



# INSTALLATION INSTRUCTIONS

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## AFAD-5 ADJUSTABLE FRESH AIR DAMPER

### FOR USE WITH BARD WALL MOUNT HEAT PUMPS

Models:

**WH381**

**WH431**

**WH491**

**WH611**

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**BARD MANUFACTURING COMPANY**  
Bryan, Ohio 43506

*Since 1914...Moving ahead, just as planned.*

Manual: 2100-343  
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## GENERAL INFORMATION

The ventilator should only be installed by a trained heating and air conditioning technician. These instructions serve as a guide to the technician installing the ventilator package. They are not intended as a step by step procedure with which the mechanically inclined owner can install the package.

The ventilator housing is shipped in one carton which contains miscellaneous hardware and installation instructions.

## UNPACKING

Upon receipt of the equipment be sure to compare the model number found on the shipping label with the accessory identification information on the ordering and shipping document to verify that the correct accessory has been shipped.

Inspect the carton housing of each ventilator as it is received, and before signing the freight bill, verify that all items have been received and that there is no visible damage. Note any shortages or damage on all copies of the freight bill. The receiving party must contact the last carrier immediately, preferably in writing, requesting inspection by the carrier's agent. Concealed damage not discovered until after unloading must be reported to the carrier within 15 days of its receipt.

## DESCRIPTION

The AFAD-05 adjustable fresh air damper is designed to be used with Bard WH381, WH431, WH491, and WH611 wall mount series heat pumps. They are mechanical vent systems designed to provide fresh air to meet indoor air quality standards. It does not include exhaust when used on these models. Separate exhaust provisions may be required.

## BASIC INSTALLATION

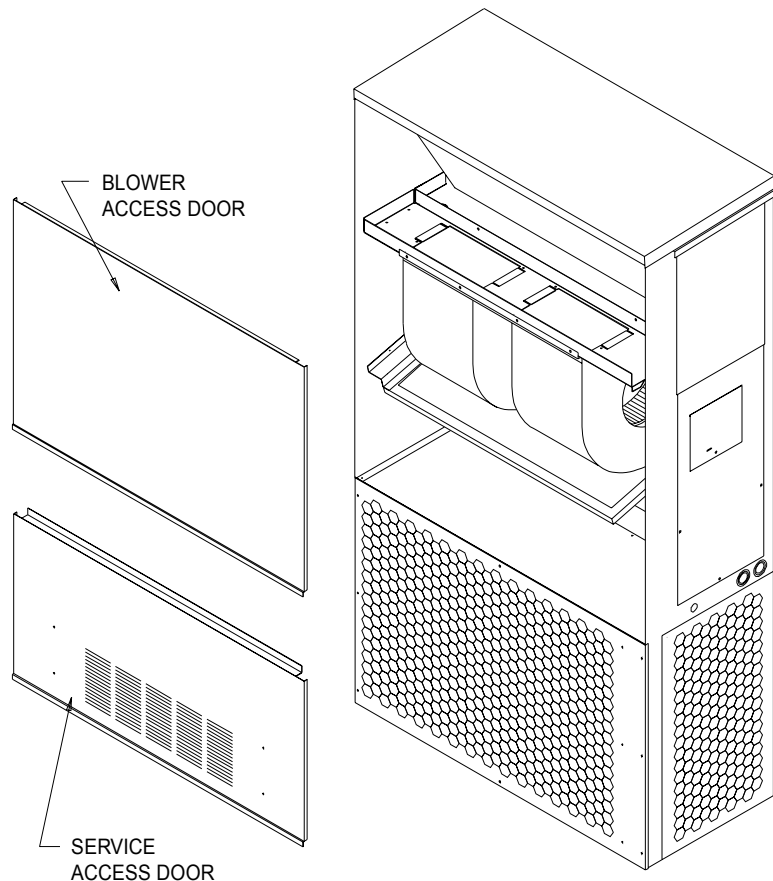
1. Unpack the ventilator assembly which includes the integral ventilator and miscellaneous hardware.

### **WARNING**

Open and lock unit disconnect switch before installing this accessory to prevent injury or death due to electrical shock or contact with moving parts. Turn thermostat to off.

