

SAFETY INSTRUCTIONS

⚠ WARNING

1. 120 Volts may cause serious injury from electric shock. Disconnect electrical power before starting installation or servicing. Leave power disconnected until installation/service is completed.
2. Sharp edges may cause serious injury from cuts. Use care when cutting plenum openings and handling duct work.

⚠ CAUTION

1. Read all instructions before beginning installation.
2. Improper installation may cause property damage or injury. Installation, service, and maintenance must be performed by a qualified service technician.

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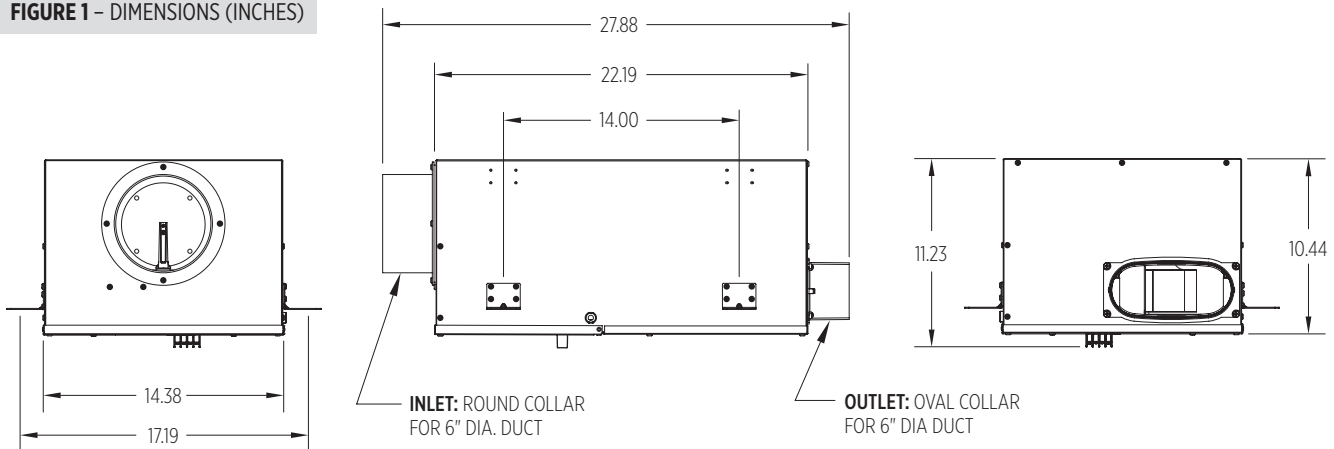
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SPECIFICATIONS

TABLE 1 – SPECIFICATIONS

External Static Pressure ("w.c.)	Airflow (CFM)	Current (amps)	Power (watts)	Efficacy (CFM/watt)	Voltage
0.0	285	.4	53	5.39	115 VAC 1 phase 60 Hz
0.2	250	.4	53	4.70	
0.4	195	.4	52	3.75	
0.6	130	.4	50	2.62	
0.8	25	.4	44	0.52	

FIGURE 1 – DIMENSIONS (INCHES)



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CONTROL RECOMMENDATIONS

Aprilaire Thermostat Models: 8620, 8620W, 8820, 8830, 8840, 8910, 8910W, 8920W.

Aprilaire Digital Ventilation Control Models: 8120A, 8120X.

INSTALL ELECTRICAL OUTLET

Install a standard NEMA 5-15 receptacle suitable for the location, near where the ventilator will be installed. The ventilator comes equipped with a 6-foot power cord with a standard 3-prong plug.

