

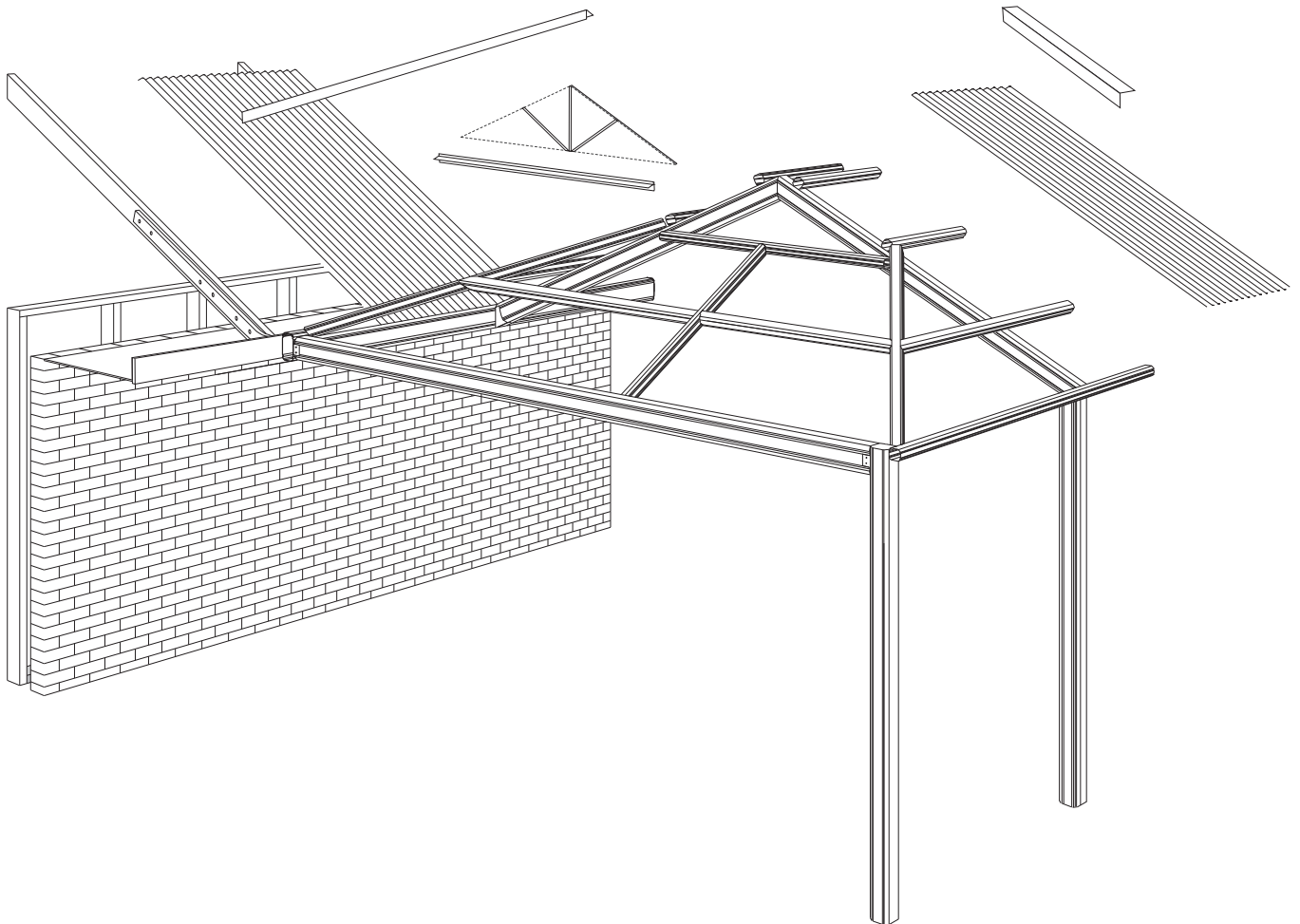
DUTCH GABLE ATTACHED PATIO AND CARPORT

STRATCO OUTBACK[®] ASSEMBLY INSTRUCTIONS.

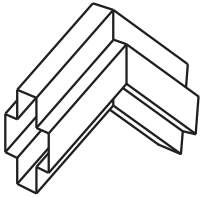
Your complete guide to building an ATTACHED Outback[®] DUTCH GABLE PATIO or CARPORT

BEFORE YOU START

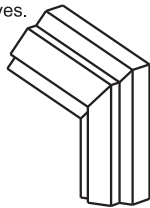
Carefully read these instructions. If you do not have all the necessary tools or information, contact Stratco for advice. Before starting lay out all components, and check them against the delivery docket. The parts description identifies each key part. The component location diagram indicates their fastening position.



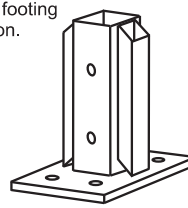
RIDGE KNUCKLE
Slots inside the gable rafters to form connection at the ridge.



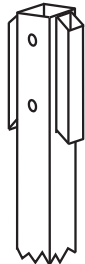
EAVES KNUCKLE
Slots inside gable rafter and column to form connection at the eaves.



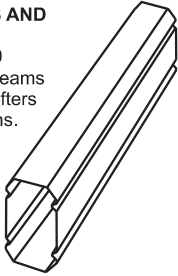
FOOTING PLATE
Slots inside column to form on concrete footing connection.



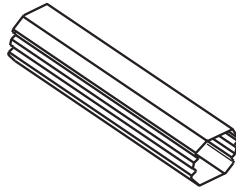
FOOTING KNUCKLE
Slots inside column to form an in ground footing connection.



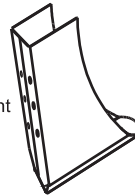
COLUMNS AND RAFTERS
Pre cut 120 Outback® beams make up rafters and columns.



PURLINS
Purlins provide support for cladding.



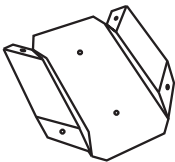
RAFTER TO VALLEY BRACKET
This bracket fastens the rafter to the 150 attachment beam.



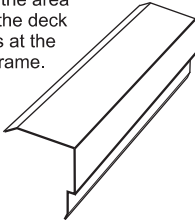
ALUMINIUM SPACERS
16mm Spacers are used to prevent the beam from crushing.



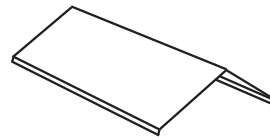
HIP PLATE
Connects purlins to the hip rafter.



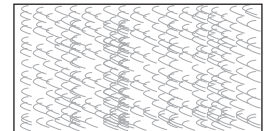
BARGE CAP
The barge cap covers the area where the deck finishes at the portal frame.



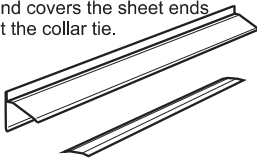
RIDGE CAP
This flashing covers the roof sheets at the gable ridge.



INFILL PANELS
Sufficient number of sheets are provided, from which the required infill panels can be cut.

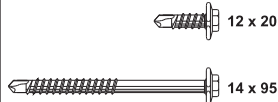


WEATHER STRIP
Supports the infill panel and covers the sheet ends at the collar tie.

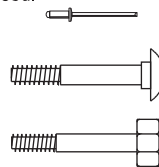


PANEL STRIPS
Panel strips attach to the infill panel where applicable.

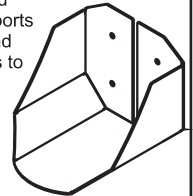
HEX HEAD SELF DRILLING SCREWS
Screw types vary depending upon the connection, ensure correct screws are used.



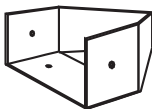
BOLTS AND RIVETS
Bolt types vary depending upon the connection, ensure the correct fixings are used.



68 mm PURLIN BRACKET
This bracket fastens end purlin supports in place and end purlins to end purlin supports.



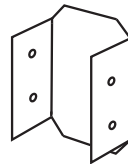
SEATED CONNECTION
Fastens hip rafters to end frame.



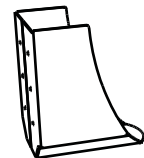
FINIAL (GABLE SPIRE)
Provides decoration at the apex of the end frame.



PERGOLA WALL BRACKET
Fastens 120 end rafter to end frame.



RIDGE RAFTER BRACKET
Connects ridge beam to rafters on a gable.



