

LVO - Low Volume Odorizer

The LVO is the perfect solution for reliable low volume odorization in RNG (renewable natural gas), biomethane and other low flow natural gas applications.

NEW features:

Z-100 Controller - (replaces Z65 and Z-200)

- ✓ Alarm Output or Odorant Output Pulse
- ✓ Memory Module with Audit Trail
- ✓ 4-20mA flow signal

Flow Switch (optional)

- ✓ Monitors discharge for odorant flow



Scan for more info



Scan for info on
RNG / Biomethane applications



Specification

Maximum Odorant Output	1.44 litres/day (.38 gallons/day)
Maximum operating pressure	99.28 bar (1440 psig)
Operating temperature range	-20°C to 60°C (-4°F to 140°F)*
Power Options	LBP-14 Battery (standard), 120VAC (optional)
Gas flow rate input signal	Analog (4-20mA) or Pulse (dry contact or voltage pulse)
Spacer Size**	0.02cc, 0.04cc**, 0.06cc**, 0.10cc**, spacers
Connections	1/4" Tubing
MAOP	1,450 PSI
Elastomers	Viton
Materials	316 SS

*At temperatures below 0°C (32°F) conditioning of the actuation gas supply may be required.

** see table for flow switch availability for each spacer size

Approvals

Z-100 Approvals	
-20°C ≤ Tamb ≤ 60°C	
IECEX	<ul style="list-style-type: none"> • Ex ia IIB T4 Ga • IECEX ETL 22.0013X
ATEX and UKEX	<ul style="list-style-type: none"> • Ex II IG Ex ia IIB T4 • ETL22ATEX0132X • ITS22UKEX0366X
North America	<ul style="list-style-type: none"> • Class I, Zone 0, AEx ia IIB T4 Ga • Class I, Division 1, Groups C-D, T4 • Ex ia IIB T4 Ga • ETL22CA104230006X
LVO System Approvals	
-20°C ≤ Tamb ≤ 60°C	
IECEX	<ul style="list-style-type: none"> • Ex ia [ia] IIB T4 Ga • ETL 23.0013X
ATEX and UKEX	<ul style="list-style-type: none"> • Ex I (I) G Ex ia [ia] IIB T4 Ga • ITS22UKEX0366X • ETL23ATEX0707X
North America	<ul style="list-style-type: none"> • Class I, Division 1, Groups C-D T4 • Class I, Zone 0, AEx ia [ia] IIB T4 Ga • Ex ia [ia] IIB T4 Ga • ETL23CA104230006X

Z100 Controller

Accuracy: Proportional to flow (inputs include dry contact pulse, voltage pulse, 4-20 mA).

Verification: Global Alarm – digital output for missed pump strokes and low battery

or

Odorant Output Pulse – digital pulse output for monitoring injected odorant.

Documentation: Z-100 provides an audit trail of system performance. Including odorant usage, alarm history and parameter changes.



Flow Switch

The Flow Switch is designed and tested to be able to detect flows as low as 0.04cc reliably on the discharge of the injection pump.



- A: Flow Switch Body
- B: Flow Switch Sensing Element
- C: Set Screw for Field Adjustments

Spacer Application Range

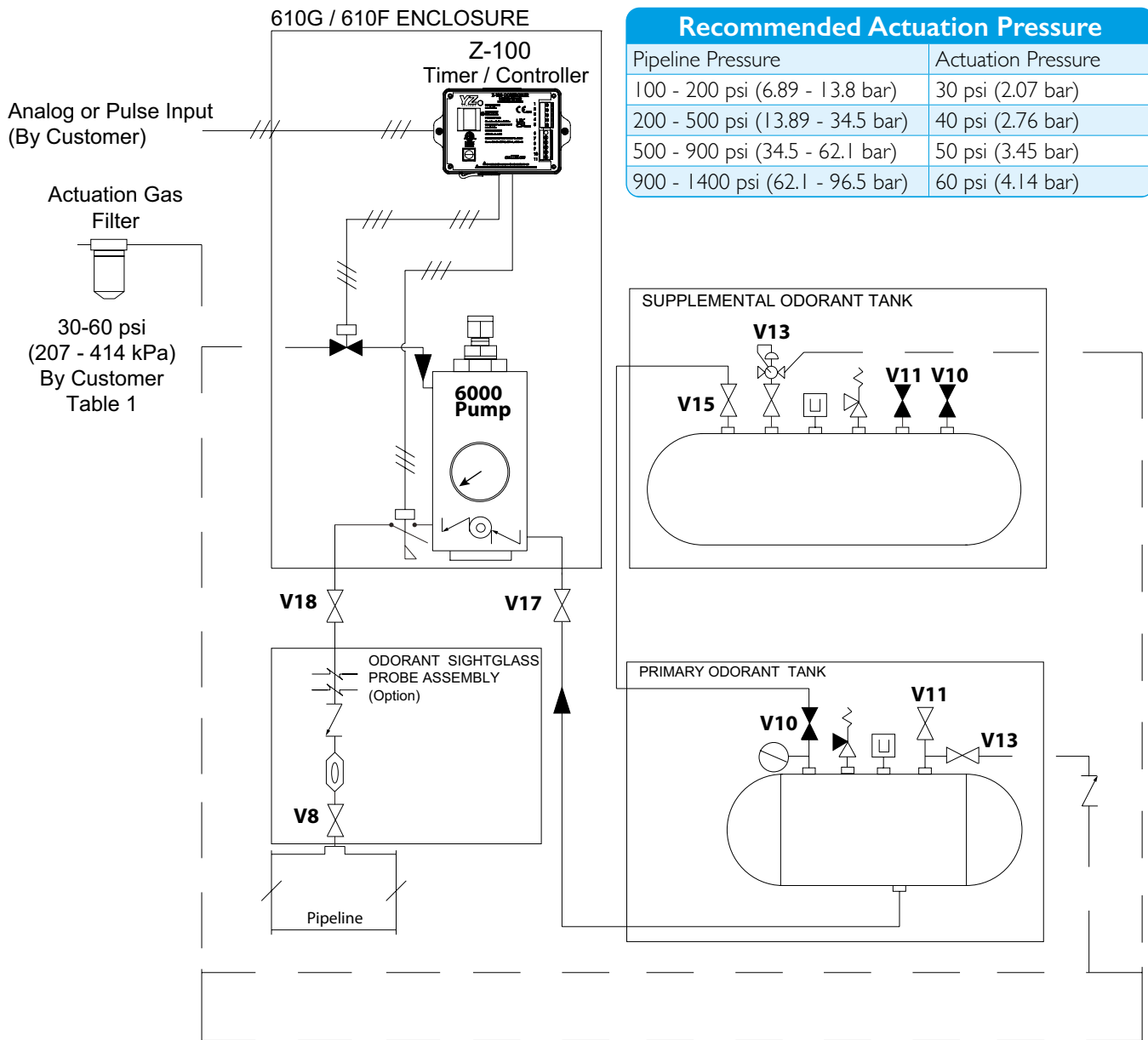
0.10 Spacer	Max 1450 PSI
0.06 Spacer	Max 1450 PSI
0.04 Spacer	Max 1000 PSI

NJEX LVO Model Code

NJEX LVO **610F** - **00** **N** - **1** **D**

NJEX Gas Odorization Series	
610G - Low Volume Odorizer	
610F - Low Volume Odorizer w/ flow switch	
Odorant Tank Selection	
00 - 5 gallon	
01 - 20 Gallon	
02 - 60 Gallon	
Skid Selection	
N - No Selection	
C - Containment Skid Selection (110% of Tank Capacity)	
Spacer Size:	
Q - for quote preparation only, final determination by YZ	
1 - 0.1cc	
2 - 0.02cc ¹	
4 - 0.04cc ²	
6 - 0.06cc	
¹ flow switch unavailable with 0.02cc spacer	
² flow switch available up to 1000PSI with 0.04cc spacer	
Power Option	
D - LBP-14 battery packs standard	
S - Solar (consult factory)	
A - 120/240 VAC (consult factory)	
N - No battery or customer supplied battery pack	

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Recommended Actuation Pressure	
Pipeline Pressure	Actuation Pressure
100 - 200 psi (6.89 - 13.8 bar)	30 psi (2.07 bar)
200 - 500 psi (13.89 - 34.5 bar)	40 psi (2.76 bar)
500 - 900 psi (34.5 - 62.1 bar)	50 psi (3.45 bar)
900 - 1400 psi (62.1 - 96.5 bar)	60 psi (4.14 bar)

Legend

- | | | |
|---|--|---|
| Actuation Gas ———— | Normally Closed Valve | Pressure Gauge |
| Odorant ————— | Normally Open Valve | Level Indicator |
| Electrical ———// | Check Valve | Pressure Relief Valve |
| | Solenoid Valve | Pressure Regulator w/ Gauge |
| | Flow Switch | |
| V8 Injection Probe Pipeline Isolation Valve | V11 Odorant Storage Tank Vapor Return Valve | V15 Odorant Storage Tank Supply Isolation Valve |
| V10 Odorant Storage Tank Fill Valve | V13 Odorant Storage Tank Blanket Gas Isolation Valve | V17 Odorant Inlet Isolation Valve |
| | | V18 Odorant Discharge Line Isolation Valve |