

INSTALLATION GUIDE

Outback® Pergola



OUTBACK PERGOLA

Building a Stratco Outback Pergola is easy – all it takes is some pre-planning and careful design. This brochure is designed to give you the basic techniques required for assembly. Further advice is available from Stratco. As well as improving the look of your outdoor entertaining area, the Stratco Outback Pergola adds value to your home and provides a sheltered area for you and your plants.

When planning your pergola, determine the most important reason for its construction (e.g. shade, privacy, appearance) and list the less important objectives also. Ensure that you bring these details to Stratco with your design for the best advice. Standard Pergola designs are available, but Stratco can customise a Pergola to suit your particular application. Either profiled pergola beam ends or plain ends are available to suit the style of your home. A wide range of cladding, screens and shading alternatives are available to suit your home, including the Stratco Shade Blade system.

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. If required, they must be purchased as additional items.

TOOLS REQUIRED

- Drill & Hex/Phillips Head Adaptors
- 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



BEFORE YOU START

Read the instructions before starting your project. If you do not have all the tools or information, contact Stratco for advice. Before starting, lay out the main components in the order of assembly on the ground and check them against the delivery note. The parts description identifies each part and their fastening positions. Mark out the overall area of your Stratco Outback Pergola on the ground using pegs and string line. Ensure the site is level and free of obstructions.

Check the column, beam and rafter positions on the ground. Check all corners to ensure they are square and mark out the hole locations. Beam-to-wall connections can cause difficulty if they are near door and window openings, so avoid these in your design.

COMPONENTS

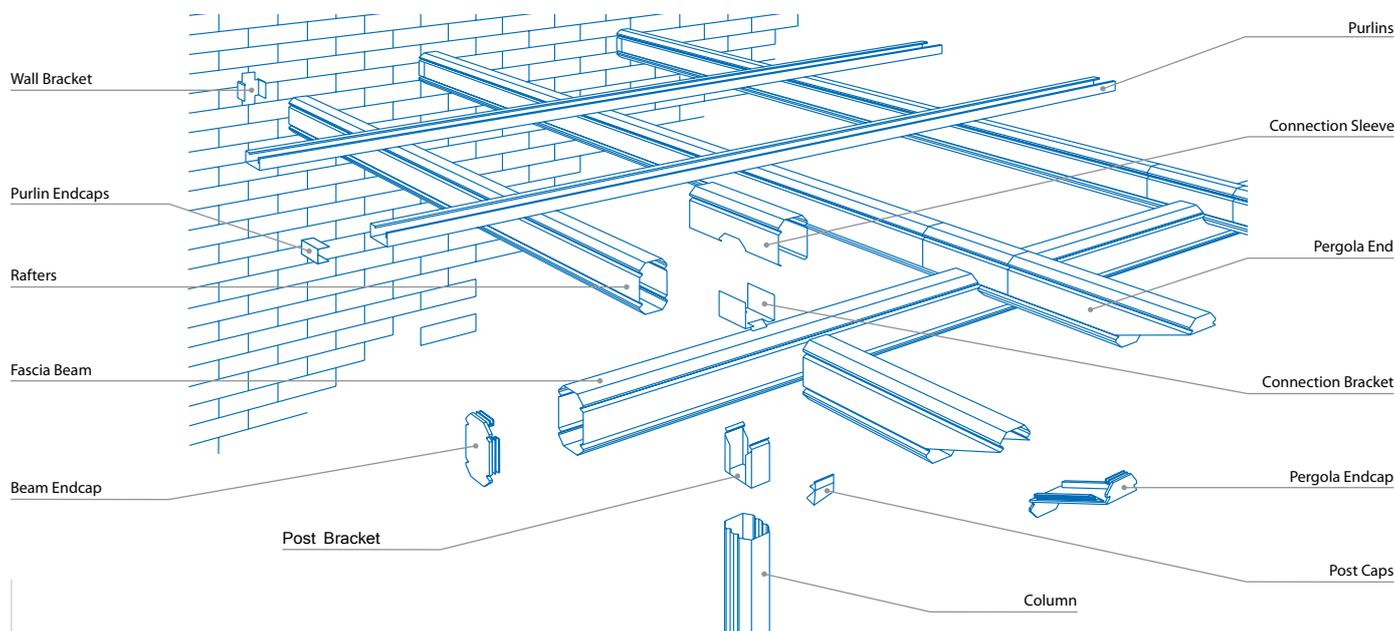


Figure 1

WALL OR FASCIA CONNECTION

Determine the spacing of the rafters. The two end rafters should be placed at right angles to the fascia beams directly over the post. The remaining rafters should be spaced at their nominated centres (usually up to 900mm).

