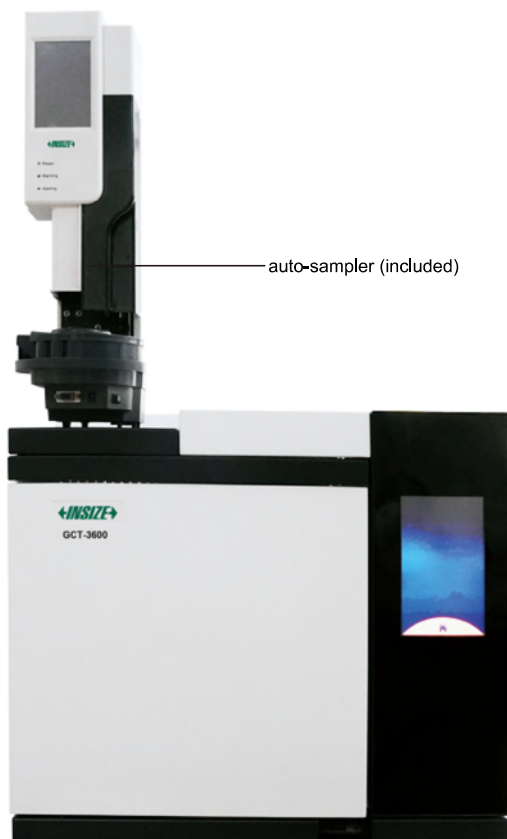


## GAS CHROMATOGRAPHY (ADVANCED TYPE) CODE GCT-3600

ANALYSIS METHODS AND CONFIGURATIONS CAN BE CUSTOMIZED ACCORDING TO INSPECTION REQUIREMENTS



hydrogen generator (included)



air generator (included)



electronic balance (optional)

- Widely used in the analysis, testing, and research work in petroleum and petrochemical industries, environmental analysis, food analysis, pharmaceutical and clinical analysis, fine chemical and polymer analysis, as well as synthetic industries
- The instrument is equipped with a 7-inch color LCD touch screen, supports hot-swappable, can be used as a handheld controller
- The instrument adopts a microcomputer system to control temperature with high precision, high reliability, and anti-interference
- The instrument is equipped with advanced electronic flow control unit (EFC) and electronic pressure control unit (EPC) to realize the digital control of the gas circuit, which greatly improves the stability of the instrument and the reproducibility of the analytical results
- Chromatography microcomputer system with MODBUS/TCP standard protocol, can be interfaced with DCS system

### STANDARD DELIVERY

Main unit	1pc
Auto-sampler	1pc
Computer	1pc
Software	1pc
Detector (FID)	1pc
Hydrogen generator	1pc
Air generator	1pc
Gas purifier	1pc
Column (SE-54)	1pc
Consumable and spare parts	1set*

### OPTIONAL ACCESSORY

Electronic balance	8304-220
Thermal conductivity detector*	GCT-D-TCO
Flame photometric detector	GCT-D-FPD
Electron capture detector*	GCT-D-ECD
Nitrogen phosphorus detector*	GCT-D-NPD

\*The detector needs to be ordered with the main unit together, up to two detectors can be ordered

\*Including injection needles, injection pads, graphite pads, gas connection lines and other common consumables and tools

