THINK GREENER. BREATHE BE

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Date: 05/01/14

# RenewAire - THE ESSENTIAL COMPONENT TO YOUR ENERGY EFFICIENT AND GREEN COMMITMENT

RenewAire™
Energy Recovery Ventilation

Soler&Palau Ventilation Group

# PROTECT THE TWO MOST VA

## PROTECT YOUR FAMILY

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### Poor Ventilation May Be Harmful to Your Family's Health

Builders and homeowners are doing all the right things to make homes more airtight and more energy efficient. They use vapor barriers, caulking, house wraps and better sealing doors and windows to reduce energy loss caused by air infiltration.

Today's homes eliminate nearly all wasteful air leaks, helping to control energy costs. Because homes are airtight, pollutants are trapped indoors. The health hazards from indoor air pollutants are broadly recognized as one of today's top environmental hazards.

Indoor air pollution is the uncomfortable or unhealthful presence of high levels of pollutants. Lingering odors may simply be a daily annoyance. Formaldehyde and other Volatile Organic Compounds (VOCs), cigarette smoke, radon, household cleaners, even perfumes can threaten health. Protect your family from the health problems that are associated with:

- **Carbon Dioxide ($CO_2$)** - can cause headaches, drowsiness and reduce mental acuity
- **Smoke** - can cause irritated eyes and respiratory problems like bronchitis and pneumonia
- **High Humidity** - promotes asthma, encourages fungal growth and house dust mites
- **Formaldehyde** - can cause headaches, sore throats, respiratory, eye and skin irritations, sinus problems, nasal congestion, hearing loss, arthritis, depression and memory impairments
- **Ammonia** - can cause eye, nose and respiratory tract irritation
- **Radon** - is an invisible, odorless gas that can seep into homes from the ground, and in time can cause cancer
- **Volatile Organic Compounds** - many building materials including paints, carpets and adhesives contain substances that outgas and can cause allergic reactions

# INVESTMENTS OF YOUR LIFE

## PROTECT YOUR H

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## Excess Moisture Can Damage Your Home

Breathing, showering and cooking are just a few ways that moisture is generated in your home *(about one gallon per person, everyday)*. When that moisture is trapped in your home, the result can be "sweaty windows" and other moisture damage such as rust, mildew, mold and odor. Structural damage from excess moisture is often the easiest to spot - heavy condensation on windows, water damage on window sills and molds forming in cold corners of the home.

## Ventilation Protects Your Home From Extremes in Humidity

Intermittent excessive humidity can be controlled with ample exhaust ventilation. Intermittent sources of humidity include bathing and showering, cooking and dish washing and clothes washing. These humidity producing activities are generally of short duration and can be controlled using ceiling mounted ventilation fans or a centrally ducted exhaust system. When air is exhausted from a home, an equal amount of outdoor air must replace it. Caution should be exercised with any exhaust-only approach to insure that associated negative pressure will not cause back drafting of combustion appliances and the introduction of uncontrolled outdoor air through building materials.

Homes in different parts of the country face a wide range of humidity conditions – from very dry to extremely wet. For over 25 years RenewAire has manufactured Energy Recovery Ventilators (ERVs) that moderate extremes in outdoor temperature and humidity. Since RenewAire ERVs have both an exhaust fan and a fresh air supply fan it is a pressure balanced ventilation system in one appliance. The result is ideal ventilation year-round.

## RenewAire Offers the Best Ventilation Choice For Your Home

Whether you have a **new home** under construction or an **existing home** needing a ventilation upgrade, RenewAire offers you the best ventilation choice. RenewAire provides **powerful, quiet blowers** in both its ventilation fans and energy recovery ventilators so you can enjoy ample air exchange without the objectionable noise associated with lower quality products. RenewAire ventilation fans are the **most efficient line** available in North America. And if you want the **best "whole house" approach** to efficient and effective ventilation, **RenewAire ERVs** makes your choice simple.

***Let us show you how RenewAire fits into your plans.***

# REQUIRED EXHAUST AND GENERAL VENTILATION

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## RenewAire V Series Ventilation Fans

- **economical and effective exhaust ventilation for bathrooms, utility rooms and other spot exhaust applications**
- lowest power consumption of any fan line in the industry
- recess ceiling mount
- designed for continuous operation
- "Is it on?" quiet

## RenewAire Breeze BR70/BR13 Energy Recovery Ventilators

*Recommended Upgrade*

- moderates extremes in outdoor humidity year-round
- easiest to install; only 2 duct connectors
- mounts to furnace (AC) return air
- has integrated automatic proportional runtime control

# ENERGY RECOVERY VENTI
# FOR CENTRAL EX

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Your BEST choice for green ventilation, RenewAire ERVs exhaust stale air, bring in fresh air and save energy year-round.

