

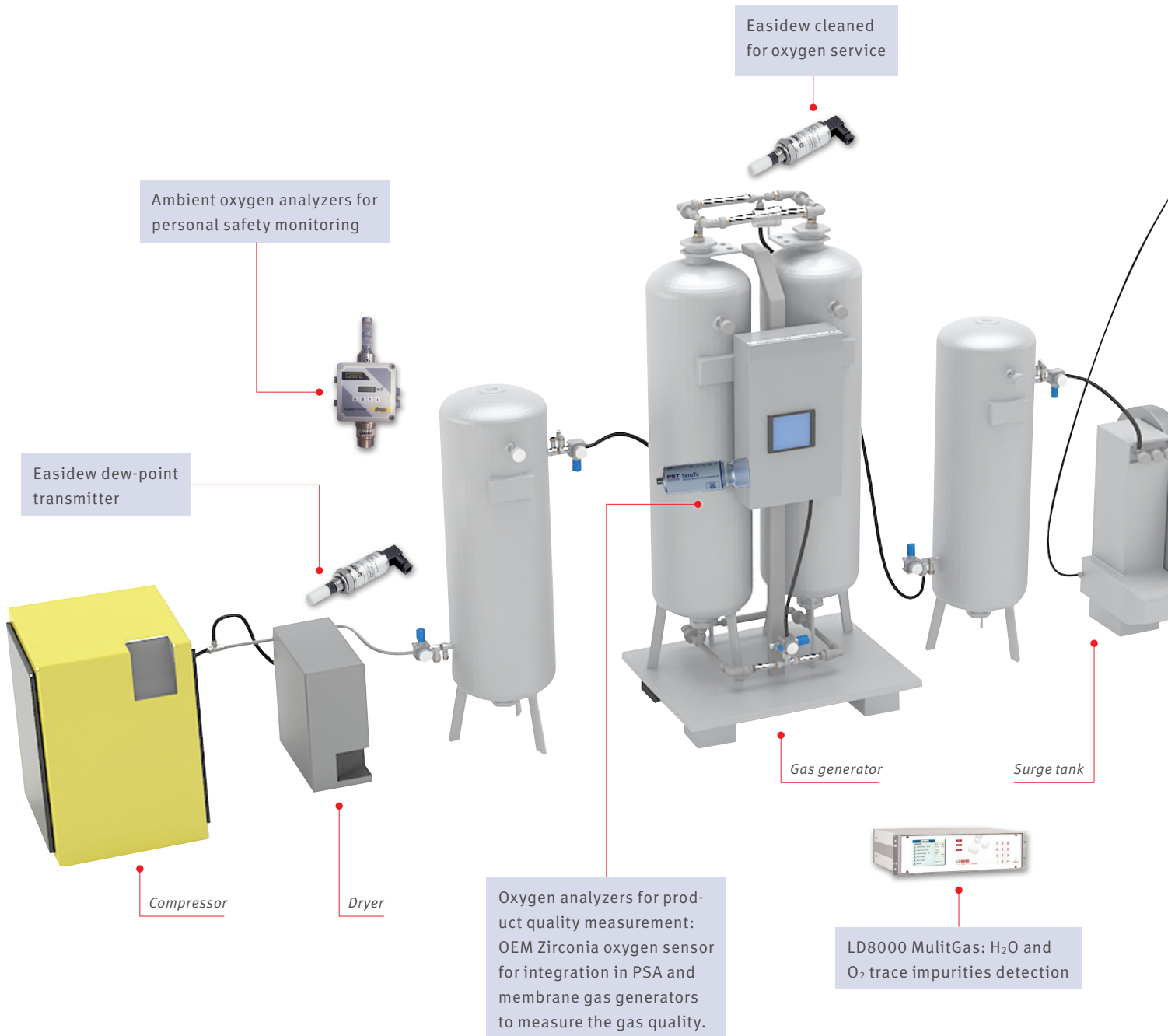
# Analyzers and Sensors for Gas Generation

Quality and Purity Measurements in Oxygen and Nitrogen for PSA and Membrane Gas Generators

## Quality and Purity Control for Nitrogen and Oxygen Generators

On-site gas generation offers a cost-effective, reliable and safe alternative to liquid or cylinder supplies of oxygen or nitrogen. With the latest developments in pressure swing absorption (PSA) technology, on-site generation of high-quality oxygen and nitrogen is also possible. Process Sensing Technologies offers a suite of oxygen, trace humidity and gas analyzers for PSA and membrane gas generators.

Schematic Diagramm for PSA Nitrogen Generator





# Oxygen Analyzers and Monitors

Medical gas analyzers – Designed to comply with the requirements of Pharmacopoeia directives for the measurement of oxygen, carbon monoxide and carbon dioxide for medical applications.



