

ISSUE
7

SERVOMEX PRODUCT GUIDE

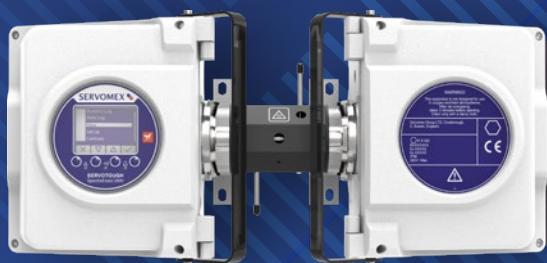
OUR INDUSTRY-LEADING GAS ANALYZERS AND
SYSTEMS, MATCHED TO YOUR REQUIREMENTS



**SERVOFLEX
PORTABLES**



**SERVOPRO
SAFE AREA**



**SERVOTOUGH
HAZARDOUS AREA**

PRODUCTS

SYSTEMS

SERVICE



SERVOMEX.COM

SERVOMEX 
a spectris company

GAS MEASUREMENT GUIDE

SERVOTOUGH	O ₂	Ar	CO	CO ₂	He	C1-C6	NMHC	H ₂	HCl	H ₂ S	CH ₄	NO	NO _x	NO ₂	N ₂
Oxy 1900	%														
OxyExact 2200	%														
H2scan								%							
SpectraScan 2400			%CV	%CV		%CV				%CV					
SpectraExact 2500			%ppm	%ppm		%			%ppm		%	%ppm			
FluegasExact 2700	%		ppm												
Laser 3 Plus Environmental															
Laser 3 Plus Combustion	%		ppm								%				
Laser 3 Plus Process	%														

SERVOPRO	O ₂	Ar	CO	CO ₂	He	C1-C6	NMHC	H ₂	HCl	H ₂ S	CH ₄	NO	NO _x	NO ₂	N ₂
AquaXact 1688															
AquaXact 1688 Controller															
MonoExact DF150E	ppm/b														
MonoExact DF310E	ppm/b														
4900 Multigas	%		%ppm	%							ppm	ppm			
MultiExact 4100	%ppm		%ppm	%ppm							%ppm				
MultiExact 4200	%		ppm	ppm							ppm				
Chroma	ppm/b	ppm/b	ppm/b	ppm/b	ppm/b		ppm	ppm/b			ppm/b				%ppm/b
NanoChrome	ppb/t	ppb/t	ppb/t	ppb/t			ppb/t	ppb/t			ppb/t				ppb/t
DF-500 Range	ppm/b/t														
DF-700 Range	ppm/b/t														
NanoChrome ULTRA	ppb/t	ppb/t	ppb/t	ppb/t			ppb/t	ppb/t			ppb/t				ppb/t
DF-560E NanoTrace ULTRA	ppm/b/t														
DF-750 NanoTrace ULTRA															
DF-760E NanoTrace ULTRA	ppm/b/t														
Plasma															ppm
FID															
NO _x												ppm	ppm	ppm	
HFID							ppm				ppm				

SERVOFLEX	O ₂	Ar	CO	CO ₂	He	C1-C6	NMHC	H ₂	HCl	H ₂ S	CH ₄	NO	NO _x	NO ₂	N ₂
Micro i.s. 5100	%														
MiniMP 5200	%			%											
MiniHD 5200	%		%	%											

WANT TO VIEW OUR PRODUCTS ONLINE? Visit [servomex.com](https://www.servomex.com)

N ₂ O	NH ₃	C ₃ H ₆	THC	H ₂ O	SO ₂	KEY APPLICATIONS HAZARDOUS AREA	PAGE
						■ Process control ■ Flare stack analysis ■ Vapor recovery ■ Safety-critical oxidation	5
						■ Oxidation control reactions ■ EO, PTA and EDC manufacturing ■ Catalyst regeneration ■ Solvent recovery	5
						■ Refinery ■ Petrochemical ■ Manufacturing ■ Industrial gas supply	5
						■ BTU/Wobbe content measurement ■ Gas turbine, engines, fuel cells ■ Flare stack monitoring	6
%ppm	%	%	%	%		■ Water in EDC/solvents ■ Ethylene production ■ TDI production ■ Chlorine production	6
						■ Process heaters ■ Utility boilers ■ Thermal crackers ■ Crematoria and incinerators	6
	ppm					■ Process heaters ■ Incinerators ■ Power stations ■ Furnaces ■ Thermal oxidizers	7
						■ Process heaters ■ Incinerators ■ Power stations ■ Furnaces ■ ESP protection ■ Thermal oxidizers	7
						■ Oxidation control ■ Inerting ■ Safety monitoring ■ Flare gas monitoring ■ Combustion control (<500°C) ■ Coal to chemical	7

N ₂ O	NH ₃	C ₃ H ₆	THC	H ₂ O	SO ₂	KEY APPLICATIONS SAFE AREA	PAGE
				ppmvdp		■ Glove boxes ■ Solder reflow ovens ■ Compressed air generation ■ Ethylene production	9
				ppmvdp		■ Glove boxes ■ Air separation units ■ Instrument air units ■ Refining gases	9
						■ Glove boxes ■ Heat treating ■ Solder reflow ovens ■ Industrial gas production	9
				ppm		■ Air separation units ■ Medical/industrial gases ■ Specialty gas blending	10
ppm					ppm	■ Utility boilers ■ Clinical waste incinerators ■ Chemical incinerators ■ Mobile labs	10
ppm				ppm		■ Product purity on ASU ■ Validation of medical O ₂ , N ₂ and air ■ Process control on ASU ■ Monitor trace CO ₂ on scrubbed air inlet to air separation process	10
ppm						■ Hydrogen production ■ HyCO plants ■ Syngas production	11
						■ Medical gas production ■ ASU ■ Cryogenic truck loading station ■ High purity gas production	11
						■ Semiconductor production ■ Quality control measurements ■ Stationary analytical systems UHP gas production	11
						■ Continuous quality control monitoring ■ Post purifier quality certification ■ Leak detection for electronics grade gases	12
				ppm/b/t		■ Continuous quality control monitoring ■ Bulk gas cylinder quality control ■ Trace moisture analysis	12
						■ Semiconductor production – quality control measurements – stationary analytical systems ■ UHP gas production	12
						■ Continuous quality control monitoring ■ Inert gases control checks ■ Post-purifier quality certification ■ Leak detection	13
				ppm/b/t		■ Continuous quality control of bulk UHP gases for semiconductor fabs	13
				ppm/b/t		■ Monitoring O ₂ and H ₂ O as contaminants in UHP bulk gases used in semiconductor applications	13
						■ Argon production ■ Truck loading ■ Pure gas bottling ■ Specialty gas laboratories	14
			ppm			■ Cryogenic air separation ■ Process control ■ Food gas manufacture ■ Product validation	14
						■ Scrubber efficiency ■ Turbine/generator feedback control ■ SCR/SNCR feedback control ■ CEMS	14
			ppm			■ Compliance monitoring and testing ■ VOC abatement ■ Scrubber efficiency ■ CEMS	15

