



# Installation Instructions

Rainier Shading  
1760 Route 211 East  
Middletown, NY 10941  
(800) 501.3850

Version 5.25

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**NOTE: Specific model-related installation details may be included in the product chapter.**



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## General Awning Mounting Instructions

### Before You Begin An Installation

Whether you are an experienced awning installer, or a handyman or builder ready to take on your first awning installation, it's probably a good idea to read these instructions at least once before you begin.

Before you start drilling holes or cutting siding, take a minute to make sure your installation will proceed as smoothly as possible.

- Measure the awning and make sure it will fit in the desired space.
- Make sure you have both the correct number and length of lag bolts for this installation. We recommend 3/8" lag screws with washers. As for length of your lag screws, your goal should be to achieve at least 2-1/2" of lag penetration into the stud, roof rafter, plate or header board.
- If the unit is roof mounted, you will need 3 lag bolts for each bracket provided.
- Make sure you have all the tools needed. See the list below. **Tools needed may vary by model.**
- You will need **AT LEAST 2 PEOPLE** to lift the awning into the brackets and make any adjustments as needed.

### Tools You Will Need for an Rainier Awning Installation:

- Allen Wrenches: 3mm, 4mm, 5mm, 6mm, 7mm, 8mm, 10mm, 12mm & 3/16" (motor bracket)
- Open/Box 13mm, 17mm, 22mm
- Drill with 1/8" bit for stud probing, 1/4" bit for pre-drilling to avoid splitting the wood
- Level
- Tape measure
- Utility knife
- #2 screwdriver
- 2 ladders minimum
- Impact driver with sockets
- Eye protection
- Chalk line
- Rubber mallet
- Caulk gun and caulk
- Metric and standard sockets and ratchet
- Marking pencil or chalk

### Lag Screw Recommendation:

Attaching the lag screws to the most solid part of the structure available is key for an installation that will stand the test of time. When installing (on any surface), you'll want no less than 2-1/2" of lag into the stud, roof rafter or header board. Anything less than the 2-1/2" will compromise the integrity of the installation. Always remove all material that can compress and allow the bracket to "rock"; install the bracket on a strong level surface.

## Mounting Height:

Allowing for the front bar of the unit to be 7' off the deck surface (7' will work for installs 99% of the time, but not Shaq's house), you should mount the unit according to projection by the following guide.

The bottom of the bracket should be your point of reference. Any less pitch can compromise the unit. With less than the recommended pitch you will increase the likelihood of the wind "lifting" the unit and causing unit damage, which will not be covered by the warranty. A wire free wind sensor can help this situation, but damage can still occur. Lack of adequate pitch may cause the fabric to sag or even lay on the arms. This will be an issue especially if rain water is allowed to gather on the awning, causing irreversible stretching of the fabric, which is also not covered by the warranty.

Projection	Mounting Height
5'-0"	8'-0"
7'-4"	8'-3"
9'-0"	8'-9"
10'-0" to 10'-6"	9'-3"
11'-6"	9'-6"
13'-0"	9'-6"
14'-9"	10'-0"
16'-6"	10'-6"

## Bracket Placement:

Before you start attaching brackets to the house, make sure that the unit can be installed where you planned it to go, based on the location of the brackets. There are certain areas of the awning, considered "dead areas," where either the end brackets, arm shoulders, center support, cassette support, etc. will impede the square bar/torsion bar from entering the installation brackets.

Begin this process by matching the width of the awning to the area of the house designated for installation. Mark with a pencil where the awning will go, then determine the location of the available studs, roof rafters, or other structural mounting you plan to utilize for the installation. Once you figure out where you can put brackets, match them up with where you can put them on the awning. Do your best to bookend each shoulder for maximum strength. The best location for the install brackets is no less than 8" and no more than 16" to both sides of each arm shoulder. On smaller units, there may be as few as three installation brackets. In these cases, try to install a bracket within 16" on each end of the awning, and place the third bracket near the middle.

If you have any questions, please contact us.

## Attaching the Brackets to the Wall:

- Determine the height of your installation, measure the exact height on both ends of the install site, and use a chalk line to ensure level bracket placement.
- Take the 6mm bolt out of each bracket.
- Mark the holes that need to be drilled by placing the bottom of the installation bracket on the chalk line, and marking the openings.
- Pre-drill the lag screw holes to prevent splitting the studs using a 1/4" drill bit.

- Lag the brackets to the wall, leveling each bracket before fully tightening the lag bolts.

## Put the Unit Up:

It's now time to place the unit in the brackets. With the fabric on top, lift the unit up and place the square (torsion) bar in the brackets. Make sure the torsion bar slides all the way to the back of the bracket, then insert and tighten the 6mm bolt.

**DO NOT RUN THE AWNING OUT UNTIL ALL OF THE 6MM BOLTS ARE TIGHT!!!**

**See each model guide for specific instructions on how to adjust pitch.**

## Installing on Clapboard:

Determine the location of the wall studs or other framework to which you plan to install the Rainier. **Exterior planking or the sheathing behind the siding WILL NOT support the awning when extended.** The clapboard, if no sheathing has been used, is usually nailed to the studs and in general, the studs are very easy to find. Locate the nail heads in the clapboard (they should be 16" on center) and you will have located the studs.

Probe for the center of the wall stud using your 1/8" drill bit.

**Note:** Probe drill in a straight line so that the holes will be covered by the installed awning. Your mounting bracket holes should be pre-drilled using a 1/4" bit. You will need at least 2-1/2" of penetration into the center of your supporting framework.

Match this depth to the length of your lag screw.

## Installing on Vinyl & Aluminum Siding:

When installing on siding you have two choices: mount directly to the house (to the studs), or use a header board.

### Attaching Brackets Directly to the Studs:

Find the studs and remove the siding in an area slightly larger than the footprint of the bracket. If you remove or unzip the siding (they make a tool just to unzip siding), you can easily find the studs and replace and score siding.

**PRO TIP:** To avoid razor knife slips, consider using a Dremel/rotary style tool. You'll have better control and can be more precise in your cutting.

Remove any compressible material behind your cutouts. You may need to build out the mounting surface to bring you to the face or beyond the face of the siding. Rainier offers 1/2" thick, powder coated, aluminum buildout plates just for this type of installation. Some dealers will use pressure treating decking, pre-cut to the bracket side, and drill out the areas where the lag screws can pass through freely, then paint as needed to match the house's trim. It's also important to caulk around the edges to keep rain water from getting behind the siding.

### Using a Header Board:

We suggest the use of pressure treated lumber equal to the length of the awning (2"x 8" plank for most models, and 2"x12" for Summit unit). You may choose to "wrap" the header board in matching vinyl or aluminum to give the job a finished, professional look. Others will paint the header to match the trim or house.

For this method, you will also need additional lags and washers to mount the board. We suggest 2 bolts per wall stud to secure the board to the wall. You will need 3" long carriage bolts, washers, and nuts to pre-mount the installation brackets to the board **BEFORE** you mount the board to the wall. This method should provide ideal placement of all installation brackets.

## Installing on Brick or Masonry:

In all circumstances, we advise that you avoid drilling into the mortar between the bricks, and NEVER fasten into the top two levels of brick. Why? We have heard of brick walls detaching from the structure when the awning is extended if installed to brick in this way.

When drilling into brick, aim for the center of the brick for maximum strength.

If the wall surface is not level, you will need to use a header board (2"x 8" for most models, or 2"x12" for the Summit). See "Installing to Uneven Surfaces" (below).

Before you begin to drill, consider using the Hilti Hit System. They offer different adhesives based on mounting surfaces.

If the brick is only a veneer, you will need to tag into the wall studs behind the brick and treat the bricks as "spacers."

## Installing to a Soffit:

Inspect the installation location to see that nothing will open into the unit, such as the top of the door, windows, etc. To clear the frame hardware, you will need a minimum of 12" from the bottom of the soffit, and 16" total to clear the valance when the unit is retracted. Please review the model handbook for model specific measurements.

Open the soffit area to determine if a solid mounting can be achieved. If solid mounting is achievable, mount directly to the soffit. If the ends of the roof rafters are near the mounting area, you may want to use a header board across the rafter ends, and then mount the unit to the header board. Make sure your lags penetrate at least 2-1/2" into the rafter. Once the header board is built out even to the bottom of the soffit, replace the soffit covering and install the mounting brackets through the covering and into the header board. If a header board is not used, make sure that the unit will clear the lip of the soffit when you place the unit into the brackets. Spacers may be needed to clear the lip, and are needed for Summit soffit mounts over 20' wide to provide clearance for the center support. Rainier offers 3/4" thick, aluminum, powder coated plates to match the awning hardware.

## Installing to Uneven Surfaces:

We recommend using pressure treated lumber equal to the length of the awning as a header board (2"x 8" for most Rainier models, or 2"x12" for the Summit) .

You may choose to "wrap" the header board in matching vinyl or aluminum to give the job a finished, professional look, or you may choose to paint the header to match the trim or house.

For this method, you will also need additional lags and washers to mount the board. We suggest 2 bolts per wall stud to secure the board to the wall. If the surface is brick or stone, we suggest that you consider using the Hilti Hit System.

You will need 3" long carriage bolts, washers, and nuts to pre-mount the installation brackets to the board BEFORE you mount the board to the wall. This method should provide ideal placement of all installation brackets.

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### INSTALLATION BRACKET & CENTER SUPPORT INFORMATION (applies to all mounting applications)

#### RAINIER/OLYMPUS UNITS (projection range varies by model)

BRACKET COUNT	PROJECTION/WIDTH					
	5'0''/6'7''	7'4''/8'2''	9'0''	10'6''	11'6''	13'0''
3	up to 12'11 <sup>7/8</sup> ''	up to 10'11 <sup>7/8</sup> ''	-			
4	13' to 16'11 <sup>7/8</sup> ''	11' to 16'11 <sup>7/8</sup> ''	up to 16'11 <sup>7/8</sup> ''			
5	17' to 20'	17' to 20'	17' to 20'	17' to 20'	17' to 19'11 <sup>7/8</sup> ''	17' to 19'11 <sup>7/8</sup> ''
6	-	-	20'0 <sup>1/8</sup> '' to 22'11 <sup>7/8</sup> ''	20'0 <sup>1/8</sup> '' to 22'11 <sup>7/8</sup> ''	20' to 22'11 <sup>7/8</sup> ''	20' to 22'11 <sup>7/8</sup> ''
7	-	-	23' to 23'11 <sup>7/8</sup> ''	23' to 26'11 <sup>7/8</sup> ''	23' to 30'11 <sup>7/8</sup> ''	23' to 30'11 <sup>7/8</sup> ''
8	20'0 <sup>1/8</sup> '' to 34'11 <sup>7/8</sup> ''	20'0 <sup>1/8</sup> '' to 34'11 <sup>7/8</sup> ''	24' to 34'11 <sup>7/8</sup> ''	27' to 34'11 <sup>7/8</sup> ''	31' to 34'11 <sup>7/8</sup> ''	31' to 34'11 <sup>7/8</sup> ''
9	35' to 36'11 <sup>7/8</sup> ''	35' to 36'11 <sup>7/8</sup> ''	-			
10	37' to 40'	37' to 40'	37' to 40'	37' to 40'	37' to 40'	35' to 40'

#### SUMMIT UNITS

BRACKET COUNT	PROJECTION/WIDTHS		
	13'0''	14'9''	16'6''
4	up to 16'11 <sup>7/8</sup> ''	up to 20'	up to 20'
5	17' to 18'11 <sup>7/8</sup> ''	20'0 <sup>1/8</sup> '' to 20'11 <sup>7/8</sup> ''	20'0 <sup>1/8</sup> '' to 21'11 <sup>7/8</sup> ''
6	19' to 20'	-	-
7	20'0 <sup>1/8</sup> '' to 30'11 <sup>7/8</sup> ''	21' to 33'11 <sup>7/8</sup> ''	22' to 30'11 <sup>7/8</sup> ''
9	31' to 35'11 <sup>7/8</sup> ''	34' to 36'11 <sup>7/8</sup> ''	31' to 35'11 <sup>7/8</sup> ''
11	36' to 36'11 <sup>7/8</sup> ''	37' to 40'	-
13	37' to 40'	-	37' to 40'

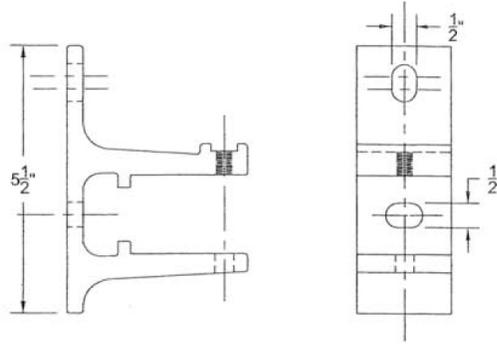
#### RAINIER\*\*, OLYMPUS & SUMMIT UNITS CENTER SUPPORT/SPLIT ROLLER APPLICATIONS

UNIT WIDTH	COUNT
up to 20'	0
20'0 <sup>1/8</sup> '' to 22'	1
20'0 <sup>1/8</sup> '' to 36'11 <sup>7/8</sup> ''	2
Over 37'	3

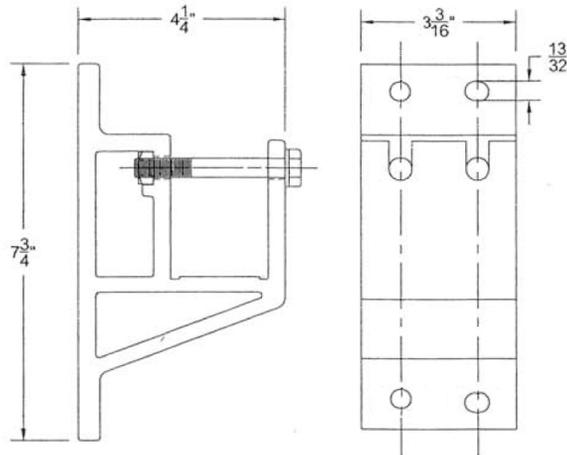
\*\*Rainier units with 11'6'' projections has a center support or split roller at 20'0''

# Retractable Awnings

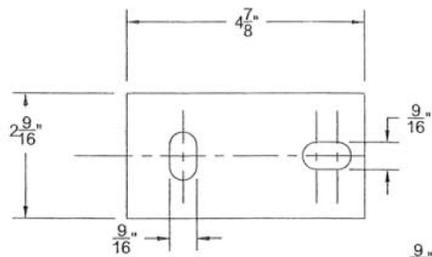
## Installation Bracket Dimensions



2 RAINIER WALL BRACKET  
4 N.T.S.



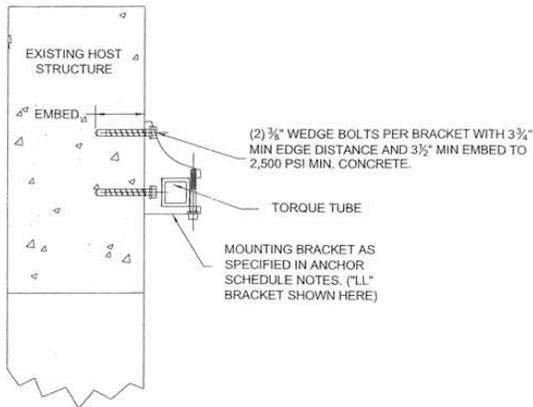
4 SUMMIT WALL BRACKET  
4 N.T.S.



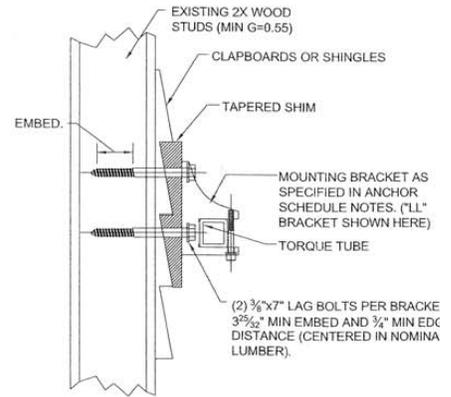
5 RAINIER SOFFIT BRACKET  
4 N.T.S.

# Retractable Awnings

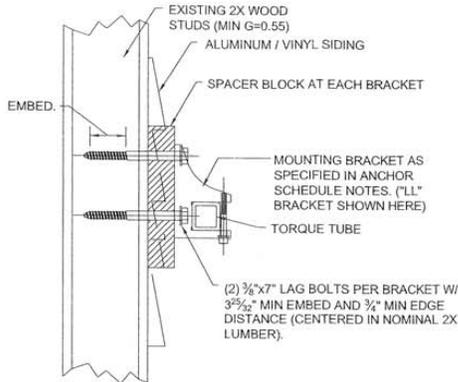
## Installation Bracket Attachment Dimensions



**1** MOUNT TO CONCRETE  
 2 N.T.S. VERT SECTION

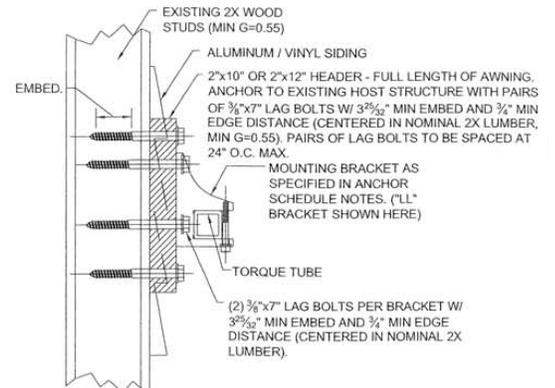


**5** MOUNT TO WOOD STUDS THROUGH CLAPBOARDS  
 2 N.T.S. VERT SECTION



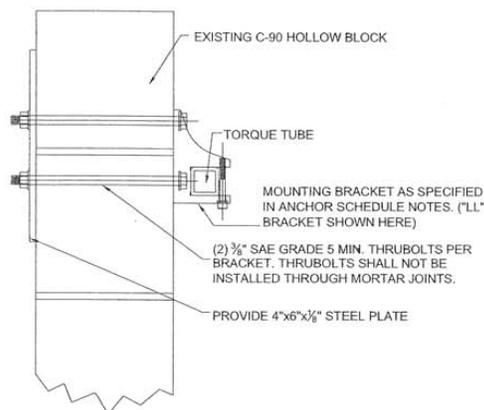
CUT THROUGH SIDING AND USE A SPACER BETWEEN EACH BRACKET AND THE EXISTING PLYWOOD.

**2** MOUNT TO WOOD STUDS THROUGH SIDING  
 2 N.T.S. VERT SECTION

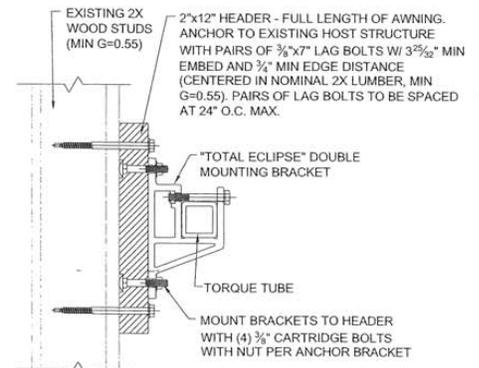


CUT THROUGH SIDING AND USE A HEADER BETWEEN BRACKETS AND EXISTING PLYWOOD.

**4** MOUNT TO WOOD STUDS THROUGH HEADER  
 2 N.T.S. VERT SECTION



**3** MOUNT TO C-90 HOLLOW MASONRY BLOCK  
 2 N.T.S. VERT SECTION



**6** MOUNT THROUGH HEADER FOR PROJECTIONS 13'-0" AND GREATER  
 2 N.T.S. VERT SECTION

**IMPORTANT NOTE: 12" BRACKETS FOR USE WITH SUMMIT -- YOU WILL NEED TO DRILL 4 HOLES ON THE FACEPLATE**

*Additional Required Tools: 3/4" wrench, Metal blade saw, and 2 tubes of roofing cement*

On the roof, mark the width of the awning and the outer boundaries of the usable rafters. Some rafters may fall where the arms or center support are mounted to the torsion bar. Transpose the "dead mounting areas" and determine which rafters you can attach to. To locate the rafters, some will use a framing hammer and listen as they bang.

