



HOTEL VENTILATION



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SOLUTIONS FOR AIR QUALITY, COMFORT,
AND ENERGY SAVINGS

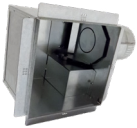
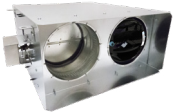


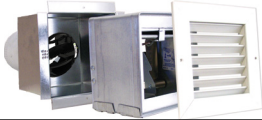


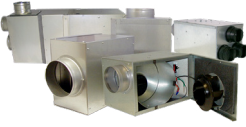

SOLUTION BROCHURE

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We're a proud member of the US Green Building Council, the Home Ventilating Institute and are an ENERGY STAR® partner. We are committed to ensuring all Aldes products are durable and efficient.



ACCESSORY		LOW-RISE (3 STORIES OR LESS)	HIGH-RISE (4 STORIES OR MORE)	MEETS IECC 2018 CODE	MODULAR CONSTRUCTION
	Zoned Ventilation for Exhaust and Supply Applications (ZRT)	✓✓✓	✓✓✓	✓	✓✓✓
	Parallel Damper In-Line Zone Register Terminals (ZRT-PDIL)	✓	✓✓✓	✓	
	Constant Airflow Regulators (CAR3®)	✓✓✓	✓✓✓		✓
	Constant Exhaust/Supply Registers (CER & CSR)	✓✓✓	✓✓✓		✓
	Constant Exhaust/Supply with Fire Dampers (CER3-S-F & CSR3-S-F)	✓✓✓	✓✓✓		✓
	Occupancy-Sensing Grilles (OSG)	✓✓✓	✓✓✓	✓	✓
	Vertical Fan Coil Unit with HRV/ERV (IQ-VFC) USA only.	✓	✓✓✓		✓
	Ventergy® Series Fans	✓	✓		
	Multi-family heat and energy recovery (InspiraIR® Compact)	✓	✓		✓

✓ = Sometimes used

✓✓✓ = Commonly used



UNIQUE CHALLENGES TO VENTILATING HOTELS

At Aldes North America, we understand the challenges faced when designing hotels. You have a myriad of elements to consider. We live and breathe these challenges every day and have designed solutions to satisfy all those involved—from engineers, designers, and installers, to building owners and guests.

MINIMIZE CROSS-CONTAMINATION RISK

Guests may not notice when indoor air quality is healthy, but they certainly will if it's not. Shared walls, floors, and ceilings make proper ventilation especially critical in preventing unpleasant next-door odors and humidity from seeping into adjacent rooms. Aldes airflow exhaust products remove moisture and odors effectively and efficiently.

MANAGING FLUCTUATING AIRFLOW NEEDS

Maintaining proper airflow can be challenging, and airflow fluctuates constantly. Some guest rooms may be occupied, while others are unoccupied. Activity in shared spaces such as fitness rooms, and lounge areas may fluctuate throughout the day. Managing airflow in these spaces takes careful consideration and planning.

MAXIMIZE ENERGY EFFICIENCY

Independent studies have revealed Aldes Zone Register Terminals save an average of \$200 per year/per room in energy costs while providing healthy indoor air quality and protecting the building from mold and mildew. That's just one of the many ways Aldes saves on energy costs.

CONSIDER BUILDING ENVELOPE PENETRATION

We understand the importance of each building's curb appeal. Clean lines along outside walls are important, with fewer duct penetrations. Our research and development engineers have taken this into consideration when designing ventilation solutions.

SIMPLIFY MAINTENANCE - ON ALL OF OUR PRODUCTS

We understand that there are maintenance issues to be considered. Via the rooftop, a mechanical room, in the ceiling of each guest room. How frequently will they need maintenance? Will maintenance generally be done by a trade professional or hotel maintenance staff? All of these are factors to consider, and Aldes makes our products as simple as possible to install and maintain.

HOTEL CODES AND REGULATIONS

Our engineers provide solutions for hundreds of hotels across the country. At Aldes, we understand the difficulty of complying with many levels of regulations, therefore, we work with engineers and architects to ensure all requirements are met.

Hotels have unique needs due to the challenges related to variable occupancy rates. We've been involved in ASHRAE since our inception and have kept at the forefront of updates and changes. Energy efficiency can be difficult to achieve in hotels. Consequently, we've met these challenges. we are LEED and ENERGY STAR® partners, providing a lineup of products that will help you achieve energy efficiency and code compliance.

* Do you know the 2018 International Energy Conservation Code® (IECC®) C403.7.6.2? *

The American Hotel Lodging Association has determined that hotel guestrooms are occupied an average 27% of the time. This lack of occupancy combined with continuous ventilation leads to over ventilated spaces resulting in significant waste and high utility costs.

