# Verax<sup>™</sup> SSG Analyzer

## Single-Stream Measurement of Hydrocarbon Composition BTU, Relative Density, and Other Properties for Gases

#### Designed for Fast and Accurate Measurement of Gases

The Verax<sup>™</sup> SSG single-stream gas analyzer is built upon the same field-proven technology as the Verax CTX. The SSG provides rapid and reliable measurement of key compositional and physical properties for a wide variety of gas-phase analytical applications. The SSG system is highly reliable, requires neither consumable materials nor sample conditioning, and delivers real-time process measurements with extremely high accuracy. The Verax SSG meets or exceeds applicable GPA and ASTM performance requirements for repeatability and reproducibility. Older, less reliable and maintenance intensive technologies can now be replaced with confidence. The unit can be powered by a small solar panel, or standard 120V AC or 24V DC.



Verax SSG NIR Spectrometer

### Measure at the Pipeline at Operating Pressure and Temperature

The Verax flow cell is installed directly on the process at operating pressure and temperature; no sample conditioning system is required. The flow cell may either be directly connected to the analyzer (SSG-I) or tethered by a pair of fiber optic cable (SSG-T), allowing the analyzer to be located away from the process if needed. The Verax SSG supports multiple simultaneous compositional and physical property analyses. JP3's advanced technology means all Verax analyzers produce no emissions and require no carrier or calibration gases.

#### Solid State Spectroscopy for Rapid Response Time

Using a broadly-tunable Near-Infrared (NIR) optical spectrometer and advanced chemometric techniques, the Verax SSG provides direct process readings for gases in a matter of seconds. No moving parts, no consumables, and no sample conditioning systems means longer life and reduced maintenance costs. The patented laser source utilizes constant amplitude correction and wavelength calibration to deliver performance that is unmatched in the industry.

### Internet Ready for Remote Monitoring

JP3 Verax's advanced electronics and communication capabilities allow easy integration into your plant networks and systems. Verax also supports monitoring via secure cellular data connection, making even the most remote unmanned applications possible and economical.







Verax SSG installed on a mobile trailer



Verax NIR Flow Cell

Critical Data. Real Time.

# **Verax<sup>™</sup> SSG Specifications**

Applications	Fluid Streams	<ul> <li>Flow cell read points: SSG-I: 1 integrated flow cell SSG-T: 1 separate flow cell with fiber optic connection</li> <li>Type: Natural Gas, Flare Gas, Field Gas, Vent Gas, and many others. Upstream, Midstream, and Downstream applications</li> <li>Phase: Gas</li> </ul>
	Property Analysis	<ul> <li>Composition: C1-C6+ (GPA 2261), C1-C9+ (GPA 2286); others by request</li> <li>Physical Properties: BTU, Relative Density</li> </ul>
	Sample System	None Required
	Calibration Gas	None Required
	Line Pressure	• 0-1750 psig
	Line Temperature	<ul> <li>-20°F to 200°F (-29°C to 93°C); Higher ranges available</li> </ul>
	Flow Requirement	<ul> <li>1 psi pressure difference required to induce flow</li> </ul>
	Response Time	<ul> <li>~15 seconds per analysis point</li> </ul>
	Detection Method	NIR spectroscopy with on-line bypass flow cell

lectrical	Input Power	<ul> <li>24 VDC / 6A max</li> <li>100-240 VAC / 1.4-0.65A</li> <li>12 VDC Solar</li> </ul>
	Communications	<ul> <li>MODBUS RTU over TCP or Serial (others available upon request)</li> <li>4.3" Touchscreen Color Display (480 x 272)</li> </ul>
8	1/0	<ul> <li>3x 4-20mA Analog Input, 1x RTD input</li> <li>Optional analog I/O unit (4x 4-20mA A/O, 2x D/I, 2x D/O)</li> </ul>



Enclosure	NEMA 4X IP 66, Painted 304 Stainless Steel
Dimensions	• Control Panel: 16"W x 16"H x 8"D
Weight	<ul> <li>SSG-I: 50 lbs.</li> <li>SSG-T: Control Panel: 43 lbs.; Flow Cell Assembly: 12 lbs.</li> </ul>
Ambient Conditions	<ul> <li>-4°F to 122°F ( -20°C to 50°C)</li> <li>Sunshade recommended if &gt;90°F (32°C)</li> </ul>
Classification	<ul> <li>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</li> <li>Flow Cell: Intrinsically Safe / Class I Division 1 / Zone 1 CRN for AB, BC, SK and ON</li> </ul>



