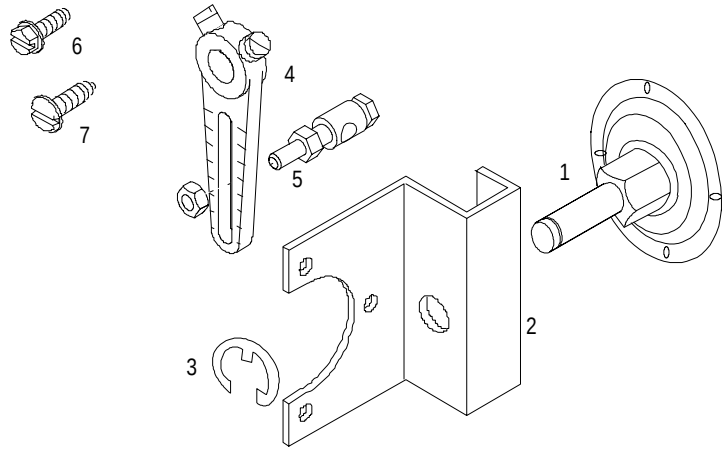
JOHNSON CONTROLS

D-3062-101 Auxiliary Mounting Kit Installation



Item	Description	Qty
1	Auxiliary Mounting Bracket Assembly	1
2	Swivel Mounting Bracket	1
3	E-ring Clip	1
4	Crank Arm	1
5	Swivel Ball Joint Assembly	1
6	No. 8-32 x 3/8 inch (10 mm) Hex-head, Taptite® Screws	3
7	No. 12 x 1/2 inch (13 mm) Pan-head Thread-forming Screws	4

*T*ools Required

- standard screwdriver, 6 inch shank with 5/16 inch blade
- open end wrench adjustable to 1 inch
- drill bit (3/16 inch, 4.8 mm, No. 9 or 10) and drill
- 1/8 inch Allen-head wrench

Part No. 34-250-0, Rev. A
Code No. LIT-26810512

General

The D-3062-101 auxiliary mounting bracket kit is designed for use with the D-3062 actuator to accurately position small dampers primarily on VAV terminal units. This kit is used where swivel mounting is required and/or space limitations inhibit the use of the standard universal mounting bracket. The swivel mounting feature reduces the side load on the shaft bearing to provide smooth operation.

The D-3062 pneumatic actuators may be used with UL leakage rated dampers in smoke control applications up to 250° F (121° C).

A 1/8 inch NPT straight barbed fitting for 5/32 or 1/4 inch O.D. polytubing is furnished for standard HVAC installation. When used for safety applications, the straight barbed fitting will have to be replaced by compression fitting F-200-3 for 1/4 inch O.D. copper tubing. The compression fitting is ordered separately. Use a pipe thread sealant on the compression fitting during installation.

IMPORTANT:	For safety dampers, copper tubing must be used between the actuator and the controller. The tubing must be looped at the actuator so that pivoting of the actuator does not cause stress on the tubing.