Storage tank



Transportable analyzer for the measurement of PPM and % oxygen

## Microx & Microx-OL Oxygen Analyzer

The Microx is a compact and robust oxygen analyzer that utilizes zirconia or electrochemical technology to give a reliable measurement of oxygen concentration.

- OEM solution for integration into PSA and Membrane gas generators
- Measuring ranges from 0 to 96% O<sub>2</sub>
- Flexible panel, wall or din rail configurations
- 4-20 mA and RS232 modbus communication

## Yellow Box Portable Oxygen Analyzer

Compact, robust, transportable oxygen analyzer providing a versatile solution for high purity oxygen measurement applications.

- Unique micro-valve for very low dead volume and fast purging time
- Low sample consumption ethernet for online control
- Measures ppm and % oxygen up to 96%

## GPR-1200 & GPR-3500 Portable Oxygen Analyzers

Portable oxygen analyzers for oxygen purity measurements or for trace oxygen where gas purity must be controlled at defined measurement points.

- GPR-1200 and GPR-3500
- Up to 30 days operation on a single charge
- Low maintenance with up to 32 months sensor lifetime

## SILO2 Oxygen Analyzer

SIL Capable Oxygen Analyser for use in nitrogen generation plants when the nitrogen is required for safety-critical applications.

- Measurement range 0 to 25% O<sub>2</sub>
- Compact for easy integration
- 3 configurable alarm outputs



Output range of 0 to 10 ppm



Long-life solid state zirconia sensor



Compact and lightweight



Analyzer and galvanic isolation barrier



*Easy to install and maintain*

*Compact and rugged*

### SenzTx Oxygen Transmitter

A compact and robust O<sub>2</sub> transmitter that gives reliable measurements of oxygen concentration. Outputs include 4-20mA analog and RS485 digital.

- Choice of zirconia or electrochemical O<sub>2</sub> sensors
- Minimum output range of 0-10 ppm for trace O<sub>2</sub>
- Multiple process connections for easy installation

### Gasenz Oxygen Monitor

Designed for the monitoring of oxygen-deficient atmospheres in any work area where the risk of asphyxiation may occur due to the presence of gases like nitrogen or carbon dioxide.

- Measurement range 0 to 25% O<sub>2</sub>
- Long-life, low-maintenance zirconia sensor technology
- Perfectly suited for personnel protection in the gas generation industry

## Moisture Measurements

### Easidew Industrial Dew-Point Transmitter

Simple to install and maintain dew-point transmitter measures dew point and moisture content across a broad humidity range.

- Measurement range from -110 to +20 °C dew point 0-3000 ppmV
- Wide range of process connections for easy installation

### MDM300 Portable Hygrometer

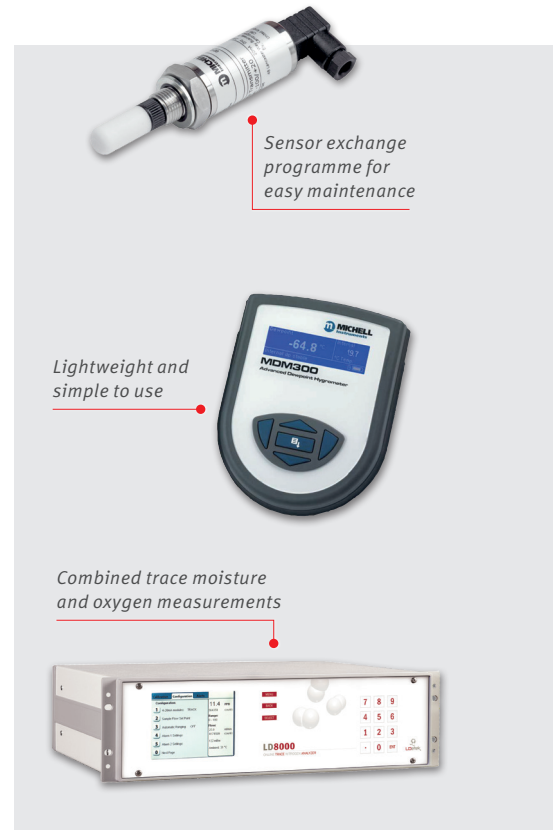
Fast response and recovery time allows for a greater number of measurements per day than comparable instruments.

- Wide measurement range: -100 to +20 °C dew point
- Repeatedly fast measurements at low pressure from less than 15 minutes for T95 to -60 °C
- Long battery life: up to 48 hours of typical use between charges

### LD8000 MultiGas Analyzer

For combined measurements of trace oxygen and moisture in a single compact rackmount enclosure. Features high-purity sample flow controllers and a 5.6" touch screen display.

