

Pressure Steam Humidifiers



LS
SERIES

 **nortec**
humidity.com



Humidifiers designed to deliver reliable humidity from facility steam boilers.

People spend 90% of their lives indoors, therefore the importance of correct temperature and humidity levels are critical to personal health and comfort. Too much humidity can be as destructive as too little.

Manufacturing and industrial processes are also directly affected by the indoor environment. Like people, machines work better in favorable surroundings. All equipment and processes respond in various ways to temperature and humidity fluctuations. For maximum performance, reliable temperature and humidity are essential.

Nortec LS Series pressure steam humidifiers and Nortec SE Series steam exchange humidifiers deliver reliable humidity from the facility steam boiler. Constructed of premium quality 304 and 316 stainless steel, Nortec LS and SE Series are designed for long operating life with minimal maintenance.

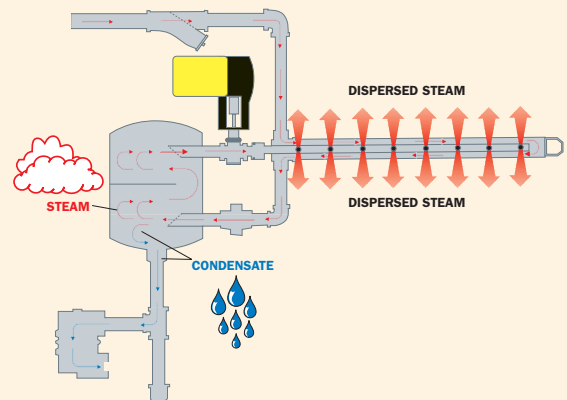
In hospitals, universities, museums, galleries, and other facilities, boiler steam humidification is a tried and true way to achieve reliable humidity control.

hospitals
educational facilities
government buildings
institutional buildings
printing plants
museums and galleries
commercial offices

Pressure Steam

The Nortec LS Series delivers precise humidity control. Utilizing tried and true components and 304 stainless steel tubing, the LS Series is the dependable pressure steam system for your facility.

LS Series distributors are available in a wide variety of lengths ranging from 12" to 144" to suit your duct size for the best possible steam dispersion. Multi-tube units are also available.



Steam Exchange

The Nortec SE Series Steam Exchange humidifiers generate, clean, atmospheric steam using facility boiler steam as an energy source. Boiler steam passes through internal 316 stainless steel heat exchangers, turning fresh water into steam. This technique prevents chemical boiler treatments from being dispersed into the building air supply.

The SE Series is factory assembled and includes all required components, most of which are contained within the cabinetry. The unit is designed for easy installation, reliable operation, and rapid maintenance. Available capacities range from 50-1050 lbs/hr.



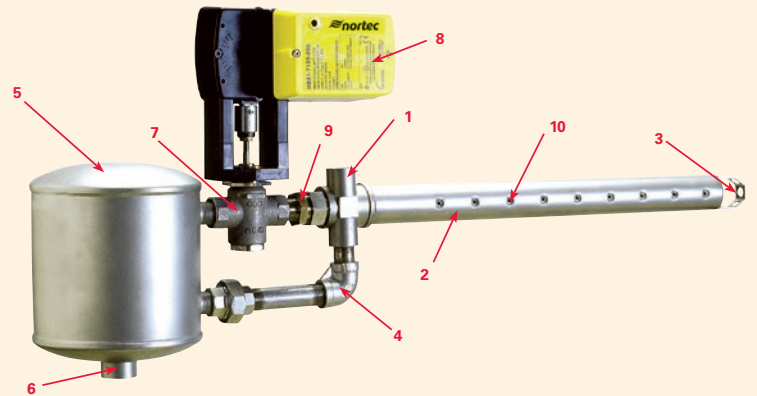
Pressure Steam Humidifiers



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- ▶ Available single or multiple tube configurations (LS tubes)
- ▶ Available with short absorption distributors (SAM-e)
- ▶ Pressure ranges from 2-50 PSIG (14-345 kPa)
- ▶ High capacity system up to 3200 lbs/hr (1452 kg/hr)
- ▶ Economical and cost effective system to meet high humidity requirements
- ▶ Delivers precise humidity control
- ▶ Steam jacketed dispersion tubes to prevent “spitting”
- ▶ Available tube insulation for increased efficiency
- ▶ Suitable for boilers operating on DI, RO or potable water
- ▶ Available pneumatic or electric controls