VENTILATOR LOCATION AND ORIENTATION

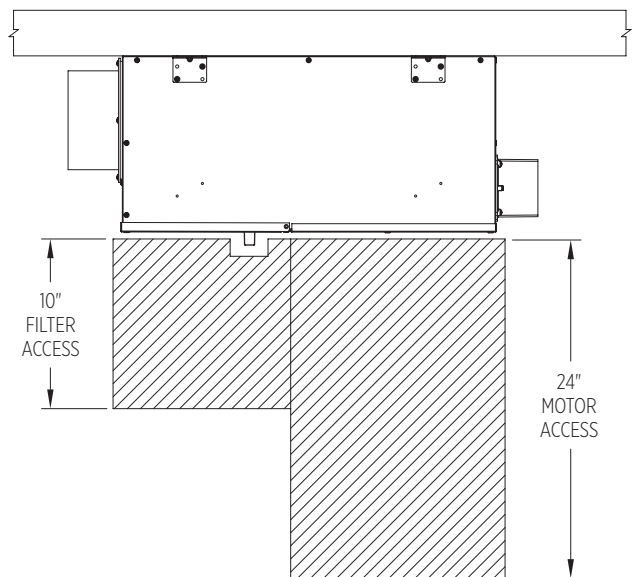
⚠ CAUTION

1. Mount the blower with the lowest, exposed moving parts at least 8 feet (2.4 m) above floor or grade level.
2. Mount the blower at least 3.3 feet (1.0 m) from any accessible opening of the duct.

Choose a location for the ventilator that is within 6 feet of the outlet into which the ventilator will be plugged. Allow space for filter removal and service as shown in **FIGURE 2**.

The ventilator can mounted in any orientation.

FIGURE 2 – CLEARANCES FOR SERVICING

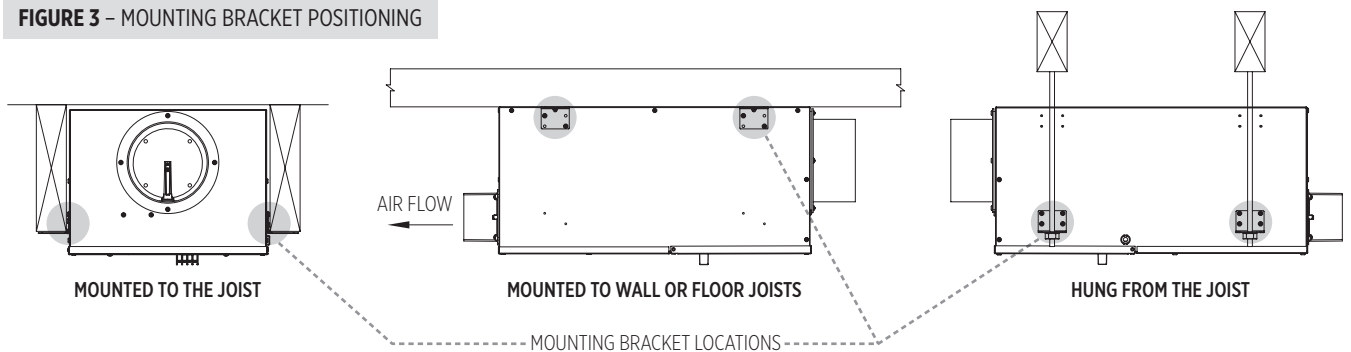


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MOUNT THE VENTILATOR

1. Install the mounting brackets, using the #8 x 1/2" screws supplied, to the side of the housing as shown in **FIGURE 3**. Use the holes nearest the covers for mounting to floor joists or hanging from rafters. Use the holes near the bottom of the unit for mounting to a flat wall or ceiling surface.
2. Secure the ventilator into joists or a strong platform and screw into place using the #10 x 3/4" screws provided. The ventilator weighs approximately 25 pounds, so do not secure it into drywall alone.

FIGURE 3 – MOUNTING BRACKET POSITIONING



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MOUNT INTAKE HOOD

Install a weather tight hood with a bird screen.

Cut a hole in the exterior wall that is large enough to fit 6" insulated flexible duct through with minimal compression of the insulation. Pull the duct through the hole and attach the flex duct to the collar of the hood. Use metal foil tape or a plastic zip-tie to secure the duct to the collar. Pull the insulation and vapor barrier over the duct and tape it to the collar.

IMPORTANT: The end of the insulation must be sealed to prevent condensation from forming inside the insulation. If a plastic zip-tie is used to secure the insulation to the hood collar, also tape the end to seal it against condensation problems.

