

### Actuating Terminal Equipment Controller (ATEC) - Base VAV

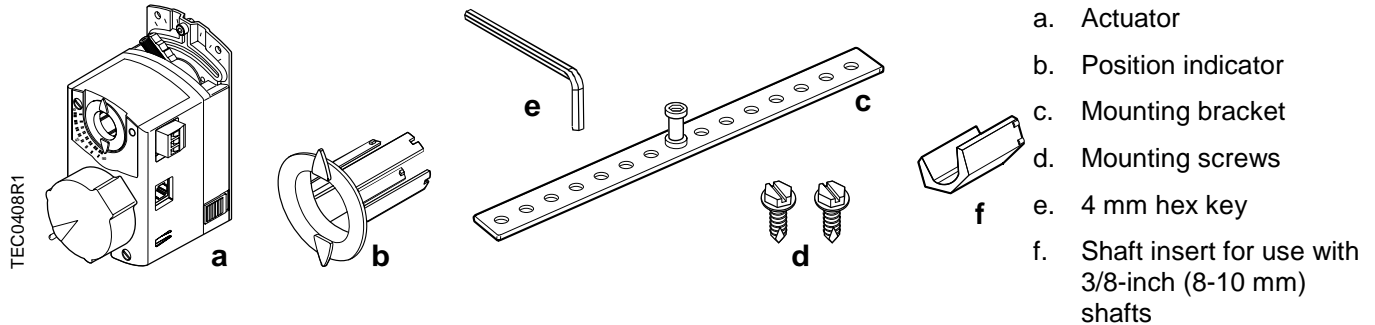


Figure 1. Actuator Parts.

### Product Description

These installation instructions describe direct-coupled mounting of the Actuating Terminal Equipment Controller (ATEC) – Base VAV is combination TEC and OpenAir™ GDE131 Non-spring Return Rotary Electronic Damper Actuator.

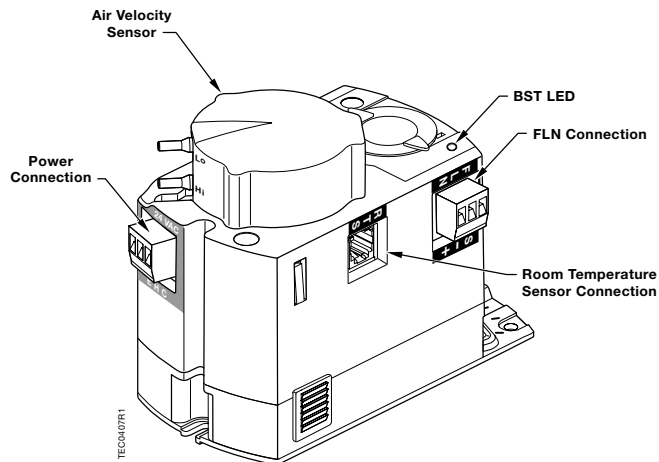


Figure 2. ATEC – Base VAV.

### Product Numbers

550-400	Actuating TEC
550-400P10	Actuating TEC – 10 pack

### Required Tools

- 4 mm hex wrench
- 1/4-inch Hex Driver and screwgun
- Small flat-blade screwdriver
- Marker or pencil
- Torque Wrench

### Estimated Installation Time

20 minutes

### Warning/Caution Notations

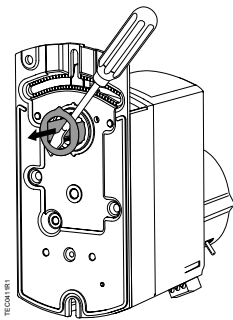
<b>WARNING:</b>		Personal injury/loss of life may occur if you do not follow a procedure as specified.
<b>CAUTION:</b>		Equipment damage or loss of data may occur if you do not follow a procedure as specified.

## Instructions



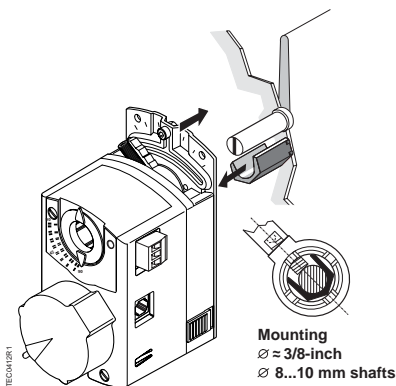
**WARNING:**  
 Do not open the actuator.

1. Determine the size of the damper shaft.
    - If the damper shaft is **1/2-inch**, proceed to Step 2.
- NOTE:** The ATEC actuator comes with a factory installed 1/2-inch damper shaft guide.
- If the damper shaft is **5/8-inch**:
    - a. Remove the 1/2-inch shaft guide, Figure 3.
    - b. Proceed to Step 2.
  - If the damper shaft is **3/8 inch**:
    - a. Remove the 1/2-inch shaft guide, Figure 3.



