Installation and Maintenance Instructions

Suncourt recommends professional installation of the Airiva (or by an accomplished DIY person)

Please read and save these entire instructions before starting the installation.
IMPORTANT WARNINGS
IMPORTANT SAFETY INSTRUCTIONS

- **WARNING To reduce the risk of fire or electrical shock, do not use this fan device with a speed control of any kind. This device is for general ventilating use only. Do not use with hazardous, toxic or flammable vapors.**
- **WARNING To reduce the risk of fire, electric shock or injury to persons or animals, observe the following: Use this unit only in the manner intended by the manufacturer. If you have any questions or doubts, contact a qualified installer or Suncourt Inc. Before servicing or cleaning this unit, disconnect the power by unplugging it from the 110-120 Volt AC outlet. If a suitable 110-120 Volt AC grounded outlet is not within reach of the Airiva power cord, a new outlet needs to be installed. The installation of this outlet must be done by a qualified person(s) in accordance with all applicable Codes and Standards. The Airiva is equipped with a grounded plug. This safety feature must never be defeated.**
- **WARNING For your safety and protection follow all instructions and adhere to applicable safety, building and electrical codes.**
- **WARNING Install this product inside a building or dwelling only.**
- **WARNING Do not operate this product without ductwork or approved grilles being installed at the fan openings to prevent contact with the fans. Contact with the operating fans will cause serious injury.**
- **WARNING Do not install this product where it can come in contact with water from flooding or otherwise.**
- **WARNING Protect the outside vent hoods from ingress of water from rain or otherwise.**
- **WARNING Never expose this product to air temperatures over 120°F (49°C).**

WHERE AND HOW TO MOUNT

View typical installation drawings below.

- The Airiva should be mounted on a stand, shelf or shelf brackets that can easily support the 67 or 70 lb. unit.

- The minimum mounting height should be 8" off the floor to provide clearance for the condensate drain. For convenience when servicing, mounting the Airiva at chest height is recommended.

- The Airiva should be mounted such that the latches for the door are on top. The hinges for the door should be on the bottom of the unit and slightly hanging over the stand or shelf.

- When preparing the Airiva shelf or stand, allow for a slight angle so that condensation (if any) will flow to the end of the housing with the condensate drain (low side).

- Only if you will be connecting the stale house air input connection of the Airiva to your forced air system main air supply trunk duct is it necessary to install the unit near the furnace air supply trunk duct. It is not recommended to exceed 25' of duct length per Airiva connection point.

If you are not connecting to the main supply trunk duct, you may install the Airiva anywhere, preferably along an outside wall. As a general rule, keep the total ductwork as short as possible.

ELECTRICAL POWER

- You will need a 110-120 Volt AC electrical outlet that can be reached by the Airiva power cord. The short length of the Airiva power cord is dictated by the National Electrical Code. The housing of the Airiva is equipped with a door safety interlock switch. This switch cuts the electrical power to the electric fans and electronic control system when the door of the housing is opened.

Regardless of this safety interlock, you must disconnect the power cord at the electrical outlet before opening the housing.

