

## VentZone®

Systems Zoned IAQ with Heat  
and Energy Recovery

U.S. Patent #7,766,734 and Canada Patent #2,570,948



#HealthyLiving



# The new and improved **VentZone® Systems** by ALDES are the most energy efficient ventilation system on the market today.

Ultra energy-efficient VentZone® Systems combine zoned bathroom exhaust PLUS whole-house ventilation with a single heat and or energy recovery ventilator.



## **Key benefits of ALDES VentZone® IAQ with HRV or ERV**

- Combination of centralized zoned exhaust ventilation, whole house IAQ and heat and energy recovery make this system efficient and innovative.
- Homeowners benefit from healthy indoor air quality throughout the home with extra boost ventilation in bathrooms as needed.
- The entire ventilation system only requires two penetrations to the outside of the home, as opposed to one for each bathroom, plus two for the ERV with other systems.
- Compatible controllers are available to automate the system's response to changes in the indoor environment.
- The new and improved air exchanger models each feature an onboard 24V low-voltage power supply to power up to 5 zone register terminals. The entire system is designed for installation by a single trade in most cases. Check local codes.

VentZone® Systems and the patented Zone Register Terminals® (ZRT) have both earned the American Society of Heating, Refrigeration, Air Conditioning Engineers (ASHRAE) Innovation Award for ventilation.





**Two of our most popular products make up the VentZone® System:** The Zone Register Terminal® - Residential version (ZRT-R) and an ALDES Heat or Energy Recovery Ventilator (HRV or ERV).

ALDES ZRTs provide the zoned bathroom exhaust, and it's unlike anything else on the market today.

**Other systems typically ventilate bathrooms in one of two ways:**

1. Individual fans for each bathroom. This is expensive since you must buy, install, and create a penetration in the exterior wall of the home for each bathroom.
2. Inline bathroom fan connected to all bathrooms. These remote fan kits waste energy and can over ventilate a home since all bathroom exhaust is either on or off and does not allow the occupant to operate ventilation in each bathroom independently.

## The ALDES way:

Centralized zoned bathroom exhaust. ZRTs take the place of individual fans or grilles like those found on remote inline fan kits. ZRTs are multifunctional in that they can provide two types of ventilation.

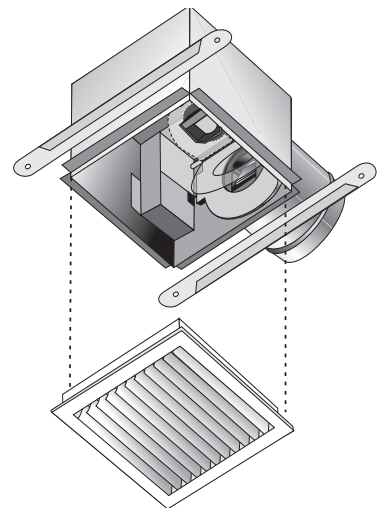
1. Continuous low-level ventilation every home needs to keep indoor air healthy.
2. Boosted ventilation as needed to remove humidity, odors and other pollutants in the bathroom.

ZRTs control the ventilation so that individual bathrooms are only exhausted as needed. Also known as demand controlled ventilation, controlling the airflow on a zone-by-zone basis saves energy and reduces the load on heating and cooling systems.

### How do ZRTs work with the ventilator to control airflow?

Each ZRT can control a specified amount of continuous whole house IAQ ventilation through a constant airflow regulator when the damper is closed. When called upon by any switch, timer, dehumidistat, or occupancy sensor, the ZRT damper opens and ventilates at a higher rate of CFM to rapidly remove steam, odors or other indoor pollutants. Low-voltage power to operate controls and ZRTs are supplied from the ALDES heat or energy recovery ventilator. These are the only air exchangers in the industry to provide this ease of installation, time and cost savings benefit. The ZRTs exhaust air via an ALDES heat or energy recovery ventilator. During normal operation, the air exchanger is operating at a specified lower level of air flow needed for whole house indoor IAQ. When activated by a zoned ZRT control, the air exchanger automatically ventilates at a higher rate to provide boosted ventilation to that space only. Maintaining the low-level ventilation in bathrooms not requiring boosted ventilation.

