



Shade Sails - Installation / Layout Tips

Sail Structure Designs and Layout:

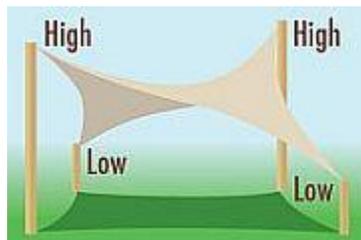
Shade Sails can be flown in a variety of ways:

- Horizontally (flat), where all corners are at the same height;
- Vertically, like a privacy fence;
- Slants & Angles with overlapping sails
- Or, where some corners are high and some low, like the *Cool-Off "Sail Twist"*

We recommend having varied mounting heights for both triangle and square shade sails. For triangles, we like two corners at the same height and the third either higher or lower to create a slope. This allows for some artistic flair, but also for rainwater run-off and the avoidance of "pooling".

Similarly, for rectangles or squares, we place diagonal mounting heights at the same level but with opposing diagonals at different levels to create a slope and grace of a curve. A good rule of thumb is to have a slope of about 1 foot for each 10 foot of distance between attachment points.

We call this the *Cool-Off "Sail Twist"* as shown below.



Prior to installation, check with local authorities for any relevant building regulations which may exist, and check with the local utility companies for any underground services prior to digging holes for the support posts.

Shade Sail Placement:

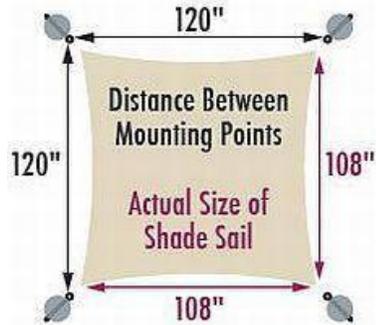
Before you commence installation, it is very important that you consider the most suitable location for your shade sails. Take into account the following:

- Size of the shade sail(s);
- Strength of existing structures intended to be anchor points;
- Ability to insert suitable fixing posts;
- Location of barbecue grills, fire pits, and other high heat sources;
- Sun direction and path tracking;
- Wind speed and direction.

Note: Shade sails should not be used near an open flame. Do not use your barbecue under the shade structure.

In determining the location for your shade sail, it is important to keep in mind the movement of the sun across the sky throughout the day. The shade shadow of the sail will, of course, move as the sun moves. As a result, you will only have shade directly under the shade sail at midday during mid-summer.

Once you have identified the location for your shade sail, it is important to determine the most suitable mounting points for the corners.

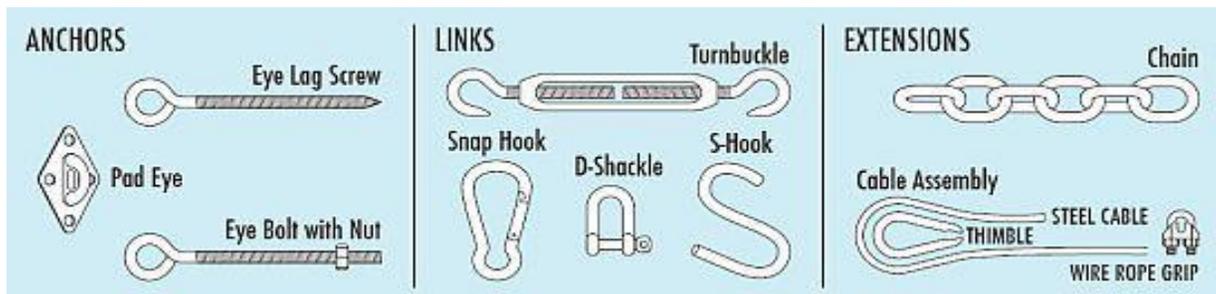


Some of these fixing points might already exist -- for example, a pergola, large tree, fence post, soffit or fascia. If enough fixing points are not already available, posts may need to be installed. On each side of the sail, you should allow a space between the corner of the shade sail and the mounting point that is at approximately 10% of the shade sail's length. For example, if one side of the shade sail has a length of 120 inches, allow at least 12 inches of space between the corner of the shade sail and the mounting point. This will provide enough room for mounting hardware, material stretch, and tensioning of the sail. This should be done for each side of the shade sail to ensure there is adequate room to tension the sail properly.

This stage of the installation is critical. You should ensure all fixing points are structurally sound, and, if you are unsure, obtain independent advice from a builder or engineer. Or call us at (800)504-6478, we have been doing this for over 13 years!

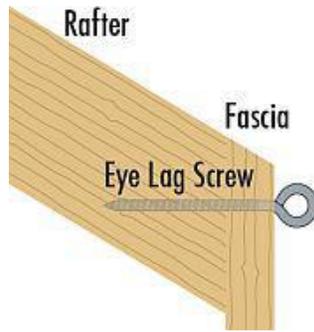
Mounting Hardware for Shade Sails:

There is an extensive range of fixing accessories available to help you secure your shade sails. These accessories are readily available from your hardware supplier.



Chain, wire, or thick, strong rope can be used to extend your shade sail corner to a fixing point many feet away if required.

Attaching Sail to Fascia:



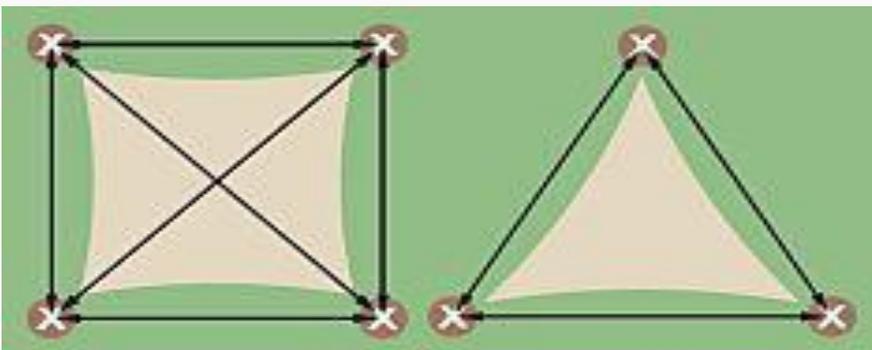
If you intend to fix your shade sails to a fascia, the use of a Fascia Support is strongly recommended. The fascia support is used to connect the overhangs of rafters or trusses to fascia ledgers giving a strong connection between the two for improved strength. Always make sure the fascia has been beefed up on the back side and attached to the rafters within 3 feet either side of the attachment point. With shades larger than 150 sq. ft., you should make sure the rafters have been secured with screws, and not just nails to the tops of the walls. Simpson strong ties/hurricane hangers can be used to do this.

Post Supports for Mounting Sails:



If additional posts are required, we recommend the use of a minimum 4 inch, schedule 40 steel pipe or 6inch x 6inch pressure treated wood. Your local timber supplier can assist you in selection. Post lengths should be taken into account with the proposed height of the sail plus the depth of your footings. Footing depth should be a minimum of 36 inches deep and 30inches square. For example, if your post height is higher than 8 feet, we recommend a hole depth 40% of the height above ground.

Sail Posts Footings



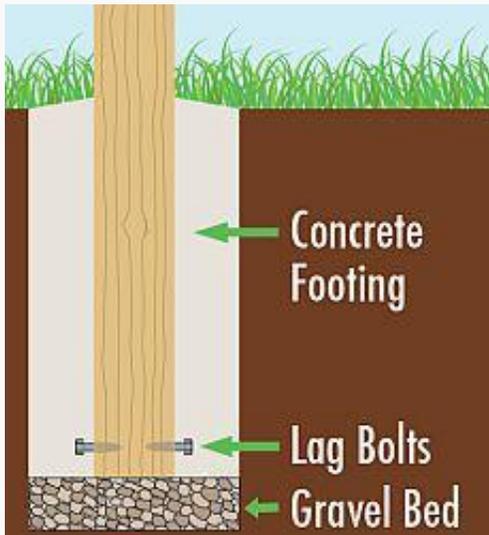
Measure out centers of footing positions and mark as illustrated. Dig holes at least 12 inches around the post and to the depth required by the post height as described above.

Steel Post Footing



Lay a 4inch (100mm) depth of 3/4inch diameter gravel at the base of the hole. Next, pour a 4inch (100mm) depth of concrete to provide a solid pad. Patio stones can be substituted in place of the poured concrete. Insert the post with a hold down bolt through the post to keep it secure. (see diagram) Pour the concrete footing and temporarily brace the posts until the concrete has set.

Wood Post Footing



Lay a 4inch (100mm) depth of 3/4 inch diameter gravel at the base of the post. Insert the posts using lag bolts partially driven into the post to hold it in place. Use string lines to ensure they are in plumb alignment. Temporarily brace the posts until the concrete has set.

Securing Sail Posts:



Mix concrete in line with the package instructions. These will be labeled clearly on the packet. Your supplier will be able to give you any special advice you may require for your own conditions. Pour concrete to the top of the holes ensuring it is packed well. Ensure the concrete surface is sloping away from the posts to assist water drainage. Allow poles to set in concrete for a minimum of 48 hours. Brace if required.

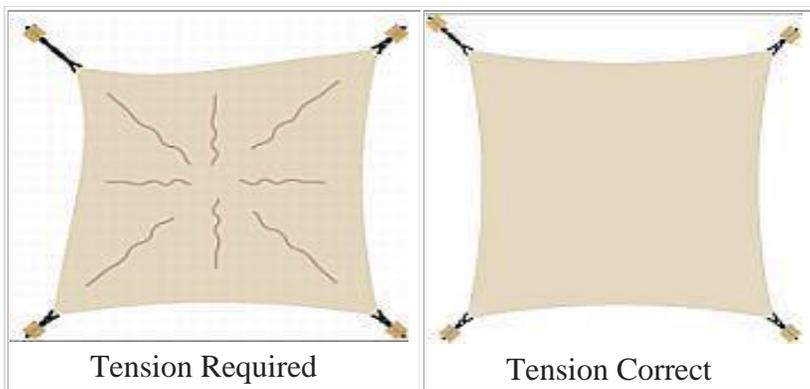
Sail Attachment Points:

Connect fixing accessories to mounting points as required. Ensure all connections face towards the middle of the sail and are tightly secured. Check again to ensure all mounting points are solid.

Lay your shade sail out on ground where it will shade, and commence to attach each corner to a fixing point loosely.

Tension the Sail Fabric:

The last corner of any sail will be the challenge. Use of a rope and a friend, or a 1 inch webbing with a winch, bring the last corner of sail as close to its attachment point as possible and put the last attachment hardware in place. Now look at sail to see if there are any wrinkles. Wrinkles usually occur between two corners where they are tighter than the other corners. Tighten the other corners turnbuckles to reduce and eliminate the wrinkles.



A properly mounted and tensioned shade sail will have approximately 100-200 pounds of tension on it and will have few to no wrinkles. Connect all points, using rope or wire cable if necessary, to gain increased leverage. The rope can be threaded around a few times so that it works as a "pulley" mechanism. Another tensioning method would be to use a turnbuckle which can aid in applying the proper amount of tension. Stop tensioning when the shade sail doesn't sag in the middle and has few or no creases. *Do NOT over tension the sail.* Tension only by hand and only tight enough to remove the wrinkles out of the shade. Re-tension periodically if required.

Shade Sail Care & Cleaning:

The Cool-Off shade sails are made of commercial grade polymer knitted fabric that require virtually no maintenance, but can be easily hosed or rinsed off to remove dust and debris.

DO NOT put the fabric in your washing machine, clothes drier, or scrub it with a stiff brush, scouring pad, or an abrasive cleaner.

Your shade sail is designed to block up to 95% of UV rays and reduce temperatures by up to 20 degrees. When selecting the position for your shade sail, ensure all fixing points are structurally sound and fixings are tightly secured. Inspect regularly. Exposure to certain chemicals, e.g. Chlorine, can lead to the premature breakdown of the fabric.