Carefully read these instructions to ensure you are familiar with all the steps involved. Take special consideration when reading the "Important Note for Cyclonic Conditions" on page three, as preparation for a high wind load event, prior to the event, is vital for the safety of anyone within the vicinity of the Homeshed in such an event. Ensure you have the correct tools and equipment for the job as listed on page four of this guide under the "Tools Required" section.







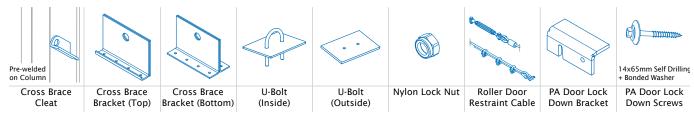






COMPONENTS Flashings A = Door B = WallC = Door PA Door Barge Cap Roller Door Corner Flashing Front Corner Centre Column **Raking Angle** PA Door Angle PA Door Header Flashing Flashing Flashing Flashing

High Wind Load Condition Fixings



IMPORTANT NOTE FOR CYCLONIC CONDITIONS

It is highly recommended that the "High Wind Load Condition Fixings" be installed as part of the installation process. Once the installation of the Homeshed is complete the U-bolt components will need to be removed and stored in an easy to access location. To provide access to the Homeshed the roller door restraint cables need to be released by unfastening one D-shackle on each roller door restraint cable from the cross brace cleats, and the roller door restraint cables then be stored neatly beside the roller door/s. If a Personal Access (PA) door is installed, the PA door lock down bracket will need to be set to an 'open' position to provide access to the Homeshed through the PA door.

With this preparation the final steps to prepare the Homeshed for a high wind load event will take approximately 15 minutes. Always leave ample time to prepare the Homeshed in a high wind load event.

Predicted High Wind Load Situation

The following components are required for the final preparation of the Homeshed in a high wind load situation;

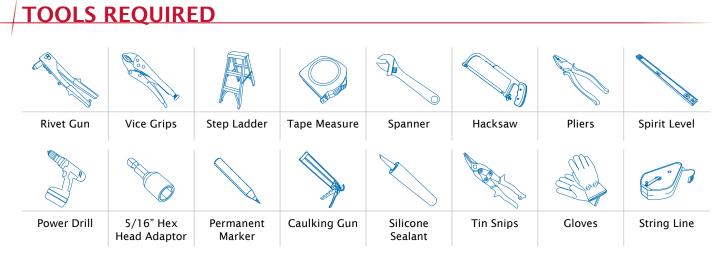
- Ladder
- · Gloves
- · U-Bolt (Inside)
- · U-Bolt (Outside)
- · Nylon Lock Nut
- · Roller Door Restraint Cables
- · PA Door Lock Down Brackets
- · PA Door Lock Down Screws

See the section "Roller Door Bracing Preparation" towards the back of this guide for the location of the relevant components when bracing the roller door/s. The U-bolt is to be fixed in place to the roller door/s, using the pre-drilled holes. The roller door restraint cable/s are fed through the U-bolt/s and connected via the D-shackle to the cross brace cleats. Ensure the roller door restraint cables are still under tension once fixed to the cross brace cleats.

If a Personal Access (PA) door has been installed see "PA Door Bracing Preparation" towards the back of this guide for the location of the relevant components. The PA door lock down screw that will align with the slot on the PA door lock down bracket will need to be loosened in order to allow the bracket to slide down behind it. Once the bracket is in place the loosened screw is to be tightened to fix the bracket in place. Repeat for the second bracket.

Absentee Situations

It is recommended the Homeshed is braced as described in this guide as a preventative measure when people will be absent from the Homeshed during a season with potential for high wind loads.



SITE PREPARATION

Determine the position of the Homeshed. If the ground is uneven or sloped, ensure that the slope does not exceed more than 150mm.

Mark out the footing hole locations as specified in Figure 1 and Table 1. Check that the corner to corner measurements ("F" in Figure 1) are equal to ensure the Homeshed is square.

(Note the dimensions are listed in metres).

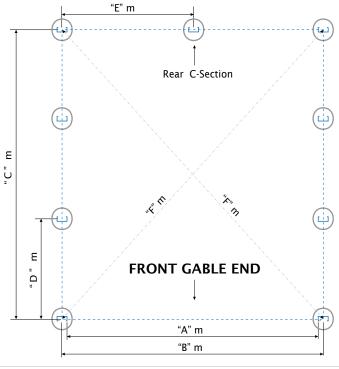


Figure 1

Size	Width x Length (m) Overall *	A Internal Spacing	B Column Spacing	C Column Spacing	D Column Spacing	E Centre Column Spacing	F Corner to Corner
C46	4.3 x 6.1	3.6	3.80	6.00	3.00	-	7.10
C47	4.3 x 7.6	3.6	3.80	7.50	2.50	-	8.41
C49	4.3 x 9.1	3.6	3.80	9.00	3.00	-	9.77
C66	6.9 x 6.1	6.1	6.35	6.00	3.00	3.18	8.74
C67	6.9 x 7.6	6.1	6.35	7.50	2.50	3.18	9.83
C69	6.9 x 9.1	6.1	6.35	9.00	3.00	3.18	11.02
C86	8.0 x 6.1	7.2	7.45	6.00	3.00	3.73	9.57
C87	8.0 x 7.6	7.2	7.45	7.50	2.50	3.73	10.57
C89	8.0 × 9.1	7.2	7.45	9.00	3.00	3.73	11.67

