

Installation, Operation and Maintenance Instructions

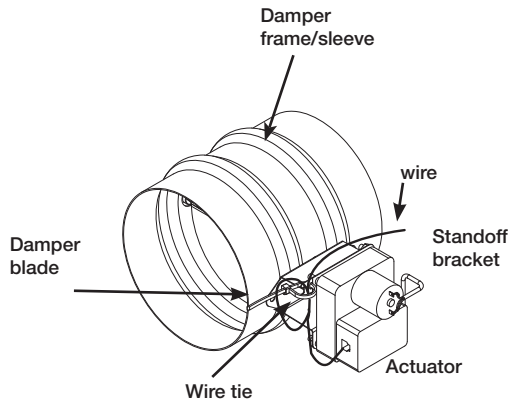


Figure 1

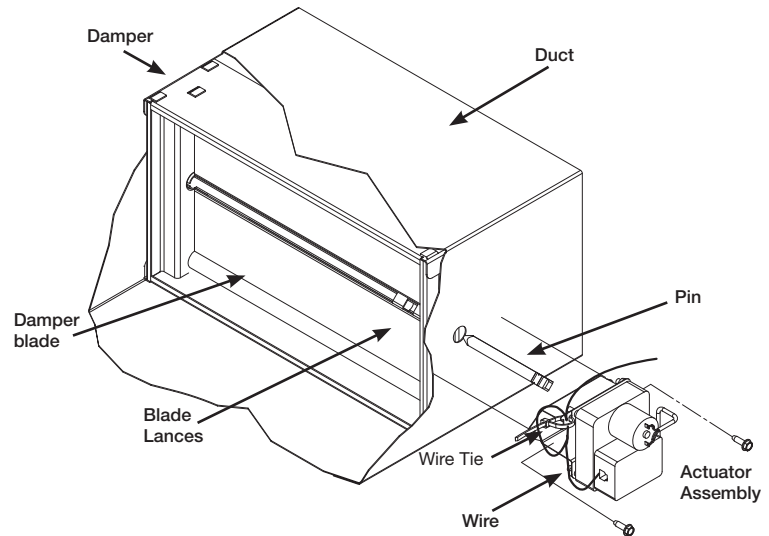


Figure 2

Receiving and Handling

Upon receiving dampers, check for both obvious and hidden damage. If damage is found, record all necessary information on the bill of lading and file a claim with the final carrier. Check to be sure that all parts of the shipment, including accessories, are accounted for.

Dampers must be kept dry and clean. Indoor storage and protection from dirt, dust and the weather is highly recommended. Do not store at temperatures in excess of 100°F (38°C).

Warranty

Greenheck warrants this equipment to be free from defects in material and workmanship for a period of one year from the shipment date. Any units or parts which prove to be defective during the warranty period will be repaired or replaced at our option. Greenheck shall not be liable for damages resulting from misapplication or misuse of its products. Greenheck will not be responsible for any installation or removal costs. Greenheck will not be responsible for any service work or back charges without prior written authorization.

Pre-Installation Guidelines

The basic intent of a proper installation is to secure the remote balancing damper in the opening in such a manner as to prevent distortion and disruption of damper operation. The following items will aid in completing the damper installation in a timely and effective manner.

- 1) Check the schedules for proper damper locations within the building. Visually inspect the damper for damage.
- 2) Lift or handle damper using sleeve or frame. Do not lift damper using blades or actuators.
- 3) Do not install screws in damper frame that will interfere with unexposed blade linkage and prevent damper blades from opening and/or closing.
- 4) Damper must be installed into duct or opening square and free of twist or other misalignment. Damper must not be squeezed or stretched into duct or opening. Out of square, racked, twisted or misaligned installations can cause excessive leakage and/or torque requirements to exceed damper/actuator design.
- 5) Damper and actuator must be kept clean and protected from dirt, dust and other foreign materials prior to and after installation. Examples of such foreign materials include but are not limited to:
 - a) Mortar dust
 - b) Drywall dust
 - c) Firesafing materials
 - d) Wall texture
 - e) Paint overspray
- 7) Damper should be sufficiently covered as to prevent overspray if wall texturing or spray painting will be performed within 5 feet of the damper. Excessive dirt or foreign material deposits on damper can cause excessive leakage and/or torque requirements to exceed damper/actuator design.

This manual is the property of the owner, and is required for future maintenance. Please leave it with the owner when the job is complete.

Installation Instructions

Round, RBDR series, dampers are supplied from the factory with the actuator installed.

Square/rectangular, RBD series, dampers are supplied with an actuator kit that must be field installed as follows:

- 1) Install the RBD series damper into the ductwork with the lanced end of the blade positioned to the side of the duct where the actuator is to be located (see Figure 2).
- 2) Drill a minimum 9/16 in. (14mm) diameter hole that lines up with the center pivot of the damper blade.
- 3) Insert the pointed end of the pin through the hole and into the blade lances. Pound pin into the blade lances until the end of the pin is ½ in. (13mm) outside of the duct surface while the blade is centered in the damper frame.
- 4) Install the actuator by aligning the coupler over the end of the square pin and sliding the actuator assembly onto the pin until the bracket is in contact with the duct surface. Rotate the actuator and blade until the actuator is positioned as shown in Figure 2.
- 5) Check the blade clearance to be sure that the blade can move side to side in the frame and it is not pressed against the opposite side of the damper frame. If the blade is pressed against the opposite side, the pin may need to be pounded a little further into the blade.
- 6) Using the two supplied screws secure the actuator bracket to the duct as shown.
- 7) Recheck the blade clearance.
- 8) All wire connections from the wall or ceiling jack to the damper actuator must be secured to the building structure in such a way as to prevent strain on the wire connections (for example: use wire ties to secure a wire loop at each connection and intermittently between the connections).
- 9) The actuator mounting bracket has a factory installed wire tie for the purpose of providing strain relief at the actuator. Thread the wire through the wire tie, loop around and back through the wire tie before connecting to the actuator box. Tighten the wire tie leaving a short loop at the actuator.

Electrical Guidelines

RBD & RBDR Series dampers are driven by a 9 volt actuator. The 9 volt power is supplied from a Greenheck “Quick Control” hand held remote. The “Quick Control” remote is plugged into a wall or ceiling jack that is wired to the damper actuator using wire and connector assemblies.

After the damper and wiring is installed, operation of the damper and wiring circuit must be visually verified by connecting the “Quick Control” remote to the wall jack and power up the unit. Using the switch on the “Quick Control” remote, run the damper through a complete cycle from full close to full open and reverse back to closed position. Document that proper operation has been verified.

Damper Trouble Shooting

| The following is a cause and correction list for common concerns with the dampers. | | |
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| Symptom | Possible Cause | Corrective Action |
| Damper does not fully open and/or fully close | Frame is 'racked' causing blades to bind | Adjust frame such that it is square and plumb |
| | Screws in damper components | Locate screws and remove |
| | Contaminants on damper | Clean with a non oil-based solvent (see Damper Maintenance) |
| | Defective motor | Replace |
| Damper does not operate | Remote battery is dead | Replace with a 9 volt battery |
| | Broken wire connection | Check all wire connections |
| | Broken wire | Check wire for cuts, replace if necessary |

Due to continuing research, Greenheck reserves the right to change specifications without notice.

