QUEST DEHUMIDIFIERS HI-E DRY

ELIMINATE CONDENSATION.

MANAGE HUMIDITY IN YOUR WATER TREATMENT FACILITY.

(877) 420-1330
QUESTCLIMATE.COM

CONDENSATION CONTROL 101

The key to controlling condensation in a water facility is understanding the dew point of the air in the building. Have you ever noticed that a cold can of soda will "sweat" in the summer, but not in the winter? The temperature in your house is about the same, so the temperature of the air present cannot be the cause. The difference is the temperatures the air has been subjected to before it entered the structure.

The ability of air to hold moisture is determined by the temperature of the air. Hot air has the capacity to hold substantially more moisture than cold air. 50-degree air can hold approximately twice as much water as 32-degree air. 70-degree air can hold twice as much water as 50-degree air and about four times as much water as 32-degree air.

Relative humidity is the term used to express the percentage of moisture present in the air in relation to the total amount of moisture the air could hold at a given temperature. Air that has a relative humidity of 100% is at its saturation temperature. This is also referred to as the dew point temperature. Air with a relative humidity of 100% at 32 degrees will have a dew point of 32 degrees.

If this air is heated to 50 degrees the relative humidity will be about 50%. If heated to 70 degrees the relative humidity will be about 25%, but the dew point of the air will still be 32 degrees. In order to prevent condensation from forming on cold surfaces, the dew point of the air must be lower than the temperature of cold surfaces. In most groundwater facilities the coldest pipes are approximately 54 degrees.

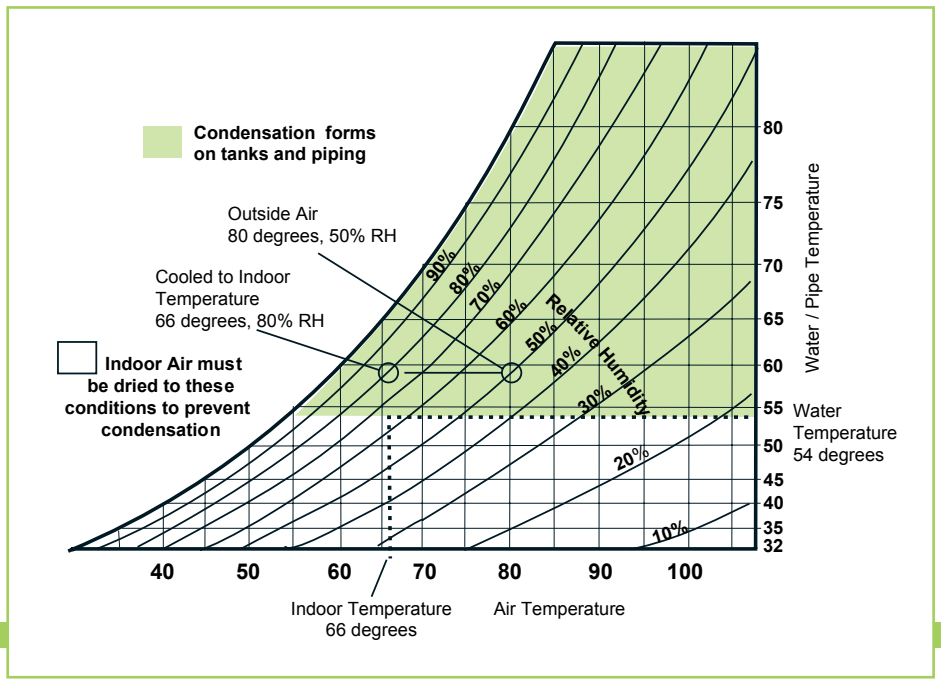
The air in these facilities must be kept at a dew point lower than 54 degrees to prevent condensation.

Summertime dew point temperatures are normally 60 to 70 degrees, so without a humidity control system the pipes "sweat" almost constantly.

A pound of air at 50 degrees and 100% relative humidity will hold .0076 lbs of water or 53.2 grains. Twice as much as 32-degree air.

