

GOVERNMENT

HUMIDIFICATION BUYER'S GUIDE



WHY HUMIDIFY GOVERNMENT BUILDINGS?

There are over 16 million state and local government employees and thousands of citizens who visit government facilities on any given day. Staff and visitors in these facilities are exposed to health and wellness issues caused by overly dry air such as respiratory problems, skin irritations, dry nasal passages, dry eyes, and sore throats. Studies have shown keeping relative humidity (RH) levels within a range of 40 to 60 percent is necessary to maintain a healthy indoor environment. Controlling the humidification within government buildings will reduce the spread of airborne viruses such as SARS-CoV-2 and create a more comfortable environment for employees and visitors.

During the 2018-2019 flu season, an estimated 35.5 million people were sick with influenza, with only 16.5 of them going to a health care provider.<sup>1</sup> Shared workspace, frequent face-to-face interactions, and the constant flow of visitors make government facilities an ideal environment for viruses to spread. Using a preventative, non-pharmaceutical intervention like humidity is highly recommended to protect staff and decrease absentee rates during the influenza seasons.

There is evidence of a link between overly dry air and increased cold or flu transmission between people because dry air allows infectious particles, such as bacteria and viruses, to survive longer in the air and on surfaces. In addition, the natural defense system of our bodies becomes less effective in dry air, meaning that we are unable to fight off infection very effectively. It has been proven that viruses that cause influenza and other flu-like illnesses survive best when the RH is low. Installation of a humidification system allows precise control over the relative humidity in an indoor space to render viruses inactive and less infectious, helping to protect staff, visitors, and the surrounding community.

ISSUES CAUSED BY UNCONTROLLED HUMIDITY LEVELS

- Spread of viruses
  - Healthy levels of humidification can help to reduce the spread of viruses like COVID-19 (SARS-CoV-2) and seasonal influenza in the built environment.
  - The World Health Organization has called for non-pharmaceutical approaches to mitigate the transmission of COVID-19,<sup>2</sup> and the addition of humidity is a safe, efficient, and easy way to protect staff, visitors, and the surrounding community.
  - Airborne viruses such as SARS-CoV-2, MERS, and Influenza A are expelled as aerosols through breathing, speaking, coughing, and sneezing. Researchers have captured pathogen-bearing aerosols traveling up to 25 feet from a simple sneeze.
- Illness and discomfort to staff and visitors:
  - Dry indoor air can cause discomfort in the form of dry skin, eyes, and throat for visitors and staff.
  - Dry indoor air has a negative impact on the overall wellness of the staff and visitors because it allows easier transmission of airborne viruses such as SARS-CoV-2 and seasonal influenza.
  - There are real costs associated with health-related issues caused by dry air, including a higher occurrence of infections and increased rates of staff absenteeism.
  - Humidified spaces feel warmer and are more comfortable for employees and visitors, especially in cold climates where heating systems run frequently.



SOURCES

1. "Estimated Influenza Illnesses, Medical visits, Hospitalizations, and Deaths in the United States—2018–2019 influenza season," CDC, 8, January 2020, <https://www.cdc.gov/flu/about/burden/2018-2019.html>
2. "Non-pharmaceutical public health measures for mitigating the risk and impact of epidemic and pandemic influenza," WHO, 2019, <https://apps.who.int/iris/bitstream/handle/10665/329438/9789241516839-eng.pdf>

DRI-STEEM Corporation  
 A subsidiary of Research Products Corporation.  
 DriSteem is an ISO 9001:2008 certified company.  
[www.dristeem.com](http://www.dristeem.com)  
 © 2021 Research Products Corporation

U.S. Headquarters:  
 14949 Technology Drive  
 Eden Prairie, MN 55344  
 800-328-4447 or 952-949-2415  
 952-229-3200 (fax)  
 Email: [inquiries@dristeem.com](mailto:inquiries@dristeem.com)

European office:  
 Grote Hellekensstraat 54 b  
 B-3520 Zonhoven  
 Belgium  
 +3211823595  
 Email: [dristeem-europe@dristeem.com](mailto:dristeem-europe@dristeem.com)

**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.

Recently, 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. As the study showed, the addition of steam humidification resulted in a significant reduction in the total number of influenza-positive samples in the air and on surfaces.

- › See the full case study here: <https://dristeem.azureedge.net/public-documents/docs/default-source/azure-public/case-studies/mayo-clinic-humidification-case-study-0518.pdf?sfvrsn=2>
- › And the supporting published study “Humidity as a non-pharmaceutical intervention for influenza A” here: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0204337>

Additional health care facilities case studies:

- › Unsuitable Substitutions: Learning the Hard Way About Absorption <http://www.dristeem.com/humidity-university/case-studies/case-study-mercy-hospital>
- › Ultra-sorb Improves Absorption and Reduces Operating and Maintenance Costs <http://www.dristeem.com/humidity-university/case-studies/case-study-ultra-sorb-improves-absorption>



**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.



XT SERIES ELECTRODE HUMIDIFIER

**VAPORMIST® HUMIDIFIERS**

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

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



VAPORMIST HUMIDIFIER

**VAPORSTREAM® HUMIDIFIER**

Disperses steam humidification through ductwork with dispersion 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)



VAPORSTREAM HUMIDIFIER

**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



GTS HUMIDIFIER LX SERIES

**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)



STEAM DISPERSION OPTIONS