

SOURCES

1. E.M. Sterling, Criteria for Human Exposure to Humidity in Occupied Buildings, 1985, ASHRAE.

2. Ambulatory Healthcare Association Standards FAQ, https://www.jointcommission.org/standards_information/jcfaqdetails.aspx?StandardsFAQId=1498

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AMBULATORY
HEALTHCARE
SERVICES

HUMIDIFICATION
BUYER'S GUIDE



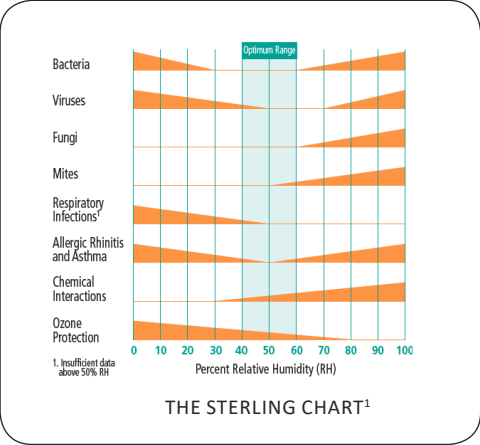
WHY HUMIDIFY AMBULATORY HEALTHCARE SERVICES?

Overly dry indoor air can have adverse effects on people’s health and well-being, damage materials, and impair equipment operation. In health care facilities, maintaining proper humidity levels is an essential and critical responsibility.

Health care facilities need to conform to the Joint Commission (JCAHO) Health Care Relative Humidity standards² in order to avoid issues such as delays of operating room procedures, withheld Medicare or Medicaid payments, and potential loss of facility accreditation.

ISSUES CAUSED BY LOW OR FLUCTUATING RELATIVE HUMIDITY

- Illness and Discomfort:
 - Dry indoor air can cause discomfort in the form of dry skin, eyes, and throat. It can increase the incidences of cracked skin and dehydration, which can be especially threatening to vulnerable populations such as immune-system compromised, elderly, and pediatric patients.
 - Dry indoor air also has a negative impact on the overall wellness of patients and staff because it makes it easier for infections to spread
 - There are real costs associated with health-related issues caused by dry air, including a higher occurrence of hospital-acquired infections and increased rates of staff absenteeism.
 - Keeping RH levels within a range of 40 to 60 percent not only decreases bacteria and viruses in the air, but hinders the development of fungi, mites, chemical interactions, and ozone production. The result is reduced occurrences of allergic rhinitis, respiratory infections, and asthma among building occupants. In addition, humidified spaces feel warmer and are more comfortable for occupants, especially in cold climates where heating systems run frequently.
- Damage to Equipment and Supplies:
 - Dry indoor air can cause safety concerns due to electrostatic discharge (ESD) problems for X-ray, ultrasound, and other high-tech equipment.
 - There are also ignition hazards due to ESD that can affect flammable materials like oxygen.
 - Common items that increase the risk of ESD:
 - Office carpeting
 - Desktop and laptop computers
 - Employee clothing
 - Metal tools
 - Surgical lights
 - MRI machines
 - Mobile technology carts
 - Electronic diagnostic equipment



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