

# SUBMITTAL DATA



## UNIT HEATER

For Industrial/ Commercial Use

PROJECT	
ENGINEER	
CONTRACTOR	
DISTRIBUTOR	
HEATSTAR MODEL	
FUEL	<input type="checkbox"/> NATURAL GAS <input type="checkbox"/> LIQUID PROPANE GAS
APPROVED BY	
DATE	
APPROVAL #	

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# HeatStar Unit Heater Specifications

## 1. Heater Specifications

- a. Gas fired vented infrared heaters shall be furnished and installed in accordance with local codes and as shown per building drawings.
- b. Heaters shall be Design Certified by C.S.A. (Canadian Gas Association) formally A.G.A. Under the American National Standard (ANSI) Z83.8-2016 • CSA 2.6-2016. The supplier shall provide C.S.A. certificate numbers and heaters shall bear the C.S.A. Seal of Certification.
- c. Manufacture shall warrant mechanical and electrical components per the owner's manual specifications.
- d. The supplier shall furnish owner/contractor with copies of engineering specification forms for each model, showing the physical dimensions, installation detail and recommendations, control wiring diagrams, and spare parts list.
- e. Heaters shall be so designed to satisfactory operate at a minimum inlet gas pressure of 6" NG / 11" LP inches W.C. to a maximum inlet gas pressure of 14" LP /NG inches W.C.
- f. Heater shall be certified for use with natural gas and will be designated type gas on heater per the nameplate. LP gas conversion kits are available for purchase for field conversion from natural to LP gas.
- g. Heaters can be installed with two different vent systems depending on the heater model.  
(Power Vent or Separated Combustion)

## 2. Heater Control System

- a. Unit heater shall be equipped with direct spark ignition control system and operate with 100% shut-off ignition device. Power supplied to each heater shall be 120 V, 60Hz, single phase. Burners shall be rated for 5 percent of the voltage rating of the heater and each phase must be balanced within 2 percent of each other. (HSU100-HSU150: 115V/5A/1H) - (HSU200-HSU250: 115V/7A/1H) (HSU300:115V/10A/1H) - (HSU400: 115V/12A/1H)
- b. Heater controls shall include a single pressure switch to provide complete unit shut off in the event of insufficient air or flue blockage.
- c. Heaters are equipped with a pressure switch which can determine if the vent system and heat exchanger are blocked.
- d. Heater shall be capable of being controlled with a low voltage (24 volt) thermostat without additional external, internal wiring, or relays.
- e. The burner control box shall be constructed of 18-gauge steel with an industrial powder coated finish.
- f. Refer to model number on the heater to determine the vent system: Power vent units use an adapter for connecting the vent pipe and Separated combustion units have an inlet air pipe adapter for connecting the inlet air pipe and separate adapter for the vent pipe. (4" HSU150-200) - (6" HSU250-HSU400)

## 3. Heater Construction

- a. The material used in the heater's heat exchanger are aluminized steel and stainless steel refer to model number.
- b. Models HSU100 to HSU400 there are four mounting holes on top of the heater for 3/8"-16 threaded rod. Locking nuts and washers should be used to lock the threaded rod tightly into the heater mounting holes.

## 4. Certification

- a. The heaters are design certified by C.S.A. (Canadian Gas Association) formally A.G.A. Under The American National Standard (ANSI) Z83.8-2016• CSA 2.6-2016.
- b. Heaters shall be certified with natural or LP (propane) gas and will be designated as such on the heater name plate.
- c. Heater is manufactured to be installed only in a level horizontal position.

- d. Heater must be vented to the outdoors and must have proper air for combustion. Horizontal venting is Category III and must be vented in vent pipe to UL 1738 and vertical venting is Category I. Refer to installation manual for proper venting lengths/installation and refer to local/national codes.

**5 Warranty**

Heatstar Unit Heater series are warranted for a period of 3 years on parts (limited to 1 year in high humidity or caustic environments), 10 years on the Aluminized Steel Heat Exchanger (limited to 5 years when installed in corrosive environments), and 10 years on the Stainless Steel Heat Exchanger from the date of delivery to the buyer.

<b>TABLE 1A: MODEL CONFIGURATIONS</b>						
<b>POWER VENTED COMBUSTION UNIT HEATER (Aluminized Steel Heat Exchanger)</b>						
<b>QUANTITY ON THIS PROJECT</b>	<b>STOCK #</b>	<b>MODEL #</b>	<b>DIMENSION W x H x D (inches)</b>	<b>SHIPPING WEIGHT (lbs.)</b>	<b>BTU</b>	<b>Flue Size (inches)</b>
	*F163060	HSU100NGPALP	36" x 20.7" x 32"	152	100,000	4"
	*F163061	HSU125NGPALP	36" x 20.7" x 32"	152	125,000	4"
	F163062	HSU150NGPALP	33.5" x 23.5" x 33"	170	150,000	4"
	F163063	HSU200NGPALP	40.5 x 26.3" x 35"	212	200,000	4"
	F163064	HSU250NGPALP	40.5" x 29" x 35"	244	250,000	6"
	F163065	HSU300NGPALP	40.5" x 31.8" x 35.8"	264	300,000	6"
	F163066	HSU400NGPALP	40.5" x 40" x 36.3"	341	400,000	6"

*\*100,000 & 125,000 BTU model is available by special order only*

<b>TABLE 1A: MODEL CONFIGURATIONS</b>						
<b>POWER VENTED COMBUSTION UNIT HEATER (Stainless Steel Heat Exchanger)</b>						
<b>QUANTITY ON THIS PROJECT</b>	<b>STOCK #</b>	<b>MODEL #</b>	<b>DIMENSION W x H x D (inches)</b>	<b>SHIPPING WEIGHT (lbs.)</b>	<b>BTU</b>	<b>Flue Size (inches)</b>
	*F163050	HSU100NGSSP	36" x 20.7" x 32"	152	100,000	4"
	F163051	HSU125NGPSSP	36" x 20.7" x 32"	152	125,000	4"
	*F163052	HSU150NGPSSP	33" x 23.5" x 33"	166	150,000	4"
	F163053	HSU200NGPSSP	40.5 x 26.3" x 35"	212	200,000	4"
	F163054	HSU250NGPSSP	40.5" x 29" x 35"	244	250,000	6"
	F163055	HSU300NGPSSP	40.5" x 31.8" x 35.8"	264	300,000	6"
	F163056	HSU400NGPSSP	40.5" x 40" x 36.3"	341	400,000	6"

*\*100,000 & 150,000 BTU model is available by special order only*

**TABLE 2A: MODEL CONFIGURATIONS**

SEPARATED COMBUSTION UNIT HEATER (Aluminized Steel Heat Exchanger)

QUANTITY ON THIS PROJECT	STOCK #	MODEL #	DIMENSION W x H x D (inches)	SHIPPING WEIGHT (lbs.)	BTU	Flue Size (inches)
	*F163040	HSU100NGPAL	36" x 20.7" x 32"	152	100,000	4"
	*F163041	HSU125NGPAL	36" x 20.7" x 32"	152	125,000	4"
	*F163042	HSU150NGPAL	33.5" x 23.5" x 33"	170	150,000	4"
	F163043	HSU200NGPAL	40.5 x 26.3" x 35"	212	200,000	4"
	F163044	HSU250NGPAL	40.5" x 29" x 35"	244	250,000	6"
	F163045	HSU300NGPAL	40.5" x 31.8" x 35.8"	264	300,000	6"
	F163046	HSU400NGPAL	40.5" x 40" x 36.3"	341	400,000	6"

**TABLE 2A: MODEL CONFIGURATIONS**

SEPARATED COMBUSTION UNIT HEATER (Stainless Steel Heat Exchanger)

QUANTITY ON THIS PROJECT	STOCK #	MODEL #	DIMENSION W x H x D (inches)	SHIPPING WEIGHT (lbs.)	BTU	Flue Size (inches)
	*F163030	HSU100NGPSS	36" x 20.7" x 32"	152	100,000	4"
	*F163031	HSU125NGPSS	36" x 20.7" x 32"	152	125,000	4"
	*F163032	HSU150NGPSS	33" x 23.5" x 33"	166	150,000	4"
	F163033	HSU200NGPSS	40.5 x 26.3" x 35"	212	200,000	4"
	F163034	HSU250NGPSS	40.5" x 29" x 35"	244	250,000	6"
	F163035	HSU300NGPSS	40.5" x 31.8" x 35.8"	264	300,000	6"
	F163036	HSU400NGPSS	40.5" x 40" x 36.3"	341	400,000	6"

