Agilent 3000 Micro GC
1, 2, 3 and 4-Channel Systems
Data Sheet

Dimensions/Weight

1, 2-Channel (G2801A, G2803A)

Maximum weight	8.2 kg	18.0 lbs
Height	15 cm	5.9 in
Width	25 cm	9.8 in
Depth	41 cm	16.1 in

3, 4-Channel (G2802A, G2804A)

Maximum weight	12.2 kg	27.0 lbs
Height	15.5 cm	6.1 in
Width	47.2 cm	18.5 in
Depth	42.0 cm	16.5 in

Portable (G2805A)

Maximum weight	16.6 kg	36.5 lbs
Height	15.5 cm	6.1 in
Width	36.4 cm	14.3 in
Depth	41.3 cm	16.3 in

Environmental Conditions

- Operating temperature range: 0 °C to 50 °C
- Relative humidity: 5 to 95% noncondensing
- Altitude to 15,000 ft (4,572 m)
- Usage: indoor or enclosed

Sampling

- Compatible with mixtures that are in a gaseous phase at standard temperature and pressure (STP); typically for compounds with boiling points <250 °C
- Compatible with highly pressurized (liquefied) gases, such as liquefied petroleum gas (LPG), with heated vaporizer accessory
- Maximum sample pressure <30 psig; recommended sample pressure 5–10 psig

Sample Injectors

- Micro-electromechanical devices fabricated from silicon and other inert materials
- Injector types: fixed volume, variable volume/timed, or backflush to vent, heated
- Injection volume: 1 to 10 µL for variable volume/timed (depends on sample composition and gas compressibility), 1 µL for fixed volume injector and backflush injector
- Internal sample vacuum pump
- 1/16-in. 316 stainless steel bulkhead deactivated sample introduction port with 5-micron filter

Detector

- Micro-electromechanical device fabricated from silicon and other inert materials
- 240 nanoliter internal volume
- Thermal conductivity detector (TCD) using Wheatstone Bridge design

Minimum Detection Level

This will vary by compound, sample matrix injector type, carrier gas, and interferences. Typically <10–20 ppm for many compounds. Does not include reactive compounds (for example, sulfur containing).

Linear Dynamic Range

10^6 ±10%

Repeatability

Typically RSDs at constant temperature and pressure (for C_1–C_6 components at % level):

Injector type	Repeatability
Variable volume	≤1% RSD
Backflush, timed mode	≤1% RSD
Fixed volume	≤0.2% RSD
Backflush, fixed mode	≤0.5% RSD

Column Heater Range

Isothermal operation: ambient plus 15 °C to 180 °C

Carrier Gas

External Source

- Compatible with helium, hydrogen, nitrogen, and argon with 1/8-in. Swagelok fittings
- Input pressure: minimum = 80 ±2 psig

Portable

One rechargeable on-board gas cylinder:

- 300 mL up to 1800 psi
- Approximately 30 hours usage
- Rechargeable with helium, nitrogen, and argon

Power

1, 2-Channel System

- Power supply input: 100–240 Vac, 50–60 Hz, 200 VA
- Power supply output: 19 Vdc at 3.68 Amps, 70 Watts

3, 4-Channel System

- Power supply input: 100–240 Vac, 50–60 Hz, 250 VA
- Power supply output: 24 Vdc at 5.4 Amps, 130 Watts

Portable

- Power supply input: 100–240 Vac, 47–63 Hz, 3.2 Amps
- Power supply output: 15 Vdc at 8.6 Amps, 130 Watts
- Two rechargeable batteries and charger built in
- Power cable adapter for automobile

External Input/Output

- LAN
- Power supply input connector
- Remote start

Sample Interface

Heated Vaporizer (Inlet)

- Sample stream pressure reduction, temperature control, removal of entrained liquid and particles
- Recommended for use with LPG type sample streams
- Quick connect fittings
- 2-micron particle filter

Operating conditions

- Flow operating temperature: 100 °C ±10 °C
- Sample input pressure: 1380–5500 kPa (200–800 psig) (liquified sample)
- Delivery pressure to Micro GC: 52 ±17 kPa (7.5 ±2.5 psig)

Environmental conditions

- Operating temperature range: 0 to 50 °C
- Relative humidity: 5 to 95% (non-condensing)
- Altitude to 15,000 ft (4,572 m)
- Usage: indoor or enclosed

Physical specifications

- Power supply input: 115–230 Vac, 50–60 Hz, 1.2–0.6 Amps
- Power supply output: 15 Vdc at 6.6 Amps, 100 Watts
- Height: 15.0 cm
- Width: 12.5 cm
- Depth: 9.0 cm
- Weight: 1.4 kg

Heated Regulator (Inlet)

- Sample stream pressure reduction, temperature control, removal of entrained liquid and particles
- Handles sample gas streams with C_5+ components ≥0.5 mole %
- Quick connect fittings
- 7-micron sintered stainless steel particle filter

Operating conditions

- Flow operating temperature: 60 °C to 120 °C
- Sample input pressure: 14–5500 kPa (2–800 psig)
- Delivery pressure to Micro GC: 0 to 52 ±17 kPa (0 to 7.5 ±2.5 psig)

Environmental conditions

- Operating temperature range: 0 to 50 °C
- Relative humidity: 5 to 95% (non-condensing)
- Altitude to 15,000 ft (4,572 m)
- Usage: indoor or enclosed

Physical specifications

- Power supply input: 115–230 Vac, 50–60 Hz, 1.2–0.6 Amps.
- Power supply output: 15 Vdc at 6.6 Amps, 100 Watts.
- Height: 15.0 cm
- Width: 12.5 cm
- Depth: 9.0 cm
- Weight: 1.65 kg

Pressure Reducer

- High pressure manual flow controller (30–240 cc/min air)
- Handles sample gas streams with C_5+ <0.5 mole %
- Sample input pressure <1000 psig
- Sample inlet connection: 1/8-in. Swagelok fitting
- Overflow vent: 1/8-in. Swagelok fitting
- Particulate filter: 10-microns

Gas-Liquid Separator and Pressure Reducer

- Low pressure manual flow controller
- 5-micron particle filter and moisture trap
- Sample input pressure <500 psig
- Sample inlet connection: 1/8-in. Swagelok fitting

Safety and Regulatory

Conforms to the following safety standards:

- International Electrotechnical Commission (IEC)
- 1010-1 EuroNorm (EN)
- 61010-1 (CE Mark)

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

- CISPR 11/EN 55011 Group 1 Class A and EN-50082-1

Declaration of Conformity available

Control Software and Software Reporting

- Cerity NDS for 3000 Micro GC

Application Reports

- BTU Calorific Report – BTU/calorific calculation and reporting for natural gas analysis in accordance with GPA 2172-96, ASTM D 3588-98, and ISO 6976-1996 standards (Reference documents: GPA 2261-99, GPA 2145-00, ISO 10723, ISO 6974)
- Refinery Gas Report – Four-channel integrated report with calorific calculation

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