

# QUICK INSTALLATION GUIDE



## Seismic Kit

These specifications and instructions are based on the requirements necessary to restrain the largest Big Ass fan against the lateral acceleration forces experienced during a severe seismic event according to applicable codes. While the components in the Seismic Kit have been specified to resist potential seismic loads, the installation of guy wires is absolutely critical to the success of the design. In all cases, the guy wires must be attached as closely to 45° as possible. Any deviation from this angle must be approved by Big Ass Fans Engineering.

*These instructions were developed to adhere to the International Building Code (IBC 2012), ASCE 7-10: Minimum Design Loads for Buildings and Other Structures, Office of Statewide Health Planning and Development (OSHPD), and the International Code Council. Consult the complete Installation Guide for all other aspects of fan installation.*

### READ AND SAVE THESE INSTRUCTIONS BEFORE INSTALLATION



**TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:**

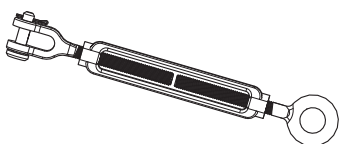
- ⚠ WARNING:** Disconnect power to the installation locations before installing the fan, controller, and Seismic Kit components.
- ⚠ CAUTION:** Guy wires are critical to this installation and must be installed at a 45° angle. If guy wires must be installed at an adjusted angle due to an obstruction, Big Ass Fans must approve the installation of the fan.
- ⚠ CAUTION:** Do not bend the airfoils when installing or adjusting the fan. Do not insert objects between rotating airfoils.
- ⚠ WARNING:** Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction. Incorrect assembly can cause electric shock or damage the motor and the controller.
- ⚠ CAUTION:** The Big Ass Fans product warranty will not cover equipment damage or failure that is caused by improper installation or use.
- ⚠ WARNING:** Installation must be in accordance with the requirements set forth by the National Electrical Code (NEC), ANSI/NFPA 70, and all national and local codes.

## PARTS AND HARDWARE

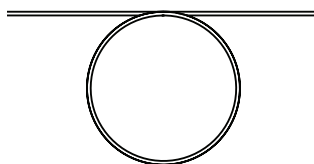
Confirm you have all the parts and hardware needed for installation. If you are missing a part or hardware, contact Big Ass Fans Customer Service. You will only require the parts and hardware needed for your mounting method. For example, if mounting to bar joists, the beam clamps will not be needed and can be discarded. *Note: The drawings below are not to scale. No hardware substitutions are acceptable.*

### Guy Wire Components

*The components included in the Guy Wire Kit are used on all mounting structures (I-beam, bar joist, and concrete).*



(4) Turnbuckles



(4) Guy Wires



(8) Thimbles



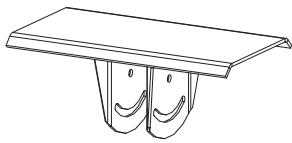
(4) Carabiners



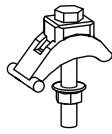
(16) Guy Wire Clamps

## PARTS AND HARDWARE (CONT.)

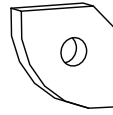
### I-Beam Applications



Upper Mount



(4) Beam Clamps

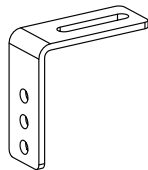


(4) Guy Wire Attachment Brackets

### Bar Joist Applications



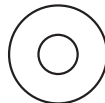
(4) Adjustable Bars



(8) Guy Wire Attachment Brackets



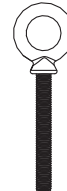
(8) 1/2-13 x 1-1/4" Bolts



(4) 1/2" Washers



(4) 1/2-13 Hex Nuts



(4) 1/2-13 x 4" Eye Bolts



(4) 1/2-13 Nylock Nuts

## PREPARING THE WORK SITE

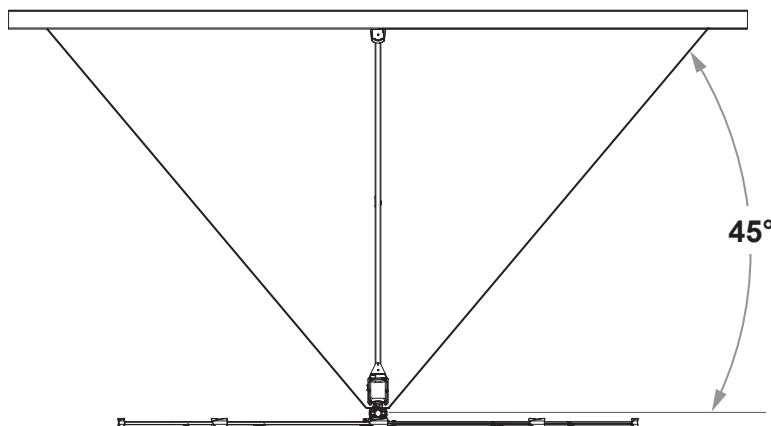
### 1. Determine fan location

The location where the fan is to be installed must adhere to the following guidelines:

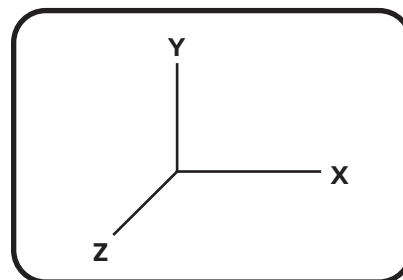
- ☑ If installing the fan on an I-beam, the beam thickness cannot exceed 1-7/16 in. (36 mm), the beam width must be no more than 20 in. (508 mm), and the flange angle must be 15° or less.
- ☑ Ensure all electrical cords and cables will remain unobstructed by the guy wires.
- ☑ The guy wire attachment points must be located at a 45° angle.
- ☑ If installing to concrete, do not install the fan where there is exposed reinforcing steel, spalling or chipping, cracks, discoloration of concrete (i.e. rust stains), or efflorescence. Avoid locations that have a hollow sounding response if tapped lightly with a hammer.

### 2. Determine guy wire attachment points

Before beginning installation, plan where the guy wires will be attached to the mounting structure. Ensure that they will be installed at a 45° angle in both the X-Y and X-Z planes as shown below. If this cannot be achieved due to obstructions, contact Big Ass Fans Engineering to determine alternate guy wire attachment locations. *Note: Fan setup may differ from the illustrations below.*



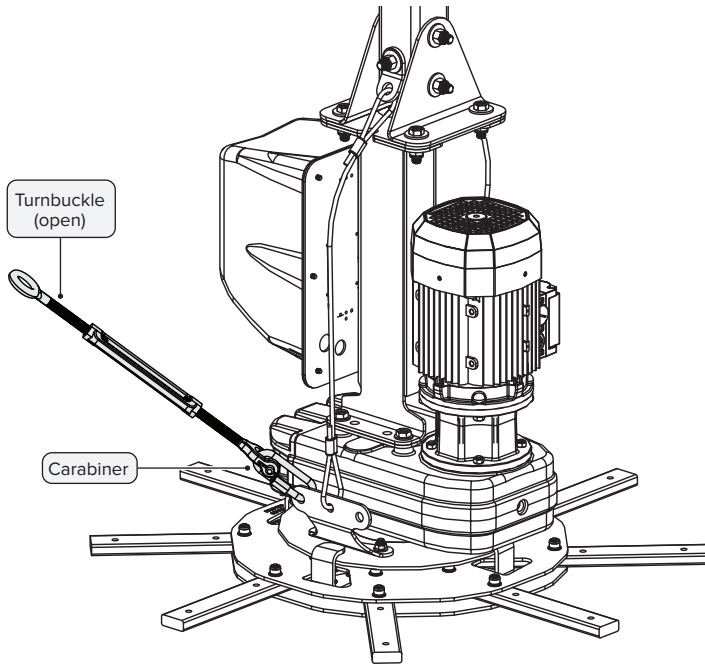
Plane Diagram



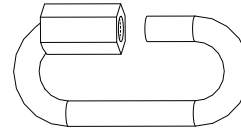
## PREPARING THE WORK SITE (CONT.)

### 3. Attach turnbuckles to main fan unit

Before attaching the turnbuckles, unscrew both ends (eyes and jaws) of the (4) turnbuckles to the open position. Attach the (4) locking carabiners and turnbuckles to the main fan unit. Make sure the carabiner gates are closed. *Note: The turnbuckles can be attached with either end (eye or jaw) to the carabiner.*



