

MODERN-AIRE VENTILATING

READ AND SAVE THESE INSTRUCTIONS

For use with: EM1400 EC External Blower

IMPORTANT:

Save these instructions for the local electrical inspector's use.

INSTALLER:

Please leave these installation instructions with this unit for the owner.

OWNER:

Please retain these instructions for future reference.

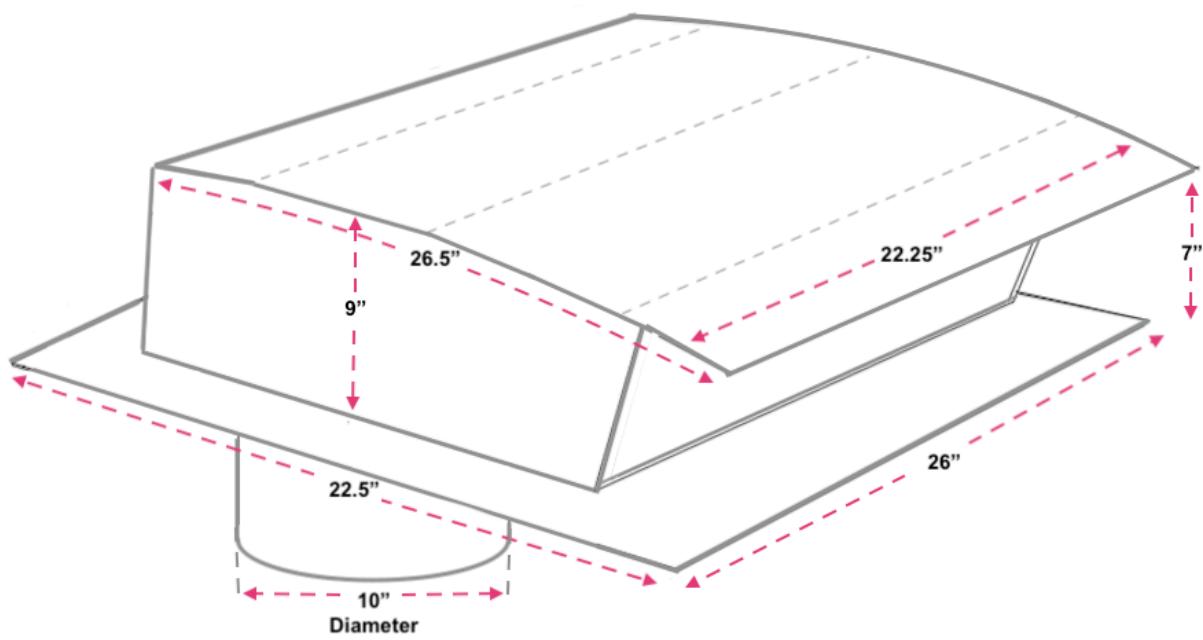
WARNING: TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:

1. Use this unit in the manner intended by the manufacturer. If you have questions, contact the manufacturer or dealer.
2. Before installation, servicing or cleaning unit, switch power off at the service panel and lock the service disconnecting means to prevent power from being switched on accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device, such as a tag, to the service panel.
3. Installation work and electrical wiring must be done by a qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction codes and standards.

4. Sufficient air is needed for proper combustion and exhausting of gases through the flue of the fuel burning equipment to prevent backdrafting. Follow the heating equipment manufacturers guideline and safety standards such as those published by the National Fire Protection Association (NFPA), and the American Society for Heating, Refrigeration and Air Conditioning Engineers (ASHRAE), and the local code authorities.
5. When cutting into wall or ceiling, do not damage electrical wiring or other hidden utilities.
6. Ducted fans must always be vented to the outdoors
7. To reduce the risk of fire use only metal ductwork
8. This unit must be grounded

CAUTION

1. For general ventilating use only. Do not use to exhaust hazardous or explosive material and vapors
2. To avoid motor bearing damage and noisy and/or unbalanced impellers, keep drywall spray, construction dust, etc. off power unit
3. Please read specification label on product for further information and requirements
4. Electrical circuit including speed control must be rated 6amps minimum



SPECIFICATIONS

MODEL	VOLTS	AMPS	CFM	DUCT SIZE
EM1400	115	2.3	1400	10"

ROOF MOUNT INSTALLATION

1. Locate the ventilator on the rear slope of the roof. Place the unit in a location to minimize the duct run. The location should be free of obstacles (electrical lines, attic vents, etc.)
2. For flat roofs or roofs with less than 1 1/2" rise in 12", mount the ventilator on roof curb. See Figure 1. Build a curb that will mount the ventilator at a minimum pitch of 2/12.
3. Center the duct cut out between roof rafters.
4. Cut holes for ducting and electrical wiring as shown in Figure 2.
5. Install the ventilator so its discharge is down slope and away from prevailing winds. According to the standard roofing procedures: (shingles must cover the rear flashing flange and a minimum of 1' of the side flanges. The flashing on the discharge end must rest on top of the shingles.
6. The ventilator must be sealed between the roof and its underside with quality roofing mastic.

Figure 1

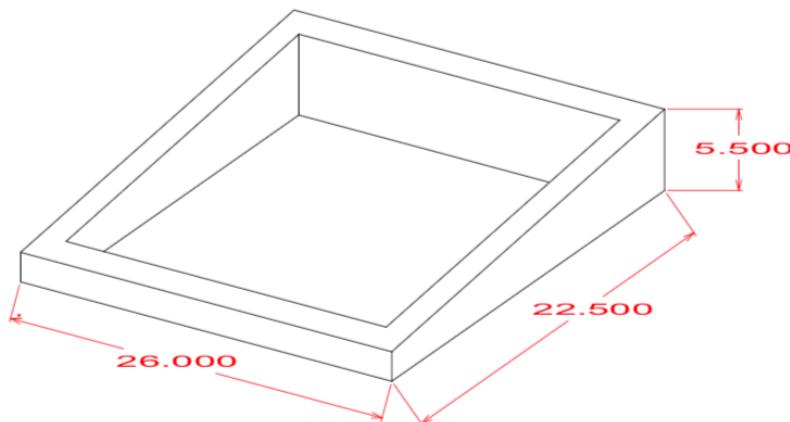
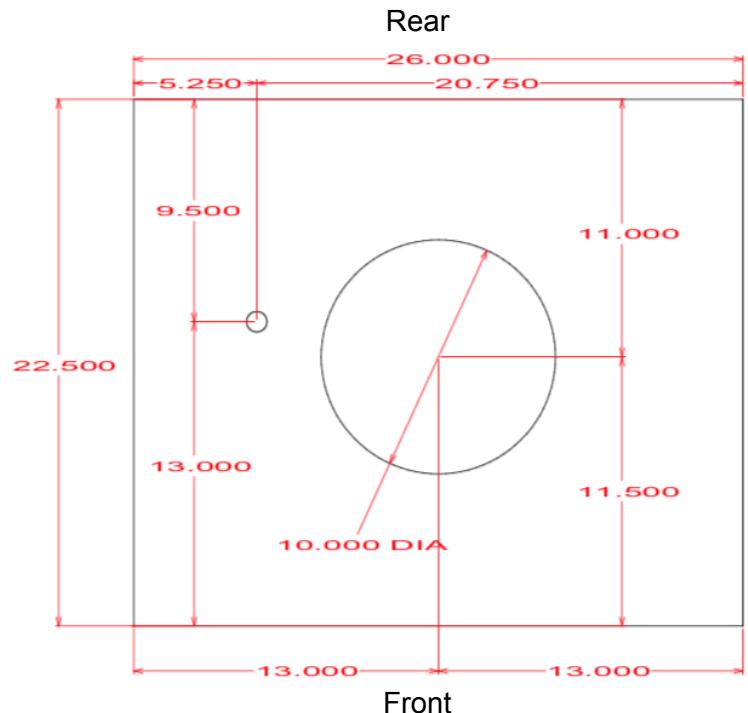


Figure 2



SIDE WALL MOUNT INSTALLATION

1. Locate the ventilator on the side wall. Place the unit in a location to minimize the duct run. The location should be free of obstacles (electrical lines, attic vents, etc.)
2. Center the duct cut out.
3. Cut holes for ducting and electrical wiring as shown in Figure 2.
4. Install the ventilator so its discharge is facing downwards with lags into the wall at a minimum of 6 contact points.
5. The ventilator must be sealed between the side wall and its underside.

