

INSTALLATION GUIDE

Outback® Clearspan Gable WITH COOLDEK® ROOFING



BEFORE YOU START

It is important to check your Local Government Authority requirements before the installation of your new Stratco Outback® Clearspan Gable. It is the builder's responsibility to ensure any existing structure that an Outback Clearspan Gable is being attached to is adequately reinforced to accommodate the additional loads imposed by the verandah, patio or carport. Read these instructions thoroughly before starting your project and refer to them constantly during each stage of construction. Contact Stratco for advice if you do not have the necessary tools or information.

Before starting, lay out the main components in order of assembly on the ground and check them against the delivery note. The 'Components' section identifies each part of your Outback Clearspan Gable with Cooldek and shows the relative location of the components.

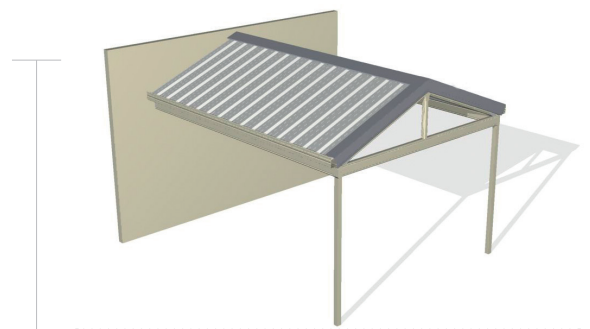
Mark out the overall area of your verandah, patio or carport and ensure that it is free from obstructions. Beam to wall connections can cause difficulty if they coincide with door and window openings, so avoid these in your design. Ensure there is reasonable access for materials and working space and consider the disposal of run-off water. Check the column and beam positions on the ground; roughly check they are square by measuring the diagonals, then mark out the column locations. If columns are to be 'in ground', dig the holes to Stratco specifications.

ADDITIONAL MATERIALS

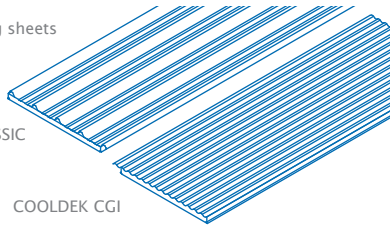
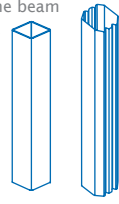
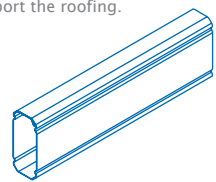
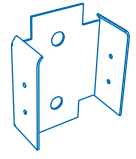
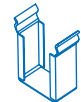

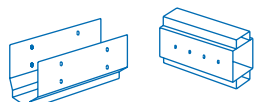
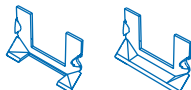
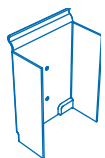
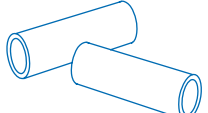
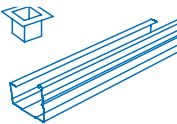

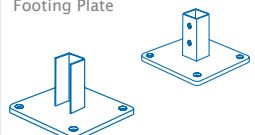
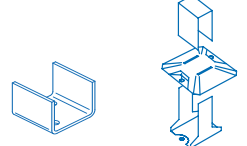
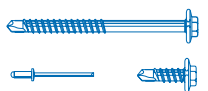


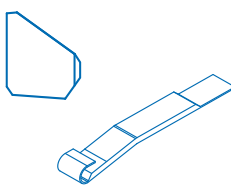
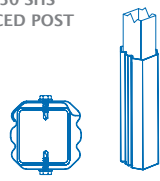
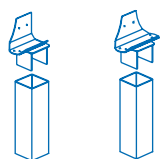
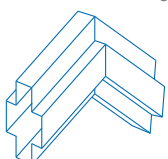
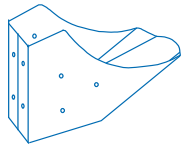
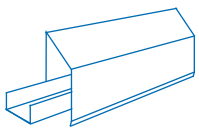
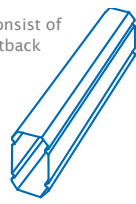
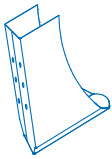
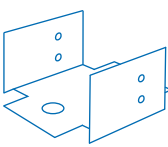
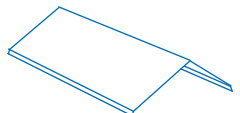
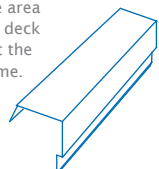
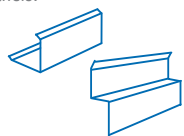


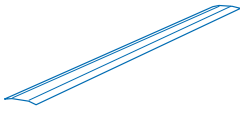

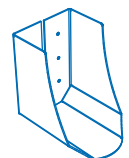
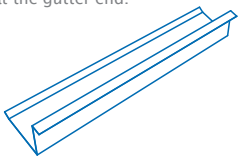
The Outback kit does not include fixings to attach the unit to an existing structure or concrete/masonry anchors for the column installation. Other items not included in the standard kit are infill panels and accessories, box gutters and cover flashings. If required, they must be purchased as additional items.

ADDITIONAL MATERIALS

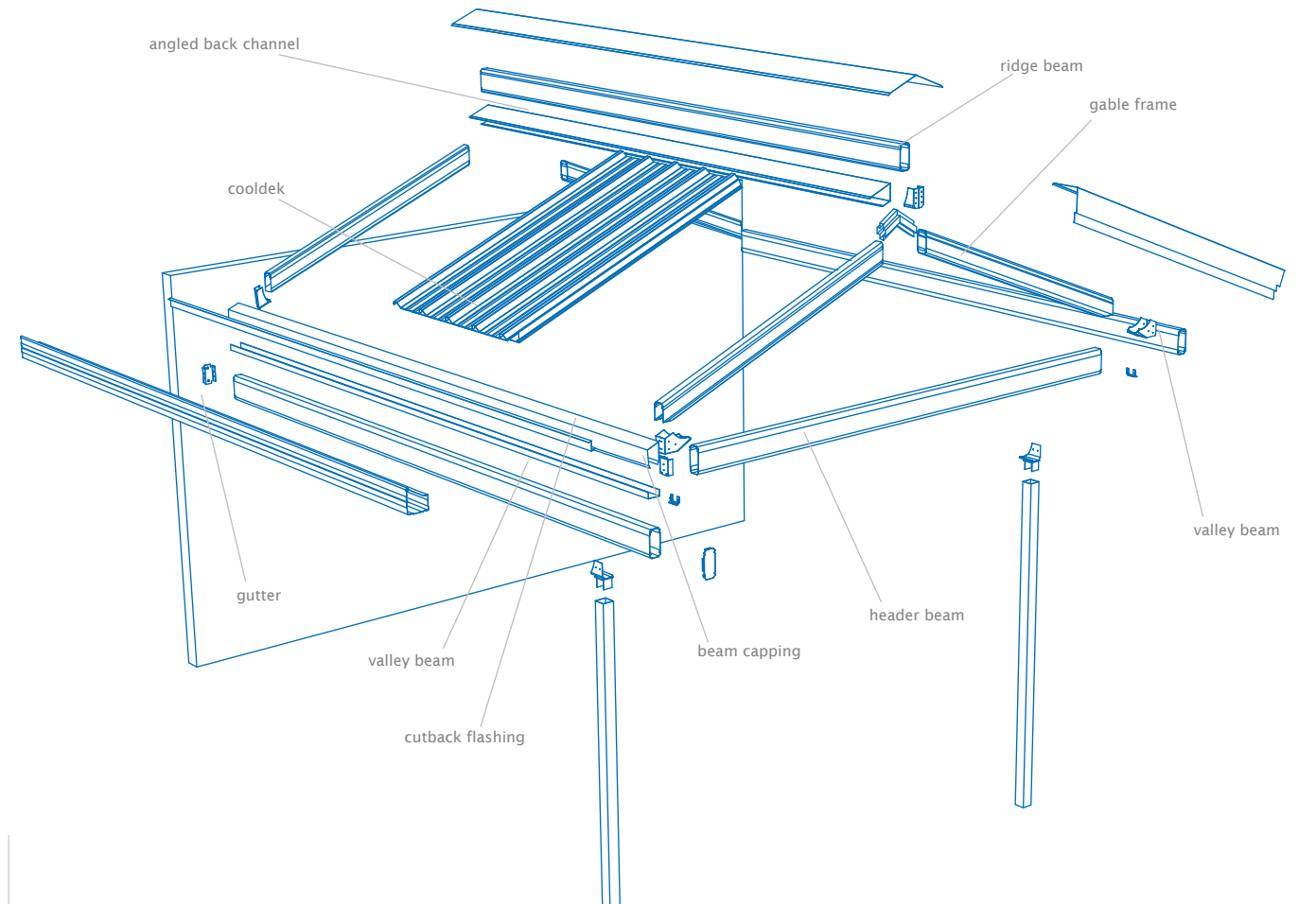
- Drill
- Hex Head Adaptors (5/16 & 3/8)
- Phillips Head Adaptors (5/16 & 3/8)
- Rivet Gun
- Tape Measure
- Tin Snips
- Spirit Level
- Hack-Saw
- Post Hole Digger
- Silicone Gun
- Spanner or Ratchet
- Adjustable Construction Props
- Turn Up/Down Tool
- Concrete
- Ladder
- Extended Drill bit



COMPONENTS

<p>COOLDEK Insulated Roofing sheets</p>  <p>COOLDEK CLASSIC</p> <p>COOLDEK CGI</p>	<p>COLUMNS Supports the beam framework.</p> 	<p>OUTBACK BEAMS The beams are the frame to support the roofing.</p> 	<p>WALL BRACKET Fastens Outback beams directly to a wall.</p> 	
<p>POST BRACKET Connects post to beam</p>  <p>POST CAP Fills gap between the post and beam</p> 	<p>BEAM IN-LINE CONNECTORS Joins beams flush to form a continuous beam. Different connections are available for various angles and loadings.</p> 	<p>BEAM FILLERS Fills gap between interesting beams. A notched version is available where a column also intersects.</p> 	<p>BEAM TO BEAM BRACKET Connects beams.</p> 	<p>SPACERS Are used to prevent the 150 attachment beam from crushing.</p> 
<p>GUTTER The gutter adjoins the roof to catch water run off. Stop ends, outlets and straps are available.</p> 	<p>TEK SCREWS with CYCLONE CAP AND NEOPRENE WASHER Used to fix insulated deck into beams.</p> 	<p>FOOTING PLATES 68 Outback Column Reinforced Footing Plate SHS Column Footing Plate</p> 	<p>SHS Internal Upstand 68 Outback Column Footing Plate</p> 	<p>SCREWS AND RIVETS Fastener types vary depending upon the connection, ensure the correct fixings are used.</p> 
<p>SUSPENSION BRACKET Replaces the wall brackets when the beam is suspended from the fascia</p> 	<p>DOWNPIPE Funnels water from the gutter to the ground via the outlet. Accessories of mitres, shoes and brackets are available as optional extras.</p> 	<p>GUTTER STRAP & STOP END</p> 	<p>68 OUTBACK COLUMN WITH 50x50 SHS REINFORCED POST</p> 	<p>SHS POST CONNECTORS Corner Connector Inline Connector</p> 
<p>RIDGE KNUCKLE Slots inside the gable rafters to form connection at the ridge.</p> 	<p>GABLE BEAM BRACKET Connects rafters to header beam.</p> 	<p>BEAM CAPPING Fixed to top of the valley beam to provide support for the Cooldek.</p> 	<p>RAFTERS Gable rafters consist of pre-cut 120 Outback beam</p> 	<p>RAFTER TO VALLEY BRACKET Connects the rafter to the valley beam.</p> 
<p>HEADER BEAM BRACKET Connects end strut to header beam on an infill gable.</p> 	<p>RIDGE CAP Covers the Cooldek at the gable ridge.</p> 	<p>BARGE CAP The barge cap covers the area where the deck finishes at the portal frame.</p> 	<p>HEADER FLASHING Runs along the header beam to neatly finish the base of the infill panels.</p> 	<p>BEAM ENDCAP Encloses ends of beams.</p> 
<p>END STRUT The gable infill is supported by the end strut, which consists of a section of post. 22° END STRUT PLATE Secures the end strut at the ridge</p> 	<p>PANEL STRIPS Decorative strips fixed to infill panels.</p> 	<p>INFILL PANEL Cut to suit gable end frames.</p> 	<p>RIDGE RAFTER BRACKET Cut to suit gable end frames.</p> 	<p>ANGLED CUTBACK FLASHING Flashing used to cover the deck at the gutter end.</p> 

COMPONENT LAYOUT



GABLE FRAME ASSEMBLY

The first step when installing your Clearspan Ultimate with Cooldek is to assemble the gable frame. This will determine your gable opening which will be used when setting up the rest of the frame work.