In response, the IECC [Section C403.7.6.2], now calls for use of demand control for supply and exhaust ventilation systems in R-1 buildings with more than 50 guestrooms. Furthermore, the International Building Code Table 6-4 provides minimum ventilation rates per ASHRAE 62.1, while specifically stating that the requirement for ventilation is only when a guestroom is occupied. Aldes ZRT's are the premier solution to address the need for cost effective demand control in hospitality spaces.

RESOURCES AT YOUR FINGERTIPS



Have a question about airflow rates? Energy recovery? Setpoint adjustments in the field? Our experts are on hand to answer your questions and help you select the right products for the job.



We're committed to providing you with the tools and information you need. From brochures, spec sheets and installation manuals to warranties and replacement parts, we stand behind our products from specification to installation and beyond.



All of our product literature and downloads are available on our website at www.aldes-na.com.



Looking for specific examples of similar projects that use Aldes North America products, visit our [Featured Projects Map](#) on our website. It's a clickable map that you can filter by location, product, sales representative, or project type. Simply select "Hotels" under the product category filter to see a sampling of recent projects across the nation.

THE MOST TRUSTED BRANDS IN HOSPITALITY CHOOSE ALDES



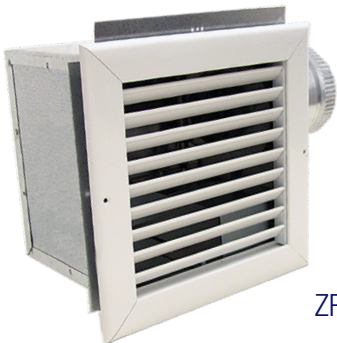
CENTRALIZED VS. UNITIZED SOLUTIONS

Choosing between centralized and unitized (also called compartmentalized) ventilation systems depends upon several factors. If it's important to ventilate the entire building or large zones together as a centralized solution, then it's also important to have automated air regulators in place to eliminate stack effect and provide on-demand control of airflow rates. If a unitized solution fits the needs of your hotel, then it's important to ensure units are compact yet powerful. Either way, Aldes has energy efficient solutions that enhance protection against odors, moisture, mold and mildew, and are easy to install and maintain.

CENTRALIZED SYSTEMS: AIRFLOW CONTROL

Centralized systems come with their own set of challenges. If not designed correctly, these rooftop systems will have poor overall performance. Some portions of the building can be easily over-ventilated, which uses more energy than necessary, while at the same time other portions of the building can be under-ventilated, causing poor indoor air quality. Balancing these systems can be difficult and costly. Aldes has solutions.

ZRT® WITH CONSTANT AIRFLOW REGULATOR (CAR3®)



ZRT®



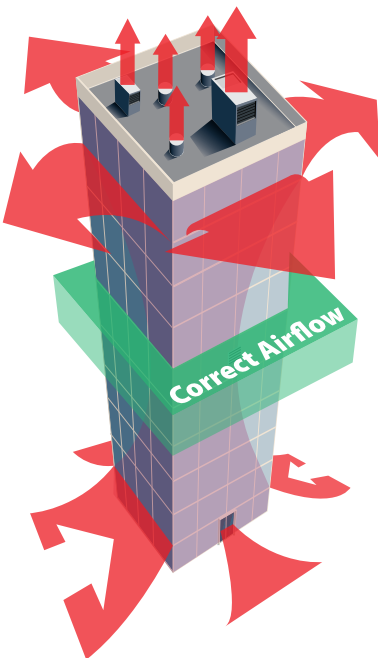
CAR3®

Supply and return/exhaust airflow for each area is automatically balanced by installing the ZRT® with CAR3® in the branch ducts or terminal device locations.

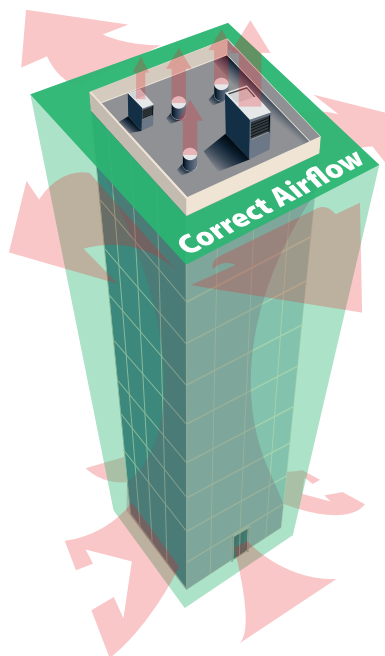
Stack effect occurs when air is heated and rises in the shaft forcing more air in the lower floors and out the top floors. This results in pressure variation to vertically ducted central ventilation systems, causing over-ventilation at some levels that wastes energy, and under-ventilation at other levels which prevents proper contaminant removal. These pressure imbalances can also cause cross-contamination or force unwanted air from one compartment to the next. Cross-contamination is often the cause of many poor indoor air quality issues.