Do your best to bookend each shoulder for maximum strength. The best location for the install brackets is no less than 8" and no more than 16" to both sides of each arm shoulder. On smaller units, their may be as few as three installation brackets. In these cases, try in install a bracket within 16" on each end of the awning and place the third bracket near the middle.

Place the three-hole base of the roof mount bracket 3"- 5" back on the roof. Mark with a chalk line so that all of the brack-ets will be in line. **PRO TIP:** *Some installers use the bottom edge of the 2nd row of shingles as a mounting guide as where to line up the bottom of the plates.*

Pre-drill 1/4" holes for 3/8" lags (make sure each time you drill you have a solid rafter to mount to).

Fill all holes, and the back of the bracket with roofing cement or silicone caulk - see A.

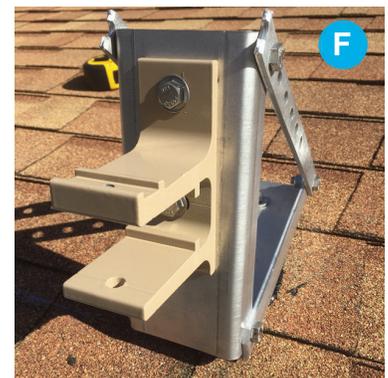
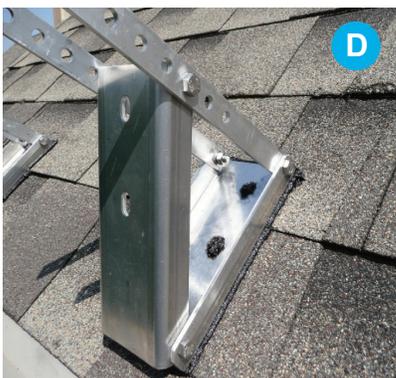
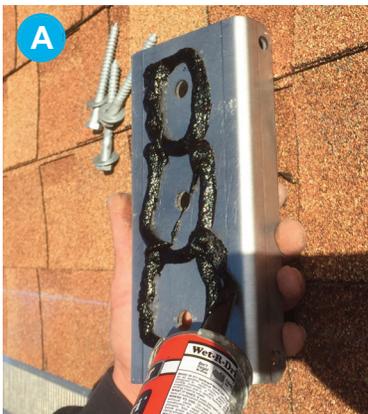
Lag the three-hole face plate to the roof rafters. The lag needs to hit the center of the roof rafter and go in straight, at least 3 1/2" to 4 1/2" deep into rafter. To achieve this you need 4 to 6 inch long lag screws - see B.

Assemble the rest of roof bracket and mount the installation bracket to the face plate. The install bracket should be as close to level as possible or leaning back slightly. The install bracket should never lean forward - see C & D.

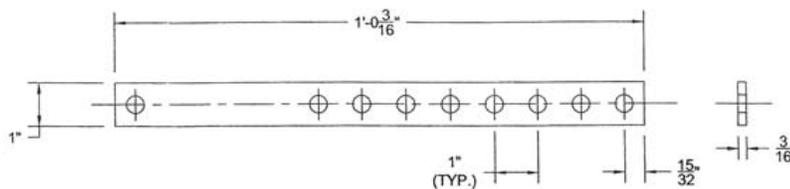
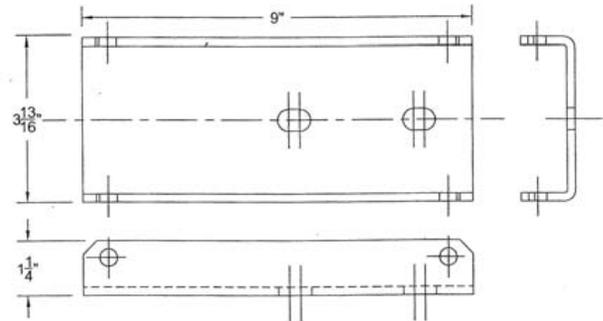
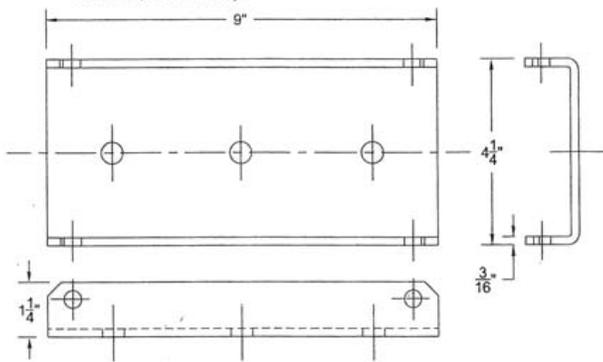
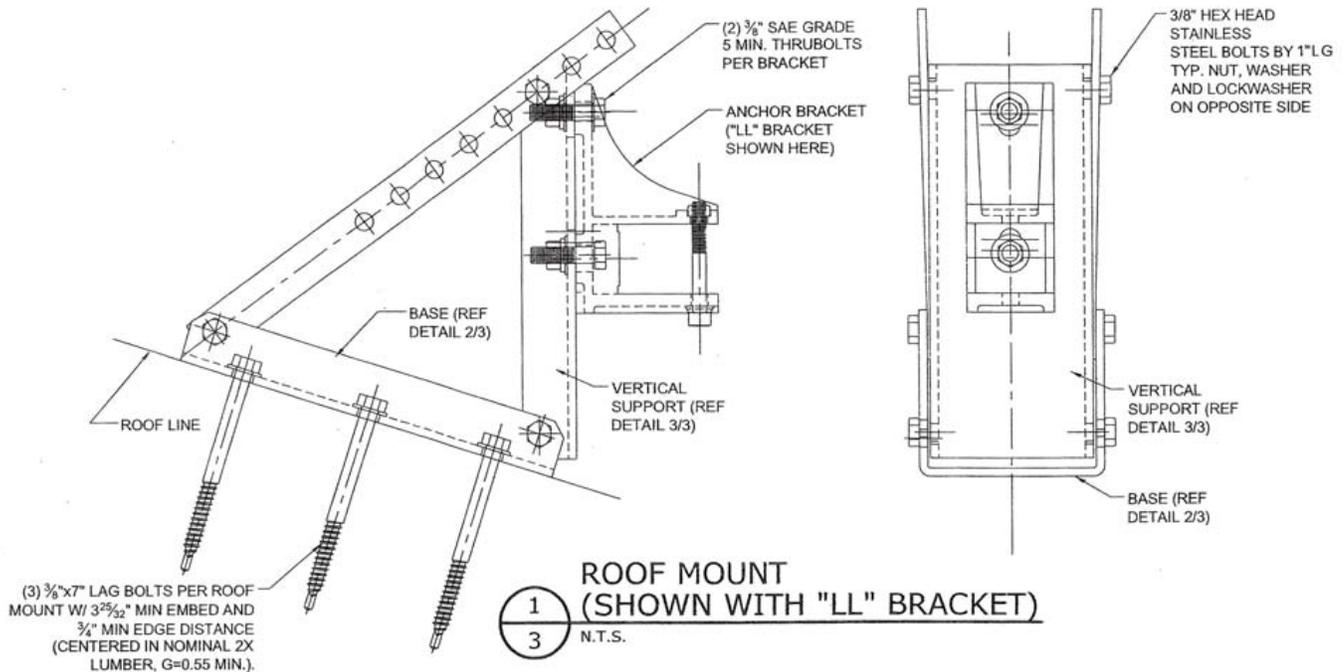
Trim off the extra side straps and caulk around the base of the bracket, then with the hardware provided, attach install brackets making sure the install bracket is plumb using a 6" level - see E.

A fully installed Roof Mount Bracket - See F.

**Any Technical Questions: 845.645.6995**

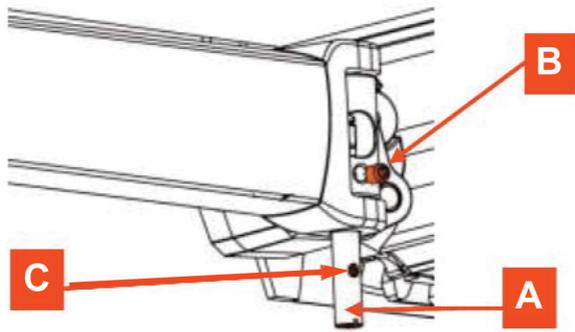


### Rainier Awning Roof Mount Bracket Details - Typical Installations



**\*Applies to units produced before 8/22/19**

### LEVELING THE ARMS



B = 4mm Allen  
C = 3mm Allen

To raise or lower the unit's elbow, you will need to adjust the angle of the upper arm pin "A" that attaches to the shoulder.

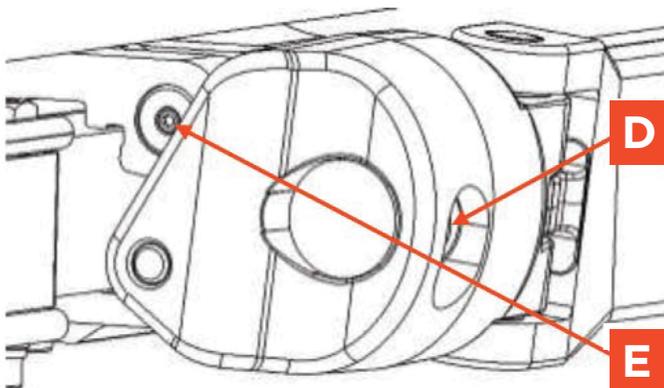
With the arm extended, you will have access to the 4mm Allen set screw "B". First, remove the 4mm Allen fully - this will give you access to the "real adjustment screw", the 3mm Allen located in the same hole and threaded into the pin itself "C".

Turn the 3mm Allen screw clockwise to raise the elbow, counter clockwise to lower the elbow. **Be careful as to NOT let the upper arm pin twist or fall out as shown in picture.** Once the adjustment is made, reinstall the 4mm Allen, tighten and test the unit.

#### IMPORTANT NOTE:

The upper arm pin "A" is shown this way to give you visual access to "C", DO NOT let the arm pin drop as shown!

### CHANGING UNIT PITCH



D = 10mm Allen  
E = 3mm Allen

To change the unit pitch, extend the awning fully, loosen "E" the 3mm Allen pitch lock screw. With the help of an assistant lifting up on the arm, adjust the 10mm Allen "D" on each shoulder.

Once the desired pitch is achieved, retighten "E" to lock "D" into position.

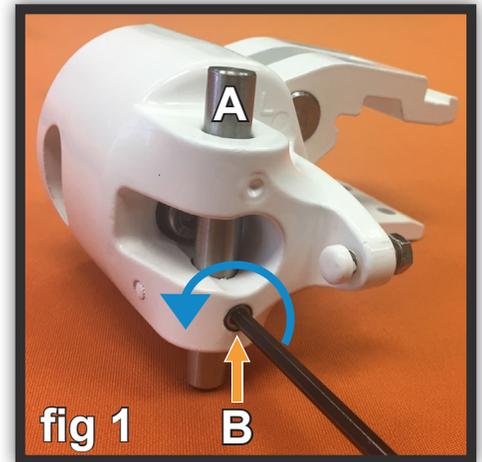
**\*Applies to units produced after 8/22/19**

► **What to Expect:** Elbow adjustments adjustment typically take around 15-20 minutes. On units produced after 8/22/19, raising or lowering the unit's elbow is a much simpler process, and it requires just one 4mm Allen wrench.

► **Tools Needed:** • 4mm Allen Key

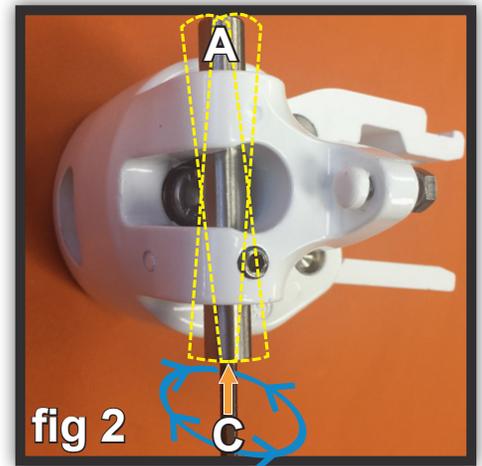
### Step #1

To raise or lower the unit's elbow, first simply loosen the 4mm Allen set screw "B", using a 4mm Allen wrench. You'll "unlock" the arm pin "A" by turning the 4mm Allen set screw "B" very slightly to the left (fig 1).



### Step #2

Once the arm pin "A" has been "unlocked," you can then adjust the angle of the arms by using that same 4mm Allen wrench to turn the other 4mm Allen "C" that's in the base of the arm pin "A" (fig 2). The angle of the arm pin "A" will shift as you turn "C."

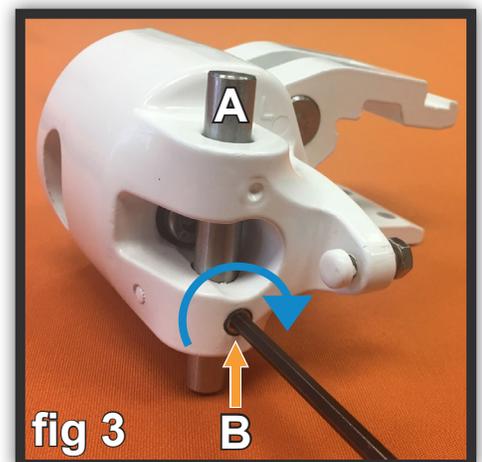


### Step #3

Once the arms are leveled, re-tighten the 4mm Allen set screw "B" to re-lock the arm pin "A" into its new position (fig 3).

### \*Note

**It's important to make sure that "A" has been firmly locked into position.**



► **What to Expect:** A pitch adjustment typically takes 10-15 minutes to complete and requires 2 people.

► **Tools Needed:**

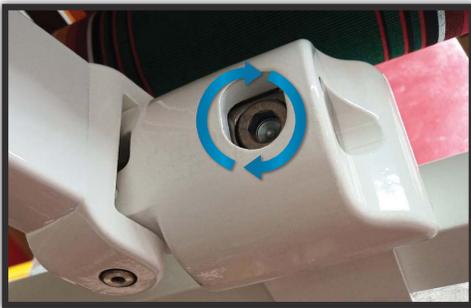
- 10mm Allen Wrenches/Sockets
- A Step Ladder
- Measuring Tape or a Level
- An Assistant

**Step #1** Fully extend the Olympus awning.

**Step #2** With an assistant lifting the arm, rotate the 10mm Allen.



**Step #3 To Raise Pitch:** Turn the 10mm Allen **clockwise or tighten**.



**Step #4 To Lower Pitch:** Turn the 10mm Allen **counterclockwise or loosen**.



**Step #5** If turning the 10mm Allen is difficult, have the assistant raise the arm higher to ease tension.

**Step #6** Confirm the front bar is level. Use a level or measure both sides of the front bar to a flat, even surface.

► **What to Expect:** A minor pitch adjustment typically takes around 20 minutes to perform and requires an assistant.

► **Tools Needed:**

- 6mm Allen Wrench/Socket
- A Step Ladder
- (Two) 22mm Sockets/Wrenches
- An Assistant
- Measuring Tape or a Level

**Step #1** Extend the Summit awning fully.

**Step #2** Loosen both 22mm nuts on the inside of the shoulder several turns. Repeat on other shoulders.



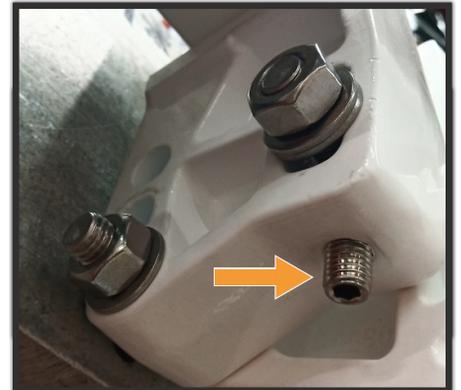
**Step #3a** Depending on the adjustment needed, loosen or tighten the two 6mm Allen pitch adjustment screws on all shoulders.

**Step #3b** When adjusting the 6mm screws, raise the front bar slightly to remove pressure from the screws.

**Step #3c** To Raise Pitch: Turn the 6mm Allens Clockwise.

**Step #3d** To Lower Pitch: Turn the 6mm Allens Counterclockwise.

**\*Note** Both 6mm Allen screws need to be adjusted equally.  
\*If desired pitch cannot be achieved, please view our Summit Major Pitch Adjustment video.



**Step #4** When adjustments are complete, retighten the two 22mm nuts on all the shoulders.



**Step #5** Confirm the front bar is level. Use a level or measure both sides of the front bar to a flat, even surface.

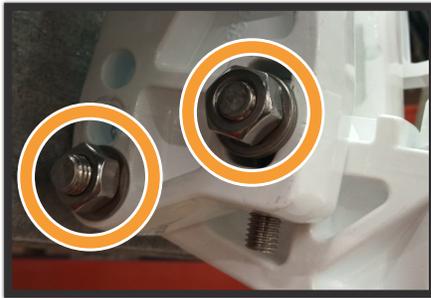
► **What to Expect:** A major pitch adjustment typically takes around 30 minutes to perform and requires an assistant.

► **Tools Needed:**

- 6mm Allen Wrench/Socket
- A Step Ladder
- (Two) 22mm Sockets/Wrenches
- An Assistant
- Measuring Tape or a Level

**Step #1** Extend the Summit awning fully.

**Step #2** Loosen both 22mm nuts on the inside of the shoulder several turns.



**Step #3a** Loosen both pitch 6mm Allen adjustment screws all the way down.

**Step #3b** When adjusting the 6mm screws, raise the front bar slightly to remove pressure from the screws.



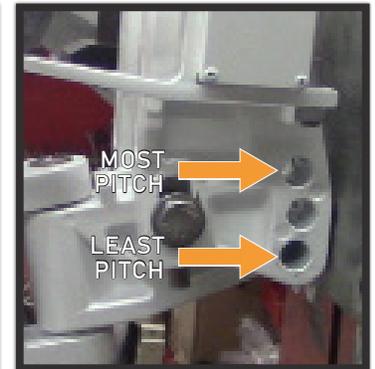
**Step #4** With an assistant lifting the front bar, remove the back 22mm bolt from the shoulder.

**Step #5a** Depending on the pitch required, replace the 22mm bolt into one of the three openings.

**Step #5b** **To Raise Pitch:** place the bolt in a lower slot.  
**To Lower Pitch:** place the bolt in a higher slot.

**Step #6a** Hand tighten the nut on the bolt.

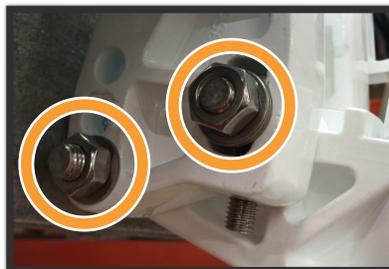
**Step #6b** IMPORTANT: Repeat this process on the other shoulders before final pitch adjustments.



**Step #7** Roll the awning out fully and with a level or a ruler, determine the desired pitch. Adjust both 6mm Allen screws in each shoulder to achieve correct pitch.

**\*Note** Both 6mm Allen screws need to be adjusted equally.

**Step #8** When adjustments are complete, retighten the two 22mm nuts on all shoulders.



**Step #9** Confirm the front bar is level. Use a level or measure both sides of the front bar to a flat, even surface.

► **What to Expect:** A pitch adjustment typically takes 10-15 minutes to complete and requires 2 people.

► **Tools Needed:**

- 8mm Allen Wrenches/Socket
- A Step Ladder
- Measuring Tape or a Level
- An Assistant

**Step #1** Fully extend the Solar Eclipse awning.

**Step #2** With an assistant lifting the arm, rotate the 8mm Allen.



**Step #3 To Raise Pitch:** Turn the 8mm Allen **clockwise or tighten.**



**Step #4 To Lower Pitch:** Turn the 8mm Allen **counterclockwise or loosen.**



**Step #5** If turning the 8mm Allen is difficult, have the assistant raise the arm higher to ease tension.

**Step #6** Confirm the front bar is level. Use a level or measure both sides of the front bar to a flat, even surface.

► **What to Expect:** A front bar adjustment typically takes 25-30 minutes to complete.

