Agilent InfinityLab LC Series

Specification Compendium

Agilent Technologies

Notices

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A WARNING notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in personal injury or death. Do not proceed beyond a WARNING notice until the indicated conditions are fully understood and met.

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Agilent 1290 Infinity II Flexible Pump (G7104A)

Physical Specifications

Table 1 Physical Specifications

Type	Specification	Comments
Weight	16.1 kg (35.5 lbs)	
Dimensions (height × width × depth)	180 x 396 x 436 mm (7.1 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	120 VA / 110 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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Performance Specifications

Table 2 Agilent 1290 Infinity II Flexible Pump (G7104A) Performance Specifications

Feature	Specification
Hydraulic system	Dual pistons in series pump with proprietary servo-controlled variable stroke design and smooth motion control for active damping.
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 0.01 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.
Gradient formation	Low pressure quaternary mixing
Delay volume	As low as 350 µL
Composition range	Settable range: 0 – 100 % Recommended range: 1 – 99 % or 5 µL/min
Composition precision	<0.15 % RSD or 0.02 min SD, whatever is greater
Composition accuracy	±0.4 % absolute (1 – 99 % B)
Number of solvent	4 out of maximum 26 solvents
Solvent selection valve	Internal 4-solvent gradient formation valve included. External 2x 12 solvent valve as option, fully integrated in the pump control interface.

Table 2 Agilent 1290 Infinity II Flexible Pump (G7104A) Performance Specifications

Feature	Specification
Degassing unit	Integrated. Number of channels: 4, Internal volume per channel: 1.5 mL
Materials in contact with solvent	TFE/PDD copolymer, FEP, PEEK, PPS, stainless steel, polyimide
Automatic Purge Valve	Included, allows automatic inline-filter back-flush and automatic mixer change, e.g. for optional TFA-mixer
Active Seal wash	Included
Intelligent System Emulation Technology (ISET)	Included
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), 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 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.

Agilent 1260 Infinity II Flexible Pump (G7104C)

Physical Specifications

Table 3 Physical Specifications

Type	Specification	Comments
Weight	16.1 kg (35.5 lbs)	
Dimensions (height × width × depth)	180 x 396 x 436 mm (7.1 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	120 VA / 110 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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Performance Specifications

Table 4 Agilent 1260 Infinity II Flexible Pump (G7104C) Performance Specifications

Feature	Specification
Hydraulic system	Dual pistons in series pump with proprietary servo-controlled variable stroke design and smooth motion control for active damping.
Flow range	settable: 0.001 – 5 mL/min
Flow precision	≤ 0.07 % RSD or 0.01 min SD, whichever is greater
Flow accuracy	± 1 % or ±10 µL/min, whichever is greater
Pressure operating range	up to 80 MPa (800 bar, 11603 psi) up to 5 mL/min
Pressure pulsation	< 1 % amplitude or < 0.5 MPa (5 bar), whichever is greater
Compressibility compensation	automatic
Recommended pH-range	1.0 – 12.5
Gradient formation	Low pressure quaternary mixing/gradient capability using proprietary high-speed proportioning valve
Delay volume	≤ 350 µL (default configuration)
Composition range	Settable range: 0 – 100 % Recommended range: 1 – 99 %
Composition precision	< 0.15 % RSD or 0.02 min SD, whichever is greater
Composition accuracy	± 0.4 % absolute
Number of solvents	4
Solvent selection valve	Internal 4-solvent gradient formation valve included. External 2 x 12 solvent valve as option, fully integrated in the pump control interface.
Integrated degassing unit	Number of channels: 4, Internal volume per channel: 1.5 mL

Table 4 Agilent 1260 Infinity II Flexible Pump (G7104C) Performance Specifications

Feature	Specification
Materials in contact with solvent	TFE/PDD copolymer, FEP, PEEK, PPS, stainless steel, polyimide, ceramic, HMWPE
Automatic purge valve	Enables automatic software-embedded functionalities such as switching the optional mixer in and out or automatic purging.
Active seal wash	Included
Intelligent System Emulation Technology (ISET)	Included
Instrument control	LC & CE Drivers A.02.17 or above Instrument Control Framework (ICF) A.02.05 or above InfinityLab LC Companion (G7108AA) with firmware D.07.25 or above Instant Pilot (G4208A) with firmware B.02.22 or above Lab Advisor software B.02.10 or above
Communications	Controller-area network (CAN), RS232C, APG remote: ready, start, stop, and shutdown signals, LAN
Safety features and maintenance	Leak detection, safe leak handling, leak output signal for shutdown of the pumping system. No hazardous voltages in major maintenance areas. Extensive diagnostics, error detection and display with Agilent Lab Advisor software.
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.

Agilent 1260 Infinity II Isocratic Pump (G7110B)

Physical Specifications

Table 5 Physical Specifications

Type	Specification	Comments
Weight	14.0 kg (31 lbs)	
Dimensions (height × width × depth)	180 x 396 x 436 mm (7.1 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	80 VA, 65 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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Performance Specifications

Table 6 Performance Specifications 1260 Infinity II Isocratic Pump (G7110B)

Type	Specification
Hydraulic system	Dual piston in series pump with servo-controlled variable stroke drive, power transmission by gears and ball screws, floating pistons
Settable flow range	Set points 0.001 – 10 mL/min, in 0.001 mL/min increments
Recommended flow range	0.2 – 10.0 mL/min
Flow precision	≤0.07 % RSD, or ≤0.02 min SD whatever is greater
Flow accuracy	± 1 % or 10 µL/min whatever is greater, pumping degassed H_2O at 10 MPa (100 bar)
Pressure operating range	Operating range up to 60 MPa (600 bar, 8700 psi) up to 5 mL/min Operating range up to 20 MPa (200 bar, 2950 psi) up to 10 mL/min
Pressure pulsation	< 2 % amplitude (typically < 1.3 %), or < 0.3 MPa (3 bar, 44 psi), whatever is greater, at 1 mL/min isopropanol, at all pressures > 1 MPa (10 bar, 145 psi)
Compressibility compensation	User-selectable, based on mobile phase compressibility
Instrument Control	Lab Advisor B.02.08 or above LC and CE Drivers A.02.14 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.02.20 or above
Communications	Controller-area network (CAN), Enhanced Remote Interface: ready, start, stop and shut-down signals, LAN onboard
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.

Table 6 Performance Specifications 1260 Infinity II Isocratic Pump (G7110B)

Type	Specification
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

NOTE For use with flow rates below 500 µL/min a vacuum degasser is required.

Agilent 1260 Infinity II Quaternary Pump (G7111B)

Physical Specifications

Table 7 Physical Specifications

Type	Specification	Comments
Weight	17.6 kg (38.8 lbs)	
Dimensions (height × width × depth)	180 x 396 x 436 mm (7.1 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	80 VA, 65 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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Performance Specifications

Table 8 Performance Specifications 1260 Infinity II Quaternary Pump (G7111B)

Type	Specification
Hydraulic system	Dual piston in series pump with servo-controlled variable stroke drive, power transmission by gears and ball screws, floating pistons
Settable flow range	Set points 0.001 – 10 mL/min, in 0.001 mL/min increments
Recommended flow range	0.2 – 10.0 mL/min
Flow precision	≤0.07 % RSD, or ≤0.02 min SD whatever is greater
Flow accuracy	± 1 % or 10 µL/min whatever is greater, pumping degassed H_2O at 10 MPa (100 bar)
Pressure operating range	Operating range up to 60 MPa (600 bar, 8700 psi) up to 5 mL/min Operating range up to 20 MPa (200 bar, 2950 psi) up to 10 mL/min
Pressure pulsation	< 2 % amplitude (typically < 1.0 %), or < 0.3 MPa (3 bar, 44 psi), whatever is greater, at 1 mL/min isopropanol, at all pressures > 1 MPa (10 bar, 145 psi)
Compressibility compensation	User-selectable, based on mobile phase compressibility
Recommended pH range	1.0 – 12.5, solvents with pH < 2.3 should not contain acids which attack stainless steel
Gradient formation	Low pressure quaternary mixing/gradient capability using proprietary high-speed proportioning valve
Delay volume	600 – 900 µL, dependent on back pressure; measured with water at 1 mL/min (water/caffeine tracer)
Settable composition range	0 – 100 % in 0.1 % increments
Composition precision	< 0.2 % RSD or < 0.04 min SD, whatever is greater
Integrated degassing unit	Number of channels: 4 Internal volume per channel: 1.5 mL

