

PGC5000C Smart Oven™

PGC5000 Series gas chromatographs

Complex applications



PGC5000C Oven:

- Innovative and flexible solutions for complex requirements and specifications
- Targets complex applications requiring multiple detectors
- Multiplex stream analyses
- Maximum application densification
- Optimized for maximum analytical capability with minimal hardware
- All hardware component access points are from the front of the analyzer
- Flexible platform for product expansion and future enhancements
- Multiple oven capability
- EPC standard
- Distributed analyzer architecture
 - Oven isolation for maintenance and upgrades
 - Different oven sizes for application designs
 - Analyzer densification for reduction in shelter size
- Industry standard CANopen protocol
- Unlimited application configurations
- Local diagnostic capability
- Controlled and phased analyzer upgrades
- Factory engineered reapplications
- Simple application expansion

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Application

Usage

having special applications requirements. Smart Oven™ technology can be single or multiple ovens allowing application design flexibility, producing simpler analyses which are easier to maintain with higher reliability. PGC5000C Smart Oven™ is 28% larger than the PGC5000B Smart Oven™ to accommodate more complex applications.

Description

PGC5000C Smart Oven™ technology supports applications that require dual detectors with up to six analytical valves. Advanced pressure, temperature and stream control software executes analytical methods required for analyses. A single PGC5000A Controller can support up to two PGC5000C Smart Ovens™ increasing applications flexibility and offering maximum application density.

Physical

C-class oven:

Environmental (enclosure):	Protected from weather: IP 54, (NEMA 3 equivalent)
Ambient temperature range:	0 to +50° C (32 to 122° F)
Humidity:	95% relative humidity, non-condensing
Dimensions:	596.9 mm W x 419.1 mm D x 914.4 mm H (23.5 in. W x 16.5 in. D x 36.0 in. H)
Weight:	75.0 kg (150 lb) (minimum, configuration dependent)
Mounting:	Wall: 33 mm (1.3 in.) from wall with brackets Floor: Optional dolly with casters
EMI/RFI considerations:	Conform to class A industrial environment
Electrical entries:	Left side
Pneumatic entries:	Right side
Sample entries: Gas & Liquid:	Right side
Vents:	Right side

Safety area classification

CSA / NRTL:	Class I, Division 1; gas groups B, C, D with type Y-purge Class I, Division 2; gas groups B, C, D temperature code T4 – T2
ATEX / IEC / CN / KO:	Zone 1: CE 0344; II2G, Ex de py IIB+H2 T4 – T2 Zone 2: CE; II3G Ex de nA nL IIB+H2 T4 – T2 Ex de px IIB+H2 T4 – T2 (optional) With X-purge power interlock
Purge wait time:	18 minutes (Class I, Division 1 / Zone 1 area)

Power **(hot, neutral, ground)**

Voltage:	100 – 240 VAC
Frequency:	50-60 Hz
Power consumption:	1,600 Watts startup, 900 Watts steady-state operation Typical, varies with installed options.

Instrument air

Supply connection: 3/8 inch tube, minimum
Supply pressure: 551.6 kPa (80 psig)
Quality: Instrument grade: Clean, oil free and -34° C, (-30° F) dewpoint
Flow rates: Steady state purge: 127-147 L/min (4.5-5.2 ft³/min) at 20° C, Y-purge types

Analytical detectors

Standard detectors: Single and multiport thermal conductivity, flame ionization, flame photometric
Third party detectors: Consult factory for availability

Isothermal analytical oven (B-class)

Oven liner: Stainless Steel
Internal dimensions: 327.5 mm W x 607.0 mm H x 287.02 mm D
(12.9 in. W x 23.9 in. H x 11.3 in. D)
Number of valves: Standard provisions for 6 gas sample or column switching valves in the oven.
Standard provisions for 2 external liquid sample valves.
Consult factory for special requirements
Columns: 1/16, 1/8, 3/16 inch, packed Stainless, metal or fused Silica capillary
Heat: Forced air
Temperature control method: Closed loop PID
Oven temperature: Ambient + 30° to 180° C (settings and display in ° C only)
Setpoint resolution: 1° C
Temperature stability:
 Steady ambient: ± 0.1° C
 Ambient range: ± 1.0° C

Gas control (electronic)

Electronic
Control method: Closed loop PID, temperature stabilized
Number of zones: 1 to 10
Filtration: 2µm at inlet, provided
Inlet pressure:
 Minimum: Setpoint + 69 kPa (10 psig)
 Maximum: 1034 kPa (150 psig)
Range: 0-100 psig, bubble tight, non-venting
Electronic pressure zones: Electronic readout: 0.001psig resolution,
Setpoint resolution: 0.001psig
Accuracy: 0-100 psig: 2%
Repeatability: ± 0.05 psig
Allowable gasses: H₂, He, N₂, Air, Ar
No liquids, corrosives, combustibles, O₂
Quality: GC grade
Flow adjustment: Oven mounted valves or pressure controllers with local or remote adjustment
Tube fittings: 316 SS Gyrolok (standard)
316 SS Swagelok (optional)
1/16, 1/8, 1/4 inch connections

Specifications subject to change without notice.

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Sales



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