CONDENSATE DRAIN

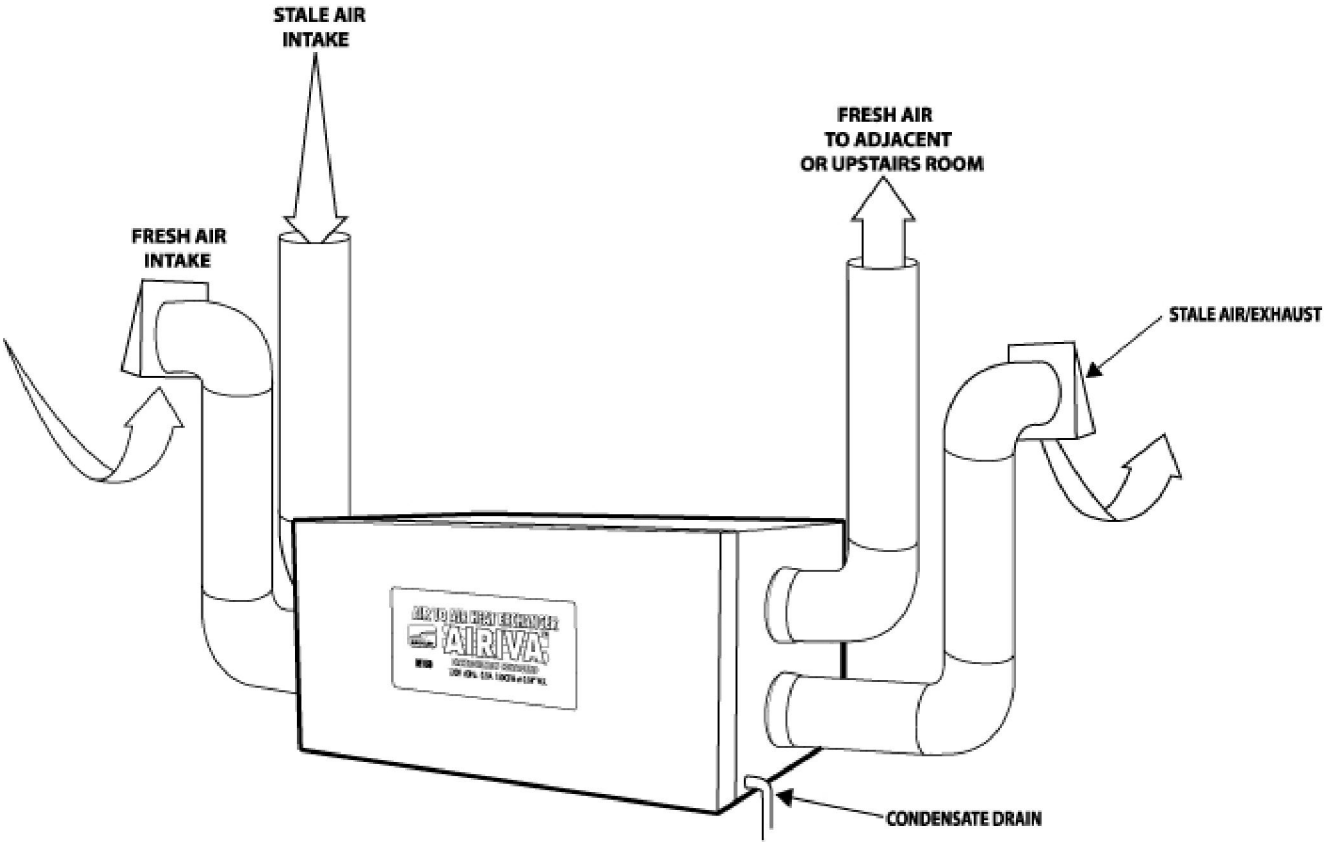
- Choose a drain location (i.e. sink, floor drain, washer drain, etc.) to run the condensate drain hose to. The inside diameter of the hose needed is 3/8". (Hose not provided)

DUCT CONNECTIONS

- The fresh outside air intake and stale air exhaust ducts should be kept as short as possible. On the outside of your home you will need to install hoods to protect the openings from rain. Select a hood that has a built-in screen to prevent access of rodents or birds. If at all possible, install the ducts where they are protected from prevailing winds. Keep the two hoods a minimum of 48" apart to avoid air re-circulation from one hood to the other. Keep the fresh air intake at least 72" away from dryer vents, furnace exhausts, etc.

- The fresh air to house and stale house air intake should be ducted away from each other. The stale house air intake can be located in your furnace room if there is circulation from the house to the furnace room. If there is no ventilation, you will have to install a vent grille in the furnace room door or wall to allow for free air movement. The minimum grille opening should be 64 square inches.

- The fresh air to house should be ducted to a location where this fresh air will not be sucked into the stale air intake and be blown outside. Normally, ducting to an adjacent room or the upstairs level of the house will be adequate. Natural circulation inside a home will distribute the fresh air. (Just remember when cooking how quickly the aroma spreads through the house.)



FRESH AIR TO HOUSE to FORCED AIR SYSTEM CONNECTION

- It is possible to connect the stale house air intake to your forced air system air supply trunk duct.

You may only make this connection to a system in which the furnace blower is NOT operating continuously (24 hours a day). Connect to a system where the blower only operates when either furnace or air conditioner is on. When making this connection, stale air is collected from the whole house. When connected to the air supply trunk duct of your forced air system, the air velocity through the heat exchanger of your Airiva will be much higher due to the air pressure in the air supply trunk duct. At this higher airflow, the efficiency of you Airiva will be lower for the short periods your forced air system operates. This will not significantly affect the system efficiency over a 24 hour period.

For other connection options, see PROFESSIONAL INSTALLATION below.

Note: Suncourt recommends that you use metal duct to connect the Airiva. Flexible duct does not have a smooth inside surface. This creates turbulence in the airflow and will reduce the flow of air through your installation.

