



Agilent 1290 Infinity II High Speed Pump

Data Sheet

Product Description

The Agilent 1290 Infinity II High Speed Pump is designed to enhance your efficiency through highest speed and ultimate chromatographic performance. A low-delay-volume mixer allows you to run ultrafast gradients for narrow-bore applications for highest laboratory efficiency. The new 1290 Infinity II LC power range guarantees highest instrument efficiency, allowing you to run any HPLC and UHPLC method. The full ISET range enables you to seamlessly transfer existing methods from different instruments, including current Agilent systems as well as instruments from other manufacturers. Furthermore, proven technologies, such as active damping, automatic purge valve, new ultralow dispersion kits or lowest delay-volume capability, combine to achieve highest instrument and analytical efficiency.



Features

- Ultimate performance in terms of accuracy and precision for flow and composition.
- Infinite power range combining ultrahigh pressure up to 1300 bar and high analytical flow rates up to 5 mL/min for maximum chromatographic performance.
- The unique Intelligent System Emulation Technology (ISET) enables the emulation of current Agilent 1100, 1200 and 1260 Infinity series instrument, as well as Waters Alliance, Waters H-Class, Waters Acquity and Shimadzu Prominence.
- Lowest delay volumes (to 10 μ L) for running ultrafast gradients on narrow-bore columns make this pump the perfect front-end for LC/MS applications.
- Active damping with independently controllable high resolution pump drives and firmware-embedded tuning algorithms significantly reduce ripples and associated UV noise.
- The new Agilent Jet Weaver mixer, based on multi-layer microfluidic technology, facilitates highest efficiency mixing in combination with lowest delay volume for highest UV-detector sensitivity.
- Integrated high efficiency degasser with low internal volume is based on PTFE AF technology and offers fast change-over of solvents for purging and priming the pump.
- Built-in active seal-wash for increased uptime.

Specifications

Table 1 Physical Specifications

Type	Specification	Comments
Weight	21.0 kg (46.3 lbs)	
Dimensions (height × width × depth)	200 x 396 x 436 mm (7.9 x 15.6 x 17.2 inches)	
Line voltage	100 – 240 V~, ± 10 %	Wide-ranging capability
Line frequency	50 or 60 Hz, ± 5 %	
Power consumption	210 VA / 180 W	
Ambient operating temperature	4 – 55 °C (39 – 131 °F)	
Ambient non-operating temperature	-40 – 70 °C (-40 – 158 °F)	
Humidity	< 95 % r.h. at 40 °C (104 °F)	Non-condensing
Operating altitude	Up to 3000 m (9842 ft)	
Non-operating altitude	Up to 4600 m (15092 ft)	For storing the module
Safety standards: IEC, EN, CSA, UL	Installation category II, Pollution degree 2	For indoor use only.

Table 2 Agilent 1290 Infinity II High Speed Pump (G7120A) Performance Specifications

Feature	Specification
Hydraulic system	Two dual pistons in series, pumps with proprietary servo-controlled variable stroke design and smooth motion control.
Pump resolution step size	300 pL step size
Settable flow range	0.001 – 5 mL/min, in 0.001 mL/min increments (executed in 300 pL/step increments).
Flow precision	≤0.07 % RSD or 0.005 min SD, whatever is greater
Flow accuracy	±1 % or 10 µL/min, whatever is greater
Pressure range	up to 130 MPa (1300 bar) at 0 – 2 mL/min ramping down to 80 MPa (800 bar) at 5 mL/min
Pressure pulsation	<1 % amplitude or <0.5 MPa (5 bar), whatever is greater
Compressibility compensation	Automatic
Recommended pH-range	1.0 – 12.5, solvents with pH <2.3 should not contain acid which attack stainless steel.

Table 2 Agilent 1290 Infinity II High Speed Pump (G7120A)
Performance Specifications

Feature	Specification
Gradient formation	High pressure binary mixing
Delay volume	As low as 45 μ L (10 μ L without mixer)
Composition precision	<0.15 % RSD or 0.01 min SD, whatever is greater
Composition accuracy	\pm 0.35 % absolute
Number of solvent	2 out of maximum 26 solvents
Solvent selection valve	Internal 4-solvent selection valve included. External 2x 12 solvent valve as option, fully integrated in the pump control interface.
Integrated degassing unit	Included Number of channels: 2 Internal volume per channel: 1.5 mL Materials in contact with solvent: TFE/PDD Copolymer, FEP, PEEK, PPS.
Automatic Purge Valve	Included
Active Seal wash	Included
Intelligent System Emulation Technology (ISET)	Included
Communications	Controller-area network (CAN), RS232C, APG remote: ready, start, stop and shutdown signals, LAN
Safety and maintenance	Extensive diagnostics, error detection and display through included Agilent LabAdvisor, leak detection, safe leak handling, leak output signal for shutdown of the pumping system. Low voltage in major maintenance areas.
GLP feature	Early maintenance feedback (EMF) for continuous tracking of instrument usage in terms of seal wear and volume of pumped mobile phase with pre-defined and user settable limits and feedback messages. Electronic records of maintenance and errors.
Housing	All materials are recyclable.

Ordering Details

Description	Product Number
Agilent 1290 Infinity II High Speed Pump	
Maximum pressure 1300 bar	G7120A
Agilent Lab Advisor Advanced Software	G7120A#004
Ultra-low Dispersion Kit	G7120A#006
Ultra-clean Tubing Kit	G7120A#033
Safety Caps	G7120A#034
V380 Jet Weaver Mixer Upgrade Kit	G7120A#070

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