Table 8 Performance Specifications 1260 Infinity II Quaternary Pump (G7111B)

Type	Specification
Instrument Control	Lab Advisor B.02.08 or above LC and CE Drivers A.02.14 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.02.20 or above
Communications	Controller-area network (CAN), Enhanced Remote Interface: ready, start, stop and shut-down signals, LAN onboard
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

Agilent 1260 Infinity II Quaternary Pump VL (G7111A)

Physical Specifications

Table 9 Physical Specifications

Type	Specification	Comments
Weight	14.7 kg (32 lbs)	
Dimensions (height × width × depth)	180 x 396 x 436 mm (7.1 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	80 VA, 65 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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Performance Specifications

Table 10 Performance Specifications Agilent 1260 Infinity II Quaternary Pump VL (G7111A)

Type	Specification
Hydraulic system	Dual piston in series pump with servo-controlled variable stroke drive, power transmission by gears and ball screws, floating pistons
Settable flow range	Set points 0.001 – 10 mL/min, in 0.001 mL/min increments
Recommended flow range	0.2 – 10.0 mL/min
Flow precision	≤0.07 % RSD, or ≤0.02 min SD whatever is greater
Flow accuracy	± 1 % or 10 µL/min whatever is greater, pumping degassed H_2O at 10 MPa (100 bar)
Pressure operating range	Operating range up to 40 MPa (400 bar, 5880 psi) up to 5 mL/min Operating range up to 20 MPa (200 bar, 2950 psi) up to 10 mL/min
Pressure pulsation	< 2 % amplitude (typically < 1.0 %), or < 0.3 MPa (3 bar, 44 psi), whatever is greater, at 1 mL/min isopropanol, at all pressures > 1 MPa (10 bar, 145 psi)
Compressibility compensation	User-selectable, based on mobile phase compressibility
Recommended pH range	1.0 – 12.5, solvents with pH < 2.3 should not contain acids which attack stainless steel
Gradient formation	Low pressure quaternary mixing/gradient capability using proprietary high-speed proportioning valve
Delay volume	600 – 900 µL, dependent on back pressure; measured with water at 1 mL/min (water/caffeine tracer)
Settable composition range	0 – 100 % in 0.1 % increments
Composition precision	< 0.2 % RSD or < 0.04 min SD, whatever is greater
Integrated degassing unit	Number of channels: 4 Internal volume per channel: 1.5 mL

Table 10 Performance Specifications Agilent 1260 Infinity II Quaternary Pump VL (G7111A)

Type	Specification
Instrument Control	Lab Advisor B.02.08 or above LC and CE Drivers A.02.14 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.02.20 or above
Communications	Controller-area network (CAN), Enhanced Remote Interface: ready, start, stop and shut-down signals, LAN onboard
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

Agilent 1260 Infinity II Binary Pump (G7112B)

Physical Specifications

Table 11 Physical Specifications

Type	Specification	Comments
Weight	17.6 kg (38.8 lbs)	
Dimensions (height × width × depth)	180 x 396 x 436 mm (7.1 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	90 VA / 74 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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Performance Specifications

Table 12 Performance Specifications 1260 Infinity II Binary Pump (G7112B)

Type	Specification
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
Flow precision	≤0.07 % RSD or < 0.02 min SD, whichever is greater
Flow accuracy	± 1 % or 10 µL/min, whichever is greater
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 *Low delay volume configuration:* < 5 % amplitude (typically < 2 %)
Compressibility compensation	Pre-defined, based on mobile phase compressibility
Recommended pH range	1.0 – 12.5
Gradient formation	High-pressure binary mixing
Delay volume	*Standard delay volume configuration*:600 – 900 µL, (includes 400 µL mixer), dependent on back pressure *Low delay volume configuration:*120 µL
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
Composition accuracy	± 0.35 % absolute
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

Table 12 Performance Specifications 1260 Infinity II Binary Pump (G7112B)

Type	Specification
Communications	Controller-area network (CAN), Extended Remote Interface (ERI), Local Area Network (LAN)
Safety and maintenance	Extensive diagnostics, error detection and display through Agilent Lab Advisor, 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

Agilent 1290 Infinity II High Speed Pump (G7120A)

Physical Specifications

Table 13 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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Performance Specifications

Table 14 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.
Gradient formation	High pressure binary mixing
Delay volume	As low as 45 µL (10 µL without mixer)
Composition precision	<0.15 % RSD or 0.01 min SD, whatever is greater
Composition accuracy	±0.35 % absolute
Number of solvents	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.

Table 14 Agilent 1290 Infinity II High Speed Pump (G7120A) Performance Specifications

Feature	Specification
Automatic Purge Valve	Included
Active Seal wash	Included
Intelligent System Emulation Technology (ISET)	Included
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), 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.

Agilent 1260 Infinity II Bio-Inert Pump (G5654A)

Physical Specifications

Table 15 Physical Specifications

Type	Specification	Comments
Weight	14.7 kg (32 lbs)	
Dimensions (height × width × depth)	180 x 396 x 436 mm (7.1 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	80 VA, 65 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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Performance Specifications

Table 16 Performance Specifications 1260 Infinity II Bio-inert Pump (G5654A)

Type	Specification
Hydraulic system	Dual piston in series pump with proprietary servo-controlled variable stroke drive, floating pistons and active inlet valve, integrated 4-channel degassing unit
Settable flow range	0.001 – 10 mL/min, in 0.001 mL/min increments
Flow precision	< 0.07 % RSD, or <0.02 min SD whichever is greater
Flow accuracy	± 1 % or 10 µL/min whichever is greater
Pressure	Operating range up to 60 MPa (600 bar, 8700 psi) up to 5 mL/min Operating range up to 20 MPa (200 bar, 2950 psi) up to 10 mL/min
Pressure pulsation	< 2 % amplitude (typically < 1.3 %), at 1 mL/min isopropanol, at all pressures > 1 MPa (10 bar)
Compressibility compensation	User-selectable, based on mobile phase compressibility
Recommended pH range	1 – 13, short term 14[1]
Gradient formation	Low pressure quaternary mixing/gradient capability using proprietary high-speed proportioning valve
Delay volume	600 – 900 µL, dependent on back pressure.
Settable composition range	0 – 100 % in 0.1 % increments
Composition precision	< 0.2 % RSD or < 0.04 min SD, whichever is greater
Instrument Control	Lab Advisor B.02.08 or above LC and CE Drivers A.02.14 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.02.20 or above
Communications	Controller-area network (CAN), USB Extended Remote Interface: ready, start, stop and shut-down signals

Table 16 Performance Specifications 1260 Infinity II Bio-inert Pump (G5654A)

Type	Specification
Materials in flowpath	Titanium, Gold, Platinum-Iridium, Sapphire, PEEK, PTFE, Ruby, Ceramic, FEP, PFA
Active seal wash	Included

[1] For solvent compatibility, refer to section "Solvent information" in the manual for the Agilent 1260 Infinity Bio-inert LC System.

Agilent 1220 Infinity II LC Pump

Physical Specifications

Table 17 Physical Specifications

Type	Specification	Comments
Weight	30 kg (66 lbs) G4294B: 43 kg (94 lbs)	
Dimensions (height × width × depth)	640 × 370 × 420 mm (25.2 × 14.6 × 16.5 inches) G4294B: 640×370×485 mm (25.2×14.6×19.1 inches)	
Line voltage	100 – 240 V~, ± 10 %	Wide-ranging capability
Line frequency	50 or 60 Hz, ± 5 %	
Power consumption	240 VA / 210 W / 717 BTU	Maximum
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 2000 m (6562 ft)	
Non-operating altitude	Up to 4600 m (15092 ft)	For storing the module
Safety standards: IEC, CSA, UL	Installation category II, Pollution degree 2	For indoor use only.

