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# INSTALLATION INSTRUCTIONS

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## MOTORIZED FRESH AIR DAMPER

### MODEL MFAD-5



Bard Manufacturing Company  
Bryan, Ohio 43506

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

Manual : 2100-224 C  
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# Contents

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**MFAD General Information** ..... 1  
Description ..... 1  
Application ..... 1  
**Installation** ..... 2

**Figures**  
Figure 1 ..... 2  
Figure 2 ..... 2  
Figure 3A ..... 3  
Figure 3B ..... 3

**Tables**  
Table 1 ..... 1  
Table 2 ..... 1

# GENERAL INFORMATION

## DESCRIPTION

The motorized fresh air damper MFAD-5 is an internally mounted damper designed to bring up to 25% fresh air. The damper blade is powered by a 24 VAC motor with spring return on power loss. The damper is powered open anytime the unit blower motor is energized.

## APPLICATION

The amount of outside fresh air brought into the structure is dependent on the supply and return duct static pressure present in the duct system. Refer to Table 2 for ventilation air that will be supplied at different duct static pressures.

For free blow applications with return air filter grille and supply grille use 0.00 supply air static pressure and 0.1 return air static pressure.

**TABLE 1**  
**MFAD-5**  
**SUITABLE FOR THESE UNITS**

WA421-A	WA481-A	WA601-A
WA421-B	WA481-B	WA601-B
WA421-C	WA481-C	WA601-C
WA421-E	WA481-E	WA601-E
WA421-F	WA481-F	WA601-F
WH421-A	WH481-A	WH601-A
WH421-B	WH481-B	WH601-B
WH421-C	WH481-C	WH601-C
WH421LA	WH481LA	WH601LA
WH421LB	WH481LB	WH601LB
WH421LC	WH481LC	WH601LC

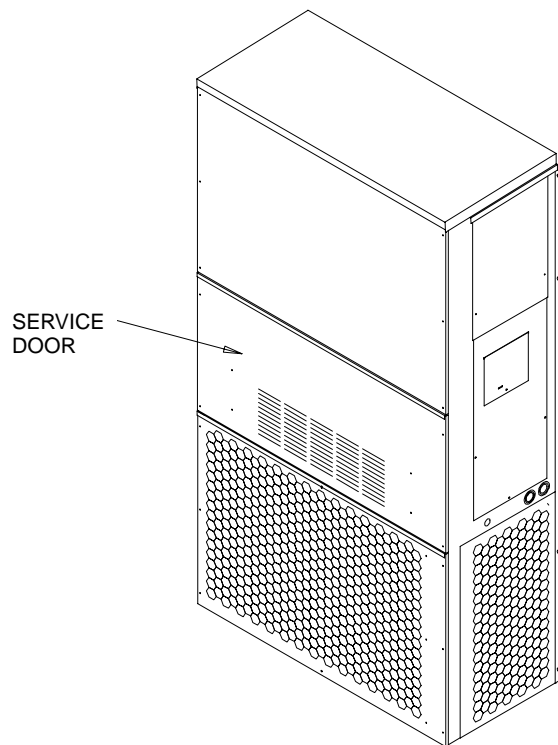
**TABLE 2**  
**MFAD-5**  
**VENTILATION AIR SUPPLIED AT STATIC PRESSURES**

HIGH SPEED						
		Ventilation Air (CFM)				
Supply Air ESP	.00	185	265	350	420	490
	.20	175	255	335	410	490
	.40	165	245	325	405	490
Return Air Static Pressure		.00	.05	.10	.15	.20
LOW SPEED						
Ventilation Air (CFM)	125	225	330	415	500	
Return Air Static Pressure	.00	.05	.10	.15	.20	

# INSTALLATION

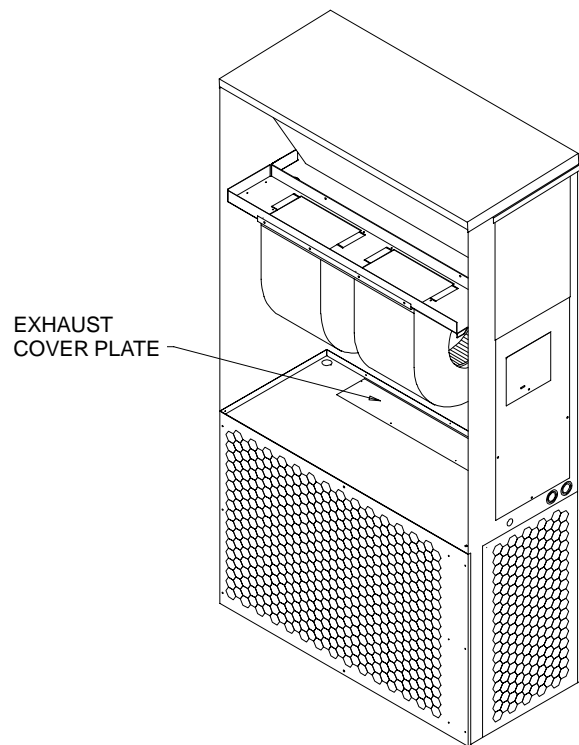
1. Disconnect all power to wall mount unit before installing MFAD.
2. Remove service door. (See Figure 1.) Remove fresh air damper or blank off plate if installed on service door. Remove 4 screws from top of front condenser grille. (See Figure 3A.)
3. The “exhaust cover plate” *must be* in place when an MFAD-5 is installed. (See Figure 2.)
4. Install MFAD with notch in front lip of MFAD centered over hole in condenser partition. (See Figure 3A.)
5. Position MFAD with front lip over condenser partition and under front grille. (See Figure 3B.) *This is important to insure proper drainage of any water entering damper assembly.*
6. Use a self drilling screw through hole provided in left mounting flange to secure MFAD in position.
7. Route wires as shown in Figure 3A into unit low voltage terminal strip area. For left hand units unclip 2 wire ties on right half of the MFAD. Reroute wire down the left side. Route wires into low voltage terminal strip area.
8. Connect black wire to C terminal of low voltage block. Connect red wire to G terminal of low voltage block. See wall mount low voltage connection diagram in the unit installation instructions for wiring diagram.
9. Check MFAD for proper operation. MFAD should open whenever the blower is energized.
10. Replace 4 screws in front condenser grille and replace service door. Plug 4 holes in service door with plastic plugs provided.

