



Gas Humidification for any Application

Nortec's GS Series Humidifier



The GS Series, a complete line of gas humidification solutions.

We love humidity

Condair has been an expert in the manufacturing of gas-fired humidification systems for the past two decades. With each new series of units, we look to improve on past designs and promote new innovative technologies. The GS Series has been engineered to meet the high standards of cost effective and efficient performance while improving on the ease of installation, operation and maintenance.

Condensing high efficiency

Condair has pushed the boundaries of condensing high efficiency with the GS CS, Condensing System, model and the GS NX, Low NOx, model designed to meet low NOx emissions requirements.

New models

To complete the series, Condair is excited to introduce the GS MT, non-condensing models on the GS platform. This new model allows for economical humidification solutions for all new, and retrofit, applications. The Nortec GS MT gas-fired humidifier can provide from 50 to 600 lbs/hr of humidity with a single system.

Secondary Heat Exchanger

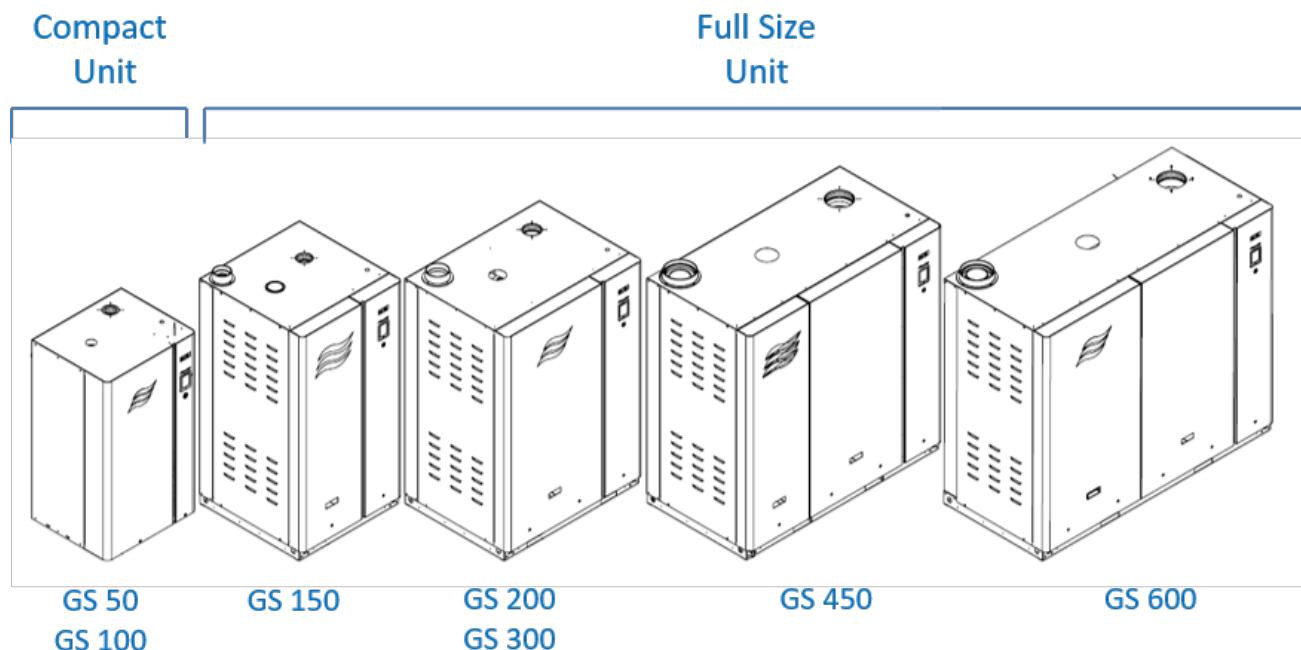
Featured on the GS CS/ NX models pre-heats water entering the water tank and further cools combustion exhaust gases.