This provides energy efficient, balanced ventilation, so when air is being exhausted from the home, fresh air is also being brought in. This avoids negative pressure on the home and improves indoor air quality while maximizing energy recovery.

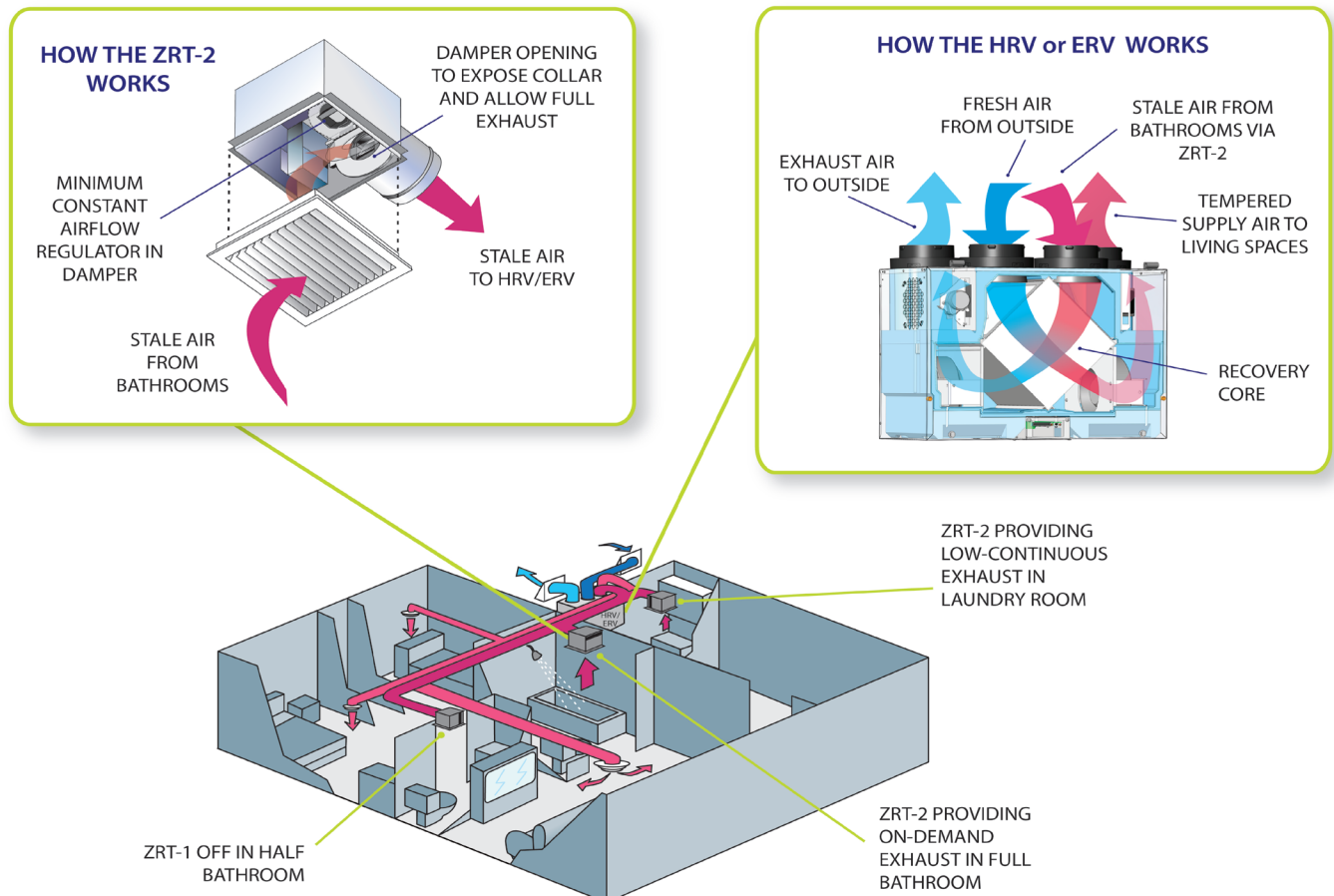


# How Do Heat and Energy Recovery Ventilators Work?

Heat Recovery Ventilators (HRV) and Energy Recovery Ventilators (ERV) replace stale, polluted air from inside the home with clean fresh air from the outside. The technology built inside the air exchanger does this in the most energy efficient manner possible to avoid losing heating or cooling energy from within the home. In the heating season, as the two airstreams pass each other in the unit's core, the incoming fresh air is heated with heat energy recovered from the exhaust air without any mixing taking place. An ERV will also transfer moisture to the incoming air if this is drier than exhaust air, improving efficiency and comfort in overly dry homes.

In the cooling season, the reverse occurs. The air exchanger cools incoming warm fresh air using the air-conditioned exhaust air from inside the home. Again, no mixing of the air streams take place. An ERV will also remove humidity from the warmer incoming air and transfer it to the drier outgoing exhaust air. This process reduces the humidity load on the air conditioning system, which would otherwise result in the continuous introduction of humid summer air to the home.

Whether it is heating or cooling season, the tempered incoming air is distributed throughout the home by a dedicated-duct system or through the forced-air heating/air conditioning system. At the same time, the ZRTs located in moisture- and heat-pollutant producing rooms (such as bathrooms, and laundry rooms) exhaust an equal amount of stale air to the outside.



# Benefits of the HRV or ERV for Homeowners



- **Continuous Duty:** Backward-inclined impellers and totally enclosed motors are not susceptible to dust loading and do not need cleaning.
- **Quietly Powerful:** High-efficiency motors are virtually silent and designed to consume very little power.
- **Speed Options:** The unit can operate continuously at low or medium speeds, with on-call high-speed override.
- **EvacMAX™ Exhaust Boost:** On-demand maximum bathroom exhaust removes odors, humidity, and stale air.
