

SPECIFICATIONS

Overall Dimensions	13 ¹ / ₈ " W x 6 ⁷ / ₁₆ " H x 13 ¹ / ₈ " L with control 13 ¹ / ₈ " W x 6 ⁷ / ₁₆ " H x 11 ⁹ / ₁₆ " L without control
Inlet Collar	6" Round
Outlet Collar	6" Oval
Ventilation Setting	Off, 6-60 min/hr Code/Comfort Operation
Ambient Temperature	0°F - 140°F
Outdoor Temperature	Low: -10°F - 40°F
Limits	High: 85°F - 105°F
Indoor RH Limits	Low: 10 - 30% High: 45 - 70%
Voltage	115 VAC, 1 phase, 60 Hz
Power	Includes 5' power cord
Ducting	6" dia. flexible insulated duct
Warranty	5 Years
ETL	Tested to UL Standard 705 Not for outdoor use



FEATURES

- + Control is integrated into the Model 8142 Ventilator. The Model 8142NC has no integrated control so the ventilator can be hardwired to the HVAC system and controlled from within the living space.
- + High and low outdoor temperature limit lock-outs while maintaining ASHRAE Standard 62.2-2010 (Model 8142 only)
- + High and low indoor relative humidity (RH) limits can be set on the controller (Model 8142 only)
- + Simple plug-in installation

BENEFITS

- + Delivers the precise amount of outside air needed in today's efficiently designed homes
- + Model 8142 optimizes energy savings by locking out ventilation during hottest/coldest times of the day
- + Improves indoor air quality
- + Robust design handles hot attics up to 140°F
- + Installation labor reduced, requires only a switched outlet and 24-volt wiring to HVAC system
- + Furnace or air handler does not require an ECM motor to meet efficacy requirement

When properly installed and set, the Aprilaire Model 8142 will meet the mechanical ventilation requirements of:*

- + ASHRAE 62.2-2010
- + Energy Star Certified Homes, Version 3
- + EPA Indoor airPLUS, Version 1
- + 2012 & 2015 International Residential Code (IRC)
- + 2012 & 2015 International Energy Conservation Code (IECC)
- + California Energy Commission Title 24

*8142NC compliance is subject to the functionality of the external control. To assure compliance, use an 8910, 8910W, 8920W, 8620 or 8620W thermostat or 8120X ventilation controller.

Figure 1 - Overall Dimensions (inches) Model 8142

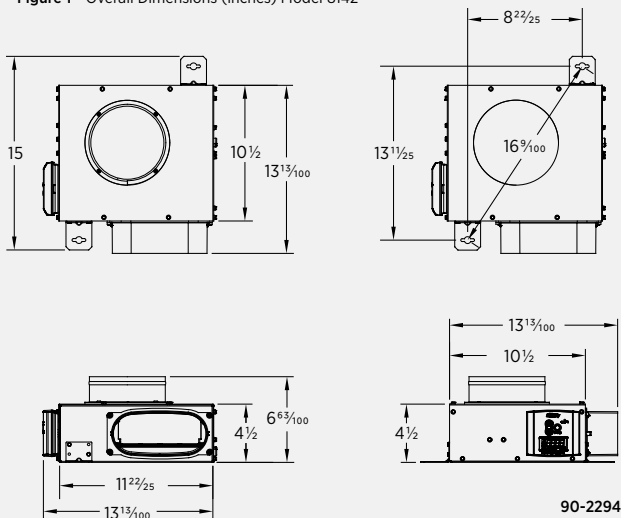
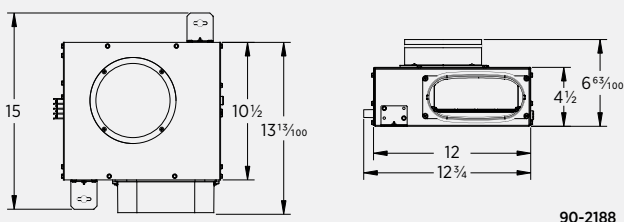
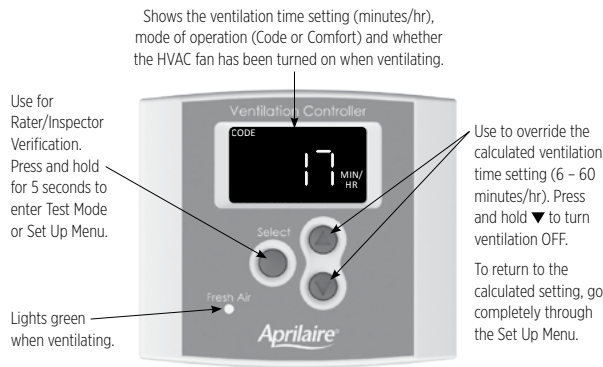


