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TECHNOLOGY GROUP

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CP-3800 Gas Chromatograph

Your Competitive Edge in Gas Chromatography



- Simple and easy to operate
- Flexible custom configurations
- Stand-alone, PC, and client/server control

VARIAN

CP-3800 GC Specifications

Dimensions and Weights

- Size: 53 cm (h) x 66 cm (w) x 56 cm (d)
- Weight: 43 kg

Environmental Conditions

- Operating temperatures: 10 °C to 40 °C
- Operating humidity (relative): 5% to 95%
- Line voltage requirements: 101V, 120V, 230V (±10% nominal)

Column Oven

- Dimensions: 28 cm (w) x 20 cm (d) x 28 cm (h)
- Temperature range: ambient +4 °C to 450 °C
  - With liquid N_2: -99 °C to 450 °C
  - With liquid CO_2: -65 °C to 450 °C
- Temperature program ramps/holds: 7/8
- Maximum temperature ramp rate: 100 °C /min for all voltages
- Cool down rate: 400 °C to 50 °C in 4.5 minutes
- Temperature set-point resolution: 1 °C

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Eliminate injection start variability. *Varian's AutoStart switch is automatically activated by the syringe to guarantee that every run starts immediately when the sample is injected.*

Injector Options

- Maximum injectors: three operating concurrently
- Pneumatics: manual or electronic flow control (EFC)
- Columns: capillary columns standard with optional packed column adapter
- Injectors
  - CP-1177 Split/Splitless
  - 1079 Programmable Temperature Vaporizing (PTV)
  - 1061 Flash Megabore/Packed
  - 1041 On-Column Megabore/Packed

CP-1177 Split/Splitless

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

1079 Programmable Temperature Vaporizing (PTV)

- Pressure range: 0-100 psi
- Total flow: 500 mL/min at 10 psi
- Temperature range
  - -99 °C to 450 °C liquid N_2
  - -65 °C to 450 °C liquid CO_2
- Maximum temperature ramp rate: 180 °C/min
- Temperature ramps: 4
- Split range: 1-10,000 (column dependent)
- Operational modes
  - Temperature ramped splitless
  - Cold on-column
  - Large Volume Injection
  - Split and splitless
  - ChromatoProbe solid sample introduction: optional

1061 Flash Megabore/Packed

- Pressure range: 0-100 psi
- Total Flow: 50 mL/min (Type 3 EFC)
  500 mL/min (Type 4 EFC)
- Maximum temperature: 450 °C

1041 On-Column Megabore/Packed

- Pressure range: 0-100 psi
- Total Flow: 50 mL/min (Type 3 EFC)
  500 mL/min (Type 4 EFC)
- Maximum temperature: 450 °C

Quick-Switch Valve Option

- Instantly switch between injectors/columns and detectors
- Configurations: automated or manual, factory or field installed

Detector Options

- Maximum detectors: three operating concurrently
- Pneumatics: manual or electronic flow control (EFC)
- Columns: capillary columns standard with optional packed column adapter
- Detectors
  - Flame Ionization Detector (FID)
  - Thermal Conductivity Detector (TCD)
  - Electron Capture Detector (ECD)
  - Thermionic Specific Detector (TSD or NPD)
  - Pulsed Flame Photometric Detector (PFPD)

FID

- Maximum temperature: 450 °C
- Detectivity: 2 pg C/sec
- Linear dynamic range: 10^7
- Patented ceramic flame tip: standard
- Flame-out detection/auto re-ignition: standard

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TCD

- Maximum temperature: 450 °C
- Detectivity: 300 pg/sec (C_4)
- Linear dynamic range: 10^6
- Filament protection: standard
- Automatic bridge balancing: standard

ECD

- Maximum temperature: 450 °C
- Detectivity: 7 fg/sec Lindane
- Linear dynamic range: 10^4

TSD

- Maximum temperature: 450 °C
- Detectivity:
  - N: 100 fg N/sec (Azobenzene)
  - P: 100 fg P/sec (Malathion)
- Maximum temperature: 450 °C
- Linear dynamic range:
  - N: 10^5
  - P: 10^4
- Self-aligning bead: standard

PFPD

- Maximum temperature: 450 °C
- Detectivity: using S/P Photomultiplier Tube
  - S: 1 pg S/sec
  - P: 100 fg P/sec
  - N: 20 pg N/sec
- Linear dynamic range:
  - S: 10^3
  - P: 10^4
  - N: 10^2

