

GC2000 Gas Chromatograph

Introduction

1. A trustworthy partner

The new-generation GC2000 gas chromatograph is benchmarked against international leading brands, and the instrument adopts advanced electronic flow control, microfluidic plate control, high-precision independent temperature control and other technologies to meet the user's requirements for strong analytical capabilities and reliable stability.

2. A smart application expert near you

The new-generation GC2000 has intelligent functions such as self-diagnosis, self-leak detection, self-saving of carrier gas, automatic reminders, etc., which help you easily grasp the instrument status and solve problems quickly. It can be matched with various pretreatment equipment such as solid phase microextraction, headspace, liquid sampler, etc. to meet your needs for more application expansion.





World-class column oven



Excellent human-computer

interaction experience

Supporting multiple detector options (up to four at the same time)

User-friendly workstation software





Ultra-stable liquid injection port

- Fully electronic flow control is adopted with a selfdiagnostic function and no need for manual soap leak detection, reducing the risk of system contamination.
- Optional injection ports with permanent ultra-deactivated surface treatment are available, which makes it easy for users to deal with the detection of strong adsorption and corrosive samples.

Ultra-high-precision electronic pressure controller (EPC)

- The EPC core is made of the ruby material, and the excellent pressure control performance is consistent all day long.
- The pressure control accuracy of the EPC can reach 0.001 psi.

World-class column oven

- Supporting up to 32-stage/33-platform temperature programs, and adapted to the most complex analysis methods
- Rapid equilibration of column temperature for minimal waiting time between analyses

User-friendly workstation software

- The workstation software inherits the classic operation interface, and the users do not need to change their usage habits.
- The batch function can automatically perform statistical analysis on the sample data and draw sample trend charts .

Excellent human-computer interaction experience

- The Human-computer interaction APP is based on Android intelligent operating system, the interface is in Chinese, skeuomorphic graphic UI design is incorporated, and the monitoring content is clear at a glance.
- The 8- inch color screen display is ultra-large, the resolution is 1280*720 (RGB), and the capacitive screen provides full touch operation.

Supporting multiple detector options (up to four at the same time)

- Flame Ionization Detector (FID)
- Electron Capture Detector (ECD)
- Flame Photometric Detector (FPD)



- Thermal Conductivity Detector (TCD)
- Mass Selective Detector (MS)
- Triple Quadrupole Mass Spectrometer (MS/MS)

GC 2000 used with DW-EXPEC236 headspace autosampler





Specifications

Peak area repeatability	< 0.5%.			
Retention time repeatability	< 0.008%.			
2 injection ports, 4 detectors and 3 detector signa path are controlled by electronic flow path, supp	ls can be installed at the same time. All inlet, detector and auxiliary gas ort pressure and temperature compensation;			
*The instrument can be upgraded to gas chroma quadrupole mass spectrometer of the same brand	tography-single quadrupole mass spectrometer and gas chromatography-triple l as gas chromatograph.			
The detector uses electronic digital data output;				
≥6 electronic flow control modules can be installe	ed at the same time to provide ≥18 gas path control;			
There are 4 separate heating zones (excluding co	lumn oven).			
2. Environmental Conditions				
Ambient operating temperature range	5°C~35°C or wider;			
Ambient working humidity range	5%-95%RH or wider;			
Power supply requirements	220 V±10%, 50 Hz±10%;			
3. Column Oven				
Femperature control range	room temperature +4°C~450°C or wider;			
Femperature setting accuracy	≤0.1°C;			
Cemperature control accuracy	≤0.01°C			
*Program level	31 level /32 platform, can achieve program temperature and program cooling			
Maximum heating rate	≥120 °C/min;			
Cooling rate	from 450°C to 50°C (room temperature 20°C) ≤6 min;			
Гhe ambient temperature changes by 1°С, and th	ne average temperature of column temperature chamber changes by < 0.01°C.			
4. Electronic Pressure Flow Controller (EPC)				
*Ruby damper;				
Pressure control accuracy	≤± 0.001psi;			
The pressure unit can be psi, kpa, bar;				
Gas path control mode	constant pressure, constant current, program boost and program lift steps ≥4 steps, can calculate the column average linear velocity;			
Pressure control range	0~100 psi or wider;			
Flow monitoring range	Nitrogen 0~500 mL/min or wider, hydrogen or helium 0~1000 mL/min or wide			
5. Split/splitless Inlet				
Maximum operating temperature	≥450°C;			
Temperature setting accuracy	≤0.1°C;			
Maximum split ratio	≥ 1:12,500;			

The injection modes can be split, splitless, pulse split, pulse splitless, etc.

Applicable to all capillary columns (inner diameter 0.1mm ~ 0.53mm);

The injector spacer and split plate can be replaced by manual maintenance without tools.

6. Detector

Hydrogen Flame Ionization Detector (FID)				
Maximum operating temperature	≥450°C;			
Detection limit	<5×10 ⁻¹² g C/s;			
Linear range	≥10 ⁷ ;			
Signal acquisition frequency	≥200 Hz;			
With automatic ignition function and flameout protection function;				
Hydrogen leakage protection.				
Flame Photometric Detector (FPD)				



Maximum operating temperature	≥350°C;
Detection limit	<9×10 ⁻¹⁴ g/s (P), 5×10 ⁻¹² g/s (S);
Linear range	$\geq 10^4$ (P), $\geq 10^3$ (S);
Signal acquisition frequency	≥200 Hz;
With automatic ignition function and flameout j	protection function;
With automatic ignition function and flameout	protection function;
Hydrogen leakage protection function.	
Electron Capture Detector (ECD)	
Maximum operating temperature	≥350°C;
Detection limit	<3.8×10 ⁻¹⁴ g/ml;
Signal acquisition frequency	≥200 Hz.
Thermal Conductivity Detector (TCD)	
Maximum operating temperature	≥350°C;
Detection limit	< 8.7×10 ⁻⁶ g/ml;
Linear range	≥10 ⁴ ;
Signal acquisition frequency	≥200 Hz.
7. Assistant EPC Module	
Pressure control range	0~100 psi or wider;
Pressure control accuracy	≤± 0.001psi.
8. Host Display	
*≥8 inches high resolution full color full touch c	apacitive screen, built-in intelligent operating system;
The host control software is customized based o self-diagnosis and reminder, self-leak detection,	n Android system, graphical UI, and intelligent functions such as and carrier gas self-saving.
9. Workstation Software	
*Independent research and development softwa	re, according to user needs to develop special software;
Collection software and analysis software can b The workstation software occupies less than 1 G	e installed separately and work independently. SB of memory.
The analysis software has the functions of data s	screening, batch processing, automatic calculation of statistical data and

drawing trend chart;

Q'TY NO. PARTS NO. ITEM 1.1 P01605-0003 1 GC 2000 gas chromatograph host machine pc 1.2 P01605-0004 1 pc GC 2000 installation accessories kit 1.3 P01605-0005 1 GC 2000 installation tool kit pc 2 P01605-0108 1 Inert split/splitless inlet pc

Standard Configuration

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3	P01605-0203	Hydrogen Flame Ionization Detector (FID)	1	рс
4	P01605-0310	19-vial liquid automatic sampler	1	рс
5	P01605-0409	Hydrogen generator	1	рс
6	P01605-0410	Air Generator	1	рс
8	P03000-F100	Universal integrated trap hydrazine (nitrogen)	1	рс
9	P01605-0408	Network Switch	1	рс