ENGINEERED SOLUTION:

Energy and Cost Savings



Before CAR3® Installation



After CAR3® Installation

CONSTANT EXHAUST OR SUPPLY REGISTER (CER3 OR CSR3)

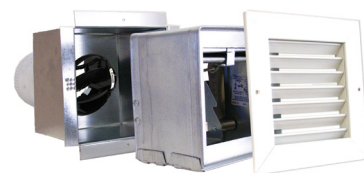


CER3-R

This model combines the Constant Airflow Regulator with an exhaust or supply grille/boot for new construction and retrofit applications. The grilles are constructed of heavy-gauge extruded aluminum to prevent rust in moist environments. The regulating element (CAR3®) is integral to the boot. The entire assembly is designed to be attached directly to the duct (available for square or round duct).

CONSTANT EXHAUST OR SUPPLY REGISTER WITH FIRE DAMPER (CER3-S-F OR CSR3-S-F)

Have the added feature incorporating a fire damper/radiant damper. CER-S-F or CSR-S-F combine the Constant Airflow Regulator with a grille, steel sleeve and fire damper. The fire damper is tested and listed per UL555 for use in a wall or shaft application and is rated for two-hour protection. Three-hour fire dampers can also be used. Each sleeve is welded to provide durability. The assembly is sized to fit inside standard duct riser openings and chases.



CER3-S-F

CONSTANT EXHAUST OR SUPPLY REGISTER BOX (CEB3 OR CSB3)



CEB3

The register box incorporates a Constant Airflow Regulator (CAR3®) that automatically regulates airflows in duct systems to constant levels. This unit type accommodates specialty grilles required to match other architectural grilles.

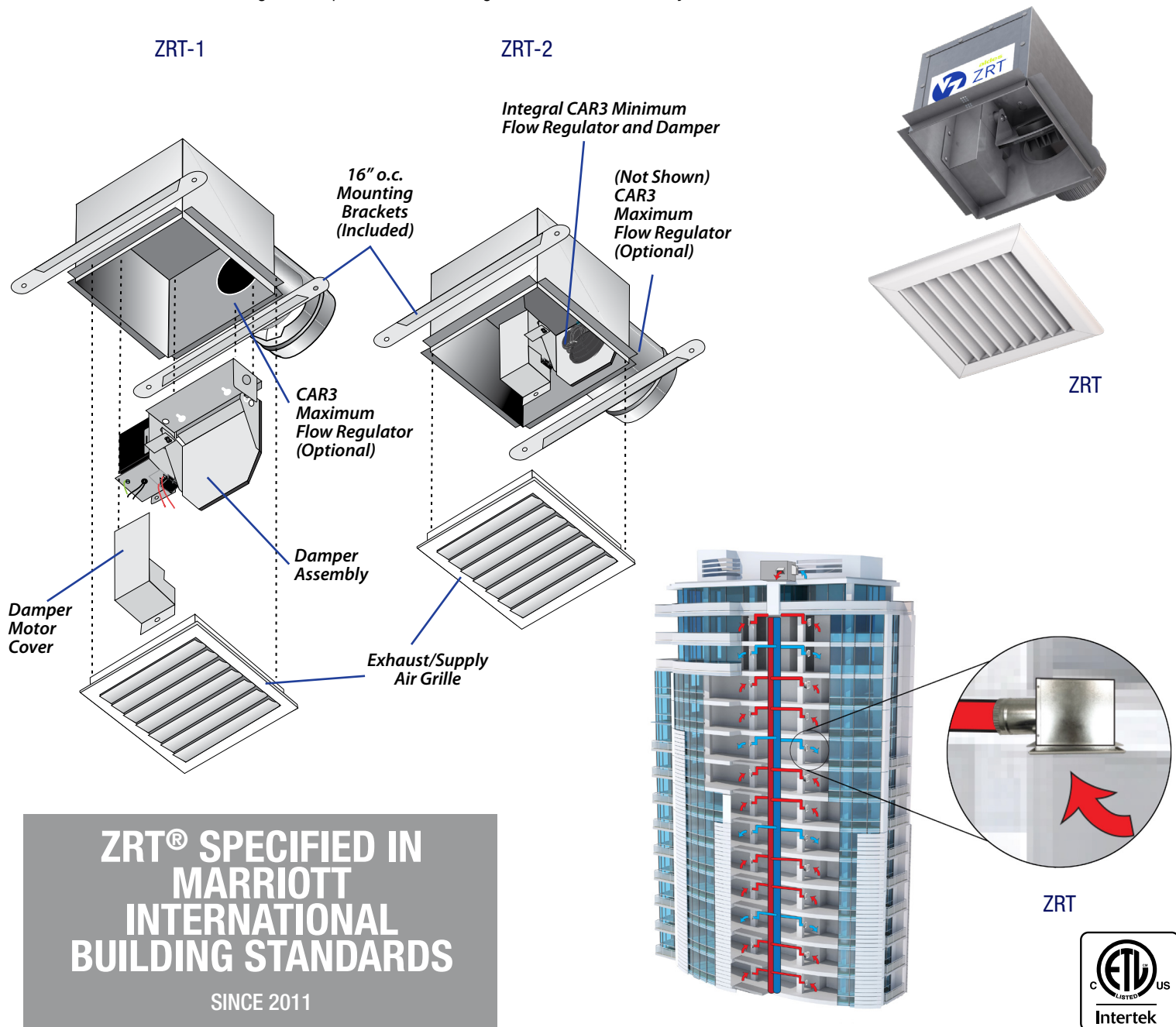
PLAZA HOTEL, NEW YORK.