► **Tools Needed:** • 6mm Allen Wrenches/Sockets • A Step Ladder

**Step #1** Extend the awning until it reaches the outer limit.

**Step #2**

Press up and down together on the remote until the awning jogs. Now roll out beyond your outer limit until the fabric is loose.



**Step #3**

Using a 6mm allen key, loosen the 2 wrist bolts on both sides.



**Step #4** With the wrist bolts loose on all wrists, rotate the front bar up or down to the desired position. Be sure the wrists are on the same mark on both sides.

**Step #5** With the front bar in the desired position, tighten the (2) 6mm bolts on both wrists

**Step #6** Roll the awning back in to the outer limit position and press and hold "MY" for 1 jog, outer limit has been reset and adjustment is complete.

Check elbow alignment:



► **What to Expect:** This process typically takes 20-30 minutes to complete.

► **Tools Needed:** • 3mm, 4mm Allen Wrenches/Sockets • 1/8" and 1/2" Drill Bits • Phillips Head • Rotary Saw  
 • Straps or Rope to secure arms • A Step Ladder • Rubber Mallet

**Step #1** With the awning fully retracted, secure together the front and back half of all arms and secure both arms to the torsion bar.

Extend the awning one full rotation of the roller tube to ensure that the arms are properly secured.

**Step #2** Remove the side cover by locating and removing the 4mm allen set screw shown here. Once the set screw is removed, you can pull the side cover off.

**Semi Cassette**

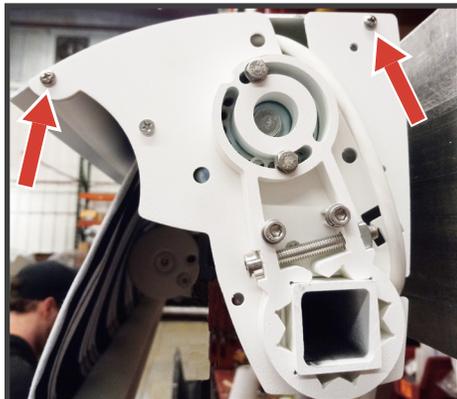


**Full Cassette**

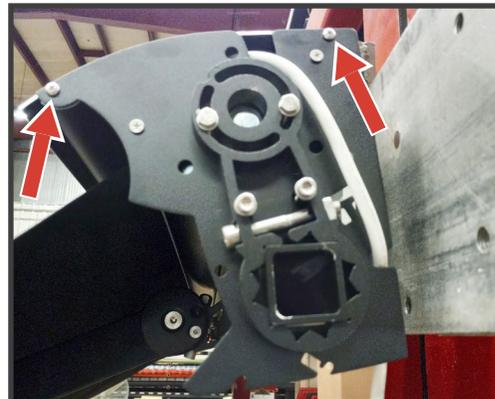


**Step #3** Loosen the Upper Cassette Profile by removing the 2 phillips head screws shown here. You can now lift the Upper Cassette Profile and work beneath it. You can also repeat step 2 and step 3 on the opposite side of the awning and set the entire Upper Cassette Profile aside.

**Semi Cassette**

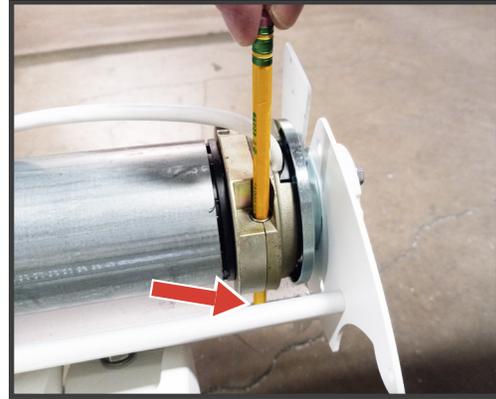
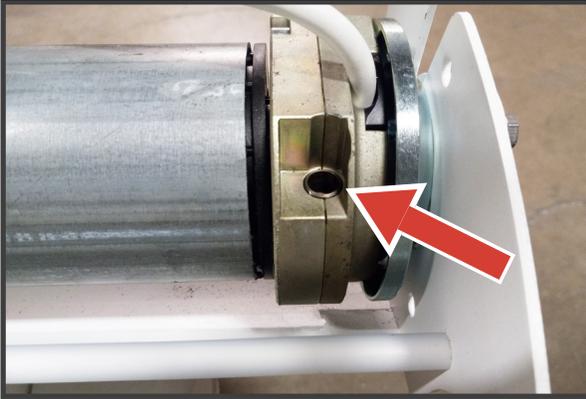


**Full Cassette**

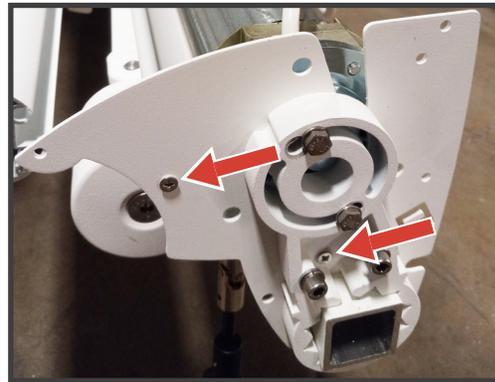
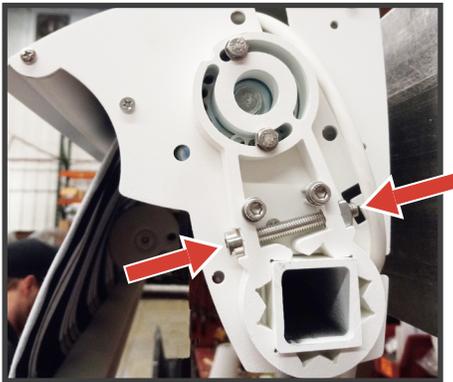


**Note:** The Semi Cassette model is pictured for steps 4 through 9, but the instructions apply also to the Full Cassette. The side plate just appears slightly different.

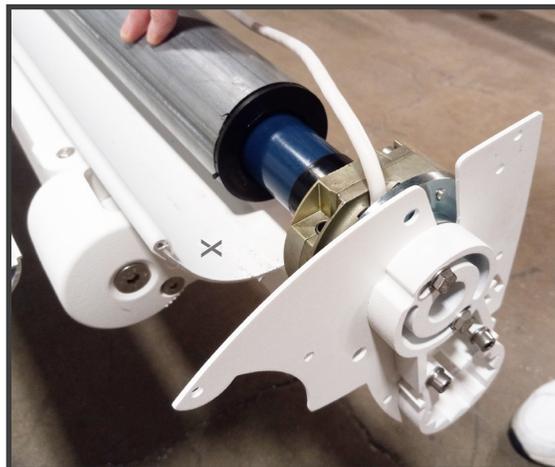
**Step #4** Drop a pencil through the override hole in the motor head in order to mark where the hole will be drilled on the Fabric Protector Profile.



**Step #5** Remove the 6mm Allen bolt and two phillips head screws shown in order to pull out the end bracket, side plate, and motor.



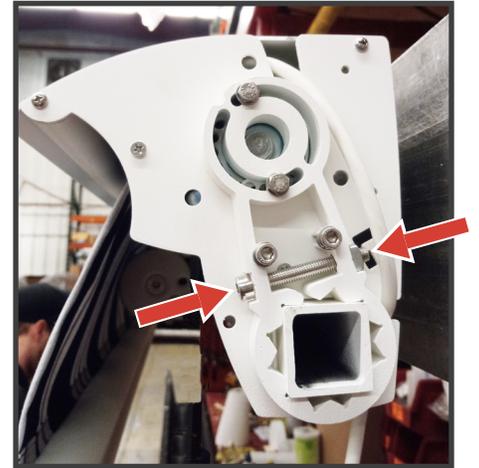
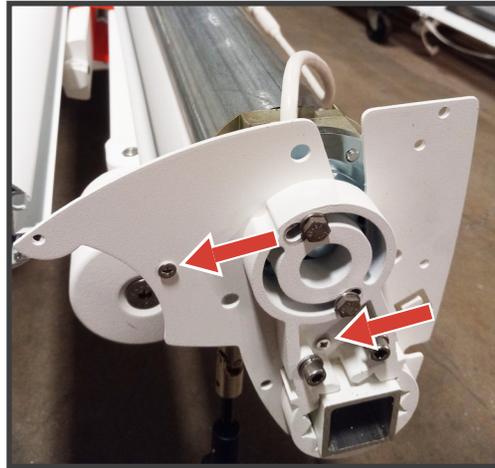
**Step #6** Pull out the end bracket, side plate, and motor in order to access the mark made in step 4.



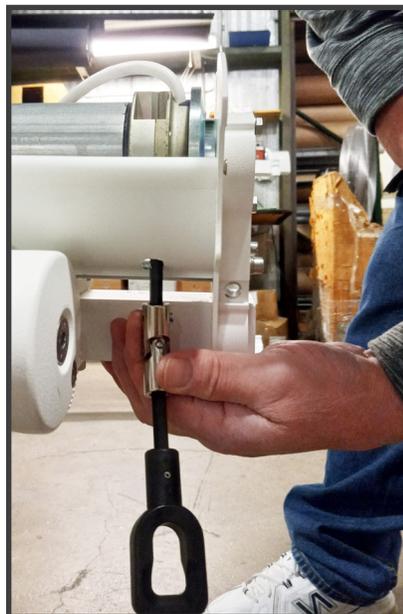
**Step #7** With a 1/8" drill bit, make a pilot hole on the mark. Then use a 1/2" to expand the opening in the fabric protector profile.



**Step #8** Slide the motor and side plate back into the roller tube and resecure the 2 philips screws and 6mm bolt from step 5.

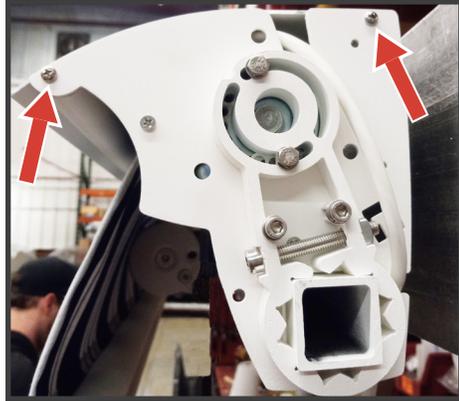


**Step #9** Insert the override stem through the fabric protector profile and the motor, and attach the 3mm allen bolt and washers.

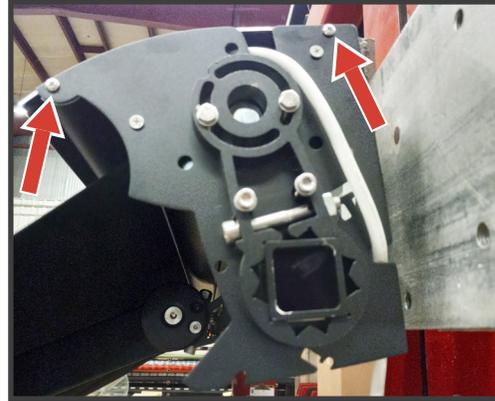


**Step #10** Replace the Upper Cassette Profile and the 2 phillips head screws shown here. Repeat this process on the opposite side of the awning if you removed the other side in step 3.

**Semi Cassette**

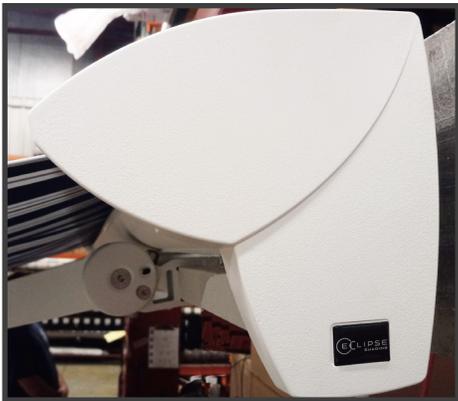


**Full Cassette**



**Step #11** Replace the side cover(s) by snapping it in place and replacing the 4mm allen set screw shown here. Gently tap on with a rubber mallet if needed.

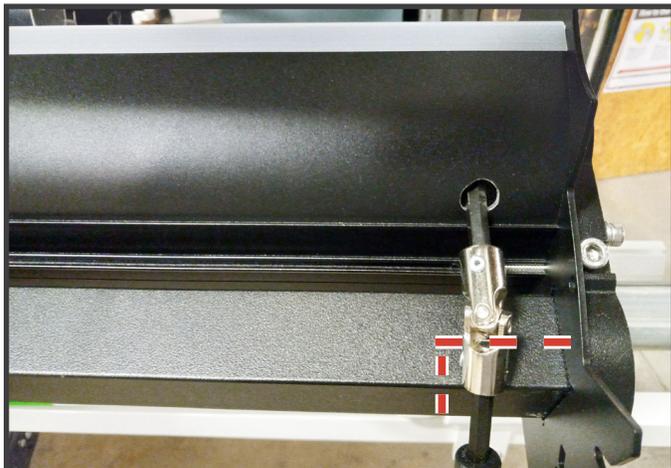
**Semi Cassette**



**Full Cassette**



**Note:** FULL CASSETTE MODEL ONLY: Measure from the inside of the side plate to the override stem before making the cut on the bottom plate. This will generally be around 2" in length and around 1" in depth. Use a rotary saw to make a notch on the bottom plate profile to make room for the override stem.



► **What to Expect:** A pitch adjustment typically takes 10-15 minutes to complete and requires 2 people.

► **Tools Needed:**

- 7mm, 8mm, & 12mm Allen Wrenches/Socket
- A Step Ladder
- Small Flat Blade Screwdriver
- Measuring Tape or a Level
- An Assistant

**Step #1** Fully extend the awning.

**Step #2**

With a small flat blade screw driver, remove the decorative plastic caps on the front and side of the shoulders.



**Step #3**

Partially loosen, but do not remove, the 12mm Allen locking bolt on the outside of the shoulder.



**Step #4** With an assistant lifting up on the arm to reduce tension, adjust the pitch by turning the 7mm or 8mm Allen front setting screw.

**To Raise Pitch:**  
Turn clockwise or tighten.



**To Lower Pitch:**  
Turn counterclockwise or loosen.



**\*Note** When the required level position has been achieved, raise the arm slightly to eliminate play in the internal mechanism.

**Step #5** Repeat the process on the other arm(s), using a level or tape measure to confirm a level unit.

**Step #6** Confirm the front bar is level. Use a level or measure both sides of the front bar to a flat, even surface.

**Step #7** When desired pitch is achieved, completely tighten ALL 12mm Allen locking bolts and replace the decorative caps.

**Questions: 845-692-7070 || M-F (8am - 5pm EST)**  
**After Hours / Tech Support: 845-645-6995**

► **What to Expect:** A pitch adjustment typically takes 10-15 minutes to complete and requires 2 people.

► **Tools Needed:**

- 10mm Allen Key
- A Step Ladder
- 22mm Box Wrench
- Measuring Tape or a Level
- An Assistant

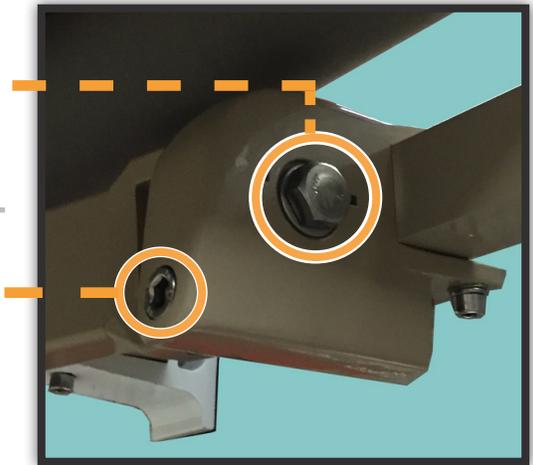
**Step #1** Fully extend the awning.

**Step #2**

Remove the decorative plastic cap from the side of the shoulder, covering the 22mm bolt.



**Step #3** Partially loosen (DO NOT REMOVE) the 22mm side locking bolt on the side of the shoulder.



**Step #4** With an assistant lifting up on the arm to take the load off the pitch bolt, use a 10mm Allen key to turn front setting screw.

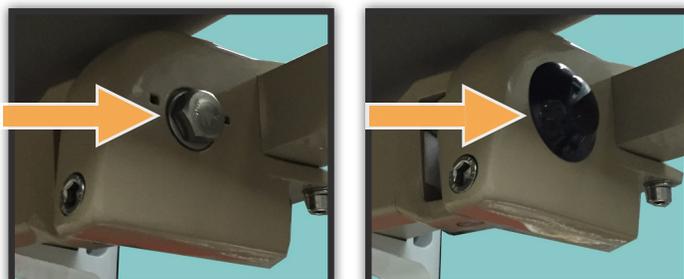
**To Raise Pitch:** Turn the 10mm setting screw **Clockwise**.

**To Lower Pitch:** Turn the 10mm setting screw **Counterclockwise**.

**\*Note** Pitch should be adjusted from higher to lower front bar position. When the required level position has been achieved, raise the arm slightly to eliminate play in the internal mechanism and to prevent the arms from losing their level position in the future.

**Step #5** Repeat the process on the other arm(s), using a level or tape measure to confirm a level unit.

**Step #6** When desired pitch is achieved, completely tighten the 22mm side locking bolt and replace the decorative cap.



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### PROTECTIVE HOOD (optional)

#### Hood Assembly & Installation *(For Summit hood assembly, please see page 14.)*

Unbox the hood, side covers and the brackets. Lay the hood on its back with the tracks facing up. Choose a surface that will not damage the painted finish.

Slightly loosen the 13mm hex head bolts from the aluminum plate on the hood brackets provided. Slide the 3/4" x 4" aluminum plate into the groove of the hood. There is the letter "F" on this aluminum plate that should be facing the front (the curved side) of the hood - do not tighten the bolts at this time. Next remove the 5mm allen head bolt from each hood bracket - **see A.**

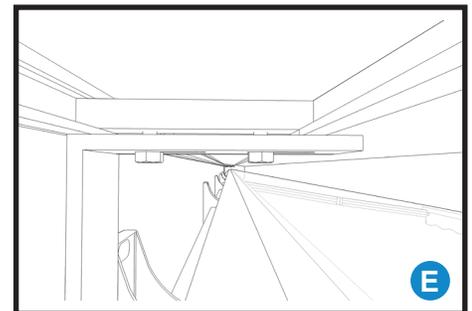
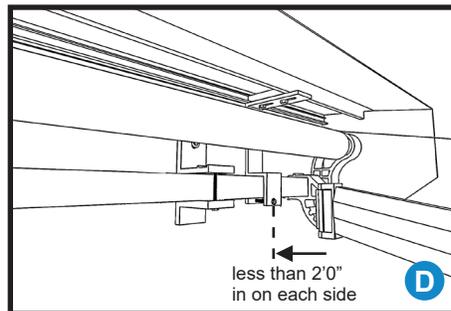
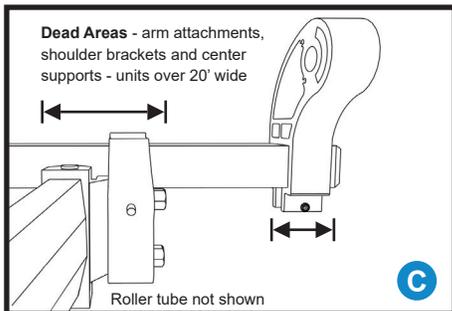
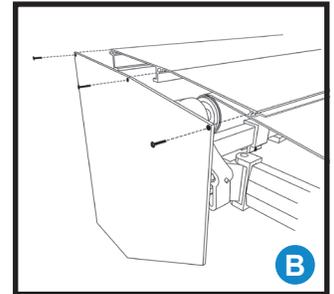
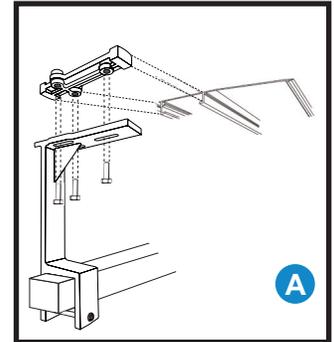
Next, attach the hood end covers with the Phillips screws provided. Each end cover requires 3 screws which install into screw guides in the hood, The side covers can also be installed once the hood is in place - **see B.**

The hood will be attached to the square torsion bar - the brackets slide directly down over this bar. Check the torsion bar and make a note of the unusable mounting areas such as the end brackets, arm shoulders, install brackets, and any other obstruction that will interfere with the hood brackets. These areas will not accept a hood bracket and are "dead mounting areas" and should be noted as areas where brackets cannot go - **see C.**

The first two brackets: A hood bracket should be placed no more than 2' 0" from either end. The balance of the brackets should be evenly spaced along the unit should not exceed 5' 0". Once the brackets are properly spaced (keeping in mind of the dead areas mentioned earlier), tighten the 13mm hex head bolts - **see D & E.**

With a helper, walk up the ladders and place the hood straight down onto the top of the square torsion bar. This may be done before or after the awning is installed. The protective hood is 1" longer than the awning allowing for some side to side adjustability.