N ₂ O	NH ₃	C ₃ H ₆	THC	H ₂ O	SO ₂	KEY APPLICATIONS PORTABLES	PAGE
						■ Process monitoring ■ Inerting applications ■ Controlled atmosphere ■ Hazardous area combustion optimization	16
						■ Laboratories and research ■ Air separation and gas bottling plants ■ Transfilling ■ Combustion analysis ■ Medical gas verification	16
						■ Physiology studies ■ Universities ■ Combustion optimization	16

> WELCOME TO SERVOMEX

THE WORLD'S LEADING MANUFACTURER OF GAS ANALYZERS AND GAS ANALYSIS SYSTEMS

Developed and manufactured in our UK and Americas Technical Centers, Servomex analyzers are hand-built to precise requirements. This ensures every product we make provides performance optimized to the needs of each customer process.

Built around the stable, accurate and reliable gas measurements provided by our world-leading Hummingbird sensing technologies, our analyzers incorporate the latest advances in hardware design and software control into resilient designs optimized for hazardous or safe area use.

Once manufactured, our analyzers can integrate into existing systems or be designed into a complete system manufactured to equally high standards in our global network of Systems integration facilities.

We build every analyzer to deliver a long lifetime of performance. This ethos is maximized through our global Service offering, which provides a complete support service for your analyzer, from commissioning to regular maintenance.



Andy Cowan,
President of Servomex

The world's largest and fastest-growing group of companies are aligning with the Business Ambition for 1.5°C: helping to halve global emissions by 2030. As a member of the Spectris Group, Servomex is a proud participant in this campaign, and we have committed to science-based emissions reduction targets across the entire value chain.

CARBON NET ZERO

Find out more: servomex.com/sustainability

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We regularly post on LinkedIn and Facebook. Follow us for the latest news about our expert gas analysis solutions. Be the first to find out about our product releases, exhibition appearances, and career opportunities around the globe.



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SERVOTOUGH Oxy 1900

HAZARDOUS AREA

AWARD-WINNING PARAMAGNETIC DIGITAL O₂ ANALYZER DESIGNED FOR HAZARDOUS AREA USE

Offering industry-standard features alongside revolutionary, value-added options, the Oxy 1900 O₂ gas analyzer sets new standards of flexibility, measurement stability and reliability from a single, cost-effective unit.



FEATURES AND BENEFITS

- Safe Area to Zone 1/Division 1 hazard-rated locations
- Heated sample gas compartment provides improved measurement performance with optional sample heater for simplified sample conditioning system design
- Unique Servomex Flowcube flow sensor technology for improved safety
- Internal sample pressure compensation option available for improved measurement performance
- RS485 Modbus communications available as standard, Ethernet TCP/IP modbus as an option
- SIL 2 hardware compliant

APPLICATIONS

- Process control
- Safety-critical oxidation, such as ethylene oxide and propylene oxide purity
- Flare stack analysis
- Vapor recovery

GAS	MEASURES	APPLICATION
OXYGEN	PERCENT	PROCESS CONTROL
		SAFETY

SENSING TECHNOLOGY



SERVOTOUGH OxyExact 2200

HAZARDOUS AREA

HIGH-SPEC PROCESS O₂ ANALYZER OFFERS SAFE OR HAZARDOUS AREA CONTROL WITH UP TO SIX TRANSMITTERS

The OxyExact 2200 high-specification O₂ analyzer offers an unrivaled combination of precision, flexibility and performance for optimum process and safety control. The OxyExact 2200 can be configured with a Zone 1 or Zone 2 hazardous area control unit, with up to six transmitters per control unit.



FEATURES AND BENEFITS

- Zone 1 certified to ATEX Cat 2, IECEx, CML (Japan) and FM/CSA Class 1 Division 1
- Up to six transmitters can be connected to one control unit
- Control units use an option card based I/O system to allow expansion of I/O to suit system requirements
- Transmitter three-enclosure systems allow sampling of any flammable gas up to 100% O₂ and pressures of up to 45psia
- High-temperature transmitter eliminates the need to condense hot wet samples prior to analysis
- SIL 2 hardware compliant

APPLICATIONS

- Oxidation control reactions
- EO, PTA and EDC manufacturing
- Catalyst regeneration
- Solvent recovery

GAS	MEASURES	APPLICATION
OXYGEN	PERCENT	PROCESS CONTROL
		SAFETY

SENSING TECHNOLOGY



SERVOTOUGH H2scan

HAZARDOUS AREA

EXPLOSION-PROOF IN-LINE HYDROGEN PROCESS ANALYZER, USING A SOLID-STATE, NON-CONSUMABLE SENSOR CONFIGURED TO OPERATE IN PROCESS GAS STREAMS

The H2scan hydrogen process analyzer features thin film technology that provides a direct hydrogen measurement that is not cross-sensitive to other gases.



FEATURES AND BENEFITS

- UL Class 1, Division 1, Groups B, C, D. ATEX and CSA certifications
- Easily configurable alongside SERVOTOUGH SpectraScan 2400
- Simple system integration

APPLICATIONS

- Refinery
- Petrochemical
- Manufacturing
- Industrial gas supply

GAS	MEASURES	APPLICATION
HYDROGEN	PERCENT	PROCESS CONTROL
		QUALITY

SERVOTOUGH SpectraScan 2400

HAZARDOUS AREA

REVOLUTIONARY IN-LINE
REAL-TIME ANALYSIS OF
HYDROCARBON COMPONENTS
C1-C6

A real-time optical analyzer utilizing the Precise field-proven optical bench, the SpectraScan 2400 delivers a breakthrough capability in the continuous analysis of light hydrocarbons C1-C6.



FEATURES AND BENEFITS

- North American Cat 1, Division 2 ATEX Cat 3 IECEx Zone 2
- Tunable band-pass filter enables simultaneous scanning of selected wavelength bands for gases including methane, ethane, propane and iso-butane
- Unique tunable filter process with Infrared photometer technology delivers industry-leading interference compensation

APPLICATIONS

- BTU/Wobbe content measurement
- Gas turbine, engines, fuel cells
- Flare stack monitoring

GAS	MEASURES	APPLICATION
CARBON MONOXIDE	PERCENT	PROCESS CONTROL
CARBON DIOXIDE	CALORIFIC VALUE	QUALITY
C1-C6		
HYDROGEN SULFIDE		

SENSING TECHNOLOGY

SPECTROSCOPIC

SERVOTOUGH SpectraExact 2500

HAZARDOUS AREA

RUGGED PHOTOMETRIC GAS
ANALYZER FOR DEMANDING
PROCESS APPLICATIONS

Servomex's iconic industry-leading Photometric analyzer delivers flexible gas analysis capability for corrosive, toxic and flammable sample streams. The SpectraExact 2500's reliable, accurate and stable real-time online process analysis makes it ideal for a range of process, combustion and emissions gas analysis applications.



FEATURES AND BENEFITS

- UKCA, CE, ATEX, UKEx, IECEx and North American hazardous area approvals
- Robust and high-performance NDIR analyzer for industrial and process applications
- Non-contact analysis, with the sample cell segregated from the electronics for ease of maintenance and safe operation

APPLICATIONS

- Ethylene production
- EDC production
- Carbon capture
- Direct reduction iron

GAS	MEASURES	APPLICATION
TOXIC	PERCENT	PROCESS CONTROL
FLAMMABLE	TRACE PPM	
CORROSIVE		

SENSING TECHNOLOGY

GAS FILTER CORRELATION

INFRARED

SERVOTOUGH FluegasExact 2700

HAZARDOUS AREA

ADVANCED FLUE GAS
COMBUSTION EFFICIENCY
ANALYZER FOR HIGH-
TEMPERATURE MEASUREMENT
OF O₂ AND COMBUSTIBLES

Designed to measure O₂ and COe in flue gases for improved combustion efficiency and reduced emissions, the FluegasExact 2700 gas analyzer is designed to suit the most demanding needs of combustion efficiency applications in the power generation and process industries.

FEATURES AND BENEFITS

- Safe Area, ATEX Cat. 3, IECEx Zone 2 and North America Class 1, Division 2 options
- Unique Flowcube flow sensor technology enables positive flow conditions to be validated with optional flow alarm
- The combustibles sensor is sulfur-resilient, enabling operation in flue gases with elevated sulfur levels
- Close-coupled extractive measurement principle
- Flame traps incorporated as standard within sample compartment for process protection
- Wide selection of probe lengths and materials available

APPLICATIONS

- Process heaters
- Utility boilers
- Thermal crackers
- Crematoria and incinerators

GAS	MEASURES	APPLICATION
OXYGEN	PERCENT	PROCESS CONTROL
COMBUSTIBLES	TRACE PPM	COMBUSTION

SENSING TECHNOLOGY

CALORIMETRY

ZIRCONIA

SERVOTOUGH Laser 3 Plus Environmental

HAZARDOUS AREA

COMPACT NH₃ MEASUREMENT,
OPTIMIZED FOR AMMONIA SLIP
DeNOx APPLICATIONS

This Tunable Diode Laser (TDL) analyzer, specifically optimized for ammonia slip measurement, provides all the benefits of Servomex's TDL technology in a compact, light unit, offering unparalleled installation flexibility plus cost and performance benefits.

FEATURES AND BENEFITS

- High measurement reliability utilizing Servomex's own line lock cuvette technology
- ATEX, IECEx and North American hazardous area approvals
- A compact analyzer specifically optimized for the fast, accurate and responsive measurement of NH₃
- Auto-validation feature provides complete assurance of ongoing measurement accuracy
- Meets all uptime and performance requirements for the US EPA PS18 standard for reliable CEMS monitoring of NH₃

APPLICATIONS

- Process heaters
- Incinerators
- Power stations
- Furnaces
- Thermal oxidizers

GAS	MEASURES	APPLICATION
AMMONIA DeNOx	TRACE PPM	PROCESS CONTROL
ENVIRONMENTAL NH ₃		EMISSIONS

SENSING TECHNOLOGY

TUNABLE DIODE LASER

SERVOTOUGH Laser 3 Plus Combustion

HAZARDOUS AREA

COMPACT COMBUSTION
ANALYZER OPTIMIZED
FOR CO, O₂, OR CO + CH₄
MEASUREMENTS

Containing all the benefits of Servomex's Tunable Diode Laser (TDL) technology in a light, compact unit, with unmatched installation flexibility plus cost and performance benefits, this analyzer is optimized for fast, accurate and responsive measurements in combustion and process control, making it a must for safety applications.

FEATURES AND BENEFITS

- High safety integrity utilizing Servomex's own line lock cuvette technology
- Compact size means quick and easy installation by one person with on-board display negating the need for laptop configuration
- ATEX, IECEx and North American hazardous area approvals. Approved for process Zone 2. SIL 2 assessed and CE marked
- Auto-validation capability provides complete assurance of ongoing measurement accuracy

APPLICATIONS

- Process heaters
- Incinerators
- Power stations
- Furnaces
- ESP protection
- Thermal oxidizers

GAS	MEASURES	APPLICATION
OXYGEN	PERCENT	PROCESS CONTROL
CARBON MONOXIDE	TRACE PPM	COMBUSTION
CARBON MONOXIDE + METHANE		

SENSING TECHNOLOGY

TUNABLE DIODE LASER

SERVOTOUGH Laser 3 Plus Process

HAZARDOUS AREA

COMPACT TDL GAS ANALYZER,
OPTIMIZED FOR PROCESS O₂
MEASUREMENTS

All the benefits of Servomex's Tunable Diode Laser (TDL) technology in a small, light unit offering unparalleled installation flexibility plus cost and performance benefits. Optimized for the fast, accurate and responsive measurement of process oxygen in hot or hazardous conditions.

