CHROMATEC

Gas chromatography devices.

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GAS CHROMATOGRAPHS

Crystal 9000

Description

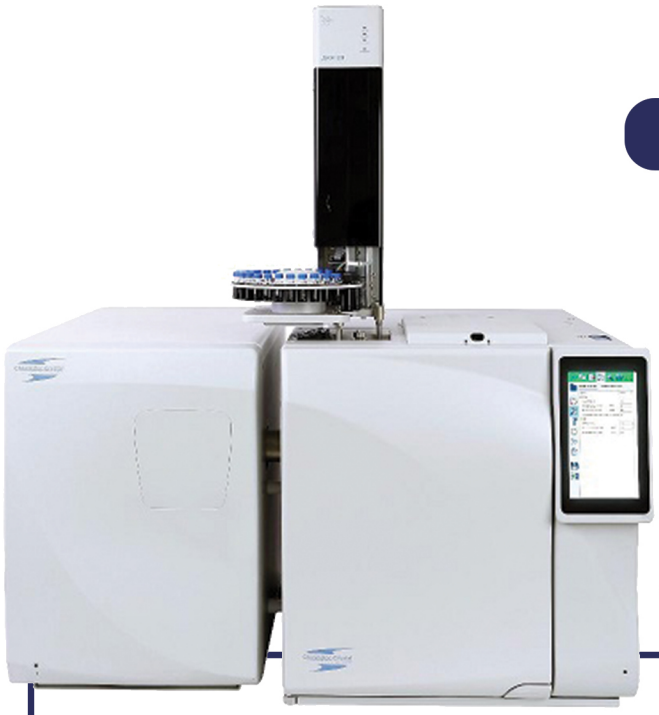
Crystal 9000 is a high-end gas chromatography system created to meet all challenges. The original design of the system's components offers a universal platform to reach maximum flexibility and efficiency.
Fully automated Crystal 9000 GC covers a wide range of applications with the easiest way to function.Crystal 9000 GC's additional tools and accessories could be provided to increase productivity and laboratory throughput.

ASTMs

- ASTM D7755
- ASTM D5441
- ASTM D7900
- ASTM D5134
- ASTM D6733
- ISO 6974, ISO 6976, ISO 7941
- UOP 960
- UOP 411
- UOP 603
- UOP 373
- UOP 539
- ASTM D5580
- ASTM D7096
- ASTM D5307
- ASTM D3612
- ASTM D7833
- ASTM D2163
- ASTM D2504
- ASTM D2505
- ASTM D3588
- ASTM D2598
- ASTM D7423
- ASTM D1945
- ASTM D1946
- ASTM D3606
- ASTM D3710
- ASTM D2887
- ASTM D6729
- ASTM D6730
- ASTM D6352
- ASTM D7169
- ASTM D7213
- ASTM 4815

Technical specifications

Gas flow and pressure control system	Unified Electronic Pneumatic System (UEPC)
Maximum flow	1250 mL/min for all gases
Oven temperature range	up to 450 °C with unlimited number or ramps
Pressure control and set point resolution	0.01 kPa / 0.001 psi
Number of inputs and detectors	3 inlets / 4 detectors
Types of detectors	FID, FPD, TCD, ECD, PID, CCD , PDD, MSD
Accessible inputs	Packed Split/splitless Programmable Split/splitless (PTV)
Retention time repeatability	0.008 min



GAS CHROMATOGRAPHS

Mass-spectrometers

Description

Chromatec Crystal GC-MS is an advanced instrument for analyzing chemical compounds, combining Gas Chromatography (GC) and Mass Spectrometry (MS). Renowned for its high precision, flexibility, and exceptional performance, it is the ideal choice for various applications in environmental labs, pharmaceutical industries, food analysis, petrochemicals, and forensic science.

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Technical specifications

Options	Chemical ionization Direct probe system (DPS)
Operation modes	Scan SIM Scan & SIM (simultaneous)
Scan speed	Up to 20,000 amu/sec
Leak test	Integrated
Detection system	High-sensitivity off-axis 10 kV dynode plus long-life electron multiplier
Ion source	Made of an inert material with minimal adsorption
Filaments	Double for EI and CI
Other features	Glass window for observing filament operation Dual reagent gas for CI

Clean air generators

Description

Intended for producing compressed air to feed flame detectors (FID, FPD, NPD).
Chromatec compressor has very strong points:
low noise level and stable output pressure.
For a purpose of additional purification compressor is equipped with two adsorption filters.

Technical specifications

Output pressure, kPa	170-200 kPa
Productivity, L/min	3 L/min
Noise level, dBA	less than 63
Output pressure maintenance accuracy, kPa	0.75 kPa / 0.0075 bar

HYDROGEN GENERATORS

Description

Intended for producing hydrogen from distilled water and allows to substitute hazardous in use hydrogen gas cylinders. Hydrogen obtained from Chromatec generators can be used to feed flame detectors (FID, FPD, NPD) as well as carrier gas (HP – high purity – models only).

Technical specifications

Hydrogen purity, %vol	99,995 99,9995 (HP models)
Productivity, L/h (depending on model)	Depending on model: 10 16 25
Output pressure, kPa	600

NITROGEN GENERATORS

Description

Chromatec Nitrogen generator for producing nitrogen from ambient air. The operation principle is based on method of Pressure Swing Absorption (PSA) optimized to produce high purity nitrogen for chromatography applications.

Technical specifications

Nitrogen purity	> 99.9995 %
Nitrogen output pressure	400 kPa / 4 bar
Productivity by nitrogen, L/hour (ml/min)	Depends on model: 20 (333) / 30 (500)
Oxygen concentration	< 3 ppm
Moisture concentration	< 7 ppm
Hydrogen concentration	< 2 ppm
Total hydrocarbon level	< 0.05 ppm

Catalytic filters

Filter 20.0 series

Description

Intended for gas cleaning from oxygen and organic impurities by heating in the presence of catalyst. Catalytic filter is commonly used for nitrogen cleaning from oxygen when working with ECD as well as with WAX or FFAP column types, and aslo for cleaning of compressed air from organic impuryties when feeding flame detectors, or when air is used as carrier gas. Oxygen absorption channel can be recovered with hydrogen flow.

Technical specifications

model	20.0-01	20.0-02	20.0-03
Air purification from organic impurities	✓	✗	✓
Purification of inert gases from oxygen	✗	✓	✓
Operating temperature of reactor, ˚C	400	400	400
Warm-up time, min	30	30	30
Maximum air flow, ml/min	700	✗	700
Max flow of inert gas, ml/min	✗	500	500
Operating room temperature C˚	10-35	10-35	10-35
Dimensions: (WxDxH); mm	327*168*219	327*168*219	327*168*219
weight kg	5	5	5

Liquid autosamplers

AS-2M single port

Liquid autosamplers

AS-2M (3D)

Description

Based on the robust design of the single-port model this sampler is expected to make your instrument more productive, flexible and versatile in its operating.

Technical specifications

model	AS-2M Single-Port	AS-2M 3D
type	Carousel	3D-robot
Capacity	22 vials (18 sample, 4 waste)	150 vials (1.5 ml)
Syringe	10 µl (standard)	10 µl (standard)
Washing	top washing from vial	top washing from vial

HEADSPACE AUTOSAMPLERS

3D AUTOSAMPLER

Description

Autosampler implements static headspace technique by syringe. Modular configuration allows to improve functionality of the sampler with liquid or SPME options, which can be supplied separately and easily installed in the autosampler.

Headspace syringes of Diamond HS series by SGE provide good performance in carryover, repeatability and operating temperature range.

Inlets remain free for manual injection or easy GC maintenance.

Vials tray is isolated from GC heating zones influence.

Technical specifications

Operation technique	syringe headspace sampling
Injection ports	up to 3
Sample oven capacity	4 vials
Sample tray capacity	30 vials
Syringe temperature	+40-150 °C
Oven temperature	+40-170 °C
Sample volume range	0,1-2,5 ml
Shaker	orbital

Manual headspace samplers

DRP-4 HEADSPACE

Description

Chromatec DRP4 Manual Headspace is an economical solution that enables you to use the headspace technique to measure volatile and semi-volatile compounds in your sample without additional preparation.

Technical specifications

Operating technique	Syringe headspace
Sample oven capacity	4 vials (20 ml, or 10 ml with an insert)
Sample oven temp	35-150°C
Timer	Embedded
Shaker	Orbital
Syringe type	Gastight Diamond HS™

Thermal desorbers

Description

Volatile and semi-volatile compounds determination in ambient / indoor / workplace / car air by thermal desorption

Technical specifications

Tube size	length 3½" (89 mm) x O.D. ¼" (6.4 mm)
Desorbtion temperature range	T (amb) +10 to 400˚C (0.1˚C resolution)
Cold trap temperature range	−20 to +400 ˚C
Trap heating rate	500; 1000; 1500 or 2000 ˚C/min
Transfer line temperature range	+40 to +350 ˚C
Pneumatics	independent from GC (3 UEPC channels integrated (Carrier gas, Split vent & blowing gas)
Control	Chromatec Analytic software or Integrated touchscreen
Automatic loader capacity	50 tubes