

# Envent Model 131S

## Process Gas Chromatograph

The Model 131S Process Gas Chromatograph (GC) is a simple approach to energy measurement, created and designed for many different applications. Envent provides a Process Gas Chromatograph platform that is efficiently manufactured to ensure industry leading delivery, while providing a GC that allows for ease of serviceability.

### Features

- High performance GC columns packed in our Envent GC Lab
- Reduced carrier usage due to efficient column design

### Field-Serviceability

- Easy access Electronics Enclosure with single board technology
- Easy access GC Detector/Column Oven for easy GC valve diaphragm replacement and column change
- Typical downtime for diaphragm and column change: approx. 30 minutes
- No modules to maintain or un-planned downtime due to non-serviceability and high cost of competitor's module technology
- Returns ownership to the measurement technician rather than the GC manufacturer

### Natural Gas Applications

- Energy Measurement
- Pipeline Monitoring
- Custody Transfer
- Biogas/Landfill
- Power Generation
- Turbine Control

### Gas Processing Applications

- Cryogenic gas plant
- NGL/LPG (methanol ethanol)
- LNG
- Fractionation/ Hydrocarbon Purity
- Gas Sweetening
- Methanol in NGL
- Methanol in Natural Gas

### Electronics

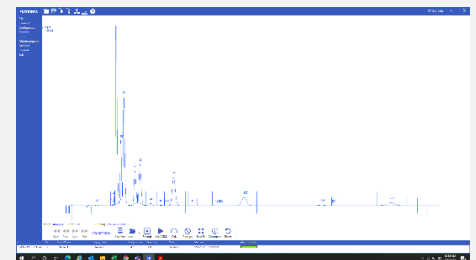
- Non-incendive electronic circuit design approved for Class I Division 1 electrical areas
- Includes all CPU, Memory, and I/O functions on a single board that operates together with the Envent Gas Chromatograph software
- Low-cost, simplified electronic troubleshooting approach

### Software

- Archived custody stream chromatogram/chart storage
- Auto-storage of most recent calibration chromatogram/chart
- 18 months of archived analysis reports
- 6 months of archived calibration reports



131S Process Configuration



Envent Gas Chromatograph Software (GCS)



Easily Accessible GC Oven



1. Thermal Conductivity Detector (Max 2)
2. GC Valve (Max 6)
3. Column Dish
4. Sample Pre-Heat Coil (Max 4)

Specifications

<b>Environmental Temperature</b>	-20° to 60°C (-4° to 140°F) Quoted per application
<b>Dimensions</b>	Standard Configuration: 78" H x 24" W x 16" D (198cm H x 61cm W x 41cm D)
<b>Mounting</b>	Wall mount or floor mount
<b>Enclosure</b>	NEMA 4X
<b>Electrical Classification</b>	Class I, Division 1, Groups B, C, D
<b>Power</b>	120 +/- 10% VAC 50/60 Hz Standard 240 +/- 10% VAC 50/60 Hz Available
<b>Power Consumption</b>	Start up: 100 watts (does not include sample system electronics) Steady State: 60 - 80 watts nominal
<b>Oven</b>	Airless Heat Sink
<b>GC Valves</b>	Six-port and ten-port diaphragm chromatograph valves Thermal Conductivity Detector (TCD) Single or Dual TCD Capabilities (2-min application)
<b>Stream Valves</b>	Double Block and Bleed
<b>Carrier Gas</b>	UHP Helium (99.999%) or UHP Hydrogen (99.999%)
<b>Actuation Gas</b>	Helium, Nitrogen, Instrument Air (GC Valves/Stream Valves Regulated to 65 psig)
<b>Detector</b>	Thermal Conductivity Detector: Single or Dual TCD capabilities Advanced TCD allows for low ppm measurement
<b>Peak Gating</b>	Auto-Slope detection
<b>Streams</b>	Up to 4 Custody streams (plus auto-calibration stream)
<b>Input/Output</b>	Two (2) analog outputs Four (4) dry contact relay outputs Four (4) digital inputs Four (4) solenoid outputs
<b>Communications</b>	SIM 2251 Modbus mapping User Modbus mapping One (1) RS-232 serial communication port (Modbus capable) Two (2) RS-485 serial communication ports (Modbus capable) One (1) 1 Ethernet communication port RJ-45 (Modbus capable)
<b>Measurement Calculations</b>	Latest GPA 2145, GPA 2172, AGA 8, and ISO 6976 calculations

**Canadian Office**  
2721 Hopewell Place NE  
Calgary, Alberta, Canada T1Y 7J7  
Phone: 403-253-4012  
Email: canadasales@envent.com

**USA Office**  
12560 Reed Road, Suite 200  
Sugar Land, Texas, USA 77478  
Phone: 713-568-4421  
Email: usasales@envent.com

**Mexico Office**  
Av. Revolución No. 1267,  
Floor 19, Office 55  
Mexico City, MX  
Phone: +52 833 247 8260  
Email: mexicosales@envent.com

**International**  
Phone: 403-253-4012  
Email: internationalsales@envent.com