IMPORTANT: When assembling the gable frame ensure that the double thickness portion of the beams is on top and the seam is on the same side. The rafters are supplied pre-cut and drilled at the ridge. There are two types of rafters used depending on whether a header beam is being installed, these are shown in Figure 1.0.

Insert the ridge knuckle into the pre-cut rafters and screw together using two 12x20 hex head self drilling screws through both sides of each rafter and two 12x20 hex head self drilling screws through the top (double flange side) of each rafter (figure 1.1). Make sure that the two ends are flush at the connection, leaving no gaps. Measure the distance between rafter ends, O, to check valley beam spacing (Figure 1.2). **This will become the gable opening dimension.**

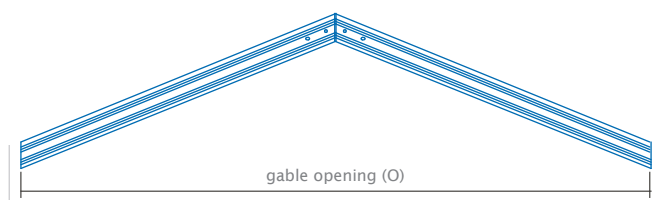


Figure 1.2

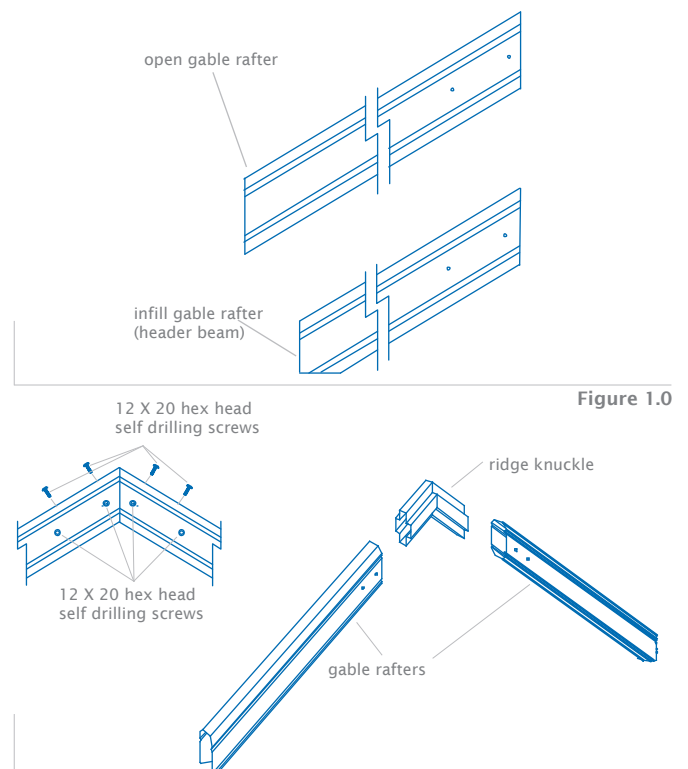


Figure 1.0

Figure 1.1

VALLEY BEAM ASSEMBLY

Before erecting any valley beams the capping needs to be fixed to the top of the beams. The beam capping will support the Cooldek when it is laid and the gable brackets will be attached to the beam capping. When fixing the beam capping ensure that the double thickness of the beam is on top.

Fix the beam channel to the top of the valley beam using 12x20 hex head self drilling screws at maximum 500mm centres and with two screws at the location of all rafters as shown in figure 2.0. Fix the beam capping to the channel using 3mm rivets or 12x 20 hex head screws each side at maximum 500mm centres and with two rivets either side of the location of all rafters. Ensure the break is located in the top groove (figure 2.0).

If attaching the valley beam to a header beam, notch the capping so that it sits on top of the header beam as shown in figure 6.6.

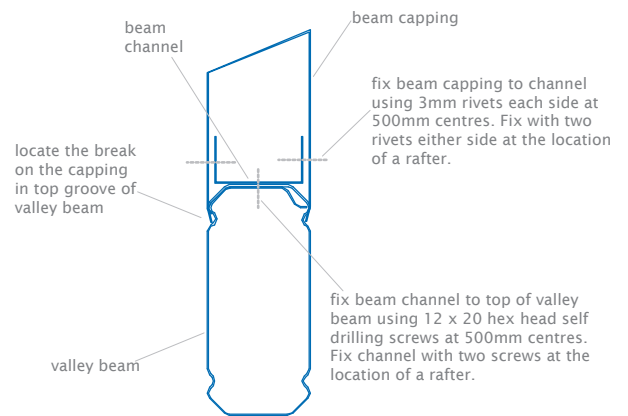


Figure 2.0

ATTACHING ON SIDE TO HOUSE

A Stratco Clearspan attached on its side to a house is attached to the existing eaves overhang at the fascia, or to an existing wall if height permits.

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.

An attachment beam is bolted to the strengthening brackets at the fascia. Once the attachment beam is secured to the house, the Gable Unit can be erected and fastened to the beam.

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, however spacing is recommended not to exceed 1200mm.

Note: It is the builder's 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.

It is recommended an adjustable rafter strengthening bracket is used in conjunction with an extension channel, as shown in figure 3.0.

The adjustable rafter strengthening bracket is shown in figure 3.1.

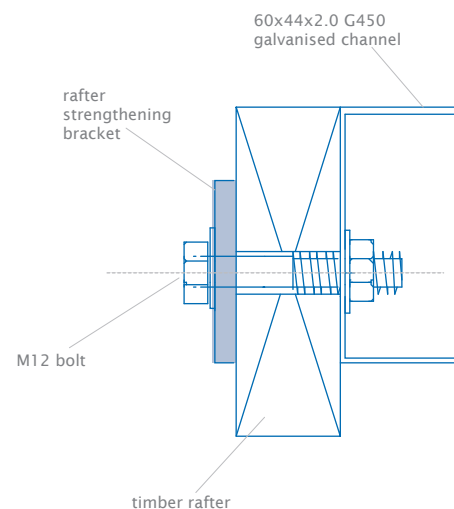


Figure 3.0

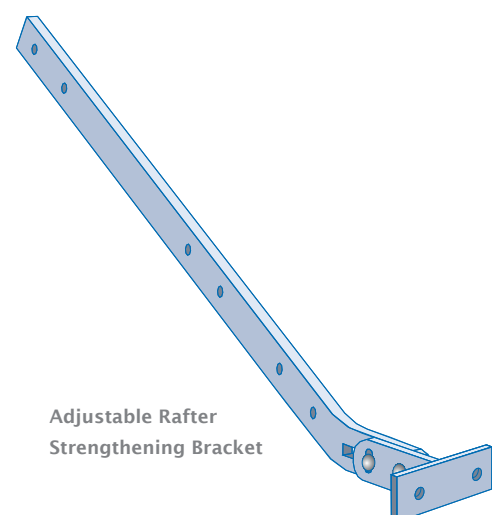


Figure 3.1

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 a channel is fixed to the side of the house rafter (figure 3.0). 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 channel 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 4.0). 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 to the house rafter using M12 hex head bolts through the existing holes in the bracket and further up the channel (Figure 4.3). 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 are to be tightened to a minimum 50Nm 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 4.1.

The attachment beam is to be fixed to the end plate to ensure the roof sheets drain into the existing house gutter (figure 4.1).

