

MSA GAS DETECTION SYSTEM

Anesthesia Gas Monitoring in Healthcare Facilities



Situation

Healthcare facilities are faced with issues of worker long-term exposure to anesthetics, carbon dioxide, and nitrous oxide, all of which are used and stored within engineering and calibration laboratories, service areas, and shipping/receiving departments. These areas typically store multiple cylinders containing such gases, necessitating the use of sampling and gas monitoring systems for potentially hazardous leaks.

Long-term exposure to anesthetics (halothane, enflurane, sevoflurane, isoflurane and desflurane as part of anesthesia blends) may result in chronic effects of the respiratory, cardiovascular, reproductive, and central nervous systems. Acute effects include loss of concentration, fatigue, depression, and headache. Exposure to high levels of nitrous oxide can affect the respiratory, reproductive, and central nervous systems. Cylinder valve or line leaks can create high levels of anesthetics and N₂O, especially within hospital cylinder storage areas.

Solutions from MSA

MSA Chemgard® Gas Monitors and Multigard™ Gas Sampling Systems for N₂O, CO₂ and anesthesia agents are ideal solutions for patient monitoring and anesthetic proportioning/control systems for the health care industry.

Single or multiple MSA Chemgard Gas Monitors are ideal for leak detection of nitrous oxide. However, if the application requires a data interface to a supervisory system end, discreet relay outputs for multiple sample points, and flexibility of alarm levels for each sample point, an MSA Multigard Gas Sampling System is preferred.

A typical Multigard System setup uses a single Chemgard Sensor with a custom band-pass filter to accommodate the unique absorbency peaks of the entire family of anesthetic agents without undue risk of interferants. In addition, this 8-point system has a second PIR (Photoacoustic Infrared) bench for N₂O and an MSA Ultima® XIR Gas Monitor for CO₂ detection. The MSA Multigard Gas Sampling System provides flexible and reliable multi-point gas detection for many hospital applications.



ULTIMA® XIR GAS MONITOR

The **Ultima XIR Gas Monitor** provides microprocessor-based, infrared point gas detection for continuous monitoring of combustible gases and vapors. This unit also offers definitive compensation for temperature, humidity and aging effects. Ultima XIR Gas Monitors are IP67 rated (dust proof, protected from temporary immersion in water) to withstand tough environments.



CHEMGARD® GAS MONITOR

The Chemgard Gas Monitor detects low ppm or percent levels for a number of industrial compounds. This unit can be configured to monitor from up to eight remote areas. Standard features include vacuum fluorescent display, audio alarm, four relays and 4-20mA & 0-10V outputs. The unit can be housed in GP, XP or rack-mount enclosures.



MULTIGARD™ GAS SAMPLING SYSTEM

The MultiGard Gas Sampling System is an efficient, cost effective method of gas detection. Gas samples are pumped from up to 32 locations and delivered to an internal gas analyzer. The system can process the outputs of up to four analyzers reducing costly floor space requirements. This also saves money by eliminating multiple systems, duplicate sampling tubing and unnecessary maintenance.

Note: This Bulletin contains only a general description of the products shown. While uses and performance capabilities are described, under no circumstances shall the products be used by untrained or unqualified individuals and not until the product instructions including any warnings or cautions provided have been thoroughly read and understood. Only they contain the complete and detailed information concerning proper use and care of these products.



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