



# Live Steam<sup>®</sup>

Pressure  
Steam  
Humidifiers

Designed to deliver  
reliable humidity from  
facility steam boilers.



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

## **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.

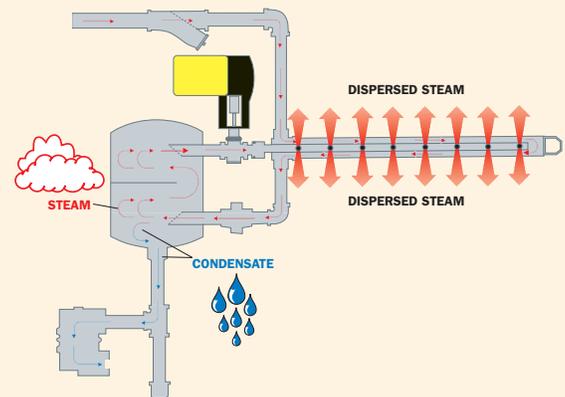
NORTEC LiveSteam (LS Series) steam injection humidifiers and NORTEC SE Series steam exchange humidifiers deliver reliable humidity from the facility steam boiler. Constructed of premium quality 304 and 316 stainless steel, NORTEC LS and SE Series equipment are designed for long operating life with minimal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

In hospitals, universities, museums, galleries, and other facilities, steam injection humidification is a tried and true way to achieve a critical balance between temperature and humidity control.

## Steam Injection

NORTEC LiveSteam delivers precise humidity control. Utilizing tried and true components and 304 stainless steel tubing, LiveSteam is the dependable steam injection system for your facility.

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



## Steam Exchange

On NORTEC SE Series Steam Exchange humidifiers, the boiler steam passes through the SE internal heat exchanger(s) bringing the surrounding water in the tank to atmospheric clean steam vapor. The chemical treatment from the boiler does not enter the air steam.

The SE Series heat exchanger utilizes 316 stainless steel and is designed to give maximum output while taking up minimal space. It is easy to remove for cleaning and the flat smooth surfaces help reduce maintenance time.

## Precise Control

In facilities with existing steam boilers LS and SE Series offer a cost effective way to add precise humidity control. With a wide variety of control options and unit capacities NORTEC LS and SE Series are ideal for job engineered systems.

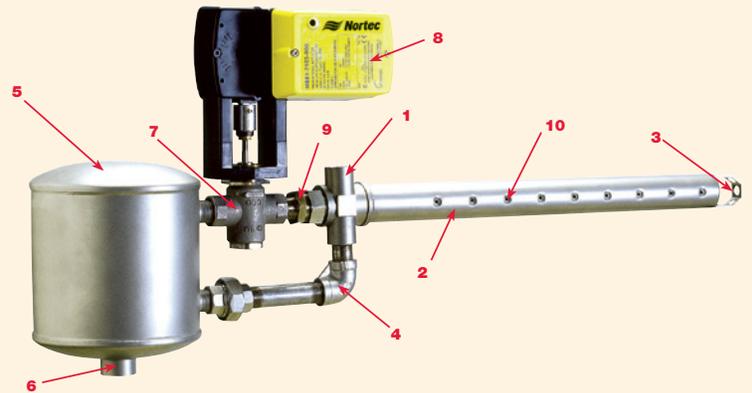


# Live Steam®

Steam  
Injection  
Humidifiers

- ▶ Available for single or multiple tube applications
- ▶ Pressure ranges from 2-50 PSIG
- ▶ High capacity system (up 3209 lbs/hr)
- ▶ Economical and cost effective system to meet high humidity requirements
- ▶ Delivers precise humidity control
- ▶ Steam jacketed dispersion tubes to prevent wetting
- ▶ Support brackets on tubes over 2 feet in length
- ▶ Available for regular or purified boiler steam
- ▶ Available for pneumatic or electric controls

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



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



# SE Series™

Steam  
Exchange  
Humidifiers



SETC 100

- ▶ Capacity up to 1050 lbs/hr
- ▶ NORTEC Total Controller
- ▶ Intuitive scale management based on steam production
- ▶ All components suitable for RO or DI water
- ▶ Internal water tempering for drain water cooling
- ▶ Fully modulating
- ▶ Built-in float and thermostatic steam trap(s)
- ▶ Built-in P-trap
- ▶ Fully insulated tank for efficient operation
- ▶ Pre-cleaning sequence ensures shorter maintenance time
- ▶ Building management system compatible
- ▶ Network up to 10 units
- ▶ Small SE 50 lbs/hr for easy ceiling mounting

SE Series Features Comparison	SETC	SEP
Steam capacity adjustment	•	
Full size alphanumeric display and keypad	•	
Configurable date and time indication	•	
Transducer signal acceptance	•	
Individual component diagnostic capability	•	
Keypad set-point adjustment (humidity)	•	
Display of relative humidity	•	
Low and high relative humidity alarms	•	
Keep warm feature	•	
Networking capability up to 10 units	•	
Pre-cleaning sequence	•	
Troubleshooting Guide	•	
Self diagnostic capabilities	•	
Fault history	•	
Smart drain water cooling	•	
Single or Dual modulation signal acceptance	•	
Time to next maintenance alarm	•	
System demand indication	•	
Backlit display	•	
Built-in Float & Thermostatic steam trap(s)	•	•
3-day drain with no call for humidity	•	•
Full tank blow down capability via time of day, timer, or signal from BMS	•	•
Remote fault indication	•	•
Industry standard modulation signal acceptance	•	•
Internal Drain water cooler	•	•
Blow down based on steam production	•	•
Precise five level water level indication	•	•
Status indicator lamps	•	•
Single or multiple steam outlet options	•	•
Large Side tank cleaning port	•	•
Top access cleaning	•	•
Single water connection	•	•
Fully modulating down to 25% of total capacity	•	•
<b>Options</b>		
Interaction with BMS system (Contact Factory)	•	
Freeze protection	•	
Floor stand	•	•
<b>Distribution Systems</b>		
SAM-e	•	•
Steam distributor	•	•
Blower pack	•	•



## LiveSteam

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 (1451.5)
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					
<b>OPTIONS:</b>						
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	no
DI water installation	yes	yes	no	no	no	yes

## SE Series

SPECIFICATION	SE 50	SE 100	SE 175	SE 250	SE 375	SE 475	SE 675	SE 950	SE 1050
Pressure range - psig (kPa)	5-15 (35-105)								
Max. capacity single tube - lbs/hr (kg/hr)	17-50 (8-23)	5-100 (2-45)	7-175 (3-79)	11-250 (5-114)	15-375 (7-170)	24-475 (11-215)	30-675 (14-306)	58-950 (26-430)	67-1050 (30-476)
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)	
<b>OPTIONS:</b>									
NORTEC Links BMS	BACnet, LonWorks, Johnson Control N2 Bus or Modbus (SETC model only)								
NORTEC OnLine	SETC model only								
Keep Warm Feature	no	yes	yes	yes	yes	yes	yes	yes	yes
Freeze Protection	no	yes	yes	yes	yes	yes	yes	yes	yes
Outdoor Model	no	yes	yes	yes	yes	yes	yes	yes	yes
Floor Stand	yes	yes	yes	yes	yes	yes	yes	yes	yes

# AxAir Nortec

a WMH Company

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ISO 9001:2000



Certificate No. 002419

electric steam — atomizing nozzles — high pressure nozzles — steam injection — steam exchange — gas steam