Nortec GS Series
Gas Steam Humidifier

Smaller footprint, large output

The GS Series is available with a single unit for outputs up to 600 lbs/hr (260kg/hr). Up to 6 single units can be controlled on a master/slave configuration (LinkUp) for outputs up to 3600 lbs/hr (kg/hr). Footprint is reduced, with unit widths <30in to fit through a standard doorway.



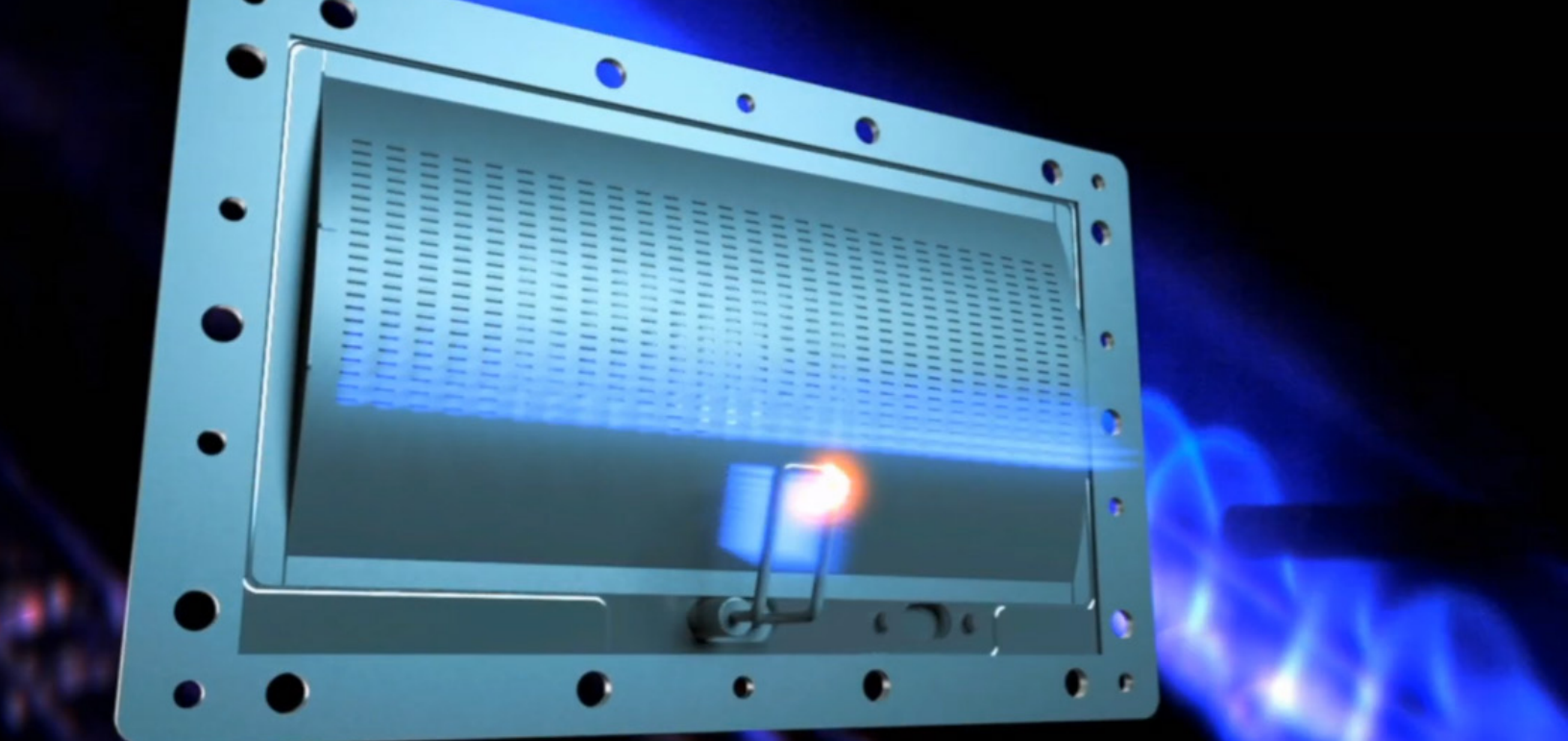
Model Specifications

| | GS CS Condensing System | GS NX Low NOx Emissions | GS MT Mid-Temperature |
|----------------------------|----------------------------|----------------------------|--------------------------|
| Efficiency | Up to 93% | Up to 89% | Up to 84% |
| Exhaust Temperature | 140°F / 60°C | 140°F / 60°C | 300°F / 150°C |
| Venting | CPVC, BH | CPVC, BH | BH |
| Condensing High-Efficiency | Yes | Yes | No |
| Gas Type | NG/P | NG | NG |

The Nortec GS NX model is certified and listed with the South Coast Air Quality Management District (SCAQMD) in California.



CPVC is a great alternative to stainless steel venting. Not only is it easier to work with, but installation costs are greatly reduced creating short pay back periods.



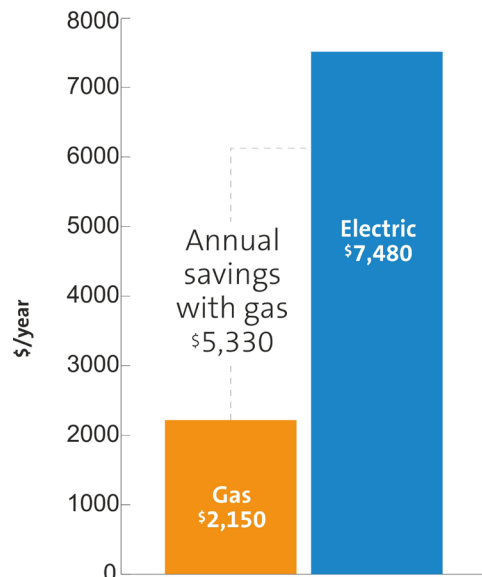
Why choose a Nortec GS Series humidifier

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

Nortec GS Series humidifiers has been engineered to meet the highest standards efficient performance with cost effective gas operation. They are designed for ease of installation, adaptability, simplicity of operation, ease of maintenance and servicing, energy efficiency, cleanliness and long term reliability. Nortec GS Series humidifiers offer complete application flexibility to system engineers, contractors and customers.

You can count on Condair when you need humidity for: Commercial offices, Schools and libraries, Museums and art galleries, Manufacturing facilities, Laboratories, Hospitals, Printing plants, and more...

