



# DIY Shade Sail Installation Guide



**DISCLAIMER:** All information provided here is a general guide only. Installation of shade sails can vary depending on many factors including but not limited to, fixing points, wind conditions, the area you live in and soil type. Whilst every attempt has been made to ensure the accuracy of the information provided, we recommend your shade sail be installed by suitably capable and qualified persons.

The Outdoor Shop Australia Pty Ltd does not accept liability for damage, loss, injury or expense.

# Planning for your Shade Sail Installation

## When deciding on the most suitable location for your shade sail, it's important to consider the following:

- Strength of existing structures intended as fixing points
- Ability to install suitable fixing points such as posts
- Location of barbecues, electrical/ telephone cables, water pipes
- Sun direction and wind speed and direction
- Size of the shade sail
- Your local councils relevant building regulations

## Getting your Measurements correct

Once you have established the most suitable location for you shade sail, getting the measurements correct is crucial.

Measure the area you wish your shade sail to cover from fixing point to fixing point to determine the size of shade you will require. The shade sail needs to be smaller than the overall measured area to allow for material stretch, fixing accessories (d-shackles, snap hooks) and turnbuckles for tensioning. If you purchase a shade sail which is exactly the same size as the area you wish to cover, you will be unable to tension the shade correctly, which will lead to sagging, flapping and water pooling. As a rough guide allow 30cm to 40cm from each corner point depending on the fixing and tensioning accessories you are using.

If you have pre-existing fixing points which are suitably strong enough to support the shade sail, but are very high or a distance from the area you wish to cover, steel wire rope or chain is available to assist in adding length to your fixing points. If this is the case, calculate how far you will extend the fixing points out to, including turnbuckles for tensioning and then take your measurements for your shade sail from here.

Shade sails can be erected in many ways and it is important to ensure they are at differing heights for your fixing points as you do not want you shade sail to lay flat. A twist in your shade sail can be more aesthetically pleasing to the eye, will reduce sagging in the middle, can be tightened more effectively and will allow water to run off more efficiently and avoid pooling.



We have a wide range of prefabricated shade sails available in rectangle, square, triangle and right angle. Several smaller shade sails may look better than a larger sail and elevated at different heights the shade sails can be very visually appealing. We have a wide range of colours and sizes to mix and match.

Take into account the height and direction of the sun, as you want to provide the maximum shade for your area. This will help you figure out where the high and low points should be placed.



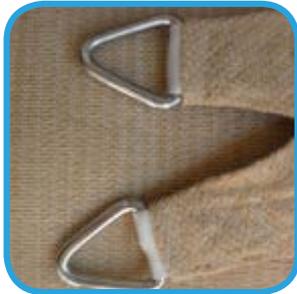
We are unable to make custom shade sails.

Once you have measured out the area you wish to cover please visit our website for our full range of shapes, sizes and colours

Please consult our accessories guide and checklist for further information on measurements of fixing and tensioning accessories to assist you further.

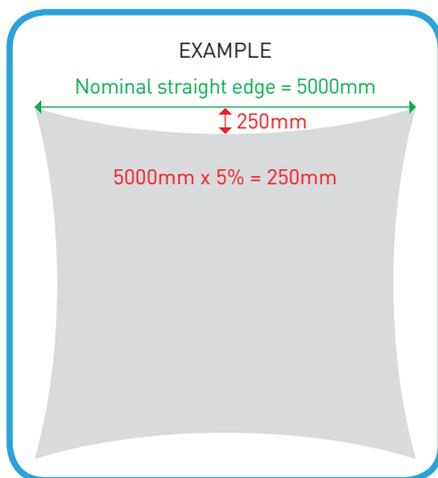
# Planning for your Shade Sail Installation

## How our Shade Sails are made



Our prefabricated shade sails are made using 280gsm commercial grade cloth. Our shade sails have a tighter and flatter knit, diminishing defects that you may get with the lighter, cheaper and less quality shade sails.

Your prefabricated shade sail comes with marine grade stainless steel buckles on each corner. Measurements of our shade sails are taken from buckle to buckle along the nominal straight line of the shade sail.



Many people ask why shade sails are curved around the edges and also why their shade sail is not 'true' to measurement across the centre point – here we will briefly explain why.

All shade sails are manufactured with curved edges so that tensioning can be applied evenly across the entire surface of the shade sail. If the shade sail was a square piece of fabric with no curved edges, there would be no way to apply even tension across the entire surface of the fabric.

