ALL PRODUCTS BROCHURE

driSteem™

Who we are

EXPERTS

DriSteem is a premier provider of humidification and evaporative cooling systems. We engineer our products to meet specific demands and custom requirements. We have earned our reputation as experts by supporting our customers' unique commercial, health care, industrial, and process-critical applications for over 45 years.

INNOVATORS

Through extensive research and development we continue to develop industry-leading innovations that greatly improve methods for cooling and adding moisture to air with precise control.

ON A MISSION

Our mission is to provide customers with exceptional service and superior products that condition or control air for HVAC applications.

STEAM GENERATION

Electric resistance steam generators

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Electrode steam generators

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Gas-fired steam generators

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Steam-to-steam generators

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STEAM DISPERSION

Ultra-sorb® Model XV

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Ultra-sorb Models LV, LH

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Steam dispersion tubes

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Steam fans/ blowers

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Steam injection

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CREATE HEALTHY ENVIRONMENTS

Bacteria and viruses thrive in dry air. A recent NIOSH study[1] demonstrated that maintaining relative humidity at 40% or higher significantly reduces airborne influenza virus transmission. Another study[2] demonstrates that when room relative humidity level drops below 40 percent, respiratory illnesses increase. Proper humidification can significantly reduce student and employee absenteeism and reduce exposure to airborne viruses in hospitals and clinics.

IMPROVE PRODUCTION PROCESSES

Controlling a building's humidity level significantly improves production processes. Humidity affects the properties of hygroscopic materials such as wood, textiles, paper, leather, fibers, and foods. Such materials either absorb or release moisture to reach equilibrium, which can negatively affect production processes.

PRESERVE MATERIALS AND ARTIFACTS

Fluctuating humidity levels cause materials to repeatedly absorb and release moisture. These changes affect a material's weight, strength, and appearance, which can damage material and shorten its longevity.

[1] "High Humidity Leads to Loss of Infectious Influenza Virus from Simulated Coughs" (2013). J.D. Noti, F.M. Blachere, National Institute for Occupational Safety and Health (NIOSH), et al.
[2] "Indirect health effects of relative humidity in indoor environments" (1986). A.V .Arundel, E.M. Sterling, J.H. Biggin, and T.D.Sterling

EVAPORATIVE COOLING/HUMIDIFICATION

High-Pressure System

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Wetted Media System

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CONTROL/CONNECT

Vapor-logic®, Modbus®, BACnet®, LonTalk®

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WATER TREATMENT

Reverse osmosis, softening, dechlorination

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SERVICES/OPTIONS/ACCESSORIES

Custom engineering

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Outdoor enclosures/ covers/accessories

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Seismic certification option

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Steam generation

ELECTRIC RESISTIVE-ELEMENT STEAM GENERATORS

All DriSteem electric resistive-element steam generators:

- Generate steam using long-lasting Incoloy-sheathed submerged heating elements
- Disperse steam through ductwork or directly into spaces
- Deliver 0 to 100% modulating output
- Provide comprehensive control with Vapor-logic controller and keypad/display and/or web interface (see Page 12)
- Connect to BAS via Modbus, BACnet, or LonTalk
- Operate with tap, softened, reverse-osmosis-filtered, or deionized water
- Can operate several seasons without cleaning

Vaporstream® humidifier: *Versatility and critical control*

- **Capacity:** 5.7–285 lbs/hr (2.6–129 kg/h) for each unit; link up to 16 units for capacity up to 4560 lbs/hr (2068 kg/h)
- **Control:** ±1% RH
- **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, multiple control capabilities, seismic certification

Vapormist® humidifier: *Designed for finished spaces*

- **Capacity:** 6–102 lbs/hr (2.7–46 kg/h) for each unit; link up to 16 units for capacity up to 1632 lbs/hr (740 kg/h)
- **Control:** ±3% RH
- **Applications:** Attractive, compact, cabinet-style unit perfect for finished spaces. Easy installation.
- **Options:** Matching fan-based steam dispersion cabinets, control capabilities, seismic certification