With the hood in place, reinstall the 5mm allen bolts into each hood bracket. Some hood brackets may be behind the arm - if this is the case, extend the awning to allow you access.



#### Installing to Uneven Surfaces:

We recommend using pressure treated lumber equal to the length of the awning as a header board (2"x 8" for most Rainier models, or 2"x12" for the Summit).

You may choose to "wrap" the header board in matching vinyl or aluminum to give the job a finished, professional look, or you may choose to paint the header to match the trim or house.

For this method, you will also need additional lags and washers to mount the board. We suggest 2 bolts per wall stud to secure the board to the wall. If the surface is brick or stone, we suggest that you consider using the Hilti Hit System.

You will need 3" long carriage bolts, washers, and nuts to pre-mount the installation brackets to the board BEFORE you mount the board to the wall. This method should provide ideal placement of all installation brackets.

**Questions: 845-692-7070 M-F (8am - 5pm EST)**  
**After Hours / Tech Support: 845-645-6995**

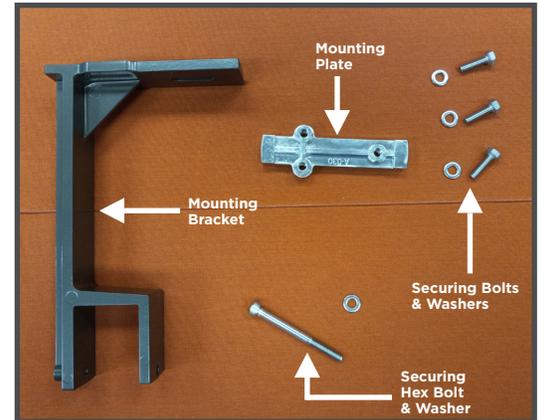
**Affected Models:** Rainier & Olympus models without center supports

**Hardware Included:**

- (1) Mounting Bracket
- (1) Mounting Plate
- (3) Securing Bolts & Washers
- (1) Securing Hex Bolt & Washer

**Tools Needed:**

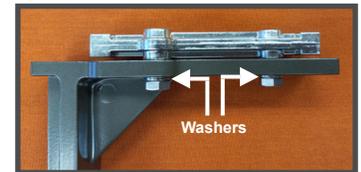
- 5mm Hex Key
- 10mm Socket/Open End Wrench



**Step #1** Remove hardware from the bag provided.

**Step #2** Remove the bolts from the mounting plate.

**Step #3** Place the mounting plate on top of the mounting bracket and install the (3) bolts and washers. Leave Loose.



**Step #4**

Place the mounting bracket on an angle into the underside of the hood and pivot into place as shown:



**Step #5**

Once the proper location along the hood is determined, snug the bolts to keep the bracket in place.



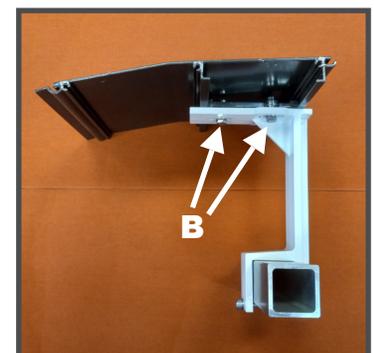
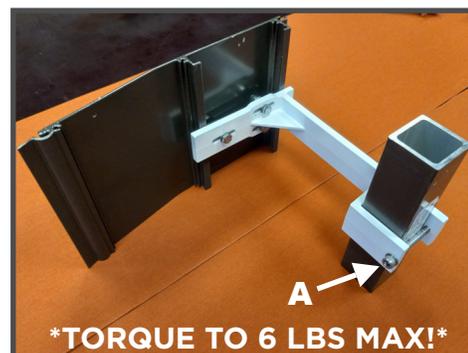
**Step #6** Repeat the process on the remaining hood brackets provided.

**Step #7**

(Not shown) Lower the hood onto the installed awning's torsion bar.

Now install the Hex bolt with 5mm Hex wrench and tighten (A). Torque to 6 FT/LBS. The Bracket may still wobble side to side which is within tolerance.

Position the hood forward and aft to seal against the wall, then tighten all 10mm securing bolts (B).



► **What to Expect:** An arm replacement typically takes around 30 minutes to complete and requires 2 people.  
*\*Retractable awning arms are spring loaded and can cause serious injury, exercise extreme caution. Always properly secure all awning arms with straps or rope during service work.*

► **Tools Needed:**

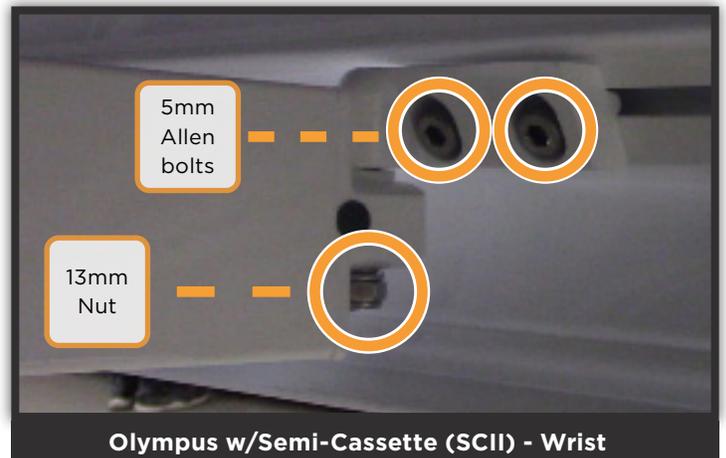
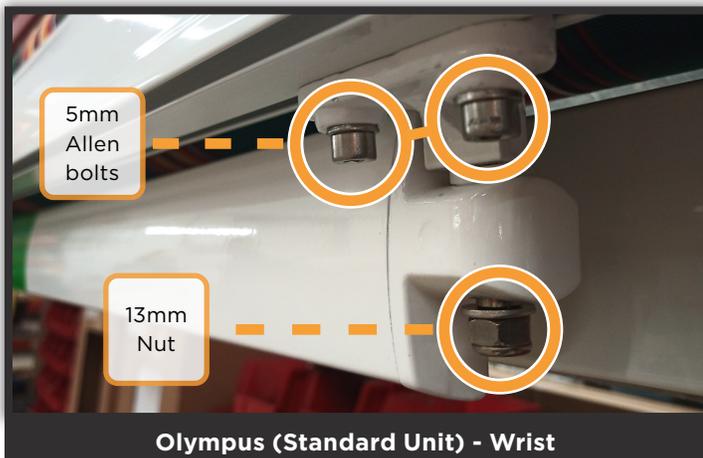
- 3mm, 4mm & 5mm Allen Wrenches/sockets
- Needle Nose Pliers
- 13mm Socket/Wrench
- An Assistant
- Rope/Straps to Secure Arms
- Rubber Mallet

**Step #1** Fully retract the awning.

**Step #2** Secure together the front and back half of all arms and secure both arms to the torsion bar.

**Step #3** Extend the awning one full rotation of the roller tube. This ensures that the arms are properly secured.

**Step #4** Loosen the 5mm Allen bolts and remove the 13mm nuts on all arms.



**Step #5** Lift the front bar off of the arms (wrists still attached).

**Step #6** Remove the strap from Step #2, that secured the arm you are replacing to the torsion bar.

**Step #7** Swing the arm out to gain access to the 4mm Allen set screw holding the arm pin to the shoulder.

**Step #8** Loosen the 4mm Allen set screw.



**Step #9a** Removing the Pin: While lifting up on the arm, loosen the 4mm Allen set screw located at the bottom of the arm pin.

**Step #9b** Removing the Pin: Pry the stainless pin from the top using an allen wrench or similar tool to get it started.



**Step #10a** With a rubber mallet, reinsert the arm pin slightly into the bottom arm fork and align the arm with the shoulder.

**Step #10b** Some rocking may be required for alignment.

**Step #11a** With the arm pin fully installed, slightly tighten the 4mm Allen set screw - Check the alignment first before fully tightening.

**Step #11b** If the replaced arm does not align with the other arm(s), you can raise or lower the arm elbow position by turning the 4mm Allen in the arm pin.



**Step #12** With the arm elbow properly aligned, fully tighten the 4mm Allen set screw.



**Step #13** Reconnect the front bar to the arms at the wrists.

**Step #14** Replace the 13mm nuts and retighten 5mm Allen bolts on all wrists.

**Step #15** Untie all arms and test the unit.

**Questions: 845-692-7070**  
**M-F (8am - 5pm EST)**  
**After Hours / Tech Support: 845-645-6995**

► **What to Expect:** An arm replacement typically takes around 30 minutes to complete and requires 2 people.  
*\*Retractable awning arms are spring loaded and can cause serious injury, exercise extreme caution. Always properly secure all awning arms with straps or rope during service work.*

- **Tools Needed:**
- 4mm Allen Wrenches/sockets
  - (TWO) 22mm Socket/Wrenches
  - 17mm Socket/Wrench
  - An Assistant
  - Rope/Straps to Secure Arms
  - Rubber Mallet

**Step #1** With the awning fully retracted, Secure together the front and back half of all arms.

**Step #2** Secure all arms to the torsion bar.

**Step #3** Extend the awning one full rotation of the roller tube. This ensures that the arms are properly secured.

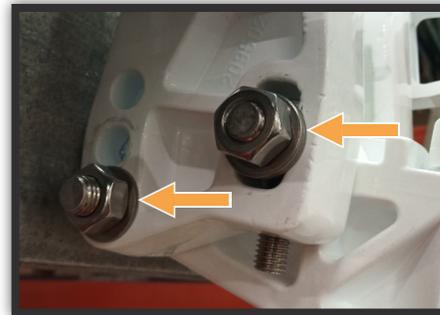
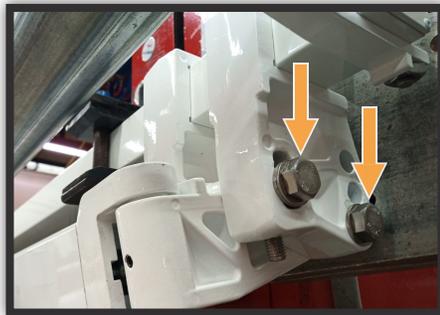
**Step #4** Unsecure the arm you are replacing from the torsion bar.

**Step #5** Remove the 17mm nut that connects the front of the arm to the wrist on the back of the front bar.



**Step #6** Disconnect the front of the arm from the wrist.

**Step #7** With an assistant supporting the arm, remove both 22mm bolts and washers from the shoulder.

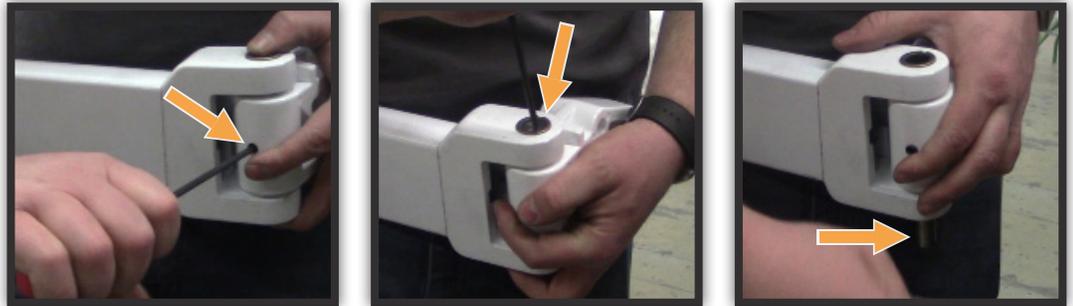


**Step #8** Remove the arm with shoulder center attached.



**Step #9**

Loosen the 4mm Allen set screw and remove the pin.



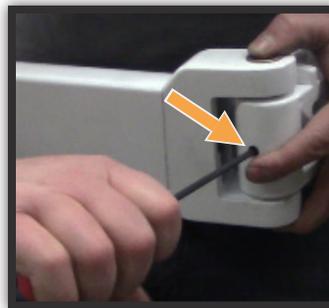
**Step #10**

Attach the shoulder center to the new arm with the groove facing up.

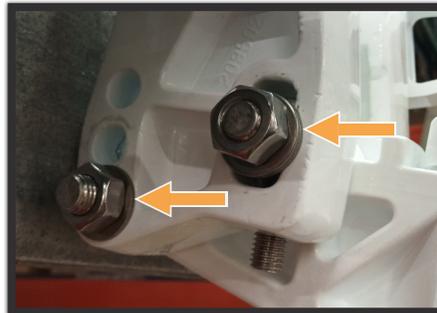
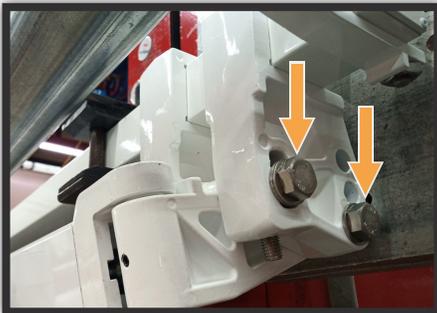


**Step #11**

Reinsert the stainless pin and tighten the 4mm Allen set screw.



**Step #12** Replace and tighten both 22mm nuts and bolts. Use a rubber mallet if needed.



**\*Note**

Replace the nut with two washers on the outer bolt.

**\*Note**

Replace the nut with a single washer on the inner bolt.

**Step #13**

Reattach the front of the arm to the wrist and replace and tighten the 17mm nut.



**Step #14**

Untie all arms and test the unit.

► **What to Expect:** An arm replacement typically takes around 30 minutes to complete and requires 2 people.  
*\*Retractable awning arms are spring loaded and can cause serious injury, exercise extreme caution. Always properly secure all awning arms with straps or rope during service work.*

► **Tools Needed:**

- 3mm & 5mm Allen Wrenches/Sockets
- An Assistant
- 13mm Socket/Wrench
- Rubber Mallet
- Rope/Straps to Secure Arms

**Step #1** With the awning fully retracted, Secure together the front and back half of all arms.

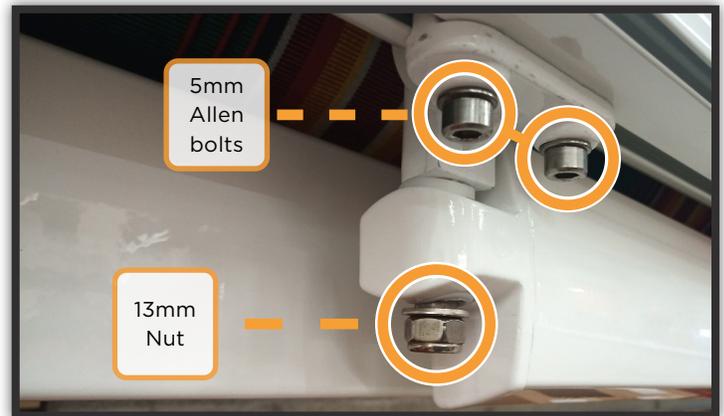
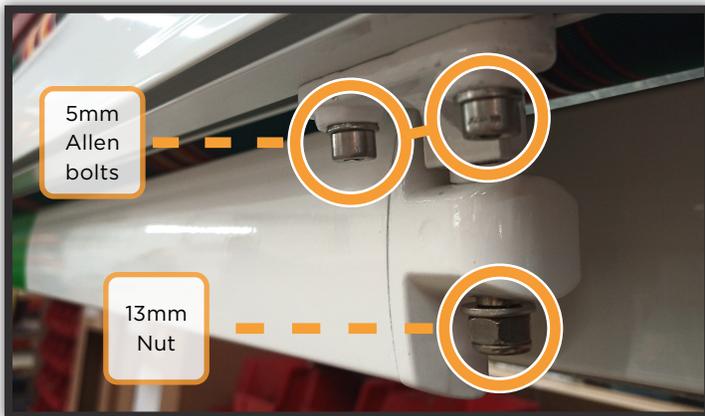
**Step #2** Secure all arms to the torsion bar.

**Step #3** Extend the awning one full rotation of the roller tube. This ensures that the arms are properly secured.

**Step #4** Unsecure the arm you are replacing from the torsion bar.

**Step #5a** Remove the 13mm nuts on all arms.

**Step #5b** Loosen the 5mm Allens on all wrists.



**Step #5c** This will allow you to lift the front bar with the wrist still attached off the arm being replaced.

**Step #6** Swing the arm out to gain access to the 3mm Allen set screws holding the arm to the shoulder.

**Step #7a** Loosen the top 3mm Allen set screw that connects the arm to the shoulder.

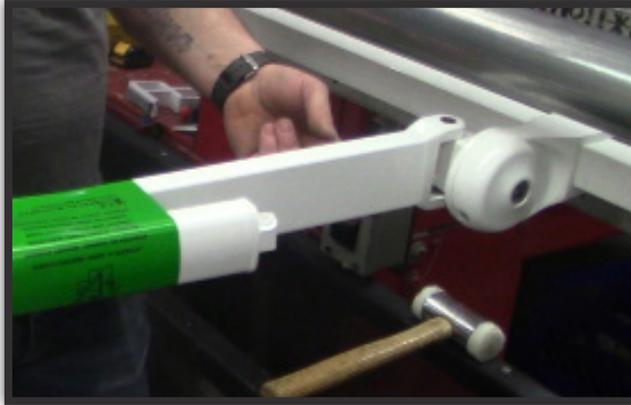
**Step #7b** Remove the bottom 3mm Allen set screw.

**Step #8** Remove the stainless steel pin and set aside.



**Step #9** Remove the old arm and install the new arm.

**Step #10** Reinsert the stainless steel pin from the bottom with the pin groove facing up as shown.



**Step #11a** Replace the bottom 3mm Allen set screw.

**Step #11b** Reinstall and tighten the top 3mm Allen set screw.



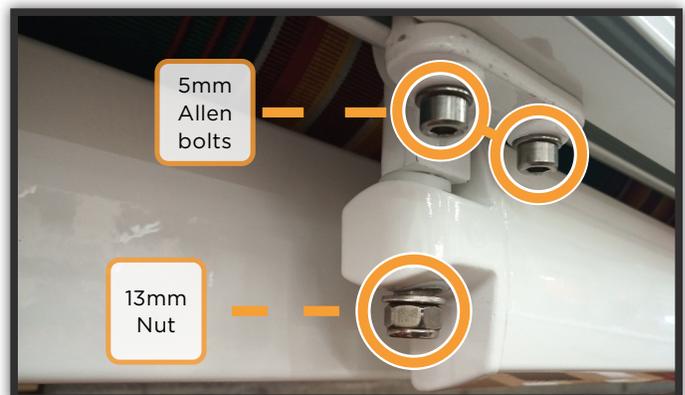
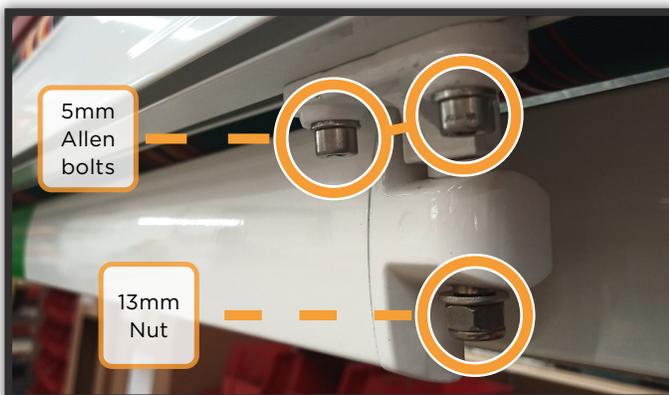
**\*Note** If the elbow is misaligned, adjust the 3mm Allens as needed.