LS Series mounted with a SAM-e manifold for short absorption distance applications



- | | |
|---|--|
| <p>1 Steam inlet, strainer upstream to remove impurities.</p> <p>2 Steam jacketed dispersion tube.</p> <p>3 Tube support bracket, ensures proper unit installation.</p> <p>4 Interconnecting pipes between dispersion tube and separator.</p> <p>5 Steam separator ensures only condensate-free steam is discharged into the air stream.</p> <p>6 Condensate outlet to steam trap for recirculation to boiler for energy efficient operation.</p> | <p>7 Steam control valve meters steam entering dispersion tube.</p> <p>8 Electric on/off and electric modulating actuators standard. Pneumatic valve actuator optional.</p> <p>9 Tube adaptor connecting valve to dispersion tube. Factory installed silencers are available.</p> <p>10 Steam outlet orifices sized for exact humidity output.</p> |
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Steam Exchange Humidifiers



SE
SERIES



SETC 100

- ▶ 3 models available: Premium SETC, cost effective SEP and rugged SETC outdoor
- ▶ Capacities up to 1050 lbs/hr (476 kg/hr)
- ▶ Nortec Total Controller (SETC only)
- ▶ Intuitive scale management based on steam production
- ▶ All components suitable for RO, DI or potable water
- ▶ Suitable for all water types including: Potable, RO and DI
- ▶ Built-in drain water cooling
- ▶ Fully modulating down to 15% of capacity
- ▶ Built-in float and thermostatic steam trap(s)
- ▶ Built-in P-trap
- ▶ Fully insulated tank for efficient operation
- ▶ Pre-cleaning sequence for easier and faster maintenance
- ▶ Building management system compatible
- ▶ Includes valve, actuator and strainer

SE Series Features Comparison	SETC	SEP
Complete cabinetry with insulation	•	•
Side and top maintenance access (most capacities)	•	•
Stainless steel flat-surface heat exchanger	•	•
Valve, actuator, wye strainer included	•	•
Built-in float & thermostatic steam trap(s)	•	•
Built-in drain water cooler	•	•
Precise water level indication system	•	•
Fully modulating down to 15% of total capacity	•	•
Modulating demand signal acceptance	•	•
Transducer signal acceptance	•	
Single or dual modulation	•	
LED unit status indicators	•	•
Dry contacts for remote fault indication	•	
3-day drain with no call for humidity	•	•
Full tank blow down capability via time of day, timer, or signal from BMS	•	•
Automatic blow down cycles based on steam production	•	•
Backlit LCD display and keypad	•	
On-screen unit status	•	
Self-diagnostic capabilities	•	
Fault and maintenance history	•	
Onscreen troubleshooting guide	•	
Networking capability up to 10 units	•	
Low and high relative humidity alarms	•	
Time to next maintenance alarm	•	
Keep warm feature	•	
Water saving smart drain water cooling	•	
Pre-cleaning sequence	•	
Options		
BMS system (LINKS 2 Support)	•	
Freeze protection	•	
Floor stand	•	•
Compatible Distribution Systems		
SAM-e	•	•
Steam distributor	•	•
Blower pack	•	•

options



Nortec offers flexible steam distribution choices to satisfy a wide range of requirements:

- **Stainless Steel Steam Distributors** to distribute atmospheric steam into ducts.
- **Independent Blower Packs** for in space applications (remote mounted).
- **SAM-e Short Absorption Manifold** for use in air handlers or ducts where short steam absorption distance is critical.