FEATURES AND BENEFITS

- High safety integrity utilizing Servomex's own line lock cuvette technology
- ATEX, IECEx and North American hazardous area approvals. Approved for process Zone 2. SIL 2 assessed and CE marked
- Quick and easy installation by one person with on-board display negating the need for laptop configuration
- Auto-validation capability provides complete assurance of ongoing measurement accuracy

APPLICATIONS

- Oxidation control
- Inerting
- Safety monitoring
- Flare gas monitoring
- Combustion control (<500°C, 932°F)
- Coal to chemical

GAS	MEASURES	APPLICATION
OXYGEN	PERCENT	PROCESS CONTROL
		COMBUSTION

SENSING TECHNOLOGY

TUNABLE DIODE LASER

P06

P07

70 YEARS OF GAS ANALYSIS EXPERTISE



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SERVOPRO AquaXact 1688

SAFE AREA

A FAST, ACCURATE AND RESILIENT MOISTURE MEASUREMENT SOLUTION

The AquaXact 1688 is a rugged ultra-thin film Aluminum Oxide moisture sensor that enables the measurement of moisture in a wide variety of gas phase process applications, such as glove boxes, air separation units, regenerative skid dryers, combustion, and instrument air, with no calibration required after dry-out.



FEATURES AND BENEFITS

- Functions as a standalone 4-20mA transmitter or remotely interfaces with our digital controller, MonoExact DF310E and MultiExact 4100
- NIST-traceable field-replaceable sensor element for seamless recalibration
- Stainless steel, weatherproof casing enables operation in ambient temperatures ranging from -10°C to +70°C (14°F to 158°F)

APPLICATIONS

- Glove boxes
- Solder reflow ovens
- Compressed air generation
- Ethylene production

GAS	MEASURES	APPLICATION
MOISTURE	DEW POINT	PROCESS CONTROL
	PPMV	

SENSING TECHNOLOGY



SERVOPRO AquaXact 1688 Controller

SAFE AREA

DIGITAL CONTROLLER PLATFORM FOR THE AQUAXACT 1688

Built specifically to work in harmony with the AquaXact 1688 ultra-thin film Aluminum Oxide moisture transmitter, this digital controller provides a high-clarity color touchscreen display, alarms, relays and advanced communications protocols, and allows easy sensor tip replacement in the field.



FEATURES AND BENEFITS

- Dew point and ppmv H₂O measurements
- Tight Al₂O₃ pore structure provides the AquaXact 1688 sensor with rapid response times
- The dense geometry increases stability and reduces drift
- Compact footprint for easy integration into your system
- Advanced digital communications including Ethernet, Modbus TCP/IP and PROFIBUS

APPLICATIONS

- Air separation units
- Glove boxes
- Instrument air units
- Refining gases

GAS	MEASURES	APPLICATION
MOISTURE	DEW POINT	PROCESS CONTROL
	PPMV	

SENSING TECHNOLOGY



SERVOPRO MonoExact DF150E

SAFE AREA

TOUCHSCREEN OPERATED PPM OXYGEN ANALYZER FOR GENERAL INDUSTRIAL APPLICATIONS

With a digital touchscreen and icon-driven guided user interface (GUI) for easier operation, the MonoExact DF150E combines the reliability of Servomex's tried and tested Coulometric oxygen sensor with a more user-friendly package.



FEATURES AND BENEFITS

- Updated digital sensor includes new operation and maintenance features that reduce cost of ownership
- Digital analyzer with self-diagnostic smart operating system monitors itself, so you can better manage your process
- Servomex proprietary software makes reporting and parameter control simple

APPLICATIONS

- Glove boxes
- Heat treating
- Solder reflow ovens
- Industrial gas production

GAS	MEASURES	APPLICATION
OXYGEN	TRACE PPM	PROCESS CONTROL
	ULTRA TRACE PPB	QUALITY

SENSING TECHNOLOGY



SERVOPRO MonoExact DF310E

SAFE AREA

NEXT-GENERATION DIGITAL OXYGEN ANALYZER DESIGNED FOR INDUSTRIAL GAS APPLICATION

Designed specifically for accurate measurements of oxygen in industrial gas applications, the MonoExact DF310E is a next-generation digital O₂ analyzer that combines precision trace-level measurement with a icon-driven guided user interface (GUI) and advanced digital communications.



FEATURES AND BENEFITS

- Advanced touchscreen GUI for intuitive setup and operation; now with favorite icon page and text over icon display
- Digital analyzer with self-diagnostic smart operating system monitors itself, so you can better manage your process
- AquaXact Aluminum Oxide sensor is optional for simultaneous O₂ and H₂O monitoring
- RS232, RS485, Modbus, PROFIBUS and Ethernet Modbus TCP/IP

APPLICATIONS

- Air separation units
- Medical/industrial gases
- Specialty gas blending

GAS	MEASURES	APPLICATION
OXYGEN	TRACE PPM	PROCESS CONTROL
	ULTRA TRACE PPB	
MOISTURE	DEW POINT	QUALITY
	PPMV	

SENSING TECHNOLOGY



SERVOPRO 4900 Multigas

SAFE AREA

AN ADVANCED DIGITAL MULTI-GAS CEMS ANALYZER

Specifically designed for Continuous Emissions Monitoring (CEMS) of flue gas, the SERVOPRO 4900 Multigas provides up to four simultaneous gas stream measurements. It combines Servomex's leading-edge sensing technologies with a modern digital platform for next-generation performance.



FEATURES AND BENEFITS

- A comprehensive solution for CEMS analysis of multiple flue gas components
- Low maintenance and cost of ownership
- Advanced digital communications including Ethernet (Modbus TCP/IP), Modbus RS485 and PROFIBUS
- Automated calibration/validation routines triggered by internal timer or external triggers
- Completely updated icon-driven software interface for easy set-up and operation

APPLICATIONS

- Utility boilers
- Chemical incinerators
- Crematoria
- Mobile labs

GAS	MEASURES	APPLICATION
MULTIPLE	PERCENT	EMISSIONS
	TRACE PPM	

SENSING TECHNOLOGY



SERVOPRO MultiExact 4100

SAFE AREA

A SOPHISTICATED, NEXT-GENERATION MULTI-GAS ANALYZER PROVIDING A HIGHLY ADAPTABLE ANALYSIS SOLUTION

The MultiExact 4100 is a high-performance multi-gas analyzer designed to provide up to four simultaneous gas stream measurements including: O₂ (trace, control, and purity), CO₂, CO, N₂O, CH₄ and H₂O.



