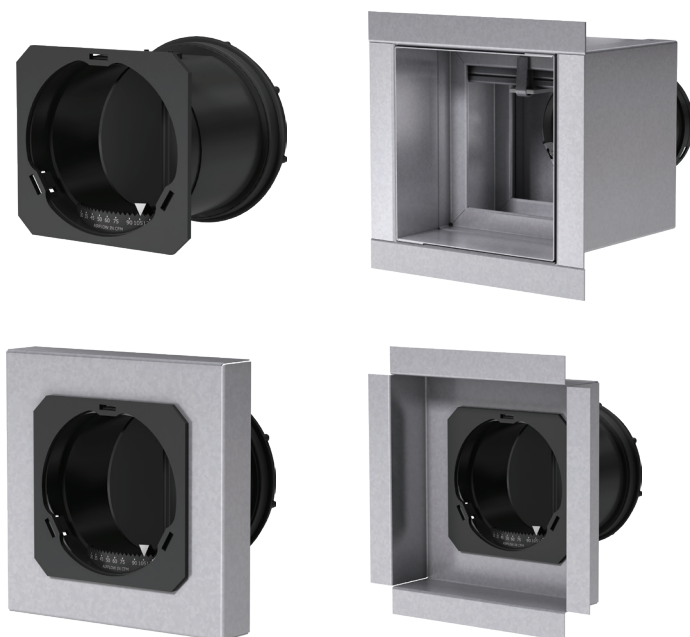


## Installation, Operation and Maintenance Manual

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.

These instructions apply to the automatic balancing damper (ABD), including dampers with a transition and a grille mount box.

NOTE: The ABD is air flow dependent and the direction of airflow through the product is critical for proper operation.



See complete marking on product.

UL 2043 Classification  
R39668

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### 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).

### Safety Warning

Improper installation, adjustment, alteration, service or maintenance can cause property damage, injury or death. Read the installation, operating, and maintenance instructions thoroughly before installing or servicing this equipment.

## General Installation

Greenheck's ABD dampers can be installed anywhere a constant volume of air is required. Assure that the airflow direction is properly aligned for your application (see **Figure 1**). These dampers can be installed in any orientation vertically or horizontally (see **Figure 2**). If installed with the set-point arrow point sideways, the damper will still function, but it may be outside of the  $\pm 10\%$  range of the selected volume.

The ABD is designed for installation without the need for any screws or fasteners. The adjustment of the cfm set-point is accomplished by positioning the set-point indicator to the notch corresponding to the desired cfm (see **Figure 3**). The damper must be mounted such that the set-point ridges are located on the bottom of the damper (see **Figure 4**).