CRUV® humidifier: *Compact and easy to service*

- **Capacity:** 6–102 lbs/hr (2.7–46 kg/h)
- **Control:** ±3% RH
- **Applications:** The compact CRUV humidifier is designed to integrate inside an existing enclosure, such as a packaged air conditioning unit, or added to an existing system, such as an environmental chamber. Easy tank access without disconnecting electrical or piping lines
- **Options:** Vapor-logic or LW Series control

ELECTRODE STEAM GENERATORS

All DriSteem electrode steam generators:

- Create heat caused by electrical resistance in conductive fill water to boil water into steam
- Disperse steam into ductwork or open spaces
- Drain and fill automatically to optimize humidifier performance
- Are easy to maintain — just replace the affordable steam cylinder when prompted
- Are among the most affordable humidification systems to purchase and install

XT Series humidifier:

Easy installation and maintenance

- **Capacity:** 5–287 lbs/hr (2–130 kg/h) Stage up to four humidifiers together for maximum system capacity of 1148 lbs/hr (520 kg/h)
- **Control:** ±3% RH
- **Applications**: Wide range of buildings including health care, commercial, industrial, and government facilities
- **Options:** Vapor-logic control (see Page 12)

XTR Series humidifier:

Residential and light commercial

- **Capacity:** 4–8 lbs/hr (1.8–3.6 kg/h), depending on the voltage connected to the humidifier
- **Control:** ±5% RH
- **Applications:** Health and comfort applications

Steam generation

GAS-TO-STEAM GENERATORS

GTS® humidifier: *Lowest operating cost for a steam-generating humidifier*

The GTS humidifier generates humidification steam for dispersion into ducts or open spaces.

- **Capacity:** 75–600 lbs/hr (34–272 kg/h) for each unit; link up to 16 units for capacity up to 9600 lbs/hr (4354 kg/h)
- **Control:** ±3% RH; Vapor-logic control (see Page 12)
- **Applications:** A broad capacity range, compatibility with all water types, application flexibility, full burner modulation, and integral drain water tempering make GTS the ideal choice for almost any application
- **Options:** Indoor and outdoor enclosures

STEAM-TO-STEAM GENERATORS

STS® humidifier: *Chemical-free steam*

The STS humidifier creates chemical-free humidification steam using boiler steam as its energy source. It accomplishes this by using boiler steam in its heat exchanger to vaporize clean fill water into humidification steam. It's a closed-loop system, so no boiler steam or chemicals enter the humidified space; they return to the boiler. STS is compatible with all supply water types.

- **Capacity:** 20–1600 lbs/hr (9.1–726 kg/h) for each unit; link up to 16 units for capacity up to 25,600 lbs/hr (11,612 kg/h)
- **Control:** to ±1% RH; Vapor-logic control (see Page 12)
- **Applications:** Most energy-efficient means of producing chemical-free steam with pressurized steam as the energy source. Easy retrofit for steam injection humidifiers.
- **Options:** Indoor and outdoor enclosures, seismic certification

ULTRA-SORB STEAM DISPERSION PANELS

Features of all Ultra-sorb models:

- **Guaranteed, short non-wetting distances**
  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 and LH.)
- **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.

Model XV: *Highest performance dispersion*

- **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, 5 psi (35 kPa) minimum
  Chemical-free boiler steam humidification when used with our STS steam-to-steam humidifier
  Seismic certification option
- **Capacity**
  Pressurized steam: Up to 1978 lbs/hr (898 kg/hr)
  STS humidifier: Up to 450 lbs/hr (204 kg/h) per panel

Model XV:
Integral condensate management

Models LV and LH: *Most versatile*

- **Disperse pressurized or nonpressurized steam**
  Models LV and LH disperse steam generated by pressurized steam boilers or by nonpressurized steam generators such as DriSteem's GTS, STS, Vaporstream, Vapormist, and XT Series humidifiers.
- **Capacity**
  Pressurized steam: Up to 4000 lbs/hr (1815 kg/h)
  Nonpressurized steam: Up to 1850 lbs/hr (840 kg/h)
- **Options**
  High-Efficiency Insulated Tubes
  316 stainless steel construction
  Seismic certification

