

STRONGER SAFETY CULTURE

Advancing gas detection reliability in oil and gas operations

In oil and gas operations, gas detection is one of the most fundamental layers of protection for workers in the field. While technology in the industry continues to advance, many of the day-to-day challenges surrounding personal gas monitoring remain the same: ensuring detectors are powered, functional, rugged enough for harsh conditions, and easy for teams to maintain. As a result, safety professionals increasingly look toward equipment designs that reduce operational burden while maintaining consistent protection.

One area where meaningful progress has emerged is low-maintenance gas detectors that require little to no charging. Traditional rechargeable instruments can be dependable, but they bring unavoidable logistical requirements – charging stations, cable management, equipment rotation, and the risk of a detector being left unpowered when it's needed most. In contrast, long-life, no-charging gas detectors alleviate much of this friction. These instruments are designed to operate continuously for years without requiring access to external power. For remote sites, long shifts, or crews constantly on the move, removing the power dependency eliminates a common point of failure and simplifies the daily routine for workers responsible for wearing them.

RUGGED DESIGNS

Ruggedness is another major consideration. Oil and gas environments subject equipment to temperature swings, humidity, impact, vibration, and airborne contaminants. Detectors built with durable housings, sealed electronics, protective sensor placement, and shock-resistant construction help ensure that performance is not compromised by the physical realities of fieldwork. A device that can survive rough handling and environmental stressors reduces downtime, minimises

The MGC IR Pump from Gas Clip Technologies



Gas Clip Technologies' SGC Plus Detector

replacement costs, and provides confidence that readings remain stable and accurate throughout the instrument's service life.

OPTIMISING DETECTOR LIFE

Single-gas detectors for H₂S, CO, and O₂ continue to play an important role, especially in operations where risk profiles are specific or where workers rotate through multiple sites. For H₂S-heavy regions, the availability of a single-gas detector with a hibernate function, such as the Single Gas Clip Plus, offers additional lifecycle optimisation. When work is intermittent – seasonal, project-based, or subject to shut-in periods – the ability to place the detector into hibernation preserves the remaining life on the unit. This approach reduces waste and ensures that the detector's operational span aligns more closely with actual usage patterns.

STREAMLINING BUMP TESTING AND CALIBRATION

Maintenance efficiency is equally important. Daily bump testing and periodic calibrations are essential for reliable monitoring, but the process can become time-consuming without the right tools. Portable docking

systems address this challenge by enabling quick bump tests and/or calibrations for multiple units at once. Because the station is mobile, it can be brought directly to the work location instead of requiring workers to visit a dedicated area. This flexibility improves compliance, supports structured maintenance programs, and helps safety teams manage fleets more effectively.

SUPPORTING A STRONGER SAFETY CULTURE

Together, these advancements – extended life spans, reduced charging requirements, rugged construction, and streamlined maintenance – support a more resilient safety culture. They allow safety managers to focus less on device logistics and more on worker protection strategies, training, and operational readiness. As the industry continues to prioritise reliability and efficiency, equipment that minimises complexity while maintaining consistent performance will remain a valuable asset across many sectors of oil and gas operations. •

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