Metropolitan Air Technology

Installation and Maintenance Instructions

Model BD-200-HD-FS Pressure Relief Vent (Damper) and Door Assembly

Before Installing in Duct

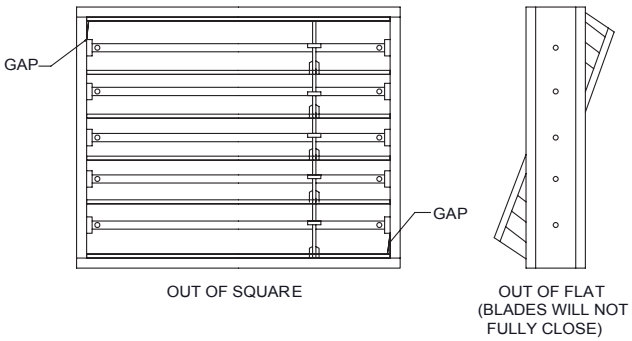
Before installation, verify walls, ducts, and frames are flat, square, plumb/level, clean, dry, rigid, and free of debris or obstructions; correct any irregularities before setting the damper. Improperly installed dampers and damper sections prevent blades from sealing properly. Excessive or uneven gaps between the blades and frame indicate a damper installed out of flat. Misalignment of the damper or damper sections can cause twist in the frame resulting in blade-to-linkage bind. (Reference Fig. 1).

1. Prior to installation, confirm the damper is free of any shipping damage to ensure proper fit and function.
2. Remove the packaging shims between the blades. Check damper for free operation before installation.
   - Manual dampers should be run through a full-open to full-close cycle (5-10 times) by hand to confirm smooth operation.
   - Do not grab the blades or force them past the linkage stops.
   - Use the linkage arm that is attached to the blades. Slide it up and down to open and close the blades. Note: Blades may not reach the horizontal position in the open position.
3. Multiple-panel dampers will be tagged for ease of assembly.
4. If the door assembly is included with the pressure relief dampers, remove the packaging shims between the door and the frame and check that the door opens and closes freely.

Caution

Check damper linkage to ensure that blades move freely. Make sure that linkage rods are not bent or damaged. Also check blade brackets for damage. DO NOT INSTALL IF DAMAGED!

Fig. (1) Dampers Out of Square and Flat



IMPORTANT: Check Often. Use a square.

Magnet Bracket Position

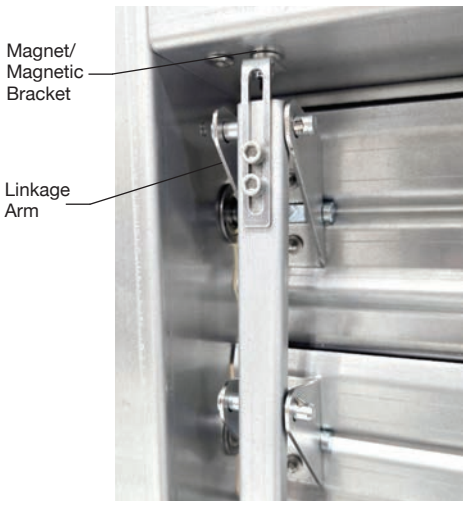
Inspect the magnet bracket on the linkage side of the damper. It is mounted at the top of the linkage bar. (Reference Fig. 2).

- For all dampers larger than 12 x 12 (305 x 305), the magnet at the top of the L-bracket must contact the top frame when the damper is vertical and the blades are closed.
- For the 10 x 10 (254 x 254) and 12 x 12 (305 x 305) dampers, the magnet must be positioned .025” (.64mm) away from the top frame when the damper is vertical and the blades are closed.

If the magnet bracket is found to be loose or out of position, follow the steps below to reposition it:

1. Place the damper in a true vertical position.
2. Loosen the two screws shown below in Figure 2
3. Hold the linkage arm so that the blades are fully closed and slide the magnet bracket up so that the magnet is secured in the correct position. If a shim is not available for the 10 x 10 and 12 x 12 dampers, six pieces of standard copy paper can be used to create the 025” (.635mm) gap. (Reference Fig. 2).
4. Tighten the set screws until they are snug. Be careful not to strip the threads.