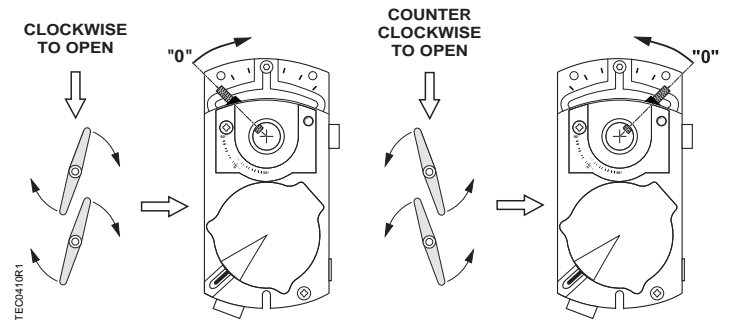
**Figure 3. Removing the 1/2-inch shaft guide.**

- b. Use the 3/8-inch adapter, provided in the actuator packaging, Figure 4. Hold the shaft insert so that the raised tabs are inserted last when placing the insert into the back of the actuator.
- c. Proceed to Step 2.



**Figure 4. Installing the 3/8-inch shaft adapter.**

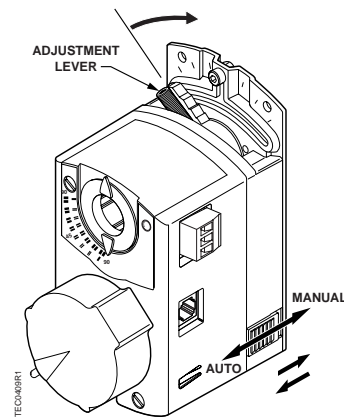
2. Determine the damper blade rotation, clockwise or counterclockwise to open, Figure 5.



**Figure 5. Damper Rotation.**

- If the blades will rotate counterclockwise, slide the manual override switch to manual, and move the adjustment lever to the right. Return the switch to automatic, Figure 6.
- If the blades will rotate clockwise, slide the manual override switch to manual, and move the adjustment lever to the left. Return the switch to automatic, Figure 6.

**NOTE:** Changes to MTR SETUP (in the application) may be necessary during start-up/commissioning if dampers open counterclockwise.



**Figure 6. Setting the Direction of Rotation.**

3. Close the damper blades, Figure 8.
4. Mark the end of the damper shaft with a pencil/marker, Figure 8.
5. Tighten the set screw until the first thread can be seen in the shaft hole, Figure 7.

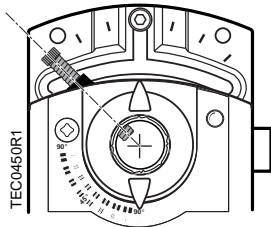


Figure 7. Set screw in shaft hole.

6. Mount the actuator on the damper shaft, Figure 8.

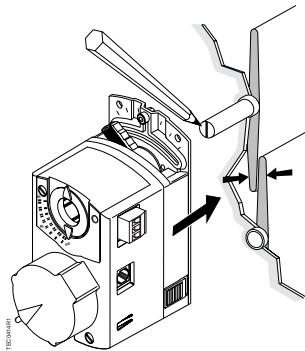


Figure 8. Mounting the actuator.

7. Install the position indicator, Figure 9.
8. **Tighten the adjustment lever to the proper torque listed:**
  - **70 +/- 5 inch-pounds** for solid metal
  - **37 +/- 2 inch-pounds** for plastic graphite composite (hollow metal shafts require an insert to prevent shaft damage).

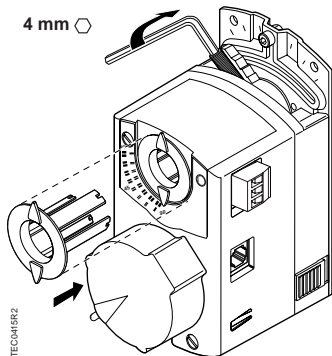


Figure 9. Position indicator and adjustment lever.

9. Attach the mounting bracket, Figure 10.

**NOTE:** When installing the mounting bracket directly on the ductwork be sure to position the bracket such that the screws do not obstruct the damper blade movement inside the box.

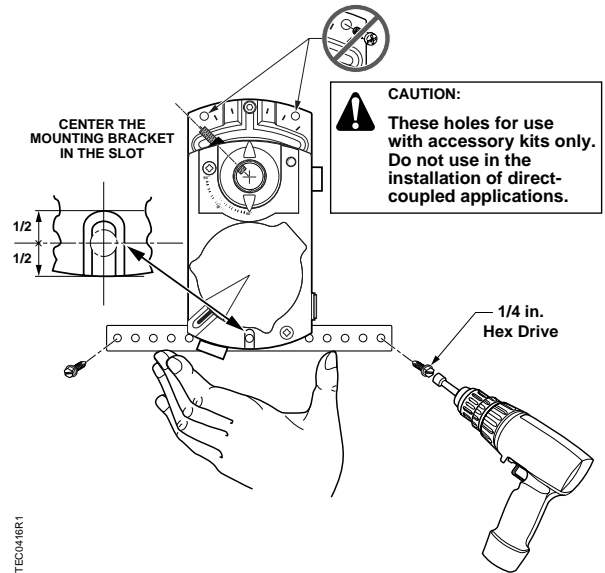


Figure 10. Installing the mounting bracket.