**Step #12** Reattach the front bar and wrist to the new awning arm.

**Step #13a** Replace all 13mm nuts connecting the arm to the wrist - do not tighten yet.

**Step #13b** Replace both 5mm Allens on all wrists.

**Step #13c** Fully tighten all 13mm nuts.



**Step #14** Untie all arms and test the unit.

### Motor Replacement Steps for an Open Roll or Standard Hooded Retractable Awning

#### **Assumption:**

*These steps assume that you have 3' or more clearance on the motor side to be able to slide the motor out*

*without having to take down the awning.*

**Step #1**

Fully retract the awning.

**Step #2**

Unplug the motor and if equipped with a quick disconnect, unscrew connection.

**Step #3**

Tie front and back of the arms together, keeping each arm closed (this prevents you getting knocked off the ladder by the arms' internal springs).

**Step #4**

To check your knots, run the motor out a few inches, the fabric should "slack" confirming your knots are secure.

**Step #5**

Tie the secured arms and the roller tube/front bar to the torsion bar, leave a little breathing room in your tie off (this supports the main components once you remove the end bracket).

**Step #6**

Remove hood side cover on the motor side if it has one.

**Step #7**

Loosen the end bracket on the motor side from the torsion bar (the plan is to pull the end bracket straight off the torsion bar with the motor still attached).

**Step #8**

Pull the end bracket with the motor attached - the motor, motor crown and drive wheel will slide out of the roller tube. The motor may be up to 3' long.

**Step #9**

On the ground, detach end motor from end bracket and or motor plate, swap out the black plastic motor crown and drive wheel to the new motor.

**Step #10**

Reverse the steps and program motor.

**Questions: 845-692-7070 M-F (8am - 5pm EST)**  
**After Hours / Tech Support: 845-645-6995**

# Rainier & Olympus (Standard Units) Motor Replacement

► **What to Expect:** A motor replacement typically takes about 30 minutes to perform. The following steps assume that you have 3' or more clearance on the motor side to slide the motor out without needing to take down the awning.

- **Tools Needed:**
- 3mm & 5mm Allen Wrenches/Sockets
  - #4 Washer
  - 10mm Socket/Wrench
  - An Assistant
  - Rope/Straps to Secure Arms
  - Rubber Mallet
  - A Small Screwdriver
  - A Step Ladder

**Step #1** Fully retract the awning.

**Step #2** Secure together the front and back half of all arms and secure both arms to the torsion bar.

**Step #3** Extend the awning one full rotation of the roller tube. This ensures that the arms are properly secured.

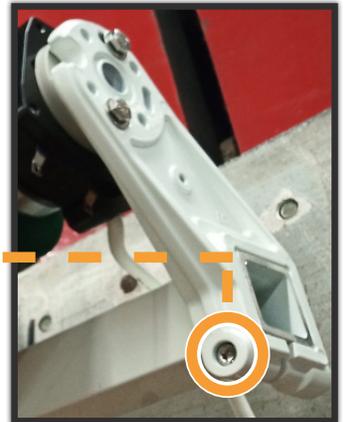
**Step #4** Unplug the motor. If equipped with a fast connect, unscrew the connection.

**Step #5** If the unit has a hood, remove the hood side cover on the motor side.

**Step #6** Loosen the 5mm Allen on the end bracket on the motor side. The plan is to pull the end bracket straight off the torsion bar with the motor still attached.

**Step #7a** Pull the end bracket with the motor attached. A rubber mallet may be required to tap the bracket loose.

**Step #7b** The motor, crown, and drive wheel will slide out of the roller tube. The motor may be up to 3' long.



**\*Note** To be safe, perform steps 8 through 11 from the ground.

**Step #8a**

Remove the two 5mm Allen set screws from the motor side, this will free the motor from the bracket and plate.



**Step #8b**

The motor plate will stay attached to the bracket.



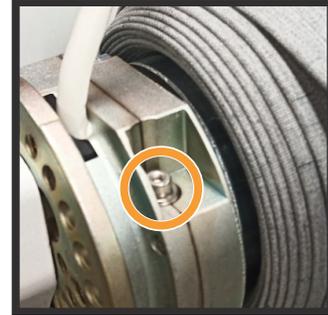
**Step #8c**

\*Note: In the event that you need to replace the mounting plate on the motor, remove both 10mm bolts on the end bracket to gain access to the plate.



**Step #8d**

(If Equipped) Remove the manual override stem, #4 washer, and the 3mm Allen set screw.



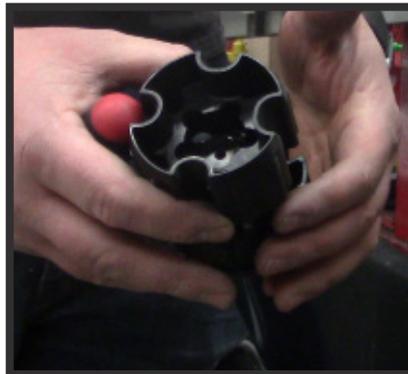
**Step #9**

Remove the black plastic motor crown and drive wheel from the old motor by lightly prying with a small screwdriver while pushing in the two retention clips on the end of the motor.



**Step #10a**

Add the motor crown and drive wheel to the new motor.

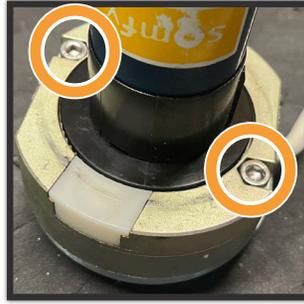


**Step #10b**

(If Equipped) Replace the manual override stem on the new motor along with the #4 washer, and tighten the 3mm Allen.



**Step #11** Attach the new motor to the motor plate and bracket by replacing the two 5mm Allen set screws.

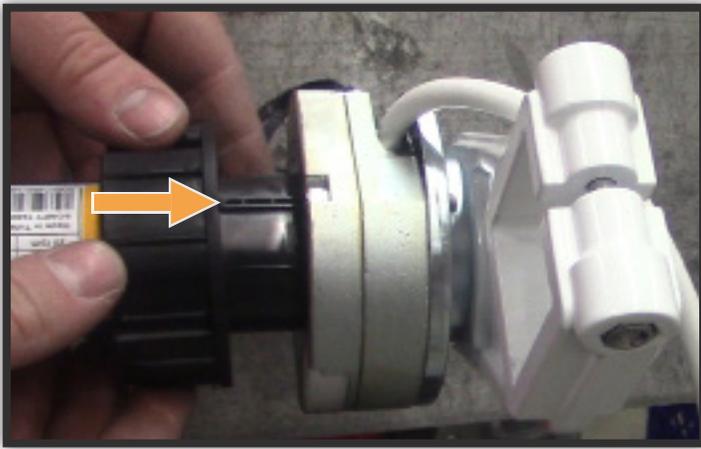


**Step #12**

Install the new motor with the groove on the motor crown lining up with the fabric slot of the roller tube.



**Step #13** Align the plastic drive with the motor notch as shown.



**Step #14** Tap the bracket near the torsion bar until aligned properly. Do not to over tighten so that the roller tube has difficulty turning freely.

**Step #15** Tighten the 5mm Allen on the end bracket.



**Step #16** Replace the awning hood side cover if one was removed.

**Step #17** Plug in the new motor or reattach the fast connect.

**Step #18** Untie all arms and program the new motor.

**Questions: 845-692-7070**  
**M-F (8am - 5pm EST)**  
**After Hours / Tech Support: 845-645-6995**

# Olympus with Semi-Cassette Motor Replacement

► **What to Expect:** A motor replacement typically takes about 30 minutes to perform. The following steps assume that you have 3' or more clearance on the motor side to slide the motor out without needing to take down the awning.

- **Tools Needed:**
- 5mm & 5/32" Sockets/Wrenches
  - #4 Washer
  - 3mm Allen Key
  - A Small Screwdriver
  - Rope/Straps to Secure Arms
  - A Step Ladder

**Step #1** Fully retract the awning.

**Step #2** Secure together the front and back half of all arms and secure both arms to the torsion bar.

**Step #3** Extend the awning one full rotation of the roller tube. This ensures that the arms are properly secured.

**Step #4** Unplug the motor. If equipped with a fast connect, unscrew the connection.

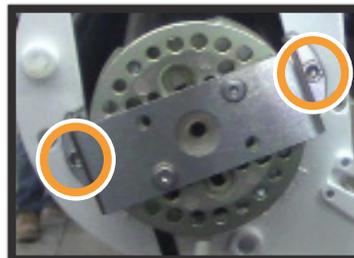
**Step #5**  
Remove the 5mm Allen set screw and washer from the inside of the hood end cap on the motor side.



**Step #6**  
Remove the end cap.



**Step #7** Remove the two 5mm Allens from the end bracket assembly.

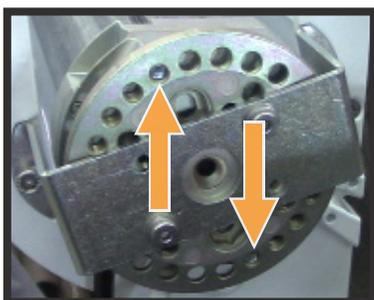


**Step #8** Slide the motor out from the roller tube. The motor may be up to 3' long.

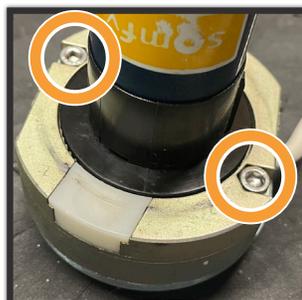


**\*Note** To be safe, perform steps 9 through 12 from the ground.

**Step #9a**  
Make a note of where the two 5/32" Allen set screws are on the motor plate for an easier time when reinstalling.



**Step #9b**  
Remove the two 5/32" Allen set screws from the motor side, this will free the motor from the bracket and plate.

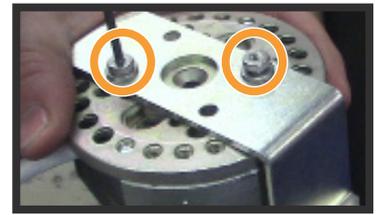


**Step #9c**  
The motor plate will stay attached to the bracket plate.



**\*Note**

In the event that you need to replace the mounting plate on the motor, remove both 3mm bolts on the end bracket to gain access to the plate.



**Step #10**

(If Equipped) Remove the manual override stem, #4 washer, and the 3mm Allen set screw.



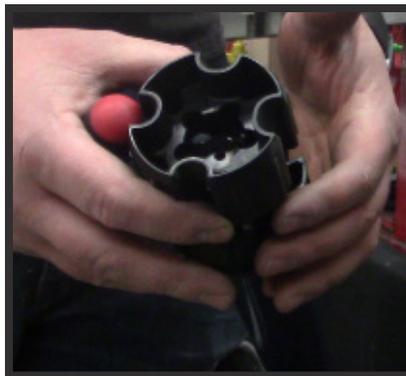
**Step #11a**

Remove the black plastic motor crown and drive wheel from the old motor by lightly prying with a small screwdriver while pushing in the two retention clips on the end of the motor.



**Step #11b**

Add the motor crown and drive wheel to the new motor.



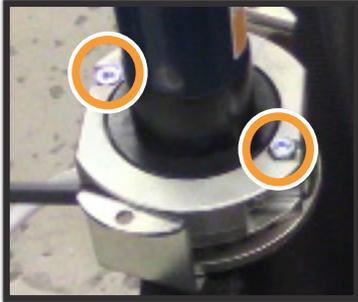
**Step #12a**

(If Equipped) Replace the manual override stem on the new motor along with the #4 washer, and tighten the 3mm Allen.



**Step #12b**

Attach the new motor to the motor plate and bracket by replacing the two 5mm Allen set screws.



**Step #13**

Install the new motor with the groove on the motor crown lining up with the fabric slot of the roller tube.

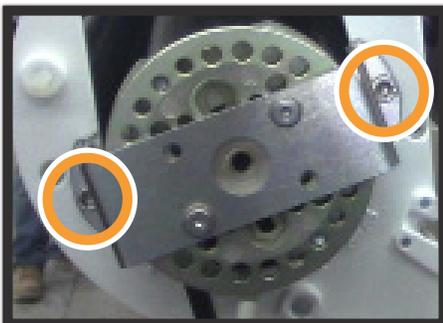


**Step #14** Align the plastic drive with the motor notch as shown.



**Step #15**

Replace the two 5mm Allen set screws on the motor bracket assembly.



**Step #16**

Reinstall the end cap by snapping it into place and replacing the 5mm Allen set screw and washers on the inside of the end cap.



**Step #17** Plug in the new motor or reattach the fast connect.

**Step #18** Untie all arms and program the new motor.

**Questions: 845-692-7070**  
**M-F (8am - 5pm EST)**  
**After Hours / Tech Support: 845-645-6995**

► **What to Expect:** A motor replacement typically takes about 30 minutes to perform. The following steps assume that you have 3' or more clearance on the motor side to slide the motor out without needing to take down the awning.

► **Tools Needed:**

- 3mm, 5mm, & 8mm Allen Wrenches/Sockets
- An Assistant
- 10mm Socket/Wrench
- Rubber Mallet
- A Small Screwdriver
- A Step Ladder
- #4 Washer
- Rope/Straps to Secure Arms

**Step #1** Fully retract the awning.

**Step #2** Secure together the front and back half of all arms and secure both arms to the torsion bar.

**Step #3** Extend the awning one full rotation of the roller tube. This ensures that the arms are properly secured.

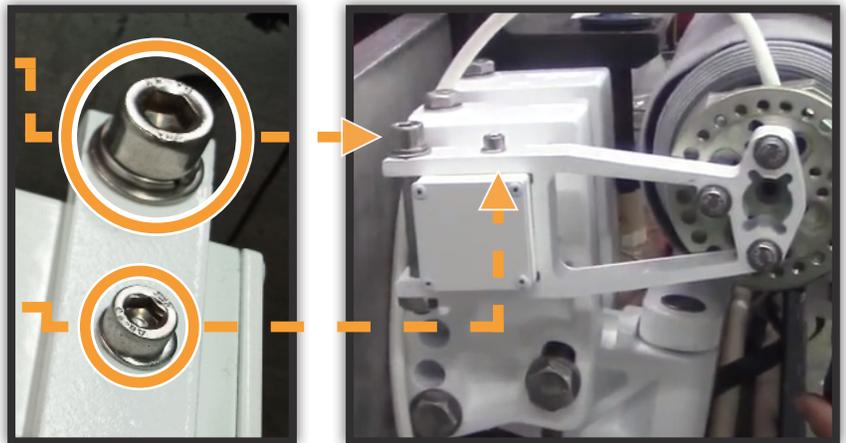
**Step #4** Unplug the motor. If equipped with a fast connect, unscrew the connection.

**Step #5** If the unit has a hood, remove the hood side cover on the motor side.

**Step #6a** Loosen but do not remove the 8mm Allen on the back side of the motor end bracket.

**Step #6b** Remove the 5mm Allen bolt that secures the bracket to the torsion bar.

The plan is to pull the end bracket straight off the torsion bar with the motor still attached.



**Step #7a** Pull the end bracket with the motor attached. A rubber mallet may be required to tap the bracket loose.

**Step #7b** The motor, crown, and drive wheel will slide out of the roller tube. The motor may be up to 3' long.

**\*Note** To be safe, perform steps 8 through 11 from the ground.

**Step #8a** Remove the two 5mm Allen set screws from the motor side, this will free the motor from the bracket and plate.

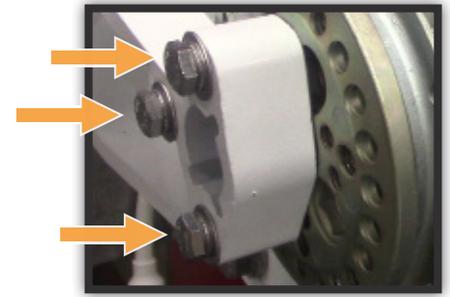


**Step #8b** The motor plate will stay attached to the bracket.



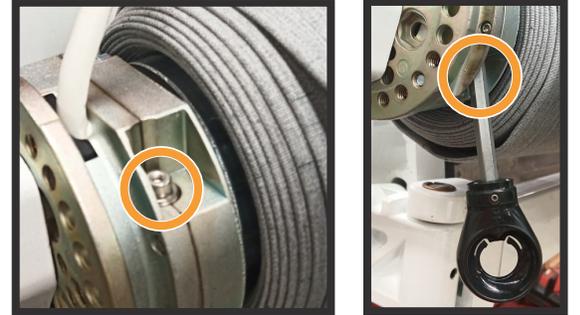
**Step #8c**

\*Note: In the event that you need to replace the mounting plate on the motor, remove all three 10mm bolts and washers on the end bracket to gain access to the plate.



**Step #8d**

(If Equipped) Remove the manual override stem, #4 washer, and the 3mm Allen set screw.



**Step #9**

Remove the black plastic motor crown and drive wheel from the old motor by lightly prying with a small screwdriver while pushing in the two retention clips on the end of the motor.



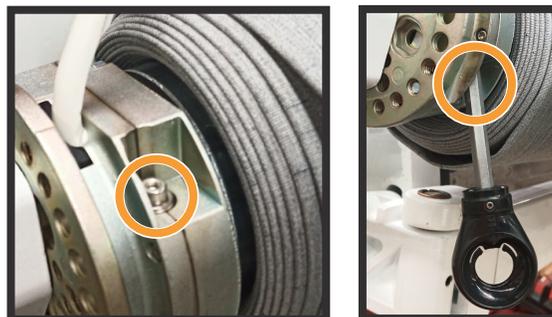
**Step #10a**

Add the motor crown and drive wheel to the new motor.



**Step #10b**

(If Equipped) Replace the manual override stem on the new motor along with the #4 washer, and tighten the 3mm Allen.



**Step #11** Attach the new motor to the motor plate and bracket by replacing the two 5mm Allen set screws.

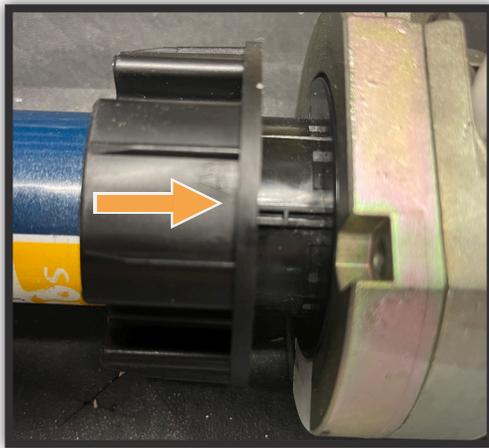


**Step #12**

Install the new motor with the groove on the motor crown lining up with the fabric slot of the roller tube.

