

Compact HPLC System

LC-4500 Series



JASCO

Performance
Innovation
Reliability



The LC-4500 is a compact HPLC for routine separations.

The modular system is simple enough to be used for academic research, teaching or QA/QC.

The extremely compact stackable design requires a small amount of bench space or can be used in fume cabinets where space is a premium.

Individual modules can be used for integration with other systems or for free standing operation.

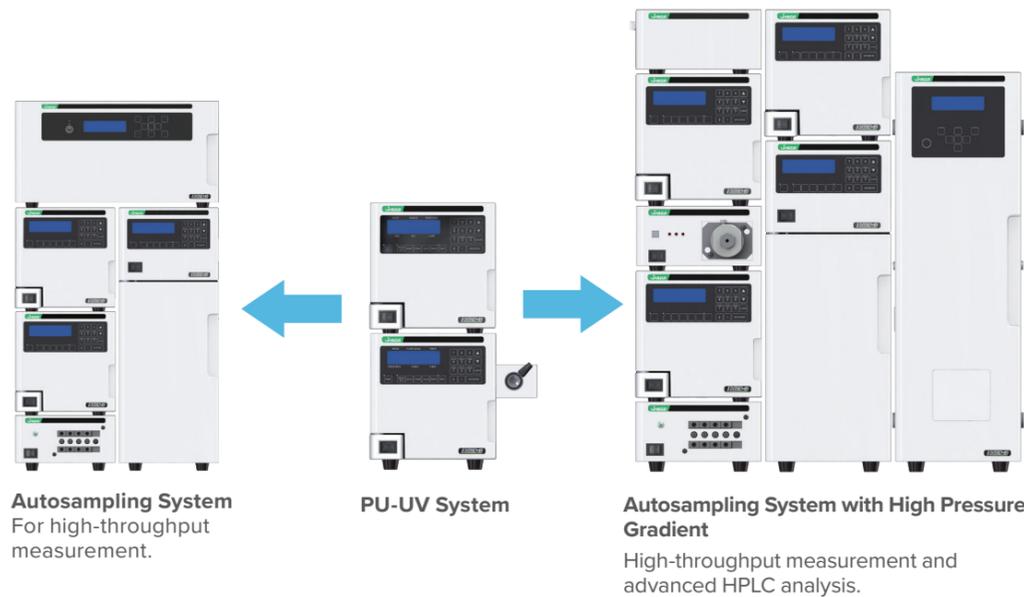
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Features of the LC-4500 System

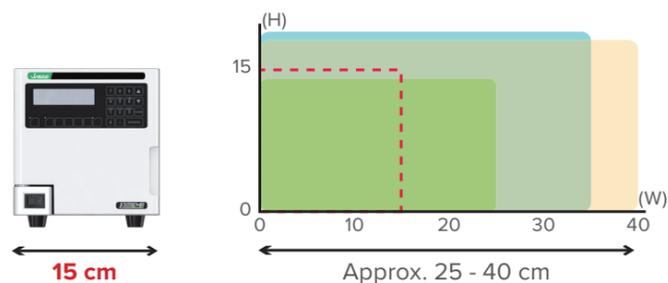
The LC-4500 is a compact, simple to configure and easy to use system

The LC-4500 Series is only 15cm wide offering the smallest of HPLC systems. A simple isocratic or gradient pump with UV-visible detector and manual injection valve requires only 15cm. Adding an autosampler means the system is only 30cm wide. The LC-4500 Series is stackable and can be used with the range of modules from the larger LC-4000 Series to make a more complex system.



Key Features

- Compact module (only 15 cm wide) for efficient use of lab space
- PC control using ChromNAV 2.0
- User-friendly keypad for simple operation
- Isocratic or gradient solvent pumps, with manual injector or autosampler
- Use with the compact UV-4570 UV-visible detector or choose a detector from the LC-4000 Series
- Modules can be used individually or combined into flexible systems



Comparison of module size
(PU-4580 vs other pumps)



Keypad Control (HPLC Pump)

Setting examples (Solvent delivery pump)

- Flow rate
- Start/stop timer
- Gradient program
- Flow rate time program
- Max/min pressure

ChromNAV 2.0

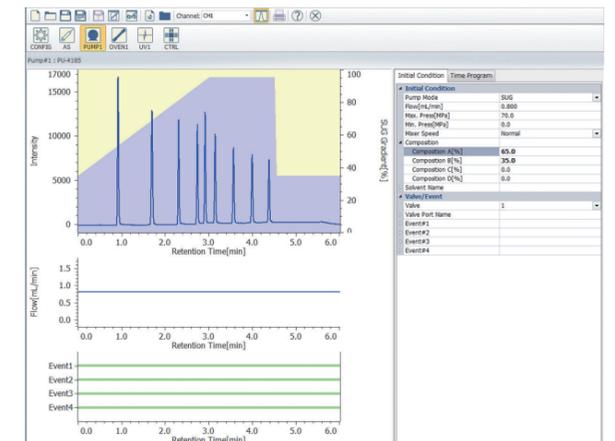
ChromNAV 2.0 is a next generation chromatography data system with a host of easy-to-use yet powerful features.

With a customizable graphical-user-interface (GUI), ChromNAV can be tailored to display only functions necessary for the users operation. This intuitive GUI allows the user to quickly learn the operation and explore the extensive functionality for data processing.

ChromNAV 2.0 is a universal CDS that can be used with any type of HPLC separation.

ChromNav 2.0 Standard Features

- Peak integration and peak identification
- Peak grouping
- Linear and non-linear quantitation
- Spectral analysis for UV-visible, Fluorescence and PDA detectors



All raw data is protected and saved; which can then be analyzed, reported and saved with both the results and raw data. A comprehensive audit trail records the acquisition method together with a history of instrument performance indicators; these provide a snapshot of the system status, with alerts for up-coming requirements for maintenance.

ChromNAV 2.0 Optional Applications

- ChromNAV CFR for 21 CFR Part 11 compliance with electronic registration of data
- ChromNAV FC for preparative chromatography
- ChromNAV -MS for mass-spec analysis
- GPC molecular weight analysis
- Molecular weight analysis of low molecular weight heparin
- FUMI theory (Function of Mutual Information) for theoretical precision analysis

Powerful System Control and Data Acquisition

During acquisition, the run-time for a chromatogram can be increased to capture later eluting peaks which may exceed the set run-time.

Fluorescence and UV-visible detectors include spectral scanning as standard, which can be triggered manually, by time or by threshold, and the spectra transferred to Spectra Manager™ for analysis.

With the increasing requirements for Green Energy, the LC-4500 series has the facility not only to power off and save lamp life at the end of the run, but also a 'soft-off' function to automatically power off a module at the end of the sequence.

System Configuration

PU-4580 | HPLC Pump

- Can be configured for isocratic or gradient solvent delivery
- Range of optional accessories
- Simple maintenance (front access)



DG-4580/LG-4580/MX-4580-D | HPLC Pump Optional Accessories

Model	DG-4580	LG-4580	MX-4580-D
Description	Degassing Unit	Low Pressure Gradient Unit	Dynamic Mixing Unit
Capacity	Up to 4 Solvents*	Up to 4 Solvents	Up to 3 Solvents

*optional expansion up to 5 solvents.



DG-4580 LG-4580 MX-4580-D

LV-4580-02 | Manual 2-Solvent Switching Valve Unit

(without valve unit panel)

AS-4550 | Autosampler

- Variable and fixed loop injection modes (includes: dilution and pre-column derivatization modes)
- Optional sample racks for a range of vial sizes and microplates
- Optional rack temperature control (4-40 degree C)

Optional Sample Racks

- Eppendorf tubes
- 300 µL vials
- 600 µL vials
- 1 x 96-well microplate



UV-4570 | UV-Visible Detector

- UV-4570 can measure from UV region to Visible region (190-900 nm)
- Optional flow cells, including: micro, preparative and high pressure
- Programmable wavelength switching and spectral scanning



BS-4500 | Solvent Rack

Number of solvent reservoirs

- Up to 5 (500 mL)
- Up to 4 (1 L)



7725i | Manual Injector

Sample Loop

- 20 µL (standard)
- Optional range of volumes



Specifications

HPLC Pump

Model	PU-4580
Flow Rate Setting Range	0.001 - 10.0 mL/min (0.001 mL/min step)
Flow Rate Accuracy	±1% or ±2 µL/min, which is larger. (0.5 - 10.0 mL/min)
Flow Rate Precision	0.05% RSD or ±0.04 min SD, which is larger. (0.5 - 5.0 mL/min)
Maximum Pressure	50 MPa (- 6.0 mL/min) 35 MPa (- 10.0 mL/min)
Dimensions, Weight	150(W) x 470(D) x 150(H) mm, Approx. 11 kg
Power requirement	AC100 - 240 V, 50/60 Hz, 65 VA

Autosampler

Model	AS-4550
Sample Injection Method	Full or partially fill loop injection (zero sample loss available)
Injection Volume	0.1 - 200 µL (0.1 µL step, 1 µL step (100 µL -))
Sample Loop	100 µL (standard)
Number of Samples	50 (standard, 2.0 mL vial)
Maximum usable Pressure	35 MPa
Dimensions, Weight	150(W) x 470(D) x 386(H) mm, Approx. 14 kg (without temperature control unit), Approx. 15 kg (with temperature control unit)
Power requirement	AC100 - 240 V, 50/60 Hz, 40 VA (without temperature control unit), 110 VA (with temperature control unit)

UV-Visible Detector

Model	UV-4570
Light Source	D ₂ lamp, Wl lamp
Wavelength Range	190 - 900 nm
Noise Level	±0.3 x 10 ⁻⁵ AU
Drift	1.5 x 10 ⁻⁴ AU/h
Dimensions, Weight	150(W) x 470(D) x 150(H) mm, Approx. 9 kg
Power requirement	AC100 - 240 V, 50/60 Hz, 160 VA



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ISO
9001
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