



Retractable Roof Installation Guide

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Introduction

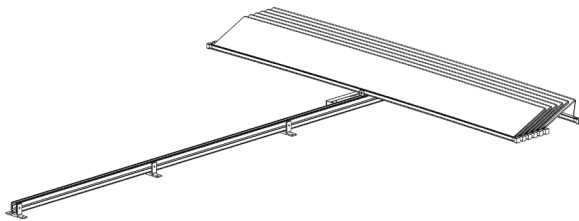
Objective

To provide clear and concise installation steps for your ShadeFX Retractable Roof. Installing your Retractable Roof in accordance with this guide will ensure a successful deployment of the system.

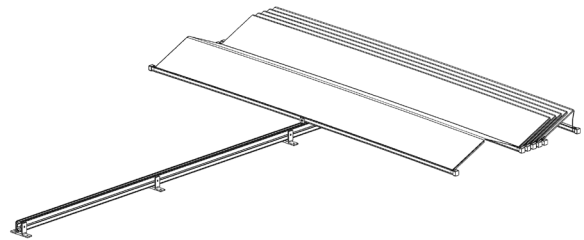
How it Works

Retractable Roofs are comprised of two main assemblies – drive beam and roof. All ShadeFX systems utilize the patented single-track drive system. Fabric panels of the roof assembly are extended or retracted as the lead carrier and wing travel along the drive beam. Retractable Roofs are only available in motor-driven applications. The images below demonstrate the extension of a Retractable Roof from its retracted position.

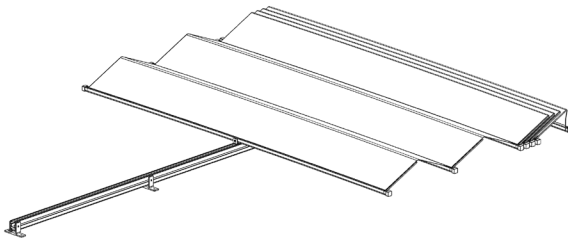
Retracted Roof



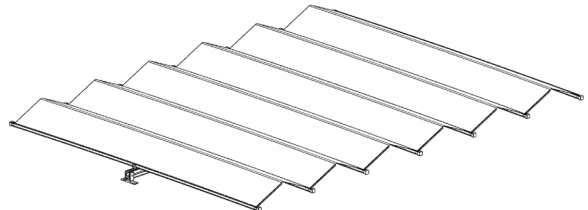
Extending Lead Carrier



Engaging Second Wing



Extended Roof



The Importance of Proper Installation

Proper installation will preserve the life of your ShadeFX Retractable Roof. Inadequate installation will result in avoidable and expedited wear on the system's components.

The installation instructions outlined in this guide are intended to assist with the successful deployment but are not absolute. You may receive project-specific instructions from ShadeFX.

It is recommended that a complete review of the installation guide be conducted prior to installation. If there are questions regarding installation that are not addressed in the guide, please contact ShadeFX before continuing.

Proper Handling

Proper care must be taken when handling the product during installation as contact with hard, sharp or abrasive surfaces could result in deformation, scratches or rips in the fabric and components of the system.

It is important to handle your roof assembly with care, especially when lifting the roof onto the structure. It is recommended to work in a group of at least three people.

Special Considerations

Mounting Structure

ShadeFX Retractable Roofs can weigh more than 200lbs depending on their size. The structure that the ShadeFX system will be mounted to must be capable of supporting the weight load of the system. Before installation, identify the material of the structure. Depending on the material type, certain tools (drills, drill bits, etc.) may be required to ensure that the system is adequately secured to the structure.

Training and Compliance

Most installation work is conducted above ground on a ladder or hoist. As such, working-at-heights training is strongly recommended. Depending on the jurisdiction, licensing or regulatory requirements may apply.

Questions

ShadeFX Retractable Roofs are a unique product with limited comparable offerings. Whether you are an experienced contractor or homeowner installing the system for the first time, questions may arise

ShadeFX Canopies: (855) 509-5509

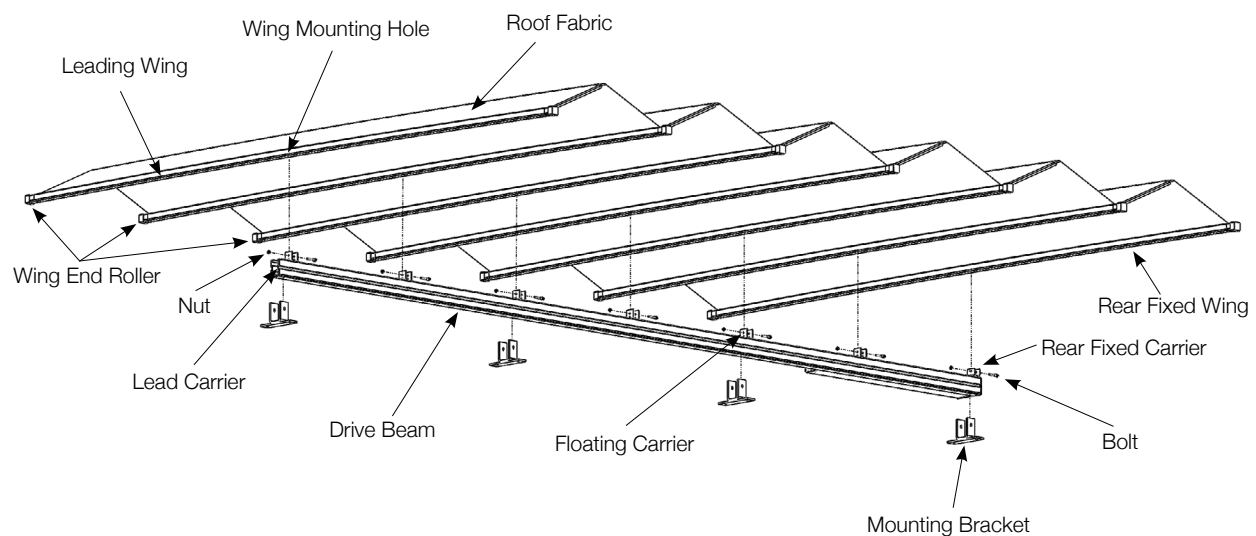
Pre-Installation

The pre-installation section is intended to educate the installer of the various components of the system, the tools recommended for use in installation and the applicable hardware that may be included with the roof.