FOOTING HOLE SPACING

* Note: Width and length measured to outside of wall cladding.

FOOTINGS

Dig the footing holes as specified. For footing with no concrete slab refer to Figure 2, or for footing with concrete slab refer to Figure 3. Arrange footing inspection by your Private Certifier.

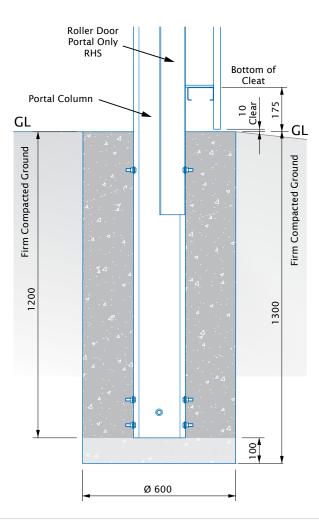
If a slab is to be included reinforce the perimeter edge beam with trench mesh (see Figure 3). The trench mesh is to have a minimum reinforcing of four bars at no less than 11mm diameter (L11M4). The slab must be a minimum of 100mm deep. Refer to Figure 3.

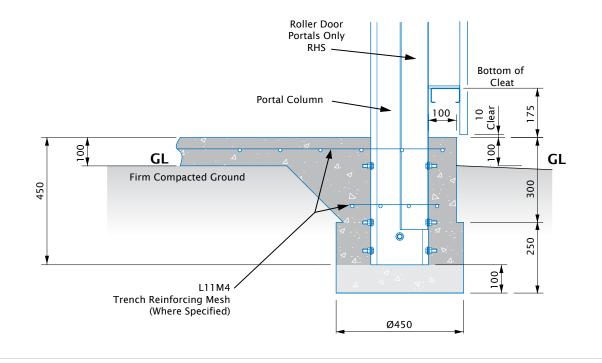
Ensure the M12x30 flanged purlin bolts shown in Figures 2 and 3 are installed in the columns prior to the pouring of any footings.

Ensure the footing holes are level and in line with each other. Use string line and a spirit level to determine this. Measure each hole depth to ensure the Homeshed will stand level when the walls are placed in position.

Fill the base of each hole with approximately 100mm of concrete. This will ease settlement and make up the distance between the base of the column and bottom of the hole.

The design assumes the soil has a cohesive skin shear (friction capacity) of at least 25kpa. The specified foundations are only suitable for slightly reactive (type 'S') and moderately reactive (type 'M') soil types.





CONSTRUCTING THE WALLS

Wall Frames

The number of columns for one wall:

6.1m long	= 3 columns
7.6m long	= 4 columns
9.1m long	= 4 columns

Depending on the length of your Homeshed, lay three or four columns on the ground making sure the open side of each column is facing the correct way as illustrated in Figure 1.

As a general rule, the open side of each column will face the rear of the Homeshed, except for the front columns which face the front of the Homeshed. Refer to Figure 4.

Please note that the columns have welded cleats at every wall girt to column connection, and welded splice plates at the rafter to corner connection. At this stage, the columns must have the cleats facing up.

Diagonal Wall Bracing

Before installing wall girts refer to the diagonal wall bracing details in section "Wall and Roof Bracing" found on page 12.

Wall Girts

The wall girts have been pre-punched at each wall girt to column connection.

Place the wall girts across the columns and match the pre-punched holes with the cleat holes. Refer to Figure 4.

Fasten the girts to the columns with two M12x30 flanged purlin bolts through each cleat.

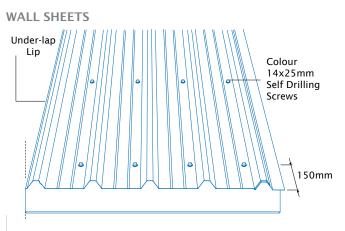
The girts are to attach below each cleat. Refer to Figure 4.

