ENOTEC

GAS SENSING SOLUTIONS SINCE 1980

OXITEC®

O_2 InSitu analyzer systems

UNSTOPPABLE QUALITY!

DEVELOPED AND MANUFACTURED IN GERMANY

ENOTEC
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ENOTEC
SENSOR TECHNOLOGY

The family of *ENOTEC* sensors are engineered for maximum durability. *ENOTEC* use only the most robust materials in creating sensors, giving them an operational life span superior to any comparative sensor on the world market. The sensors are leak-proof due to an elaborate *ENOTEC* soldering process, giving them lasting accuracy, reliability and safety.

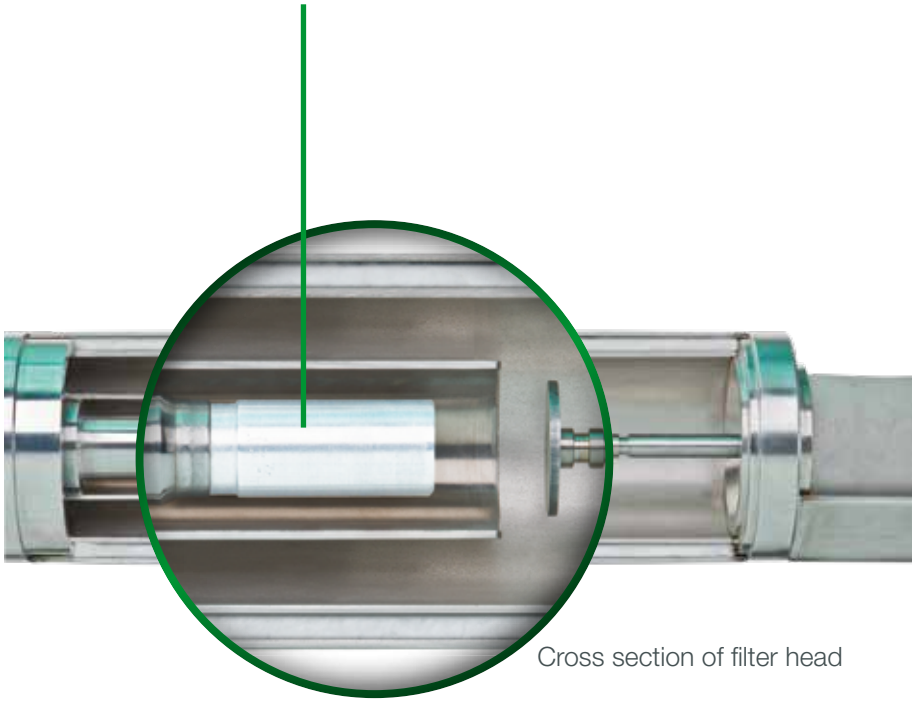
The *ENOTEC* sensors are positioned directly in the flue at the end of the patented probes which allows for a quick and representative measurement. Any fluctuations in the gas composition can be quickly responded to. This allows for efficient combustion control, resulting in reduced energy usage which in turn keeps the output of emissions to a minimum.

The *ENOTEC* MLT sensor is the premium sensor for measurement of oxygen in harsh process conditions such as with high dust load, aggressive or corrosive flue gas compositions. The MLT production method of the O_2 sensors make them highly resilient and robust.

ROBUST SENSORS, DESIGNED TO LAST

MLT O_2 sensor

The best sensor for measurement of O_2, which is just as reliable and robust in reducing atmospheres, thanks to integrated **C**ell **S**urface **P**rotection (optional).



