

# THE FLORIDA FORCE

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## “UltraDry” Hot Gas Reheat Systems

### Fast Facts

- 100% outside air capability
- Variable capacity refrigerant control
- Modulating hot gas reheat system
- Variable frequency drive fan control
- Stainless steel drain pans
- High/low pressure protection
- Optional double wall construction
- Please contact your Florida Air HVAC specialist for more information.

## SPOTLIGHT TOPIC OF THE MONTH

### Energy Recovery Ventilation The Future of Ventilation Control

Energy recovery ventilation is quickly becoming the method of choice to address humidity control for outside air ventilation. Why has this technology gained popularity recently and what are the advantages?

DX air conditioning systems were designed to provide air conditioning for comfort cooling. With the introduction of ventilation requirements thru ASHRAE Standard 62, packaged units were being selected to address both comfort cooling and the removal of moisture from the humid ventilation air. In order to accomplish this, traditional DX systems were being oversized (usually twice the size needed for comfort cooling load in 100% outside air systems) to address the additional moisture and load of the ventilation air. The units are kept operating thru the use of energy inefficient hot gas bypass and hot gas reheat coils.

ERV systems are now introduced into the market. ERV systems were designed to address the humidity and load of ventilation air. Thru the use of ERV's in conjunction with DX systems, we are able to address both comfort cooling and ventilation requirements. This combination allows for the DX system to be appropriately sized for the cooling

load requirements in the building. According to ARI Guideline V, system efficiencies for the ERV-DX unit combination yield efficiencies much greater than a standard oversized AC unit (as much as 2 times the efficiency).

Realizing the energy savings on these types of systems, both the Florida Building Code and ASHRAE 90.1 mandate the use of ERV's to address high outside air ventilation requirements. According to ASHRAE 90.1-2007, addendum e, ERVs would be required in Florida on most systems with supply air as low as 1,000 cfm with 70-80% of outside air (see Table 6.5.6.1.A in Addendum e for the requirements).

In order to encourage the reduction of energy consumption, many utility companies are offering rebates for use of ERV technology. Both FPL and Progress Energy are examples of utilities in Florida offering incentives for Energy Recovery Ventilators.

With the benefits of humidity control, energy efficiency and rebate incentives, ERV's are becoming the design of choice for engineers.

Please contact your local Florida Air HVAC specialist for pricing and further details and white papers on the topic.

### *“THE FLORIDA AIR ERV ADVANTAGE”*

- 100% outside air capability
- Direct drive plenum fans
- Varying fan speed thru EC motors with frequency drives
- Balancing and building pressurization control thru airflow measuring stations

# JOB SPOTLIGHT OF THE MONTH

## EXCELSIOR SCHOOL-MIAMI

- Designed with (10) 100% outside air packaged units with hot gas reheat
- Designed packaged units had an average efficiency of 10 EER
- Project went overbudget with the designed system
- FACD, the mechanical engineer and the mechanical contractor together redesigned the system to bring the project into budget with the ERV-Packaged Unit combo
- ERV-Packaged Unit combo system reduced packaged unit tonnage by 40% by utilizing the conditioned air within the building as the heat transfer medium for the ERV
- System efficiencies increased to between 16.5 EER to 23 EER for each ERV-Packaged Unit combination. Average system efficiency was 19 EER
- School will recognize yearly operating cost savings with higher efficiency systems
- Eligible for over \$16,000 in incentive rebates
- Building pressurization control thru ERV system in lieu of exhaust fans



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Please contact FACD for catalogs, cd's, software programs, presentations, or any items that may assist you with your projects.



## Upcoming Events and Reminders

- Fundamentals of Indoor Air Quality

Presented by:  
Philders Group

Date:

Tuesday, 9/30

Location:

8633 Elm Fair Blvd.

- FACD Webinar Series

VRF Systems

ERV Systems

Cooling Towers

Microchannel Coils

Rawal APR Control

Corrosion Coatings

LEED Design

YCCS Controls

### FLORIDA AIR CONDITIONING DISTRIBUTORS

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