Model LV:
Vertical tubes

Model LH:
Horizontal tubes

Steam dispersion

NONPRESSURIZED STEAM DISPERSION

Rapid-sorb® dispersion tube system
Single header with multiple tubes, short non-wetting distance

- Short non-wetting distance, compared to single dispersion tube
- Models available in sizes from 10" × 10" (254 × 254 mm) and up
- For horizontal or vertical airflows with header inside or outside duct
- Available with High-Efficiency Dispersion Tubes (see below)

Capacity: Up to 2100 lbs/hr (955 kg/h)

Single dispersion tube
Installation flexibility

- Low-capacity dispersion for horizontal or vertical airflows.
- Available as a High-Efficiency Dispersion Tube

Capacity: up to 97 lbs/hr (44.1 kg/h)

Space distribution units and blowers
Remote or humidifier-mounted dispersion

- SDUs mount on top of Vapormist humidifiers, or they can remotely disperse steam from Vapormist or Vaporstream humidifiers.
- XT steam blowers mount on top of XT Series and XTR humidifiers, or they can remotely disperse steam from the humidifier.

SDU capacity: Up to 102 lbs/hr (46.3 kg/h)
Steam blower capacity: Up to 50 lbs/hr (22.7 kg/h)

XT Series humidifier
with mounted steam blower

High-Efficiency Dispersion Tubes
For new and existing Ultra-sorb and Rapid-sorb

High-Efficiency Tubes are featured on all Ultra-sorb Model XV. Also, they are an available option for Ultra-sorb Models LV and LH, Rapid-sorb, and single dispersion tube.

- Available as a retrofit option for existing Ultra-sorb Models LV and LH and Rapid-sorb
- Highest efficiency
- Up to 85% reduction in wasted energy, airstream heat gain, and condensate production
- Plenum approved for in-duct installation with revolutionary, patented insulating material

Rapid-sorb
with High-Efficiency Tubes

Ultra-sorb Model LV
with High-Efficiency Tubes

PRESSURIZED STEAM INJECTION HUMIDIFIERS

DriSteem'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

All Steam Injection humidifiers shown here, except Area-type, are available with options for applications requiring all stainless steel construction.

Multiple-tube humidifier

Fits any need, for large capacity

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.

Steam pressures: 2–50 psi (14–345 kPa)
Capacity: 6.5–3989 lbs/hr (2.3–1809 kg/h)
Duct sizes: Width: 6–192" (152–4877 mm); height:15" (381 mm) minimum

Mini-bank® humidifier

Pre-assembled for small ducts

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.

Steam pressures: 2–15 psi (14–103 kPa)
Capacity: 1.6–84 lbs/hr (0.7–38 kg/h)
Duct sizes: Width: 6"–48" (152 mm–1219 mm); height: 6"–24" (152 mm–610 mm)

Single-tube humidifier

Suitable for—but not limited to—small-capacity systems

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.

Steam pressures: 2–50 psi (14–345 kPa)
Capacity: 1.5–525 lbs/hr (0.7–238 kg/h)
Duct sizes: Width: 6"–192" (152 mm–4877 mm); height: 9" (229 mm) minimum

Area-type™ humidifier

For rooms without ducts

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.

Steam pressures: 2–15 psi (14–103 kPa)
Capacity: 1.8–286 lbs/hr (0.8–130 kg/h)

Evaporative cooling and humidification

ENERGY EFFICIENT

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.

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.

LOW MAINTENANCE

High-Pressure and Wetted Media 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.

High-Pressure System water treatment options available from DriSteem provide ultra-pure water that leaves no white dust. The reverse osmosis (RO) system automatically backflushes for extended membrane life.

Wetted Media Systems recycle water, after it flows through the media, with robust centrifugal pumps. The Vapor-logic controller manages the concentration of dissolved solids in recirculated supply water to minimize scaling and lengthen media life. When required, new media cassettes easily drop into place.