On a rectangle or square shade sail the curved edges are less imposing than on a triangular shade sail. Yes, you will lose overall coverage but without the curved edges the shade sail will not tension correctly. Typically a shade sail is made with a curved edge of

between 5-8%. For example, if you had a shade sail with a length of 5 metres you would lose 250mm of coverage at the deepest point in the curve.

**IMPORTANT – Measurements are not taken from the centre curvature points. Measurements are taken from buckle to buckle in a straight line around the shade sail. Please take into consideration the curvature when ordering as you will lose a little in the middle section of the shade sail.**

# Accessories information

6mm, 8mm, 10mm, 12mm refers to the thickness of the accessories, you can view the measurements on our accessories checklist or website.



## Turnbuckle Hook Hook

Turnbuckles are used for adjusting the tension or to give extra length when installing your shade sail. You can hook this turnbuckle straight into your shade sail and then into your fixing point.

It's always best to use your turnbuckle at its greatest length so you have room to adjust the tensioning as required.

Size available 8mm



## Pad Eye Rectangle

Especially designed to be anchored to brick walls for a secure fixing point over individual bricks.

Sizes available 8mm, 10mm

Larger sizes can spread your weight bearing load over a wider area.



## Turnbuckle Hook Eye

Turnbuckles are used for adjusting the tension or to give extra length when installing your shade sail. Attach the eye to your fixing point with a D shackle or snap hook for a stronger connections and use the hook end to attach to your shade sail.

It's always best to use your turnbuckle at its greatest length so you have room to adjust then tensioning as required.

Sizes available 8mm



## D Shackle

D Shackles are used to attach or extend in shade sail application.

Sizes available 6mm, 8mm



## Turnbuckle Rigging Bottle Screw

Rigging bottle screws are the strongest configuration of turnbuckles. Fitted with spring clips which prevent the pins from coming loose overtime, they also conceal the threads within the pipe for a streamline look.

Its always best to use your turnbuckle at its greatest length so you have room to adjust then tensioning as required. Designed to attach to a wide range of accessories such as pad eyes, wire rope, snap hooks, eyebolts & D shackles.

Sizes available 6mm & 8mm



## Twisted D Shackle

Twisted D Shackle can offer more maneuverability when installing your shade sail and are used to attach or extend you shade sail. Particularly useful when your fixing point is horizontal not vertical.

Size 8mm short and long available



## Eye Bolt

Eyebolts are generally used for steel or timber posts. Different lengths available depending on your application. Depending on your requirements a Turnbuckles, D Shackles & Snap Hooks can be use to attach the shade sail to the eyebolt.

Sizes available 8mm, 10mm, 12mm



## Bow Shackle

Bow Shackles are used to attach or extend in shade sail installation.

Sizes available 8mm



## Pad Eye Diamond

Especially designed to be anchored to brick walls for a secure fixing point over individual bricks. Used in conjunction with Turnbuckles, D Shackles & Snap Hooks to attach you shade sail.

Sizes available 8mm, 9mm

Larger sizes can spread you weight bearing load over a wider area.



## Snap Hook

Snap Hooks are used to extend or attach in shade sail installation.

Size available 8mm



## Pad Eye Oblong

Especially designed to be anchored to brick walls for a secure fixing point over individual bricks.

Sizes available 8mm, 9mm

Larger sizes can spread you weight bearing load over a wider area.



## Diamond Shackle Plate

Extra heavy duty wall plate, especially designed to be anchored to brick walls for a secure fixing point over individual bricks.

# Accessories information



## Wall Plate Diamond Galvanised

Extra heavy duty wall plate available in two sizes 100 x 100mm and 150 x 150mm Diagonal Galvanised steel (fixing point is set at a diagonal). Especially designed to spread load over a wide area increasing the pull out strength. Stainless steel also available at an additional cost.



## Corner Brackets internal

Internal corner brackets give you the option to create a fixing point in a 90° corner crevice.



## Wall Plate Horizontal Galvanised

Extra heavy duty wall plate available in two sizes 100 x 100mm and 150 x 150mm Horizontal Galvanised steel (fixing point is set as horizontal). Especially designed to spread load over a wide area increasing the pull out strength. Stainless steel also available at an additional cost.



## Corner Brackets external

External corner brackets give you the option to create a fixing point in a 90° external corner fixing point.



