

## Knauer AZURA P 6.1L

Binary analytical HPLC pump

Article number: APH30EA



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 high pressure and 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 Binary Pump contains two identical high pressure pumps (700 bar), 2 × 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

- Binary 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

## Technical data

<b>Pump type</b>	binary HPLC pump with degasser
Solvent delivery	
<b>Pump head</b>	10 ml/min, with spring-loaded check valves
<b>Pulsation compensation</b>	active pressure and pulsation compensation
<b>Pump head materials</b>	stainless steel
<b>Maximum delivery pressure</b>	70 Mpa (700 bar, 10150 psi) up to 5 ml/min, 40 MPa (400 bar, 5800 psi)
<b>Solvent selection valve</b>	2 x 2 channels
<b>Flow rate range</b>	0.001 - 10 ml/min 0.02 - 10 ml/min (recommended)
<b>Flow rate increment</b>	0.001 ml/min
<b>Flow rate accuracy</b>	± 1%, measured at 5 - 80% of flow range using ethanol
<b>Flow rate precision</b>	< 0.1 % RSD based on retention time at constant room temperature
<b>Pulsation</b>	< 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).
<b>Gradient formation</b>	high pressure binary mixing
<b>Gradient range</b>	0-100% 5-95% (recommended)
<b>HPG: minimum increment</b>	0.1%
<b>HPG: gradient accuracy</b>	± 0.3 % at 1 ml/min, 150 bar (ethanol/caffeine tracer) ± 1 % (5 - 95 %, measured at 0.1 - 10 ml/min, water/caffeine tracer)
<b>HPG: gradient precision</b>	< 0.1 % RSD at 1 ml/min, 0.3% RSD overall, based on retention time at constant room temperature
<b>Mixing volume</b>	50, 100, 200 µl
<b>Delay volume</b>	110 µl (depending on mixer)
<b>Piston seal washing</b>	standard
<b>System protection</b>	soft start, P <sub>min</sub> and P <sub>max</sub> are programmable
<b>Wetted Materials</b>	stainless steel, graphite fiber reinforced PTFE, FKM, PEEK, sapphire, aluminium oxide (Al <sub>2</sub> O <sub>3</sub> )
Communication	
<b>Control</b>	LAN; analog and event controlled
Technical parameters	
<b>Ambient conditions</b>	temperature range: 10-40°C; 50-104°F air humidity: below 90 % humidity (non condensing)
<b>Leak sensor</b>	yes
General	
<b>Power supply</b>	voltage range: 100 - 240 V, 50 - 60 Hz
<b>Dimensions</b>	361 x 208.2 x 523 mm (W x H x D)

Visit [www.sercolab.be](http://www.sercolab.be) or [www.separations.nl](http://www.separations.nl) for details on complete HPLC systems, HPLC columns and Accessories.

### Contacts Belgium - Luxembourg:

SerCoLab bvba      Tel +32 (0)3 640 33 15  
Westkaai 7        Fax +32 (0)3 644 04 05  
B-2170 Merksem    E-mail: [info@sercolab.be](mailto:info@sercolab.be)

### Contacts The Netherlands:

Separations A.I.                      Tel +31 (0)78 62 20 500  
Veersedijk 59                        Fax +31 (0)78 68 13 059  
3341LL Hendrik-Ido-Ambacht    E-mail: [info@separations.nl](mailto:info@separations.nl)