Aprilaire®

Energy Recovery Ventilators

Aprilaire® – a breath of fresh air, all year long.

You know that feeling you get every spring when you throw open the window for the first time and take a deep breath? That sense of freshness, rebirth, renewal. The fresh air seems to bring your home back to life after being sealed up all winter. Now you can enjoy spring-like fresh air in your home all year long, without having to watch your energy dollars fly out the window, thanks to the Aprilaire® Energy Recovery Ventilator.

Aprilaire provides a constant, controlled supply of fresh air to your home throughout the year. And while adding fresh air, it reduces unhealthy indoor air pollutants and unpleasant odors.

THE CONCERNS

Over the last few years, we've been able to learn more about indoor air pollution and its effects on people through advanced testing techniques. Formaldehyde, radon, household chemicals, odors, cigarette smoke, and other contaminants are present in our homes. These substances have become the focus of studies by builders, remodelers, heating and ventilating contractors, and even the Environmental Protection Agency {EPA}. In fact, EPA studies prove that concentrations of toxic pollutants can be up to 10 times greater inside homes than outside, even in our smoggiest cities. And some of these pollutants have been known to cause headaches, nausea, and possibly even cancer.

THE CAUSE

So where was this problem 20 years ago? Why is it in the news all of a sudden? In an effort to save energy costs, new homes are being better sealed to prevent indoor air from escaping. Energy efficient windows and doors with double weather stripping are being installed in both new homes and older homes that are being remodeled. Insulation is thicker and the use of air-tight vapor barriers is more prevalent. Better caulk is sealing up cracks and other potential air leaks. While all this has made many homes more efficient, saving both energy and money, it has also made it nearly impossible for these homes to "breathe" – to expel stale, polluted indoor air and exchange it for cleaner, fresher outdoor air.

THE CURE

Experts now recognize the critical importance of improving indoor air quality without using excessive amounts of energy. The EPA, the National Association of Home Builders, many local building codes, and ASHRAE* recommend adequate ventilation in homes. That means bringing the outside air in. But how do you do that without sacrificing your home's energy efficiency? More and more builders, heating contractors, as well as health-conscious homeowners are discovering the perfect solution: the Aprilaire Energy Recovery Ventilator.

THE SOLUTION

The Aprilaire Energy Recovery Ventilator was developed using the concept of a mechanical device known as an air-to-air heat exchanger, or a heat recovery ventilator. In simple terms, it exchanges stale, polluted indoor air for fresh outdoor air with minimal energy loss.

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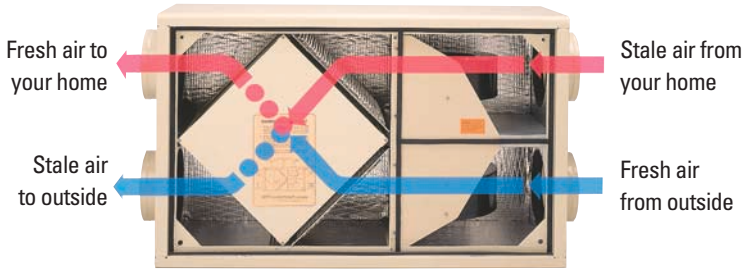
*American Society of Heating, Refrigerating and Air-Conditioning Engineers

THE WAY IT WORKS

The Aprilaire Energy Recovery Ventilator makes use of your home's existing heating or air-conditioning duct system to distribute fresh air throughout your home.

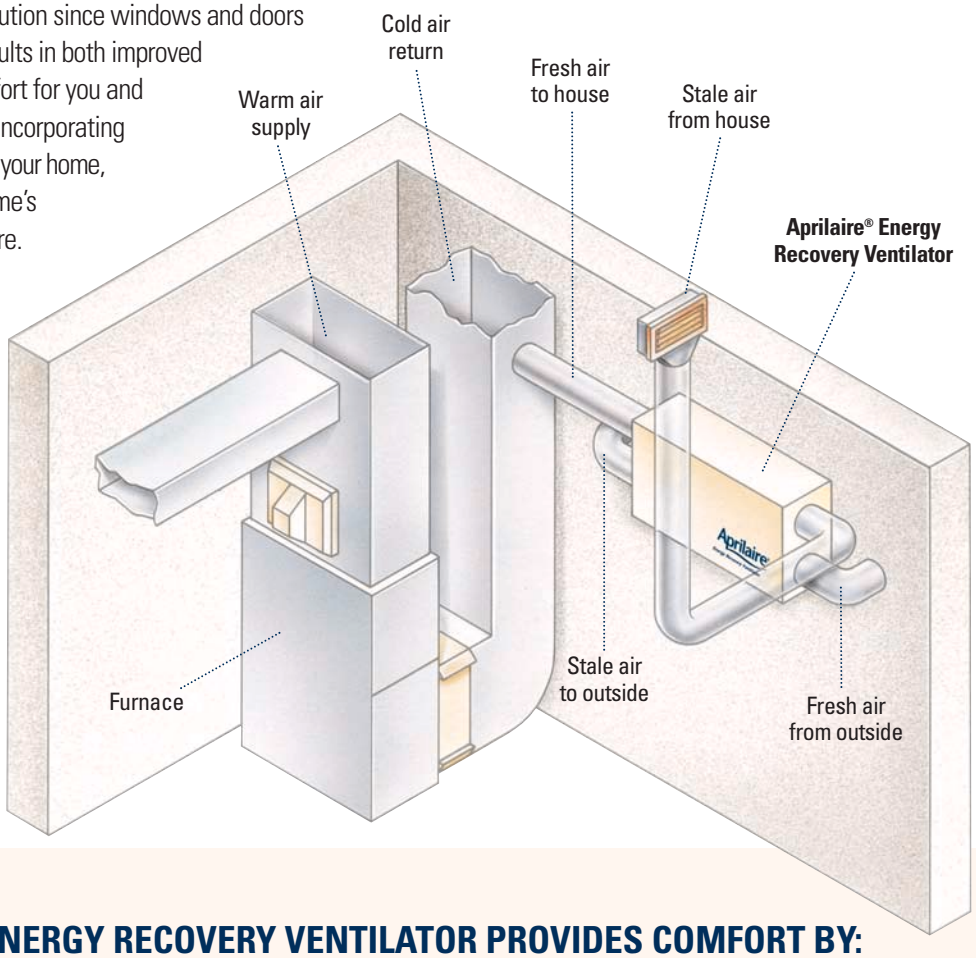
The outgoing polluted air stream and the incoming fresh air stream both pass through the exclusive Energy-Max® Transfer Core. At no time do the stale and fresh air streams ever mix. Instead, they pass by each other separated by thin walls that allow only the air's energy to be transferred, cutting your heating and cooling bills. In winter, the transfer core uses the energy from the heated indoor air to warm the incoming cold, fresh air. In the warmer months, the air-conditioned indoor air cools the incoming fresh air, and removes excess moisture from the incoming air, increasing your home's comfort.

