

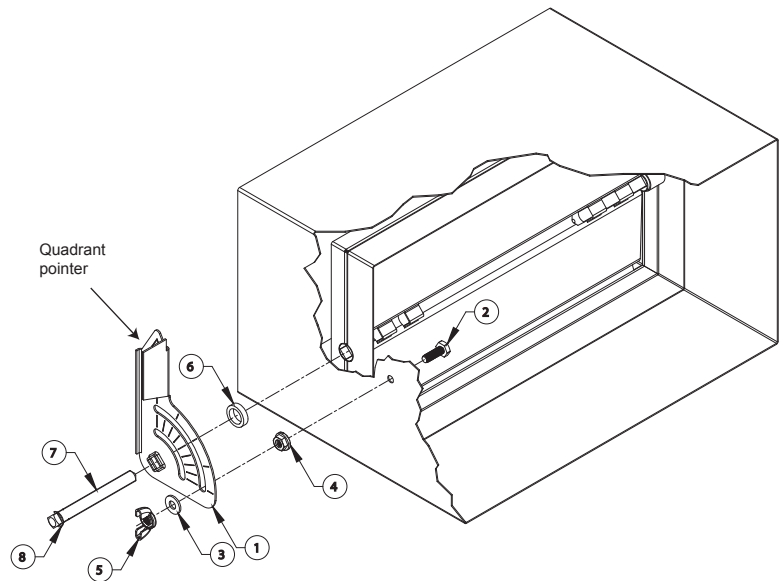
Installation, Operation and Maintenance Manual

Please read and save these instructions for future reference. Read carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with these instructions will result in voiding of the product warranty and may result in personal injury and/or property damage.

Tools Required:

Hammer
 5/16 in. driver
 Electric drill
 9/16 in. drill bit
 7/16 in. wrenches (2)

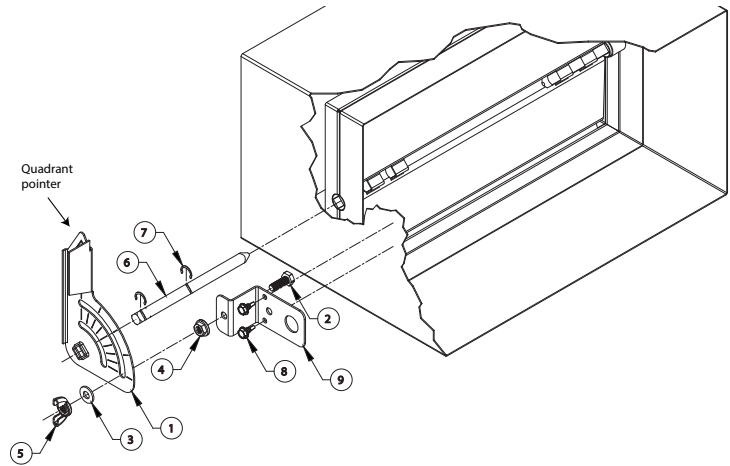
Item	Qty	Description	Part Number
1	1	Manual Quadrant	475679
2	1	Bolt	415034
3	1	Flat washer	416206
4	1	Hex nut	415455
5	1	Wing nut	415885
6	1	Washer	415482
7	1	Axle pin	454136
8	1	Axle clip	451890



Installation Instructions Without Standoff Bracket

1. Install the damper in the duct. Place fasteners so that they do not interfere with operation of the blades. If the damper has one blade, either end of the blade will accept the quadrant. If the damper has two blades w/linkage, place the linkage side of the damper against the side of the duct where the quadrant is to be located.
2. Cut a hole through the duct, over the blade axle bearing where the quadrant will be installed. The hole should be made large enough for the axle pin to slide through (approximately 9/16 in. diameter).
3. Slide out the axle pin approximately ¾ in. (19mm) beyond the duct while retaining the bushing inside the frame boss. Remove the axle clip.
4. Place the spacer onto the axle pin. Align the quadrant pointer with the blade as shown and then slide the quadrant onto the blade axle pin.
5. Rotate the quadrant and blade until the blades are at the full closed position. (The quadrant pointer will be approximately perpendicular to the centerline of the duct).
6. While holding the quadrant and blade in the closed position and using the end of the outer quadrant arc as a guide, drill a ¼ in. (6mm) diameter hole through the duct. Drill the hole at the end of the arc that is furthest from the quadrant pointer.
7. Rotate the quadrant out of the way and insert the bolt from the inside of the duct. Secure the bolt to the duct using the hex nut.
8. Rotate the quadrant and blade back and position the quadrant over the bolt. Install the flat washer and wing nut onto the bolt.
9. Install the axle clip into the axle pin groove. Pound the axle pin into the blade until the axle ring is within 1/8 in. (3mm) of the quadrant.
10. Using the quadrant lever, cycle the damper while checking for proper operation. Verify that the blade is free floating within the frame. Resolve any interference issues that prevent smooth operation.
11. Set the damper blade to the desired position and tighten the wing nut.

Item	Qty	Description	Part Number
1	1	Manual Quadrant	475679
2	1	Bolt	415034
3	1	Flat washer	416206
4	1	Hex nut	415455
5	1	Wing nut	415885
6	1	Axle pin	452899
7	1	Axle clip	451890
8	2	Tek screw	415555
9	1	1 1/2 in. Standoff bracket	742523
	1	2 in. Standoff bracket	742525



Installation Instructions With Standoff Bracket

- Note that one of the blade axle pins is longer. The quadrant will be applied to that pin. Install the damper in the duct so that the longer pin will be positioned against the side of the duct where the quadrant is to be located. Place fasteners so that they do not interfere with operation of the blades.
- Cut a hole through the duct, over the square axle bearing that contains the longer pin. The hole should be made large enough for the axle pin to slide through (approximately $\frac{9}{16}$ in. diameter).
- Slide out the axle pin approximately $2\frac{1}{4}$ in. (57mm) beyond the duct while retaining the bushing inside the frame boss. Remove the axle clip from the outer groove of the pin and place it on the inner groove. Pound the axle pin back into the blade until the axle clip presses the bushing against the blade.
- Insert the bolt into the standoff bracket as shown and secure with the hex nut.
- Using the outer arc of the quadrant, place the quadrant onto the bolt and apply the flat washer and wing nut. Slide the standoff to the end of the arc that is furthest from the quadrant pointer and secure the wing nut.
- Align the quadrant pointer with the blade as shown and then slide the quadrant onto the blade axle pin.
- Rotate the quadrant and blade until the blade(s) are at the full closed position. (The quadrant pointer will be approximately perpendicular to the centerline of the duct). Attach the standoff bracket to the duct as shown, using two self-drilling screws.
- Install another axle clip into the outer groove on the axle pin to keep the quadrant from slipping off of the pin.
- Using the quadrant lever, cycle the damper, checking for proper operation. Verify that the blade is free floating within the frame. Resolve any interference issues that may prevent operation.
- Set the damper blade to the desired position and tighten the wing nut.

Our Commitment

As a result of our commitment to continuous improvement, Greenheck reserves the right to change specifications without notice.

Product warranties can be found online at Greenheck.com, either on the specific product page or in the literature section of the website at Greenheck.com/Resources/Library/Literature.