Performance Specifications

Table 18 Performance Specifications Agilent 1220 Infinity II LC Pump

Type	Specification
Hydraulic system	Dual plunger in series pump with proprietary servo-controlled variable stroke drive, floating plungers and passive inlet valve
Flow range	Settable: 0.001 – 10 mL/min Recommended: 0.2 – 10.0 mL/min
Flow precision	≤0.07 % RSD, or ≤ 0.02 min SD whichever is greater
Flow accuracy	± 1 % or 10 µL/min whatever is greater
Pressure operating range	Up to 60 MPa (600 bar, 8702 psi) up to 5 mL/min Up to 20 MPa (200 bar, 2901 psi) up to 10 mL/min
Pressure pulsation	< 2 % amplitude (typically < 1.3 %), or < 0.3 MPa (3 bar, 44 psi), whichever is greater
Compressibility compensation	User-selectable, based on mobile phase compressibility
Recommended pH	1.0 – 12.5
Gradient formation (optional)	Low pressure binary mixing/gradient capability using proprietary high-speed proportioning valve
Delay volume	600 – 900 µL, dependent on back pressure
Composition range	Settable 0 – 100 % Recommended 5 – 95 %
Composition precision	< 0.2 % RSD or < 0.04 min SD, whichever is greater

Agilent 1220 Infinity II LC Pump VL

Physical Specifications

Table 19 Physical Specifications

Type	Specification	Comments
Weight	30 kg (66 lbs)	
Dimensions (height × width × depth)	640 × 370 × 420 mm (25.2 × 14.6 × 16.5 inches)	
Line voltage	100 – 240 V~, ± 10 %	Wide-ranging capability
Line frequency	50 or 60 Hz, ± 5 %	
Power consumption	240 VA / 210 W / 717 BTU	Maximum
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 2000 m (6562 ft)	
Non-operating altitude	Up to 4600 m (15092 ft)	For storing the module
Safety standards: IEC, CSA, UL	Installation category II, Pollution degree 2	For indoor use only.

Performance Specifications

Table 20 Performance Specifications Agilent 1220 Infinity II LC Pump VL

Type	Specification
Hydraulic system	Dual plunger in series pump with proprietary servo-controlled variable stroke drive, floating plungers and passive inlet valve
Flow range	Settable 0.001 – 10 mL/min Recommended: 0.2 – 10.0 mL/min
Flow precision	≤0.07 % RSD, or ≤ 0.02 min SD whichever is greater
Flow accuracy	± 1 % or 10 µL/min whatever is greater
Pressure operating range	Up to 40 MPa (400 bar, 5801 psi) up to 5 mL/min Up to 20 MPa (200 bar, 2901 psi) up to 10 mL/min
Pressure pulsation	< 2 % amplitude (typically < 1.3 %), or < 0.3 MPa (3 bar, 44 psi), whichever is greater
Compressibility compensation	User-selectable, based on mobile phase compressibility
Recommended pH range	1.0 – 12.5
Gradient formation	Low pressure binary mixing/gradient capability using proprietary high-speed proportioning valve
Delay volume	600 – 900 µL, dependent on back pressure
Composition range	Settable: 0 – 100 % Recommended: 5 – 95 %,
Composition precision	< 0.2 % RSD or < 0.04 min SD, whichever is greater

Agilent 1290 Infinity II Preparative Binary Pump (G7161B)

Physical Specifications

Table 21 Physical Specifications

Type	Specification	Comments
Weight	27.2 kg	
Dimensions (height × width × depth)	320 x 396 x 436 mm (12.6 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	350 VA, 320 W	Maximum
Ambient operating temperature	4 – 40 °C (39 – 104 °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 2000 m (6562 ft)	
Non-operating altitude	Up to 4600 m (15092 ft)	For storing the module
Safety standards: IEC, CSA, UL	Installation category II, Pollution degree 2	For indoor use only.

Performance Specifications

Table 22 Agilent 1290 Infinity II Preparative Binary Pump (G7161B) Performance Specifications

Feature	Specification
Settable flow range	*50 mL head:*0.01 – 50 mL/min, in 0.01 mL/min increments *200 mL head:*0.01 – 200 mL/min, in 0.01 mL/min increments
Recommended Flow range	*50 mL head:* ≥ 1 mL/min *200 mL head:* ≥ 4 mL/min
Pressure operating range	*50 mL head:*60 MPa (600 bar, 8702 psi) up to 50 mL/min *200 mL head:*42 MPa (420 bar, 6092 psi) up to 150 mL/min with linear ramp down to 30 MPa (300 bar, 4350 psi) at 200 mL/min
Compressibility compensation	Pre-defined or user-settable, based on mobile phase compressibility
Recommended pH range	1.0 – 12.5, solvents with pH <2.3 should not contain acids which attack stainless steel
Gradient formation	High-pressure binary mixing
Settable composition range	0 – 100 % in 0.1 % increments
Recommended composition range	*50 mL head:*2 – 98 % or 20 µL/min per channel, whichever is greater *200 mL head:*2 – 98 % or 80 µL/min per channel, whichever is greater
Flow accuracy[1]	<±1.0 %
Composition accuracy[1]	±1.0 % from 2 – 98 %
Flow precision[1]	≤0.3 % RSD or ≤0.1 min SD whichever is greater, based on retention time at constant room temperature
Composition precision[1]	≤0.3 % RSD or ≤0.1 min SD whichever is greater, based on retention time at constant room temperature
Active Seal Wash	Included with sensor
Instrument Control	LC & CE Drivers A.02.18 or above Instrument Control Framework (ICF) A.02.04 or above Lab Advisor software B.02.10 or above

Table 22 Agilent 1290 Infinity II Preparative Binary Pump (G7161B) Performance Specifications

Feature	Specification
Communications	Controller-area network (CAN), Local Area Network (LAN), Extended remote interface (ERI), USB, ready, start, stop and shutdown signals, external leak sensor.
Safety features and maintenance	Extensive diagnostics, error detection and display through included Agilent Lab Advisor, 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

[1] Using freshly prepared degassed mobile phase.

Agilent 1260 Infinity II Preparative Binary Pump (G7161A)

Physical Specifications

Table 23 Physical Specifications

Type	Specification	Comments
Weight	27.2 kg	
Dimensions (height × width × depth)	320 x 396 x 436 mm (12.6 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	350 VA, 320 W	
Ambient operating temperature	4 – 40 °C (39 – 104 °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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Performance Specifications

Table 24 Agilent 1260 Infinity II Preparative Binary Pump (G7161A) Performance Specifications

Feature	Specification
Settable flow range	0.01 – 50 mL/min, in 0.01 mL/min increments
Pressure operating range	Up to 42 MPa (420 bar, 6092 psi)
Compressibility compensation	Pre-defined or user-settable, based on mobile phase compressibility
Recommended pH range	1.0 – 12.5, solvents with pH <2.3 should not contain acids which attack stainless steel
Gradient formation	High-pressure binary mixing
Settable composition range	0 – 100 % in 0.1 % increments
Recommended composition range	5 – 95 % or 50 µL/min per channel, whichever is greater
Flow accuracy[1]	<±1.0 %
Composition accuracy[1]	±1.0 % from 5 – 95 %
Flow precision[1]	≤0.3 % RSD or ≤0.1 min SD whichever is greater, based on retention time at constant room temperature
Composition precision[1]	≤0.3 % RSD or ≤0.1 min SD whichever is greater, based on retention time at constant room temperature
Active Seal Wash	Included
Instrument Control	LC & CE Drivers A.02.17 or above Instrument Control Framework (ICF) A.02.04 or above Lab Advisor software B.02.10 or above
Communications	Controller-area network (CAN), Local Area Network (LAN), Extended remote interface (ERI), USB, ready, start, stop and shutdown signals, external leak sensor.
Safety features 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.