The Aprilaire Energy Recovery Ventilator lets you enjoy greater security and less noise pollution since windows and doors can remain closed. This results in both improved indoor air and greater comfort for you and your family. And finally, by incorporating this advanced technology in your home, you are enhancing your home's value now, and for the future.



Wintertime example

This unit can also be installed with its own ductwork for hydronic or electric heating systems. Because your heating contractor or builder will provide professional installation, the ideal time to consider an Aprilaire Energy Recovery Ventilator is when you are building a new home. But, it can be easily added to any existing heating system. A typical installation is shown in the drawing below.



THE APRILAIRE ENERGY RECOVERY VENTILATOR PROVIDES COMFORT BY:

- Providing a constant, controlled supply of fresh air to your home throughout the year.
- Reducing unhealthy indoor air pollutants such as radon, formaldehyde, smoke, and odors.
- Removing excess moisture from incoming fresh air during the summer to increase comfort.
- Removing excess indoor moisture caused by new building materials in the winter months.
- Conserving energy through efficient retention of the energy from indoor air.
- Helping to produce a quiet, safe, secure, healthy indoor environment.

Aprilaire®

Fresh Ideas for Indoor Air®

www.aprilaire.com

EASY TO MAINTAIN, INEXPENSIVE TO OPERATE

Achieving all the benefits of the Aprilaire Energy Recovery Ventilator requires only a minimum of maintenance: every six months, wash the two pre-filters and then recoat with Super Filter Coat® adhesive; occasionally check the outside vent screens for leaves and other debris; and vacuum the blower compartments and the faces of the EnergyMax® Transfer Core annually. No other service or maintenance is normally required. The electrical costs to operate this unit are about the same as operating two 60-watt light bulbs. That's a small price to pay for clean, fresh, healthy air in your home throughout the year.

SPECIFICATIONS FOR APRILAIRE® MODEL 8100

Dimensions: 37 3/8" wide x 20 9/16" high x 12 3/4" deep.

Unit Capacity: Handles up to a 3,600 square foot home. *{Calculated to include natural infiltration and mechanical ventilation per ASHRAE Standard 62-89.}*

Free Air Flow: 150 CFM each air stream.

Design Air Flow: 120 CFM @ 0.3" w.g. external duct resistance, i.e., 240 equivalent feet for each of the "fresh" and "stale" air streams.

Electrical Usage: 120 VAC, 60 HZ, 1.4 AMPS.

Apparent Sensible Effectiveness @ 120 CFM: 77% {temperature efficiency}.

Connecting Ducts: 6" diameter, no special adapters required.

Access Door: Door opens to provide access to filters, EnergyMax® Transfer Core, and blowers.

Insulation: 1" foil-covered fiberglass ductboard {R=4.25}.

EnergyMax® Transfer Core: Cross-flow treated media and aluminum.

No Condensate Drain Or Defrost Cycle Needed: The exhaust air stream is partially dehumidified so that the exhaust air seldom reaches the dew point.

Filters: Two 10 13/16" x 11 5/16" x 3/32" EZ Kleen® Air Filters for both exhaust and fresh air streams.

Unit Warranty: Three-year limited warranty against defects in materials and workmanship. See warranty for details.

Core Warranty: Five-year limited warranty against defects in materials and workmanship. See warranty for details.

Shipping Weight: 76 lbs.

UL LISTED Ducted heat recovery ventilator.

Intelligent Solutions for Indoor Environments™

An entire line of indoor air quality products that are the best in their categories.
Together they set a new standard for intuitive use, performance and reliability.
Aprilaire products enhance your comfort, health and energy efficiency:
• Zoned Comfort Control • Automatic Humidifiers • Electronic Thermostats • Ventilation
• UV Germicidal Lamps • High Efficiency Air Cleaners • Whole-Home Dehumidifiers

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Form No. 3010 05.08.04