

ION CHROMATOGRAPHY SYSTEMS



ION CHROMATOGRAPHY SYSTEMS

Used in Food Testing, Chemical Industry, Beverage Testing, Drug testing, Forensic Science, Pharmaceutical, Molecular Biology, Medical, Research, Laboratory.

LTCGR8-1 ION CHROMATOGRAPHY SYSTEM

Built-in circulating 3D constant temperature technology:

Temperature stability time is less than 30 mins, ensuring the accuracy and reliability of test data.

The world's leading full-range series of ion chromatographic columns:

High efficiency, large capacity of the columns for detecting ions of varied compositions.

Self-Regenerating Electrolytic Micro-membrane Suppressor:

High pressure resistance, small dead volume, highly responsive to signals.

Auto-range Conductivity Detector:

It can directly detect the signal from ppb to ppm without adjusting the range. Only one conductivity detector can detect anions and cations.

Observatory intelligent workstation:

Integrated control, intelligent start-up, shutdown and maintenance functions.

Compatible with a variety of instruments.



SPECIFICATIONS

Model	LTCGR8-1
Ion Chromatographic Pump	
Maximum Pressure	42 Mpa (Stainless steel)
Type	High-pressure and low-pulse two-piston tandem advection pump
Pressure Display Accuracy	≤ 0.1 MPa
Flow Range	0.001 ~ 9.999 mL/min
Pressure Fluctuation	$\leq 0.5\%$
Flow Stability	(0.2-0.5) mL/min $\leq 2\%$; (0.5-1.0) mL/min $\leq 1\%$; > 1.0 mL/min $\leq 1\%$
Manual Sample Injector	
Contact Material of the Rotor	PEEK
Contact Material of Medium	PEEK/Ceramics
Column Heater	
Operating Temperature Range	20°C~60°C (68~140°F)
Controlling Temperature Accuracy	$\pm 0.01^\circ\text{C}$
Allowable Deviation of Column Heater's Temperature	$\pm 1^\circ\text{C}$
Temperature Stability	$\leq 0.05^\circ\text{C/h}$
Conduction Detection System	
Type	Constant temperature auto-range conductivity detector
Cell Volume	$\leq 0.8\mu\text{L}$
Detection Range	0~35000 $\mu\text{S/cm}$
Detection Resolution	$\leq 0.0020\text{nS/cm}$
Output Voltage	-6000~+6000 mv (adjustable)
Electronic Noise	0.02 nS

Baseline Noise	≤ 0.001 μS/cm
Baseline Drift	≤ 0.02μS
Operating Temperature Range	Room temperature +5°C~60°C(41~140°F)
Controlling Temperature Accuracy	±0.01°C
Temperature Compensation	1.7 %/°C
Maximum Pressure	10.0 Mpa
Linear Range	≥ 10 ³
Instrument Linearity	≥0.999
Quantitative Repeatability	≤1.0%
Qualitative Repeatability	≤0.5%
Minimum Detectable Concentration	Cl ⁻ ≤ 0.0005 ug/mL; Li ⁺ ≤ 0.001 ug/mL; BrO ₃ ≤ 0.001 ug/mL
Flow System	
Six-way Valve	PEEK material, pressure 5000 psi; Independent automatic collecting and flow function.
Suppressor	
Type	Self-Regenerating electrolytic micro-membrane suppressor
Maximum Pressure	6.0 Mpa
Dead Volume	<50 μL
Other Specifications	
Dimension (LxWxH)	350x470x510 mm
Net Weight	26 kg
Gross Weight	32 kg
Power	150 W

LTCGR8-2 ION CHROMATOGRAPHY SYSTEM

Temperature-control bipolar conductivity detector:

Greater detection range, better precise analysis.

Built-in circulating 3D constant temperature technology:

Temperature stability time is less than 30 mins, ensuring the accuracy and reliability of test data.

The world's leading full-range series of ion chromatographic columns:

High efficiency, large capacity of the columns for detecting ions of varied compositions.