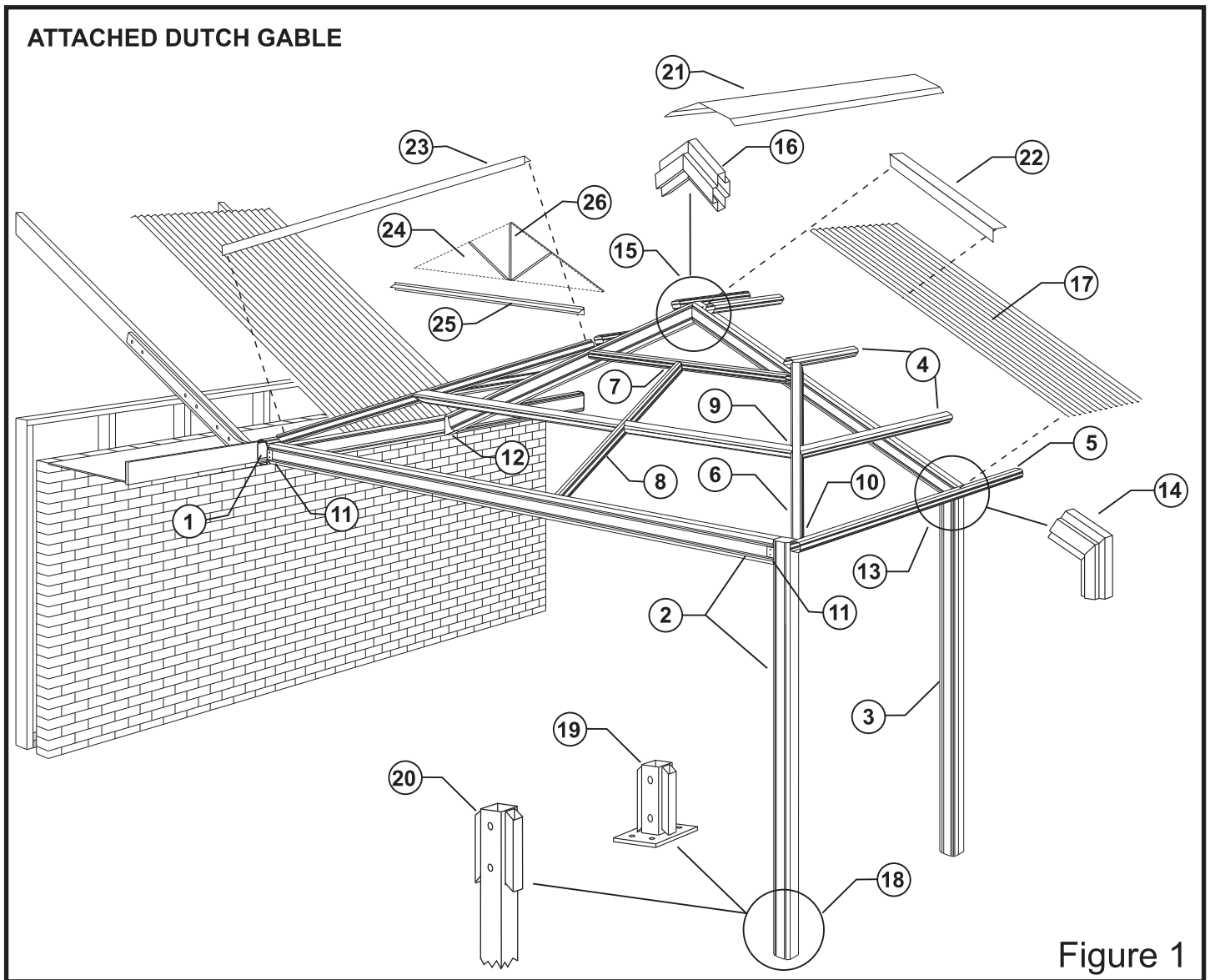


Figure 1

- | | | | | |
|-------------------|---|----------------------------|----------------------|-----------------|
| ① Attachment Beam | ⑦ Collar Tie | ⑫ Rafter To Valley Bracket | ⑱ Footing Connection | ⑳ Hip Flashing |
| ② End Frame | ⑧ End Purlin Support | ⑬ Eaves Connection | ⑲ Footing Plate | ㉑ Infill Panel |
| ③ Portal Frame | ⑨ Hip Plate Connection | ⑭ Eaves Knuckle | OR | ㉒ Weather Strip |
| ④ Purlins | ⑩ Seated Connection | ⑮ Ridge Connection | ㉓ Footing Knuckle | ㉔ Panel Strip |
| ⑤ Eaves Purlin | ⑪ Pergola Wall Bracket or 150 Modified Suspension Bracket | ⑯ Ridge Knuckle | ⑳ Footing Knuckle | |
| ⑥ Hip Rafter | | ⑰ Roof Cladding | ㉑ Footing Knuckle | |
| | | | ㉒ Ridge Capping | |
| | | | ㉓ Barge Capping | |

ADDITIONAL MATERIALS

These materials are needed to complete the job but are not included in the basic kit price (they must be purchased as extra items, and their quantities specified):

Rafter strengthening brackets and channels to suit 150 beam attachment.

M12 bolts and nuts for fixing strengthening brackets to the rafter.

M12 bolts and nuts for fixing 150 attachment beam to strengthening brackets.

Any extra tie down or stiffening requirements for the house rafters.

Box gutter in necessary (measurements required).

OPTIONAL EXTRAS

These items are available at request:

Cover flashings (measurements required)

On concrete footing plate, in lieu of footing knuckle

Chemical anchors for on concrete footings

Concrete

Panel Strips

Finial

1.0 INTRODUCTION

Please read these assembly instructions thoroughly before commencing the construction. Double check all dimensions, levels and bolting locations before cutting, screwing or bolting structural members. It is recommended that the persons erecting the structure have had some previous building experience because some modifications to the existing house structure are required.

2.0 ATTACHING TO AN EXISTING STRUCTURE

The builder or council is to ensure the existing house/structure is of a suitable structural integrity and complies with all the relevant Australian Building codes and standards. For more information regarding the suitability of the house structure to accommodate the Stratco Attached Dutch Gable, consult a structural engineer or a building authority. It is the builders responsibility to ensure that the existing house roof structure is strengthened correctly.

Refer to section 2.1 if attaching Dutch Gable on it's side to a house, section 2.2 if attaching on it's end to a house or refer to both sections if attaching the gable on it's side and end.

2.1 ATTACHING ON SIDE TO HOUSE

A Stratco Dutch Gable attached on it's side to a house is attached to the existing eaves overhang at the fascia.

The first objective in the construction is to fix a structural side beam along the fascia or wall, to which the Gable Unit is attached.

Most existing houses have not been designed for the attachment of portal framed gables to their side, therefore additional strengthening of the house rafters must be performed.

In order to strengthen the existing house rafters, the roof tiles or roof sheets need to be lifted to expose the roof frame. Steel rafter brackets and channels are then bolted along the house rafters. Refer to section 2.1.1.

A 150 mm Outback[®] beam is bolted to the strengthening brackets at the fascia. Once the 150 attachment beam is secured to the house, the Gable Unit can be erected and fastened to the beam.

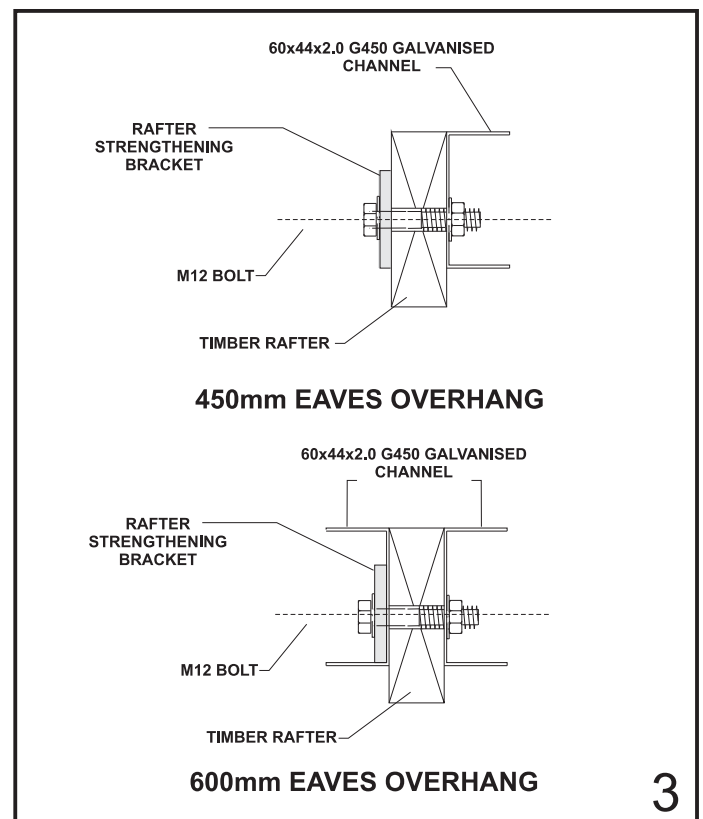
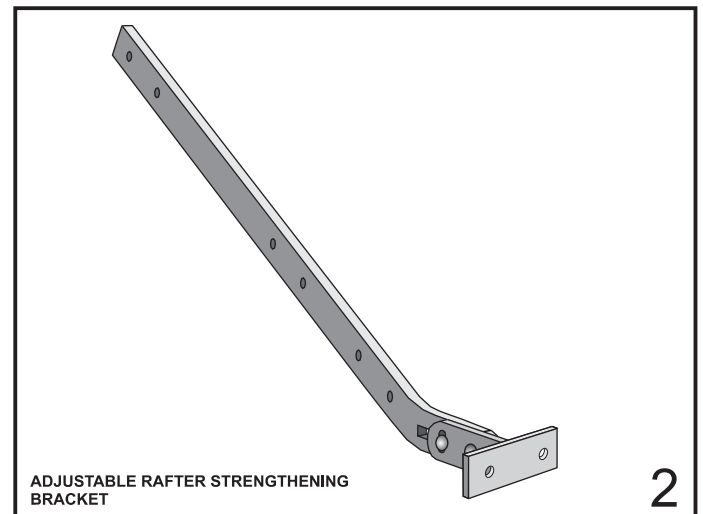
2.1.1 RAFTER STRENGTHENING

The first step is to determine the number of rafters which need to be strengthened and their location relative to the unit. You will have to lift some roof tiles or roof sheets to discover the rafter positions and spacings. The number of rafters which need to be strengthened is determined by the builder.

Note: It is the builders responsibility to ensure the existing rafters and fascia are adequately reinforced and strengthened to accommodate any additional attached structure. The reinforcing method must be approved by the appropriate council or engineer.

Use an adjustable rafter strengthening bracket and one channel for eaves overhangs up to 450 mm. Use an adjustable rafter strengthening bracket and two channels for eaves overhangs over 450 mm and up to and including 600 mm, as shown in figure 3.

The adjustable rafter strengthening bracket is shown in figure 2. Please note that this bracket may not be suitable for applications where the front face of the house gutter is higher than 120 mm. In these cases please contact Stratco for alternative solutions.

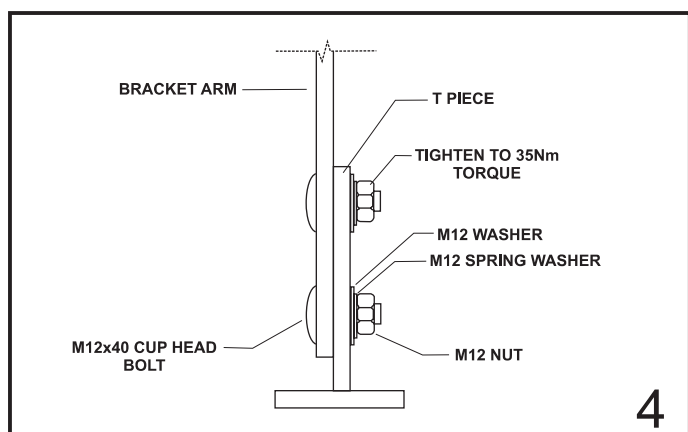


Fixing Rafter Strengthening Brackets and Channels

The adjustable rafter strengthening bracket allows for an adjustment of pitch in the range of 15 to 30 degrees. The distance the bracket extends past the fascia is also adjustable to allow for standard gutters or box gutters with a width of up to 200mm.

