

**DRISTEEM**<sup>®</sup>  
The humidification experts



Ultra-sorb Model LV



Ultra-sorb Model LH



Ultra-sorb Model XV

- *Guaranteed short non-wetting distances*
- *Reduce wasted energy and condensate up to 85%*
- *Lowest installation cost*

**Ultra-sorb**<sup>®</sup>  
Steam Dispersion Panels

PRODUCT CATALOG



## All Ultra-sorb models feature:



### Guaranteed, short non-wetting distances

***Install within inches of downstream devices.***

Rapid, drip-free steam 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. (Standard on Model XV; optional on Models LV and LH.)

***Higher capacities per 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 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.

### Lowest installation cost

***Factory assembly eases installation.***

Panels ship preassembled and install quickly with easy mounting, steam, and condensate connections.

## More benefits, by model:

### Model XV: Highest performance

#### *Integral condensate management.*

An 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.

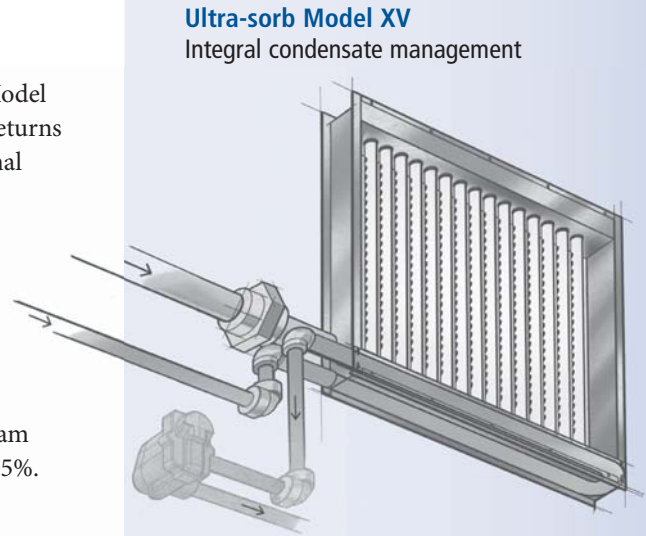
#### *Most efficient dispersion.*

##### *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%.



**Ultra-sorb Model XV**

Integral condensate management

### Models LV and LH: Most versatile

#### *Disperse pressurized or nonpressurized steam.*

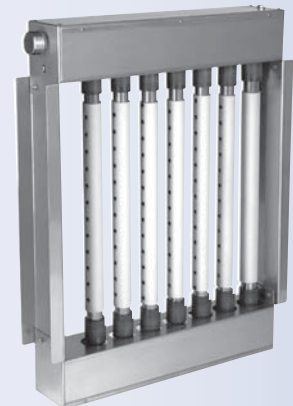
Models LV and LH disperse steam generated by pressurized steam boilers or by nonpressurized steam generators such as DRI-STEEM's GTS®, STS, Vaporstream®, Vapormist®, and XT humidifiers.

#### *Wide capacity range and options*

- Steam capacity up to 1815 kg/h
- High-Efficiency Insulated Tubes option
- 316 stainless steel construction option

**Ultra-sorb Model LV**

Vertical tubes



**Ultra-sorb Model LH**

Horizontal tubes



## Ultra-sorb models comparison

**Table 4-1:  
Ultra-sorb models comparison**

	<b>Model XV</b> Integral condensate management	<b>Ultra-sorb Model LV</b> Vertical tubes	<b>Ultra-sorb Model LH</b> Horizontal tubes
<b>Steam source</b>	<u>Humidification steam inlet:</u> Steam from boiler or STS humidifier <u>Heat exchanger:</u> Pressurized boiler steam	Pressurized boiler steam or nonpressurized steam	
<b>Steam capacity</b>	<u>Per panel:</u> Pressurized boiler steam: Up to 898 kg/h One Ultra-sorb Model XV with STS: Up to 204 kg/h <u>Per tube:</u> 19.5 kg/h*	<u>Per panel:</u> Up to 1815 kg/h <u>Per tube:</u> Insulated: 39 kg/h** Uninsulated: 36 kg/h**	<u>Per panel:</u> Up to 1482 kg/h <u>Per tube:</u> Insulated: 39 kg/h*** Uninsulated: 36 kg/h***
<b>Steam pressure</b>	<u>Heat exchanger:</u> 35 to 345 kPa <u>Humidification steam inlet:</u> 5 to 50 psi, pressurized boiler; or atmospheric, STS humidifier	Up to 345 kPa	
<b>Airflow</b>	Horizontal	Horizontal	Horizontal (pressurized steam) Vertical (nonpressurized steam)
<b>High-Efficiency Insulated Dispersion Tubes</b>	Standard	Available option	
<b>Header insulation</b>	Header inside of enclosure is insulated	Header enclosure provides air gap insulation	
<b>Condensate drain</b>	Pressurized	Atmospheric	
<b>Condensate lifting</b>	Vaporizes dispersion tube-generated condensate in header; returns pressurized condensate to condensate return main	Available pump	
<b>Airstream heat gain</b>	Lowest	Low with High-Efficiency Insulated Tubes option	
<b>Non-wetting distance</b>	Shortest; performs to published Ultra-sorb non-wetting distance		
<b>Face dimensions</b>	305 x 305 to 3660 x 3660 mm	305 x 305 to 3660 x 3660 mm	305 x 305 to 3050 x 3050 mm
<b>Assembly</b>	Pre-assembled (shipped unassembled by request or as larger dimensions require)		
<b>Dispersion tube mounting</b>	Spring-loaded tubes and frame	Slip couplings and frame	
<b>Steam / drain connections</b>	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	
<b>Airflow</b>	Horizontal	Horizontal	Horizontal or vertical
<b>Weight</b>	For Ultra-sorb weights, see our free Dri-calc sizing and selection software. Go to our Tools page at <a href="http://www.dristeem.com">www.dristeem.com</a> to order a free copy of Dri-calc.		
<b>Piping connections</b>	Same-side connections	Top or side steam inlet, opposite-side drain connection	Top or side steam inlet, 2 drain connections (one per header)
<b>Optional 316 stainless steel construction, and stainless steel trap, valve, and strainer</b>	No	Yes	
<b>Notes:</b>			
* Consult DRI-STEEM when face height dimension is less than 432 mm.			
** Consult DRI-STEEM when face height dimension is less than 660 mm.			
*** Consult DRI-STEEM when face width dimension is less than 635 mm.			

