

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

PGC5000C Smart Oven™

PGC5000 Series gas chromatographs

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.

Contact us

ABB Inc.

Analytical Measurements

843 N. Jefferson Street
Lewisburg
WV 24901
USA

Tel.: 1 304 647 4358
Fax: 1 304 645 4236
analyzeit@us.abb.com

ABB Limited

Process Automation

Oldends Lane
Stonehouse
Gloucestershire GL10 3TA
UK

Tel.: +44 1453 826 661
Fax: +44 1453 829 671
instrumentation@gb.abb.com

ABB (China) Limited

Universal Plaza
10 Jiuxianqiao Lu
Chaoyang District
Beijing 100016
P.R. China

Tel.: +86 10 8456 6688
Fax: +86 10 8456 7613
china.instrumentation@cn.abb.com

www.abb.com

Note

We reserve the right to make technical changes or modify the contents of this document without prior notice. With regard to purchase orders, the agreed particulars shall prevail. ABB does not accept any responsibility whatsoever for potential errors or possible lack of information in this document.

We reserve all rights in this document and in the subject matter and illustrations contained therein. Any reproduction, disclosure to third parties or utilization of its contents - in whole or in parts - is forbidden without prior written consent of ABB.

Copyright© 2015 ABB
All rights reserved

9AKK104295D7797



Sales



Service