



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

Model	Gas Type	MBTUH	KW
S-30 DSAN	Natural	30	8.8
S-40 DSAN	Natural	40	11.7
S-50 DSAN	Natural	50	14.7
S-50 DSAL	Propane	50	14.7

Two Stage Models

Clearance to Combustibles:

	Inch	cm
Side of the Heater	30	77
Back of the Heater	30	77
Top of the Heater		
Mounted 0-29 deg	60	153
Mounted at 30 deg	48	122
With Heat Shield	34	87
Below the Heater		

Overall Dimensions:

	Inch	cm
Length	16.75	43
Width	28.63	73
Depth	8.75	23

Shipping Weight

	lb	Kg
	30	13.6



70,000 - 100,000 BTUH

Model	Gas Type	MBTUH	KW
S-70 DSAN	Natural	70	20.5
S-70 DSAL	Propane	70	20.5
S-80 DSAN	Natural	80	23.4
S-80 DSAL	Propane	90	26.4
S-100 DSAL	Natural	100	29.3

SHLK-100/50	Natural	50 to 100	15/30
SHLK-100/50	Propane	45 to 90	13/26

	Inch	cm
Side of the Heater	36	95
Back of the Heater	30	77
Top of the Heater		
Mounted 0-29 deg	62	158
Mounted at 30 deg	50	127
With Heat Shield	38	97
Below the Heater		

Overall Dimensions:

	Inch	cm
Length	25.25	64
Width	25.63	65
Depth	8.75	23

Shipping Weight

	lb	Kg
	36	16
SHLK	41	19



110,000 - 160,000 BTUH

Model	Gas Type	MBTUH	KW
S-120 DSAN	Natural	120	35
S-120 DSAL	Propane	120	35
S-50 DSAN	Natural	50	15
S-50 DSAL	Propane	50	15

SHLK-150/100	Natural	100 to 150	15/30
SHLK-120/80	Propane	80 to 120	24/36

	Inch	cm
Side of the Heater	48	106
Back of the Heater	33	84
Top of the Heater		
Mounted 0-29 deg	68	173
Mounted at 30 deg	68	173
With Heat Shield	N/A	N/A
Below the Heater		

Overall Dimensions:

	Inch	cm
Length	33.88	86
Width	25.63	65
Depth	8.75	23

Shipping Weight

	lb	Kg
	49	22
SHLK	54	25



160,000 - 200,000 BTUH

Model	Gas Type	MBTUH	KW
S-200 DSAN	Natural	200	59
S-160 DSAL	Propane	160	47

SHLK-200/100	Natural	100 to 200	28/59
SHLK-160/80	Propane	80 to 160	24/48

	Inch	cm
Side of the Heater	48	106
Back of the Heater	33	84
Top of the Heater		
Mounted 0-29 deg	68	173
Mounted at 30 deg	68	173
With Heat Shield	N/A	N/A
Below the Heater		

Overall Dimensions:

	Inch	cm
Length	42.5	108
Width	28.63	73
Depth	8.75	23

Shipping Weight

	lb	Kg
	62	28
SHLK	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.