Figure 2 - Overall Dimensions (inches) Model 8142 NC



Controller Interface



SEQUENCE OF OPERATION – “CODE” SETTING

- + The control will open the vent damper with a heating, cooling or fan call for the set number of minutes during a one-hour cycle period. If the outdoor temperature is above the high temperature ventilation limit, ventilation will not occur with a cool or fan call, but if it is below the low temperature ventilation limit it will occur with a heat call.
- + If the HVAC equipment does not turn on enough to meet the ventilation time within the hour, the control will open the vent damper and turn on the HVAC blower without a call, but only if the outdoor air temperature is within the high and low ventilation temperature limits.
- + If the outdoor air temperature is outside of the limits at the end of the one-hour cycle period, then no additional ventilation will occur for another 60 minutes, and the cycle period will automatically adjust to four hours. The controller will then attempt to meet the set amount of ventilation during the four-hour cycle period.
- + If the air temperature is still out of range at the end of the four-hour cycle period, the control will automatically switch to an eight-hour cycle period, then a 12-hour cycle period and finally a 24-hour cycle period. During eight, 12 and 24 hour cycle periods, the total ventilation time increases to compensate for ventilation effectiveness as defined in ASHRAE Standard 62.2-2010.
- + When the cycle period automatically adjusts to 24-hours, the control will turn on ventilation to meet the requirements even if the temperature is outside of the set limits.

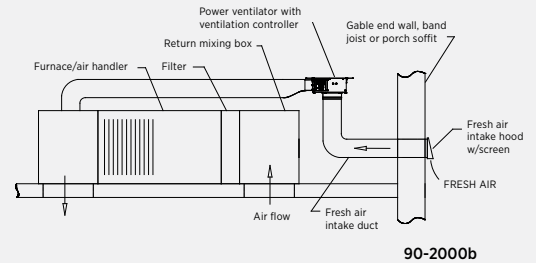
SEQUENCE OF OPERATION – “COMFORT” SETTING

- + The control will open the vent damper with a heating, cooling or fan call if the outdoor air temperature is within the high and low ventilation temperature limits and the indoor RH is within the high and low RH limits, for the set number of minutes during a one-hour cycle period.
- + If the HVAC equipment does not turn on enough to meet the ventilation time within the hour, the control will open the vent damper and turn on the HVAC fan without a call, if the outdoor air temperature and indoor RH is within the set limits. If the outdoor temperature or indoor RH are outside of the set limits, then no ventilation will occur.

PERFORMANCE						
External Static Pressure* ("w.c.)	0.0	0.2	0.4	0.6	0.8	1.0
Airflow (CFM)	245	220	190	160	120	95
Current (amps)	0.63	0.64	0.64	0.63	0.61	0.60
Efficacy (CFM/watt)	3.30	2.96	2.57	2.12	1.69	1.35

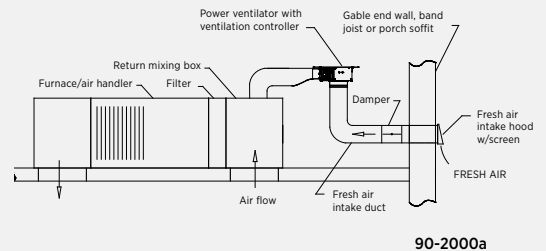
* Measured across ventilator.

Typical Attic Installation – Power Ventilator Ducted to Supply Duct



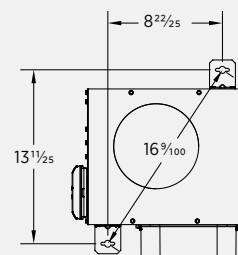
90-2000b

Alternate Attic Installation – Power Ventilator Ducted to Return Duct



90-2000a

Mounting Bracket Dimensions



90-2294