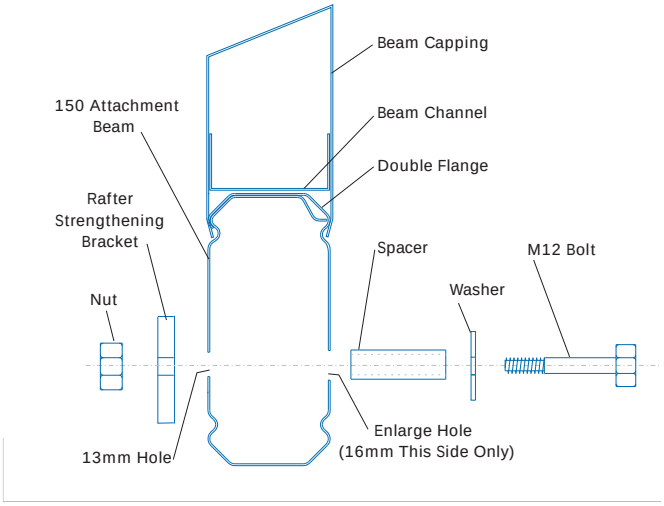


Figure 7

2.2 Attaching On End To House

If fixing a Clearspan Gable on its end to a wall, two alternatives are available. Ridge and valley beams are fixed directly to the wall using beam to wall brackets. This option will not require a rear gable frame and back channel is fixed to the wall to accommodate sheets running along the wall. The other alternative requires valley beams be fixed to the wall and a rear gable frame installed. The rear gable frame will need to be slightly offset from the wall to allow the appropriate bracket fixing.

If fixing a Clearspan Gable on its end with suspension brackets to a fascia (Figure 9) typically a soaker flashing is used. In this case the gable rafter at the rear of the unit is to be set back sufficiently from the house fascia to accommodate the house gutter and infill panel (refer to Figures 22 and 23).

If fixing a Clearspan Gable on its end to an attachment beam, elevated to the existing house gutter height, the attachment beam is to be as close as possible (within 5mm) to the outside face of the gutter (Figure 24). The 150 attachment beam is fixed to rafter strengthening brackets as detailed in section 2.1.1.

2.2.1 Fascia Strengthening

It is recommended extended fascia strengthening brackets are fastened at a spacing not exceeding 1200mm centres to fascia and rafters (Figure 9). Brackets and reinforcement channels are also recommended to the first rafter either side of the valley beams. Secure brackets to rafters with 12x25mm timber fixing screws through pre-drilled holes and bolt through backchannel and fascia with M10 bolts.

Note: It is the builder's responsibility to ensure the existing rafters and fascia are adequately reinforced and tied down to accommodate any additional attached structure loads.