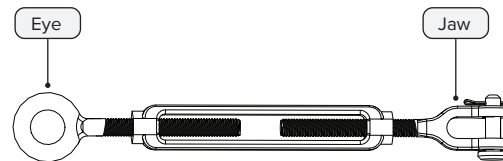
Open Carabiner



Open Turnbuckle



Closed Turnbuckle



### 4. Mount the fan

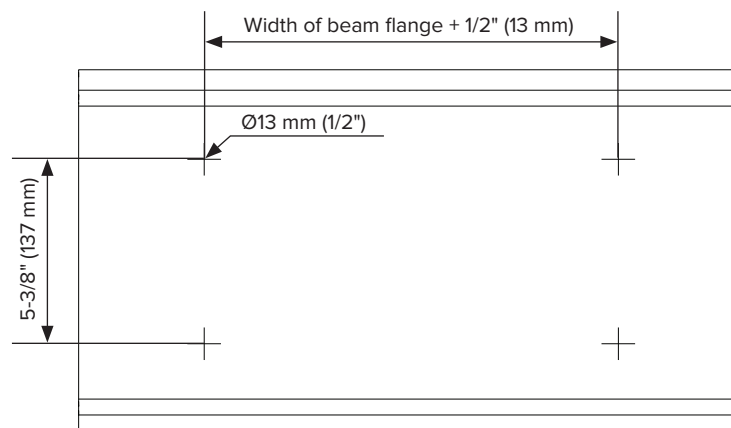
Proceed to the instructions for your required mounting method on the following pages.

## MOUNTING METHOD: I-BEAM

Before beginning, locate suitable guy wire anchor points as described in "Determine guy wire attachment points." Install the guy wire brackets and turnbuckles on the fan before proceeding.

### 1. Prepare upper mount

Measure the flange of the I-beam and add 1/2 in. (13 mm). Drill (4)  $\text{\O}13$  mm (1/2 in.) mounting holes in the upper mount. *Note: The beam width must be  $\leq 20$  in. (50.8 cm).*



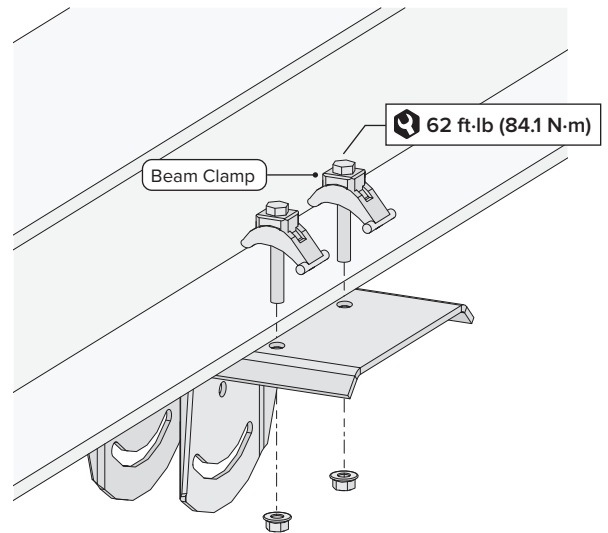
## MOUNTING METHOD: I-BEAM (CONT.)

### 2. Install upper mount and beam clamps

Attach the upper mount to the I-beam using the provided beam clamps. Make sure the beam clamps are oriented as shown with the longer ends toward the edge of the mount.

The beam clamps should be at least 3/4" from the edge of the upper mount, and the beam clamp bolt should be flush with the edge of the beam. **Make sure the bolts are flush to the edge of the beam.**

*Note: Clamps can be used to keep the upper mount in position during installation.*



### 3. Install main fan unit and safety cables

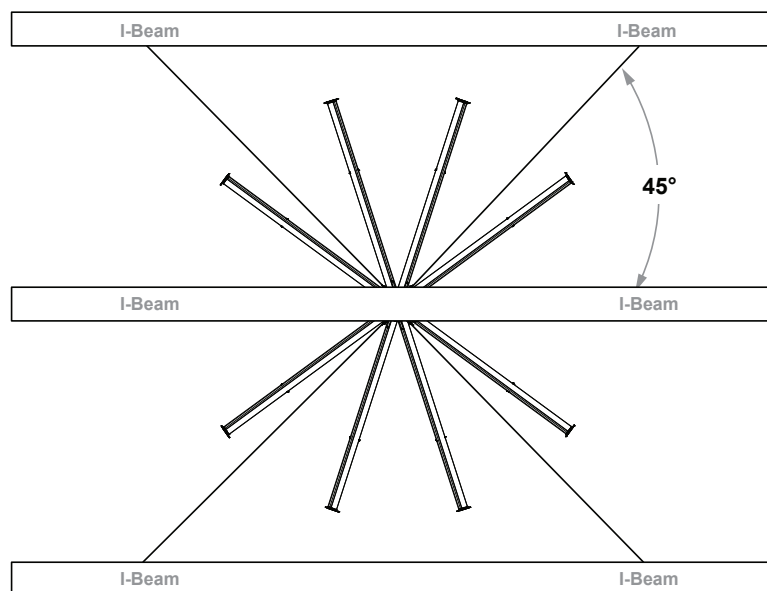
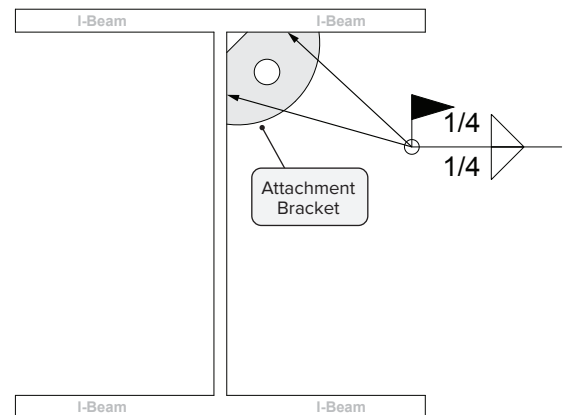
Refer to the fan Quick Installation Guide for instructions on how to install the main fan unit and safety cables. **Return to these instructions after completing the main fan unit and safety cable installation steps.**