Wall Sheeting

Ensure the framework is square and the diagonal measurements are equal. Start laying the sheeting from the back-end of the Homeshed, to make sure the overlap seam is not visible from the front of the Homeshed. Ensure the top edge of the wall sheets are parallel with and spaced 150mm above the top edge of the top wall girts, as illustrated in Figures 4 and 5. This will prevent any rubbing between the wall and roof sheets while ensuring there is no visible gap.

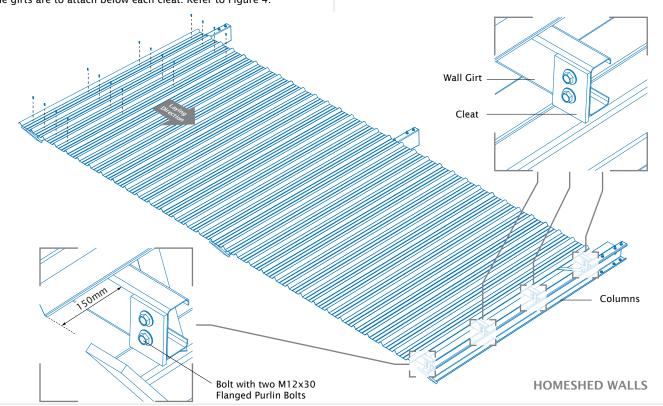
Pan fix the Stratco Superdek[®] wall sheets with colour 14x25mm self drilling screws at every girt junction. The sheets are laid with the short rib overlapping. Before fastening all screws, run a string line from both ends of the wall panel through the centre of the girts to ensure all the screws will be fastened in line.

Check the wall frame remains square as the wall sheets are fixed.



Ensure top edge of sheet is parallel with edge of wall girts.

Figure 5



PERSONAL ACCESS (PA) DOOR

If you are installing a PA door, the door location must be a minimum of 815mm from the Homeshed corners.

Diagonal Wall Bracing

Before installing wall girts refer to the shortened diagonal bracing in the first bay, that will contain the PA door, in section "Wall and Roof Bracing" found on page 12.

PA Door Installation

Fix the wall sheets on each side of the proposed door location with colour 14x25mm self drilling screws. Once the wall sheets have been fixed, cut the middle and bottom wall girts with a hacksaw, creating a minimum 1200mm clear opening between cuts (Figure 6.1). Do not cut the top wall girt. Position the 75x25x2.5mm RHS PA door girt stiffener centrally within the bay containing the PA door and screw it to the top wall girt with plain 14x25mm screws at 300mm centres (Figure 6.2).

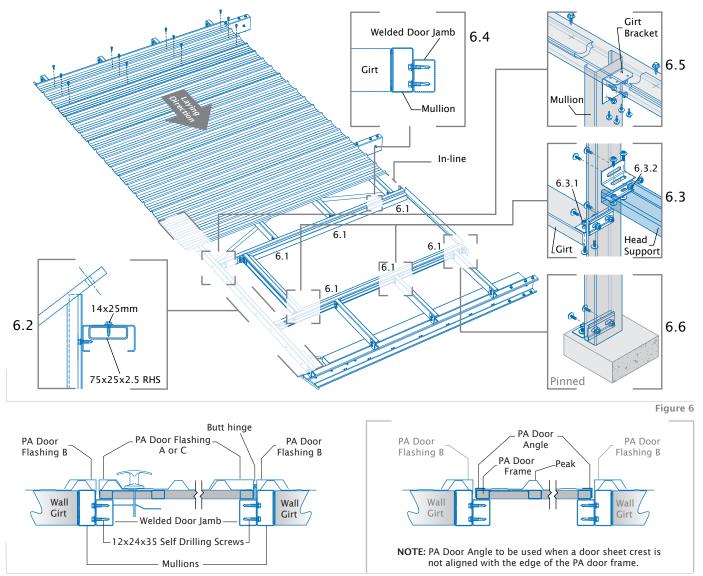
Secure the first mullion to the bottom and middle girts with angle connectors and clamp plates (Figure 6.3.1). Fix the 100 C-section head support to the welded door jamb through the top of the 100 C-section head support into the top of the welded door jamb.

Position the welded door jamb assembly so the bottom of the door jamb is in line with the bottom of the wall sheet, then fix to the first mullion with plain 14x25mm self drilling screws at maximum 450mm centres (Figure 6.4). Position the second mullion between the welded door jamb and cut girts, then fix to the welded door jamb before securing the second mullion to the wall girts with angle connectors and clamp plates. Fix the 100 C-section head support to both mullions (Figure 6.3.2), then secure the mullions to the RHS PA door girt stiffener with girt brackets and plain 14x25mm screws (Figure 6.5).

Pan fix wall sheets to the PA door frame with colour 14x25mm self drilling screws. Fix the PA door flashings with 12x20mm self drilling screws at 600mm centres. Refer to Figure 7.

