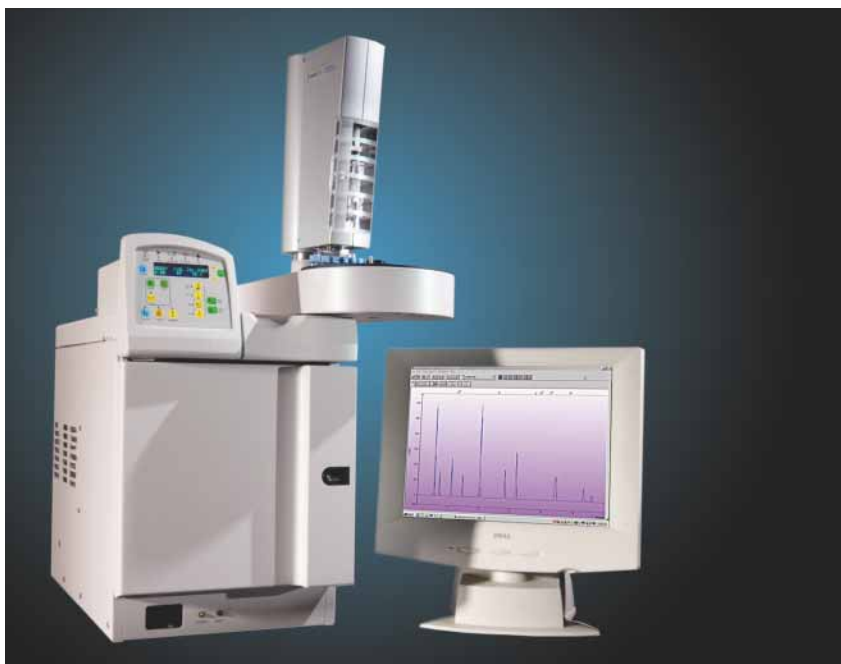


Varian 3900 GC

An easy-to-use,
high-throughput GC



- Small footprint saves precious benchspace
- Intuitive, icon-based keypad
- Simplified routine operation

The Varian 3900 GC is an easy-to-use, high-throughput GC designed to meet the requirements of the routine analytical laboratory.

Save Benchspace

The 3900 is a single-channel GC with less than half the footprint of a conventional dual-channel GC. Two 3900s running the same or different applications, simultaneously will double your laboratory's sample throughput. Increase your productivity without sacrificing precious benchspace!

Efficient Column Oven

The new compact oven, with its precise temperature control, uses standard 7 in./17.5 cm diameter capillary columns. A maximum operating temperature of 450 °C accommodates any application. Plus, the oven cools down from 450 °C to 50 °C in only 5.2 minutes!

Ultimate Simplicity

Our new icon-based keypad provides quick and easy access to all method parameters. Select one of six pre-programmed languages for

further ease-of-use. Password protection locks keypad from unauthorized access.

Automation Options

Automate the Varian 3900 GC with your choice of autosamplers. The Varian CP-8410 AutoInjector provides reproducible results from operator to operator and shift to shift. The CP-8400 AutoSampler is a fully automated system handling up to 100 samples. Add an autoinjector or an autosampler as your laboratory's requirements grow.

Available Configurations

The configurations below include all the required options to get your laboratory up and running quickly.

- CP-1177 Split/Splitless Injector and Flame Ionization Detector (FID)
- CP-1177 Split/Splitless Injector, Silcosteel coated, and FID
- 1041 Packed/0.53 mm Injector and FID
- 1041 Packed/0.53 mm Injector and Thermal Conductivity Detector (TCD)



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3900 GC Specifications

Dimensions and Weight

- Size: 21.8 in./55 cm (h) x 12.5 in./32 cm (w) x 22 in./56 cm (d)
- Weight: 59 lbs/26.8 kg

Environmental Requirements

- Humidity (relative): 5% to 95% (without condensation)
- Temperature: 10 °C to 35 °C

Power Requirements

- 120 Vac $\pm 10\%$, 60 Hz $\pm 2\%$, 11 Amps, 1.3 kilowatt
- 230 Vac $\pm 15\%$, 50 Hz $\pm 2\%$, 6 Amps, 1.3 kilowatt
- 101 Vac $\pm 10\%$, 50 or 60 Hz $\pm 2\%$, 14 Amps, 1.4 kilowatt

Column Oven

- Size: 9 in./23 cm (w) x 4.5 in./11 cm (d) x 9 in./28 cm (h)
- Temperature range: ambient +10 °C to 450 °C; with liquid CO₂ option, -60 °C to 450 °C
- Temperature-programmed ramps: 7 ramps with 8 isothermal holds
- Maximum temperature ramp rate: 100 °C/min
- Cool-down rate: 450 °C to 50 °C in 5.2 min
- Temperature setpoint increment: 1 °C

CP-1177 Split/Splitless Injector

- Maximum temperature: 450 °C
- Electronic Flow Control (EFC Type 21)
 - Pressure range: 0 to 100 psi
 - Total flow: 500 mL/min at 10 psi
 - Split range: 1 to 10,000 (column dependent)

- Accuracy: $\pm 0.1\%$ psi, 7% nominal flow
- Increment: 0.1 psi or 0.1 mL/min
- Pressure pulse injection
- Gas Saver mode

1041 Packed/0.53 mm On-Column Injector

- Maximum temperature: 450 °C
- EFC Type 24
 - Pressure range: 0 to 100 psi, 0.1 psi increments
 - Total flow: 0 to 1500 mL/min depends on set pressure, 1 mL/min increments
 - Accuracy: $\pm 0.1\%$ psi, 7% nominal flow

FID

- Maximum temperature: 450 °C
- Detectivity: 2 pg C/sec
- Linear dynamic range: 10⁷
- Flame-out detection and auto re-ignition
- Auto-scaling electrometer
- Data acquisition rate: up to 80 Hz
- Detector EFC
 - Detector flows: air, 0 to 500 mL/min; hydrogen, 0 to 50 mL/min; make-up 0 to 50 mL/min
 - Flow accuracy: $\pm 7\%$ setpoint flow
 - Flow increment: 1 mL/min

TCD

- Maximum temperature: 450 °C
- Detectivity: 300 pg/mL (butane)
- Linear dynamic range: 10⁶ (butane)
- Filament protection: standard

- Automatic bridge balancing: standard
- Data acquisition rate: up to 80 Hz
- Detector EFC
 - Two channels: makeup gas and reference gas, non-hydrogen
 - Flow rate: 0 to 50 mL/min, 1 mL/min increments
 - Flow accuracy: $\pm 7\%$ setpoint flow

Communication

- Analog output: 0 to 1V or 0 to 10V, standard
- Digital output and PC workstation control: TCP/IP with industry-standard Ethernet 10Base-T (optional)

Other Specifications

- Powered external events (24V): 2
- VFD display: 2 lines, 20 characters per line
- International language display: 6
- Maximum stored methods with battery protection: 5
- Preprogrammed check-out method
- Internal autosampler control: standard
- Flash ROM memory

Options

- The Varian CP-8400 AutoSampler delivers high-throughput automation for up to 100 samples.
- The Varian CP-8410 AutoInjector accommodates 2, 5, and 10 mL sample vials.



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