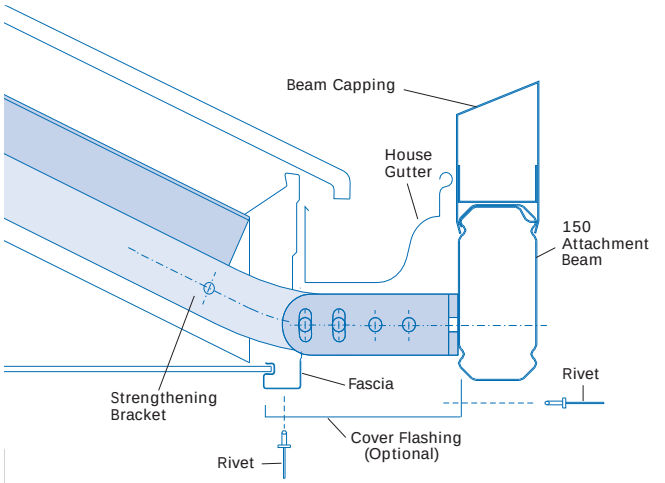


Figure 8

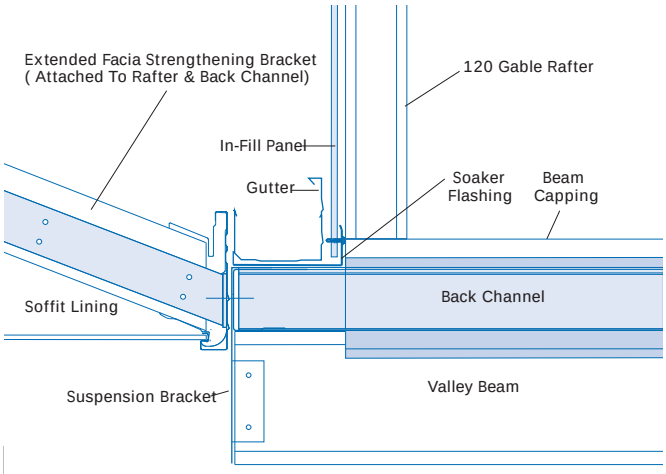


Figure 9

3.0 GABLE FRAME ASSEMBLY

IMPORTANT: Ensure that the double thickness portion is at the top when installing all beams and rafters.

Note: The rafters are supplied pre-cut and drilled at the ridge as shown in (Figure 10). Insert 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.

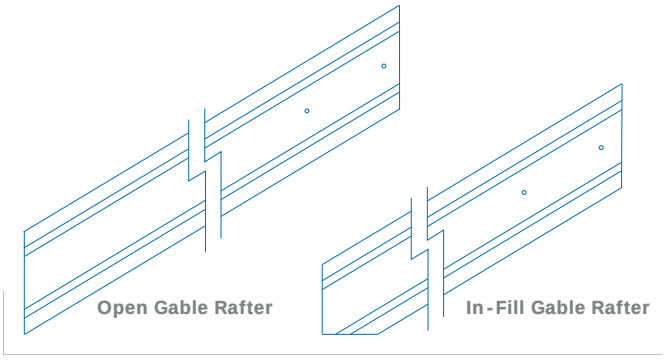
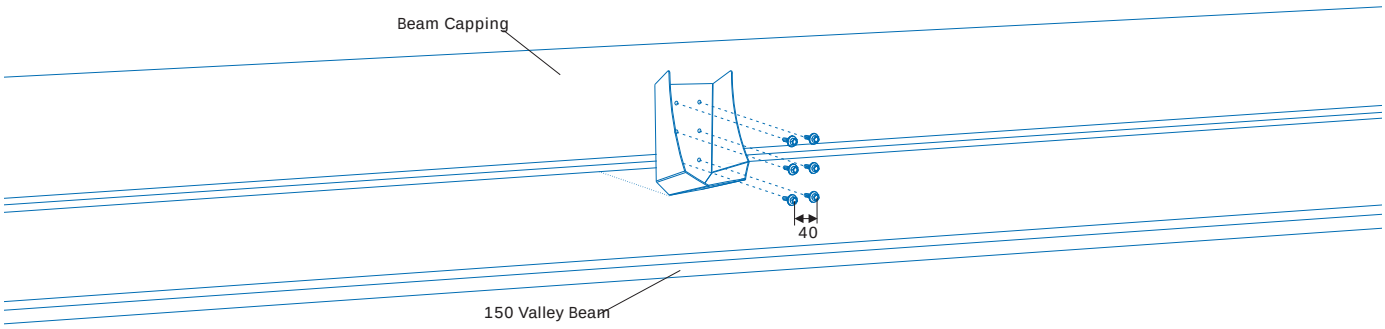
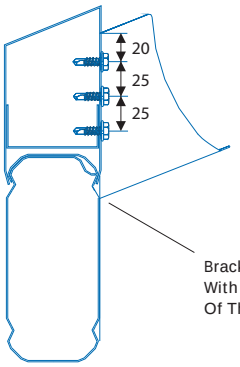
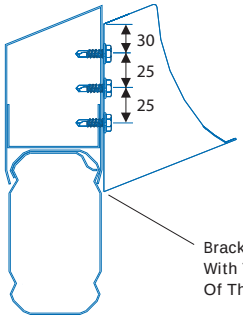