Table 24 Agilent 1260 Infinity II Preparative Binary Pump (G7161A) Performance Specifications

Feature	Specification
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

[1] Using freshly prepared degassed mobile phase.

Agilent 1260 Infinity II SFC Binary Pump (G4782A)

Physical Specifications

Table 25 Physical Specifications

Type	Specification	Comments
Weight	17.6 kg (38.8 lbs)	
Dimensions (height × width × depth)	180 x 396 x 436 mm (7.1 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	90 VA / 74 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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Performance Specifications

Table 26 Performance Specifications 1260 Infinity II SFC Binary Pump (G4782A)

Type	Specification
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
Flow precision	≤0.07 % RSD or < 0.02 min SD, whichever is greater
Pressure operating range	Up to 60 MPa (600 bar, 8702 psi) up to 5 mL/min
Compressibility compensation	Pre-defined, based on mobile phase compressibility
Recommended pH range	1.0 – 12.5
Gradient formation	High-pressure binary mixing
Delay volume	Standard delay volume configuration: 600 – 900 µL, (includes 400 µL mixer), dependent on back pressure
Composition range	Settable: 0 – 100 %
Composition precision	< 0.15 % RSD or < 0.04 min SD, whichever is greater
Integrated degassing unit	Number of channels: 2 Internal volume per channel: 1.5 mL
Instrument Control	LC and CE Drivers A.02.16 or above Instrument Control Framework (ICF) A.02.04 or above Instant Pilot (G4208A) with firmware B.02.21 or above Lab Advisor software B.02.09 or above
Communications	Controller-area network (CAN), Extended Remote Interface (ERI), Local Area Network (LAN)
Safety features and maintenance	Leak detection, safe leak handling, leak output signal for shutdown of the pumping system. Low voltage in major maintenance areas. Extensive diagnostics, error detection and display with Agilent Lab Advisor software.

Table 26 Performance Specifications 1260 Infinity II SFC Binary Pump (G4782A)

Type	Specification
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

2 Injectors

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Agilent 1290 Infinity II Multisampler (G7167B)

Physical Specifications

Table 27 Physical Specifications

Type	Specification	Comments
Weight	22 kg (48.5 lbs)	w/o Thermostat
Dimensions (height × width × depth)	320 x 396 x 468 mm (12.6 x 15.6 x 18.4 inches)	
Line voltage	100 – 240 V~, ± 10 %	Wide-ranging capability
Line frequency	50 or 60 Hz, ± 5 %	
Power consumption	180 VA, 180 W	
Ambient operating temperature	4 - 40 °C (39 - 104 °F)	
Ambient non-operating temperature	-40 – 70 °C (-40 – 158 °F)	
Humidity	< 95 % r.h. at 40 °C (104 °F)[1]	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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11
Permitted solvents	Auto-ignition temperature ≥200 °C Boiling point ≥56 °C	

[1] If a sample cooler or thermostat is included the upper value for humidity can be reduced. Please check your lab conditions to stay beyond dew point values for non–condensing operation.

Performance Specifications

Table 28 Performance Specifications Agilent 1290 Infinity II Multisampler (G7167B)

Type	Specification
Injection range for *Single-needle* instruments	Default: 0.1 – 20 µL in 0.1 µL increments; optional: 40 µL or 100 µL (using optional 100 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 *Dual-needle* instruments	Default: 0.1 – 20 µL in 0.1 µL increments; optional: 40 µL or 100 µL
	Up to 500 µL in 0.1 µL increments depending on installed loop size
Injection precision for *Single-needle* instruments	<0.15 % RSD or SD <10 nL, whatever is greater
Injection precision for *Dual-needle* 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 1300 bar
Sample viscosity range	0.2 – 5 cp
Sample capacity	1H Drawer up to 8 drawers and 16 positions Shallow well plates (MTP)
	2H Drawer up to 4 drawers and 8 positions MTP, deep well plates, vials, Eppendorf
	3H Drawer 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 µL/min Default eject speed: 400 µL/min Injection volume: 1 µL
Carry Over	<0.003 % (30 ppm) Multisampler Standard and Dual Needle <0.0009 % (9 ppm) Multisampler Multiwash

Table 28 Performance Specifications Agilent 1290 Infinity II Multisampler (G7167B)

Type	Specification
Multiwash	Outer needle wash and seat backflush for carryover reduction with up to 3 different solvents
Instrument Control	LC & 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.

Physical Specifications of the Sample Cooler

Cooling unit is designed as vapor-compression refrigeration system. Contains fluorinated greenhouse gas (refrigerant) according to the Kyoto protocol. For specifications of refrigerant, charge capacity, carbon dioxide equivalent (CDE), and global warming potential (GWP) see instrument label.

Table 29 Physical Specification of the Sample Cooler

Type	Specification	Comments
Weight	< 6 kg	
Dimensions (height × width × depth)	205 mm x 340 mm x 370 mm	
Refrigerant gas	HFC-134a (0.042 kg)	Ozone depletion potential (ODP) = 0
Supply voltage	24 VDC (nominal)	
Current	10 A max.	
Ambient operating temperature	4 – 40 ° C (39.2 – 104 ° F)	
Ambient non-operating temperature	-40 – 70 ° C (-20 – 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 (15091 ft)	
Safety standards: IEC, EN, CSA, UL	Installation category II, Pollution degree 2	For indoor use only.
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Table 30 Performance Specifications Agilent 1290 Sample Cooler

Type	Specifications
Operating principle	High performance, low-energy consumption micro-compressor based cooler with ozone-friendly HFC-134a coolant (42 g), user-upgradable.
Temperature range	from 4 °C to 5 °C below ambient
Temperature settable	from 4 – 40 °C in 1 ° increments
Temperature accuracy (<25 °C, <50 % r.H.)	2 °C to 6 °C at a setpoint of 4 °C

Specifications of the Sample Thermostat

The sample thermostat is designed as a combination of a heater and vapor-compression refrigeration system. It uses non-Freon refrigerant (isobutane). This material is harmless to the environment and does not affect the ozone layer and global warming but it is combustable. Please adhere to the warnings listed in the manual.

Table 31 Physical Specifications of the Sample Thermostat

Type	Specification	Comment
Weight	<6 kg	
Dimensions (height x width x depth)	205 mm x 340 mm x 370 mm	
Refrigerant gas	R600a (0.030 kg)	Ozone depletion potential (ODP) =0 Global warming potential (GWP) =3
Supply voltage	24VDC (nominal)	
Current	10 A max.	
Ambient operating temperature	4 – 40 °C (39.2 – 104 °F)	
Ambient non-operating temperature	-40 – 70 °C (-20 – 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 (15091 ft)	
Safety standards: IEC, EN, CSA, UL	Installation category II, Pollution degree 2	For indoor use only
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Table 32 Performance Specifications for the Sample Thermostat

Type	Specifications
Operating principle	High performance, low-energy consumption micro-compressor based cooler with natural R600a coolant (Butane 30 g), user-upgradable
Temperature range	from 4 – 40 °C
Temperature settable	from 4 – 40 °C in 1 ° increments
Temperature accuracy (<25 °C, <50 % r.H.)	2 – 6 °C at a setpoint of 4 °C

NOTE

Minimum firmware revision for the sample thermostat is D.07.22.

Minimum LC driver revision for the sample thermostat is A.02.14.