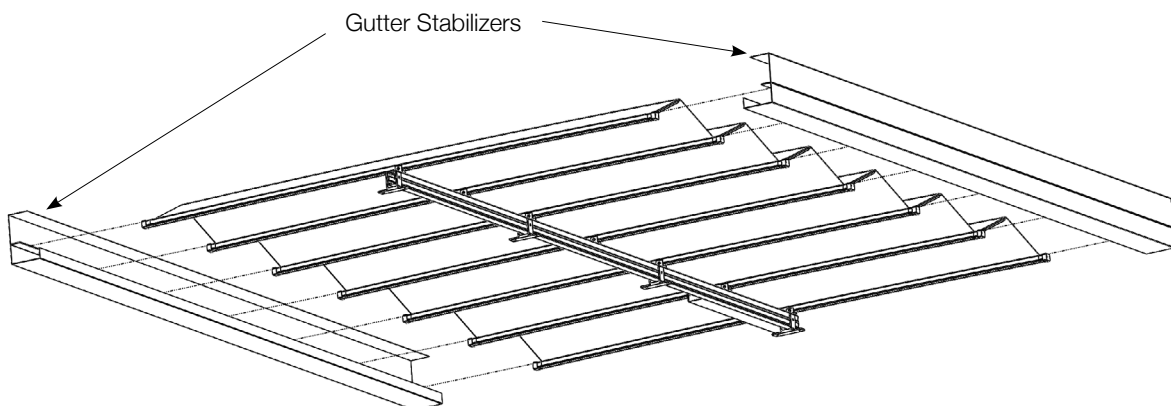
Each ShadeFX Retractable Roof will include a drive beam, roof, stabilizers and hardware. Please note that stabilizers play a vital role in the installation of the roof and are explained in further detail later in this guide.

System Components

Drive Beam and Roof



Retractable Roof Stabilizers



Recommended Tools

The tools listed below are recommended to facilitate an efficient and effective installation. Certain tools may be substituted.

- Cordless Drill(s)
- Cordless Impact Driver(s)
- Stepladder(s) and/or Scissor Lift(s)
- Material Lift (manual)
- Quick-Trigger Bar Clamps (x4 min.)
- Tape and/or Laser Measure
- Level
- Extension Cord(s)
- 7/16" Wrench
- 7/16" Nut Driver Bit(s)
- 5/16" Nut Driver Bit(s)
- 3/16" Drill Bit(s)
- Chalk and/or String Line

Hardware

The following is a list of the hardware included with your Retractable Roof to be used during installation:



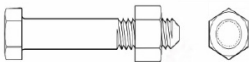
Wood Screw
(if applicable)



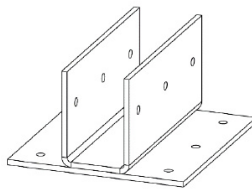
Self-Drilling Screw
(if applicable)



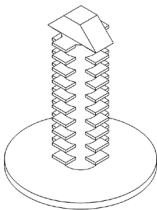
Remote



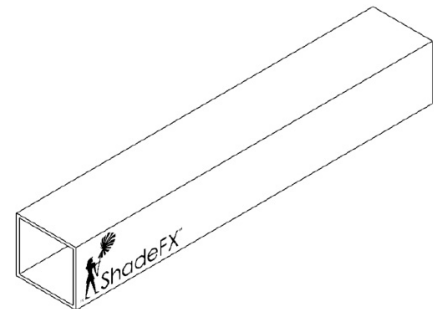
Bolts: 1 1/2" and 3/8" lengths



Mounting Bracket
(Bracket dimensions
vary by project)



Polycarbonate Pin



Cardboard Motor Cover

Installation

The following installation instructions are intended to assist with the installation of the Retractable Roof and should not be used as a guide to install any form of Retractable Canopy. Please contact ShadeFX if you require other installation instructions.

This installation consists of three main steps:

