Typical Applications

Many applications can benefit from the Humidi-MiZer® Adaptive Dehumidification system. The following applications exhibit conditions in which the Humidi-MiZer Adaptive Dehumidification system would be an ideal cost-effective enhancement to a packaged rooftop unit.

Schools — Due to variable student occupancy with constant changes in ventilation air change requirements in each classroom, the proportion of latent load may be high, and humidity may rise. High humidity levels can damage computer equipment or building structural materials. In addition, students entering and leaving classrooms may result in a variation in latent load for each room, which requires maximum part load dehumidification control.

Restaurants and Fast Food Chains — The high degree of variable occupancy, along with kitchen areas of restaurants that have many humidity producing activities, such as dish washing and cooking, can easily result in humidity control problems and over cooling by conventional packaged rooftop units.

Convenience Stores and Supermarkets — High humidity levels can cause inefficient operation of freezer and refrigeration systems. Over cooling can cause significant discomfort for customers.

Churches — Like schools, the high degree of variable occupancy and ventilation requirements can result in humidity control problems and over cooling situations by a conventional packaged rooftop unit.

Health Clubs — Shower areas and human perspiration can cause uncomfortable and higher humidity space conditions. In addition to human discomfort, these conditions can propagate the growth of mold and mildew.

Museums and Libraries — These applications require a tighter degree of tolerance to maintain part load conditions, since high humidity levels can cause substantial damage to priceless books and artifacts.

Humid Climates — In climates along the coast, when the temperature drops, the outdoor wet bulb temperature may remain the same or higher. This results in a need to reduce the sensible capacity, but yet provide more latent capacity to prevent humidity levels from increasing in the space.

Unique Benefits and Performance of Humidi-MiZer

A Legacy of Training

Willis H. Carrier began training members of the heating, ventilation, air conditioning and refrigeration industry in 1905. Carrier continues to promote technical expertise in the industry with the expansion of its sustainable solutions curriculum and has recently been named a U.S. Green Building Council Education Provider (USGBC EP). To earn this status, Carrier’s course materials were reviewed by a panel of USGBC peers and deemed to provide the high level of quality required for training Leadership in Energy and Environmental Design (LEED®) professionals. The courses and workshops supporting LEED-Accredited Professional and Green Associates credential maintenance are administered through Carrier University.
Humidi-MiZer® Adaptive Dehumidification System
Unitary Rooftop Part-Load and Dehumidification Control

Features & Benefits
Humidi-MiZer® Adaptive Dehumidification system provides a greater degree of operational flexibility and enhances humidity control for consistently maintaining year round indoor comfort temperature and humidity levels with a packaged rooftop unit. Benefits include:

Maximum Flexibility — Using three operational modes, for multiple Sensible Heat Ratio (SHR) per unit, the system is better able to adapt to peak and part load outdoor temperature and humidity conditions. This results in up to 35% more moisture removal capability than typical conventional hot gas reheat systems, and the ability to operate without any restrictions on the unit’s normal CFM range.

Consistent Comfort — System flexibility allows the rooftop unit to maintain both indoor temperature and humidity comfort conditions consistently year round.

Superior Humidity Control — Using compressors for active dehumidification, the system can boost the latent capacity of the standard rooftop unit by up to 40%, in the sub-cooling mode, and still allow the capability for dehumidification without a call for cooling, when required by the space.

Cost Effective — Available as a factory installed option on most light commercial rooftop units, the Humidi-Mizer Adaptive Dehumidification system provides a cost effective packaged alternative for meeting latent load intensive applications and variable SHR requirements. System installation costs are simplified and minimized by using Carrier’s exclusive Thermidistat® or a humidistat device with a thermostat for combined temperature and humidity sensing.

Factory Installed & Warranted — The Humidi-Mizer Adaptive Dehumidification system is a factory designed, tested and installed option, specifically engineered for optimum performance and reliability with Carrier rooftop units. The Humidi-Mizer is backed by a warranty, providing additional value to the purchaser.

Not available on Packaged Heat Pump models.