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### GAS ANALYSIS SOLUTIONS THAT HELP BUILD A BRIGHTER FUTURE



The global expert in gas analysis, Servomex empowers change across industries, helping to build a better, cleaner world with a range of innovative technological solutions. Measuring a variety of gases, Servomex analyzers help to drive decarbonization, making industrial processes cleaner and more efficient. These products are transforming industries worldwide, helping businesses achieve a new level of accuracy, efficiency, and productivity in their operations.

# Reliability redefined for the precision measurement of liquid water



Achieve accurate liquid water analysis with SpectraExact 2500F

The SERVOTOUGH SpectraExact 2500F delivers a new level of accuracy to the measurement of liquid water, and has been developed to achieve low-level water measurements in hazardous area locations.

Servomex's iconic, industry-leading photometric analyzer can measure liquid water in acetic acid, acetone, EDC, glycols, and more, providing flexible, real-time, on-line analysis in a range of process gas analysis applications.

It uses a Single Beam, Dual Wavelength non-dispersive

Digital communications enable the SpectraExact 2500 to be operated remotely and safely, with Modbus implemented through MODBUS TCP.

It can be configured to measure liquid water in acetic acid, acetone, EDC, glycols, NMP, THF, VAM, VCM, methanol, ethanol, isobutanol, and sodium hydroxide, making it highly versatile and suitable for a wide range of industrial applications.

By monitoring liquid water in process gas streams, plant operators can ensure greater product quality, while minimizing the effects of corrosive damage caused by the water reacting with other components present.

# Laser-focused gas analysis with rock-solid reliability



Laser-focused gas analysis with the Laser 3 Plus

Servomex's SERVOTOUGH Laser 3 Plus range enables fast, accurate gas analysis in a light, compact design. It combines Servomex's own Tunable Diode Laser (TDL) technology with the latest Wavelength Modulated Spectroscopy (WMS) measurement techniques and unique Servomex signal processing. The Laser 3 Plus Combustion measures oxygen  $(O_2)$ , carbon monoxide (CO), or CO and methane  $(CH_4)$  in in-situ cross-stack applications, delivering exceptional benefits, including low detection limits, negligible zero drift, and minimal cross interference.

The Laser 3 Plus Process version provides the most stable, repeatable results for the measurement of  $O_2$  in process temperatures up to 500°C. It is optimized for fast, accurate, and responsive measurements in hot or hazardous conditions.

Finally, the Laser 3 Plus Environmental reliably measures ammonia ( $NH_3$ ) for monitoring ammonia slip during DeNOx processes. It is also EPA PS18 compliant for CEMS monitoring of NH3 as a precursor to harmful particulates.

Line-lock cuvette technology ensures continuous, reliable measurement of the required gas in furnaces, process heaters, NOx reduction, CEMS monitoring of NH<sub>2</sub>, and power generation.

This unique Servomex technology prevents dangerous signal drift, ensuring a stable continuous reading and empowering high safety integrity.

The Laser 3 Plus range's pioneering compact design occupies a footprint one-tenth the size of many competitor products, providing instant benefits for installation and flexibility.

# Stable oxygen measurements in demanding applications



Infrared (NDIR) measurement technique which offers high performance, increased measurement sensitivity, and a high degree of stability.

This technique is virtually unaffected by contamination on the sample cell windows, since it influences both wavelengths equally. A 50% loss of signal due to obscuration of the sample windows produces no more than a 3% FSD error in reading.

The SpectraExact 2500F has a rugged, reliable, user-friendly design that requires minimal maintenance, and is certified for use in hazardous areas and for the measurement of flammable samples.

It has CE, ATEX, IECEx, and North American (applied for) hazardous area approvals.

This non-depleting measurement technology requires no sample conditioning and ensures the Laser 3 Plus range can provide the most stable, repeatable results, with minimal installation and maintenance costs.

Servomex's TDL analyzers use a second harmonic detection (2f) modulation technique that delivers greater accuracy, sensitivity, and reliability of measurement, especially in low parts-per-million-level measurements.

There are three models, each configured for optimum performance.