Mounting

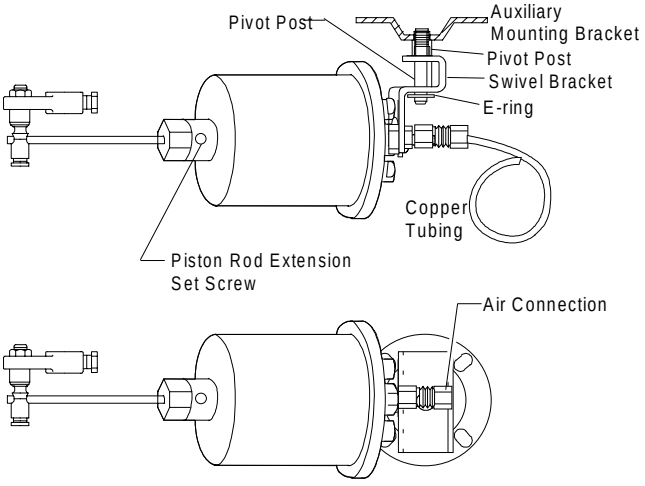


Figure 1: Mounting Components

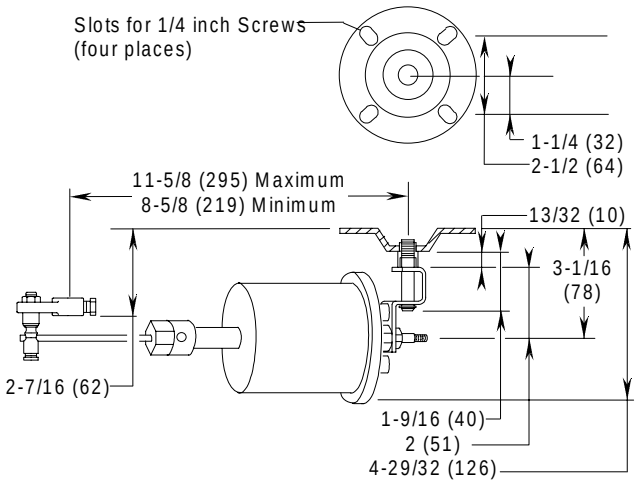


Figure 2: Mounting Dimensions

Special Linkages and Offset Surfaces

In order to achieve the desired mounting bracket location, it may be necessary to extend the piston rod. This can be done by loosening the set screw on the shaft extension hex nut and telescoping the piston rod.

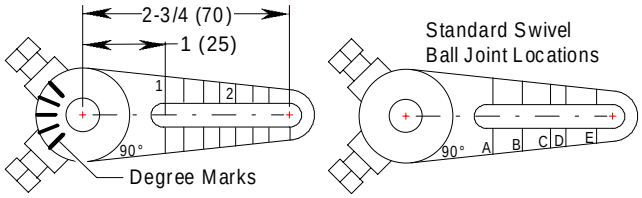


Figure 3: Crank Arm Detail

Note: The hub of the crank arm that fastens over the shaft is marked in 22-1/2 degree increments, and one side of the arm is marked in 1/4 inch increments in order to facilitate crank arm adjustments.

To minimize axis angles for best operation and maximum thrust, or to reach a more remote mounting location, up to 4 feet (122 cm) of 5/16 inch rod stock (D-3153-102) may be substituted as required. The rod must be ordered separately and cut to the required length.

Drive Shaft Linkage

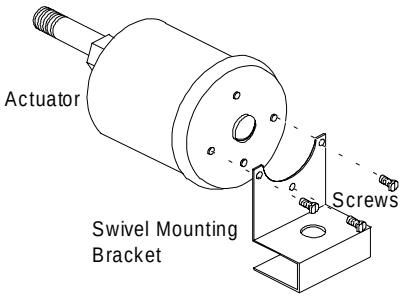


Figure 4: Attaching Swivel Mounting Bracket

1. Attach the swivel mounting bracket to the back of the D-3062 actuator using three No. 8-32 x 3/8 inch hex-head screws furnished.
2. Place the swivel mounting bracket onto the pivot post and secure it to the post with the E-ring from the package.
3. Determine whether clockwise or counterclockwise damper shaft rotation is required and position the crank arm accordingly above or below the blade pin.
4. Slide the crank arm onto the blade shaft.
5. Temporarily position the auxiliary bracket and pivot post assembly on the mounting surface between 8-5/8 and 11-5/8 inches (219 and 295 mm) center-to-center from the drive shaft.

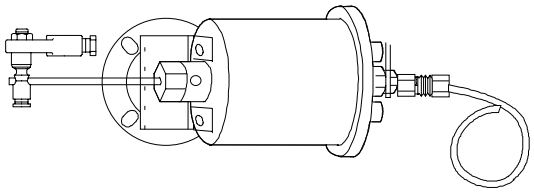


Figure 5: Optional Front Mounting Arrangement

Note: If space limitations require that the actuator be mounted between 3-1/16 and 6-1/4 inches (78 and 159 mm), this may be accomplished using the optional front mounting arrangement for the swivel bracket (see Figure 5).

6. Align the linkage point for 90° rotation at a 2 inch (51 mm) stroke. Try to maintain the factory settings for the crank arm (1-13/32 inch radius or point “B” on the crank arm) and the piston rod length.
7. Finger tighten the crank arm set screws and make sure that the actuator is in a level position and the line of action goes through the start and end points.

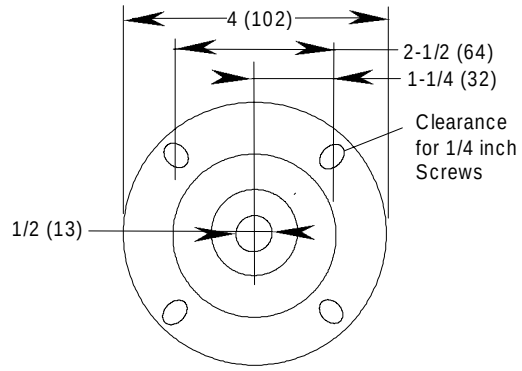


Figure 6: Auxiliary Mounting Bracket, inches (mm)

8. If there are no adjustments necessary, mark the four mounting holes using the auxiliary bracket as a template and swing the actuator and mounting bracket aside.

