



## Rapidox 7100 Blue Hydrogen Analyser

The Rapidox 7100 Blue Hydrogen (H<sub>2</sub>) Analyser is a high specification rack mountable, or bench top instrument designed for the analysis and calculation of calorific value for hydrogen produced from biomass gasification, zero-CO<sub>2</sub>-emission methane pyrolysis, suitable either in a research laboratory or on-site.



**Benchtop** - Front and rear



The Rapidox 7100 Blue H<sub>2</sub> Analyser can be used in a laboratory or on-site to analyse the output of your hydrogen production process. Using a combination of Thermal Conductivity (TCD), Infra-Red (IR), Tuneable Laser Diode (TLD) and Electrochemical (EC) sensor technology, the Rapidox 7100 offers accurate analysis that can be relied upon.

The analyser will measure the gas composition providing % or ppm values for Hydrogen (H<sub>2</sub>), Methane (CH<sub>4</sub>), Carbon Dioxide (CO<sub>2</sub>), Carbon Monoxide (CO) and Oxygen (O<sub>2</sub>). It also has an optional upgrade to include a dewpoint sensor to measure the moisture content in the gas sample. With our bespoke design of the analyser, we can include a range of other sensors also if your production methods have any other gases which require monitoring. Our customer designed firmware for the analyser will also calculate and record the Gross Calorific Value (GCV) of the gas throughout the measurement.

The Rapidox 7100 Blue H<sub>2</sub> Analyser is available as either a benchtop version for the laboratory or in a 19" rack mountable case which can be housed in a suitable enclosure for use in an external or hazardous area.



**Rack mountable** - Front and rear



The Rapidox 7100 Blue H<sub>2</sub> Analyser is highly configurable to suit individual H<sub>2</sub> production requirements and incorporates the following features to enhance functionality:

- Bespoke sensor combination
- Two programmable alarms
- 7" full-colour touchscreen
- Continuous data logging and 4GB internal data storage
- Multi-language
- Worldwide mains voltage
- Password protection



## Accessories



- 1 Gas Recovery Bag
- 2 Calibration Kit
- 3 Calibration Service
- 4 Multiplex Sampling System
- 5 Thermal Printer
- 6 Gas Filters

## Specification

<b>H2 (hydrogen)</b>	0-100% TCD sensor with background gas correction. $\pm 1\%$ full scale accuracy. 0.1% resolution
<b>CO (carbon dioxide)</b>	0-2000ppm, 0-2%, 0-10% or 0-100% Infra-red sensor. $\pm 1\%$ full scale accuracy. 0.1% resolution
<b>CH4 (methane)</b>	0-5% (LEL) or 0-100% TLD sensor. $\pm 1\%$ full scale accuracy. 0.1% resolution
<b>CO2 (carbon monoxide)</b>	0-5000ppm, 0-5%, 0-20% or 0-100% Infra-red sensor. $\pm 1\%$ full scale accuracy. 0.1% resolution
<b>O2 (oxygen)</b>	0-30% or 0-100% electrochemical sensor. $\pm 1\%$ full scale accuracy. 0.01% resolution
<b>H2O Dewpoint (optional)</b>	-60°C to +20°C or -100°C to +20°C Dewpoint sensor
<b>Other gases</b>	Contact us for further information
<b>Normal Operating Conditions</b>	Temperature 0°C to 40°C / Humidity 10 - 90% RH / Pressure 900 to 1100 mbar absolute.
<b>Sampling</b>	Fixed or continuous sampling modes
<b>Warm-up Time</b>	3-4 minutes at 20°C
<b>Voltage Outputs</b>	0-10V, user programmable
<b>Current Outputs</b>	4-20mA linear, user programmable
<b>Digital Outputs</b>	RS232 (RS485 option available) Data streamed on demand. Modbus RTU/Ethernet
<b>Data Output</b>	Excel compatible data via USB memory stick
<b>Alarms</b>	Relay circuits, user programmable
<b>Sample Connections</b>	6mm OD or 1/4" Swagelok fittings. Rear positioning
<b>Calibration</b>	Calibration by the user using zero and span gases An optional Auto-Cal system can be installed on certain models
<b>Display</b>	7" (180mm) full-colour LCD with touchscreen operation; resolution 0.01ppm or 0.01%
<b>Supply Voltage</b>	90-260 VAC, 50/60Hz
<b>Analyser Dimensions</b>	Rack Mount: 132mm(H) x 482mm(W) x 365mm(D) / Benchtop: 180mm (H) x 570mm (W) x 345mm (D)
<b>Weight</b>	Rack Mount: 6.5kg / Benchtop: 6.5kg

For detailed specs on individual sensor performance, please contact us.