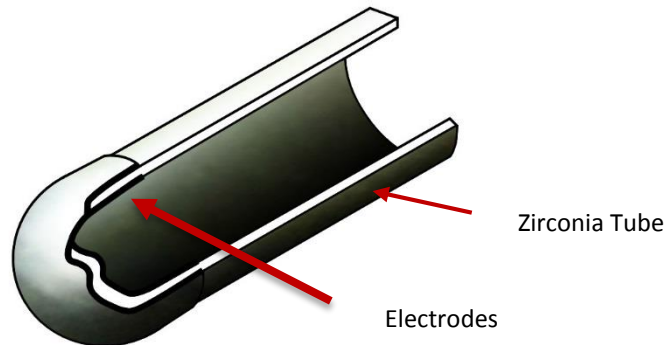


Zirconia

Ideal for the analysis of oxygen within high temperature applications such as combustion or metal heat treatment, zirconia sensors can also be used as effective vacuum leak detectors within chambers or glove boxes. Suitable for low ppm to 100% gas analysis.

Typically the sensors are coated internally and externally with platinum electrodes. At temperatures in excess of 450°C the zirconia will begin to conduct oxygen ions, generating a voltage between the electrodes.

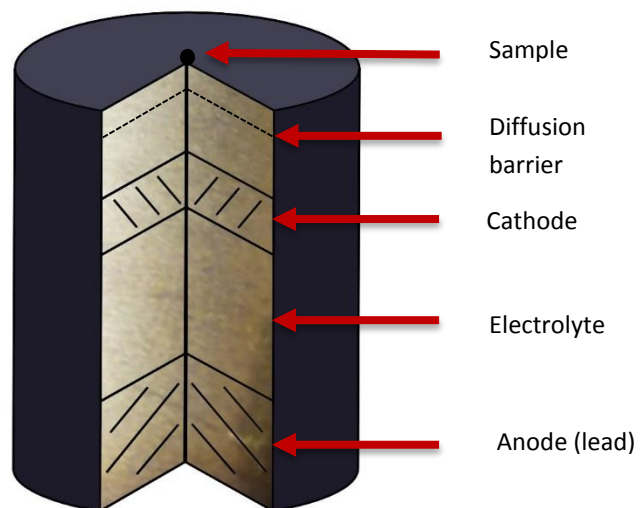
The value of this voltage is dependent upon the differences between the partial pressures of the oxygen in the sample and within the reference gas. Rapidox oxygen analyser interpret this difference to display an oxygen concentration.



Electrochemical

Suitable for use within measurement gases containing VOCs, solvents, fuels, helium or hydrogen. Electrochemical cells are ideal for use within applications where a zirconia sensor is unsuitable. Available for oxygen analysis on a scale of either 0.1ppm to 1% or 0-100%. Most electrochemical sensors have two electrodes, a 'sensing' and 'counter' which are divided by a thin electrolyte coat. Gas enters the sensor and there is an oxidation reaction

(a reduction that causes an electrical current), that is directly proportional to the gas concentration. The Rapidox oxygen analyser interprets this current into an oxygen reading.



For further information on gas analysis applications please visit:

www.cambridge-sensotec.co.uk/applications/