



DryCool® HCUi Desiccant Dehumidifiers

Benefits

- Controlled dewpoints (RH)
- Energy efficient
- LEED credits for green building construction
- Independent temperature and humidity control
- Increase cooling COP
- Increase makeup air without adding chiller
- No low temperature chiller required
- Retrofit or new construction

DryCool® HCUi Desiccant Dehumidifiers

Munters DryCool Humidity Control Unit for industrial and institutional facilities (HCUi) provides operators with the ability to control temperature and humidity independently. The DryCool HCUi is designed to cost-effectively treat 100% makeup air and can work in conjunction with your existing A/C system. It controls humidity on an as-needed basis, when humidity levels exceed setpoint. The DryCool HCUi can also be utilized in existing facilities with chiller capacity limitations. By offloading the latent

load and allowing chiller water temperatures to be raised, the DryCool HCUi can prevent costly chiller plant expansions.

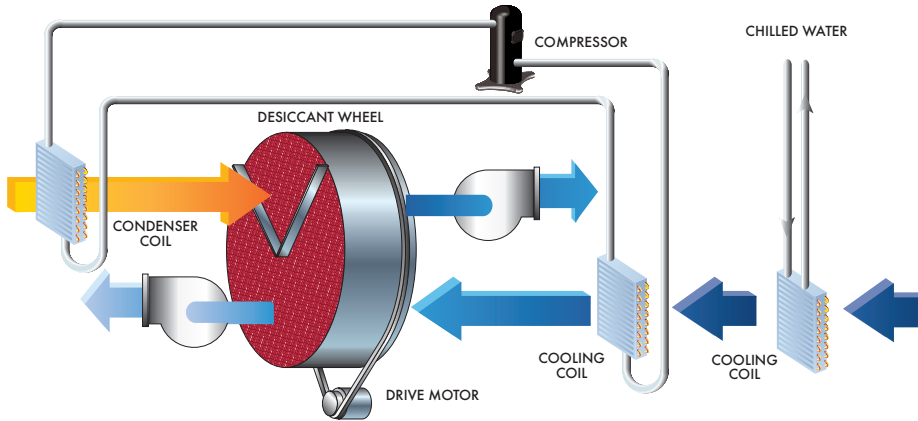
Conventional dehumidification systems use chilled water or refrigeration cooling to dehumidify air. They reheat air to maintain desired temperatures, which results in wasted energy from overcooling and reheating. Additionally, chiller water temperatures must often be lowered to satisfy humidity demands leading to additional energy costs. The DryCool HCUi

uses desiccant and refrigeration technology together to provide dehumidification while maximizing efficiency. The DryCool HCUi operates cost-efficiently because all of the energy required for the operation of its desiccant dehumidifier is recycled from cooling components. When there is a call for cooling only, the DryCool HCUi helps lower energy costs by providing a Coefficient of Performance (COP) that is higher than a typical air conditioning system. These systems currently range up to 40,500 cfm.

DryCool® HCUi

DryCool HCUi units include filters, chilled-water coil, direct expansion pre-cooling coil, a desiccant wheel, integrated condensing package, supply fan, reactivation fan and condensing fans. They can include gas, electric, steam or hot water heating. Systems independently control temperature and humidity with night setback mode and optional remote monitoring. Product airflow range: 16,500 to 40,500 scfm.

DryCool HCUi Flow Schematic



Typical Applications

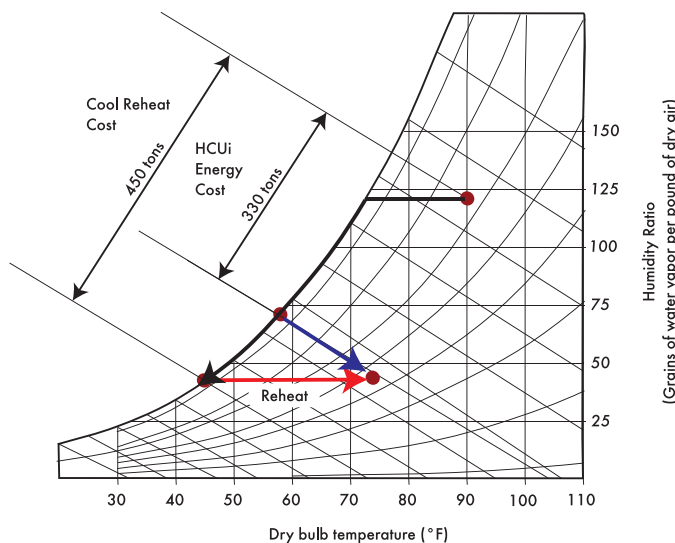
- Pharmaceutical Laboratories
- Semiconductor Manufacturing
- Electronics Assembly
- Clean Rooms
- Hospital Suites
- Efficient alternative to large conventional AHUs for treating outdoor air

In the 1950's Munters invented modern industrial dehumidification when the company introduced the self-regenerating desiccant rotor, the core technology of the dehumidifier.

Today, Munters offers rotors with five desiccant formulations and is the acknowledged expert in the integration of rotors into dehumidification systems and air handlers.

DryCool HCUi Operations Example

At a nominal CFM entering at 90°F db and 77°F wb, the DryCool HCUi uses 330 tons of combined compressor and chilled water cooling to deliver space neutral temperature air at or below a 45°F dewpoint. A cool reheat unit uses 450 tons of chilled water cooling energy to deliver the same conditions, assuming reheat is free. Higher chilled water temperature of DryCool HCUi further minimized nominal chiller tons for DryCool HCUi solution.



Benefits the DryCool HCUi provides over conventional heat-cool makeup air (DOAS) systems include:

- Consistently lower dewpoints than CW/Glycol/DX cool-reheat
- Lower BTUH per lb of H₂O removed
- Improved chiller COPs
- Buildings can increase makeup air without increasing central chiller tonnage



Protected by one or more of the following U.S. Patents. 5435958; 5505769; 5423934; 5500402; 6375914; 6557365; 6622508; 6711907; 6875299; 7047751. U.S. and Worldwide Patents Pending.

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