

retracting awnings motorised installation

Outrigger motorised retracting awnings are generally installed as a single stage job. This means that the poles, fittings, framework (if require) and the fabric roller assembly are all manufactured at the same time, ready to be installed at once. However, if the placement of the fittings is critical due to the type of structure that the awning is to be attached to, two stages may be required to ensure that the fabric roller assembly fits between the stub shafts on installation.

With a two stage installation, poles, fabric roller stub shafts, awning cover and any framework is installed first, if possible, everything is completed except for the fabric roller assembly and the winch and winch cable. Measurements are then taken between the stub shafts (noting exactly where on the stub shaft the measurements are taken from-to) and the length of the awning (the distance from the stub shaft to the tension post). The fabric roller assembly can then be manufactured and installed in the second stage (about ten working days later for Sydney Metro area).

Installing the fabric roller assembly, as with sails, can take a little time to get right as a completely straight, ripple free fabric panel is the goal. Any ripples in the fabric are nearly always due to the location of the stainless steel fittings on the end batten. One or both of these sometimes needs to be repositioned to alleviate any side ways pull on the end batten.



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■ 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

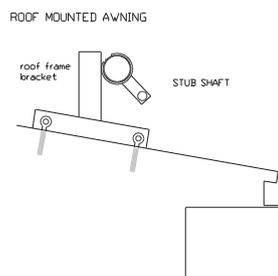
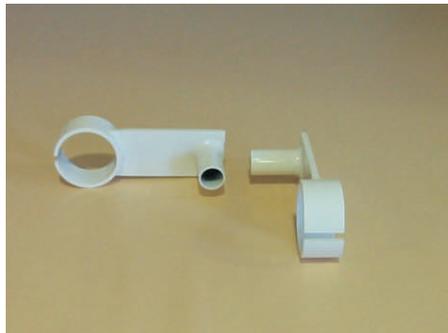
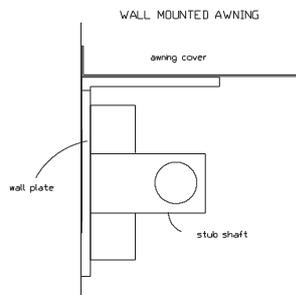
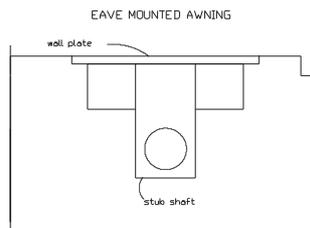
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retracting awnings motorised installation

■ stub shafts

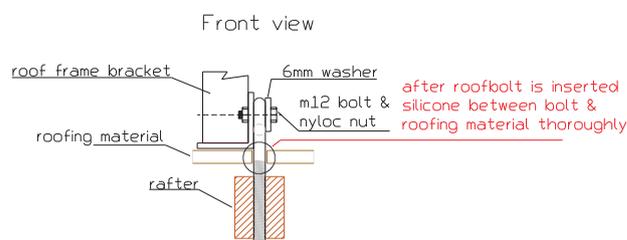
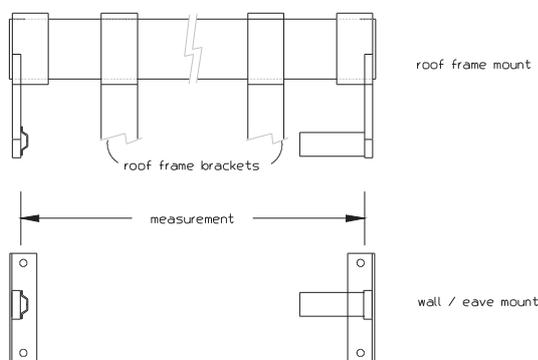
Outrigger retracting awnings can be mounted onto a wall, under or on an eave or, particularly for waterproof awnings on single story buildings with low eaves, mounted onto framework that is attached to the roof structure (see below). In each case the stub shafts need to be attached in a similar way. For a single stage job, insert the stub shaft into the ends of the fabric roller assembly and assemble motor plate shafts (pictured top left) measure the distance between the outside-outside of the stub shafts. Mark this distance on the wall, eave, or roof frame from where the fabric coverage needs to begin and check that the awning is going to be the correct length. Mount one stub shaft on one of the marks (it is a lot easier to mount the non motor end first), for frame mounted awnings, angle stub shafts for awning cover clearance (see next page). Then, lift the fabric roller assembly into position with the second stub shaft inserted into the other end of the roller and mark the position of the mounting holes. Remove the roller assembly and drill the mounting holes for the second stub shaft and temporarily attach it without the roller in place. Do not fit the roller assembly until awning covers have been installed.