### 4. Install guy wire attachment brackets

Weld the (4) guy wire attachment brackets to the I-beams. Make sure the attachment brackets are welded in a location that allows the guy wires to be as close to a 45° angle as possible. **Do not weld the attachment brackets on the lower flanges of the I-beams.**

If a 45° angle cannot be achieved due to obstructions, contact Big Ass Fans to determine alternate guy wire attachment locations.

**The attachment bracket must be welded to the TOP of the beam.**

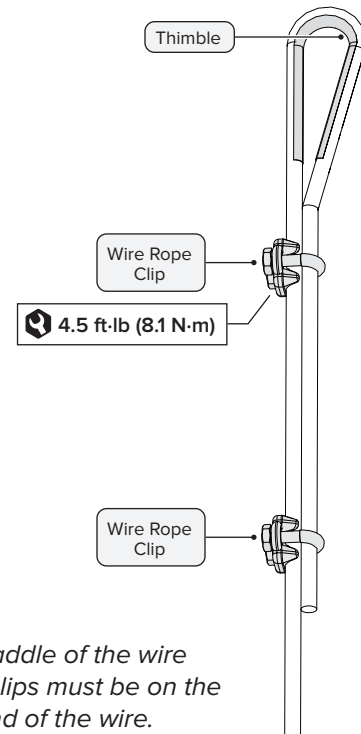
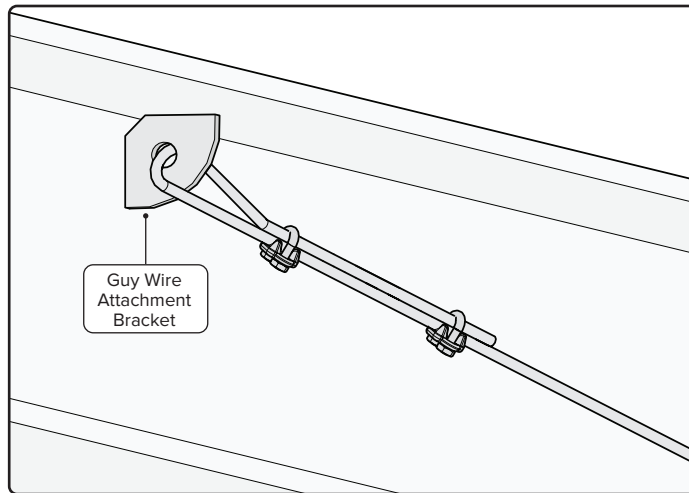


## MOUNTING METHOD: I-BEAM (CONT.)

### 5. Install guy wires

Insert a thimble through the guy wire attachment bracket, and then thread the guy wire through the thimble. Install a thimble around the turnbuckle, and then thread the other end of the guy wire through the thimble.

