



SUPERIOR
RADIANT PRODUCTS

Superior Radiant AM Series Specification

Acceptable Manufacturer: Superior Radiant Products

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| <ul style="list-style-type: none">• <u>Canadian Location:</u>
563 Barton St.
Stoney Creek, ON, Canada L8E 5S1 | <ul style="list-style-type: none">• <u>United States Location:</u>
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Low Intensity Adaptive Modulating Infrared Tube Heaters. Heavy duty industrial/commercial infrared heater featuring the best overall performance in the industry automatically adjusts air and gas to properly regulate the temperature in a given space through a patent applied for technology to maintain up to 40% modulating differential by direct analog signal. The controls are to be simple, effective and non-proprietary. The AM unit must read the room and adjust itself accordingly. Pre-programed units will not be accepted. Steady state thermal efficiency will be in excess of 80%. 100% efficient reflector design. Baffles required as per manufacturer's instructions.

Assemblies shall be CSA approved low intensity heater to latest ANSI Z83.20 and CSA 2.34 for use in commercial and industrial applications. Burner shall be a positive pressure burner system where exhaust gases and other products of combustion are not routed through the blower. The burner shall operate at a minimum gas inlet pressure of 5.3 inches W.C. (natural gas) or 11.8 inches W.C. (propane) and draw no more than 1.2 Amp at 120VAC, 60Hz.

Burner head shall be chrome plated steel and burner controls shall be located outside of the air supply stream to allow service and diagnostic control checks with the burner operating. Reflector shall have a minimum 10-sided design reflecting virtually 100% of the infrared energy out and away from the emitter tubes. Reflector shall be "Deep Dish" design with emitter tubes fully recessed within reflector. Reflectors with fewer than 10 surfaces will not be allowed as they allow energy to bounce back to the main heat exchanger tubing. Reflector shall be mill-finished aluminum, ASTM 1100, .024 inch thickness aluminum sheet metal with two reflector support brackets for each 10 feet (3048 mm) reflector section. Reflectors shall extend below the lowest position of the tubing at all times. Reflector end caps shall be fitted to the end of each reflector run to reduce convective heat loss, and shall be standard equipment. Emitter Tube shall be 4 inch (102 mm) diameter, minimum 16 gauge thickness. Combustion Tube shall be 4 inches (102 mm) diameter, 16 gauge, heat treated type 1 aluminized steel tubing and shall be required for all firing rates. Hot rolled steel combustion tubing shall not be allowed. Combustion tubing shall incorporate a welded, 11 gauge steel, 4 bolt flange to orient the burner to the tube as designed. Couplings shall be 16 gauge aluminized steel, minimum 12 inches in length and be of heavy duty design incorporating two 1-inch wide draw bands.

This product was specified based on best practice design to meet the specific engineered design criteria for this project. Any submission for substitution must include the following material for consideration or bid will be deemed unqualified and rejected:

- Independent testing to show adaptive modulation to 40% modulating differential
- Professional Engineer Stamped Design, calculations and complete set of stamped drawings with alternate system.
- Stamped fuel usage data showing a minimum 20% fuel savings over specified Superior Radiant Model
- Verification that Manufacturer successfully completed and passed the auditing requirements for ISO 9001 Quality Management System (QMS).