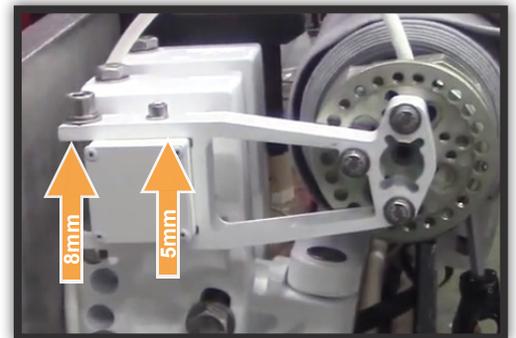


**Step #13** Align the plastic drive with the motor notch as shown.



**Step #14** Tap the bracket near the torsion bar until aligned properly. Do not to over tighten so that the roller tube has difficulty turning freely.

**Step #15** Replace and tighten the 5mm Allen and fully tighten the 8mm Allen on the motor end bracket.



**Step #16** Replace the awning hood side cover if one was removed.

**Step #17** Plug in the new motor or reattach the fast connect.

**Step #18** Untie all arms and program the new motor.

### How to Recover a Retractable Awning

*(should apply to all brands)*

*A recover typically takes less than an hour to perform and requires 2 people. These steps assume that you have several feet to work with on the pivot side of the unit and that this is not a cassette style awning.*

1. Retract the awning fully and secure together the front to the back half of each arm. The goal is to make sure each arm is tied off so they remain fully closed. Once each arm is tied off, extend the awning a full rotation of the roller tube and stop it. You are checking the security of your knots.
2. Remove the nut that connects the front bar and wrist to each arm. Remove a front bar side cover cap and check for a fabric lock. The fabric lock may be a 2mm Allen set screw or it may be a Phillips screw. If you find one, then there is another one on the other side, remove that one also. Next, slide the front bar with the wrist still attached off the fabric cover. The PVC spline will stay in the pocket in the cover.
3. If the unit has a hood, remove the side cover on the pivot side.
4. With the remote, “extend the unit” until it stops, then surpass the outer motor limit by holding the up and down button until unit jogs, then press the down button until the full roller tube is exposed and the slot in the roller tube aligns in a exposed, accessible position with the pivot end bracket.
5. Slide the cover off on the pivot side. Now is a good time to clean the framework.
6. Identify the top of the cover as it will be marked, “Top”. Trim the PVC in the top pocket flush to each side of the fabric cover, then reinstall the cover. It should be obvious where the old cover started on the roller tube by the discoloration. The top hem flap should be on the underside as you install it on the roller tube. Be careful as to not rip the cover as it can hang up on the panel seams as it slides onto the roller tube.
7. “Retract” the awning. The inner limit setting of the motor may be saved, if not stop the unit in the estimated closed position.
8. Slide the front bar onto the cover. If the cover has been installed correctly, the bottom hem pocket should be seen from the underside of the cover. Trim the PVC as needed and reinstall the fabric locks (if applicable) and the front bar end caps.
9. Reattach the arms to the wrists, then remove the ropes from the arms. If the unit has a hood, reattach the side cover.
10. Check both the inner and outer motor limits as they may need to be reset.

**Questions: 845-692-7070 M-F (8am - 5pm EST)**  
**After Hours / Tech Support: 845-645-6995**

► **What to Expect:** A wrist adjustment typically takes 5 minutes to complete.

► **Tools Needed:** • 5mm Allen/Hex Wrench or Socket • 10mm Wrench & Socket • A Step Ladder

Before beginning the process of adjusting the wrists on the Regal, it's important to identify the key areas that you'll need to focus on. See Fig.1 and Fig.2 below:

Figure.1

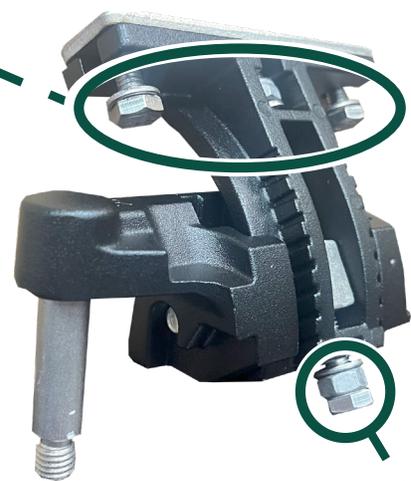


(Front View)

10mm wrist attachment screws

5mm allen screw

Figure.2



(Back View)

10mm backup screw

**Step #1** The wrist adjustment comes after you set your pitch. Once the pitch adjustment is taken care of, retract the unit fully to see how the unit closes to determine if you need to adjust the front bar. If the front bar is tilting too far forward or too far back, follow these steps.

**Step #2**

From the fully closed position, extend the unit about a foot to gain access to the fasteners. Then, loosen the backup 10mm nut on the top (Fig.3) on the bottom of each wrist.

Figure.3

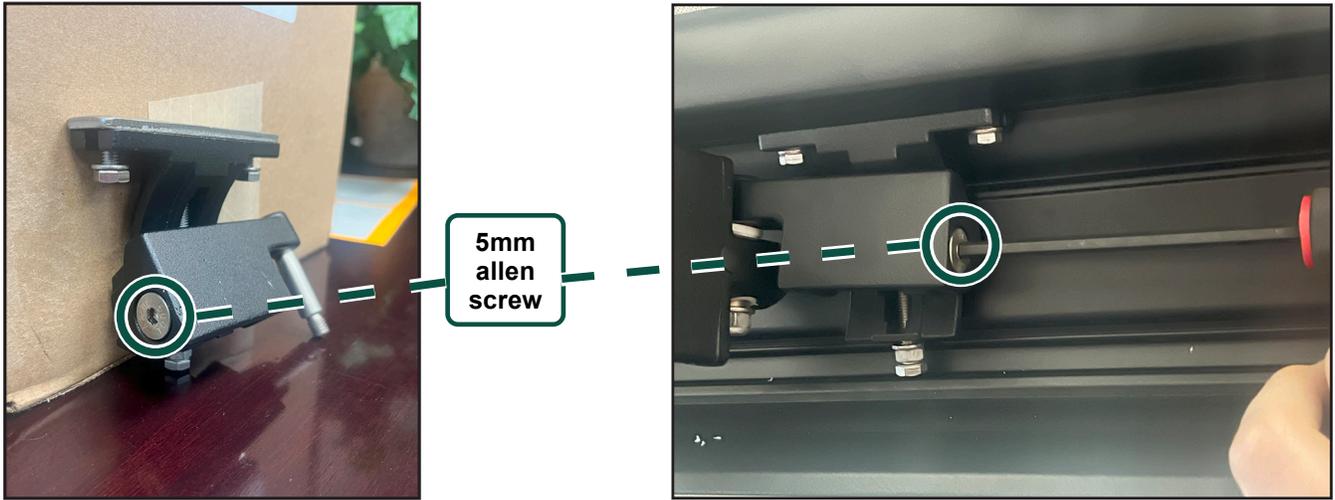


10mm backup screw

### Step #3

Then, loosen the 5mm allen screw (Fig.4) on the side of each wrist in order to begin adjusting the wrist.

**Figure.4**



### Step #4

Spin the bottom of the 10mm backup nut counter clockwise if the front bar needs to be adjusted in from the bottom, or clockwise if the front bar needs to be adjusted in from the top.

**Front Bar all the way in**



**Front Bar all the way up**



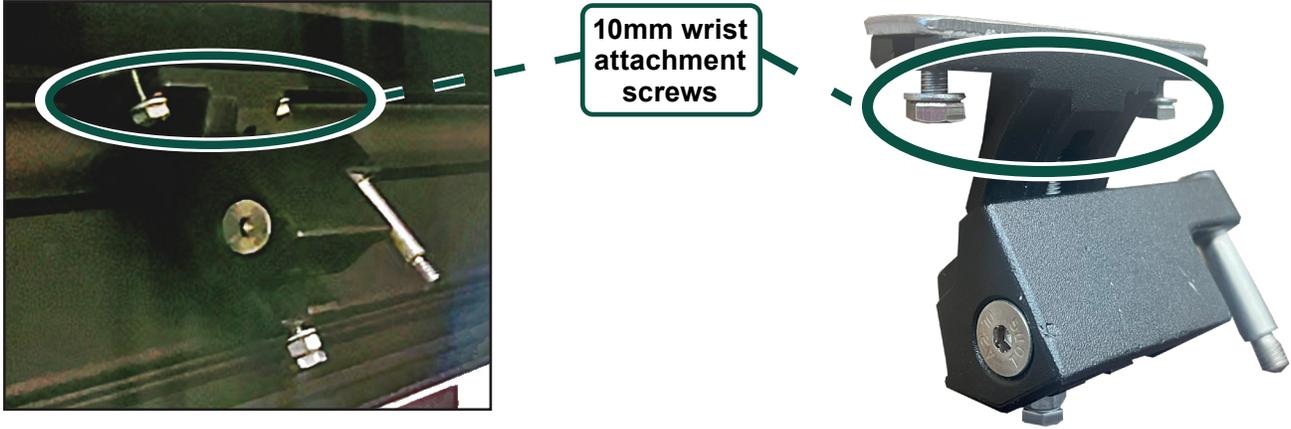
### Step #5

After the front bar is adjusted to desired position, retighten the bottom 10mm backup nut (Fig.3) and fully tighten the 5mm (Fig.4) side allen screw on each wrist.

**Step #6**

If an arm elbow is not aligned when fully closed, you can make the adjustment with the arm wrist. Carefully loosen the two 10mm bolts as shown in (Fig.5). DO NOT REMOVE BOLTS. Then, hold the arm elbow & move it to the desired position. This should allow the wrist to slide along the front bar. Once the desired position is confirmed, retighten the two 10mm wrist attachment bolts & test run the unit.

**Figure.5**



**ANY QUESTIONS PLEASE CONTACT TECH SUPPORT AT:  
845-645-6995**

**What to Expect:** A recover typically takes 45-60 minutes to perform and requires 2 people. These steps assume that you have several feet to work with on the pivot side of the unit.

**Tools Needed:**

- 13mm Socket/Wrench
- 5mm Allen Wrench/Socket
- Rope/Straps to Secure Arms
- Drill and/or Phillips Head
- Pliers to cut PVC Spline
- An Assistant
- 1" Molly Anchors

**\*Note** If the unit has a standard hood, remove the pivot side end cover.

**Step #1** Remove both front bar end caps. Remove both screws and pry off each end cap.

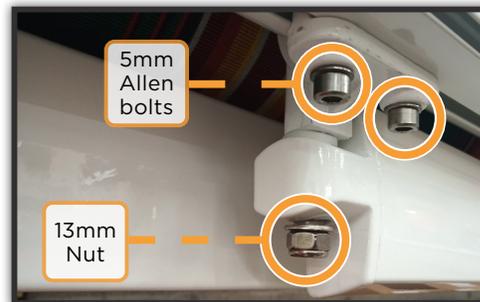
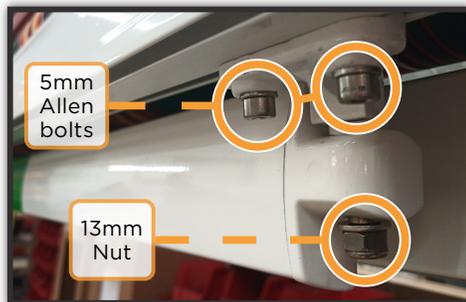


**Step #2** Fully retract the awning and slide the valance off the front bar.

**Step #3** Secure together the front and back half of all arms with straps, tie wraps, or rope.

**Step #4** Extend the awning one full rotation of the roller tube. You are checking the security of your knots.

**Step #5** Loosen 5mm Allen bolts and remove the 13mm nut on all wrists.



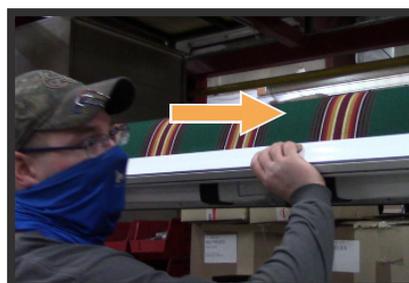
**Step #6**

Lift the front bar (wrists still attached) off the arms.



**Step #7**

Slide the front bar (wrists attached) off. The PVC spline will stay inside of the pocket of the cover.



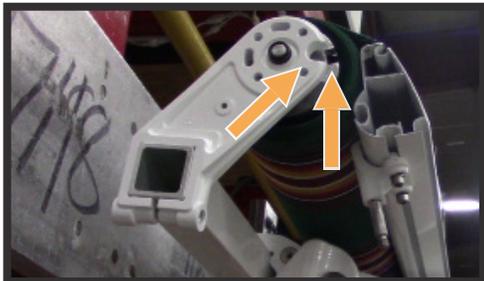
**Step #8a** With the remote, extend the unit until it stops.

**Step #8b** Surpass the outer motor limit by holding the “up” and “down” button for a jog, then pressing “down” to expose the roller tube.

**Step #8c**

**For Rainier and Olympus Units:**

The slot in the roller tube should align, in an exposed and accessible position, with the pivot end bracket.



**For Summit Units:**

Align the slot in the roller tube so that it is facing straight out as pictured below.



**Step #9** Slide the cover off on the pivot side.

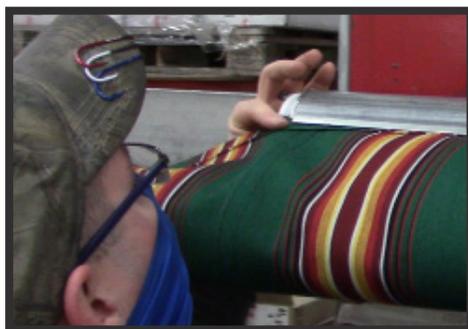
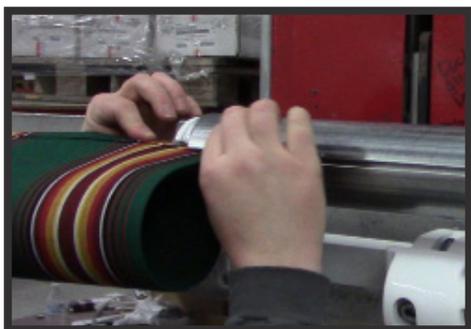
**\*Note** Now is a good time to clean the awning framework.

**Step #10a** Identify the top of the cover as it will be marked “Top”.

**Step #10b** Trim the PVC in the top pocket flush to each side of the fabric cover.



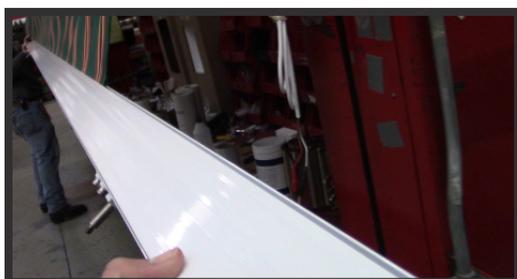
**Step #11** Install the new fabric cover with the top pocket seam over the top, be careful when passing over the panel seams.



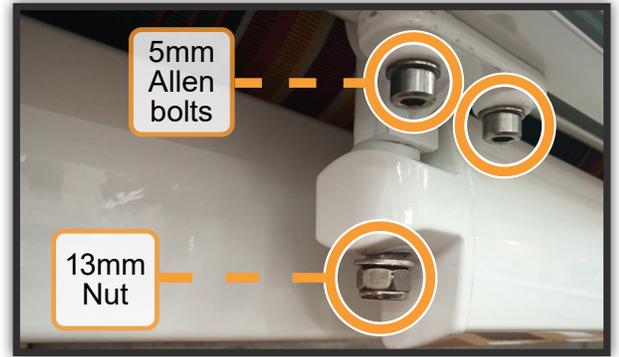
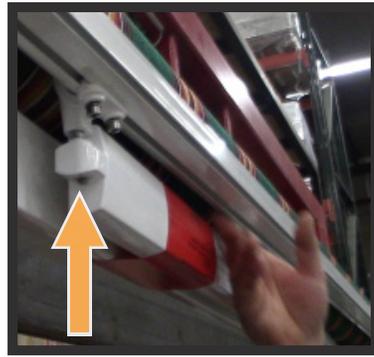
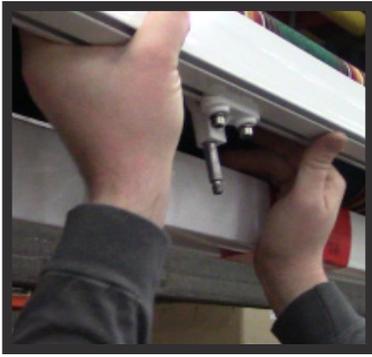
**Step #12a** Retract the awning.

**Step #12b** The inner limit setting of the motor may be saved, if not stop the unit in the estimated closed position.

**Step #13** Slide the front bar on to the cover.



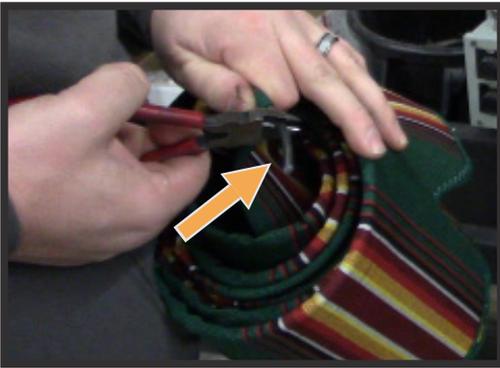
**Step #14** Reattach the front bar to the arms, Tighten the 5mm Allen bolts and reinstall the 13mm nuts on the wrists.



**Step #15** Remove straps and ropes from both arms and the torsion bar.

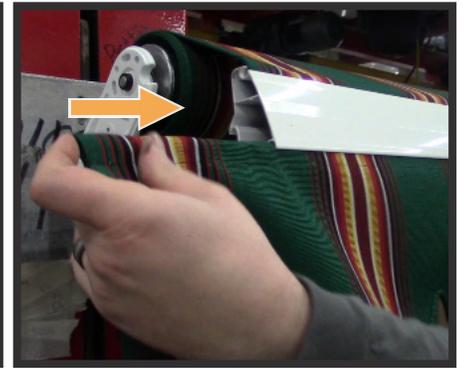
**Step #16a**

\*Replacing a Valance: Trim the PVC located inside the valance about 1" on each side



**Step #16b**

Slide the valance onto the front bar and align the stripes or seams with the main body cover.



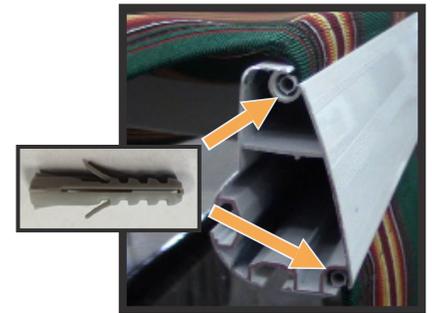
**Step #17a**

Extend the awning in order to "bag the cover" and create slack.



**Step #17b**

Pull fabrics flush to the edges of the front bar. Insert Molly Anchors into the awning cover (and valance) on both ends.



**Step #18** Replace both end caps and screws on the front bar.



**Step #19** Check both the inner and outer limits, as they may need to be reset.

\*Note If unit has a hood, replace end cover removed at step 1.

**What to Expect:** A recover typically takes about an hour to perform and requires 2 people. These steps assume that you have several feet to work with on the pivot side of the unit.

- Tools Needed:**
- 13mm Socket/Wrench
  - 4mm & 5mm Allen Wrench/Socket
  - 2.5mm Allen Key
  - Drill and/or Phillips Head
  - Pliers to cut PVC Spline
  - Rope/Straps to Secure Arms
  - A Rubber Mallet
  - An Assistant

**Step #1a** Slightly extend the unit.

**Step #1b**

Loosen the 4mm Allen set screw and remove the front bar end caps and hardware on the **both sides**.

Some light tapping may be required to remove the end caps.



**Step #2a**

Mark the inside of the front bar at the fabric locks for reference when installing new fabric.

**Step #2b**

Loosen the 2.5mm Allens, remove both fabric locks and set aside.