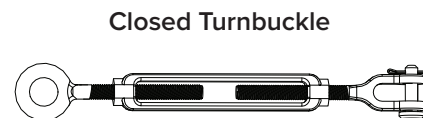
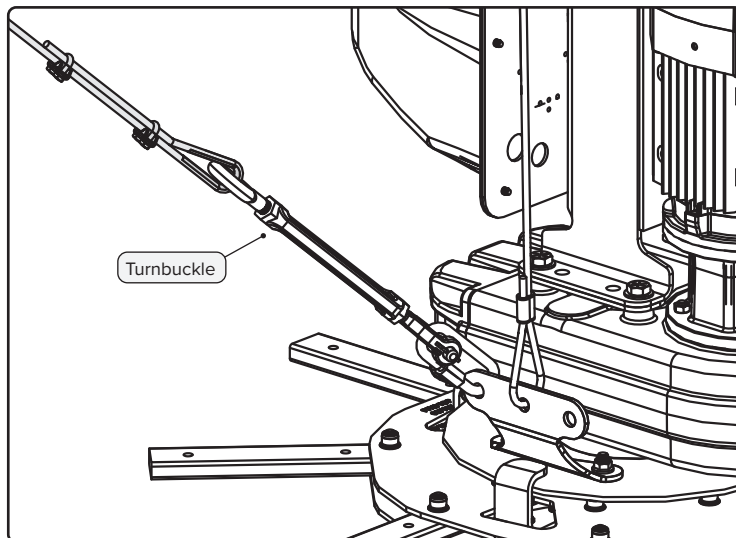
Secure the loose ends of the guy wires with the (2) wire rope clips. Repeat this for all (4) guy wires.



The guy wires should be taut, evenly spaced around the fan, and away from the path of the airfoils. *Ensure all electrical cords and cables are unobstructed by the guy wires.*

Adjust the tension of each guy wire by screwing together both ends of the turnbuckle until it is closed so that the guy wires are taut and the fan hangs plumb to the ground.

**Return to the fan Quick Installation Guide to complete fan installation.**

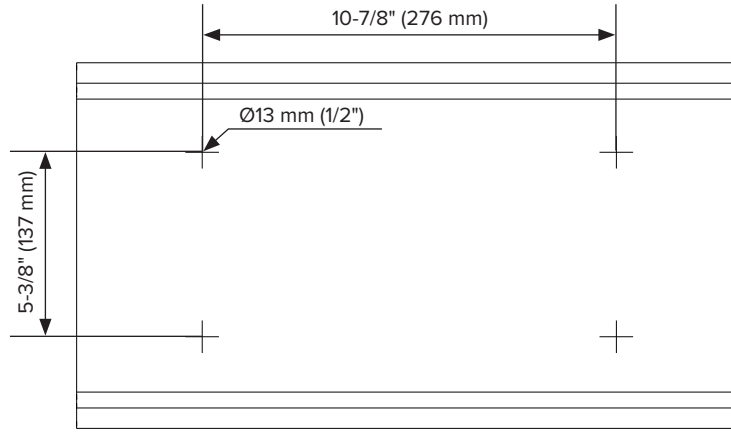


## MOUNTING METHOD: BAR JOISTS

Before beginning, locate suitable guy wire anchor points as described in “Determine guy wire attachment points.” Install the guy wire brackets and turnbuckles on the fan before proceeding.

### 1. Prepare upper mount

Drill (4)  $\text{\O}13$  mm (1/2 in.) mounting holes in the upper mount.

