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# 1231 and 1232 Oxygen Probe

The Ecotech 1231 and 1232 are highly durable Oxygen probes that feature high accuracy and minimal drift( $\pm 1\%$ ).

The model 1231 is used to analyze for  $O_2$  in gases with temperatures below  $900^\circ\text{C}$  and the model 1232 is used for temperatures of  $700^\circ\text{C}$  to  $1400^\circ\text{C}$ .



## Features

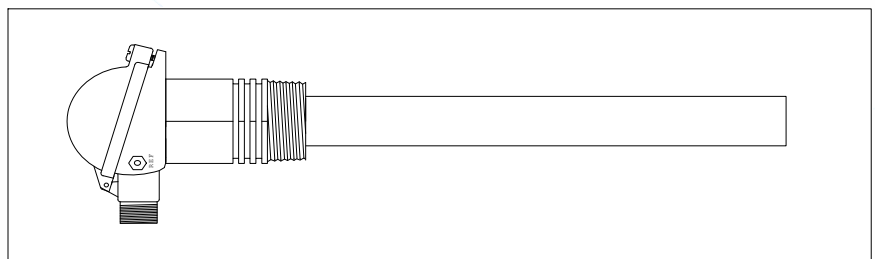
The 1231 and 1232 Oxygen probes incorporate rugged zirconia Sensors and are ideal for:

- Flue gas analysis
- Oxygen levels in boilers, kilns and furnaces
- Combustion analysis
- Carbon potential measurement
- Water vapour concentration and dew point measurement
- $O_2$  determination in inert and sterile packaging
- General industrial use
- Annealing furnaces

A fast response time of between 1 and 4 seconds to  $O_2$  concentration changes means that potentially hazardous situations such as those caused through the build-up of dangerous, fuel-rich conditions can be avoided.

The model 1232 has a main burner safety interlock for the prevention of potentially explosive situations.

## Model 1231 Heated Oxygen Probe



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# Specifications

## Model 1231 1232

Applications:	Combustion flue gases below 900°C Combustion flue gases above 700°C (Note 1) with no contaminants. eg natural gas, light oils
Temperature Range:	0-900°C 700-1400°C
Length:	250mm-2000mm 500mm-1500mm
Process Connection:	11/2" BSP or NPT 3/4" BSP or NPT
Sheath OD:	34mm 19mm
Electrical Connection:	Weather-proof plug-in connector or optional screw terminals. Hazardous area heads have screw terminals.
Heater:	Yes No
Flue Gs Thermocouple:	Refer to note 2 R, Integral
Response time:	Typically < 4 seconds Typically < 1 second
Head Temperature:	100°C Max 150°C Max
Reference Gas:	Air 50 cc/minute approx. Pump supplied within analyzer
Calibration Check/Gas Flow:	10 to 500 cc/minute 10 to 500 cc/minute
Ref. Air Connection:	1/4" tube Integral air line in probe cable
Particulate Filter (optional):	Removable stainless steel 30um standard, Not required 15um option Calibration Check/Gas 1/8" NPT female 1/8" NPT female
Weight:	0.6kg plus 0.3kg/100 mm 0.1kg/100mm length

## Notes

1. Care must be taken to avoid contact with explosive or inflammable gases with 1231 heated oxygen probes when hot. Ecotech oxygen analysers have built-in safety protection which disconnects the heater when the main flame is off.
2. A separate flue gas thermocouple is required with a 1231 probe if a flue gas temperature display on the analyser is required. A 1231 oxygen probe has an integral type K thermocouple which is used to control the sensor temperature.

## Standard Probe 'U' Lengths

**1231:** 250 mm, 350 mm, 500 mm, 750 mm, 1000 mm, 1500 mm, 2000 mm

**1232:** 500 mm, 750 mm, 1000 mm, 1500 mm

## Ordering Information

- Probe insertion length (from process end of mounting thread to probe sensing tip). Standard lengths below
- Weather-proof plug or screw terminal connections
- No filter or standard 30 µm filter or 15 µm option (1231 only)
- Hazardous area installation (specify zone classification)
- Process connection thread type, BSP or NPT
- Cable with plug connector or no connector



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