



# Agilent 1260 Infinity Nanoflow Pump

## Features, Specifications and Ordering Details



### Nanoflow LC

The Agilent 1260 Infinity Nanoflow Pump uses a unique solvent delivery technology optimized for nanoliter-per-minute flows and features Electronic Flow Control (EFC) with active feedback and real time flow adjustment. EFC is the gold standard for robust and reliable nanoflow performance and delivers accurate and precise flow and gradient performance necessary for retention time reproducibility and stable ion generation essential for high sensitivity nanospray MS performance. The Agilent 1260 Infinity Nanoflow Pump can also be configured to deliver standard LC flow rate up to 2.5 mL/min.

### Features

- Reliable and reproducible results – Electronic Flow Control (EFC) provides real-time adjustment of the flow rate throughout the analysis for reliable and reproducible results.
- Two pumps in one – use nanoflow mode for optimized flow rates from 100 nL/min to 1 µL/min; use normal mode for flow rate up to 2.5 mL/min with easy hardware changes.
- Micro vacuum degassing with very low internal volume per channel (1 mL) for fast changeover of mobile phase and quick purge.
- Industry leading flow sensor technology for accurate nanoflow.
- Control from handheld controller for convenient local status monitoring and MS coupling.
- Application focus: High resolution separations and high sensitivity MS detection, ideal for nanoelectrospray proteomic experiments.



**Agilent Technologies**

## Specifications – Agilent 1260 Infinity Nanoflow Pump

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<b>Hydraulic system</b>	Two dual piston in series, with proprietary servo-controlled variable stroke drive, floating piston, active inlet valve, solvent selection valve and electronic flow control for flow rates from 0.1 to 1 $\mu\text{L}/\text{min}$ .
<b>Settable column flow range</b>	0.01 – 4 $\mu\text{L}/\text{min}$ , 1 – 2500 $\mu\text{L}/\text{min}$ (with the electronic flow control bypassed).
<b>Recommended column flow range</b>	0.1 – 1 $\mu\text{L}/\text{min}$ 200 – 2500 $\mu\text{L}/\text{min}$ (with the electronic flow sensor bypassed).
<b>Optimum composition range</b>	1 to 99% or 5 $\mu\text{L}/\text{min}$ per channel (primary flow), whatever is greater.
<b>Composition precision</b>	< 0.2 % SD, at 500 nL/min (default settings) Minimum primary flow/pump channel is 5 $\mu\text{L}/\text{min}$ .
<b>Delay volume</b>	Typically 300 nL from the electronic flow control to the pump outlet for flow rates up to 4 $\mu\text{L}/\text{min}$ . For flow rates up to 4 $\mu\text{L}/\text{min}$ and electronic flow control active: primary flow path 180 - 480 $\mu\text{L}$ ; system pressure dependent (default settings; calculated volume) Typically 180 to 480 $\mu\text{L}$ (system pressure dependent) for flow rates up to 2.5 mL/min. (default settings; calculated volume)
<b>Pressure range</b>	20 to 400 bar (5880 psi) system pressure.
<b>Compressibility compensation</b>	User-selectable, based on mobile phase compressibility.
<b>Recommended pH range</b>	1.0 – 8.5, solvents with pH < 2.3 should not contain acids which attack stainless steel. Upper pH range is limited by fused silica capillaries.
<b>Control and data evaluation</b>	Agilent ChemStation for LC and Agilent MassHunter for LC/MS.
<b>Analog output</b>	For pressure monitoring, 2 mV/bar, one output.
<b>Communications</b>	Controller-area network (CAN), GPIB, RS-232C, APG Remote: ready, start, stop and shut-down signals, LAN optional.

## Ordering Details – Agilent 1260 Infinity Nanoflow Pump

The Agilent 1260 Infinity Nanoflow Pump can be ordered as a stand alone module with micro vacuum degasser or as a pre-configured system with the Agilent 1200 Series Instant Pilot control module and the Agilent 1260 Infinity High Performance Micro Autosampler. Both configurations are described below. Whatever system configuration is chosen as starting point – the modular, scalable and open system architecture of the Agilent 1260 Infinity Nanoflow Pump allows future expandability and adaptability to other configurations and applications. Please contact your local sales representative for more detailed information and further advice.

### Agilent 1260 Infinity Nanoflow Pump and other recommended modules

Description	Product Number
<b>Agilent 1260 Infinity Nanoflow Pump</b> with micro vacuum degasser	G2225A
<b>Agilent 1260 Infinity High Performance Micro Autosampler</b>	G1377A
<b>Agilent 1290 Infinity Thermostat</b> for thermally labile samples	G1330B
<b>Agilent 1200 Infinity Series Instant Pilot</b>	G4208A
<b>To expand the system the following additional modules can be ordered:</b>	
<b>Agilent 1290 Infinity Thermostatted Column Compartment</b> and micro column switching option for enrichment method and 2D LC	G1316A G1316A#056
<b>Agilent 1290 Infinity Thermostat</b> for thermally labile samples	G1330B
<b>A 2nd pump in the system</b> for enrichment method for HPLC-Chip/MS and/or 2D LC	
<b>Agilent 1260 Infinity Capillary Pump</b> with micro vacuum degasser	G1382A
<b>Agilent 1260 Infinity Chip Cube MS Interface</b>	G4240A

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