



## Gas Chromatography FM-GC-A100

### Overview

Gas chromatography FM-GC-A100 controls temperatures precisely from RT + 5°C to 450°C. It features a high-precision gas flow control system (EPC) for accuracy. It includes self-protection for gas circuit failure and automatic ignition. Innovative sampler design prevents sample sticking to the surface. Various injection methods like headspace sampling, thermal desorption analysis, and liquid automatic sampling are enabled. It can start analyses automatically at set times. The unit offers a user-friendly interface with a color widescreen and unique touch keys. Its modular design allows easy upgrades and compatibility with detectors such as FID, TCD, ECD, FPD, and NPD.

### Specifications :

Oven Temperature Range	RT+5 to 450°C
Oven Temperature Accuracy	± 0.01
Oven Temperature Program	16-phase
Oven Maximum Heating Rate	40 /min
Oven Time Range	0 to 900.9 min
FID Temperature Range	450°C
FID Detection Limit	± 5 × 10 <sup>-12</sup> g/s (100 ng/μl n-hexadecane isooctane solution)
FID Baseline Drift	± 2 × 10 <sup>-12</sup> A / 30 min
FID Baseline Noise	± 3 × 10 <sup>-12</sup> A
FID Linear Range	10 <sup>1</sup> to 10 <sup>7</sup> w
Injection Method	Capillary column split/splitless sampling, Packed Column sampling, valve sampling, gas/liquid automatic sampling system, etc.
Injection Inlet	1 to 4, up to 3 capillary column inlets
Injection Type	Packed column injection, capillary column injection
Flow Control Range	0 to 1000 ml/min
Flow Control Accuracy	Pressure: 0.01 KPa, Flow: 0.01 ml/min
Flow Maximum Split Ratio	1:999
Force Detector Accuracy	< 2 % of full scale
Force Detector Repeatability	0.05 KPa
Force Detector Range	0 to 0.6 MPa
Flow Sensor Accuracy	< 5 % of full scale
Flow Sensor Repeatability	0.5 KPa
Sampling Valve Operation	Can sequentially operate multiple imported automatic control valves
Power Supply	AC 220 V – 10 %, 50/60 Hz
Packaging Dimensions (W × D × H)	750 × 710 × 720 mm
Weight	70 Kg

### Features :

Gas chromatography offers efficiency, stability, and user-friendly operation

16-phase temperature program at 40°C/min

Equipped with Brain Chrom workstation for data processing

Built-in Modbus/TCP server for easy connection to DCS

Injection types include packed column injection and capillary column injection

Flow setting range of 0 to 1000 ml/min

Sampling valve can be equipped with multiple imported automatic control valves

Supports 1 to 4 inlets, allowing up to 3 capillary column inlets for injection

### Applications :

Gas chromatography is employed across diverse sectors for applications such as environmental monitoring, petrochemical analysis, pharmaceutical research, food and beverage testing, forensic investigations, chemical research, clinical diagnostics, material analysis, quality control, and research and development

### Accessories :

FID Detector Chromatography workstation software Capillary Sampler

### Accessories Optional :

Accessories Name	Specification
Sample Injection System	
Thermal Conductivity meter (TCD)	Sensitivity : > 5000 mv/ml /mg ( 50 mg /ml toluene -benzene solution )
	Temperature : 400°C
	Baseline drift : ± 0.1 mV / 30 min
	Linear range : 10 <sup>1</sup> to 10 <sup>5</sup> ( ± 10 % )
Electron Capture Detector (ECD)	Detection limit : ± 1 × 10 <sup>-14</sup> g / ml ( Sample : n -hexadecane · 666 )
	Linear Range : 10 <sup>1</sup> to 10 <sup>4</sup>
Flame Photometric Detector (FPD)	Detection limit : ± 5 × 10 <sup>-12</sup> g/s ( S of 10 ng/ul methyl parathion-ethanol solution )
	Detection limit : ± 4 × 10 <sup>-12</sup> ( P of 10 ng/ul methyl parathion-ethanol solution )
	Linear range ( S ) : 10 <sup>1</sup> to 10 <sup>3</sup> Linear range ( P ) : 10 <sup>1</sup> to 10 <sup>4</sup>
Nitrogen and Phosphorus Detector ( NPD )	Detection limit : ± 1 × 10 <sup>-12</sup> g/s ( Azobenzene )
	Detection limit : ± 1 × 10 <sup>-12</sup> ( Methyl sulfur phosphorous )
	Linear range : 10 <sup>1</sup> to 10 <sup>3</sup>