- **Serviceability Ease:** In the event that the unit ever needs servicing, the filters, core, and modularized motor decks can be removed without tools.
- **Superior Insulation:** One-piece molded expanded polystyrene (EPS) is non-porous, so moisture does not get trapped in the unit where it could cause mold to grow.
- **Clean Air:** Multiple filter options are available to enhance the filtration capabilities of the unit, which improves overall indoor air quality.
- **Built to Last:** Painted, heavy-gauge galvanized steel casing is rust-resistant and extremely durable.
- **Effective Recovery:** Units recover up to 72% of sensible heat, shrinking heating and cooling bills.
- **Built-In Defrost:** Automatic fan exhaust or recirculation modes protect the core from freezing in cold climates.
- **Complete Climate Control:** Compatible controllers are available to automate the unit's response to changes in the indoor environment.



# Benefits of the HRV or ERV for installers

- Quick Calibration with FLEXControl : Airflow circuits can be electronically calibrated without the need for resistance-inducing balancing dampers.
- Gauge ports on the door provide fast and reliable airflow readings, and blowers are electronically and independently adjustable.
- Clever Packaging : The carton protects the unit in transit, and built-in handles make it easy to remove the unit from the box without damaging any components.
- Compact Design : Top-mounted collars minimize unit width for installation in tight spaces. Units can be installed in new construction or existing homes.
- No-Hassle Duct Connections : Removable collars can be attached to duct first, then twisted onto the unit.
- Front Access Panel : No tools are needed to access the internal components.
- Lightweight : Units are light enough for one person to lift and install.
- Core Options : Polypropylene (sensible heat recovery) or high-latent-transfer enthalpy (sensible and latent heat recovery) cores are available to accommodate different climates and application needs.
- Simplified Electronics : The circuit board is conveniently accessible, and the terminal block can be removed for wiring.
- Standards Compliant : All models are ETL safety listed. Select models are also HVI Certified and ENERGY STAR® Qualified (Canada).



