



2- Stage High Intensity Gas Infra-Red Heaters

Project:

Approved:

Equipment:

GAS FIRED INFRA-RED HEATERS:

The heaters shall be CSA International design certified and manufactured in compliance with the harmonized standard Z83.19.19 CSA 2.35-latest edition, approved by the American Standards Institute, Inc and the Interprovincial Gas Advisory council. Heaters shall be fully tested and ready to hang, pipe and wired for operation and bear the A.G.A. or CGA serial plate on Natural or LP/Propane Gas.

Gas fired infra-red heaters shall be furnished and installed in accordance with local codes, building drawings and manufacturer’s recommendations. Heaters shall be vented by air displacement of 4 CFM for natural or 5 CFM for propane gas. (In Canada: 3 CFM for natural or 4 CFM for propane gas). One (1) square inch of net free inlet area shall be provided per 1,000 BTUH input.

TWO-STAGE OPERATION:

Heaters shall be capable of two-stage operation on low and high modes in conjunction with a 24 volt 2-stage microprocessor thermostat.

Heaters shall be Solaronics HLK Series with control suffix letters HLN (natural gas) or HLL (propane gas), as manufactured by Solaronics, Inc., Rochester, Michigan (1-800-223-5335) of the MBTUH indicated by the model number and shall be supplied by the original equipment manufacturer. Heaters shall be of an atmospheric design with air and gas ratios precisely matched for optimal combustion.

CONTROLS:

Controls shall be Direct Spark Ignition with 100% safety shut-off with flame monitoring and operate on 25 VAC 6VA maximum power consumption.

THERMOSTAT:

Thermostat shall be 24 Volt, Mercury free- Microprocessor control two-stage thermostat with “Smart Control” heat compensation, self-diagnostic capability, field adjustment for anticipator, Fahrenheit/Celsius and offset for room temperature.

BURNER HEAD/COMBUSTION SURFACE:

The burners(s) shall include the ceramic combustion surface, a plenum chamber, a venturi mixer and shall be removable with a single screw for cleaning or replacement without disconnecting any gas, electrical or

hanging device. The ceramic combustion surface shall be capable of reaching temperatures up to 185°F (an

incandescent appearance) and withstand thermal shock when water quenched. It shall be a cordierite-based grooved ceramic of an exclusive permeable design whereby alternate rows of 230 perforations per square inch, terminate at the bottom of slots making one half of the flame below the top surface of the ceramic and creating a more intimate contact between flame and surface. This will increase the ceramic surface temperature and the radiant output while maintaining a lower gas input and achieving greater wind resistance.

The plenum chamber shall be of a 20 Ga. (.035”) corrosion-free aluminized steel, one-piece fabrication and seamless no-weld construction. The plenum chamber shall utilize a one- piece stainless steel retainer to hold the ceramic surface in place around its entire perimeter, a 14 Ga. (.083”) aluminized steel, back bracket for holding it in place to achieve proper alignment of the surface, venturi and orifice.

MAIN FRAME:

The main frame shall be 16 Ga. (.065”) corrosion-free aluminized steel and of no weld construction. The main frame shall have a double turned upper edge. The side frames shall have four (4) 3’8” holes for easy mounting of an “S” hook and chain.

REFLECTORS :

Reflectors shall be of 21 Ga. (0.032”) Mirror Brite Aluminum Finish (highly polished) with .352 square feet of reflective area per linear foot. Reflector design (shape) shall be of standard design and be mounted to the heater at the factory. Material finish shall have a reflectivity of not less than 98%. The reflector shall have a double turned lower edge for rigidity. An optional parabolic reflector extension is used for concentrating infra-red energy, usually for spot heating or higher mounting height applications.

WARRANTY:

The manufacturer shall warrant the entire heater including burner and controls for a period of one (1) year.



