



Superior Radiant M 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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Kennesaw, GA 30144 |
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Assemblies shall be CSA approved high intensity heaters to ANS1 Z83.19 (latest revision) and CSA 2.35 (latest revision). Approval shall include components of the complete heater, including burners, reflectors, accessories, thermostats and associated controls and specifications. Installations of units shall comply with local building codes, or in their absence, the latest edition of the national regulations and procedures listed below. Heaters shall be electrically grounded in accordance with the National Electric Code, ANSI/NFPA 70 in the US, and the Canadian Electric Code, CSA C22.1 in Canada, and shall comply with all local requirements. Heaters shall be installed only for use with the type of gas appearing on the rating plate, and the installation shall conform to the National Fuel Gas Code, ANSI Z223.1 (NFPA 54) in the US and the Natural Gas and Propane Installation Codes, CAN/CGA B 149.1 & B149.2 in Canada. The Manufacturer warrants to the original owner that the product will be free of defects in material and workmanship. For the M Series, the warranty for all components except for the ceramic burner head assembly is limited to 24 months from the date of installation. The ceramic burner head assembly shall be warranted for an additional 8 years for units which are proven to the satisfaction of the manufacturer to be inoperative due to defects in material or workmanship.

Basis-of-Design Product shall be Superior Radiant Products Model M Series high intensity type gas-fired radiant infrared heaters with firing rates as called for within the range of 21 MBH to 125 MBH. CSA approved complete with single body burner head, ignition control, valve & gas pressure switch. Heaters must provide radiant factor of at least 77.3% as tested to EN 419-2 standard and provide documentation upon request and shall cover entire infrared spectrum – from short to long wavelengths at a minimum gas inlet pressure of 6.5 inches W.C. (natural gas) and 12 inches W.C. (propane). Maximum inlet pressure for both fuel types is 14 inches W.C. The unit shall draw no more than 20 VA at either 24 VAC or 120VAC, 60Hz. The heater shall perform a controlled and clean surface combustion. The resulting quantity of noxious components CO and NOx shall be CO: 20 – 200 ppm; NOx: 4 – 10 ppm. Heater body shall be comprised of Burner-head (mixing chamber, ceramic emitter tiles and steel mesh), outer body and reflector assemblies. Burner head shall be stainless steel venturi and shall provide for pre-heat of the air-fuel mixture to achieve higher efficiency. Ignition shall be solid-state direct spark and make a minimum of 3 ignition attempts before lockout. Ignition shall have openly accessible sense current contacts. Gas valve shall include a manual valve, two magnetic operators and a standard gas pressure regulator and have pressure taps to measure inlet and manifold pressures. Controls shall incorporate a gas pressure switch capable of shutting off power to the ignition module in case of inlet gas pressure drops below the minimum requirement.

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 lab testing to EN416-2 standard dated no later than 6 months from date of submission showing minimum 77% radiant factor.
- Professional Engineer Stamped Design, calculations and complete set of stamped drawings with new 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).

