

Performance Specifications

Table 2 Performance Specifications 1260 Infinity II Binary Pump (G7112B)

Type	Specification	Comments
Hydraulic system	Two dual piston in series pumps with servo-controlled variable stroke drive, power transmission by gears and ball screws, floating pistons	
Flow range	settable: 0.001 – 5 mL/min recommended: 0.05 – 5.0 mL/min	Set points in 0.001 mL/min increments
Flow precision	≤0.07 % RSD or < 0.02 min SD, whichever is greater	based on retention time at constant temperature
Flow accuracy	± 1 % or 10 µL/min, whichever is greater	pumping degassed H ₂ O at 10 MPa (100 bar, 1450 psi)
Pressure operating range	Up to 60 MPa (600 bar, 8702 psi) up to 5 mL/min	
Pressure pulsation	< 2 % amplitude (typically < 1.3 %), or < 0.3 MPa (3 bar, 44 psi), whichever is greater <i>Low delay volume configuration:</i> < 5 % amplitude (typically < 2 %)	
Compressibility compensation	Pre-defined, based on mobile phase compressibility	
Recommended pH range	1.0 – 12.5	Solvents with pH < 2.3 should not contain acids that attack stainless steel
Gradient formation	High-pressure binary mixing	
Delay volume	<i>Standard delay volume configuration:</i> 600 – 900 µL, (includes 400 µL mixer), dependent on back pressure <i>Low delay volume configuration:</i> 120 µL	measured with water at 1 mL/min (water/water with tracer)

Table 2 Performance Specifications 1260 Infinity II Binary Pump (G7112B)

Type	Specification	Comments
Composition range	settable: 0 – 100 % recommended: 1 – 99 % or 5 µL/min per channel, whichever is greater	
Composition precision	< 0.15 % RSD or < 0.04 min SD, whichever is greater	at 0.2 and 1 mL/min; based on retention time at constant temperature
Composition accuracy	± 0.35 % absolute	at 2 mL/min, at 10 MPa (100 bar, 1450 psi) (water/water with tracer)
Integrated degassing unit	Number of channels: 2 Internal volume per channel: 1.5 mL	
Instrument Control	Agilent control software with LC and CE Drivers A.02.14 or above Lab Advisor B.02.09 or above Agilent Instant Pilot (G4208A) with firmware B.02.20 or above Instrument Control Framework (ICF) A.02.04 or above	For details about supported software versions refer to the compatibility matrix of your version of the LC and CE Drivers
Communications	Controller-area network (CAN), Extended Remote Interface (ERI), Local Area Network (LAN)	
Safety and maintenance	Extensive diagnostics, error detection and display through Agilent LabAdvisor, leak detection, safe leak handling, leak output signal for shutdown of the pumping system. Low voltage in major maintenance areas.	
GLP features	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	

Performance Specifications

Table 82 Performance Specifications 1260 Infinity II Diode Array Detector WR (G7115A)

Type	Specification
Detection type	1024-element photodiode array
Light source	Deuterium and tungsten lamps
Data rate	up to 120 Hz
Wavelength range	190 – 950 nm
Short term noise (ASTM) Single and Multi-Wavelength	$< \pm 0.7 \cdot 10^{-5}$ AU at 254 and 750 nm
Drift	$< 0.9 \cdot 10^{-3}$ AU/h at 254 nm
Linear absorbance range	> 2 AU (5 %) at 265 nm
Wavelength accuracy	± 1 nm
Wavelength bunching	1 – 400 nm
Slit width	1, 2, 4, 8, 16 nm
Diode width	< 1 nm

Table 82 Performance Specifications 1260 Infinity II Diode Array Detector WR (G7115A)

