



commercial offices  
hospitals  
computer rooms  
museums  
clean rooms  
schools  
high-tech centres  
printing plants



# NH Series™

Electric  
Steam  
Humidifiers

Designed for installation  
flexibility while maintaining  
precise humidification control

# NORTEC NH Series humidifiers resolve demanding application needs.

Productivity and quality of life are directly affected by the indoor environment. People work better and feel better in favorable surroundings. So do products and machines! They all respond in various ways to changes in air quality, temperature and humidity. All three elements must be just right to maximize performance and reliability, both in humans and equipment. But correct humidity is critical, since too much humidity can be as destructive as too little.

NORTEC is a world leader in state-of-the-art humidity technology. The company's efforts are concentrated exclusively on designing and building better humidification systems. The NH Series offers the choice of electrode steam for potable water operation or resistive element for DI/RO water operation.

Because every building has its own unique set of physical characteristics, and environmental factors vary from one location to another, four distinct NH models are offered along with a range of modular control peripherals. They adapt to the differing requirements of both new and retrofit applications and are sensitive to budget parameters.

Every NORTEC NH model has been engineered to meet the highest standards of cost-effective, efficient performance. They are designed for ease of installation, adaptability, simplicity of operation, ease of maintenance and servicing, energy efficiency, cleanliness and long-term reliability.

NORTEC NH humidifiers offer complete application flexibility to systems engineers, contractors and customers. They can be integrated into central Heating/Ventilating/Air Conditioning (HVAC) systems or placed in specified locations for individual room control. Models are available to serve small or large areas with outputs of 0 - 180 lbs./hr.

## NH Series™



*NH Series products  
are manufactured  
in one of NORTEC's  
ISO 9001-1994  
registered facilities.*





# NH Series™

*operating advantages*



## Precise control

The NHMC and NNDI have an automatic system test routine, and the alphanumeric display window provides readouts on operating parameters and self-diagnostic functions, including service indicators. The humidifier will make service adjustments automatically or trigger a shutdown while displaying the function requiring operator attention.

NH Series humidifiers can be easily integrated with a central HVAC control system, via a computer interface, for maximum control flexibility. Humidifiers can accept command inputs from a BMCS to automatically control the humidifier's output.

## Economy

NORTEC's NH Series humidifiers provide lower initial installation costs for the customer. Operating costs are also reduced through efficient steam conversion rates and minimal energy losses due to low hot water drain rates.

NH humidifiers provide clean humidification, reducing air-borne contaminants and subsequent health-related employee absenteeism. Correct interior humidity levels in winter maintain comfort at lower temperatures and can reduce heating costs. NH self-diagnostics confirm optimal operational efficiency and reduce servicing costs.

## Installation Flexibility

NH humidifiers offer unprecedented installation flexibility. They can be configured for both small and large systems.

Steam distribution is easily accomplished through either the HVAC duct system or into individual areas through built-on or remote blower packs.



VERSATILE  
STEAM  
DISTRIBUTOR  
SYSTEMS



SAM-e  
SHORT ABSORPTION MANIFOLD

## electrode steam

The electrode steam system produces pure uncontaminated steam with variable output through electronic power control of the electrodes. Water borne minerals remain in the cylinder and are periodically flushed out through the automatic cylinder drain. On NHMC and NHP models the drain automatically empties the steam cylinder if it is not operated for three days. Solid mineral scale sinks to the bottom of the cylinder which, when filled with residue, is easily removed and replaced.



## resistive steam

The NHDI resistive element offers the highest accuracy performance available. Designed for use with DI/RO water incorporating high quality stainless steel heating elements combined with solid state relays, it allows for very tight control of relative humidity. When using a high precision humidistat, the NHDI can be accurate to  $\pm 1\%$  rh. With standard modulating control  $\pm 2\%$  rh is achievable. With either control the NHDI has variable output from 0-100%. Like electrode steam, resistive steam produces pure uncontaminated steam.

# system features



The **NHMC** is the most advanced electrode steam humidifier available in the world today. Its built-in micro-computer provides instantaneous updating of all operating parameters. And, it is easily programmable for compatibility with most Building Management Control Systems.



**NORTEC'S NHP** includes all the most wanted technological features, ensuring top-of-the-line performance. Available with modulation and on/off control, and LED display of steam output, this unit offers NORTEC's proven reliability at an economical price.



The **NHB** offers all the basic NORTEC time-proven humidification features for advanced technology applications requiring a simple on/off control.

# featurecomparison



The **NHDI** is the most advanced resistive steam humidifier when it comes to DI/RO water operation. It's built-in solid state relays and high quality stainless steel heating elements provide the most accurate humidity control available in the world.

