# **PURE Humidifier Company**

Options "ES" Series

#### To Humidifier

**Insulation.** Unit shall be covered (except bulkhead side) with 3/4" (1.90 cm) thick fiberglass duct insulation. Insulation material shall have aluminum facing.

**Freeze Protection.** A factory installed temperature sensor shall be mounted onto the humidifier reservoir. The system shall maintain the water temperature above freezing.

**Standby Water Temperature Sensing.** Consists of a temperature sensor to maintain water temperature at a selected level for fast response upon a call for humidity.

**DCT-927 Self Actuated Drain Tempering Kit.** The drain tempering kit is designed to provide drain and condensate water at a temperature of less than 140 °F.

### Mounting

**Support Legs.** Provide support legs made of 1 ½" x 1 ½" x ½" (3.2 cm) angle iron and painted with enamel gray paint. Distance from humidifier bottom to floor shall be 24" (61 cm).

**Wall Brackets.** Provide two wall brackets made of 1 ½" x 1 ½" x 1½" (3.2 cm) angle iron and painted with enamel gray paint.

#### **Injection Tubes**

**Injection tube(s) and Flexible Hose.** Each unit shall include one or more 10 ft. (305 cm) sections of 1 ½" (3.8 cm) I.D. flexible hose and a 1 ½" (3.8 cm) O.D. stainless steel injection tube long enough to extend across the duct. Steam ports shall direct steam upward into the airflow. The reservoir cover shall have a matching connection so the flexible hose can be connected with two stainless steel hose clamps. A two-piece duct plate shall be provided to seal the duct opening.

**Fast-Pac Multiple Tube Assembly.** Tube assembly consists of a stainless steel supply/condensate header with a 3/4"-NPT drain connection and horizontal 1 1/2"Ø stainless steel injection tubes.

**Insty-Pac Multiple Tube Assembly.** Tube assembly consists of a steam supply/separator header constructed of stainless steel with steam inlet, condensate drain outlet and steam jacketed injection tubes welded to header. Steam jacketed injection tubes constructed of stainless steel with punched steam ports of the proper size and spacing to deliver the maximum specified capacity.

#### **To Control Cabinet**

**Control Cabinet Factory Mounting.** Humidifier control cabinet shall be factory mounted and wired to the left side of the humidifier reservoir.

**NEMA 4 Control Cabinet.** A NEMA 4 weather tight control cabinet shall be substituted for the standard NEMA 12 cabinet.

**Control Panel Door Lock.** Control cabinet shall be provided with a factory installed key lock on the cabinet door.

## **Modulating Controls (select one)**

**Time Cycle Modulation.** Time cycle modulation provides 0-100% time proportioned control of the heater output. All heaters shall be time cycle modulated according to the demand. A modulating wall humidity sensor shall be provided with the system (+/- 3-4% RH).

**SCR Modulation.** SCR modulation provides 0-100% power modulation of the heater outputs down to a 1 second cycle rate. A modulating wall humidity sensor shall be provided with the system (+/- 1-2% RH).

#### **Controls**

**VAV Control.** The INTAC® software shall accept a modulating high-limit humidity input and space controlling RH input and modulate the heater output to prevent over saturation of the supply air due to changes in the quantity of airflow. A compatible space and duct humidity sensor shall be shipped loose for field installation.

**Outdoor Air Temperature Setback.** Provides automatic reduction of the RH set point to prevent condensation on windows during extreme cold weather. Includes duct mount temperature sensor.

**Zone Control.** A separate flexible hose kit with 24 volt zone control valve with humidity sensor (optional) will be provided for each zone specified. The zone valve will be sized to provide capacity requirements without exceeding 2" (5cm) W.C. pressure drop. The humidifier shall require one heater per zone and on humidity demand the zone valve(s) shall energize the appropriate heater(s).

**Air Flow Proving Switch.** A diaphragm operated air flow proving switch with adjustable range of .05" W.C. to 2.0" W.C. shall be provided for field installation.

**Duct High-Limit.** A high-limit humidistat shall be provided for duct installation. The high-limit shall be field set to prevent over saturation within the supply duct.