Tech-Note: Why use Dewpoint Control in Ice Arenas?

Most dehumidifiers are controlled by a simple and inexpensive relative humidity transmitter. These are inexpensive but do not accurately control humidity in an ice arena.

The problem is that as the temperature in your arena changes, the humidistat will either run the unit too much (in a cold arena) or not enough (in a warm arena).

The result is that your humidistat might be set to control the space on the warmest day. When the rink gets cold, the dehumidifier runs too much and over dries the space.

Knowing the space temperature allows you to set the humidistat for the relative humidity which solves the problem. This loosely approximates dewpoint control, but requires frequent and expert adjustment of the relative humidity setpoint considering the prevailing rink temperature.

Here is a chart that shows relative humidity setpoint corresponding to room temperature to achieve the preferred 35° F dewpoint: