汉邦科技
Hanbon Sci. & Tech.

HPLC-LAB SEPARATION & PURIFICATION SYSTEM

2018-2019

PRODUCT MANUAL



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H A N B O N S C I . & T E C H .

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HPLC SYSTEM

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01 NP7000 LC Pump

NP7000C series liquid chromatography pump are the solvent transmission unit, it can provide more precision and stable flow rate for HPLC system.

Product Features

- Electronic damp control technology can effectively control pulsation to reduce baseline noise.
- Multipoint flow calibration curve will guarantee the flow accuracy in full range.
- Floating plunger piston design can guarantee working life of the high pressure seal ring.
- Automatic plunger piston cleaning function will prevent the crystallization of high salt concentration buffer which can reduce the lifespan of the seal ring.

NP7001C Analytical Liquid Chromatography Pump

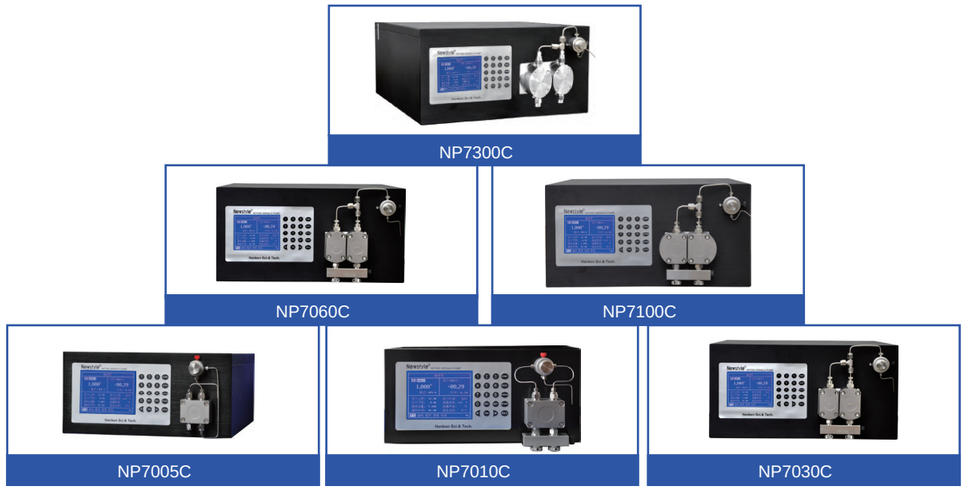


Technical Specification

No.	Configuration	Parameter
1	Flow rate range	0.001～9.999 ml/min
2	Flow rate increment	0.01ml/min
3	Flow rate accuracy	± 0.5%
4	RSD Flow rate repeatability	≤ 0.1%
5	Pressure fluctuation	≤ 0.2MPa
6	Pressure range	≤42 MPa（SS316Lpump head）
7	Power	150W
8	Dimension（W×H×D）	382×310×150mm
9	Weight	12kg
10	Power supply	AC220V±10%, 50Hz
11	Environment	Ambient temperature 5℃～35℃, Relative humidity 20%～80%
12	Infusion way	Double pistons in series model

01 NP7000 LC Pump

NP7001C Analytical Liquid Chromatography Pump



Technical Specification

No.	Configuration	Parameter					
1	Model	NP7005C	NP7010C	NP7030C	NP7060C	NP7100C	NP7300C
2	Flow rate range (ml/min)	0.01～49.99	0.01～99.99	0.01～299.99	0.01～599.99	0.1～999.9	0.1～2999.9
3	Flow rate increment(ml/min)	0.01	0.01	0.01	0.01	0.1	0.1
4	Flow rate accuracy	±1%	±1%	±1%	±1%	±1%	±1.5%
5	Flow rate repeatability (MPa)	≤0.1%	≤0.1%	≤0.5%	≤0.5%	≤0.5%	≤1%
6	Pressure pulsation (MPa)	≤0.2	≤0.2	≤0.5	≤0.5	≤0.5	≤0.5
7	Pressure range	≤25	≤20	≤15	≤15	≤10	≤10
8	Power(W)	150	150	500	500	750	2000
9	Dimension(W×H×Dmm)	382×310×150		481×420×210			663×530×260
10	Weight (kg)	13		30			70
11	Power supply	AC220V±10% ,50Hz					
12	Environment	Ambient temperature 5℃～35℃, Relative humidity 20%～80%					
13	Infusion way	Double pistons in series model					

Note: Materials PEEK, PCTFE, Titanium Alloy are available.