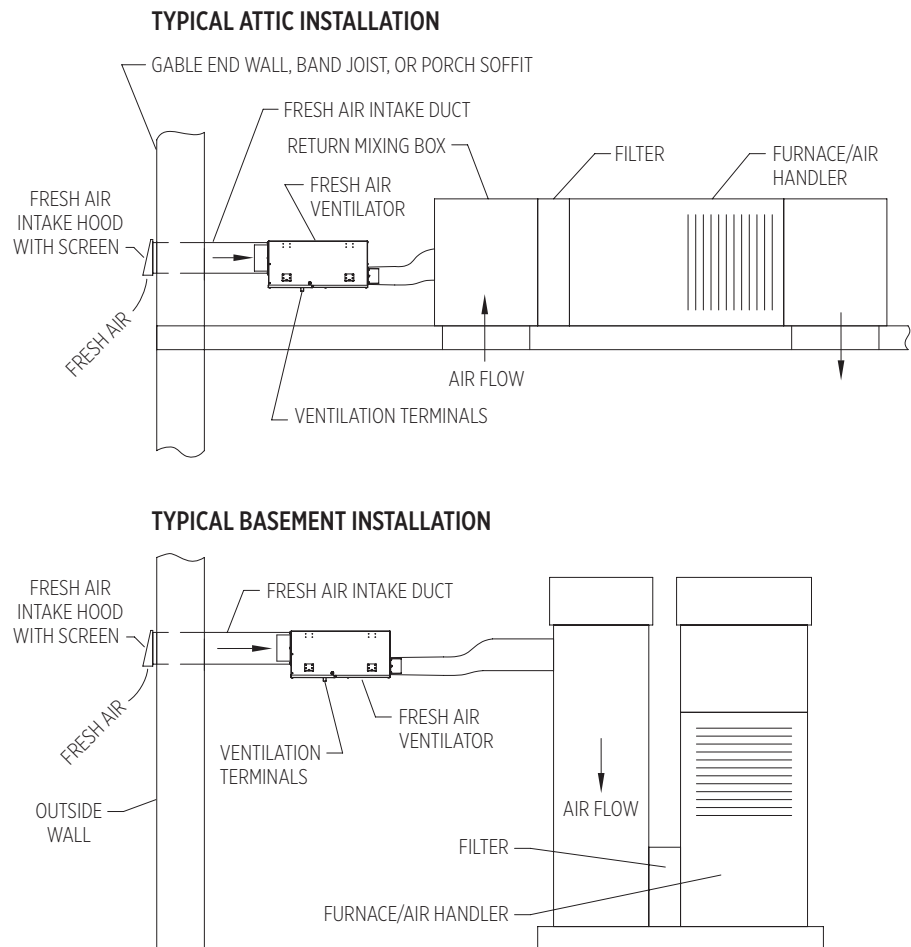
Press the hood against the outside wall and secure in place with screws; seal around the perimeter of the hood with caulk.

INSTALL DUCTWORK

Install 6" diameter flexible, insulated duct from the round inlet collar of the unit to the intake hood and from the oval outlet collar of the unit to the HVAC system. Duct the outlet of the ventilator to the **return side** of the HVAC system (refer to **FIGURE 4**).

IMPORTANT: The end of the insulation must be sealed to prevent condensation from forming inside the insulation. If a plastic zip-tie is used to secure the insulation to the hood collar, also tape the end to seal it against condensation problems.

FIGURE 4 – MODEL 8140NC DUCTING IN UPFLOW AND HORIZONTAL HVAC SYSTEMS



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WIRING

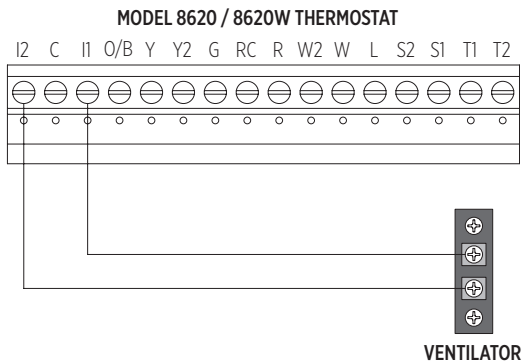
The Model 8140NC Fresh Air Ventilator can be wired to the normally open contacts of the ventilation output of an Aprilaire thermostat, equipment control module, Model 8120A or 8120X Digital Ventilation Controller.

⚠ CAUTION

Do not apply voltage to the vent terminals of the ventilator.

