

sail awnings installation

Outrigger sail awnings are installed as two stage jobs. The first stage is to install the poles and fittings and to take measurements for the fabric to be made to. The second stage is to fit the sail / sails.

The first stage involves embedding the poles directly into footings, or, in the case of a de-mountable sail, embedding sockets for the poles to be mounted in to. If the sail is to be attached to a building, roof fittings, wall plates or bolt rope tracks are fitted, depending on how and where the sail is to be attached to the building.

The second stage (about ten working days later for Sydney Metro area) is the installation of the sail with either the use of stainless steel turnbuckles, or, a pulley system housed inside of the poles. The installation of the fabric can be a time consuming practice, especially with complex shapes, as the aim is for the fabric to tension out ripple free. The best approach is to slowly and evenly apply tension to all attachment points and use tension lines in the fabric as a guide to where needs adjusting next. Tension lines will run in the direction that the greater amount of tension is applied. The lines can be reduced by either increasing the tension across the lines, or, decreasing the tension along the lines.



sail installation first stage

poles & fittings

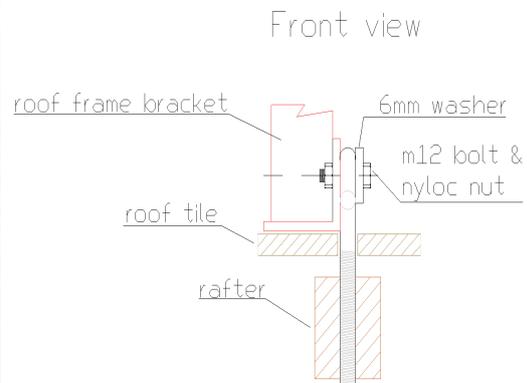
■ Free standing sails

require poles to support each attachment point, see page 19.



■ Sails attached to existing structure

Sails attached to existing structure require custom brackets. These brackets can be simple wall plates to secure a straight edge of the sail with an aluminium end batten sewn into a pocket in the fabric under an eave, or more complex brackets that support a frame to attach a sail above the gutter line onto a roof using roof bolts



■ Attaching fittings

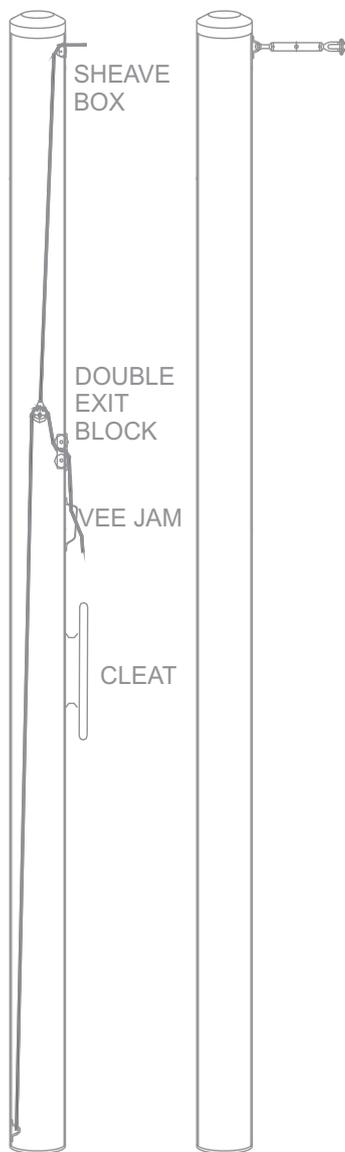
Attach all fittings at the specified positions and heights. All fittings attached to brick or masonry use stainless steel fasteners, all fittings attached to timber use stainless steel or galvanised steel.

sail installation first stage

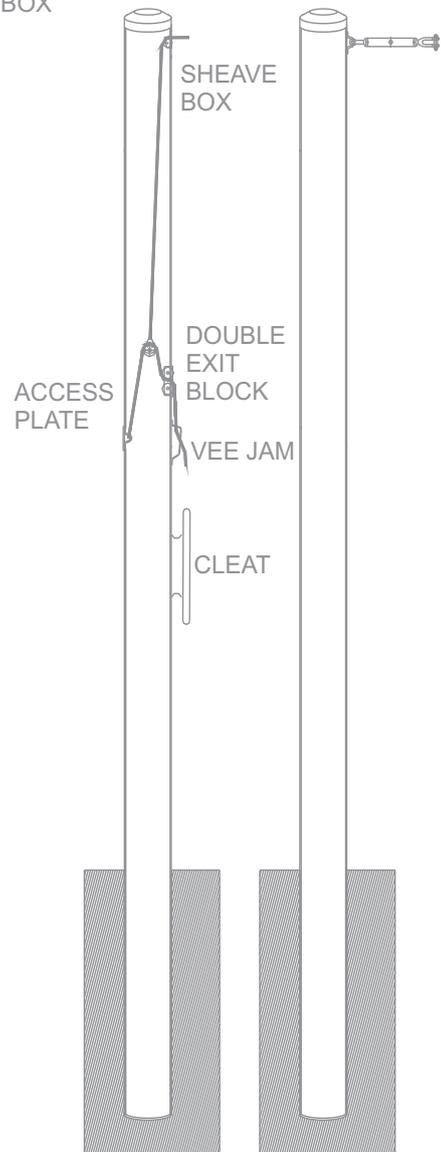
Poles mounted in sockets or other mounts

Poles in footings

INTERNAL PULLEY SYSTEM TURNBUCKLE TENSION



INTERNAL PULLEY SYSTEM AND ACCESS BOX TURNBUCKLE TENSION



sail installation first stage

poles & fittings

■ poles with footings

Mark out pole positions using dimensions specified, confirming with client that the positions are correct and the locality of any services. Check the fabric dimensions from the paperwork and check the relationship between these and the pole positions before commencing pole footings. Refer to pole footing specification sheet at the back of this folder for footing size for the given pole diameter, length and ground condition. Before pouring footings, place pole into hole to make sure the pole is the correct height. Whilst pouring the footing, check pole with a spirit level. Poles with connecting framework are set straight. Poles without framework are set to lean a couple of degrees away from the direction that load will be applied to them when fabric is installed and tensioned, thus straightening the pole when the fabric is set.

