

CB SERIES

ARCHITECTURAL/ENGINEERING SHORT FORM SPECIFICATIONS

Gas-fired infrared space heaters shall be furnished and installed in accordance with governing codes and as shown per building drawing(s) as described below:

Heaters shall be SPACE-RAY CB series tube heaters, model number(s) CB_____, rated at _____ Btu/hr as manufactured by Gas-Fired Products, Inc., Charlotte, North Carolina. Heaters shall be equipped with a 24-volt direct spark ignition with automatic 100% shutoff system. Power supplied to each heater shall be 120 VAC, 60 Hz. The series shall be available with a single stage input (N5 or L5 Controls) or two stage inputs (N7 or L7 Controls). The heater controls shall include a pressure switch designed to provide complete unit shutoff in the event of combustion air or flue blockage. The heaters shall be equipped with an on-line diagnosis monitoring light system. The three lights shall monitor the power to the heater, insufficient airflow, spark ignition and the combination gas valve operation.

The heater's burner shall consist of a cast iron atmospheric burner. The flame characteristics shall be highly luminous for maximum radiant heat transfer through the emitter tube wall.

The heater's emitter tube shall operate at an average surface temperature of 750°F and shall be made of 16-gauge, aluminized steel for long life (3" O.D.). The emitter tube shall be calorized for longevity, corrosion resistance and high radiant efficiency for use in high humidity and harsh environment installations (Car washes, outdoor covered patios and restaurants, wash bays, golf driving ranges etc.) The measured surface emissivity shall be 0.80-0.82 at operating temperature. The calorization process shall produce an emitter tube that is highly radiant absorptive (0.95) on the interior and highly radiant emissive (0.80-0.82) on the exterior.

To assure a high degree of safety and increased radiant efficiency, the heaters shall operate under negative pressure (pull through system) at all times during operation to preclude the escape of combustion gases inside the building. Heaters that operate under positive pressure (push through system) will not be accepted. The heater exhaust assembly shall include a 120-volt draft inducer. The draft inducer shall be equipped with a permanently lubricated, totally enclosed, shielded, fan cooled and heavy-duty ball bearing motor. The motor shall not require maintenance or lubrication for the life of the unit. The draft inducer assembly shall be capable of rotating 90° for vertical or horizontal venting.

The heaters will be CSA design certified for vertical or horizontal venting, maximum 75 feet horizontal sidewall venting and for 50 feet outside combustion inlet duct. There shall be no draft hoods. The combustion chamber shall be totally enclosed.

The heaters shall utilize factory assembled, highly efficient aluminum reflectors with a reflectivity of 97.5%. The reflector ends shall be enclosed for maximum radiant heat output and minimum convection losses. The tube body and U-bend shall be totally enclosed with reflectors to maximize emitter temperature. The single reflector design shall cover the firing and exhaust legs as well as the u-bend.

The heaters shall be factory assembled and tested. The heaters shall not require any field wiring or adjustments to assure maximum performance and safety. The manufacturer shall include a 36" long, 5/8" OD heavy-duty stainless steel (powder painted in yellow color) flexible gas connector as part of the heater

Heaters shall operate satisfactorily in any position from horizontal to forty-five degrees (45°) from horizontal and shall be suitable for direct venting/indirect venting applications. Heaters shall be designed to operate on natural or propane gas.

Heaters shall be design certified by the Canadian Standards Association (CSA) to American National Standard Z83.20/CSA 2.34. The manufacturer shall provide a written limited warranty covering the heavy one-piece cast iron burner for a period of ten (10) years, the emitter tube for a period of five (5) years, and all components utilized in the heater's control assembly for a period of one (1) year.