ZONE REGISTER TERMINALS® (ZRT) AVAILABLE IN EXHAUST OR SUPPLY MODELS

Zone Register Terminals (ZRT®)* are designed to introduce flexibility and demand control to central ventilation systems. Each ZRT® is a combination with grille, register box, control damper, and CAR3®. This unique combination provides up to four different control schemes without the need for expensive pneumatic, electronic, or DDC control systems.

The ZRT-1 model provides on-off control for on-demand ventilation. This allows fan downsizing and promotes energy savings by minimizing necessary fan horsepower and ventilation-induced heating and cooling loads on the building. The Constant Airflow Regulator (CAR3®) provides precise balancing to each terminal on demand. The ZRT-2 model is used for combination low-flow continuous indoor air quality ventilation and on-demand high-flow spot ventilation using the same central fan system.

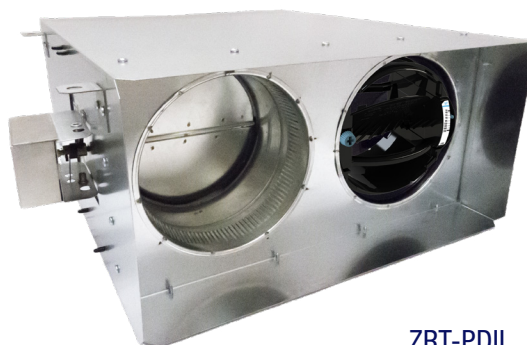


PARALLEL DAMPER IN-LINE ZONE REGISTER TERMINALS® (ZRT-PDIL)

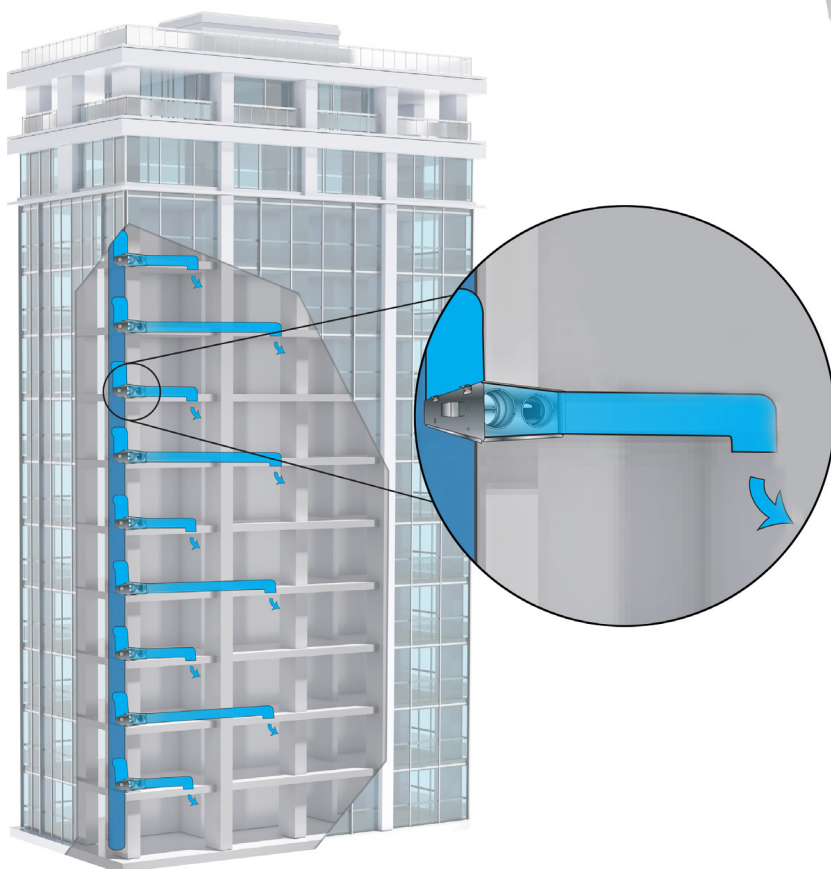
ZRT-PDILs are designed to introduce flexibility and dynamic control to central **supply** or **exhaust** ventilation systems. Used in both large and small systems, the ZRT-PDIL regulates ventilation in place of traditional VAV terminal units.