Agilent 1260 Infinity II Multisampler (G7167A)

Physical Specifications

Table 33 Physical Specifications

Type	Specification	Comments
Weight	22 kg (48.5 lbs)	w/o Thermostat
Dimensions (height × width × depth)	320 x 396 x 468 mm (12.6 x 15.6 x 18.4 inches)	
Line voltage	100 – 240 V~, ± 10 %	Wide-ranging capability
Line frequency	50 or 60 Hz, ± 5 %	
Power consumption	180 VA, 180 W	
Ambient operating temperature	4 - 40 °C (39 - 104 °F)	
Ambient non-operating temperature	-40 – 70 °C (-40 – 158 °F)	
Humidity	< 95 % r.h. at 40 °C (104 °F)[1]	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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11
Permitted solvents	Auto-ignition temperature ≥200 °C Boiling point ≥56 °C	

[1] If a sample cooler or thermostat is included the upper value for humidity can be reduced. Please check your lab conditions to stay beyond dew point values for non–condensing operation.

Performance Specifications (Agilent 1260 Infinity II Multisampler G7167A)

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

Type	Specification
Injection range for *Single-needle* 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 *Dual-needle* 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 *single-needle* instruments	<0.15 % RSD or SD <10 nL, whatever is greater
Injection precision for *dual-needle* 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	*1H Drawer* up to 8 drawers and 16 positions Shallow well plates (MTP)
	2H Drawer up to 4 drawers and 8 positions MTP, deep well plates, vials, Eppendorf
	3H Drawer 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 µL/min Default eject speed: 400 µL/min Injection volume: 1 µL

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.

Physical Specifications of the Sample Cooler

Cooling unit is designed as vapor-compression refrigeration system. Contains fluorinated greenhouse gas (refrigerant) according to the Kyoto protocol. For specifications of refrigerant, charge capacity, carbon dioxide equivalent (CDE), and global warming potential (GWP) see instrument label.

Table 35 Physical Specification of the Sample Cooler

Type	Specification	Comments
Weight	< 6 kg	
Dimensions (height × width × depth)	205 mm x 340 mm x 370 mm	
Refrigerant gas	HFC-134a (0.042 kg)	Ozone depletion potential (ODP) = 0
Supply voltage	24 VDC (nominal)	
Current	10 A max.	
Ambient operating temperature	4 – 40 ° C (39.2 – 104 ° F)	
Ambient non-operating temperature	-40 – 70 ° C (-20 – 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 (15091 ft)	
Safety standards: IEC, EN, CSA, UL	Installation category II, Pollution degree 2	For indoor use only.
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Table 36 Performance Specifications Agilent 1290 Sample Cooler

Type	Specifications
Operating principle	High performance, low-energy consumption micro-compressor based cooler with ozone-friendly HFC-134a coolant (42 g), user-upgradable.
Temperature range	from 4 °C to 5 °C below ambient
Temperature settable	from 4 – 40 °C in 1 ° increments
Temperature accuracy (<25 °C, <50 % r.H.)	2 °C to 6 °C at a setpoint of 4 °C

Specifications of the Sample Thermostat

The sample thermostat is designed as a combination of a heater and vapor-compression refrigeration system. It uses non-Freon refrigerant (isobutane). This material is harmless to the environment and does not affect the ozone layer and global warming but it is combustable. Please adhere to the warnings listed in the manual.

Table 37 Physical Specifications of the Sample Thermostat

Type	Specification	Comment
Weight	<6 kg	
Dimensions (height x width x depth)	205 mm x 340 mm x 370 mm	
Refrigerant gas	R600a (0.030 kg)	Ozone depletion potential (ODP) =0 Global warming potential (GWP) =3
Supply voltage	24VDC (nominal)	
Current	10 A max.	
Ambient operating temperature	4 – 40 °C (39.2 – 104 °F)	
Ambient non-operating temperature	-40 – 70 °C (-20 – 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 (15091 ft)	
Safety standards: IEC, EN, CSA, UL	Installation category II, Pollution degree 2	For indoor use only
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Table 38 Performance Specifications for the Sample Thermostat

Type	Specifications
Operating principle	High performance, low-energy consumption micro-compressor based cooler with natural R600a coolant (Butane 30 g), user-upgradable
Temperature range	from 4 – 40 °C
Temperature settable	from 4 – 40 °C in 1 ° increments
Temperature accuracy (<25 °C, <50 % r.H.)	2 – 6 °C at a setpoint of 4 °C

NOTE

Minimum firmware revision for the sample thermostat is D.07.22.

Minimum LC driver revision for the sample thermostat is A.02.14.

Agilent 1290 Infinity II Vialsampler (G7129B)

Physical Specifications

Table 39 Physical Specifications

Type	Specification	Comments
Weight	19 kg (41.9 lbs)	w/o Thermostat
Dimensions (height × width × depth)	320 x 396 x 468 mm (12.8 x 15.6 x 18.4 inches)	
Line voltage	100 – 240 V~, ± 10 %	Wide-ranging capability
Line frequency	50 or 60 Hz, ± 5 %	
Power consumption	350 VA / 350 W / 1195 BTU/h	
Ambient operating temperature	4 - 40 °C (39 - 104 °F), without chiller up to 55 °C (131 °F)	
Ambient non-operating temperature	-40 – 70 °C (-40 – 158 °F)	
Humidity	< 95 % r.h. at 40 °C (104 °F)[1]	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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11
Permitted solvents	Auto-ignition temperature ≥200 °C Boiling point ≥56 °C	

[1] If a sample cooler or thermostat is included the upper value for humidity can be reduced. Please check your lab conditions to stay beyond dew point values for non–condensing operation.

Performance Specifications

Table 40 Performance Specifications (G7129B)

Type	Specification
Injection range	0.1 – 20 µL in 0.1 µL increments (default) 0.1 – 40 µL in 0.1 µL increments if 40 µL loop is installed 0.1 – 120 µL in 0.1 µL increments with 1290 Infinity large volume injection kit (hardware modification required) 0.1 – 100 µL in 0.1 µL (if 100 µL-loop and 100 µL-head is installed)
Precision	<0.25 % RSD of peak areas from 5 µL to 100 µL
Pressure range	Up to 130 MPa (1300 bar, 18854 psi)
Sample viscosity range	0.2 – 5 cp
Sample capacity	132 x 2 mL vial (two trays default) 100 x 2 mL vial (two classic trays optional) 36 x 6 mL vials (two trays optional)
Carry over	<0.004 % (40 ppm) with needle wash
Injection cycle time	18 s for draw speed 200 µL/min Ejection speed: 200 µL/min Injection volume: 1 µL
Minimum sample volume	1 µL from 5 µL sample in 100 µL microvial, or 1 µL from 10 µL sample in 300 µL microvial.
Instrument Control	Lab Advisor B.02.07 or above LC and CE Drivers A.02.12 or above
Local control	Agilent Instant Pilot (G4208A)
Communications	Controller-area network (CAN),Local Area Network (LAN) ERI: ready, start, stop and shut-down signals
Safety and maintenance	Extensive support for troubleshooting and maintenance is provided by the Instant Pilot, Agilent Lab Advisor, and the Chromatography Data System. Safety-related features are 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.
Metering device	Metering device in high pressure flow path

Physical Specifications of the Sample Cooler

Cooling unit is designed as vapor-compression refrigeration system. Contains fluorinated greenhouse gas (refrigerant) according to the Kyoto protocol. For specifications of refrigerant, charge capacity, carbon dioxide equivalent (CDE), and global warming potential (GWP) see instrument label.

Table 41 Physical Specification of the Sample Cooler

Type	Specification	Comments
Weight	< 6 kg	
Dimensions (height × width × depth)	205 mm x 340 mm x 370 mm	
Refrigerant gas	HFC-134a (0.042 kg)	Ozone depletion potential (ODP) = 0
Supply voltage	24 VDC (nominal)	
Current	10 A max.	
Ambient operating temperature	4 – 40 ° C (39.2 – 104 ° F)	
Ambient non-operating temperature	-40 – 70 ° C (-20 – 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 (15091 ft)	
Safety standards: IEC, EN, CSA, UL	Installation category II, Pollution degree 2	For indoor use only.
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Table 42 Performance Specifications Agilent 1290 Sample Cooler

Type	Specifications
Operating principle	High performance, low-energy consumption micro-compressor based cooler with ozone-friendly HFC-134a coolant (42 g), user-upgradable.
Temperature range	from 4 °C to 5 °C below ambient
Temperature settable	from 4 – 40 °C in 1 ° increments
Temperature accuracy (<25 °C, <50 % r.H.)	2 °C to 6 °C at a setpoint of 4 °C

Specifications of the Sample Thermostat

The sample thermostat is designed as a combination of a heater and vapor-compression refrigeration system. It uses non-Freon refrigerant (isobutane). This material is harmless to the environment and does not affect the ozone layer and global warming but it is combustable. Please adhere to the warnings listed in the manual.

