



Evaporative Humidifier/Cooler

The sustainable solution for
humidifying and cooling



MH Series™





data centers
laboratories
manufacturing
institutional
research facilities
commercial
automotive

The NORTEC MH humidifier is the most cost-effective humidifier/cooler available today.

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. Correct humidity is critical, since too much humidity can be as destructive as too little.

Walter Meier is a world leader in state-of-the-art humidification technology. Our focus is concentrated exclusively on designing and building better humidification systems. Every NORTEC MH 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 MH evaporative humidifiers offer complete application flexibility to systems engineers, contractors and customers. They can be integrated into central air handling units or ventilation ducts.

With its stingy energy consumption the MH Series is a perfect compliment towards Green/LEED building design.

- ▶ High humidification efficiency
- ▶ Hygiene friendly
- ▶ Free evaporative cooling
- ▶ Safe polyester media
- ▶ Complete packaged system

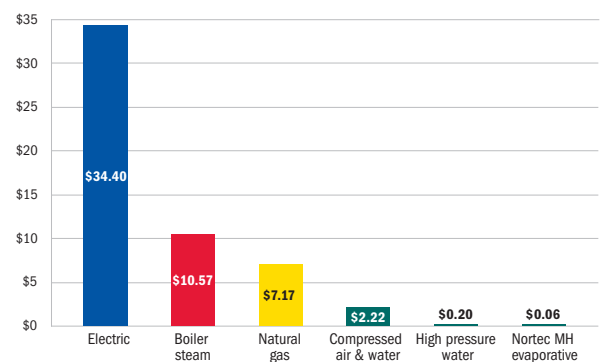


Economy

The V-Profile polyester media intensifies the evaporation process providing exceptionally high performance and efficiency. The large surface of the evaporation media results in a high evaporation rate with low energy consumption. The MH Series offers humidification efficiencies of up to 85 and 95%. The MH Series is suitable for high duty applications and when applying the Reflow model, the system captures the non-evaporated water and returns it to the water circulation system for reuse. The increased water efficiency has a very quick payback for building owners.

Saving water and energy as well as reducing operating costs is an important challenge in today's world. The NORTEC MH Series not only humidifies but can cool the air by up to 22°F (12.5°C) at high humidification efficiency and at a low cost.

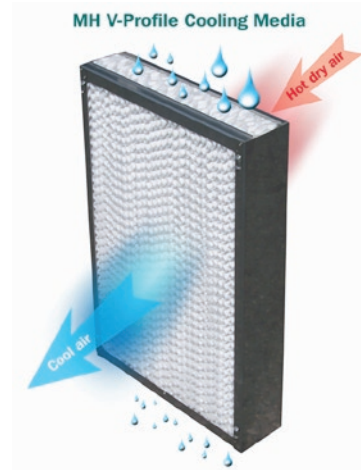
Energy Cost for 1000 lbs./hr based on technology



V-profile Media

The core element of the MH unit is the patented humidifier box located in the air duct. Dry air flows through the box, water flows over the hygroscopic media and the extremely large wet surface releases humidity to the air. This method enables air humidifying or cooling with limited electrical energy. The V-profile humidifier box consists of synthetic media with an impressed V-profile which enables a more intensive exchange of air and water.

- ▶ Hygroscopic Coating
- ▶ High Velocity Performance
- ▶ Low Pressure Losses
- ▶ UL 900 Class 1 Rating
- ▶ Suitable for DI/RO
- ▶ No Droplets, Free of Aerosols



MH Series™

Evaporative
Humidifiers



Total Control (TC) System

The TC system offers the most complete control of any evaporative humidifier / cooler on the market today! The integrated processor with real-time clock controls the air humidity, smart water management featuring UV treatment and conductivity monitoring, plus advanced hygiene cycles and staging operations.

- ▶ Smart Water Management
- ▶ Advanced Hygiene Control
- ▶ Internet Monitoring & Control
- ▶ BMS Interoperability
- ▶ Full Function Operating Panel
- ▶ NRTL-C Approved



Models

The Nortec MH Series is available in two basic versions. The **FLOW** model with direct water drainage and the **REflow** model for water recirculation. Whether to use a flow or REflow system depends considerably on the primary application of humidifying or cooling and the supplied water quality.