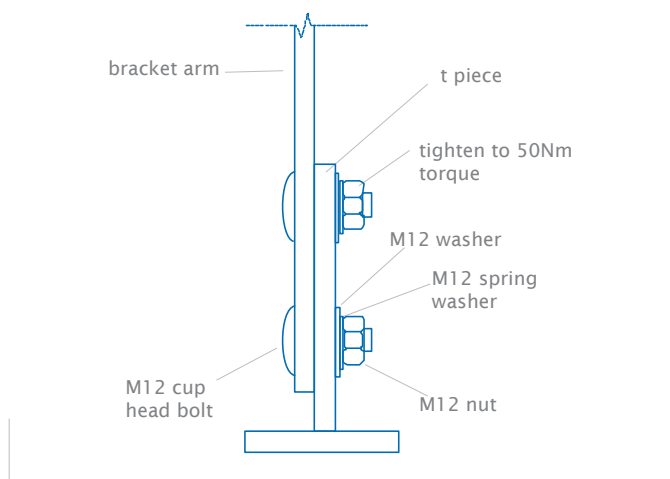


Figure 4.0

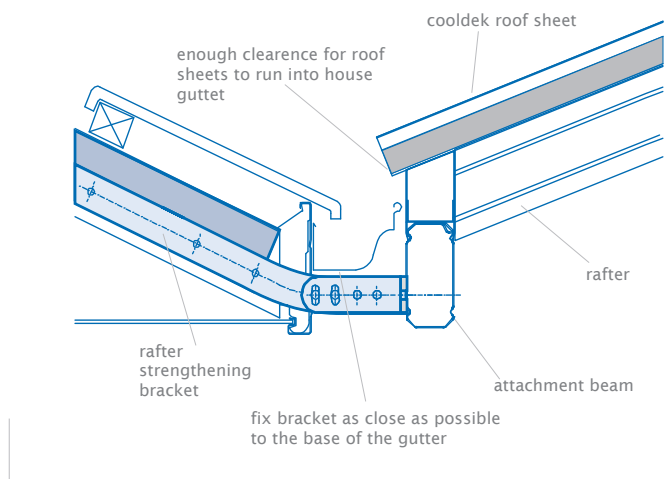


Figure 4.1

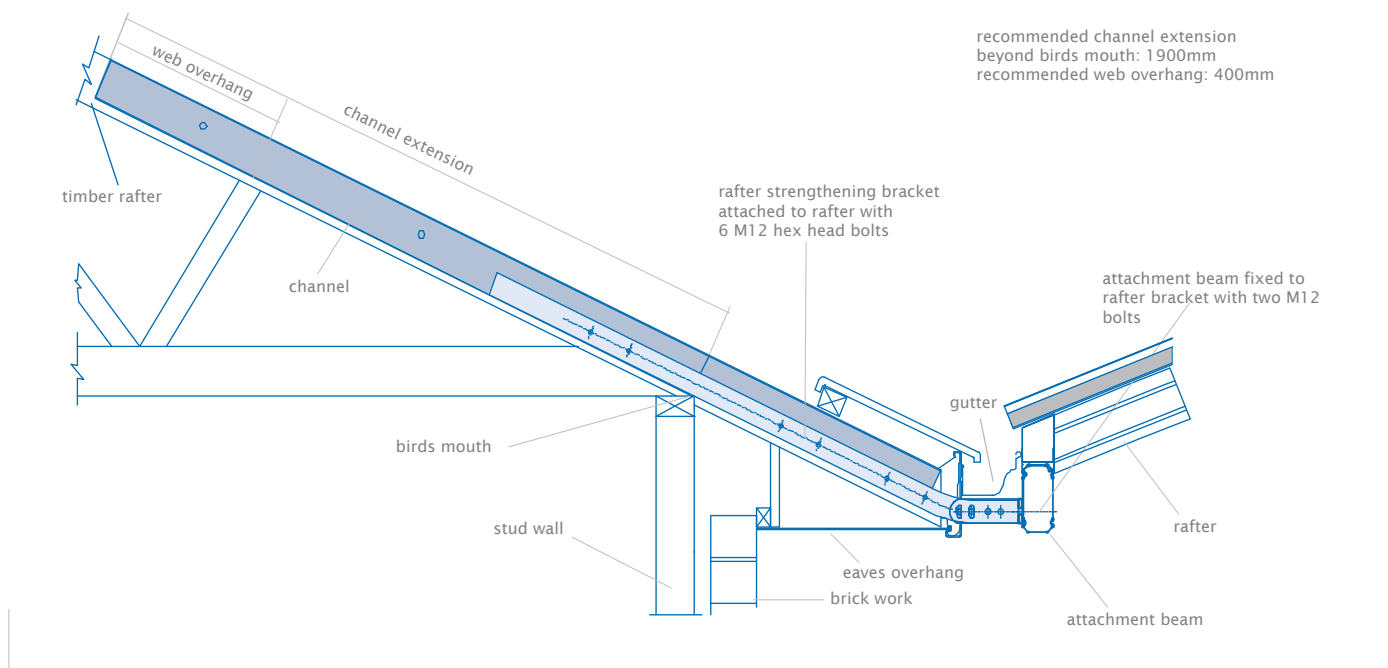


Figure 4.3

FIXING THE ATTACHMENT BEAM IN PLACE

After fixing all the brackets and channels, the attachment beam can now be fixed into place.

Prop the attachment beam in position with the beam capping on top, the beam will need to be located at a height on the bracket which allows clearance between the Cooldek and the gutter. Fix to the end plates of the rafter bracket using two M12 bolts, with the bolt head on the attachment beam side. Insert spacers to prevent the beam from crushing, and bolt in position, using nuts and washers. To insert spacers drill 13mm holes through the attachment beam. Then drill 16mm holes on the outside face only, but 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 5.

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 5.1 suggests a simplified flashing.

The attachment beam becomes the base for the attachment of the Clearspan Gable unit.

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 5.0 for fixing spacers.

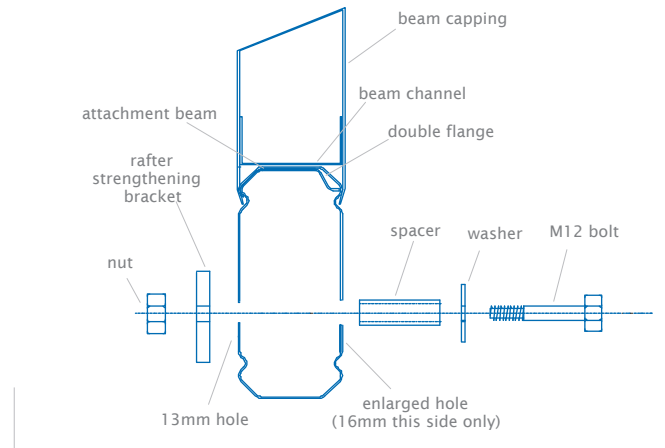


Figure 5.0

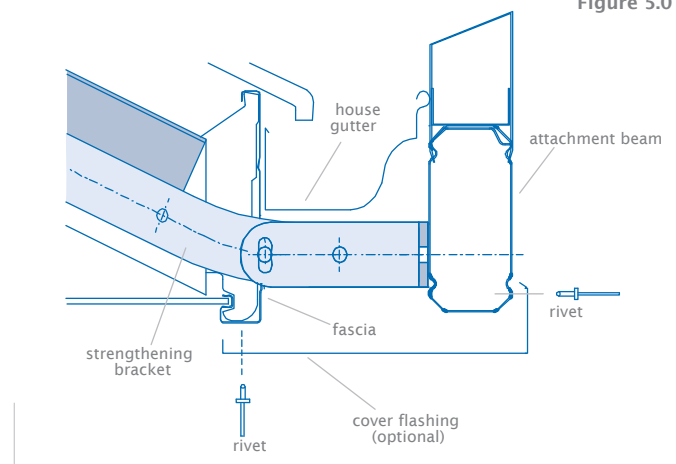


Figure 5.1

END ATTACHED UNITS

If fixing a Clearspan Gable on its end to a wall, valley beams are fixed directly to the wall using beam to wall brackets. The rear gable frame will need to be offset from the wall to allow the appropriate bracket fixing. Wall brackets are positioned either side of the gable opening at the spacing determined in the section 'Gable Frame Assembly'. The folded section on the tabs of the bracket is located at the top (figure 6.0). The highest point of the wall bracket will be 15mm below the top of the beam. Mark the holes and drill using an 8mm masonry bit. Fasten the bracket to the wall with two M8 masonry anchors to a minimum 65mm embedment. Locate the first

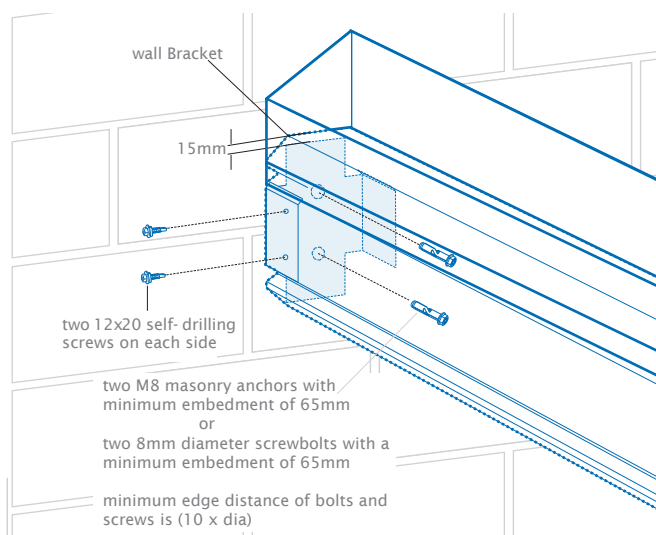


Figure 6.0

valley beam (beam cap on top) up into the wall bracket so the curved flange locate against the top flute of the beam. The valley beam is fastened to the wall bracket with two 12x20 hex head screws either side in the pre-drilled holes while the opposite end is supported on adjustable construction props. If required, additional hold down to the wall may be obtained by using tie down brackets, refer figure 6.1.

A suspension bracket is used when a beam is suspended from the fascia (figure 6.3). If fixing a Clearspan Gable on its end with suspension brackets, the brackets are to be positioned either side of

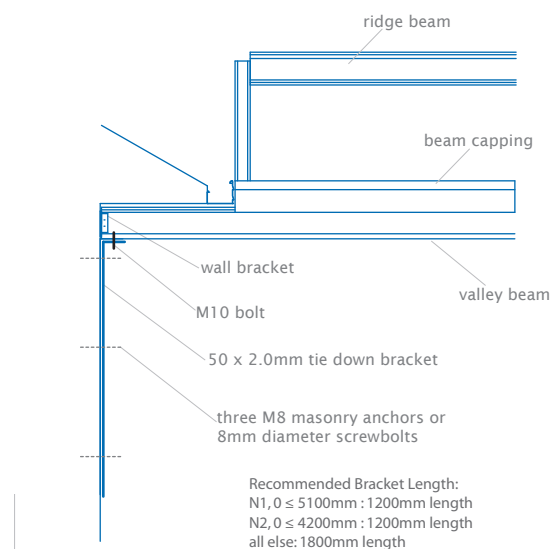


Figure 6.1

the gable opening. The gable rafter at the rear of the unit will need to be set back sufficiently from the house fascia to accommodate the house gutter and infill panel. Use silicone to seal behind the suspension bracket and fascia. For steel fascia a minimum of three M6 bolts with washers are fixed through the suspension bracket and fascia. For timber, three 12x25 type 17 screws are used to fix through the suspension bracket and timber. Refer figure 6.2 for fastener locations. The first valley beam is slid into position and fastened using three 12x20 self drilling screws either side (figure 6.3), while the opposite end is supported on adjustable construction prop.

It is recommended extended fascia strengthening brackets and reinforcing channels are fastened at a spacing not exceeding 1200mm centres to fascia and rafters (figure 6.3). Brackets are also recommended to the first rafter either side of the valley beams. Secure brackets and channels to rafters with 12x25mm timber fixing screws through pre-drilled holes and bolt through fascia with M10 bolts. If required, additional fascia reinforcement may be obtained by securing RHS tubing behind the fascia, refer figure 6.4.

If fixing a Clearspan Gable on its end to an attachment beam (figure 6.5), elevated to the existing house gutter height, the attachment

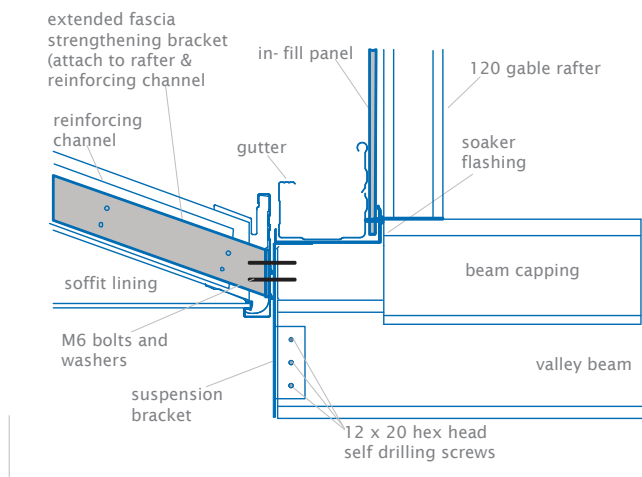


Figure 6.3

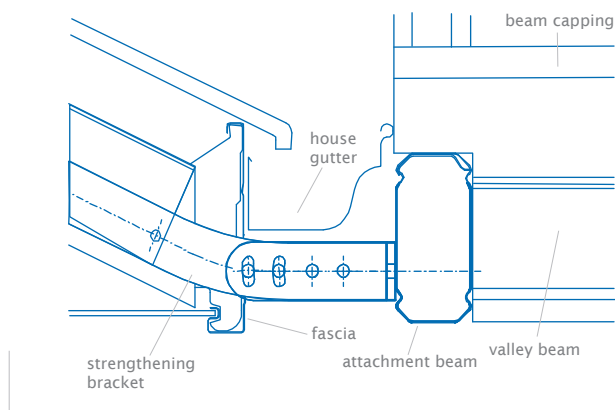


Figure 6.5

beam is fixed to rafter strengthening brackets as detailed in the previous section. Beam to beam brackets are positioned at either side of the gable opening at the spacing determined in Section 'Gable Frame Assembly'. Fix beam to beam brackets to the attachment beam (header beam) with two 12x20 hex head screws so they clamp the beam filler to the beam (figure 6.6). The first valley beam is fastened over the beam to beam bracket with two 12x20 hex head screws either side while the opposite end is supported on adjustable construction props.

Note: It is the builder's 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.

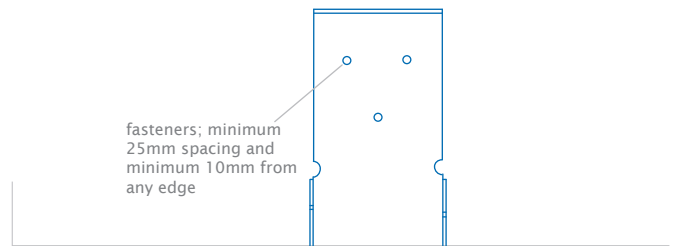


Figure 6.2

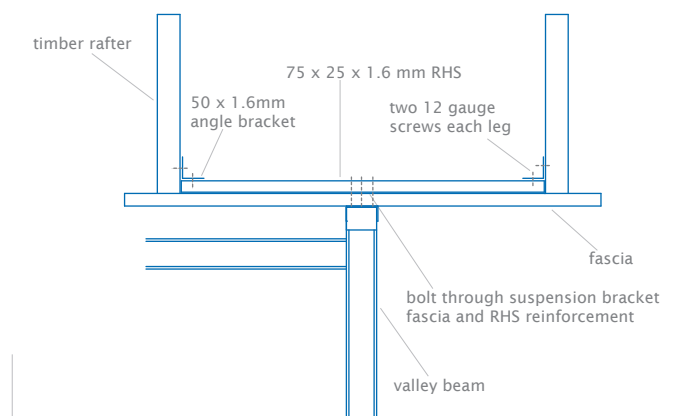


Figure 6.4

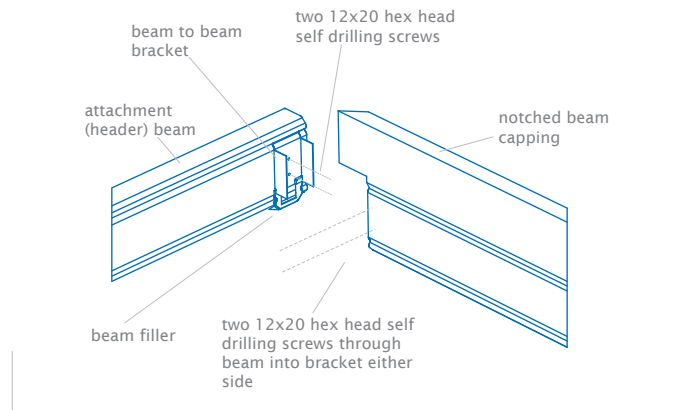


Figure 6.6

COLUMN BRACKETS

If any intermediate columns are required measure the valley beam marking where they meet. Fasten post brackets as explained in the section '68 Outback column' or 'SHS columns'. This can be done before the valley beams are fixed in place.

Support the second valley beam on adjustable construction props but do not fix to the wall, fascia or attachment beam until the front gable frame has been attached.

BEAM TO BEAM CONNECTIONS

For units where rear and/or front header beams are required beam to beam brackets will be used. Place the bracket on the inside face of the beam, aligning their curved flange with the top groove of the beam so that they clamp the beam fillers in place, fasten using two 12x20 hex head screws (figure 7.0). Fasten the incoming beam either side with two 12x20 self drilling screws (figure 7.1).

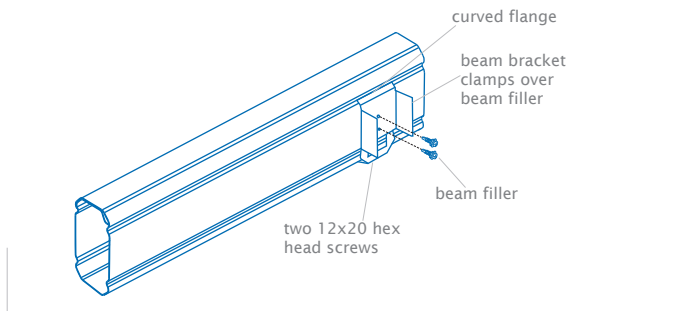


Figure 7.0

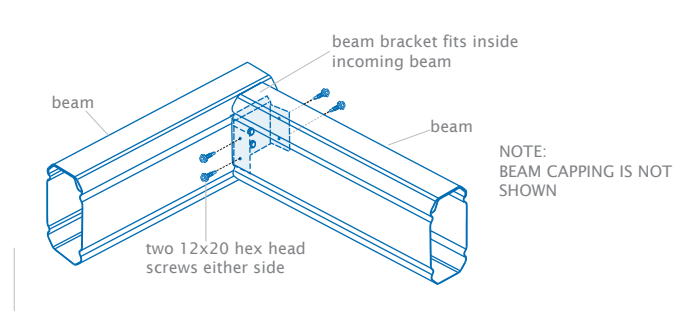


Figure 7.1

NOTE:
BEAM CAPPING IS NOT SHOWN

ATTACHING GABLE FRAME (WITHOUT HEADER BEAM)

The rafter to valley brackets are attached to the beam capping on valley beams using six 12x20 hex head screws (figure 8.0) at the appropriate locations.

For an end attached unit attach the second valley beam into the wall or suspension bracket while using construction props to support the opposite end. The gable rafters can now be fixed into the rafter to valley brackets with two 12x20 hex head screws either side (figure 8.1).

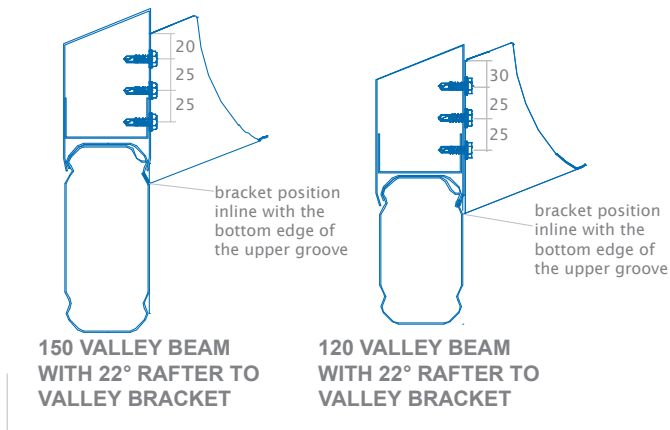


Figure 8.0

For a side attached unit support the second valley beam at the spacing determined in the section, 'Gable Frame Assembly' with adjustable construction props. The gable rafters can now be fixed into the rafter to valley brackets with two 12x20 hex head screws either side (figure 8.1).

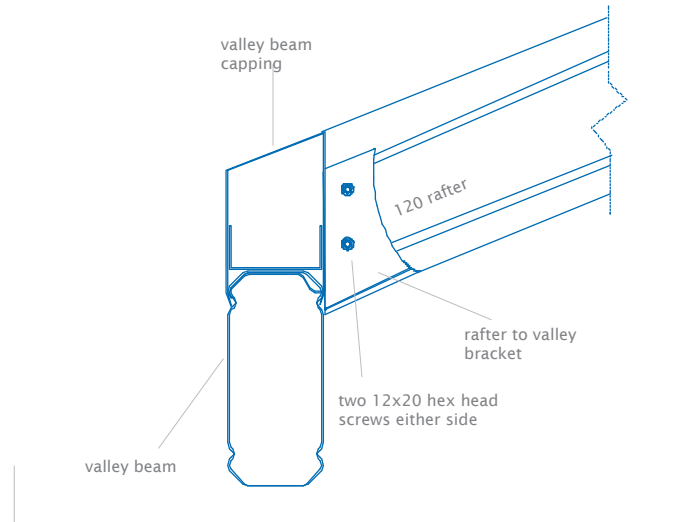


Figure 8.1

ATTACHING GABLE FRAME (WITH HEADER BEAM)

If the unit is being installed with header beam/s attach the beam to the frame work using beam to beam brackets. If fixed at the rear to an attachment beam this beam becomes the header beam.

Attach gable beam brackets to the header beam and capping using a minimum of eight 12x20 hex head self drilling screws, refer figure 9.0. Rafters are supplied notched at the base to fit the gable beam brackets. Rafters are fastened inside the gable beam brackets with a minimum of three 12x20 hex head self drilling screws either side as shown in figure 9.0.

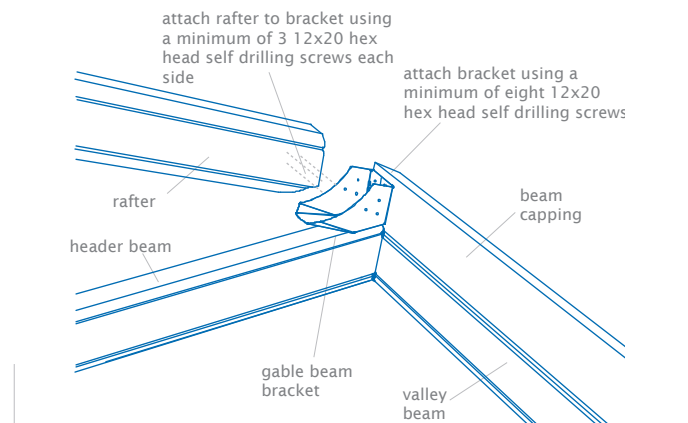


Figure 9.0

SOAKER FLASHING

If rear infill panels are being used, a soaker flashing is used to conceal the existing house gutter, waterproof the rear end of the gable and neatly finish the base of the infill panel (figure 10.0).

The rear gable frame and header beam are set back in order to accommodate the standard soaker flashing which is optional with the Outback unit.

Fix the standard soaker flashing into position underneath the gutter. Infill panels must be fixed with split tail soft pull rivets at 500mm centres a minimum of 20mm above the pan of the soaker flashing. This will reduce the possibility of moisture being absorbed into the sheet.

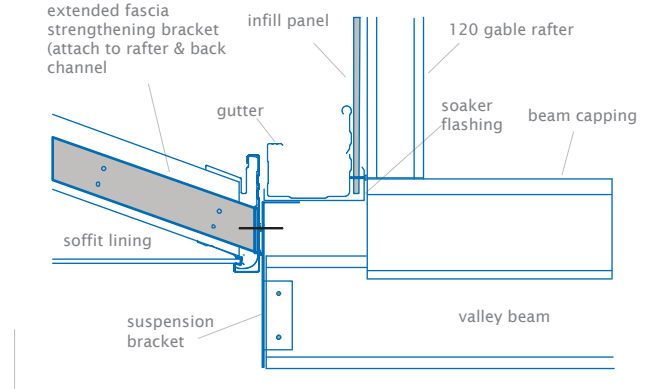


Figure 10.0

REAR HEADER FLASHING

When a gable is fixed at the rear to an attachment beam, elevated to the existing house gutter height, a header flashing is used typically in conjunction with the rear infill. In this case, the rear attachment beam is considered a header and along with the rear gable frame is fixed as close as possible (within 5mm) to the existing gutter in order to accommodate the header flashing. The gable frame is fixed on the rear header to gable beam brackets as previously described.

Fix the header flashing into position over the existing gutter lip with rivets. Infill panels are located behind the header flashing and fixed with split tail soft pull rivets at 500mm centres (figure 11.0).

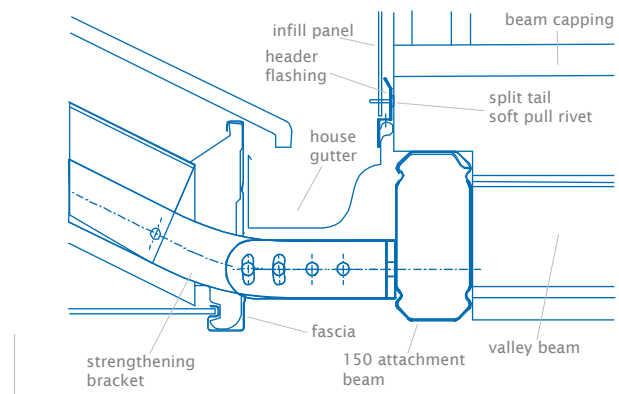


Figure 11.0

ASSEMBLING RIDGE BEAM

Fix the ridge rafter bracket at the ridge using six 12x20 hex head self drilling screws through the gable frame and into the ridge knuckle at both ends of the unit. The base of the bracket is positioned 32mm from the base of the gable frames, refer figure 12.0.