Table 43 Physical Specifications of the Sample Thermostat

Type	Specification	Comment
Weight	<6 kg	
Dimensions (height x width x depth)	205 mm x 340 mm x 370 mm	
Refrigerant gas	R600a (0.030 kg)	Ozone depletion potential (ODP) =0 Global warming potential (GWP) =3
Supply voltage	24VDC (nominal)	
Current	10 A max.	
Ambient operating temperature	4 – 40 °C (39.2 – 104 °F)	
Ambient non-operating temperature	-40 – 70 °C (-20 – 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 (15091 ft)	
Safety standards: IEC, EN, CSA, UL	Installation category II, Pollution degree 2	For indoor use only
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Table 44 Performance Specifications for the Sample Thermostat

Type	Specifications
Operating principle	High performance, low-energy consumption micro-compressor based cooler with natural R600a coolant (Butane 30 g), user-upgradable
Temperature range	from 4 – 40 °C
Temperature settable	from 4 – 40 °C in 1 ° increments
Temperature accuracy (<25 °C, <50 % r.H.)	2 – 6 °C at a setpoint of 4 °C

NOTE

Minimum firmware revision for the sample thermostat is D.07.22.

Minimum LC driver revision for the sample thermostat is A.02.14.

Agilent 1260 Infinity II Vialsampler (G7129A)

Physical Specifications

Table 45 Physical Specifications

Type	Specification	Comments
Weight	19 kg (41.9 lbs)	w/o Thermostat
Dimensions (height × width × depth)	320 x 396 x 468 mm (12.8 x 15.6 x 18.4 inches)	
Line voltage	100 – 240 V~, ± 10 %	Wide-ranging capability
Line frequency	50 or 60 Hz, ± 5 %	
Power consumption	350 VA / 350 W / 1195 BTU/h	
Ambient operating temperature	4 - 40 °C (39 - 104 °F), without chiller up to 55 °C (131 °F)	
Ambient non-operating temperature	-40 – 70 °C (-40 – 158 °F)	
Humidity	< 95 % r.h. at 40 °C (104 °F)[1]	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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11
Permitted solvents	Auto-ignition temperature ≥200 °C Boiling point ≥56 °C	

[1] If a sample cooler or thermostat is included the upper value for humidity can be reduced. Please check your lab conditions to stay beyond dew point values for non–condensing operation.

Performance Specifications

Table 46 Performance Specifications 1260 Infinity II Vialsampler (G7129A)

Type	Specification
Injection range	0.1 – 100 µL in 0.1 µL increments with 100 µL up to 60 MPa 0.1 – 900 µL in 0.1 µL increments with 900 µL up to 40 MPa
Precision	<0.25 % RSD of peak areas from 5 µL to 100 µL
Pressure range	0 – 60 MPa (0 – 600 bar, 0 – 8702 psi) 0 – 40 MPa (0 – 400 bar, 0 – 5801 psi)
Sample viscosity range	0.2 – 5 cp
Sample capacity	132 x 2 mL vial (two trays default) 100 x 2 mL vial (two classic trays optional) 36 x 6 mL vials (two trays optional)
Carry over	<0.004 % (40 ppm) with needle wash
Injection cycle time	18 s for draw speed 200 µL/min Ejection speed: 200 µL/min Injection volume: 1 µL
Minimum sample volume	1 µL from 5 µL sample in 100 µL microvial, or 1 µL from 10 µL sample in 300 µL microvial.
Instrument Control	Lab Advisor B.02.07 or above LC and CE Drivers A.02.12 or above
Local control	Agilent Instant Pilot (G4208A)
Communications	Controller-area network (CAN),Local Area Network (LAN) ERI: ready, start, stop and shut-down signals
Safety and maintenance	Extensive support for troubleshooting and maintenance is provided by the Instant Pilot, Agilent Lab Advisor, and the Chromatography Data System. Safety-related features are 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.
Metering device	Metering device in high pressure flow path

Physical Specifications of the Sample Cooler

Cooling unit is designed as vapor-compression refrigeration system. Contains fluorinated greenhouse gas (refrigerant) according to the Kyoto protocol. For specifications of refrigerant, charge capacity, carbon dioxide equivalent (CDE), and global warming potential (GWP) see instrument label.

Table 47 Physical Specification of the Sample Cooler

Type	Specification	Comments
Weight	< 6 kg	
Dimensions (height × width × depth)	205 mm x 340 mm x 370 mm	
Refrigerant gas	HFC-134a (0.042 kg)	Ozone depletion potential (ODP) = 0
Supply voltage	24 VDC (nominal)	
Current	10 A max.	
Ambient operating temperature	4 – 40 ° C (39.2 – 104 ° F)	
Ambient non-operating temperature	-40 – 70 ° C (-20 – 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 (15091 ft)	
Safety standards: IEC, EN, CSA, UL	Installation category II, Pollution degree 2	For indoor use only.
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Table 48 Performance Specifications Agilent 1290 Sample Cooler

Type	Specifications
Operating principle	High performance, low-energy consumption micro-compressor based cooler with ozone-friendly HFC-134a coolant (42 g), user-upgradable.
Temperature range	from 4 °C to 5 °C below ambient
Temperature settable	from 4 – 40 °C in 1 ° increments
Temperature accuracy (<25 °C, <50 % r.H.)	2 °C to 6 °C at a setpoint of 4 °C

Specifications of the Sample Thermostat

The sample thermostat is designed as a combination of a heater and vapor-compression refrigeration system. It uses non-Freon refrigerant (isobutane). This material is harmless to the environment and does not affect the ozone layer and global warming but it is combustable. Please adhere to the warnings listed in the manual.

Table 49 Physical Specifications of the Sample Thermostat

Type	Specification	Comment
Weight	<6 kg	
Dimensions (height x width x depth)	205 mm x 340 mm x 370 mm	
Refrigerant gas	R600a (0.030 kg)	Ozone depletion potential (ODP) =0 Global warming potential (GWP) =3
Supply voltage	24VDC (nominal)	
Current	10 A max.	
Ambient operating temperature	4 – 40 °C (39.2 – 104 °F)	
Ambient non-operating temperature	-40 – 70 °C (-20 – 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 (15091 ft)	
Safety standards: IEC, EN, CSA, UL	Installation category II, Pollution degree 2	For indoor use only
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Table 50 Performance Specifications for the Sample Thermostat

Type	Specifications
Operating principle	High performance, low-energy consumption micro-compressor based cooler with natural R600a coolant (Butane 30 g), user-upgradable
Temperature range	from 4 – 40 °C
Temperature settable	from 4 – 40 °C in 1 ° increments
Temperature accuracy (<25 °C, <50 % r.H.)	2 – 6 °C at a setpoint of 4 °C

NOTE

Minimum firmware revision for the sample thermostat is D.07.22.

Minimum LC driver revision for the sample thermostat is A.02.14.