FEATURES AND BENEFITS

- Comprehensive solution for industrial and medical gas manufacture and for pharmacopeia applications
- Integrated support for the AquaXact 1688 Aluminum Oxide moisture transmitter
- Uses ultra-stable, non-depleting digital sensing technologies that help extend maintenance intervals

APPLICATIONS

- Product purity on air separation plants
- Process control on air separation plants
- Monitor trace CO₂ on scrubbed air inlet to air separation process
- Validation of medical O₂, N₂ and air

GAS	MEASURES	APPLICATION
MULTIPLE	PERCENT	PROCESS CONTROL
	TRACE PPM	

SENSING TECHNOLOGY



SERVOPRO MultiExact 4200

SAFE AREA

A SOPHISTICATED, NEXT-GENERATION MULTI-GAS ANALYZER PROVIDING A HIGHLY ADAPTABLE ANALYSIS OF FLAMMABLE GAS SAMPLES FOR TRACE CONTAMINANTS IN INDUSTRIAL APPLICATIONS

The MultiExact 4200 is a high-performance multi-gas analyzer designed to provide up to four simultaneous gas stream measurements including: O₂ control, and trace CO₂, CO, N₂O, and CH₄.



FEATURES AND BENEFITS

- Comprehensive solution for flammable gas contaminant monitoring
- Advanced digital communications including Ethernet (Modbus TCP/IP) and Modbus RS485
- Automated calibration/validation routines triggered by internal timer or external triggers
- Completely updated icon-driven software interface for easy set-up and operation
- Uses ultra-stable, non-depleting digital sensing technologies that help extend maintenance intervals

APPLICATIONS

- Hydrogen production
- HyCO plants
- Syngas production

GAS	MEASURES	APPLICATION
OXYGEN	PERCENT	PROCESS CONTROL
		QUALITY

SENSING TECHNOLOGY



SERVOPRO Chroma

SAFE AREA

HIGHLY VERSATILE TRACE GAS ANALYZER PLATFORM CONFIGURABLE TO A WIDE RANGE OF APPLICATIONS

Offering a non-depleting Plasma Emission Detector (PED), Flame Ionization Detector (FID) and Thermal Conductivity Detector (TCD), the Chroma analyzer is one of the most versatile gas analyzers for trace gas measurement available. Most applications will be satisfied by a single 4U rack analyzer configuration, making the Chroma a compact, cost-effective solution for continuous process control or quality monitoring.



FEATURES AND BENEFITS

- Fully automated – tune to the application – system for unique simplicity of use
- Standalone system requires no third-party software or computer to operate
- For CH₄/NMHC measurements, the Plasma HC system requires no FID and therefore no H₂ fuel gas

APPLICATIONS

- Medical gas production
- Air separation plants
- Cryogenic truck loading station
- High purity gas production

GAS	MEASURES	APPLICATION
MULTIPLE	PERCENT	PROCESS CONTROL
	TRACE PPM	QUALITY
	ULTRA TRACE PPB	

SENSING TECHNOLOGY



SERVOPRO NanoChrome

SAFE AREA

SUB-PPB TRACE MEASUREMENT OF H₂, CH₄, CO, CO₂, N₂, Ar AND NMHC FOR THE SEMICONDUCTOR INDUSTRY

Incorporating the latest advances in gas sensing technology and signal processing methodology, the NanoChrome revolutionizes ultra-trace purity measurements for the semiconductor industry.



FEATURES AND BENEFITS

- In compliance with Low Voltage, EMC and applicable Directives
- New Plasma Emission Detector (PED) sensor technology enables sub-ppb measurements of H₂, CH₄, CO, CO₂, N₂, Ar and NMHC
- Enables unique total Servomex solution for UHP gas analysis

APPLICATIONS

- Semiconductor production – quality control measurements
- Semiconductor production – stationary analytical systems
- UHP gas production – quality control measurements

GAS	MEASURES	APPLICATION
MULTIPLE	ULTRA TRACE PPB	QUALITY
	ULTRA TRACE PPT	

SENSING TECHNOLOGY



SERVOPRO DF-500 Range

SAFE AREA

LEADING ULTRA-TRACE PPT O₂ ANALYZER RANGE

Verified by independent experts as measuring O₂ down to the lowest ppt levels available, the DF-500 analyzer range delivers the premium performance in ultra-trace O₂ measurement. Consisting of the DF-550E NanoTrace and DF-560E NanoTrace II, the NanoTrace series delivers exceptional O₂ measurements at trace and ultra-trace ppt levels.



FEATURES AND BENEFITS

- The industry standard for the reliable measurement of O₂ in semiconductor manufacture
- Fast response and quick upset recovery ensures ultimate performance
- Options include flexible configurations hand-carry portable option and on-board calibration systems

APPLICATIONS

- Continuous quality control monitoring
- Inert gases control checks for electronics grade gases
- Post-purifier quality certification
- Leak detection for electronics-grade gases

GAS	MEASURES	APPLICATION
OXYGEN	TRACE PPM	QUALITY
	ULTRA TRACE PPB	
	ULTRA TRACE PPT	

SENSING TECHNOLOGY

COULOMETRIC

SERVOPRO DF-700 Range

SAFE AREA

TUNABLE DIODE LASER ABSORPTION SPECTROSCOPY (TDLAS) TRACE MOISTURE ANALYZER RANGE

The all new DF-700 Series Gen-7 is a sophisticated trace and ultra-trace moisture analyzer range combining new digital electronics with tried and tested sensing technology. Designed for manufacturability and repairability, it allows for field serviceability with many components able to be replaced in the field.



FEATURES AND BENEFITS

- Exceptional range from 100ppt to 20ppm moisture level readings depending on the model
- Only true Laser Absorption Spectroscopy technology in the market space which is unaffected by gas contaminants that plague CRDS laser systems
- Designed with field service in mind; laser cell, SSD, CPU, PCBs, display, filter and gas panel all easily replaced in situ

APPLICATIONS

- 740: Analysis of electronics-grade NH₃ specialty gas
- 745: Inert gases leak detection for LED and LCD plants
- 745 SGMx: Specialty gas cylinder quality control
- 749: HP bulk gases used in semiconductor applications
- 750: Bulk UHP gas CQC for semiconductor fabs
- 760E: O₂ and H₂O monitoring in UHP bulk gases used in semiconductor applications

GAS	MEASURES	APPLICATION
MOISTURE	PPM	QUALITY
	TRACE PPB	
	ULTRA TRACE PPT	

SENSING TECHNOLOGY

TUNABLE DIODE LASER

NEW GEN-7 NanoTrace SERIES

SERVOPRO NanoChrome ULTRA

SAFE AREA

THE NUMBER ONE CHOICE FOR ULTRA-TRACE PURITY MEASUREMENTS IN THE SEMICONDUCTOR INDUSTRY

Delivering superior ultra-trace measurements of UHP gases in a wide range of background gases, the revolutionary NanoChrome ULTRA incorporates the latest advances in sensing and signal processing methodology, for exceptional performance.