On the wall, or fascia, mark a horizontal line 15mm down from the top of each beam. Align the top of a wall bracket with each line. Mark the position for the fasteners, drill 8mm holes and fasten the brackets to the wall using two M8x65 masonry anchors per brackets or use 10mm diameter coach screws or bolts for timber or steel fascia respectively (Figure 2).

In some fascia fixing applications it may be necessary to use the suspension bracket, which replaces the wall bracket. When fastening to steel fascia, the roofing or eaves lining should be removed and a steel fascia bracket fastened to the side of the rafters at 1200mm centres.

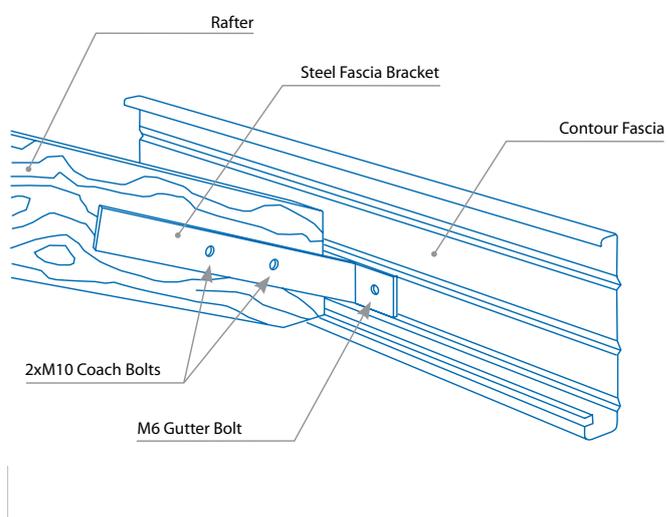


Figure 2

FASCIA BEAM AND RAFTER ASSEMBLY

Assemble The Beams On The Ground

Important: When installing the beams, ensure the double thickness of the beam is on top. Measure the front beam (and intermediate beams if required) marking where the rafters and columns connect. Clip the post brackets onto the bottom of the beam where the columns will meet. Fasten through the bracket holes into the flute of the beam using four 10x25 countersunk self drilling screws per bracket.

Place the beam-to-beam connection brackets on the top of the beam where the rafters will intersect with the beam, making sure the location corresponds with the wall brackets.

Fasten through the connection bracket holes into the beam using two 12x20 self drilling screws per bracket. Push in the beam end cap if required (Figure 3).

Assemble The Rafter On The Ground

Check the beam orientation against the pergola end, making sure the laps of each beam are on the same side. Ensure the double thickness of the beam is on top. Slide the beam-to-beam connection sleeve over the end of the beam.

Line the end of the beam up with the notch of the sleeve and fasten using five 12x20 coloured self drilling screws through the holes provided.

Slide the pergola end into the connection sleeve. Align it with the other side of the notch and screw into place (Figure 4). Snap the pergola end caps into place.

