

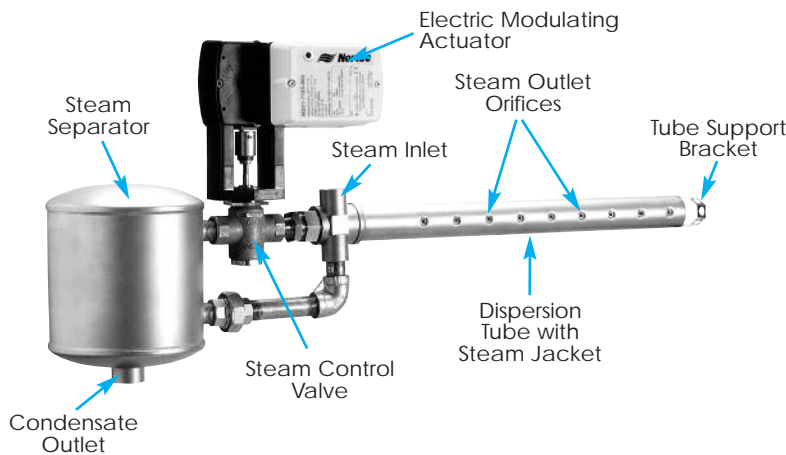
# SPECIALTY PRODUCTS

## WLS & WSE

### Steam Humidifiers

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#### WLS - Steam Injection Humidifier



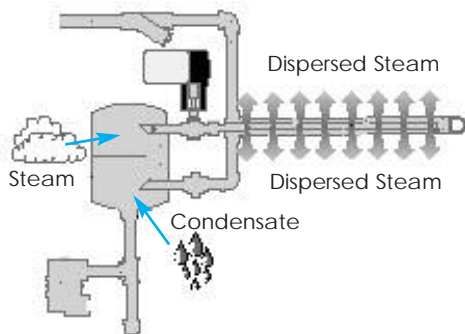
**WSAM-e (Short Absorption Manifold)**  
WLS Steam Humidifier mounted with a WSAM-e Manifold.

#### TYPICAL APPLICATIONS

The **WLS** Steam Injection Humidifier and the **WSE** Steam Exchange Humidifier supply precise humidity control from the facility steam boiler into the air stream. Typically used in manufacturing plants, printing plants, commercial offices, hospitals and any other facilities which require a critical balance between temperature and humidity control.

#### HOW IT WORKS

The **WLS** Steam Injection Humidifier works by injecting steam directly from the boiler (live steam) into the duct work or an air stream. Live steam enters a steam jacket to preheat the dispersion tube. Steam then flows into the separator where condensate is removed. Dry steam is then discharged through the dispersion tube for circulation into the air stream.



#### MATERIALS

Separator	304 & 316 SST
Dispersion Tube	304 SST

#### FEATURES

- Provides accurate humidity control
- Simple and cost efficient system to meet high humidity requirements
- Available for regular or purified boiler steam
- Available for single or multiple tube applications
- Capacities up to 3200 lbs/hr
- Pressure ranges from 2-50 PSIG
- Available for pneumatic or electric controls
- All stainless steel distributors and nozzles ensure permanent bond
- Separator & Steam jacket included in order to provide highest quality steam (WLS only)

#### INSTALLATION

Distributor must be mounted level in a straight section of duct, with steam outlets facing into the air stream. A steam trap should be installed on the separator outlet, allowing for proper condensate removal. Also include a strainer upstream of humidifier inlet.

#### MAINTENANCE

The strainer should be cleaned periodically. The valve, actuator, steam trap and temperature switch should be inspected annually to confirm proper operation. For full maintenance details, see installation and maintenance manual.

#### HOW TO ORDER

Consult factory for sizing and selection. Provide required humidification load, steam pressure at humidifier inlet, duct dimensions, actuator type and any accessories.

# SPECIALTY PRODUCTS

## WLS & WSE Steam Humidifiers

### WSE - Steam Exchange Humidifier



### HOW IT WORKS

The **WSE** Steam Exchange Humidifier works by using existing boiler steam and creating clean steam by using steam to steam generation. The clean steam generated by this process is then used for humidification. The WSE will heat clean water and disperse it into the air.

### FEATURES

- Provides accurate humidity control
- Intuitive scale management based on steam production
- All components suitable for RO or DI water
- Internal water tempering for drain water cooling
- Capacities up to 1050 lbs/hr
- Built-in Float & Thermostatic Steam trap(s)
- Fully insulated tank for efficient operation
- Pre-cleaning sequence ensures shorter maintenance time
- All stainless steel distributors and nozzles ensure permanent bond
- Network up to 10 units

### WLS Series – Technical Data

SPECIFICATION	Separator	Model 200	Model 300	Model 450	Model 600	Model 800	
	Distributor	Model WLS1	Model WLS2	Model WLS3	Model WLS3	Model WLS3	WSAM-e
Pressure Range - PSIG (kPa)		2-50 (14-354)					
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					

Options available, contact factory; Pneumatic actuator, Electric on/off actuator, tube insulation, DI water installation.

### WSE Series – Technical Data

SPECIFICATION	WSE 100	WSE 175	WSE 250	WSE 375	WSE 475	WSE 675	WSE 950	WSE 1050
Pressure Range - PSIG (kPa)	5-15(35-105)							
Max. Capacity - lbs/hr (kg/hr)	5-100(245)	7-175(3-79)	11-250(5-114)	15-375(7-110)	24-475(11-215)	30-675(14-306)	58-950(26-430)	67-1050(30-476)
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	
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							
Telescope Stand	Standard							
Steam Outlet(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 available, contact factory; Keep Warm Feature, Freeze Protection, Outdoor Enclosure.