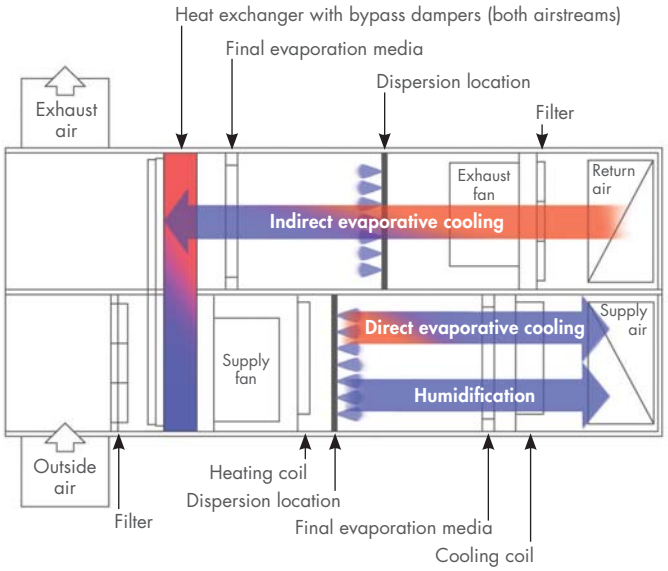
HIGH-PRESSURE SYSTEM

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, water treatment, and meeting tight space condition requirements.

WETTED MEDIA SYSTEM

The DriSteem Wetted Media System delivers evaporative cooling and humidification to air handlers and ducts. The Vapor-logic controller's sophisticated water and scale management capabilities optimize water and media life.

DIRECT OR INDIRECT EVAPORATIVE COOLING



Direct evaporative cooling adds moisture to the supply air. Indirect evaporative cooling occurs in the heat exchanger without adding moisture. A High-Pressure System is shown here. Direct and indirect evaporative cooling can function similarly when using a Wetted Media System.

Feature	High-Pressure System	Wetted Media System
Application versatility	Suitable for any application; commonly used in data centers, industrial manufacturing, printing facilities,and applications using air-side economizers	
Advanced technology	Micro-turbines in precision-machined atomizing nozzles fragment water droplets into ultra-fine particles (90% are ten microns or less)	Controller anticipates cooling requirements, maximizes system on-time, monitors media performance and prompts for replacement, and provides temperature control
	Water delivered to nozzles at up to 1200 psi (8.27 MPa) requires no pressurized air	Water concentration management maximizes media life and water utilization
	Integral check valve in nozzle ensures no dripping when system shuts off	Multiple compact recirculation pumps provide redundancy with low system energy usage
Cooling effect saves energy	Every pound of atomized water absorbed in air removes approximately 1000 Btu of heat from the air (every kg absorbed removes approximately 2300 kJ of heat)	
	Significant energy savings when cooling and humidifying simultaneously	
	Utility rebates can offset costs	
Low maintenance	Stainless-steel pump is cooled by purified supply water; 8000 hours before maintenance check	Uses potable water, eliminating water treatment maintenance
	Stainless-steel nozzles and manifolds require no maintenance	Water concentration management minimizes media scaling, extending media life
	Thorough water filtration protects stainless-steel components from corrosion and undue wear	Easy-to-replace media cassettes drop into frames in seconds
	Final evaporation media as close as three feet (0.9 m) downstream from heating coil prevents downstream wetting	Powerful pumps keep solids in the holding tank in motion to be easily drained away
Comprehensive system control with Vapor-logic	Accurate, responsive RH control; PID control tunes system for maximum performance	
	Set up, view, and adjust system functions with intuitive keypad/display or Web interface	
	Integrates into any building automation system via Modbus and optional BACnet or LonTalk communication protocols	
Multiple zone control capability	Individual zone monitoring and modulated staging valves provide tight control in all zones with optimized absorption and minimal water waste	Not available
	One system cools and humidifies multiple zones with separate demands	
Versatile	Cools and humidifies in air handlers, ducts, and open spaces	Cools and humidifies in air handlers and ducts
	Nozzle staging and pulsed modulation allow high turndown of system output	Media staging and predictive operation allow high turndown of system output; stages can remain active while other stages are in dry-out mode
	Capacities up to 5500 lbs/hr (2495 kg/h), multiple systems can be combined for larger capacities	Media sizes from 4 ft^2 (0.4 m^2) to 100 ft^2 (9.3 m^2); multiple systems can be combined for larger capacities
	Flexibility to accommodate the most challenging applications; extensive network of DriSteem representatives available to assist with system layout and design	
Complete water treatment solution	Water treatment options available from DriSteem include RO hyperfiltration, particulate filtering, dechlorination, and duplex water softening	Not required
	Automatic back-flush technology ensures long RO membrane life	
	Ultra-pure water eliminates white dust fallout and bacteria/virus proliferation that can occur when using potable water	

