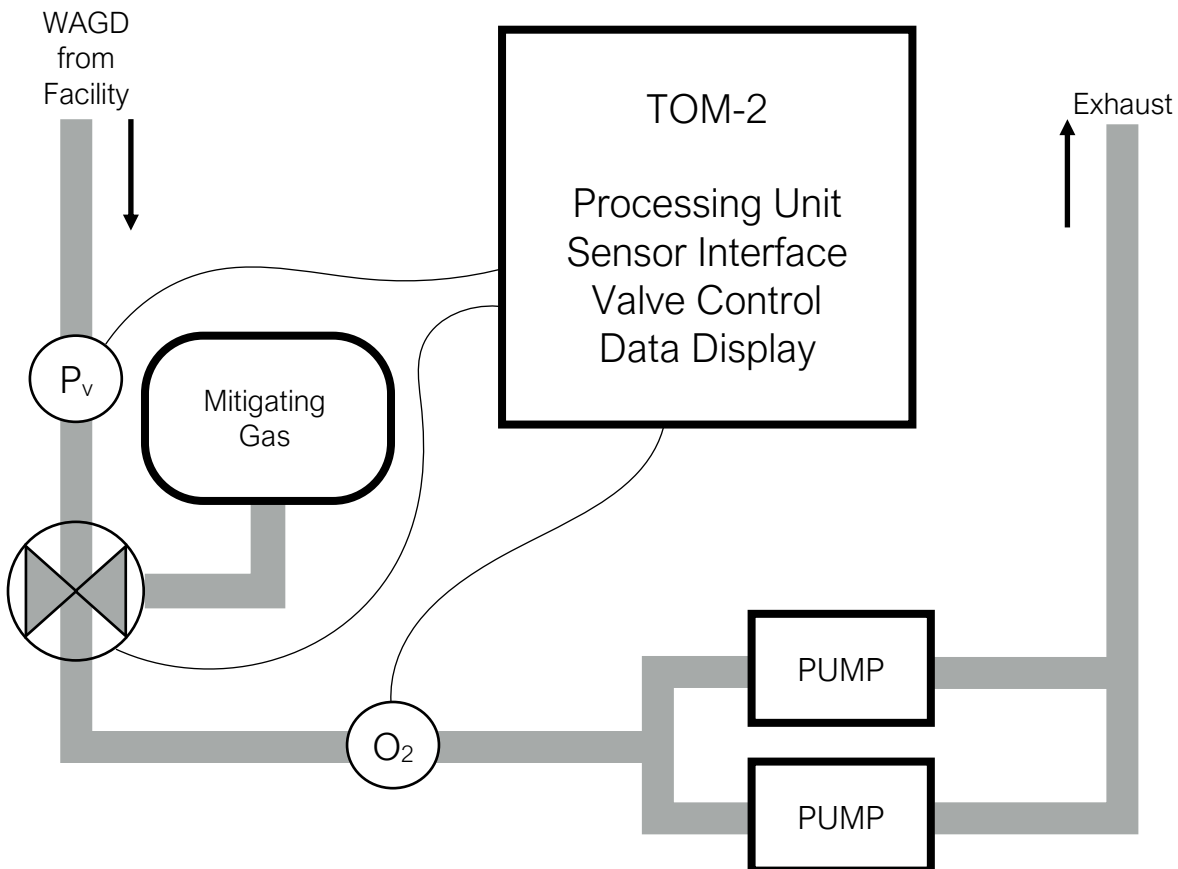


TOM-2 Total Oxidizer Monitor w/Mitigation

With the introduction of NFPA 99 2012 edition comes an entirely new requirement for medical-surgical vacuum systems that are also used for Waste Anesthetic Gas Disposal (WAGD). For these combined-use systems, the NFPA now requires the total concentration of oxidizers (oxygen and nitrous oxide) be maintained below 23.6 percent or the materials, lubricants, and sealants within the vacuum pump be inert to these oxidizers for new installations. The NFPA 99 2018 edition imposes this requirement on all (**existing** and new) combined-use vacuum systems.

The **TOM-2** Total Oxidizer Monitor (patent pending) from EMS Healthcare, LLC is a gas monitoring and mitigation system that's ideal for the continuous regulation of oxidizers below the limit of 23.6 percent in combined-use vacuum systems. The heart of the monitoring & mitigation system is a PLC that interfaces to an oxidizer sensor, a vacuum transducer, and a control valve. The unit monitors system oxidizers (oxygen and nitrous oxide) and vacuum pressure and takes action based on programmed levels for these parameters. The PLC will operate a valve plumbed to a regulated inert gas source (e.g., nitrogen) or ambient air to maintain levels below the critical threshold of 23.6%. Vacuum pressure is always prioritized over oxidizer levels. As long as vacuum pressure remains acceptable, increasing oxidizer levels to the vacuum pump inlet will be mitigated.



TOM-2

The TOM-2 is available in two models. The TOM-2A performs oxidizer monitoring only and is recommended for use in large in-patient facilities with diluted levels of oxidizers in their combined vacuum systems. The TOM-2B performs both oxidizer monitoring and mitigation and is recommended for use in outpatient facilities and surgery centers where oxidizer concentrations typically exceed the NFPA 99 threshold of 23.6%. Both TOM-2A and TOM-2B continuously monitor and log oxidizer levels in order to provide periodic reports for compliance purposes.

Part Number		TOM-2095A	TOM-2095B
Description		Oxidizer monitoring, alarm relay output, data logging	Oxidizer monitoring and mitigation, vacuum pressure monitoring, alarm relay output, data logging
Performance	Response Time	Within 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 readings logged every 10 seconds	Oxidizer and Vacuum Pressure readings logged every 10 seconds
	Alarm Output	2-wire dry contact, normally closed (open on alarm of 23.6% O ₂)	
Oxidizer Monitoring	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	N/A	0 – 30 in Hg, vacuum range
	Sensor Connection	N/A	¼" NPT male threaded connection (10 ft cord to control unit)
Gas Mitigation	Gas Type	N/A	Inert gas (typically nitrogen) or ambient air
	Gas Pressure	N/A	5 – 10 psig (operating pressure range at valve inlet port)
	Gas Connection	N/A	½" NPT female threaded connection
	Valve Power	N/A	Power supplied by control unit (10 ft cord to control unit)
Electrical	Voltage Source	110-120 VAC, 60 Hz	
	Power (max)	13 Watts	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	