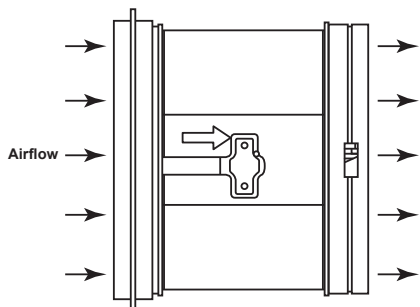


Figure 1

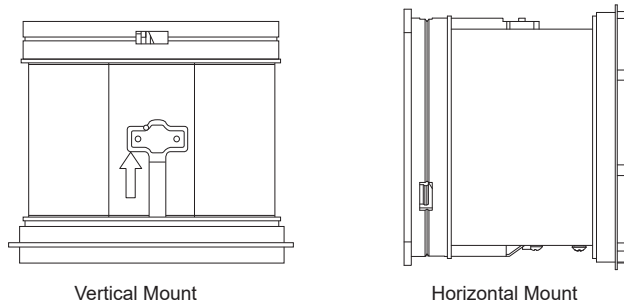


Figure 2

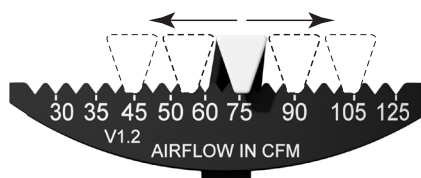


Figure 3

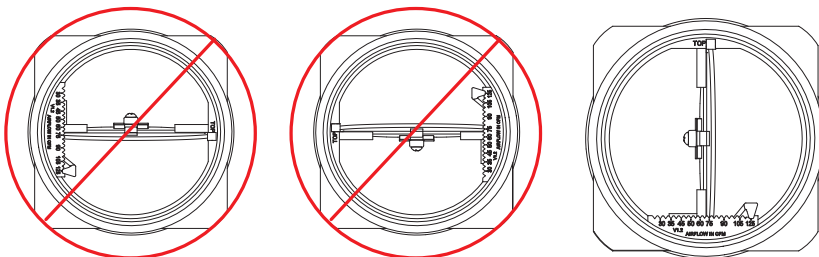


Figure 4

## Round Duct/Opening Installation

The damper can be pressed into a round duct without the need for fasteners. The supplied perimeter gasket provides a press fit grip to hold the valve in place without the need for additional fasteners or adhesives.

Remove the adapter plate from the end of the ABD and slide the damper into either spiral duct or round duct (see **Figure 4**) or any rigid round opening, such as the neck of a diffuser.

Note: The perimeter gasket material can be removed from one end and moved to the opposite end if needed for installation.

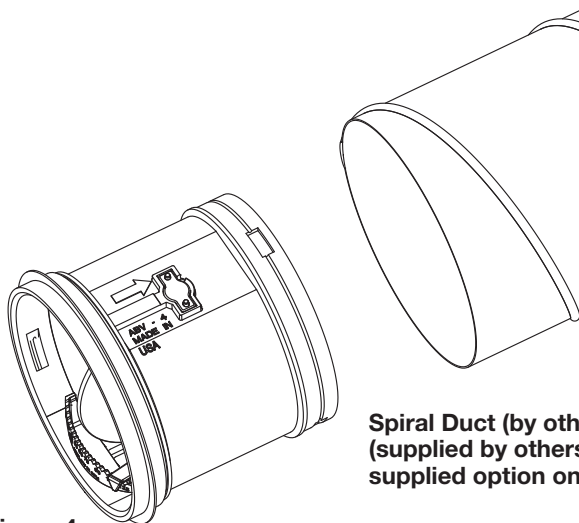


Figure 4

Spiral Duct (by others) or Round Collar (supplied by others [ABD], factory supplied option on ABD-RB.

## Square Duct/Box Transition Installation

Installation into square duct requires a square to round transition. Greenheck model ABD-T is supplied with a factory square to round transition. The size of the transition can be specified at the time it is ordered (see **Figure 5**).

The square to round transition can be inserted into a square duct or plenum box (see **Figure 6**). Sheet metal screws can then be used to secure the ABD-T into place.

Note: If the valve is installed in a continuous duct run, an access panel or door should be provided for periodic cleaning, inspection, or adjustment.



Figure 5

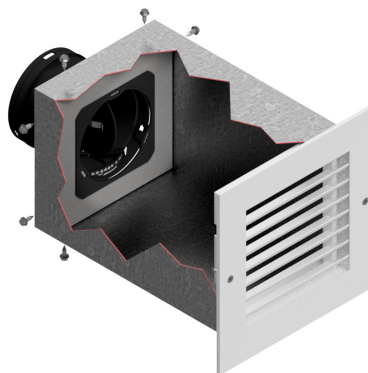


Figure 6

## Grille Mount Box Installation

Greenheck model ABD-RB are designed for applications where round duct terminates at a square grille. The ABD-RB are supplied with a factory installed mounting box (see **Figure 7**). **Figure 8** shows optional ceiling mounting box with side collar. The grille can also be factory supplied. Factory supplied grilles are shipped loose. Screws can be used to secure the grille mount box into place.

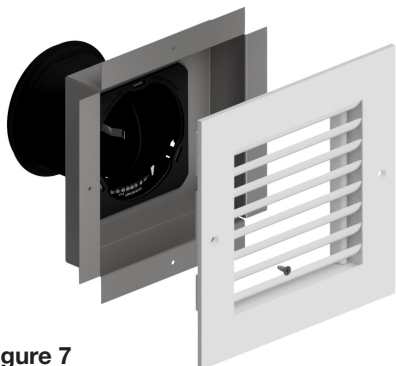


Figure 7

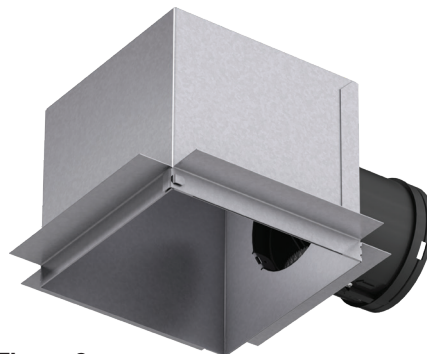


Figure 8

**Note:** The ABD-RB and ABD-T are applications without a fire damper. For applications with a fire damper, please refer to Greenheck assembly ABD-FD on the following page.

