

Oxygen Deficiency Monitoring in MRI Scanner Rooms

The Issue :

MRI Scanners are part of a modern Hospitals vital equipment with many thousands in service throughout the world. The Superconducting Electro-magnets used in MRI scanners need to be cooled to an extremely low temperature in order to achieve optimum performance. This is achieved by using liquid Helium as it is extremely cold (- 268°C).

Leakage of this Helium from storage containers and pipelines can cause displacement of the Oxygen and presents a risk of asphyxiation. It is therefore important to monitor Oxygen levels in MRI Scanner rooms.

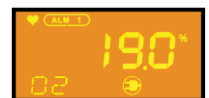


Solution 1 : OX-600 Fixed Oxygen Deficiency Monitor

The **Riken Keiki Model OX-600**, Stand Alone Oxygen Monitor, can accurately monitor MRI Scanner rooms for Oxygen Deficiency in the presence of Helium and has both audible and visual alarms.

Key Features :

- Long Life, Galvanic Sensor which is not affected by Helium.
- 0 to 25% Volume measurement range.
- L-LL or L-H alarm settings.
- 2 x Relay outputs.
- 4-20mA output.
- Pressure compensation.
- Unique 3 colour display changes colour at alarm levels.
- Optional remote sensor and cable (3-20m options).
- 24V or battery (2 x AA) options (240v adapter available).
- Very compact and lightweight (180g).
- Extremely easy to use and install.




Riken Keiki Gas Detectors for Medical Applications

Example of installation


For monitoring anesthetic gas concentrations

Optical Gas Indicator
[Model:FI-8000]




A single unit measures O₂, N₂, N₂O and air, as required by JIS T7101 (Medical Gas Pipeline Systems).

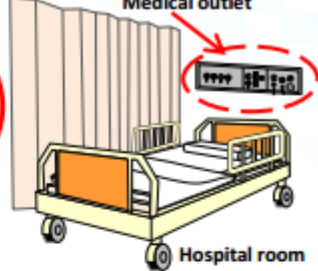
Portable Oxygen Monitor (for inspecting medical equipment)
[Model:OX-07 TYPE C]



Anesthesia equipment




Medical outlet



Hospital room


Prevents oxygen deficiencies in medical examination areas (including MRI rooms) where liquid gas is used.

Indoor Oxygen Monitor
[Model:OX-600]



For environmental monitoring around the EO (ethylene oxide) gas sterilizer (as required by Rules on Labour Standards for Women)


Indoor Ethylene Oxide (EO) Gas Monitor
[Model:GM-600]



For environmental monitoring around sterilizers and gas monitoring for air sterilization in work environments


For measuring formaldehyde

Formaldehyde Gas Detector
[Model:FP-330] [Model:FP-31]




For measuring hydrogen peroxide

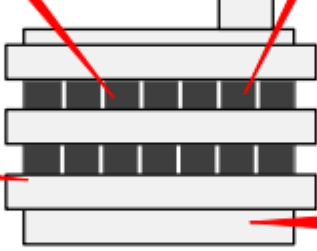
Intelligent Gas Detector
[Model:GD-70D]



For easy measurement of organic solvents (as required by Rules on Labour Standards for Women and Ordinance on Prevention of Dangers Due to Specified Chemical Substances)

Portable Multi Gas Detector
[Model:GX-6000]





Gas sterilizer