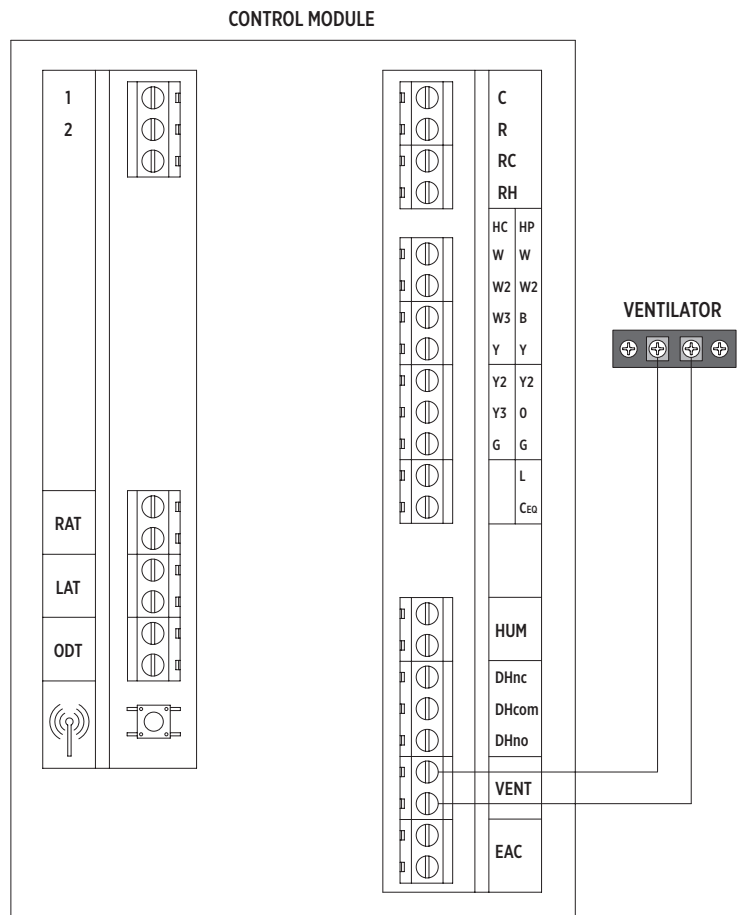
Select the wiring diagram that corresponds to the control to be used. Refer to **FIGURES 5-8**.

FIGURE 6 - THERMOSTAT WIRED TO VENTILATOR



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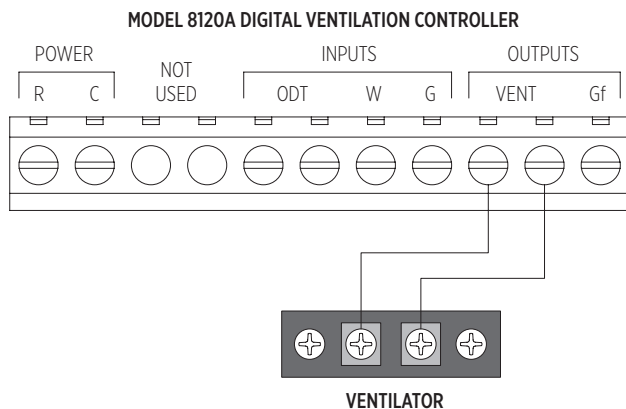
FIGURE 5 - CONTROL MODULE WIRED TO VENTILATOR



WIRE THE CONTROL MODULE TO THE HVAC SYSTEM, THERMOSTAT AND ANY OTHER ACCESSORIES ACCORDING TO THE INSTRUCTIONS PROVIDED WITH THE CONTROL MODULE.

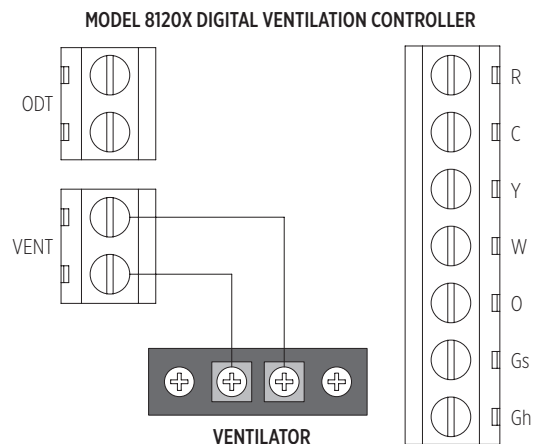
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FIGURE 7 - MODEL 8120A WIRED TO VENTILATOR



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FIGURE 8 - MODEL 8120X WIRED TO VENTILATOR



