United Mechanical Corporation
The Leader in Comfort and Process Mechanical Solutions

United Automation Corporation
Controls and Automation Services

HUMIDITY– CLEARING UP A COMMON MISCONCEPTION

Relative Humidity *is not a direct measure of water content, but water content relative to air temperature.*

Dew Point *is a direct measure of water content in the air. The air has to be this temperature for condensation to occur at this water content. With no water addition or removal, the dew point stays the same regardless of ambient temperature.*

MISCONCEPTION: Adding heat to a space will remove humidity. IT WILL NOT.

Hot air has a greater capacity to hold moisture than cold air does. Therefore , heating up a building's air temperature increases its ability to hold moisture. So, with no change in water content in the air, heating the air will cause relative humidity to fall because the air has more ability to hold water. However, water content in the air remains the same. The only way to remove moisture from the air with standard HVAC equipment is to drop the temperature of the air to the dew point required in the space. Excess water above this dew point temperature exits out the drain from the evaporator coil of the air handler.

How United Mechanical Saves You Money at the Same Time Maintaining Optimal Humidity Levels

We have perfected a process that requires only 50% of the total system capacity (energy) be utilized, while still consistently maintaining ongoing dehumidification. Occupant comfort and energy savings are both maximized.

Benchmark Level for Occupant Comfort

- **Temperature–** 72° F
- **Humidity–** 55%
- **Dew Point—** 55° F

Negative Side Effects of Excess Humidity

- Occupant discomfort
- Warping
- Mold

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