Determine which way the door will swing. The PA door frame will be provided with butt hinges that are pre-welded in position. Fix the hinges to the door mullion with 10×16 mm wafer head screws.

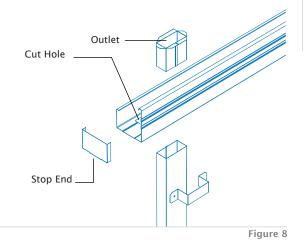
Cast door mullions into footing prior to slab pouring according to the "Footings" section of this guide, or fix with two M10 chemset fixings through the angle connector and clamp plate after the slab is poured (in this case cut back the mullions to suit) (Figure 6.6).



GUTTER INSTALLATION

Constructing the Gutters

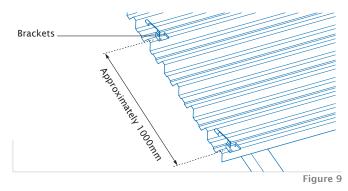
Rivet a left and right hand stop end to each length of gutter. Seal with silicone. Cut a hole for each downpipe outlet and rivet the outlet into position (refer to Figure 8). Seal with silicone.



Gutter Brackets

Crest fix the gutter brackets to the wall sheets at approximately 1000mm centres with 10x16mm self drilling screws (see Figure 9). Allow for a slight fall towards the downpipe end so the water can flow freely.

Once the gutter brackets have been installed, roll the gutter bead onto the gutter bracket and clip the back of the gutter into position.



REAR WALLS AND ROOF INSTALLATION

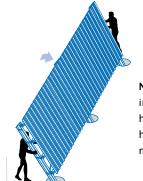
Standing the Wall Frame

Stand the completed wall frame in the footing holes (Figure 10) and temporarily brace it. Make sure the wall is level and square.

Repeat the previous steps for the other side wall frame. Stand the two wall frames in the holes and brace them securely.

Rafters

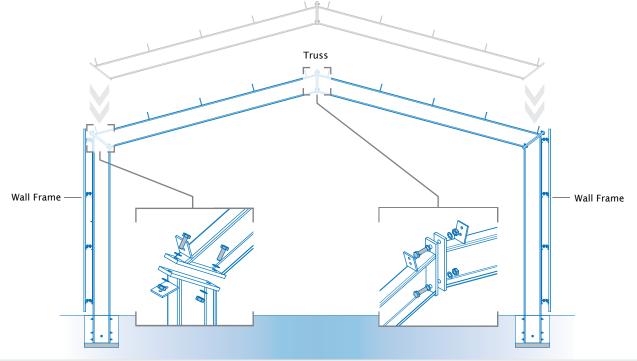
The rafters are bolted together on the ground. Lay two rafters out, making sure you use a left and a right rafter. The C-section opening on each rafter should open on the same side, and the purlin cleats should point up.



STANDING THE WALL

Note: Assembled components can weigh in excess of recommended safe manual handling limits. Mechanical aids, manual handling equipment and techniques may be required to move and position.

Figure 10



REAR WALLS AND ROOF INSTALLATION

Bolt the rafters together by lining up the splice plate holes. Use a M16x20 hex head bolt for single roller door Homesheds sized 4.3m wide, or M20x60 hex head bolt for double roller door Homesheds sized 6.9m or 8.0m wide, in each hole and tighten (refer detail Figure 11).

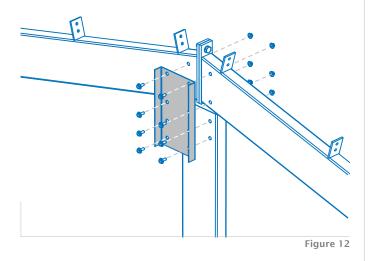
Roof Truss

Use a person on each end of the rafter frame to lift the frame into position. Bolt the rafter corner splice plates to the column splice plates with M16x20 hex head bolt for single roller door Homesheds sized 4.3m wide, or M20x60 hex head bolt for double roller door Homesheds sized 6.9m or 8.0m wide (refer to Figure 11).

Attach all the intermediate trusses first for stability, then the front and rear trusses as previously described.

Centre Columns

If your Homeshed is 6.9m or wider, attach the front and rear centre columns to the appropriate trusses with eight M16x20 hex head bolts for single roller door Homesheds sized 4.3m wide, or M20x60 hex head bolt for double roller door Homesheds sized 6.9m or 8.0m wide, as illustrated in Figure 12.



Rear Wall Girts

Check the frame is square and level before fixing the rear wall girts.

Use the pilot holes on the girt brackets to hold the bracket in place before fixing the girts to both columns and centre column (if applicable) with four plain 14x25mm self drilling screws as illustrated in Figure 13.