	NHMC	NHP	NHB	NHDI
Alphanumeric function display	x			x
Keypad programming	x			x
Auto self-test at start-up	x	x		x
Micro-computer electronics	x	x		x
DI/RO water operation				x
Potable water operation	x	x	x	
Stainless Steel cylinder				x
Disposable cylinders	x	x	x	
Low waste drain water	x	x	x	x
SSR operation (standard)				x
Stainless Steel heating element				x
Auto Adaptive Control System	x	x	x	
Dual float water level control				x
P+I Control System	x	x		x
Network capability to 808 lbs.	x			
Modulation Control	x	x		x
Building Management System Interface	x	x		x
VAV control system	x	x		x
On/Off control systems	x	x	x	x
Dual modulating capability (with NORTEC controller)	x	x		x
Display of space RH	x			
Display of space temperature	x			
Display of RH setpoint	x			
Keypad setpoint adjustment	x			
Output display	x	x		x
Status indicator lamps	x	x	x	x
Autopulse of drain valve	x	x		
Cylinder drain (3 day no-call)	x	x		
Tempered drain during normal operation	x	x	x	
Independent circuits on multi-cylinder humidifiers	x	x	x	
Manual output adjustment (20-100%)	x	x	x	
Manual output adjustment (0-100%)				x
Fill cup with 1" air gap	x	x	x	x
Door interlock switch	x	x	x	x
High water shut-off	x	x	x	x
Key lock doors	x	x	x	x
Simple installation	x	x	x	x
Built-on or remote blower packs	x	x	x	x
Steam distributors with condensate separators	x	x	x	x
UL listed	x	x	x	x
CSA certified	x	x	x	
Two year limited warranty	x	x	x	x

SPECIFICATION	NH 005	NH 010	NH 020	NH 020	NH 030	NH 050	NH 075	NH 100	NH 150	NH 200
Capacity: lbs/hr*	1-5	2-10	4-20	4-20	6-30	10-50	15-75	20-100	15-150	20-200
Capacity: kg/hr*	0.5-2.2	0.9-4.5	1.8-9	1.8-9	2.7-13.6	4.5-22.7	6.8-34	9-45	6.8-68	9-91
Input kW max	1.9	3.8	7.6	7.6	11.4	17.2	26.0	34.3	52.0	68.6
Voltage	110-120	208-600	208-600	208-600	208-600	208-600	208-600	208-600	208-600	208-600
Phase	1	1	1	3	3	3	3	3	3	3
No. of Cylinders/Control Circuits	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	2/2	2/2
<b>STEAM DISTRIBUTION CHOICES **</b>										
NORTEC steam hose I.D.	7/8"	7/8"	7/8"	7/8"	7/8"	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"
Duct mounted distributors	ASD-12-60	ASD-12-60	BSD-12-102	BSD-12-102	BSD-12-102	CSD-24-144	CSD-24-144	CSD-24-144	CSD-24-144	CSD-24-144
Built-on blower packs	yes	yes	yes	yes	yes	yes	yes	yes	n/a	n/a
Remote mounted blower packs	yes	yes	yes	yes	yes	yes	yes	1-2 units	2-4 units	2-4 units

\*NHB, NHP, NHMC can be field adjusted from 20% to 100% of full output.  
 \*\* Refer to Engineering Manual for recommended clearances and blower packs.

SPECIFICATION	DI 10	DI 20	DI 20	DI 30	DI 50	DI 75	DI 100	DI 150	DI 200	
Capacity: lbs/hr*	0-12.8	0-24.5	0-24	0-31.9	0-54.1	0-77.6	0-92.6	0-155.3	0-185.3	
Capacity: kg/hr*	0-5.8	0-11.1	0-10.9	0-14.5	0-24.5	0-35.2	0-42	0-70.4	0-84.1	
Input kW max	4.2	8.0	7.8	10.5	18.4	25.3	30.2	50.7	60.4	
Voltage	208-600	208-600	208-600	208-600	208-600	460-600	460-600	460-600	460-600	
Phase	1	1	3	3	3	3	3	3	3	
No. of Stainless Steel Tanks	1	1	1	1	1	1	1	2	2	
<b>STEAM DISTRIBUTION CHOICES **</b>										
NORTEC steam hose I.D.	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"	
Duct mounted distributors	ASD-12-102	BSD-12-102	BSD-12-102	CSD-24-144	CSD-24-144	CSD-24-144	CSD-24-144	CSD-24-144	CSD-24-144	
Built-on blower packs	yes	yes	yes	yes	yes	yes	yes	n/a	n/a	
Remote mounted blower packs	yes	yes	yes	yes	yes	yes	1-2 units	2-4 units	2-4 units	

For details on these and other humidifiers, please consult your NORTEC representative.

\*Capacities are voltage dependant. Output can be field adjusted from 0-100%.  
 \*\* Refer to Engineering Manual for recommended clearances and blower packs.



**U.S.A.**  
**NORTEC Industries Inc.**  
 P.O.Box 698  
 826 Proctor Avenue  
 Ogdensburg, NY 13669  
 TEL: (315) 425-1255  
 EMAIL: nortec@humidity.com

**CANADA**  
**NORTEC Air Conditioning Industries Ltd.**  
 2740 Fenton Road  
 Ottawa, Ontario K1T 3T7  
 TEL: (613) 822-0335  
 FAX: (613) 822-7964

Authorized Agent: