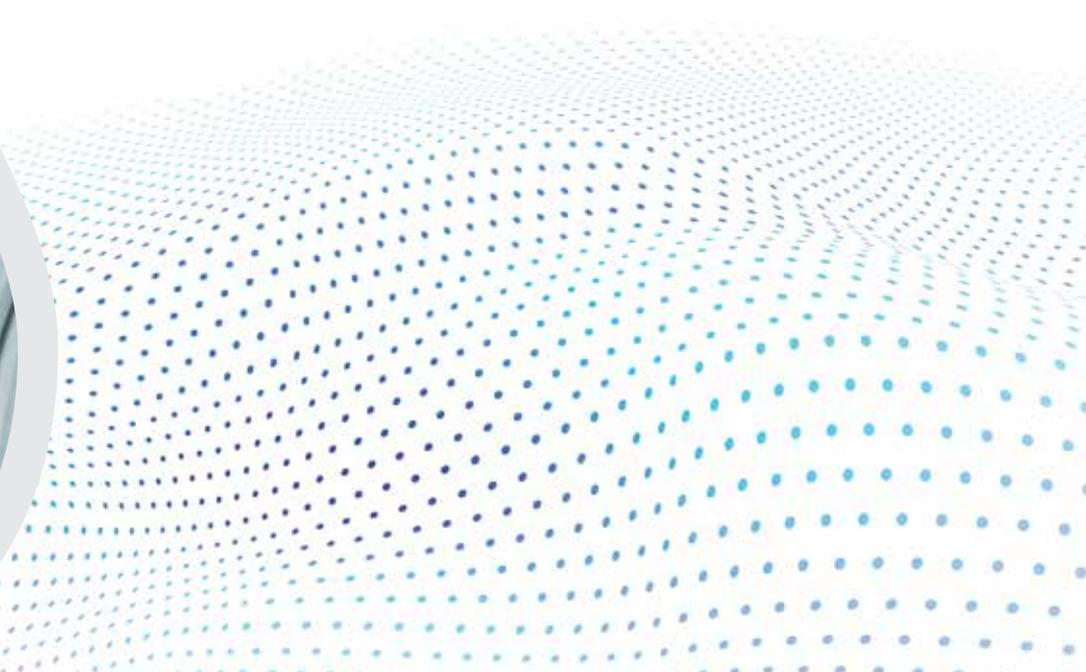
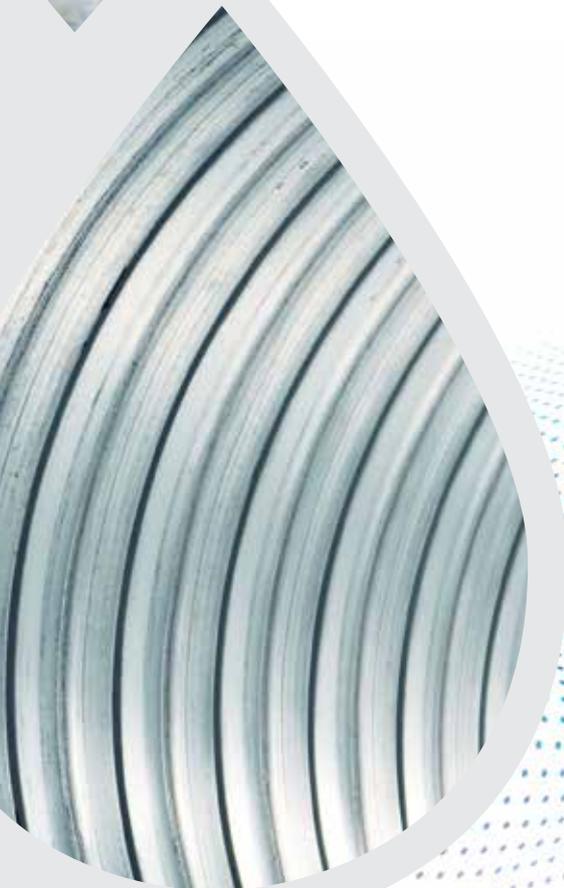


# ALL PRODUCTS BROCHURE

*Humidification Control,  
Evaporative Cooling, and  
Water Treatment*

driSteem 



# WHY HUMIDITY IS CRITICAL

*Properly controlled humidification can promote health and safety, improve processes, extend the life of materials, and enhance occupant satisfaction.*

Aspects to consider when using relative humidity (RH) include the intended use (humidification or cooling), the humidity load, the available energy sources, the quality of the water, where the moisture will be dispersed, and the level and type of controls required. This guide provides helpful guidance on understanding the benefits of humidity and choosing the most appropriate humidification system for your needs or that of your client.