Agilent 1260 Infinity II Vialsampler (G7129C)

Physical Specifications

Table 51 Physical Specifications

Type	Specification	Comments
Weight	19 kg (41.9 lbs)	w/o Thermostat
Dimensions (height × width × depth)	320 x 396 x 468 mm (12.8 x 15.6 x 18.4 inches)	
Line voltage	100 – 240 V~, ± 10 %	Wide-ranging capability
Line frequency	50 or 60 Hz, ± 5 %	
Power consumption	350 VA / 350 W / 1195 BTU/h	
Ambient operating temperature	4 - 40 °C (39 - 104 °F), without chiller up to 55 °C (131 °F)	
Ambient non-operating temperature	-40 – 70 °C (-40 – 158 °F)	
Humidity	< 95 % r.h. at 40 °C (104 °F)[1]	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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11
Permitted solvents	Auto-ignition temperature ≥200 °C Boiling point ≥56 °C	

[1] If a sample cooler or thermostat is included the upper value for humidity can be reduced. Please check your lab conditions to stay beyond dew point values for non–condensing operation.

Performance Specifications

Table 52 Performance Specifications 1260 Infinity II Vialsampler (G7129C)

Type	Specification
Injection range	0.1 – 100 µL in 0.1 µL increments with 100 µL up to 80 MPa
Injection precision	<0.25 % RSD of peak areas from 5 µL to 100 µL
Pressure range	0 – 80 MPa (0 – 800 bar, 0 – 11603 psi)
Sample viscosity range	0.2 – 5 cp
Sample capacity	132 x 2 mL vial (two trays default) 100 x 2 mL vial (two classic trays optional) 36 x 6 mL vials (two trays optional)
Carry over	<0.004 % (40 ppm) with needle wash
Injection cycle time	18 s for draw speed 200 µL/min Ejection speed: 200 µL/min Injection volume: 1 µL
Minimum sample volume	1 µL from 5 µL sample in 100 µL microvial, or 1 µL from 10 µL sample in 300 µL microvial.
Instrument Control	LC & CE Drivers A.02.17 or above Instrument Control Framework (ICF) A.02.05 or above Instant Pilot (G4208A) with firmware B.02.22 or above InfinityLab LC Companion (G7108A) Lab Advisor B.02.10 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.

Physical Specifications of the Sample Cooler

Cooling unit is designed as vapor-compression refrigeration system. Contains fluorinated greenhouse gas (refrigerant) according to the Kyoto protocol. For specifications of refrigerant, charge capacity, carbon dioxide equivalent (CDE), and global warming potential (GWP) see instrument label.

Table 53 Physical Specification of the Sample Cooler

Type	Specification	Comments
Weight	< 6 kg	
Dimensions (height × width × depth)	205 mm x 340 mm x 370 mm	
Refrigerant gas	HFC-134a (0.042 kg)	Ozone depletion potential (ODP) = 0
Supply voltage	24 VDC (nominal)	
Current	10 A max.	
Ambient operating temperature	4 – 40 ° C (39.2 – 104 ° F)	
Ambient non-operating temperature	-40 – 70 ° C (-20 – 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 (15091 ft)	
Safety standards: IEC, EN, CSA, UL	Installation category II, Pollution degree 2	For indoor use only.
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Table 54 Performance Specifications Agilent 1290 Sample Cooler

Type	Specifications
Operating principle	High performance, low-energy consumption micro-compressor based cooler with ozone-friendly HFC-134a coolant (42 g), user-upgradable.
Temperature range	from 4 °C to 5 °C below ambient
Temperature settable	from 4 – 40 °C in 1 ° increments
Temperature accuracy (<25 °C, <50 % r.H.)	2 °C to 6 °C at a setpoint of 4 °C

Specifications of the Sample Thermostat

The sample thermostat is designed as a combination of a heater and vapor-compression refrigeration system. It uses non-Freon refrigerant (isobutane). This material is harmless to the environment and does not affect the ozone layer and global warming but it is combustable. Please adhere to the warnings listed in the manual.

Table 55 Physical Specifications of the Sample Thermostat

Type	Specification	Comment
Weight	<6 kg	
Dimensions (height x width x depth)	205 mm x 340 mm x 370 mm	
Refrigerant gas	R600a (0.030 kg)	Ozone depletion potential (ODP) =0 Global warming potential (GWP) =3
Supply voltage	24VDC (nominal)	
Current	10 A max.	
Ambient operating temperature	4 – 40 °C (39.2 – 104 °F)	
Ambient non-operating temperature	-40 – 70 °C (-20 – 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 (15091 ft)	
Safety standards: IEC, EN, CSA, UL	Installation category II, Pollution degree 2	For indoor use only
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Table 56 Performance Specifications for the Sample Thermostat

Type	Specifications
Operating principle	High performance, low-energy consumption micro-compressor based cooler with natural R600a coolant (Butane 30 g), user-upgradable
Temperature range	from 4 – 40 °C
Temperature settable	from 4 – 40 °C in 1 ° increments
Temperature accuracy (<25 °C, <50 % r.H.)	2 – 6 °C at a setpoint of 4 °C

NOTE

Minimum firmware revision for the sample thermostat is D.07.22.

Minimum LC driver revision for the sample thermostat is A.02.14.

Agilent 1260 Infinity II Bio-Inert Multisampler (G5668A)

Physical Specifications

Table 57 Physical Specifications

Type	Specification	Comments
Weight	22 kg (48.5 lbs)	w/o Thermostat
Dimensions (height × width × depth)	320 x 396 x 468 mm (12.6 x 15.6 x 18.4 inches)	
Line voltage	100 – 240 V~, ± 10 %	Wide-ranging capability
Line frequency	50 or 60 Hz, ± 5 %	
Power consumption	180 VA, 180 W	
Ambient operating temperature	4 - 40 °C (39 - 104 °F)	
Ambient non-operating temperature	-40 – 70 °C (-40 – 158 °F)	
Humidity	< 95 % r.h. at 40 °C (104 °F)[1]	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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11
Permitted solvents	Auto-ignition temperature ≥200 °C Boiling point ≥56 °C	

[1] If a sample cooler or thermostat is included the upper value for humidity can be reduced. Please check your lab conditions to stay beyond dew point values for non–condensing operation.

Performance Specifications

Table 58 Performance Specifications 1260 Infinity II Bio-inert Multisampler (G5668A)

Type	Specification
Injection range	Default: 0.1 – 100 µL in 0.1 µL increments
	Default: 0.1 – 250 µL or 1000 µL in 0.1 µL increments with Multidraw upgrade kit (Bio-inert) (G5667-68711)
Precision	<0.15 % RSD or SD <10 nL, whatever is greater
Pressure range	Up to 600 bar
Sample viscosity range	0.2 – 5 cp
Sample capacity	1H Drawer up to 8 drawers and 16 positions Shallow well plates (MTP)
	2H Drawer up to 4 drawers and 8 positions MTP, deep well plates, vials, Eppendorf
	3H Drawer 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 µL/min
	Default eject speed: 400 µL/min Injection volume: 1 µL
Carry Over	<0.003 % (30 ppm) Multisampler Standard <0.0009 % (9 ppm) Multisampler Multiwash
Multiwash	Outer needle wash and seat backflush for carryover reduction with up to 3 different solvents
Materials in flow path	Titanium, gold, PTFE, PEEK, ceramic
	PEEK, ceramic
Instrument Control	Lab Advisor B.02.08 or above LC and CE Drivers A.02.14 or above
Local Control	Agilent Instant Pilot (G4208A)
Communications	Controller-area network (CAN), Local Area Network (LAN), USB ERI: ready, start, stop and shut-down signals

Table 58 Performance Specifications 1260 Infinity II Bio-inert Multisampler (G5668A)

Type	Specification
Safety and maintenance	Extensive support for troubleshooting and maintenance is provided by the Instant Pilot, Agilent Lab Advisor, and the Chromatography Data System. Safety-related features are 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.
Metering device	Metering device in high pressure flow path

Physical Specifications of the Sample Cooler

Cooling unit is designed as vapor-compression refrigeration system. Contains fluorinated greenhouse gas (refrigerant) according to the Kyoto protocol. For specifications of refrigerant, charge capacity, carbon dioxide equivalent (CDE), and global warming potential (GWP) see instrument label.