Figure 10

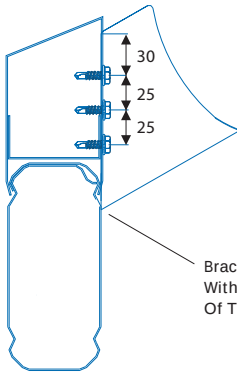




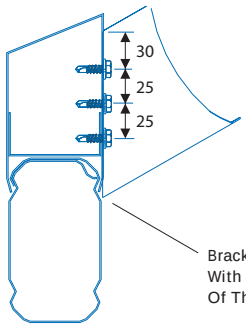
150 VALLEY BEAM WITH
22° RAFTER TO VALLEY BRACKET



120 VALLEY BEAM WITH
22° RAFTER TO VALLEY BRACKET



150 VALLEY BEAM WITH
30° RAFTER TO VALLEY BRACKET



120 VALLEY BEAM WITH
30° RAFTER TO VALLEY BRACKET

Figure 15

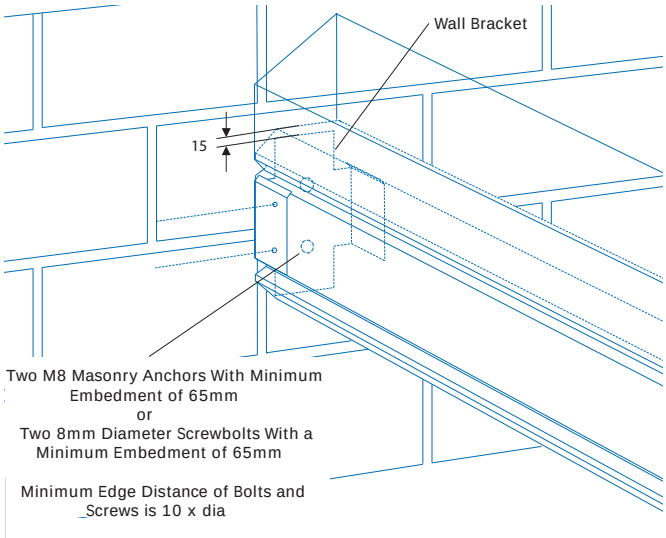


Figure 16

The valley beam is fastened to the wall bracket with 10x16 hex head screws in the pre-drilled holes while the opposite end is supported on adjustable construction props.

For units attached on the end to a fascia, suspension brackets are positioned at either side of the gable opening at the spacing determined in Section 3.0 (Figure 12). The top tab of the suspension bracket must be located between the fascia and back channel. A minimum of two M6 bolts with washers are fixed through back channel, suspension bracket and fascia (Figure 17).

If back channel is not present, (ie, no adjacent flat roof) locate a 2mm washer plate behind fascia at suspension bracket. Fix through bracket, fascia and plate.

The first valley beam is fastened into the suspension bracket with 10x16 hex head screws through the dimples while the opposite end is supported on adjustable construction props.