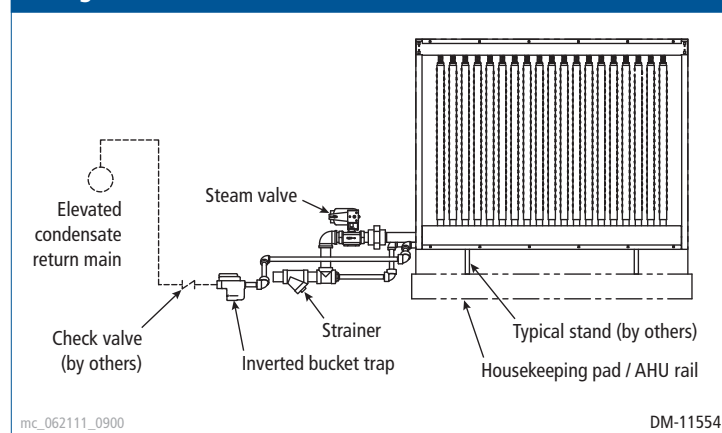
## Ultra-sorb models comparison

**Table 5-1:  
Condensate piping for Ultra-sorb steam dispersion panels**

	Model XV	Models LV and LH	
		Nonpressurized steam	Pressurized steam
P-trap water seal (see Figure 21-4)	n/a	Drop: 150 mm Seal: 130 mm	<u>Recommended:</u> Drop: 205 mm Seal: 255 mm
F&T trap (see Figures 12-1, 12-3, and 21-3)	Yes	No	<u>Alternate: *</u> Drop: 305 mm Drip: 105 mm
Inverted bucket trap, for lifting condensate to elevated condensate return main (see Figure 5-1)	Yes, with no additional pumps, valves, or controls	No	No
Stainless steel thermostatic trap	No	No	No
Condensate to open drain (see Figures 21-3 and 21-4)	n/a	Yes	Yes
Condensate return by condensate pump (see Figure 21-2)	n/a	Yes	Yes
Condensate return to humidifier by gravity	n/a	Yes	n/a
Condensate return to boiler via return line (see Figure 12-1 and 12-2)	Yes, with no additional pumps, valves, vents or controls	n/a	No

**Note:**  
\* Provide 460 mm vertical clearance for future P-trap substitution if required.

**Figure 5-1:  
Lifting condensate with Ultra-sorb Model XV**



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

## Conserving resources through better performance

### Expect quality from the industry leader

For more than 45 years, DRI-STEEM has been leading the industry with creative and reliable humidification solutions. Our focus on quality is evident in the construction of the Ultra-sorb, which features stainless steel construction. DRI-STEEM also leads the industry with a Two-year Limited Warranty and optional extended warranty.

### For more information

www.dristeem.com  
sales@dristeem.com

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

### DRI-STEEM Corporation

An ISO 9001:2000 certified company

European office:

Marc Briers

Grote Hellekensstraat 54 b

B-3520 Zonhoven

Belgium

+3211823595 (voice)

+3211817948 (fax)

E-mail: marc.briers@dristeem.com

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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DRI-STEEM conserves resources by designing humidification systems that optimize performance. Systems that perform well save energy and water and, ultimately, cost less to operate and maintain.

### Save energy

For applications requiring short absorption, High-Efficiency Dispersion Tubes reduce wasted energy up to 85% by significantly reducing airstream heat gain and condensate production. Available for new and retrofit Ultra-sorb® and Rapid-sorb® steam dispersion panels.

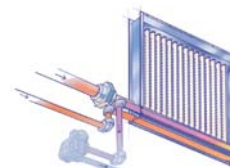


DRI-STEEM's High-Pressure Atomizing Systems disperse unheated micro-fine water particles into airstreams or open spaces. As atomized water droplets evaporate, air temperature drops, reducing the cooling load. This provides significant energy savings when humidifying and cooling simultaneously.



### Save water

Ultra-sorb Model XV eliminates water waste and reduces airstream heat gain, energy costs, and boiler chemical use. Available for STS® steam-to-steam humidifiers and all pressurized steam applications.



### Optimize performance

DRI-STEEM's most advanced controller, Vapor-logic®4 continuously monitors space conditions to align humidifier output with demand. The result is accurate, responsive control.



Your DRI-STEEM distributor is: