Shade Sail Installation

Planning Your Shade Sail Structure

There are many, very important considerations when planning your structure, and in fact this is the single most important aspect of the whole process. Proper planning will ensure that your sail shade structure performs in the way it was intended. You will already have an area in mind that you wish to cover with a shade sail. It may be a paved area, a courtyard, a terrace, a pool; regardless, the area is known but the “how to” remains in doubt. There may be opportunities for creating attachment points for your Shade Sail on areas of existing structures, or you may need to install steel or aluminium posts to create a totally free standing structure.

Movement of the Sun

The sun rises daily in the east and sets to the west. As the seasons progress, it also moves from low in the sky during the cooler months to high in the sky during summer. Your structure should be planned to provide maximum shade protection during the height of summer as this is when it will be needed most.

Sail Design And Architectural Twist

Sails work best when they are designed to have a “twist”, or architectural hypar effect. This is where the fixing points, being steel posts or brackets, are created at different heights, such that the sail is then twisted in order to fit. A flat sail is harder to tension correctly, and in times of heavy downpour can catch and hold water for long periods of time, thus putting excess load pressure on the fixing points. Further, from an aesthetic perspective, they look less interesting. We recommend you install your fixing points with diagonally opposite high and low points, to avoid these problems and create a visually appealing Shade Sail structure

Sail Size

In order to fully tension the shade sail, it requires a space between the sail and fixing points for rigging tensioners, and also catenary curves in the sides of the sail. For larger sails, these tension gaps and catenary curves need to be quite large, to ensure maximum tension and thus maximum longevity of the sail. For this reason, we strongly recommend that you install your fixing points further apart from each other than the actual shaded area you desire. As a general rule, your sail will begin about 300mm away from the fixing point, although this varies depending on the size of your sail.

Fixing To Existing Structures

Caution is imperative when considering fixing to existing structures, such as your house. In instances of poor weather and strong winds, the loads placed on fixings by the sail are enormous, and should not be underestimated. To ensure that your existing structure is adequate to handle such loads, you may need to consult a qualified builder. We recommend that you remove your sail when high wind conditions are forecast. making use of snap hooks at each mounting point will allow your sail to be demounted in less than 5 minutes.

Steel v Timber Posts

We recommend you use steel or aluminium posts, and not timber posts, for your sail structure. Steel is stronger, will not overly deflect and will not rot. Rust factors can be compensated by using stainless, galvanised steel or aluminium. Note that steel is inherently stronger than aluminium, and thus is typically cheaper to obtain. If adequately dimensioned (125mm x 125mm minimum), timber posts are a suitable alternative to steel or aluminium and can look more attractive.

Post Footings

Required footing sizes vary dependant on the size of the structure and the height of the post out of the ground. An old conservative engineering principal is “1 third in, 2 thirds out”, which means posts out of the ground by 2.4m need to be at least 1.2m into the ground. This is typically considered conservative, however we recommend you strongly consider this principal, as correcting a post that has been leant over in high winds due to an undersized footing is a difficult, sometimes impossible, job. Even a small movement of your footing will also compromise the ability to tension the sail, thus reducing the longevity of the sail shade. If you are digging through land fill or raised garden beds, these depths should not be included in the overall depth of the footing. As a general rule, hole diameters should be around 350mm, however increasing as column sizes increase. Depth, however, is the most important factor.

Installing Your Fixing Points

A well installed shade sail will last many years, and become a very cost effective means of shading any area. Also, take extreme care in fixing to existing structures. The more conservative you are in these earlier phases, the longer the life of the sail structure you build.

Installing Your Shade Sail

1. Lay out the shade sail and attached the fixing components. Each corner of the sail shade should have a tensioner and snap hook. Unwind the turnbuckle tensioners to full extension, and use the snap hooks to connect the turnbuckle to the sail corner points

2. Attach your sail - Fix your turnbuckle (which has already been attached to your sail) to the relevant fixing lug on your fixing points. At this stage, leave the turnbuckles fully unwound, until all points have been attached. Move from point to point until all points of the sail are fixed as required.
NOTE: In the manufacturing process, we have allowed for the fact that the fabric may stretch. This means that considerable force will be needed to wrench up the last points to get them close to the fixing points. We guarantee that this is the best way to manufacture your product, even when you think your sail may have been constructed too small. We recommend you consider

creating a quasi-pulley effect to pull the last points up. This is done by tying rope onto your sail corner point, and looping it back and forth to the relevant fixing point You may have access to purpose built pulley systems such as block and tackle, and if so we recommend you use them. Continue this process until all fixing points are in place. Your turnbuckles should still be fully unwound.

3. Tension your turnbuckles - Now simply move around from point to point, and tension each of the turnbuckles as required. As previously mentioned, the longevity of your sail product is dependant almost completely on how well you maintain tension in the sail. The sail materials, perimeter webbings, and corner fixings are designed to be placed under very heavy load, so do not be too afraid to pull the sail up extremely tight. Note that if you are using your sail for temporary purposes only, and will be installing it and removing it on regular occasions, the tension aspect for longevity is not as crucial. However, should the day be a little windy, try to maintain as much tension as possible, as the constant gusty movement of the sail could eventually damage the corners and compromise the overall product. And that's it!

Your shade sail area is now completed, so sit back, relax, and enjoy.