

Pendalex V+ Models **Owner's Manual**

- Installation of Bases
- Diagram of Parts
- Operating Instructions
- Optional Accessories
- Care and Maintenance
- Troubleshooting
- Glossary and Warranty

IMPORTANT: Read instructions thoroughly before operating or setting up your Pendalex Sunshade. Save these instructions with your proof of purchase for warranty. For customer service or warranty enquiries please call our toll free customer service number 1-888-489-9929.

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THANK YOU FOR PURCHASING AN ENVIRODESIGNS SUNSHADE PRODUCT

IMPORTANT

**Read your Owner's Manual thoroughly
before setting up or operating your
new Pendalex V+ Sunshade.**

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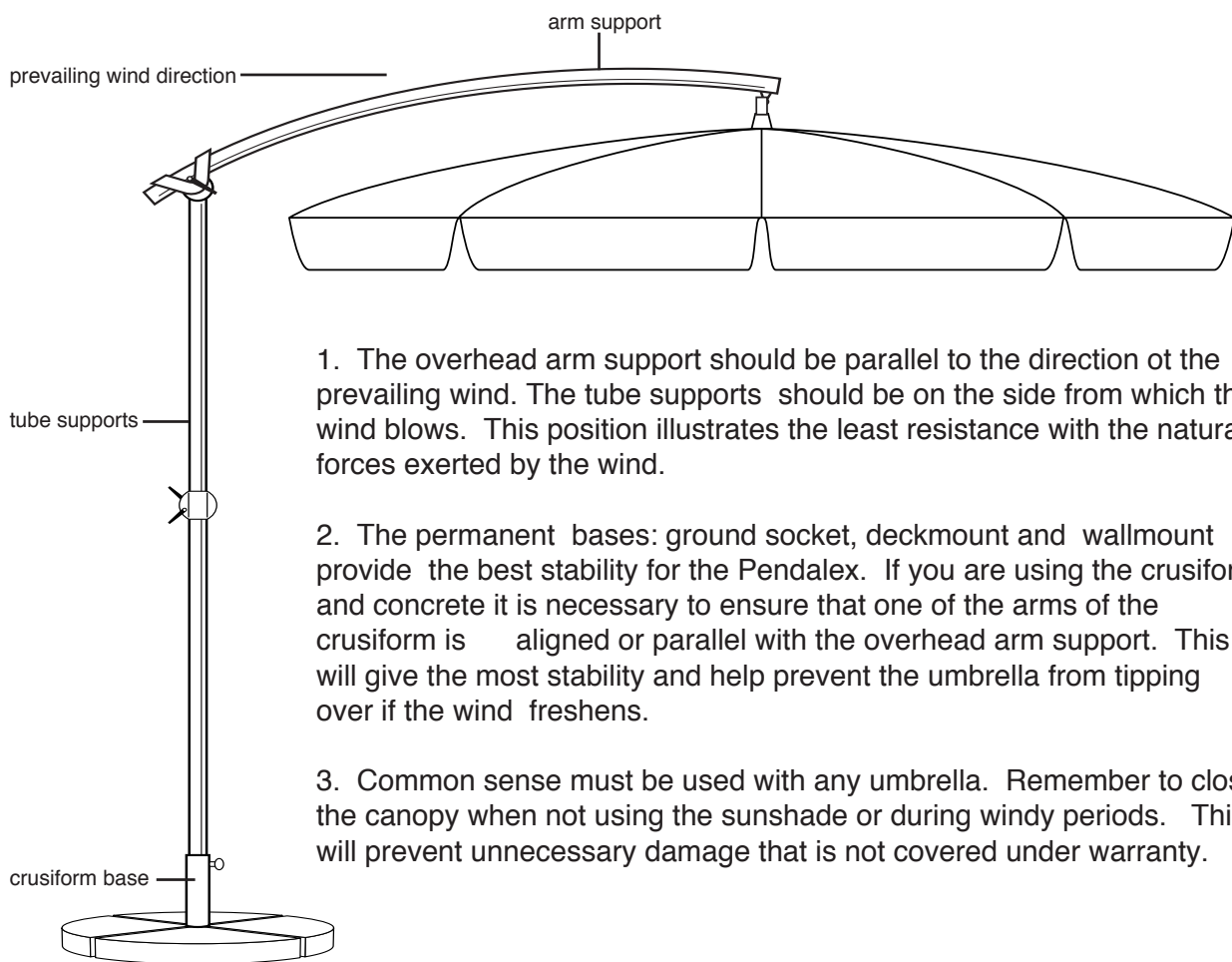
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Installation

Positioning the Pendalex V+ Sunshade

The side post design offers many advantages over the conventional centre post umbrella. Finding the right location for your Pendalex Sunshade will require a little planning in order to utilize the umbrella's ability to rotate around its base and to tilt at various angles.

If space permits, position the base where it can allow the sunshade to rotate 360°. To tilt the sunshade, in relation to the angle of the sun throughout the day, install the Pendalex in a south/southwesterly direction from the seating area. If you are placing the Pendalex in a location where it may be windy the following should be observed to improve stability.



1. The overhead arm support should be parallel to the direction of the prevailing wind. The tube supports should be on the side from which the wind blows. This position illustrates the least resistance with the natural forces exerted by the wind.

2. The permanent bases: ground socket, deckmount and wallmount provide the best stability for the Pendalex. If you are using the crusiform and concrete it is necessary to ensure that one of the arms of the crusiform is aligned or parallel with the overhead arm support. This will give the most stability and help prevent the umbrella from tipping over if the wind freshens.

3. Common sense must be used with any umbrella. Remember to close the canopy when not using the sunshade or during windy periods. This will prevent unnecessary damage that is not covered under warranty.

NOTICE TO PURCHASER:

Manufacturer's only obligation shall be to replace such parts of the product proved to be defective. User shall determine the suitability of the product for the intended use and assumes all risk and liability in connection therewith. Refer to Pendalex warranty on back of Manual.