FROST PROTECTION

The Airiva has a built-in electronic thermostat to protect the unit from freezing up under very cold outside conditions. This thermostat is preset at the factory to stop the operation when the fresh air being blown into your home cannot be held above approximately 40°F (4°C). When the temperature in your home is 70°F (21°C), the frost protection can normally be expected to activate at an outside temperature of 15°F (-9°C) or lower.

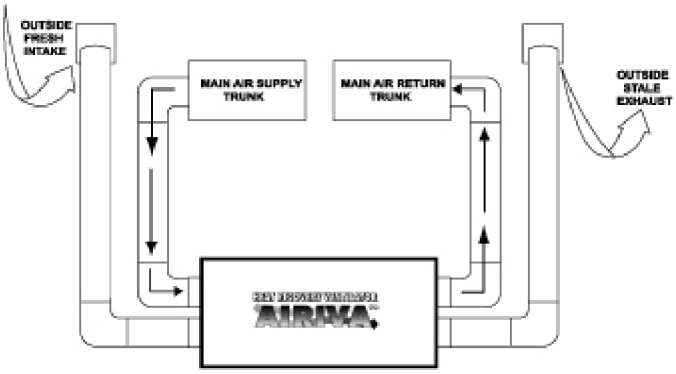
CLEANING AND MAINTENANCE

- It is important to inspect the internal air filter at least once a month and wash if required. At the same time, inspect the heat exchanger core for dust, lint or anything else blocking the air channels in the heat exchanger plates. **Always unplug the power first!**

If the heat exchanger needs cleaning, simply slide out the metal rods that hold the top plate in place. Lift out all plates and wash with a mild detergent. Rinse under running water and shake any remaining water out of the air channels. Often, light dust can be cleaned without removing the heat exchanger core, using your vacuum cleaner and a small brush attachment. If available, you may carefully blow out the air channels with compressed air.

Place each plate, alternating the airflow channels on each layer. Lock the top plate in place with the metal rods, being careful not to bend them.

PROFESSIONAL INSTALLATION



Installation for forced air systems with continuously operating main blower.

A. Connection to air return duct.

WARNING: This connection can only be made in areas where the outside temperature does not drop below 15°F (-9°C). The reason is that the frost control in the Airiva will turn the fans off when the temperature of the air at the fresh air outlet drops below 40°F (4°C). However, from the suction of the return air duct of your forced air system, air will still flow through the heat exchanger of the Airiva and may cause freeze up.

Connect the fresh air to house output of the Airiva to the return duct of the forced air system with 6" duct pipe. Install a manual damper in this duct.

Switch the Airiva 'on' at high speed.

Measure the air velocity at the stale house air intake (suction side 6" duct).

Measure the air velocity in Feet per Minute (FPM) through the fresh air output duct of the Airiva. If you do not have an electronic probe airflow meter that can be inserted into the duct through a small hole, measure the FPM at the fresh air intake side. Adjust the damper to match the FPM airflow in the stale air duct. You may also balance the airflow paths by measuring the static pressures using a manometer or magnehelix.

Convert the FPM to CFM and do not exceed 130 CFM for Model HE100 or 150 CFM for Models HE150.

The airflow through both paths of the Airiva should match within 5%.

Attach a label to the manual damper lever, instructing the homeowner not to change the setting of this damper.

B. Connection to air supply duct.

Using this connection, there is no concern about heat exchanger freeze up. The frost control in the Airiva will turn the fans off when the fresh air to house temperature falls below 40°F (4°C). The only airflow that remains will be on the suction side of the stale house air. Minimal outside air will flow.

Connect the stale house air intake (suction side 6" duct) to the forced air system main air supply trunk duct. This is the large duct that the various small ducts going to individual registers branch off from. Install a manual damper in this duct.

Switch the Airiva 'on' at high speed.

Measure the air velocity at the fresh air intake or fresh air to house output duct of the Airiva. Adjust the damper to match the air velocity (FPM) in the stale air path to the FPM observed in the fresh air path. You may also balance the airflow paths by measuring the static pressure using a manometer or magnehelix.

Convert the FPM to CFM and do not exceed 130 CFM for Model HE100 or 150 CFM for Model HE150.

The airflow through both paths of the Airiva should match within 5%.

Attach a label to the manual damper lever, instructing the homeowner not to change the setting of this damper.

Manufacturer reserves the right to change product specifications without notice.

SUNCOURT INC. P.O. Box 40, 500 West Second Avenue. Durant IA 52747-0040 USA
1.800.999.FANS www.suncourt.com