

# Carbon Dioxide Analyzer

## Ecotech EC9820 CO<sub>2</sub> Analyzer

The EC 9820 Carbon Dioxide Analyzer combines the benefits of microprocessor control with the NDIR gas filter correlation photometry technique for accurate and reliable measurement of carbon dioxide with minimal interference from CO and H<sub>2</sub>O. The CO<sub>2</sub> concentration is automatically corrected for gas temperature/pressure changes and is displayed in units of ppm or mg/m<sup>3</sup>. The EC9820 allows for a manual, timed or remote initiated zero/span calibration.

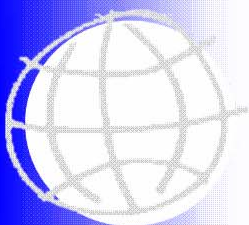


### Features

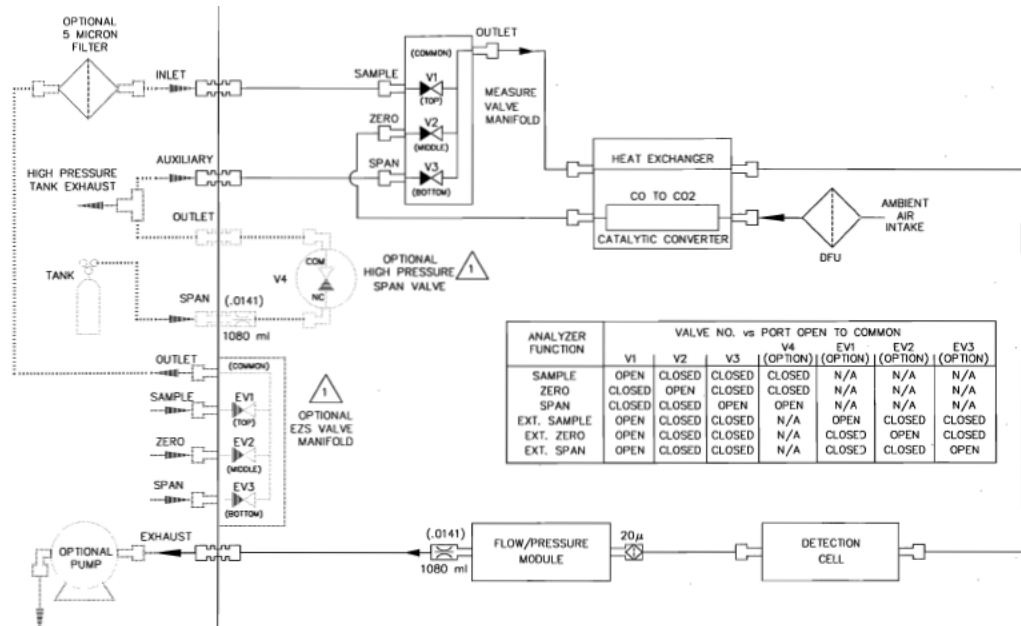
- Accurate and specific measurements of CO<sub>2</sub> with minimal interference from CO or H<sub>2</sub>O using proven gas filter wheel correlation technology
- The EC 9820 uses a long life infrared (IR) source and advance material in the gas filter wheel for trouble free long life operation and minimum maintenance.
- Sample flow rate is variable and allows for faster purge during zero and span cycles and faster returns to measurements mode. The variable flow rate enables the analyzer to obtain more data points at steady state zero and span conditions.
- Software algorithms handle all internal adjustments, perform diagnostics, indicate errors, display status, linearise and make calculations of CO<sub>2</sub> concentration. The only operator functions are routine maintenance of pneumatics and periodic calibration of the unit.
- Internal Flash ROM for logging of gas measurement data. The stored data can be remotely downloaded for analysis, reports or archives.
- Battery or solar power operation is possible using the optional 12 VDC power supply.
- Inbuilt data logger using Flash ROM stores up to 175 days of 5 minute data.
- Data stored can be retrieved via RS232, USB interface or the optional Ethernet connection to a TCP/IP network via an RJ45 connector. Ethernet option enables the user to download data from an analyzer connected to the internet via a standard web interface, also supports remote access to instruments parameters and the front screen remotely using a web browser.



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## Model EC9820 Series Analyzer



### Specifications

Ranges Display:	Auto ranging 0-3000 ppm, Units & decimal places selectable (2)
Analog Out:	0-full scale from 0-100 ppm to 0-3000 ppm with 0%, 5% and 10% offset Autoranging between 2 user-specified full scale values
Noise (at zero):	0.1% of concentration reading with adaptive filter active
Lower Detectable Limit:	2 ppm or 0.2% of concentration reading (1)
Zero Drift:	Time dependent, at fixed temperature 24 Hours: Less than 10 ppm 30 Days: Less than 10 ppm Temperature dependence, 0.2% per °C change
Span Drift:	24 hours < 0.5% of reading 30 days < 0.5% of reading Temperature dependence, 0.2% per °C change
Lag Time:	Less than 20 sec
Rise/Fall Time	Less than 60 sec 95% of final reading (1slpm) with Kalman filter active
Precision:	10 ppm or 1% of reading, at 3000 ppm range (1)
Sample Flow Rate:	1 slpm—zero air supply to zero port must exceed 2 slpm
Support Gas:	Zero air (CO <sub>2</sub> free air) must be delivered to the analyzer at 10-15 psi 0.5 slpm
Sample Pressure Dependence:	A 5% change in pressure produces less than 1% change in reading
Temperature Range:	5°C to 40°C
Relative Humidity:	10% to 80% non-condensing
Rejection Ratio	Negligible interference from H <sub>2</sub> O vapour and CO
Analog Outputs:	Jumper selectable voltage output of 100mV, 1V, 5V, 10V with menu selectable zero offset of 0.5% or 10% or menu selectable current output 0-20mA, 2-20mA, 4-20mA
Digital Outputs:	Multidrop RS232 port shared between analyzers for data, status and control. Service RS232 port gives front panel access USB port provided as standard
DB50 Interface (STD)	DB50 with discrete status, user controls and analog output provides status outputs, control inputs and 20mA current loop output
Power:	99-132 VAC, 198-264 VAC 47-63 Hz, 110 Watts consumed at 115 VAC, Optional 12 VDC power supply
Dimensions/weight:	43.2 x 17.8 x 64.8 cm (w x h x d), weight 20.9 kg (46 lbs)

(1) Whichever is greater with Kalman filter active

(2) Other analyzer ranges are available including 0-750 ppm and 0-1500 ppm (specify at time of ordering)

For further information please contact our nearest office

**ECOTECH**

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