FEATURES AND BENEFITS

- Innovative high-sensitivity Plasma Emission Detector (PED) enables ultra-trace measurements of Ar, N₂, H₂, CH₄, CO, CO₂ and NMHC
- ProPeak peak detection technique enables unprecedented measurement sensitivity
- A complete stand-alone UHP gas analysis solution when combined with DF-500 and DF-700 analyzers

APPLICATIONS

- Semiconductor production - quality control measurements
- Semiconductor production - stationary analytical systems
- UHP gas production - quality control measurements

GAS	MEASURES	APPLICATION
MULTIPLE	ULTRA TRACE PPB	QUALITY
	ULTRA TRACE PPT	

SENSING TECHNOLOGY

GAS CHROMATOGRAPHY

PLASMA

SERVOPRO DF-560E NanoTrace ULTRA

SAFE AREA

MEASURES ULTRA-TRACE O₂ TO THE LOWEST LEVELS

Designed to measure ultra-trace O₂ to the ultra-low ppt levels demanded by the semiconductor sector, the DF-560E ULTRA delivers an industry-leading 45ppt LDL. Once the analyzer is measuring below 1 ppb, the units automatically convert to ppt for better resolution of the smallest of concentration movements.



FEATURES AND BENEFITS

- Lowest level O₂ detection available to the semiconductor industry
- Automated maintenance performs zero and span calibrations on a scheduled basis
- Fast response and quick upset recovery ensures highly stable operation

APPLICATIONS

- Continuous quality control monitoring
- Inert gases control checks for electronics grade gases
- Post-purifier quality certification
- Leak detection for electronics-grade gases

GAS	MEASURES	APPLICATION
OXYGEN	TRACE PPM	QUALITY
	ULTRA TRACE PPB	
	ULTRA TRACE PPT	

SENSING TECHNOLOGY

COULOMETRIC

SERVOPRO DF-750 NanoTrace ULTRA

SAFE AREA

THE FIRST CHOICE IN MOISTURE ANALYSIS FOR THE SEMICONDUCTOR INDUSTRY

A TDLAS-based trace/ultra-trace analyzer, the DF-750 ULTRA delivers an industry-leading LDL of 55ppt for process measurements of moisture in the UHP gases used in <14 nm semiconductor fabs. Using the new DF-700 Gen 7 digital electronics, it offers improved serviceability and field replacement for key components.



FEATURES AND BENEFITS

- Exceptional 55ppt LDL delivers the sensitivity and precision demanded by semiconductor makers
- New solid state hard drive and CPU
- Storage and recall function for archiving of operational history
- TDLAS line lock technology keeps the laser on the moisture peak centroid, measuring the entirety of the moisture's mass under the Voigt curve

APPLICATIONS

- Continuous quality control of bulk UHP gases for semiconductor fabs

GAS	MEASURES	APPLICATION
MOISTURE	PPM	QUALITY
	TRACE PPB	
	ULTRA TRACE PPT	

SENSING TECHNOLOGY

TUNABLE DIODE LASER

NEW GEN-7 NanoTrace SERIES

SERVOPRO DF-760E NanoTrace ULTRA

SAFE AREA

MARKET-LEADING DUAL ANALYSIS OF O₂ AND MOISTURE

Delivering an industry-leading LDL of 55ppt for moisture and 45ppt O₂ in the UHP gases used in <14 nm semiconductor fabs, the new DF-760E ULTRA Gen-7 is designed for manufacturability and repairability. A completely new digital electronic package offers enhanced field serviceability and parts replacement.



FEATURES AND BENEFITS

- Industry-leading LDLs of 45ppt O₂ and 55ppt moisture
- Non-depleting sensing technologies reduce ongoing costs
- Analysis immune from gas cell contamination and background gas interference with auto zero sweep of the full moisture peak

APPLICATIONS

- Monitoring O₂ and moisture as contaminants in UHP bulk gases used in semiconductor applications

GAS	MEASURES	APPLICATION
MOISTURE	PPM	QUALITY
	TRACE PPB	
OXYGEN	ULTRA TRACE PPT	

SENSING TECHNOLOGY

TUNABLE DIODE LASER

COULOMETRIC

NEW GEN-7 NanoTrace SERIES

SERVOFLEX Micro i.s. 5100

PORTABLES

INTRINSICALLY SAFE ANALYZER MEASURES O₂

Designed for the measurement of oxygen in potentially flammable gas samples, the intrinsically safe Micro i.s. 5100 is a unique analyzer certified to Zone 0 and Division 1 and suitable for measuring percent levels of O₂.



FEATURES AND BENEFITS

- Intrinsically safe design (Zone 0) to ATEX and IECEx standards, Division 1 to FM and CSA standards, ensures safety operation in hazardous environments
- IP65 rugged design and optional carry case allows for use in the most demanding environments
- Powered by integral rechargeable battery with up to 18-hour run time
- Ergonomic compact design ensures easy operation on the move
- Available in non-pump or internal pumped versions with optional sample conditioning kit

APPLICATIONS

- Process monitoring
- Inerting applications
- Controlled atmosphere monitoring
- Hazardous area combustion optimization

GAS	MEASURES	APPLICATION
OXYGEN	PERCENT	PROCESS CONTROL
		SAFETY

SENSING TECHNOLOGY

PARAMAGNETIC

SERVOFLEX MiniMP 5200

PORTABLES

BENCHTOP ANALYZER OFFERING SINGLE OR DUAL MEASUREMENTS OF O₂ AND CO₂

The only truly portable battery-powered gas analyzer with TÜV certification, the MiniMP 5200 is designed to offer single or dual measurement of O₂ and CO₂ by utilizing Servomex's advanced Paramagnetic and Infrared sensing technologies.