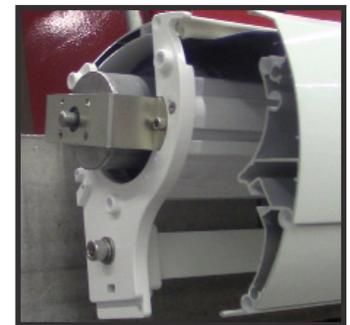
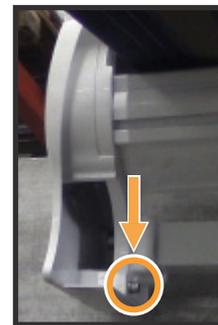


**Step #3**

Remove the 5mm Allen set screws and washers from the inside of the hood end caps on the both sides.

Remove both cassette end caps.

\*Some light tapping may be required.

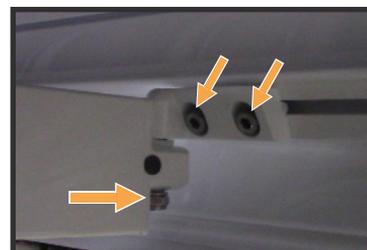
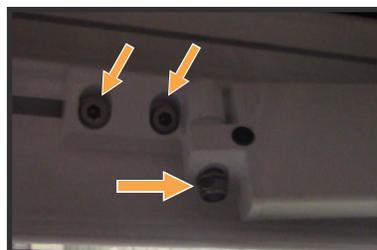


**Step #4** Fully retract the awning.

**Step #5** Secure together the front and back half of all arms with straps, tie wraps, or rope.

**Step #6** Extend the awning one full rotation of the roller tube. You are checking the security of your knots.

**Step #7** Loosen 5mm Allen bolts and remove the 13mm nuts on all wrists.



**Step #8**

Lift the front bar (wrists still attached) off the arms. The front bar will hang as shown below.



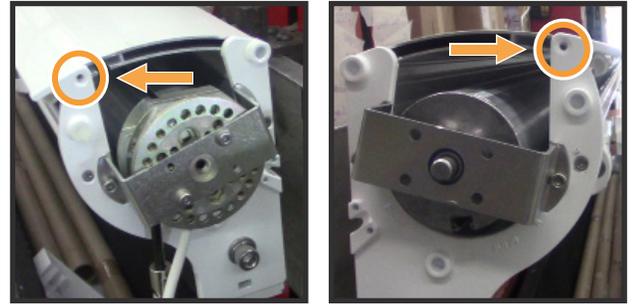
**Step #9**

Slide the front bar (wrists attached) off. The PVC spline will stay inside of the pocket of the cover.



**Step #10**

Remove the Philips head screws shown here from both cassette end brackets.

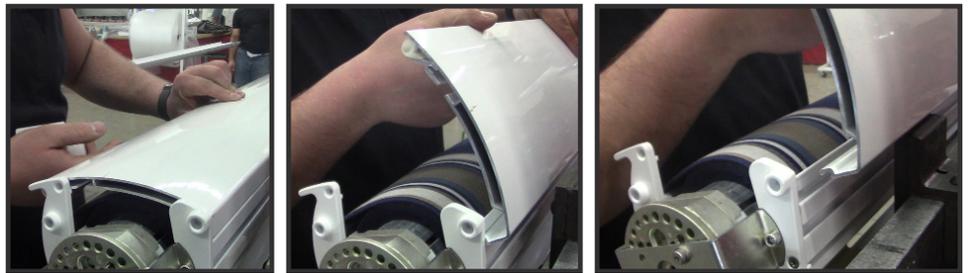


**Step #11a**

Remove both Phillips head screws from the end brackets as shown.

**Step #11b**

Now you can lift and remove the cassette hood.



**Step #12** Extend the unit.

**\*Note** Surpass the outer motor limit by holding the “up” and “down” button for a jog, then pressing “down” to expose the roller tube.

**Step #13a**

The slot in the roller tube should face up so that removing the fabric will not be hindered by the end brackets.

**Step #13b**

Slide the cover off on the pivot side.



**\*Note** Now is a good time to clean the awning framework.

**Step #15a**

Identify the top of the cover as it will be marked “Top”.

**Step #15b**

Ensure that the PVC in the top pocket is flush to the edge of the fabric.

**Step #15c**

With the help of an assistant, install the new fabric cover with the top pocket seam over the top.

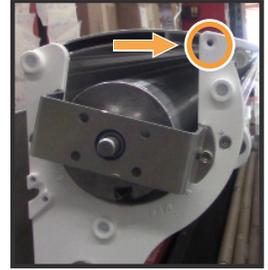
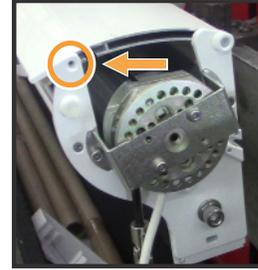
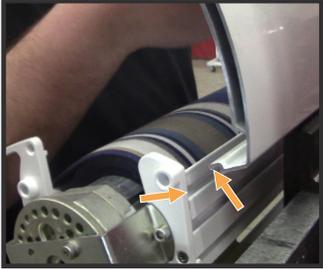


*\*Be careful when passing over the panel seams.*

**Step #16** Retract the unit.

**\*Note** The inner limit setting of the motor may be saved, if not stop the unit in the estimated closed position.

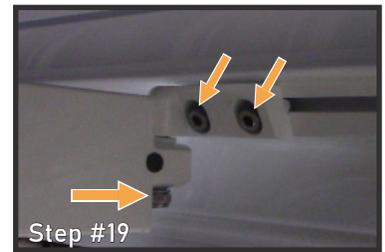
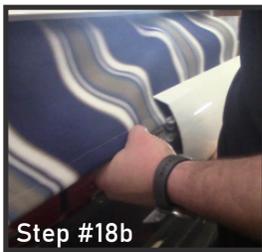
**Step #17** Install the cassette hood and tighten both Phillips head screws on the end brackets.



**Step #18a** Trim about an inch of PVC spline from each side of the cover.

**Step #18b** With an assistant, slide the front bar on to the cover.

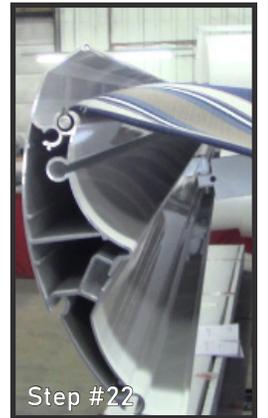
**Step #19** Reattach the front bar to the arms, Tighten the 5mm Allen bolts and reinstall the 13mm nuts on all wrists.



**Step #20** Remove straps and ropes from both arms and the torsion bar.

**Step #21** Extend the awning in order to “bag the cover” and create slack.

**Step #22** Insert and tighten both 2.5mm fabric locks into the cover and front bar.



**Step #23** Retract the unit to “unbag the cover”.

**Step #24** Replace both end caps and hardware on the front bar. Tighten both 4mm Allens.

**Step #25** Replace both cassette end caps and tighten both 5mm Allens.



**\*Note** Check both the inner and outer limits, as they may need to be reset.

# Replacing a Center Support Ring

## Applies to Rainier and Olympus Standard

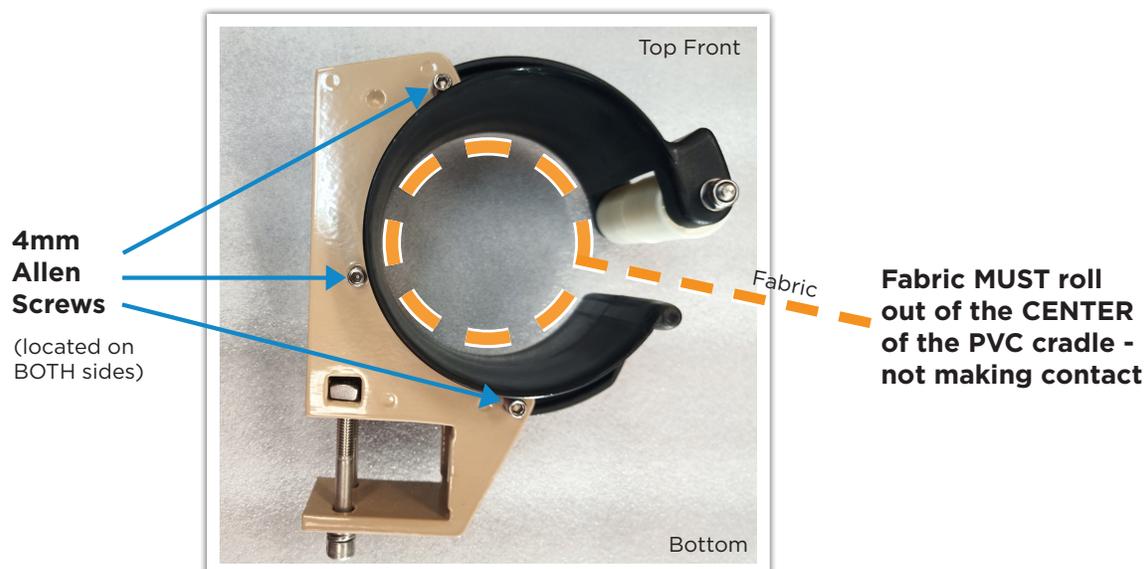
### How to Replace A Broken Center Support Ring

*(applies to Olympus and Rainier units)*

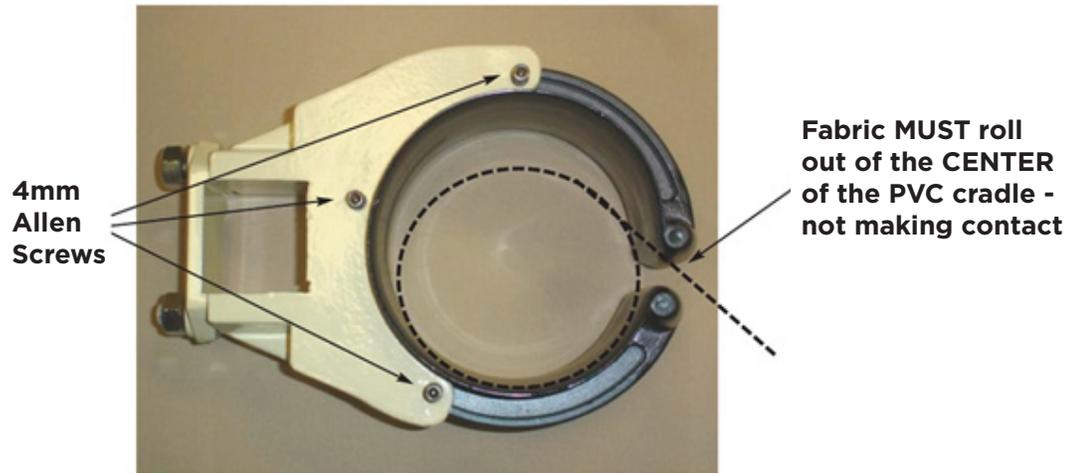
*This procedure typically takes less than 15 minutes to perform and requires only 1 person but for an added layer of safety, we suggest 2 people. These steps assume that you have several feet to work with on the pivot side of the unit. Tools need include rope, 4mm, 5mm 8mm Allen wrenches.*

1. Retract the awning fully and secure together the front section of the arm extrusion to the back half of each arm. The goal is to make sure each arm is tied off so they remain fully closed. Once each arm is tied off, extend the awning a full rotation of the roller tube and stop it. You are checking the security of your knots.
2. Leaving the unit in that position, if equipped, remove the pivot side hood end cover This is held on with 3 Phillips screws. Loosen the 4mm Allen set screws currently hold the broken black plastic center support ring to the bracket.
3. Loosen the pivot side end bracket bolt. On an Rainier or Olympus it's a 5mm Allen bolt, on a Summit it's a 8mm Allen. Once the bolt is loose cradle and support the roller tube while you slide off the end pivot side end bracket from the torsion bar.
4. With the pivot end of the roller tube now able to move freely, you can position the tube out of the way enough to swing out the broken ring and replace it with the new one. There is no need to secure the Ring to the bracket at this time.
5. Reinstall the pivot side end bracket and fully tighten the Allen bolt, making sure you do not "pinch" the center support ring, then untie the arms and extend the awning halfway out.
6. Reinstall the 6 count, 4mm Allen set screw which hold the Center Support Ring to the center support bracket making sure that the ring is rotated so that the fabric is in the correct position - SEE PHOTOS.

### The Rainier & Olympus Center Support



### The Summit Center Support



7. Adjusting the center support: Make sure the center support is centered on a fabric seam - DO NOT shift the center support away from a fabric seam.
8. Roll the awning out fully and inspect that the center support ring does not come in contact with the fabric. **IMPORTANT NOTE:** An improperly adjusted center support can cause premature fabric wear which is NOT covered by the warranty.

Questions: 845-692-7070 M-F (8am - 5pm EST)  
After Hours / Tech Support: 845-645-6995

# Retrofitting a Drop Shade

## Applies to Rainier, Olympus & Summit

### How to Retrofit A Drop Shade

*(applies to Rainier, Olympus and Summit units)*

This procedure typically takes less than 30 minutes and requires 2 people. These steps assume that you have the primary tools - rope, 13mm and/or 17mm sockets, 2mm, 4mm and 5mm Allen wrenches.

1. Retract the awning fully and secure together the front section of the arm extrusion to the back half of each arm. The goal is to make sure each arm is tied off so they remain fully closed. Once each arm is tied off, extend the awning a full rotation of the roller tube and stop it. You are checking the security of your knots.
2. Leaving the unit in that position, remove the valance. Remove front bar side cover cap and check for a fabric lock. The unit may or may not have fabric locks, The fabric lock may be a 2mm Allen set screw or it may be a Phillips screw. If you find one, then there is another one on the other side - remove that one also.
3. Remove the nut that connects the front of the arm to the front bar wrist. On Rainier and Olympus models that will be a 13mm nut, on the Summit it will be a 17mm nut. Lift the front bar up and off the awning.

With both front bars on the ground, confirm the length is the same and measure the placement of the

4. old wrist, then duplicate those measurements for the placement of the new wrists on the new drop shade front bar. You will need a 5mm Allen wrench to perform this task.

Connect the new drop shade front bar to the arms and reinstall the fabric valance.

5. Untie the arms and extend the awning out fully. You may have to readjust the pitch due to the extra
6. weight of the drop shade.

For a motorized drop shade, measure, trim and install the adhesive wire chase to the top of the drive side

7. arm, and feed the wire through allowing enough slack at the elbow to allow the arm to close fully.
- Connect the motor to a power source and install the drop shade operation on a separate channel of the
8. remote or wire free wall switch than the awning. See MOTOR PROGRAMMING if you need assistance with this step.

**Questions: 845-692-7070 M-F (8am - 5pm EST)  
After Hours / Tech Support: 845-645-6995**

### **CLEANING SUNBRELLA® SHADE FABRICS**

One of the best ways to keep Sunbrella® fabric on your Rainier awning looking good is to hose fabrics off on a monthly basis with clear water. This helps prevent dirt from becoming deeply embedded in the fabric and eliminates the need for more frequent vigorous cleaning. In most environments, a thorough cleaning will be needed every two to three years.

When it's time for a thorough cleaning, the fabric cover can be cleaned while still on an awning frame or, size permitting, they can be removed to aid in the cleaning of stubborn stains or for professional cleaning.

#### **General Or Light Cleaning**

To clean while still on an awning frame:

- Brush off loose dirt.
- Hose down.
- Prepare a cleaning solution of water and mild soap such as Woolite or Dawn dishwashing liquid.
- Use a soft bristle brush to clean.
- Allow cleaning solution to soak into the fabric.
- Rinse thoroughly until all soap residue is removed.
- Air dry.
- May not require retreatment depending on the age of the fabric.

If stubborn stains persist, you can use a diluted bleach/soap mixture for spot cleaning of mildew. For roof run-off or other similar stains a strong degreaser may be required.

#### **Heavy Cleaning for Stubborn Stains and Mildew**

Sunbrella® fabrics do not promote mildew growth, however, mildew may grow on dirt and other foreign substances that are not removed from the fabric. To clean stubborn stains:

- Prepare a solution of 1 cup of bleach and one fourth cup mild soap per gallon of clean water.
- Allow mixture to soak into fabric for up to 15 minutes.
- Clean with soft bristle brush Note: This step should be avoided when cleaning the coated side (back side) of Sunbrella® Plus, Supreme, or Clarity.
- Rinse thoroughly until all soap residue is removed.
- Air dry.
- Repeat if necessary.
- Retreatment of fabric for water and stain resistance will be necessary after using bleach solution.

Remember to protect the area around your awning if using a bleach solution.

### Retreating Sunbrella® Fabrics

Sunbrella® fabrics are treated with a proprietary water and stain repellent finish that is designed to last for several years, but may require replenishing after a thorough cleaning. Glen Raven® (the parent company of Sunbrella®) recommends 303 Fabric Guard which can be purchased on line from Walmart to Amazon.

### Applying A Retreatment:

- Clean Sunbrella® fabric, using one of the cleaning methods.
- Allow Sunbrella® to completely air dry.
- Apply retreatment in a well-ventilated area following instructions on the container.

### Helpful Hints

Protect the area around the awning when using a bleach solution.

Please be aware of the environment when cleaning with bleach. Bleach can have harmful effects on the natural environment around you. We do not advise using bleach if you are surrounded by a body of water or other environment that could be affected.

The fabric should only be allowed to air dry - do not use heat.

Use of bleach and/or advanced age of the fabric application may impact the deterioration of the sewing thread and other non-fabric components.

**For more information, call Sunbrella® at 336-221-2211.**



In Accordance with European Regulation EN 13561 - Wind Resistance

Class Rating	Nominal Test Pressure	Wind Velocity Speed
<b>Class 0</b>	< 30 lbs	< 17 mph
<b>Class I</b>	30 lbs	17 mph
<b>Class II</b>	52 lbs	24 mph
<b>Class III</b>	81 lbs	31 mph

Wind resistance classification according test methods specified in EN 1932

The performance criteria specified shall be met under the action of the nominal load and the safety load.