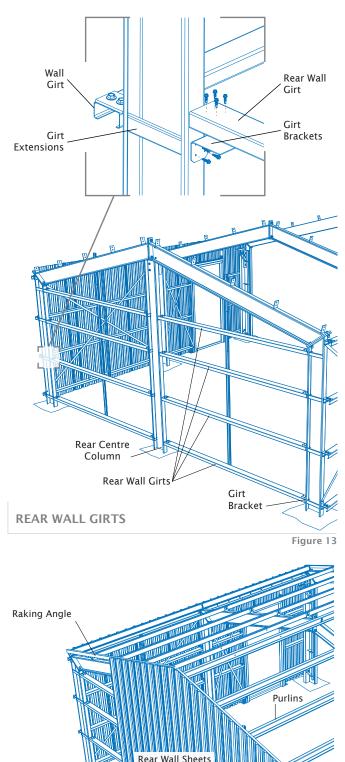
Ensure girt brackets are in line with the cleats, as the girt should be in line with the girt extensions found within the rear columns.

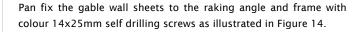
Purlins

Ensure the Homeshed is square. Position the roof purlins across the rafters, match the pre-punched holes with the rafter cleats and bolt into position with one M12x30 flanged purlin bolt per hole.

Gable Wall Sheets

Before fixing the gable wall sheets, locate the raking angle so it sits on the edge of each purlin, following the roof line. Screw the raking angle to each purlin with one 12x20mm self drilling screw.





GABLE WALL SHEETS

REAR WALLS AND ROOF INSTALLATION

Footings

Check the alignment of the walls with a string line. Pour the concrete footings around the column base and allow 24 hours before removing any braces.

Roof Sheets

Fix the roof sheets, starting from one end of the Homeshed. Sheets should be laid into the prevailing wind.

Crest fix the roof sheets with CGI 14x42mm self drilling screws with cyclonic washer assembly. Fix the CGI sheet on every peak at each end support, and every second peak at each internal support.

Ensure the first sheet is square with the frame and that the roof sheets overhang into the gutter by approximately 50mm.

Turn the valley flute of every corrugated roof sheet upwards at the ridge, as illustrated in Figure 15. This will aid in water proofing the Homeshed.

ROLLER DOOR COLUMNS

The Region D Homesheds come with partially assembled front columns. The additional column on-site assembly details have been indicated as per Figure 17.

Bridging Members

The 2.7m high Homeshed has three bridging pieces that require welding between the gussets for centre columns, and between gussets and RHS stiffener for corner columns. The 3.0m high Homesheds have four bridging pieces.

The welds required are shown in Figure 17 in Details A and B, with weld details marked C1, C2, C3.

- C1: 2mm fillet weld the small bridge piece to both the gusset and RHS stiffener as shown.
- C2: 3mm fillet weld between the roller door guide and column, 50mm long and centred around the roller door guide lugs.
- C3: 2mm fillet weld the large bridge piece to both the roller door guide lugs and column as shown.

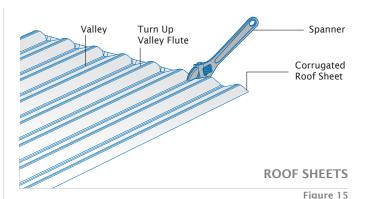
Roller Door Support Bracket/s

On the corner column locate the roller door support bracket against the RHS stiffener as shown in Figures 16 and 17. Slide the roller door support bracket upwards until it touches the portal splice plate (see Figure 16), then fix to the column with five Series-500 12x38mm screws.

Header Beam

The RHS header beam is installed only at the front end of the Homeshed above the roller door openings. It is to be located so the face of the RHS header beam is flush with the outside front face of the portal frame. This will allow the front wall cladding to be fixed with a neat appearance.

The bottom of the RHS header beam must be 160mm lower than the axle support arm of the roller door support bracket. Install the RHS header beam with a girt bracket each end and four plain 14x25mm self drilling screws on each leg of the bracket.



If it is necessary to walk over roof sheets, ensure that you walk over the purlins to avoid any damage.

Wear flat, rubber soled shoes and walk flat footed, spreading your weight over as many corrugations as possible.