## **BENEFITS OF RELATIVE HUMIDITY WITHIN THE BUILT ENVIRONMENT**

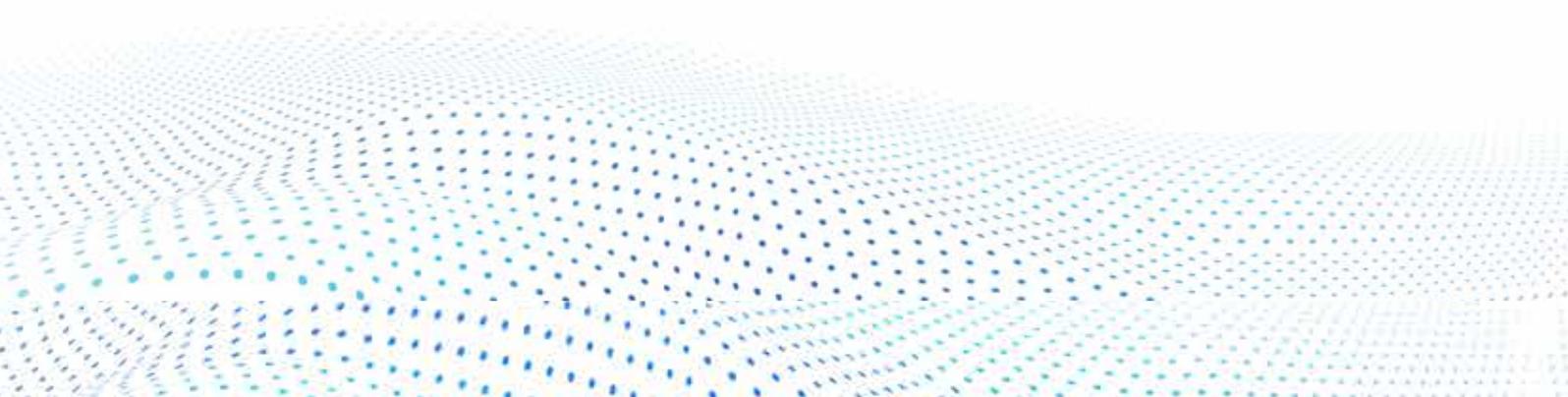
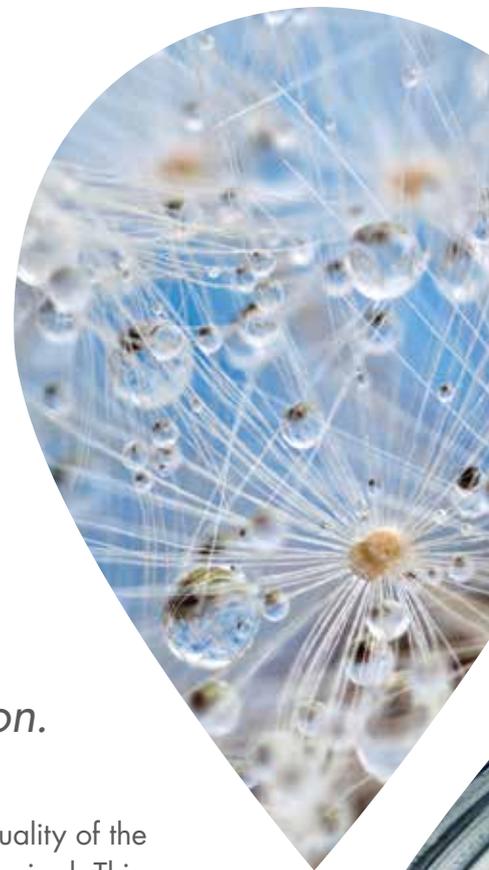
- Competitive advantage through process improvement
- Increase longevity of materials and artifacts
- Create a healthy and comfortable environment for occupants

Gain a competitive advantage by controlling a building's relative humidity (RH) which significantly improves production processes and product quality. Relative Humidity (RH) affects the moisture content of hygroscopic materials, such as wood, textiles, paper, leather, fibers, and foods.

Fluctuating RH causes material to repeatedly absorb and release moisture which shortens the shelf-life. These changes may impact a material's weight, strength, and appearance, which may damage the material and shorten its longevity.

Studies show that when room RH drops below 40 percent, incidents of respiratory illness increase. Proper humidification can significantly reduce absenteeism and create a comfortable environment for your occupants.

Relative humidity (RH) protects the bottom line by protecting the people, processes, and materials inside commercial buildings.



# INDEX

- 04 STEAM HUMIDIFICATION
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- 14 CONTROL
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- 16 ACCESSORIES
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## WHY DRISTEEM

*Developing industry-leading humidity-management solutions for the built environment to optimize processes, preserve materials, and create a healthy environment for occupants.*

### INNOVATION

To support the unique needs of our clients, we are committed to developing innovative designs and building world-class humidification solutions.

### INDUSTRY EXPERTS

Our representatives have experience and expertise in a wide range of environments to help you select the system that best meets your needs, both now and in the future.

### QUALITY

Quality goes beyond words; we provide you with a wide array of white papers and case studies to support your business case. Visit [www.dristeem.com/humidity-university](http://www.dristeem.com/humidity-university)

# STEAM HUMIDIFICATION

Steam humidifiers vaporize water into humidification steam in order to add moisture to indoor air. They can use electricity, natural gas, propane, or even pressurized steam as an energy source.

## ALL DRISTEEM STEAM HUMIDIFIERS

- Disperse steam through ductwork or directly into spaces
- Protect the people, processes, and materials inside the built environment
- Lead the industry in quality and reliability

## ELECTRIC RESISTIVE STEAM HUMIDIFIERS

Electric resistive steam humidifiers boil water using electric resistive heating elements that are submerged in a stainless steel cleanable tank. Tank cleaning frequency and effort depends on the incoming water type and the demand on the humidifier. Electric resistive humidifiers can operate using potable, softened, reverse-osmosis, or deionized water.