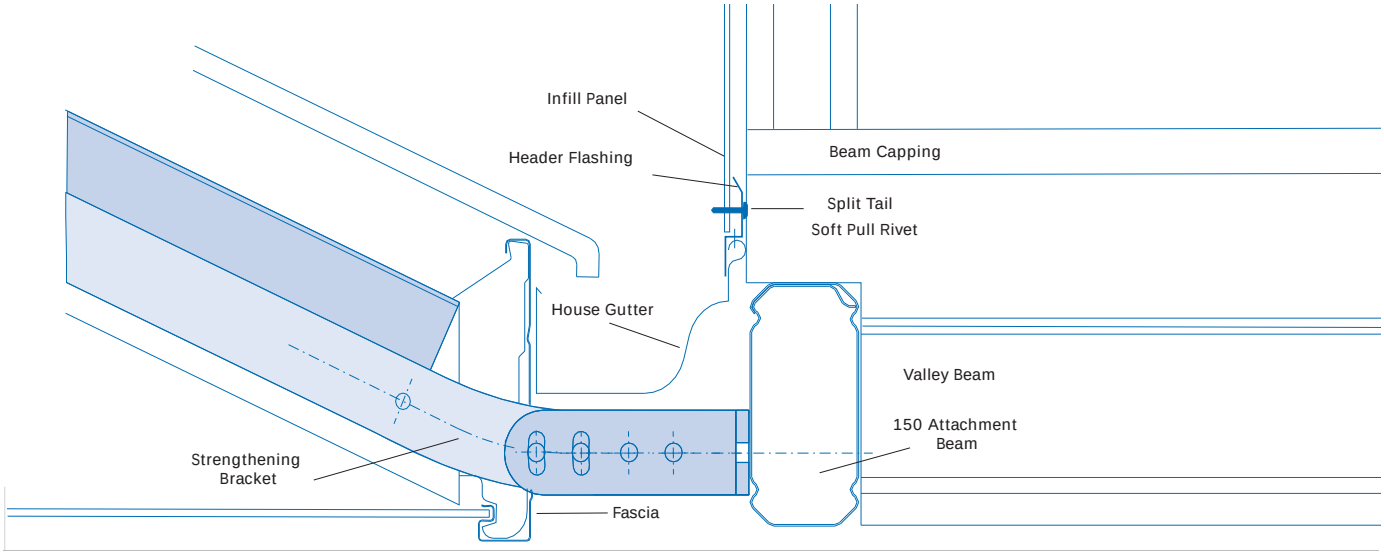


Figure 24

6.0 RIDGE BEAM

6.1 Assembling Ridge Beam

Assemble ridge beam before attaching to gable frames. Fix angled back channel to both sides of the ridge beam using 10x16 hex head self drilling screws at 500mm centres, ensuring that the top of the back channel is in line with the bottom of the beam chamfer as shown in (Figure 25). The back channel should run 34mm past the end of the beam at both ends of the ridge beam. If there is no rear portal frame, finish the back channel flush at one end.

Fasten 10x16 hex head self drilling screws at 500mm centres along the double flange of the ridge beam (Figure 25).

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 26). A ridge rafter bracket will be required on both sides of the ridge to support overhang.

6.1 Attaching Ridge Beam

Fix the ridge rafter bracket at the ridge with six 12x20 hex head self drilling screws through the gable frame and into the ridge knuckle.

Position the ridge beam so that the angled back channel rests on the gable frame (Figure 27). Fix the ridge rafter bracket using two 12x20 hex head self drilling screws each side (top screw may be fastened through the backchannel into the bracket & beam).

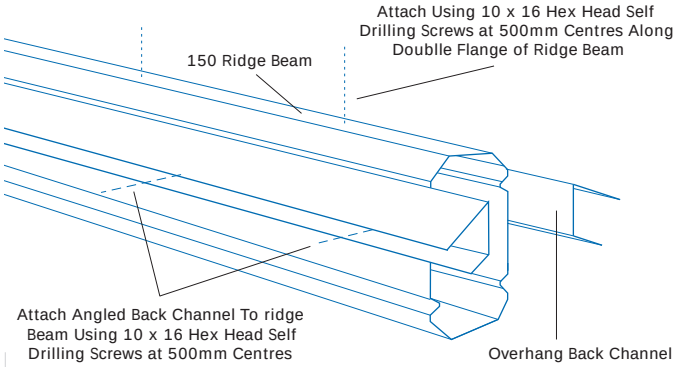


Figure 25

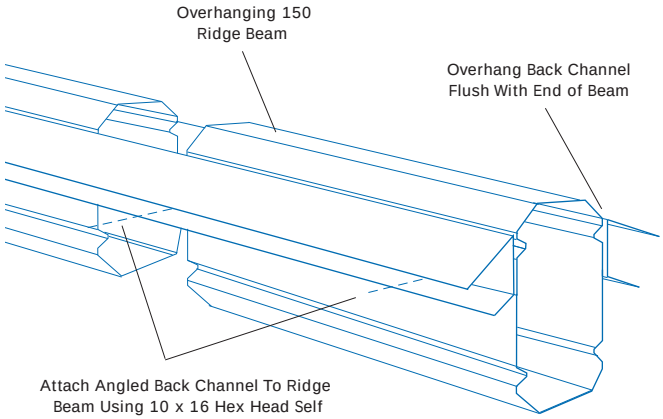


Figure 26

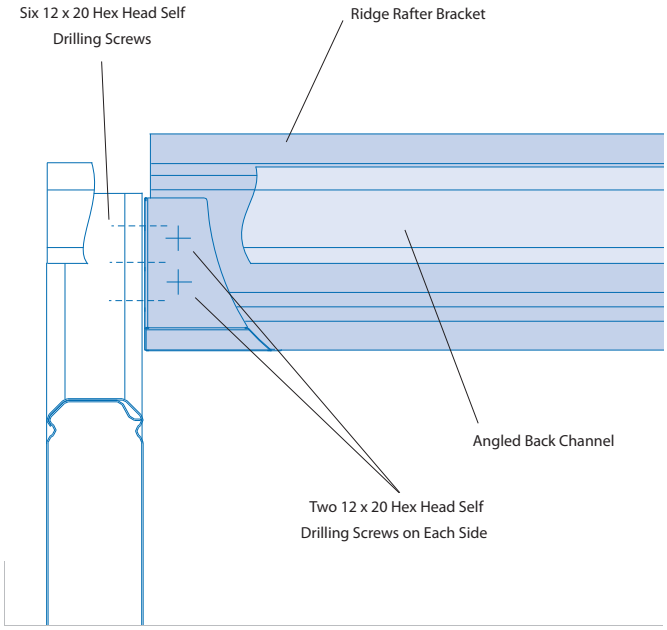


Figure 27

11.0 GUTTERING

If a flat verandah is included connect the gutter to the flat roof 3HUROD as described in 'Pergola Flat Attached Verandah, Patios & Carports'.

Where there is no flat roof adjacent the gable, the gutter is attached to the top of the beam capping. Cut 30mm tabs in the gutter back lip at 1000mm intervals and fold back. Fix the gutter to the beam capping, through the tabs with rivets as shown in (Figure 32). Once decking is attached (Section 12.0) fit gutter straps at maximum 1000mm intervals, attaching to the top of the decking with rivets. Waterproof rivets with silicone.

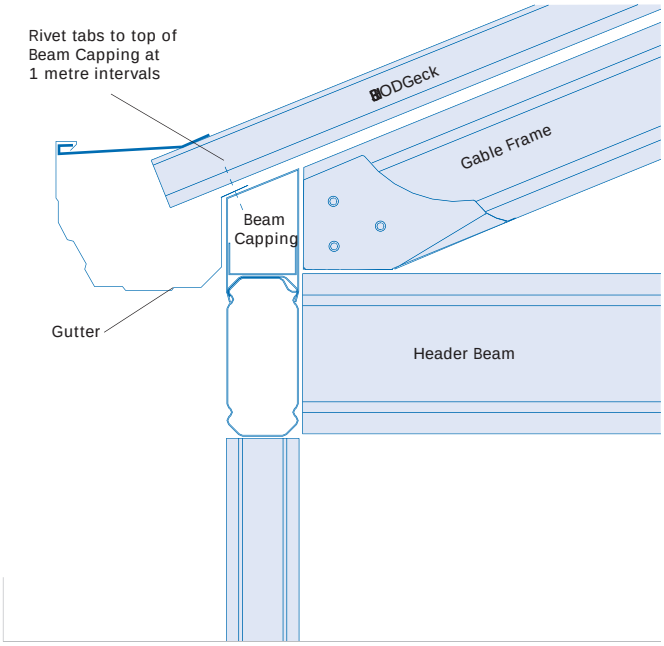


Figure 32

11.1 Gutter Outlet Assembly

Position the downpipes in line with columns then cut a hole in the base of the gutter near the back chamfer. Insert the downpipe outlet from the inside of the gutter and rivet in place using 3mm rivets (Figure 33). Remove any swarf and waterproof with silicone.

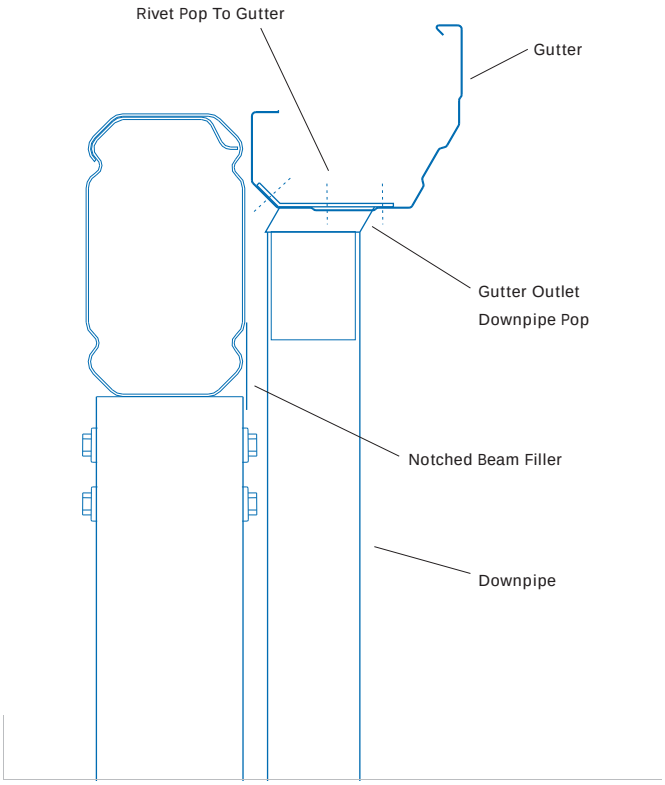


Figure 33

12.0 ATTACH DECKING

12.1 Flat Roof (If Applicable)

Attach the decking to the flat roof verandah first as laid out under "DECKING" ('Pergola Flat Attached Verandah, Patios & Carports'), starting from the valley beam and working away, on both sides.

The back channel is attached upside down (the shorter leg on top) along beam capping to assist the fixing of decking. (Figure 34).

12.2 Clearspan Gable

When attaching the decking to the gable, start from the rear on one side of the gable. Fix the deck to the angled back channel at the ridge, and to the capping at the valley beam. If the deck of the flat roof section runs perpendicular to the valley beams, align the ribs of the gable decking up with the flat roof section. The Pergola decking will need to overhang the beam capping allowing water to flow directly into the gutter (Figure 32).

12.2 Clearspan Gable

When attaching the decking to the gable, start from the rear on one side of the gable. Fix the deck to the angled back channel at the ridge, and to the capping at the valley beam. If the deck of the flat roof section runs perpendicular to the valley beams, align the ribs of the gable decking up with the flat roof section. The Pergola decking will need to overhang the beam capping allowing water to flow directly into the gutter (Figure 32).