**Humidifier
Annual Operating Cost
Natural Gas vs. Electric**
100 lbs/hr (45 kg/hr)



Operating costs based on an electric cost of \$0.11 per kWh, natural gas cost \$0.90 per therm, full output for 2,000 hours per season. Efficiency of electric product is 100% and efficiency of gas unit is 91%. Costs do not include Electric Peak demand charges.



More standard features

More standard features means more flexibility.

Touch controller for precise control

The Integrated Controller allows verification of all unit and process data at a glance. Operating data can be called up in real time, and there is a comprehensive data history. Seamless integration into existing Building Management Systems. Standard connection using Modbus, BACnet IP and BACnet MSTP. Option required for LonWorks and BTL certified.

Venting flexibility

The GS series can be vented as a direct room or sealed combustion appliance without any modification to the unit.

Support stand

The GS CS and MX models come standard with a support stand to ensure easy installation.

Easy cleaning & maintenance

Water treatment

The GS can operate on both potable water and mineral-free water. Operation with reverse osmosis water reduces the maintenance cycle as well as maintenance costs.

Programmable system drains

Software on the GS system allows for automatic blowdowns, periodic full tank drain cycles and automatic idle drains to reduce mineral concentration in the tank. The amount of water drained can be adjusted based on water conditions and the time of full tank drains programmed for a time that fits the application.

Large cleanout port

Designed with technician feedback, the GS features one of the largest cleanout ports on the market. The whole face of the tank is removed to help simplify maintenance.