*Note: only two arm systems were measured during this test*

### Rainier Model - Lateral Arm Retractable Awning

Width	Projection				
	5'0"	7'4"	9'0"	10'6"	11'6"
8'					
10'					
12'					
14'					
16'					
18'					
20'					

### Olympus - Lateral Arm Retractable Awning

Width	Projection				
	6'7"	8'2"	10'6"	11'6"	13'0"
8'					
10'					
12'					
14'					
16'					
18'					
20'					

### Summit - Lateral Arm Retractable Awning

Width	Projection	
	14'9"	16'6"
14'		
16'		
18'		
20'		
22'		
24'		

Monobloc Plus 400 AKA Olympus

	Designation	Code	<b>1.50 meter = 5'0" projection</b>
Set of arms:	SPL 400	10 003	<b>2.00 meter = 6'7" projection</b>
Front profile:	UNIVERS 290	36 024	<b>2.50 meter = 8'2" projection</b>
Weather cover:	GALAXY 290	39 036	<b>3.25 meter = 10' 6" projection</b>
			<b>3.50 meter = 11'6" projection</b>
			<b>4.00 meter = 13' projection</b>
Installation:	Wall and Ceiling		

TORQUE at BRACKET (Nm)		WIDTH (m)									
		2	2.5	3	3.5	4	4.5	5	5.5	6	6.5
PROJECTION (m)	1.50	66.5	79.2	91.9	104.6	117.3	130.0	142.7	155.5	168.2	180.9
	1.75	84.9	101.1	117.3	133.5	149.7	165.9	182.2	198.4	214.6	230.8
	2.00	105.4	125.6	145.7	165.8	186.0	206.1	226.3	246.4	266.5	286.7
	2.25	126.3	150.7	175.2	199.7	224.2	248.7	273.2	297.6	322.1	346.6
	2.50	154.2	183.5	212.7	242.0	271.3	300.5	329.8	359.0	388.3	417.5
	2.75	185.0	219.4	253.9	288.3	322.8	357.2	391.7	426.1	460.6	495.0
	3.00	211.6	251.7	291.8	331.9	371.9	412.0	452.1	492.1	532.2	572.3
	3.25		290.1	336.2	382.3	428.4	474.6	520.7	566.8	612.9	659.0
	3.50		339.9	392.5	445.1	497.7	550.2	602.8	655.4	708.0	760.6
	3.75			437.3	496.8	556.3	615.8	675.2	734.7	794.2	853.7
4.00			498.0	564.8	631.6	698.4	765.2	832.0	898.8	965.6	

FORCE at BOLT (N)		WIDTH (m)									
		2	2.5	3	3.5	4	4.5	5	5.5	6	6.5
PROJECTION (m)	1.50	671.3	799.7	928.2	1,056.6	1,185.0	1,313.5	1,441.9	1,570.3	1,698.8	1,827.2
	1.75	857.4	1,021.1	1,184.9	1,348.7	1,512.5	1,676.2	1,840.0	2,003.8	2,167.6	2,331.4
	2.00	1,065.0	1,268.4	1,471.8	1,675.2	1,878.6	2,082.0	2,285.4	2,488.8	2,692.2	2,895.6
	2.25	1,275.3	1,522.7	1,770.0	2,017.3	2,264.6	2,511.9	2,759.2	3,006.5	3,253.9	3,501.2
	2.50	1,557.8	1,853.4	2,148.9	2,444.4	2,739.9	3,035.4	3,330.9	3,626.5	3,922.0	4,217.5
	2.75	1,868.3	2,216.3	2,564.3	2,912.3	3,260.4	3,608.4	3,956.4	4,304.4	4,652.4	5,000.4
	3.00	2,137.8	2,542.5	2,947.3	3,352.1	3,756.9	4,161.6	4,566.4	4,971.2	5,376.0	5,780.7
	3.25		2,930.1	3,396.0	3,861.8	4,327.7	4,793.5	5,259.3	5,725.2	6,191.0	6,656.9
	3.50		3,433.2	3,964.4	4,495.6	5,026.8	5,558.0	6,089.2	6,620.3	7,151.5	7,682.7
	3.75			4,417.4	5,018.2	5,619.0	6,219.8	6,820.7	7,421.5	8,022.3	8,623.1
4.00			5,030.2	5,705.0	6,379.7	7,054.5	7,729.2	8,404.0	9,078.7	9,753.4	

Designation Code  
 Set of arms: SPL 400 10 003  
 Front profile: SOMBREX 700 36 011  
 Weather cover: GALAXY 290 39 036  
 Installation: Wall and Ceiling

TORQUE at BRACKET (Nm)		WIDTH (m)									
		2	2.5	3	3.5	4	4.5	5	5.5	6	6.5
PROJECTION (m)	1.50	94.4	114.1	133.8	153.5	173.2	192.9	212.7	232.4	252.1	271.8
	1.75	117.2	141.5	165.7	190.0	214.3	238.6	262.9	287.2	311.5	335.8
	2.00	142.1	171.4	200.7	229.9	259.2	288.5	317.8	347.1	376.4	405.7
	2.25	167.2	201.9	236.7	271.4	306.1	340.8	375.6	410.3	445.0	479.7
	2.50	199.5	240.1	280.7	321.3	361.8	402.4	443.0	483.6	524.2	564.7
	2.75	234.6	281.5	328.3	375.2	422.0	468.9	515.8	562.6	609.5	656.3
	3.00	265.6	319.2	372.7	426.3	479.9	533.4	587.0	640.5	694.1	747.7
	3.25		363.0	423.6	484.3	545.0	605.7	666.4	727.1	787.8	848.5
	3.50		418.2	486.4	554.7	622.9	691.2	759.4	827.7	895.9	964.1

FORCE at BOLT (N)		WIDTH (m)									
		2	2.5	3	3.5	4	4.5	5	5.5	6	6.5
PROJECTION (m)	1.50	953.7	1,152.8	1,351.8	1,550.9	1,749.9	1,948.9	2,148.0	2,347.0	2,546.1	2,745.1
	1.75	1,183.6	1,428.9	1,674.2	1,919.6	2,164.9	2,410.2	2,655.6	2,900.9	3,146.2	3,391.5
	2.00	1,435.0	1,730.9	2,026.8	2,322.7	2,618.6	2,914.5	3,210.4	3,506.3	3,802.2	4,098.1
	2.25	1,689.1	2,039.9	2,390.6	2,741.4	3,092.1	3,442.9	3,793.6	4,144.4	4,495.2	4,845.9
	2.50	2,015.4	2,425.3	2,835.2	3,245.1	3,655.0	4,064.9	4,474.8	4,884.7	5,294.6	5,704.5
	2.75	2,369.7	2,843.0	3,316.3	3,789.6	4,263.0	4,736.3	5,209.6	5,683.0	6,156.3	6,629.6
	3.00	2,682.8	3,223.9	3,764.9	4,306.0	4,847.0	5,388.1	5,929.1	6,470.2	7,011.2	7,552.3
	3.25		3,666.2	4,279.3	4,892.3	5,505.4	6,118.4	6,731.5	7,344.5	7,957.6	8,570.7
	3.50		4,224.0	4,913.4	5,602.7	6,292.1	6,981.4	7,670.8	8,360.1	9,049.5	9,738.8

# Bracket Bolt Loads

## Applies to Olympus with Semi Cassette

MONOBOX 400 AKA Olympus with Semi Cassette

Set of arms: Designation SPL 400 Code 10 003  
 Front profile: MONOBOX Code 39 028  
 Installation: Wall and Ceiling

1.50 meter = 5'0" projection  
 2.00 meter = 6'7" projection  
 2.50 meter = 8'2" projection  
 3.25 meter = 10' 6" projection  
 3.50 meter = 11'6" projection  
 4.00 meter = 13' projection

TORQUE at BRACKET (Nm)		WIDTH (m)									
		2	2.5	3	3.5	4	4.5	5	5.5	6	6.5
PROJECTION (m)	1.50	77.1	92.6	108.1	123.7	139.2	154.7	170.2	185.7	201.2	216.8
	1.75	97.3	116.8	136.2	155.7	175.2	194.6	214.1	233.6	253.0	272.5
	2.00	119.6	143.4	167.3	191.1	215.0	238.8	262.7	286.5	310.4	334.2
	2.25	142.2	170.9	199.5	228.2	256.8	285.5	314.1	342.8	371.4	400.1
	2.50	171.9	205.7	239.6	273.5	307.4	341.2	375.1	409.0	442.9	476.7
	2.75	204.3	243.8	283.3	322.9	362.4	401.9	441.4	481.0	520.5	560.0
	3.00	232.8	278.4	324.0	369.6	415.2	460.8	506.4	552.0	597.6	643.2
	3.25		318.9	371.0	423.1	475.2	527.3	579.4	631.5	683.6	735.8
	3.50		370.8	429.8	488.8	547.9	606.9	665.9	724.9	784.0	843.0
	3.75			477.4	543.8	610.2	676.5	742.9	809.3	875.7	942.0
4.00			540.6	614.8	688.9	763.1	837.2	911.4	985.5	1,059.7	

FORCE at BOLT (N)		WIDTH (m)									
		2	2.5	3	3.5	4	4.5	5	5.5	6	6.5
PROJECTION (m)	1.50	779.0	935.7	1,092.4	1,249.1	1,405.8	1,562.6	1,719.3	1,876.0	2,032.7	2,189.4
	1.75	982.7	1,179.4	1,376.0	1,572.7	1,769.3	1,966.0	2,162.6	2,359.3	2,555.9	2,752.6
	2.00	1,208.0	1,448.9	1,689.8	1,930.7	2,171.5	2,412.4	2,653.3	2,894.1	3,135.0	3,375.9
	2.25	1,436.5	1,725.9	2,015.3	2,304.7	2,594.0	2,883.4	3,172.8	3,462.2	3,751.6	4,040.9
	2.50	1,736.0	2,078.1	2,420.3	2,762.5	3,104.7	3,446.9	3,789.0	4,131.2	4,473.4	4,815.6
	2.75	2,063.4	2,462.7	2,861.9	3,261.2	3,660.4	4,059.7	4,459.0	4,858.2	5,257.5	5,656.8
	3.00	2,351.1	2,811.7	3,272.4	3,733.0	4,193.6	4,654.3	5,114.9	5,575.5	6,036.1	6,496.8
	3.25		3,221.5	3,747.8	4,274.1	4,800.4	5,326.7	5,853.0	6,379.2	6,905.5	7,431.8
	3.50		3,745.3	4,341.5	4,937.7	5,534.0	6,130.2	6,726.4	7,322.7	7,918.9	8,515.1
	3.75			4,822.3	5,492.7	6,163.2	6,833.6	7,504.1	8,174.6	8,845.0	9,515.5
4.00			5,460.9	6,209.9	6,958.9	7,707.8	8,456.8	9,205.8	9,954.8	10,703.8	

ART-MONOBLOC 500 AKA Summit Unit

	Designation	Code	
Set of arms:	ART 500	10 045	4.5 meter = 14'9" projection
Front profile:	UNIVERS 290	36 024	5.00 meter = 16'6" projection
Weather cover:	GALAXY 290	39 036	

Installation: Wall and Ceiling

TORQUE at BRACKET (Nm)		WIDTH (m)				
		4.5	5	5.5	6	6.5
PROJECTION (m)	4.50		1,079.9	1,166.7	1,253.4	1,340.1
	5.00			1,448.2	1,552.9	1,657.6

FORCE at BOLT (N)		WIDTH (m)				
		4.5	5	5.5	6	6.5
PROJECTION (m)	4.50		3,002.4	3,243.3	3,484.2	3,725.1
	5.00			4,025.3	4,316.1	4,607.0

	Designation	Code	
Set of arms:	ART 500	10 045	Drop Shade
Front profile:	SOMBREX 700	36 011	
Weather cover:	GALAXY 290	39 036	

Installation: Wall and Ceiling

TORQUE at BRACKET (Nm)		WIDTH (m)				
		4.5	5	5.5	6	6.5
PROJECTION (m)	5.00		1,540.8	1,669.2	1,801.2	1,922.6
	4.50		1,284.7	1,391.9	1,499.1	1,606.3

FORCE at BOLT (N)		WIDTH (m)				
		4.5	5	5.5	6	6.5
FORCE at BOLT (N)	5.00		1,249.9	1,455.6	1,661.4	1,867.1
	4.50	820.3	981.9	1,143.5	1,305.1	1,466.7

ART-MONOBLOC 350= Rainier Model

1.50 meter = 5'0" projection  
 2.25 meter = 7'4" projection  
 2.75 meter = 9'0" projection  
 3.25 meter = 10' 6" projection  
 3.50 meter = 11'6" projection

Set of arms: Designation Code  
 ART 350 10 045  
 Front profile: EVO 80 (2 SLOTS) 36 076  
 Weather cover: GALAXY 290 39 036

Installation: Wall with and without Crossed arms kit

TORQUE at BRACKET (Nm)		WIDTH (m)								
		2	2.5	3	3.5	4	4.5	5	5.5	6
PROJECTION (m)	1.50	59.2	70.7	82.3	93.8	105.4	116.9	128.5	140.1	151.6
	1.75	75.1	90.0	104.9	119.8	134.7	149.5	164.4	179.3	194.2
	2.00	95.1	113.7	132.4	151.0	169.6	188.3	206.9	225.5	244.2
	2.25	116.3	139.1	161.9	184.7	207.5	230.3	253.1	276.0	298.8
	2.50	139.0	166.4	193.8	221.2	248.6	276.0	303.4	330.8	358.2
	2.75	166.5	198.9	231.3	263.8	296.2	328.6	361.1	393.5	425.9
	3.00	199.4	237.3	275.2	313.1	350.9	388.8	426.7	464.6	502.5
	3.25		275.0	318.8	362.5	406.3	450.0	493.8	537.5	581.3
3.50		314.6	364.7	414.7	464.8	514.9	564.9	615.0		

FORCE at BOLT (N)		WIDTH (m)								
		2	2.5	3	3.5	4	4.5	5	5.5	6
PROJECTION (m)	1.50	591.6	707.1	822.7	938.3	1,053.9	1,169.4	1,285.0	1,400.6	1,516.2
	1.75	751.2	900.0	1,048.9	1,197.7	1,346.5	1,495.4	1,644.2	1,793.0	1,941.9
	2.00	951.1	1,137.4	1,323.8	1,510.1	1,696.4	1,882.8	2,069.1	2,255.5	2,441.8
	2.25	1,162.9	1,391.0	1,619.1	1,847.2	2,075.3	2,303.4	2,531.5	2,759.6	2,987.7
	2.50	1,389.7	1,663.8	1,937.9	2,212.0	2,486.1	2,760.2	3,034.3	3,308.4	3,582.5
	2.75	1,664.6	1,988.9	2,313.3	2,637.6	2,961.9	3,286.3	3,610.6	3,934.9	4,259.3
	3.00	1,994.1	2,372.9	2,751.7	3,130.5	3,509.3	3,888.1	4,267.0	4,645.8	5,024.6
	3.25		2,750.0	3,187.6	3,625.1	4,062.7	4,500.2	4,937.8	5,375.3	5,812.9
3.50		3,146.4	3,647.0	4,147.5	4,648.0	5,148.5	5,649.0	6,149.6		

Installation: Ceiling with and without Crossed arms kit

TORQUE at BRACKET (Nm)		WIDTH (m)								
		2	2.5	3	3.5	4	4.5	5	5.5	6
PROJECTION (m)	1.50	57.6	68.9	80.1	91.4	102.7	113.9	125.2	136.4	147.7
	1.75	73.4	88.0	102.5	117.1	131.6	146.2	160.7	175.3	189.8
	2.00	93.2	111.5	129.8	148.0	166.3	184.5	202.8	221.1	239.3
	2.25	114.2	136.6	159.1	181.5	203.9	226.3	248.7	271.1	293.5
	2.50	136.8	163.7	190.7	217.7	244.6	271.6	298.6	325.5	352.5
	2.75	164.0	196.0	228.0	259.9	291.9	323.8	355.8	387.8	419.7
	3.00	196.7	234.1	271.5	308.9	346.2	383.6	421.0	458.4	495.7
	3.25		271.6	314.8	358.0	401.2	444.5	487.7	530.9	574.1
3.50		311.0	360.5	410.0	459.5	508.9	558.4	607.9		

FORCE at BOLT (N)		WIDTH (m)								
		2	2.5	3	3.5	4	4.5	5	5.5	6
PROJECTION (m)	1.50	644.6	769.7	894.7	1,019.8	1,144.8	1,269.8	1,394.9	1,519.9	1,644.9
	1.75	820.3	981.9	1,143.5	1,305.1	1,466.7	1,628.4	1,790.0	1,951.6	2,113.2
	2.00	1,040.2	1,243.1	1,446.0	1,648.9	1,851.9	2,054.8	2,257.7	2,460.6	2,663.5
	2.25	1,273.6	1,522.5	1,771.5	2,020.4	2,269.3	2,518.3	2,767.2	3,016.1	3,265.1
	2.50	1,523.8	1,823.5	2,123.1	2,422.8	2,722.5	3,022.1	3,321.8	3,621.4	3,921.1
	2.75	1,826.9	2,182.0	2,537.1	2,892.3	3,247.4	3,602.5	3,957.6	4,312.7	4,667.8
	3.00	2,190.3	2,605.6	3,020.8	3,436.1	3,851.4	4,266.6	4,681.9	5,097.2	5,512.4
	3.25		3,022.1	3,502.2	3,982.4	4,462.5	4,942.7	5,422.8	5,903.0	6,383.1
3.50		3,460.1	4,009.9	4,559.6	5,109.3	5,659.1	6,208.8	6,758.5		

Set of arms: Designation ART 350 Code 10 045  
 Front profile: SOMBREX 700 36 011  
 Weather cover: GALAXY 290 39 036

Installation: Wall with and without Crossed arms kit

TORQUE at BRACKET (Nm)		WIDTH (m)								
		2	2.5	3	3.5	4	4.5	5	5.5	6
FORCE at BOLT (N)	1.50	91.3	111.0	130.6	150.2	169.8	189.4	209.0	228.6	248.2
	1.75	112.3	136.5	160.7	184.9	209.1	233.3	257.4	281.6	305.8
	2.00	137.3	166.5	195.7	224.9	254.1	283.3	312.5	341.7	370.9
	2.25	163.5	198.2	232.8	267.4	302.0	336.7	371.3	405.9	440.5
	2.50	191.3	231.7	272.2	312.7	353.2	393.7	434.1	474.6	515.1
	2.75	223.8	270.5	317.3	364.0	410.8	457.6	504.3	551.1	
	3.00	261.7	315.2	368.7	422.1	475.6	529.1	582.5		
	3.25		359.2	419.8	480.4	541.0				
	3.50		405.1	473.3	541.4					

FORCE at BOLT (N)		WIDTH (m)								
		2	2.5	3	3.5	4	4.5	5	5.5	6
FORCE at BOLT (N)	1.50	913.5	1,109.5	1,305.5	1,501.6	1,697.6	1,893.7	2,089.7	2,285.8	2,481.8
	1.75	1,123.3	1,365.2	1,607.0	1,848.9	2,090.8	2,332.6	2,574.5	2,816.4	3,058.2
	2.00	1,373.4	1,665.3	1,957.3	2,249.2	2,541.1	2,833.1	3,125.0	3,416.9	3,708.9
	2.25	1,635.5	1,981.7	2,328.0	2,674.2	3,020.4	3,366.7	3,712.9	4,059.2	4,405.4
	2.50	1,912.6	2,317.3	2,722.1	3,126.9	3,531.7	3,936.5	4,341.3	4,746.1	5,150.9
	2.75	2,237.6	2,705.2	3,172.8	3,640.4	4,108.0	4,575.6	5,043.2	5,510.8	
	3.00	2,617.3	3,152.0	3,686.6	4,221.3	4,755.9	5,290.5	5,825.2		
	3.25		3,591.9	4,197.8	4,803.8	5,409.7				
	3.50		4,051.1	4,732.6	5,414.0					

Installation: Ceiling with and without Crossed arms kit

TORQUE at BRACKET (Nm)		WIDTH (m)								
		2	2.5	3	3.5	4	4.5	5	5.5	6
FORCE at BOLT (N)	1.50	89.4	108.6	127.8	147.0	166.2	185.4	204.6	223.8	243.0
	1.75	110.3	134.0	157.7	181.5	205.2	229.0	252.7	276.5	300.2
	2.00	135.1	163.8	192.5	221.2	250.0	278.7	307.4	336.1	364.8
	2.25	161.1	195.2	229.3	263.5	297.6	331.7	365.8	399.9	434.0
	2.50	188.6	228.6	268.5	308.5	348.4	388.3	428.3	468.2	508.2
	2.75	220.9	267.1	313.3	359.5	405.7	451.9	498.1	544.2	
	3.00	258.7	311.5	364.4	417.2	470.1	523.0	575.8		
	3.25		355.3	415.2	475.2	535.1				
	3.50		401.0	468.5	535.9					

FORCE at BOLT (N)		WIDTH (m)								
		2	2.5	3	3.5	4	4.5	5	5.5	6
FORCE at BOLT (N)	1.50	997.8	1,211.2	1,424.5	1,637.8	1,851.2	2,064.5	2,277.8	2,491.2	2,704.5
	1.75	1,229.3	1,493.1	1,757.0	2,020.9	2,284.7	2,548.6	2,812.5	3,076.3	3,340.2
	2.00	1,505.0	1,824.1	2,143.2	2,462.4	2,781.5	3,100.6	3,419.7	3,738.8	4,058.0
	2.25	1,794.2	2,173.3	2,552.4	2,931.5	3,310.6	3,689.7	4,068.8	4,447.9	4,826.9
	2.50	2,100.3	2,544.0	2,987.8	3,431.6	3,875.3	4,319.1	4,762.9	5,206.7	5,650.4
	2.75	2,459.2	2,972.4	3,485.5	3,998.7	4,511.9	5,025.0	5,538.2	6,051.4	
	3.00	2,878.4	3,465.7	4,052.9	4,640.2	5,227.5	5,814.8	6,402.1		
	3.25		3,952.0	4,618.1	5,284.2	5,950.3				
	3.50		4,459.7	5,209.4	5,959.1					

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