## Factory Supplied Steel Collar

When a factory supplied steel collar is selected on the ABD-RB, the ABD valve will be shipped loose. To install the ABD can be installed in the round collar (see **Figure 4**) or inside the steel box (see **Figure 9**).

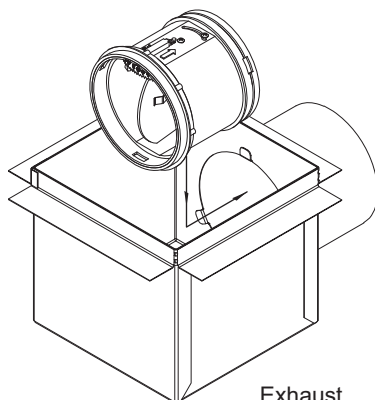
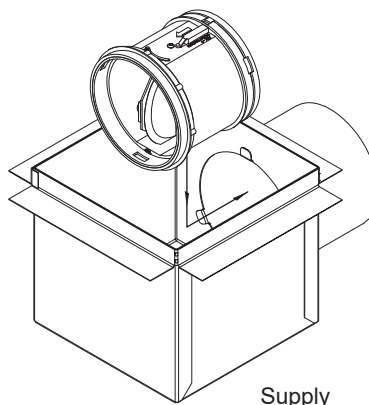


Figure 9

Exhaust



Supply

## UL Rated Fire Damper Assembly Installation

### For installation of the ABD-FD refer to:

'Installation Instructions for Curtain Fire Dampers  
(Part #481324)'

Greenheck assembly ABD-FD (**Figure 10**) is a UL 555 rated fire damper model (FD-150 or FD-350) with UL 2043 rated automatic balancing damper (ABD). The assembly includes a curtain fire damper with a flanged sleeve, ABD, and optional factory supplied grille (see **Figure 11**). Factory supplied grilles are shipped loose. Screws can be used to secure the grille mount box into place.

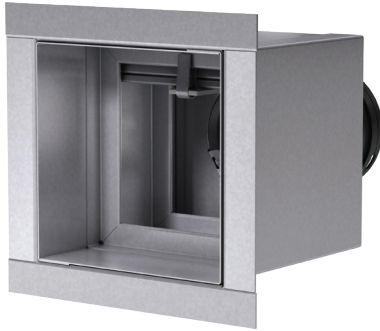


Figure 10



Figure 11

## Operation - CFM Set-Point Adjustments

The design of the Greenheck ABD allows for easy field adjustment to over 20 cfm set-points. The set-point range for the 4 and 5 inch damper is 25 to 125 cfm. For the 6 inch damper, the range is 55 to 250 cfm. With the 8 inch damper, the range is 125 to 400 cfm for exhaust and 105 to 425 cfm for supply.

Adjusting the damper to the target cfm set-points can be done without tools. Simply slide the set-point indicator on the face of the damper to the desired point.

The damper should only be adjusted by means of the adjustment arm. Do not operate the damper via the blade. Adjusting or operating the damper by the blade can change the tension of the stainless steel spring and could change the operating range of the damper.

## Damper Maintenance

Dampers do not typically require maintenance as long as they are kept dry and clean. If cleaning is necessary, wash with water. No solvents should be used in cleaning, as they could damage the valve or gasket. In addition, ABD dampers incorporate Steri-Balance™ into all plastic components. Steri-Balance™ is a non-caustic material that inhibits antimicrobial growth.

## 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](http://Greenheck.com), either on the specific product page or in the literature section of the website at [Greenheck.com/Resources/Library/Literature](http://Greenheck.com/Resources/Library/Literature).

