

PURE Humidifier Company
Sample Specification
“SX” Series

Humidifier

The humidifier shall be steam heated heat exchanger type as manufactured by PURE Humidifier Company of Chaska, Minnesota.

The humidifier shall be tested and approved by ETL/ETL-C Testing Laboratories, Inc (ETL #472940).

The humidifier shall have an evaporating reservoir with a gasket sealed cover which is capable of operating at pressures of at least 19”-48 cm (W.C.) without steam or water leaks. The reservoir shall be made of type 304 stainless steel with welded joints.

The humidifier shall be designed to facilitate easy removal of the heat exchanger for periodic scale removal and inspection. The cover and heat exchanger shall be secured to the unit by the use of quick release clamps. The heat exchanger shall be removable from the side of the humidifier without disturbing the cover or injection tube system’s steam supply piping.

Humidifier shall be field convertible from a steam heat exchanger style “SX” humidifier to an electric immersion heater style “ES” humidifier with a simple change of the side entry assembly.

The heat exchanger shall be constructed of type 304 stainless steel with rectangular heat transfer tubes and headers for improved scale removal and cleaning. Tubes shall be self-cleaning via expansion and contraction of tube. Coating of tubes is not required.

An adjustable surface water flusher shall be included to drain away a portion of the water upon each refill cycle. This will allow mineral deposits produced by earlier evaporation cycles to be removed. Flusher height should be adjustable for minimum water waste and efficient flushing.

A brass body, solenoid operated block style water fill valve with internal strainer shall be factory mounted on the top near the front of the humidifier reservoir. A bottom fill system shall be utilized to prevent any collapse of the steam head during the fill cycle. The fill valve shall be located to allow a minimum water gap of 1 ½” (3.81 cm). An internal strainer shall remove any water born particulate matter before the humidifier fill valve. The water strainer shall have a removable screen to permit periodic inspection and cleaning.

The humidifier shall be provided with an ETL/ETL-C listed JIC NEMA 12 control cabinet, shipped loose (optional factory mounting available). The control cabinet shall be made of 14-gauge steel with ANSI 61 gray polyester powder coating, continuous hinge and oil-resistant gasket. The panel shall include a factory wired sub-panel with control valve interlock, Tri-Probe water level control module, fused control circuit transformer, numbered terminal block and main power fuse(s).

A solid state, plug-in type control module shall be factory mounted within the control panel and shall electronically control the automatic refilling, low water cut-off, high water cut-off, manual surface water flushing, and safety switch interlock functions. The module shall include automatic drain functions to drain the reservoir. The drain period will be field adjustable in 10 hour increments from 10 to 150 hours with the drain duration adjustable in 2 minute increments between 2 and 30 minutes. During the drain period, the humidifier chamber will drain and the fill valve will be energized to provide a thorough rinsing action. After the drain period is completed, the drain valve will close and the humidifier will refill to provide humidity on demand.

The control module shall incorporate LED lights to indicate safety switch interruption, power, fill, heat ready, and drain. The control module shall control all water level control functions through a Tri-Probe sensor mounted on the top-front of the humidifier reservoir. The Tri-Probe sensor with stainless steel shield shall electrically sense the water level within the reservoir.

The control system shall maintain humidification during the fill cycle to maintain a consistent relative humidity.

Injection tube(s) shall be 1 ½" (3.81 cm) O.D. type 304 stainless steel, .049" wall, and shall be as long as required by the humidifier model and duct size. For each "Angle Tube" or "Universal Tube", the unit cover shall have a matching connection so that the tube can be connected by using an 8" (20.32 cm) flexible connector with stainless steel hose clamps. Two-piece duct plate shall be included for sealing the duct opening.