

Multiplelabs
Turnkey Laboratories Solutions

GC-9310

Portable Gas Chromatograph



►► Interview

- The GC-9310 portable gas chromatograph adopts a highly integrated and integrated design. The built-in air source of the instrument does not require an external air source and a computer, and the outer box uses an imported storm box. The anti-drop height is more than 1.2 meters, and the modular structure design makes the maintenance in the later stage simple and convenient. Ensure that customers can quickly and sensitively detect accurately anytime, anywhere.
- The instrument adopts a new industrial design, and applies the current mainstream network communication technology to the portable gas chromatograph to develop a new chromatograph with international advanced technology. The instrument uses the latest high-integration industrial-grade chip, bus technology, Ethernet technology, micro-flow gas control technology and data processing software to optimize temperature control accuracy and gas control accuracy, which fundamentally improves the reliability of the instrument.

►► System performance

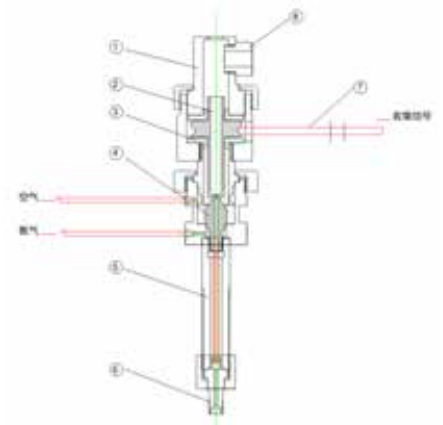
» Can be configured with a variety of detectors

- Wide-range helium ionization detector (PDHID)
- Discharge mode: pulse discharge
- Baseline noise: $\leq 0.1\text{mv}$
- Baseline drift: $\leq 0.5\text{mv}/30\text{min}$
- Detection limit: $\leq 1.0 \times 10^{-11}\text{g/mL}$
- linear range: 106
- Specially processed magnifying plate, stable during the wet season
- Digital amplifier circuit with smaller signal-to-noise ratio and wider linear range²



» Hydrogen flame ionization detector (FID)

- Program automatic ignition (automatic ignition above 130 °C)
- automatic ignition;
- Stabilization time: ten minutes
- Detection limit: $\leq 3 \times 10^{-12}\text{g / s}$ (n-hexadecane / isooctane)
- Baseline noise: $\leq 5 \times 10^{-14}\text{A}$
- Baseline drift: $\geq 1 \times 10^{-13}\text{A}/30\text{min}$
- Linear: $\geq 10^7$

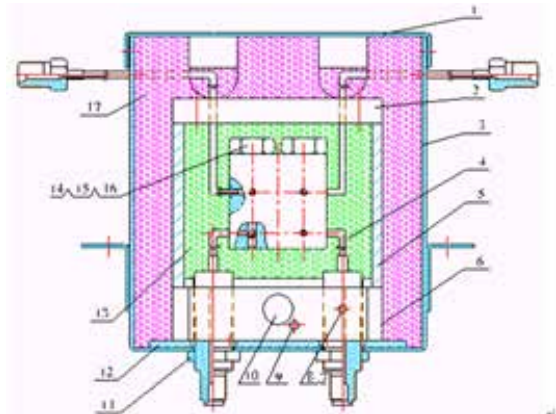


» **thermal conductivity detector (TCD)**

- Sensitivity: $S \geq 6000 \text{mV} \cdot \text{ml/mg}$ (n-hexadecane)
- Baseline noise: $\leq 20 \mu\text{V}$
- Baseline drift: $\leq 30 \mu\text{V}/30 \text{min}$
- linear range: $\geq 10^4$

»» **Injection switching valve**

- Fully meet the needs and applications of different gas analysis (up to 8 valves can be configured)
- Valve drive automatic control and sequence automatic operation
- Imported purge-free spool
- Long life fast switching solenoid valve (1 million times, 10mS)
- Low leakage rate $10^{-7} \text{Pa} \cdot \text{m}^3 \cdot \text{s}^{-1}$
- Dead volume $0.5 \mu\text{L}$
- Purge valve integrated design
- Patented spool cross-section purge technology
- Prevent external leakage and internal leakage



»» **Technical performance**

- Maximum error: $< 3\%$
- Stabilization time: $< 30 \text{min}$
- Working environment: $-40 \sim 50 \text{ }^\circ\text{C}$
- Detection channel: 2
- On-site continuous detection capability: Mobile detection under power-on state, continuous operation for no less than 10 hours

»» **Temperature control indicators**

- Temperature control area: 8 roads
- Temperature control range: $4 \text{ }^\circ\text{C} \sim 450 \text{ }^\circ\text{C}$ above room temperature, increment: $1 \text{ }^\circ\text{C}$, accuracy: $\pm 0.01 \text{ }^\circ\text{C}$
- Temperature programmed order: 20 steps
- Cheng Sheng rate: $0.1 \sim 60 \text{ }^\circ\text{C} / \text{min}$
- Program boost: 8th order

▶▶ **Other parameters: size, weight, power**

- Dimensions: 625 × 500 × 297mm
- Weight: <15kg
- Power source: 220V±22V, 50Hz
- Power: ≤500W

Technical characteristics

- ▶▶ **Fast and sensitive and accurate detection anytime, anywhere** : The instrument is highly integrated and integrated. The built-in air source of the instrument does not require an external air source and a computer. The outer box uses an imported storm box. The anti-drop height is more than 1.2 meters, and the modular structure design makes the maintenance in the later stage simple and convenient. Ensure that customers can quickly and sensitively detect accurately anytime, anywhere.
- ▶▶ **The Oven** : Each column has a separate oven temperature control system. Due to the compact structure of the oven, the temperature rise is very fast and the oven temperature is very stable. Because each column has an independent temperature control system, when one column needs to age, it does not affect other columns.
- ▶▶ **Control System** : Built-in industrial computer with touch screen function, combined with powerful spectrum software and Windows PC system, users can use screen creation methods, design custom reports, view calibration curves, acquire and process data, create and run Batch inspection. At the same time, it can also control the opening and closing of the valve inside the chromatograph, and realize the functions of backflushing and center cutting.
- ▶▶ The new IC temperature control system, high temperature control accuracy, reliability and anti-interference performance; with eight independent temperature control output, can achieve 20th-order program temperature, near-room temperature control ability, up / down speed Faster.
- ▶▶ Automatic gas shutoff protection function, when the carrier gas pressure is less than the safety threshold, the system will automatically cut off the detector voltage, protect the detector from damage, and ensure the safe operation of the instrument.