ACCURATE, RESPONSIVE CONTROL

Vapor-logic is the control platform for all DriSteem nonpressurized steam generation humidifiers and DriSteem's evaporative cooling/humidification systems. Vapor-logic provides accurate, responsive RH control, and PID control tunes the system for maximum performance.

Modbus, BACnet, or LonTalk allow interoperability with multiple building automation systems. Modbus is standard, and BACnet or LonTalk are available options.

Web interface provides the capability to set up, view, and adjust humidifier 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 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.

Performance monitor tracks media performance and prompts for replacing media in Wetted Media 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.

USB port for firmware updates, downloading data logs, and data backup and restore.

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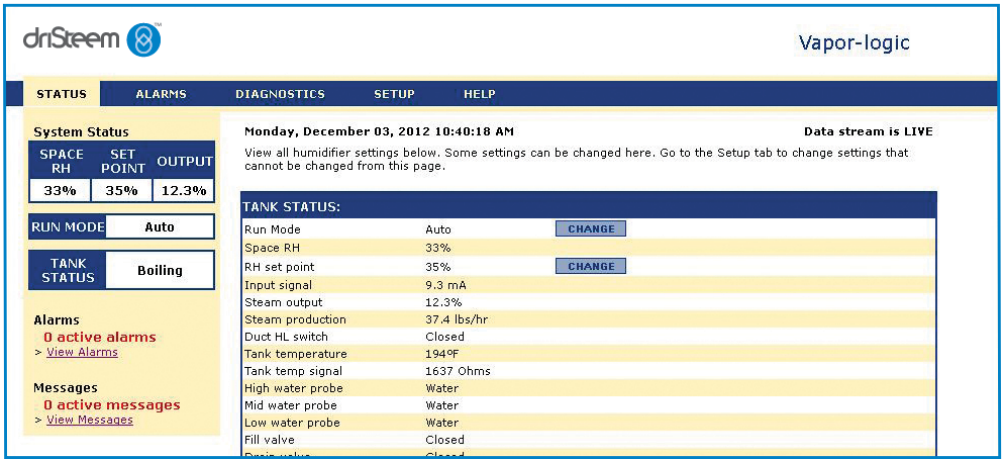


Use the Vapor-logic keypad or the Web interface to control your humidification system.

WATER TREATMENT SYSTEMS

Dechlorination, water softening, and reverse osmosis equipment

Enhances performance of and minimizes or eliminates humidifier and evaporative cooling maintenance requirements. Provides the cleanest water possible for humidification and evaporative cooling applications and other processes requiring water treatment.

Water is integral to the operation and longevity of humidification and evaporative cooling equipment. Required maintenance, system performance, and water/energy usage are all affected by water quality. Operating with treated water reduces or eliminates hard water scale on equipment surfaces, thereby reducing maintenance requirements. Performance improves in systems using treated water with benefits such as reduced downtime, higher energy transfer, and elimination of clogged nozzles. Humidification vapor quality also improves when the supply water is treated.

