

Packaged Rooftop Units

Humidi-MiZer[®] Adaptive Dehumidification System

HGSV

(Hot Gas Solenoid Valve)

Maintaining indoor space humidity levels can be increasingly difficult depending on the time of year, location of the installation, and the ability of the equipment to provide reliable, flexible operation to meet indoor part load sensible and latent load requirements. Standard rooftop performance often cannot meet these variable requirements. The Humidi-MiZer[®] Adaptive Dehumidification System could be the solution to your problem!

How it works:

Outdoor Air

Evaporator Coil

LLSV

(Liquid Line Solenoid Valve)

Using a simple space thermostat and humidistat input, the Humidi-MiZer Adaptive Dehumidification system changes the refrigerant flow by adjusting the position of the refrigerant solenoid valves. There are three modes of operation: Normal, Sub-Cooling and Hot Gas ReHeat.

Humidi-MiZer coil

Indoor Air

Condenser Coil



ARENAS







HEALTH CLUBS



HUMID CLIMATES











Normal Mode

(HGSV closed, LLSV open) When there is a call for cooling only, the dehumidification system is inactive and the refrigerant circulates per a typical packaged system.

Sub-Cooling Mode

(HGSV closed, LLSV closed)

During part load conditions when the room temperature and humidity are above the setpoint, the unit will initiate the sub-cooling mode of operation; a call for cooling and dehumidification. The end result is a conditioned space that is cooled and significantly more dehumidified, but not over-cooled. This also helps eliminate short cycling of the rooftop unit and improves space temperature and humidity control.

Hot Gas ReHeat Mode

(HGSV open, LLSV closed)

When there is a call for dehumidification without a call for cooling, a portion of the hot gas from the compressor bypasses the condenser coil and is fed into the liquid line. The air is cooled and dehumidified as it flows across the evaporator and is then reheated to neutral conditions by the Humidi-MiZer coil. When used on an Applied Rooftop unit the Humidi-MiZer[®] System becomes modulating.



The HumidiMiZer is available as a factory option on the following Carrier® Packaged Rooftop Units:



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