Each ZRT-PDIL is a multi-position, pressure-independent terminal with control dampers to regulate on-demand airflow controls. This unique combination provides flexible control schemes without the need for expensive pneumatic, electronic, or DDC control systems.

The ZRT-PDIL is primarily used for combination low-flow indoor air quality ventilation or make-up air, and on demand high-flow spot ventilation using the same central exhaust or supply fan system. This is achieved by integrating a minimum Constant Airflow Regulator (CAR3®) in the terminal end panel and in-line with the branch duct. The maximum airflow is controlled by a series of 24v, 120v, or 230v powered motorized damper(s) and a secondary CAR3® airflow controller. With the maximum-air motorized control damper completely closed, the continuous CAR3® allows steady, low-volume airflow control.

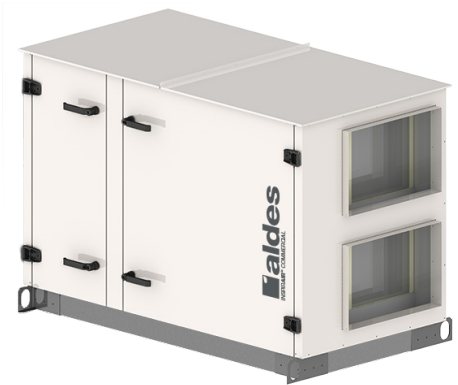


ZRT-PDIL



HEAT AND ENERGY RECOVERY VENTILATORS (HRV/ERV)

HRVs and ERVs maximize energy efficiency. Bringing in fresh air and then heating or cooling that air to make it comfortable for occupants. Our commercial line of HRV/ERVs reduce the costs of heating ventilated air in the winter by transferring heat from the warm inside air being exhausted to the fresh (but cold) supply air. In the summer, the inside air cools the warmer supply air to reduce ventilation cooling costs. Aldes wide range of commercial HRV/ERV solutions makes it easy to align the scope of your project with the perfect unit.

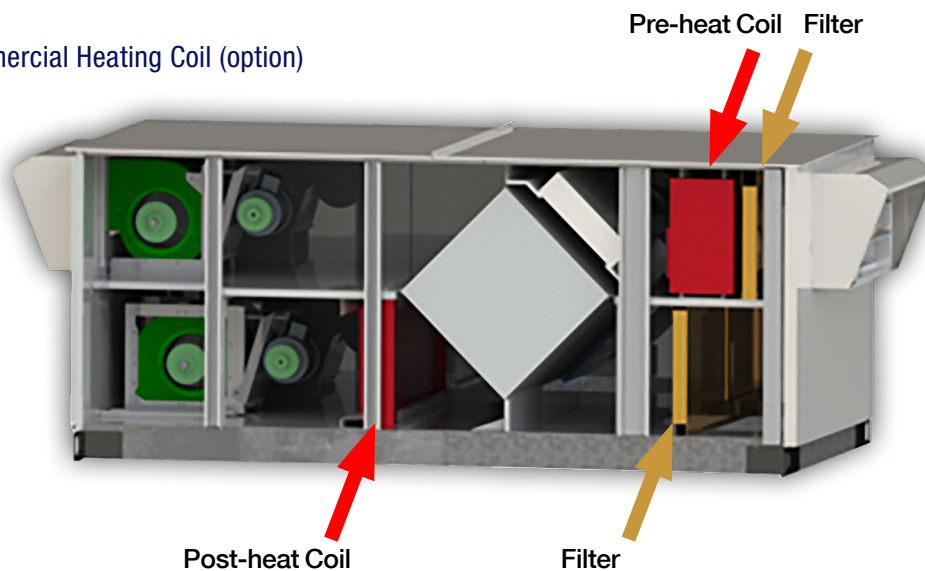


InspirAIR PH 15 (shown)



