

SECTION 23 8415
STEAM HUMIDIFIERS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Dry steam humidifiers.
- B. Steam jacketed distribution manifolds.

1.02 RELATED REQUIREMENTS

- A. Section 23 0913 - Instrumentation and Control Devices for HVAC: Humidistats.
- B. Section 23 2213 - Steam and Condensate Heating Piping.
- C. Section 23 2214 - Steam and Condensate Heating Specialties.
- D. Section 26 2717 - Equipment Wiring: Electrical characteristics and wiring connections.

1.03 REFERENCE STANDARDS

- A. AHRI 610 (I-P) - Performance Rating Of Central System Humidifiers for Residential Applications; 2014.
- B. AHRI 611 (SI) - Performance Rating Of Central System Humidifiers for Residential Applications; 2014.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide catalog data indicating rated capacity, dimensions, duct and service connections, electric nameplate data and wiring diagrams.
- C. Shop Drawings: Indicate layout of system and components.
- D. Manufacturer's Instructions: Indicate installation instructions and recommendations.
- E. Operation and Maintenance Data: Include manufacturer's descriptive literature, operating instructions, installation instructions, maintenance and repair data, and parts listing.
- F. Warranty: Submit manufacturer's warranty and ensure forms have been completed in Owner's name and registered with manufacturer.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the type of products specified in this section, with minimum three years of documented experience.
- B. Products Requiring Electrical Connection: Listed and classified by Underwriters Laboratories Inc. as suitable for the purpose specified and indicated.

1.06 WARRANTY

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
- B. Provide two year manufacturer warranty for humidifier unit except the cylinder.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Armstrong International, Inc; _____: www.armstronginternational.com.
- B. Dri-Steem Corporation; _____: www.dristeem.com.
- C. Substitutions: See Section 01 6000 - Product Requirements.

2.02 DRY STEAM HUMIDIFIERS

- A. Humidifier: Steam separator type receiving steam at supply pressure and providing separation ahead of control valve, discharging through internal drying and silencing chambers, and distribution manifold at atmospheric pressure; complying with AHRI 610 (I-P).

- B. Body: Cast iron with integral metering valve, separating and drying chambers, and silencing chamber with stainless steel silencing medium.
- C. Separating Chamber: To disengage and remove water droplets and particle matter when operated at maximum capacity.
- D. Control Valve: Steam jacketed parabolic plug, capable of modulating flow of steam over entire stroke of operator with pneumatic operator.
- E. Internal Drying and Silencing Chambers: To receive steam at atmospheric pressure and jacketed by steam at supply pressure.
- F. Distribution Manifold: To provide uniform distribution over entire length, and jacketed by steam at supply pressure, with full length stainless steel internal silencing screen.
- G. Controls: Temperature switch before steam trap to prevent humidifier from operating before start-up condensate is drained.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Provide galvanized steel rods to support distribution manifolds and mount in air system plenums.
- C. Connect dry steam humidifiers to steam supply and to condensate piping. Provide gate valve, inlet strainer, and inverted bucket steam trap. Refer to Section 23 2213 and Section 23 2214.

END OF SECTION 23 8415