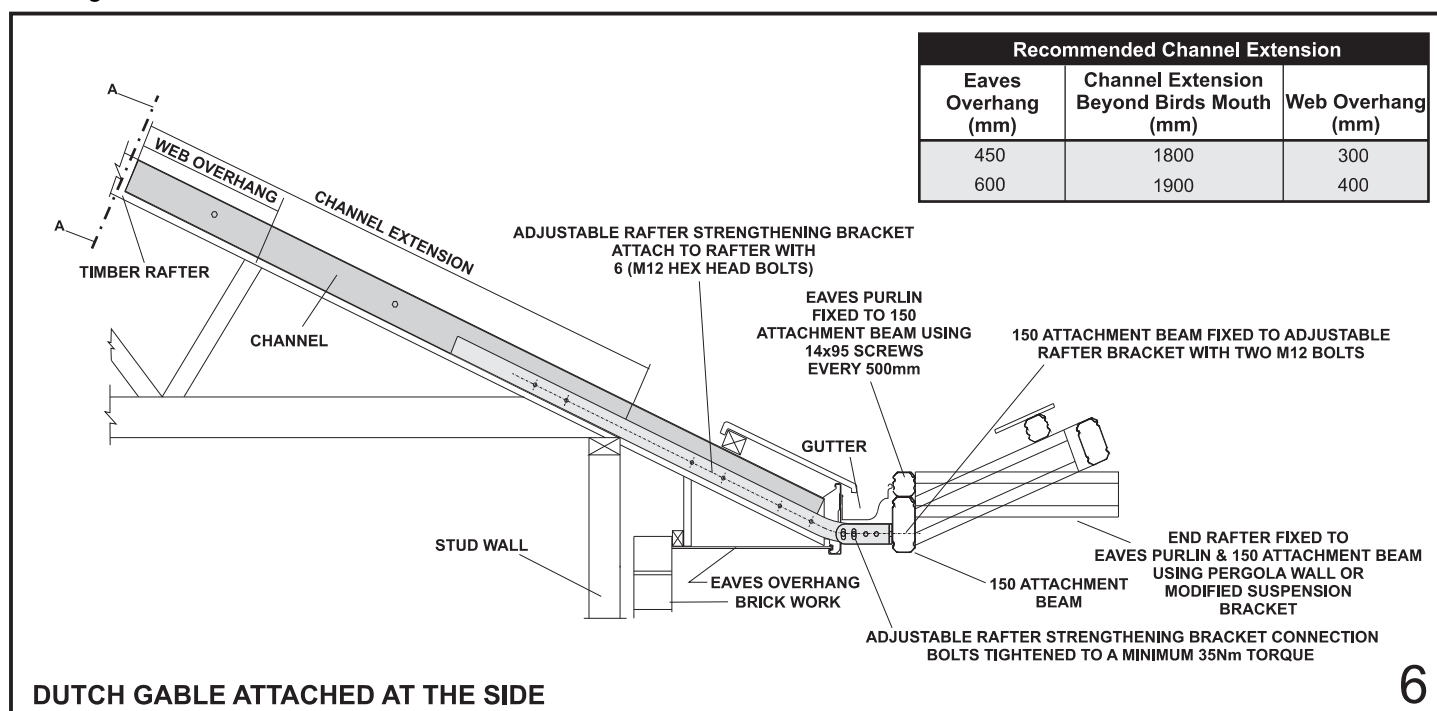
In conjunction with rafter strengthening brackets, channels are fixed to the side of the house rafter (Figure 3). The bottom end of the channel will be located at the base of the house rafter. Holes should be marked and pre-drilled in the channels to suit the location of existing holes in the bracket. The channel will extend beyond the bracket so additional holes are to be drilled in the channel at approximately 500mm centres.

Initially the bracket T piece shall be fixed to the bracket arm with two M12 cup head bolts (hand tighten only), a spring washer is to be located between the standard M12 washer and nut (Figure 4). Mark the position of the bracket on the fascia and notch a rectangular hole in the fascia allowing the bracket to be fed through the front of the fascia. The hole may need to be enlarged slightly if the M12 cup head bolts interfere with the fascia.



Insert the bracket through the fascia and fix with the channel(s) to the house rafter using M12 hex head bolts through the existing holes in the bracket and further up the channel(s) (Figure 6). Adjust the T piece so it is horizontal and has the appropriate extension past the fascia to allow for fixing of the attachment beam. T piece connection bolts

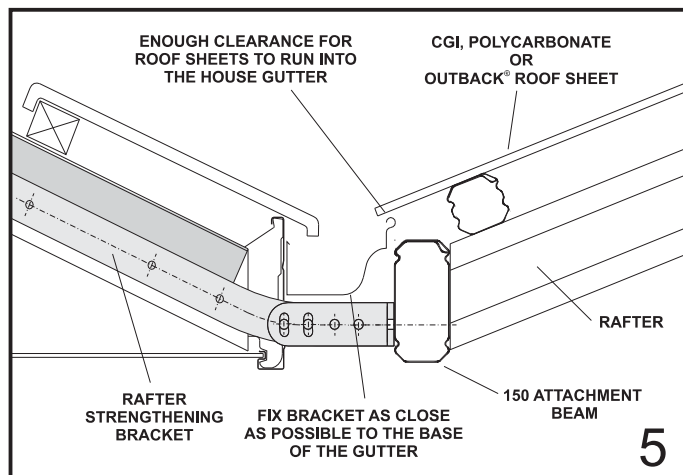
The 150 attachment beam becomes the base for the attachment of the Dutch Gable unit for a side attached unit. Figure 6 shows a unit attached at the side. The 150 attachment beam becomes the end rafter of the Dutch Gable for a rear attached unit. Figure 7 shows a unit attached at the rear.



are to be tightened to a minimum 35Nm torque.

Fix the bracket as close to the base of the gutter as possible (recommended distance 10mm from lowest end of gutter), as shown in figure 5.

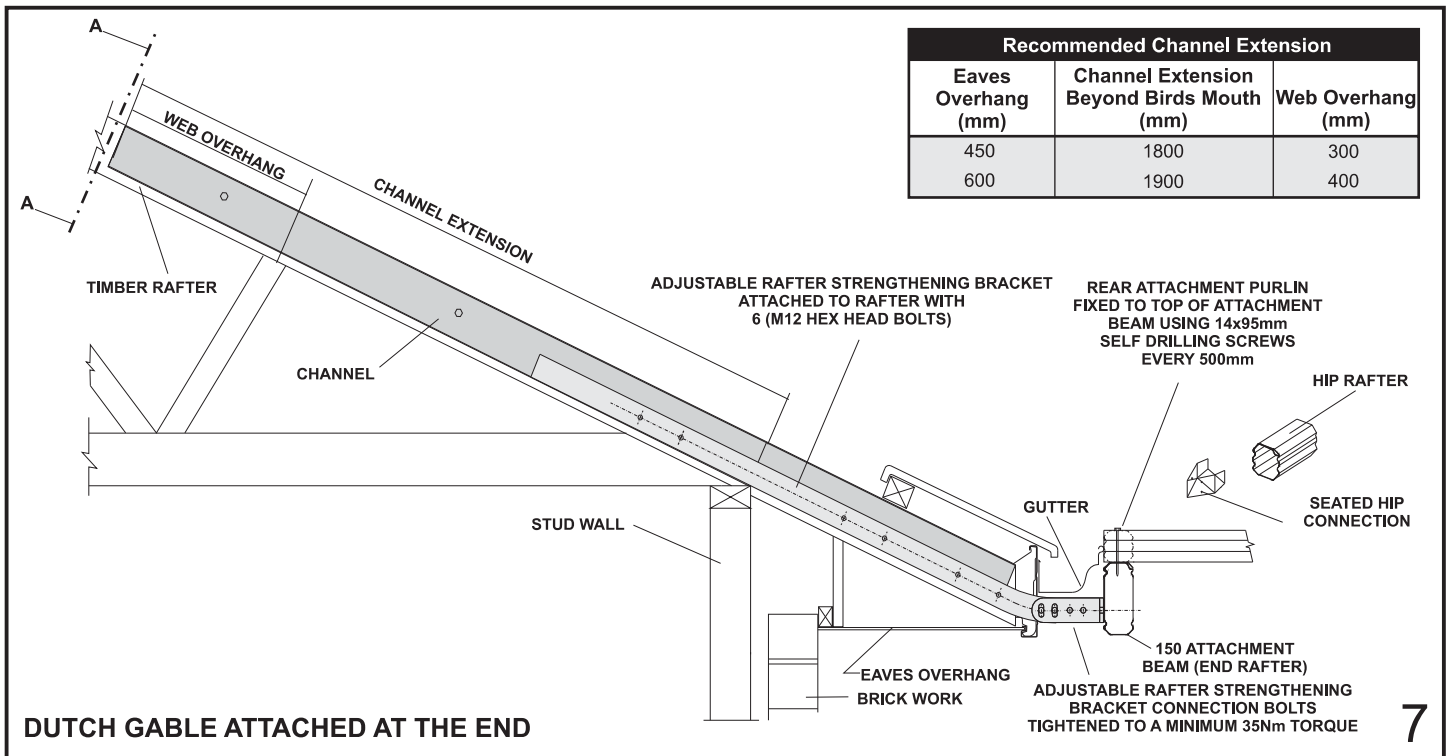
The 150 attachment beam is to be fixed to the end plate to ensure the carport roof sheets drain into the existing house gutter (Figure 5).



Fixing the 150 Attachment Beam in Place

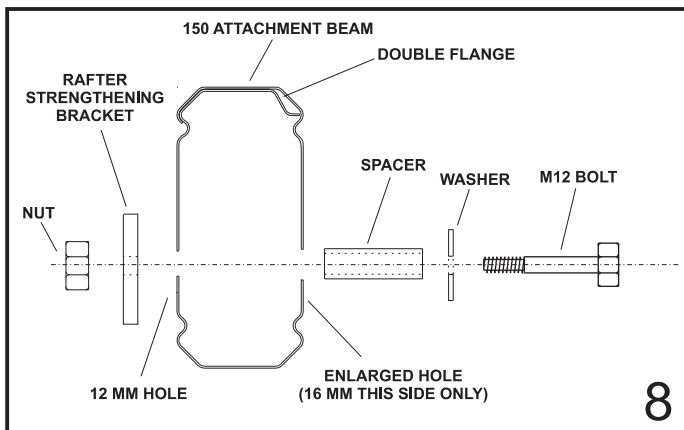
After fixing all the brackets and channels, the 150 attachment beam is fixed in place.

Prop up the 150 attachment beam in position with the double flange on top, the beam will need to be located at a height on the bracket which allows clearance between the gable roof sheets and the gutter. Fix to the end plates of the rafter bracket using two M12 bolts, with the bolt head on the 150 attachment beam side. Insert spacers to prevent the beam from crushing, and bolt in position, using nuts and washers.

