

What's New in Energy Conservation Measures

- The Low Hanging Fruit has been Picked
- Cyber Issues and Resiliency are Driving Up Costs with No Associated Savings
- There's Still Hope if We Focus on Where the Energy Money Goes
 - Lighting
 - HVAC
 - Maintenance
- Have you Considered the Cost of Humidity and the Potential Savings?

Current State of Equipment

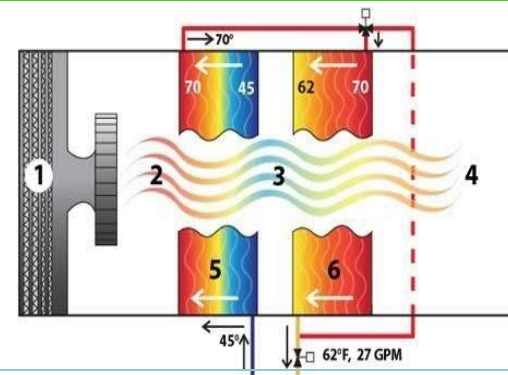
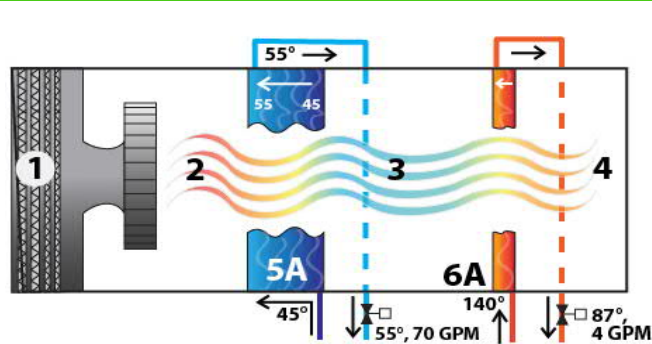
- Most current air conditioning systems cool the air and then separately reheat it (or not)
- This is inefficient and can lead to uncomfortable indoor space that is humid
- Desiccants, energy recovery wheels, and run-around coils might do the job for a while but they are costly to maintain and eventually fail
- These systems are inefficient and are more likely to cause mold growth than to prevent it
- If you do the dehumidification math you will find that most systems are undersized

Existing Inefficient System Do Not Adequately Dehumidify but HEDS Does

- The High Efficiency Dehumidification System (HEDS) is a simple, energy efficient, low maintenance, method of controlling RH and biological growth
- HEDS can be deployed as a new chilled water AHU, an AHU retrofit or a DOAS unit
- It's all about the heat transfer coils
 - If you put the radiator from a Pinto into a Corvette, it will overheat
 - When it comes to heat transfer coils, size really does matter



HEDS is Really Simple and Easy to Maintain



Conventional A/C Design

HEDS A/C Design

- The HEDS technology cools the air to remove moisture and then uses the heat removed from the air to reheat it in a very innovative way
- The air and water are moving more slowly and require less energy and there is no reheat energy

Costs are Slightly Higher but it Pays for Itself in Energy and Maintenance Savings

- Mold and Mildew mitigation costs the government millions of dollars every year
- There is a 5 year-old Building at a Military Base in the southeast that has had the entire 5th floor condemned for mold issues
- In an ESPC at Fort Stewart, reduction in mold accounted for 80% of the savings
- Considering mold and mildew cost and savings in every project can really help make a performance contract work

HEDS is Proven Technology

- Winner of the 2016 Department of Energy FEMP JUMP national energy efficiency competition
- 2014 and 2018 DoD ESTCP competitions
- 2018 Navy evaluation for 5 ship classes
- Test Projects at Fort Bragg and Tinker AFB have worked perfectly and the bases want more
- ESTCP Funding is still available for UESC on Military Bases

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- Conservant Systems is under contract with DOE to locate DOD facilities that have RH control problems that can participate in the ESTCP Program to co-fund 50% of the cost of HEDS demonstration in a UESC project
- Lower humidity creates a healthier indoor air quality environment for employees

Thank you for your time