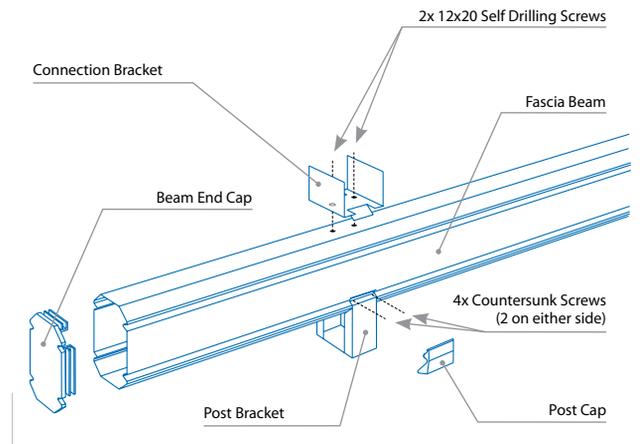


Figure 3

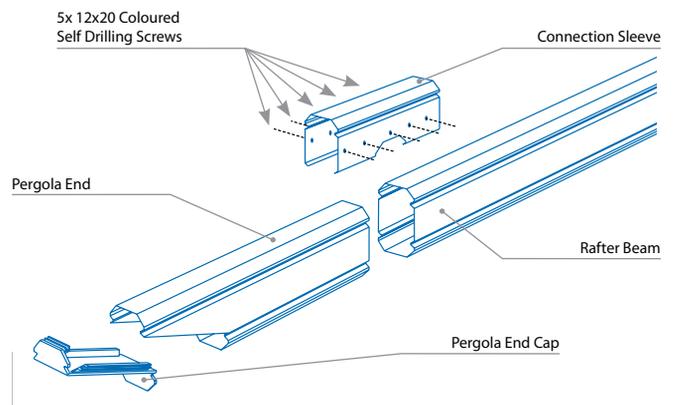


Figure 4

POSITION THE BEAMS AND RAFTERS

Positioning The End Rafter

Select an end rafter and lift it towards the wall bracket. Position it between the flanges so the curved top of the flanges locate against the top flute of the beam. Support the other end of the rafter on an adjustable construction prop, and screw into position using four 12x20 coloured self drilling screws through the holes in the wall bracket (Figure 5).

Positioning The Beam

Support the front beam on construction props and slide the end rafter connection sleeve over the connection bracket on the beam. Fasten in position with two 12x20 coloured self drilling screws through the holes in the sleeve (Figure 6).

Fixing The Remaining Rafters

Fix the other end rafter by lifting it over the front beam then sliding it back into the flanges of the wall bracket. Fix it into position. Lift the rafter over the connection bracket and screw through the holes provided. Attach the remaining rafters following this method.

