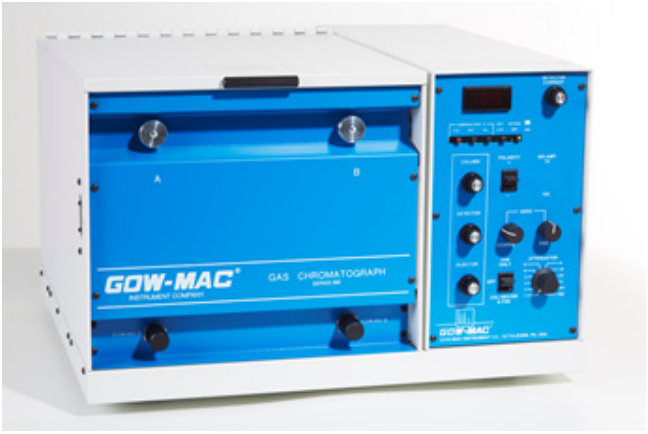
GOW-MAC®
INSTRUMENT CO.

Series 580 Isothermal Gas Chromatograph



The GOW-MAC Series 580 Isothermal Gas Chromatograph sets the standard for reliable performance in a wide range of applications. So impressive has the performance of this GC been, that many 580 users refer to it as "The Workhorse" instrument of their laboratory.

Flow System

- Single or Dual Injection Ports or Gas Sample Valves
- Valve Configurations:
  - Backflush
  - Foreflush
  - Heart-cut via column switching
  - Series/Bypass
- Pneumatic valves (optional)
- Heated valve housing for high temperature gas analysis applications (optional)
- Large capacity oven
- Independent temperature controllers for oven, detector and injection ports
- Stainless steel wetted surfaces standard
- Corrosion resistant Silcosteel®, nickel alloy systems available

Column Oven

- Temperature Range: ambient to 400 °C
- Digital display temperature readout: 3-1/2 digit LED digital meter
- Independent temperature controllers with direct reading, ambient to 400 °C
- Column Oven Temp. Protection Circuit: shuts the column oven off if the temp. rises to 30 °C over setpoint
- Oven Fittings: accommodates 1/8" or 1/4" o.d. metal, 6 mm glass, or capillary columns
- Oven Capacity: accommodates up to 30' of 1/8" columns

Injection Ports

- Septum: standard 9 mm
- Proportioning temperature control with direct digital setting
- Digital display temperature readout: 0 - 400 °C, 3½ digit LED digital meter
- Injection Method: direct on-column or gas sample valve
- Single or Dual column with single or dual injection ports and exits (detector specific)
- Single or dual metering valves for separate control of each column (detector specific)
- Heated, threaded exit ports allow for collection of effluent, optional (TCD)
- Filament protector pressure switch in carrier inlet line (TCD)

Detectors (one detector only; not interchangeable)

- Single Detector Oven
  - Detector Temperature Control
  - Accurate and reproducible detector conditions
  - Proportioning temperature control with direct digital setting
  - Digital display temperature readout, 3-1/2 digit LED meter
  - Filament protector pressure switch (TCD)
  - Signal amplifier, x10 (optional)
  - Output: 4-20 mA

- Detector Types

Thermal Conductivity Detectors

- Types:
  - ~ standard, 350 µL internal volume
  - ~ capillary, 20 µL internal volume
  - ~ preparative, 350 µL internal volume with threaded, heated exit ports
  - ~ nano-katharometer, 140 µL internal volume
  - ~ gas density, 780 µL internal volume
  - ~ thermistor, 115 µL internal volume
  - ~ wide bore capillary, 140 µL internal volume

Filament Availability

- ~ rhenium-tungsten (WX)
- ~ rhenium-tungsten (WX7) high sensitivity
- ~ gold-sheathed tungsten (AuW)
- ~ nickel (Ni)
- ~ 9k thermistors

- ~ Design: flow-through
- ~ Stainless steel, standard
- ~ Corrosion resistant materials available
- ~ Carrier Gas: helium, nitrogen, or argon
- ~ TCD Bridge Control & Power Supply
  - ~ Continuous current adjust, 0 - 300 mA
  - ~ Bridge zero adjust
  - ~ Attenuator for bridge output: 12 positions to 1024 plus infinity (∞)
  - ~ Polarity switch
  - ~ Line operated, solid state, integrated circuit regulated, constant current

Flame Ionization Detector (FID)

- Electric Potential: 160 V
- Sensitivity: 1 x 10^{-12} g/sec
- Max. Operating Temp: 300 °C
- Material: Stainless steel/Ceramic Insulation
- Tip: Stainless steel/Ceramic Insulated jet
- Collector: Cylinder of heavy gauge stainless steel
- Ignitor: Glow plug
- Connectors: Coaxial connector type BNC

FID Electrometer Amplifier

- Circuit: solid state FET operational amplifier powered by voltage regulated hybrid regulator circuit
- Sensitivity: 1.5 x 10^{-12} A, full scale
- Linear range: 1 x 10^{6}
- Input Ranges: 10^{-9}, 10^{-10}, 10^{-11}, 10^{-12} A/mV
- Output Ranges: binary, 1 to 1024 plus infinity (∞)

Discharge Ionization Detector (DID)

- Temperature Range: ambient to 120 °C

DID Power Supply

- Output: Continuous, stable adjustment, from 0 to rated voltage and current by means of an external zero
- Linearity: ± 1% fill scale
- Accuracy: 1% of rates, + 1% of setting
- Output Voltage: 0 - 1.5 kV
- Output Current: 0 - 10 mA
- Stability: 0.01%/hour after ½ hour warm-up

DID Electrometer Amplifier

- Circuit: solid state FET operational amplifier powered by voltage regulated hybrid regulator circuit
- Sensitivity: 1.5 x 10^{-12} A, full scale 1 mV recorder
- Dynamic range: 1 x 10^{5}
- Input Ranges: 10^{-9}, 10^{-10}
- Output Ranges: binary, 1 to 1024 plus infinity (∞)

Flame Photometric Detector (FPD)

- Detector Type: flame photometric
- Optical Filter: 394 nm central wavelength (sulfur)
- Carrier Gas: N_2 or Helium
- Temperature Range: ambient to 200 °C
- Sensitivity: < 5 ppb COS

Communications

Using Clarity® chromotography software and interfacing with a PC with MS Windows® XP™ Pro (SP3), Windows® Vista™ Ultimate, or Windows® 7™, a chromatographer can create methods, design custom reports, view calibration curves, acquire and process data, and create and run batch sequences from a single window. The Series 580 GC also interfaces with strip chart recorders or computing integrators.

Electrical Requirements

Series 580	105-125 Vac, 60 Hz, 1100 W
Series 582	200-240 Vac, 50 Hz, 1100 W
Circuit Breaker:	Series 580: 10 amps
	Series 582: 5 amps

Standard Dimensions

12.50"H x 19.50" W x 18.00" D (31.75 x 49.53 x 45.72 cm)

Weight

Net: 70 lbs. (31.75 kg) Shipping: 80 lbs. (37.50 kg)

Note: Specifications are subject to change without notice. Specifications will vary depending upon the application.

Ordering Information:

Contact your local GOW-MAC sales representative to discuss your application.

GOW-MAC® INSTRUMENT CO.
Analytical instruments since 1935

ISO 9001:2008 FM 581002

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SB-580 0921

Printed in the U.S.A.