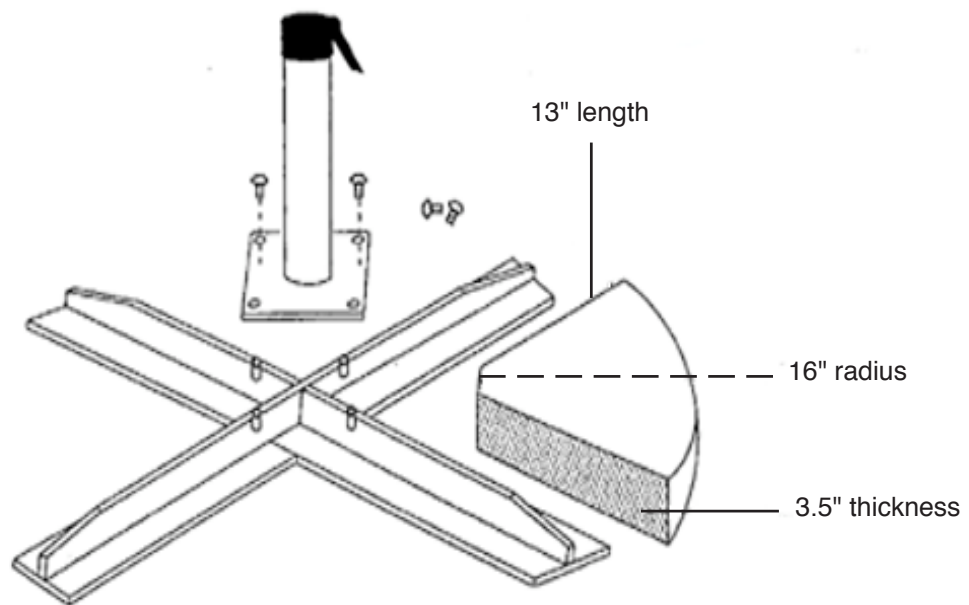
Crusiform and Concrete

With the Pendalex Sunshade it is necessary to have sufficient counterweight to provide proper stability for the cantilevered design. A permanent installation provides the best stability for the Pendalex, however, the crusiform is the most popular of the Pendalex bases because it is movable and does not require any installation work to an existing patio. It must be positioned properly to provide optimum stability.

The crusiform is designed to accommodate four concrete quarter circles. Manufacturer recommends a minimum of 220 lbs. of concrete to counterbalance the sunshade. See concrete specifications below. Two sets of concrete may be used for increased stability.

IMPORTANT

The greatest support of the crusiform is at each of the arms. To provide the most stability for the sunshade ensure that one of the arms of the crusiform is aligned or parallel with the overhead arm support of the Pendalex. Close sunshade when not in use or during windy periods. Do not leave an open umbrella unattended.



Concrete specifications:

- a 3.5 inch thick concrete circle divided into 4 sections with 90° angle at centre
- exposed aggregate on all sides except bottom, or in plain or marbelized concrete
- each quarter section has a radius of 16 inches cut diagonally across at centre to accommodate central tube - at 13 inches in from circumference or 3 inches in from centre
- concrete lightly reinforced internally
- **each quarter section of concrete must weigh a minimum of 55 to 60 lbs.**

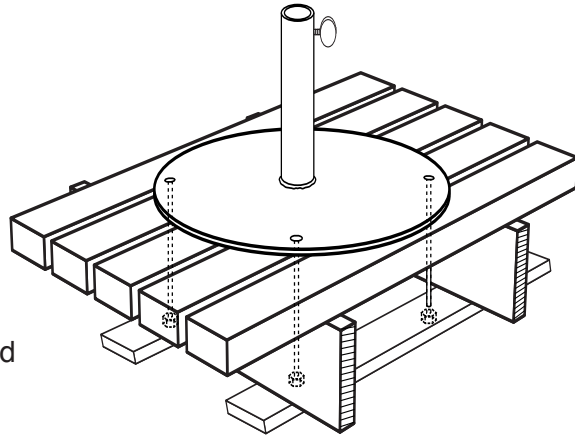
Installation of the Deckmount Base

1. Onto a wooden deck.

The deckmount must be secured by 4 long bolts (3/8" diameter), washers and nuts.

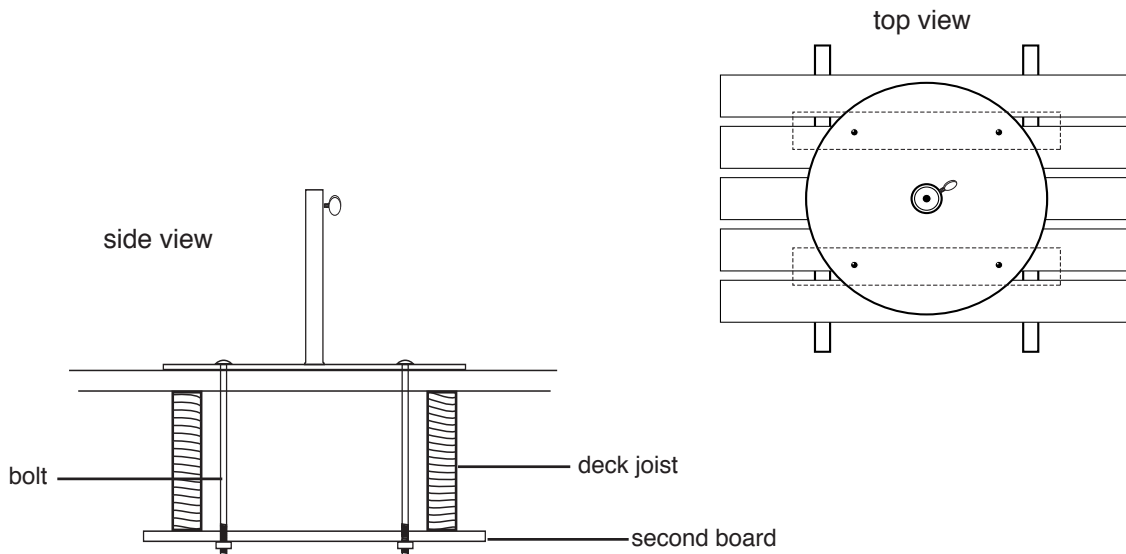
The deckmount must be bolted through the floor boards and through a second board placed perpendicular to the deck joists as shown in the side view diagram.

