SolarMax Shade Structure

Installation Guide

Structure Size 5m x 5m

Important Information

SolarMax shade structures are designed to be installed by suitably persons only.

Safe working methods should be adhered to at all times.

If you do not have the necessary training or building experience
it is recommended that building professional be engaged to install this structure.

This document is a guide only. Specific site considerations must always be taken into account.

WARNING: ALWAYS BE AWARE OF OVERHEAD POWERLINES.

IF HOLES ARE BEING DUG FOR POSTS – ALWAYS CHECK TO ENSURE THERE
ARE NO INGROUND SERVICES IN THE AREA PRIOR TO COMMENCMENT OF WORKS.

EXERCISE EXTREME CAUTION
WHEN DIGGING INTO THE GROUND.

Instructional Video

http://www.youtube.com/watch?v=zoSR-lXoAbE

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INSTALLATION OF SHADE STRUCTURE ONTO EXISTING CONCRETE SLAB OR PAD FOOTINGS FOR BOLTDOWN PLATES

Firstly do a rough mark-out of the structure using the diagonal measurements given.

Fit all 4 Footplate-spigots into the posts, drill and bolt.

Place one foot plate in position (ensuring a minimum clearance from the edge of the slab if it is a bolt-down structure of 300mm). Position second column diagonally opposite then position the other two columns. Check both the diagonals and all four sides! It is critical that all measurements are precise. Once in position, check all levels and pack foot-plates if required so that all columns are exactly vertical. If necessary you can cut one or more columns down to make them all level. Secure each column with 4 x 10mm x 100mm Galvanised Dyna Bolts or Chemical Anchors.

For the next stage you will need at least two people - one on a ladder in the middle and the other two on the ground. Ensure you observe safe work practices at all times.

The order in which to assemble the rafters and ridge beam is shown in the following diagrams.

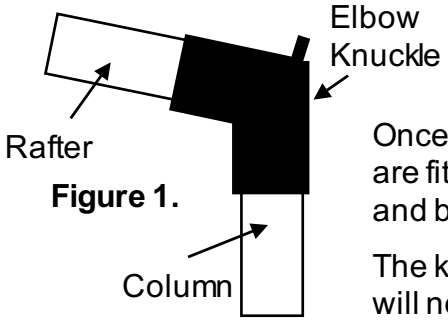
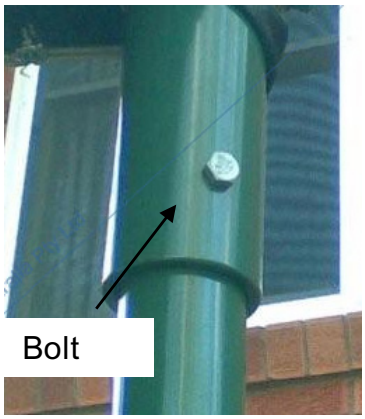


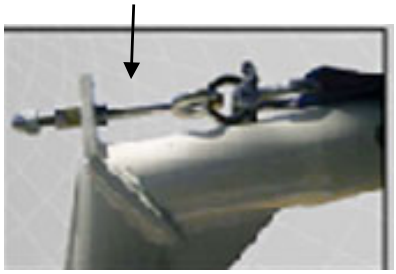
Figure 1.

Once the rafters and ridge-beam are fitted drill and secure with a nut and bolt.

The knuckles are pre-drilled but you will need to drill the internal holes.



Tensioner



Once the frame is fully assembled the last step is to fit the canopy. Take care not to drag the canopy along the ground or catch it on any hooks or bolts. This can damage the fabric and will not be covered by warranty.

Every joint should have a bolt both top and bottom. Use some lubricant on stainless steel threads.

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STRUCTURE LAYOUT

5 x 5 Metres

Figure 2.