02 NU3000 UV-Vis Detector

NU3000 is a high efficiency, multifunction UV-Visible spectrum detection unit, it provides higher detection efficiency and accuracy for HPLC system.

Product Features

- Electronic damp control technology can effectively control pulsation to reduce baseline noise.
- Multipoint flow calibration curve will guarantee the flow accuracy in full range.
- Floating plunger piston design can guarantee working life of the high pressure seal ring.
- Automatic plunger piston cleaning function will prevent the crystallization of high salt concentration buffer which can reduce the lifespan of the seal ring.

NU3000C Detector



Technical Specification

No.	Configuration	Parameter
1	Wavelength range	190～400nm
2	Light source	Deuterium lamp
3	Wavelength accuracy	±2nm
4	Wavelength repeatability	0.2nm
5	Flow cell optical path	1～5mm，adjustable optical path
6	Baseline noise	$\pm 2\times10^{-5}$ AU, 254nm, TC＝1S
7	Baseline drift	$\pm 2\times10^{-4}$ AU, 254nm
8	Range ability	≤3AU
9	Time constant	0.1/0.2/0.5/1.0/2.0/5.0/10.0s
10	Automatic zero setting	Digital zeroing, full scale
11	Display parameter	320×240pixel screen display
12	Control mode	Panel control or anti-control by computer
13	Power supply	AC220V±10% ,50Hz
14	Environment	Ambient temperature:5℃～35℃, Relative humidity:20%～80%
15	Power	150W
16	Dimension（W×H×D）	382×310×150mm
17	Weight	8.5kg
18	Flow cell connector	1/8″、1/4″、1/16″

02 *NU3000 UV-Vis Detector*

NU3000D UV-Vis Detector



NU3000C/NU3000D UV-Vis(双灯)



NU3005C

Technical Specification

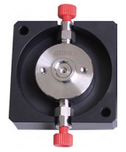
No.	Configuration	Parameter
1	Wavelength range	190～700nm
2	Light source	Deuterium lamp , tungsten lamp
3	Wavelength accuracy	±2nm
4	Wavelength repeatability	0.2nm
5	Flow cell optical path	1～5mm，adjustable optical path
6	Baseline noise	$\pm 2\times10^{-5}$ AU, 254nm, TC＝1S
7	Baseline drift	$\pm 4\times10^{-4}$ AU, 254nm
8	Range ability	≤3AU
9	Time constant	0.1/0.2/0.5/1.0/2.0/5.0/10.0s
10	Automatic zero setting	Digital zeroing, full scale
11	Display parameter	320×240 pixel screen display
12	Control mode	Panel control or anti-control by computer
13	Power supply	AC220V±10% ,50Hz
14	Environment	Ambient temperature:5℃～35℃, Relative humidity:20%～80%
15	Power	150W
16	Dimension（W×H×D）	382×310×150mm
17	Weight	8.5kg
18	Flow cell connector	1/8″、1/4″、1/16″

02 *NU3000 UV-Vis Detector*

Flow Cell



Analytical flow cell



Semi-prep flow cell



Preparative flow cell



Optical fiber flow cell

Technical Specification

No.	Configuration	Parameter
1	Analytical flow cell	1/16″
2	Semi-prep flow cell	1/8″
3	Preparative flow cel	1/4″
4	Optical fiber flow cell	1/16″、1/8″、1/4″

03 Other Detectors

NP7000C series liquid chromatography pump are the solvent transmission unit, it can provide more precision and stable flow rate for HPLC system.

2800 PDA Detector



With a combination source of light unit, have a UV-VIS -NIR light source supports a wavelength detection range of 190nm and 1020nm for sensitive and versatile detection in HPLC systems. The detector has an enlarged linearity range and is distinguished by having and outstanding signal to noise ratio.

Technical Specification

No.	Configuration	Parameter
1	Diode array	1024
2	Wavelength range	190～1020nm
3	Light source	Deuterium lamp, Tungsten lamp(combined light source)
4	Spectral resolution	2.4 nm (0.8nm pixel distance)
5	Wavelength accuracy	＜0.5nm
6	Wavelength reproducibility	＜0.1nm
7	Signal to noise ratio	1×10-5 AU, optical path length 10 mm, flow rate 1 ml/min, wavelength 254 nm/750 nm
8	Linearity	0～2.0AU
9	Drift	＜5×10^{-4}AU/h
10	Power supply	AC220V±10%，50Hz
11	Environment	Ambient temperature:5℃～35℃, Relative humidity:20%～80%
12	Power	100W
13	Dimension	220×185×340mm
14	Weight	8.5kg

03 Other Detectors

RID Detector



This detector has a dual temperature controlling device to significantly reduce baseline drift arising from unstable environment temperature.

