

HORIBA

Process & Environmental



The NZ-5000 InSitu analyzer system has been proven in countless installations, in all possible combustion systems, using all possible fuel types, usually with more than **10 years life-span** in most flue gas applications.

The system comprises a robust probe which is inserted directly in the process for fastest and most representative measurement (the sensor is located at the tip of the probe directly in the process). The modern and highly intelligent electronic unit has a graphics enabled, bright LED backlit display for easy handling.

NZ-5000 has no need for calibration and thus provides maintenance-free O₂ analysis, typically for many years.

The DIN ISO 9001:2008 certification for all production stages guarantee perfect measuring equipment with a high service life.

TECHNICAL DATA

INSERTION DEPTH OF PROBE	up to 3682mm
O ₂ RANGES	ppm to 100% O ₂
MEASUREMENT ACCURACY	± 0,2% of measured value
REACTION TIME	0,5s (process flow velocity > 10m/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
IP CODE	probe - IP65 electronic unit - IP66

**REDUCE EMISSIONS
AND INCREASE
FUEL EFFICIENCY**



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An essential precondition for a safe and efficient combustion process is the fast and exact measurement of O_2 . The volume of oxygen in the combustion is the parameter which needs to be controlled. A target range of 0.5 - 2%

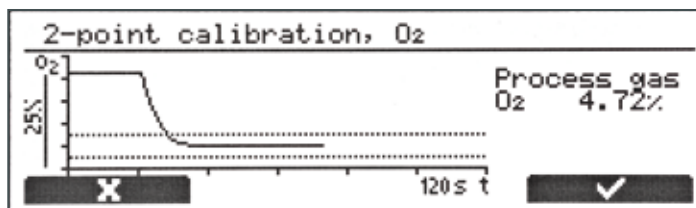
O_2 is desirable and also attainable with *HORIBA* systems.

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

will lead to an unnecessary cooling of the process which in turn requires a higher fuel usage.

The *HORIBA*'S electronic units offer built in plausibility for safer efficiency in all types of combustion.

FAST RESPONSE TIME



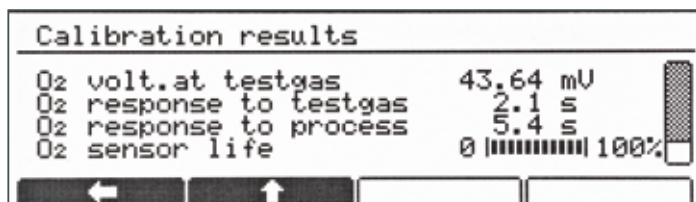
Here a 2-point calibration is taking place showing the actual oxygen content - here 4.72% O_2 . The fast reaction to process gas after calibration is evident and this speed of measurement is the same when the sensor reacts to changes of the oxygen concentration in flue. An immediate regulation of the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

HART
COMMUNICATION FOUNDATION



...and more interfaces available.

DYNAMICS OF THE PROCESS



The possibility to refer to earlier calibrations enhances your knowledge of your process conditions and reduces the risk of handling errors during future calibrations. The self monitoring and self diagnostic functions of *HORIBA* analyzer systems include „ O_2 Sensor Life“. Here one is informed of the state of the sensor.

