

## Gas Chromatograph

## GC5200

### Features:

- Excellent pneumatic control system, greatly improving the reproducibility of the instrument
- Simplified and intelligent design brings better convenience to users
- The ultimate temperature control system, more accurate and faster heating and cooling
- Proven product quality and reliable process guarantees make your instruments more durable, safer and more efficient
- Flexible scalability, providing complete overall solutions for users in different industries
- Intelligent and compliant chromatography workstation, more convenient to use and operate

### Application:

- Food safety
- Environment
- Pesticide
- Petroleum

### Description:

The GC5200 Series is the latest generation of gas chromatographs developed by Optosky. It can be fully controlled by software.

It uses AFC gas circuit control system, and the pressure control accuracy has reached 0.001psi, reaching the international first-class level. The core components proportional valve and sensor are imported original parts, which have better corrosion resistance and longer service life. After rigorous EMC testing, it has excellent anti-interference ability. The newly designed purifier can be controlled by gas circuit, which can realize the safety cut-off of hydrogen leakage and improve laboratory safety.

Multiple protection of oven heating to ensure safe use. Except for the column box, the rest of the heating area adopts DC heating, which is safer, more efficient and more stable.



## 1. Technical Specifications

Max capacity	2 inlets, 3 detectors (3 channel signal output)
Peak area RSD	≤1%
Retention time RSD	≤0.02%
AFC/EPC pressure accuracy	0.001 psi
Carrier gas control mode	Pressure, Flow programming pressure, Programming flow, Programming Pressure/Flow/Linear
Speed	Max 8 steps
Features	Maintenance tracking reminder, intelligent regular maintenance plan
	Full AFC/EPC, 6 AFC module with 18-channel AFC/EPC independent control
	Independent split cold-trap and spectrum collecting trap

### Detector specification

Detector	Max operating temp	Limit of detection	Baseline noise	Baseline drift (after 2 hrs stabilization)	Linear dynamic range
FID	450°C	≤3.00×10 <sup>-12</sup> g/s (N-C16)	≤2×10 <sup>-14</sup> A	5×10 <sup>-14</sup> A/30min	≥10 <sup>7</sup>
TCD	400°C	≥10000mV.ml/mg(N-C16)	≤30μV	≤100μV/30min	≥10 <sup>4</sup>
ECD	400°C	≤3×10 <sup>-14</sup> g/ml(v-666)	≤20μV	≤50μV/30min	≥10 <sup>4</sup>
FPD	400°C	S: ≤2.0×10 <sup>-11</sup> g/s P: ≤5.0×10 <sup>-13</sup> g/s or 2.0×10 <sup>-13</sup> g/s	S: ≤2×10 <sup>-13</sup> A P: ≤8×10 <sup>-13</sup> A	<3.0x10 <sup>-12</sup> A/30min	S: ≥10 <sup>2</sup> P: ≥10 <sup>3</sup>
NPD	400°C	N: ≤1×10 <sup>-12</sup> g/ (Azobenzene) P: ≤5×10 <sup>-12</sup> g/s(Malathion)	≤4×10 <sup>-13</sup> A	2×10 <sup>-12</sup> A/30min	N: ≥10 <sup>3</sup> P: ≥10 <sup>3</sup>

## 2. Multi-valve system

Multi-valve/multi-column available to customize per different application, max 4 external valve can be installed One-time injection for complete gas analysis. High stability and low valve switch over fluctuation.

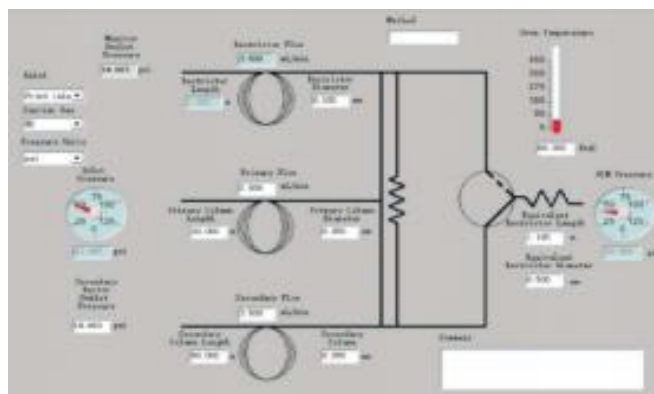


## 3. Microchannel Flow Control

Designed for complex matrix

Uses photochemical etching technique to reduce dead volume of flow paths;

'Visa card' flow- broad: Capable for faster thermal response and leak-free Deactivated Inner-surfaces for inert gas line. No leakages under repeated heating to 400C and cooling.



## 4. Patented gas purifier

Brand- new design for gas purifier to achieve H<sub>2</sub> over- pressure shutoff safely.

Strict EMC test to make excellent anti-interference capability



## 5. GC/ HPLC column and consumables



Capillary column



Packed column



HPLC column



Home-made 6-port valve



Oxygen/hydrocarbon trap



Workstation