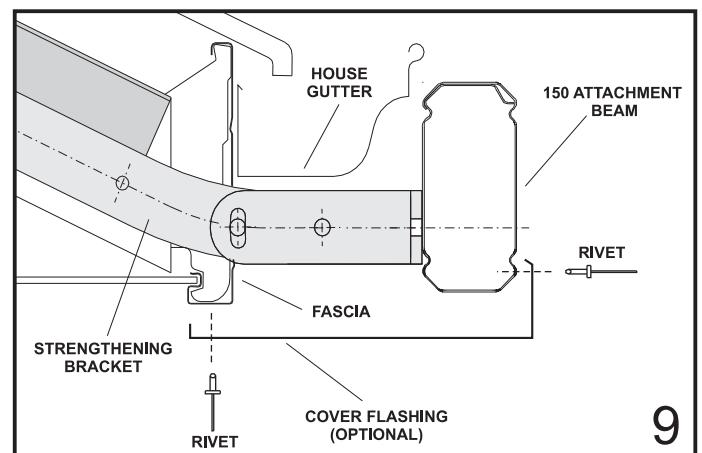


Note: Do not over tighten bolts as this can lead to a visible indentation due to the high gloss nature of the material. Refer to figure 8 for fixing spacers.

To insert spacers drill 11 mm holes through the 150 attachment beam. Then drill 16 mm holes on the outside face only ie, this time do not drill all the way through. This will allow the spacer to slide in from the outside and stop at the other side as shown in figure 8.



A cover flashing may be ordered as an additional option and custom made to cover the exposed brackets and holes through the fascia. Rivet flashings in place, figure 9 suggests a simplified flashing. You may however use your imagination and design a flashing that suits your individual taste.



Note: It is the builders responsibility to ensure the existing rafters and fascia are adequately reinforced and strengthened to accommodate any additional attached structure. The reinforcing method must be approved by the appropriate council or engineer.

2.2 ATTACHING ON END TO HOUSE

If fixing a Dutch Gable on its end to an attachment beam (Figure 7), elevated to the existing house gutter height, a purlin is fixed to the top of the attachment beam using 14x95mm hex head self drilling screws. The purlin and attachment beam assembly are to be fixed at a location which allows clearance between the gable roof sheets and the gutter. The 150 attachment beam is fixed to rafter strengthening brackets as detailed in section 2.1.1.

3.0 MARKING OUT CARPORT POSITION

3.1 IN GROUND FOOTING

Place stakes at the carport column locations using the appropriate dimensions from the drawings supplied.

Where more than two internal portal frames are required space them evenly along the length. Refer to drawings for frame centre spacings.

Ensure that the end frame spacing and the width of the carport are exactly as specified in the drawings supplied.

Note: These column locations are very critical, as the roof sheet lengths are governed by these dimensions.

Tie string lines between the stakes to ensure the footings are in line. Check the dimensions and diagonals for squareness.

Dig holes to the required size as stipulated by your Council Application Form. Place bricks in the bottom of the holes to give a solid base onto which the footing knuckles can be positioned.

Note: A slight fall should be allowed for toward one end of the unit at which the downpipes will be located.

3.2 ON CONCRETE FOOTING

If bolting columns onto an existing concrete slab check to ensure concrete dimensions allow for anchor edge distance and anchor depth. Stratco does not take any responsibility for concrete failure. The erector/owner is responsible for ensuring that the slab is capable of supporting the structure.

Mark the position of the columns from the drawings supplied. Where more than two internal portal frames are required space them evenly along the length. Refer to drawings supplied for frame centre spacings.

Ensure that the end frame spacing and the width of the carport are exactly as specified in the drawings supplied.

Note: These column locations are critical, as the roof sheet lengths are governed by these dimensions.

Check the marks with a string line to ensure the footings are in line. Check the dimensions and diagonals for squareness.

Mark the position of the holes through the existing holes in the base plate. Remove the base plate and drill into concrete using the values given in Table 1.

Note: Do not drill completely through slab as chemical anchors require a solid base to bear against. It is recommended that the minimum slab depth is 1.25 times the anchor hole depth.

Use chemical anchors (for size refer to Table 1) together with the appropriate anchor capsules and install according to the manufacturer's recommendations. Leave the Stud Bolt undisturbed for the minimum time specified by the manufacturer for the resin to cure. Curing times are dependent on the concrete temperature at the time of installation.

Note: Footing plates are not fixed until portal frames have been assembled.

CARPORT	CHEMICAL ANCHOR SIZE (mm)	HOLE DIAMETER (mm)	HOLE DEPTH (mm)
GENERAL	M10x130	12	95
CARPORTS \geq 5000mm WIDE IN W41 WIND SPEEDS OR HIGHER	M12x160	14	115

TABLE 1

4.0 FRAME ASSEMBLY

4.1 PORTAL FRAMES

Place the knuckle connections inside the portal frame members, using a hammer to tap in position (a block of timber should be used whenever hammering to avoid damaging paintwork).

Important note: Knuckles are colour coded as follows, ensure that the correct knuckle is used for each connection.

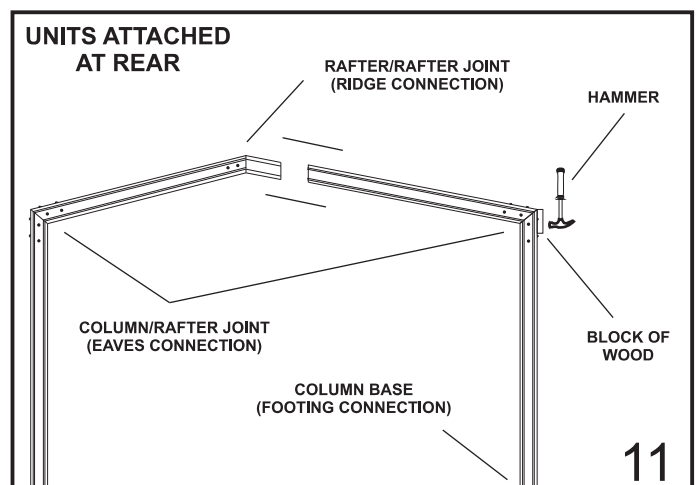
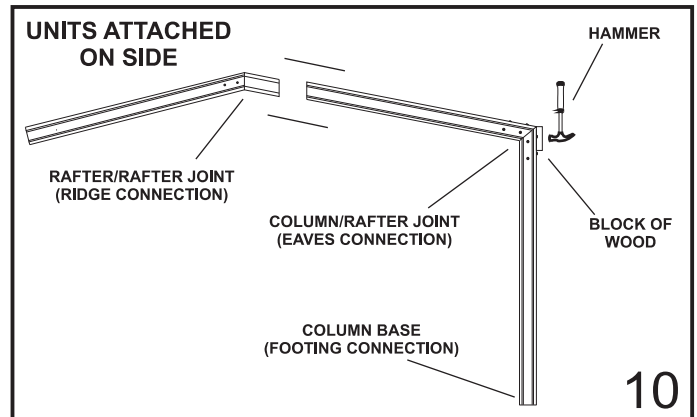
22° Ridge Knuckle - Green

22° Eaves Knuckle - Red

30° Eaves and Ridge Knuckle - Yellow

Join all frame members; first insert eaves knuckle into column to rafter joint, next the footing knuckle/ base plate into the column base and then finally the ridge knuckle into the two halves of the frame at the ridge (refer to Figures 10 and 11 for knuckle locations).

Use a hammer at the eaves knuckle to join the two sides together. If knuckles are difficult to insert apply a lubricant or grease.

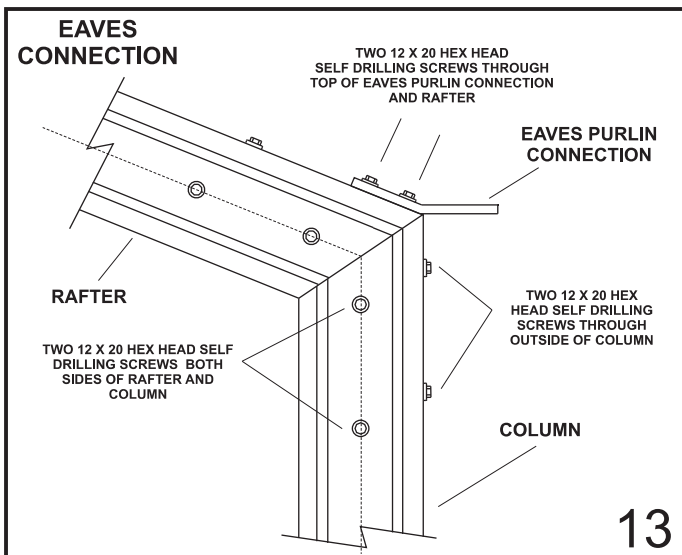
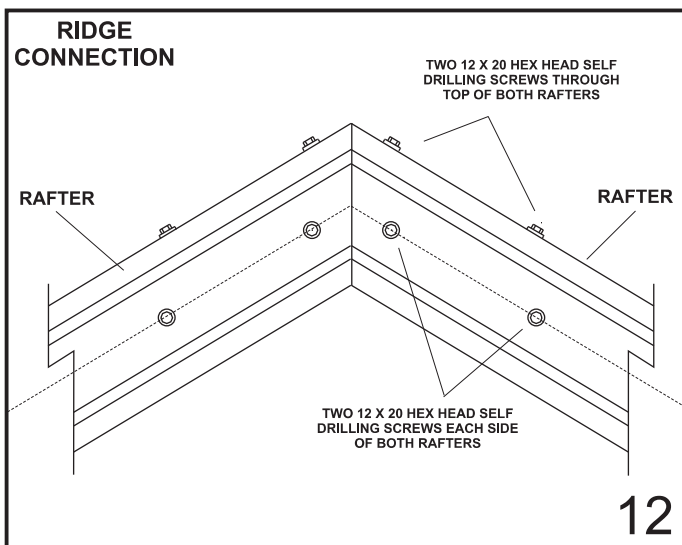


4.1.1 EAVES AND RIDGE CONNECTIONS

Screw together eaves and ridge connections, using two 12x20 hex head self drilling screws both sides of each member and two 12x20 hex head self drilling screws through the top (double flange side) of each member. Pilot holes indicate screw locations as shown in figures 12 and 13.

Make sure that the two ends are flush at the connection, leaving no gaps.