InspirAIR PW 40 (shown)

InspirAIR Commercial Heating Coil (option)

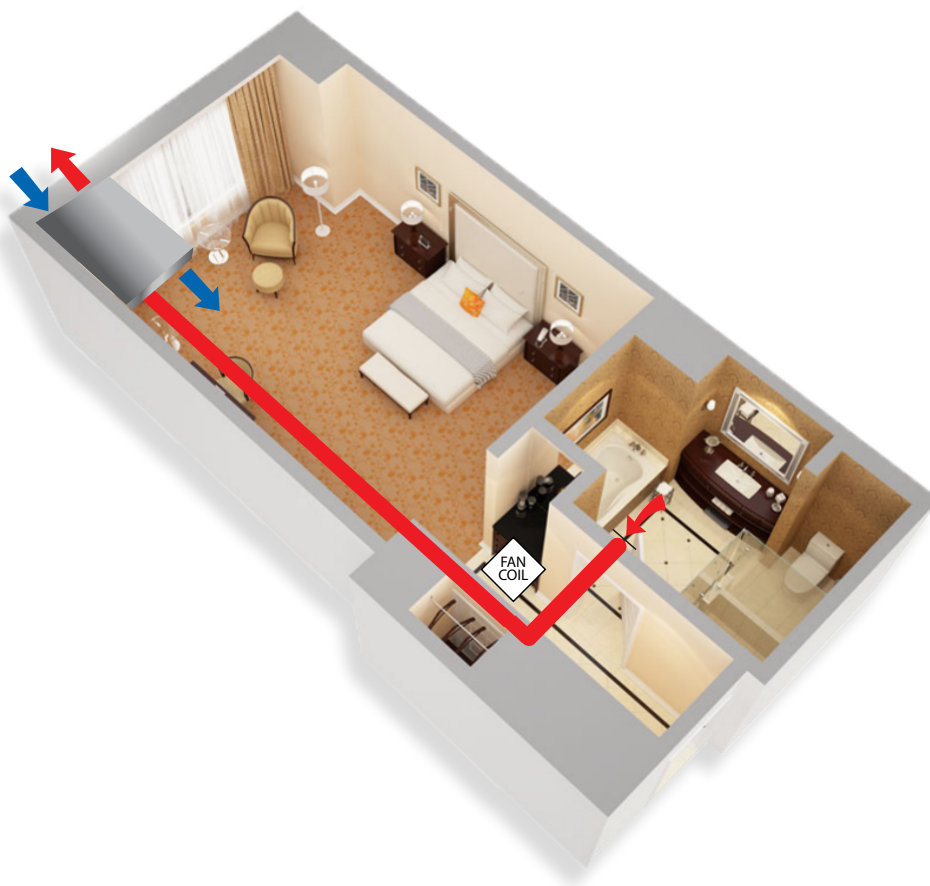


INSPIRAIR® COMPACT HEAT AND ENERGY RECOVERY VENTILATORS (HRV/ERV)

Aldes North America — InspirAIR® Compact Heat or Energy Recovery units maximize energy efficiency. InspirAIR® Compact are sized just right for smaller living spaces and deliver between 80-130 CFM of fresh, filtered air. Our E80-HRX-N unit includes the **first in-suite air exchanger to offer an automatic free cooling economizer function** feature that saves energy by using cool outdoor air to help reduce the demand for air conditioning during spring and fall. The slim height of just 9" easily fits above suspended ceilings, or in drywalled areas due to the bottom controls and aesthetic access door.



E80-HRX-N



Unitized systems, also called compartmentalized systems, have the distinct advantage of giving occupants control over their own indoor air quality, energy usage, and metering. If maintenance is ever needed, only one living space is impacted. Combine centralized system with demand controlled ventilation such as Zone Register Terminals for even more energy savings and greater control over boost and low-flow ventilation.

VERTICAL FAN COIL UNIT WITH INTEGRATED HRV/ERV

The Vertical Fan Coil Unit (IQ-VFC) combines 2 traditionally separate systems into one compact and fully integrated heating, cooling, and ventilation solution. The built-in heat or energy recovery ventilator utilizes highly efficient EC motors to provide up to 120 CFM. Which can be easily programed in the field to provide additional control over Indoor Air Quality. Secondly, it is designed to handle humidity even in extreme cold temperatures with Positive Protect™. The exhaust air is ducted directly from the bathroom, maximizing system efficiency and performance, while eliminating the need for additional fans or costly central systems. By building the H/ERV directly into the vertical fan coil chassis, the need for additional access panels or power supplies are eliminated.

