Data sheet DS/PGC5000C-EN Rev. A

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 then 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:	Zone 1: CE 0344; II2G, Ex de py IIB+H2 T4 – T2 Zone 2: CE; II3G Ex de nA nL IIB+H2 T4 – T2
CN / KO:	Ex de px IIB+H2 T4 – T2 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:	1,200 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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