**General**

**TYPICAL SPECIFICATIONS FOR ACME**

**ES SERIES ELECTRIC STEAM SUPERHEATER**

Supply and install where shown on drawings, ES series package type Electric Steam Superheaters as manufactured by Acme Engineering Products. Units shall be skid mounted factory assembled, pre-wired, including automatic controls and factory tests.

The ACME Superheater shall heat lbs steam/hr entering at PSIG saturated with % steam quality at º F to a leaving temperature of º F and have an electrical capacity of \_KW at V PH HZ including a

10% allowance for losses and safety considerations. In and Out connections shall be in. flanges.

Provide pressure and temperature gauges on outlet and a safety relief valve.

**Pressure Vessel**

Pressure Vessel design shall be minimum 50 PSI and 100º F above operating conditions in order to allow for suitable settings of protection devices. Design to ASME Boiler and Pressure Vessel Code Section VIII Div. 1 and provide “U” stamp, National Board or CRN Registration.

Inlet & Outlet connections and flanged heating elements shall be class 300# flanges or higher if applicable.

Provide a suitable drain connection.

6 in. of high temperature insulation shall enclose the vessel behind a 2 in. angle frame supporting external panels in aluminum.

**Heating Elements**

The Heating Elements shall have ANSI class 300# flanges or higher if applicable with cooling extension to weather-proof terminal boxes. Heating blades shall be incoloy sheathed with a maximum watt dissipation of 25 w/in2.

Additional cost **option** for units up to 150 PSI and 500º F: Flanged heating elements shall have individually field replaceable blades with standard tools secured in the flange with stainless steel fittings. Flanges shall be insulated on the exposed side.

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**Power and Control Panel:**

NEMA 12 Enclosure shall include the following:

• Magnetic Breaker or Disconnect Switch, door interlocked;

• Buss Bars or Splitter Block;

• Fuses;

• Control Transformer fused primary;

• On-Off breaker for 120V control circuit;

• Dual Digital Display Electronic Controller, 1/4” DIN size for ease of operation;

• SCR Power Controller to modulate total heating capacity from 0 to 100%, according to steam flow variations;

• Semiconductor fuses to protect the SCRs;

• Thermocouple in outlet to detect leaving steam temperature. A minimum flow is required;

• Two levels of high steam temperature protection, one with automatic reset and the second one with manual reset in separate protection circuits for maximum security;

• Audible and visual alarm circuit with associated display lights, silencing button and horn.

• SPDT dry contacts for remote alarm supervision;

• **OPTIONAL:** Two SCR Power Controllers, each modulating half the total capacity, with slightly different time bases in order to reduce pulsations in the electrical distribution.