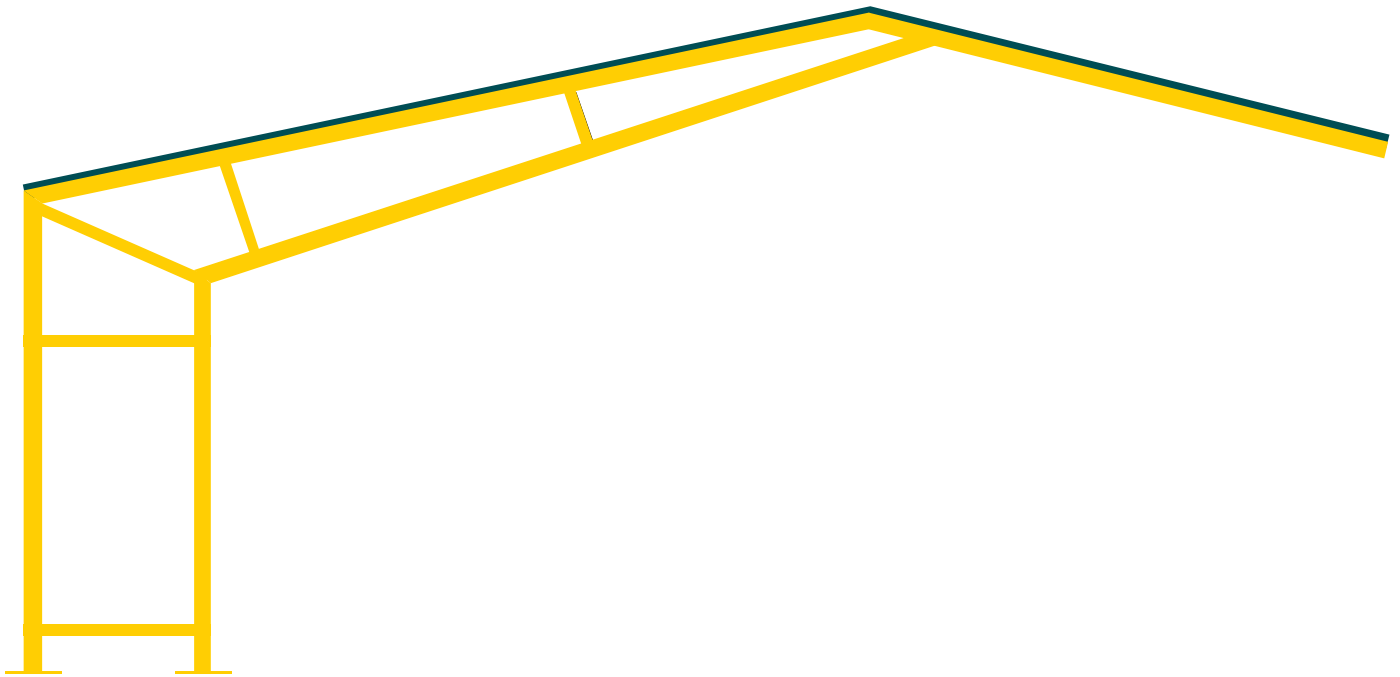


Installation Guide

SHADOW WING

For surface mount or new footings poured to specifications.



4487 B Ashton Rd
Sarasota FL 34233
941.925.3000



1.800.319.1010
salesgov@sunguard.net
www.floridasunshade.com

Premier Manufacturer of Shade Structures  **Promoting Sun Safety & Cool Comfort**

Safety First

For your safety, Sunguard Shade recommends that you read and comply with all safety instructions.

- Hard hats should be worn at all times.
- Safety goggles must be worn at all times when operating electrical power tools.
- Secure all ladders and work platforms; make sure they are stable at all times.
- When drilling, point drill away from the body or other persons in case of drill breakage, etc.
- Ensure all electrical equipment used is properly grounded.
- During installation, steel posts and beams should be secured to prevent from tipping, deflection or falling.

Cautions

Warning: *While installing the fabric cover watch for the following...*

Do not pull fabric cover at sharp angles.

If fabric cover binds, **do not** continue to force pull.

Watch for anything else that might damage the fabric cover.

Do not attempt to install fabric cover when the air temperature is below 50°F. Cold temperatures stiffens the fabric making it hard to fit.