Electronic Flow Control: Injectors

- Module types: 4 injector-specific modules
- Accuracy: ± 0.1 psi, 5% full scale flow
- Resolution: 0.1 psi or 0.1 mL/min

Electronic Flow Control: Detectors

- Module types: 6 detector-specific modules
- Accuracy: ± 7% set point flow
- Resolution: 1 mL/min

Communications

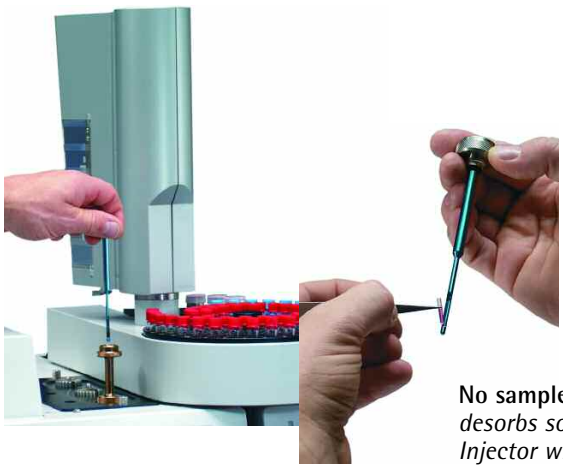
- Three channel analog output time programmable (0-1V or 0-10V): standard
- Three channel digital output and control with TCP/IP Ethernet and LAN connectivity: optional
- Synchronization signals: for 'ready' and 'start' with other devices and data systems

Data Handling

- Star Integrator: optional
- Star Workstation (PC) control: optional
- Galaxie Workstation (PC) control: optional
- Galaxie Chromatography Data System (CDS) client/server control: optional

Other Specifications

- Powered external events: 7
- LCD display: 11 lines, 35 characters/line
- Maximum stored methods with battery protection: 8
- Internal autosampler control: standard
- On-line help: standard
- Complete local control: standard



No sample preparation. *With ChromatoProbe, directly desorbs solids, liquids, and slurries in the 1079 PTV Injector without additional hardware.*

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Automation Options

CP-8410 AutoInjector

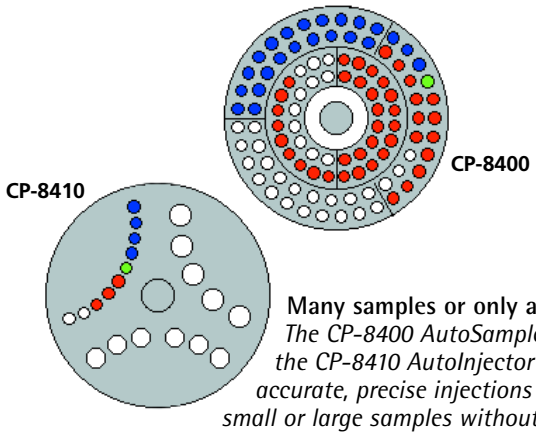
- Sample capacity: 10 x 2 mL, 6 x 5 mL, and 5 x 10 mL vials
- Dual and duplicate mode: standard
- Internal standard addition: standard
- Modes of operation: liquid, standard; ambient headspace, optional; and SPME (Solid Phase Microextraction), optional
- Pre-programmed modes of injection: standard

CP-8400 AutoSampler

- Sample capacity: 100 x 2 mL vials
- Dual and duplicate mode: standard
- Internal standard addition: standard
- Modes of operation: liquid, standard; ambient headspace, optional; and SPME, optional
- Sample heating and cooling: optional
- Pre-programmed modes of injection: standard

Combi PAL AutoSampler

- Sample trays: two standard and expandable to four
- Tray types: 98 x 2 mL vials; 200 x 1 mL vials; 32 x 10 mL/20 mL vials; and 96-well plates
- Dual and duplicate mode: standard
- Internal standard addtion: standard
- Modes of operation: liquid, standard; heated headspace, optional; and SPME, optional
- Sample heating and cooling: standard
- Optional modules: additional sample trays, micro-well plate holders, wash station, SPME fiber bake-out station, dilutor, barcode readers, and flowcell



Many samples or only a few. *The CP-8400 AutoSampler and the CP-8410 AutoInjector deliver accurate, precise injections of small or large samples without sample carryover.*



Uses standard capillary columns. *Spacious column oven easily accommodates three capillary columns.*

VARIAN

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