Type	Specification
Flow cells	<p>Standard: 13 μL volume, 10 mm cell path length and 120 bar (1740 psi) pressure maximum</p> <p>Standard bio-inert: 13 μL volume, 10 mm cell path length and 120 bar (1740 psi) pressure maximum</p> <p>Semi-micro: 5 μL volume, 6 mm cell path length and 120 bar (1740 psi) pressure maximum</p> <p>Micro: 2 μL volume, 3 mm cell path length, 120 bar (1740 psi) pressure maximum</p> <p>Semi-nano: 500 nL volume, 10 mm cell path length and 50 bar (725 psi) pressure maximum</p> <p>Nano: 80 nL volume, 6 mm cell path length and 50 bar (725 psi) pressure maximum</p> <p>High pressure: 1.7 μL volume, 6 mm cell path length and 400 bar (5800 psi) pressure maximum</p> <p>Prep SST: 3 mm cell path length and 120 bar (1740 psi) pressure maximum</p> <p>Prep Quartz: 0.3 mm cell path length and 20 bar (290 psi) pressure maximum</p> <p>Prep Quartz: 0.06 mm cell path length and 20 bar (290 psi) pressure maximum</p> <p>SFC Flow Cell: Light path 10 mm, Pressure Rating 400 bar, Internal Volume 13 μL</p> <p>SFC Flow Cell LD: Light Path 3 mm, Pressure Rating 400 bar, Internal Volume 2 μL</p>
Time programmable	Wavelength, polarity, peak width, lamp bandwidth, autobalance, wavelength range, threshold, spectra storage mode
Spectral tools	Data analysis software for spectra evaluation, including spectral libraries and peak purity functions
Instrument Control	Lab Advisor B.02.08 or above LC and CE Drivers A.02.14 or above
Local control	Agilent Instant Pilot (G4208A)
Analog outputs	Recorder/integrator: 100 mV or 1 V, output range 0.001 – 2 AU, two outputs
Communications	Controller-area network (CAN), USB Extended Remote Interface (ERI): ready, start, stop and shut-down signals

Table 82 Performance Specifications 1260 Infinity II Diode Array Detector WR (G7115A)

Type	Specification
Safety and maintenance	Extensive diagnostics, error detection and display (through control module and ChemStation), leak detection, safe leak handling, leak output signal for shutdown of pumping system. Low voltages in major maintenance areas.
GLP features	RFID for electronics records of flow cell and UV lamp conditions (path length, volume, product number, serial number, test passed, usage) Early maintenance feedback (EMF) for continuous tracking of instrument usage in terms of lamp burn time with user-settable limits and feedback messages. Electronic records of maintenance and errors. Verification of wavelength accuracy with built-in holmium oxide filter.
Housing	All materials recyclable.
Others	Second generation of Electronic temperature control (ETC) for the complete optical unit

Performance Specifications (Agilent 1260 Infinity II Multisampler G7167A)

Table 34 Performance Specifications Agilent 1260 Infinity II Multisampler (G7167A)

Type	Specification
Injection range for <i>Single-needle</i> instruments	Default: 0.1 – 90 μL in 0.1 μL increments optional: 20 μL or 40 μL (using optional 40 μL analytical head)
	0.1 – 500 μL or 900 μL in 0.1 μL increments (using 900 μL analytical head)
	0.1 – 120 μL in 0.1 μL increments with 1290 Infinity II large volume injection kit (hardware modification required) G4216-68711 0.1 – 500 μL or 1500 μL in 0.1 μL increments with 100 μL upgrade kit (hardware modification required) G7167-68711
Injection range for <i>Dual-needle</i> instruments	Default: 0.1 – 100 μL in 0.1 μL increments; optional: 20 μL or 40 μL (using 100 μL analytical head)
	Up to 900 μL in 0.1 μL increments depending on installed loop size
Injection precision for <i>single-needle</i> instruments	<0.15 % RSD or SD <10 nL, whatever is greater
Injection precision for <i>dual-needle</i> instruments	<0.2 % RSD or SD <10 nL, whatever is greater
Injection linearity	0.9999 in the range of 0.1 – 100 μL
Pressure range	Up to 800 bar
Sample viscosity range	0.2 – 5 cp
Sample capacity	<i>1H Drawer</i> up to 8 drawers and 16 positions Shallow well plates (MTP)
	<i>2H Drawer</i> up to 4 drawers and 8 positions MTP, deep well plates, vials, Eppendorf
	<i>3H Drawer</i> up to 2 drawers and 4 positions MTP, deep well plates, vials up to 6 mL, Eppendorf
Injection cycle time	<10 s using following standard conditions: Default draw speed: 100 $\mu\text{L}/\text{min}$ Default eject speed: 400 $\mu\text{L}/\text{min}$ Injection volume: 1 μL

