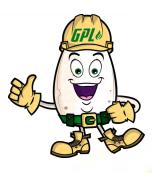


GPL Odorant Injection

Natural Gas • Propane • Biogas





Advanced Technology, Cost-Effective, and Planet Friendly "It just makes scents!"

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GasOdorizer.com

The Benefits of GPL Advanced Odorant Injection



GPL Odorizers meets the need for simpler, cost-effective, planetfriendly odorization by employing advanced technology to deliver safe, accurate, and reliable odorant injection systems for natural gas, biogas, and propane.

Eco-Friendly

No Odorant or Gas Discharge

Our patented and innovative approach does not use gas to actuate the system and has a clean, sealed, and ventless design.

- No gas or odorant discharges to atmosphere
- No smell during operation and maintenance
- Lowers false leak-call complaints
- Saves pipeline gas

Advanced Technology Remote Monitoring and Mobile Alerts

The GPL advanced technology saves time and money through remote monitoring, real-time communications, and efficient reporting.

- Real-time mobile alerts to smartphones and computers
- Data stores on PLC SD Card
- Automated remote monitoring using Modbus or wireless modem
- Audit trail reports for regulatory or company inspections
- No additional software required



Cost-Effective and Simple

Simple Solutions - Complex Challenges

Our straightforward systems are cost-effective, competitively priced and easy to maintain and operate.

- One or few moving parts (depending upon the model)
- Minimal fittings and tubing for long-lasting performance
- No pneumatic pumps minimal annual maintenance

Accurate and Reliable Even in Problematic Flow Ranges

Our systems provide precision odorant injection over a wide range, including problematic noflow, ultra-low-flow, to high-flow and highpressure applications. Our two models offer precise odorization for most applications.

- Precision odorant injection relative to gas flow
- Eliminates under- or over-odorization issues
- Exceeds 49 CFR § 192.625 (e) Odorization of gas

Model	min flow (MMSCFD)	max flow (MMSCFD)
GPL 750	0	18
GPL 750 HC	0	24
GPL 10000	0.48	240

(At an injection rate of 0.5 lb./MMSCFH)

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GPL 10000 Odorizer

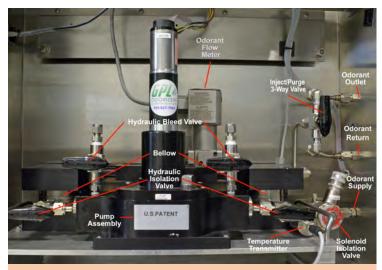
High-Volume Odorant Injection

G ODORIZERS planet-friendly solutions

The GPL 10000 is intended for high-pressure and high-volume applications at transmission companies and large city gate stations. The odorizer has high rangeability, achieving precision odorization over a wide operating range of volume. The industry-leading programmable logic controller (PLC) interfaces with the flow meter and its system components to maintain constant odorant injection proportional to the gas flow rate.

Continuous Odorant Injection for Pipelines:

- \Rightarrow Up to 1480 PSI (102 Bar)
- ⇒ From 0.48 MMSCFD to 240 MMSCFD (at an injection rate of 0.5 lb./MMSCFH)



Solid-state modular design permits hot-swap capability, minimal joints, and tubing for long lasting performance.

Features

- No odor operation
- High rangeability (100:1 turndown ratio)
- Few moving parts
- Dual stroke electric-powered bellows pump
- Modular solid-state manifold
- Wireless modem
- Interfaces with SCADA systems
- Remote communication using Modbus or wireless modem
 - \Rightarrow Real-time mobile alerts
 - \Rightarrow Online monitoring
- Industry-leading PLC
 - \Rightarrow Large, intuitive 7" color touchscreen
 - \Rightarrow SD card data storage
- No additional software required
- Class I Division 2, Groups C and D



Advanced Technology Improves Efficiency of Operation

Options

- Turnkey odorization packages (page 5)
- Thermoelectric generator
- Solar panel
- Odorant pressure control



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GPL Odorizers—Low and Intermittent Flow

GPL 750 Odorizer

Low- and Intermittent-Volume Odorant Injection

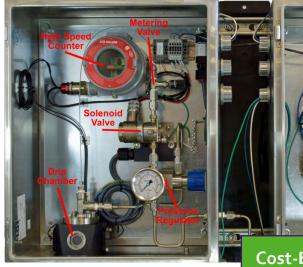
The GPL 750 uses proprietary drip technology, permitting precise odorization in even problematic ranges, such as low-volume (even no-flow) and intermittent-volume applications. The unit is appropriate for municipalities, small city gate stations, and methane (biogas) producers. The PLC receives flow information and automatically compensates the injection rate to provide uniform odorant distribution.

Batch Odorant Injection for Pipelines:

- \Rightarrow 40 to 250 PSI (17 Bar)
- ⇒ No Flow to 24 MMSCFD (at an injection rate of 0.5 Ib./MMSCFH)



Our simple systems are cost-effective, competitively priced, and easy to maintain and operate.





Features

- No odor operation
- High rangeability
- One moving part
- Wireless modem
- Interfaces with SCADA Systems
- Remote communication using Modbus or wireless modem
 - \Rightarrow Real-time mobile alerts
 - \Rightarrow Online monitoring
- Industry-leading PLC
 - ⇒ Large, intuitive 7" color touchscreen
 - \Rightarrow SD card data storage
- No additional software required
- Class I Division 2, Groups C and D



Cl I Div I Electronics (optional)

Options

- Turnkey odorization packages (page 5)
- Class I Division 1 hazardous classification
- Heater
- GPL 100 thermal mass flow (page 6)
- Thermoelectric generator
- Solar panel



GPL Odorizers—Upgrades

Upgrades

Turnkey Odorization Packages

GPL Odorizers offers full packaged odorization skids with the odorizer, ASME odorant tank, and containment assemblies, in both vertical (60-120 gallons) and horizontal (250 – 2000 gallons) tank configurations.

Options

- Nitrogen blanket gas system
- Fiberglass buildings
- Wireless modem
- Odorant control panels





Better for the Environment

No smell during operation and maintenance • No gas discharges

Horizontal Design—GPL 10000

The leak-proof containment skid safeguards against ground contamination in the event of a tank failure. It is designed to capture 110% of the reservoir's capacity.

Multiple odorant tank sizes are available to accommodate the flow rate of the pipeline; from 60 to 2000 gallons.

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Temporary Odorization

Our temporary/portable odorization package is easy to transport by a forklift and fits in the back of most pickup trucks. The unit includes the odorizer, odorant tank, containment, interconnecting valves and a holder for the customer-supplied nitrogen tank for blanket-gas pressurization. No actuation gas is required for the odorizer's operation, merely connect the electrical power.



Temporary or Portable Odorization



GPL 100 Flow Meter

GPL Odorizers recommends the GPL 100 flow meter for low- and intermittent -flow applications. The high rangeability of the thermal mass flow meter assures accurate, optimal and repeatable measurement of the gas mass flow; assuring precise odorization. Recommended for all GPL 750 odorizers.

Accurate and Reliable

Even in problematic flow conditions

Fiberglass Shelters

We offer custom-built fiberglass buildings to protect the odorization system, tank, and containment. The shelters provide the ultimate protection from weather, improve aesthetics and deter vandalism.



Industry Leading Service Platform and Support

We provide customized maintenance agreements tailored to meet each end-user's needs. Our programs provide the required annual maintenance to ensure the units are operating efficiently and correctly to maintain the standard 18-month warranty.

Lease Options

GPL Odorizers offers lease-purchase options which may provide tax incentives. This financing option keeps the monthly expense within operational budgets rather than capital expenditures. All leases include the configuration, equipment, start-up and annual maintenance, for the life of the contract.

Our History

In 2003, Zeck Systems launched the Z9000 as the efficient and straightforward solution for selfcontained odorization systems. Sentry Equipment acquired Zeck Systems in 2010, and GPL Odorizers bought the odorizer product line in 2015.



Master Distributor

Linc Energy Systems is the master distributor for GPL Odorizers. The company specializes in natural gas odorization, measurement and control, and damage prevention of utilities. Learn more at <u>LincEnergySystems.com</u>.

Learn more about GPL Odorizers, or identify your nearest representative, by visiting GasOdorizer.com, or call (303) 927-7683.

MercapMan

MercapMan is GPL Odorizers mascot and educates the public and industry on the importance of odorizing natural gas. MercapMan, AKA the "good egg" wants everyone to know that the nasty, rotten egg smell commonly associated with natural gas is there for a reason. MercapMan's blog is at <u>NaturalGasOdorization.com</u>.



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