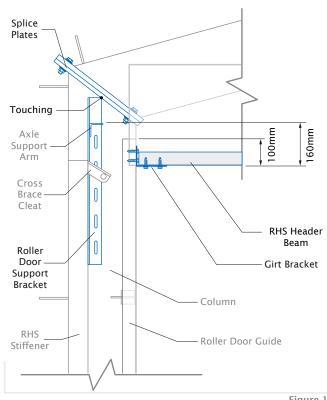


Figure 16

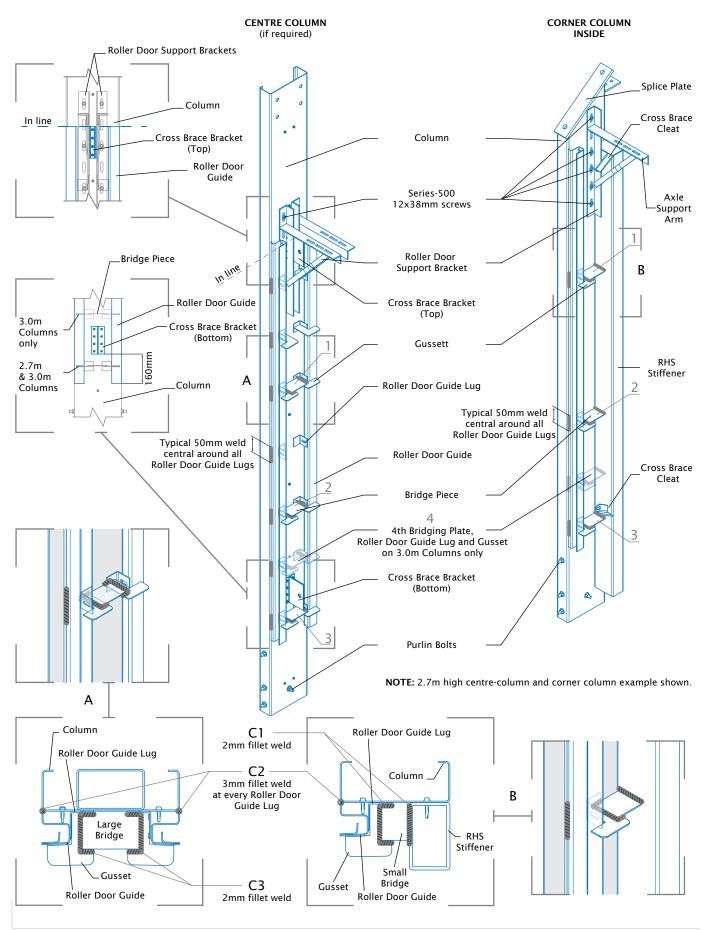
The top of the roller door guide is located 100mm above the bottom of the RHS header beam.

If there is a second roller door, repeat the process to install the second header beam.

Ensure purlin bolts are installed prior to the pouring of any footings.

Install the roller door as per the manufacturer's instructions.

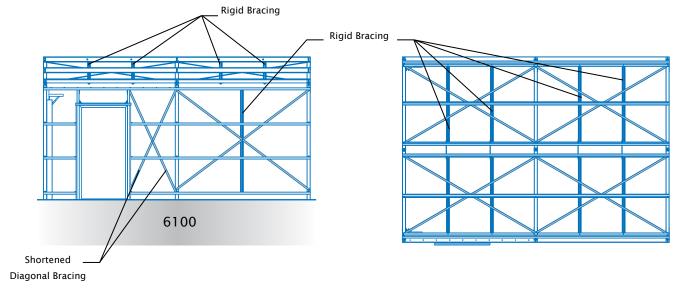
ROLLER DOOR COLUMNS

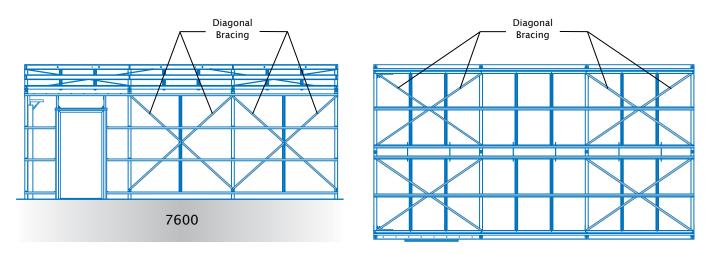


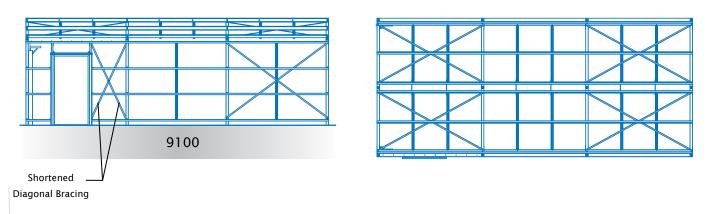
WALL AND ROOF BRACING

Check the Homeshed is square and level. Fix diagonal bracing to each end wall and roof bay as per Figure 18. If necessary, shorten strapping beside PA door jamb as per Figure 18. Fix rigid bracing to the middle of the wall bays.

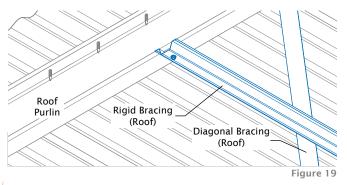
Fix two rows of rigid bracing to each roof bay making sure they are evenly spaced within the bay.

