

**environmental monitoring  
and combustion optimisation  
for gas fired boilers**



**LAND**  
combustion

*the total efficiency concept*



For the first time, a unique monitor that meets your environmental monitoring and combustion optimisation requirements in a single, stand-alone instrument

GasPro<sup>+</sup> is a compact instrument, that measures NO, CO and O<sub>2</sub> for small gas-fired boilers and turbines.

## Benefits

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- Economical - purpose designed for gas-fired boilers
- Save fuel - reduce operating costs
- Reduce costs of environmental checks
- Compact, single unit solution

## Boiler Control

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To achieve optimum performance, every boiler requires a control system, which can adjust operating conditions in response to changing flue gas components.

Precise control is the key to reduced operating costs.

Environmental considerations now often carry equal importance, and offer further cost savings.

Multi-component monitoring is essential to satisfy both performance requirements economically.

## Environmental

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GasPro<sup>+</sup> is a system designed to meet the environmental monitoring needs of small gas-fired boilers and turbines.

It is ideal for plant operators to have an effective and reliable means to monitor CO and NO<sub>x</sub> levels, where a full CEM system is not required.

Emissions can be monitored and reported by the user, without additional workload for existing operation and maintenance personnel. The cost of independent tests can also be significantly reduced.

NO<sub>x</sub> monitoring in smaller plants can be performed economically using GasPro<sup>+</sup>. When configured to measure NO and O<sub>2</sub>, the system can calculate total NO<sub>x</sub> emissions, corrected to reference conditions.

## Combustion

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GasPro<sup>+</sup> monitors Oxygen and Carbon Monoxide, which are the key indicators for combustion optimisation.

Carbon Monoxide (CO) levels are directly measured and used to tune the combustion process, be it through automatic control or manual adjustment. This results in improvements in overall combustion and fuel efficiency.



## Features

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- Stand-alone system
- Small and compact
- Simple, single-flange installation
- Fully integrated display and control panel
- User selectable ranges
- Proven measurement technology
- Quick-release probe removal system
- User configured analogue outputs ( e.g. 4 - 20mA)
- Designed for gas-fired applications



Quick-release probe removal system



GasPro<sup>+</sup> is built into a weatherproof steel case which mounts directly onto a flange on the chimney, stack or duct.

## Applications

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GasPro<sup>+</sup> is only suitable for gas-fired applications, where the flue gas is low in particulates and does not contain soluble gases.

- Food processing
- Pharmaceuticals
- Municipal buildings (Hospitals, Office Blocks)
- Small chemical plants
- District heating plants
- Paper mills
- Tyre and rubber products
- Desalination plants

## Hydrocarbons

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GasPro<sup>+</sup> has an option for direct measurement of the levels of unburnt Hydrocarbons present in the flue gas.

Hydrocarbon measurement can be used to monitor boiler safety in certain applications.

## Further Information

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## Product Specifications

### Measurement Ranges

Gas Sensors	Range	Accuracy	Resolution
Nitric Oxide, NO	0 - 100 ppm to 0 - 2000ppm	±4 %	1 ppm
*Carbon Monoxide, CO Low or *Carbon Monoxide, CO High	0 - 100 ppm to 0 - 5000 ppm 0 - 1 % to 0 - 4 %	±4 %	1 ppm 10 ppm
Oxygen, O <sub>2</sub>	0 - 25 %	0.2 % Vol.	0.1 % Vol.
Hydrocarbons, C <sub>x</sub> H <sub>y</sub>	0 - 5 %	(Application dependent)	

*\*Select either low or high range CO sensor*

### Fuel Types

Natural Gas  
Propane

### Display

Type:

40 x 8 Matrix Liquid Crystal, with  
electroluminescent backlight

Keyboard:

Tactile membrane function and cursor keys

Indicators:

LED type for Power, Service required, Fault

### Electrical Data

Power Supply:

100 - 240 V a.c., 50-60 Hz

Power Consumption:

150 W max.

### Environmental

Safety:

Conforms to EN 61010

EMC:

Conforms to EN 61326

Ambient Temperature:

-20 °C to +55 °C

Max Flue Gas Temperature:

600 °C

### Services

Air Supply (Vortex Cooler):

Pressure 6.9 bar  
Flow 50 litres/min

### Dimensions/Construction

Weight:

20 kg approx.

Dimensions (h x w x d):

300 mm x 500 mm x 300 mm

Protection Rating:

IP 65

### Mounting Details

Flange:

Dual Purpose DN65 PN6 / 2" 150lb ANSI

### Outputs:

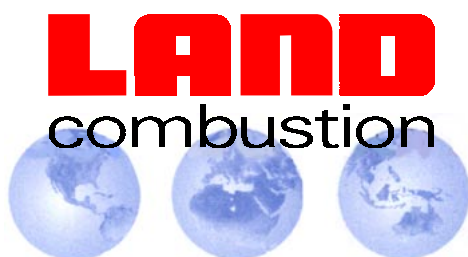
Analogue outputs:

4 current loops, Independently configurable  
0, 2, 4-20mA

### Options:

Minimum of 1, Maximum of 4 measured gases  
Probe length options: 0.5 m, 1 m, 1.5 m or 3 m

*Continuous Product Development may make it necessary to change these details without notice*



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Land Combustion has a comprehensive range of Combustion and Environmental Monitoring Instrumentation.



*Approval applies to products designed and manufactured in the UK*

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