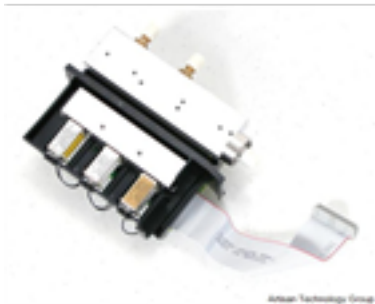


HP G1544-60540

Split/Splitless EPC Pneumatic Module w/ 150PSI Inlet Manifold



Limited Availability
New From Surplus Stock

Open Web Page

<https://www.artisanng.com/54576-7>

All trademarks, brandnames, and brands appearing herein are the property of their respective owners.



Your **definitive** source
for quality pre-owned
equipment.

Artisan Technology Group

(217) 352-9330 | sales@artisanng.com | artisanng.com

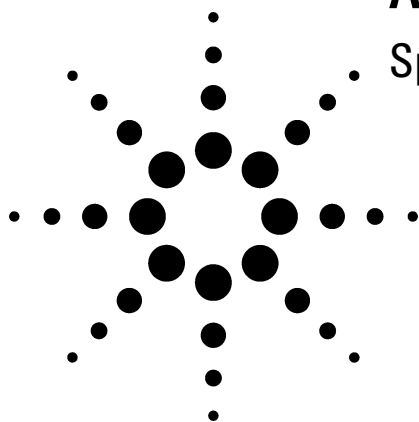
- Critical and expedited services
- In stock / Ready-to-ship

- We buy your excess, underutilized, and idle equipment
- Full-service, independent repair center

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

Agilent 6890N Network Gas Chromatograph

Specifications



Dimensions and Average Weight

- Height: 50 cm (19.7 in.)
- Width: 58 cm (22.8 in.) with EPC inlet and detectors; 68 cm (26.8 in.) with manual inlets or detectors or with optional gauges
- Depth: 54 cm (21.6 in.)
- Average weight: 49 kg (108 lb)

Environmental Conditions

- Ambient operating temperature: 15 °C to 35 °C
- Ambient operating humidity: 5 to 95 percent
- Storage extremes: -40 °C to 65 °C
- Line voltage requirements: $\pm 5\%$ of nominal

Safety and Regulatory Certifications

- Conforms to the following safety standards:
 - Canadian Standards Association (CSA): C22.2 No. 1010

- CSA/Nationally Recognized Test Laboratory (NRTL): UL 3101

- International Electrotechnical Commission (IEC): 61010-1

- EuroNorm (EN): 61010-1

- Conforms to the following regulations on Electromagnetic Compatibility (EMC) and Radio Frequency Interference (RFI):

- CISPR 11/EN 55011: Group 1 Class A

- IEC/EN 61326

- Designed and manufactured under a quality system registered to ISO 9001
- Declaration of Conformity available

Column Oven

- Dimensions: 28 × 31 × 16 cm
- Operating temperature: 4 °C above ambient to 450 °C
 - With LN₂ cryo: -80 °C to 450 °C
 - With CO₂ cryo: -55 °C to 450 °C
- Temperature setpoint resolution: 1 °C
- Maximum temperature ramp rate: 120 °C/min (see Table 1)
- Maximum run time: 999.99 min
- Temperature programming ramps/plateaus: 6/7
- Ambient rejection: <0.01 °C per 1 °C

Table 1. Typical 6890 GC Oven Ramp Rates

Temperature Range (°C)	120 Volt Oven Rates (°C/min)	Fast Ramp Rates* (°C/min)	
		Dual-Channel	Single-Channel**
50 to 70	75	120	120
70 to 115	45	95	120
115 to 175	40	65	110
175 to 300	30	45	80
300 to 450	20	35	65

* Fast ramp rates require power >200 volts at >15 Amps.

** Requires G2646A oven insert accessory.



Agilent Technologies

- Column bleed compensation standard for two channels
- Typical oven cool-down is shown in Figure 1.

Heated Zones

- Independent heated zones, not including oven: six (two inlets, two detectors, and two auxiliary)
- Maximum operating temperatures for auxiliary zones: 400 °C

Inlets

- Maximum inlets installed: two
- Inlets available:
 - Packed purged injection port (PPIP)
 - Split/splitless capillary inlet (S/SL)
 - Temperature-programmable cool on-column (PCOC)
 - Programmable temperature vaporizer (PTV)
 - Volatiles inlet (VI)
- Accessory for solvent vapor exit (SVE) with PCOC

PPIP

- Electronic or manual pressure/flow control
- 400 °C maximum operating temperature
- Pressure setting range: 0-100 psi
- Total flow setting range: 0 to 100 mL/min
- Adapters included for 1/4-inch and 1/8-inch packed columns, and 0.530 mm capillary columns

S/SL

- Electronic or manual pressure/flow control
- 400 °C maximum operating temperature
- Pressure setting range: 0-100 psi (0-150 psi optional)

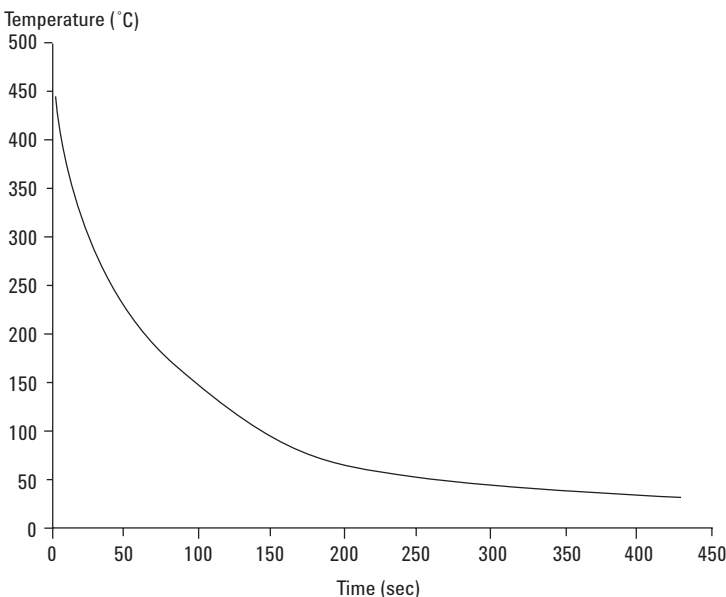


Figure 1. Typical oven cool-down rate, 6890N GC.

- Total flow setting range: 0 to 200 mL/min N₂ or 0 to 1,000 mL/min H₂ or He

- Available with Gerstel septumless head or Merlin MicroSeal septum head

PCOC

- Electronic pressure/flow control
- 450 °C maximum operating temperature
- Three temperature program rates or oven track mode
- Pressure setting range: 0-100 psi
- Total flow setting range: 0 to 100 mL/min

VI

- Electronic pressure/flow control
- 400 °C maximum operating temperature
- Pressure setting range: 0-100 psi
- Total flow setting range: 0 to 100 mL/min
- He or H₂ carrier gas
- Very low volume for pre-volatilized sample connection to capillary columns
- SilcoSteel® coating for high surface inertness

PTV

- Electronic pressure/flow control
- 450 °C maximum operating temperature
- Three temperature program ramps
- Temperature ramp rates 0.1 to 720 °C/min
- Pressure setting range: 0-100 psi
- Total flow setting range: 0 to 200 mL/min N₂ or 0 to 1,000 mL/min H₂ or He
- Cryogenic cooling fluid: LN₂ (down to -160 °C) or LCO₂ (down to -65 °C)

SVE

- Attaches to PCOC to permit large-volume injections
- Electronically controlled, inert, three-way valve allows solvent venting
- Includes software for method optimization
- Pre-assembled retention gaps/vent line/analytical column for easy installation

- Retention gap = 5 m, 530 μ m
- Precolumn = 2 m, 250 μ m
- Analytical column = HP-5 MS, 30 m, 250 μ m

Detectors

All detectors include electronic pneumatics control and electronic on/off for all detector gases.

Detectors available:

- Flame ionization detector (FID)
- Thermal conductivity detector (TCD)
- Micro-electron capture detector (micro-ECD)
- Nitrogen-phosphorus detector (NPD)
- Single- or dual-wavelength flame photometric detectors (FPD)
- Atomic emission detector (AED)
- Mass selective detector (MSD)

FID

- Electronic pressure/flow control
- Available for packed/capillary columns or optimized for capillary columns
- 450 °C maximum operating temperature
- Flame-out detection
- MDL: <5 pg carbon/sec as propane using N₂ carrier and 0.29-mm id jet
- Linear dynamic range: <±10%, 10⁷ with N₂ carrier and 0.29-mm id jet
- Data acquisition rate: up to 200 Hz

TCD

- Electronic pressure/flow control
- 400 °C maximum operating temperature
- MDL: <400 pg propane/mL He carrier (MDL may be affected by laboratory environment.)

- Linear dynamic range: 10⁵ (±5%)

Micro-ECD

- Electronic pressure/flow control
- Equipped with hidden anode and high velocity flows for contamination resistance
- 400 °C maximum operating temperature
- Makeup gas types: argon/5% methane or nitrogen
- Radioactive source: <15 mCi ⁶³Ni
- MDL: <0.008 pg/sec lindane
- Dynamic range: >5 × 10⁵ with lindane
- Linear dynamic range: >5 × 10⁴ with lindane
- Data acquisition rate: up to 50 Hz

