

LH Series Natural Gas Line Heaters

The Cata-Dyne™ LH Line Heater prevents equipment freezing and possible hydrate formation during pressure reduction at natural gas regulating sites. The LH Line Heater heats the gas stream using infrared radiant heat transfer, eliminating the use of burners, glycol fluid and high maintenance heat exchange systems. It is also used to condition fuel gas for natural gas fired turbines or engines, and for heating gas and diluent streams in a variety of process applications. Custom engineered units for nonstandard applications are available.

The Cata-Dyne™ LH Line Heater's use of direct infrared heat transfer eliminates the need for traditional gas fired glycol bath systems. The elimination of glycol based heat transfer systems results in a more environmentally favourable installation. High field maintenance and operating costs are all eliminated by the Cata-Dyne™ LH Line Heater.

Applications

Cata-Dyne™ Line Heaters are used for a variety of applications in the oil & gas, pipeline, midstream, gas distribution, and power generation industries. Common applications include:

- Heating high pressure natural gas prior to pressure reduction to prevent equipment freezing and the formation of hydrates.
- Conditioning fuel gas for natural gas fired turbines and engines.
- Heating of gas and diluent streams in a variety of process applications.

Features

- Infrared radiant energy provided by the silent Cata-Dyne™ WX Gas Catalytic Heater is NOx free providing the cleanest and quietest heating system available.
- The flanged multi-pass coil heat exchanger is designed and built to the ASME B31.3 Code for Process Piping with Canadian Registration Number.
- Enclosures feature galvanized steel structures with stainless-steel cladding, limiting corrosion and maintenance.
- Control options from manual stop/start with and without temperature control to remote start/stop and automated feedback pneumatic or electric temperature control.
- Automatic units feature engineered control panels with PLC control systems.
- Infrared heat is accurately controlled to meet process temperature requirements while economizing operating costs.
- Standard high temperature shutdowns, optional low flow shutdowns available.
- Fuel gas system designed and built in accordance with CSA/Can – B149.1 and NFPA 54.
- Electrical system designed and built in accordance with CSA/Can – C22.2 and NEC (NFPA 70).
- Catalytic heaters conform to ANSI Z83.20a-2010/ CSA 2.34a-2010 standard for Gas-Fired Low Intensity Heaters and are CSA and FM certified for use in Class I, Division 1 or 2, Group D hazardous locations.



Table 15 – Line Heaters

Model No.	Heater Input (Btu/hr)		External Dimensions in (mm)
	Min.	Max.	Length x Width x Height
LH-40	10,000	40,000	56 x 48 x 84 (1420 x 1219 x 2130)
LH-60	15,000	60,000	
LH-80	20,000	80,000	
LH-100	25,000	100,000	78 x 68 x 90
LH-160	40,000	160,000	(1980 x 1725 x 2286)

Hybrid Capabilities

Only Thermon Heating Systems, Inc. offers the optional Catalytic/Electric Hybrid Line Heater. A secondary electric gas circulation heater is used to augment the capabilities of the base catalytic line heater. The hybrid design provides enhanced responsiveness to gas flow transients and deeper turn-down capabilities.

Note:

1. Custom designs and Btu ratings are available upon request.
2. Heater output between minimum and maximum values is manually selected on manual and sequential models.
3. Automatic zone control is only available with the automatic model.

Model Coding

LH	40	M	NT	12	1	600
Model Series LH – Line Heater		Start-up Type M - Manual S - Sequential A - Automatic (engineered option)		Start-up Voltage (VAC) 12, 120, 208, 240, 480, 600 *Custom LH-160 and above		Flange Rating 600 - 600 ANSI 900 - 900 ANSI
	Heater Input 40 - 40,000 Btu/hr 60 - 60,000 Btu/hr 80 - 80,000 Btu/hr 100 - 100,000 Btu/hr 160 - 160,000 Btu/hr		Temperature Control NT - Fixed heat output, outlet temperature not controlled T* - Variable heat output, low/high, outlet temperature controlled. *Variable control from 40% to 100% of heater output.		Flange Size 1 - 1" 2 - 2" 3 - 3"	

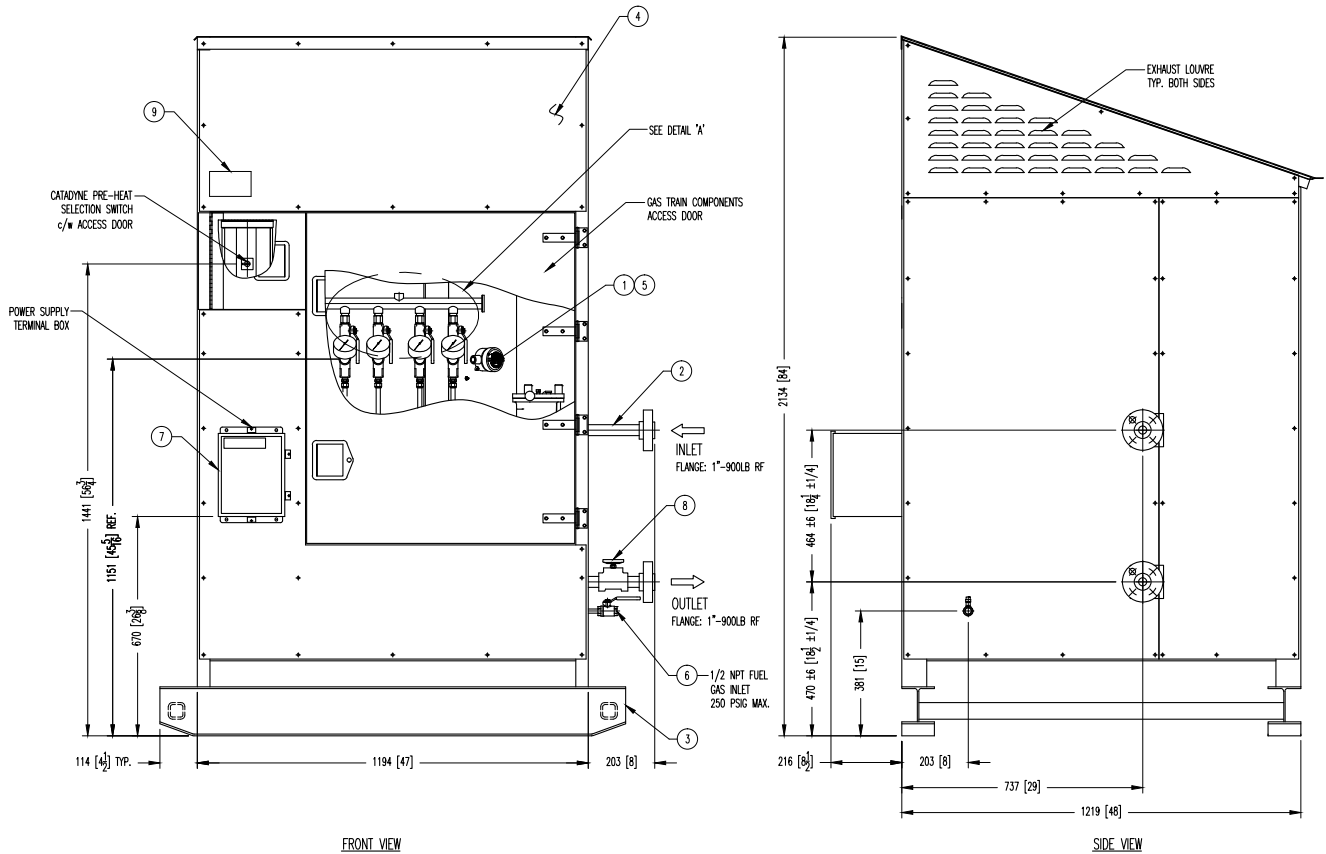


Figure 8 – Cata-Dyne™ Line Heater

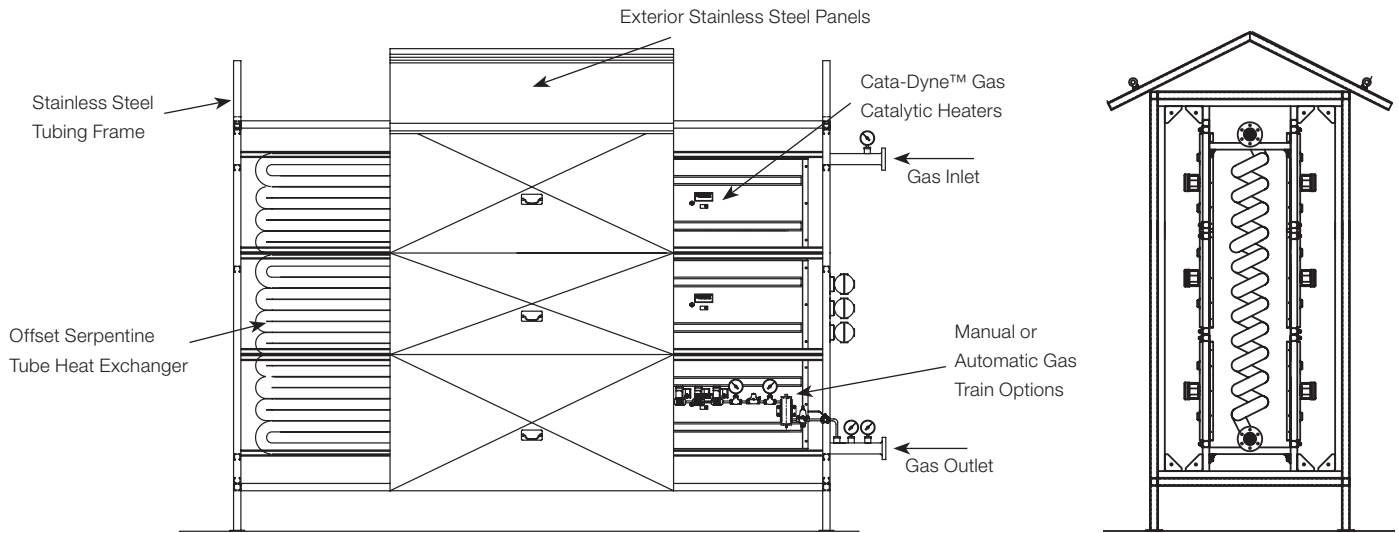


Figure 9 – Cata-Dyne™ Custom Engineered Line Heater