Do not attempt to install fabric cover when the air temperature is above 85°F. Hotter temperatures can cause the fabric to contract, making the fabric hard to fit.

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Sunguard Shade Structures Corp. recommends that all safety requirements be met and observed during the installation and erection of any structure. Sunguard Shade Structures Corp. will not be held responsible for any accidents or losses as a result of improper installations or unsafe work methods. ***Failure to comply with the recommended method of installation may void all warranties.***

For further product information or any queries on installations, please contact Sunguard Shade Structures Corp.

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03SWIC0001c

Introduction

Welcome to the standard Shadow Wing Installation Guide. This guide is based on an installation of Sunguard's unit at our headquarters in Sarasota, Florida.

Are You Prepared?

Have your site inspected for underground utilities, irrigation systems, soil condition and overhead power line restrictions.

Before You Begin

- Confirm unit size for site location.
- Check packaging for damage.
- Confirm Packing List contents.
(Report errors/shortages immediately. Call 1.800.319.1010)
- Read installation guide provided with your unit.

Safety First

For your safety, Sunguard Shade recommends that you read and comply with all safety instructions.

- Hard hats should be worn at all times.
- Safety goggles must be worn at all times when operating electrical power tools.
- Secure all ladders and work platforms; make sure they are stable at all times.
- When drilling, point drill away from the body or other persons in case of drill breakage, etc.
- Ensure all electrical equipment used is properly grounded.
- During installation, steel posts and beams should be secured to prevent from tipping, deflection or falling.

Important: When more than one structure is being constructed at the same site, correctly identify each structure with it's corresponding layout.

Packing List Notes & Items Supplied by Apollo

Check packing list and verify that the shade unit is complete with the correct assembly part packages. Each package is labelled for a specific size shade unit. All other structural members are shipped bubble wrapped and labelled according to size of structure.

Tools Required

- Electric drill
- $\frac{5}{8}$ " diameter drill bit (steel)
- $\frac{1}{2}$ " diameter drill bit (steel)
- Extension cords
- $\frac{1}{2}$ " diameter Wrench
- $\frac{5}{8}$ " diameter Wrench
- One (1) Level
- Two (2) 8' Ladder
- Non-shrink Grout
- Clear Silicone Spray
Lubricant (not sealant type)
- Four (4) People
- One (1) small crane or similar lifting device.
- Two (2) shovels
- Wheelbarrow
- Crow Bar
- One (1) 10' Ladder
- Rubber Mallet
- Paintable (clear) silicone sealant with caulk gun
- $\frac{5}{8}$ " J-bolts
- $\frac{5}{8}$ " Leveling Nuts
- 2 Double Columns
- 1 Left Boom
- 1 Right Boom
- 2 Truss Connectors
- 3 Purlin Beams
- (4) $\frac{1}{2}$ " diameter x 4" Bolts
- (4) $\frac{5}{8}$ " diameter x 4" Bolts
- (4) Lock Washers
- (4) Nuts
- (4) Flat Washers
- 1 Fabric Cover
- 1 can Touch Up Spray Paint
- Blueprints/Engineering Plans (custom units only)

Site Preparation

Step 1: Footings Preparation

- Confirm precise location of unit.
- Ensure that your site is clear.



- Review footing details[†].
- Locate footing positions & mark.
- Layout of your unit at the site.



A final inspection of the site is recommended.

- Check footing details[†] for the correct depth, width & length.
- Dig footings.

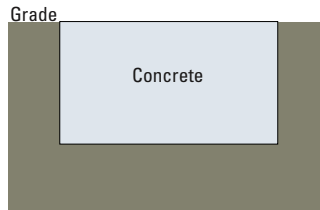


Remember that the depth or height of the footing may vary depending upon the grade of your installation site.

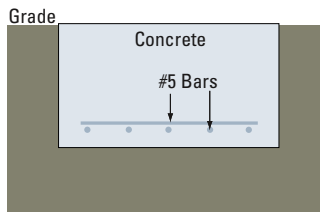
- Check all footings & make depth adjustments for the grade of your site.