## Wire Rope

4.0mm Wire Rope – sold by 1 Metre lengths, including 2 x rope grips. Wire rope can be used to give you extra length. You can easily loop the ends of the wire and secure it with a rope grip, which are easily tightened with a small spanner.



## Rafter Bracket Assembly

The Rafter bracket assembly 16mm with M16 Eye nut give you the ability to secure a fixing point on to a roof. Backing plates for the rafter bracket can be purchased additionally.



## Medium Chain

6mm – 1 Metre Chain is made from high quality AISI 316 marine grade stainless steel and designed for general purpose and shade sail applications.



## Dektite Flashing

Dektite flashing tubes are designed to be used with the rafter brackets assembly and provides a waterproof sealed finish for metal roofs.



## Fascia Brackets

Fascia bracket are used to give adding support to fascia, they are angled at 20 degree. Available in Left and Right 20 degree fascia angles.



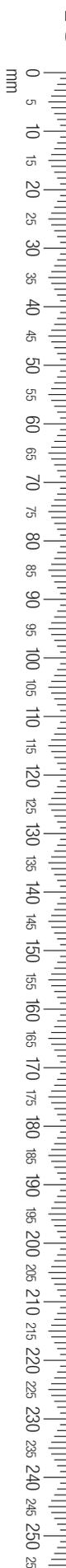
## Fascia Rafter Bracket 12mm

This Rafter/Fascia bracket assembly with 12mm thread & 12M Eye nut have been designed to create a fixing point at the fascia or on an exposed rafter. Backing plates for the fascia rafter bracket can be purchased additionally.

The information we have provided is a general guide for what to use in DIY shade installation. We are not able give qualified building advice on fixing points or structural information. If you feel that you need to get further advice you get information from a qualified handy man or builder.

# Accessories Checklist

• Please note - To ensure ruler prints to scale set to 100% when printing.



Code		Turnbuckles
ODSHE6	SS	Turnbuckles Hook Eye 6mm Length min 160mm - 220mm max
ODSHE8	SS	Turnbuckles Hook Eye 8mm Length min 210mm - 280mm max
ODSHH8	SS	Turnbuckles Hook Hook 8mm Length min 210mm - 280mm max
ODSR8	SS	Turnbuckles Rigging bottle screw Length min 170mm - 255 max
		<b>Eyebolts</b>
ODS81	SS	Eyebolt M8 8mm Thread 85mm overall length 120mm
ODS82	SS	Eyebolt M8 8mm Thread 95mm overall length 135mm
ODS83	SS	Eyebolt M8 8mm Thread 120mm overall length 150mm
ODS10	SS	Eyebolt M10 10mm Thread 120mm overall length 160mm
ODS12	SS	Eyebolt M12 12mm Thread 120mm overall length 170mm
		<b>Pad Eyes &amp; Wall Plates</b>
ODSD8	SS	Pad Eye Diamond 8mm length 80mm width 48mm
ODSD9	SS	Pad Eye Diamond 9mm length 90mm width 57mm
ODSREC8	SS	Pad Eye Rectangle 8mm length 50mm width 29mm
ODSREC10	SS	Pad Eye Rectangle 10mm length 60mm width 38mm
ODSO8	SS	Pad Eye Oblong 8mm Height 21mm Width 25mm length 80mm
ODSO9	SS	Pad Eye Oblong 9mm Height 32mm Width 32mm length 100mm
ODSDD	SS	Pad Eye Diamond Wall Plate Extra large 180mm x 110mm
ODS100H	GAL	Wall plate galvanized horizontal 100mm x 100mm
ODS150H	GAL	Wall plate galvanized horizontal 150mm x 150mm
ODS100D	GAL	Wall plate galvanized diagonal 100mm x 100mm
ODS150D	GAL	Wall plate galvanized diagonal 150mm x 150mm
		<b>Fixing and extending</b>
ODSDS6	SS	D Shackle 6mm Length 30mm width 21mm
ODSDS8	SS	D Shackle 8mm Length 48mm width 30mm
ODST8	SS	Twist shackle 8mm Length 59mm width 30mm
ODST8L	SS	Twist shackle 8mm (long) Length 80mm width 30mm
ODSB8	SS	Bow shackle 8mm length 45mm width 40mm
ODSS8	SS	Snap hook 8mm length 80mm width 38mm
		<b>Wire and Chain</b>
ODSW4	SS	Wire 4mm includes 2 rope grips sold by the metre
ODSC4	SS	Chain 4mm sold by the metre
ODSC6	SS	Chain 6mm sold by the metre
		<b>Fascia and Rafter brackets</b>
FBR or FBL	GAL	Fascia bracket Right or Left
ODSRB1	GAL	Rafter bracket 16mm assembly includes M16 eye nut
ODSRB2	GAL	Rafter bracket backing plate
ODSRB3	GAL	Rafter/Fascia bracket assembly 12mm thread includes M12 eye nut
ODSRB4	GAL	Rafter/Fascia bracket backing plate
ODSINT or OSEXT	GAL	Corner Internal bracket or external bracket
ODSDEK		Dektite Flashing 0-35mm