Note: An eaves purlin connection bracket is attached as part of the eaves connection to the side/s of the portal frames using two 12x20 hex head self drilling screws as detailed in figure 13 (pre-drill for ease of fastening).



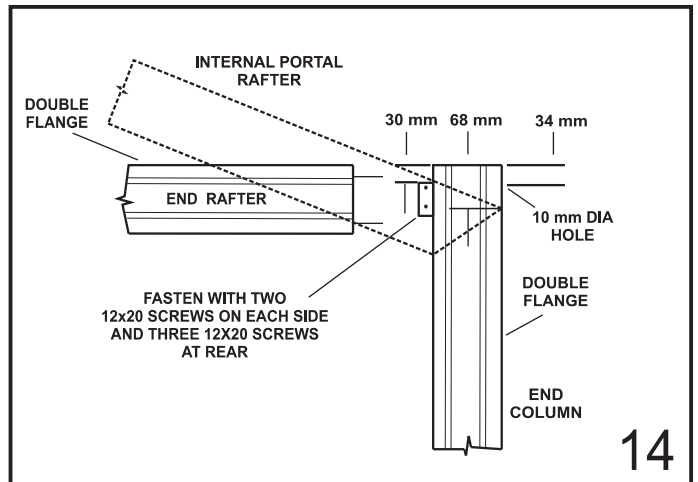
4.2 END FRAMES

Assemble the front (and rear for units attached on the side only) end frames. Pre-drill an 11 mm diameter hole 34 mm down from the top of the column through the double flange side (eaves purlin will be bolted at this location) as shown in figure 14.

Note: Double flange must always be on the outside of the frame.

Attach pergola wall bracket for 120mm end rafter or ridge rafter bracket for 150mm end rafter 30 mm down from the top inside face of column, using three or six 12 x 20 hex head self drilling screws respectively..

Slip the end rafter into the connection and fasten with two 12x20 hex head self drilling screws either side as shown in figure 14.



5.0 FRAME ERECTION

5.1 SIDE ATTACHED

5.1.1 END FRAMES

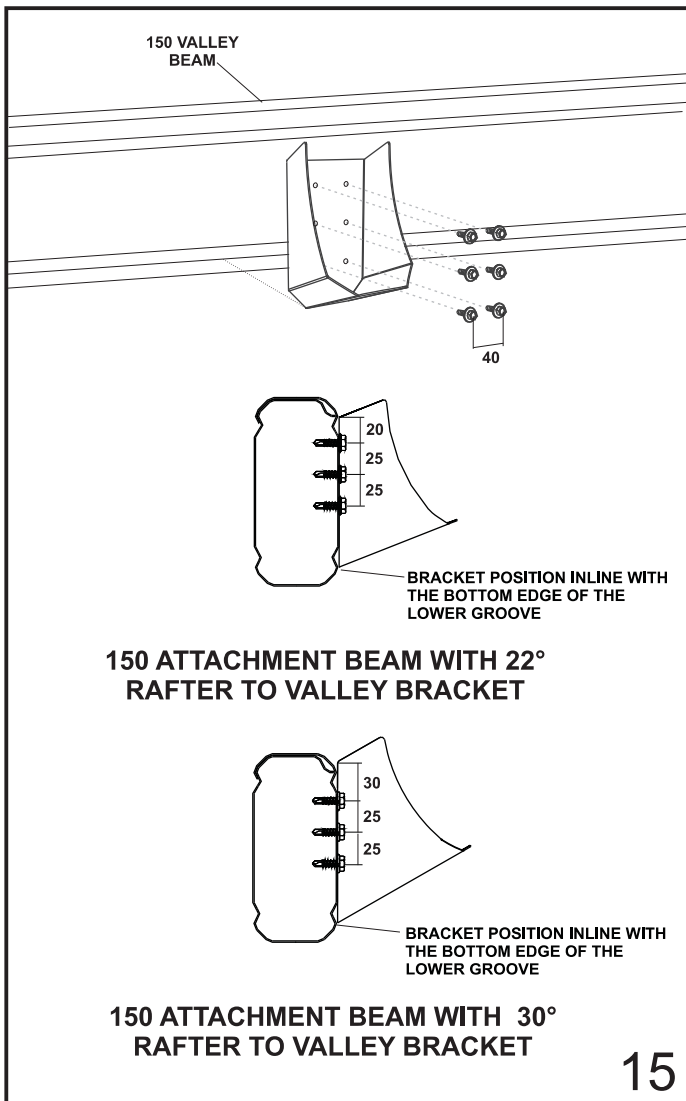
Fasten the eaves purlin on attached side to the top of the 150 attachment beam using 14x95 hex head self drilling screws at 500mm centres. The eaves purlin shall be the same length as the 150 attachment beam.

For a 120mm end rafter, fix a pergola wall bracket to the 150 attachment beam and 68 mm eaves purlin at the end frame position, using three 12x20 hex head self drilling screws. For a 150mm end rafter, fix a 150mm modified suspension bracket to the 150 attachment beam and eaves purlin in the same manner. Please note that the top of the end rafter lines up with the top of the 68 mm eaves purlin (Figure 6).

5.1.2 PORTAL FRAMES

For units attached at the side, fix the rafter to valley brackets to the 150 attachment beam at the correct portal frame positions using six 12x20 hex head screws per bracket through the pre-drilled holes (Figure 15). Please note the bottom face of the bracket lines up with the bottom edge of the lower groove in the 150 attachment beam (Figure 15). Check positions before drilling.

Ensure that the spacing between the end frame and the first portal frame is correct at both ends of the unit. Any internal portal frames should be evenly spaced between these two portal frames.



5.1.3 IN GROUND FOOTING

Stand the portal frames and remaining end frame in the appropriate footing locations and brace in position with clamps and struts (Figure 16A).

Locate the end frames in the pergola wall brackets or modified suspension brackets and check that the column base is at the ground surface and the clear opening between the column and the 150 attachment beam is correct. Finally and most importantly check that the columns are vertical.

Fix the end rafters to the pergola wall brackets or modified suspension brackets using two 12x20 hex head self drilling screws either side.

Stand the internal portal frames in the appropriate footing locations and temporarily brace in position with clamps and struts (see Figure 16A).

Locate the portal frames in the rafter to valley brackets and check that the column base is at the ground surface and the clear opening between the column and the 150 attachment beam is correct. Finally and most importantly check that the columns are vertical.

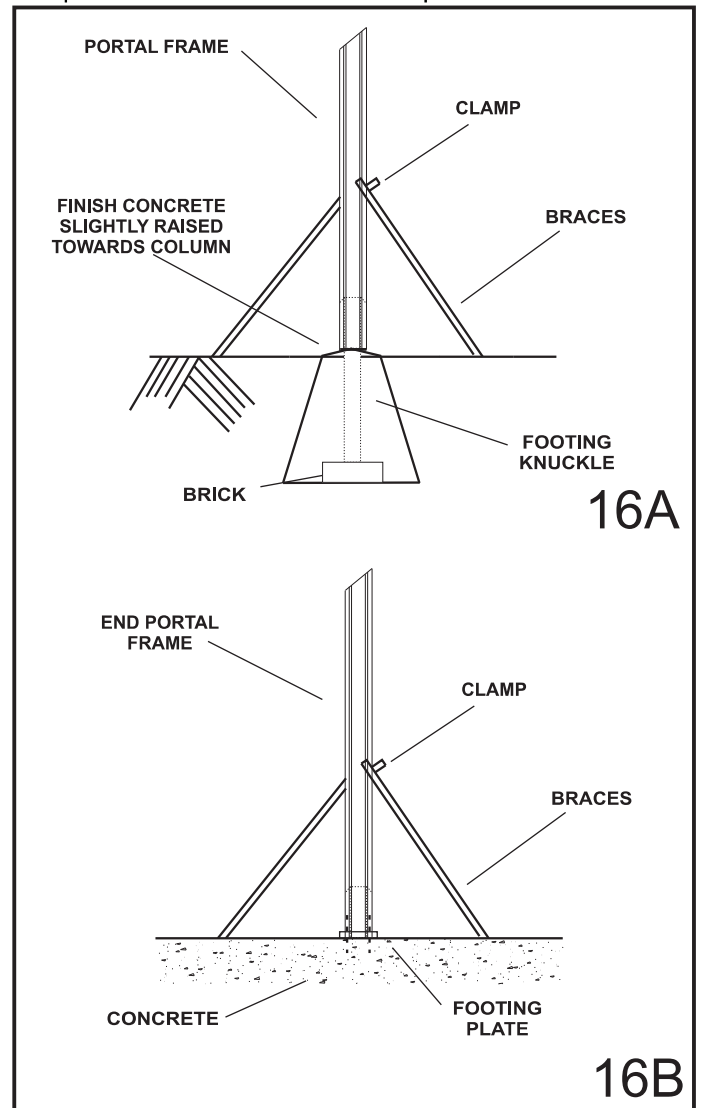
Fix the gable rafters into the rafter to valley brackets with two 12x20 hex head screws either side (Figure 17).

Bolt all columns to the footing knuckles through the predrilled holes using M10 cup head bolts as shown in figure 18. Ensure that the bolt heads are all on the same side of the frame.

Concrete the footings and leave overnight to cure.

Note: The concrete should be finished slightly raised towards the column, ensuring water runs away from the column, see figure 16A. A 5-10mm gap should be left between the bottom of the column and the concrete.

Important Note: The concrete is to only be in contact with the footing knuckle. If concrete or soil is in permanent contact with the columns, corrosion will result in the base of the coloured column. Refer to the "Selection, Use and Maintenance of Stratco Steel Products" brochure for complete details of maintenance requirements.



5.1.4 ON CONCRETE FOOTING

Stand the end frames in the appropriate footing locations and temporarily brace in position with clamps and struts (see Figure 16B).

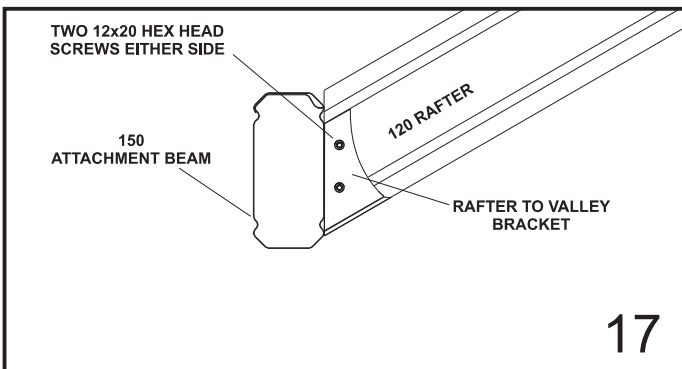
Locate the end frames in the pergola wall brackets or modified suspension brackets and check that the column base is at the ground surface and the clear opening between the column and the 150 attachment beam is correct. Finally and most importantly check that the columns are vertical.

