VeraCAL Calorimeter

A Complete Flare Monitoring Solution for Net Heating Value Monitoring and OOOOb/c Compliance



Flare System Solution

The VeraCAL flare system contains a JP3 gas analyzer, a sampling system and communications to enable convenient flare monitoring for compliance with OOOOb/c requirements. The system comes on a mobile cart which simplifies transfer from site to site. The cart requires 120V, 20Amp power and comes with a 75ft heated sample bundle for attaching to the flare line. Designed for straightforward operation, the VeraCAL is easy to set up, take the required data for 14 days and then move to the next site.

Robust Design

The VeraCAL system is Class I Div 2 certified to accommodate site requirements. It is robust to field conditions including extreme temperatures, impervious to dust and is vibration tolerant. The VeraCAL does not require consumables or utility gases, meaning that it can be installed in remote, unmanned locations.

Remote Monitoring Means No Site Visits

The VeraCAL flare system takes continuous Net Heating Value (NHV) measurements and records carbon speciation data. The system can be monitored and fully controlled remotely, so no site visits are required for the duration of the test. This reduces cost and increases safety since technicians do not have to be sent out to each site twice a day to pull samples.

Continuous Monitoring Reduces Risk

Continuous monitoring avoids the risks associated with pulling bad, nonrepresentative, or incomplete samples. Hourly averaging is allowed for continuous monitoring data sets, reducing the impact of NHV spikes or dips.

Built In Sampling System

The VeraCAL flare system has a built in sampling system to accommodate low pressure and variable pressure flare lines. The system is also heated to a constant 60C to comply with the OOOOb/c regulatory requirements and ensure gas phase stability.



VeraCAL Calorimeter System



Critical Data. Real Time.

VeraCAL System Specifications

Applications	Fluid Streams	 Flow cell read points: Verax SSG or CAL-X: 1 integrated flow cell Type: Natural Gas, Flare Gas, Field Gas, Vent Gas, and many others. Appropriate for Upstream, Midstream, and Downstream applications Phase: Gas
	Property Analysis	 Composition: C1-C6+ (GPA 2261), C1-C9+ (GPA 2286); others by request Physical Properties: NHV, temperature, pressure
	Sample System	 Included: Sample line, pump, regulator, sample collection cylinders
	Calibration Gas	None Required
	Validation Gas	Sealed reference cell included
	Line Pressure	 0-140 psig; Higher pressure options available on request.
	Line Temperature	• Set to 60C
	Response Time	• 1 min per analysis point
	Detection Method	NIR spectroscopy optical calorimeter with in-line flow cell

Electrical	Input Power	• 120 VAC / 20A
	Communications	 MODBUS RTU over TCP or Serial (others available upon request) 4.3" Touchscreen Color Display (480 x 272)
	I/O	 3x 4-20mA Analog Input, 1x RTD input Optional analog I/O unit (4x 4-20mA A/O, 2x D/I, 2x D/O)



Physical	Enclosure	NEMA 4X IP 66, Painted 304 Stainless Steel
	Dimensions	• 3.5ft x 3.5ft x 2.5ft
	Weight	• 130 lbs
	Ambient Conditions	 -4°F to 122°F (-20°C to 50°C) Sunshade recommended if >90°F (32°C)
	Classification	 Enclosure: Class I Division 2, A-D, T4 Class I Zone 2, Group IIC, T4 Certified to UL 61010-1 Certified to CAN/CSA C22.2#61010-1-12 Conforms to ISA 12.12.01 Conforms to CSA C22.2#213 Flow Cell: Intrinsically Safe / Class I Division 1 / Zone 1 CRN for AB, BC, SK and ON



