

HPLC Constant Pressure Pump

Product Information



Model CP Constant Pressure Pump for Chromatography Column Packing

The Model CP is a high pressure dual piston pump utilizing a constant pressure mode of operation to efficiently pack small diameter packing materials and smaller diameter columns. The constant pressure pump allows constant packing pressures up to 10,000 psi and 12 ml/min.

The use of a variable ramp speed setting allows the user to choose the best flow profile for a given packing. The Model CP reduces turbulence and shear during the packing process, leading to more uniform bed structures and less fines generation than traditional methods of packing using high-pressure pneumatic amplifier pumps. The packing pressure can be monitored during the process to verify performance.

The pump has RS232 or simple keypad control and a digital stepper drive for precise flows and pressures. A [column packing system](#) is also available for use with the model CP. All LabHut pumps include a 3-year warranty.

Standard Features and Controls:

- Dual pump heads for reduced pulsation
- Real-time pressure monitoring with upper/lower pressure limits
- Remote 0-10 volt & remote 0-10 kHz flow rate control input
- Simple front panel key pad controls with LED display
- Autoprime™ one button toggles flow rate to maximum for rapid solvent change
- Motor stall detector
- Dual ball and seat check valves for consistent flow performance
- Prime purge valve
- RS232 serial COM port for complete control & status monitoring
- Run/stop inputs (5 volt TTL type)

Specifications

Flow Rates:	0.01 - 12.0ml/min
Flow Accuracy:	±2%
Flow Precision:	0.2% RSD
Pressure:	0 - 9990psi
Pressure Accuracy:	±1% of full scale pressure

Physical Characteristics

Dimensions (W x H x D):	260 x 150 x 460mm
-------------------------	-------------------

Mass:

14kg

Description	Part No	Qty	Price
Model CP Constant Pressure Pump, non-flush, 0.01-12 ml/min, 10000 psi, with transducer and RS-232 control, SS, 110/220V	F05SNXP1	Each	
Model CP Constant Pressure Pump, non-flush, 0.1-24 ml/min, 10000 psi, with transducer and RS-232 control, SS, 110/220V	P10SNXP1	Each	

HPLC Constant Flow Pump

Product Information

The Series 1500 Constant Flow Pump for Analytical Chromatography Applications



The Series 1500 Constant Flow Pump has been designed for analytical to small-scale preparative chromatography applications. The patented low-dead-volume pulse damper and dual piston mechanism make this pump virtually pulse-free, and provide unmatched performance for the most demanding applications. The unit provides constant flow rates from 0.01 to 12.0 ml/min and is typically suitable for columns from 2mm up to 22mm ID.

The Series 1500 drive features a linear cam and pressure compensation to provide accurate gradients in the high- or low-pressure mode.

Standard controls include RS-232 serial communication port and Run/Stop inputs, remote frequency and remote voltage controls, real-time pressure monitoring, and constant flow.

The use of modern digital stepper motor technology and high-performance mechanical design provide accurate pressures to 6,000 psi. All LabAlliance pumps include a 3 year warranty.

Standard Features and Controls:

- Dual Self Flushing Pump Heads for Reduced Pulsation
- Pulse Damper for Reduced Dead Volume
- Real-time pressure monitoring with upper/lower pressure limits
- Remote 0-10 volt & remote 0-10 kHz Flow Rate Control Input
- Simple Front Panel Key Pad Controls with LED Display
- Autoprime™ one button toggles flow rate to maximum for rapid solvent change
- Motor Stall Detector
- Dual ball and seat Check Valves for Consistent Flow Performance
- Prime Purge Valve
- RS-232 Serial Com Port for Complete Control & Status Monitoring
- Run/stop Inputs (5 volt TTL type)
- Stainless Steel or PEEK Fluid Path

Specifications

Flow Rates:	0.01 - 12.0ml/min
Flow Accuracy:	±2%
Flow Precision:	0.2% RSD
Pressure:	0 - 6000psi (stainless steel) 0 - 5000psi (PEEK)
Pressure Accuracy:	±1% of full scale pressure
Pulsation:	±0.5% at 1ml/min and 1000psi

Physical Characteristics

Dimensions (W x H x D):	260 x 150 x 460mm
Mass:	14kg

Description	Part No	Qty	Price
Series 1500 Pump, self-flush, 0.01-12ml/min, PEEK, 110/220V, minipulse with pressuring monitoring and RS-232 control	F05PFD01	Each	
Series 1500 Pump, self-flush, 0.01-12ml/min, SS, 110/220V, minipulse with pressuring monitoring and RS-232 control	F05SFD01	Each	

Digital Metering Pump (Series I)

Product Information

Series I Digital Pump for General Metering or Chromatography Applications. Now with 3 flow ranges — Stainless Steel or PEEK



The Series I Pump provides precise, reproducible flow in an economical package. The unit is designed for use in a variety of applications, including metering and liquid chromatography.