Three optional types: RI-501(analytical), RI-502(preparative), RI-504(semi-micro).

Technical Specification

No.	Item	RI-501(analytical)	RI-502(preparative)	RI-504(semi-micro)
1	Detection range	0.25~512μRIU	2.5~5120μRIU	0.25~512μRIU
2	Drift	0.2μRIU/h	2μRIU/h	0.2μRIU/h
3	Linearity range	600μRIU	6000μRIU	600μRIU
4	Noise	2.5nRIU	25nRIU	5nRIU
5	Flow cell volume	8μL	8μL	2.5μL
6	Flow rate(usual)	0.2~3.0mL/min	1.0~50mL/min	0.2~1.0mL/min
7	Zero adjustment	Full auto zero (Optical calculation)		
8	Refractive index range	1.00~1.75		
9	Flow cell type	2 Double channel		
10	Response time	0.1,0.25,0.5,1,1.5,2,3,6sec		
11	Maximum back pressure	50KPa		
12	Recorder output	0~10mV/FS		
13	Temperature controlling	OFF, 30~55°C		
14	Communication port	LAN		
15	Power supply, Power dissipation	AC100-240V+10%, 50/60Hz 150VA		
16	Dimensions, weight	260W×420D×165Hmm,12.5kg		

03 Other Detectors

RID Detector



The advanced temperature control ensures high sensitivity, fast baseline stabilization, and excellent reproducibility. Furthermore, the long-life LED, highly pressure resistant flow cell, improved safety features and enhanced diagnostics functions guarantee easy handling and minimal maintenance. The wide linear dynamic range makes the detector the perfect choice for most laboratory tasks. It is suitable for detecting compounds with little or no UV activity such as alcohols, sugars, lipids or polymers.

Technical Specification

No.	Item	Analytical	Preparative
1	Maximum back pressure	5bar	5bar
2	Maximum flow rate	10mL/min	100 ml/min
3	Flow cell volume	15μL	9μL
4	Wetted material	Stainless steel/ Fused Silica / PTEFE/ PEEK	Stainless steel/ Fused Silica / PTEFE/ PEEK
5	Temperature control	OFF, 30 - 55 °C	OFF, 30 - 55 °C
6	Time constants	0.00/0.01/0.02/0.05/0.1/0.2/0.5/1.0/2.0/5.0/10.0 s	0.00/0.01/0.02/0.05/0.1/0.2/0.5/1.0/2.0/5.0/10.0 s
7	Max data rate	100Hz/20Hz	100Hz/20Hz
8	Leak sensor	Yes	Yes
9	Zero setting regulating	Autozero	Autozero

03 Other Detectors

Micro-Splitter Valve



Micro-Splitter Valve can control the bypass the main flow and adjust the branch flow, it is suitable for connecting liquid chromatographic system with RID, ELSD and LC-MS detectors.

Product Features

- Control the branch flow rate accurately
- Calibrated valve body has ability of repeatable setting.
- Valve body pressure can reach 55bar(standard) and 276bar(high pressure)

Technical Specification

No.	Model	Type	Internal volume (closed / fully opened)	Maximum working pressure
1	P-450	Standard	2.1/4.1μl	800psi(55bar)
2	P-451	Standard	1.2/2.8μl	800psi(55bar)
3	P-460S、T	High pressure	1.2/2.8μl	4000psi(276bar)
4	P-470	High pressure with digital display	1.2/2.8μl	4000psi(276bar)

pH/Conductivity Meter



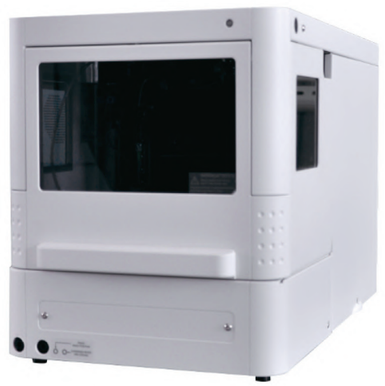
International renowned brand PH conductivity transmitter can be professionally applied to on-line monitoring, which is stable and reliable.

