

Flow Control Valve Performance

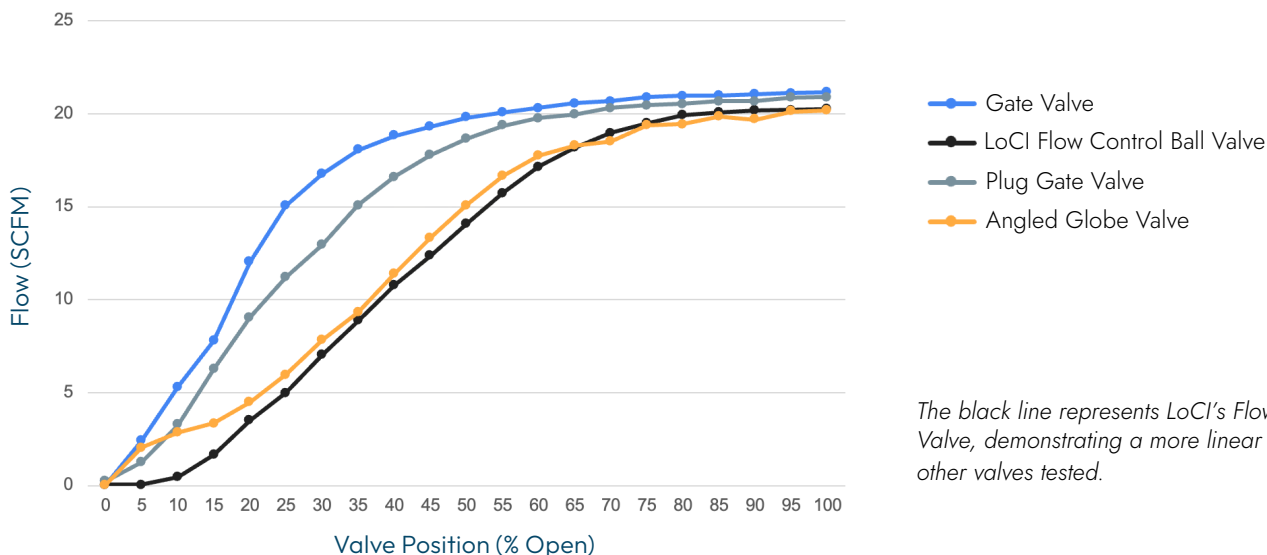
LoCI conducted tests of industry standard landfill gas control valves to establish the most effective flow control in optimizing gas collection. **Across testing, the LoCI Flow Control Ball Valve offered the widest linear range and greatest sensitivity compared to the other control valves.**

By calculating linear range and sensitivity, LoCI could objectively and consistently measure:

- To what extent the valve's range of motion produces linear flow change
- The valve's control precision within the linear range, where a value closer to 1 signifies more control of flow per valve adjustment increment

Tests show the **2" LoCI Flow Control Ball Valve produces a more linear valve position vs. flow curve** when compared to other industry standard control valves in high, average, and low flow scenarios.

Average Flow Results (20 SCFM)

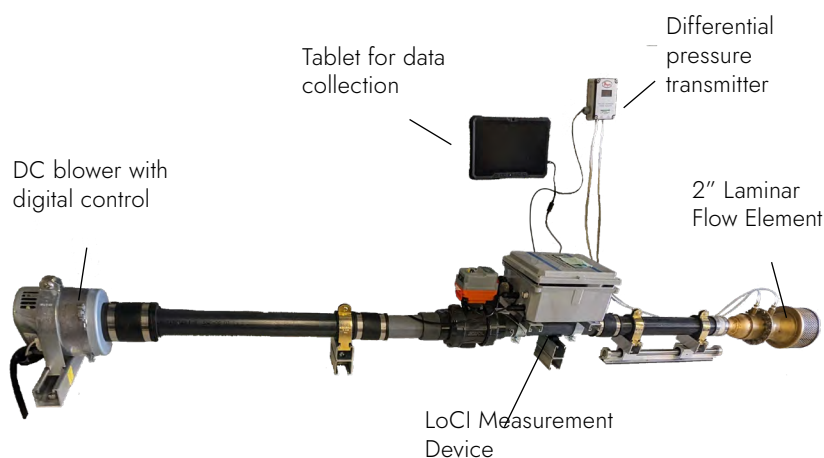


The black line represents LoCI's Flow Control Ball Valve, demonstrating a more linear result than the other valves tested.

VALVE TYPE TESTED	LINEAR RANGE*	LINEAR RANGE %	SENSITIVITY (Slope of Linear Portion)
2" LoCI Flow Control Ball Valve	15 – 70%	55%	1.15
2" Angled Globe Valve	20 – 65%	45%	1.16
2" Plug Gate Valve	10 – 40%	30%	1.50
2" Gate Valve	5 – 25%	20%	1.90

*Linear range results based on 20 SCFM and 75 SCFM test data

Test Setup



All testing was performed at standard temperature and pressure, and each valve was adjusted across its range of motion.

- Positions ranged from 0–100% open and increased in increments of 5%, resulting in 21 possible positions
- Data was sampled at each valve position and at a frequency of 1 measurement per second
 - The flow rate was allowed to stabilize for 30 seconds prior to sampling
 - A minimum of 60 data points were collected and averaged at each valve position
- The blower was fixed at 75 SCFM, 20 SCFM, and 10 SCFM flow rates to **simulate high, average, and low flow scenarios.**

To learn more and contact us, visit 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