Driven by a high-resolution stepper motor, the Series I Pump has several flow control options, including RS-232 and remote voltage control. User selectable upper and lower pressure limits and real time pressure monitoring (via RS-232 or display) is also available.

The pump is designed for use in many applications. The PEEK fluid paths make it ideal for pumping most common HPLC solutions.

The use of modern manufacturing methods combined with years of industry experience provides the performance of the most expensive pumps at an exceptional value.

Two flow rate ranges are available to match most applications. In addition to proven reliability, the Auto-Flush™ piston wash and easy seal change procedures keep maintenance costs down.

The pump includes a 3-year warranty.

Standard Features and Controls:

- Self Flushing Pump Head
- Simple Key Pad Controls with LED Display (0.01ml increments)
- Single Piston with Electronic Rapid Refill Mechanism
- Motor Stall Detector
- Spring Loaded Check Valves Available for Consistent Performance at Low Flow
- RS-232 Serial Com Port for Complete Control & Status Monitoring
- Run/stop Inputs (5 volt TTL type)

Specifications

Flow Rates:	0.01 - 10.0ml/min
Flow Accuracy:	±2% at midpoint of flow
Flow Precision:	0.5% RSD
Pressure:	0 - 3000psi
Pressure Accuracy:	±2% of full scale pressure
Flow-Pressure curves available on request	

Physical Characteristics

Dimensions (W x H x D):	191 x 159 x 254mm
Mass:	8.6kg

Description	Part No	Qty	Price
Series I Pump, self-flush, 0.01-9.99ml/min, maximum 2500psi, Bioclean, 110/220V	110PFN01	Each	
Series I Pump, self-flush, 0.01-9.99ml/min, maximum 2500psi, Stainless steel, 110/220V	110SFN01	Each	
Series I Pump, self-flush, 40ml/min, PEEK, 110/220V	140PFN01	Each	
Series I Pump, self-flush, 40ml/min, Stainless Steel, 110/220V	140SFN01	Each	
Series I Pump, 40ml/min, with voltage and frequency control, PEEK, 110/220V	V40PFN01	Each	
Series I Pump, 40ml/min, with voltage and frequency control, Stainless Steel, 110/220V	V40SFN01	Each	

Series I Pump, 10ml, with pressure monitoring, PEEK, 110/220V	V10PFT01	Each
---	----------	------

Series I Pump, 10ml, with pressure monitoring, stainless steel, 110/220V	V10SFT01	Each
--	----------	------

Isocratic HPLC Pump (Series II)

Product Information

The Series II is an isocratic pump for basic applications



The Series II pump consists of a series of modular subassemblies packaged to meet basic metering and chromatography application requirements. The extensive use of digital logic and a micro-stepped motor allow for precise and flexible control. The user interface consists of an LED display and keypad. The use of the self-flush head and a three-year warranty ensure years of trouble-free service. Method development is easy with Autoprime™ purging. The Series II is designed to give the modern chromatographer state-of-the-art capability at a value price.

Meets the most demanding applications:

The patented low dead volume pulse damper and rapid refill in the Series II make this single-piston pump virtually pulse-free. It meets the requirements of the most demanding detectors.

Analytical and preparative separations:

Flow rates from 0.01 - 10ml/min or 0.04 - 40 ml/min are available.

Material compatibility for all applications:

Available in either traditional 316 stainless steel or biocompatible PEEK™ (polyetherether ketone) for metal-sensitive applications. Choose the material best suited for each application.

Reduced maintenance:

Seal life is dramatically extended by actively flushing the back of the primary seal with a flushing solution. The result is less down-time and reduced operating expenses. The self-flush is automatic; just change the flushing fluid weekly. Seals can be changed in five minutes without tools.

Easy solvent changes:

Autoprime™ one-button purging makes it easy to prime or purge the pump.