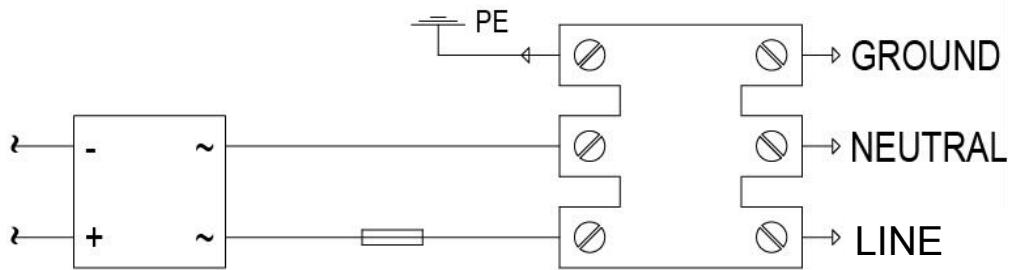
Electrical Connections

AC Line

Warning:

Turn off power at the service box before wiring

1. Install junction box containing 115V AC line near intended mounting location.
2. Remove top enclosure of the ventilator for access to the wiring terminal blocks.
3. Push the electrical cable up through the bottom knock out of the external blower body. Pull enough wire up into the housing to make attachment to the 3 lead terminal block.
4. Connect wires per diagram below.

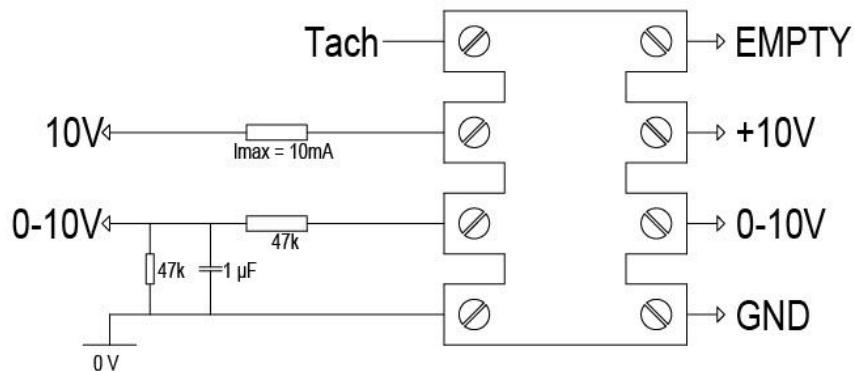


Designation	Color	Function
LINE	Black	Supply connection, power supply, phase, see nameplate for voltage range
NEUTRAL	Blue	Supply connection, power supply, neutral conductor, see nameplate for voltage range
GROUND	Green/Yellow	Ground connection

Electrical Connections

0-10V DC Switch

1. Run minimum AWG22 wires from designated switch junction box in hood unit to roof.
2. Push the electrical cable up through the bottom knock out of the external blower body. Pull enough wire up into the housing to make attachment to the 4 lead terminal block.
3. Connect wires per diagram below.



Designation	Color	Function
EMPTY	White	Tach output - DO NOT USE - LEAVE EMPTY
+10V	Red	Fixed voltage output 10 VDC +/-3%, max 10 mA, short-circuit proof, power supply for ext. devices, SELV
0-10V	Yellow	0-10V / PWN control input, $R_i=100k\Omega$, SELV
GND	Blue	Reference ground for control interface, SELV

Duct Connections

Warning: To reduce risk of fire, use only metal ductwork.

1. Use only round metal ducting, elbows and transitions or rectangular ducting having equivalent area of square inches as per required duct size.
2. Tape all joints with UL 723 classified metal multi purpose duct tape.
3. Turn on power and check ventilator operation
4. Make sure damper opens and closes freely
5. Install top enclosure of the ventilator.

FIVE (5) YEAR WARRANTY

Modern-Aire will repair or replace any part of your product that has a factory defect in workmanship or material. Product must be returned to point of purchase, with bill of sale, within five (5) years of purchase. If factory return is required, as determined by distributor / dealer, the warranty assumes all cost to and from the factory.

The Following Warranties Do Not Apply:

1. To damages from shipping, either concealed or visible
2. To damages resulting from improper wiring or installation
3. To damages or failure caused by Acts of God; or resulting from improper consumer procedures such as.... (A) improper maintenance (B) misuse, abuse, abnormal use, or accident and (C) incorrect electrical voltage or current
4. To removal of or any alteration to the label, control number or date of manufacture
5. To any other warranty, expressed, implied or written, and to any consequential or incidental damages, loss of property, revenues, or profit or costs of removal, or reinstallation, for any breach of warranty.

Warranty Validation

The end user must keep a copy of the Bill of Sale to verify purchase date. Valid proof of the date of installation may also serve as a verification of commencement of warranty period.

Use and Care

Disconnect electrical power supply and lock out service panel before cleaning or servicing this unit

Cleaning

Remove cover and carefully vacuum blower and inside of housing. Be careful not to beck or otherwise damage blower wheel

Motor Lubrication

The motor is permanently lubricated. Do not oil or disassemble motor.

Modern-Aire Ventilating Corporation

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