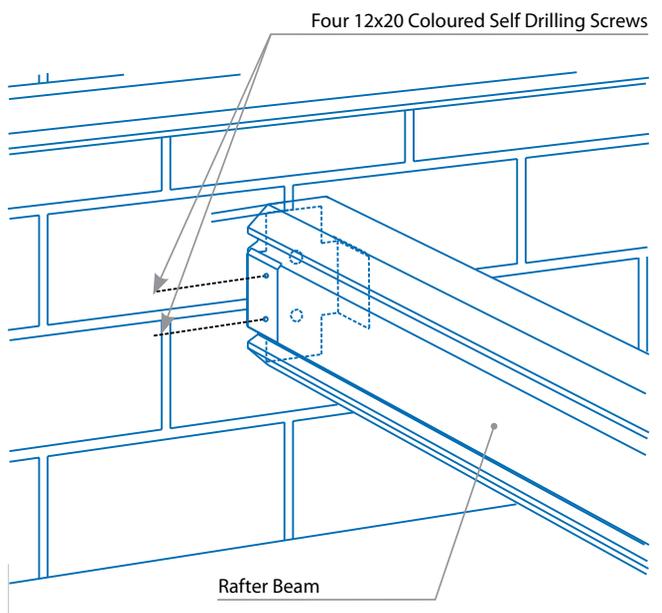


Figure 5

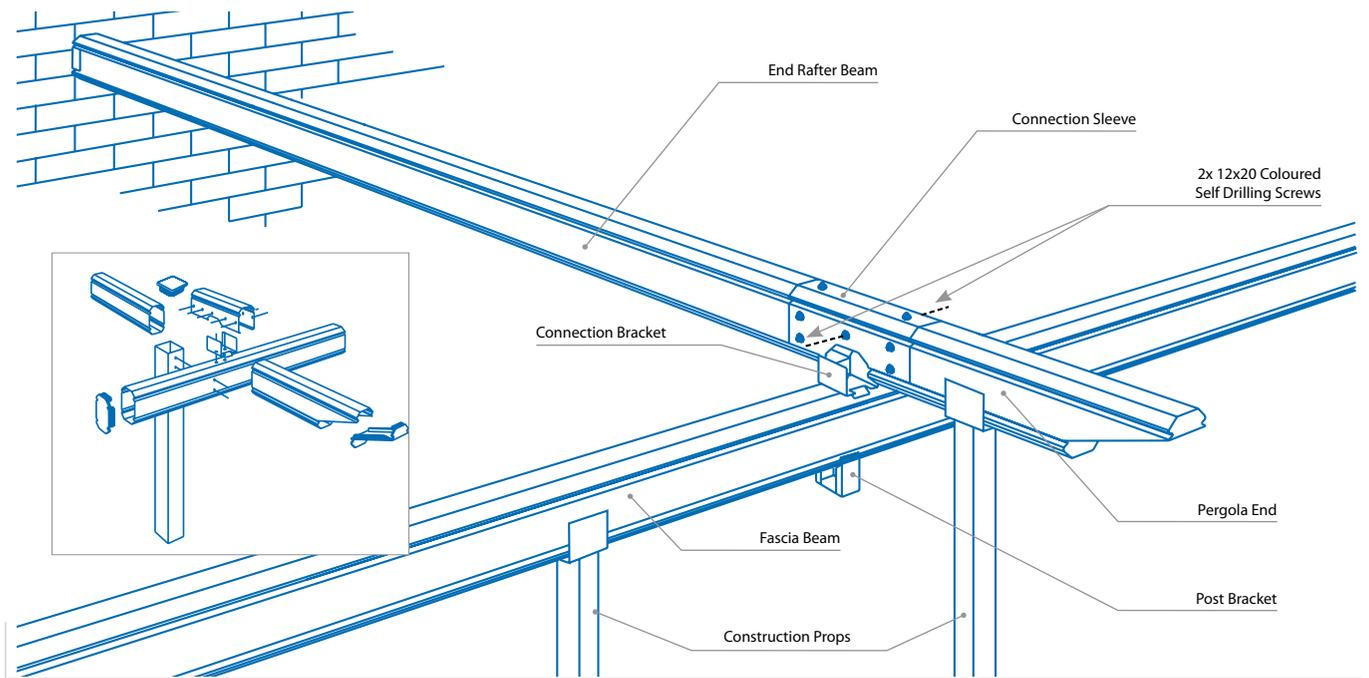


Figure 6

FRAMEWORK ASSEMBLY

Attaching The Columns

Dig the column holes to a minimum of 300mm long x 300mm wide x 450mm deep. Place a half brick in the bottom of the hole to minimise settlement. Measure the distance from the bottom of the beam to the top of the brick, and cut the column to length. Slide the top of the column over the post bracket until it is flush with the under side of the beam. 30mm below the top of the column, mark and drill an 11mm diameter hole on the two plain faces of the column. Fix with the supplied M10 x 75mm bolt and self-locking nut. Push post caps into place.

Framework Check

Check all the posts are vertical and the beams and rafters are square and level. Check the basic frame is square by ensuring the diagonal measurements are the same (Figure 7). ie. A, C and B, D are the same distance. Concrete the posts into position.

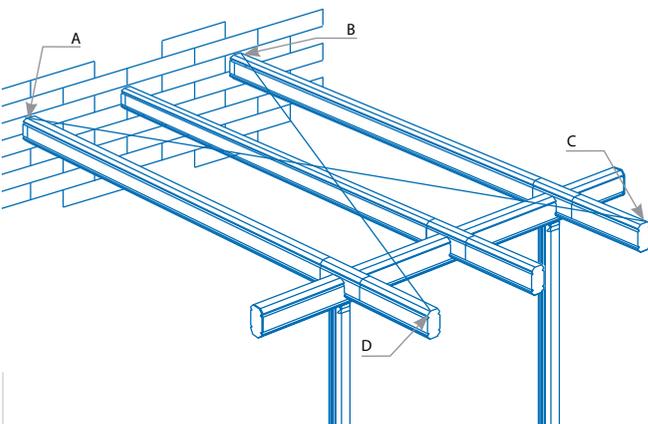


Figure 7

Purlin Connections

If the rafters require extra stability, or shade cloth is to be installed, purlins can be screwed to the rafters every 600 to 1200mm (Figure 8). If attaching shade cloth, it should be installed between the top of the rafters and the bottom of the purlins for a superior, tidy finish. The purlin end caps simply push into place. Do not seal the end caps because they should be removed periodically and any debris washed out.