### RTS® humidifier RX series:

- **Electric resistive steam humidifier**
- EN 1717 certified
- **Capacity:** 2.7 - 147 kg/h, link up to 8 units for capacity up to 1176 kg/h
- **Control:**  $\pm 1\%$  RH; Vapor-logic control (see page 14)
- **Applications:** Elegant cabinet-style humidifier that continuously learns as it runs, and automatically adapts to optimize steam output. Easy installation and one-sided front access for annual maintenance. Integrated drain water tempering and SSR control make the RTS humidifier the ideal choice for almost any application.
- **Options:** Climate-controlled outdoor enclosure; Modbus, BACnet, or with optional LonTalk protocols; wall or base mount, floor stand; matching fan-based steam dispersion cabinets

*Sustained quality and dependability*



### Humidi-tech® humidifier:

- **Electric resistive steam humidifier**
- **Capacity:** 2.7–46 kg/h; link up to 16 units for capacity up to 740 kg/h
- **Control:**  $\pm 3\%$  RH; Vapor-logic control (see page 14)
- **Applications:** Attractive, compact, cabinet-style unit perfect for finished spaces. Wall mounted. Easy installation.
- **Options:** Matching fan-based steam dispersion cabinets; Modbus or with optional BACnet or LonTalk protocols; SSR control

*Designed for finished spaces*



### Vaporstream® humidifier:

- **Electric resistive steam humidifier**
- **Capacity:** 2.6–129 kg/h; link up to 16 units for capacity up to 2,068 kg/h
- **Control:**  $\pm 1\%$  RH; Vapor-logic control (see page 14)
- **Applications:** From providing comfort humidity to meeting the strictest clean-room requirements, the Vaporstream electric humidifier is an industrial-grade unit designed to meet the humidification demands of any building environment.
- **Options:** Weather cover, climate-controlled outdoor enclosure; Modbus or with optional BACnet or LonTalk protocols; mounting by wall brackets, trapeze or support legs

*Versatility and critical control*



### CRUV® humidifier:

- **Not CE certified**
- **Electric resistive steam humidifier**
- **Capacity:** 2.7–46 kg/h
- **Control:**  $\pm 3\%$  RH; Vapor-logic (see page 14) or LW Series control
- **Applications:** The compact CRUV humidifier is designed to integrate inside an existing enclosure, such as a packaged air conditioning unit. Easy tank access without disconnecting electrical or piping lines.
- **Options:** Modbus or with optional BACnet or LonTalk (with Vapor-logic controller only); SSR control

*Compact and easy to service*



Discover how building owners and developers can leverage humidification as a competitive advantage.

Scan the QR code with your smart phone or visit [www.drivesteam.com/resources-for-contractors](http://www.drivesteam.com/resources-for-contractors)

## ELECTRODE STEAM HUMIDIFIERS

Electrode steam humidifiers boil water by using the electrical resistance in conductive fill water. Electrode steam humidifiers are among the most affordable humidification systems to purchase and maintain. Simply replace the worn steam cylinder when prompted. Electrode steam humidifiers can operate using potable water.



### XTP humidifier:

- **Electrode steam humidifiers**
- EN 1717 certified
- **Capacity:** 2–130 kg/h
- **Control:**  $\pm 8\%$  RH; Vapor-logic control (see Page 14)
- **Applications:** Wide range of buildings including health care, commercial, industrial, and government facilities
- **Supply water conductivity:** 125 to 1250  $\mu\text{S}/\text{cm}$
- **Options:** Indoor and climate-controlled outdoor enclosures, matching fan-based steam dispersion units, low conductivity cylinders, Modbus, BACnet, or with optional LonTalk protocols

*Easy installation and maintenance*



### XTR humidifier:

- **Electrode steam humidifiers**
- **Capacity:** 2.5–5.1 kg/h, depending on the supply voltage
- **Control:**  $\pm 8\%$  RH; Keypad control
- **Applications:** Health and comfort applications
- Selectable 120, 208, or 230/240 VAC input in one model
- Standard package includes 3 m steam hose and 200 mm dispersion tube

*Residential and light commercial*

## TOOLS THAT MAKE IT EASY TO DESIGN THE SYSTEM THAT IS RIGHT FOR YOU

**LoadCalc** allows you to make a quick calculation of the humidification load for your application.

**EnergyCalc** shows the energy cost comparison of using electricity vs gas.

**Building Information Modeling** download DriSteem products in a 3D BIM file to create a digital representation to support your design process. Visit [www.dristeem.com/products/bim-content](http://www.dristeem.com/products/bim-content)

**DriCalc**<sup>®</sup> makes it easy to specify and select DriSteem equipment. You can access your projects online anywhere, any time.

Visit [www.dristeem.com/calculators-and-selection-software](http://www.dristeem.com/calculators-and-selection-software) to access DriCalc, LoadCalc, and Energy Calc.

## GAS-TO-STEAM HUMIDIFIERS

Gas-to-steam humidifiers boil water using a burner and heat exchanger submerged in a stainless steel cleanable tank. The GTS humidifiers can operate using potable, softened, reverse-osmosis, or deionized water.

The GTS LX is a Category IV (condensing, positive pressure) high-efficiency gas appliance, and it is certified Low NO<sub>x</sub> by the South Coast Air Quality Management District.

### GTS humidifier LX series:

The condensing design of the GTS humidifier LX series results in the highest efficiency gas-fired humidifier available. Compared to non-condensing humidifiers, installation costs are reduced through use of PVC, CPVC, or polypropylene venting.