The length of each bolt will depend on the combined width of the **deck joists**, the thickness of the floor boards and the second board placed under the deck joists.



IMPORTANT

The side post system of the Pendalex requires that the Deckmount be installed very securely because of the torsion and stress exerted. It is not sufficient to bolt it to the floor boards of a wooden deck.

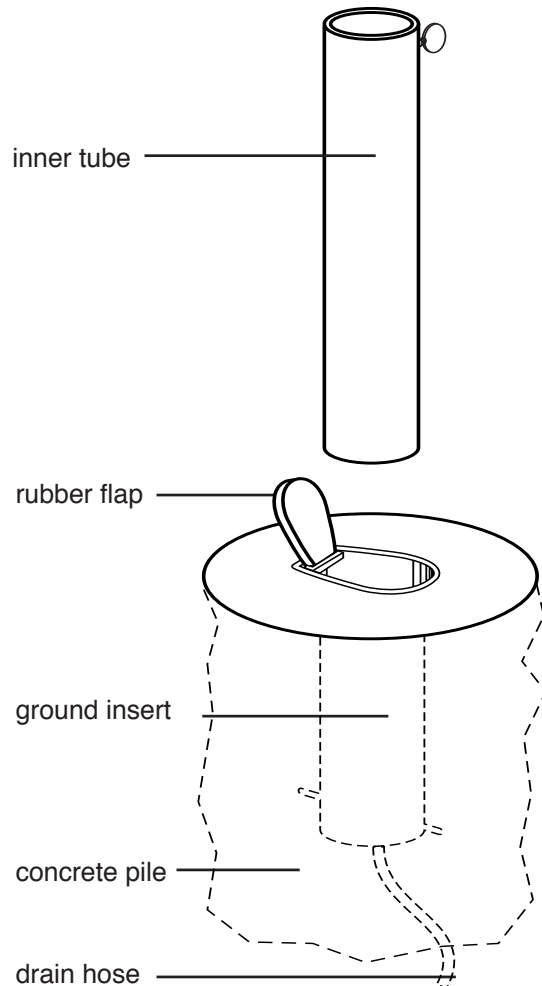


2. Onto a concrete patio.

If the Pendalex deckmount is positioned onto a concrete patio it must be secured by 4 bolts imbedded into the concrete when the cement is poured. With an existing concrete patio the deckmount must be securely mounted by inserting **concrete expansion anchors** into holes (a min. of 3 inches deep) drilled into the concrete and then securely fastened with **lag screws** (3/8" diameter).

Installation of the Ground Socket Base

With the Ground Socket Base the Pendalex can be positioned permanently in any location - the lawn, a wooden deck, a concrete deck about to be poured or into a patio made of patio bricks or interlocking blocks. The Ground Socket base consists of two parts: the ground insert which is imbedded into concrete and the inner tube which is placed into ground insert and then Pendalex frame is inserted into inner tube.



1. The ground insert must be set into a concrete foundation 20 x 20 inches in length by 12 inches in depth or a concrete pile at least 8 inches in diameter and 2.5 to 3 feet deep with **ground underfill**.
2. The **concrete pile** should be reinforced with vertical steel rebar.
3. The rubber flap encasement should be flush with the floor of the deck or ground.
4. When setting the ground insert into concrete a drain hose is fitted into the bottom as shown in diagram to prevent the ground insert filling up with runoff rain water.

INSTALLATION TIP:

Once concrete has been poured, use a levelling device to ensure the ground socket base is perfectly vertical. Insert the inner tube in the ground insert and then use the level for final adjustments before the concrete has set.

IMPORTANT

It is absolutely essential that the completed ground socket base be perfectly vertical when finished otherwise the Pendalex will have an unsightly lean when the tube support of the frame is inserted into the base. Once the concrete has set it is very difficult to make any levelling changes in the vertical position of the ground socket base. Any adjustments in levelling should be made before the concrete has set or hardened.

Installation of the Wallmount Base

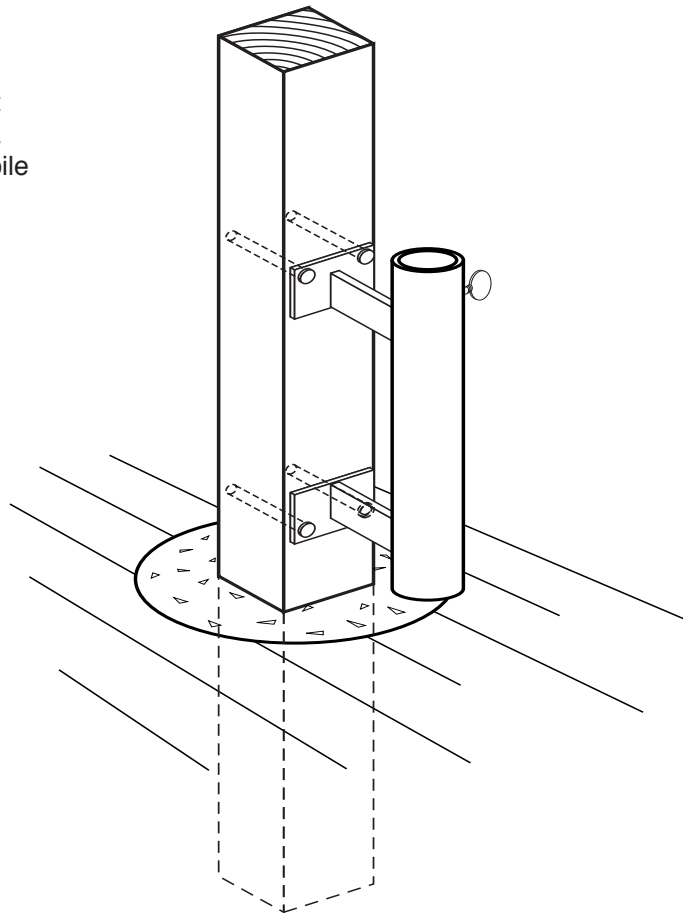
1. Onto a post imbedded into a concrete pile.

The wallmount can be attached to a 4 x 4 reinforced post with four galvanized 5/16" x 5" bolts, nuts and washers. See diagram below.

