Humidity control with rooftop systems
Air quality, conditioning, recycled energy, humidity solutions
Drier buildings simply feel better. Humidity-managed facilities offer a greater sense of comfort, and a healthier environment. Dehumidification is an on-going process of reducing or removing excess moisture from the air. Controlled humidity improves comfort, reduces moisture-based contaminant growth, and preserves building interiors.

**Indoor Air Quality (IAQ)**

The air we breathe is an especially important consideration when choosing a mechanical system. Properly conditioned indoor air goes beyond quality—it encompasses the health and safety of facility occupants.

Humidity control provides a positive means to increase a building’s IAQ, while decreasing health issues and absenteeism. In addition, humidity control helps to preserve building structures and furnishings by reducing moisture-based contaminants that have the potential to cause damage.

**Climate conditioning**

While dehumidifying a building does not reduce temperature, it makes the air “feel” warmer. Keeping indoor humidity at acceptable levels:

- Greatly improves comfort
- Decreases occupant complaints
- Increases market values of facilities

The American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) has developed Standard 62-2001, Ventilation for Acceptable Indoor Air Quality. It addresses indoor moisture and microbial growth by recommending:
**Moisture control**

One of the key steps to creating an interior environment that offers a comfortable atmosphere for learning, working, rehabilitation and recreational activities is to understand how moisture enters a building.

Moisture enters a building in either a liquid or vapor state. Leaky roofs and damp carpets, condensation on cold surfaces, or leaky pipes can all contribute to liquid moisture. In a vapor state, moisture may enter the building through an outside ventilation system, human respiration, cooking, wet cleaning, or infiltration through cracks and other exterior openings.

**Moisture removal**

Regardless of how moisture enters a building, it has the potential to cause disruption, illness and damage. Removing unwanted moisture will significantly enhance any interior environment.

“Relative humidity in habitable spaces preferably should be maintained between 30 percent and 60 percent to minimize the growth of allergenic pathogenic organisms.” (Section 5.10)
A humidity control solution!
Trane’s hot gas reheat dehumidification system can help facility designers and operators keep their buildings in their “comfort zone.” With a single unit, the system senses and controls both space humidity and temperature independently. The system operates conventionally when there is a demand for cooling without dehumidification, but on those humid days, the hot gas reheat system will remove unwanted moisture from the air. The result: both temperature and humidity are maintained without the wasteful and costly use of new energy.