Fix the end rafters to the pergola wall brackets or modified suspension brackets using two 12x20 hex head self drilling screws either side.

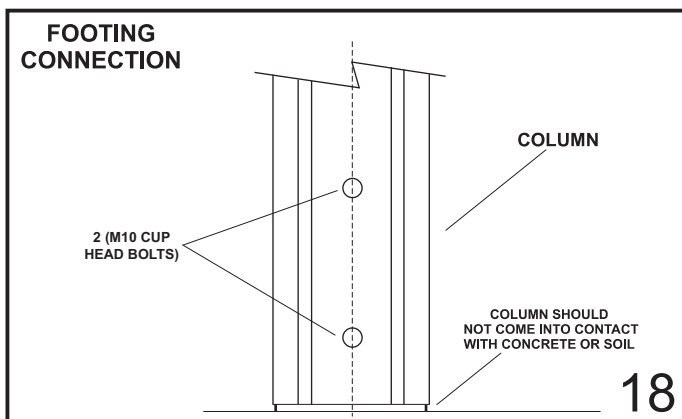
Stand the internal portal frames in the appropriate footing locations and temporarily brace in position with clamps and struts (see Figure 16B).

Locate the portal frames in the rafter to valley brackets and check that the column base is at the ground surface and the clear opening between the column and the 150 attachment beam is correct. Finally and most importantly check that the columns are vertical.

Fix the gable rafters into the rafter to valley brackets with two 12x20 hex head screws either side (Figure 17).



Bolt all columns to the footing plates using 10 cup head bolts as shown in figure 18. Ensure that the bolt heads are all on the same side of the frame.



Fix the rear attachment purlin to the top of the 150 attachment beam using 14x95 hex head self drilling screws at a maximum of 500mm centres. The attachment purlin shall be the same length as the 150 attachment beam. The eaves purlins will end flush with the back of the rear purlin and is fixed in place with a 68mm purlin bracket.

5.2.2 PORTAL FRAMES.

Ensure that the spacing between the end frame and the first portal frame is correct at both ends of the unit. Any internal portal frames should be evenly spaced between these two portal frames.

5.2.3 IN GROUND FOOTING

Stand the portal frames and remaining end frame in the appropriate footing locations and brace in position with clamps and struts (Figure 16A).

Check that the base of all columns are at at the ground surface and most importantly that the columns are vertical.

Bolt the columns to the footing knuckles through the predrilled holes using M10 cup head bolts as shown in figure 18. Ensure that the bolt heads are all on the same side of the frame.

Concrete the footings and leave overnight to cure.

Note: The concrete should be finished slightly raised towards the column, ensuring water runs away from the column, see figure 16A. A 5-10mm gap must be left between the bottom of the column and the concrete.

Important Note: The concrete is to only be in contact with the footing knuckle. If concrete or soil is in permanent contact with the columns, corrosion will result in the base of the coloured column. Refer to the "Selection, Use and Maintenance of Stratco Steel Products" brochure for complete details of maintenance requirements.

5.2.4 ON CONCRETE FOOTING

Stand the portal frames and remaining end frame in the appropriate footing locations and temporarily brace in position with clamps and struts (see Figure 16B).

Check that the base of all columns are at the ground surface and most importantly that the columns are vertical.

Bolt the columns to the footing plates through the predrilled holes using M10 cup head bolts as shown in figure 18. Ensure that the bolt heads are all on the same side of the frame.

Bolt the footing plates to the chemical anchors installed earlier (refer Section 3.2).

Note: A 5-10mm gap should be left between the bottom of the column and the footing plate.

5.3 HIP RAFTERS

Screw the four seated hip rafter connections to the top inside corners of the structure level with the top of the eaves purlin and end rafter. Fix with two 12x20 hex head self drilling screws, see figure 19.

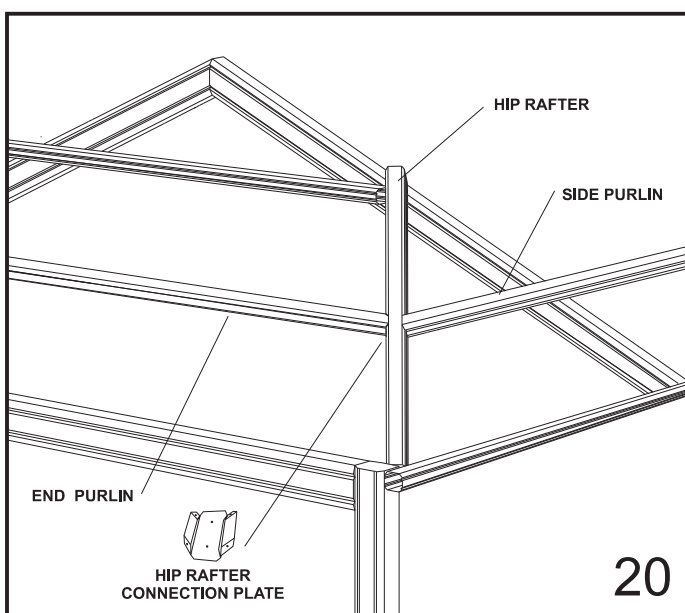
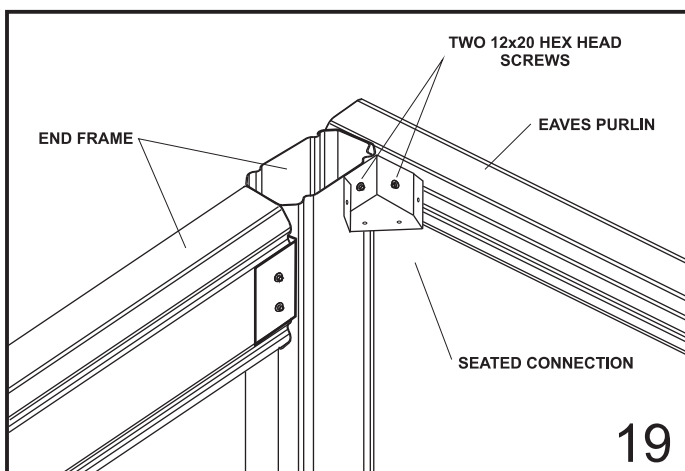
The hip rafter angles away from the end frame at 45° and is screwed onto the internal portal frame as shown in figure 20.

Note: This 45° angle is critical in ensuring correct shape of the Dutch Gable and therefore the sheet lengths.

Cut the hip rafters to length and pre-drill with one 14 x 95 hex head self drilling screw at the end, ensuring the double thickness flange is at the top. Position the hip rafter on the seated connection and fasten the underside with two 12x20 hex head self drilling screws.

Screw the other end to the top of the internal portal rafter through the pre-drilled hole at the mid point. Do not over tighten to prevent crushing of the hip rafter.

Fix the hip rafter connection plate to the underside of the hip rafter at the location of the side purlin joint using two 12x20 hex head self drilling screws in the holes provided (Figure 20).



5.4 COLLAR TIE

The collar tie spans horizontally across the outside of the internal portal frame. It aligns with the top of the hip rafters, so the front roof sheets can run continuously over the end rafter, end purlin/s and collar tie.

Pre-drill through the double flange material with one 14x95 hex head self drilling screw at each end and fasten to the side of the portal frame. In this case, ensure the double flange faces outward.

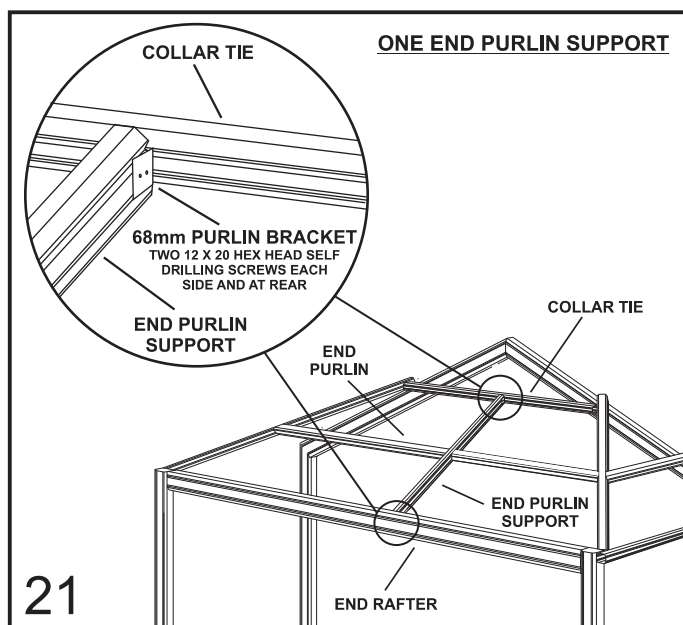
5.5 END PURLIN SUPPORTS

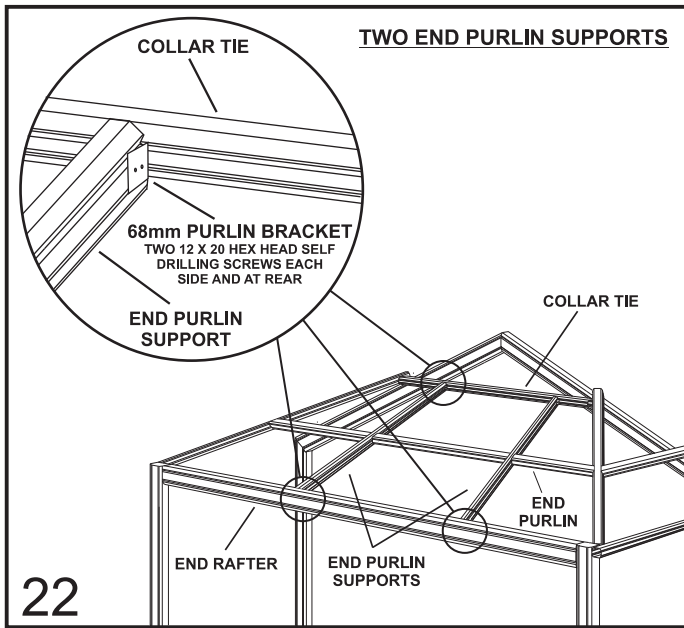
End purlin supports (68mm purlins) are only required if indicated in the drawings supplied. End purlin supports span between the collar tie and the end frame and are to be fastened in place using 68mm purlin brackets.