IMPORTANT

In this installation it is important that the post be very securely mounted into a concrete pile and that all bolts be as specified and tightened properly. The wallmount is very effective when placed on a post on the outside edge of a patio deck. Installation on a full wall will limit the rotation of the umbrella to 180°.

4 x 4 post
set into a
concrete pile



2. Onto a wall.

If the wallmount is to be fastened to a wall the bolts must be connected to the structural members (studs) with either 5/16" bolts or **lag screws**.

3. Onto a concrete wall or concrete block wall.

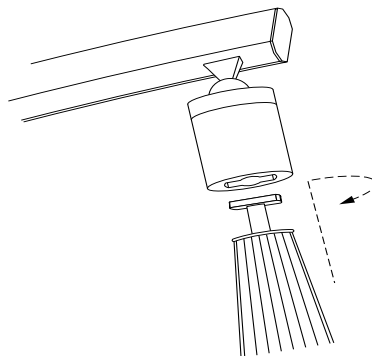
In this installation proper **concrete expansion anchors** must be inserted into the holes drilled into the concrete and then fastened with **lag screws**.

Pendalex V+

The impressive design of the new Pendalex V+ incorporates the ingenious functionality and superior quality of the original Pendalex with a sleek, contemporary look. The new frame features a **pneumatic lift** in the support tube for height adjustment, and the V+ joint allows the overhead arm to pivot and slide from a horizontal to a vertical position.

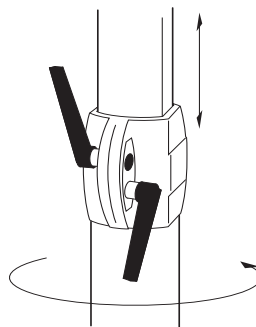
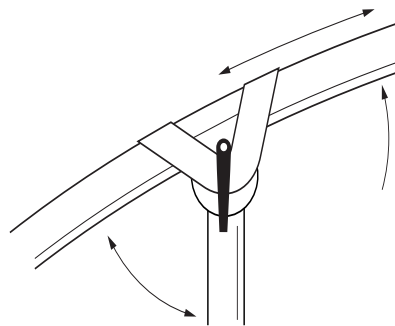


Pendalex V+ frame in vertical or folded position with **pneumatic lift** in lower tube support for height adjustment



ball joint & socket

V+ joint allows overhead arm support to pivot and slide from a horizontal to vertical or folded position



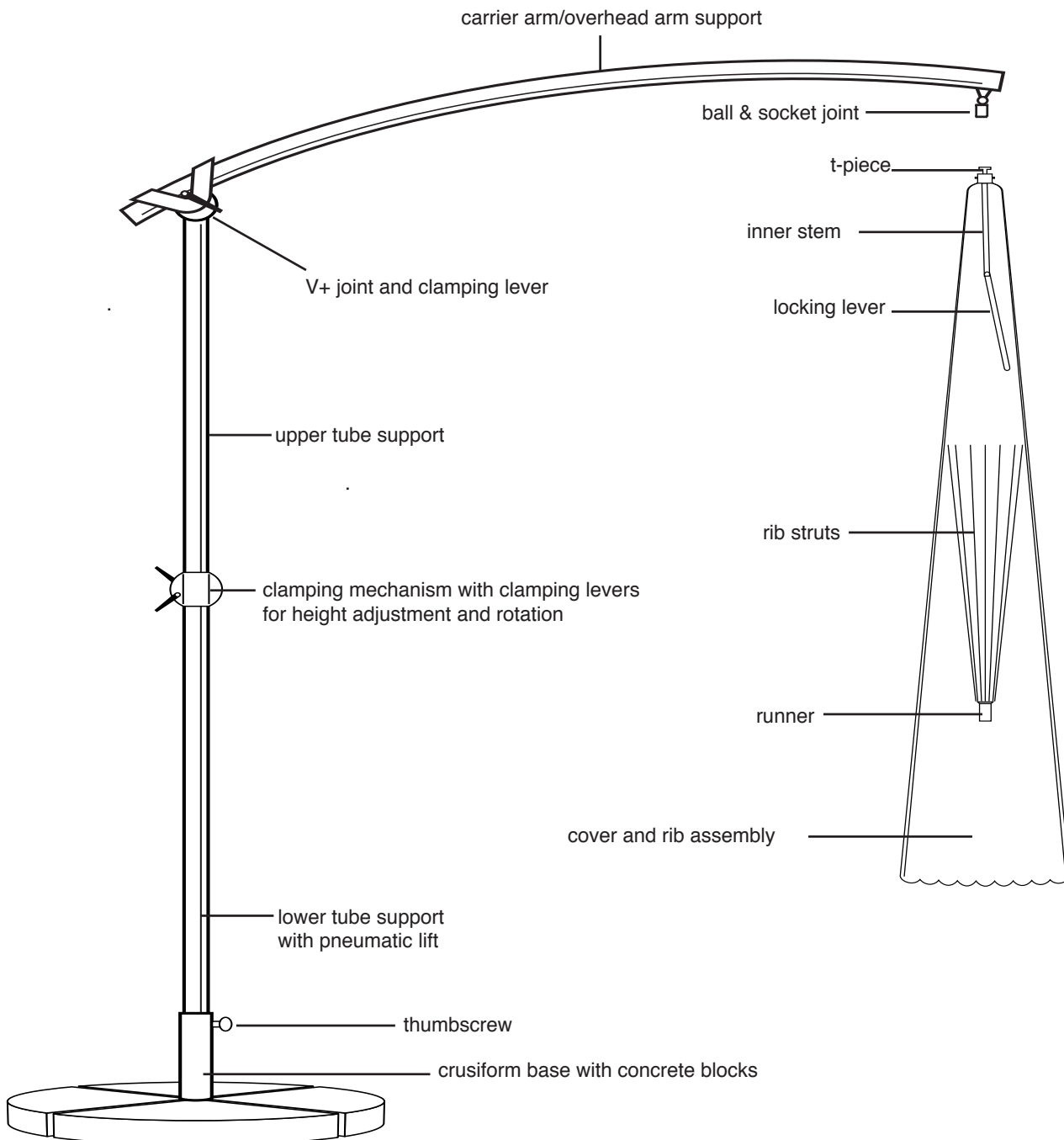
clamping mechanism allows for height and rotation adjustment

The **orange buttons** on each lever allow the position of the lever to be changed without loosening the lever. Pull the black lever towards you and rotate to desired position.

