

THE LEADER IN FIELD GAS ANALYSIS



The Envision™ HCH Gas Analyzer, from Elkins Earthworks, LLC is an affordable, rugged gas analyzer built for taking accurate gas measurements in the extremes of the landfill environment.

The Envision™ HCH utilizes Infrared technology to measure CH₄, and CO₂, measures O₂, CO, H₂S by an electrochemical cell while adding H₂ measurements via thermal conductivity. The Envision™ HCH also houses multiple pressure sensors dedicated to accuracy across low and high range measurements.



- CH₄ METHANE
- CO₂ CARBON DIOXIDE
- O₂ OXYGEN
- H₂ HYDROGEN
- CO CARBON MONOXIDE
- H₂S HYDROGEN SULFIDE
- m LOW RANGE PRESSURES
- m HIGH RANGE PRESSURES
- ⦿ GAS TEMPERATURE
- 📍 GPS LOCATION
- 📶 WIRELESS COMMUNICATION
- 📄 UNIVERSAL .CSV FILE FORMAT

BUILT BY TECHNICIANS FOR TECHNICIANS

The Envision™ HCH Gas Analyzer is driven by either a Windows or Android tablet computer via a Bluetooth® connection. This allows the user to connect the Envision™ HCH to a sampling point and continue to read the gas measurements wirelessly, up to 60+ feet* away.



* Actual distance may vary based on local factors.



OPTIMIZED WORKFLOW, RELIABLE DATA

Utilizing the Elkins Gas Analyzer Software, built around the field technician's optimal workflow, data collected by the Envision™ HCH can be locked, reviewed and unlocked to ensure accurate data is stored on the first visit. Once stored, all data is immediately available in a convenient .csv file format.



COMPLIANT & FIELD READY

The Envision HCH complies with ALT-143 sections 7.2.1 and 7.2.2. The user is responsible for ensuring compliance with the **ALTERNATIVE METHOD FOR THE FIELD DETERMINATION OF CARBON MONOXIDE CONCENTRATION IN LANDFILL GAS WELLHEADS UNDER 40 CFR 63, SUBPART AAAA.**

ENVISION HCH TECHNICAL SPECIFICATIONS

GAS SENSORS				
Gas Type	Range	Typical Accuracy	Resolution	t ₉₀ (seconds)
CH ₄	0-100%	± 2% abs	0.1%	<30
CO ₂	0-100%	± 2% abs	0.1%	<30
O ₂	0-2%	± 0.1% abs	0.1%	<30
	2%-25%	± 5% relative	0.1%	<30
H ₂	0-1%	± 0.1% abs	0.1%	<30
	1%-100%	± 2% abs ¹	0.1%	<30
CO	0-2000 PPM	± 40 PPM abs ^{1,2,4}	1 PPM	<45
H ₂ S	0-2000 PPM	± 40 PPM abs ^{1,2,4}	1 PPM	<45

PRESSURE SENSORS				
Pressure Type	Low Range	Low Range Accuracy	High Range	High Range Accuracy
Static	-5 to +5 (" H ₂ O)	±0.14"H ₂ O	-130 to +130 ("H ₂ O)	±2% of reading
Differential	-5 to +5 (" H ₂ O)	±0.14"H ₂ O	-130 to +130 ("H ₂ O)	±0.6"H ₂ O
Available	NA	NA	-130 to +130 ("H ₂ O)	±2% of reading
Barometric	NA	NA	22 to 31 ("Hg)	±0.24"Hg (±8 mBar)

BATTERY		
Discharge Time @ > 50°F	Discharge Time @ 32°F	Discharge Time @ 14°F
> 10 hours	8 hours	5 hours
Charge Time	Lifetime	Construction
4 hours from complete discharge	up to 1000 full charge cycles	NiMH (no memory)

OPERATING TEMPERATURE	
Range	
+14 to +122°F (-10 to +50°C)	

WIRED THERMISTOR	
Range	Accuracy
-22 to +212°F (-30 to +100°C)	±1.0°F (±0.6°C)

SAMPLE PUMP	
Minimum Vacuum Pull	Minimum Flow Rate
-138 ("H ₂ O)	260 cc/min

NOTES

- When measurements are taken with H₂ concentrations higher than 10,000 PPM, the CO and H₂S sensors will be disabled. High level H₂ measurements will not damage CO and H₂S sensors as long as software warnings and procedures are followed.
- To achieve specified accuracies, the meter should have a valid calibration certificate and proper field calibration procedures should be followed.
- Sensor life is dependent on gas mix concentrations that are measured.
- It is recommended to follow all software instructions, failure to do so may cause permanent damage to sensors.

Patents

<https://elkinsearthworks.com/patents>



Elkins Earthworks LLC

BUILT FOR THE ENVIRONMENT. BUILT TO PERFORM.



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**RUGGED.
ACCURATE.
FIELD READY.**