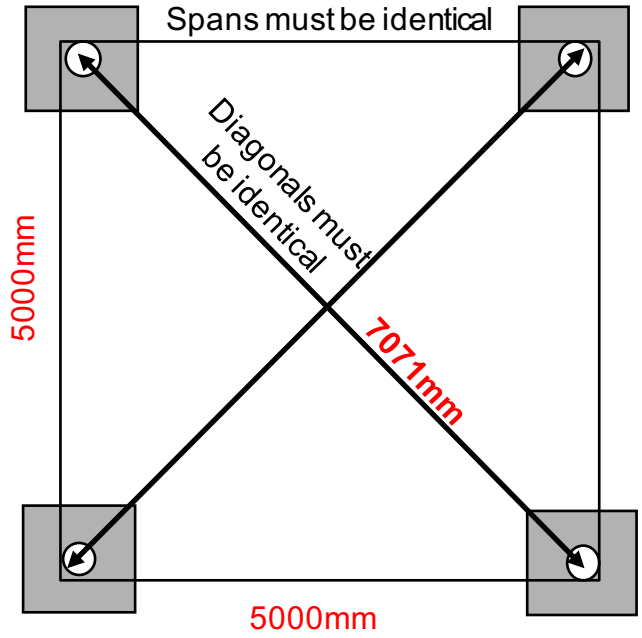

Figure 3.

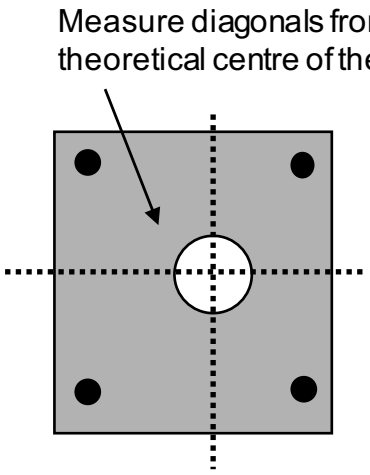

Figure 4. Pipe Lengths

DIAGONALS	**7071mm**
Post Lengths (BOLTDOWN)	**2250mm***
Post Lengths: : (INGROUND)	**3250mm***
Rafters:	**3560mm**
Ridge Beam:	**X Piece**

*** NOMINAL – AS REQUIRED.**

Footing Size for Pad Footing: 450mm wide x 1000mm deep.
(Assumes Firm Natural Ground).
Bolting To a Concrete Slab – Min 100mm thick with reinforcing and slab must be larger in area than the structure.

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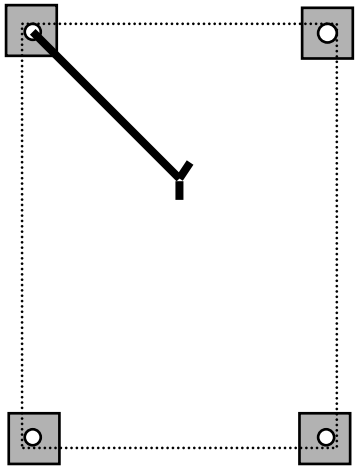
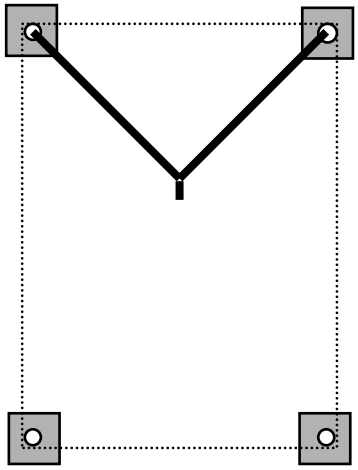
INSTALLATION PROCEDURE

A



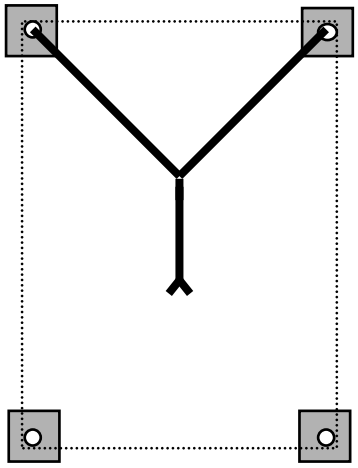
Fit the first elbow knuckle into one column, then fit a rafter into the elbow. The person on the ladder then slides the first Y knuckle into place