Technical Specification

No.	Item	Unit	Range
1	Conductive	ms/cm	1~999
2	pH	/	0~14

04 LC Auto Sample Injector

The automatic sample unit is seamlessly connected with the HPLC system workstation, which further improves the system compatibility and sample volume with 25ul and 50ul is optional.
The automatic sample unit function can be amplified, and the sample can be automatically diluted or derived.



Technical Specification

No.	Configuration	Parameter
1	Maximum working pressure	35MPa（5000psi）
2	Injection mode	Full Loop /Partial Loopfill /uL - Pick - up
3	Loop volume	Standard:50ul, other optional
4	Sample volume	Full loop:50ul ,partial loop:1~25ul
5	Sampling accuracy	Full loop: ＜0.3%RSD ,partial loop: ＜0.5%RSD
6	Sample syringe	Stainless steel，0.25mm i.d
7	Tube between syringe and injection valve	Teflon tube，1.0mm i.d，volume 500ul
8	Injection valve	SS stator, peek rotor, 0.4mm pore, 1/16″connector
9	Syringe volume	250ul
10	Injection cycle time	Usually 30s, including the default cleaning in partial loop mode.
11	Sample residue	< 0.05% (standard purge), usually <0.01%(additional purge)
12	Power supply	AC220V±10% 50Hz
13	Power	200W
14	Dimension（W×H×D）	300×500×340mm
15	Weight	15kg

05 NC6000 Fraction Collector

Hanbon can provide fraction collector and automatic collection strategy of corresponding specification according to the flow rate of preparative chromatography for customers, which will greatly improve your work efficiency and sample recovery rate.

NC6010 Matrix Fraction Collector

The matrix component collector adopts mechanical arm operation, reasonable structure, flexible movement, precise positioning and easy to use.

Product Features

- The minimum pipeline is precisely designed to meet the requirement of collecting dead volume.
- The collection tube can reach any collection position as quick as possible.
- The collection method realizes time, volume or automatic peak identification for fraction collection.



Technical Specification

No.	Configuration	Parameter
1	Matching flow range	0～100ml/min
2	Capacity	1）120 test tubes (Height 90 -180mm, diameter 13-15mm)
		2）80 test tubes (Height 90 -180mm, diameter 18mm)
		3）Including hopper plate, unlimited collection volume.
3	Power supply	AC220V±10%，50Hz
4	Power	50W
5	Environment	Temperature 0℃-±40℃, relative humidity i20%- 80%
6	Dimension（W×D×H）	350×240×320mm
7	Weight	8kg

05

NC6000 Fraction Collector

NC6100 Fraction Collector

This collector is customized according to the user's requirements, has small size, easy to install, and operate.

Product Features

- The standard configuration has 6 collection ports, one waste liquid port, which can be extended to 12 collection ports.
- 1/8 " PTFE tube, maximum infusion flow rate is 1000ml/min.



Technical Specification

No.	Configuration	Parameter	
1	Model	NC6106Fraction collector	NC6112Fraction collector
2	Collection port quantity	6（1purge）	12（1purge）
3	Collection method	Peek collection (track the up-down point),Peek cutting collection,Multi timing collection,Time + Detector power collection,Manual real-time collection	
4	Flow rate range	0～1000 ml/min	
5	Tube	1/8″	
6	Weight	2kg	4kg
7	Dimension (W×D×H)	162×62×80mm	162×62×160mm
8	Power supply	AC220V±10%，50Hz	
9	Environment	Temperature 5℃～35℃, relative humidity 20%- 80%	

05

NC6000 Fraction Collector

NC6300 Fraction Collector



Product Features

- The standard configuration of the component collector has 6 collection ports, one of which is the waste liquid port, which can be extended to 12 collection ports.
- The maximum transport flow rate is 3000ml/min.
- It can be operated automatically by software, or it can be manually operated by the "Start/Stop" group collection key.

Technical Specification

No.	Configuration	Parameter	
1	Model	NC6306 Fraction collector	NC6312 Fraction collector
2	Collection port quantity	6（1purge）	12（1purge）
3	Collection method	Peek collection (track the up-down point),Peek cutting collection,Multi timing collection,Time + Detector power collection,Manual real-time collection	
4	Flow rate range	0～3000 ml/min	
5	Tube	1/4″	
6	Weight	18kg	
7	Dimension (W×D×H)	420×310×420mm	
8	Power supply	AC220V±10%，50Hz	
9	Environment	Temperature 5℃～35℃, relative humidity 20%- 80%	

06 HPLC Column & Column Packer

HPLC Column



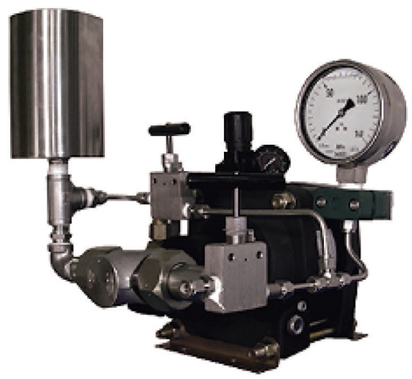
Hanbon can provide ID4.6、ID6、ID10、ID20、ID30、ID50 series analytical, semi-prep HPLC column and HPLC empty column.