**SPECIFICATION**

<b>Analysis material</b>		hydrocarbons, carbonaceous organic matter (COC), volatile organic compound (VOCs), etc	
<b>Control System</b>	<b>Temperature control area</b>	8 signals	
	<b>Temperature control range</b>	above room temperature 4-450°C, incremental 1°C, accurate: ±0.1°C	
	<b>Program temperature rise rate</b>	0.1-120°C/min	
	<b>Air circuit control</b>	full electronic pressure flow control	
	<b>Measurement range</b>	0-100Psi (pressure), 0-1000mL/min (flow rate)	
	<b>Resolution</b>	0-0.1Psi (pressure), 0-1mL/min (flow rate)	
	<b>External control</b>	8 signals, auxiliary control output 2 signals	
<b>Detector</b>	<b>Program temperature rise step</b>	16 steps	
	<b>Type</b>	hydrogen flame ionization detector (FID)	
	<b>Detection limit</b>	≤3×10 <sup>-12</sup> g/S (n-hexadecane)	
	<b>Baseline noise</b>	≤1×10 <sup>-14</sup> A (after 2 hours of instrument stabilization)	
	<b>Baseline drift</b>	≤1×10 <sup>-13</sup> A/30min (after 2 hours of instrument stabilization)	
	<b>Auto-sampler</b>	<b>Syringe specifications</b>	1, 5, 10, 25, 50, 100, 250, 500 (μL)
		<b>Vial position</b>	24 bits (customizable expansion to 160 bits)
<b>Solvent bottle position</b>		2 bits (customizable expansion to 11 bits)	
<b>Vial volume</b>		2mL	
<b>Injection volume</b>		0.1-250μL	
<b>Feed rate</b>		fast, Slow, user-defined	
<b>Feed mode</b>		general, continuous, PTV, user-defined	
<b>Gas supply</b>	<b>Carrier gas</b>	N <sub>2</sub> ≥99.999%	
	<b>Natural gas</b>	H <sub>2</sub> ≥99.999%	
	<b>Combustion gas</b>	dry oil-free air	
<b>Data processing</b>		dedicated data workstation, can support multiple chromatographs of multiple channels of data processing at the same time (up to support 5000 chromatographs access), can automatically generate chromatograph folder, time folder, as well as according to the time, frequency or sequence of the named spectra file functions	
<b>Communication interface</b>		ethernet: IEEE802.3	
<b>Working environment</b>		15~30°C, ≤85%RH	
<b>Power supply</b>		AC 220V, 50Hz, 3kW	
<b>Dimension (LxWxH)</b>		560×530×480mm	
<b>Weight</b>		60kg	

**DETECTORS**

<b>Thermal conductivity detector (TCD)</b>	<b>Code</b>	<b>GCT-D-TC</b>
	<b>Sensitivity</b>	≥10000mv • mL/mg (Benzene/Toluene)
	<b>Baseline noise</b>	≤20μv
	<b>Baseline drift</b>	≤20μv/30min
	<b>TC bridge road</b>	air break protection: protects the tungsten filament from damage
	<b>Analysis material</b>	purity of industrial gases such as oxygen, nitrogen, helium, etc. and VOCs
<b>Flame photometric detector (FPD)</b>	<b>Code</b>	<b>GCT-D-FPD</b>
	<b>Detection limit</b>	(S) ≤5×10 <sup>-11</sup> g/s (Thiophene/Ethanol), (P) ≤1×10 <sup>-12</sup> g/s (Methyl Parathion/Ethanol)
	<b>Baseline noise</b>	≤3×10 <sup>-13</sup> A
	<b>Baseline drift</b>	≤2×10 <sup>-12</sup> A/30min
	<b>Linear range</b>	S≥10 <sup>2</sup> , P≥10 <sup>3</sup>
<b>Analysis material</b>	sulfur and phosphorus containing compounds	
<b>Electron capture detector (ECD)</b>	<b>Code</b>	<b>GCT-D-ECD</b>
	<b>Detection limit</b>	≤1×10 <sup>-14</sup> g/mL (Propyl Hexahydroxy/Isooctane)
	<b>Baseline noise</b>	≤0.03mV
	<b>Baseline drift</b>	≤0.2mV/30min
	<b>Radiation source</b>	Ni <sup>63</sup>
<b>Analysis material</b>	halogenated compounds, peroxides, nitro compounds, metal-organic compounds, steroidal compounds, polycyclic aromatic compounds, etc.	
<b>Nitrogen phosphorus detector (NPD)</b>	<b>Code</b>	<b>GCT-D-NPD</b>
	<b>Detection limit</b>	(P) ≤5×10 <sup>-13</sup> g/s (Malathion/Isooctane), (N) ≤7×10 <sup>-13</sup> g/s (Azobenzene/Isooctane)
	<b>Baseline noise</b>	≤3×10 <sup>-13</sup> A
	<b>Baseline drift</b>	≤2×10 <sup>-12</sup> A/30min
	<b>Linear range</b>	≥10 <sup>3</sup>
<b>Analysis material</b>	organic compounds containing nitrogen and phosphorus	