With up to **75%** recovery efficiency, there is no need for additional tempering after the heat exchanger. There are times when heating or cooling is not needed. The IQ-VFC blends the fresh air with the room air, providing an even temperature to the guestroom at low speed.

The most significant benefits of the IQ-VFC are those associated with the benefits of decentralized systems. Studies have shown that decentralized ventilation systems can save up to 35% over the cost of a typical central ventilation system. These savings are due in part to the elimination of supply and exhaust risers to each dwelling unit, no penetrations of fire rated barriers into these units, saved floor space per floor from loss of risers, and a significant reduction in labor. These systems are also dramatically less complex than large central systems making them easier to design, easier to install, and simple to operate. Not only are decentralized systems more efficient by design, but in their operation too. By eliminating vertical runs in the unit ventilation systems and minimizing duct lengths, fans operate at lower pressure and without the impact of environmental factors like stack effect. Decentralized ventilation systems are the key to achieving truly high-performance buildings.

Finally. If one system goes down, only one room is down. With Centralized Systems, the whole riser or building goes down. Creating major challenges for not only the guests but hotel staff as well.



Available in USA only.

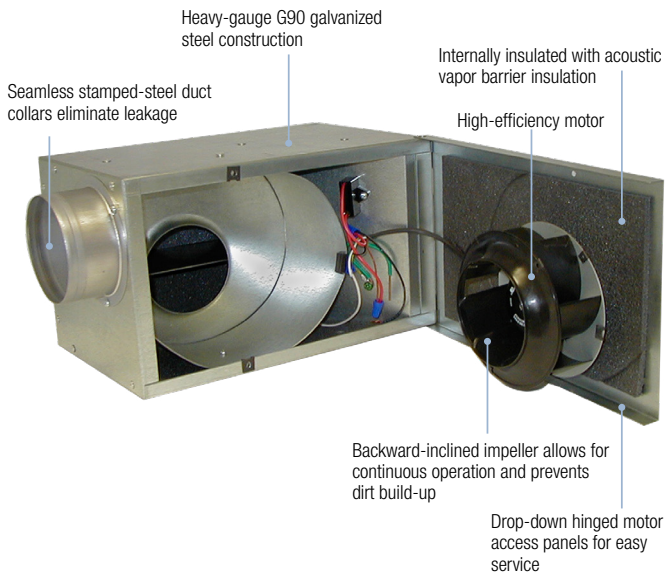


IQ-VFC Airflow

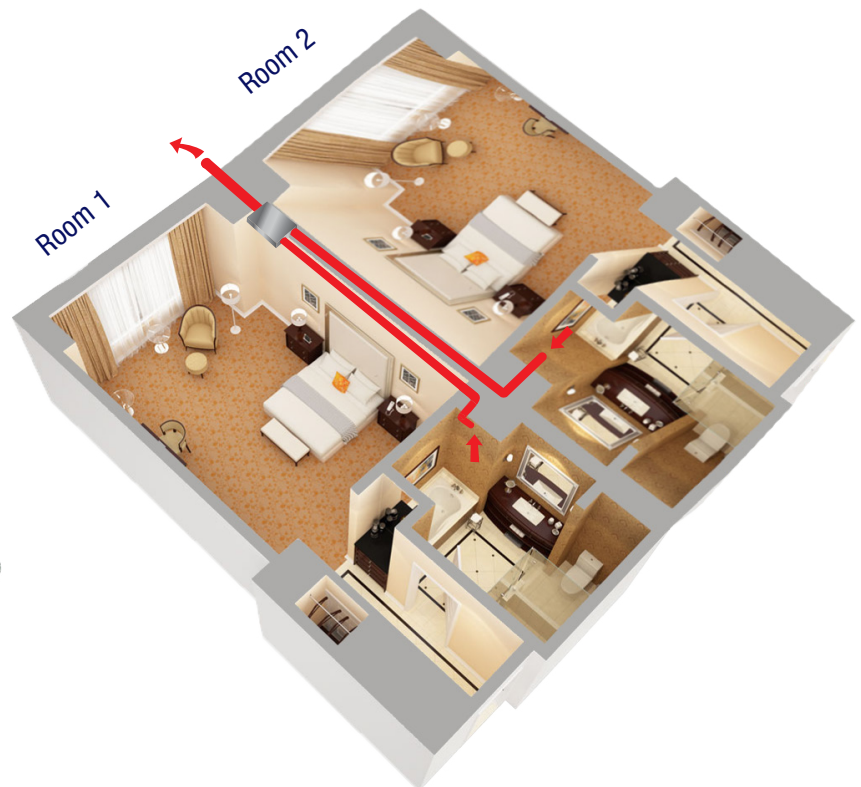
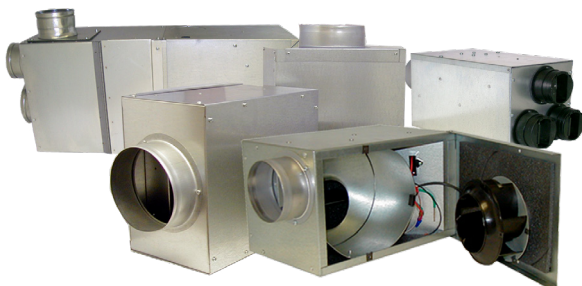
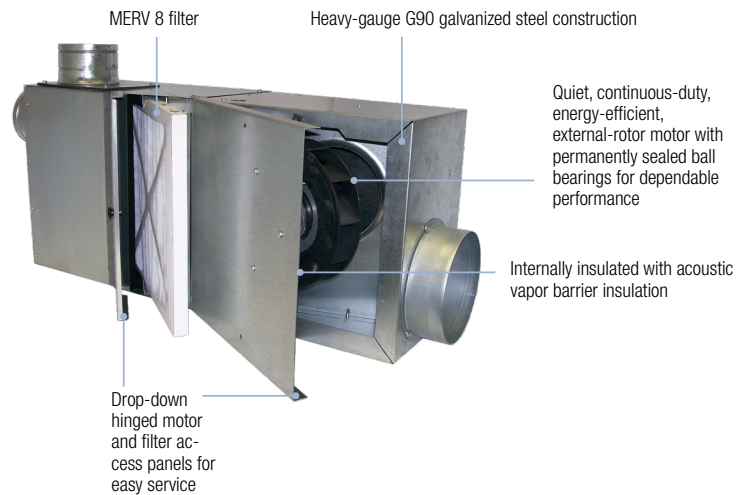
VENTERGY® SERIES FANS

Ventergy® Series Fans deliver performance, efficiency and flexibility. Aldes range of ENERGY STAR® rated ventilators, are smart choices to fit in tight spaces. Ventergy® fans are available as in-line exhaust, multi-port exhaust, distributing supply, filtering supply.