Atmospheric steam distributor



Blower pack



SAM-e Short Absorption Manifold



Nortec LINKS XPS offers monitoring and control allowing humidifier(s) to communicate to your Building Management System (BMS). The controller is factory installed and is located internally to the humidifier. Simply specify at time of order what operating protocol you are using – BACnet IP, BACnet MSTP, LonWorks or Johnson N2.



Nortec OnLine is a remote interactive communication package that allows satellite contacts to monitor, maintain and control a humidification center from any location worldwide using standard internet connections. This advanced software shows graphic representations of the humidifier and its key parameters (up to 75 functions).



LS Series

SPECIFICATION	MODEL 200 MODEL LS1	MODEL 300 MODEL LS2	MODEL 450 MODEL LS3	MODEL 600 MODEL LS3	MODEL 800 MODEL LS3	SAM-e mini SAM-e
Pressure range - psig (kPa)	2-50 (14-345)	2-50 (14-345)	2-50 (14-345)	2-50 (14-345)	2-50 (14-345)	2-50 (14-345)
Max. capacity single tube - lbs/hr (kg/hr)	284 (129)	571 (259)	916 (417)	1258 (572)	N/A	N/A
Max. capacity multi-tube - lbs/hr (kg/hr)	374 (170)	653 (297)	1030 (468)	1664 (757)	3209 (1456)	3200 (1452)
Separator physical data - Height x Diameter	7.7" x 6" 195mm x 152mm	8.8" x 6" 223mm x 152mm	10.5" x 6" 268mm x 152mm	11.2" x 9" 284mm x 229mm	12.6" x 9" 322mm x 229mm	Custom
Standard actuator	Electric Modulating 0-10 VDC, 24 VAC					
Standard steam trap	Float & Thermostatic					
Separator and dispersion tube material	Stainless Steel 304					
OPTIONS:						
Pneumatic actuator	yes	yes	yes	yes	yes	yes
Electric on/off actuator	yes	yes	yes	yes	yes	yes
Tube insulation	yes	yes	yes	yes	yes	yes
DI water installation	yes	yes	no	no	no	yes

SE Series

SPECIFICATION	SE 050	SE 100	SE 175	SE 250	SE 375	SE 525	SE 750	SE 1050
Pressure range - psig (kPa)	5-15 (35-105)							
Max. capacities (at 15 psi steam pressure) - lbs/hr (kg/hr)	50 (23)	100 (45)	175 (79)	250 (114)	375 (170)	525 (240)	750 (340)	1050 (476)
Physical data - Width x Height x Depth	25.6" x 20.6" x 18.4" 65.1cm x 52.4cm x 46.7cm	46.4" x 32.0" x 20.0" 117.8cm x 81.4cm x 50.8cm		46.4" x 32.0" x 26.4" 117.8cm x 81.4cm x 67.1cm		46.4" x 32.0" x 42.0" 117.8cm x 81.4cm x 106.7cm		46.4" x 32.0" x 58.0" 117.8cm x 81.4cm x 147.3cm
Standard actuator	Electric Modulating 0-10 VDC, 24 VAC							
Built-in steam trap	Float & Thermostatic							
Insulation & Cabinetry	Standard							
Voltage/Phase	110-120/1							
Full load amps	2.1							
Internal Smart Drain Water Cooler	Standard							
Steam Outlets (s) - OD	1 x 1.75" (1 x 4.44cm)		1 x 3" (1 x 7.62cm)			1 x 4" (1 x 10.16cm)	2 x 4" (2 x 10.16cm)	
OPTIONS:								
Nortec Links BMS	BACnet, LonWorks, Johnson Control N2 Bus or Modbus (optional SETC model only)							
Nortec OnLine	SETC model only							
Keep Warm Feature	no	SETC model only						
Freeze Protection	no	SETC model only						
Outdoor Model	no	SETC model only						
Floor Stand	yes	yes	yes	yes	yes	yes	yes	yes



USA 826 Proctor Avenue, Ogdensburg, NY 13669

Canada 2740 Fenton Road, Ottawa, Ontario K1T 3T7

1.866.NORTEC1
nortec@humidity.com

