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# GPL Z10000

## Odorant Injection System

Patented

*Accurate odorization from 10,000 to 10,000,000 SCFH*



### ABOUT GPL ODORIZERS

At GPL Odorizers, we believe simple is better and strive to provide planet-friendly solutions.

GPL Odorizers (formerly Sentry Equipment and Zeck Systems) manufactures environmentally-friendly odorant injection systems for natural gas and other gases.

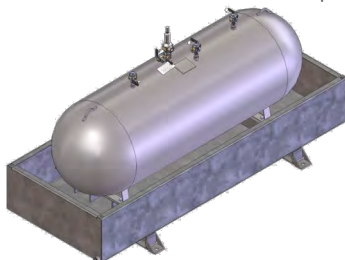
### WHAT MAKES US DIFFERENT

The GPL Z10000 is electrically driven and hydraulically isolated. Pipeline gas is not used to actuate the injector. This means our odorizers do not vent gas to the atmosphere, making this system environmentally friendly. Additionally, since our odorizers are self-contained and do not discharge gas, safety is improved, pipeline gas is saved, and subsequently, odor at the unit is reduced. This, of course, equates to lower leak call complaints.

The GPL Odorizers also have fewer moving parts than the leading competitive odorization systems. This means less maintenance over the life of the unit.

### ODORIZATION SYSTEMS

The GPL Z10000 is available as an odorizer or a complete odorization system that includes the odorizer, odorant tank, and containment.



### DESCRIPTION

**The GPL Z10000 odorizer is the eco-friendly odorant injection system that meets the demands of nearly all pipeline applications. The Z10000 is ideal for high-volume and high-pressure applications. With a 100:1 turndown ratio, the system injects precise quantities (0.2% accuracy) of liquid odorant across the entire operating range, in both continuous and batch modes.**

What makes the GPL Z10000 unique is its dual stroke electrohydraulic pump. A variable speed electric servo motor drives a stochastic mechanism that converts the rotary motion of the motor into linear double stroke motion. This provides the force to drive two independent metal Bellows Pump modules. The dual stroke sends the hydraulic fluid into one of the pump modules, compressing the bellows to discharge a fixed volume of the odorant. Simultaneously, hydraulic fluid is withdrawn from the opposite pump module, expanding that bellows and drawing in new odorant for the next injection stroke. This action provides nearly continuous injection flow, a feature not offered by single pump injectors. As the pipeline flow rate varies, the pump motor speed is adjusted to change the time per stroke while maintaining a continuous flow of odorant in the process. Since the motor has the maximum rate of 25 revolutions per minute, fluid flashing, due to acceleration induced pressure drop, is virtually eliminated. Additionally, the hydraulic section of the Bellows Pump is completely isolated from the odorant section, and there are no seals or diaphragms to replace in the odorant section of the pumping circuit. The only replacement items are the hydraulic piston seals that have been engineered for high cycle life. When piston seal replacement is required, the drive system is easily isolated from the pump modules by closing the isolation ball valve, located on each hydraulic line. The piston seals are captured within cartridge assemblies, to allow for quick and easy replacement. The GPL Z10000 odorizer is state of the art technology for accurate, repeatable and low maintenance odorant injection.



### FEATURES

#### Ventless

- ⇒ Improved safety
- ⇒ Saves pipeline gas
- ⇒ Environmentally friendly
- ⇒ Lowers leak call complaints

