VacuGuard+
Medical Vacuum Oxidizer Monitor & Mitigation

NFPA 99 Compliance

NFPA 99 requires medical vacuum systems that also support Waste Anesthetic Gas Disposal (WAGD) to maintain total oxidizer levels of oxygen and nitrous oxide below 23.6%, unless the vacuum pump's materials and lubricants are fully inert to these gases. VacuGuard+ provides continuous oxidizer monitoring and automated mitigation to ensure combined-use vacuum systems stay within this NFPA limit.

Designed for outpatient facilities and surgery centers where oxidizer concentrations often rise above the 23.6% threshold, VacuGuard+ continuously measures, records, and manages oxidizer levels, providing reliable control along with the documentation needed for NFPA compliance.

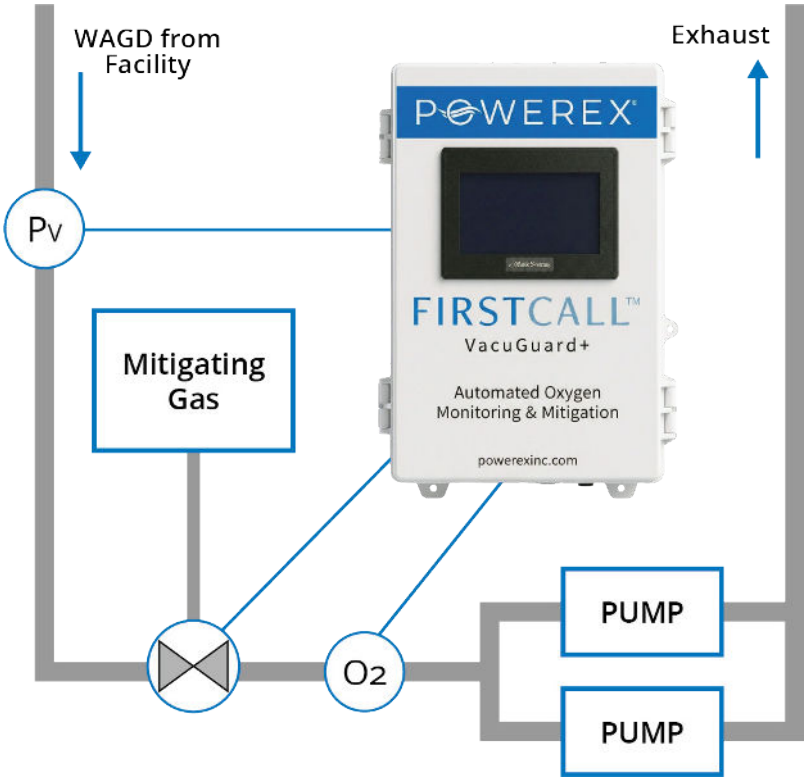
Product Description

The VacuGuard+ is a continuous gas monitoring and mitigation solution designed to maintain oxidizer levels below the NFPA maximum limit of 23.6% by integrating input the following into the unit's PLC:

- Oxygen sensor
- Vacuum pressure transducer
- Mitigation control valve

The VacuGuard+ continuously monitors oxygen concentration and vacuum pressure, automatically initiating mitigation if oxygen levels meet the threshold via the PLC-operated mitigation valve. IMPORTANT: Vacuum levels are always prioritized even if threshold is exceeded. Mitigation only occurs if the vacuum levels remain within acceptable limits, ensuring uninterrupted system operation.

Product Example: VacuGuard+ integrated with a duplex Medical Vacuum System for continuous oxidizer monitoring and mitigation serving WAGD.



Specifications

Part Number		VacuGuard+
Description		Monitors & mitigates oxidizers, vacuum pressure monitoring, alarm relay output & data logging
Performance	Reponse Time	< 1 second of any change in oxidizer levels
	Accuracy	± 0.5% of FS
	Repeatability	± 1% of reading
	Operating Temp	-40° to 122°F (-40° to +50°C)
	Humidity	0 – 98% RH, non-condensing
	Data Logging	Oxidizer and Vacuum Pressure readings logged every 10 seconds
	Alarm Output	2-wire dry contact, normally closed (open on alarm of 23.6% O2)
Oxidizer Monitoring	Sensor Type	Non-depleting Zirconium Oxide with 10+ year life
	Maintenance	No re-calibration required for the life of the sensor
	Range	0 – 95% oxidizer concentration
	Sensor Connection	1" NPT male adapter with KF25 quick disconnect (10 ft cord to control unit)
Vacuum Pressure Monitoring	Range	0 – 30 in Hg, vacuum range
	Sensor Connection	¼" NPT male threaded connection
		(10 ft cord to control unit)
Gas Mitigation	Gas Type	Inert gas (typically nitrogen) or ambient air
	Gas Pressure	5 – 10 psig (operating pressure range at valve inlet port
Gas Connection		½" NPT female threaded connection
Valve Power		Power supplied by control unit (10 ft cord to control unit)
Electrical	Voltage Source	110-120 VAC, 60 Hz
	Power (max)	19 Watts
Physical (Control Unit)	Dimensions	10" (W) x 8" (H) x 6" (D)
	Weight	6 pounds (2.7 kg)
Enclosure Type		General purpose (NEMA 2); not intended for explosive atmospheres