Diagram of Parts

Pendalex V+ Frame

- available in **anodized** bronze or natural aluminum or white **powder coated** finish
- V+ joint and clamping mechanism are powder coated with nylon reinforcement
- ball joint and socket are nickel plated brass
- **pneumatic lift** in lower tube consists of stainless steel rod and powder coated tube
- cover is **100% acrylic awning and marine weight fabric** with water repellency
- all sizes of the Pendalex Sunshade will fit on the V+ frame
- rib assembly made of u-channel spring steel with white powdered coated finish.



Operating Instructions for the Pendalex V+

I. Setting up the Frame:

1. Set up the Pendalex base. Refer to individual instructions provided with each base and the accompanying diagram of parts. Place the V+ frame into the tube insert of base. Turn lower tube support until it locks into place. Tighten the thumbscrew of the tube insert.

2. For height adjustment (fig. 1), hold upper tube support **firmly** and loosen height clamping lever marked with vertical arrows. Raise to desired height then retighten (if upper tube support is not held firmly, it will spring up when height clamping lever is loosened). **Note:** Once rib assembly and cover are attached to the frame, the pneumatic lift will not spring up with as much force.

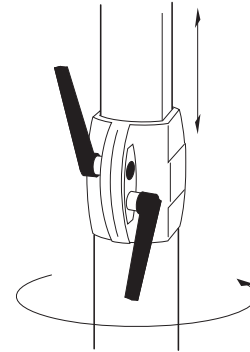


fig. 1

3. Release the rotation clamping lever marked with horizontal arrows, rotate sunshade in the required direction and retighten (fig. 1).
4. To extend or retract the carrier arm (arm support) loosen the clamping lever of the V+ joint (fig. 3) by 1 1/2 turns. Allow the V+ joint to pivot and then extend or retract to either stop bolt at the top of the carrier arm (fig. 2) or bottom (fig. 4).

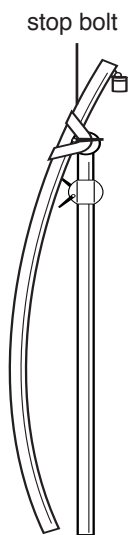


fig. 2

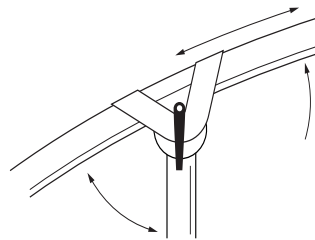


fig. 3

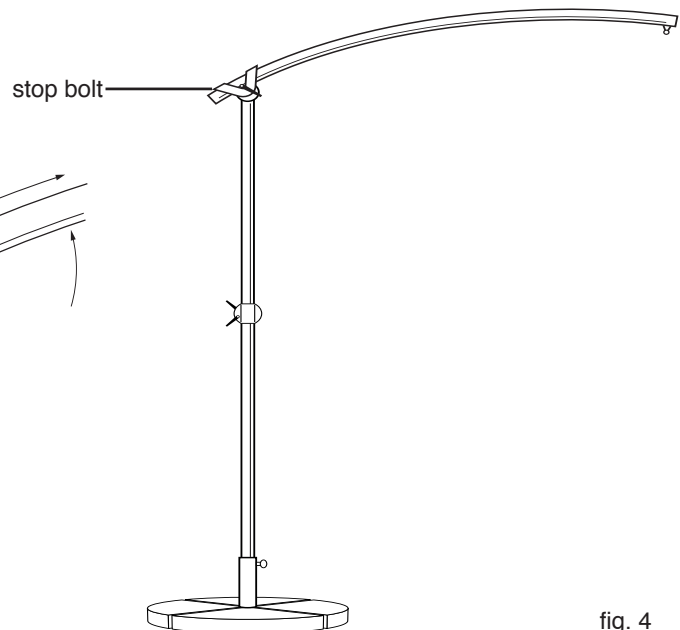


fig. 4

II. Setting up the Sunshade:

1. Insert the t-piece of the sunshade rib assembly and cover into the ball joint & socket (fig. 5) and turn a quarter turn until engaged or until you hear it click into place.

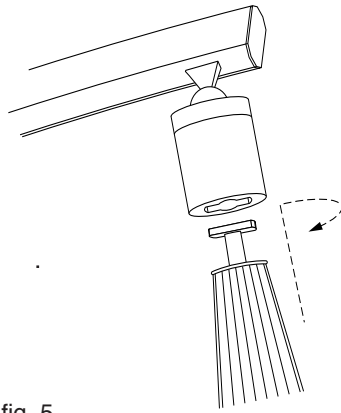


fig. 5

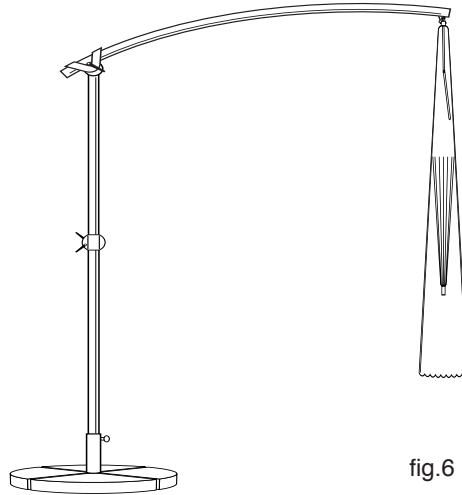


fig. 6

2. To open sunshade lift cover and spread the rib struts by pushing runner up. With the other hand insert locking lever and inner stem through runner (fig. 7) While depressing the runner handle pull until locking lever clicks into place and release handle to secure. Position the locking lever horizontally (fig. 8).