#### Few moving parts

- ⇒ low maintenance cost

#### Excellent full range accuracy

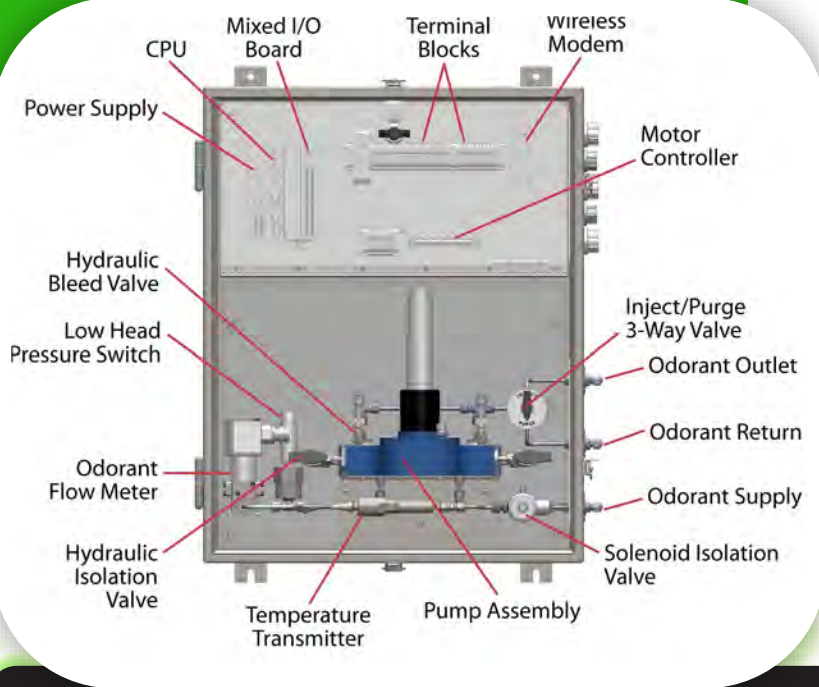
#### 10-micron odorant filter

#### Automatic system shut-off for low odorant supply pressure

# GPL Z10000 SPECIFICATION SHEET

## Odorant Injection System

High-Volume  
and High-  
Pressure  
Applications



**GPL**  
**ODORIZERS**  
planet-friendly solutions

Linc Energy Systems is the  
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## PRODUCT SPECIFICATIONS SHEET

### Weight

194 lb. (88 kg)

### Power

Typical: 24 VDC; 0.036 HP; 27.05W  
Maximum: 24 VDC; 0.193 HP; 124.8W  
Optional: Optional AC and solar

### Gas Pipeline Pressure

To 1480 psi (102 bar) maximum

### Odorant Blanket Pressure

15 to 30 psig (1 to 2 bar)

### Data Logging

Hourly archives with audit trail

### Enclosure

304 stainless steel

### Hazardous Area Classification

Class I Division 2, Groups C and D

### Overall Dimensions

32 1/2 x 25 5/8 x 10 7/8 in

For More Information Contact:

10/15

### Odorant Injection Rate, Continuous<sup>1</sup>

.50–50 cc/min. (.008–.793 gal/hr.) at natural gas flow rate of .107–10.7  
MMSCFH (3029–302990 Sm<sup>3</sup>/h)

### Odorant Injection Rate, Batch

For natural gas flow rates below 100,000 SCFH down to virtually zero flow

### Connections

Myers hub: (3) 3/4 in NPT; (2) 1/2 in NPT  
Odorant outlet, odorant return, vent, odorant inlet: 1/4 in comp

### Operating Temperature Range

0–140°F (-18–60°C)  
Optional: Heater assembly available for below 0°F (-18°C)

### User Interface Options:

- ⇒ Optional HMI via a serial interface (max. 20 ft. from unit)
- ⇒ Z10000-configured TechView via Ethernet or Internet (supplied at no charge)
- ⇒ Serial RS-485 Modbus; Open/TCP Modbus via cell modem

### Additional Options:

Wireless modem, battery pack, solar panel, odorant tanks and containments

<sup>1</sup> At injection rate of 0.5# mercaptan/MMSCF (10 mg/m<sup>3</sup>)



It is the end user's responsibility through its own analysis and testing, to select products and materials suitable for their specific application requirements, ensure they are correctly installed, safely applied, properly maintained, and limit their use to their intended purpose. Improper selection, installation, or use may result in personal injury or property damage.