

## L-3000 Binary Manual-Sampling HPLC System



### Features :

#### L-3000 Binary Manual-sampling HPLC System

RIGOL L-3000 binary manual-sampling HPLC System is designed in accordance with UHPLC standard: with an outstanding operating pressure limit 8,000 psi.

This product owns independent intellectual property rights, all of the key units/modules are of autonomous design and manufacturing. Performance of the entire system reaches advanced world level.

The professional product definition proprietary design, solid performance and intuitive user interface make the RIGOL L-3000 series HPLC ideal for widely and food safety to environmental monitoring and much more.

**8000 PSI**

Up to 8000PSI operational pressure. Higher working pressure extends the dynamic range in the application of chromatographic analysis, and improves the durability and reliability of the entire system.

**2.5 AU**

Up to 2.5 AU linear range of the detector, allows accurate analysis for widely varying sample concentrations, either with high concentrated substance(s) or trace component(s).

**100 Hz**

Up to 100Hz data sampling rate, allows sharper peak(s) detection and enables ultra fast analysis.

**$5 \times 10^{-9}$  g/mL**

As low as  $5 \times 10^{-9}$  g/mL detection limit, creating higher sensitivity with lower noise floor.

**Higher Precision**

Proprietary automatic solvent-compressibility compensation and pulsation dampening technologies enable excellent analysis reproducibility.

**Fine Processing**

Patented propulsion technology and ultrafine NC processing provide excellent system durability.

**FDA GLP/GMP**

User-friendly HPLC workstation, complies with the FDA 21 CFR Part 11, GLP, GMP regulations.

### Component :

1. L-3220 Binary Pump
2. L-3500 UV-VIS Detector
3. L-3400 Column Oven
4. 7725i – Rheodyne Injector
5. Rigol Chromatography Workstation
6. L-3120 Solvent Organizer



## L-3220 Binary Gradient Pump



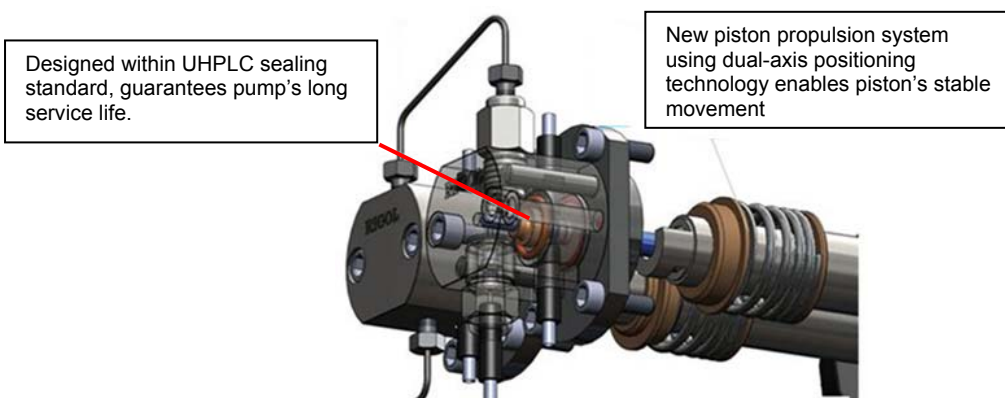
### Features :

**L-3220 is a binary gradient pump** with 2-pump integration design. Developed by RIGOL's patented technology and manufactured through advanced processing, L-3220 owns world-class performance parameters, its operating pressure is also up to 8000PSI.

In addition to the same high-durability as L-3210, L-3220 also owns very high gradient accuracy & precision, as well as a much lower delay volume. These features make it competent for fast & high-throughput analysis.

- Competent for fast & high-throughput analysis
- Operating pressure 8000PSI
- Excellent gradient accuracy and reproducibility
- Proprietary automatic solvent-compressibility compensation technology
- Higher stability and longer service life
- Integrated damper & mixer design
- Online wash for piston rod

### High stability and durability, a longer service life.



### Specifications :

<b>Flow Rate Range :</b>	0.001 ml/min – 10.000 ml/min (Increment 0.001ml/min)
<b>Flow rate : Accuracy :</b>	± 0.5% (@ 1ml/min, water)
<b>Flow Rate Precision :</b>	≤ 0.1% (@ 1ml/min, water) (JJG) ≤ 0.07% RSD (@ 1ml/min, water) (ASTM)
<b>Pressure Limit :</b>	8,000 Psi (@ 0 – 2 ml/min) 6,000 Psi (@ 2 – 5 ml/min) 3,000 Psi (@ 5 – 10 ml/min)
<b>Pressure Pulsation :</b>	≤1% (@ 1 ml/min, water, back pressure > 10 Mpa)
<b>Gradient Accuracy</b>	± 0.5%
<b>Gradient Reproducibility</b>	≤ 0.15% RSD
<b>Weight :</b>	22 Kg
<b>Dimension :</b>	462mm(D) × 367 mm(W) × 143(H)mm
<b>Power Supply :</b>	100 – 240 Vac, 50 – 60 Hz, 150 Watts

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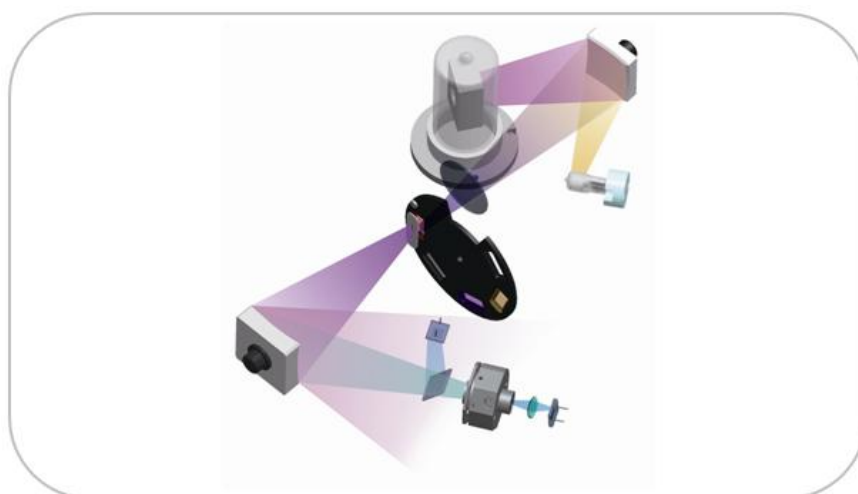
<http://www.rigol.com>

**Features :**

*L-3500 is a variable-wavelength UV-Visible light detector*, with wavelength range 190 - 800 nm. Designed & developed by RIGOL's patented technology, and manufactured through advanced processing,

L-3500 owns world-class performance parameters: data rate up to 100Hz, very low noise & drift level and detection limit. It can be widely used for analysis of compounds with UV absorbance.

- Data rate up to 100Hz
- Linear range up to 2.5 AU
- Extremely low noise & drift, and detection limit

**Specifications :**

<b>Wavelength range</b>	190-800 nm
<b>Lamp</b>	Deuterium lamp, Tungsten lamp
<b>Spectral width</b>	8 nm
<b>Wavelength accuracy</b>	±1 nm
<b>Wavelength precision</b>	0.2 nm
<b>Noise</b>	± 0.5 × 10 <sup>-5</sup> AU (JJG) ± 0.35 × 10 <sup>-5</sup> AU (ASTM)
<b>Drift</b>	1 × 10 <sup>-4</sup> AU /Hr
<b>Linear range</b>	> 5 × 10 <sup>4</sup> (JJG) > 2.5 AU (ASTM)
<b>Flowcell pressure</b>	10 Mpa
<b>Flowcell light path</b>	10 mm
<b>Flowcell volume</b>	12 μL
<b>Detection limit</b>	5×10 <sup>-9</sup> g/mL
<b>Weight</b>	12.6 Kg
<b>Dimension</b>	462 mm(D) × 367 mm(W) × 143(H)mm
<b>Power supply</b>	100 VAC - 240 VAC , 50/60 Hz, 90Wmax