1. Mounting the drive beam
2. Attaching the roof to the drive beam
3. Applying the stabilizers

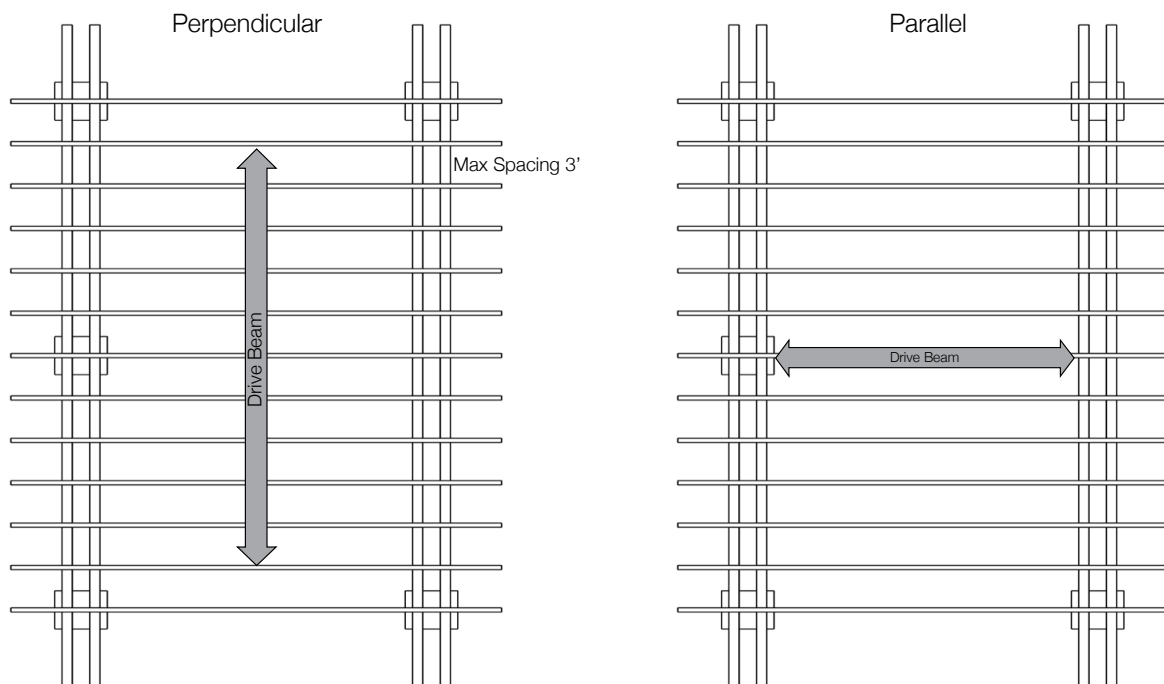
Certain steps will vary depending on the roof options selected as well as the material of the structure to which the roof will be mounted. Each step is laid out for the most common procedure with supplementary notes for various customizations and options.

STEP 1: Mounting the Drive Beam

A) Drive Beam Orientation

Note: Do not dispose of the cardboard motor cover when unpacking the drive beam.

The drive beam can be mounted either parallel or perpendicular to the structure's rafters. Orientation is application dependent and is specified in 'Appendix A – Roof Information'.



The span between the rafters should not exceed 3' and the rafters should be at least 1.5" wide.

The rafter/beam on which the drive beam will be mounted should be at least 4" wide.

If the application requires back-to-back stabilizers, 6" wide beams are required to support the G-channels or Gutter stabilizers.

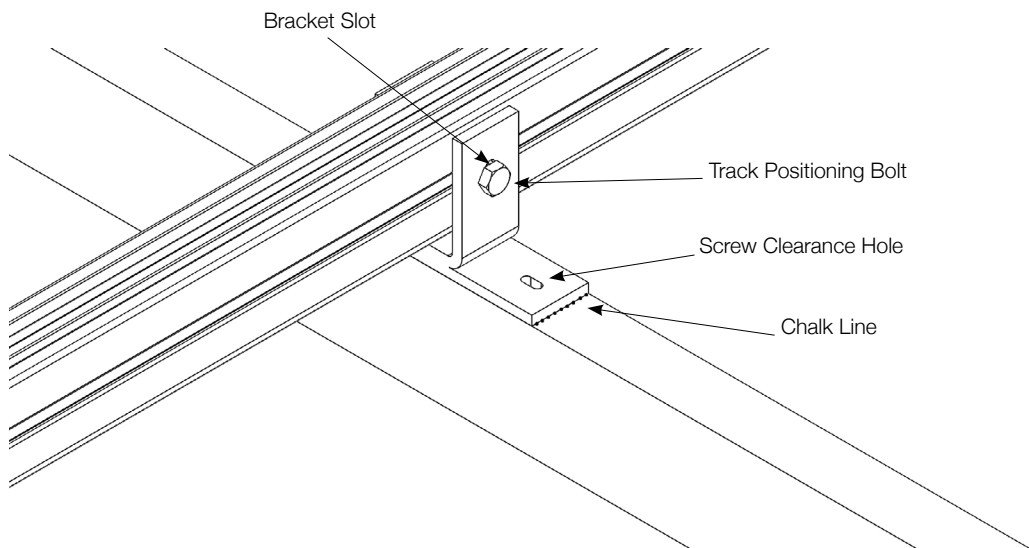
B) Marking the Drive Beam Location on the Structure

A schematic of **Step 1B** is presented on Page 9 of this guide.

Ensure that the surface (or surfaces) to which the drive beam will be mounted are flat and level.

To determine the position of the drive beam on the structure, measure the width of the structure and mark the center of the structure on which the roof will be mounted.