## RenewAire EV Series *(EV Series can also be used for General Ventilation)*

- replaces bathroom exhaust fans
- 20 CFM continuous per bathroom
- 50 CFM intermittent per bathroom
- other possible exhaust locations: kitchen area *(cannot exhaust range hood)*, utility room, smoking room, hobby room, etc.
- small duct work system to collect air from each exhaust location
- fresh air may be supplied to furnace (AC) return air duct
- optional automatic proportional runtime control and push button control available

# RenewAire & our Green Com

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## Mission Statement

*RenewAire supports a healthy indoor environment and a sustainable earth through the manufacture and sales of energy efficient ventilation equipment.*

## Green Ventilation Design Principles

**Attributes of good ventilation:**

- ample air flow
- pressure balanced
- quiet operation
- energy efficient
- automatic control

**Attributes of "Green" products:**

- save energy
- low carbon foot print
- material efficient
- people friendly

**Green Ventilation = Great Value**

RenewAire was founded in 1978 as a renew efficiency company. Manufacturing of ERV equip and commercial buildings began in 1983. Since that time RenewAire has proven itself to be a reliable, maintenance-free ventilation product with over 120,000 installations from Puerto Rico to Point Barrow, Alaska.

In 2008, RenewAire introduced its V-Series line of ceiling recessed ventilation fans. This addition means RenewAire offers the broadest range of ventilation products for yesterday's, today's and tomorrow's buildings. RenewAire's founding mission has resulted in the most energy efficient, durable and people friendly line of products in the ventilation industry.

## LEED – Silver Certified

With growing sales, in 2005 RenewAire needed to more than double its production and office space. Not surprisingly, the new facility was designed and developed to be Green and was the 850th building to be LEED Certified. *(The Leadership in Energy and Environmental Design (LEED) Green Building Rating System™ is a third-party certification program for the design, construction and operation of high performance green buildings.)*

The RenewAire project took an existing metal building shell and on a tight budget developed a very functional factory with attractive, modern corporate offices. Many "green building" practices were incorporated. Of course, the building is a showcase and "test bed" with five fully operational RenewAire Energy Recovery Ventilators.

*RenewAire's facility is also Green Globes Certified and an Energy Star Building based on actual energy consumption records.*

*RenewAire offices and manufacturing facility in Madison, WI.*

THE SMART WAY TO DEAL WITH INDOOR AIR QUALITY AND ENERGY EFFICIENCY

# ENERGY RECOVERY VENTILA

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**BR Series/Breeze®:**
*Return Air Duct Mounted ERV*

includes built-in proportional run time control fully adjustable from 0-100% of every hour

simple wiring to cycle furnace/AC blower

**Options:**
through the wall kit and duct collar kit

**EV Series:**
*Fully Ducted ERV*

includes transformer/relay package allowing simple on/off control

**Options:**
controls, weather hoods

**PTL C**

- primar
  EV200
- runs ur
  time each hour
- two wire, low voltage connection to ERV

**PBL Control**

- push button control turns on unit from bathrooms or other intermittent exhaust locations
- 20 minute run-time with one touch
- push 2x for 40 or 3x for 60 minutes
- two wire, low voltage connection to PTL Control

**FM Control**

- alternate primary control for EV70, EV130, EV200 & EV300
- wires to EV unit and either thermostat or furnace control to turn on furnace blower
- six wire, low voltage connection

**Both Series:**

MERV-8 filters, less than 1 watt stand-by power consumption, plastic double collars, 3' power cord, integral mounting flange and hanging bracket system, fully insulated case, large cores for high efficiency, no condensate or active defrost, **10 year core warranty, 5 year warranty on balance of unit**

