

Oxygen Deficiency Monitoring in Hospitals

The Issue:

Hospitals, Veterinary centres and other medical facilities use and store quantities of industrial and medical gas. One common gas used is liquid nitrogen. Liquid nitrogen provides temperatures as low as -196°C and can be used for cryobiology and cryotherapy. The very low temperatures are also ideal for use in cryoconservation, the long-term preservation of blood, blood components, other cells, body fluids or tissue samples.

The presence of liquid nitrogen in cylinders and containers requires a focus on health and safety as liquid nitrogen rapidly vaporises to gas at about 700 times the liquid volume. By displacing air nitrogen gas may kill by asphyxiation if it escapes. When the oxygen concentration in air is sufficiently low, a person can become unconscious without warning.



The Solution:

Riken Keiki Model **OX-600**, stand alone oxygen monitor units, from **Weatherall** Equipment and Instruments Ltd can monitor individual rooms that store nitrogen containers.

An optional remote mounted sensor and cable (3-20 metre options) allows the unit to be mounted outside of the room, while the extender cable allows the sensor to be located in the nitrogen storage area. This allows an individual to monitor the condition of a room prior to entering. Being aware of oxygen deficiency in the presence of compressed nitrogen cylinders or liquid nitrogen containers can save lives.



3 Color Display



Normal



Alarm 1



Alarm 2

The **OX-600** is an indoor, standalone monitor that detects Oxygen (O_2) with a range of 0-25 % volume with 0.1% increments.

Its compact, lightweight design is equipped with a unique tri-colour display, which changes colour as oxygen levels reach each alarm level.

The **OX-600** alarms can be set to low-low or low high settings and there are relay outputs for 1st and 2nd alarms in addition to a 4-20mA output. It comes ready to operate with a simple wall mounted bracket and has 24 VDC (optional mains adapter available) or battery powered options (2 x AA Alkaline batteries included).

The **OX-600** uses a fast responding low-cost plug-in style galvanic cell sensor. This long life sensor is field- replaceable with no special tools required. The sensor includes a pressure compensation feature to avoid false alarms.