

Varian CP-4900 GC

Simple, reliable, and cost-effective gas analysis wherever you need it!



- Separations in seconds
- Analysis anywhere
- Easily exchangeable GC channels

When the composition of gas mixtures is critical, Varian's CP-4900 Micro-GC delivers the information you need time after time. Our 4th generation micro-GC generates more data in less time for faster and better business decisions.

The Speed You Need

Precise gas analysis in seconds rather than minutes brings improved product quality and more exact product valuation to industries such as oil and gas exploration, refining, natural gas production and distribution, fuel cell development, and specialty gas production.

On the Road with the CP-4900

The CP-4900 is a rugged, compact analyzer for lab-quality gas analysis at any site.

With advanced micro-machining and computing technologies, the CP-4900 offers one to four plug-and-play GC channels. Each channel is a separate GC with pneumatics, injector, column, and detector.

User exchangeable GC channels provide quick and easy reconfiguration or repair.

Increase Monitoring Frequency

Micro-electronic gas control with time-programmable backflush lets you inject samples while eliminating contaminants. Fast analysis and frequent process monitoring with the CP-4900 ensures high quality end products.

Immediate Start-Up

On arrival, the CP-4900 provides the results and ruggedness you demand in the lab and in the field for the analysis of gas and vapor streams.

Start-up is immediate with electronic data sheets (EDS) which store operational history and the last used method for each GC channel. The CP-4900 can be controlled from virtually anywhere in the world through a PC and the internet using industry standard protocols.



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CP-4900 GC Specifications

Configuration: one to four plug-and-play GC channels

Control: independent control for each channel with its separate pneumatics, injector, column, and detector

Injector

- Micro-machined injector with no moving parts
- Injection volume: 1 μ L to 10 μ L, software selectable
- Optional heated injector: 30 °C to 110 °C, including heated transfer line

Column Oven

- Temperature range: 30 °C to 180 °C, isothermal
- Optional backflush capability

Detector

- Micro-machined Thermal Conductivity Detector (TCD)
- Dual-channel (sample and reference)
- Internal volume: 200 nL per channel
- Filaments: 4

Detection Limits

- WCOT columns: 1 ppm
- Micro-packed columns: 10 ppm

Operating Range

- Concentration: 1 ppm to 100% level
- Linear dynamic range: 10^6

Repeatability: < 0.5% RSD for propane at 1 mol % level for WCOT columns at constant temperature and pressure

Carrier Gas

- He, H₂, N₂ or Ar: 550 \pm 10 kPa (80 \pm 1.5 psig) input
- Inlet connection: 3.2 mm (1/8 in.) stainless steel compression fitting (Swagelok®)

Sampling

- Sample inlet: 1.6 mm (1/16 in.) stainless steel Valco® fitting with replaceable 5 μ m stainless steel filter
- Sample conditions: non-condensing gas of 0 °C to 40 °C
- Maximum sample input pressure: 200 kPa (29 psig)
- Optional separate sample inlet in front or back

Environmental Requirements

- Humidity (relative): 0% to 95% non-condensing
- Temperature: 0 °C to 50 °C

Dimensions and Weight

- Two-channel system: 28 cm (h) x 15 cm (w) x 30 cm (d)
- Four-channel system: 28 cm (h) x 15 cm (w) x 55 cm (d)
- Weight: minimum of 5.2 kg

Power Requirements

- Main power: 90-130 Vac or 180-260 Vac, 50-60 Hz
- Output: 12 Vdc, maximum 180W

Communication

- Analog input: 6 signals
- External port: RS-232
- Optional: Ethernet TCP/IP with static IP address
- Optional: Com Port for external devices, selectable RS-232 or RS-485

Control/Data Handling Software

- Standard packages: Star® Chromatography Workstation or CP Maître-Elite
- Regulatory compliance and reports: meet requirements, particularly for the natural gas and petrochemical industries
- Special packages: ISOCAL and BTU for natural gas properties, such as calorific value and relative density, meet ISO 6976, GPA 2171, and ASTM D 3588 standards

Optional Field Case

- Gas containers: one or two 300 mL gas containers with maximum pressure of 12,000 kPa (1740 psig)
- Rechargeable battery packs: two
- Two-channel system: 37 cm (h) x 29 cm (w) x 41 cm (d)
- Four-channel system: 37 cm (h) x 29 cm (w) x 72 cm (d)
- Weight with CP-4900: minimum of 16 kg

Optional Micro-Gasifier

- Heated pressure reducing regulator
- Injection of high pressure LPG or LNG samples



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