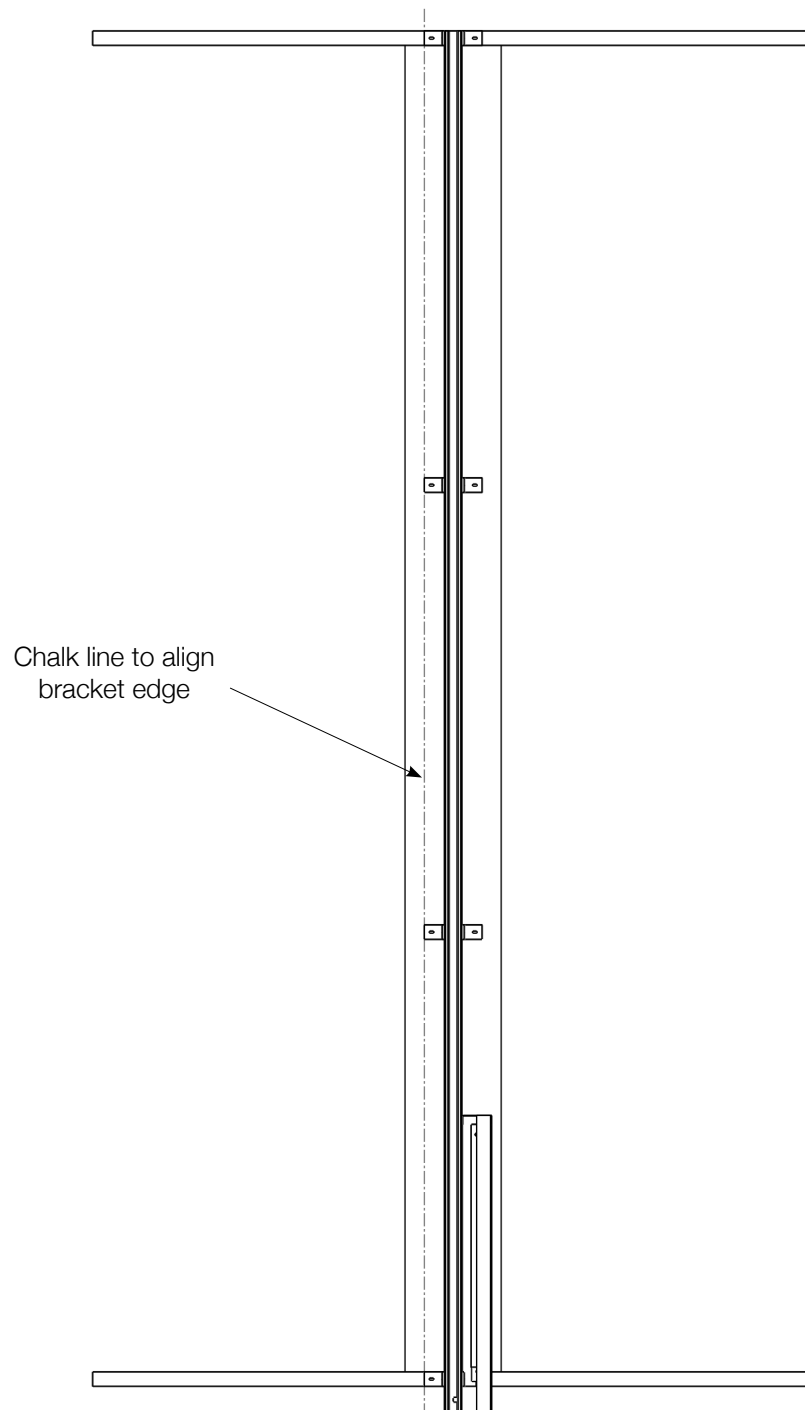
If your Retractable Roof is mounting **perpendicular to beams**: From the center mark, measure 3" to the left (away from the motor) and mark it on each beam. Repeat this procedure at both the front and back of your structure. Draw a straight chalk line using the 3" marks. Align left edge of mounting brackets with previously drawn chalk line. Reposition the mounting brackets to accommodate for the rafter spacing of the structure. The bolts at the side of the drive beam can be loosened using a 7/16" wrench, and **the bolts should not be turned more than one revolution.**



Once the mounting brackets are positioned on their respective rafters as shown above, you are ready to move to **Step 1C** – attaching the drive beam to the structure.

If your Retractable Roof is mounting **parallel to a beam**: From the center mark, measure 2" to the left (away from the motor) and mark it on the beam. Repeat this procedure at both the front and back of the structure. Draw a straight chalk line using the 2" marks. Align left edge of mounting brackets with previously drawn chalk line. This will ensure that the drive beam is centered on the structure when standard Retractable Roof mounting brackets are used.

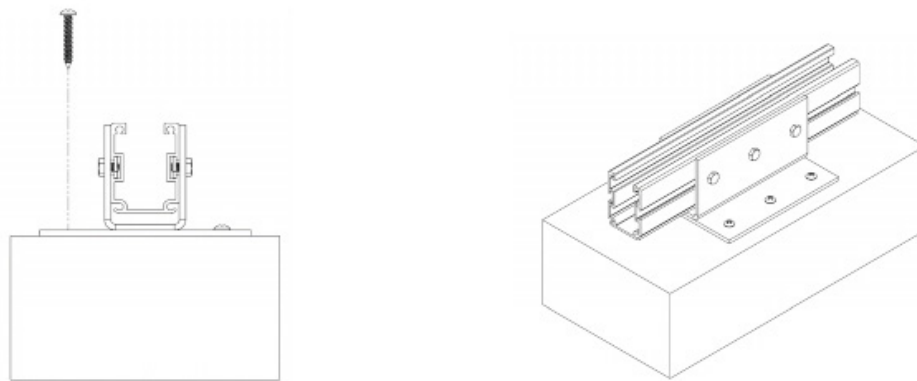
Step 1B



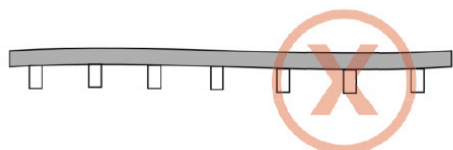
C) Attaching the Drive Beam to the Structure

After aligning the left edge of the mounting brackets on the structure, use quick clamps to hold the track and mounting brackets before drilling into the structure. Clamp the track instead of the mounting brackets to avoid obstructions when attaching the mounting brackets to the structure.