High Intensity Gas Infra-Red Heaters

| 30,000 to 60,000 BTUH | | | | 70,000 - 100,000 BTUH | | | | 110,000 - 160,000 BTUH | | | | 160,000 - 200,000 BTUH | | | |
|-----------------------------------|----------|-------|------|-----------------------|----------|-----------|-------|------------------------|----------|------------|-------|------------------------|----------|------------|-------|
| Model | Gas Type | MBTUH | KW | Model | Gas Type | MBTUH | KW | Model | Gas Type | MBTUH | KW | Model | Gas Type | MBTUH | KW |
| S-30 DSAN | Natural | 30 | 8.8 | S-70 DSAN | Natural | 70 | 20.5 | S-120 DSAN | Natural | 120 | 35 | S-200 DSAN | Natural | 200 | 59 |
| S-40 DSAN | Natural | 40 | 11.7 | S-70 DSAL | Propane | 70 | 20.5 | S-120 DSAN | Propane | 120 | 35 | S-160 DSAL | Propane | 160 | 47 |
| S-50 DSAN | Natural | 50 | 14.7 | S-80 DSAN | Natural | 80 | 23.4 | S-50 DSAN | Natural | 50 | 15 | | | | |
| S-50 DSAL | Propane | 50 | 14.7 | S-80 DSAL | Propane | 90 | 26.4 | S-50 DSAL | Propane | 50 | 15 | | | | |
| | | | | S-100 DSAL | Natural | 100 | 29.3 | | | | | | | | |
| Two Stage Models | | | | SHLK-100/50 | Natural | 50 to 100 | 15/30 | SHLK-150/100 | Natural | 100 to 150 | 15/30 | SHLK-200/100 | Natural | 100 to 200 | 28/59 |
| | | | | SHLK-100/50 | Propane | 45 to 90 | 13/26 | SHLK-120/80 | Propane | 80 to 120 | 24/36 | SHLK-160/80 | Propane | 80 to 160 | 24/48 |
| Clearance to Combustibles: | | | | | | | | | | | | | | | |
| | | Inch | cm | | | Inch | cm | | | Inch | cm | | | Inch | cm |
| Side of the Heater | | 30 | 77 | | | 36 | 95 | | | 48 | 106 | | | 48 | 106 |
| Back of the Heater | | 30 | 77 | | | 30 | 77 | | | 33 | 84 | | | 33 | 84 |
| Top of the Heater | | | | | | | | | | | | | | | |
| Mounted 0-29 deg | | 60 | 153 | | | 62 | 158 | | | 68 | 173 | | | 68 | 173 |
| Mounted at 30 deg | | 48 | 122 | | | 50 | 127 | | | 68 | 173 | | | 68 | 173 |
| With Heat Shield | | 34 | 87 | | | 38 | 97 | | | N/A | N/A | | | N/A | N/A |
| Below the Heater | | | | | | | | | | | | | | | |
| Overall Dimensions: | | | | | | | | | | | | | | | |
| Length | | 16.75 | 43 | | | 25.25 | 64 | | | 33.88 | 86 | | | 42.5 | 108 |
| Width | | 28.63 | 73 | | | 25.63 | 65 | | | 25.63 | 65 | | | 28.63 | 73 |
| Depth | | 8.75 | 23 | | | 8.75 | 23 | | | 8.75 | 23 | | | 8.75 | 23 |
| Shipping Weight | | | | | | | | | | | | | | | |
| | | lb | Kg | | | lb | Kg | | | lb | Kg | | | lb | Kg |
| | | 30 | 13.6 | | | 36 | 16 | | | 49 | 22 | | | 62 | 28 |
| | | | | SHLK | | 41 | 19 | | | SHLK | 54 | 25 | | 67 | 30 |

| SYSTEM INFORMATION | Natural Gas | Propane |
|-----------------------------|-------------|----------|
| Manifold Operating Pressure | 6" W.C. | 10" W.C. |
| Minimum Inlet Pressure | 7" W.C. | 8" W.C. |
| Maximum Inlet Pressure | 14" W.C. | 14" W.C. |