

# Model 4200

## Ultra-Fast GC Analyzer



EST Part No. SYS4200C5 (DB-5 Column), SYS4200C6 (DB-624 Column)

### Transportable, Quantitative and Qualitative Analysis

#### What is it?

The Model 4200 is a transportable GC that was designed to speciate and quantify organic compounds from C-4 to C-24 in 10 seconds or less. The Model 4200 is available with either a DB-624 or a DB-5 column. The SAW detector utilizes an uncoated quartz crystal for maximum sensitivity and minimal recovery times.



#### How does it work?

Employing a trap and helium carrier gas, the Model 4200 injects samples into a heated column where separation is achieved. Materials sequentially exit the column and are deposited on the SAW detector. This deposition results in a change in the oscillating frequency of the resonator directly proportional to the mass.

### Specifications

#### Analysis Time/ Recycle Time

- 5 – 60 seconds / 30 seconds min.

#### Precision and Accuracy

- Standard Deviation <2%

#### Sensitivity

- Can analyze vapors in 10 seconds with sensitivity in parts-per-billion for many compounds
- Detects hydrocarbons in the range of C4 – C25. Sensitivity will vary by compound sampling time, matrix, interferences and detector temperature settings.

#### Dynamic Range

- $10^6 \pm 10\%$

#### Sampling

- Internal Sample Pump
- Sample Introduction: ~.5 ml/second
- Time programmable: 1-300 seconds
- Sample absorbed into internal tenax preconcentrator

#### Compound Identification

- Automatic with user calibration

#### Communications

- RS-232 between controller and 4300
- Bluetooth or RS-232, user selectable

#### Dimensions

##### Sampler

- Weight 5.7 lbs 2.6 kg
- Length 12.5 in 31.8 cm
- Width 4.3 in 10.9 cm
- Height 6.8 in 17.3 cm

##### Chassis

- Weight 20 lbs 9.1 kg
- Depth 12 in 30 cm
- Width 10 in 25 cm
- Height 6 in 15 cm

#### Environmental Conditions

- Operating Temperature Range: 32° F to 105° F (0° C to 40° C)
- Relative Humidity: 0 – 95% non-condensing

#### Power

- 100 – 260 VAC at 250 watts MAX (50 watts typical)

#### Detector

- Surface Acoustic Wave (SAW) Quartz microbalance
- Dynamic Range:  $2 \times 10^4$
- Temperature: 0° C to 125° C, programmable

#### Column Limits

- 35° C to 200° C – depending on column

#### Column Heater Range

- Isothermal operation: 40° C to 180° C or 5° C above ambient (whichever is higher)
- Column Ramping: Isothermal or ramped from 1-18° C/second

#### Column Ramping

- Ramped from 0 – 18° C/second

#### Carrier Gas

- Helium (Min. 99.999% Purity, #6) Typical usage is 300 tests per day on one helium charge

#### Inlet

- Connection: Stainless Steel LUER inlet port
- Temperature: 50° c to 200° C

#### System Controller Software

- Intel Pentium 100 MHz or better processor
- Minimum: 16MB RAM 1GB Hard Drive
- Microsoft Windows (any version)