The **REflow** model contains a circulation pump that conveys the water via EPDM plastic hose to the spray beam located above the humidifier box. The water then trickles vertically through the boxes. The water not needed for humidifying flows back into the water basin where it is collected and recirculated for optimal water efficiency.

In the **FLOW** model, the water is not collected in the water basin, but is discarded and flows directly into the drain.

Features Comparison	MHB Flow	MHTC Flow	MHB REflow	MHTC REflow
Operates on DI/RO, Potable, Soften Water	●	●	●	●
Circulation Water System			●	●
Direct Water System	●	●		
Total Control (TC) System with Full Backlit Display		●		●
On/Off control system	●		●	
Smart Water Management System		●		●
Adjustable Flush Cycles		●		●
Pre-cleaning Sequence		●		●
Smart Media Box Drying		●		●
Modbus BMS host protocol		●		●
Programmable Maintenance Settings		●		●
Step-Control 1, 2 or 3 Stage		●		●
Multi-Unit Networking		●		●
Display and Control of RH		●		●
Multiple Control Signal Acceptance		●		●
Operation History Log		●		●
Real Time Information		●		●
Adjustable Capacity of Nominal Output		●		●
Remote Fault Indication	●	●	●	●
Stainless Steel Reservoir	●	●	●	●
Stainless Side frames	●	●	●	●
V-Profile Polyester Media	●	●	●	●
Mist Eliminator V-Profile Polyester Media (above 750 fpm)	●	●	●	●
2 Year Limited Warranty *Excluding Media	●	●	●	●
Conductivity Smart Monitoring				○
Ultra Violet Water Treatment	○	○	○	○
Nortec LINKS BMS Interoperability - BACnet, Lon Talk, Modbus		○		○
Nortec OnLine - Internet Monitoring and Control		○		○

● = standard ○ = optional

Ultra Violet Sterilization

For applications where higher hygienic requirements must be met an optional UV package is available. The ultra violet radiation from the discharge lamp sterilizes the water and controls potential microbial build up. Both Flow and REflow models can be fully equipped.

Conductivity Monitoring

Conductivity monitoring will continuously check the Total Dissolved Solid (TDS) content inside the water tank. The adjustable conductivity sensor then initiates drains accordingly. This feature is available for the REflow models only.

Controls

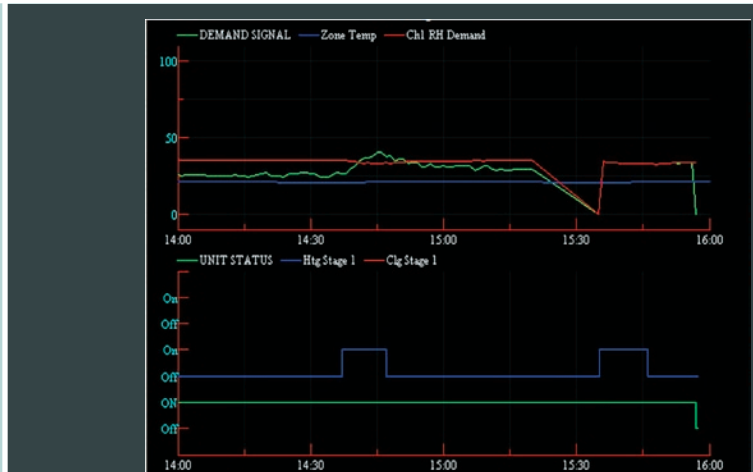
Nortec offers a wide range of digital controls when selecting the MH product. The total controller allows easy integration into any local building management system with it's host protocol modbus. See Nortec LINKS2 and Online for other communication options.

Bringing Tomorrow's Humidifier Support to You... TODAY!