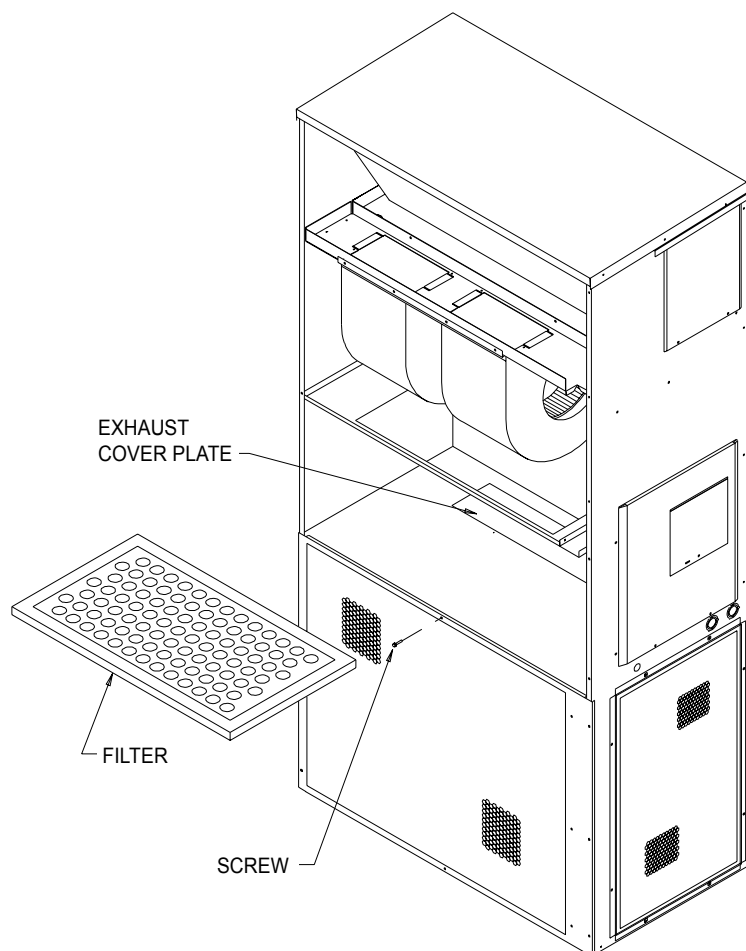
2. Remove and save the existing exterior blower access and service access panels on the Bard wall mount units. (Refer to Figure 1.)

FIGURE 1



MIS-344

**FIGURE 2**



MIS-427

3. Remove and save existing unit air filter and screw from front center grille. (See Figure 2.)

4. **DO NOT REMOVE EXHAUST COVER PLATE!** Install ventilator by inserting the ventilator into the unit to the far left side clearing the right filter bracket. Once the ventilator is fully inserted, slide the ventilator to the right until it is tight against the back of the control panel. (See Figure 3 on Page 3.)

5. Replace left filter support, filter and four (4) screws in condenser grille.

6. Reinstall the blower access panel at top of unit and secure with sheet metal screws.

7. Remove mist eliminator to set blade position.

8. Set damper blade position for desired air. (See Tables.)

9. Replace mist eliminator. Be sure it is installed with the drain holes to the bottom.

10. Remove blank off plate or barometric fresh air damper installed on service access door. Plug four (4) mounting holes with the plastic plugs provided with the ventilator.

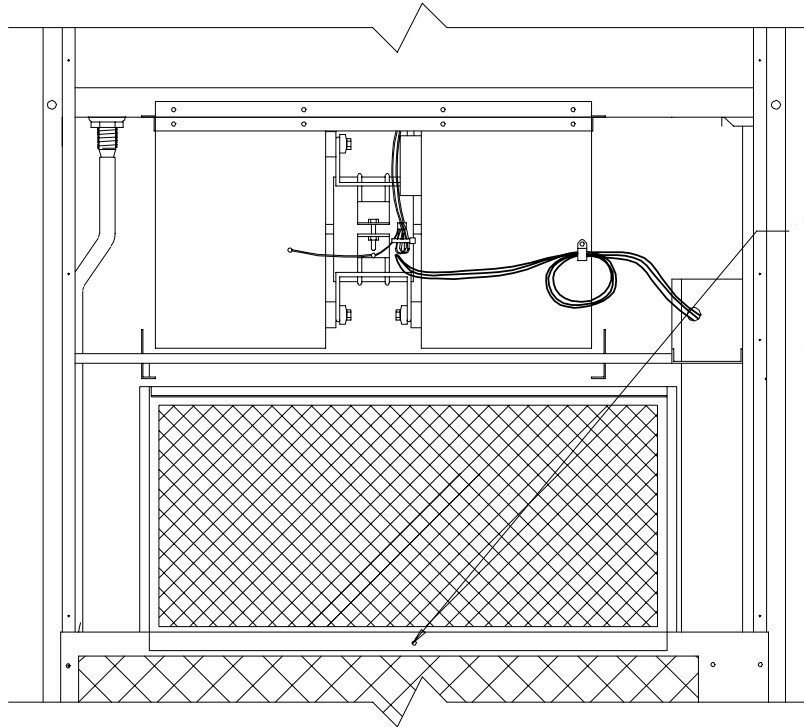
11. Replace service access panel.