Cross section of filter head

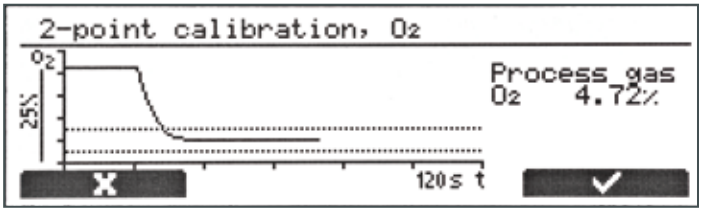
OXITEC KEX-5002 probe

OXITEC® 5000

O_2 ANALYZERS FOR INTELLIGENT PROCESS CONTROL

An essential precondition for a safe and efficient combustion process is the fast and exact measurement of O_2.
The O_2 concentration after combustion is the parameter which needs to be controlled. A target range of 0.5 - 2% O_2 is desirable and also attainable with *ENOTEC* systems.
Oxygen values below 0.5% O_2 are an indicator of an incomplete combustion which produces an increase in unburned molecules. Values above 2% O_2 (depending on application) will lead to an unnecessary cooling of the process which in turn requires a higher fuel usage.
ENOTEC's SME-5 electronic units offer built in plausibility for safer efficiency in all types of combustion.

FASTET RESPONSE TIME

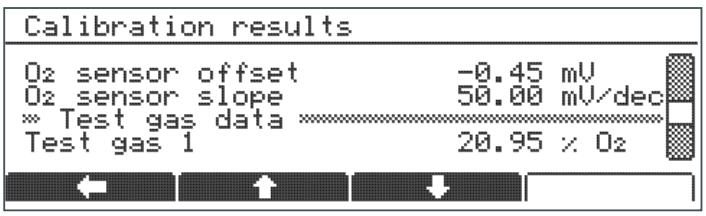


HART COMMUNICATION FOUNDATION
FOUNDATION

...and more interfaces available.

Here a 2-point calibration is taking place showing the actual oxygen content - here 4.72 % O_2. The fast reaction to process gas after calibration is evident and this speed of measurement is the same when the sensor reacts to changes of the oxygen concentration in flue. An immediate regulation of the combustion process is thus possible.

DYNAMICS OF THE PROCESS



The possibility to refer to earlier calibrations enhances knowledge of the process conditions and reduces the risk of handling errors during future calibrations.
The self-monitoring and self-diagnostic functions of *ENOTEC* analyzer systems include „O_2 Sensor Life“, which informs of the state of the O_2 sensor.

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OXITEC® 5000

INSITU OXYGEN MEASUREMENT IN SAFE AREAS

The *OXITEC 5000* O_2 analyzer system is the reference product for all InSitu O_2 analyzers on the market. Its unbeatable robustness, process response time, accuracy and versatility make it the # 1 choice for almost all O_2 process measurement and CEMS applications - even in most aggressive processes.

OXITEC analyzers range from budgetfriendly ECONOMY analyzers to ATEXcertified Dust Ex and Gas Ex analyzers.All include the *OXITEC* O_2 sensor which is reliable & robust like no other, designed and manufactured to withstand aggressive gases, high dust concentration and high vibration processes.

OXITEC 5000 is TÜV approved according to EN 15267 for governmental controlled emission monitoring. This certification has shown *OXITEC* to be the superior O_2 analyzer on the world market, offering a unique maintenance interval of a full 6 months, 3 months longer than any competitive analyzer.

TECHNICAL DATA

INSERTION DEPTH OF PROBE	up to 3689 mm
O_2 RANGES	ppm to 100 % O_2
MEASUREMENT ACCURACY	< 0.5 % of measured value or 0.02 Vol. % O_2
REACTION TIME	0,5 s (process flow velocity > 10 m/sec.)
PROCESS GAS TEMPERATURE	max. 800 °C max. 1400 °C (with cooling protection tube)
AMBIENT TEMPERATURE	-40 °C to 80 °C (probe) -20 °C to 55 °C (electronic unit)
INTERFACE	HART, FIELDBUS, RS485 MODBUS RTU, RS232, ENOTEC Remote
IP CODE	probe - IP65 electronic unit - IP66

BE SAFE – CHOOSE ENOTEC

REDUCE EMMISIONS AND INCREASE FUEL EFFICIENCY

OXITEC 5000 safe area analyzer system

OXITEC® 5000 Gas Ex

INSITU O_2 MEASUREMENT IN HAZARDOUS AREAS

Safe, reliable and accurate are the main characteristics of the ATEX certified *OXITEC 5000 GasEx*. The proven *OXITEC* quality is integrated into an Ex protected system for safe operation in gas hazardous environments (gas explosion zones 1 and 2).