**SS - Stainless Steel Gal - Galvanised**

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# Fixing Points

Once you have identified the location for your shade sail, it is important to determine the most suitable fixing points for the corners and how you want to install your shade sail. Shade sails can be erected in many ways and you can create a great look when elevations change from corner to corner.

Your shade sail needs to be anchored to stable and sturdy fixing points. You may have pre-existing fixing points or are looking at installing posts, either way, before installation you will need to check your fixing points are structurally sound and are strong enough to withstand the weight of the shade sail and take into account instances of high winds and poor weather. Your shade sail will be under considerable tension and fixing points need to be strong.

If you are using an existing fascia, it is recommended to use a fascia support which will reinforce the overhangs of rafters or trusses and provide a stronger connection between the two and improve the overall strength. We have a range of fascia supports to assist.

If you have not installed your fixing points we recommend that you purchase your shade sail first to avoid any mistakes before the fixing points are installed.

Having fixing points at differing heights is recommended, as this will help in tensioning your shade sail, reduce sagging, flapping and help with water runoff as well as looking great!

To assist you, we have a wide range of accessories available for structural strengthening, tensioning and extending lengths of fixing points. Check out our accessories guide and website for more details

If you are unsure of your requirements please consult a handy man or qualified builder.

Examples of pre-existing fixing points:

- Pergola
- Fence post
- Fascia or rafter
- Structurally sound brick walls

## Timber or Steel Posts?

Square or round galvanised steel posts, 100 x 100mm diameter, with a minimum thickness of 4mm are advised for larger sails, due to their strength. Your local hardware store or steel fabricator should be able to provide these for you.

Timber posts are generally only recommended for smaller sized shade sails. Use round or square treated timber posts with a minimum diameter of 125mm and consult your local hardware store for the appropriate class of timber to use for your region.

# Fixing Points

## Installing your posts

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

Set your sail out on the ground in the position where it will eventually be installed and if using turnbuckles, wind the turnbuckles out to their full extension. Mark out on the ground the ends of the turnbuckles or other tensioning device you are using. This is the position of your posts.

It is recommended to set your posts on a slight angle, approximately 2°- 5° away from the shade sail, this way when you set your tension the posts have room to flex in slightly without looking as though your posts are slanting inwards.

Footings range in size according to the height of the posts. In general however, it's recommended that posts are embedded in footings which are 900mm to 1800mm deep and 300mm to 500mm in diameter with one third of the total length of the posts embedded in the ground, with the remaining two thirds above the ground.

Take into account where your fixing points (eyebolts) will be on your posts, and ensure these are approximately 40mm from the top of the posts.

**IMPORTANT – check the area you are digging is free of cables and pipes**

Dig footings with the centre of the footing measured as the approximate location point of the sail.

**Soft Ground** – If installing your posts into soft ground, first line the footings with 100mm of concrete and allow to set. Alternatively place a concrete paver in the footings. Add a gravel bed of around 100mm, position the post in the footing remembering to allow for the 2°- 5° of lean and fill footings with the required amount of concrete.

**Firm Ground** – If installing your posts into firmer ground, line the footings with a gravel bed around your posts, allow for the 2°-5° lean away from the centre of the shade sails position and fill the footings with the required amount of concrete.

## Concreting

It is recommended to use concrete with a minimum of 20Mpa. This may vary depending on conditions, so please consult your hardware store for more information. Always mix concrete to manufacturers specifications.

Pour the concrete into the footings on top of the gravel bed and pack down well. The top of your concrete surface should be sloping away from the posts to assist with water drainage.

Concrete should be left for 48 hours to set properly and bracing may be necessary depending on the height and weight of your posts.

As you position each pole check your posts are not leaning too far and if you have your fixing points (eyebolts) on the posts, ensure they are positioned toward its diagonal opposite.

