



## SPECIFICATION SHEET MODULATING STEAM HUMIDIFIER MODEL 801

**HIGH CAPACITY** - One unit can provide between 11.5 and 34.6 gallons per day.

**ELECTRODE TYPE HUMIDIFIER** - Generates steam by energizing two electrodes that extend into the steam canister. Current flowing between the electrodes causes the water to boil creating steam.

**MODULATING INPUT SIGNAL** - The Model 801 accepts an input signal of 0-10 Vdc, 0-20mA, 2-10 Vdc, or 4-20mA.

**INTERNAL CONTROL BOARD** - Manages the complete operation of the humidifier. Fills and drains to maintain proper amperage draw, water level and notifies when service is required.

**VERSATILE MOUNTING OPTIONS** - Remote and duct mounted options. Steam dispersion tube, steam hose and drain tube included in the box. Fan Pack option also available (see Model 866).

**DISPERSION AND ABSORPTION** - Steam dispersion technology ensures proper absorption of steam into the air, preventing condensation in duct.

**DISPLAY PANEL** - Provides power switch for on/off operation, illuminates LEDs to show fill, drain, steam operations, and diagnostics.

**WATER LEVEL SENSOR** - Manages the water level in the steam canister to prevent over filling.

**BACK FLOW PROTECTION** - Air gap in the fill cap prevents pressure built up.

**AUTOMATIC DRAIN AND FILL CYCLE** - Unit flushes and fills periodically to maintain the proper conductivity.

**DRAIN WATER TEMPERING** - Unit uses cold inlet water to temper the canister water reducing the drain water temperature below 140°F to protect PVC piping and condensation pumps.

**END-OF-SEASON DRAIN** - After a 72-hour period with no call for humidity the humidifier will drain the water from the canister. Unit will remain in stand-by until next call for humidification.



**OPERATING TIME MONITOR** - Accumulates actual humidifier run time to activate periodic drain and fill cycles, end-of-season drain function and monitors the life of canister.

**EASY TO MAINTAIN** - No cleaning or scrubbing, simply remove canister and replace.

PRODUCT SPECIFICATIONS	
Model	801 (Ducted)
Steam Capacity Lbs/hr (Gal/day)*	
120 volts max amperage (16 amps) reduced amperage operation (11.5 amps)*	5.6 lbs/hr (16.0 gpd) 4.0 lbs/hr (11.5 gpd)
208 volts max amperage (16 amps) reduced amperage operation (11.5 amps)*	10.4 lbs/hr (30.0 gpd) 7.1 lbs/hr (20.5 gpd)
240 volts max amperage (16 amps) reduced amperage operation (11.5 amps)*	12.0 lbs/hr (34.6 gpd) 8.1 lbs/hr (23.3 gpd)
Cabinet - Enclosure	Metal - 22 gauge side, top and front access panels powder painted
Cabinet - Access	Easy front access to canister compartment and electrical compartment
Steam Dispersion Tube (Steam Distributor)	Stainless steel tube with properly size thermal-resin tubelets
Type of Steam Canister	Disposable canister - factory installed Zinc plated low carbon steel electrodes permanently fixed inside the canister Plug type connectors fixed to the molded canister top Water level and overfilling sensor within canister
LED Indicator Lights	On/Off button and operating indicator light Fill indicator Steam indicator Drain indicator Service light - end of canister life
Drain Water Temperature	Drain water not to exceed 140°F. Tempered with cold fill water
Door Switch Safety	Door Switch removes all power to canister for maintenance and troubleshooting
Modulating Configuration - (Proportional)	- Modulating 0-10vdc or 0-20 mA - Modulating 2-10vdc or 4-20 mA
Unit Control Configuration	Water level control Automatic refill, high water cutoff, and automatic drain-down Monitor the amperage draw Optimize water conductivity, minimize energy waste, and maximize cylinder life. Controls drain/flush cycles
Unit Dimension	20.88" H x 10.13" W x 7.13" D
Supply/Drain Connection	Supply: 1/4" copper - compression fitting - Drain: 7/8 for flex hose
Weight- Unit Only / Operating Weight	23 lbs / 27 lbs
Installation Accessories Included	6 ft of commercial grade steam hose, 10 ft drain hose, clamps/hardware
Warranty	5 years
Agency Recognized	ETL, (UL 998)
National Electrical Code	ANSI/NFPA 70 NEC
Supply Water Conductivity	125 to 1250 microS/cm
Supply Water Pressure range	25 to 120 psi

\* Capacity adjustment is accomplished by using a dip switch.

Water Hardness - 3 to 36 grain per gallon, water filtration typically not necessary. Canister replacement once per humidifier season under normal conditions. Canister life will depend on water quality and run time. Unit will automatically notify when canister must be replaced.

## BASIC APRILAIRE STEAM HUMIDIFIER OPERATION:

The Aprilaire® Steam Humidifier delivers humidity in the form of steam to the conditioned space via the HVAC system duct. The humidifier generates steam by energizing two electrodes that extend into a disposable canister filled with water. Current flowing between the electrodes causes the water to boil, creating steam. Water is introduced to the humidifier through a fill valve to a fill cup located in the top of the cabinet. The fill cup serves as an overflow reservoir and provides an air gap between the humidifier and water source. The steam canister is filled from the bottom. The canister is seated in a drain cup assembly which includes a drain valve. The drain and fill valves work together to maintain water level in the canister to satisfy the demand of the modulating control based on the electrical conductivity of the water.

## CONTROL OPERATION:

To modulate the steam output of the Model 801 a modulating control must be used.