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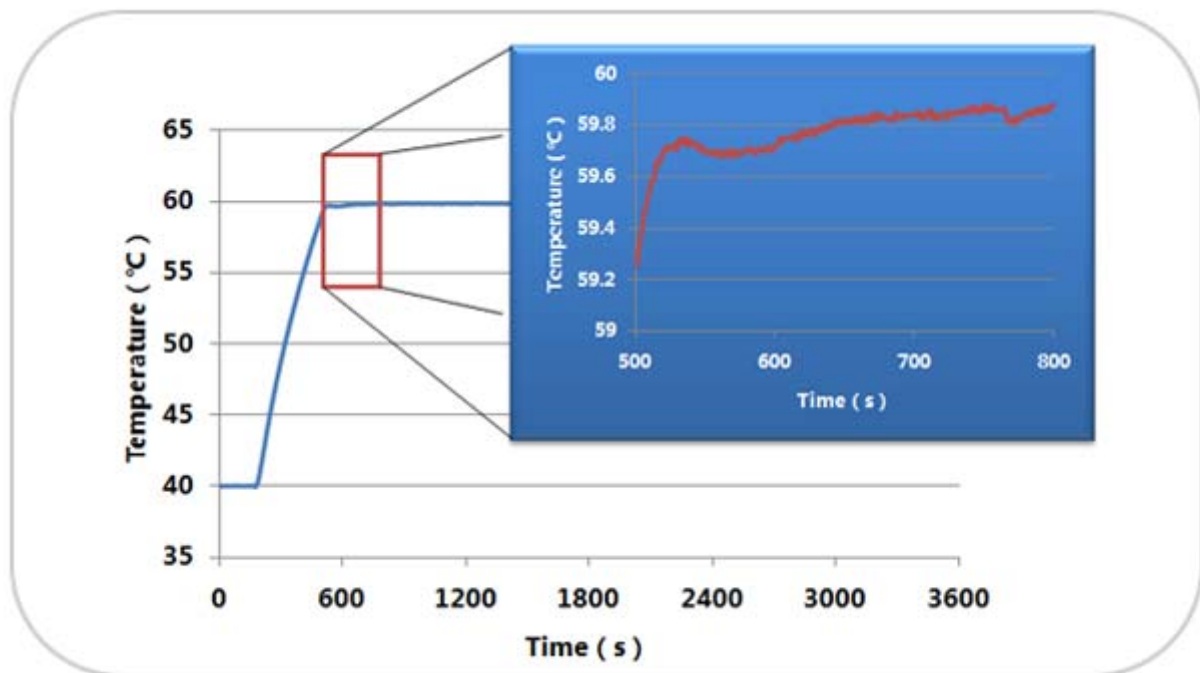
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### Features :

*L-3400 column oven* utilizes "semiconductor refrigeration" design and PID temp-control calculation, which provides fast heat-up, precise temp-control and high durability.

- PID temp-control, high temp-control precision



### Specifications :

Temperature-control range	Room Temp +5 °C – 70 °C
Temperature accuracy	± 1.0 °C
Temperature stability	± 0.1 °C
Column load	250 mm colume x 1, plus 50mm protetive column x 1
Weight	7.6 Kg
Dimension	464 mm(D) × 370 mm(W) × 90(H)mm
Power supply	100 VAC - 240 VAC , 50/60 Hz, 160Wmax

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## 7725i – Rheodyne Injector



### **Features :**

As a very advanced and widely-used manual sampler, Rheodyne 7725i owns properties as:

- Patented Rheodyne MBB design can maintain flow continuity during the switch between sampling and injecting, which largely reduces the interference of instantaneous pressure to the system.
- A 30°port offers easy connection.
- Single-point pressure adjustment reduces the friction between rotor sealing gasket and stator, further extends the service life.
- Built-in sensor switch provides the HPLC system with repeatable starting signal.
- Patented Rheodyne MBB design effectively reduces pressure fluctuation at the load-inject switch.

