Agilent 3000 Natural Gas Analyzer
Specifications

Dimensions / Weight

The 2-channel Agilent 3000 Natural Gas Analyzer (NGA) weighs 5.1 kg (11.2 lbs) and measures 15 cm high × 25 cm wide × 41 cm deep (5.9 × 9.8 × 16.1 in.).

Environmental Conditions

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

Sampling

- Compatible with mixtures that are in a gaseous phase at STP; typically for compounds with boiling points <220 °C
- Maximum sample pressure <30 psig; recommended sample pressure 5–10 psig

Sample Injectors

- Micro-electromechanical devices fabricated from silicon and other inert materials
- Injector type: fixed volume, heated
- Injection volume: 1.6 µL
- Internal sample vacuum pump
- 1/16-in. 316 stainless steel bulkhead deactivated sample introduction port with 5-micron filter

Sample Columns

- Channel A: OV-1 (8 m × 0.15 mm × 2.0 micron)
- Channel B: PLOT U (8 m × 0.32 mm)

Detector

- Micro-electromechanical device fabricated from silicon and other inert materials
- 240 nanoliter internal volume
- Thermal conductivity (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 ≤0.2% RSD at constant temperature and pressure (for C_1–C_6 components at % level)

Column Heater Range

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

Carrier Gas

- Helium with 1/8-in. Swagelok fitting
- Input pressure: minimum = 80 ±2 psig

Power

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

External Input / Output

- LAN
- Power supply input connector
- Remote start

Sample Interface

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: 0–52 ±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

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
- 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.)

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