

# ULTRA-SORB<sup>®</sup>

*Steam Dispersion Panels*



### *Ultra-Sorb Steam Dispersion Panels:*

- *Guaranteed short non-wetting distances*
- *Reduce wasted energy and condensate up to 85%*
- *Higher capacities per insulated tube increase efficiency, reduce cost*
- *No steam jackets; no unnecessary heat gain*
- *Lowest installation cost*

# GUARANTEED SHORT ABSORPTION WITH SIGNIFICANT ENERGY SAVINGS

Learn More



## ULTRA-SORB STEAM DISPERSION PANELS

Steam for humidification can be non-pressurized or pressurized. DriSteen steam dispersion units disperses steam generated by pressurized steam boilers or by nonpressurized steam humidifiers. The steam is distributed through ducts, air handlers, and even directly into finished spaces, where it is released in the airstream with a steam dispersion system.

### WHY CHOOSE ULTRA-SORB DISPERSION PANELS

#### GUARANTEED, SHORT NON-WETTING DISTANCES

Install within inches of downstream devices. Rapid, drip-free absorption means steam does not condense on downstream devices.

#### EFFICIENT BY DESIGN

- **Reduce wasted energy and condensate up to 85%**  
High-Efficiency Insulated Tubes significantly reduce airstream heat gain and condensate production.
- **Higher capacities per tube increase efficiency, and reduce cost**  
Insulated dispersion tubes produce less condensate, leaving more steam available for humidification, and increasing the capacity of each tube. As a result, fewer tubes may be required to 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.
- **Disperse pressurized or nonpressurized steam**  
Ultra-sorb Models LV, LH, and MP disperse steam generated by pressurized steam boilers or by nonpressurized steam generators.

PANELS SHIP PREASSEMBLED AND INSTALL QUICKLY WITH EASY MOUNTING, STEAM, AND CONDENSATE CONNECTIONS.

#### MODEL XV: HIGHEST PERFORMANCE

##### Integral condensate management

- Ultra-sorb Model XV vaporizes dispersion-generated condensate and returns pressurized condensate to the boiler without additional pumps, valves, vents, or controls.

##### Zero water waste

- All condensate returns to the boiler saving energy, water, and boiler chemicals. Pressurized condensate return minimizes piping space required under the panel.
- Lowest heat gain - High-Efficiency Insulated Tubes and an insulated steam delivery header reduce airstream heat gain by up to 85%.



#### MODELS LV AND LH: UNMATCHED CAPACITY AND VERSATILITY

##### Meets the most demanding applications

- Steam capacity up to 4,000 lbs/hr (1815 kg/h)
- 316 stainless steel construction option
- Vertical air flow with the Ultra-sorb Model LH



#### MODEL MP: LOWEST TOTAL INSTALLED COST

- Same side steam inlet and drain for reduced piping
- In-frame condensate drain piping maximizes available face dimensions and minimizes blank-off requirements.
- Integral steam header allows clear space on exterior walls of AHUs.