2 Injectors

Agilent 1260 Infinity II Multisampler (G7167A)

Table 34 Performance Specifications Agilent 1260 Infinity II Multisampler (G7167A)

Type	Specification
Carry Over	<0.003 % (30 ppm) Multisampler Standard and Dual Needle <0.0009 % (9 ppm) Multisampler Multiwash
Multiwash	Outer needle wash and seat backflush for carryover reduction with up to 3 different solvents
Instrument Control	LC and CE Drivers A.02.10 or above Instrument Control Framework (ICF) A.02.03 or above Instant Pilot (G4208A) with firmware B.02.19 or above Lab Advisor B.02.06 or above
Communications	Controller-area network (CAN), Local Area Network (LAN) ERI: ready, start, stop and shut-down signals
Maintenance and safety-related features	Extensive diagnostics, error detection and display with Agilent Lab Advisor software Leak detection, safe leak handling, leak output signal for shutdown of pumping system, and low voltages in major maintenance areas
GLP features	Early maintenance feedback (EMF) for continuous tracking of instrument usage with user-settable limits and feedback messages. Electronic records of maintenance and errors.
Housing	All materials recyclable.

Performance Specifications

Table 108 Agilent 1290 Infinity II Multicolumn Thermostat (G7116B) Performance Specifications

Feature	Specification
Operating principle	Dual, independent Peltier-element thermostatted column compartment. Solvent pre-heating and still-air operation for reduction of chromatographic band-broadening under UHPLC-conditions. Up to three devices can be clustered and controlled by a single user interface for additional flexibility ¹ .
Temperature range	4 °C to 110 °C, (minimum 20 °C below ambient)
Temperature stability	±0.03 °C
Temperature accuracy	±0.5 °C (with calibration)
Temperature precision	0.05 °C
Independent Temperature zones	2 (in single device) up to 6 in clustered configuration ¹
Column capacity	8 columns of 100 mm length plus Quick-Connect fittings or pre-columns 4 columns of 300 mm length plus Quick-Connect fittings or pre-columns Selection of columns by single optional integrated 8-column selection valve (1300 bar) Maximum of 24 columns of 100 mm length plus Quick-Connect fittings or pre-columns 12 columns of 300 mm length plus Quick-Connect fittings or pre-columns with clustering ¹ of three devices.
Heat-up/cool-down time	5 min from ambient to 40 °C 10 min from 40 °C to 20 °C <30 min from 25 °C to 100 °C
Solvent heat exchangers	Individually quick-installable for every column. Available at 1 µL delay volume, 0.075 mm i.d. capillary (ultra-low dispersion), 1.6 µL delay volume, 0.12 mm i.d. capillary (standard) and 3 µL delay volume, 0.12 mm i.d. capillary (high-flow) volume.

5 Column Compartments

Agilent 1290 Infinity II Multicolumn Thermostat (G7116B)

Table 108 Agilent 1290 Infinity II Multicolumn Thermostat (G7116B) Performance Specifications

Feature	Specification
Valve options	1x integrated valve drive as option 2x external valve drives as option to host user-exchangeable Quick-Change valve heads of different formats, materials and pressure ratings (up to 1300 bar): 2-position/6-port, 2-position/10-port, 6-column selection (6-pos/14-port), 8-column selection (8-pos/18-port). Equipped with tags, valve heads are automatically identified by SW
Instrument Control	Lab Advisor B.02.06 or above LC and CE Drivers A.02.11 or above For details about supported software versions refer to the compatibility matrix of your version of the LC and CE Drivers
Local Control	Agilent Instant Pilot (G4208A) B.02.19 or above
Communications	Controller-area network (CAN).
Safety and maintenance	Extensive diagnostics, error detection and display (through Instant Pilot control module and Agilent LabAdvisor), leak detection, safe leak handling, leak output signal for shutdown of pumping system. Low voltages in main maintenance areas. Door-open sensor.
GLP	Valve heads carrying tags with serial number, pressure rating, number of switches and valve type.

¹ Requires LC and CE drivers A.02.12 or above

NOTE

All specifications are valid for distilled water at ambient temperature (25 °C), set point at 40 °C and a stable flow range from 0.2 – 5 mL/min. Equilibration Time: 10 min.