B



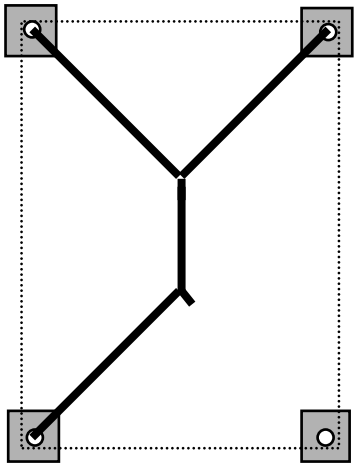
The person on the ground fits the second elbow knuckle onto the second rafter then passes the rafter up. Fit end of the second rafter into Y knuckle then person on ground places elbow down onto second column. The triangle formed will support itself.

C



Person on the ground then fits the pointy end of the second Y knuckle onto the ridge beam (shortest pipe) then passes up to person on the ladder to fit into the first Y knuckle

D



Person on the ground fits the third elbow knuckle onto the third rafter then passes the rafter up. Fit end of the third rafter into Y knuckle then person on ground places elbow down onto third column.

Note: Square Structures do not have Ridge beam. Use the X piece in the centre.

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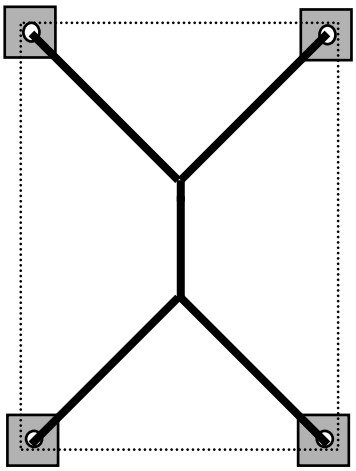
INSTALLATION PROCEDURE Cont'd

E



The person on the ground fits the final elbow knuckle onto the fourth rafter then passes the rafter up. Fit end of the fourth rafter into Y knuckle then person on ground places elbow down onto final column. The person on the ladder may need to lift the ridge beam up to get final elbow in place. Note, this can be tight and may take some effort to make everything fit.

Drill and bolt all joints into position.

Fitting the Canopy

Loosely throw the canopy over the frame.

Take great care not to snag the fabric on the frame or any other objects. Use the threaded forks and attach them to the rings on the canopy using the bow shackles. Put the brass nut on first. Secure all corners this way, the last corner may be tight and may need to be winched into position. This can be done with a strong cord which is laced through the corner of the sail and the eyebolt of the pole several times to create a block and tackle system.

Once all corners have been attached to the forks, use the brass nuts to tension it up. When tight, fit the locknuts. DO NOT OVER TENSION.

Inground Installation

Holes should be 1000mm deep x 450mm dia. Assumes Firm Natural Ground.

The same basic method applies. The holes should be dug in the positions shown and the poles should be concreted in to the depth specified. Ensure posts are perfectly vertical. The posts should be set at the distance apart specified, taking extra care to get the diagonal measurements correct as shown.

Once the concrete has set (at least one week) the rafters and ridge beams can be installed and the canopy fitted.

Please Note: If you have any questions at all regarding this installation please stop work and contact Shade Australia Pty Ltd on 1800 155 233 or find additional information at www.shadeaustralia.com.au info@shadeaustralia.com.au

The 3-4-5 Method For Squaring Corners

Make sure when you lay-out your structure that you have perfect 90 Degree square corners. Use the diagonal measurements provided. Confirm using the 3-4-5 Method.

Getting a 90 Degree Square.
The rule is this:

On one side of a corner, measure 30cm from the corner and make a mark. On the opposite side of the corner, measure 40cm from the corner and make a mark. Next, measure between the two marks. If the distance 50cm, your corner is square!

The beauty of this rule is that it is scalable. 30cm can be 300cm, 40cm can be 400cm and 50cm can be 500cm.