When the modulating control detects RH below the set point, the humidifier energizes the electrodes in the canister to provide steam. Steam is delivered into the duct work via the steam hose and dispersion tube. The dispersion tube is fitted with openings called "Tablets™". The dispersion tube and Tablets are designed to distribute steam over a wide area in the duct and any condensation that may form in the dispersion tube and steam hose will be drained back into the canister. Humidification may be required when there is no need for heating or cooling, for this to occur the HVAC systems blower must be activated before steam is introduced to the duct. If the modulating control does not activate the HVAC system on a call for humidity we recommend using a blower activation relay. The modulating control will vary the Modulating Steam Humidifier's output based on the difference between the set point and actual RH. The Modulating control sends a proportional signal to the Modulating Steam Humidifier providing precise control of the living space humidity. Humidity can also be distributed directly into the living space via the Fan Pack, refer to the Model 866 operation and specifications for more detail.

## The Optional Aprilaire Model 63 Automatic Digital Modulating Control (ADMC) Package, includes the following items:

- Wall mounted digital humidistat: provides a proportional signal of 0-10Vdc or 2-10Vdc and operating in a range from 0 to 100% RH within a precision of 3% (see specification for Model 63)
- Duct humidity sensor: measure the RH in the duct and responds to the needs of the ADMC wall mounted humidistat. It also can be used as a high humidity sensor.
- Outdoor temperature sensor for temperature compensation
- Blower activation relay: when there is a call for humidity and HVAC system is idle the blower activation relay will turn ON the HVAC system blower to add humidity.

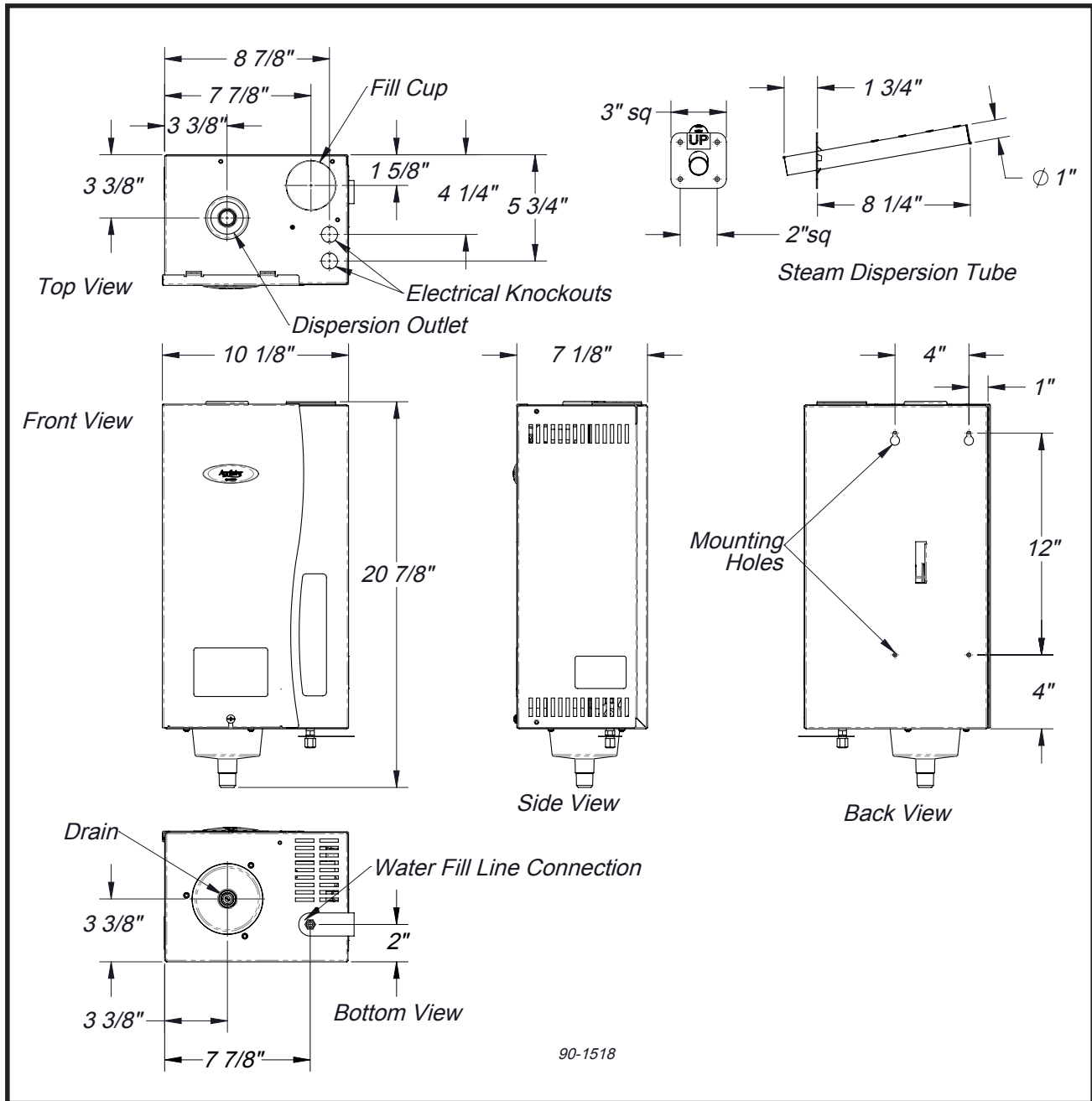
\* Model 63 is sold separately



## Other available accessories:

High humidity limit switch (4594): prevents high humidity levels in the duct. Airflow switch (4592): airflow proving switch to ensure airflow in the duct.

# MODEL 801 MODULATING STEAM HUMIDIFIER DIMENSIONAL DRAWING



Humidifier 801 with dimensional information



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