

Smartline HPLC Pump 1000

Overview

This highly reliable high-performance chromatography pump can be fitted with either a 10 ml or 50 ml/min. pump head. The pump has been developed for practically pulsation-free operation with reduced maintenance for the user.

Accurate and Precise

The pump design ensures very low rest pulsation giving exceptional flow accuracy and pumping precision for reproducible chromatography.

Two Pumpheads

Two interchangeable inert pump heads for micro HPLC, analytical HPLC and semi-preparative HPLC applications are available. Built-in back-flushing capability gives greatly improved reliability for unattended operation.

Compact

The pump has been designed to fit directly into the Smartline instrument family as part of a system tower. The modular design of the detector means that it can also be used as a completely separate HPLC module and its small size allows it to be installed practically anywhere.

Gradient Capability

This pump contains the logic needed for gradient operation, together with the Smartline Manager it can be extended without requiring a PC to realise a low pressure gradient system for up to four solvents, alternatively extra pumps can be added to form a high pressure gradient system up to a maximum of four pumps.



Specifications

Delivery system	Dual piston pump with main and auxiliary piston	
Flow ranges	0.001 - 9.999 ml/min	0.01 - 49.99 ml/min
Pressure	max. 400 bar	max. 150 bar
Flow accuracy	better then 0.5 % RSD (Relative Standard Deviation) at 1 ml/min.	
Flow precision	better than 0.1 % at 1 ml/min	
Display	LCD, 2 x 24 characters	
System protection	Softstart, permanently available analogue pressure output, digital setting of Pmax and Pmin	
Remote control	RS-232 Interface, Remote inputs for stop and flow, output for error conditions and pressure, analogue flow control from 0 - 10 volts (The pump can be controlled via Geminix Software.)	
Local programming	Maximum 20 programs can be created and stored locally (without PC) plus 10 Links, possibility to set up an Emergency program	
GLP	Recording of running time, pump cycles, total volume, installation, maintenance and errors	
Features	Addition of an electric switching valve allows use of solvent recycling or fraction collection.	
Dimensions	226 x 135 x 390 mm (W x H x D)	
Weight	5.2 kg	
All specifications may be subject to change for technical reasons.		

Ordering Information

A50303	Smartline HPLC Pump 1000 with 10 ml pump head with stainless steel inlays
A50313	Smartline HPLC Pump 1000 with 50 ml pump head with stainless steel inlays
A50304	Smartline HPLC Pump 1000 with 10 ml pump head with stainless steel inlays, especially for aqueous media
A50314	Smartline HPLC Pump 1000 with 50 ml pump head with stainless steel inlays, especially for aqueous media
A50301	Smartline HPLC Pump 1000 with 10 ml pump head with titanium inlays
A50311	Smartline HPLC Pump 1000 with 50 ml pump head with titanium inlays
Gradient Options	
A5331	Smartline Manager 5050 with analytical degasser, interface and lpg modules
A5332	Smartline Manager 5050 with analytical degasser and interface modules
A5333	Smartline Manager 5050 with analytical degasser and lpg modules
A5338	Smartline Manager 5050 with semi-preparative degasser, interface and lpg modules
Accessories	
A5326	Eluent tray
A0248	Set of titanium capillaries for bio-compatible applications
A5342	Set of static mixing chambers (A5340, A5341)
A5350	SmartMix HPLC Mixer up to 0.5 ml/min.
A5351	SmartMix HPLC Mixer up to 2 ml/min.
A54103	10 ml pump head with stainless steel inlays
A54113	50 ml pump head, inert, with stainless steel inlays
A54104	10 ml pump head with stainless steel inlays, especially for aqueous media
A54114	50 ml pump head with stainless steel inlays, especially for aqueous media
A54101	10 ml pump head with titanium inlays
A54111	50 ml pump head, inert, with titanium inlays
A0895	RS232 cable for serial PC interface

Accessories and Spare Parts, 10 ml Pump Heads	
A0684	Check valve unit
A1410	Piston rod, 1/8"
A1414	2 piston seals and 1 O-ring
A1514	Seal set, (1 high-pressure seal, 1 low-pressure seal, 1 O-ring)
A1515	Seal set for aqueous media, (1 high-pressure seal, 1 low-pressure seal, 1 O-ring)
Accessories and Spare Parts, 50 ml Pump Heads	
A0684	Check valve unit
A1411	Piston rod, 1/4"
A0768	2 piston seals and 1 O-ring
A0981	Seal set, (1 high-pressure seal, 1 low-pressure seal, 1 O-ring)
A0982	Seal set for aqueous media, (1 high-pressure seal, 1 low-pressure seal, 1 O-ring)