DriSteem Water Treatment Systems offer:

- Complete suite of products available for all applications — dechlorination, water softening, and reverse osmosis systems
- Designed for use with all DriSteem humidification and evaporative cooling systems, or as a stand-alone system for other processes requiring water treatment
- Single point supply, drain, and electrical connections and system skidding available
- Supply multiple evaporative cooling or humidification systems with a single water treatment system
- Components can be used individually or as a complete water treatment solution

Capacity: 288–15840 gallons per day (100–5500 lbs/hr ; 45–2495 kg/hr)

TYPICAL PLUMBED WATER TREATMENT SYSTEM

Dechlorinator

Duplex water softener

Reverse osmosis station:
- Particulate filter
- RO membranes

Pressurized RO holding tank

Custom engineering

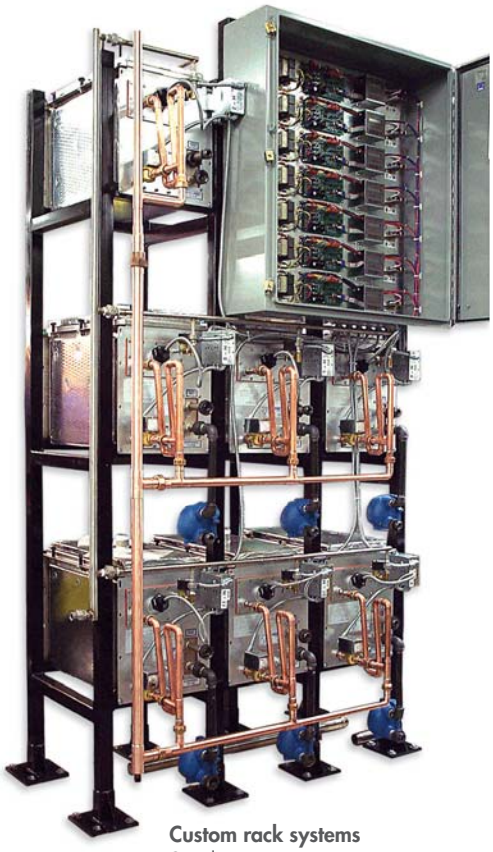
TAILORED SOLUTIONS FOR UNIQUE APPLICATIONS

For over 45 years, 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 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

OUTDOOR ENCLOSURES AND WEATHER COVERS

Heated/ventilated outdoor enclosures for evaporative 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 outdoor enclosure is 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.

Heated/ventilated outdoor enclosures
Available for all evaporative humidifiers

Weather covers
Available for Vaporstream and STS humidifiers

HUMIDIFIER DE-SCALING SOLUTION

Keep your humidifier operating at peak efficiency with DriSteem Humidifier De-scaling Solution. The solution cleans without corroding humidifier tanks or welds.

DRANE-KOOLER

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.

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.

SERVICE KITS

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

SEISMIC CERTIFICATION OPTION

DriSteem's pre-approved humidifiers passed rigorous tests to meet seismic standards. These products are rated to remain operational after seismic events to help mitigate risk and comply with seismic standards.

DriSteem humidifier during seismic testing
Seismic certification is available for Vaporstream, Vapormist, STS, and Mini-bank humidifiers; and Ultra-sorb dispersion panels.

Overview: All products

DriSteem steam generator comparison							
	GTS	STS	Vaporstream	Vapormist	CRUV	XT Series	XTR
Energy source							
Electric, resistive (heating element)			X	X	X		
Electric, conductive (electrode)						X	X
Natural gas or propane	X						
Boiler steam		X					
Steam capacity, lbs/hr (kg/hr)							
Maximum for one humidifier	600 (272)	1600 (726)	285 (129)	102 (46)	102 (46)	287 (130)	8 (3.6)
Minimum	75 (34.0)	20 (9.1)	5.7 (2.6)	6 (2.7)	6 (2.7)	5 (2)	4 (1.8)
Maximum with multi-tank control	9,600 (4,354)	25,600 (11,612)	4,560 (2,068)	1,632 (740)		1148* (520)	
Application size based on steam capacity**							
Square footage (m^2) capability of 1 humidifier	100,000 (9,290)	266,000 (24,712)	47,500 (4,412)	17,000 (1,579)	17,000 (1,579)	47,300 (4,394)	6,200 (575)
Installation options							
Indoor	X	X	X	X		X	X
Outdoor (in optional enclosure)	X	X	X				
Finished space				X		X	X
In packaged A/C unit					X		
Water type							
Tap	X	X	X	X	X	X	X
Softened	X	X	X	X	X	X	X
Reverse osmosis	X	X	X	X	X		
Deionized	X	X	X	X	X		
Controller							
Vapor-logic controller	X	X	X	X	Optional	Optional	
Standard controller							X
Microprocessor LW417 control					X		
Microprocessor on-off or modulating demand signal						X	
Connectivity: Modbus, BACnet, LonTalk	X	X	X	X	Optional	Optional	
Control capability							
With modulating demand signal	± 3%	± 3%	± 1%	± 3%	± 3%	± 3%	± 5%
With on-off demand signal					± 3%	± 5%	
With available options for specific applications		± 1%					