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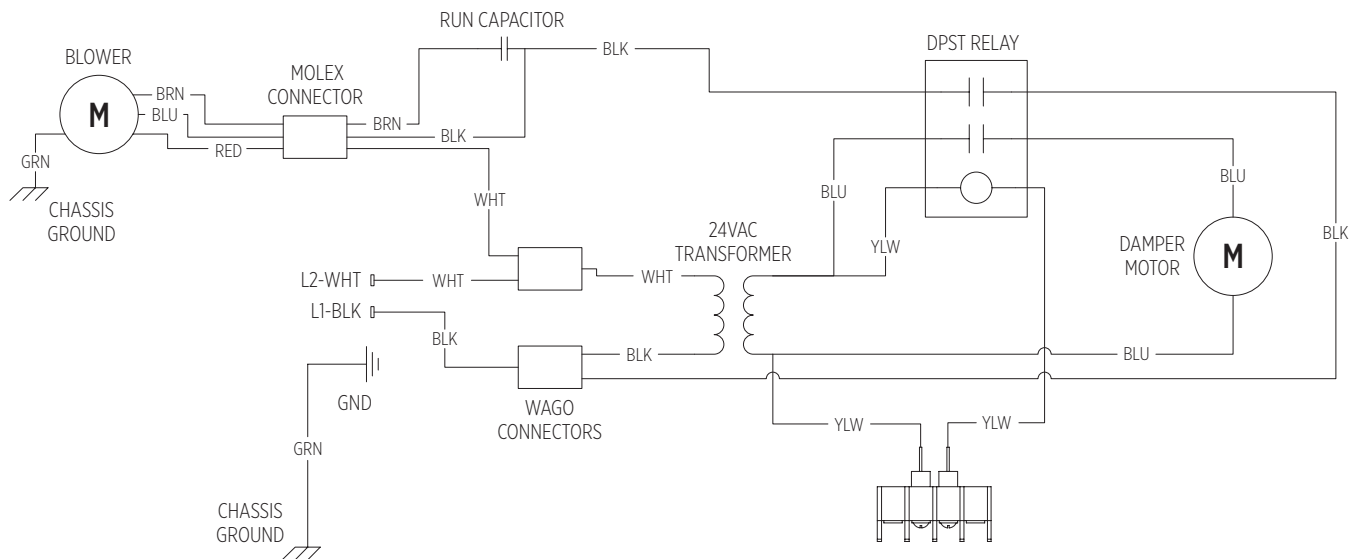
TEST

After all ducting and wiring is complete, plug in the ventilator, restore power to the HVAC system and make sure the switch controlling the outlet into which the ventilator is plugged (if applicable) is turned on.

1. Complete a circuit across the “VENT” terminals on the ventilator.
2. The ventilator blower will start, and the integral damper will also open.
3. Adjust the ventilation control to the desired setting.
4. If the ventilator was properly wired to turn on the HVAC unit blower with ventilation, the HVAC blower will turn on.

TROUBLESHOOTING

FIGURE 9 – MODEL 8140NC INTERNAL SCHEMATIC



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TABLE 2 – TROUBLESHOOTING GUIDE

Symptom	Possible Reason	Correction
Ventilator does not turn on.	No power to the outlet into which the ventilator is plugged.	Turn on the switch or breaker that controls power to the outlet.
	No completed circuit between VENT terminals of the 8140NC.	Wire the control to the ventilator as shown in the wiring diagrams on page 5.
Damper does not open.	No voltage to damper motor.	Open the filter cover and reconnect the damper motor wires to the blue power wires using wire nuts.

FILTER CLEANING

Normally, the fresh air filter will need to be removed and cleaned every six months, but check it after the first three months following installation to determine if more or less frequent cleaning will be necessary. After cleaning the filter inside the ventilator, clean off the screen at the fresh air intake hood on the outside of the house. The most common cause of reduced ventilation is a clogged air intake hood.

To clean the ventilator filter:

1. Remove the two screws securing the filter door to the housing and swing open the door (**FIGURE 10**).
2. Rotate the plastic filter retainer to release the filter and remove it from the ventilator (**FIGURE 11**).
3. Use water to rinse the filter and shake the excess moisture off the filter.
4. Replace the filter in the ventilator, turn the filter retainer to secure it in the housing, and close and secure the filter door.