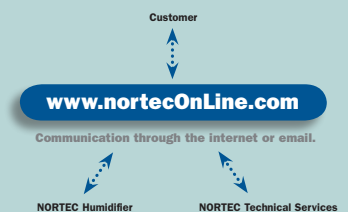
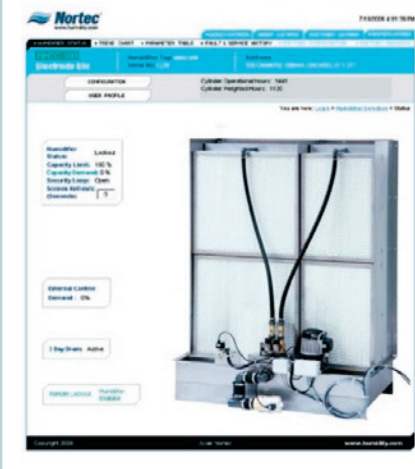
NORTEC LINKS 2

NORTEC LINKS 2 offers advanced monitoring and control allowing the MH units to communicate to your local Building Management System (BMS) via BACnet MSTP or IP LonWorks, or Modbus protocols. LINKS2 also provides internet ready monitoring and control (consult factory).



NORTEC OnLine

By adding the NORTEC OnLine option you get direct factory support with its proactive data acquisition which allows the system to suggest maintenance programs and recognize problematic symptoms before there is any trouble, helping to minimize potential downtime. Emails are automatically sent to the linked parties if there is any sign of abnormal conditions, specifying the unit information and functional status (consult factory).

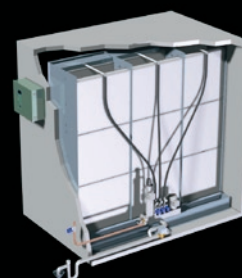




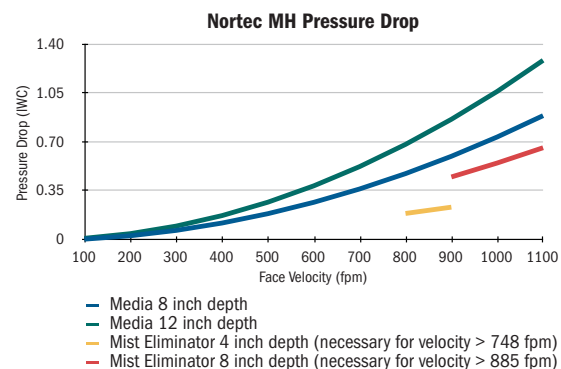
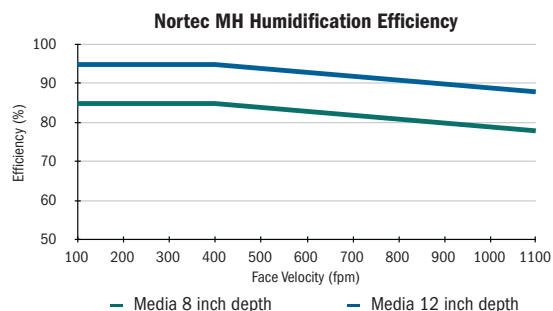
Specification	
Media Box Efficiency max.	85% and 95%
Maximum Face Velocity over Media	750 fpm (3.8 m/s)
Maximum Face Velocity with Integral Mist Eliminator	1080 fpm (5.5 m/s)
Pressure Drop at 500 fpm	0.25 IWC (62 Pa)
Fire Protection Rating	UL 900 Class I
Power supply pump (REflow, REflow C, REflow SC)	120 VAC/1, 50 and 60 Hz
Power consumption	0.2 - 0.6 kw
Water supply pressure	30 - 145 psi
Unit Height	26" (650mm) - 130" (3300mm)
Unit Width	24" (610mm) - 130" (3300mm)
Unit Depth	30" (575mm)
Standards and guidelines	UL 900 Class 1 and NRTL Approval

INSTALLATION FEATURES & REQUIREMENTS

Pre-assembled hydraulic package for quick installation
Only three connections to be made- water, drain and electrical
REflow pump model powered by a 120 V 1phase 60Hz connection
Stainless steel water tank and lateral supports
Media boxes can be installed in seconds
Footprint not to exceed 3" top and 2" side clearance from AHU/duct wall



PERFORMANCE



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