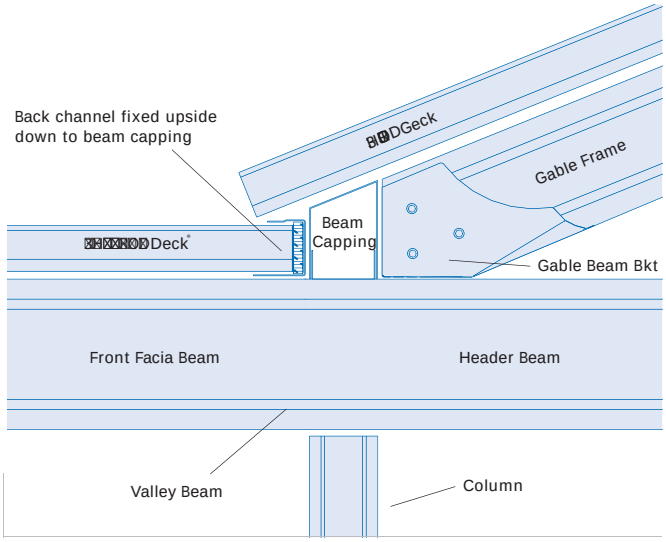


Figure 34

13.0 RIDGE CAPPING

Position the ridge cap over the ridge beam and two angled back channels and rivet into the channel (Figure 35). Position the ridge cap over the ridge beam and two angled back channels and rivet into the channel (Figure 35).

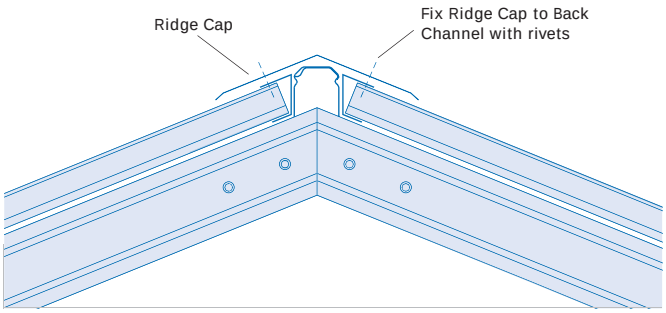


Figure 35

14.0 INFILL PANELS

Two styles of header flashings are available to neatly finish the base of infill panels, one is used on header beams with gutter and the other for headers without gutter. Gable infill panels are to be cut in triangular 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 (Figure 36).

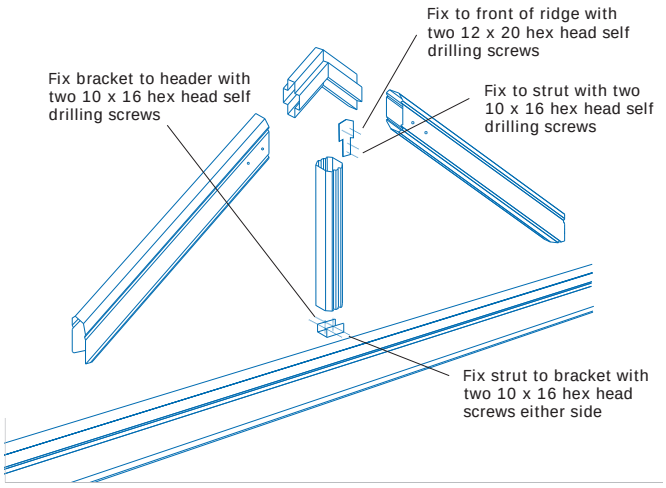


Figure 36

14.1 Header Beam With Gutter

Attach the header flashing to the rear gutter lip with rivets. Infill panels are fixed through the top groove of rafters and the end strut with 8x35mm self embedding self drilling screws at maximum 500mm centres in non-cyclonic areas and 250mm centres in cyclonic areas. Panels are fixed at the base through the header flashing with split tail soft pull rivets at maximum 500mm centres (Figure 37).