EXHAUST MODELS



SUPPLY MODELS



SOME HOTEL PROJECTS

- Gaylord Rockies Resort & Convention Center
- Hilton Garden Inn - Downtown Dallas
- The Logan Philadelphia - Curio Collection by Hilton
- Hilton Garden Inn - Chicago/North Loop
- Hilton Grand Vacations on the Las Vegas Strip
- Hilton Grand Vacations at the Flamingo
- Hilton Garden Inn - New York/Central Park South - Midtown West
- Home 2 Suites by Hilton - Little Rock West
- Hilton Orlando - Lake Buena Vista
- Hilton - Atlanta
- Embassy Suites - Atlanta Airport
- Embassy Suites - Minneapolis
- Embassy Suites by Hilton - the Woodlands at Hughes Landing
- Hampton Inn & Suites - Manchester
- DoubleTree by Hilton Hotel - Washington D.C. - Crystal City
- Hampton Inn - Richland/Tri-Cities
- DoubleTree by Hilton Hotel Nashville Downtown
- The Miami Beach EDITION
- Courtyard Williamsburg Busch Gardens
- Courtyard - West Palm Beach
- Courtyard - Macon
- Courtyard - Norwalk
- Newark Liberty International Airport Marriott
- The Ritz-Carlton, Amelia Island
- Buffalo Marriott - Niagara
- JW Marriott - Austin
- JW Marriott - Chicago
- JW Marriott - Houston
- JW Marriott - Minneapolis Mall of America
- Marriott - Annapolis Waterfront
- Marriott - Chicago
- Marriott Marquis - Atlanta
- Marriott Marquis - San Diego
- Marriott Marquis - San Francisco
- Marriott Marquis - Time Square
- Marriott - Seattle
- Houston Airport Marriott - at George Bush Intercontinental
- Houston Marriott Medical Center
- New York Marriott - Downtown
- Little Rock - Marriott
- Richmond Marriott West
- Santa Clara Marriott
- The Ritz-Carlton - St. Thomas
- Denver Marriott - Westminster
- New York Marriott - Brooklyn Bridge



For more information, contact your
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