Using the *OXITEC* 5000 GasEx, plant safety is enhanced while lowering emissions by controlling fuel usage in the combustion process.

Also available is a DustEx solution for O_2 measurements in Zone 21 / 22 environments with potentially explosive dust loading.

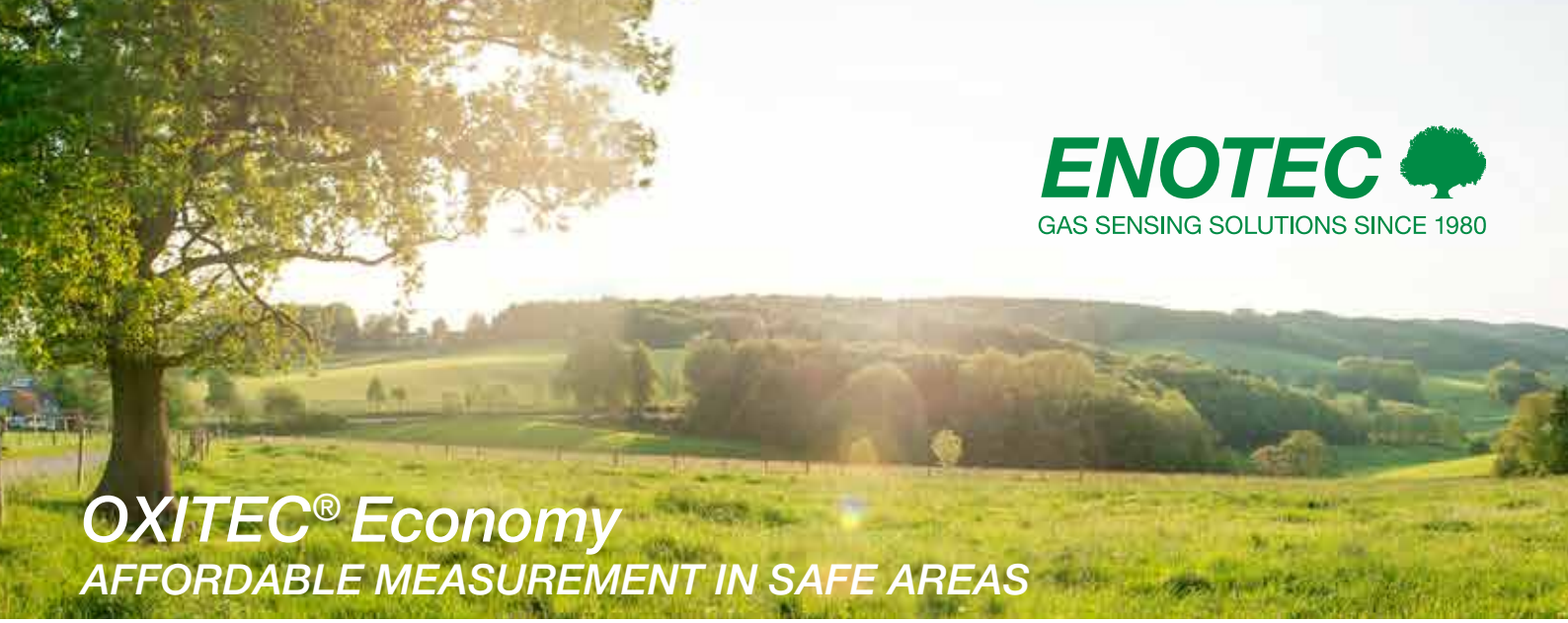
TECHNICAL DATA

INSERTION DEPTH OF PROBE	up to 924mm
O_2 RANGES	ppm to 100% O_2
MEASUREMENT ACCURACY	< 0.5 % of measured value or 0.02 Vol. % O_2
REACTION TIME	0,5s (process flow velocity > 10m/sec.)
PROCESS GAS TEMPERATURE	max. 500°C max. 1400°C (with cooling protection tube)
AMBIENT TEMPERATURE	-20°C to 55°C (probe) -20°C to 55°C (electronic unit)
INTERFACE	HART, FIELDBUS, RS485 MODBUS RTU, RS232, ENOTEC Remote
IP CODE	probe - IP66 electronic unit - IP66

Certified in operation for realistic process conditions by an independent German **ATEX** test house.