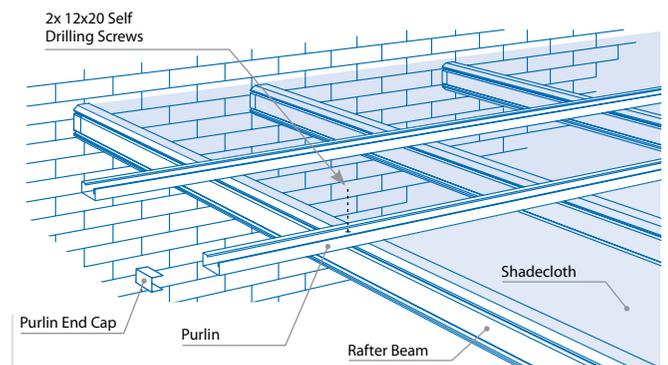


Figure 8

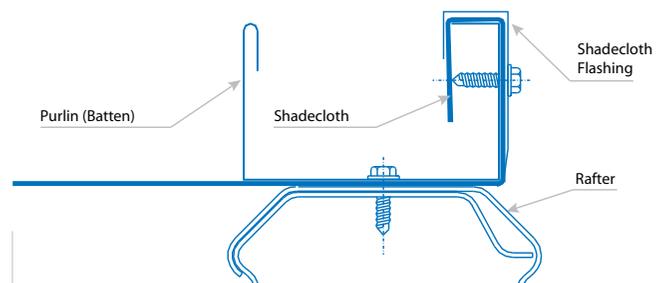


Figure 9

SHADE BLADE ASSEMBLY

Install Louvre Blade End Channels to the top of rafters at every 2400mm with 12 x 20 self drilling screws. Slide the Louvre Blades in place and fix one at a time with a 12 x 20 self drilling screw at each end and intermediate rafters. With all blades secured fix the end blades to the channel with pop rivets (Figure 10) and addition blades at maximum 1150mm centres.