| Model | ESP (Inches $H_20$) | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 | 1.0 | Specifications |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BR70 | Airflow (CFM) | 86 | 73 | 59 | 46 | — | — | — | — | — | — | **Electrical**: 120 V, 60 Hz, Single Phase, 1.0 FLA, contains one 0.08 hp motor **Dimensions**: unit case=27-1/8W x 18-1/4H x 10-5/8D carton=21-1/2W x 29L x 14-1/2H **Weight**: unit=39 lbs, in carton=50 lbs |
| | Watts | 99 | 95 | 90 | 87 | — | — | — | — | — | — | |
| | Temp Eff % | 72 | 75 | 77 | 80 | — | — | — | — | — | — | |
| | Total Winter % | 66 | 69 | 72 | 75 | — | — | — | — | — | — | |
| | Total Summer % | 51 | 54 | 58 | 62 | — | — | — | — | — | — | |
| BR130 | Airflow (CFM) | 148 | 141 | 132 | 113 | 94 | 69 | 52 | — | — | — | **Electrical**: 120 V, 60 Hz, Single Phase, 1.3 FLA, contains one 0.07 hp motor **Dimensions**: unit case=30-7/8W x 18-1/4H x 13-3/8D carton=21W x 32L x 17-1/2H **Weight**: unit=49 lbs, in carton=60 lbs |
| | Watts | 138 | 132 | 125 | 118 | 110 | 98 | 92 | — | — | — | |
| | Temp Eff % | 69 | 70 | 71 | 74 | 76 | 80 | 82 | — | — | — | |
| | Total Winter % | 62 | 63 | 65 | 68 | 71 | 75 | 78 | — | — | — | |
| | Total Summer % | 46 | 47 | 49 | 53 | 57 | 62 | 65 | — | — | — | |
| EV70 | Airflow (CFM) | 92 | 77 | 61 | 47 | — | — | — | — | — | — | **Electrical**: 120 V, 60 Hz, Single Phase, 1.0 FLA, contains one 0.1 hp motor **Dimensions**: unit case=25-1/8W x 20-1/8H x 10-1/8D carton=21-1/2W x 29-1/2L x 14-1/2H **Weight**: unit=39 lbs, in carton=48 lbs |
| | Watts | 91 | 87 | 81 | 79 | — | — | — | — | — | — | |
| | Temp Eff % | 71 | 74 | 77 | 80 | — | — | — | — | — | — | |
| | Total Winter % | 64 | 68 | 72 | 75 | — | — | — | — | — | — | |
| | Total Summer % | 49 | 53 | 58 | 62 | — | — | — | — | — | — | |
| EV130 | Airflow (CFM) | 165 | 153 | 137 | 126 | 104 | 79 | — | — | — | — | **Electrical**: 120 V, 60 Hz, Single Phase, 1.3 FLA, contains one 0.1 hp motor **Dimensions**: unit case=28-3/4W x 20-1/8H x 13D, carton=21W x 32L x 17-1/2H **Weight**: unit=49 lbs, in carton=58 lbs |
| | Watts | 116 | 112 | 104 | 101 | 95 | 86 | — | — | — | — | |
| | Temp Eff % | 67 | 68 | 71 | 72 | 75 | 78 | — | — | — | — | |
| | Total Winter % | 59 | 61 | 64 | 66 | 69 | 73 | — | — | — | — | |
| | Total Summer % | 43 | 45 | 48 | 50 | 55 | 60 | — | — | — | — | |
| EV200 | Airflow (CFM) | 207 | 192 | 186 | 176 | 168 | 149 | 122 | — | — | — | **Electrical**: 120 V, 60 Hz, Single Phase, 1.5 FLA, contains one 0.1 hp motor **Dimensions**: unit case=28-3/4W x 20-1/8H x 23-7/8D carton=21-1/2W x 32L x 29H **Weight**: unit=70 lbs, in carton=82 lbs |
| | Watts | 185 | 169 | 165 | 154 | 148 | 138 | 128 | — | — | — | |
| | Temp Eff % | 76 | 77 | 77 | 78 | 78 | 79 | 81 | — | — | — | |
| | Total Winter % | 70 | 71 | 72 | 72 | 73 | 75 | 77 | — | — | — | |
| | Total Summer % | 56 | 57 | 58 | 59 | 59 | 61 | 64 | — | — | — | |
| EV300 | Airflow (CFM) | — | — | — | 311 | 295 | 277 | 256 | 215 | 191 | 170 | **Electrical**: 120 V, 60 Hz, Single Phase, 3.3 FLA, contains one 0.2 hp motor **Dimensions**: unit case=28-3/4W x 20-1/8H x 23-7/8D carton=21-1/2W x 32L x 29H **Weight**: unit=72 lbs, in carton=85 lbs |
| | Watts | — | — | — | 322 | 308 | 288 | 272 | 242 | 225 | 206 | |
| | Temp Eff % | — | — | — | 69 | 70 | 71 | 73 | 75 | 77 | 78 | |
| | Total Winter % | — | — | — | 62 | 63 | 65 | 66 | 69 | 71 | 73 | |
| | Total Summer % | — | — | — | 46 | 47 | 49 | 51 | 55 | 57 | 59 | |

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# FROM RENEWAIRE, THE ERV LEA

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Since 1983 RenewAire has been the innovator and leader in energy efficient residential ventilatio ERVs, stale room air is exhausted and fresh outdoor air is brought back into the house. These two directed through a highly developed "air-to-air" energy exchange core. The airstreams are physically separated by many layers of "plates" so there is no mixing or contamination of the fresh air. The plates are made of an engineered "resin" material that simultaneously transfers heat by conduction and humidity by attracting and "wicking" water vapor from one air stream to the other.