Fig. (2) Magnet Bracket Position



6235 South Oak Park Avenue Chicago, IL 60638 USA
Toll free: 800.585.7686 +1.708.552.4040
Fax: +1.708.594.0396 www.metairtech.com

Represented by:

© 2026 Metropolitan Air Technology. All rights reserved. 10/26

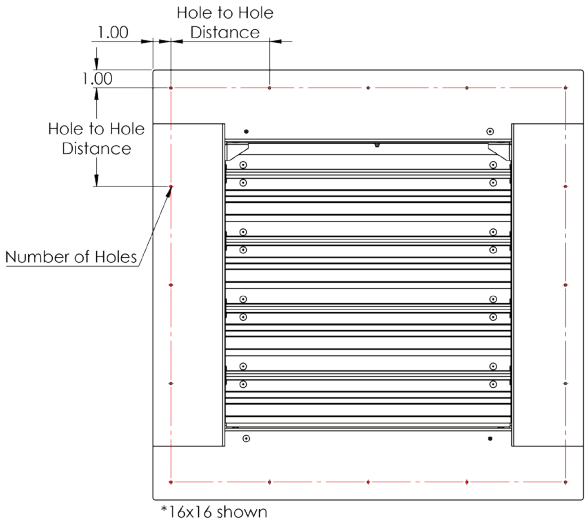
Installation and Maintenance Instructions

Model BD-200-HD-FS Pressure Relief Vent (Damper) and Door Assembly

Installation

Lift the damper by the frame only (use the top lifting holes). Do not lift by blades, linkage, or hardware. If the door assembly is being used, install the door assembly first.

1. If the door assembly is being used with the dampers, install the door assembly first.
   - Slide the door sleeve into the opening until the flange is flush with the wall face.
   - Set orientation: true vertical, square, and not twisted.
   - Shim and square the door assembly to not rack the frame.
2. Insert the damper into the wall opening until the damper flange is flush with the wall.
   - If the damper is being used with the door assembly, slide the damper frame inside the door sleeve when inserting into the wall opening. The frame need not fully seat but it must overlap the sleeve by at least 0.25 in (6.35mm).
   - Shim as needed to ensure that fastening will not rack the frame. Damper position must be true vertical, square, and not twisted.
   - Fasten evenly.
     - For concrete: use concrete screws (Tapcon-type).
     - For metal structures: machine or self-tapping screws.
     - Place fasteners at all four corners and at ≤6 in. centers. Do not over-tighten.
     - Verify free operation: cycle blades open and closed several times.
     - With blades closed, once again confirm the magnet at the top of the L-bracket contacts the top frame; adjust the bracket if needed.



*16x16 shown

SIZE	HOLE TO HOLE DISTANCE	NUMBER OF HOLES
12X12	6.0	4
16X16	5.5	5
20X20	5.2	5
24X24	5.0	6
28X28	5.7	6
32X32	5.4	7
36X36	6.0	7

Operation

The BD-200-HD-FS pressure relief damper is a gravity type damper that opens automatically against pressure. There are no actions needed to ensure proper operation except for the maintenance instructions described below.

Maintenance

In general dampers must be kept clean and free from foreign matter that may impede normal movement and seating of blades and seals. A cleaning schedule should be established and is entirely dependent upon the environment into which the damper is placed. Cleaning of the bearings can be done with a non-corrosive solvent and thorough drying. The damper is basically maintenance free with the above exception and regular lubrication and seal inspection as indicated below:

Sealed ball bearings and linkage pivots: Lubricate with dry graphite as required to provide free movement.

Blade Seals: The blade seal material is a combination of highperformance TPE, TPV, and polypropylene. The seals provide strong UV, sunlight, and weather resistance. A visual inspection should be performed regularly to check for contamination on the bulb seal. The blade seals can typically be cleaned with mild detergent and water. Avoid using harsh chemicals or abrasive cleaners.

6235 South Oak Park Avenue Chicago, IL 60638 USA
Toll free: 800.585.7686 +1.708.552.4040
Fax: +1.708.594.0396 www.metairtech.com

Represented by:

© 2026 Metropolitan Air Technology. All rights reserved. 10/26