FEATURES AND BENEFITS

- TÜV QAL 1 makes the MiniMP ideal for source testers that require reference O₂ analysis for Continuous Emissions Monitoring Systems (CEMS) verification
- Li-ion battery system offers unique true portability
- Non-depleting sensor design ensures long service with minimal calibration

APPLICATIONS

- Laboratories and research
- Air separation and gas bottling plants
- Transfilling
- Combustion analysis
- Medical gas verification

GAS	MEASURES	APPLICATION
OXYGEN	PERCENT	PROCESS CONTROL
CARBON DIOXIDE		QUALITY
		EMISSIONS

SENSING TECHNOLOGY

PARAMAGNETIC

INFRARED

SERVOFLEX MiniHD 5200

PORTABLES

PORTABLE GAS ANALYZER FOR MEASUREMENT OF COMMON GAS MIXTURES

Designed for use in field locations or light industrial applications, the MiniHD 5200 portable gas analyzer is a rugged, heavy duty analyzer designed to accurately measure the levels of O₂, CO and CO₂ within common gas mixtures. The MiniHD 5200 utilizes Servomex's non-depleting Paramagnetic and Infrared sensors to give dependable and accurate results.



FEATURES AND BENEFITS

- Robust IP65 construction meets the demanding needs of field location analysis
- Long life Li-ion rechargeable batteries and range of sampling options ensure ease of use
- Accurate measurement of O₂, CO and CO₂ levels

APPLICATIONS

- Physiology studies
- Universities
- Combustion optimization

GAS	MEASURES	APPLICATION
OXYGEN	PERCENT	PROCESS CONTROL
CARBON MONOXIDE		COMBUSTION
CARBON DIOXIDE		SAFETY

SENSING TECHNOLOGY

PARAMAGNETIC

INFRARED

Take the road to

Decarbonization

Servomex solutions for cleaner industry

Build a better, cleaner world with Servomex gas analysis. Our expert systems will help enable you to reach your carbon reduction goals.

Learn more at servomex.com/cleanair

GLOBAL SERVICE NETWORK

Whatever your service needs, Servomex Service Network has the solution. Through our network of mobile engineers and service centers, we deliver Servomex expertise directly to your plant.

Service Plan

ALL THE SUPPORT YOUR ANALYZER NEEDS

A Servomex service plan ensures our trusted gas analysis is available whenever you need it, providing maximum peace of mind.

FEATURES AND BENEFITS

- Customized services to match your process
- Full access to Servomex's expertise and resources
- On-site and remote support
- A cost-effective package



Training

ENSURE YOUR ON-SITE USER AND MAINTENANCE TEAM ARE FULLY TRAINED ON THE RELEVANT ANALYZER

Our customized training programs can help you get the best performance from your Servomex system. Get hands-on, practical analyzer instruction.

FEATURES AND BENEFITS

- In-depth systems training
- Covers all key Servomex analyzers
- Presented by Servomex experts
- Given at our global training centers or on-site



Health Check

KEEPING ON TOP OF THE OPERATIONAL EFFICIENCY OF YOUR ANALYZER CAN BE DIFFICULT AND TIME-CONSUMING

Our engineer ensures your system is performing as expected, while anomalies are detected before they become costly problems.

FEATURES AND BENEFITS

- Quality assurance of instrument performance
- Increased reliability and trustworthy results
- Expert maintenance plans
- Avoids unscheduled repairs



On-site Service Support

SERVOMEX SERVICE ENGINEERS ARE THE HEART OF THE SERVOMEX SERVICE NETWORK

Ranging from emergency assistance to routine maintenance, we ensure your gas analysis systems remain efficient and safe.

FEATURES AND BENEFITS

- Skilled product specialists
- Highly experienced experts
- Covers all operational and maintenance needs
- Locally based for fast response



Service Center Support

WHEREVER YOU ARE, THERE'S A SERVOMEX SERVICE NETWORK TEAM NEAR YOU

For a rapid response located close to customers, our state-of-the-art service centers provide comprehensive support.

FEATURES AND BENEFITS

- Full range of services
- Regional support
- Cost-effective repairs, no compromise in quality
- Dedicated in-house team



Service Agreements

YOU GET MUCH MORE THAN SERVICE WITH A SERVOMEX SERVICE AGREEMENT - YOU GET PEACE OF MIND, TOO

Regular servicing of your gas analysis systems adds real value to your operations, with service packages to meet your individual process needs.

FEATURES AND BENEFITS

- Proactive maintenance
- Ongoing partnership
- Pre-structured
- Options range from off-site telephone support to complete management and maintenance of your gas analysis system



Commissioning

WHEN INSTALLING YOUR NEW ANALYZER, A SERVICE NETWORK COMMISSIONING PACKAGE WILL ENSURE OPTIMUM PERFORMANCE

Get the performance you expect from the outset, with analyzer and systems start up and configuration by our highly trained commissioning engineers.

FEATURES AND BENEFITS

- Fast, seamless commissioning service
- Trained Servomex engineers
- Ensures optimum performance
- Qualifies analyzers for six months of additional warranty



Rentals

SERVOMEX ANALYZERS ARE AVAILABLE FOR HIRE, WHENEVER YOU NEED THEM

Source a temporary replacement analyzer for your system quickly, with complete confidence that it will operate correctly and integrate easily.

FEATURES AND BENEFITS

- A full range of analyzers to meet your requirements
- Equipment maintained to specification
- Expertise on hand to assist
- Fast delivery



Spares

MAINTAIN PROCESS UPTIME WITH RAPID ACCESS TO HIGH-QUALITY SPARE PARTS

Access to the right spare parts and consumables at the right time is critical to maintaining plant operations and safeguarding productivity. We deliver high-quality, authorized parts wherever and whenever you need them.

FEATURES AND BENEFITS

- Factory-authorized replacement parts
- Fully tested spares kits
- Ready for fast shipping
- Recommended reserve packs available



Factory Acceptance Testing

GET PEACE OF MIND THAT YOUR GAS ANALYSIS SYSTEM WILL OPERATE EXACTLY AS EXPECTED

Conducted in partnership with our expert personnel at a Servomex regional service center, a Factory Acceptance Test (FAT) ensures your system meets specifications prior to dispatch.

FEATURES AND BENEFITS

- The system performance you're expecting
- Ready to deliver the results you need from day one
- A chance to resolve unforeseen issues
- The opportunity to consult with our expert systems team



Find out more at: servomex.com/service

SYSTEMS INTEGRATION

Whatever the size of your project, Servomex Systems has the capability to build and deliver the required customized solution. We assess application requirements, site conditions and many other factors to ensure we provide the system that works best, whether it be a single analyzer or a systems house containing multiple sampling and analysis devices.

CONSULT

YOUR NEEDS ARE AT THE CENTER OF THE PROJECT

Our dedicated team will determine your process parameters at the outset, working with you at every stage to ensure the best results from your system.