- **Gas-to-steam humidifier**
- EN 1717 certified
- **Capacity:** 23–272 kg/h;  
link up to 8 units for capacity up to 2,177 kg/h
- **Control:**  $\pm 3\%$  RH; Vapor-logic control (see Page 14)
- **Applications:** A broad capacity range, application flexibility, full burner modulation, and integral drain water tempering make GTS the ideal choice for almost any application.
- **Options:** Indoor and climate-controlled outdoor enclosures, floor stand mount, wall mount, Modbus, BACnet, or with optional LonTalk protocols



*Lowest operating cost for a steam-generating humidifier*

## STEAM-TO-STEAM HUMIDIFIERS

Steam-to-steam humidifiers create chemical-free, low pressure humidification steam using boiler steam as its energy source. It is a closed-loop system, so no boiler steam or chemicals enter the humidified space. Steam-to-steam humidifiers can operate using potable, softened, reverse-osmosis, or deionized water.

### STS<sup>®</sup> humidifier:

- **Steam-to-steam humidifier**
- **Capacity:** 9.1–726 kg/h; link up to 16 units for capacity up to 11,612 kg/h
- **Control:** to  $\pm 1\%$  RH; Vapor-logic control (see Page 14)
- **Applications:** The STS humidifier can be used anywhere chemical-free humidification is desired while taking advantage of economical on-site boiler steam. The STS humidifier is commonly used in hospitals and schools where air must be of the highest quality.
- **Options:** Indoor and outdoor climate-controlled enclosures, Wall, trapeze or H-leg mount, Modbus or with optional BACnet or LonTalk protocols



*Chemical-free steam*

# STEAM DISPERSION

Steam for humidification can be non-pressurized or pressurized. DriSteem steam dispersion units disperse steam generated by pressurized steam boilers or by non-pressurized steam humidifiers. The steam is distributed through ducts, air handlers, and even directly into finished spaces.

## ULTRA-SORB® STEAM DISPERSION PANELS

Features of all Ultra-sorb models:

- **Guaranteed, shortest non-wetting distance**  
Install within inches of downstream devices.  
Rapid, drip-free steam absorption means steam does not condense on downstream devices.
- **Reduce wasted energy and condensate up to 85%**  
High-Efficiency Insulated Tubes significantly reduce airstream heat gain and condensate production. (Standard on Model XV; optional on Models LV, LH, and MP.)
- **Higher capacities per insulated tube increase efficiency, reduce cost**  
Insulated dispersion tubes produce less condensate and, therefore, have more steam available for humidification, increasing the capacity of each tube. As a result, fewer tubes can meet application requirements, further lowering condensate production and heat gain while reducing resource consumption and cost.
- **No steam jackets; no unnecessary heat gain**  
When there is no call for humidity, Ultra-sorb panels are at duct temperature while conventional jacketed steam injection systems stay hot and continue to add heat to the airstream.
- **Lowest installation cost**  
Panels ship pre-assembled and install quickly with easy mounting, steam, and condensate connections.

## GUARANTEED SHORT ABSORPTION WITH SIGNIFICANT ENERGY SAVINGS

### WHY CHOOSE DRISTEEM DISPERSION?

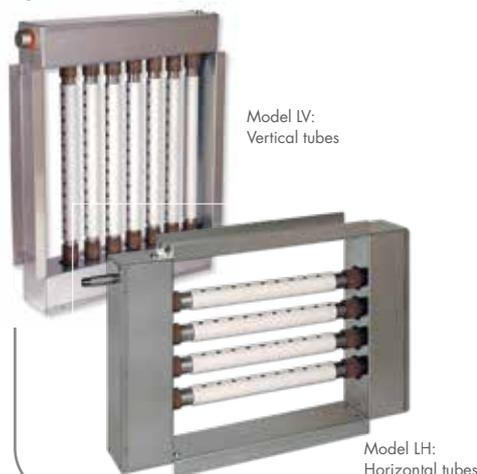
Others have never come close to Ultra-sorb and Rapid-sorb's proven and guaranteed absorption capabilities. If you must achieve absorption within a short or critical distance, there is no better choice than DriSteem's Ultra-sorb and Rapid-sorb dispersion systems.

DriSteem takes this industry-leading performance one step further with its revolutionary patented high-efficiency tubes. Standard on Ultra-sorb XV, high-efficiency tubes are also available as an option on new or retrofit Ultra-sorb LV, LH, MP, Rapid-sorb dispersion panels, and single dispersion tube.



Scan the QR code with your smart phone

OR VISIT [www.dristeem.com/support-and-literature/literature-product-resources/by-product/high-efficiency-tubes](http://www.dristeem.com/support-and-literature/literature-product-resources/by-product/high-efficiency-tubes)



### Ultra-sorb Models LV and LH

- **Steam dispersion panel**
- **Disperse pressurized or non-pressurized steam**  
Models LV and LH disperse steam generated by pressurized steam boilers or by non-pressurized steam humidifiers.
- **Capacity:** Pressurized steam: Up to 1815 kg/h.  
Non-pressurized steam: Up to 840 kg/h
- **Options:** High-Efficiency Insulated Tubes, 316 stainless steel construction

*Most versatile with greatest capacity and installation flexibility*



### Ultra-sorb Model MP

- **Steam dispersion panel**
- **Sustained quality with the best value**
- **Disperse pressurized or non-pressurized steam**  
Model MP disperses steam generated by pressurized steam boilers or by non-pressurized steam humidifiers.
- **Same side steam inlet and drain** for reduced piping
- **In-frame drain piping** maximizes available face dimensions and minimizes blank-off requirements.
- **Integral steam header** allows clear space on exterior wall of AHUs or ducts
- **Capacity:** Pressurized steam: Up to 1235 kg/h  
Non-pressurized steam: Up to 318 kg/h
- **Options:** High-Efficiency Insulated Tubes 304 or 316 stainless steel frame