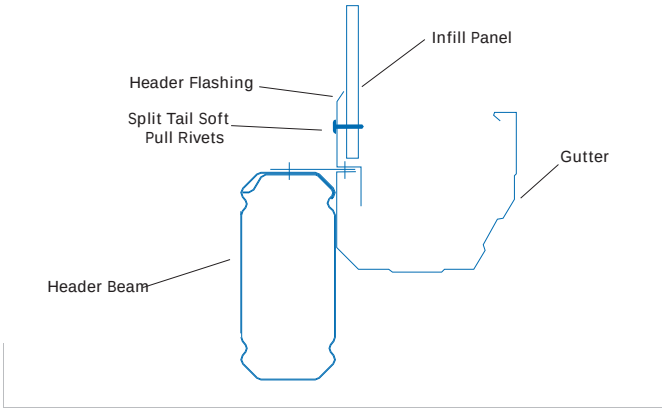


Figure 37

14.2 Header Beam Without Gutter

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. Fix at maximum 500mm centres in non-cyclonic areas and 250mm centres in cyclonic areas. Panels are fixed to the end strut at the same spacings. Attach the header flashing to the underside of the header beam with 10x16 hex head screws to neatly finish the base of the infill panels (Figure 38).

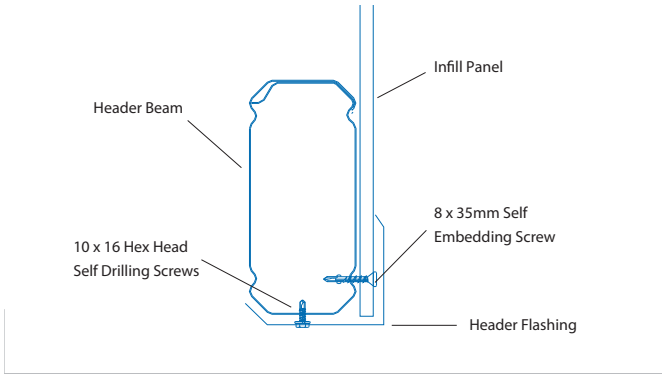


Figure 38

15.0 ATTACHING BARGE CAP

If barge capping is required at the ends of the unit, attach the barge cap by screwing the lower lip to the rafter and rivet the top section to the deck, as shown in (Figure 39). Mitre the barge at the apex of the gable for a neat finish. Run the barge cap along the gable section to where it meets the flat verandah deck and finish neatly.

Before securing columns in position ensure a minimum fall of 1 in 500 (12mm for every 6m) towards downpipe/s.

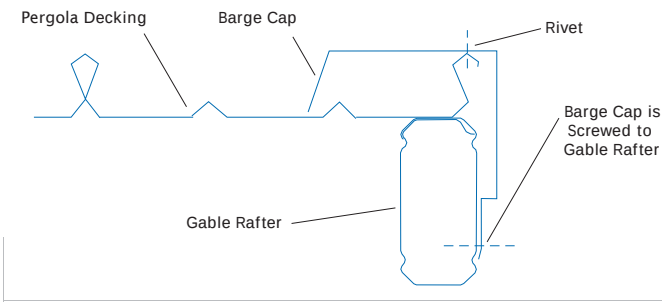


Figure 39

16.0 FINAL FIXING

16.1 Final Fixing Into Concrete

Thoroughly check 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 and air pockets. Repeat this process until the hole is full, continually checking the posts. Once the concrete is set remove any temporary bracing or props. The concrete must be finished slightly raised towards the column to ensure water runs away from the column.

16.2 Final Fixing Onto Existing Concrete

If fixing the columns to an existing concrete slab with a footing plate, each plate must be fixed to the concrete as specified in (Figures 30 or 31) as appropriate. The minimum distances from an anchor hole to the concrete edge is 75mm.

16.3 Downpipes

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

17.0 HELPFUL TIPS

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

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.

Leave all construction props and/or bracing in place until concrete is set or columns are bolted to the slab.

18.0 MAINTENANCE

You have now completed your new Stratco Pergola. Your Stratco Pergola will give you many years of service by simply following the important recommendations set out in the Stratco 'Selection, Use and Maintenance' brochure.

We recommend you wash and wipe down your Stratco Pergola unit with a soft broom, mop or sponge as frequently as you would wash your car to maintain its duco. More frequent cleaning and rinsing will be required in severe environments.