\*100,000, 125,000 &amp; 150,000 BTU model is available by special order only

**GAS PRESSURE & ELECTRICAL**

LINE MINIMUM	LINE MAXIMUM	MANIFOLD	ELECTRICAL	GAS CONNECTION
6" WC NG 11" WC LP	14" WC NG 14" WC LP	3.5" WC NG 10" WC LP	120V, 60 HZ.	½" INLET (HSU100-200) ¾" INLET (HSU250-400)

**TABLE 5: IGNITION INFORMATION**

COMPONENT	FUNCTION
Gas Valve 24VAC	15 second purge
Ignition module	LED diagnostic
Burner Box	Steel with power coated black finish
Rollout Switch and Pressure Switch	Safety Switches

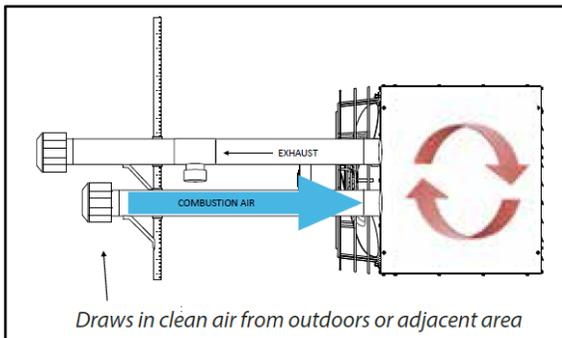
**TABLE 5: CLEARANCE TO COMBUSTIBLES**

MODEL	SUSPENDED HORIZONTALLY				
	TOP & BOTTOM	ACCESS SIDE	NON-ACCESS SIDE	REAR	MAXIMUM HEIGHT INSTALL
HSU100	1"	1"	1"	18"	12 FT
HSU125	1"	1"	1"	18"	14 FT
HSU150	6"	6"	1"	18"	14 FT
HSU200	6"	6"	1"	18"	16 FT
HSU250	6"	6"	1"	18"	18 FT
HSU300	6"	6"	1"	18"	18 FT
HSU400	6"	6"	1"	18"	20 FT

**REPLACEMENT PARTS – UNIT HEATER**

Part #	Item Description	QTY	Part #	Item Description	QTY
60366	Flame Sensor		60397	Fan Motor (HSU300)	
60375	Spark Igniter		60398	Fan Motor (HSU400)	
60376	Gas Valve (HSU100, HSU200)		60421	Combustion Blower (HSU100-HSU250)	
60377	Gas Valve (HSU250-HSU400)		60422	Combustion Blower (HSU300-HSU400)	
60387	Transformer		60427	Limit Switch	
60388	Relay (Only HSU400)		60435	Removable Panel (HSU100-HSU125)	
60473	Pressure Switch (HSU100, HSU125)		60436	Removable Panel (HSU150)	
60389	Pressure Switch (HSU150, HSU200)		60437	Removable Panel (HSU200)	
60390	Pressure Switch (HSU250)		60438	Removable Panel (HSU250)	
60472	Pressure Switch (HSU300)		60474	Removable Panel (HSU300)	
60391	Pressure Switch (HSU400)		60475	Removable Panel (HSU400)	
60392	Ignition Module		60439	Upper Removable Panel (HSU400)	
60394	Fan Motor (HSU100, HSU125)		60476	Air Deflectors (HSU100(7), HSU125(7),HSU150(8))	
60395	Fan Motor (HSU150)		60477	Air Deflectors (HSU200(9), HSU250(10),HS300(11), HSU400(14))	
60396	Fan Motor (HSU200, HSU250)		60455	Deflector Springs (HSU100(7), HSU125(7),HSU150(8), HSU200(9) HSU250(10), HSU300(11), HSU400(14))	

Separated Combustion Unit Heater



Power Vented Unit Heater