Fasten all screws through the clearance holes. Once the mounting brackets are attached, remove the clamps and lift up the track so that the bolts at the side of the drive beam are roughly in the center of the mounting bracket slot and re-tighten the bolts using a 7/16" wrench.

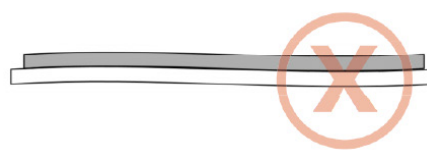
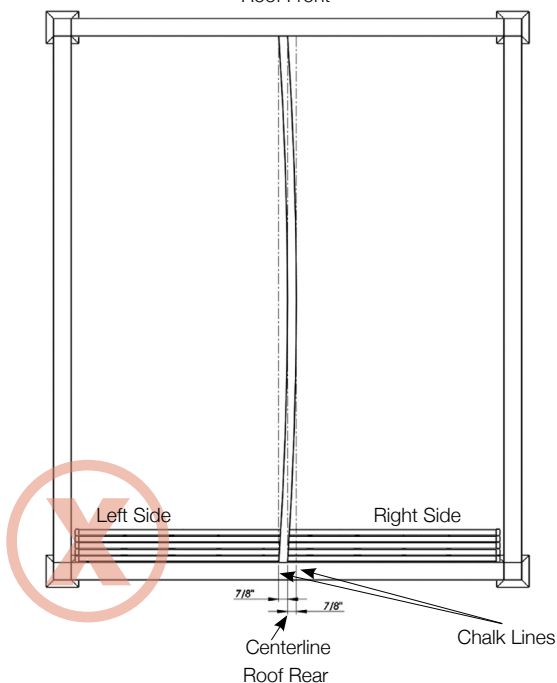


Note: It is important that all the mounting brackets are on a level surface. Otherwise, it will not operate properly and will cause damage to the system.



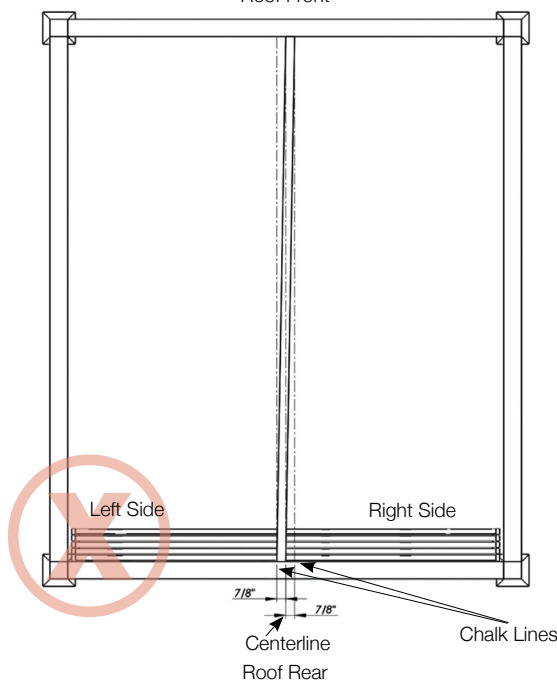
Curved Drive Beam

Roof Front



Misaligned Drive Beam

Roof Front



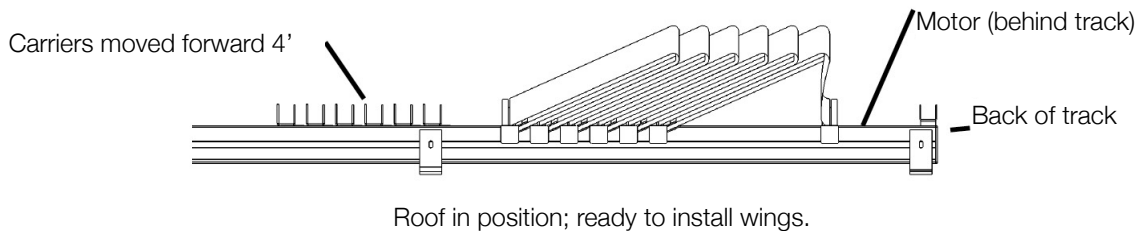
STEP 2: Attach the Roof to the Drive Beam

Note: Do not remove roof from the bag until roof is on top of drive beam.

* Use a material lift/hoist wherever possible. Whenever the roof needs to be lifted by hand, a group of three or more is required. One person on each side of the roof assembly to lift and deliver each wing to the third person, who will be attaching the wings to the carriers.

A) Getting the Roof Assembly into Position

Plug in the motor and send out the lead carrier roughly 6 feet from the back of the drive beam. Push the wrapped carriers out until the last movable carrier passes the motor. Place the cardboard motor cover in between the fixed carrier and the wrapped carriers. Identify the lead wing through the bag and bring up the roof assembly and place it on the cardboard such that the lead wing is facing forward. Unwrap the roof with care and move to **Step 2B**.