If only one end purlin support is required fasten one 68mm purlin bracket mid-span of collar tie and a second mid-span of the end frame (inline with the top of the end rafter) using two 12x20 hex head self drilling screws per bracket (Figure 21). If two end purlin supports are required, fasten brackets at third points along the end rafter and along the collar tie so the end purlin supports are perpendicular to the end rafter, (ie, two along the collar tie and two along end rafter using two 12x20 hex head self drilling screws per bracket) (Figure 22).

Measure, cut and mitre the end purlin supports to fit flush between the collar tie and end frame ensuring the double flange is on top.

Fasten the end purlin supports in place using two 12x20 hex head self drilling screws either side, top and bottom (Figures 21 and 22).



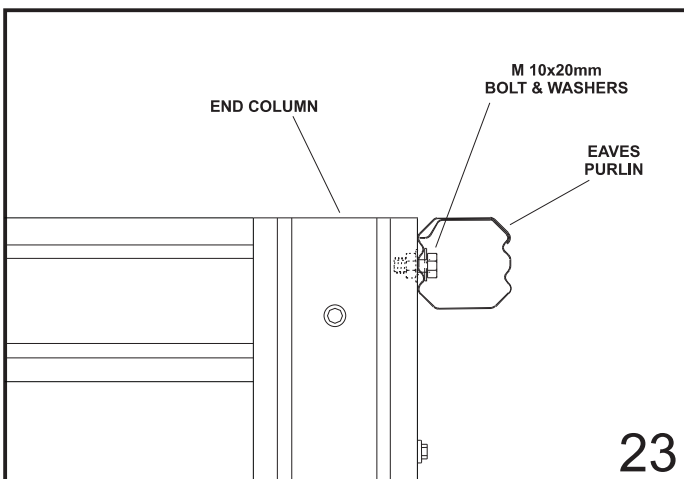


6.0 PURLINS

6.1 EAVES PURLIN

Cut the eaves purlins to the correct length. Pre-drill both eaves purlins for units attached at the rear and only one eaves purlin for units attached on the side with 11 mm diameter holes at the end frame locations. Only drill holes through the inside of the eaves purlin.

Pre-drill the end frame columns and bolt the eaves purlins on the unattached side to the end frame columns using the M10x20mm hex bolts and washers provided. Ensure the purlin is level with the top of the end column (Figure 23). Insert plastic end caps into the open ends of the eaves purlin.



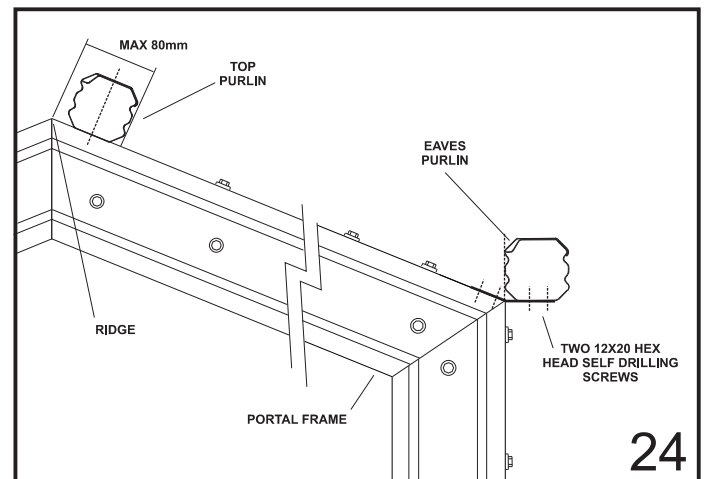
For rear attached units, fix the other end of the eaves purlin to the end of the rear attachment purlin as detailed in section 5.2.1.

Fix the eaves purlin to the eaves purlin connection brackets, fixed to the internal portal frames (Section 4.1.1), using two 12x20 hex head self drilling screws (Figure 24).

6.2 SIDE PURLINS

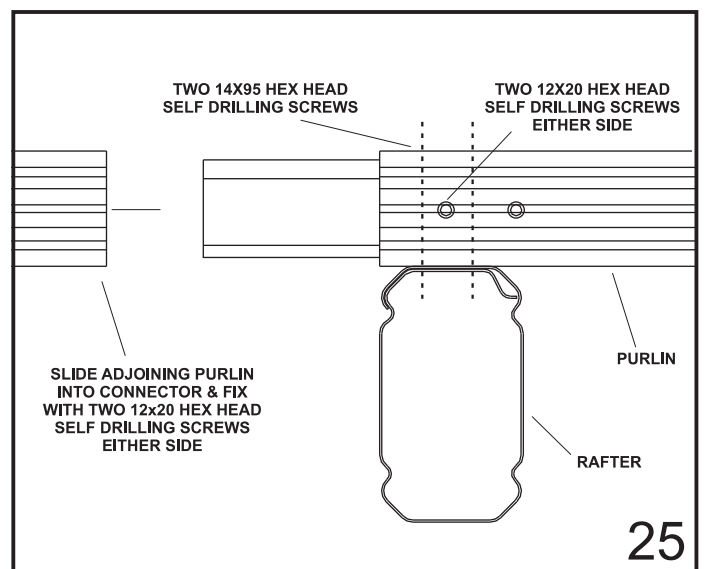
The outside face of the top purlin is positioned no greater than 80mm from the gable ridge, it may be necessary to remove the 12x20 hex head screw closest to the apex (Figure 24). Any intermediate purlins are spaced evenly on the rafters, ensuring the maximum recommended deck end spans are not exceeded.

Those purlins that finish at the first portal frame should finish flush with the rafter chamfer. Those purlins that finish at the hip rafter should be mitred at 45° to finish flush with the hip rafter. Fix to the hip plate connection using two 12x20 hex head self drilling screws.



Where purlins are continuous over rafters, they are fixed in position using 14x95 hex head self drilling screws. If it is necessary for purlins to be broken over standard gable frames (ie, purlins continue in the same direction past a join) a 68mm in-line purlin connector is used (Figure 25).

Note: By drilling pilot holes and screwing through the top of the purlin before lifting it into position, the process of screwing into the rafters is made easier. Pilot holes should also be drilled through rafters at the fixing location.



6.3 END PURLINS

Cut (and mitre if necessary) end purlin/s to span between the end purlin supports and the hip rafters. 68mm purlin brackets are to be fastened to the end purlin supports where they meet the front purlin/s using two 12x20 hex head self drilling screws.

Fix the end purlins to the hip plate connections using two 12x20 hex head self drilling screws and to the 68mm purlin brackets using two 12x20 hex head self drilling screws either side.

Note: If no end purlin support is required then the end purlins span between hip rafters.

7.0 GUTTER ASSEMBLY

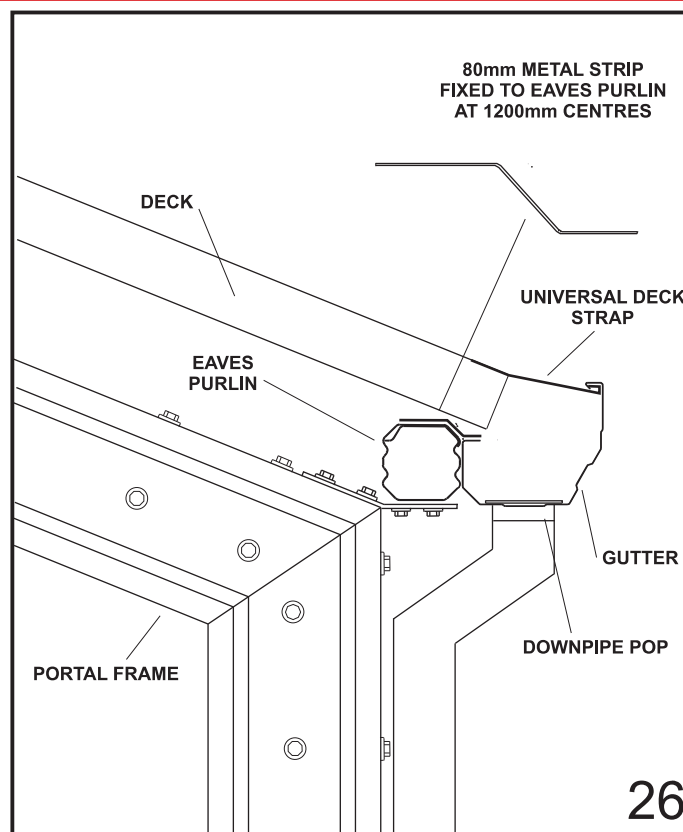
Gutter located along the side of the gable unit is to be fixed to the eaves purlin. End gutter is fixed with metal strips and deck straps to the end rafter. Gutters will need to be mitred at corners and all gutter joins are to be waterproofed with silicone.

Notch a hole in the gutter and insert a downpipe pop so that the downpipe is in line with an end portal column. Fasten the pop in place using rivets and silicone seal.

Note: If your column footings are in ground you would have installed your portal frames with a slight fall towards the downpipe end. Ensure that the gutter is notched at the right end. However, if you are bolting the footings on to an existing concrete slab and there is a slight fall in the slab, ensure that the downpipe is at the lower end of the slab to help the water run off.

Cut 80mm long metal strips from the band supplied. For side gutters bend the straps as shown in figure 26 to allow clearance between roof sheets and gutter. Pop rivet these tags to the top of the eaves purlins or end frame at 1200 mm centres as appropriate. Rivet the back lip of the gutter to these tags, ensuring the back face of the gutter is held vertical as shown in figure 26. Waterproof rivets with silicone.

Once the decking is installed, attach the universal deck straps at maximum 1200mm centres by crest fixing to the roof sheets with 12x20 screws.