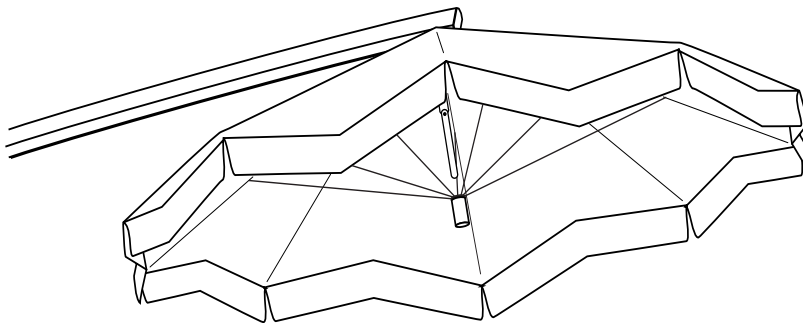


fig. 7

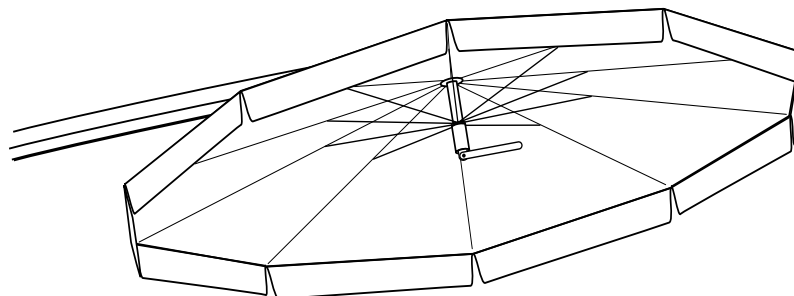


fig. 8

3. With the locking lever in the horizontal position, turning it clockwise will tighten the bolt of the inner stem against the ball joint and secure it in place. Turning the lever counterclockwise will loosen it. (fig. 9)

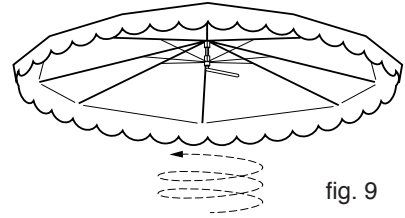


fig. 9

III. Tilting the Sunshade:

1. To tilt the sunshade according to angle of the sun, have locking lever loosened. Adjust the sunshade to the desired position and tighten lever to secure in that position. The sunshade will tilt at any angle. (fig. 10).

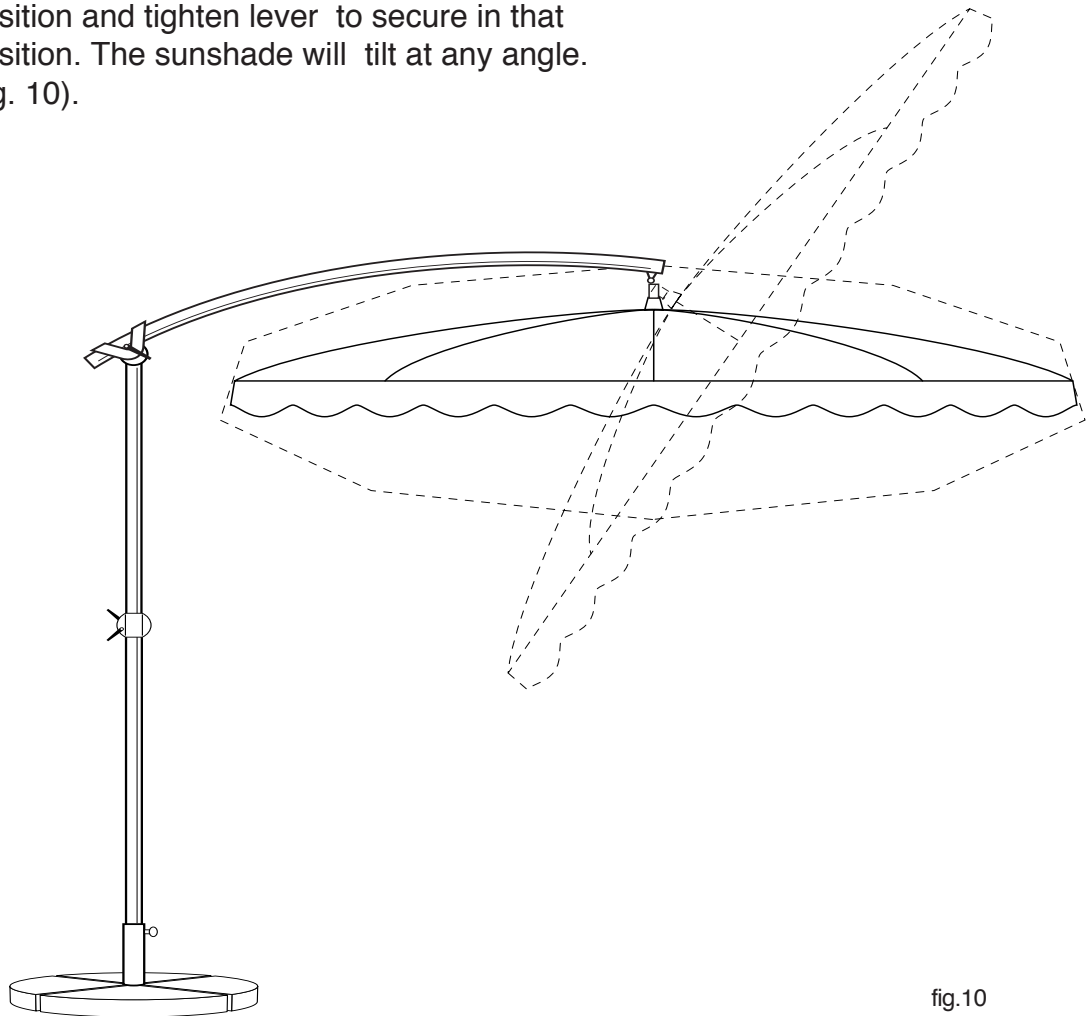


fig.10

WARNING:
Do not tilt sunshade during windy conditions

IV. Dismantling:

1. To close sunshade, loosen locking lever and bring to horizontal position. If the sunshade is to remain hanging from arm support (fig. 11) then only loosen lever with one complete revolution. Do not pull locking lever down when bolt is still tightened, always loosen it first. To close sunshade hold onto runner with one hand and pull lever down with other hand. It will remain engaged on ball joint but will not be rigid. The frame may also be in folded position while sunshade is engaged to ball joint & socket (fig. 12).