Continued

DriSteem steam generator comparison (continued)							
	GTS	STS	Vaporstream	Vapormist	CRUV	XT Series	XTR
Dispersion options							
Ultra-sorb Model XV		X					
Ultra-sorb Models LV and LH	X	X	X	X	X	X	
Rapid-sorb	X	X	X	X	X	X	
Single dispersion tube	X	X	X	X	X	X	
XTR dispersion tube							X
Space distribution unit, external absorption (SDU-E)			X	X			
Space distribution unit, internal absorption (SDU-I)			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 generator)	X		X				
Water treatment option							
Reverse-osmosis filtration	X	X	X	X	X		
Single/duplex softening	X	X	X	X	X		
Dechlorination	X	X	X	X	X		
Water tempering							
Drane-kooler option		X	X	X	X		
Integral water tempering	X					X	X
Seismic certification option		X	X	X			

* Four staged XT humidifiers, not via multi-tank control

** 20% outdoor air at 3 lbs/hr/100 cfm (231 kg/h per m^3/h), building need of 40% RH @ 72 °F (22.2 °C), typical commercial building load of 1 cfm/ft^2 (18 m^3/h per m^2)

Overview: All products

DriSteem dispersion product comparison

Vapor delivery type	DriSteem product	Capacity		Installation location		Boiler steam pressure at dispersion assembly	
		lbs/hr	kg/hr	Duct	Open space	psi	kPa
Evaporative cooling/ humidification	High-Pressure System	5500	2495	X	X	NA	NA
	Wetted Media System	*	*	X		NA	NA
Nonpressurized steam dispersion from DriSteem steam generator	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
	Rapid-sorb	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)	8	3.6		X	NA	NA
	SDU-003F (XTR fan pack)	8	3.6		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 LV	4000	1815	X		2–50	14–345
	Ultra-sorb Model LH	4000	1815	X		2–50	14–345
	Ultra-sorb Model XV	1978	899	X		5–50	34–345
	Area-type humidifier	286	130		X	2–15	14–103

* Up to 95% cooling efficiency. See the Wetted Media System cooling efficiency and pressure drop chart in our Evaporative Cooling and Humidification Catalog.
** Seismic certification option

Tools	
DRICALC **Sizing and selection software**	DriSteem's DriCalc software will size loads, select equipment, write specifications, generate as-configured installation guides, and create equipment schedules. Click **Order DriCalc** on the Tools tab of our website to request a free copy of DriCalc.
LOADCALC **Humidification load calculator**	LoadCalc provides a humidification load calculation based on entering air, outside air, and desired room conditions. Click **LoadCalc program** on the Tools tab of our website to launch the tool.
ENERGYCALC **Energy savings calculator**	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. Click **EnergyCalc program** on the Tools tab of our website to launch the tool.
WWW.DRISTEEM.COM **Our website**	Visit our website to: • Find a DriSteem representative • Get the most current product information • Learn more about humidification • Calculate load online • Calculate energy savings online • Watch product videos

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EXPECT QUALITY FROM THE INDUSTRY LEADER
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 also leads the industry with a Two-year Limited Warranty and optional extended warranty.

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