If the ridge beam needs reinforcing, slide the c-section reinforcement inside the ridge beam and fix with 12x20 hex head self drilling screws at 500 centres through top flange and 1200mm centres through bottom flange, refer figure 12.1.

Insert the ridge beam into the ridge rafter bracket and fix with a 12x 20 hex head self drilling screw on either side, refer figure 12.2.

Fix angled back channel to both sides of the ridge beam using 12x20 hex head self drilling screws at 500mm centres, ensure a screw is

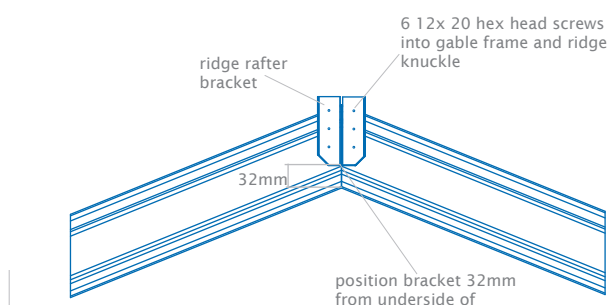


Figure 12.0

fastened either side through the ridge rafter bracket at the ends of the ridge beam. The angled back channel must rest on the gable frame and run 68mm past the end of the beam at both ends of the ridge beam. Fasten 12x20 hex head self drilling screws at 500mm centres along the double flange of the ridge beam (Figure 12.3).

In the case of decking overhanging the gable frame, run the angled back channel to the end of the overhanging ridge beam as shown in figure 12.4. A ridge rafter bracket will be required at the front of the ridge to support the overhanging ridge beam. A maximum 600mm overhang is allowed.

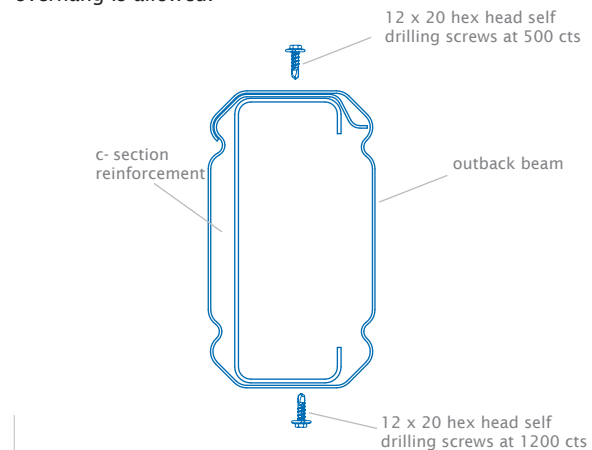


Figure 12.1

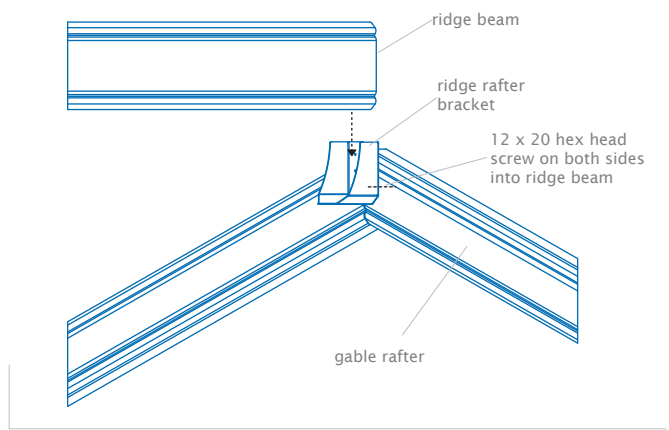


Figure 12.2

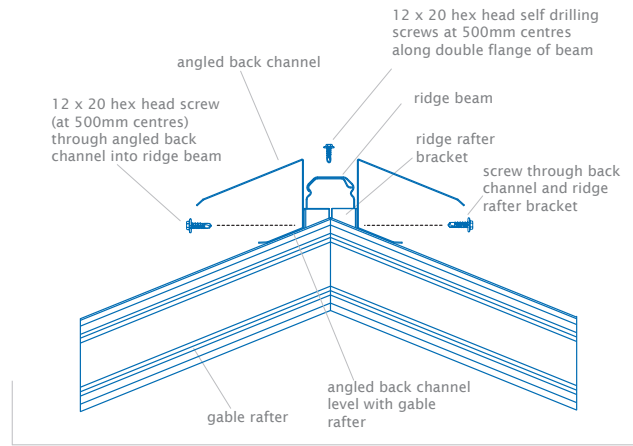


Figure 12.3

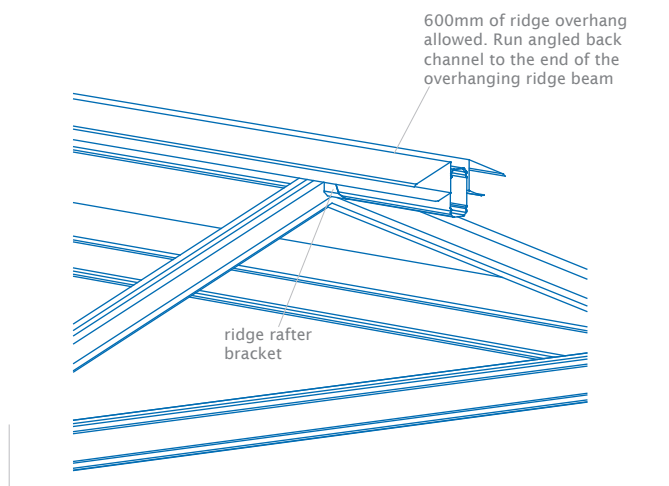


Figure 12.4

68 OUTBACK COLUMNS

If using 68 Outback columns and fixing into the ground, dig the holes to the specified size and place a brick in the bottom of the hole (figure 13.1). At each post location, measure from the underside of the beam to the top of the brick and cut the columns to length. Check to ensure all columns are plumb.

Reinforcing the 68 Outback Column

If 50 x 50mm square hollow sections (SHS) have been supplied, the fluted 68 Outback columns will need to be reinforced. Cut the 50mm SHS 75mm shorter than the column and slide into the column. Ensure the section is aligned with the base of the column and fix using two 12 x 35 hex head screws per side, at both ends, as detailed in figure 13.0.

Post Brackets

Fasten post brackets to the underside of beams at the relevant location with two 10x25 counter sunk self drilling screws either side. Slide the top of the 68 Outback column over the post bracket until it is flush with the underside of the valley beam. (Note: it may be necessary to lift the fascia beam slightly to slide the column over the post bracket). The unfluted faces of the column should be aligned with each face of the post to beam bracket. Fasten the 68 Outback column to the post bracket using two 12x20 hex head screws either side as shown in figure 13.2.

Use construction props or bracing to hold columns in position, but do not concrete in place at this stage.

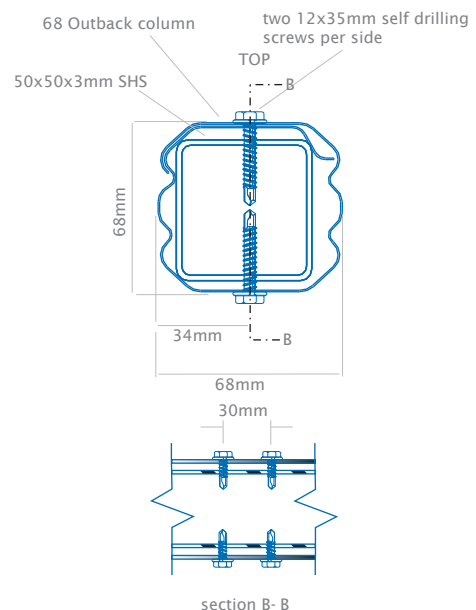


Figure 13.0

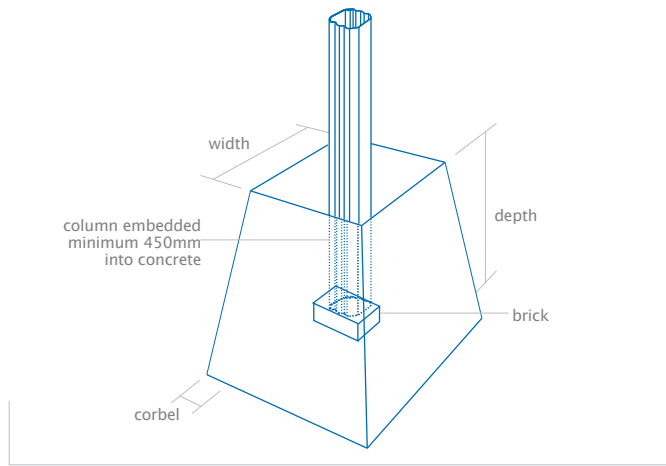


Figure 13.1

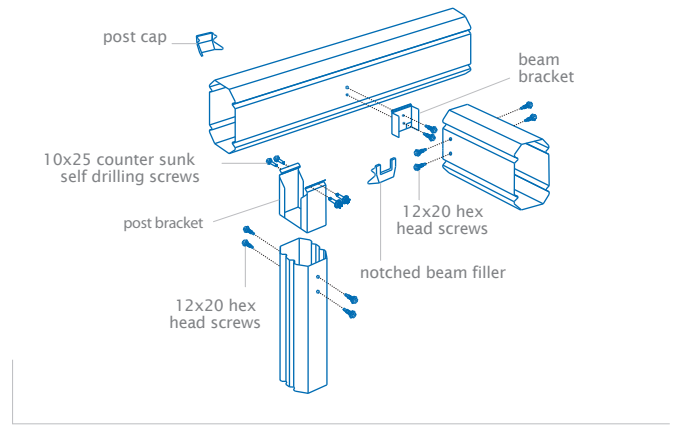


Figure 13.2

SHS COLUMNS

If square hollow section (SHS) columns have been supplied, an alternative post to beam connection method is used. Measure from the underside of the beam to the top of the half brick and cut posts to this length at each post location. Screw the corner connector or inline connector to the top of the SHS post with two 12x20 hex head screws on either side of the column. Stand the post in position and screw the connector to both the outside face and underside of the beam with 12x20 hex head screws as shown in figure 14.0.

Use construction props or bracing to hold columns in position, but do not concrete in place at this stage.

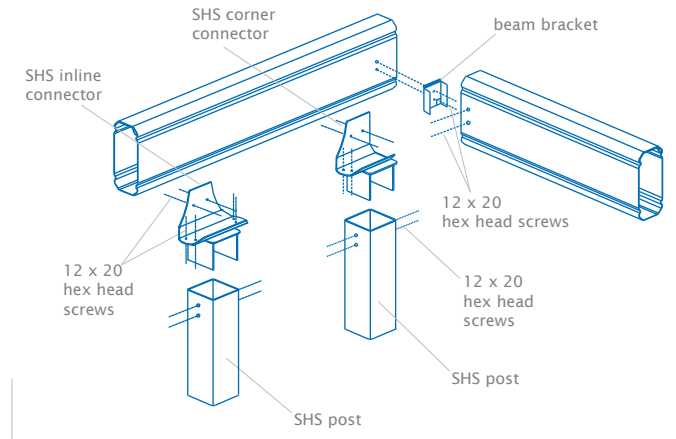


Figure 14.0

FOOTING PLATES - 68 OUTBACK COLUMNS

For non-reinforced 68 Outback Columns, two options of footing plate are available if fixing posts to an existing concrete slab, please familiarise yourself with the footing type being used before reading.

