

## Active Flow Control & Real-Time Gas Analysis to Maximize Landfill Gas Collection

The Controller is a wellhead-mounted measurement device containing an on-board sensor suite, an actuator valve, and communication system that together, enable automated and enhanced visibility and control over the gas collection system. A core component of LoCI's real-time data and control system, the Controller increases gas collection system efficiency and productivity for landfill teams.

### The LoCI Controller remotely monitors:

- Methane %
- Carbon dioxide %
- Oxygen %
- Balance gas %
- Flow
- Landfill gas temperature
- Applied and system pressures
- Barometric pressure
- Valve position
- Tuning
- Additional measurement capabilities:
  - Liquid levels
  - Static pressure

The Controller includes a patented automated, precision-controlled valve that regulates flow using LoCI's real-time data on individual well and field-level flow and gas composition. The result maximizes gas collection and methane flow within operator-established gas composition set points.

Gas composition is measured with optical sensors analogous to industry standard handheld gas analyzers, yet with performance approaching that of a gas chromatograph. Flow is measured with a Venturi Flo-Wing® integral to the Controller measurement device, and valve position is shown in real-time on LoCI's WellWatcher® platform.

It is best practice to install Controllers on active wells that comprise at least 80% of the flow in the landfill gas collection system.



MEASUREMENT	RANGE	TOLERANCE*
Methane	0 – 100%	±0.50% (vol)
Carbon Dioxide	0 – 100%	±0.50% (vol)
Oxygen	0 – 25%	±0.25% (vol)
Balance Gas (Nitrogen and trace)	0 – 100%	±1.25% (vol)
System Pressure	-138.5 – 0" of H <sub>2</sub> O	±0.50"
Landfill Gas Temperature	Up to 140°F (60°C)	±2°F
Flow (for 2" Wellheads)	10 – 120 SCFM <10 SCFM	±2 SCFM ±3 SCFM

\*When following manufacturer-recommended calibration procedures

## Additional Technical Specifications:

**Calibration:** Initial calibration during manufacturing; auto-calibration every 14 days unless otherwise specified; minimum annually

**Power:** Solar with rechargeable battery

**Battery Capacity:** >3 weeks at default measurement frequency

**Default Measurement Frequency:** 3 hours

**Maximum Operating Temperature:** 140°F (60°C)

**Install Location:** Mounted to wellhead vacuum riser; corrosive locations with >10,000 ppm H<sub>2</sub>S at LoCI discretion; not intended for locations with standing liquids

**Compatible Pipe Sizes:** 2–4" wellheads

**Connectivity:** Cellular communication or wireless gateway

**Flow Standard Temperature and Pressure Conditions:** 60°F and 1 atm, respectively

To learn more and contact us, visit [locicontrols.com](https://locicontrols.com).



## Why LoCI Controls?

With financial, operational, and environmental, health, and safety (EHS) benefits, LoCI Controls' real-time data and control system optimizes facility management and gas collection for operators and landfill owners alike.

### Increase ROI

- Maximize methane flow
- Control nitrogen in the wellfield
- Automate well tuning strategy
- Improve collection system efficiency
- Increase plant uptime and productivity

### Empower On-Site Teams

- Troubleshoot wellfield and gas collection systems faster
- Reduce EHS risks

### Improve Relationships with Surrounding Communities

- Reduce potential odors and off-site gas migration

### Support Sustainability & Climate Action Goals

- Reduce greenhouse gas emissions