■ Poles in sockets or other mounts

Mark out pole positions using dimensions specified, confirming with client that the positions are correct and the locality of any services. Check the fabric dimensions from the paperwork and check the relationship between these and the pole positions before commencing pole fitting. Poles with pre-assembled fittings should be installed so that the fittings face the direction that the load will be applied to them when the fabric is installed and tensioned and at the correct height. If possible, leave securing the poles in position until the fabric is installed to ensure the fittings pull in the correct direction.

■ Poles with baseplates on concrete

Mark out pole positions using dimensions specified, confirming with client that the positions are correct and the locality of any services. Check the fabric dimensions from the paperwork and check the relationship between these and the pole positions before commencing pole fitting. Unless otherwise stated, use chemically anchored galvanised or stainless steel threaded rod of specified size and length. Position all poles and use holes in the baseplates as templates. Mark all hole positions and drill 4mm larger than threaded rod diameter to a depth that allows sufficient thread showing above the baseplate for a stainless steel dome nut and washer. Following the manufacturers directions, bond the threaded rod into the holes. Finger tighten stainless steel dome nuts and washers onto the threaded rod only tightening after recommended curing period. Smaller less exposed awnings may only require large galvanised or stainless steel dyna bolts

■ Taking measurements

All tension fittings must be attached to the poles before the measurements are taken. Care should be taken to ensure that the fittings are attached at the specified height on the correct pole. Fittings should be attached in the centre of the pole and face in the direction that tension will be applied to the when the fabric is installed and tensioned. Take measurements between posts or wall fittings as per the following diagrams. Make a plan view sketch of the attachment points to be measured, nominate one of the attachment points as a datum point and mark it on the pole or fitting itself and on the sketch, make a note of exactly where all the measurements

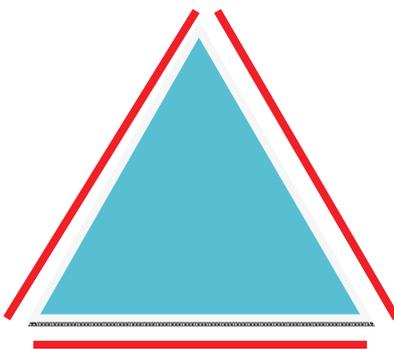


sail installation first stage

taking measurements

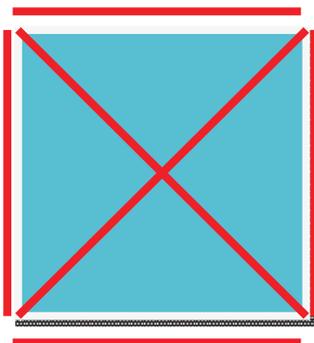
Three sided sail

x3 measurements



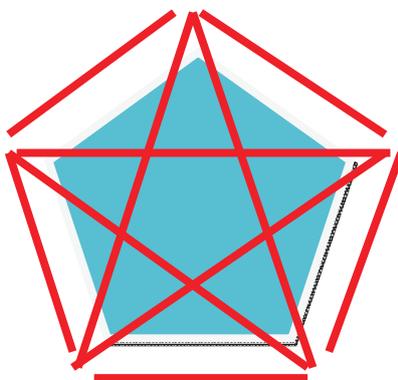
Four sided sail

x6 measurements



Five sided sail

x10 measurements



sail installation second stage

tensioning sail

■ Poles with pre-assembled internal tension

Loosen the tension on all of the poles so that the cables and “s” hooks are at full extent. Unfold the sail and determine its orientation. The datum point will be marked on the fabric, this point will attach to the pole or fitting nominated when the measurements were taken. Connect the rest of the sail corners to their corresponding “s” hooks. Gradually increase the tension on all of the poles in turn until the fabric is taught and ripple free. Lock the tension ropes off with either the vjams or rope clutches on the poles (which ever is fitted). Mark all of the tension ropes so that the same tension is applied to the sail each time it is set up. Demonstrate the de-mount and re-mount of the sail to the client. Make sure all of the panel numbers are removed from the sail with a soft cloth and detergent that has been proved not to damage the fabric.

■ Fixed sails with turnbuckles

Connect the specified size turnbuckle to each attachment point. Unfold the sail and determine its orientation. The datum point will be marked on the fabric, this point will attach to the pole or fitting nominated when the measurements were taken. Connect the rest of the sail corners to their corresponding turnbuckle. Gradually increase the tension on all of the turnbuckles in turn until the fabric is taught and ripple free. Lock the turnbuckles of using the locknuts and a high grade Loctite. Make sure all of the panel numbers are removed from the sail with a soft cloth and detergent that has been proved not to damage the fabric.



slowly and evenly apply tension to all attachment points and use tension lines in the fabric as a guide to where