Works in your existing system:

The Series II is a direct replacement for many pumps including Waters, Shimadzu and other leading brands.

Performance beyond its price and the security of a 3-year warranty:

The use of modern digital stepper motor technology and the proven single-piston design gives the performance of the most expensive pumps at a fraction of their cost. The operating cost is lower too, due to the simplicity of the design and fewer number of parts required. It's so reliable it carries a three-year warranty.

Intended Applications:

- Isocratic applications and metering

- Biocompatible applications
- Semi-preparative to 40ml/min
- Research and development
- Quality assurance
- Education

Isocratic Pump (Series III)

Product Information

The Series III is an isocratic pump for advanced applications



The Series III pump consists of a series of modular subassemblies packaged to meet any isocratic application requirements. The extensive use of digital logic and a micro-stepped motor allow for precise and flexible control. The user interface consists of an LED display and keypad. The self-flush head and a three-year warranty ensure years of trouble-free service. Method development is easy with Autoprime purging. Upper and lower pressure limits can be easily set, and the pressure can be monitored on the LED display.

External control gives flexible performance at an affordable price. The Series III is designed to give the modern chromatographer state-of-the-art capability at a value price.

The Series III includes several remote inputs: an RS232 serial communications port, frequency (0-10kHz), enable run, stop, voltage (0-10V).

Meets the most demanding applications:

The patented low dead volume pulse damper and rapid refill in the Series III make this single-piston pump virtually pulse-free. It meets the requirements of the most demanding detectors.

Analytical and preparative separations:

Flow rates from 0.01 - 10ml/min or 0.04 - 40 ml/min are available.

Material compatibility for all applications:

Available in either traditional 316 stainless steel or biocompatible PEEK™ (polyetherether ketone) for metal-sensitive applications. Choose the material best suited for each application.

Reduced maintenance:

Seal life is dramatically extended by actively flushing the back of the primary seal with a flushing solution. The result is less down-time and reduced operating expenses. The self-flush is automatic; just change the flushing fluid weekly. Seals can be changed in five minutes without tools.

Easy solvent changes:

Autoprime™ one-button purging makes it easy to prime or purge the pump.

Works in your existing system:

The Series III is a direct replacement for many pumps including Waters, Shimadzu and other leading brands.

Performance beyond its price and the security of a 3-year warranty:

The use of modern digital stepper motor technology and the proven single-piston design gives the performance of the most expensive pumps at a fraction of their cost. The operating cost is lower too, due

to the simplicity of the design and fewer number of parts required. It's so reliable it carries a three-year warranty.

Intended Applications:

- Isocratic applications and metering
- Biocompatible applications
- Semi-preparative to 40ml/min
- Research and development
- Quality assurance
- Education

Specifications

Flow Rates:	0.01 - 9.99ml/min (50µl head) 0.04 - 40ml/min (200µl head)
Accuracy:	2%
Precision:	0.2% RSD
Pressure:	0 - 6000psi (50µl head) 0 - 1500psi (200µl head)

Physical Characteristics

Dimensions (W x H x D):	264 x 140 x 445mm
Mass:	11kg
Power:	110/220V AC, 50/60Hz

Description	Part No	Qty	Price
Series III Pump, self-flush, 0.01-9.99ml/min, Bioclean, 110/220V, with external control	310PFT01	Each	
Series III Pump, self-flush, 0.01-9.99ml/min, Stainless steel, 110/220V, with external control	310SFT01	Each	
Series III Pump, self-flush, 0.04-40.00ml/min, Bioclean, 110/220V, with external control	340PFT01	Each	
Series III Pump, self-flush, 0.04-40.00ml/min, Stainless steel, 110/220V, with external control	340SFT01	Each	

Flash 2000 Digital Pump

Product Information

The Flash 2000 digital pump for flash chromatography applications

Features:

- Prime purge valve
- Autoprime™ one button toggles flow rate to maximum for rapid solvent change
- Front panel flow adjustment: 0.01ml/min increments to 24ml/min; 0.1ml/min to 100ml/min
- Digital stepper motor design prevents flow rate drift over time and temperature



I/O:

- Run/stop inputs (5 volt TTL type)
- 0 - 10 volt, 0 - 10 KHz flow rate control input
- RS232 serial communications port for complete control and status monitoring

