

# 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

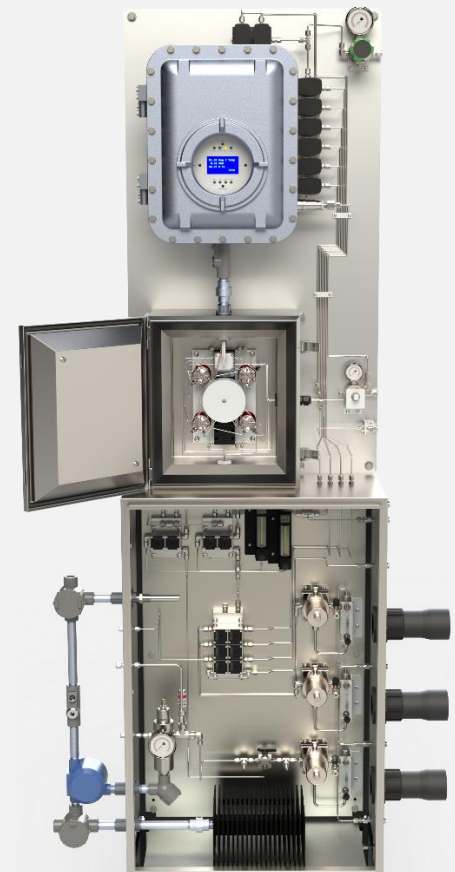
- Cryogenic gas plant
- NGL/LPG (methanol ethanol)
- LNG
- Fractionation/ Hydrocarbon Purity
- Gas Sweetening
- Methanol in NGL
- Methanol in Natural Gas

### Electronics

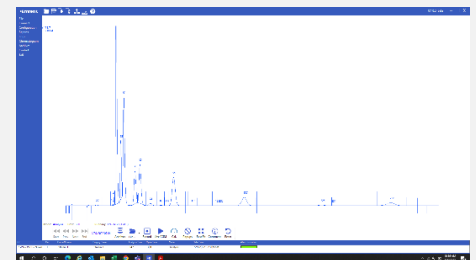
- Non-incendive electronic circuit design approved for Class I Division 1 electrical areas
- Includes all CPU, Memory, and I/O functions on a single board that operates together with the Envent Gas Chromatograph software
- Low-cost, simplified electronic troubleshooting approach

### 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  
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