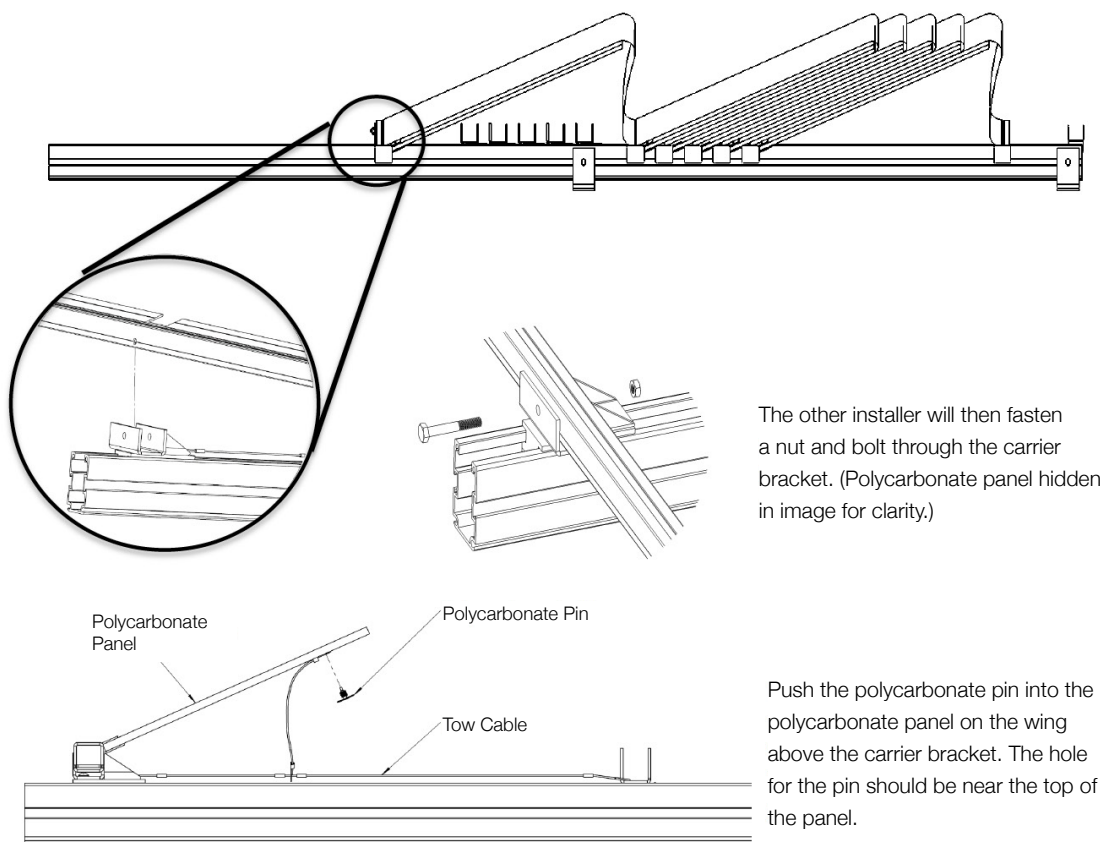
If there is no access to deliver the roof directly into the position shown above, plug in the motor and send out the lead carrier roughly 4 feet from the back of the drive beam. Push the wrapped carriers out until the last movable carrier passes the motor as shown in the image above.



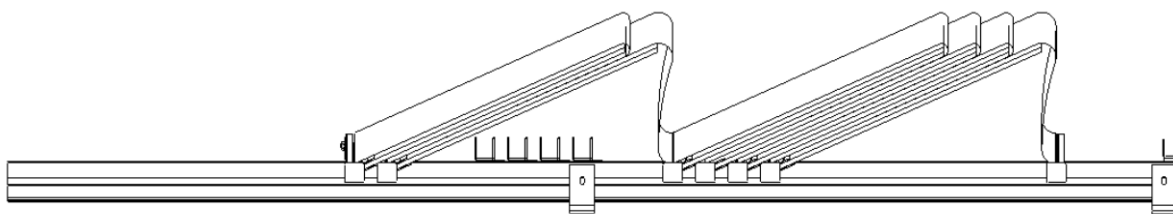
Place your cardboard motor cover on top of the front side of the drive beam. Bring the roof assembly up onto the cardboard. Position the roof assembly so that labelled lead wing is the furthest wing from the carriers. Slide the roof assembly (with the cardboard cover) to the rear side of the structure while making sure the wing mounting holes are centered with the track so that the roof will not fall while sliding. Once it reaches the extended lead carrier, lift the roof over the lead carrier and wrapped carriers. Reposition the cardboard in between the fixed carrier and the wrapped carriers. Place the roof on the cardboard and unwrap the roof. With the roof in position, you are now ready to install the wings.

B) Installing the Wings

Two installers should position themselves eye-level with the carriers, on either side of the track. Identify the labelled lead wing that contains a polycarbonate panel. One installer needs to align this wing into the lead carrier bracket, ensuring that the wing-mounting hole lines up with that of the carrier bracket. If the lead carrier is out of reach of the lead wing, move the carrier back until within reach.



Repeat the procedure until all wings are attached to the carriers. Adjust the lead carrier position and slide the rest of the roof forward as needed when repeating the process. Do not forget to attach wing into the last fixed carrier.

