

DRISTEEM RESOURCES

**Presentation:** Humidity and Occupants - What the Latest in Humidity Research Means for You  
[www.ahrinet.org/App\\_Content/ahri/files/Humidity\\_Occupants\\_Presentation.pdf](http://www.ahrinet.org/App_Content/ahri/files/Humidity_Occupants_Presentation.pdf)

For application assistance, contact your regional sales manager or Inside Sales representative at [unitorder@dristeem.com](mailto:unitorder@dristeem.com).

SOURCES

- 1. "Value of lab testing," American Clinical Laboratory Association. <https://www.acla.com/value-of-lab-testing/>
- 2. "Laboratories," United States Department of Labor: Occupational Safety and Health Administration. <https://www.osha.gov/laboratories#:~:text=More%20than%20500%2C000%20workers%20are,as%20well%20as%20musculoskeletal%20stresses>

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LABORATORY  
HUMIDIFICATION  
BUYER'S GUIDE

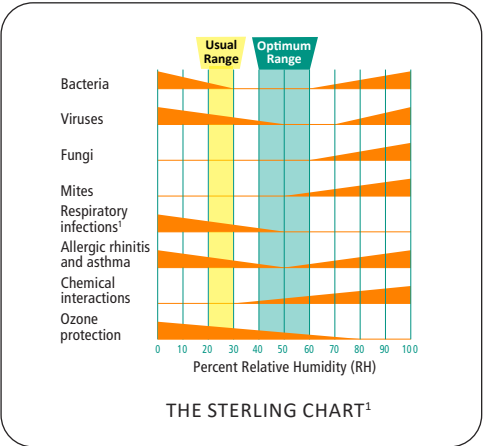


WHY HUMIDIFY LABATORIES?

In the United States alone there are more than 7 billion lab tests performed annually.<sup>1</sup> Controlling the Relative Humidity within the complex environment of a laboratory generates more accurate test results, prevents contamination, and promotes a healthier work environment for staff.

A primary concern is the prevention of contamination, the potential for the growth of microbes and bacteria increases in an improperly controlled environment. When humidity levels are too low the potential for static buildup increases which allows contaminants to collect. In unfavorable conditions, microbes and bacteria reproduce at an exponential rate. This not only impacts testing results but also diminishes the life cycle of expensive equipment.

In the United States, there are over 500,000 workers employed in laboratories.<sup>2</sup> Relative humidity not only creates a more comfortable environment for workers but also reduces the spread of airborne viruses such as SARS-CoV-2 and the seasonal flu.



ISSUES CAUSED BY LOW OR FLUCTUATING RELATIVE HUMIDITY

- Impact humidity has on test results
  - Humidity levels that are too high or too low can interfere with test results.
  - Whether from a brief interval when an HVAC system starts up or season changes, the slightest fluctuation in humidity can affect the accuracy of sensitive testing.
- Protection of equipment
  - In an overly dry environment, there is potential for static to build up which will allow contaminants to collect on equipment.
  - In an uncontrolled environment the life span of expensive equipment such as spectrometers and electronic microscopes can be notably reduced.
- Wellness of staff
  - The use of humidification can help to reduce the spread of viruses like COVID-19 (SARS-CoV-2) and seasonal influenza helping to protect the wellbeing of staff.



## WHY CHOOSE DRISTEEM HUMIDIFICATION SYSTEMS?

### COMMITTED TO QUALITY

DriSteem has been designing and building world-class humidification business for more than 50 years and is committed to making the best products in the HVAC industry.

DriSteem humidification systems are made to fit each unique application, whether it is ensuring the success of critical industrial processes, preserving fragile and valuable museum artifacts, or protecting the health and well-being of building occupants. DriSteem's mission is to support healthy environments – studies show that when room relative humidity (RH) drops below 40 percent, incidents of respiratory illness increase but by adding proper humidification, student and employee absenteeism can be significantly reduced.

DriSteem U.S. operations are ISO 9001:2015 certified and committed to providing high-quality products, efficient services, on time delivery, and innovative solutions.

### SUPPORT & RELIABILITY

DriSteem sales representatives are the industry experts in humidification systems, and are trained to recommend and specify the best solution for any application. They are willing to go the extra mile to make sure everything runs smoothly at start-up and for the life of the equipment.

DriSteem stands behind their products with a world-class Technical Support team available to troubleshoot any issues that may arise. They can also provide start-up assistance and offer field service visits.

### CASE STUDIES & RESEARCH

Support your business case with data – DriSteem is continually adding to our collection of white papers and case studies.

DriSteem partnered with the Mayo Clinic to determine whether low humidity levels during the dry winter months have an effect on the spread of flu virus in a classroom environment. The study showed that adding steam humidification resulted in a significant reduction in the total number of influenza-positive samples in the air and on surfaces.

Reducing the spread of these viruses is especially important for students at K-12 schools because research has shown that missing just 10% of school days in a year for any reason predicts low student achievement. When viruses spread among students, teachers also tend to get ill and have to take sick days. Having to rely on substitute teachers too often can negatively affect lesson plans and is also expensive for schools.

School budgets also may suffer when students don't attend. In many states, school budgets are based on the average daily attendance at a school. If many students are absent, the school has less money to pay for essential classroom needs.

See the full study here: <https://dristeem.azureedge.net/public-documents/docs/default-source/azure-public/case-studies/mayo-clinic-humidification-case-study-0518.pdf?sfvrsn=2>

"Humidity as a non-pharmaceutical intervention for influenza A" published study:

<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0204337>



## DRISTEEM SOLUTIONS

### XT SERIES ELECTRODE HUMIDIFIER

Good choice for single-room humidification. It can mount on a wall and disperse steam directly into a room such as a band or chorus practice space.

- Easy to maintain: No cleaning required. Simply replace the affordable steam cylinder when prompted by the controller display.
- Compact to fit in small spaces.

### VAPORMIST® HUMIDIFIERS

Disperses steam humidification through ductwork with dispersion tubes or panels, or directly in the space.

- Full enclosure suitable for finished spaces
- Can be wall mounted

### VAPORSTREAM® HUMIDIFIER

Disperses steam humidification through ductwork with dispersion tubes or panels, or directly in the space.

- Industrial-grade unit designed to meet the humidification demands of any building environment
- Mount options: Trapeze hanger, wall brackets, support legs
- Seismic certified option (OSHPD)

### GTS® HUMIDIFIER LX SERIES

The LX Series is the only gas-fired humidifier that combines the highest efficiency on the market with ultra-low NOx in a single design.

- Condensing design for highest efficiency and PVC venting
- Ultra-low NOx certified to SCAQMD 1146.2 standards
- Smart drain technology adjusts drain intervals automatically based on water quality
- Universal water control for use with any water type, including RO/DI water
- Modulating output with minimum 5:1 turndown for accurate humidity control
- Outdoor and indoor models for application flexibility

### STEAM DISPERSION

Depending on the application, steam dispersion options may include:

- Ultra-sorb® Model XV steam dispersion panel
- Ultra-sorb® Model LV/LH steam dispersion panel
- Ultra-sorb® Model MP steam dispersion panel
- Multiple-tube humidifier
- Space Distribution Unit (SDU)



XT SERIES  
ELECTRODE HUMIDIFIER



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GTS HUMIDIFIER LX SERIES



STEAM DISPERSION OPTIONS