BENEFITS

- Project scope
- Management procedures
- Consultation meetings
- Solution proposals
- Agreed timescales



DESIGN

WORLD-LEADING ENGINEERS FOR WORLD-LEADING PERFORMANCE

We'll select the most compatible analysis technology for your application, designed for your unique process conditions, and assembled by expert engineers.

BENEFITS

- System design
- Expert project management
- Optimum solutions
- Safety regulation



DELIVER

YOUR SYSTEM BUILT ON TIME AND BUILT TO LAST

After extensive testing, we'll deliver and install your system, providing expert support and training to ensure it operates just the way you expected, providing the results you need.

BENEFITS

- Installation
- Commissioning
- Process optimization
- Full support
- Extended service options



Analyzers and Panels

EXPERT GAS ANALYSIS INSTRUMENTATION AND SAMPLING SYSTEMS FOR EASY ACCESS TO COMPONENTS FOR HASSLE-FREE CALIBRATION AND MAINTENANCE

Our wide range of sensing technologies provides diverse, easy-to-use solutions for many industrial applications.

FEATURES AND BENEFITS

- Optimized sampling and wiring for easy operation
- Keeps instrumentation in safe areas for maintenance
- Tailor-made to suit your application needs
- Fully integrated Servomex gas analysis technology



Racks

SYSTEMS INTEGRATING RACK-MOUNTED ANALYZERS FROM OUR SERVOPRO AND DF RANGES

Our rack systems locate multiple gas analyzers into a single cabinet for easy control of an array of gas analysis solutions.

FEATURES AND BENEFITS

- Multiple analyzers working seamlessly and reliably
- Intelligent software for continuous monitoring
- Designed to meet stringent safety requirements
- A scalable solution, available as fixed racks or mobile carts



Enclosures

ENCLOSURES ENSURE SUITABLE WEATHER PROTECTION FOR YOUR SYSTEM. DESIGNED FOR HAZARDOUS AREAS

Rugged enclosed cabinets keep the instrumentation under controlled conditions for reliable, continuous performance, while allowing easy access for maintenance.

FEATURES AND BENEFITS

- A complete system, designed into a protective cabinet
- Tailor-made to operate reliably in your process conditions
- Robust, high-quality materials
- Fully assembled, tested and certified



Houses

FULLY-CONTAINED AIR CONDITIONED SHELTERS FOR LARGE SYSTEMS PROJECTS, CUSTOMIZED FOR INDIVIDUAL PROCESS REQUIREMENTS

With their own lighting and power supply, these shelters provide reliable protection for gas analysis equipment and people alike.

FEATURES AND BENEFITS

- Suitable for interior or exterior installation
- Supplied with air conditioning, power distribution, lighting and customized engineering inputs and outputs
- Maximum protection against weather conditions and hazardous process environments
- Custom-designed to accommodate any number of analyzers, equipment and other utilities



Continuous Quality Control

A SOPHISTICATED, NEXT-GENERATION MULTI-GAS ANALYZER SYSTEM PROVIDING GAS ANALYSIS FOR TRACE CONTAMINANTS IN INDUSTRIAL GAS APPLICATIONS

The revolutionary SERVOPRO Chroma gives stable ppb, ppm or % level measurements for CH₄, CO, CO₂, H₂, O₂, N₂, Ar, He, and NHMC. The industry-leading SERVOPRO MonoExact DF310E provides trace level oxygen and ppm and ppb moisture measurements. And the SERVOPRO MultiExact 4100 measures O₂ purity along with CO, CO₂ and CH₄ contaminants.

FEATURES AND BENEFITS

- Unique single-manufacturer system for the Industrial Gas industry
- Monitors purity and trace impurities in all bulk inert and noble gases
- Utilizes Servomex's industry-leading analyzers
- Standard systems available, along with configurable selections for your precise stationary rack applications



See more: servomex.com/systems

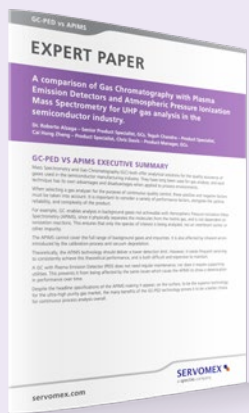
GET THE RESOURCES YOU
NEED TO SUPPORT YOUR
PROCESS SOLUTION

STAY INFORMED WITH OUR
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Available in downloadable and interactive versions, our Expert Solutions (ES) magazines cover a wide variety of topics, ranging from new product launches to complete process solutions. The publications also cover key markets, sensing technologies, and expert applications advice. Our annual Product Guide is also available, highlighting all our available gas analysis solutions.

EXPERT PAPERS

For an in-depth look at our gas analyzers and the technologies they use, download our expert papers. Written by our knowledgeable team, they examine how our sensing technologies work and explain why certain products deliver the best solution for key applications.



PRODUCT BROCHURES

For the best available information about our products, you'll want to read our product brochures. They outline how the analyzer works and which applications it's best suited to. It also explains the main features and their benefits, and lists all the certifications it has.



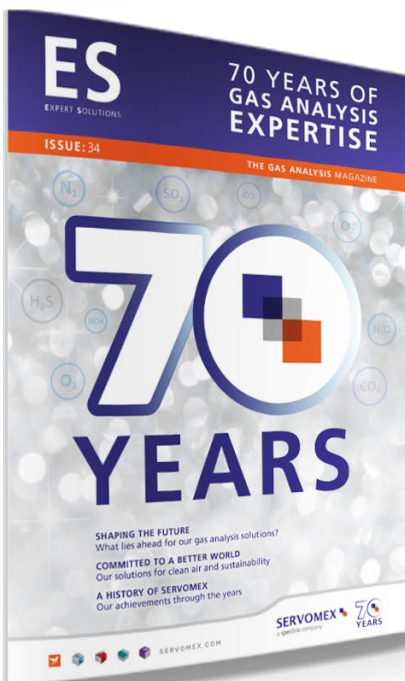
MANUALS

Whether you need to replace a lost product manual, need a quick online reference, or just want to see how the product works before you order, we've got you covered. All our existing product instruction manuals are available to download, for quickstart, installation, operation and certification.



VIDEOS

Our extensive array of videos is ready to view on our website now. Some focus on our products, including expert 'unboxings'. Others look at applications and how our products deliver the solutions you need. We also feature our experts discussing key areas of gas analysis, and how Servomex can help customers in a range of markets.



To access these resources go to: servomex.com/resources

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