FIGURE 1



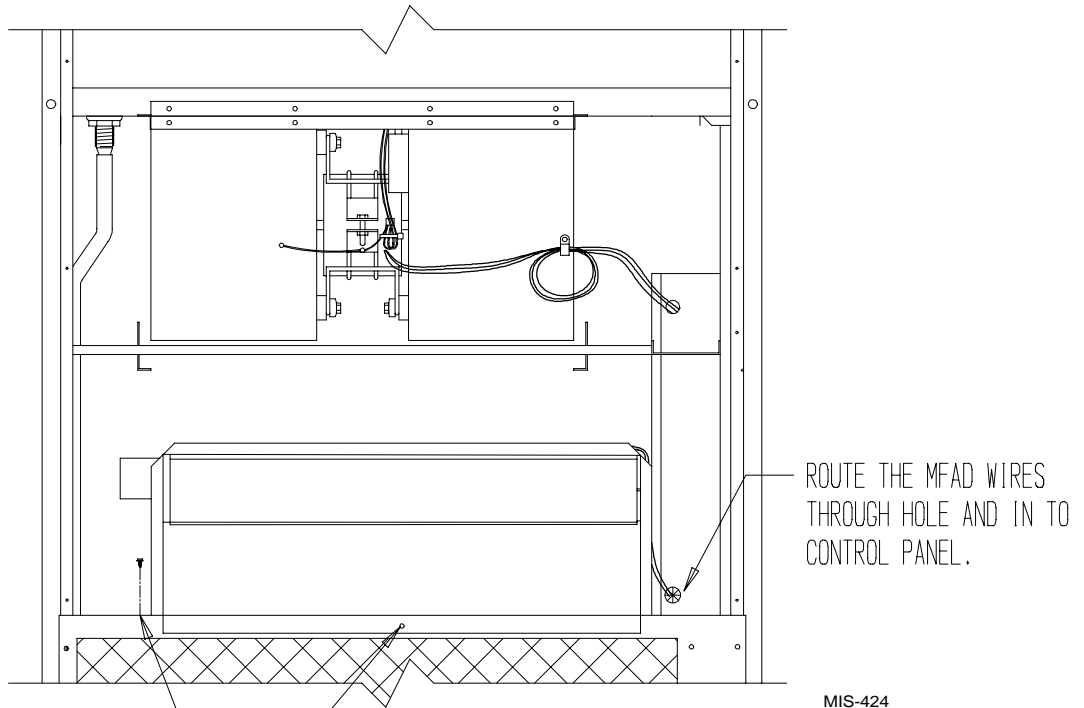
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FIGURE 2



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**FIGURE 3A**



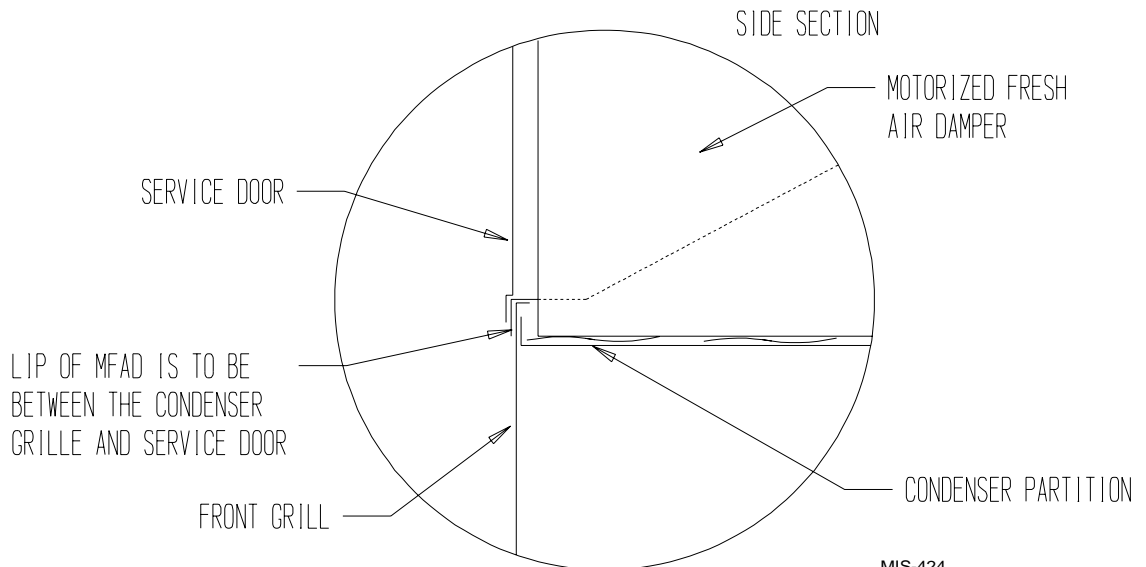
MIS-424

USE A SELF DRILLING SCREW TO FASTEN THE MFAD TO THE CONDENSER PARTITION.

CAUTION: HOLE IN MFAD MUST BE USED TO INSURE CLEARANCE FROM CONDENSER COIL TUBING.

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

**FIGURE 3B**



MIS-424