



 **CROWCON**
Detecting Gas **Saving Lives**

Meet the Next Generation of Portable O₂ Gas Detection

Long-life Oxygen Sensors Have Arrived!

June 2021

Introduction

Crowcon has introduced long-life oxygen sensors with industry leading sensor technology that your applications demand. With 5-year warranty, Crowcon's new long-life oxygen sensor saves you money and delivers on new safety and environmental regulation in a fully future proofed way. Now lead-free, the 5-year extended sensor life is backed by the industry's longest warranty.

The long-life oxygen sensor delivers key features which provide real world tangible benefits to operator and site operations:

Industry's first 5-year warranty

Industries are increasingly looking for cost-effective, sustainable, high quality investments and personal gas safety is no different. We are confident that our long-life O₂ sensors will last and work in any situation which is why we have given them broader environmental ranges on our specification sheets, and the industry's first 5-year warranty.

Portables with the Long-Life O₂ sensor improve the fleet managers confidence and peace of mind that their Long-Life O₂ gas sensors will be operational for longer and protected under a 5-year guarantee.

Lower cost of ownership

When implementing a fleet of personal Oxygen gas detectors, it is common practice to service on a recommended schedule defined by the manufacturer. This entails ongoing regular costs as well as potentially disrupting operations or processes in order to service detectors.

The new long-life Oxygen sensor helps gas detector fleet managers reduce down time and cost of ownership by increasing the O₂ sensor life to 5-years and reducing the number of replacement sensors required over the portable gas detector's expected lifetime.

Reduced environmental impact

Many industries and applications are looking to reduce their impact on the planet. Replacing leaded O₂ sensors with this alternative is a great way to cut potentially harmful effects on the environment.

The new lead-free Oxygen sensor removes the use of lead and delivers a reduced environmental impact for fleet managers and companies alike.

Lead-free for RoHS compliance

The removal of lead anodes in electrochemical oxygen sensors is due in 2024, as outlined in the Restriction of Hazardous Substances (RoHS), Directive.

Do not get caught out, plan proactively today and start to change out your fleet with the latest in Oxygen gas detection with market leading warranty.

Why should I consider long-life oxygen sensors?

The lead-free oxygen sensor from DD Scientific offers a robust, reliable and lead-free oxygen sensor for Crowcon's trusted single gas monitor, Gasman. Crowcon's oxygen sensors have a reliable track record with no history of sensors suffering from sensor toxins. Testing shows this 100% record is maintained with the new DD lead-free oxygen sensor and this is supported by a market leading warranty of 5 years.

The new design does not have compressed strands of lead the electrolyte has to penetrate, allowing a thick electrolyte to be used – which means no leaks, no leak induced corrosion, and improved safety. The additional robustness of this sensor allows us to confidently offer a 5-year warranty for added piece of mind. We have successful prolonged use of these sensors in our flue gas applications, giving us great confidence about use in all environments required by your applications.

Zone 0 use has been maintained, allowing Gasman to offer enhanced robustness and reliability with an improved sensor temperature range of -40°C to +60°C, up from -30°C to +50°C as well as a wide sensor humidity range of 0 to 99% RH, up from 5 to 95% RH.

Please note: the Gasman screen operates above -20°C, but the safety alarms operate at all temperatures.

Gasman self-tests automatically during start-up, reporting any problems. In addition, long-life oxygen sensors withstand the most challenging of environments and the Gasman immediately reports any faults.

The lead-free oxygen sensor requires very little energy, running in Gasman for nearly half a year on a single battery charge, meaning the Gasman keeps it consistently powered, maintaining its stability for around 150 days, ready for use. Since this product has 'calibration in fresh air' capability, long term stability is assured. Calibration is a simple and rapid process with 20.9% oxygen present in air.

Please note: the calibration process is with 20.9 % Volume oxygen, however it is possible to apply quad-gas to pass 18% Volume over the sensor to check alarm responses.

Lead is heavy, toxic and costly. Crowcon's new lead-free oxygen sensors reduce environmental impact without compromising on safety. Each traditional 'leaded Oxygen sensor' from our portable range of detectors has an average of 12g of lead inside, 75% of its total weight. Switching to a non-leaded, long-life Oxygen Gasman, will help save part of the 2,200kg of lead reaching the environment each year when the sensors are eventually disposed, reducing the risk of harm associated with lead exposure. With RoHS regulation significantly curbing the use of lead in products and coming into force for gas detectors in 2024, there has never been a better time to take proactive steps to keep your fleet environmentally compliant while reducing the total cost of ownership.

Conclusions

Long life-oxygen sensors have an extensive lifespan of 5-years, with less downtime, lower cost of ownership, and reduced environmental impact. They accurately measure oxygen over a broad range of concentrations from 0 to 30% volume and are the next generation of O₂ gas detection.

Please note: All ATEX and IEC Ex intrinsic safety certification is invalid above 21.0% oxygen.

Key benefits include:

- **Industry's first 5-year warranty**
- **Lead-free for RoHS compliance**
- **Less frequent sensor replacement**
- **Lower cost of ownership**
- **Reduced environmental impact**

For more information about Crowcon's Long-Life Oxygen sensors, please visit crowcon.com

*CTA to be updated to new landing page

Further Reading:

Blog (O₂ dangers):

- <https://www.crowcon.com/help-and-advice/knowledge-base/talking-gas/what-is-gas/oxygen-risk/>

WHO (Lead Dangers):

- <https://www.who.int/news-room/fact-sheets/detail/lead-poisoning-and-health>