RenewAire ERVs moderate extremes in both temperature and humidity. This not only contributes to an ideal indoor environment but also dramatically reduces the energy costs associated with providing healthy ventilation. The unique moisture transfer capability of the RenewAire core also eliminates condensation and frost build up in most applications. No mechanical or electrical defrost systems are needed, which means higher heat recovery efficiencies, easier installation and more reliable operation.

## During the Air Conditioning Season

When you need to cool for comfort do you hate the stuffy, musty air quality in your home? RenewAire ERVs provide necessary fresh air while pre-cooling and pre-dehumidifying this air with energy that would otherwise be lost with the exhaust air. With summertime humidity control *(latent energy)* being the largest portion of air conditioning cost, RenewAire's humidity transfer is critical. In fact RenewAire is typically three times more energy efficient than products that transfer only heat.

## During the Heating Season

Outdoor air is warmed close to room temperature with heat that would otherwise be lost with the exhaust air. The water vapor transfer moderates extremes in humidity levels which helps prevent moisture damage or over-drying of the home. The heat and humidity transfer *(sensible and latent energy)* gives RenewAire a big advantage over other air-to-air exchangers typically recovering 30% more energy in winter.

***The key to RenewAire's extraordinary performance is its static-plate exchange core. Within the core heat and humidity pass from one airstream to the other, but the airstreams do not mix. Humidity exchange is in the gas phase so there is no need for a condensate pan or drain.***

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# RenewAire THE CHOICE IS EASY

*The RenewAire V-Series Ventilation Fan is the best choice for exhaust-only ventilation. The V-Series improves indoor air quality and increases your home's durability by quickly exhausting contaminants and excess moisture that can cause health issues, mold growth and structural damage.*

## V-Series Ceiling Mounted Ventilation Fans:

### Remarkable Performance

- the most energy efficient line of exhaust fans available in North America
- aerodynamically engineered to move air with lowest power consumption and sound levels
- motors operate with the lowest heat build up for long life even when run continuously – 5 year warranty
- the lowest air leakage dampers minimize uncontrolled infiltration
- the lowest carbon footprint of leading residential ventilation brands

**V50 - V80 - V110**

**V150**

### Premium Construction

- robust steel housing and duct collar
- heat-sink motor mount
- internal electrical wiring box
- attractive, sturdy grille
- impedance and thermal fuse electrical protection
- UL Listed for installation in tub/shower enclosures when connected to a GFCI protected branch circuit

| Model | V50 | V80 | V110 | V150 |
|---|---|---|---|---|
| **Static Pressure** *(inches $H_2O$)* | 0.1/0.25 | 0.1/0.25 | 0.1/0.25 | 0.1/0.25 |
| **Air Flow** *(CFM)* | 50/31 | 80/60 | 110/93 | 150/110 |
| **Power Consumption** *(Watts)* | 12.9 | 16.1 | 24.2 | 32.7 |
| **Energy Efficiency** *(CFM/Watt)** | 4.5 | 5.1 | 4.6 | 4.5 |
| **Noise** *(sones)* | <0.3 | <0.3 | 0.8 | <0.3 |
| **Current** *(amps)* | 0.12 | 0.15 | 0.21 | 0.29 |
| **Power** *(V/Hz)* | 120/60 | 120/60 | 120/60 | 120/60 |
| **Housing Size** *(inches)* | 9-7/8W x 9-7/8H x 8-1/16D | 9-7/8W x 9-7/8H x 8-1/16D | 9-7/8W x 9-7/8H x 8-1/16D | 12-1/16W x 12-1/16H x 9-9/16D |
| **Grille Size** *(inches)* | 13 x 13 | 13 x 13 | 13 x 13 | 15-3/8 x 15-3/8 |
| **Duct Diameter** *(inches)* | 4 | 4 | 4 | 6 |
| **Unit Weight** *(lbs)* | 7.7 | 7.7 | 7.7 | 12.3 |
| **Shipping Weight** *(lbs)* | 10.4 | 10.4 | 10.4 | 16.2 |

**Energy Star qualified data based on tested air flow and power consumption.*

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**Be sure to check out our full line of ventilation products:**

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*RenewAire ERVs are proudly manufactured in our LEED-Silver Certified facility using 100% wind generated electricity.*

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