Setting the standard in O2 analysis with the Oxy 1900

The SERVOTOUGH Oxy 1900 sets the standard for oxygen gas analysis, delivering a feature-rich solution designed to meet the process needs of even the most challenging applications.

Specifically designed for hazardous area use, the Oxy 1900 is built around Servomex's industry-leading patented Paramagnetic technology for highly stable, non-depleting measurements, leading to low cost-of-ownership and low maintenance costs.

Available in three standard pre-configured variants for fast delivery, or custom-built from configuration options, the Oxy 1900 delivers fast measurement response times. It protects

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#### Measurement and Testing

with precision, enabling safer and more sustainable process control through a single, cost-effective unit.

It has a clear Liquid Crystal Display (LCD) with an adjustable backlight, plus an intuitive, modern, and user-friendly interface, which makes it simple to operate.

The Oxy 1900 combines this ease of use and installation with enhanced safety design aspects, creating an analytical solution that can reduce costs dramatically over product life.

It introduces unique features that offer unrivalled flexibility, operational performance, and reduced costs, including a heated sample compartment for unmatched measurement stability and simplified sample conditioning systems. When coupled with the innovative heated sample inlet/outlet bulkhead, this can reduce the requirement for a gas conditioning system on samples with a dew point of up to 50°C/122°F.

A unique integrated FlowCube sensor continuously monitors sample flow within the analyzer, and can report low and high sample flow levels.

Benchmark safety compliance and complete reliability are essential when working with potentially dangerous, hazardous area applications. The Oxy 1900 delivers these without question, supporting both product quality and plant safety.

It offers IECEx/ATEX/UKEX: for Zone 1, and cCSAus C1/D1 for North America certification and is SIL2 (Route 1H) hardware compliant, ensuring it provides solid, trusted reliability in hazardous area locations.

# Setting a new standard for feature-rich process oxygen (O<sub>2</sub>)monitoring

With an unrivalled combination of precision, flexibility, and performance for optimum process and safety control, the SERVOTOUGH OxyExact 2200 is the ultimate gas analysis solution for process oxygen, keeping customers in control of their applications and helping to ensure a healthier world.

It uses high-precision Paramagnetic O<sub>2</sub> sensing technology, built into a flexible and robust safety-enhanced design optimized to meet the needs of demanding process monitoring applications, ensuring that people, places, and processes are kept safe.

These applications include feedstock purity testing and cleanup, hydrogen and chlorine production, solvent recovery and oxidation control processes, ethylene oxide (EO), and ethylene dichloride (EDC) production.

## Our solutions for a cleaner world









SERVOTOUGH SPECTRAEXACT 2500

SERVOTOUGH LASER 3 PLUS COMBUSTION

SERVOTOU Oxy 1900

SERVOTOUGH OXYEXACT 2200



Meet the demands of process monitoring applications with the OxyExact 2200

The OxyExact 2200's sophisticated, flexible design ethos ensures it can be precisely configured to a wide range of application environments. It is easy to integrate into larger gas analysis systems.

A single intuitive-use controller can be situated in either a safe area or hazardous area, linking to up to six transmitters, permitting simplified set-up and ongoing maintenance through auto-validation and calibration procedures.

This ensures that the gas analyzer provides the high performance and adaptability required by the most dangerous process control environments.

The OxyExact 2200 transmitters also feature an innovative three-enclosure design that allows the flexibility to measure any flammable gas up to  $100\% O_2$  (oxygen-enriched).

The Paramagnetic sensing technology used by the OxyExact 2200 delivers highly stable and accurate  $O_2$  measurements. Safety-enhanced design and optional patented flow alarm and pressure compensation ensure sampling versatility.

In addition, Ethernet or RS485 Modbus protocols deliver enhanced communications capabilities. All these aspects combine to make the OxyExact an industry-leading solution for  $O_2$  analysis.

#### Conclusion

Servomex's gas analysis solutions are designed to meet the challenges that industrial operators will face not just right now, but in the years and decades ahead.

They are created not just to empower change, but to embrace it, to the benefit of the planet, helping customers to make more informed decisions, transform their processes, and make a meaningful impact.

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