12. Ventilator is now ready for operation.

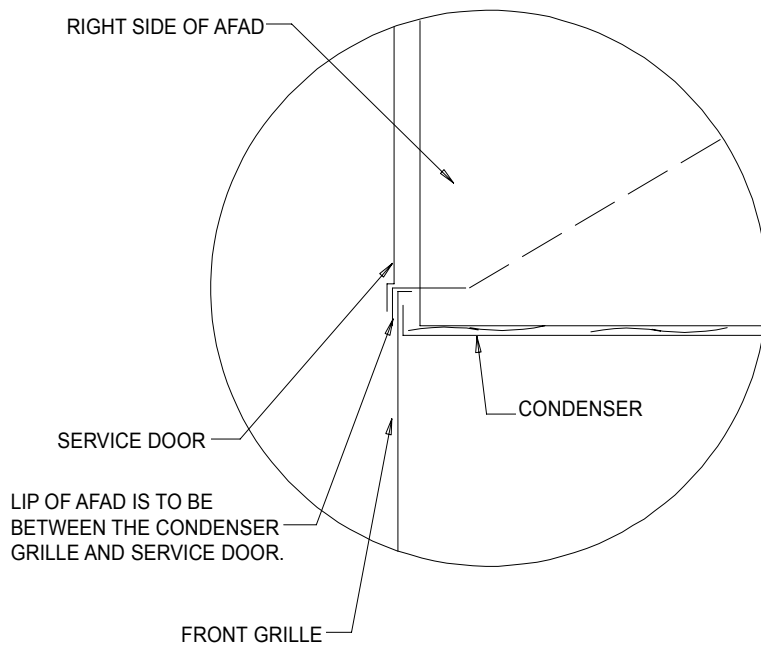
### **IMPORTANT**

Position front lip of ventilator on top of front grille and condenser partition. (See Figure 3 inset.) This is important to ensure proper drainage of any water entering damper assembly.

**FIGURE 3**



WHEN INSTALLING AFAD POSITION SO THAT HOLE IN FRONT LIP IS CENTERED OVER HOLE IN CONDENSER GRILLE TO INSERT A SELF DRILLING SCREW.



MIS-1282

## AFAD VENTILATION AIRFLOW RATES FOR NON-DUCTED FREE BLOW APPLICATIONS

**TABLE 1**

AFAD-5 Ventilation CFM		Damper Blade Position				
2" Filter w/ Supply & Return Grilles @ 230 Volts		A	B	C	D	E
High Speed Blower	Ventilator Airflow	370	424	491	564	623
	Total Unit Airflow	1490	1470	1431	1391	1333
Medium Speed Blower	Ventilator Airflow	323	385	444	533	579
	Total Unit Airflow	1351	1346	1334	1299	1255
Low Speed Blower	Ventilator Airflow	276	326	381	446	526
	Total Unit Airflow	1139	1133	1123	1104	1093

**TABLE 2**

AFAD-5 Ventilation CFM		Damper Blade Position				
2" Filter w/ Supply & Return Grilles @ 208 Volts		A	B	C	D	E
High Speed Blower	Ventilator Airflow	347	401	465	535	598
	Total Unit Airflow	1434	1413	1401	1354	1289
Medium Speed Blower	Ventilator Airflow	304	353	407	472	540
	Total Unit Airflow	1232	1223	1209	1191	1172
Low Speed Blower	Ventilator Airflow	234	291	331	382	430
	Total Unit Airflow	991	990	975	969	957

**AFAD VENTILATION AIRFLOW RATES  
FOR NON-DUCTED FREE BLOW APPLICATIONS**

**TABLE 3**

AFAD-5 Ventilation CFM		Damper Blade Position				
1" Filter w/ Supply & Return Grilles @ 230 Volts		A	B	C	D	E
High Speed Blower	Ventilator Airflow	366	423	472	532	617
	Total Unit Airflow	1556	1549	1536	1500	1437
Medium Speed Blower	Ventilator Airflow	325	368	413	479	569
	Total Unit Airflow	1389	1388	1376	1342	1286
Low Speed Blower	Ventilator Airflow	275	307	350	410	481
	Total Unit Airflow	1156	1147	1137	1123	1102