II 2G Ex db IIC T3 Gb (probe)
II 2G Ex db IIC T6 Gb (electronic unit)
II 2G Ex tb IIIC T85°C Db /IP66

OXITEC 5000 GasEx analyzer system



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OXITEC® Economy

AFFORDABLE MEASUREMENT IN SAFE AREAS

The *OXITEC* Economy is the budget friendly and affordable O_2 analyzer which is recommend for small combustion plants in the form of steam boilers burning natural gas or heavy oil such as found in biomass combustion plants, container and cruise ships etc.

The Economy analyzer is delivered pre-assembled and factory-configured and includes cables with a simple plug system ready for installation - completely Plug and Play. The filter head has a sintered metal filter as standard which also allows for O_2 measurement in dust laden flue gases. The system has a calibration connection which allows the user to confirm the measurement at any time if necessary.

Countless *OXITEC* Economy installations worldwide are proof of the system's reliability and durability over many years without the necessity of constant maintenance and part replacements.

TECHNICAL DATA

INSERTION DEPTH OF PROBE	up to 1000 mm
O_2 RANGES	ppm to 100 % O_2
MEASUREMENT ACCURACY	< 0.5 % of measured value or 0.02 Vol. % O_2
REACTION TIME	0,5s (process flow velocity > 10m/sec.)
PROCESS GAS TEMPERATURE	max. 400 °C max. 1400 °C (with cooling protection tube)
AMBIENT TEMPERATURE	-40 °C to 80 °C (probe) -20 °C to 55 °C (electronic unit)
INTERFACE	HART, FIELDBUS, RS485 MODBUS RTU, RS232, ENOTEC Remote
IP CODE	probe - IP20 electronic unit - IP66

COST EFFICIENT AND MAINTENANCE FREE FOR MANY YEARS

OXITEC Economy
analyzer system

OXITEC® 500E
EXTRACTIVE MEASUREMENTS

The extractive analyzer *OXITEC* 500E was specially developed for a 19“ rack installation for continuous measurement of O_2 in analyzer cabinets. The 500E is equipped with the same tried and tested *ENSitu* O_2 sensor in use in all *OXITEC* probes.

In combination with an *ENOTEC* gas sampling and conditioning system, oxygen content can be measured in wet/dry flue gas and water vapour with a detection limit of 1ppm.

Apart from the 19“ version, a desktop version is also available for standalone applications such as in laboratories.

TECHNICAL DATA

O_2 RANGES	ppm to 100 %O_2
MEASUREMENT ACCURACY	± 0,2 % of measured value
AMBIENT TEMPERATURE	-20 °C to 55 °C
INTERFACE	HART, FIELDBUS, RS485 MODBUS RTU, RS232, ENOTEC Remote
IP CODE	IP20

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TÜV APPROVED QUALITY GERMAN PRODUCT

OXITEC 500E
extractive anayzer

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GAS SENSING SOLUTIONS SINCE 1980

OXITEC®
SAFE AND CLEAN COMBUSTION

COMPANY

ENOTEC has provided gas sensing solutions since 1980, producing products with a high degree of accuracy, quality and durability - Made in Germany.

Our flexibility allows us to quickly develop solutions individually designed to meet your problems.
On request, we also offer after delivery service concepts - the world over.

SYSTEM FEATURES

- > Highest accuracy
- > Overview of calibration history
- > Sensor life expectancy on display
- > Gas tight sensor construction
- > Self-monitoring
- > InSitu measurement in real-time
- > Unrivaled long service life

CONTACT

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ENOTEC has four subsidiaries:
ENOTEC USA, ENOTEC ASIA, ENOTEC UK, ENOTEC OOO and over 50 distributors world wide...

ENOTEC REMOTE app
Simple control of *ENOTEC* analyzers

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