retracting awnings installation/fittings

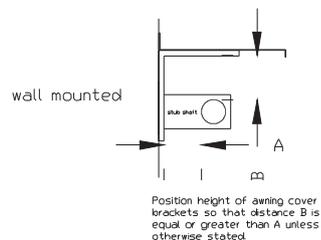
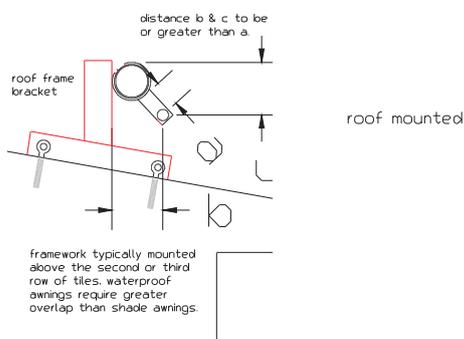
■ stub shafts cont.

for two stage installations, measurements need to be taken between stub shafts as shown below left, between the insides of the stub shaft plates. This is an Outrigger standard practice and all measurements for stub shaft centres will be taken as this. If for whatever reason the measurement are taken using different points, this must be made clear or the awning will be assembled to a different length and will not fit on the second stage of the installation. Shown below right is detail of fitment of a roof frame bracket.



■ awning cover

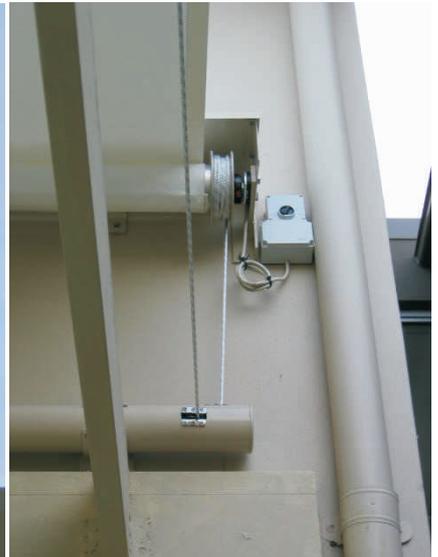
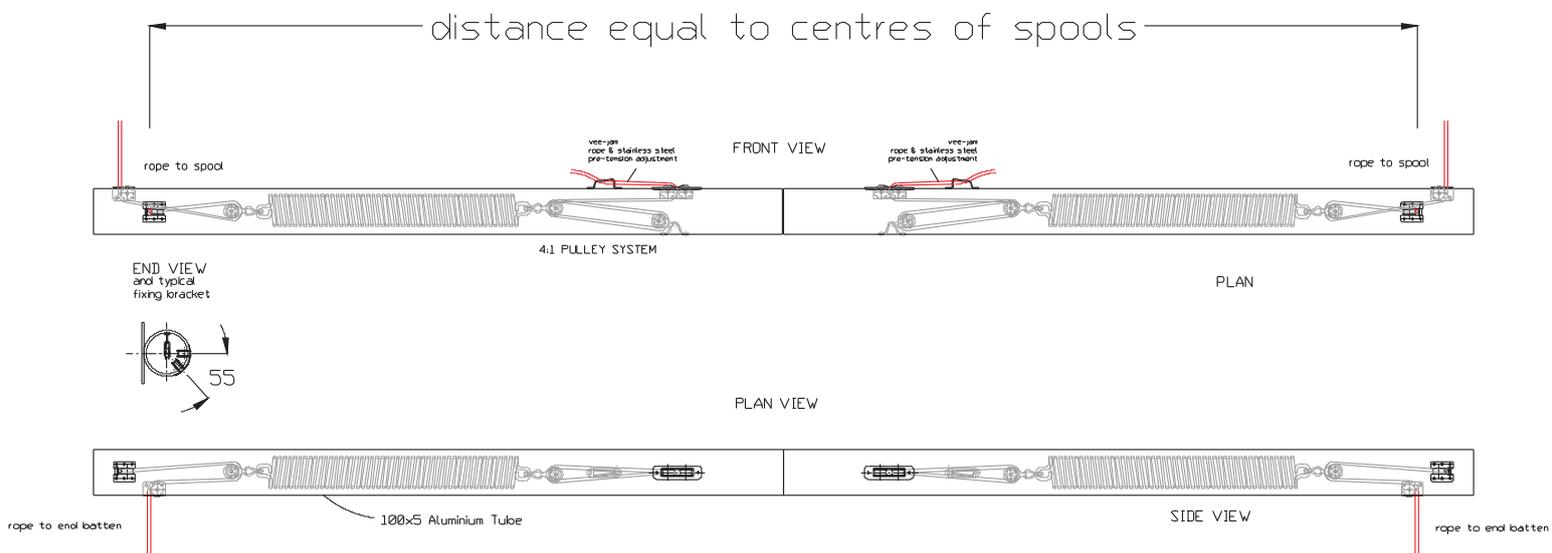
The clearance between stub shafts and awning cover should be set out as below. Evenly space awning cover brackets along length of awning. There should be a bracket for each join in the covers (if more than one is required) and one in middle of each cover section. For roof mounted awnings, it is beneficial for the two brackets at each end of the complete cover to be moved in to be in line with the posts as this will help provide a good anchorage point for guide cables. Attach awning cover sections to brackets using 3/16 stainless steel rivets. With a high grade silicone, seal along back edge of cover if attached to a wall and all of the joins in the sections. Also silicone over the heads of the rivets, neatly dab down all the silicone with a damp finger and remove excess with a cloth. After the awning cover is fitted, re-position the fabric roller assembly and secure all stub shafts.