Self-Regenerating Electrolytic Micro-membrane Suppressor:

High pressure resistance, small dead volume, highly responsive to signals.

Able to detect anions and cations at the ppb level.

Work across a variety of detectors, to expand the scope of applications of ion chromatography.



SPECIFICATIONS

Model	LTCGR8-2
Ion Chromatographic Pump	
Maximum Pressure	35 Mpa (PEEK)
Type	High-pressure and low-pulse two-piston tandem advection pump
Pressure Display Accuracy	≤ 0.1 MPa
Flow Range	0.001 ~ 9.999 mL/min

Pressure Pulse	≤ 0.5%
Flow Stability	(0.2-0.5) mL/min ≤ 3%; (0.5-1.0) mL/min ≤ 2%; > 1.0 mL/min ≤ 2%
Allowable Deviation of Flow	(0.2-0.5) mL/min ±5%; (0.5-1.0) mL/min ±3%; > 1.0 mL/min ±2%
Numerical-control and Electromagnetic Sample Injector	
Maximum Pressure	35 Mpa
Contact Material of the Rotor	PEEK
Control Mode	By Stepper motor
Power Supply	24 V (DC)
Conduction Detection System	
Type	Temperature control and bipolar conductivity detector
Cell Volume	≤0.8μL
Detection Mode	Bipolar conductivity detection
Detection Range	0~45000 μS/cm
Detection Resolution	≤0.0020nS/cm
Output Voltage	-6000~+6000 mv (adjustable)
Electronic Noise	0.02 nS
Baseline Noise	≤ 0.001 μS/cm
Baseline Drift	≤ 0.02μS
Operating Temperature Range	Room temperature +5°C~60°C
Controlling Temperature Accuracy	±0.01°C
Maximum Pressure	10.0 Mpa
Linear Range	≥ 10 ³
Instrument Linearity	≥0.999
Quantitative Repeatability	≤1.0%
Qualitative Repeatability	≤0.1%
Minimum Detectable Concentration	Cl ⁻ ≤ 0.0005 ug/mL; Li ⁺ ≤ 0.001 ug/mL; BrO ₃ ≤ 0.001 ug/mL
Flow System	
Six-way Valve	PEEK material, pressure 5000 psi; Independent automatic collecting and flow function.
Suppressor	
Type	Self-Regenerating electrolytic micro-membrane suppressor
Maximum Pressure	6.0 Mpa
Dead Volume	<50 μL
Other Specifications	
Dimension (LxWxH)	350x470x510 mm
Net Weight	26 kg
Gross Weight	32 kg
Power	150 W

LTCGR8-3 ION CHROMATOGRAPHY SYSTEM

Leakage alarm:

When there is liquid leakage in the pipeline, the liquid leakage detector will send out an alarm sound to remind in time when it detects the liquid, and automatically stop the pump and shut down after 5 minutes if no human intervention.

Automatic range:

The operation of ion chromatograph does not need to set the range, so it is easy to realize the simultaneous determination of 5ppb-100ppm concentration sample, and the signal is displayed by digital signal $\mu s / cm$.

Gas-liquid separator:

The presence of bubbles in the eluent will increase the baseline noise and reduce the sensitivity. A micro gas-liquid separator is set up in the pipeline between the infusion pump and the eluent bottle to separate the bubbles from the eluent.

Timing startup preheating:

It usually takes about 1 hour for the ion chromatograph to balance the system from start-up to sample injection analysis. When the user has prepared the eluent (or pure water for eluent generator), you can set the start-up running time of the instrument in advance (24 hours at most), complete the start-up operation, and set all parameters.

Intelligent maintenance:

Set "intelligent maintenance", the instrument can complete the flow path switch to the pure water path, the flow rate is set to 0.5ml/min, running for 1 hour.

Mobile phone app:

Mobile app has friendly interface and easy operation.

App monitoring: Put the device in the pocket, no matter where you are, you can turn on the mobile phone to view and control the field device. The mobile app can remotely control the instrument on / off and observe the operation performance index of the instrument.