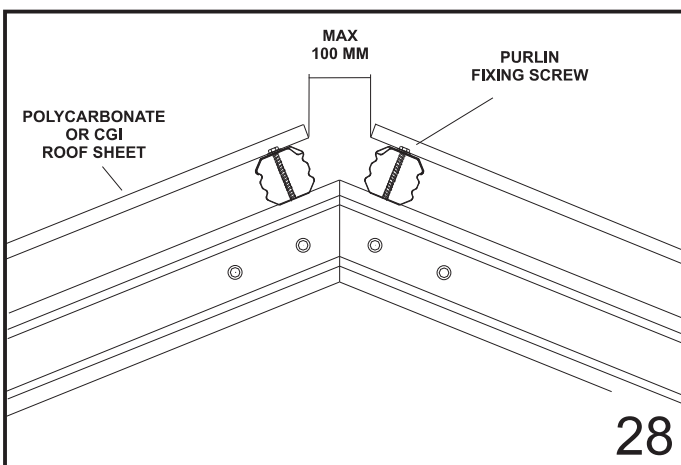
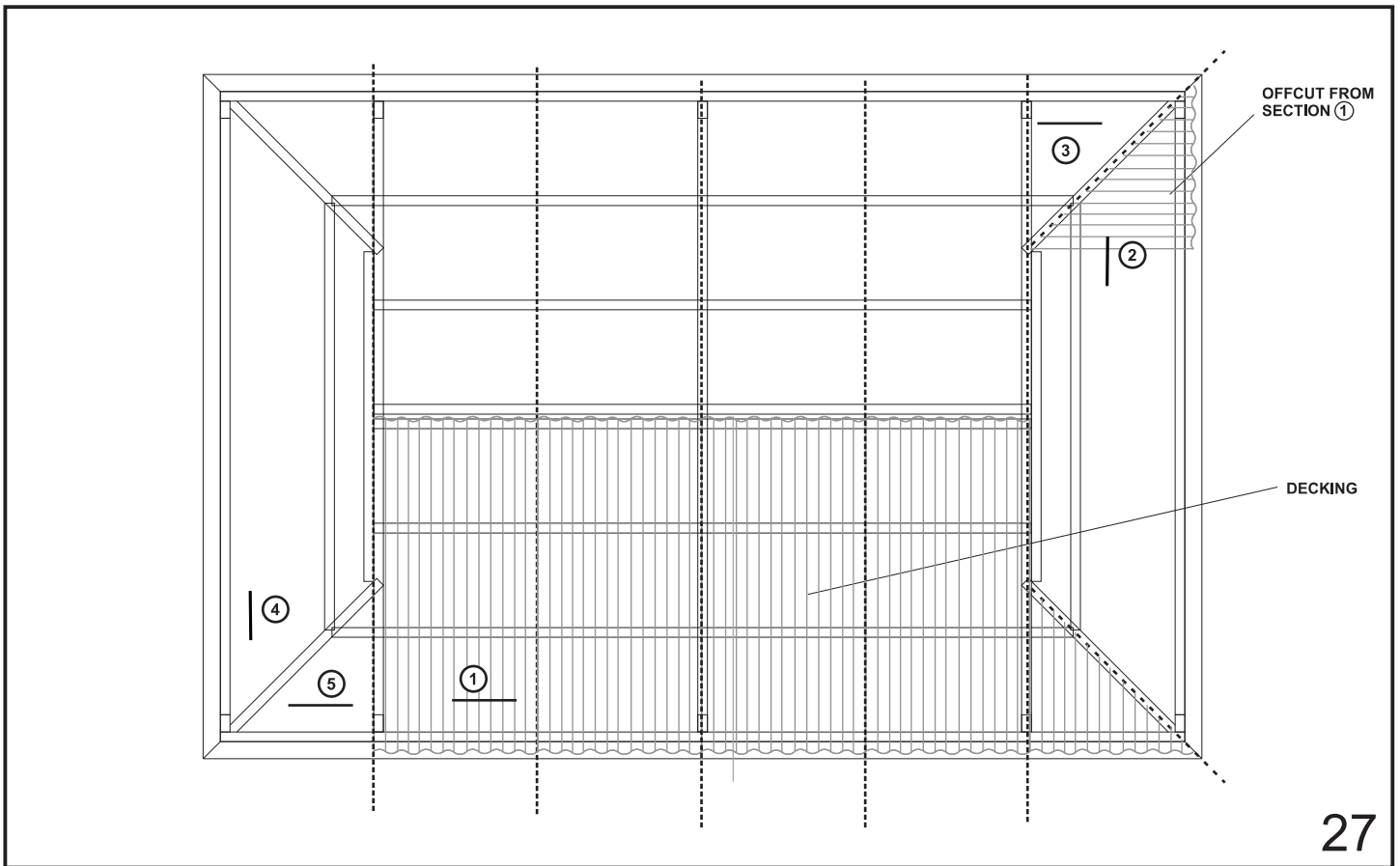
Construct two 70mm downpipe offsets from the downpipe lengths supplied and attach to the downpipe pop with rivets. Waterproof rivets with silicone. Fasten the downpipes with straps to the adjoining column.

Note: For details on making downpipe offsets and gutter mitres refer to the Stratco D.I.Y. "Gutter and Downpipes" brochure.

8.0 ATTACH DECKING

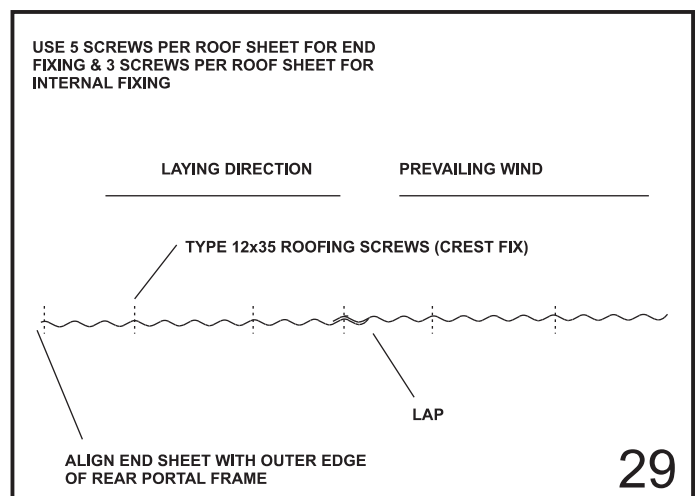
Refer to figure 27 for the order and laying direction of carport roofing. Initially, begin with a full length sheet in section 1 laying in the direction indicated, continue to the side of the Dutch Gable section. Cladding will need to be positioned, marked and then cut to fit over the side Dutch Gable sections. Offcuts from section 1 are then used in section 2 and layed in the direction as shown in figure 27. This process is continued around the Dutch Gable unit until fully clad (i.e. offcuts from section 2 to begin section 3, section 3 offcuts to begin section 4, etc).

Roof sheeting should overhang at the eaves into the gutter by approximately 40mm and overhang the top purlin to give a maximum 100mm gap at the ridge (Figure 28). Sheeting is layed to the centreline of hip rafters and as offcuts are re-used, it is critical cuts are clean and accurate. Also, have the lap joint facing away from the prevailing wind direction on all carport roof faces (figure 29).



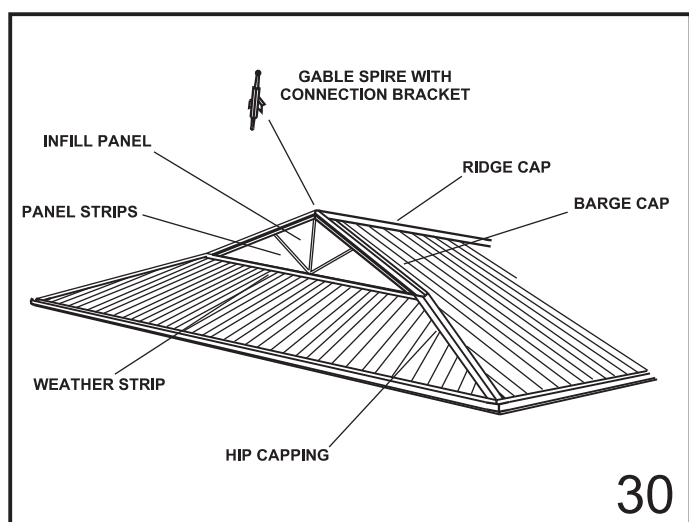
Crest fix CGI with 12x35mm roofing screws or polycarbonate sheeting with 12x45mm screws with polycarbonate washers. Sheets are fastened using five screws per sheet for end spans and three per sheet for internal spans. At the hip rafters and collar tie, sheets can be pan fixed with 10x16mm hex head self drilling screws.

Note : For cyclonic conditions ensure a cyclonic washer assembly is included with every fixing.



9.0 FIX FLASHINGS AND INFILL PANELS

Refer to figure 30 for all flashing positions. In general fasten all flashings using roofing screws through sheeting to purlins. To join flashing overlaps use 3mm pop rivets and when fixing flashings to the infill panels use split-tail rivets. Waterproof all rivets with silicone.



9.1 DUTCH GABLE WEATHER STRIP

Position the weather strip along the collar tie with its leading edge resting on top of roof sheets. Notch the weather strip to fit around the gable rafters.

9.2 INFILL PANELS

Cut triangular gable infill panels (from the rectangular panel provided), to fit the vertical gable frames located at each end of the Dutch Gable roof. Paint the panels to the desired colour before installing. Rest the panels on the weather strip and fasten the panels onto the adjoining rafters through the top groove using 8x35 self embedding screws spaced at 500 mm centres in non-cyclonic areas and 250mm centres in cyclonic areas.

Panels are fixed at the base through the weather strip with split tail soft pull rivets at 500mm centres.

9.3 HIP CAPPING

Attach the small lengths of hip capping to cover the hip rafter seams and mitre to fit the gutter corner.

9.4 BARGE CAPPING

The barge capping is fixed to the crest of the CGI roof and the front of the gable infill panel. Mitre barge capping to overlap the weather strip and hip capping so as to give a neat water tight finish at the Dutch gable junction. Waterproof joint with silicone.

9.5 RIDGE CAPPING

The ridge capping can now be attached. The ridge capping should finish flush with the end of the carport, overlapping the front and rear barge capping to provide a weather proof seal.

10.0 HELPFUL TIPS

Leave plastic coating on members until they are about to be fastened to the structure. This will help prevent scratching of the coloured finish.

Sweep the roof and clean gutters after the completion of work. Ensure any swarf and rivet stubs are removed as they can cause unsightly rust stains.

Do not allow soil to remain in permanent contact with the columns, as corrosion will result in the base of the column. Refer to the "Selection, Use and Maintenance of Stratco Steel Products" brochure for complete details of the maintenance requirements.

Leave bracing struts in position until structure is complete and concreted in. This stabilises the structure and holds it square during construction.

Double check all measurements and drilling locations before proceeding.

Regularly check framework for squareness and vertical alignment to make sure it hasn't moved during construction.

11.0 MAINTENANCE

Regular washing or hosing of the inside and outside of your Stratco Heritage Outback will ensure it looks its best at all times. Refer to the "Selection, Use and Maintenance of Stratco Steel Products" brochure for complete details of maintenance requirements.