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■ spring tension tubes

Outrigger motorised awnings utilise spring tension tubes to maintain fabric tension during operation. As the roller rotates, rope on a spool at either end of the fabric roller feeds into the spring tension tubes where an adjustable amount of load is applied to the rope. The rope then exits the spring tubes, and, similar to a manual retracting awning, it rounds a pulley on the posts and attaches to the fabric end batten. The spring tension tube assemblies have a short rope that is set up around the pulleys. Splice the awning rope onto this rope and pull through. The ropes can be spliced quickly by using a hot knife to melt the ropes together.



retracting awnings motorised installation

■ spring tension tubes cont.

These photos show a motorised awning that is installed above an existing pergola. The two outside photos show the spools at either end of the awning. The ropes go down to the tension tubes, where they are tensioned with an internal spring system. The ropes then exit the front of the spring tension tubes to individual tension posts shown in the centre, where the ropes round two pulleys and attach onto the top of the end batten.



■ During the installation, the awning will need to be operated. Every effort is made to ensure that the limit switches (shown below) are roughly set when the fabric roller assembly leaves the factory. They will need fine tuning on site though. This done using a supplied plastic tool that fit the red and white screws on the end of the motor. The directions are marked on the motor casing but, if using the photo below they are as follows

- white screw clockwise will increase the travel of the roller upwards
- white screw anti-clockwise will limit the travel of the roller upwards
- red screw clockwise will increase the travel of the roller downwards
- red screw anti-clockwise will limit the travel of the roller downwards

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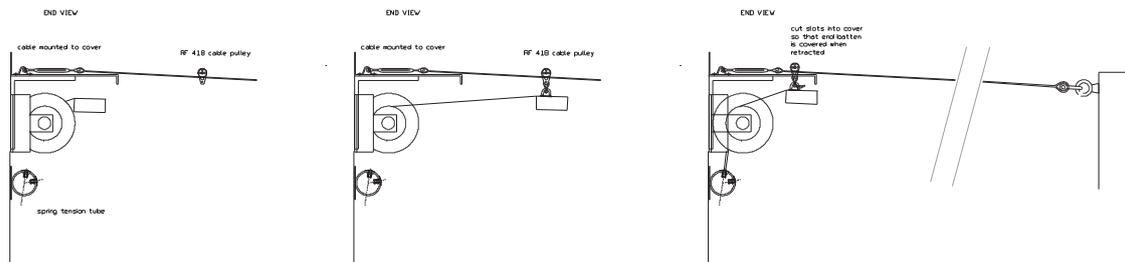
retracting awnings motorised installation

■ guide cables

Guide cables are used to support the weight of the fabric and end batten when the awning is being extended and retracted. Unless otherwise stated, 4mm, 7x19 stainless steel cable is used. They are mounted perpendicular to and above the fabric roller and inline with the tension posts. The cables attach to the posts by swaging a loop with a thimble at the end then using a bow shackle to secure them to a stainless steel eyebolt mounted to the top of the posts. The other end (above the fabric roller) is attached by another swaged loop connected to a stainless steel turnbuckle. This turnbuckle is then secured to a stainless steel saddle mounted either on the structure that the awning is mounted to, or in the case of a roof mounted awning for example, to the awning cover brackets that are in line with the posts. Before both ends of the cables are swaged, it is