*For quicker installation and shorter non-wetting distance at the lowest total installed cost*



### Ultra-sorb Model XV

- **Steam dispersion panel**
- **Integral condensate management**  
A patented industry first for pressurized steam, Ultra-sorb Model XV vaporizes dispersion-generated condensate and returns pressurized condensate to the boiler without additional pumps, valves, vents, or controls.
- **Most efficient dispersion**  
Zero water waste: All condensate returns to the boiler while still hot, saving energy, water, and boiler chemicals  
Lowest heat gain: High-Efficiency Insulated Tubes and an insulated steam delivery header reduce airstream heat gain by up to 85%.
- **Applications**  
For pressurized steam applications, 35 kPa minimum Chemical-free boiler steam humidification when used with our STS humidifier
- **Capacity:** Pressurized steam: Up to 1235 kg/hr.  
STS humidifier: Up to 204 kg/h per panel.

*Highest performance for state of the art condensate management*

## NON-PRESSURIZED STEAM DISPERSION

- Provide rapid, dry steam absorption in duct, air handling, units and spaces.
- Disperse steam from any steam-generating humidifier.
- All of DriSteem's non-pressurized steam dispersion products are made in the USA.



### Rapid-sorb® dispersion tube system

- **Non-pressurized steam dispersion**
- Short non-wetting distance, compared to a single dispersion tube
- Models available in sizes from 254 x 254 mm and up
- For horizontal or vertical airflows with header inside or outside duct
- Available with High-Efficiency Dispersion Tubes
- **Capacity:** Up to 955 kg/h

*Single header with multiple tubes,  
non-wetting distance*



### Single dispersion tube

- **Non-pressurized steam dispersion**
- Low-capacity dispersion for horizontal or vertical airflows.
- Available as a High-Efficiency Dispersion Tube
- **Capacity:** up to 44.1 kg/h wall or base mount, floor stand

*Installation flexibility*



### Space distribution units and blowers

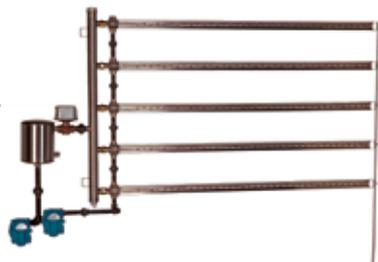
- **Non-pressurized steam dispersion**
- Space distribution units (SDUs) mount on top of a Humidi-tech or RTS humidifier. The SDUs can also remotely disperse steam from Humidi-tech, Vaporstream, or RTS humidifiers.
- XT series steam blowers mount on top of XT Series humidifiers, or they can remotely disperse steam from the humidifier.
- **SDU capacity:** Up to 46.3 kg/h
- **Steam blower capacity:** Up to 22.7 kg/h

*Remote or humidifier-mounted dispersion*

## PRESSURIZED STEAM INJECTION HUMIDIFIERS

DriSteam's Steam Injection humidifiers are available in a wide variety of models and adaptable to numerous applications.

- Steam jacketed dispersion tubes — eliminate condensation and dripping.
- Stainless steel construction reduces corrosion potential and is compatible with steam derived from deionized or reverse-osmosis treated water.
- Lightweight construction — no special supports or hangers required.



### Multiple-tube humidifier

The multiple-tube humidifier is designed for large ducts and air handlers. It achieves short to moderate non-wetting distances and is field piped and field assembled.

The Maxi-bank™ option is pre-assembled and includes the steam header and interconnecting piping.

- **Pressurized steam injection humidifier**
- **Steam pressures:** 14–345 kPa
- **Capacity:** 2.3–1809 kg/h
- **Duct sizes:** Width: 152–4877 mm; height: 381 mm minimum

*Fits any need, for large capacity*



### Mini-bank® humidifier

The mini-bank humidifier is designed for small ducts and short non-wetting distances. With a pre-engineered and pre-assembled header/tube assembly, it is ready for mounting and hookup. Seismic certification option.

- **Pressurized steam injection humidifier**
- **Steam pressures:** 14–103 kPa
- **Capacity:** 0.7–38 kg/h
- **Duct sizes:** Width: 152 mm–1219 mm; height: 152 mm–610 mm

*Pre-assembled for small ducts*



### Single-tube humidifier

The single-tube humidifier features a wide range of dispersion tube lengths and is suitable for moderate to long non-wetting distances. The separator/tube assembly is pre-assembled.

- **Pressurized steam injection humidifier**
- **Steam pressures:** 14–345 kPa
- **Capacity:** 0.7–238 kg/h
- **Duct sizes:** Width: 152 mm–4877 mm; height: 229 mm minimum

*Suitable for small-capacity systems*



### Area-type™ humidifier

The area-type humidifier is designed for open spaces such as warehouses and manufacturing spaces that do not have a duct system. Steam discharged from the humidifier is quietly dispersed by a fan without discharging water droplets.

