

● 430-GC

Specification Sheet

Dimensions and Weights

- Size: 55 cm (h) x 32 cm (w) x 56 cm (d)
- Weight: 26.8 kg

Environmental Conditions

- Operating temperatures: 10 °C to 35 °C
- Operating humidity (relative): 5 % to 95 %
- Line voltage requirements: 120 V, 230 V (±10 % nominal)

Column Oven

- Dimensions: 23 cm (w) x 11 cm (d) x 28 cm (h)
- Temperature range: ambient +10 °C / -60 °C* to 450 °C
- Temperature program ramps/holds: 7/8
- Maximum temperature ramp rate: 100 °C /min for all voltages
- Cool down rate: 450 °C to 50 °C in 5.2 minutes
- Temperature set-point resolution: 1 °C

Injector Options

- Maximum injectors: one, gas sampling valve, optional
- Pneumatics: Electronic Flow Control (EFC)
- Columns: Capillary columns, packed column (optional)
- Injector types:
 - 1177 Split/Splitless injector (S/SL)
 - 1061 Flash injector
 - 1041 Packed/Wide bore On-Column injector (PWOC)

1177 Split/Splitless (S/SL) Injector

- Pressure range: 0-100 psi
- Total flow: 500 mL/min at 10 psi
- Maximum temperature: 450 °C
- Split range: 1-10,000 (column dependent)
- Suited for columns:
 - Wide bore (0.53 mm)
 - Narrow bore (0.05 to 0.32 mm)

1061 Flash Injector

- Pressure range: 0-100 psi
- Total flow:
 - 50 mL/min (Type 23 EFC)
- Maximum temperature: 450 °C
- Suited for columns:
 - Wide bore (0.53 mm)
 - Packed (1/8 " to 1/4 ")

*with optional CO₂ cooling



1041 Packed/Wide-Bore On-Column (PWOC) Injector

- Pressure range: 0-100 psi
- Total flow:
 - 50 mL/min (Type 23 EFC)
- Maximum temperature: 450 °C
- Suited for columns:
 - Wide bore (0.53 mm)
 - Packed (1/8 " to 1/4 ")

Detector Options

- Maximum detectors: one
- Pneumatics: Electronic Flow Control (DEFC)
- Columns: Capillary columns, packed column (optional)
- Detectors types:
 - Flame Ionization Detector (FID)
 - Thermal Conductivity Detector (TCD)
 - Pulsed Discharge Helium Ionization (PDHID)
 - Mass Spectrometer (MS) (see GC/MS brochure and datasheet).

Flame Ionization Detector (FID)

- Maximum temperature: 450 °C
- Detectivity: 2 pg C/sec
- Linear dynamic range: 10⁷
- Flame tip type: ceramic (patented)
- Operational quality:
 - Flame-out detection
 - Auto re-ignition

Thermal Conductivity Detector (TCD)

- Maximum temperature: 450 °C
- Detectivity: 300 pg/mL (Butane)
- Linear dynamic range: 10⁶
- Operational quality:
 - Filament protection
 - Automatic bridge balancing

Pulsed Discharge Helium Ionization Detector (PDHID)

- Detectivity: 50 ppb (Methane)
- Linear dynamic range: 10⁴ (Methane)
- Operational quality:
 - Gold plated connections
 - Welded column connection

Electronic Flow Control: Detectors (DEFC)

- Module types: 2 detector-specific modules
- Accuracy: ± 7 % set point flow
- Resolution: 0.1 or 1 mL/min

Communication

- Ethernet: Protocol: TCP/IP
- Data rate: 10 Mbps
- Control: GC control and method parameters
- Analog output (optional):
 - Output:
 - 0-1 V (default)
 - 0-10 V
- Synchronization signals with other devices and data systems:
 - Ready in
 - Start out
- Data Handling and System control:
 - GC: Galaxie™ Chromatography Data System (CDS)
 - GC/MS: MS workstation (see the GC/MS brochure and datasheet for more information)



General Specifications

- GC control: external events (digital output) 2 standard
- Max number of timed events: 24
- Heated zones: 3 (including column oven).
- Local display and control display: VFD display: 2 lines, 20 characters per line
- Maximum stored methods: 5 (battery protected)
- System operational qualities:
 - High inertness: sample path UltiMetal™ treated, optional
 - Low level detection assurance: purged valves (optional)

Electronic Flow Control: Injectors (EFC)

- Module types: 3 injector-specific modules
- Accuracy: ± 0.1 psi, 5 % full scale flow
- Resolution: 0.1 psi or 0.1 mL/min

Certifications

- CSA: C22.2 61010-1
UL 61010-1
- IEC: 61010-1
- EMC: 47 CFR part 15
ANSI C63.4
EN 61326

All analytical specifications are applicable under optimal conditions.

Automation Options

CP-8410 Auto Injector

- Sample capacity: 10 x 2 mL, 6 x 5 mL, and 5 x 10 mL vials
- Large solvent wash vial: 2 x 120 mL (optional)
- Dual and duplicate mode
- Internal standard addition
- Modes of operation: liquid, ambient headspace (optional)
- Pre-programmed modes of injection

CP-8400 AutoSampler

- Sample capacity: 100 x 2 mL vials
- Large solvent wash vial: 2 x 120 mL (optional)
- Dual and duplicate mode
- Internal standard addition
- Modes of operation: liquid, ambient headspace (optional)
- Sample heating and cooling (optional)
- Pre-programmed modes of injection

CombiPAL AutoSampler

- Sample trays: two standard and expandable to four.
Tray types:
 - 96 x 2 mL vials, 200 x 1 mL vials.
 - 32 x 10 mL/20 mL vials and 96-well plates.
- Dual and duplicate mode.
- Internal standard addition.
- Modes of operation: liquid, heated headspace, optional, and SPME (optional).
- Sample heating and cooling.
- Optional modules: additional sample trays, micro-well plate holders, wash station, SPME fiber bake-out station, dilutor, barcode readers, and flowcell.

For research use only. Not for use in diagnostic procedure.
Bruker Daltonics is continually improving its products and reserves the right to change specifications without notice.
© Bruker Daltonics 06-2010, #CA-270115
www.bruker.com/chemicalanalysis

Bruker Daltonik GmbH
Bremen · Germany
Phone +49 (0)421-2205-0
Fax +49 (0)421-2205-103
sales@bdal.de

Bruker Daltonics Inc.
Billerica, MA · USA
Phone +1 (978) 663-3660
Fax +1 (978) 667-5993
ms-sales@bdal.com