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retracting awnings motorised installation

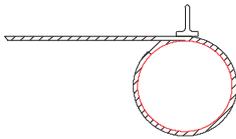
■ guide cables

The Guide cables are connected to the end batten via stainless steel saddles that are attached to the end batten. They are fixed using 3/16 stainless steel rivets and are positioned on the end batten directly below the cables in way that the end batten will be held in a neutral position and not being pulled to one side or the other.

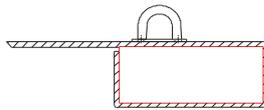
- As shown in the diagram on the previous page, extra shackles may be required to ensure that the end batten tucks beneath the awning cover. The saddles should be attached as shown below.

Fabric needs to be stretched out tight and ripple free around end battens before pad eyes are attached. The fabric needs to wrap completely around end batten so that none of it is visible. End battens that are housed in a pocket need the pad eyes attached to the leading edge.

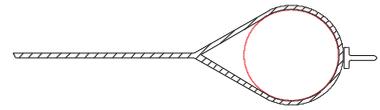
pad eye curved to fit tube



approx. 20mm



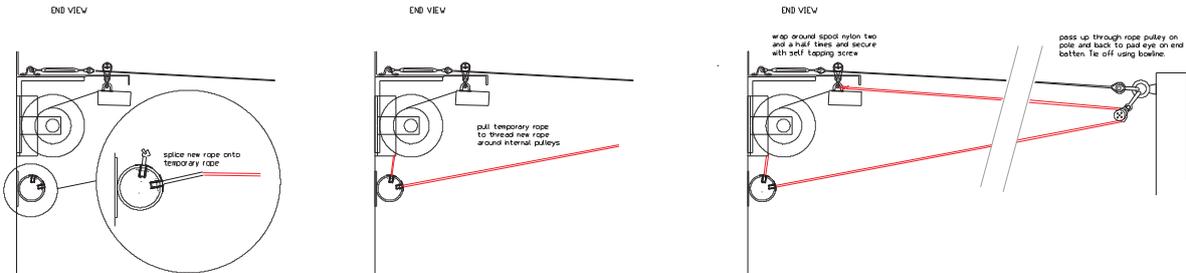
pad eye curved to fit tube



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■ tension ropes

For tension ropes a high strength, pre stretched, uv stable, 6mm yachting rope is used. With the awning still furled fully onto the roller, splice new rope onto the end of the temporary rope that is exiting the spring tension tube assembly. This is done by using a hot knife to melt the ends of the two ropes together. Make sure that the join is smooth and strong before trying to pull new rope through. Pull the new rope through the spring tube assembly and wrap around spool nylon two and a half times and secure with a stainless steel self tapping screw. Over estimate the required length of rope to go through a rope pulley at the top of the tension post and



retracting awnings

operating awning

■ opening awning

First, the pre-tension needs to be set by pulling the ropes that exit the spring tension tubes and through the stainless steel vee-jams. Pull each rope so that an equal amount of resistance is felt on the rope. With the hand held remote control, press the up button.

■ adjustment

- On initial operation, the fabric may want to travel either too far, or, not far enough. This is rectified by using the limit switches on the motor housing. See pg. 6 for adjustment details. Also the awning may not tension evenly. This is normally due to a slight difference in distance between the fabric roller and each tension point. This can be overcome by adjusting the pre-tension ropes until the awning pulls out evenly and ripple free. Also, ripples may appear if the pad eyes that connect the end batten to the guide cable are not in line. This will cause the end batten to be pulled to one side. This can be checked by pushing the end batten to each side when the awning is tensioned to so see if this alleviates the problem. If so, move the pad eyes in the direction required to let the end batten hang in a neutral position.

■ retracting awning

With the hand held remote control, press the down button. On initial operation, the fabric may want to travel either too far, or, not far enough. This is rectified by using the limit switches on the motor housing. See pg. 6 for adjustment details.

When awning is complete and adjusted, remove all marks from fabric. Check that all fittings are clean, square. Repair any chipped powdercoat. Check that customer is confident with the installation and is familiar with the operation of the awning.

