

Monitoring for Oxygen Deficiency: MRI Units



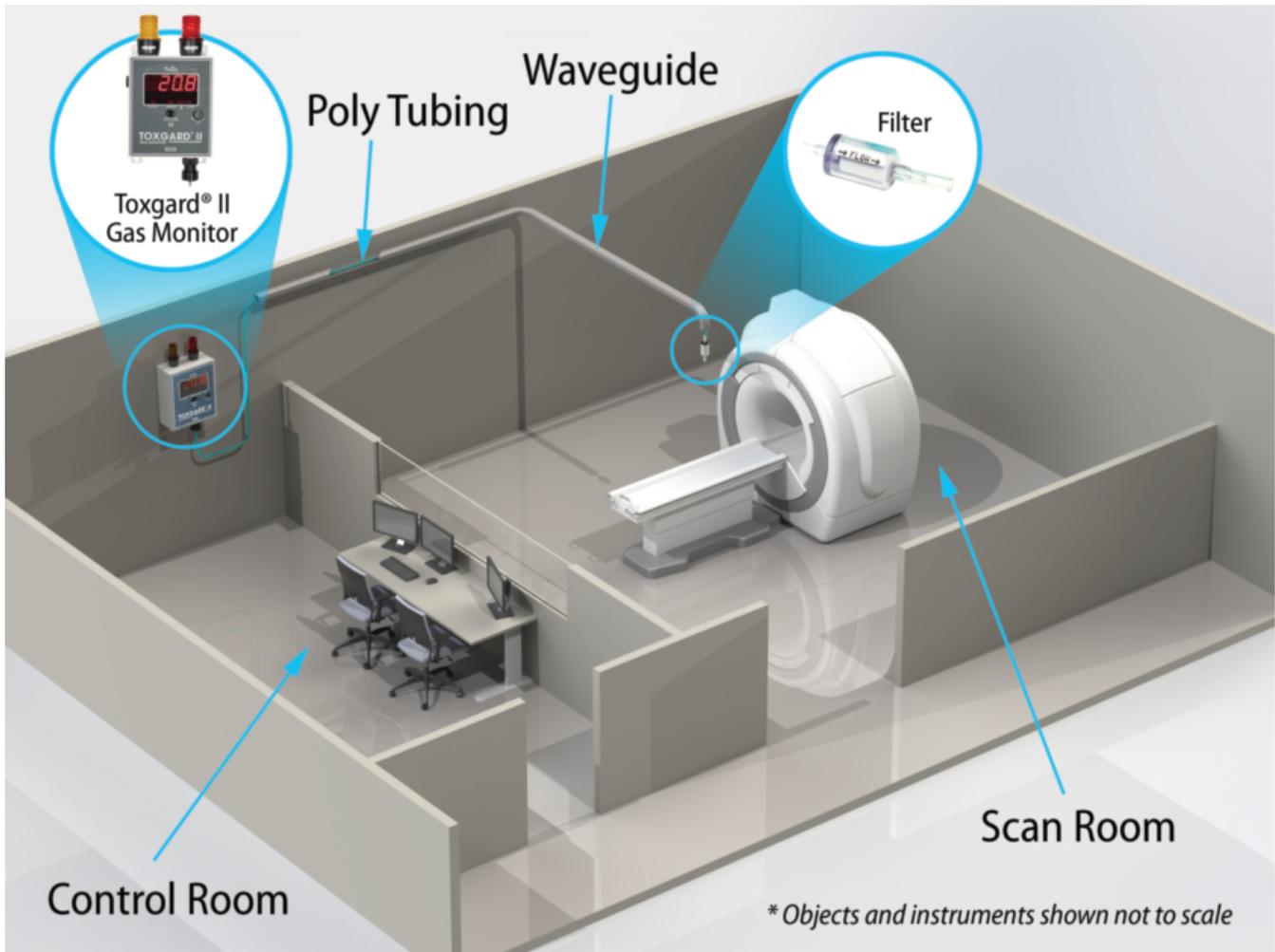
In today's MRI units, superconducting magnets are the most commonly used type of magnets. Their construction is similar to that of a resistive magnet—a current of electricity is passed through coils or windings of wire—to create the required magnetic field. The wire is continually bathed in a plumbing labyrinth of liquid helium that is maintained at 452.4° F below zero.

This extreme cold drops the wire's resistance to zero, reducing the electrical requirements for the system, making it much more economical to operate. The other main component of an MRI system is a very powerful computer system that enables the transmission of RF (radio frequency) pulses into the patient's body while they are in the scanner. The large quantity of helium required to maintain the magnet's operating temperature creates a critical safety concern. A helium leak can cause an oxygen-deficient atmosphere that can place the patient at risk. At times, MRI patients are sedated and are unable to signal any potential problem to the MRI operator. In addition, early detection of oxygen deficiency caused by a helium leak can offer protection to the MRI unit itself by signaling a shutdown event.

The MSA Toxgard® II Gas Monitor outfitted for MRI rooms is a uniquely qualified, economical solution. It offers fast, reliable protection from the hazards of oxygen deficiency caused by helium coolant leaks. The Toxgard II Monitor incorporates a sample draw pump system that uses no metal components near or inside the actual MRI room, eliminating RF interference from the MRI system.

The Toxgard II Monitor is mounted in the operator's office for almost instantaneous notification of a leak via the local audible alarm and flashing LED display. A sample draw tube is routed into the MRI room and an end-of-line filter is located above the MRI unit at a point that is most likely to detect the lack of oxygen in the MRI unit. The Toxgard II Monitor delivers extremely quiet operation via the dampened mount sample draw system minimizing background noise in the operator's office.

*Because every life has a **purpose...***



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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