External Footing

If an external footing bracket is being used establish the column lengths by measuring the distance from the underside of the fascia beam to the concrete slab and deduct 20mm to allow for the depth of the footing bracket and cut the columns to length. Assemble the footing bracket by sliding the legs of the footing upstand through the slots in the plate (figure 15.0). The upstand bracing must be located between the legs of the upstand. Slide the assembled footing bracket and bracing into the bottom of the column, and fasten with two 12x20 hex head screws either side ensuring the top

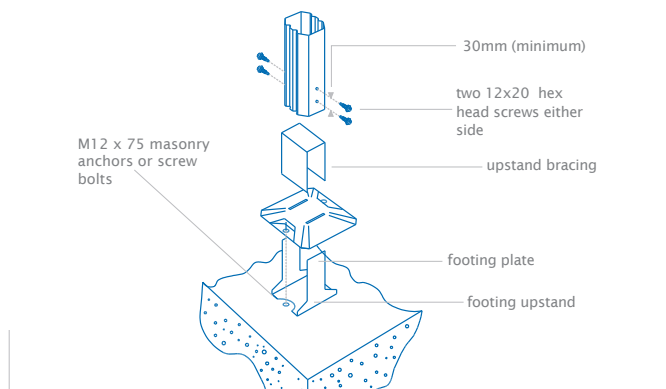


Figure 15.0

screws are located at least 15mm from the top of the upstand with screws being a minimum 30mm apart.

Internal Footing

If an internal footing bracket is being used establish the column lengths by measuring the distance from the underside of the fascia beam to the concrete. Place the 5mm washer plate inside the footing upstand and fix to the concrete with one M12x75 masonry anchors (minimum 75mm concrete edge distance). Measure the distance of the holes on the side of the footing upstand from the ground and mark this position on the column. Drill a 13mm hole at this location in the column. Slide the column over the internal footing upstand and bolt through the column and the upstand with one M12 bolt (figure 15.1).

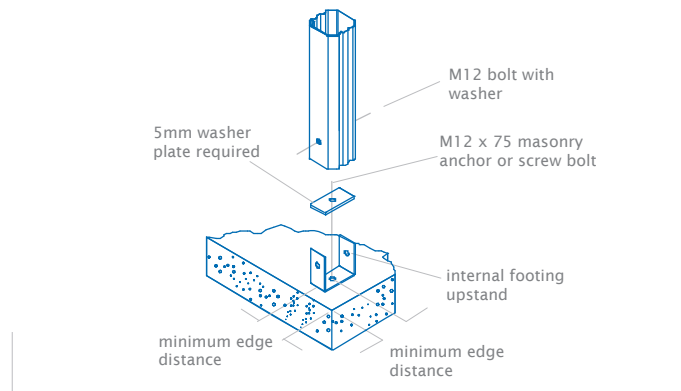


Figure 15.1

FOOTING PLATES - 68 REINFORCED OUTBACK COLUMNS

Measure from the underside of the beams to the top of the footing plate and cut the column to length. Refer section '68 Outback Columns' for reinforcement details. Slide the SHS reinforced footing bracket into the bottom of the column, and fasten with two 12x20 hex head screws on either side of the post. Locate the top screws approximately 100mm from the base of the footing plate, and the bottom screws 50mm from the base. This is shown in figure 16.0.

Slide the top of the column over the installed post bracket and secure as previously indicated, refer section '68 Outback Columns'.

Use construction props or bracing to hold columns in position but do not bolt to the concrete slab at this stage.

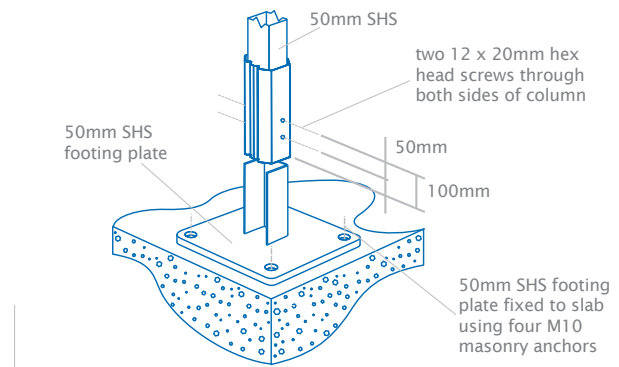


Figure 16.0

FOOTING PLATES - SHS COLUMNS

FOOTING PLATE - Measure from the underside of the beams to the top of the footing plate and cut column to length. Slide the SHS column footing bracket into the bottom of the column and fasten with two M10 bolts through the post. This is shown in figure 17.0.

Fix corner or inline connectors to columns and fasten to beams as previously indicated, refer section 'SHS Columns'.

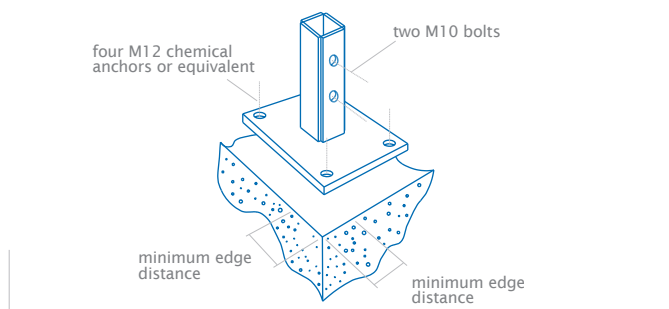


Figure 17.0

Use construction props or bracing to hold columns in position, but do not bolt to the concrete slab at this stage.

SHS INTERNAL UPSTAND - Measure from the underside of the beams to the concrete slab and cut the column to length. Position SHS over the internal upstand and ensure the upstand mounting holes are at least 75mm from the edge of the concrete (Figure 17.1). Do not fix the SHS column to the upstand at this stage.

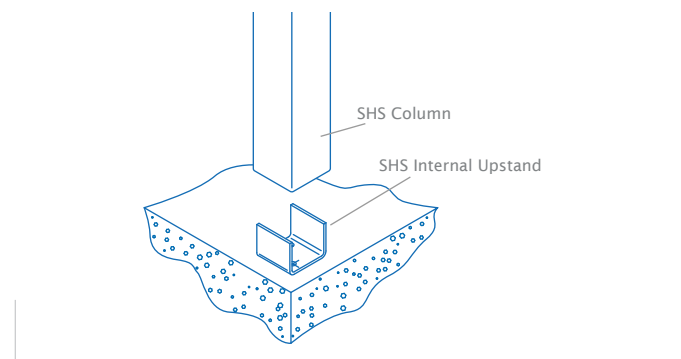


Figure 17.1

Use construction props or bracing to hold columns in position but do not bolt to the concrete slab at this stage.

CAPPING

To prevent moisture from entering the beams and for aesthetics, any beams with exposed ends require end caps to be fitted. Align the end cap and push into the exposed beam end (figure 18.0). If Outback columns are used, the postcaps can be fitted over the post-

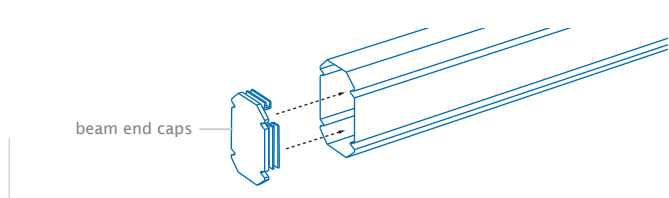


Figure 18.0

beam connection. Apply a small amount of silicone to the back of the postcap, align the two lugs with the two exposed holes of the post bracket and push firmly (figure 18.1).

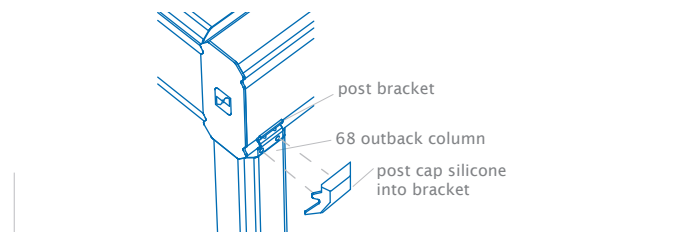


Figure 18.1

FRAME WORK CHECK

Check the framework is square by checking the diagonal measurements are equal.

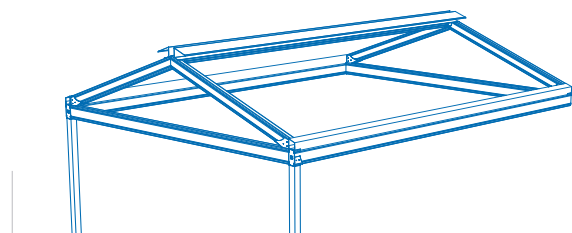


Figure 19.0

FIXING THE PANELS

There are two types of profiles in the Cooldek range; Cooldek Classic and Cooldek CGI, refer figure below. The same procedure is used when fixing either option to the frame.

COOLDEK CLASSIC



COOLDEK CGI



When attaching the Cooldek Sheeting, start from the rear on one side of the gable. Lift the first sheet into place and slide firmly into the angled back channel. Check the sheet is square against the receiving channel and the beam capping and fix into position. Lay the next sheet of decking over the previous sheets side lap and ensure that the slip joint of the two sheets has engaged, refer figure 20.0 and 20.1.

Note: The minimum Cooldek sheet length is 2.0m. If your design requires sheets smaller than 2.0m they will be supplied at 2.0m and require cutting on site.

Ridge End

Sheeting is fastened to the angled back channel using 4.8mm sealed rivets to the underside of the sheeting at maximum 200mm centres and 12 x 20 hex head self drilling screws with neoprene washer from the top into each crest for the Classic profile and every third crest for CGI, refer figure 20.2.

Beam Capping End - WITH A SIDE GUTTER

If a side gutter is being attached to the unit an 'Angled Cutback Flashing' will need to be fixed to the ends of the sheeting. Cut back the foam and the bottom skin of the insulated deck to the beam capping, refer figure 20.3. Slide the angled cutback flashing between the beam capping and the sheeting. Rivet the cutback flashing to the top sheet at 1000mm centres and fix the decking through each crest

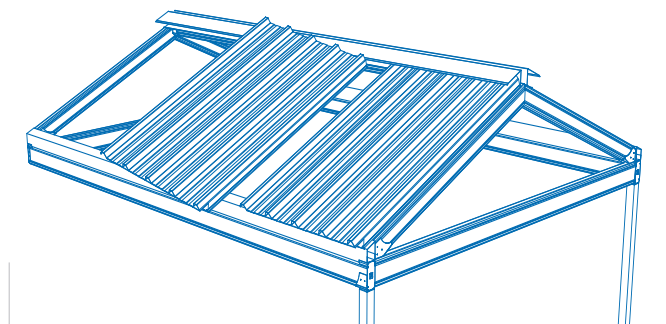


Figure 20.0

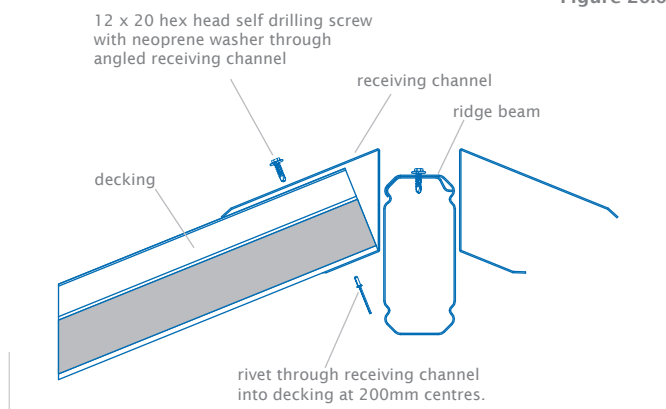


Figure 20.2

for Classic and every second crest for CGI into the beam capping (and the flashing). If using 50mm Classic panels use 14x125mm hex head self drilling screws (14 x 150mm for 75mm Classic panels, 14 x 110 for 50mm CGI panels and 14 x 125 for 75mm CGI panels) refer figure 20.3.