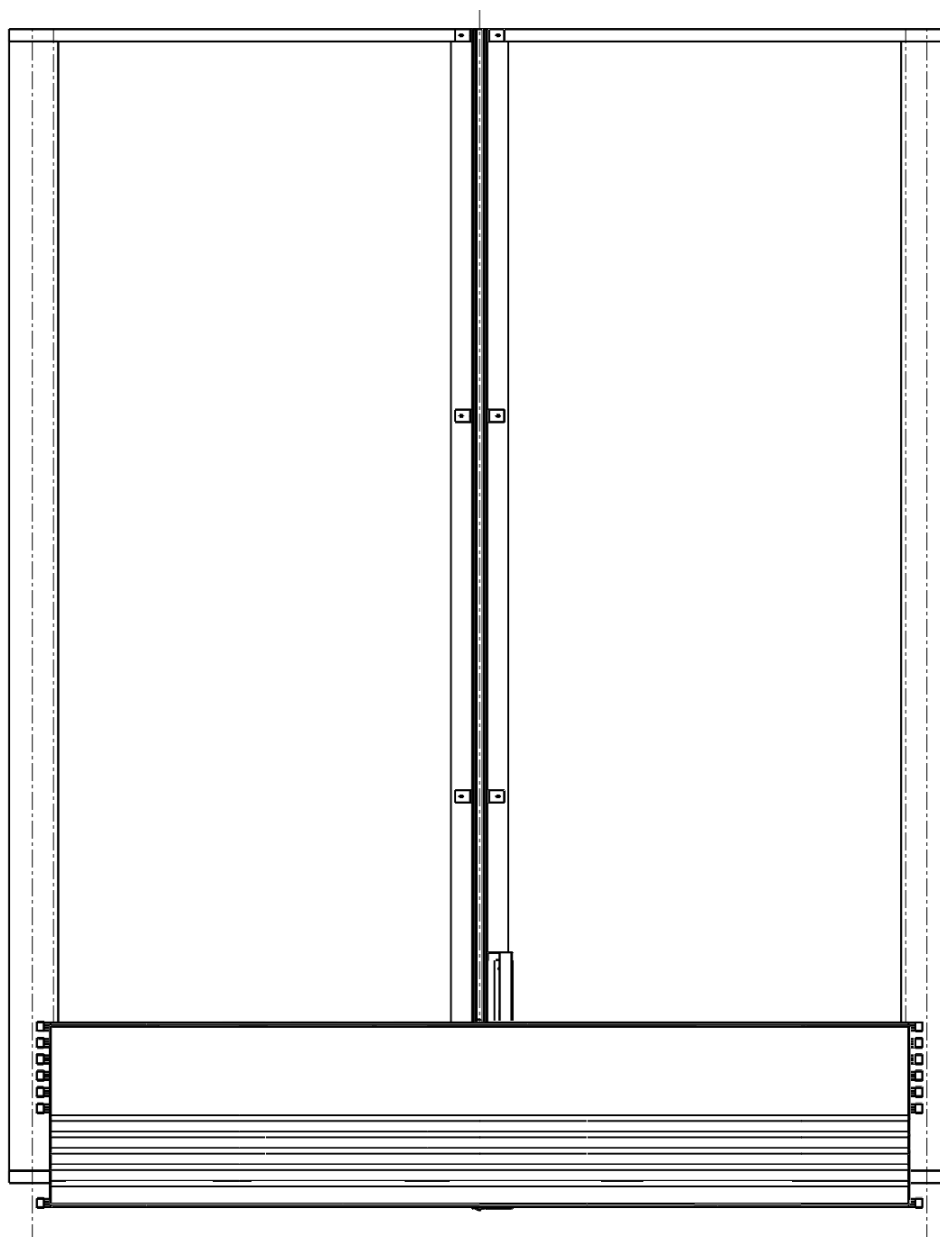


STEP 3: Applying the Stabilizers

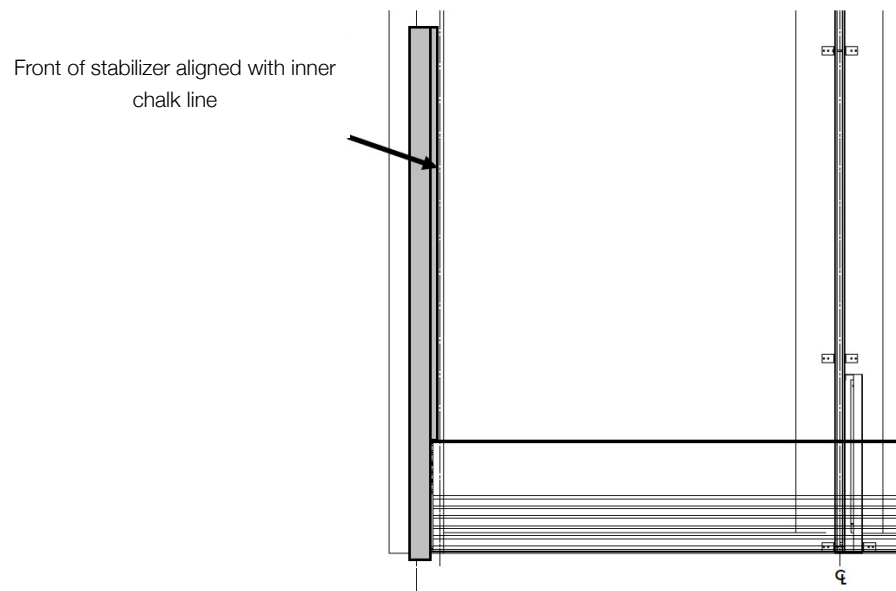
A) Stabilizer Position

ShadeFX designs your Retractable Roof mounting brackets and drive beam height for your specific application. This allows all parts of the roof to be mounted on the same plane.