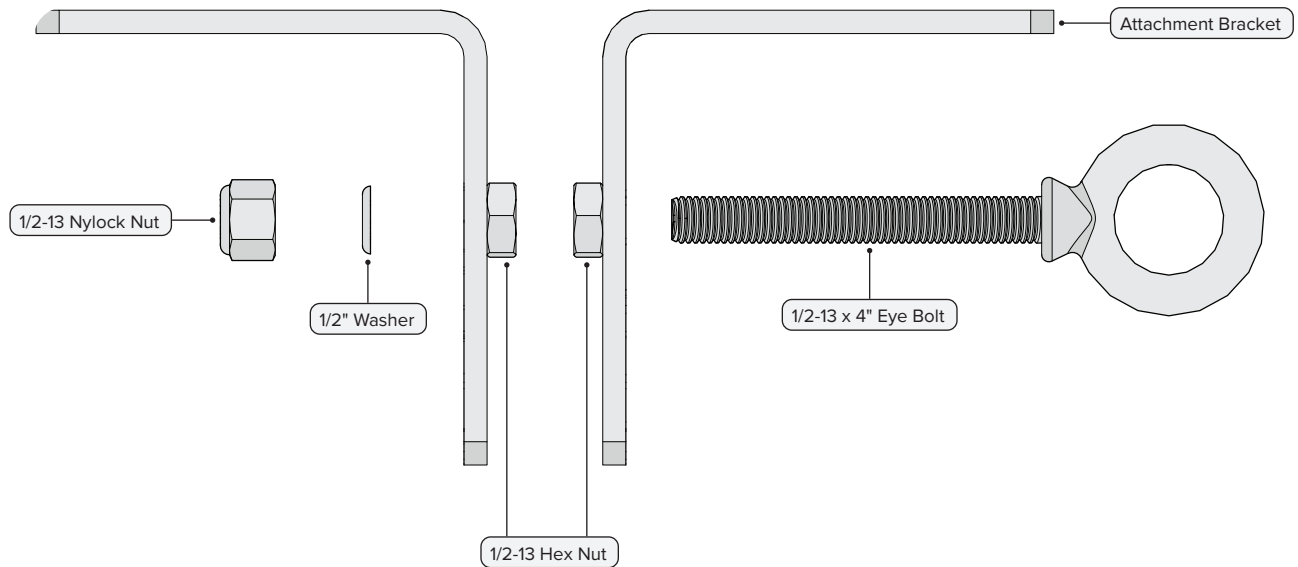


### 2. Install main fan unit and safety cables

Refer to the fan Quick Installation Guide for instructions on how to install the main fan unit and safety cables. **Return to these instructions after completing the main fan unit and safety cable installation steps.**

### 3. Assemble guy wire attachment brackets

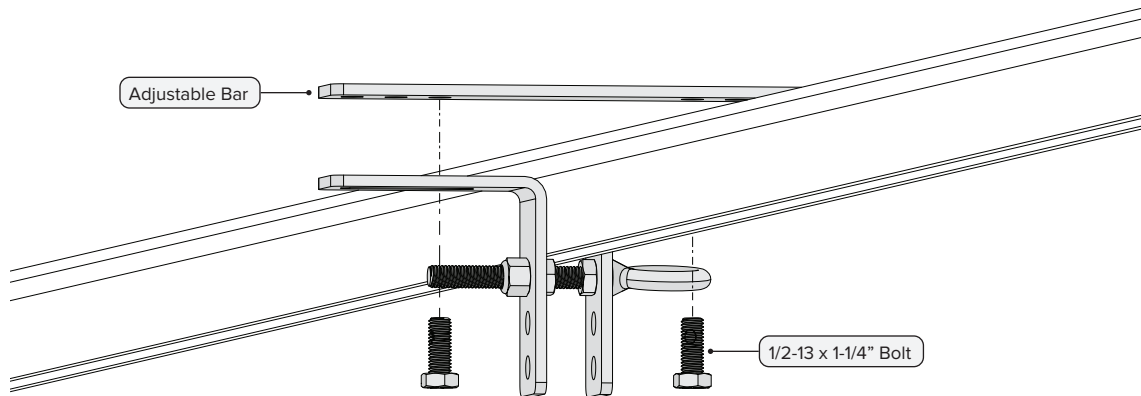
Loosely preassemble the eye bolt to the guy wire attachment brackets. The eye bolt should be inserted through the bolt holes that will be nearest to the bar joist.



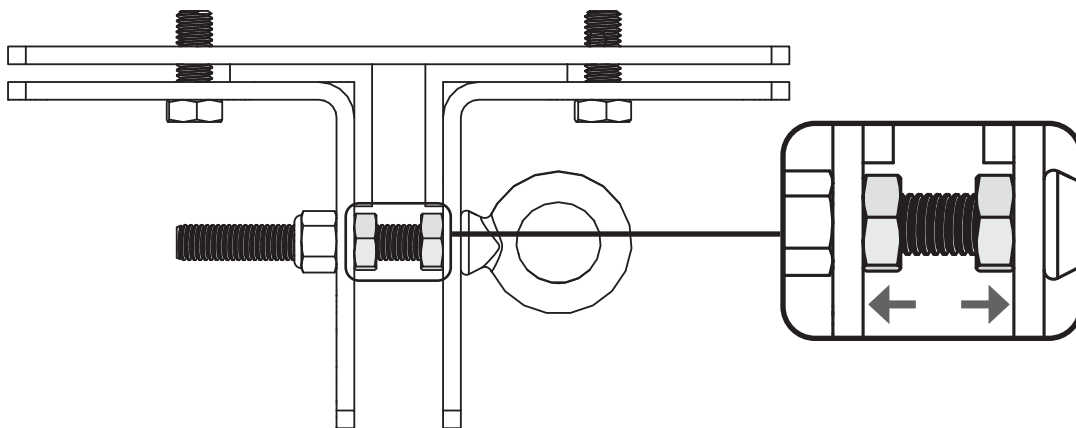
## MOUNTING METHOD: BAR JOISTS (CONT.)