Column Packer

The HPLC column packer is pressurized by pneumatic high pressure, gas driven pressure is 0.6~ 1.0mpa, and maximum pressure is 137MPa, which is the special equipment for packing HPLC column with slurry packing method.

Product Features

- The system has wide pressure range, fast pressure adjustment and small pressure drop features, and is convenient for the packing and disassembly of chromato-graphic column.
- Easy operation and maintenance; nice appearance.
- Packed column has stable performance, high column efficiency, good symmetry and no collapse.
- Equipped with different model of connectors and slurry tank, which can be packed with different model of liquid chromatography column.
- Height of packing column bed: 100 ~ 500mm range variable (other specifications need to be customized), column tube ID: 2.1 ~ 50mm.



07 Spring Column

In SAC spring column, packing material are compressed by piston in the way of manual hydraulic control,and the various dead volumes caused by stationary phase packing can get eliminated through the cooperation of garter sprig fixed on the top of the piston.

Product Features

- It can be removed from the column holder after the completing of column packing, easy to move, has no pressure rebound, and the column bed is stable and reliable.
- A column holder can be used to pack multiple columns, and the overall device is stable, reliable and cost-effective.



Technical Specification

No.	Configuration	Parameter	
1	Column ID	30\40\50mm	50\80\100mm
2	Column height	500mm（standard）	500mm（standard）
3	Column inner wall roughness	≤0.2μm	≤0.2μm
4	Effective packing height	≤300mm	≤300mm
5	Max pressure	≤10MPa	≤10MPa
6	Dimension（W×D×H）	400x400x1200mm	400x400x1300mm
7	Packing method	Down packing	Down packing

08 Dynamic Axial Compression Column

Dynamic Axial Compression Column, DAC. It is the most mature packing technology in the field of preparative chromatography. It can ensure that various scales of chromatography have good separation effect, and also can remove the influence of column bed collapse.

Product Features

- Mature technology: meet the requirements of column bed continuity, uniformity, stability and compactness.
- Multiple patented technologies: including column tube solid solution technology, rolling technology, grinding technology to ensure the performance of chromatographic column.
- Scientific distributor design, has perfect linear amplification function.
- The excellent supporting device: ensure the convenient install and disassemble of piston and cap, the frit replacement and cleaning is convenient and quick.
- The advanced DAC can finish packing or unpacking automatically and keep column pressure. It has both chromatography column and column packer functions.
- The ID of the DAC column ranges from 50mm to 2000mm, which can realize customized service.



DAC150 DAC80 DAC50 DAC100 DAC200

08 Dynamic Axial Compression Column

Technical Specification

No.	Configuration	Parameter				
1	Column tube ID	50mm	80/100mm	150mm	200mm	300mm
2	Column tube length	650mm（standard）		680mm（standard）		650mm（standard）
3	Column wall roughness	≤0.2μm				
4	Effective packing height	≤450mm				
5	Max working pressure	≤10MPa				
6	End cap connecting type	Locked by fast chain clamp				
7	Dimensions	600x600x2000mm	600x600x2300mm	650x650x2350mm	650x650x2450mm	900x900x3000mm
8	Packing method	Down packing				

Note : What the table shows is the common DAC size in the lab. Bigger size parameters are shown in the Hanbon “Industrial Preparative HPLC System Product Manual”.

09 Multi-function DAC Column

ZDAC multi-function DAC column integrates both DAC column and spring column technology, column disassembly and installation can be quickly completed within 5 minutes. The column can be used as a DAC column on the column packer, which also can be used as a spring column when separated.

Product Features

- Hanbon patent design effectively ensures the stability of the column bed.
- A column packer can match column tube of different specifications to meet the different requirements of lab level separation and purification, and it has a high cost performance.



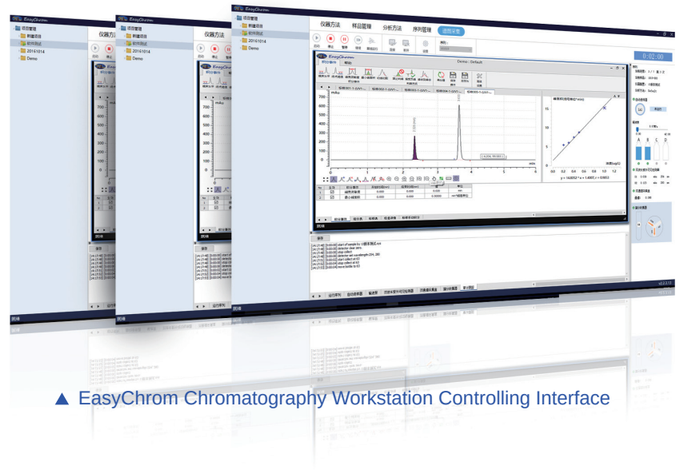
Technical Specification

No.	Configuration	Parameter	
1	ID	30\40\50mm	50\80\100mm
2	Column Tube	650mm（Standard）	650mm（Standard）
3	Inner Roughness	≤0.2μm	≤0.2μm
4	Effective Packing Height	≤450mm	≤450mm
5	Max Pressure	≤10MPa	≤10MPa
6	End Cap Connection	Bolt	Chain Clamp
7	Dimension（W×D×H）	600x600x2000mm	600x600x2300mm
8	Packing Method	Down	Down

10 Chromatographic Workstation

EasyChrom-1000

EasyChrom is a workstation software developed by Hanbon, special for NP700 series chromatography system. It is made up of controlling unit and data processing unit. This software can fast connect all parts in the chromatography system, realize accurate collection and implement correct analysis and calibration. With the modularization design, easy operation and good running can be achieved at the same time.



▲ EasyChrom Chromatography Workstation Controlling Interface

Software Features

- Adopt database management form, project management/method management/data management is presented in the form of a database.
- The display interface adopts the modular pattern, the software interface pattern is fresh, the text and icons are clear and easy to understand.
- Easy and convenient to operate, can identify and add connected devices by new document automatically, and display the port number of each device and relevant information.
- The software is humanized, and there is a corresponding guide for setting up some relevant Settings, which serves as a one-stop function.
- Equipment real-time monitoring, monitor equipment real time running state.

Spare Parts



Dynamic Mixer



Static Mixer



On-line Filter



FLOM Analytical Injection Valve



INJ-SP Preparative Injection Valve



Network Controller



Chromatography Mobile Phase Filtration System



Column Oven

Consumption



High Pressure Seal Ring



Piston



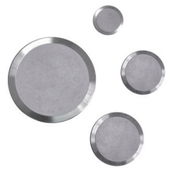
Sample Loop



Filter Sinker



Guard Column



Filter Frit



Tube



Joint and Ferrule

12 Standard Configuration

Modular

Pilot scale liquid chromatography system



Integrated

Model pilot scale liquid chromatography system



NS4101 Unitary Analytical HPLC System

This system is equipped with a NP7001 infusion pump (10ml/min) and a NU3001 UV detector. It can ensure the whole system operate successfully and also can assist you to finish common products testing and analysis in laboratory. It is cost-effective.

No.	Item number	Configuration	Qty
1	E90005	NP7001 Analytical pump(10ml/min)	1
2	E90305	NU3001 UV detector (Deuterium lamp)	1
3	S01556	Flow cell (1/16″)	1
4	E92100	FLOM Analytical injection valve (include 20ul sample loop)	1
5	H18100405.25	Analytical chromatography column(C18, 5um, 4.6*250mm)	1
6	E90950	EasyChrom-1000 chromatography workstation	1
7	E90980	Solvent tray	1
8	E90990	Network controller	1
9	S02300	Analytical HPLC system tool kit	1

*Optional

No.	Item number	Configuration	Qty
1	E90310	NU3000D UV-Vis detector (Deuterium and tungsten lamp)	1

NS4201 Binary Analytical HPLC System

This system is equipped with two NP7100C analytical pump (10ml/min) and one NU3000C UV detector, can realize high pressure gradient mode with dual pump, it can use manual programming through big display screen, and also can write program or calling program through workstation. From these methods, we can change gradient procedure at any time to achieve your ideal gradient elution effect. It is not only suitable for general products testing but also for the liquid chromatography analysis.