Intelligent touch screen:

The large screen displays the operation parameters and status of the instrument, which is convenient for the operator to check the equipment status on site, and to complete the operation of instrument on-off, instrument maintenance, etc.



SPECIFICATIONS

Model	LTCGR8-3
Ion Chromatographic Pump	
Maximum Pressure	35 Mpa (PEEK)
Type	High-pressure and low-pulse two-piston tandem advection pump
Pressure Display Accuracy	≤ 0.1 MPa
Flow Range	0.001 ~ 9.999 mL/min
Flow Precision	$\leq 0.1\%$
Pressure Pulse	$\leq 0.5\%$
Flow Stability	$\leq 0.1\%$
Numerical-control and Electromagnetic Sample Injector	
Maximum Pressure	35 Mpa
Contact Material of the Rotor	PEEK
Control Mode	By Stepper motor
Power Supply	24 V (DC)

Conduction Detection System	
Type	Temperature control and bipolar conductivity detector
Cell Volume	≤0.8μL
Detection Mode	Bipolar conductivity detection
Detection Range	0~45000 μS/cm
Detection Resolution	≤0.0020nS/cm
Output Voltage	-6000~+6000 mv (adjustable)
Electronic Noise	0.02 nS
Baseline Noise	≤ 0.001 μS/cm
Baseline Drift	≤ 0.01μS
Operating Temperature Range	Room temperature +5°C~60°C ± 0.01°C
Controlling Temperature Accuracy	±0.01°C
Maximum Pressure	10.0 Mpa
Linear Range	≥ 10 3
Instrument Linearity	≥0.999
Quantitative Repeatability	≤0.5%
Qualitative Repeatability	≤0.5%
Minimum Detectable Concentration	Cl- ≤ 0.0002 ug/mL; Li+ ≤ 0.002 ug/mL
Flow System	
Six-way Valve	PEEK material, pressure 5000 psi; Independent automatic collecting and flow function.
Suppressor	
Type	Self-Regenerating electrolytic micro-membrane suppressor
Maximum Pressure	6.0 Mpa
Dead Volume	<50 μL
Other Specifications	
Dimension (LxWxH)	350x470x510 mm
Net Weight	26 kg
Gross Weight	32 kg
Power	150 W

LTCGR8-4 ION CHROMATOGRAPHY SYSTEM

Built-in eluent generator, free from configuring eluent, with gradient elution available.

Modular manufacturing process to maintain excellent systemic stability.

Built-in low-pressure degassing technology to eliminate bubble interference for more stability.

Optional intelligent automatic injection system for large sample volumes, which features automatic dilution to save labor and time.

Work across a variety of detectors, to expand the scope of applications of ion chromatography.



SPECIFICATIONS

Model	LTCGR8-4
Ion Chromatographic Pump	
Maximum Pressure	35 Mpa (PEEK)
Type	High-pressure and low-pulse two-piston tandem advection pump
Pressure Display Accuracy	≤ 0.1 MPa
Flow Range	0.001 ~ 9.999 mL/min
Pressure Pulse	≤ 0.5%
Flow Stability	(0.2-0.5) mL/min ≤ 3%; (0.5-1.0) mL/min ≤ 2%; > 1.0 mL/min ≤ 2%
Conduction Detection System	
Type	Temperature control and bipolar conductivity detector
Cell Volume	≤0.8μL
Detection Mode	Bipolar conductivity detection
Detection Range	0~50000 μS/cm
Detection Resolution	≤0.0020nS/cm
Output Voltage	-6000~+6000 mv (adjustable)
Electronic Noise	0.02 nS
Baseline Noise	≤0.05% FS
Baseline Drift	≤3%FS
Operating Temperature Range	Room temperature +5°C~60°C(41~140°F)
Controlling Temperature Accuracy	±0.01°C
Maximum Pressure	10.0 Mpa
Linear Range	≥ 10 ³
Instrument Linearity	≥0.999
Quantitative Repeatability	≤1.0%
Qualitative Repeatability	≤1.0%
Minimum Detectable Concentration	Cl ⁻ ≤ 0.0005 ug/mL; Li ⁺ ≤ 0.001 ug/mL; BrO ₃ ≤ 0.001 ug/mL
Flow System	
Six-way Valve	PEEK material, pressure 5000 psi; Independent automatic collecting and flow function.
Built in Eluent Generator	
Eluent Types	KOH/MSA
Eluent Concentration Range	0.1-120 mM
Concentration Increment	0.1 mM
Flow Rate Range	0.1-5.0 mL/min
Maximum Pressure	20 Mpa
Minimum Pressure	5 Mpa
Suppressor	
Type	Self-Regenerating electrolytic micro-membrane suppressor
Maximum Pressure	6.0 Mpa
Dead Volume	<50 μL
Other Specifications	
Dimension (LxWxH)	350x470x650 mm
Net Weight	34 kg
Gross Weight	40 kg
Power	150 W