### 4. Install guy wire attachment brackets

At the predetermined guy wire attachment point, secure the preassembled guy wire attachment bracket and the adjustable bar to the top chord of the bar joist with the (2) 1/2-13 x 1-1/4" bolts. The bolt must be installed in the hole nearest to the edge of the bar joist. Tighten the bolts. *Note: The eye of the eye bolt should be on the fan side of the bar joist.*



Screw the hex nuts (from step 3) against the inner edges of the brackets. Ensure all hardware is secure. Repeat these steps at all four predetermined guy wire attachment brackets.

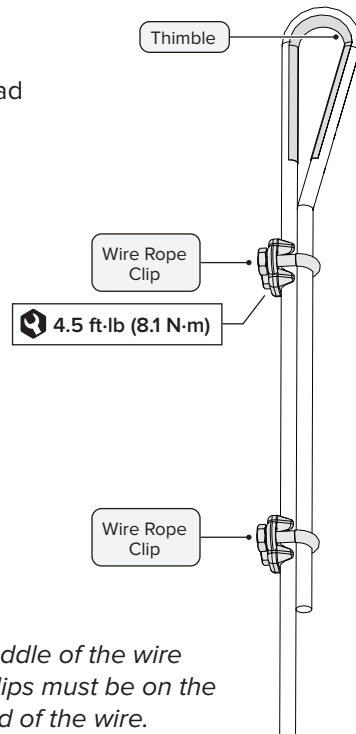
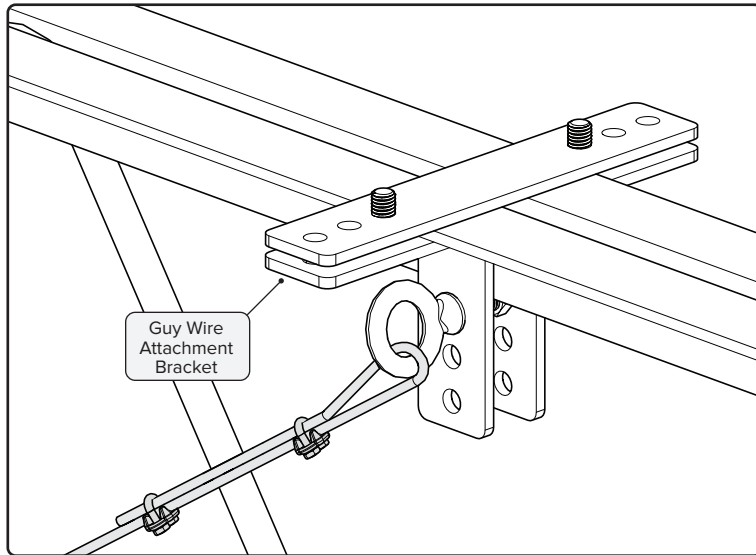


## MOUNTING METHOD: BAR JOISTS (CONT.)

### 5. Install guy wires

Insert a thimble through the eye bolt on the bracket, and then thread the guy wire through the thimble. Install a thimble around the turnbuckle, and then thread the other end of the guy wire through the thimble.

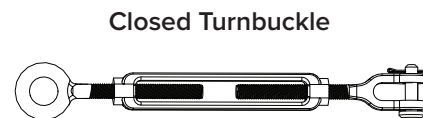
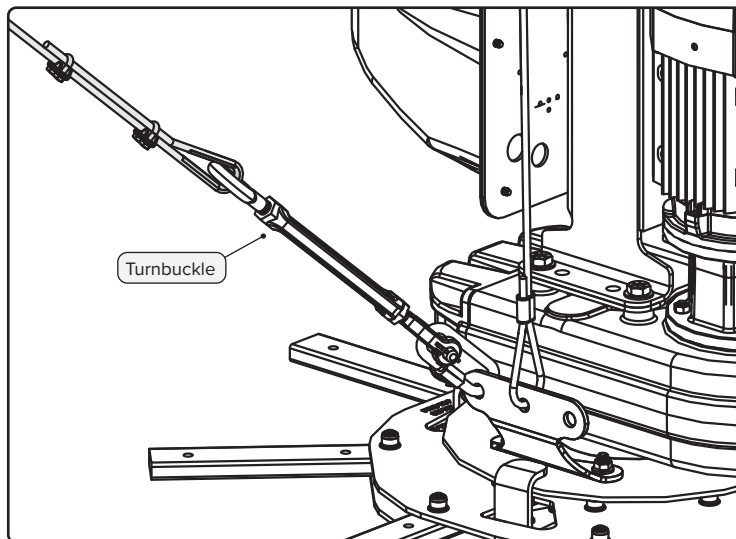
Secure the loose ends of the guy wires with the (2) wire rope clips. Repeat this for all (4) guy wires.