The GS CS/NX - Efficient and economical humidity production

Touch screen control panel

Advanced user interface offers detailed operational control and diagnostic reporting. A USB connection allows for downloading for performance data and uploading of software updates.

Easy Integration into Building Management Systems

Standard connection using Modbus, BACnet IP, and BACnet MSTP. Option required for LonWorks or BTL Certified BACnet.

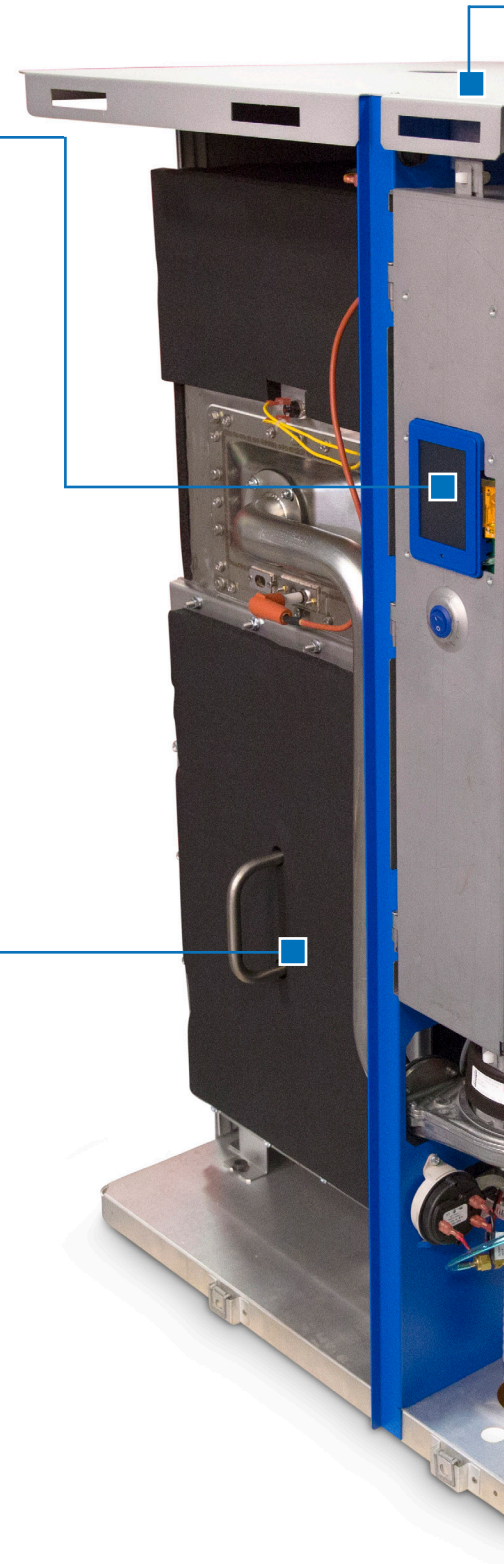


316 SS Heat Treated Heat Exchanger & 304 SS Water Boiling Tank

Lipless tank allows for simplified and efficient maintenance. Featuring a unique heat-treated heat exchanger and sacrificial anode which provides further defense against corrosion.

Automatic Blow Downs

Programmable automatic tank blowdowns break up scale and refresh water in the unit, reducing scale build up.





Nortec GS 50/100 CS/NX

Steam distribution options



SAM-e



xSD



Remote Mounted Blower Pack

Built in safety features

Features designed for safe humidifier operation should never be an option. Devices such as air proving switches and high limits all come standard with the GS Series. System software is designed to run tests to ensure safe operation and notify the operator in any other case.

Secondary Heat Exchanger

The GS Series innovative gas-fired humidifier design with a secondary heat exchanger pre-heats water entering the tank for high efficiency operation of >90%. Exhaust gases are also further cooled to allow for both stainless steel and CPVC venting options.