Allow adequate time for your concrete to set before installing your shade sail.

If you live in unprotected areas of high wind or you have sandy soil, your sail may need extra support. Before erecting the sail, you may wish to seek advice from a structural engineer.

# Attaching Your Shade Sail

Attach your fully extended turnbuckle(s) to your fixing points, working from the highest attachment points to the lowest. Next, attach your turnbuckles onto the stainless steel buckles of your shade sail.

The last attachment point can be the tightest and it can help to have assistance to hook the edge of the shade sail to the hook of the turnbuckle.

Strapping or rope can help to bring the edge of the sail to the hook of the turnbuckle, giving you more pulling power.

**Please note** – It is not essential, but is recommended, to use turnbuckles on each corner to attach your shade sail as you can tension more effectively with them.

However you may find other attachment accessories more appropriate for your application. You can find a full list of accessories available in our accessories checklist and website.

 **Handy Tip** – Before you begin it is a great idea, if using turnbuckles to have these fully extended and the threads lubricated to avoid thread galling. This occurs when under tension the steel heats up and the turnbuckle can seize, rendering them useless.

It is also recommended, when using turnbuckles with a hook eye, to attach the eye end directly to your fixing point and use the hook to attach to the shade sail. As if any failures occur, the hook end will straighten first and the shade will fall to the ground without causing any potential damage as the turnbuckle will still be attached to your fixing point and not flapping about with the shade sail.

## Tensioning

Once all sides are attached to the fixing points you can start to tension the sail slowly from each point. Slowly screw in your turnbuckles, moving from corner to corner, tensioning a little at a time. Tensioning is complete when your shade sail is firm and tight across the entire surface.

Whether installing a small or large sail, it is usually going to be tight to fit for the first time. That is why it is important to work your way around slowly and do not over tension. Tensioning should only be done by hand.

After a period of around 7 days you may find your shade sail has settled and a little more tensioning is required. This is normal.

Check all your fittings are properly tightened and secure. Work your way around and check all turnbuckles are hooked in correctly and nuts locked off, pins on d-shackles are tightened and nuts on eyebolts are also tight. It is recommended that you check your attachment points on a regular basis.

In areas prone to cyclones, it can be quite common to use thin strong nylon cord to secure the fixing points to the shade sail. This is laced through the eyebolt and shade sail ring a few times which allows the corner of the sail to get closer to the fixing point. However the main reason for this technique to be employed in cyclone prone areas is the speed and ease at which you can get the shade sail down when a storm is coming. You can simply cut the lacing and release the sail. If you plan to use lacing in place of a turnbuckle, ensure the nylon cord is UV stabilised.

**IMPORTANT – Over tensioning and under tensioning can cause damage to your shade sail.  
Failures in the stitching, webbing and fabric are common if tensioning is not correct.**

# Shade Sail Maintenance

## Here are a few handy hints for keeping your shade sail in peak condition.

- ✓ Once your shade sail has been installed for a couple of weeks and it has experienced the full force of Mother Nature it is a good idea to check to see if further tensioning is required. The fabric is very tight when it is first installed and after a few weeks of rain, wind, and sun, it is normal for the material to settle in and loosen a little bit requiring additional tensioning.

It is important to keep your shade sail taut as this will increase the lifespan significantly and will keep it looking great!

- ✓ It is highly recommended to take your shade sail down in instances of severe weather.

- ✓ Periodically check all your fixing points and tensioning accessories to ensure they are in good condition and are not wearing down.

- ✓ If you live in a leafy environment or in an area prone to debris falling, it's recommended to remove this from the shade sail regularly to reduce instances of fabric staining.

- ✓ If your shade sail becomes dirty over time it can be cleaned with mild soapy water and a soft bristled brush. **Do not use any harsh or industrial strength cleaners or bleaches** as this will badly damage the material. It is also not recommended to use high pressure water hoses on the shade sails as this can lead to damaged stitching etc.

**The Outdoor Shop Australia would like to thank you for downloading our installation guide and we hope this has provided you some valuable information to getting your project underway.**

We take great pride in offering a cost effective solution to our customers globally.

Our shade sails not only protect you from the harsh sun and reduce heat; they are also used widely to provide privacy and can also add significant value to your property.

With over 30 years of retail experience, customer service is of paramount importance to us.

Yours Sincerely, Sharon  
The Outdoor Shop Australia