



Humidity is Integral to Operations at Quest Diagnostics

DR Series

- Humidity Control
- Energy Savings
- Reduced ESD



Nortec Provides A Custom Fit Solution For Optimal Humidity Levels At Quest Diagnostics

Project Overview

Customer: Quest Diagnostics

Location: Lenexa, Kansas

Facility Size: 60,000 sq. ft.

Application: Medical / Laboratory Processing

Product: DR Series

The benefits of Nortec's direct room humidification

- Precise humidification control
- Low operating costs, and reduced cooling costs
- Minimal maintenance
- A completely hygienic solution

Abstract

Quest Diagnostics is the world's leading provider of diagnostic testing, providing public and private access to screenings and customizable health and wellness programs for companies. In 2016, Quest Diagnostics' clinical laboratory facility in Lenexa, Kansas, updated their HVAC system; a modification to the temperature system meant they needed a new, innovative humidification solution.

In-space humidification solutions can provide you with energy use cost savings.

Quest Diagnostics needed to maintain optimal humidity levels which are integral to the facility's operations and indoor air quality. With the new Nortec Humidity solution, Quest Diagnostics has improved humidification control in the facility, improved the indoor comfort with in-space evaporative cooling, as well as achieved cost savings on energy use and maintenance.



Challenge

Quest Diagnostics clinical laboratory facility in Lenexa features state-of-the-art testing and diagnostics technology. The facility consists of two separate testing areas; one lab is 36,000 sq. ft. and the other 24,000 sq. ft. The facility must maintain a regulated and strict indoor climate for accuracy in test results; the labs must maintain an environment of 70°F and 35% relative humidity (RH) for their testing purposes. With the facility running 24/7 operations, Quest Diagnostics required a high-performance, dependable humidification solution.

Quest Diagnostics' labs must maintain a consistent humidity level of 35% RH for testing purposes

With two labs full of sophisticated equipment and materials, the facility required a humidification solution that was powerful, yet discreet enough to prevent disruption of equipment or operations. They needed a powerful solution that would provide optimal comfort for employees, help control electrostatic discharge (ESD) with high-tech equipment and support effective production and processing for lab results – and Nortec was up to the challenge.

Solution

To meet the needs of the Quest Diagnostics facility, Nortec implemented its DR Series Direct Room adiabatic humidification system. This solution directly humidifies the space, instead of injecting humidity into the air through the ductwork. This high-performance humidification system provides a more consistent control of humidity throughout the facility.

The adiabatic system offers premium humidification control by pumping treated water from a main station through tubing to atomizing high-pressure nozzles, injecting the water into the air as a fine mist. The adiabatic system offers powerful humidification, as well as evaporative cooling power for better temperature control in the space.

“The new evaporative cooling and humidification system works beautifully,” said Stuart Braden, Vice President, W.L. Cassell & Associates, part of the team that designed the custom-fit solution for Quest Diagnostics using Nortec’s products. “The water evaporates quickly and you can feel the cooling in the air.”



Nortec's direct room humidifier provided Quest Diagnostics with a more consistent control of humidity throughout the facility.



Results

Through the installation of Nortec's adiabatic humidification system, Quest Diagnostics is experiencing better temperature and humidity control throughout their diagnostics facility and the extra benefit of evaporative cooling. Quest Diagnostics is also experiencing an electrical savings and maintenance savings with the new humidification system. Nortec's new solution eliminated 294,000 watts of electric elements and also took advantage of evaporative cooling which helped to further save on indoor air temperature control year-round.

"The Nortec product delivers a great evaporative cooling benefit through space humidification and powerful added capacity to the air handling unit," said John Hart, Senior Project Manager, EMCOR Services Fagan, who was integral in bringing the benefits of Nortec's solution to Quest Diagnostics. "We couldn't be more happy with the results after installation."

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John Hart, Senior Project Manager,
EMCOR Services Fagan

Nortec's innovative humidification solution has allowed Quest Diagnostics to elevate their indoor air quality without any downtime in facility operations. The success yielding from this partnership is a testament to Nortec's dedication and commitment to helping its customers to achieve and sustain optimal levels of air quality.

About Nortec

With 600 employees, the Condair Group is the world's leading manufacturer of commercial and industrial humidification systems, setting standards globally for energy-efficient and hygienic solutions through its main Condair brand. Condair is represented in 16 countries by its own sales and service organisations and is supported by distribution partners in a further 50 countries. Condair operates production sites in Europe, North America and China.

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