No.	Item number	Configuration	Qty
1	E90005	NP7001 Analytical pump (10ml/min)	2
2	E90305	NU3001 UV detector (Deuterium lamp)	1
3	S01556	Flow cell (1/16″)	1
4	E92100	FLOM Analytical injection valve (include 20ul sample loop)	1
5	H18100405.25	Analytical chromatography column(C18, 5um, 4.6*250mm)	1
6	E92050	Analytical static mixer (1/16″)	1
7	E90950	EasyChrom-1000 chromatography workstation	1
8	E90980	Solvent tray	1
9	E90990	Network controller	1
10	S02300	System tool kit	1

*Optional

No.	Item number	Configuration	Qty
1	E90310	NU3000D UV-Vis detector (Deuterium and tungsten lamp)	1

NS4205- Binary Semi-preparative HPLC System

This semi-preparative system includes two NP7005C semi-prep infusion pump and one NU3000C detector, which can realize high pressure gradient mode with dual pump, and it can extend the connection with auto fraction collection system. This system can be used for laboratory small scale preparation and preparative process amplification, can be used for the purification of peptide, plant extract, etc.

No.	Item number	Configuration	Qty
1	E90013	NP7005C preparative pump (50ml/min)	2
2	E90305	NU3000C UV detector(Deuterium lamp)	1
3	S00210	Flow cell (1/16″)	1
4	E92100	FLOM injection valve	1
5	E92348	2ml Sample loop	1
6	E92000	Dynamic mixer(1/16″)	1
7	E90950	EasyChrom-1000 chromatography workstation	1
8	S00120	20mm online filter (1/16″)	1
9	E90980	Solvent tray	1
10	E90990	Network controller	1
11	S02305	System tool kit	1

*Optional

No.	Item number	Configuration	Qty
1	E90310	NU3000D UV-Vis detector (Deuterium and Tungsten lamp)	1
2	E92250	INJ-SP semi-prep injection valve	1
3	E92349	5ml sample loop	1
4	H18101010.25	Chromatography column(C18, 10um, 10*250mm)	1
5	E91005	NC6010 matrix fraction collector	1

*NS4210- Binary Preparative HPLC System-DAC50

This system is equipped with two NP7010C semi-prep liquid chromatography pump (100ml/min) and one NU3000C UV detector, can realize high pressure gradient mode with dual pump. It can be used for semi-preparative and other small scale products' purification, realized sample injection by a manual 6-way injection valve, the sample injection volumes can reach to grams to satisfy lab scale and research use. Flexible system configuration can be used for 20-50mm pre-packing column and DAC50.

No.	Item number	Configuration	Qty
1	E90015	NP7010C preparative pump (100ml/min)	2
2	E90305	NU3000C UV detector(Deuterium lamp)	1
3	S00210	Semi-prep flow cell (1/16″)	1
4	E92250	INJ-SP preparative injection valve	1
5	E92350	10ml Sample loop	1
6	E92000	Semi-prep dynamic mixer(1/16″)	1
7	S00130	30mm online filter (1/16″)	1
8	E90950	EasyChrom-1000 chromatography workstation	1
9	E90980	Solvent tray	1
10	E90990	Network controller	1
11	S02305	Semi-prep HPLC system tool kit	1
12	E90605	DAC-50	1
13	S02401	DAC-50 start-up install kit	1

*Optional

No.	Item number	Configuration	Qty
1	E90310	NU3000D UV-Vis detector (Deuterium and tungsten lamp)	1
2	E92355	20ml sample loop	1
3	E95005	ZDAC30/40/50 column packer	1
4	E91005	NC6010 matrix fraction collector	1

NS4330- Ternary Preparative HPLC System-DAC80

This system is equipped with two NP70130C high pressure prep infusion pump (300ml/min) and one NU3000C UV detector, can realize high pressure gradient operation and also it can be chosen a NP7030C injection pump to realize automatic sampling and manual sampling, can be equipped with a ID 80mm DAC column.