- Choice of zirconia and electrochemical oxygen sensors
- Choice of ceramic metal oxide and quartz crystal moisture sensors



*Sensor exchange programme for easy maintenance*

*Lightweight and simple to use*

*Combined trace moisture and oxygen measurements*

## Hazardous Area-Rated Analyzers

### MDM300 I.S Portable Hygrometer

Intrinsically-safe portable hygrometer for spot checks of trace moisture in hazardous areas.

- Wide measurement range: -100 to +20 °C dew point
- Repeatedly fast measurements at low pressure from less than 15 minutes for T95 to -60 °C

### Easidew I.S. Intrinsically Safe Dew-point Transmitter

Intrinsically safe dew-point transmitter for trace moisture in hazardous areas, with global certifications.

- Measurement range from -110 to +20 °C dew point 0-3000 ppmV
- Wide range of process connections for easy installation
- Certifications from ATEX, CSA, FM and IECEx

### GPR-1200 ATEX Portable Oxygen Analyzer

A low PPM portable oxygen analyzer for convenient spot checks of gas purity in hazardous areas.

- Measurement range from 0–10 PPM
- Lower detection limit of 50 PPB O<sub>2</sub>
- Internal sample pump available

### XTP601-EX Oxygen Analyzer

The XTP601 process oxygen analyzer is rugged, reliable and gives precise measurements of oxygen.

- Ranges available: 0-1% up to 0-50% & 20-100% up to 90-100% O<sub>2</sub>
- Intrinsic error of better than 1% of span (0.2% O<sub>2</sub> in the suppressed zero ranges)
- Zero stability of better than 0.25% of span per month

### Minox i Intrinsically Safe Oxygen Transmitter

IECEx and ATEX certified, the Minox i is a highly reliable and cost-effective two-wire, loop-powered transmitter with a linearized 4 to 20 mA output.

- Measurement range: 0-25% O<sub>2</sub>
- Industry standard 4-20 mA output
- ATEX certified for gas and dust groups (G&D)

### Oxy-TX Oxygen Analyzer

An intrinsically-safe oxygen analyzer for surface mounting with a remote sensor.

- Electrochemical oxygen sensor
- ATEX Approved, Certified to EEx ia II C T4, ATEX II 2 G
- Large 4 Digit LCD display for local PPM O<sub>2</sub> concentration readout



## Process Sensing Technologies

We provide an unmatched suite of instruments, analyzers and sensors for precision measurements and monitoring in highly demanding end markets. These range from pharmaceutical/ life sciences, speciality gases, semiconductors, O&G, petrochemicals and power to gas detection, food and beverage and building automation.

*Using our products, customers save millions of dollars each year through increased energy efficiency in their processes and reduced process disruptions.*

The quality of food, medicines, semi-conductors and thousands of manufactured goods depends on reliable measurements of critical parameters such as humidity, oxygen, CO, N<sub>2</sub>, H<sub>2</sub>, hydrocarbons, pressure or CO<sub>2</sub> during production, storage and transport. Our products directly improve the profitability of our customers and help them to stay compliant with stringent industry regulations. We own and manufacture the sensing technologies used in the majority of our products. This allows us to remain in a strong leadership position and pass on the benefits of our innovation to our customers.

### PST Leading Brands

- **Analytical Industries Inc.** – Electrochemical oxygen sensors and gas-analysis
- **Dynamant** – Infrared gas sensors
- **LDetek** – Ultra low range online analyzers
- **Michell Instruments** – Moisture and oxygen sensing and instrumentation
- **Ntron Gas Measurement** – Oxygen sensors and analyzers
- **Rotronic** – Humidity and temperature instruments, monitoring systems
- **SST Sensing** – Oxygen sensors and liquid level switches

### Group Facts

- Experts in analyzers & systems to ensure purity of industrial O<sub>2</sub>, nitrogen and argon
- 22 Service and sales subsidiaries
- 8 global engineering and manufacturing locations
- 100+ authorized distributors
- 14 proprietary technologies



Humidity



Temperature



Dew Point



Water Activity



Differential Pressure



Oxygen



CO<sub>2</sub>



Impurities



Flammable Gases



Level

#### North America

Thetford Mines, QC, Canada  
Hamilton, ON, Canada  
Hauppauge, NY, USA  
Pomona, CA, USA

#### Asia

Tokyo, Japan  
Osaka, Japan  
Beijing, China  
Shanghai, China  
Singapore

#### South America

Rio de Janeiro, Brazil

#### EMEA

Coatbridge, Scotland, UK  
Mansfield, UK  
Ely, UK  
Crawley, UK  
Navan, Ireland  
Oosterhout, Netherlands  
Frankfurt, Germany  
Ettlingen, Germany  
Lyon, France  
Zürich, Switzerland  
Milan, Italy  
Dubai, UAE

Global direct sales and service support