## Digital Multifunction Control

- Complete control over HRV/ERV:
- Dehumidistat mode
- ECO Mode: low-speed air exchange for 20 minutes of every hour
- High Occupancy Mode: high-speed air exchange for 1, 2, or 4 hours
- Air exchanger maintenance indicator
- Relative humidity display
- Blue LED backlight (configurable as a night light)
- Compatible with 20/40/60 Minute Timer
- 24 VAC
- Fits inside 2" x 4" service box
- Includes retaining screws and white Decora™-style faceplate





## 20/40/60 Minute Timer

- Activates the HRV/ERV to operate on high-speed mode for 20, 40, or 60 minutes
- Works with Digital Multifunction Control
- 24 VAC
- Fits inside 2" x 4" service box
- Includes retaining screws and white Decora™-style faceplate








# VentZone® Zoned IAQ Kits with Heat or Energy Recovery



## VentZone® Zoned IAQ Kits with Heat Recovery

Part Number	System	Number of Bathrooms	Airflow @ 0.2 in. w.g.	Ventilator	6" ZRT-2-6-24R (24V) 10/20/30 CFM	4" ZRT-2-4-24R (24V) 10/20/30 CFM	4" ZRT-1-4-24R (24V)	20/40/60 Push Button Timer
								
<b>R39 321-24</b>	VZ-IAQ-H150-P2 -24V	2	142 CFM	H150-TRG	--	2	--	2
<b>R39 322-24</b>	VZ-IAQ-H150-P2.5-24V	2.5	142 CFM	H150-TRG	--	2	1	3
<b>R39 323-24</b>	VZ-IAQ-H190-P2.5-24V	2.5	201 CFM	H190-TRG	1	1	1	2
<b>R39 324-24</b>	VZ-IAQ-H190-P3-24V	3	201 CFM	H190-TRG	1	2	--	3
<b>R39 325-24</b>	VZ-IAQ-H190-P3.5-24V	3.5	201 CFM	H190-TRG	1	2	1	4
<b>R39 328-24</b>	VZ-IAQ-H190-P4.5-24V	4.5	201 CFM	H190-TRG	1	3	1	5
<b>R39 329-24</b>	VZ-IAQ-H190-P5-24V	5	201 CFM	H190-TRG	1	4	--	5

## VentZone® Zoned IAQ Kits with Energy Recovery

Part Number	System	Number of Bathrooms	Airflow @ 0.2 in. w.g.	Ventilator	6" ZRT-2-6-24R (24V) 10/20/30 CFM	4" ZRT-2-4-24R (24V) 10/20/30 CFM	4" ZRT-1-4-24R (24V)	20/40/60 Push Button Timer
								
<b>R39 421-24</b>	VZ-IAQ-E150-P2-24V	2	120 CFM	E150-TRG	--	2	--	2
<b>R39 422-24</b>	VZ-IAQ-E150-P2.5-24V	2.5	120 CFM	E150-TRG	--	2	1	3
<b>R39 423-24</b>	VZ-IAQ-E190-P2.5-24V	2.5	183 CFM	E190-TRG	1	1	1	2
<b>R39 424-24</b>	VZ-IAQ-E190-P3-24V	3	183 CFM	E190-TRG	1	2	--	3
<b>R39 425-24</b>	VZ-IAQ-E190-P3.5-24V	3.5	183 CFM	E190-TRG	1	2	1	4
<b>R39 428-24</b>	VZ-IAQ-E190-P4.5-24V	4.5	183 CFM	E190-TRG	1	3	1	5
<b>R39 429-24</b>	VZ-IAQ-E190-P5-24V	5	183 CFM	E190-TRG	1	4	--	5

## Accessories for VentZone® Kits

Part Number	Description	ZRT-1-6-24R	Digital Multifunction Wall Control
			
<b>R39 550-24</b>	ZRT and multi-function wall control	1	1



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For more information, contact your Aldes sales advisor,  
visit [aldes-na.com](http://aldes-na.com), call 1.800.255.7749, or find us on