A pound of air at 32 degrees and 100% relative humidity will hold .0038 lbs of water or 26.6 grains.

A pound of air at 70 degrees and 100% relative humidity will hold .016 lbs of water or 112 grains. Over four times more than 32-degree air.



While the industry average remains at only two to three pints, Quest Hi-E Dry dehumidifiers remove up to seven pints of water per kilowatt utilizing a patented revaporator process, designed for efficiency and durability.

SELECTING HIGH EFFICIENCY EQUIPMENT

It's important to look at the highest efficiency units available that have the capacity to "fit" the particular conditions and requirements of a specific facility. The size of the facility is rarely an issue since multiple units can be used if the moisture load of the plant is higher than the capacity of a single unit.

ENVIRONMENTAL CONSIDERATIONS

Reaching dew points below 50 degrees in room temperatures of 65 degrees or less can become an issue for a number of dehumidification options. Most refrigeration dehumidifiers freeze-up under these conditions and are ineffective.

HI-E Dry dehumidifiers operate superbly under these conditions while using less energy and offering much lower equipment and installation costs than alternative solutions.

The high efficiency design of HI-E Dry dehumidifiers offer more than just dramatically reduced operating costs. The larger water removal capacity from a smaller, more efficient refrigeration system eliminates the need for hard wiring special circuits. HI-E Dry dehumidifiers just plug into a standard 115 volt outlet.

The smaller refrigeration system also means a HI-E Dry dehumidifier will cost less than competitive systems of equal capacity. In some cases, water utilities can cut their initial equipment costs to a fraction of the anticipated cost and have the realized energy savings of the first year equal the initial cost of the HI-E Dry system.

Our team will work with you to size the dehumidification system necessary to control the condensation in your facility.

HI-E DRY DEHUMIDIFIERS ARE DESIGNED AND BUILT WITH EMPHASIS ON EFFICIENCY AND DURABILITY.

QUEST DEHUMIDIFIERS HI-E DRY

QUEST
DEHUMIDIFIERS

Quest 70

SPECIFICATIONS:

Power:	115 volt
Draw:	5.1 amps
Blower:	150 cfm
Temp:	33°F - 100°F
Warranty:	5 Year Limited
Duct Kit:	8" round (optional)

CAPACITIES PER 24 HOURS

80°F, 60%	70 pints
70°F°, 50%	34 pints
60°F, 60%	34 pints

DIMENSIONS:

Width:	21 inches
Height:	12 inches
Depth:	12 inches
Weight:	55 lbs

Quest 335

SPECIFICATIONS:

Power:	208-230 volt
Draw:	9 amps @208V 7.5 amps @230V
Blower:	900 cfm
Temp:	56°F - 95°F
Warranty:	5 Year Limited
Duct Kit:	16" round

CAPACITIES PER 24 HOURS

80°F, 60%	350 pints
70°F°, 50%	204 pints
60°F, 60%	187 pints

DIMENSIONS:

Width:	32.9 inches
Height:	23.7 inches
Depth:	24.6 inches
Weight:	215 lbs

HI-E Dry 195

SPECIFICATIONS:

Power:	115 volt
Draw:	3.1 amps
Blower:	610 cfm
Temp:	40°F - 110°F
Warranty:	5 Year Limited
Duct Kit:	12" round inlet 10" round exhaust

CAPACITIES PER 24 HOURS

80°F, 60%	198 pints
70°F, 50%	120 pints
60°F, 60%	88 pints

DIMENSIONS:

Width:	20 inches
Height:	42 inches
Depth:	19 inches
Weight:	130 lbs

Quest 506

SPECIFICATIONS:

Power:	230 volt
Draw:	11 amps
Blower:	1500 cfm
Temp:	45°F - 95°F
Warranty:	5 Year Limited
Duct Kit:	12" round (optional)

CAPACITIES PER 24 HOURS

80°F, 60%	506 pints
70°F, 50%	304 pints
60°F, 60%	278 pints

DIMENSIONS:

Width:	28.9 inches
Height:	33.8 inches
Depth:	44.7 inches
Weight:	280 lbs

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ETL Listed

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