

Multichannel gas exchange system



Dual CO₂/H₂O analysis

Up to 24 samples with one unit

Accurate and proven technology

Compact and fully integrated

Flow maintained to all selected channels

Flexible channel selection

SD card data storage and USB output

ADC BioScientific:

Leaders in gas exchange instrumentation

For nearly 50 years ADC has been synonymous with high quality gas exchange instrumentation, in the laboratory and in the field.

Throughout this period ADC has been the world leader in developing and manufacturing multi-sample analysis systems, where a number of analytical samples may be multiplexed to, and measured by, a single CO₂ analyser. These systems have traditionally featured a highly accurate CO₂ Infra-Red Gas Analyser (IRGA), such as the "legendary" ADC225 together with a separate gas multiplexing unit.

Compact and fully integrated

ADC BioScientific Ltd. now introduces the EGA60, the next generation of multi-sample, gas analysis systems. The EGA60 is a fully integrated system, featuring an accurate and reliable CO₂ analyser, combined with a versatile gas multiplexer in one compact unit. The EGA60 is designed for measurements during long-term, continuous experiments.



Analysis of up to 24 gas samples

A single EGA60 system can sequentially analyse up to 24 experimental samples. The EGA60 is available with 5, 10, 15, 20 or 25 channels. One channel being reserved for a CO₂ auto calibration 'zero' column.

Fully programmable

ADC has a reputation for developing the world's easiest to use gas exchange systems. The EGA60 has been designed to be the most user-friendly multi-gas analysis system to date. Complete functionality is achieved with just 5 keys driving a series of menus. No separate "bolt on" PC or laptop is required.

Sampling times of individual channels can be set together with total experimental times. Settings can be copied over to several channels, saving time.

Constant flow maintains sample integrity

Flow rates in each channel may be automatically programmed.

Individual pumps maintain flow through all sample channels, at all times. This ensures that the integrity of each sample is preserved by preventing the build-up, or reduction, of CO₂ concentrations within any sample chamber.

Integral data storage

The EGA60 provides integral data storage on interchangeable SD cards, each capable of storing millions of data points.

Data may be downloaded to a PC directly from the SD card or via a USB port. Data is stored in a comma delimited format and opens tabulated, with headings in an Excel spreadsheet.

Analogue inputs

The EGA60 has 7 analogue inputs on the rear of the unit. Each is a 12 bit, 5 volt DC input which is displayed and logged as 0.00 to 5.00.

Analogue output

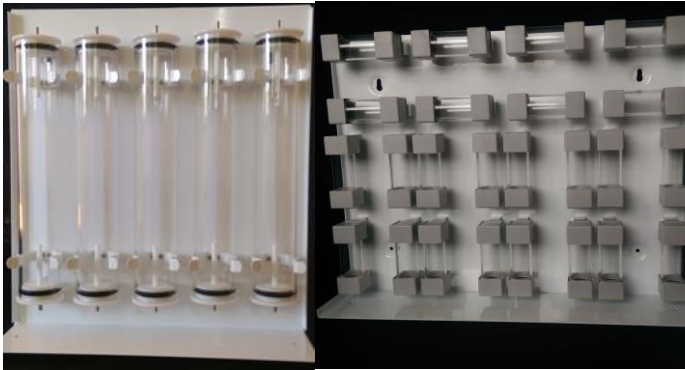
There is a single analogue output which can be configured to represent any of the measured parameters. The output can be set to 0-2.5, 0-5 or 0-10 V DC, or it can be set to a 4-20mA current output. This output can also be set to give a constant 5V DC output to power external sensors.

Accurate and stable

The EGA60 has a column of soda lime on the front panel. Ambient air is passed through this column, CO₂ is removed and the resulting gas is used to periodically "auto-zero" the infra-red gas analyser. This results in the long term stability of the CO₂ readings.

Sample cuvettes

Systems can be supplied with sample cuvettes.



These are available as 500ml cylindrical, glass or acrylic columns or as horizontally or vertically mounted 40ml acrylic columns. Columns are attached to rigid, adaptable mounting plates.

Other gas exchange applications

The EGA60 can also be user-configured for a variety of multi-sample applications including:

- Plant physiology
- Environmental chambers
- Insect respiration
- Fruit storage
- Soil respiration

Technical Specification

Measurement range and technique:

CO₂: 0-2000ppm, 1ppm resolution Infra-red gas analysis
H₂O: 0-75mbar, 0.1mbar resolution. By laser-trimmed, fast response water vapour sensors

Flow control: 0 to 500ml min⁻¹ on each channel

Test duration: Set by time or number of measurement cycles

Dwell time: 2 seconds to 999 minutes on each channel

Warm up time: 5 minutes @ 20°C

Display: 240 x 64 graphic LED backlit LCD

Recorded data: Removable SD card (1Gb card typically stores 16 million sets of data)

Power supply: 12V DC or 230/110V AC 50/60Hz using the power supply included

Electrical outputs: USB connection: Mini-B
RS232: 9 Pin "D" type

Analogue output: 0-2.5, 0-5V, 0-10V or 4-20mA

Analogue inputs: Seven 0-5V

Operating temperature range: 5°C to 45°C

Dimensions: 27 x 25 x 15cm

Weight: 7.5kg

ADC: Never compromise on quality
"Quality of product and quality of service."

From design to delivery, ensuring optimal performance and reliability is of paramount importance to our team of experienced engineers. Once in the field you are supported by our network of over 40 customer support centres worldwide.

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