No.	Item number	Configuration	Qty
1	E90020	NP7030C preparative pump (300ml/min)	3
2	E90305	NU3000C UV detector(Deuterium lamp)	1
3	S00211	Preparative flow cell (1/8″)	1
4	E92250	INJ-SP preparative injection valve	1
5	E92355	20ml Sample loop	1
6	E92020	Preparative dynamic mixer(1/8″)	1
7	S00150	50mm online filter (1/8″)	1
8	E90950	EasyChrom-1000 chromatography workstation	1
9	E90990	Network controller	1
10	S02310	Preparative HPLC system tool kit	1
11	E90610	DAC-80	1
12	S02405	DAC-80 start-up install kit	1

*Optional

No.	Item number	Configuration	Qty
1	E90310	NU3000D UV-Vis detector (Deuterium and tungsten lamp)	1
2	E95010	ZDAC50/80/100 column packer	1
3	E91010	NC6106 Fraction collector 1/8″ (6 components)	1
4	E91015	NC6112 Fraction collector 1/8″ (12 components)	1

NS4360- Ternary Preparative HPLC System-DAC100

The system is equipped with two NP7060C high pressure preparative infusion pump (600 ml/min) and one NU3000C UV detector, can realize high pressure gradient operation. Another NP7060C injection pump is optional, to realize automatic sampling and manual sampling dual function, supporting DAC column with ID 100 mm.

No.	Item number	Configuration	Qty
1	E90025	NP7060C chromatography pump (600ml/min)	3
2	E90305	NU3000C UV detector(Deuterium lamp)	1
3	S00211	Preparative flow cell (1/8″)	1
4	E92250	INJ-SP manual preparative injection valve	1
5	E92355	20ml Sample loop	1
6	E92020	Preparative dynamic mixer(1/8″)	1
7	S00150	50mm online filter (1/8″)	1
8	E90950	EasyChrom-1000 chromatography workstation	1
9	E90990	Network controller	1
10	S02310	Preparative HPLC system tool kit	1
11	E90610	DAC-100	1
12	S02405	DAC-100 start-up install kit	1

*Optional

No.	Item number	Configuration	Qty
1	E90310	NU3000D UV-Vis detector (Deuterium and tungsten lamp)	1
2	E95010	ZDAC50/80/100 column packer	1
3	E91010	NC6106 Fraction collector 1/8″ (6 components)	1
4	E91015	NC6112 Fraction collector 1/8″ (12 components)	1

NS43100- Ternary Preparative HPLC System-DAC150

System is equipped with two NP7100C high pressure preparative infusion pump (1000 ml/min) and one NU3000C UV detector, and can also equipped with one unit of NP7100C injection pump (1000 ml/min) to satisfy with large volume in demand, realize automatic injection function, supporting DAC column with ID150mm.

No.	Item number	Configuration	Qty
1	E90030	NP7100C chromatography pump (1000ml/min)	3
2	E90305	NU3000C UV detector(Deuterium lamp)	1
3	S00211	Preparative flow cell (1/8″)	1
4	E92020	Preparative dynamic mixer(1/8″)	1
5	S00150	50mm online filter (1/8″)	1
6	E90950	EasyChrom-1000 chromatography workstation	1
7	E90990	Network controller	1
8	S02310	Preparative HPLC system tool kit	1
9	E90610	DAC-150	1
10	S02405	DAC-150 start-up install kit	1

*Optional

No.	Item number	Configuration	Qty
1	E90310	NU3000D UV-Vis detector (Deuterium and tungsten lamp)	1
2	E91010	NC6106 Fraction collector 1/8″ (6 components)	1
3	E91015	NC6112 Fraction collector 1/8″ (12 components)	1

*NS43300- Ternary Preparative HPLC System-DAC300

System is equipped with two NP7300C high pressure preparative infusion pump (3000 ml/min) and one NU3000C UV detector, and can also equipped with one unit of NP7300C injection pump (3000 ml/min) to satisfy with large volume in demand, realize automatic injection function, supporting DAC column with ID200mm/300mm.

No.	Item number	Configuration	Qty
1	E90035	NP7300C chromatography pump (3000ml/min)	3
2	E90305	NU3000C UV detector(Deuterium lamp)	1
3	S00215	Preparative flow cell (1/4″)	1
4	E92080	Preparative dynamic mixer(1/4″)	1
5	S00200	100mm online filter (1/8″)	1
6	E90950	EasyChrom-1000 chromatography workstation	1
7	E90990	Network controller	1
8	S03175	Preparative HPLC system tool kit	1
9	S02410	DAC-200 start-up install kit	1
10	E90625	DAC-200	1

*Optional

No.	Item number	Configuration	Qty
1	E90310	NU3000D UV-Vis detector (Deuterium and tungsten lamp)	1
2	E91020	NC6306 Fraction collector 1/4″ (6 components)	1
3	E91025	NC6312 Fraction collector 1/4″ (12 components)	1
4	E90630	DAC-300	1
5	S02415	DAC-300 start-up install kit	1