LTCGR8-5 ION CHROMATOGRAPHY SYSTEM

Cation and anion dual-channel system, with both channels operating independently without disturbing each other and cations and anions being detected simultaneously.

Eluent thermal buffer system in which eluent enters into the columns after preheated, to avoid bubbles generated from rapid heating.

Intelligent flow path mode, one-key operation to complete flow path switch, automatic cleaning to save time and labor.

Built-in low-pressure degassing technology to eliminate bubble interference for more stability.

The world's leading full-range series of chromatographic columns able to detect of ions with varied compositions.

Excellent performance to support all your applications. Ion Chromatographic Pump: Type - High-pressure and low-pulse two-piston tandem advection pump

Numerical-control and Electromagnetic Sample Injector: Contact Material of the Rotor - PEEK

Numerical-control and Electromagnetic Sample Injector: Control Mode - By Stepper motor

Conduction Detection System: Type - Temperature control and bipolar conductivity detector



SPECIFICATIONS

Model	LTCGR8-5
Ion Chromatographic Pump	
Pressure Display Accuracy	≤ 0.1 MPa
Maximum Pressure	35 Mpa (PEEK)
Flow Range	0.001 ~ 9.999 mL/min
Resolution of Flow Rate	0.001 ml
Flow Precision	< 0.1%
Flow Accuracy	< 0.1%
Pressure Pulse	≤ 0.5%
Flow Stability	(0.2-0.5) mL/min ≤ 3%; (0.5-1.0) mL/min ≤ 2%; > 1.0 mL/min ≤ 2%
Numerical-control and Electromagnetic Sample Injector	
Maximum Pressure	35 Mpa
Power Supply	24 V (DC)
Column Heater	
Operating Temperature Range	+20°C~60°C (68~140°F)
Controlling Temperature Accuracy	± 0.01°C
Allowable Deviation of Column Heater's Temperature	± 1°C
Temperature Stability	≤ 0.05°C/h
Conduction Detection System	
Cell Volume	≤ 0.8μL
Detection Mode	Bipolar conductivity detection
Detection Range	0~50000 μS/cm
Detection Resolution	≤ 0.0020nS/cm
Output Voltage	-6000~+6000 mv (adjustable)
Electronic Noise	0.02 nS
Baseline Noise	≤ 0.001 μS/cm
Baseline Drift	≤ 0.02μS