Drain pump design with auto-tempering of drain water

The drain casting combines hot water with colder supply water to ensure the water leaving the humidifier to drain is no more than 140°F (60°C). Standard drain pumps reduces drain time and helps to break up scale.

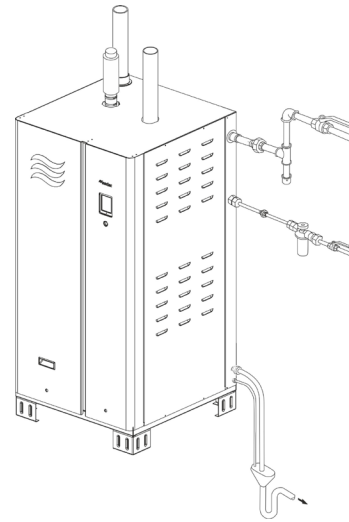
The GS Series humidifier provides hygienic steam for either in-duct or direct air humidification.

The GS Series is designed with many features to help keep scaling to a minimum as well as facilitate cleaning for no sweat maintenance.

Our gas-fired humidification systems continue to be made with dependable components for maximum reliable operation.

Features and Accessories

| | Feature | Accessory |
|--------------------------------------------------------------------------------|---------|-----------|
| Stainless steel tank and heat exchanger | ■ | |
| Continuous self-diagnostic with self-correction | ■ | |
| Fail safe operation | ■ | |
| Zero clearance to combustibles | ■ | |
| Intuitive scale management based on steam production | ■ | |
| Precise float water level management system | ■ | |
| Smart drain water cooling | ■ | |
| Manual auxiliary drain | ■ | |
| Keep warm feature | ■ | |
| Full tank blowdown capability via timer or external trigger | ■ | |
| BH / Special gas vent or CPVC venting options | ■ | |
| Potable, DI and RO water | ■ | |
| Integrated touch screen controller | ■ | |
| Modbus communication interface | ■ | |
| BACnet IP communication system interface | ■ | |
| Link-up system | ■ | |
| Real-time clock | ■ | |
| On screen troubleshooting | ■ | |
| Timer programming | ■ | |
| Sealed combustion | ■ | |
| Unit stand (standard with compact models and with GS CS / NX full size models) | ■ | |
| Humidity sensors and humidistats | | ■ |
| External drain water cooler | | ■ |
| In-line water filter | | ■ |
| Sump pump | | ■ |



- Natural gas / Propane
- LonWorks, BTL certified BACnet
- RO Water Treatment

Technical Data

| Specification | Compact Size Unit | | Full Size Unit | | | | |
|----------------------------|------------------------------------------------------------|----------------------------|----------------------------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| | GS 50 | GS 100 | GS 150 | GS 200 | GS 300 | GS 450 | GS 600 |
| Capacity lbs/hr (kg/hr) | 50 (23) | 100 (45) | 150 (68) | 200 (91) | 300 (136) | 450 (204) | 600 (272) |
| Dimensions (WxHxD) in (mm) | 25.5x22x44 640x542x1101 | 25.5x22x44 640x542x1101 | 28x28x55 717x738x1387 | 41x29x55 1026x738x1387 | 41x29x55 1026x738x1387 | 57x29x55 1448x738x1387 | 67x29x55 1700x738x1387 |
| Operating Weight* lb (kg) | 225 (102) | 245 (111) | 395 (179) | 519 (235) | 530 (240) | 675 (306) | 955 (433) |
| Mounting | Stand / Wall | | Stand (GS CS / GS NX), Stand / Floor (GS MT) | | | | |
| Power Circuit | 120 V / 1 Phase / 60 Hz | | | | | | |
| Models | Condensing System (CS), Low NOx (NX), Mid-Temperature (MT) | | | | | | |

*Weights based on CS/NX models

Condair is the world's leading manufacturer of commercial and industrial humidification and evaporative cooling products and systems, setting standards with regard to energy efficiency and hygienic solutions.

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