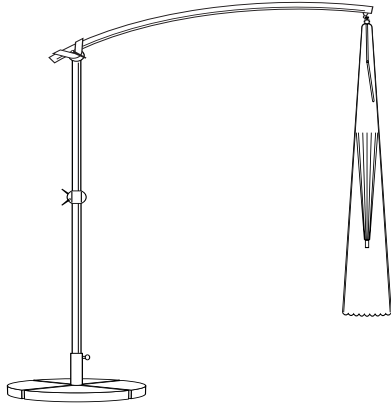


fig.11

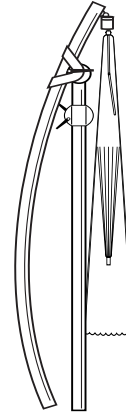


fig. 12

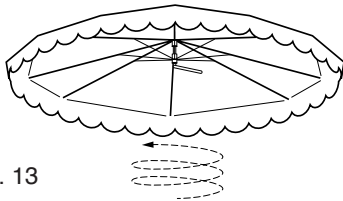


fig. 13

2. To remove or disengage sunshade from ball joint & socket, loosen lever with at least three revolutions (fig 13). This will allow enough clearance for the t-piece and socket to be separated from each other. To close sunshade hold onto runner with one hand and pull locking lever down with other hand. Disengage t-piece from ball joint & socket by pushing up slightly and turning a quarter turn (fig. 14).

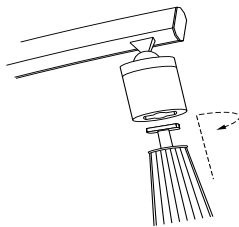


fig. 14

TIP: If you are unable to remove rib assembly from ball joint & socket, simply open sunshade and turn inner stem and locking lever a few more revolutions counterclockwise to loosen.

IMPORTANT

The sunshade cannot be removed from ball and socket joint unless the locking lever has been loosened sufficiently. Damage may also occur to the rib assembly if it is left hanging while it is still tightened.

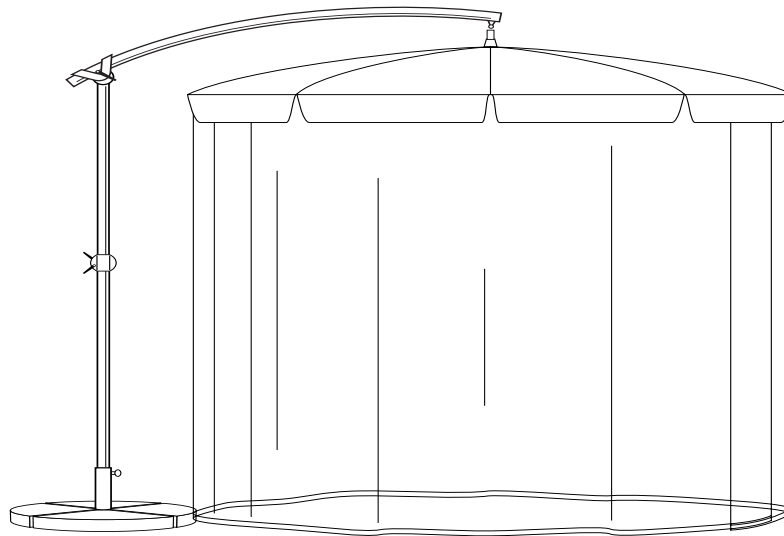
Optional Accessories

Gazebo Attachment

- made of vinyl coated charcoal fibreglass insect screening - 18 x 16 nominal mesh count
- noncombustible, will not rust, corrode or stain
- vislon zipper attached
- overlapping front closure for convenience; no velcro or ties to secure doorway

The gazebo netting is designed to accommodate the insertion of a chain into the hem for weighting purposes. The recommended chain is: chrome or nickel plated, machine chain twist link in either a 2/0 or 1/0 size link. This type of chain is smooth and will not snag the screening.

3 meter (9.8 ft) diameter uses 33 feet of chain
2.5 meter (8.25 ft) diameter uses 27 feet of chain



Cabana Attachment

- made of gathered white polyester boucle sheer curtaining
- vislon zipper attached
- overlapping front closure
- entire hem is lightly weighted with fabric covered lead beading used in drapery
- wash at cool settings with mild detergents
- remove from drying cycle immediately upon completion and hang
- should not require ironing if instructions are followed

WARNING:

For the safety of the consumer the manufacturer warns against using barbecues and other sources of open flame within the enclosures. The Pendalex Gazebo and Cabana are not intended to be permanent structures. They are umbrellas with zip-on attachments and therefore should be closed when not in use or during windy periods.

Care and Maintenance

THE FABRIC

Fabrics used are made from **100% solution dyed acrylic fiber**. Its tightly woven property prevents almost all overhead UV penetration. It is guaranteed for a period of five years against loss of color or strength from normal exposure conditions including sunlight, mildew, rot, and atmospheric chemicals. It is a solution dyed fabric which gives it a color brightness which is unsurpassed. Fabric fiber has a fluorocarbon finish which provides excellent water repellency.

CARE AND CLEANING

1. The fabric should be cleaned regularly before dirt, is allowed to accumulate on and become embedded in the fabric. The fabric can be cleaned without being removed from the frame. Simply brush off any loose dirt, hose down and clean with a mild natural soap in lukewarm water. Do not use detergents. Do not subject to excessive heat. Do not steam press or dry in electric or gas dryers.

MAINTENANCE

Any metal moving part such as the ball joint & socket, the locking lever and the upper tube support should be cleaned regularly with varsol or a **silicone spray** and wiped clean with a soft cloth. Do not grease or oil these parts as they should be thoroughly clean to work smoothly and quietly. The bolt may be occasionally lubricated.

Proper care and preventative measures for any powder coated surface.:

If the powder coating is damaged and the metal substrate is exposed to the elements moisture can penetrate to the base metal and begin to corrode (oxidize) the surface. Corrosion can rapidly eat away under the surface coating and it may begin to bubble or peel away.

