



GC 6891N

Fully automated EPC gas chromatograph

INTRODUCTION

A new generation of fully automatic EPC gas chromatograph GC 6891N, based on the international advanced technology platform and decades of industry technology application experience developed, reliability, application flexibility and other aspects in the industry leading level.

PERFORMANCE CHARACTERISTICS

- 1. Injection port flow, chromatographic column gas flow, detector gas flow, a full set of EPC control.**
 - 1.1 Microchannel gas path integrated board
 - 1.2 Fully imported miniature proportional and flow/pressure sensors
 - 1.3 Automatic temperature compensation to ensure accurate flow; Accurate to 0.01Psi pressure control
- 2. Industry-leading detector design.**
 - 2.1 All detectors are highly accurate electronic flow/pressure control.
 - 2.2 Suitable for packed column and capillary column
 - 2.3 Special ceramic processing of the amplifier plate, in the wet season is always stable.
- 3. Automatic ignition, hydrogen leakage automatic protection, safe and reliable.**
- 4. Accurate furnace temperature tracking design.**
- 5. Independent heating column box, multi-column chromatography system, can be set separately for the use of different column temperature, so as to achieve the separation effect of each column.**
- 6. Fully imported valve configuration system.**
Equipped with up to 8 valves (four-way valve, six-way valve, ten-way valve and liquid injection valve optional) automatic control, sequential operation.



- 7. Precise temperature programmed control system.**
 - 7.1 The internal control accuracy of column temperature box is less than 0.01℃
 - 7.2 The temperature difference between the internal points is not more than 1℃
 - 7.3 Rapid heating and cooling, the highest programmed heating rate: 120℃ /min, balancing time of 10 seconds; Fast cooling rate
 - 7.4 The difference between absolute control temperature accuracy and actual temperature is less than 0.3℃
- 8. Convenient realization of gas path cutting technology.**
 - 8.1 Multi-dimensional chromatographic function can be realized to complete the separation of complex samples analysis
 - 8.2 Can realize the column blowback function, greatly save the analysis time and cycle
- 9. Advanced power distribution management shunt.**
A 3000 watt UPS can provide 10 GC with normal power of 2250 watts/unit for stable operation at the same time
- 10. Automatic sampler**
8 bit, 16 bit, 110 bit, 156 bit automatic sampler (optional Agilent 7683/7693 automatic sampler)
- 11. With automatic online detection function**

TECHNICAL PARAMETERS

Column temperature box	
Column temperature box size	280 x 300 x 180mm
Temperature control range	5℃ ~ 450℃ (higher than room temperature); using liquid nitrogen cold trap -80℃ ~ 400℃, using dry ice cold trap -55℃ ~ 400℃
Temperature setting accuracy	0.1℃
Maximum programmed temperature rate	120℃ /min
Maximum method run time	999.99 min
Program warming maximum order	7 steps
Programmed temperature rate	0.1 ~ 120℃ /min(increment 0.1℃)
Operational column loss compensation (double channel)	
Heating area	
6 independent control heating zone control (not including oven temperature control, 2 injection ports, 2 detectors, 2 auxiliary heating zones)	
Maximum service temperature of auxiliary heating area	300℃
Detector	
Hydrogen flame ionization detector (FID)	
Maximum service temperature	450℃
Minimum detection limit	≤2.5pg C/s [nC ₁₆]
Dynamic linear range	10 ⁷ (±10%)
Data acquisition frequency	Maximum 100 Hz
Thermal conductivity cell detector (TCD)	
Maximum service temperature	400℃
Minimum detection limit	<400pg C ₃ H ₈ /mL (He)
Dynamic linear range	10 ⁵ (±5%)
Data acquisition frequency	Maximum 100 Hz
Flame photometric detector (FPD)	
Maximum service temperature	250℃
Minimum detection limit	<4pgS/s, <1pgP/s
Dynamic linear range	>10 ³ S, >10 ⁴ P
Selectivity	10 ⁵ g S/g C, 10 ⁶ g P/g C
Electron capture detector (ECD)	
Maximum service temperature	400℃
Detector compensating gas type	5%CH ₄ /Ar (N ₂)
Minimum detection limit	<0.01Pg/s
Dynamic linear range	>5 x 10 ⁵
Data acquisition frequency	Maximum 100 Hz
Radioactive source	<12 mCi Ni63
Nitrogen and phosphorus detector (NPD)	
Maximum service temperature	450℃
Minimum detection limit	<0.2pgN/sec, <0.2pgP/s
Minimum detection limit	<3 pg C/s
Dynamic linear range	10 ⁵ N, 10 ⁵ P
The above detectors are suitable for packed and capillary columns	
Optional configuration	
Reverse software/G reverse P Special for pharmaceutical factory	Automatic sampler B6891N