**RIGOL TECHNOLOGIES, INC.**

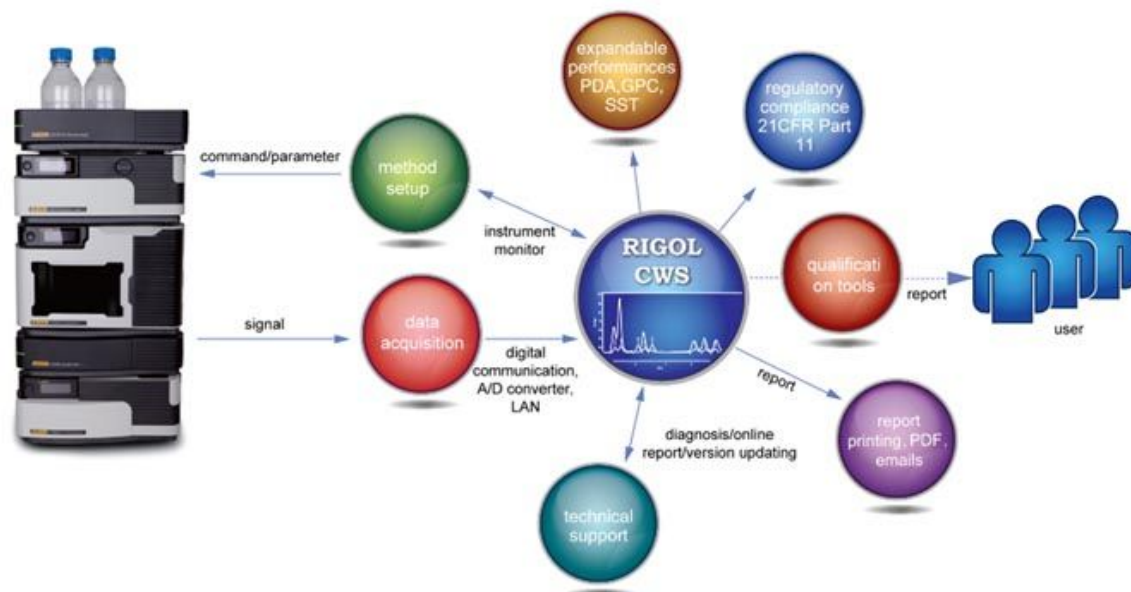
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### Features :

**RIGOL's workstation** furthers the capability of L-3000 series HPLC system with Analysis solution research and development, instrument control, data acquisition and processing, report generation, and traceable record management with versatile extensibilities.

- Full compliance with FDA 21 CFR Part 11/GMP/GLP
- Full Control Workstation
- Powerful processing capability



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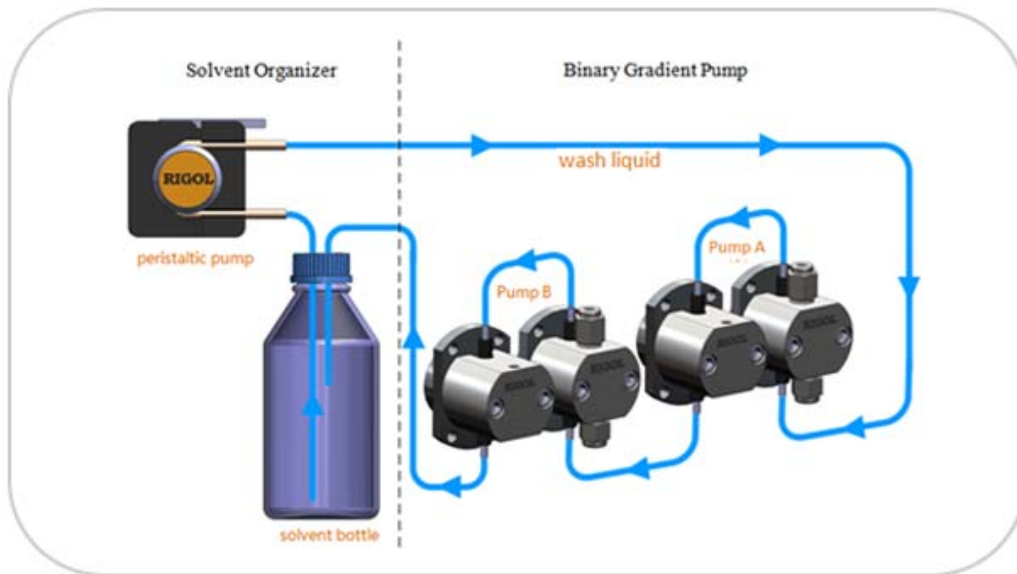
## L-3120 Solvent Organizer

### Features :

**L-3120 solvent organizer** can provide a tray for four 1-L solvent bottles, equipped with an online peristaltic pump and 2-channel high-performance degasser.

L-3120 co-works with L-3220 binary pump, it features in high degassing efficiency and excellent durability.

- Online wash for pump, effectively extends sealing system's
- 2-channel high-performance online vacuum degasser



2-channel high-performance online vacuum degasser

- High efficient Teflon AF degassing membrane, largely reducing tubing and chamber space
- Degassing capability: 50mmHg  $\pm$  5mmHg



### Specifications :

Online Wash	Speed : High/Medium/Low
Online degassing	2-channel ( channel volume 480uL )
Weight	8 Kg
Dimension	464 mm(D) x 370 mm(W) x 90(H)mm
Power supply	100 VAC - 240 VAC , 50/60 Hz, 60Wmax

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