Specifications

Flow Rates:	0.01 - 24ml/min or 0.1 - 100ml/min (depending on head selection)
Flow Accuracy:	±2%
Flow Precision:	0.5% RSD
Pressure:	0 - 500psi or 0 - 2000psi (depending on head selection)
Pressure Accuracy:	±2% of full scale pressure
Pressure Zero Offset:	±2psi
Pulsation:	±4% at 50ml/min and 250psi

Physical Characteristics

Dimensions (W x H x D):	264 x 140 x 445mm
Mass:	6.2kg

Description

Flash 2000 Pump, self-flush, 0.1-100ml/min, PEEK, 110/220V, with transducer and external control

Part No

Qty

Price

F40PFX01

Each

Flash 2000 Pump, self-flush, 0.1-100ml/min, SS, 110/220V, with transducer and external control

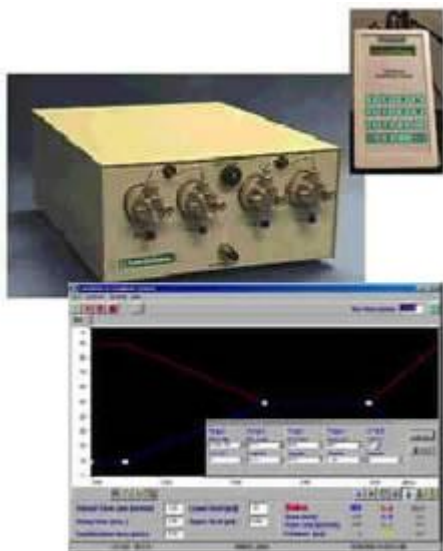
F40SFX01

Each

Q-Grad Pump

Product Information

Quaternary High Pressure Gradient Pump



The Q-Grad Pump provides high-pressure quaternary gradients for HPLC applications. Four high-performance pumps are packaged into a single cabinet and are controlled with PC-driven software. The result is high-pressure gradient capability that is as economical as low pressure mixing systems.

The Q-Grad Pump utilizes a very efficient pulse damper mixer to ensure high performance gradients. A prime-purge valve and electronic pressure transducer are also standard. All LabAlliance pumps carry a 3-year warranty.

The Q-Grad pump is controlled by standard RS-232 communication via a single serial port of the PC using LabAlliance Q-Grad software.

Run/Stop inputs and real-time Pressure Monitoring (with upper and lower pressure limits) are also standard.

External synchronization from an injector/autosampler may be enabled using the cables that are provided with the software kit. The user-friendly software permits editing of the gradient profile using a graphic gradient editor (GGE) in addition to the standard time table.

Standard Pump Features:

- Self Flushing Pump Heads
- Prime-Purge Valve
- Pulse Damper for Reduced Pulsation
- Stainless Steel or PEEK Fluid Path
- Motor Stall Detector
- Spring Loaded Check Valves

Standard Pump Controls:

- RS-232 Serial COM Port (each pump)
- Run/stop Input (each pump) - 5 volt TTL type
- Real Time Pressure Reading

Gradient Control:

Gradient control is achieved via host PC and LabAlliance Q-Grad control software. Communication from Pump Module to PC is through four RS-232 interface cables.

Typical Pump Gradient Percent Range:

- 0-100% in 0.1% increments
- Percents B, C, D programmable
- Percent A automatically adjusted

Specifications

Flow Rates:	0.1 - 5.0ml/min (each pump head)
Flow Accuracy:	±2%
Flow Precision:	0.2% RSD
Pressure:	0 - 6000psi (stainless steel)

0 - 5000psi (PEEK)

Pressure Accuracy: $\pm 1\%$ of full scale pressure

Pulsation: $\pm 1\%$ at 1ml/min and 1000psi

Physical Characteristics

Dimensions (W x H x D): 264 x 190 x 445mm

Mass: 16kg

Power: 110-220V AC, 50/60Hz

Description	Part No	Qty	Price
Q-Grad quaternary high-pressure gradient pump, 5ml heads, w/pulse damper & transducer, PEEK, no control. Control must be ordered separately.	Q05PFD01	Each	
Q-Grad quaternary high-pressure gradient pump, 5ml heads, w/pulse damper & transducer, SS, no control. Control must be ordered separately.	Q05SFD01	Each	

International Co. for Lab. Instruments

45 Shalhoub st. Ain Shams, Cairo, Egypt+ Post Code 11311



+202 24916139 or +202 24916139



+202 24953441