Proper maintenance and cleaning is required to help conserve the appearance of the product and to reduce any corrosive strain on its surface. In this way possible damage can be made subject to timely recognition and remedied by suitable measures.

In areas where there is increased salt contamination and or chemical exhausts more frequent cleaning is required. This would be areas in the vicinity of a seashore or in industrial atmospheres.

If covering nicks and scratches: Rub lightly with fine steel wool for better paint adhesion. Wipe clean. When using touch-up paint, shake can well, and use thin coats. Let dry.

Your Pendalex is designed for longevity. Proper cleaning and maintenance on a regular basis is required to maintain your umbrella throughout the years.

Troubleshooting

HEIGHT ADJUSTMENT PROBLEMS: Frame

If the height adjustment is not working properly and seems to be sticking or making a scratching sound when raising or lowering the upper tube you will need to take the frame apart to check inside.

There is a teflon strip of tape located on the bottom of the upper tube support that helps to keep the tube from scratching on the side of the lower tube. If this tape becomes dislodged it tends to stick on the inside of the tube and impairs height adjustment.

1. To disassemble the tube supports remove the sunshade from the arm support.
2. Have the frame in the vertical position and remove the v+ joint. To do this you must remove the little screw that is positioned in the nut. This screw ensures that the lever on the other side is not loosened enough to have the lever and bolt disengage from each other during normal use. In this case, however, you want the lever completely loosened from the bolt so the two parts of the v+ joint can be separated and the overhead arm removed.
3. Disassemble the clamping mechanism completely by loosening the two levers and removing the nuts. Remove upper tube support from lower tube support.
4. Check to see if the teflon strip of tape has become dislodged. Remove tape completely and reassemble the umbrella frame. If you would like to replace the teflon strip please contact our customer service number. The height adjustment will work without the teflon strip.

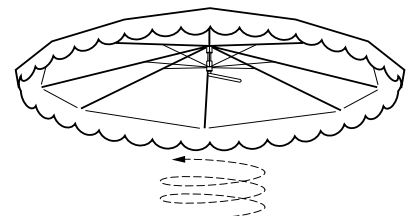
TILTING PROBLEMS: Ball & Socket

If the umbrella does not remain in a tilted position once the locking lever is tightened the ball joint needs to be examined.

1. Check the profile of the socket where the u-section is cut out. If the sides tend to flange out then the ball and socket will need to be replaced. This flanging might occur if the sunshade was tightened in a tilted position and exposed to extreme winds over a long period of time. The sunshade should not be tilted in windy conditions
2. If the sides seem to be intact then check the inside of the socket where the t-piece of the ribs is inserted. There is a large threaded disk that is set into the socket like a set screw and you should be able to see some of the threads of this socket. If you cannot see these threads then the large disk has loosened. There is too much space in between the ball joint so the bolt will be unable to tighten against it to keep the umbrella in the tilted position. Take a wrench or something similar and insert it into the end of the socket where the t-piece would normally go and try to tighten the disk back to its normal position.

If the ball joint gets dirty it tends to stick. It is always a good idea to clean this off periodically by using varsol or a teflon or silicon spray.

If the locking lever is not tight against the ball joint then the umbrella will move, sway and spin with every breeze. Turn the locking lever clockwise to tighten



Glossary

acrylic awning and marine weight fabrics - extremely durable outdoor fabric woven from synthetic fibers. They are resilient, quick drying and resistant to sunlight, fading, soiling, abrasion and mildew. These acrylics are used in awning and marine applications.

anodized - chemical plating process that permanently seals the surface of aluminum preventing formation of aluminum oxide.

concrete expansion anchors - metal sections inserted into a drilled hole in the concrete that expand when the lag screw is tightened.

concrete pile - a concrete foundation that extends into the ground usually shaped by the concrete being poured into a permatube.

deck joists - the support beams of a wooden deck that run perpendicular to the floor boards of the deck.

exposed aggregate - exposed stone or pebble concrete as opposed to the smooth concrete finish.

ground underfill - gravel that is used for drainage.

lag screw or lag bolt - referred to as a lag bolt because of the hex or square head but also referred to as a screw because of its tapered threads.

pneumatic lift - sealed compressed air cylinder inside the lower tube support that makes raising the height of the umbrella easier.

powder coated - a finishing process in which a plastic, polyester, urethane or hybrid coating is ground into a fine talc and electrostatically blown on the chemically-cleaned and etched surface of the metal to be coated. Baked in an oven, the talc melts and fuses to the product, producing a glossy, durable, weather resistant skin four to eight times thicker than paint.

silicone spray - a multipurpose silicone lubricant that prevents sticking of all metal parts, stops squeaks and prevents rust.

solution dyed fibre - the individual fibre is dyed before being woven together, rather than printed, which gives greater color fastness to the fabric.

Pendalex V+ Warranty

Full two year warranty

1. From the date of purchase this Pendalex V+ Sunshade unit is warranted against defects of workmanship and materials for two years. The awning and marine weight fabric carries a five year manufacturer's warranty against fading, mildew and rot.
2. Date of purchase must be established by means of sales slip or other evidence satisfactory to ENVIRODESIGNS INC.
3. This warranty does not cover damage caused by the wind conditions, impact from shipping or use , negligence, normal everyday wear, improper cleaning and storage, vandalism, or any circumstances beyond the manufacturer's control. Damage indicative of wind or impact is broken or bent parts.
4. Rust and corrosion is not covered under warranty.

Scratching or abrading of the product during or after installation, standing or ponding water; and improper cleaning will all contribute to damaging the product and are beyond the manufacturer's control. See care instructions for proper prevention.

5. Should this product prove to be defective in materials or workmanship immediately contact Envirodesigns' customer service department's toll free number. If the fault is deemed by Envirodesigns to be a result of faulty materials or workmanship the customer will be reimbursed for any shipping charges that may have incurred.
6. Further customer service or enquiries should be directed to:

ENVIRODESIGNS INC. Head Office and Factory
10546 - 105 Street, Edmonton, Alberta
T5H 2W7 Canada Ph: (780) 448-1044
Fx: (780) 448-1042

**Toll free Customer Service Number 1-888-489-9929
or email info@envirodesigns.com**



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