**TABLE 4**

AFAD-5 Ventilation CFM		Damper Blade Position				
1" Filter w/ Supply & Return Grilles @ 208 Volts		A	B	C	D	E
High Speed Blower	Ventilator Airflow	340	400	455	528	609
	Total Unit Airflow	1478	1475	1468	1419	1372
Medium Speed Blower	Ventilator Airflow	295	340	386	433	526
	Total Unit Airflow	1264	1260	1248	1226	1190
Low Speed Blower	Ventilator Airflow	249	285	316	354	417
	Total Unit Airflow	1017	1012	996	991	974

## ADJUSTABLE FRESH AIR DAMPER (WH381, WH431, WH491 and WH611 )

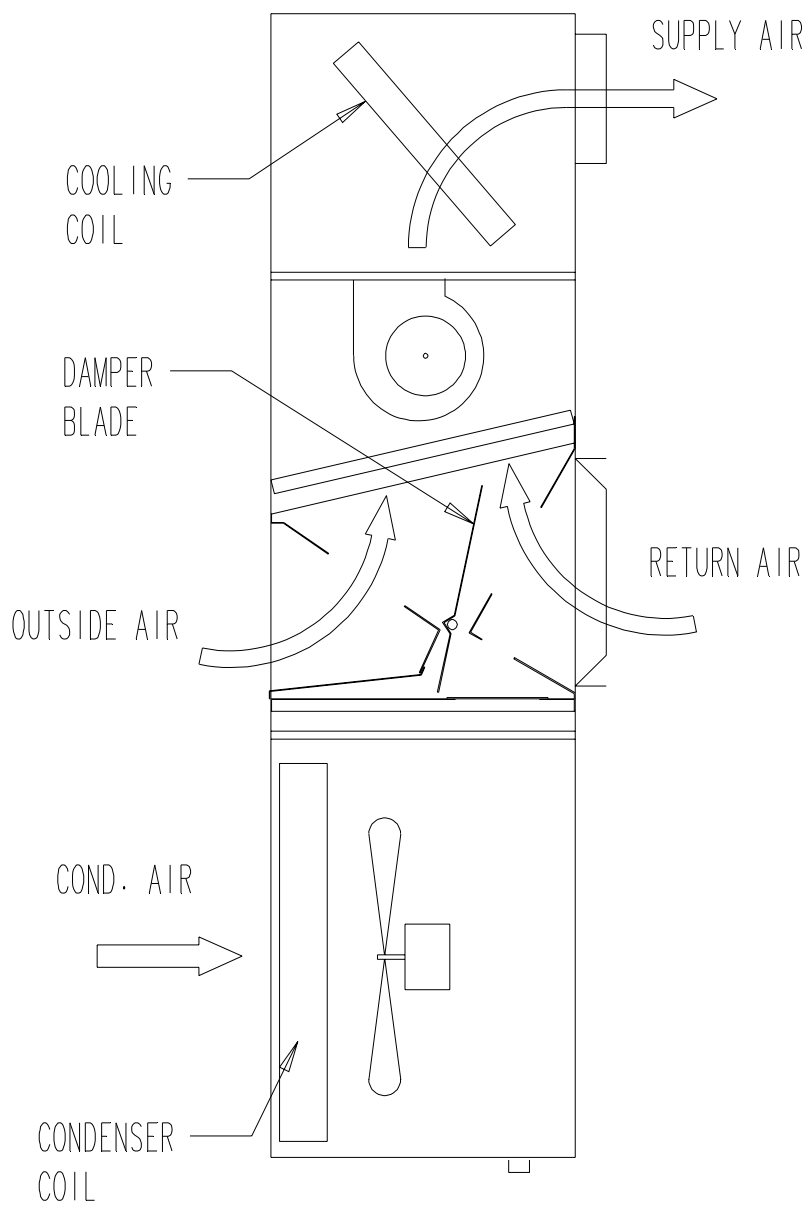
### FEATURES:

- One piece construction – easy to install.
- Provides up to 75 percent of outside air.

### AFAD

The AFAD is adjusted to deliver required outside air during blower operation.

FIGURE 4



MIS-1283