Pre-drill the crests of the ribs to provide clean holes for the seating of neoprene washers. Use cyclone caps and neoprene washers for all crest fixing. Do not over tighten screws. Fix side laps with 12x20 hex head screws with neoprene washer at approximately 1000mm centres. Silicone to waterproof all rivets.

Beam Capping End - WITHOUT A SIDE GUTTER

If no side gutter is being installed fix the decking through each crest for Classic and every second crest for CGI into the beam capping. If using 50mm Classic panels use 14x125mm hex head self drilling screws (14 x 150mm for 75mm Classic panels, 14 x 110 for 50mm CGI panels and 14 x 125 for 75mm CGI panels), refer figure 20.4.

Pre-drill the crests of the ribs to provide clean holes for the seating of neoprene washers. Use cyclone caps and neoprene washers for all crest fixings. Do not over tighten screws. Fix side laps with 12 x 20 hex head screws with neoprene washer at approx 1000mm centres.

When no side gutter is present a standard cutback flashing will be used to protect the foam. Cutback the foam and the bottom skin of the insulated deck by 20mm. Position the cutback flashing as shown in figure 20.5 and rivet to the panel at 500mm centres from both sides. Silicone to waterproof all rivets.

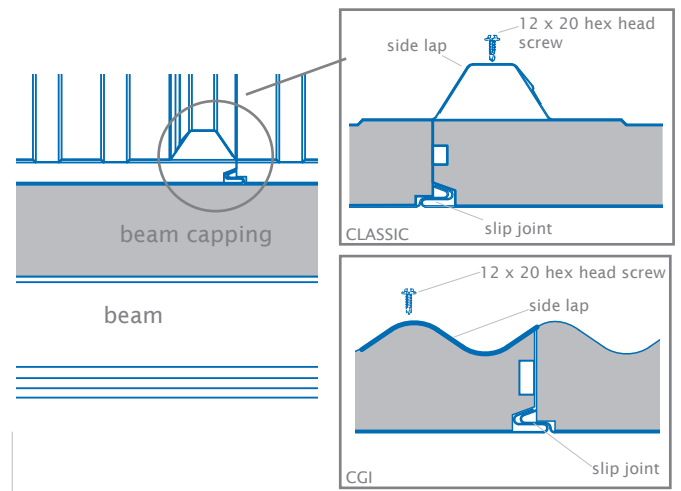


Figure 20.1

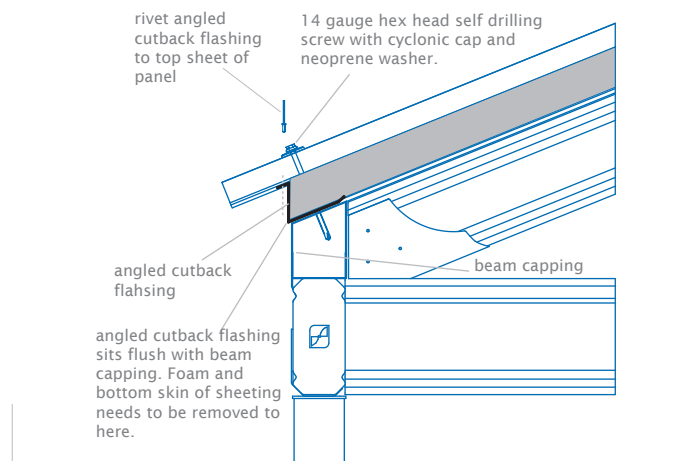


Figure 20.3

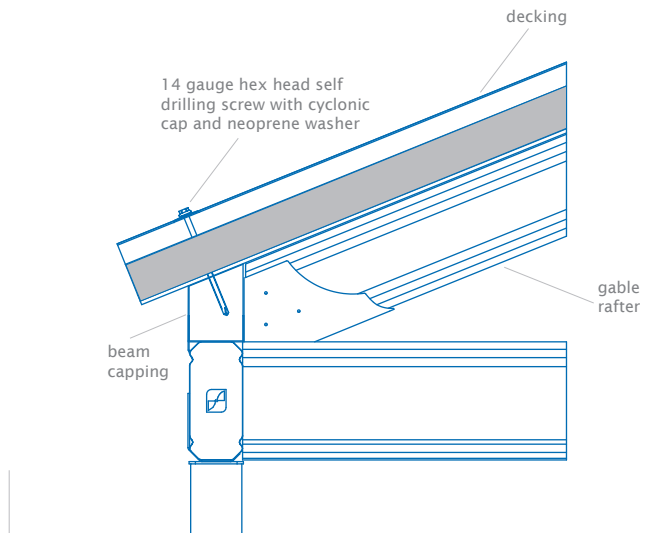


Figure 20.4

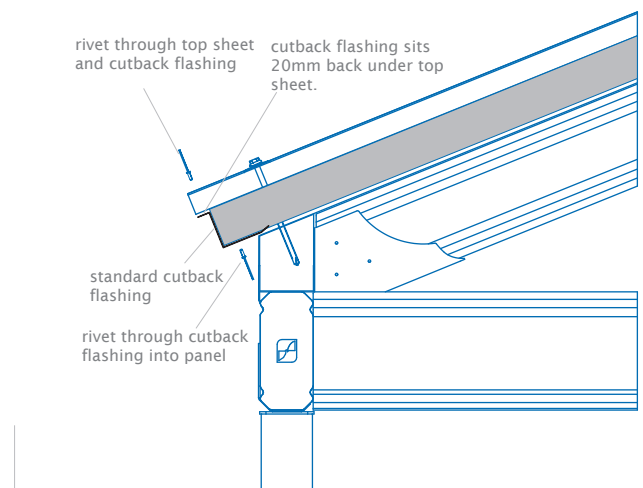


Figure 20.5

SIDE GUTTER

Attach the stop ends to the side gutters with four rivets per stop end, remove any swarf and waterproof with silicone. Lift the side gutter and rivet it to the top sheet and angled cutback flashing at 1000mm centres. Attach gutter straps to top sheet at maximum 1000mm centres, refer figure 21.0. Note: The gutter profile will look different if 'Outback Gutter' is used, see figure 21.2 for profile.

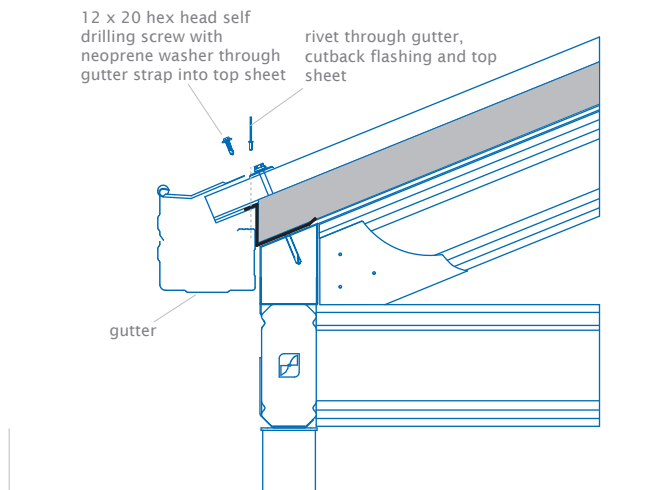


Figure 21.0

When fixing gutters always ensure that the front face of the gutter remains vertical and even. All screws to have neoprene washers. Silicone to waterproof all rivets and any pan fixed screws.

Gutter Outlet

Position downpipe in line with column/s. Cut a hole in the base of the gutter near the back chamfer. Insert the gutter outlet pop from the inside of the gutter and rivet in place using 3mm rivets (figure 21.1), remove any swarf and waterproof with silicone.

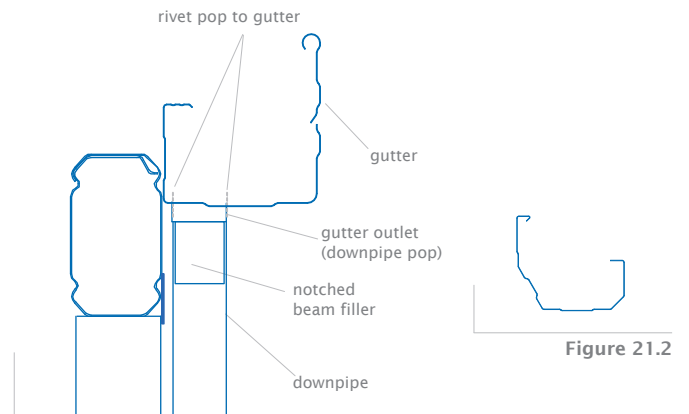


Figure 21.1

RIDGE CAPPING AND LOWER END CLOSURE

Position the ridge cap over the ridge beam and receiving channels and rivet into the channels at 250mm centres, refer figure 22.1.

The panels should be closed in order to protect against moisture and vermin. Use foam vermin proofing supplied see figure 22.0. If CGI roofing sheets are being used then vermin proofing foam will not be required.

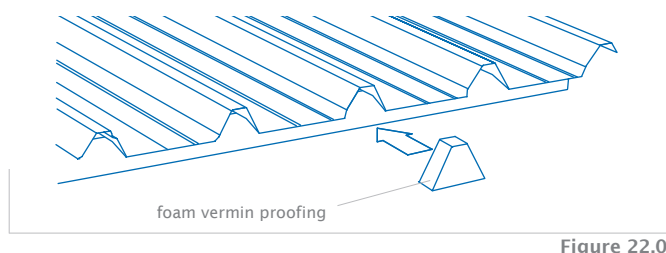


Figure 22.0

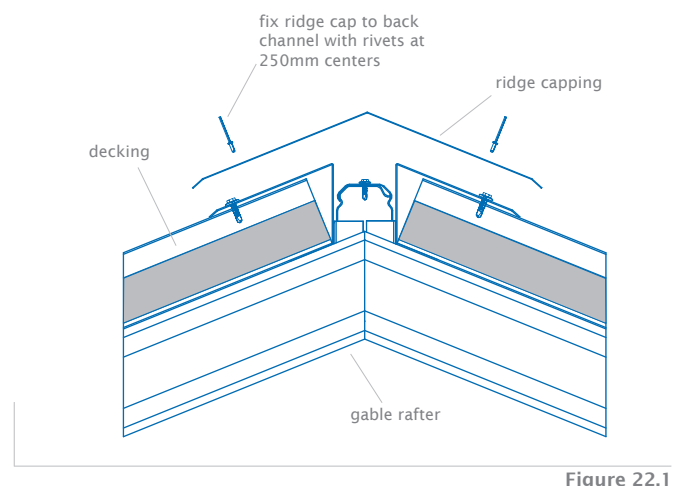


Figure 22.1

INFILL PANELS AND HEADER FLASHING

Gable infill panels are to be cut in triangle shapes to fit the end frame. Panels can be painted to the desired colour before installing. End struts are fixed mid-span of the header to a header beam bracket at the base and an end strut plate at the ridge. Infill panels are fixed through the top groove of rafters and the lower groove of the header beam with 8x35mm self embedding self drilling screws at 500mm centres. Panels are fixed to the end strut at the same spacings. Attach the header flashing to the underside of the header

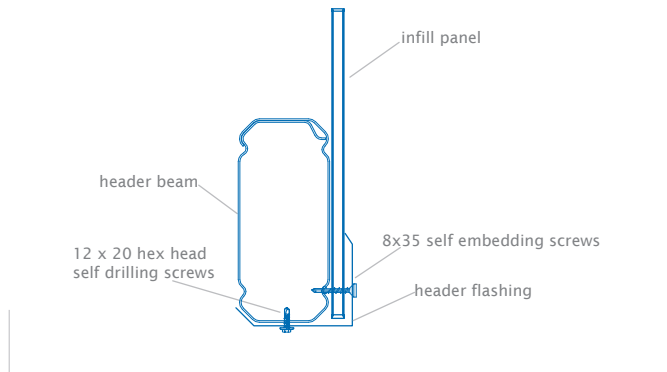


Figure 23.0

beam with 12x20 hex head screws to neatly finish the base of the infill panels. Refer figure 23.0 and 23.1.