10. Adjust mechanical range.

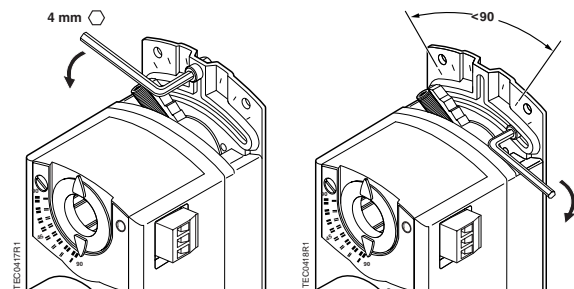


Figure 11. Moving the Mechanical Range Stop.

- a. Loosen the stop set screw.
- b. Move it along the track to the desired position, and fasten it in place.

## Wiring

- All wiring must conform to NEC and local codes and regulations.
- Use earth ground isolating step-down Class 2 transformers. Do not use autotransformers.

Determine the supply transformer rating by summing total VA (3.5 VA per unit) of all actuators used. It is recommended that one transformer power no more than 10 actuators.

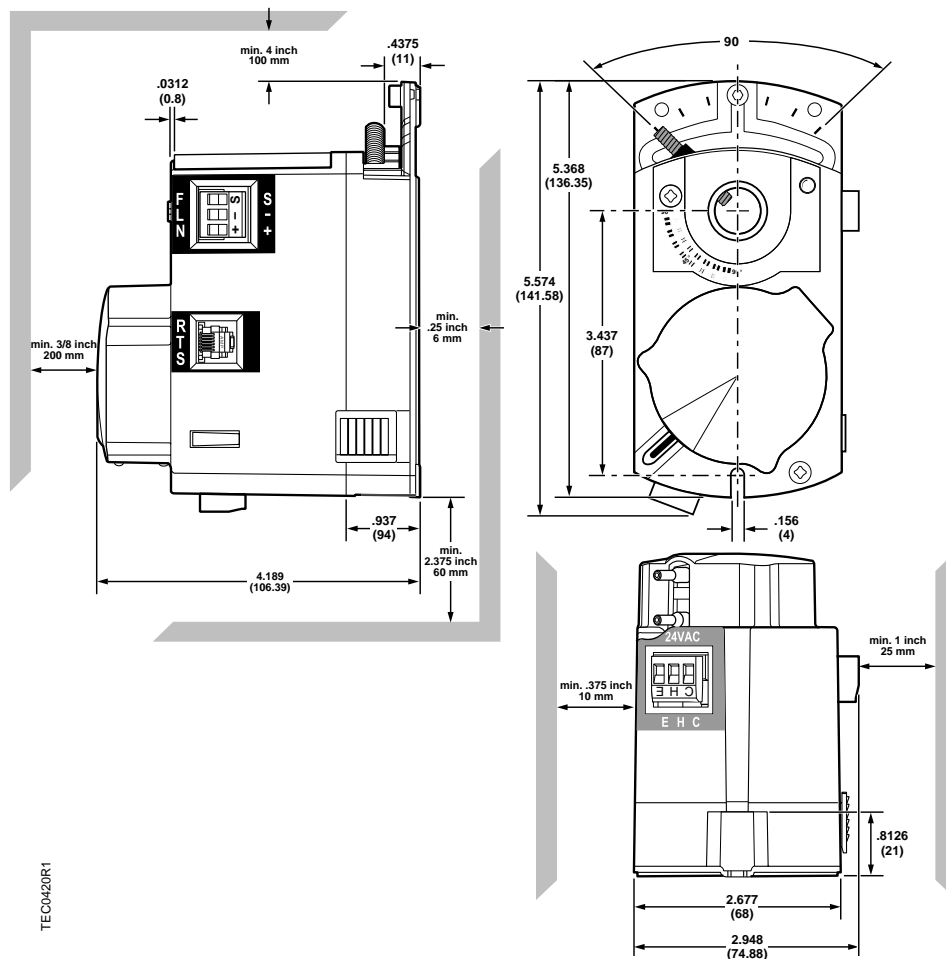


**WARNING:**

**Installations requiring CE Conformance**

- All wiring for CE rated actuators must be Separated Extra Low Voltage (SELV) or Protective Extra Low Voltage (PELV) per HD384-4-41.
- Use safety-isolating transformers (Class III transformer) per EN 61558. They must be rated for 100% duty cycle.
- Over current protection for supply lines is maximum 4A.

**Dimensions**



**Figure 12. Dimensions of the ATEC.**

Information in this publication is based on current specifications. The company reserves the right to make changes in specifications and models as design improvements are introduced. OpenAir is a trademark of Siemens Building Technologies, Inc. Other product or company names mentioned herein may be the trademarks of their respective owners. © 2003 Siemens Building Technologies, Inc.