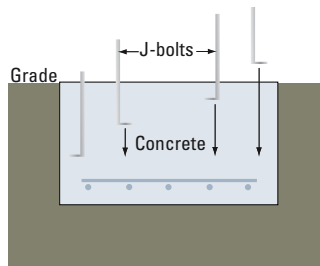
Step 2: Pouring the Footings



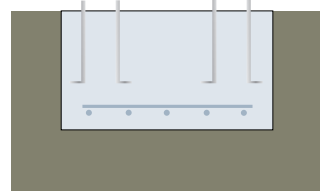
- Side View of grade & footing. (See Appendix)



- Insert (5) #5, 3000 PSI Bars into concrete 3" from bottom of footing.



- Align template to footing.
- Insert $\frac{5}{8}$ " J-bolts into wet footing where indicated by the template leaving 2" above grade.



Remember that the depth or height of the footing may vary depending upon the grade of your installation site.

[†] Footing details are found in the back of this guide.

Site Preparation

Step 2: Pouring the Footings

- Surface should be level and flat.



- You may bring each footing back to original grade.
- Clean concrete splatters & residue from the posts & footings.



Allow concrete to cure 24-48 hours before proceeding with the construction of the structure.

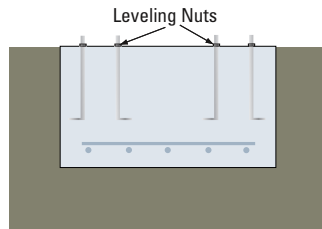
Erecting the Steel Frame

Step 1: Double Column Installation

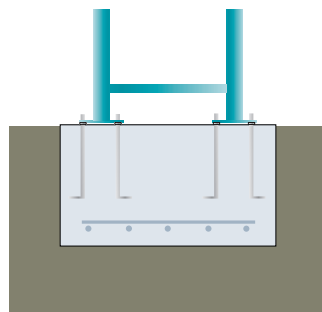
New Footing Detail

- Screw $\frac{5}{8}$ " leveling nuts onto j-bolts.

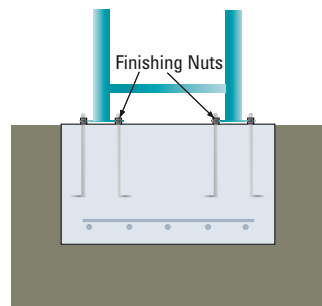
Note: Bolts used in surface mount can be used in lieu of j-bolts.



- Gently place one (1) double column onto the leveling bolts.

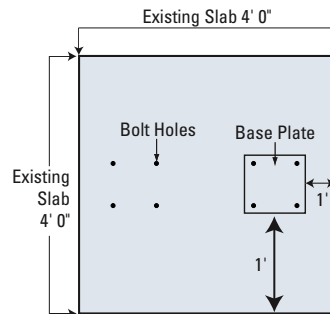


- Secure finishing nuts to j-bolts.

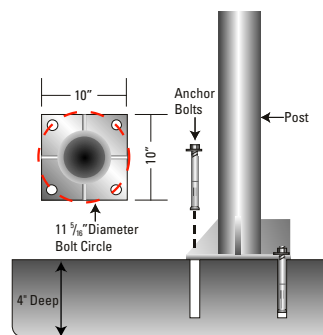


Proceed to Step 2, on page 8.

For Surface Mount



- Check your concrete pad against the specifications in your plans/blueprints
- Existing slab should be at least the same size as the shade structure +20% in area and 4\" thick. It should extend 1' beyond each side of base plate.



- Drill holes according to specifications for your unit. Should look similar to image at left.
- Insert an anchor bolt into each hole.
- Attach a leveling nut to each anchor bolt.
- Secure column to anchor bolt with a finishing nut.
- Repeat for each column.

Proceed to Step 2, on page 8.

Erecting the Steel Frame

Step 2: Attaching Booms



- Use crane or lift to load boom onto top of double column.



- Have someone help guide the boom onto the double column.



- Insert bolts and tighten nuts.
- Repeat process for each boom.

Erecting the Steel Frame

Step 3: Attaching Beams



Assembled frame.



- Attach center purlin post to the apex of the frame.



- Starting with the purlin connector that is the longest, slide the purlin post into position.



Close-up of the purlin connector joint.

Erecting the Steel Frame

Step 4: Attaching to Posts



- Slide in the shorter side of the purlin post.
- Pull back until you align the bolt holes.

Warning: Do not stand under the ridge and hip beams while being raised. *Wear your hard hat at all times.*

Installing the Fabric Cover

Cautions

Warning: While installing the fabric cover watch for the following...