- **Pressurized steam injection humidifier**
- **Steam pressures:** 14–103 kPa
- **Capacity:** 0.8–130 kg/h

*For rooms without ducts*

# ADIATEC® EVAPORATIVE COOLING & HUMIDIFICATION

*Adiabatic technologies are an energy conscience solution for humidifying by taking existing energy from the air to evaporate water. Take advantage of the free cooling and energy savings inherent with this technology.*

## HIGH-PRESSURE SYSTEM

Evaporative cooling and humidification systems draw heat from air to evaporate unheated water introduced by either high-pressure nozzles or wetted media. This process raises the relative humidity (RH) level and lowers the dry bulb air temperature. Consequently, these systems humidify and cool air very efficiently. In space type applications allow for the cooling and humidification to take place right next to the specific application need. This type of application has 100% of evaporation as the nozzles have “anti-drip” check valves integral to them. Lifetime operating cost can be much less than other technologies when these three items are present. The high-pressure system is certified to hygiene standards VDI 6022 part 1 & 6. This ensures best design practices; including stainless steel and NSF approved materials, mist elimination (aerosols), hygienic flush sequences and more.

### REDUCES COOLING LOAD

As water is absorbed in air, the evaporative cooling effect reduces the building's cooling load. Twelve pounds of unheated evaporated water (vapor) reduces the cooling load by about one ton, saving about 12,000 Btus (3.5 kW).

### APPLICATIONS

Adiabatic humidifiers use the heat gain from sources such as printing/packaging, data centers, indoor agriculture, and manufacturing facilities to vaporize water for humidification and free cooling. High-pressure atomization is advantageous when the end user has a large load, multiple zones and can benefit from free cooling.

### LOW MAINTENANCE

High-Pressure Systems are very low maintenance systems. The High-Pressure System's stainless-steel pump is designed to run for 8000 hours before its first maintenance check, and the stainless-steel dispersion nozzles and manifolds are maintenance free. The High-Pressure System provides ultra-pure water that leaves no white dust when used with water treatment options available from DriSteem.



*The DriSteem High-Pressure System delivers evaporative cooling and humidification to multiple zones in air handlers, ducts, and open spaces. The Vapor-logic controller provides comprehensive management of all system variables.*

## FAN-ASSISTED DISPERSION

DriSteed's high-pressure fan-assisted dispersion Model FA is a component of a high-pressure atomization system. The fan is designed to throw small water droplets and increase air movement. The Model FA-2 is designed for low ceiling heights. Models FA-3 and FA-4 are designed to pull air from above the fan (typically the hottest air), which promotes better absorption, and throws moisture horizontally. The Model FA can be used for cooling and/or humidification applications.

- Pulls air from above the system rather than below, using the warmest air and minimizing the chance for condensation forming from fog return.
- Utilizes flexible tubing to increase installation speed.
- The hub style system allows for easier access to service all nozzles on the unit.
- Promotes better air movement.
- The stainless steel dispersion design provides quality and longevity of the dispersion system.
- Fan powered dispersion allows for installation in lower ceiling applications.



### APPLICATION VERSATILITY

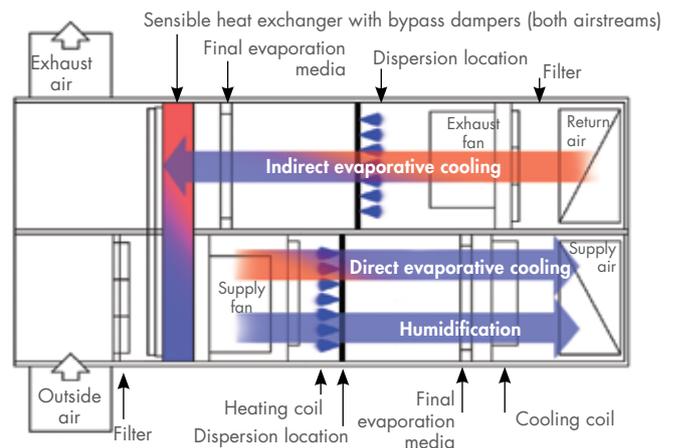
- |                        |                |                       |
|------------------------|----------------|-----------------------|
| • Greenhouses          | • Wood working | • Clean rooms         |
| • Germination chambers | • Warehouses   | • Cigar manufacturing |
| • Printing             | • Electronics  | • Plastic fabrication |
| • Paper products       | • Textiles     |                       |

## DIRECT OR INDIRECT EVAPORATIVE COOLING

*Direct evaporative cooling adds moisture to the supply air while humidifying and cooling the space at the same time.*

*Indirect evaporative cooling occurs in the heat exchanger without adding moisture. Cooling air before it enters the space without adding moisture to the space.*

*A High-Pressure System is shown here.*



# CONTROL

## ACCURATE, RESPONSIVE CONTROL

*Vapor-logic is the control platform for DriSteem non-pressurized steam generation humidifiers, Hydrotrue water treatment systems, and Adiatec evaporative cooling and humidification systems. Vapor-logic provides accurate, responsive RH control, and PID control tunes the system for maximum performance.*

### Vapor-logic® Controller

- BACnet, LonTalk, or Modbus allow interoperability with multiple building automation systems.
- Web interface provides the capability to set up, view, and adjust system functions via Ethernet, either directly or remotely through a network.
- USB port allows easy firmware updates, and data backup and restore capability.
- Real-time clock allows time-stamped alarm and message tracking, and accurate drain and flush scheduling.
- Programmable outputs allow remote signaling and device activation.
- Contactor wear leveling distributes cycles among multiple contactors for equal wear and longer contactor life in the RTS and Vaporstream humidifiers.
- Data logs can be downloaded to a PC for viewing and analysis.
- Cycle counter triggers a message when it's time to replace contactors in electric humidifiers.
- Nozzle staging and pulsed modulation allow high turndown of system output in the High-Pressure System.
- Auxiliary temperature sensor/transmitter allows temperature compensation control to prevent window condensation, or air temperature monitoring, such as in a duct.
- Multiple-humidifier control allows staged control of up to 16 humidifiers with one controller.
- Enhanced diagnostics and data collection.



