



## nano-High Pressure Pump

Accurate Flow for Pressures Up to 18,000 psi



**nano-High Pressure Pump (18,000 psi)**  
For High Throughput HPLC and Column Packing

### Versatility and Unmatched Performance

The **nano High Pressure Digital Pump** has been specifically designed for Analytical to high speed, high resolution Chromatography applications. Also, a constant pressure version has been developed to allow packing of particle in the 1 micron to 10 micron range.

The Analytical Pump provides flow rates from 0.001 to 5.000 mL/min, with flow settings in 1  $\mu$ L increments. Pulse-free flow in the Analytical Pump is guaranteed by using advanced solvent recompression algorithms and automatic pressure compensation which provides unmatched performance for the most demanding applications.

The Packing Pump has flow range settings from 0.001 to 12mL/min with flow controlled by the pressure setting.

The **nano HP Digital Pump** is offered as a freestanding unit or in kit form for OEM applications.

### Accuracy Over the Entire Pressure Range

The Ultra HP drive offers a linear cam and pressure compensation to provide accurate flow in the most demanding chromatography applications at normal HPLC pressures all the way to 18,000 psi.

The use of modern digital stepper motor technology and high performance mechanical design provide accurate flow rates and pressures over the entire performance range.

### Easy Control

Standard controls include RS-232 serial communication port (for complete control and pump status monitoring) and Run/Stop inputs. Also standard are remote frequency & remote voltage controls and real-time pressure monitoring with user selected high and low pressure limits. The Ultra HP column packing pump comes with Quick set software for unmatched control of the packing process.



### nano-High Pressure Pump Specifications

<b>Flow Rates</b> .....	0.001 - 12.0 mL/min. Constant Pressure 0.001 - 5.0 mL/min. Analytical
<b>Pressure</b> .....	18,000 psi
<b>Pulsation</b> .....	± 0.75% from 3,000 to 18,000 psi
<b>Pressure Accuracy</b> ..	± 2% of full scale pressure
<b>Flow Accuracy</b> .....	<± 1% at 1 mL/min 10,000 psi with Methanol
<b>Flow Precision</b> .....	0.5% RSD on > 30 sec. average flows
<b>Physical</b> .....	5.5" H x 10.375" W x 17.5" D (14 x 26 x 44 cm)
<b>Weight</b> .....	30 lbs. (13.6 kg)

### Standard Controls & Options

- RS-232 Serial Com Port for Complete Control & Status Monitoring
- Run/stop Inputs (5 volt TTL type)
- Remote 0 - 10 volt & remote 0 – 10 kHz Flow Rate Control Input
- Pressure monitoring (via transducer) with user selected upper/lower pressure limits
- Process Control Option: Constant Flow: User selectable flow rate set point.
- Flow accuracy maintained across the pressure range.
- Constant Pressure: User selectable pressure set point.
- Pump flow rate auto-adjusts to maintain pressure.

### Standard Features & Options

- Stainless Steel fluid path
- Dual pump heads, cam-driven with single stepper motor drive
- Auto Prime™ one button toggles flow rate to maximum for rapid solvent change
- The standard self-flush seal washer dramatically extends the seal life when buffers are used.
- Front keypad control LCD display with (pressure, flow, set points, etc.) Analytical
- Front keypad control, w/LED display (pressure, flow, set points, etc.) CP
- Advanced solvent recompression algorithms in analytical pump
- Electronic pressure transducer
- Outlet filter (bulkhead mount)
- Quick Set software for CP pump
- Available in Kit-Form for OEM applications

*For all kits, please call to request a quote.*

### Ordering Information

Description	Part No.
Analytical nano-High Pressure Pump	U05SFX01
Constant Pressure nano-High Pressure Pump	F05SNXP1-SP1



**Analytical**®  
Technologies Limited

Analytical Group Companies  
**Analytical Technologies Limited**  
 Analytical Bio-Technologies  
 Analytical Bio- Medical Solutions  
 HPLC Solutions



Team India

### Corporate & Regd. Office :

Analytical House, # E67 & E68. Ravi Park, Opp., Sainath Park, Vasna Road, Baroda, Gujarat - 390 015. INDIA

Tele : 0265-2253620 / 2252839 Fax : 0265-2254395 E-mail : info@hplctechnologies.com / info@ais-india.com

Web : www.ais-india.com / www.analyticalgroup.net