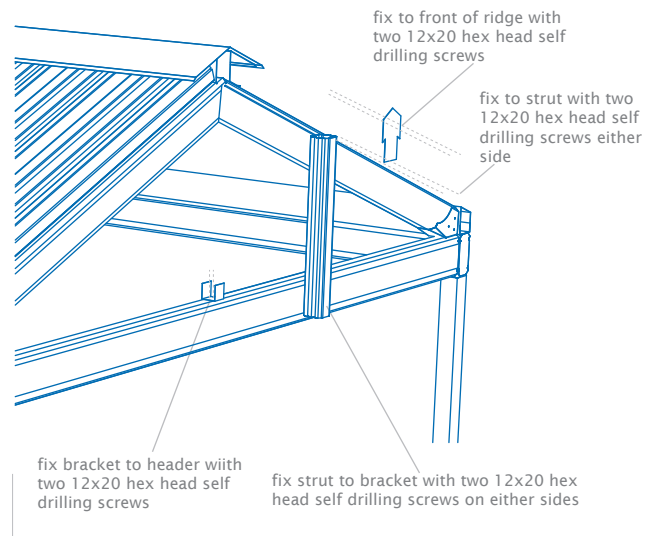


Figure 23.1

ATTACHING BARGE CAPPING

Attach the barge cap by screwing the lower lip to the gable rafter and rivet the top section to the deck as shown in figure 24.1. Mitre the barge at the apex of the gable for a neat finish. Trim the barge at the gutter end to ensure a neat finish.

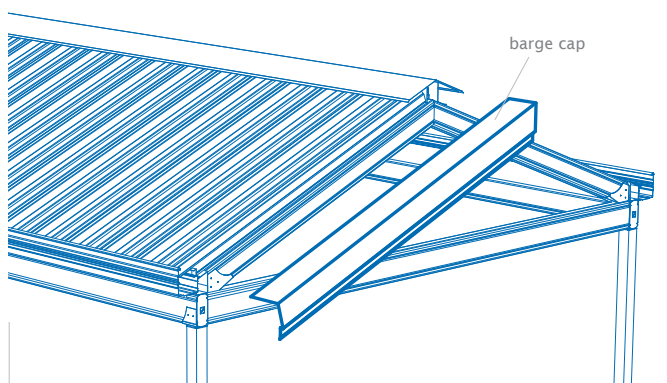


Figure 24.0

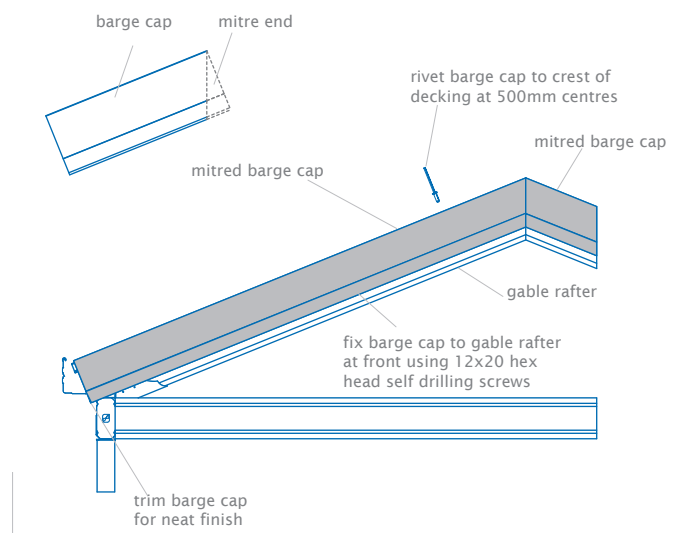


Figure 24.1

FINAL FIXING

Fixing into the Concrete Footing

Thoroughly check the posts with a spirit level. When plumb, fill the post hole with approximately 150mm of concrete and use a shovel or pole to agitate the concrete to remove any air pockets. Repeat this process until the hole is full, continually checking the posts as you go. The concrete must have a slight slope that runs away

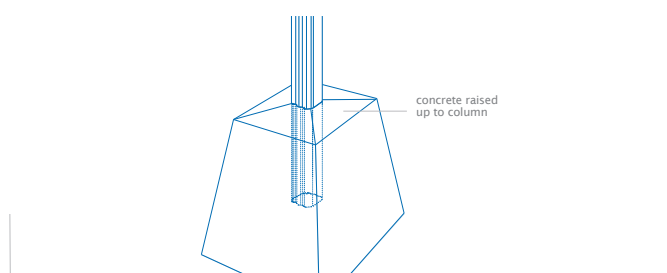


Figure 25.0

from the column to ensure any water does not pool around the base (figure 25.0). Once the concrete is set remove any temporary bracing or props.

Fixing onto Existing Concrete: External Footing

If the columns are to be fixed to an existing concrete slab with an external footing plate, each plate must be fixed to the concrete. For a 68 Outback Column refer figure 25.1, for a reinforced 68 Outback column refer 25.3 and for an SHS column refer figure 25.2. The minimum distances from an anchor hole to the concrete edge is 70mm for M10 anchors, 75mm for M12 anchors and 120mm for M16 anchors.

Fixing 68 Outback Column onto Existing Concrete: Internal Footing

Ensure the M12 bolt is tightened. Refer figure 25.4

SHS Internal Upstand

Ensure the column is plumb and mark out the footing position on the concrete. Lift the column off the internal upstand and position the upstand on the markings.

Fix the SHS internal upstand to the concrete slab using one M12 Chemical Anchor (Chemset 101 or greater) for 65mm & 75mm SHS Upstand, or two M10 Chemical Anchors (Chemset 101 or greater) for 90 & 100mm SHS Upstands (Figure 25.5).

Position the SHS column over the Internal Upstand.

- For 65mm and 75mm SHS columns pre-drill two 3.5mm holes through both the SHS and the Upstand legs at a minimum of 20mm spacing on each side of the column.
- For 90mm and 100mm SHS columns pre-drill four 3.5mm holes through both the SHS and the Upstand legs at a minimum of 20mm spacing on each side of the column.

Fix the SHS to the upstand through the pre-drilled holes using 12x20mm self drilling screws (Figure 25.6).

Seal around the base of the column with an elastic sealant. Pooling of water around the base of the column must be prevented.

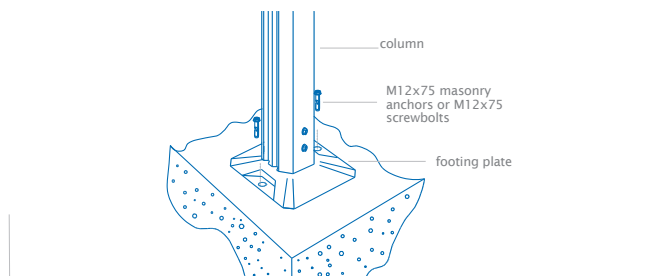


Figure 25.1

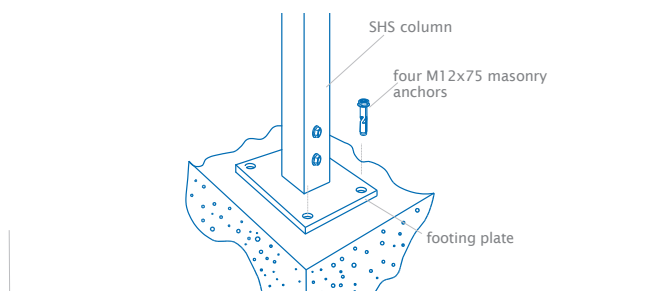


Figure 25.2

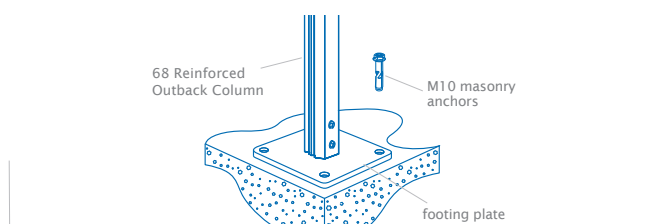


Figure 25.3

MAINTENANCE

Regular maintenance is essential to maintain the good looks of all Stratco steel products and to ensure you receive the maximum life-span possible. Washing with clean water must be frequent enough to prevent the accumulation of dust, salts, and pollutants that may reduce the life of the product. Stratco steel products that are regularly washed by rain require no additional maintenance. No Stratco steel structure or materials are recommended for use over, or in close proximity, to

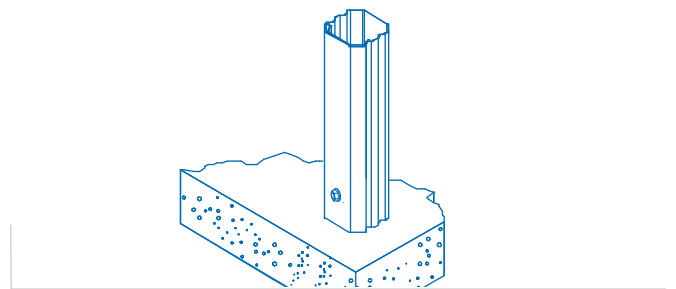


Figure 25.4

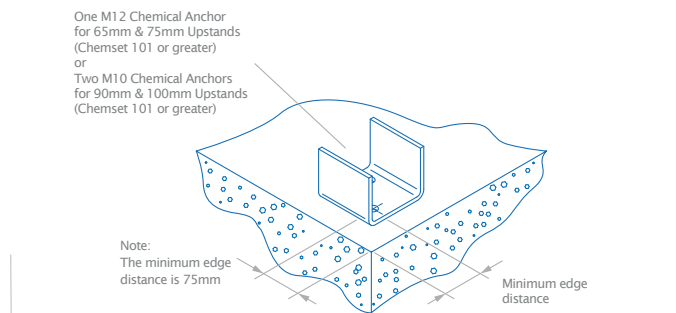


Figure 25.5

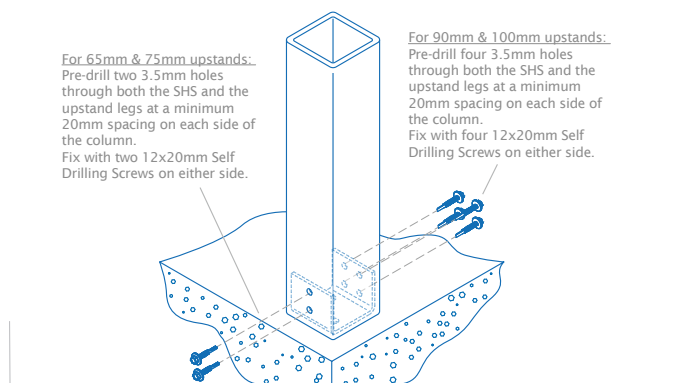


Figure 25.6

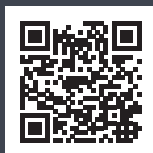
Important Note

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.

Downpipes

Before attaching the downpipes, rivet the downpipe brackets to the column and bend the flanges along the 'break-line' to accept the downpipe. Slide the downpipe over the gutter outlet and rivet into position. Rivet the downpipe to the brackets. Weatherproof all the fasteners with silicone.

swimming pools or spas. No material that retains water (such as dirt or paving sand) should be placed against the columns. Care must be taken when determining the location of Stratco steel products so that they are not placed in close contact with sources of pollution or environmental factors that could affect the life of the steel. Refer to the 'Selection, Use and Maintenance' brochure for more information.



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