*Use the Vapor-logic keypad, touchscreen, or the web interface to control your humidification system.*

# CUSTOM ENGINEERING

## TAILORED SOLUTIONS FOR UNIQUE APPLICATIONS

Since 1965 DriSteem has been the only humidification manufacturer to offer engineering design services with custom solutions. Challenge us with your requests! To get you thinking about the possibilities, here are a few of the custom projects we've completed:

- **Racked units, single-point connections.**  
We've stacked multiple humidifiers and water treatment systems in racks with single-point piping and electrical connections, making field installation easier and less costly.
- **Strict process requirements.**  
To meet ultra-clean standards, or to protect the humidifier from a destructive environment such as one that might cause corrosion, all of our products can be passivated or acid cleaned.
- **Custom configurations.**  
We've moved drains to new locations, and added custom drain piping, p-traps and tri-clover connectors to facilitate easy field connections. We've installed special relays to allow the humidifier to work in tandem with a previously installed blower.
- **Non-humidification applications.**  
We installed humidifiers at an aquarium to sterilize fish water. We've modified our Drane-kooler water tempering device to cool water discharged from sterilization equipment. Since sterilizers run continuous cold water to temper discharged condensate, the Drane-kooler, with its temperature-actuated valve, admitted cold water only when needed, saving thousands of gallons of water.

These are only a few examples of the custom projects we've done over the years. Let us know if you have a custom project where we can assist you.



**Custom rack systems**

Single-point water, steam, drain, and power connections



**Vaporstream humidifiers**

Three Vaporstream humidifiers providing humidity in a performing arts center.

# ACCESSORIES

Outdoor enclosures, parts, and covers

## OUTDOOR ENCLOSURES AND WEATHER COVERS

Heated/ventilated outdoor enclosures for isothermal humidifiers ship to the job site completely assembled, so installation is a snap. Third-party tests ensure that outdoor enclosures provide reliable operation under extreme conditions. The GTS, RTS, and XT outdoor enclosures are CSA certified for outdoor operation, and the STS and Vaporstream outdoor enclosures are ETL approved for outdoor operations. Weather covers for Vaporstream and STS humidifiers are fully assembled at the factory to protect against wind, sun, and rain.



**Weather covers** Available for Vaporstream and STS humidifiers



**Heated/ventilated outdoor enclosures** STS, GTS, RTS, XT and Vaporstream humidifiers



## PARTS

Save time and expense by having the needed parts already on hand. Ensure compatibility and reliability, easy to order, less down time, and reduce the number of return trips. Visit [www.dristeem.com](http://www.dristeem.com) or contact your local agent.

## EXTENDED WARRANTY PROGRAM

An extended warranty provides coverage for one or two years beyond DriSteem's standard two-year Limited Warranty to eliminate unforeseen expenses and lay the groundwork for a manageable budget.



## DRANE-KOOLER™ WATER TEMPERING DEVICE

The Drane-kooler mixes cold water with hot discharge water to reduce water temperature before it enters a drain system. This complies with code requirements and prevents damage to PVC drain piping.

## SERVICE KITS

Service Kits combine common replacement parts for servicing DriSteem humidifiers. Each Service Kit is priced lower than purchasing the parts individually.

# TOOLS

Tools	
<p><b>WWW.DRISTEEM.COM</b> Our website</p>	<p>Visit our website to:</p> <ul style="list-style-type: none"> <li>• Launch DriCalc sizing and selection software</li> <li>• Find a DriSteem representative</li> <li>• Get the most current product information</li> <li>• Learn more about humidification</li> <li>• Calculate load online</li> <li>• Calculate energy savings online</li> <li>• Watch product videos</li> </ul>
<p><b>LOADCALC</b> Humidification load calculator</p>	<p>LoadCalc provides a humidification load calculation based on entering air, outside air, and desired room conditions.</p> <p>Click <b>Use LoadCalc</b> on the Calculators &amp; Selection Software tab of our website to launch the tool.</p>
<p><b>ENERGYCALC</b> Energy savings calculator</p>	<p>In many locations, the savings from switching from existing electric humidifiers to new gas humidifiers are so significant the energy savings can offset replacement equipment and installation costs.</p> <p>Click <b>Use EnergyCalc</b> on the Calculators &amp; Selection Software tab of our website to launch the tool.</p>
<p><b>BIM</b> Content</p>	<p>Download DriSteem products in a 3D building information modeling (BIM) file to create a digital representation to support your design process.</p> <p>Visit <a href="http://www.dristeem.com/products/bim-content">www.dristeem.com/products/bim-content</a></p>
<p><b>DRICALC</b> Sizing and selection software</p>	<p>DriSteem's DriCalc software will size loads, select equipment, write specifications, generate as-configured installation guides, and create equipment schedules.</p> <p>Click <b>DriCalc Sign Up</b> on the Calculators &amp; Selection Software tab of our website to launch the tool.</p>