The guy wires should be taut, evenly spaced around the fan, and away from the path of the airfoils. *Ensure all electrical cords and cables are unobstructed by the guy wires.*

Adjust the tension of each guy wire by screwing together both ends of the turnbuckle until it is closed so that the guy wires are taut and the fan hangs plumb to the ground.

**Return to the fan Quick Installation Guide to complete fan installation.**





## MOUNTING METHOD: CONCRETE

**⚠ WARNING:** Consult a structural engineer to determine the best method of mounting the fan to concrete.

Before beginning, locate suitable guy wire anchor points as described in “Determine guy wire attachment points.” Install the guy wire brackets and turnbuckles on the fan before proceeding.

### 1. Install main fan unit and safety cable

Due to the number of variables at the installation site, Big Ass Fans cannot provide instructions for mounting the fan to concrete. Consult a structural engineer to determine the best installation procedure for your fan. These instructions only provide guidance on how to attach guy wires to the main fan unit with the presumption that the fan will be properly installed with correct guy wire attachment points and appropriate hardware.

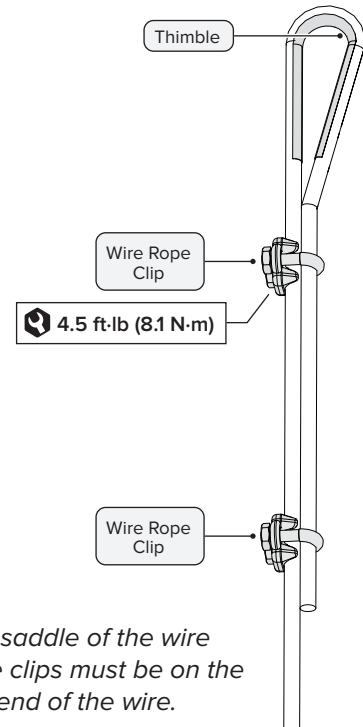
### 2. Install guy wires

Insert a thimble through the installer-supplied attachment hardware, and then thread the guy wire through the thimble. Install a thimble around the turnbuckle, and then thread the other end of the guy wire through the thimble.

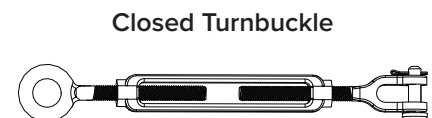
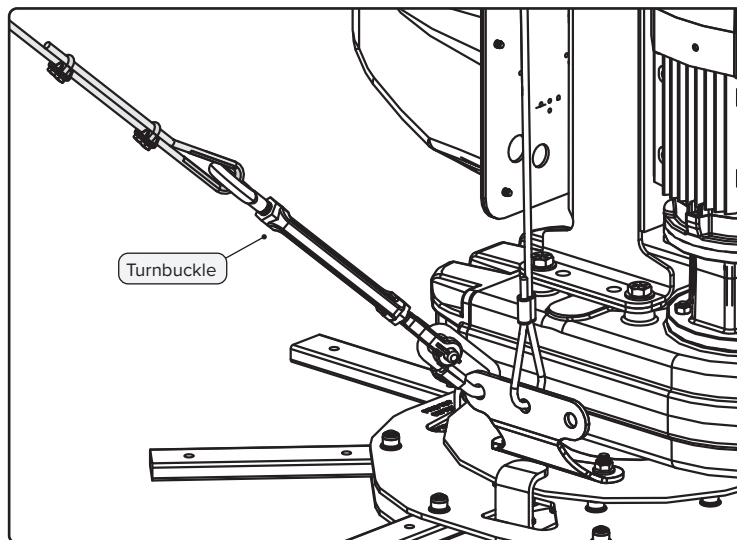
Secure the loose ends of the guy wires with the (2) wire rope clips. Repeat this for all (4) guy wires. *Note: Clamps can be used to keep the upper mount in position during installation.*

The guy wires should be taut, evenly spaced around the fan, and away from the path of the airfoils. *Ensure all electrical cords and cables are unobstructed by the guy wires.* Adjust the tension of each guy wire by screwing together both ends of the turnbuckle until it is closed so that the guy wires are taut and the fan hangs plumb to the ground.

**Return to the fan Quick Installation Guide to complete fan installation.**



*The saddle of the wire rope clips must be on the live end of the wire.*



## NOTES

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