   If adjustment is required:

   - Loosen the piston rod extension set screw.
   - Telescope the piston rod to allow attachment to the swivel ball joint; the crank arm and swivel ball joint assembly should be positioned on the damper shaft extension to allow the damper blades to be in their normal position when the actuator is fully retracted.
   - Align the actuator axis in a level position parallel to the mounting surface, maintaining a 1-7/16 inch (37 mm) dimension.
   - Tighten the crank arm, swivel ball joint, and piston rod set screws before making the air line connections.
9. Make sure that the mounting surface is solid and stable (that it can retain thread-forming screws).
10. Drill a 3/16 inch (5 mm) hole at each of the marked places and mount the auxiliary bracket using four No. 12 x 1/2 inch pan-head, thread-forming screws supplied.
11. Tighten the crank arm set screws and check all other linkage fasteners before making air line connections.

Direct Blade Linkage

1. Remove the swivel ball joint from the crank arm.
2. Determine whether normally open or normally closed damper operation is desired and either select or fabricate a blade arm (leaf connection).

The swivel ball joint on the end of the piston rod is adaptable.

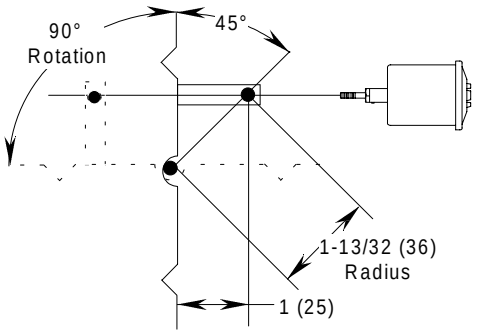


Figure 7: Normally Closed Location

For normally closed operation, form an angle of 45°.

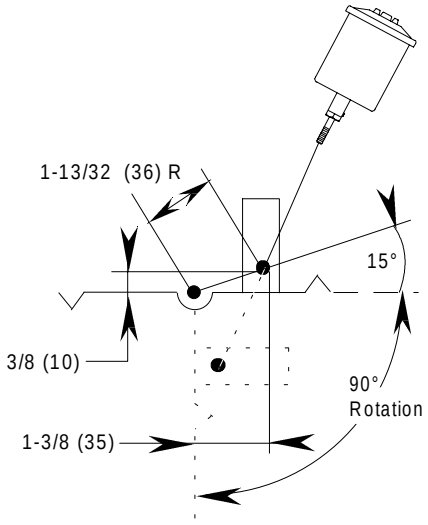


Figure 8: Normally Open Location (triple V blade)

For normally closed operation, form an angle of 15°.

3. Choose the auxiliary bracket mounting position (usually on the existing or on the adjacent duct or wall).

Note: Locate the auxiliary mounting bracket in a level position where alignment can be readily maintained.

4. The auxiliary mounting bracket assembly location should be within 7-11/16 to 10-5/16 inches (195 to 262 mm) from the blade arm linkage point to use the telescoping piston rod feature of the D-3062. Make sure that the damper blades will clear the actuator when rotated.
5. Mark the four mounting holes using the auxiliary bracket as a template and swing the actuator and mounting bracket aside.
6. Make sure that the mounting surface is solid and stable (that it can retain thread-forming screws).
7. Drill a 3/16 inch (5 mm) hole at each of the marked places and mount the auxiliary bracket using four No. 12 x 1/2 inch pan-head, thread-forming screws supplied.

Note: For heavier gauge mounting surfaces, 1/4 inch diameter bolts can be substituted for the bracket attachment.

8. If the extension of the piston rod is required, loosen the set screw located on the shaft extension hex nut.
9. Telescope the piston rod to allow attachment of the swivel ball joint to the blade bracket.
10. Tighten the crank arm, swivel ball joint, and piston rod set screws before making the air line connections.

Check Out Procedures

1. Supply air pressure to the actuator and operate the damper for at least three complete cycles.
2. Verify that the damper blades open or close fully.
3. Run the actuator to close the damper. If the blades are not fully closed, adjust the position of the linkage rod.
4. Run the actuator to open the damper. The blades should not rotate more than 90° or past full open. Adjust the crank arm or blade arm radius by repositioning the ball joint if necessary.
5. Repeat procedures as necessary.

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FAN 268.1
Damper and Actuator Manual
Printed in U.S.A.