



Specification

Armstrong GFH Gas-Fired Humidifier

Category: Humidifier

Type: Gas

Model: GFH Series

General:

1.0 GFH Gas-Fired Humidifier

- A. Humidifier shall generate steam from demineralized, deionized (DI), reverse osmosis (RO), softened, or ordinary tap water.
- B. Humidifier shall utilize disposable ionic bed inserts for tap water service to attract solids from boiling water. Ionic beds ensure controllability through responsive and consistent humidity output regardless of water quality and minimize downtime required for tank cleaning. Ionic beds are not used in systems utilizing DI or RO water.
- C. Hinged tank lid shall provide access to ionic beds.
- D. Internal components shall be contained in a steel enclosure with key-locked access doors to prevent unauthorized access.
- E. Removeable heat exchanger constructed of stainless steel.
- F. Infrared burner.
- G. Forced draft combustion system. Capable of discharging vent gases into Category I vent pipe in vertical orientation and Category III in horizontal orientation.
- H. Humidifier shall include variable speed combustion blower.
- I. Humidifier shall be ETL certified to IAS 12-94:1995, CGA CR96-004:1996, CSA 2.17:2017 (R2022) standards.
- J. Humidifier shall monitor tank operating history. Display will indicate when the unit requires ionic bed replacement. Service life cycle is field adaptable to match water quality.
- K. Humidifier shall provide modulated output and is field-adaptable to 0-10 Vdc, 4-20mA, 0-5 Vdc, or an on/off input signal.
- L. Tank drain cycle shall be based on operating history in order to conserve water and energy. Drain cycle shall be field adjustable.
- M. After 72 hours of no demand, humidifier will drain the tank.
- N. Unit shall monitor tank water level and will shut down power to the gas train to prevent unsafe operation upon failure of the drain system or fill system.



- O. Humidifier shall utilize thermal safety switch to monitor stack temperature and prevent overheating.
- P. Humidifier shall incorporate float switches for water level control.
- Q. Humidifier shall include touchscreen user interface for managing settings and providing operational status, data, and diagnostics.
- R. Humidifier fill water line shall have an air gap to prevent backflow (siphoning) of tank water into the potable water supply system.
- S. Humidifier shall incorporate electrical terminals for installation of controlling stat, duct high-limit stat, fan interlock switch, and Class 2 alarm device.
- T. Tank insulation supplied standard with each unit.
- U. The humidifier shall have the following options available for connection to building management systems (BMS):
 - 1. BMS with BACnet communication
 - 2. BMS with Modbus communication

2.0 Options

- A. Outdoor enclosure with heater and cooling fan for temperature control in rooftop and outdoor environments.
- B. Sealed combustion kit required for installation in negative pressure environments or environments containing elevated air contaminants.
- C. Painted steel tank enclosure to improve appearance in occupied spaces.