Operating Temperature Range	Room temperature +5°C~60°C(41~140°F)
Controlling Temperature Accuracy	±0.01°C
Maximum Pressure	10.0 Mpa
Linear Range	≥ 10 3
Instrument Linearity	≥0.999
Quantitative Repeatability	≤1.0%
Qualitative Repeatability	≤1.0%
Thermal Buffer System of Eluent	
Thermal Buffer System of Eluent	Before enter into the column,the eluent is preheated. By the way,can avoid the rapid heating up and the bubbles to generate,the baseline is more stable, effectively shorten the start-up balance time and improve the analysis efficiency and effect.
Temperature Range	25~40°C (77~104°F)
Built-in and Low-pressure Degassing Device	
Vacuum Degree	-70 kPa
Maximum Flow Rate	10 mL/min
Internal Volume	30 μL
Degassing Efficiency	10 mL/min 90%
Flow System	
Six-way Valve	PEEK material, pressure 5000 psi; Independent automatic collecting and flow function.
Built in Eluent Generator	
Eluent Types	KOH/MSA
Eluent Concentration Range	0.1-120 mM
Concentration Increment	0.1 mM
Flow Rate Range	0.1-5.0 mL/min
Maximum Pressure	20 Mpa
Minimum Pressure	5 Mpa
Suppressor	
Type	Self-Regenerating electrolytic micro-membrane suppressor
Maximum Pressure	6.0 Mpa
Dead Volume	<50 μL
Other Specifications	
Dimension (LxWxH)	500x500x760 mm
Net Weight	48 kg
Gross Weight	73 kg
Power	350 W

LTCGR8-6 PORTABLE ION CHROMATOGRAPHY SYSTEM

Powerful data processing system:

Iconic display, customizable interface, integration of instrument control, data analysis and processing, data sharing module for on-site and remote data sharing through 4G network.

Quick chromatographic columns for 5-min rapid detection:

Original quick chromatographic columns for on-site quick detection of anions and cations.

Intelligent flow path cleaning makes easier cleaning:

The flow path is designed with a switching valve for free switch of eluent bottles and pure water bottles.

WI-FI communication, real-time operation:

Being equipped with a tablet/laptop makes real-time operation more flexibly and conveniently.

Upgrade-supported dual detectors (Conductivity Detector and ampere detector) to meet the needs of different industries.



SPECIFICATIONS

Model	LTCGR8-6
Ion Chromatographic Pump	
Maximum Pressure	35 Mpa (PEEK)
Type	High-pressure and low-pulse two-piston tandem advection pump
Flow Range	0.001 ~ 9.999 mL/min
Flow Accuracy	±0.5%
Flow Repeatability	RSD≤0.1%
Flow Stability	(0.2-0.5) mL/min ≤ 3%; (0.5-1.0) mL/min ≤ 2%; > 1.0 mL/min ≤ 2%
Numerical-control and Electromagnetic Sample Injector	
Maximum Pressure	35 Mpa
Control Mode	By Stepper motor
Power Supply	24 V (DC)
Column Heater	
Operating Temperature Range	Room temperature +5°C~60°C(41~140°F)
Allowable Deviation of Column Heater's Temperature	± 1°C
Temperature Stability	≤ 0.5°C/h
Conduction Detection System	
Type	Temperature control and bipolar conductivity detector
Cell Volume	≤0.8μL
Detection Mode	Bipolar conductivity detection
Detection Range	0~45000 μS/cm (adjustable)
Detection Resolution	≤0.0020nS/cm
Output Voltage	-6000~+6000 mv (adjustable)
Baseline Noise	≤0.5% FS
Baseline Drift	≤ 20% FS/30 min
Operating Temperature Range	Room temperature +5°C~60°C(41~140°F)
Controlling Temperature Accuracy	±0.01°C
Maximum Pressure	10.0 Mpa

Instrument Linearity	≥0.999
Quantitative Repeatability	≤0.5%
Qualitative Repeatability	≤2%
Minimum Detectable Concentration	Cl- ≤ 0.005 ug/mL; Li+ ≤ 0.001 ug/mL
Flow System	
Six-way Valve	PEEK material, pressure 5000 psi; Independent automatic collecting and flow function.
Panel Computer	
Display Screen	12.3 inch
Internal Memory	2 G
Weight	786 g
Maximum Pressure	20 Mpa
Minimum Pressure	5 Mpa
Suppressor	
Maximum Pressure	6.0 Mpa
Dead Volume	<30 μL
Other Specifications	
Dimension (LxWxH)	330x220x310 mm
Net Weight	8 kg
Gross Weight	11 kg
Battery Capacity	5000 mAh
Power	150 W



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