Do not pull fabric cover at sharp angles.

If fabric cover binds, *do not* continue to force pull.

Watch for anything else that might damage the fabric cover.

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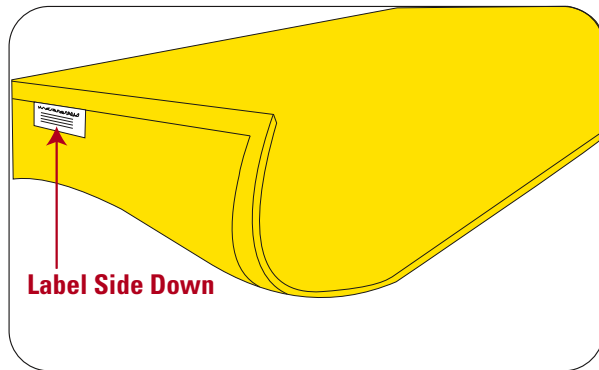
Installing the Fabric Cover

Step 1: Setting Up the Cover



- Carry the fabric cover to the installation site!

Warning: Do not drag the fabric cover, it will damage the material.



- Unfold the fabric cover, on the ground, with *label side down*!



- Use your silicone lubricant spray on the channel tracks to ease the threading of the fabric cover through.



You will need **4** people to assemble the cover.

- Starting at the front, slide cover gently up to the steel frame, from both sides equally.

Installing the Fabric Cover

Step 2: Fitting the Cover



- Slide cover on the patented channel track starting with one of the purlin sleeves.



- Continue sliding the fabric through the track until you reach the apex of the frame.
- Slide the fabric over the center purlin and back into the channel track.



- Continue sliding the fabric through the channel track until you reach the rear purlin post at the back of the unit.



- Slide the rear purlin post through the fabric sleeve and attach to the frame.

Installing the Fabric Cover

Step 2: Assembly onto Frame



- Align bolt holes of purlin and truss connector.



- Tighten the bolt on the purlin post.



- Make sure the bolt head faces to the outside of the unit and close the velcro pocket.
- Repeat for front.

Completed Inspection



- Before leaving an installation, inspect the structure to see that it complies with all installation procedures & has no damage.
- Complete any house-keeping—please dispose of all packing materials.

Congratulations! By following the recommended installation procedures, you have completed another successful Sunguard Shade Structures installation.

Cover Removal & Maintenance of the Shadow Wing

Cover Removal

Standard Units are *not* designed for snow loads; therefore, you must remove the covers before the winter season begins.

The seams in Sunguards are designed as a fail-safe to burst when wind loads exceed 75 mph. If high winds are forecast in excess of 75 mph, please remove the cover.

To ensure the maximum years of enjoyment guaranteed by Sunguard's Warranty, please take 20-30 minutes to complete the following before the winter season begins...

Manpower Needed: Depending upon the size of the unit, usually one (1) person can remove the cover.

Example: a 20'x20' cover will weigh 10 pounds.

If there is already snow on the cover, please try to push off as much as possible before removing!
DO NOT WALK ON COVER!

Step 1: Remove front purlin post from boom connectors.

Step 2: Remove front purlin post from purlin sleeve of fabric.

Step 3: Slide canopy out of channel.

Step 4: Roll fabric around back purlin post.

Step 5: Secure fabric to back purlin post with ties.

Step 6: Secure purlin post with fabric for duration of inclement weather.

An example of what happens when a cover is not removed before the snow season.



Cleaning

Sunguard suggests cleaning any soot or grit from the cover at least once a year to help maintain its vibrant color. If you live in a snow area, you could schedule your cleaning around the same time as you take off the cover for winter storage.

Cleaning may be done with a mild liquid dish washing type detergent and a broom (if the cover is already removed from the unit); or a hose system used for washing external windows. Hose down and let dry before folding to prevent mildew.

Steel Maintenance

Sunguard suggests cleaning the steel of your unit at least once a year, ideally during cover removal or re-installation.

Cleaning may be done with a mild dish liquid and a sponge.

Check for any areas that may need a touch up of paint. Touch up paint is included with your unit in a matching color, silver if your unit is galvanized. Replacement cans of touch up paint for **Black**, **white** and **silver** (galvanized) units can be purchased at your local hardware store. **For all other powder coat colors**, please call us at **1-800-319-1010**.

Appendix: Footing Details