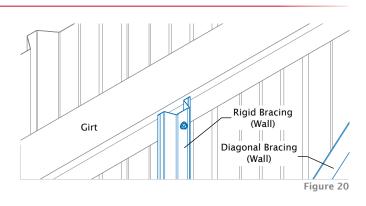






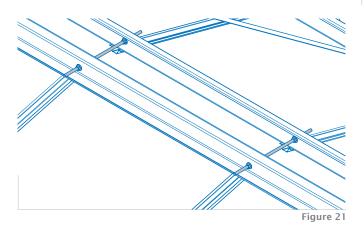
WALL AND ROOF BRACING



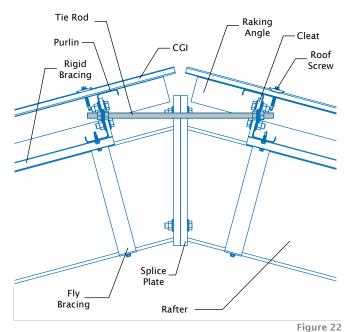


TIE RODS

Place tie rods at the same intervals as the roof bay rigid bracing.



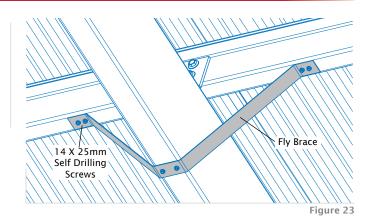
Predrill roof purlins in line with ceiling rigid bracing and secure each tie rod with washers and nuts both sides of the purlin web.



FLY BRACING

If your Homeshed is over 6.9m wide there is a requirement for fly bracing to be fixed to the internal portals at every second roof purlin, beginning from the ridge.

Ensure there are two plain 14x25mm self drilling screws at each connection and that the fly bracing spans at 45° on either side of the roof purlin.



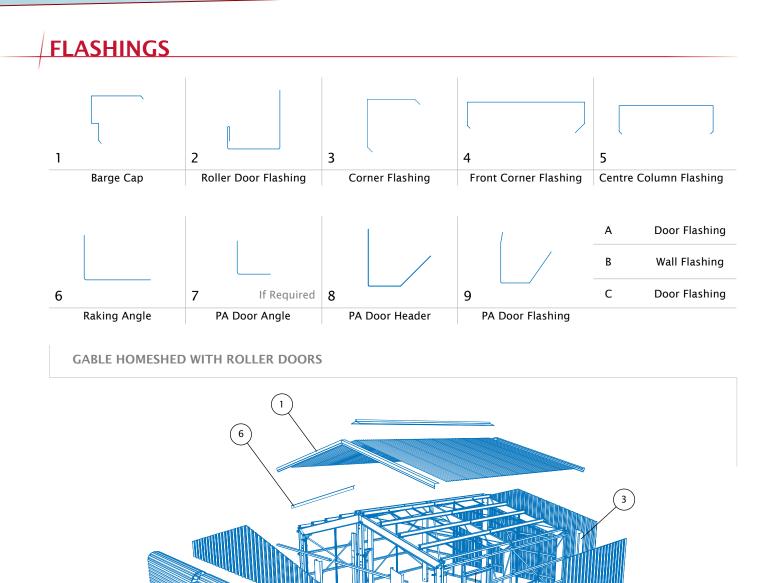
FLASHINGS

All flashings are to be fixed with 12x20mm self drilling screws. Fix the front and rear corner flashings at 600mm centres.

Ridge and Barge Cap Installation

Fix the front and rear barge caps to the roof sheets. Lap the barge caps at the ridge line and trim the outside piece to a vertical edge for a neat appearance.

Similarly, fix the ridge cap to the roof sheets with the ridge 14x42mm self drilling screws at every ridge.



DOWNPIPES

Slide the small end of one downpipe into the big end of the other.

Rivet the downpipe at the back, then use a hacksaw to cut to the desired length.

Fix the downpipe to the existing outlet using rivets, then use downpipe straps to fix the downpipe against the wall using 14x25mm self drilling screws.

7 or 9A or 9C

9B

Figure 24

ROLLER DOOR BRACING PREPARATION

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During cyclonic weather conditions the roller door/s are to be braced with the hardware provided as per Figure 25.

The roller door restraint cables are to be fixed and stored in preparation for a high wind load situation.

For Homesheds less than 6.9m wide the roller door restraint cable is to be fed through the U-bolt and fixed corner to corner of the roller door, acting as a cross brace.