# OVERVIEW: ALL PRODUCTS

DriSteem steam humidifier comparison									
	GTS	STS	RTS	Vaporstream	Humidi-tech	CRUV	XTP	XTR	High-pressure
<b>Energy source</b>									
Electric, resistive (heating element)			X	X	X	X			
Electric, conductive (electrode)							X	X	
Natural gas or propane	X								
Boiler steam		X							
Electric									X
<b>Steam capacity, kg/hr</b>									
Maximum for one humidifier	272	726	150	129	46	46	130	5.1	2500
Minimum	23	9.1	2.7	2.6	2.7	2.7	2	2.5	114
Maximum with multi-tank control	2,177	11,612	1176	2,068	740		520*		
<b>Application size based on steam capacity</b>									
NOTE: 20% outdoor air at 3 lbs/hr/100 cfm (231 kg/h per m <sup>3</sup> /h), building need of 40% RH @ 72 °F (22.2 °C), typical commercial building load of 1 cfm/ft <sup>2</sup> (18 m <sup>3</sup> /h per m <sup>2</sup> )									
Square footage (m <sup>2</sup> ) capability of 1 humidifier	9,290	24,712	5,017	4,412	1,579	1,579	4,394	575	84,948
<b>Installation options</b>									
Indoor	X	X	X	X	X		X	X	X
Outdoor (in optional enclosure)	X	X	X	X			X		
Finished space			X		X		X	X	X
In packaged A/C unit			X			X			
<b>Water type</b>									
Potable	X	X	X	X	X	X	X	X	
Softened	X	X	X	X	X	X	X	X	
Reverse osmosis	X	X	X	X	X	X			X
Deionized	X	X	X	X	X	X			X
<b>Controller</b>									
Vapor-logic controller	X	X	X	X	X	Optional	X		X
Standard controller								X	
Microprocessor LW417 control						X			
Connectivity: BACnet, Modbus, LonTalk	X	X	X	X	X	Optional	X		X
<b>Output controllability</b>									
With modulating demand signal	± 3%	± 3%	± 1%	± 1%	± 3%	± 3%	± 8%	± 8%	± 2%
With available options for specific applications		± 1%							
*Four staged XT humidifiers, not via multi-tank control									

Continued

DriSteam steam humidifier comparison (continued)

	GTS	STS	RTS	Vaporstream	Humidi-tech	CRUV	XTP	XTR	High-pressure
<b>Dispersion options</b>									
Ultra-sorb Model XV		X							
Ultra-sorb Models LV, LH, and MP	X	X	X	X	X	X	X		
Rapid-sorb	X	X	X	X	X	X	X		
Single dispersion tube	X	X	X	X	X	X	X		
XTR dispersion tube								X	
Space distribution unit, external absorption (SDU-E)	X		X	X	X				
Space distribution unit, internal absorption (SDU-I)			X	X	X				
Top- or remote-mounted XT steam blower							X		
Top- or remote-mounted XTR steam blower								X	
XTR fan pack								X	
Area-type fan (mounted on steam humidifier)	X			X					
Area-type fan									X
High-pressure system with mist eliminator									X
Area-type manifold									X
<b>Water treatment option</b>									
Reverse-osmosis filtration	X	X	X	X	X	X			X
Single/duplex softening	X	X	X	X	X	X			X
Dechlorination	X	X	X	X	X	X			X
Deionized	X	X	X	X	X	X			X
<b>Water tempering</b>									
Drane-kooler option		X		X	X	X			
Integral water tempering	X		X				X	X	

DriSteem dispersion product comparison

Vapor delivery type	DriSteem product	Capacity		Installation location		Boiler steam pressure at dispersion assembly	
		lbs/hr	kg/hr	Duct/AHU	Open space	psi	kPa
Evaporative cooling/humidification	High-Pressure System	5500	2495	X	X	NA	NA
Non-pressurized steam dispersion from DriSteem steam humidifier	Ultra-sorb Model XV (with STS humidifier)	450	204	X		NA	NA
	Ultra-sorb Model LV	1850	840	X		NA	NA
	Ultra-sorb Model LH	1850	840	X		NA	NA
	Ultra-sorb Model MP	700	318	X			
	Rapid-sorb dispersion tube system	2100	955	X		NA	NA
	Single dispersion tube (without condensate drain)	65	29.5	X		NA	NA
	Single dispersion tube (with condensate drain)	97	44	X		NA	NA
	SDU-I	30	13.6		X	NA	NA
	SDU-E	102	46.3		X	NA	NA
	SDU-003E (XTR steam blower)	11.3	5.1		X	NA	NA
	SDU-003F (XTR fan pack)	11.3	5.1		X	NA	NA
	SDU-006E (XT steam blower)	20	9.1		X	NA	NA
	SDU-017E (XT steam blower)	50	22.7		X	NA	NA
	Area-type fan	286	130		X	NA	NA
Pressurized steam injection from boiler	Multiple-tube humidifier	3989	1809	X		2-50	14-345
	Mini-bank humidifier	84	38	X		2-15	14-103
	Single-tube humidifier	525	238	X		2-50	14-345
	Ultra-sorb Model XV	2720	1235	X		5-50	34-345
	Ultra-sorb Model LV	4000	1815	X		2-50	14-345
	Ultra-sorb Model LH	3268	1482	X		2-50	14-345
	Ultra-sorb Model MP	2720	1235	X		2-50	14-345
	Area-type humidifier	286	130		X	2-15	14-103

# NOTES

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**DRI-STEEM Corporation**

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For more than 45 years, DriSteem has been leading the industry with creative and reliable humidification solutions. Our focus on quality is evident in the superior construction of DriSteem products. DriSteem leads the industry with a Two-year Limited Warranty and optional extended warranty.

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