NPD

- Electronic pressure/flow control
- Available for packed/capillary columns or optimized for capillary columns
- 400 °C maximum operating temperature
- MDL: <0.4 pg N/sec, <0.2 pg P/sec with azobenzene/malathion mixture
- Selectivity: 25,000 to 1 gN/gC, 75,000 to 1 gP/gC with azobenzene/malathion mixture
- Dynamic range: >10⁵ N, >10⁵ P with azobenzene/malathion mixture
- Data acquisition rate: up to 200 Hz

FPD

- Electronic pressure/flow control
- Available in single- or dual-wavelength versions
- 250 °C maximum operating temperature

- MDL: <20 pg S/sec, <0.9 pg P/sec with dodecanethiol/tributyl-phosphate mixture
- Selectivity: 10⁵ gS/gC, 10⁶ gP/gC
- Dynamic range: >10³ S, 10⁴ P with dodecanethiol/tributyl-phosphate mixture

MSD

See MSD Specifications, "Agilent 5973 Mass Selective Detector," Publication (23) 5965-1366E.

Electronic Pneumatics Control (EPC)

- Up to 13 EPC channels for inlets, detectors, or auxiliary gases
- Pressure may be adjusted by increments of 0.01 psi
- Atmospheric pressure sensor to compensate for altitude and ambient temperature variation
- Pressure/flow programming ramps: up to three
- Detectors provided with EPC on all gas flows (carrier, makeup, and support gases)
- Inlets are available with EPC on all gas flows (carrier and split vent gases)
- Carrier and makeup gas settings selectable for He, H₂, N₂, and argon/methane
- Flow or pressure setpoints on each inlet or detector parameter screen
- EPC settings included in Agilent 6890 and Agilent ChemStation
- Automated carrier has constant flow, or linear velocity, when capillary column dimensions are entered into the 6890
- Split/splitless and PTV inlet; flow sensor for control and storage of split ratio

Inlet Modules

- Pressure sensors:
 - Accuracy: $\pm 2\%$ full scale
 - Repeatability: ± 0.05 psi
 - Temperature coefficient : ± 0.01 psi/ $^{\circ}\text{C}$
 - Drift: ± 0.1 psi/6 months
- Flow sensors:
 - Accuracy: $< \pm 5\%$ depending on carrier gas
 - Repeatability: $\pm 0.35\%$ of setpoint
 - Temperature coefficient : ± 0.20 mL/min normalized temperature and pressure (NTP)* per $^{\circ}\text{C}$ for He or H_2 ; ± 0.05 mL/min NTP per $^{\circ}\text{C}$ for N_2 or Ar/ CH_4

* NTP = 25°C and 1 atmosphere

Detector Modules

- Flow setpoint range (mL/min NTP):

- FID/NPD makeup	0 to 100
- FID air	0 to 800
- FID hydrogen	0 to 100
- NPD air	0 to 200
- NPD hydrogen	0 to 30
- TCD makeup	0 to 12
- TCD reference	0 to 100
- Micro-ECD makeup	0 to 150
- FPD makeup	0 to 130
- FPD air	0 to 250
- FPD hydrogen	0 to 300

- Accuracy: ± 3 mL/min NTP or 7% of setpoint
- Repeatability: $\pm 0.35\%$ of setpoint
- Temperature coefficient: ± 0.20 mL/min NTP per $^{\circ}\text{C}$

ALS Interface Module

- 7683 ALS Interface standard. Provides power and communications for up to two 7683 automatic injectors, one automatic sampler tray, and one barcode reader.

Data Communications

- LAN
- RS-232-C (57,600 baud maximum is settable from keyboard)
- Two analog output channels (1-mV, 1-V, and 10-V output available) as standard
- Remote start/stop

Other Specifications

- Clock time programming
- Run deviation log (notes any changes to setpoints or expected values during a run, saved with run file in ChemStations)
- Control of eight external events (valves, on/off, or low-level contact)
 - Four internal 24-volt connections (up to 150 mA)
 - Two external 24-volt connections (up to 75 mA)
 - Two on/off contact closures (48 V, 250 mA max)

- Keyboard control of the Agilent automatic liquid sampler (ALS)
- Storage of nine methods
- Storage of five ALS sequences
- Binary-coded decimal input for a stream selection valve
- Context-sensitive online help

Maintenance and Support Services

- Service method sets temperature and flows for routine maintenance (such as septum or liner changes)
- Online service manual and parts diagrams
- Remote diagnostics
- Performance verification services
- Early Maintenance Feedback (EMF) for syringe, septa, inlet liner, and column maintenance

For More Information

For more information on our products and services, visit our Web site at www.agilent.com/chem.

Agilent shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this material.

Information, descriptions, and specifications in this publication are subject to change without notice.

SilcoSteel® is a registered trademark of Restek Corporation

© Agilent Technologies, Inc. 2002

Printed in the USA
January 15, 2002
5988-5329EN



Agilent Technologies

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at [artisanTG.com](https://www.artisanTG.com) for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisanTG.com | [artisanTG.com](https://www.artisanTG.com)