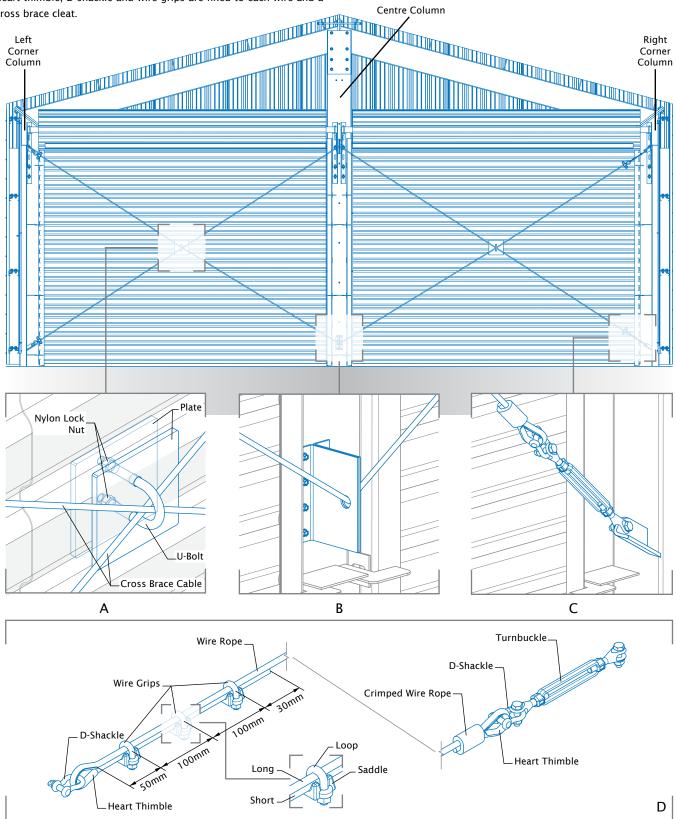
For Homesheds over 6.9m wide the cables are also to be fed through the U-bolt and fixed as shown in Figure 25.

ROLLER DOOR BRACING PREPARATION

Fix the roller door restraint cable in place and use the point where the two cables cross to mark where to install the U-bolt.

In order to fix the roller door restraint cable to the cross brace cleats on Homesheds over 6.9m wide (see Figure 25), the open end of one restraint cable is fed through the bottom cross brace bracket, and the other restraint cable through the top cross brace bracket before the heart thimble, D-shackle and wire grips are fixed to each wire and a cross brace cleat. When installing the wire grips it must be ensured that the loop component of the wire grips is on the long section of the wire and the saddle component is on the short end of the wire (Figure 25 Detail D).

Once the roller door restraint cable is fixed to all cross brace cleats with the D-shackles, tension the restraint cable by rotating the turnbuckle until all slack is removed from the restraint cable.



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ROLLER DOOR BRACING PREPARATION

In order to install the U-bolt two holes must be drilled through the roller door. These two holes are to be 2mm larger in diameter than the pins of the U-bolt. The U-bolt can be positioned either horizontally, or vertically as shown in Figure 25 Detail A, taking into consideration the profile of the roller door and the point where the two roller door restraint cables cross.

Use a rubber backing to protect the roller door from the U-bolt plates before fixing the U-bolt in place with a nylon lock nut.

After the initial installation of the roller door restraint cables, it is suggested that the restraint cables are left partially connected to the cross brace cleats on Homesheds 4.3m wide, or partially connected to the cross brace brackets on Homesheds over 6.9m wide, with the excess cable neatly stored next to the roller door/s in preparation for a high wind load event.

The U-bolt and nylon lock nut must be removed from the roller door and should always be stored in an easy to reach location, in order to assist rapid access to these components in the scenario of minimal warning before a high wind load situation.

PA DOOR BRACING PREPARATION

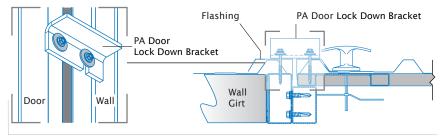


Figure 26

In preparation for high wind load conditions the PA door lock down brackets should be installed, but left in an open position. The direction that the PA door has been installed to open will determine which Homeshed component the lock down bracket will be permanently fixed to.

The PA door lock down bracket is fixed at one quarter and three quarter points of the door height with two 14x65mm self drilling screws with bonded washer. The PA door lock down bracket is aligned and secured between the PA door and Homeshed wall.

In order to set the PA door lock down bracket in an open position, loosen the 14x65mm self drilling screw that is located in the slot section of the PA door lock down bracket. Rotate the lock down bracket so it is no longer behind the screw head, then retighten the screw so it is not a catching point. In high wind load conditions reverse this process to secure the PA door with the PA door lock down bracket.

MAINTENANCE

Your Stratco Cyclonic (Region D) Gable Homeshed will maintain its good looks for even longer with a simple wash and wipe down with a soft broom. Stratco Homesheds are produced from the highest quality materials and will provide many years of service if the important recommendations set out in the Stratco 'Selection, Use and Maintenance' brochure are followed.

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