**Table 3-1:**  
**Ultra-sorb models comparison**

	Model XV Integral condensate management	Ultra-sorb Model LV Vertical tubes	Ultra-sorb Model LH Horizontal tubes	Ultra-sorb Model MP Lowest total installed cost
Steam source	<u>Humidification steam inlet:</u> Steam from boiler or STS humidifier <u>Heat exchanger:</u> Pressurized boiler steam	Pressurized boiler steam or nonpressurized steam		
Steam capacity	<u>Per panel:</u> Pressurized boiler steam: Up to 2720 lbs/hr (1235 kg/h) One Ultra-sorb Model XV with STS: Up to 450 lbs/hr (204 kg/h)  <u>Per tube:</u> 80 lbs/hr (36 kg/h)*	<u>Per panel:</u> Up to 4000 lbs/hr (1815 kg/h)  <u>Per tube:</u> Insulated: 86 lbs/hr (39 kg/h)** Uninsulated: 80 lbs/hr (36 kg/h)**	<u>Per panel:</u> Up to 3268 lbs/hr (1482 kg/h)  <u>Per tube:</u> Insulated: 86 lbs/hr (39 kg/h)*** Uninsulated: 80 lbs/hr (36 kg/h)***	<u>Per panel:</u> Up to 2720 lbs/hr (1235 kg/h)  <u>Per tube:</u> Insulated: 80 lbs/hr (36 kg/h)* Uninsulated: 77 lbs/hr (35 kg/h)*
Steam pressure	<u>Heat exchanger:</u> 5 to 50 psi (35 to 345 kPa) <u>Humidification steam inlet:</u> 5 to 50 psi (35 to 345 kPa), pressurized boiler; or atmospheric, STS humidifier	Up to 50 psi (345 kPa)		
Airflow	Horizontal	Horizontal	<u>Horizontal or vertical:</u> pressurized steam  <u>Vertical:</u> nonpressurized steam	Horizontal
High-Efficiency Insulated Dispersion Tubes	Standard	Available option		
Header insulation	Header inside of enclosure is insulated	Header enclosure provides air gap insulation		Optional header enclosure provides air gap insulation (standard on units > 60 width)
Condensate drain	Pressurized	Atmospheric		
Condensate lifting	Vaporizes dispersion tube-generated condensate in header; returns pressurized condensate to condensate return main	Available pump		
Airstream heat gain	Lowest	Low with High-Efficiency Insulated Tubes option		
Non-wetting distance	Shortest; performs to published Ultra-sorb non-wetting distance			
Face dimensions	12" x 12" up to 144" x 144" (305 x 305 to 3660 x 3660 mm)	12" x 12" up to 144" x 144" (305 x 305 to 3660 x 3660 mm)	12" x 12" up to 120" x 120" (305 x 305 to 3050 x 3050 mm)	12" x 12" up to 144" x 144" (305 x 305 to 3660 x 3660 mm)
Assembly	Pre-assembled (shipped unassembled by request or as larger dimensions require)			
Dispersion tube mounting	Spring-loaded tubes and frame	Slip couplings and frame		Sealing grommets and frame
Steam / drain connections	Inlet: Steam for humidification Inlet: Pressurized steam for heat exchanger Outlet: Pressurized condensate to return main Outlet: For optional header overflow (if no float switch)	Inlet: Steam for humidification Outlet: Condensate drain		
Piping connections	Same-side connections	Top or side steam inlet, opposite-side drain connection	Top or side steam inlet, 2 drain connections (one per header)	Same-side steam supply and condensate drain connections
Optional stainless steel features	Header/dispersion tubes: 316 stainless steel (304 standard) Enclosure/frame: 304 or 316 stainless steel (galvanized standard)	Header/dispersion tubes: 316 stainless steel (304 standard) Enclosure/frame: 304 or 316 stainless steel (galvanized standard)		Header/dispersion tubes: 316 stainless steel (304 standard) Enclosure/frame: 304 or 316 stainless steel (galvanized standard)
Notes:	<p>* Consult DriSteem when face height is less than 24" (610 mm).  ** Consult DriSteem when face height is less than 26" (660 mm).  *** Consult DriSteem when face width is less than 25" (635 mm).</p>			



**DRI-STEEM Corporation**

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ISO 9001:2015 certified

U.S. Headquarters:  
14949 Technology Drive  
Eden Prairie, MN 55344  
800-328-4447 or 952-949-2415  
952-229-3200 (fax)

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**EXPECT QUALITY FROM THE  
INDUSTRY LEADER**

Since 1965, DriSteem has been leading the industry with creative and reliable humidification solutions. Our focus on ease of ownership is evident in the construction of the Ultra-Sorb Steam Dispersion Panels. DriSteem leads the industry with a Two-year Limited Warranty and optional extended warranty.

For more information:  
[www.dristeem.com](http://www.dristeem.com)  
[sales@dristeem.com](mailto:sales@dristeem.com)

For the most recent product information  
visit our website:  
[www.dristeem.com](http://www.dristeem.com)