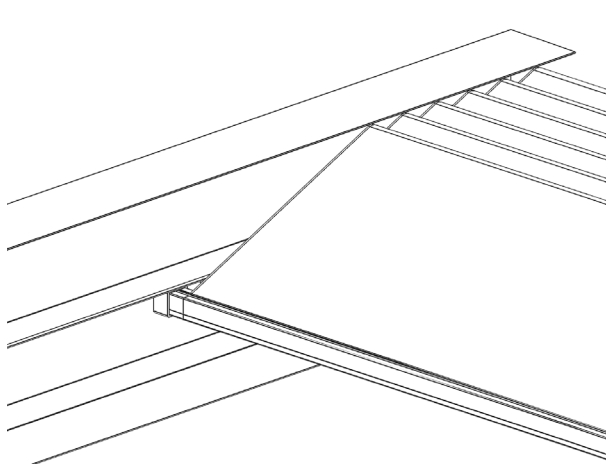
Note: These steps to position the stabilizer are best suited for the vertical attachment applications. Horizontal attachment applications should be discussed with ShadeFX. On your structure, measure and mark the 'Outside System Dimensions' given in **Appendix A** about the centerline of the drive beam. Create a second mark 4" inside of this mark for G-channel stabilizers or 6" inside of this mark for gutter stabilizers. Please refer to Appendix A for your stabilizer type. Repeat the same procedure at both the front and rear of the roof. Draw two chalk lines that are parallel with the drive beam using the previously created marks.



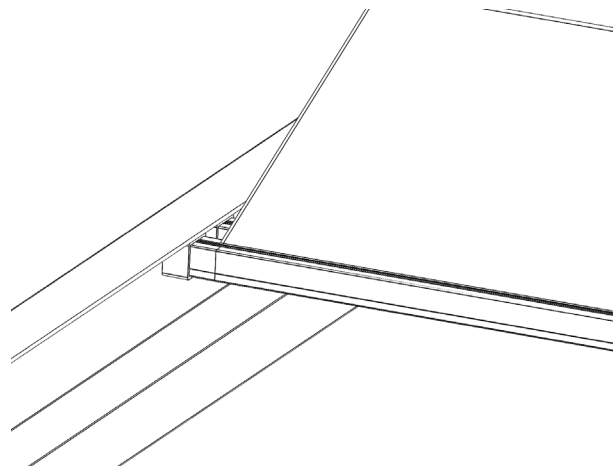
Mount the stabilizers by aligning the front of the stabilizers with the inner-most chalk lines.



Clamp both stabilizers in place and ensure each wing roller is engaged as shown in the following images.



Wings engaged in Gutter stabilizer



Wings engaged in G-channel stabilizer

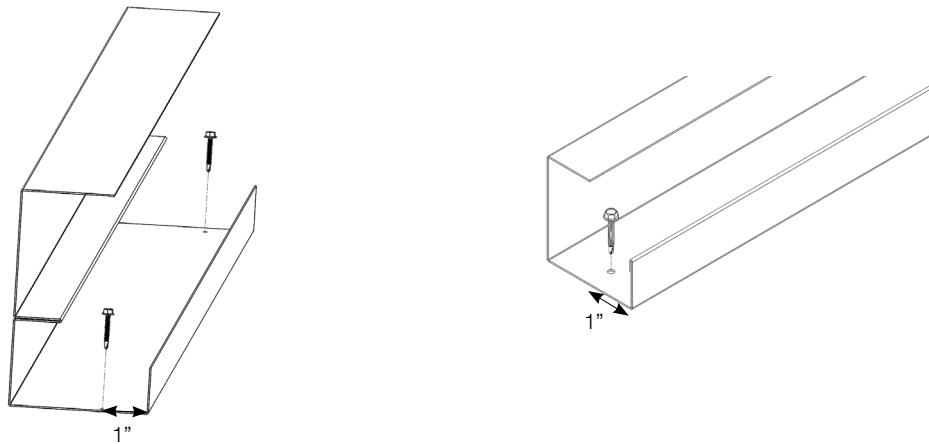
Extend and retract the roof as a test run to ensure smooth operation.

It is of the utmost importance that the stabilizers are properly located. Improperly installed stabilizers will result in operation complications and unavoidable damage to various components of the roof system.

B) Securing the Stabilizers

Stabilizers can be attached in two different orientations: fastening vertically or horizontally through the stabilizer walls depending on the mounting structure. Depictions of vertical attachment as it pertains to both the Gutter and G-Channel Stabilizers are shown below.

It may be difficult to fasten the screws when attaching vertically on the center. In this case, measure and utilize 1" distance from the front lip of the stabilizer as a drilling point.



Vertical Attachment of the Stabilizers

Fill with silicone to prevent leakage and oxidation of screws

Tack the stabilizers 1" off from both ends and every 2' or less depending on the rafters of the structure. Remove the clamps and rerun the roof to ensure smooth operation.

Post-installation Considerations

The following section is intended to inform the Retractable Roof user of preventative actions that should be taken to maintain the longevity of the system.

Winter Storage

ShadeFX Retractable Roofs are designed to remain installed year-round.

In cold climates, before winter, clean the roof, tracks, and gutters, allow the system to dry completely, then retract the roof.

Do not operate the roof in freezing temperatures or when snow or ice is present. Damage resulting from operation under these conditions is not covered under warranty.

Before spring operation, clean the roof, tracks, and gutters to remove debris.

Wind

ShadeFX Retractable Roofs are built to withstand high winds but should be retracted in winds exceeding 35mph (56kph). When retracting the roof in windy situations ensure that the roof panels retract correctly and are not blown out of place.

Improper Uses of the Product

Do not hang objects such as light, fans, heaters, lanterns, etc. from any part of the ShadeFX roof or drive beam.

Do not attempt to fix any part of the roof or drive beam without receiving instruction directly from ShadeFX.

Lubricants

Do not apply any kind of lubricants inside the drive beam or on the carriers. The system is designed and manufactured to be lubricant-free.

Appendix A- Retractable Roof Information

Project Name	
ShadeFX Sales Order Number	
Mounting Orientation Relative to Beams	
Recommended Bracket Spacing (Center-Center)	
Gutter Selection	
Wing Width	
Outside System Dimensions	



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