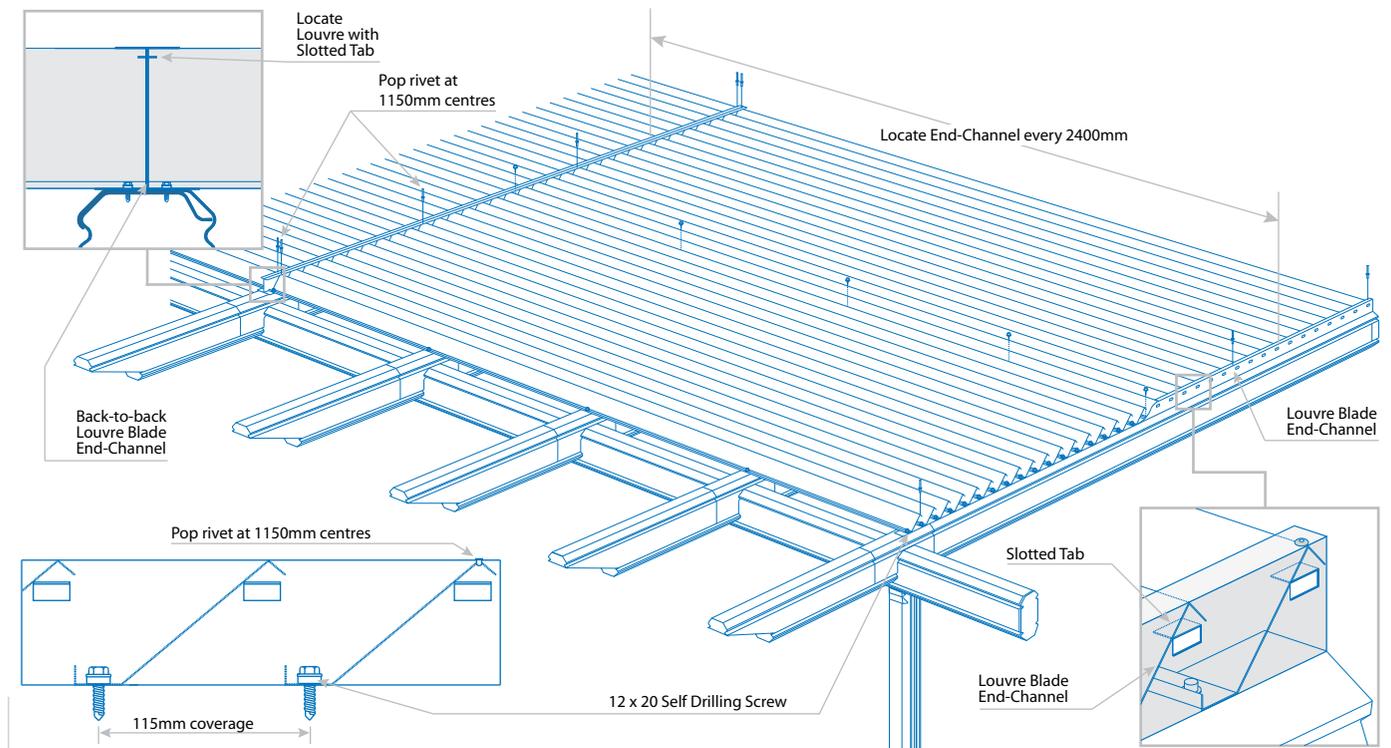


Figure 10

FINAL FIXING

Final 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 from the column to ensure any water does not pool around the base (Figure 11). Once the concrete is set remove any temporary bracing or props.

Final Fixing onto Existing Concrete

If the columns are to be fixed to an existing concrete slab with a footing plate, each plate must be fixed to the concrete with two M12x75 masonry anchors or two M12x75 screwbolts (Figure 12). The minimum distances from an anchor hole to the concrete edge is 75mm for M12 anchors.

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 the fasteners with silicone.

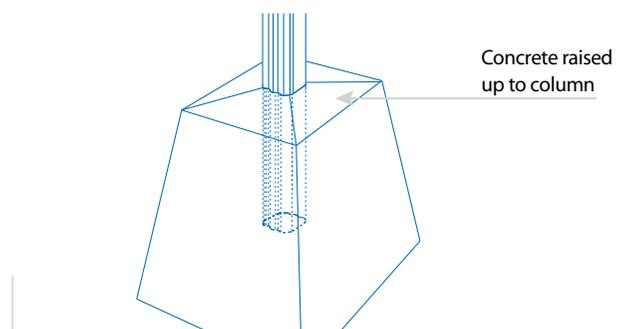


Figure 11

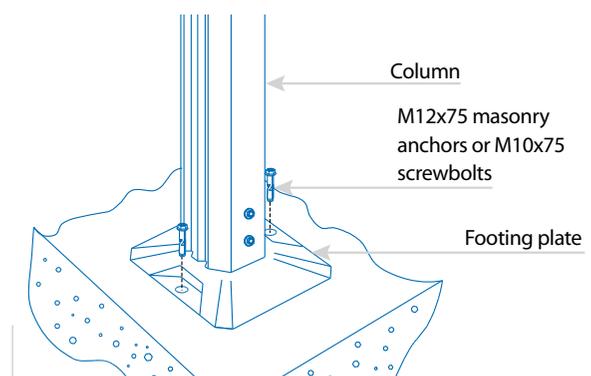


Figure 12

COUNCIL APPROVAL

It is important to contact your local government authority prior to construction of your new pergola to determine if building or planning approval is required. In general, no permit is required if the Pergola is open and allows wind to freely flow through the structure. A permit is usually required if a roof covering or side screen is part of the design or if the structure is built on a boundary.

(Note: The Outback Pergola has not been designed to allow roofing.) Designs which allow air movement, but provide shade (e.g. shadecloth, lattice work, Stratco Shade Blade) will generally not cause the structure to require local government approval.

GUIDE TO DESIGN

Deciding on the function of your Stratco Outback Pergola and its position relative to the house. Check for obstructions such as underground tanks and drains and note the position of the sun to allow for winter warmth and summer shade.

The minimum height required by many local government authorities is two metres under the lowest part of the pergola, and a check on the height of surrounding buildings will help you decide the final height for your structure.

Freestanding or attached styles are available, depending on your needs. If the pergola is to be free standing, ensure that the height is not greater than its width, otherwise it will appear taller than it really is.

While the Stratco Outback Pergola System has been designed and constructed for maximum strength, it is NOT designed to withstand the stress of roofing or to be used as a structure for lifting. The maximum recommended spans between columns is 4.5 metres.

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 in your area. Washing with clean water must be frequent enough to prevent the accumulation of dust, salts, and pollutants or any other material that will 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 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.