SerCoLab
Services and Controls for Laboratories

Separations
Analytical Instruments b.v.

Knauer AZURA P 6.1L

Quaternary analytical HPLC pump

Article number: APH34EA

The AZURA pump P 6.1L uses technology to overcome the challenges of pumping LC solvents at high pressure and high flow rates. This pump is designed to fulfill the needs for low pressure mixing tasks.

The pump can deliver flow in the range of 0.001 – 10 mL/min at pressures up to 700 bar. The AZURA quaternary pump contains one high pressure pump (700 bar) and an integrated LPG mixing block with a 4 x 2-channel inlet solvent selection valve and the new developed AZURA mixer, a low-volume mixing device.

The integrated degasser and AZURA inline filter are completing the Analytical AZURA HPLC pump and turn this pump into a working horse in the lab.

For biocompatible applications or ion chromatography this pump is also available with a complete metal free design.

Key features

- Quaternary analytical HPLC pump offers wide range of flow rates (0.001-10 ml/min)
- Integrated degasser module
- Pressure sensor with integrated and replaceable AZURA inline filter
- Solvent selection valves for two solvents per channel
- AZURA mixer for highest mixing efficiency with lowest delay volumes
- Flexible 1/16“ capillaries
- Pump version for biocompatible applications with a metal free design
- Integrated compressibility compensation
- Integrated leak management
- Constant pressure operation mode

SerCoLab
Services and Controls for Laboratories

Separations
Analytical Instruments b.v.

Technical data

Pump type	quaternary HPLC pump with degasser
Solvent delivery	
Pump head	10 ml/min, with spring-loaded check valves
Pulsation compensation	active pressure and pulsation compensation
Pump head materials	stainless steel
Maximum delivery pressure	70 Mpa (700 bar, 10150 psi) up to 5 ml/min, 40 MPa (400 bar, 5800 psi)
Flow rate range	0.001 - 10 ml/min 0.02 - 10 ml/min (recommended)
Flow rate increment	0.001 ml/min
Flow rate accuracy	± 1%, measured at 5 - 80% of flow range using ethanol
Flow rate precision	< 0.1 % RSD based on retention time at constant room temperature
Pulsation	< 2 % amplitude (typically < 1.3 %) or < 0.3 MPa (3 bar), whatever is greater, at 1 mL/min ethanol, at all pressures > 1 MPa (10 bar, 147 psi).
Gradient formation	low pressure quaternary mixing
Gradient range	0-100% 1-99% (recommended)
LPG: minimum increment	0.1%
LPG: gradient accuracy	± 0.3 % at 1 ml/min, 150 bar (ethanol/caffeine tracer) ± 2 % (1 - 99 %, measured at 5 - 50 % of the flow range, water/caffeine tracer)
LPG: gradient precision	< 0.1 % RSD at 1 ml/min, 0.3% RSD overall, based on retention time at constant room temperature
Mixing volume	50, 100, 200 µl
Delay volume	210 µl (depending on mixer)
Piston seal washing	standard
System protection	soft start, P_{min} and P_{max} are programmable
Wetted Materials	stainless steel, graphite fiber reinforced PTFE, FKM, PEEK, sapphire, zirconium oxide (ZrO_2)
Communication	
Control	LAN; analog and event controlled
Technical parameters	
Ambient conditions	temperature range: 10-40°C; 50-104°F air humidity: below 90 % humidity (non condensing)
Leak sensor	yes
General	
Power supply	voltage range: 100 - 240 V, 50 - 60 Hz
Dimensions	361 x 208.2 x 523 mm (W x H x D)
Weight	12.7 kg
Special features	automatic adaption of LPG cycle time

Visit www.sercolab.be or www.separations.nl for details on complete HPLC systems, HPLC columns and Accessories.

Contacts Belgium - Luxemburg:

SerCoLab bvba
Westkaai 7
B-2170 Merksem

Tel +32 (0)3 640 33 15
Fax +32 (0)3 644 04 05
E-mail: info@sercolab.be

Contacts The Netherlands:

Separations A.I.
Veersedijk 59
3341LL Hendrik-Ido-Ambacht

Tel +31 (0)78 62 20 500
Fax +31 (0)78 68 13 059
E-mail: info@separations.nl