FIGURE 10

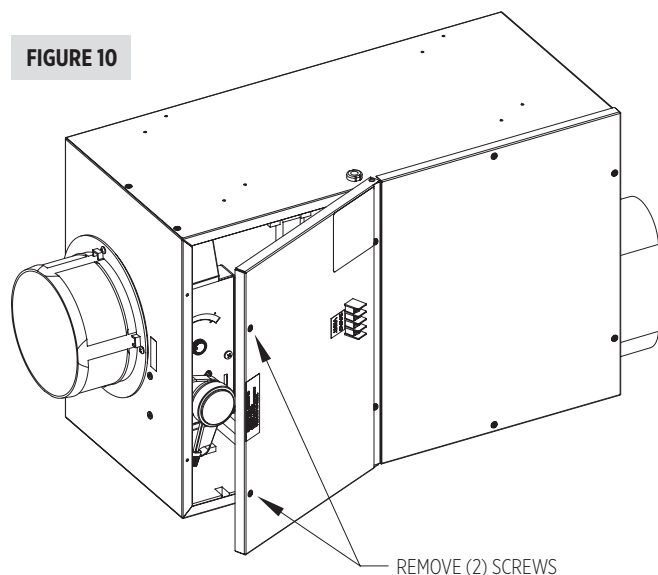
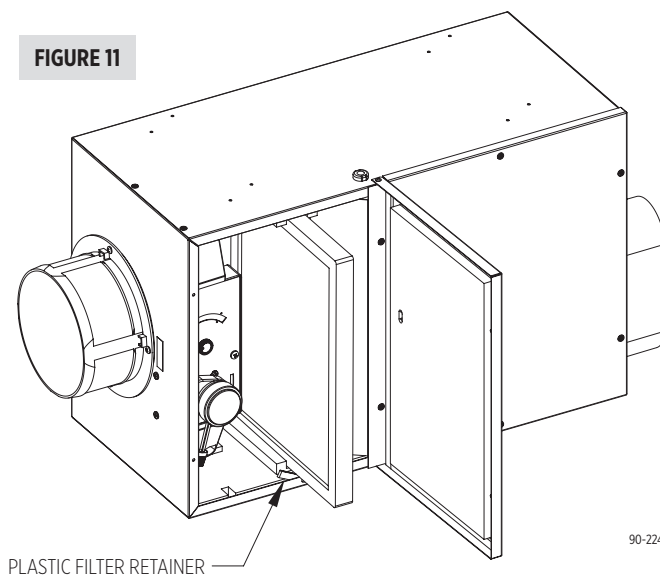


FIGURE 11



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LIMITED WARRANTY

Your Research Products Corporation Aprilaire® Fresh Air Ventilator is expressly warranted for five (5) years from date of installation to be free from defects in materials or workmanship.

Research Products Corporation's exclusive obligation under this warranty shall be to supply, without charge, a replacement for any component which is found to be defective within such five (5) year period and which is returned not later than thirty (30) days after said five (5) year period by you to either your original supplier or to Research Products Corporation, Madison, Wisconsin 53701, together with the model number and installation date of the dehumidifier.

THIS WARRANTY SHALL NOT OBLIGATE RESEARCH PRODUCTS CORPORATION FOR ANY LABOR COSTS AND SHALL NOT APPLY TO DEFECTS IN WORKMANSHIP OR MATERIALS FURNISHED BY YOU INSTALLER AS CONTRASTED TO DEFECTS IN THE VENTILATOR ITSELF.

IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE SHALL BE LIMITED IN DURATION TO THE AFORESAID FIVE YEAR PERIOD. RESEARCH PRODUCTS CORPORATION'S LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, OTHER THAN DAMAGES FOR PERSONAL INJURIES, RESULTING FROM ANY BREACH OF THE AFORESAID IMPLIED WARRANTIES OR THE ABOVE LIMITED WARRANTY IS EXPRESSLY EXCLUDED. THIS LIMITED WARRANTY IS VOID IF DEFECTS(S) RESULT FROM FAILURE TO HAVE THIS UNIT INSTALLED BY A QUALIFIED HEATING AND AIR CONDITIONING CONTRACTOR. IF THE LIMITED WARRANTY IS VOID DUE TO FAILURE TO USE A QUALIFIED CONTRACTOR, ALL DISCLAIMERS OF IMPLIED WARRANTIES SHALL BE EFFECTIVE UPON INSTALLATION.

Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages so the above exclusion or limitations may not apply to you.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

WARRANTY REGISTRATION

Visit us on-line at www.aprilaire.com to register your Aprilaire product. If you do not have on-line access, please mail a postcard with your name, address, phone number, email address, product purchased, model number, date of purchase and dealer name and address to: Research Products Corporation, P.O. Box 1467, Madison, WI 53701

Your warranty registration information will not be sold or shared outside of this company.



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