Table 59 Physical Specification of the Sample Cooler

Type	Specification	Comments
Weight	< 6 kg	
Dimensions (height × width × depth)	205 mm x 340 mm x 370 mm	
Refrigerant gas	HFC-134a (0.042 kg)	Ozone depletion potential (ODP) = 0
Supply voltage	24 VDC (nominal)	
Current	10 A max.	
Ambient operating temperature	4 – 40 ° C (39.2 – 104 ° F)	
Ambient non-operating temperature	-40 – 70 ° C (-20 – 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 (15091 ft)	
Safety standards: IEC, EN, CSA, UL	Installation category II, Pollution degree 2	For indoor use only.
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Table 60 Performance Specifications Agilent 1290 Sample Cooler

Type	Specifications
Operating principle	High performance, low-energy consumption micro-compressor based cooler with ozone-friendly HFC-134a coolant (42 g), user-upgradable.
Temperature range	from 4 °C to 5 °C below ambient
Temperature settable	from 4 – 40 °C in 1 ° increments
Temperature accuracy (<25 °C, <50 % r.H.)	2 °C to 6 °C at a setpoint of 4 °C

Specifications of the Sample Thermostat

The sample thermostat is designed as a combination of a heater and vapor-compression refrigeration system. It uses non-Freon refrigerant (isobutane). This material is harmless to the environment and does not affect the ozone layer and global warming but it is combustable. Please adhere to the warnings listed in the manual.

Table 61 Physical Specifications of the Sample Thermostat

Type	Specification	Comment
Weight	<6 kg	
Dimensions (height x width x depth)	205 mm x 340 mm x 370 mm	
Refrigerant gas	R600a (0.030 kg)	Ozone depletion potential (ODP) =0 Global warming potential (GWP) =3
Supply voltage	24VDC (nominal)	
Current	10 A max.	
Ambient operating temperature	4 – 40 °C (39.2 – 104 °F)	
Ambient non-operating temperature	-40 – 70 °C (-20 – 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 (15091 ft)	
Safety standards: IEC, EN, CSA, UL	Installation category II, Pollution degree 2	For indoor use only
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Table 62 Performance Specifications for the Sample Thermostat

Type	Specifications
Operating principle	High performance, low-energy consumption micro-compressor based cooler with natural R600a coolant (Butane 30 g), user-upgradable
Temperature range	from 4 – 40 °C
Temperature settable	from 4 – 40 °C in 1 ° increments
Temperature accuracy (<25 °C, <50 % r.H.)	2 – 6 °C at a setpoint of 4 °C

NOTE

Minimum firmware revision for the sample thermostat is D.07.22.

Minimum LC driver revision for the sample thermostat is A.02.14.

Agilent 1220 Infinity II LC Autosampler

Physical Specifications

Table 63 Physical Specifications

Type	Specification	Comments
Weight	30 kg (66 lbs)	
Dimensions (height × width × depth)	640 × 370 × 420 mm (25.2 × 14.6 × 16.5 inches)	
Line voltage	100 – 240 V~, ± 10 %	Wide-ranging capability
Line frequency	50 or 60 Hz, ± 5 %	
Power consumption	240 VA / 210 W / 717 BTU	Maximum
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 2000 m (6562 ft)	
Non-operating altitude	Up to 4600 m (15092 ft)	For storing the module
Safety standards: IEC, CSA, UL	Installation category II, Pollution degree 2	For indoor use only.

Performance Specifications

Table 64 Performance Specifications Agilent 1220 Infinity II LC Autosampler

Type	Specification
Injection range	0.1 – 100 µL in 0.1 µL increments
Precision	<1 % RSD of peak areas from 1 µL to 5 µL <0.25 % RSD of peak areas from 5 µL to 100 µL
Replicate injections	1 – 99 from one vial
Pressure range	0 – 60 MPa (0 – 600 bar, 0 – 8702 psi)
Sample viscosity range	0.2 – 50 cp
Sample capacity	100 × 2 mL vials in 1 tray 40 × 2 mL vials in ½ tray 15 × 6 mL vials in ½ tray (Agilent vials only)
Carry over	Typically < 0.1 %, < 0.05 % with external needle cleaning
Injection cycle time	Typically 50 s depending on draw speed and injection volume
Minimum sample volume	1 µL from 5 µL sample in 100 µL microvial, or 1 µL from 10 µL sample in 300 µL microvial

Agilent 1260 Infinity II Preparative Autosampler (G7157A)

Physical Specifications

Table 65 Physical Specifications

Type	Specification	Comments
Weight	19 kg (41.9 lbs)	w/o Thermostat
Dimensions (height × width × depth)	320 x 396 x 468 mm (12.8 x 15.6 x 18.4 inches)	
Line voltage	100 – 240 V~, ± 10 %	Wide-ranging capability
Line frequency	50 or 60 Hz, ± 5 %	
Power consumption	350 VA / 350 W / 1195 BTU/h	
Ambient operating temperature	4 - 40 °C (39 - 104 °F), without chiller up to 55 °C (131 °F)	
Ambient non-operating temperature	-40 – 70 °C (-40 – 158 °F)	
Humidity	< 95 % r.h. at 40 °C (104 °F)[1]	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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11
Permitted solvents	Auto-ignition temperature ≥200 °C Boiling point ≥56 °C	

[1] If a sample cooler or thermostat is included the upper value for humidity can be reduced. Please check your lab conditions to stay beyond dew point values for non–condensing operation.

Performance Specifications

Table 66 Performance Specifications 1260 Infinity II Preparative Autosampler (G7157A)

Type	Specification
Settable injection range	0.1 – 900 µL, up to 3600 µL with seat extension
Injection precision	1 µL: <5 % 5 µL: <2 % 10 µL, 50 µL: <1 % 500 – 3600 µL: <0.25 %
Pressure range	0 – 40 MPa (0 – 400 bar, 0 – 5801.51 psi)
Sample viscosity range	0.2 – 5 cp
Sample capacity	132 x 2 mL vial (two trays default) 100 x 2 mL vial (two classic trays optional) 36 x 6 mL vials (two trays optional)
Carry over	<0.005 % (50 ppm)
Injection cycle time	<60 s for injection volume 900 µL
Instrument Control	LC & CE Drivers A.02.17 or above Instrument Control Framework (ICF) A.02.04 or above Instant Pilot (G4208A) with firmware B.02.22 or above Lab Advisor B.02.10 or above
Communications	Controller-area network (CAN), Local Area Network (LAN) ERI: ready, start, stop and shut-down signals
Safety and maintenance	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.

Physical Specifications of the Sample Cooler

Cooling unit is designed as vapor-compression refrigeration system. Contains fluorinated greenhouse gas (refrigerant) according to the Kyoto protocol. For specifications of refrigerant, charge capacity, carbon dioxide equivalent (CDE), and global warming potential (GWP) see instrument label.

Table 67 Physical Specification of the Sample Cooler

Type	Specification	Comments
Weight	< 6 kg	
Dimensions (height × width × depth)	205 mm x 340 mm x 370 mm	
Refrigerant gas	HFC-134a (0.042 kg)	Ozone depletion potential (ODP) = 0
Supply voltage	24 VDC (nominal)	
Current	10 A max.	
Ambient operating temperature	4 – 40 ° C (39.2 – 104 ° F)	
Ambient non-operating temperature	-40 – 70 ° C (-20 – 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 (15091 ft)	
Safety standards: IEC, EN, CSA, UL	Installation category II, Pollution degree 2	For indoor use only.
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Table 68 Performance Specifications Agilent 1290 Sample Cooler

Type	Specifications
Operating principle	High performance, low-energy consumption micro-compressor based cooler with ozone-friendly HFC-134a coolant (42 g), user-upgradable.
Temperature range	from 4 °C to 5 °C below ambient
Temperature settable	from 4 – 40 °C in 1 ° increments
Temperature accuracy (<25 °C, <50 % r.H.)	2 °C to 6 °C at a setpoint of 4 °C

Specifications of the Sample Thermostat

The sample thermostat is designed as a combination of a heater and vapor-compression refrigeration system. It uses non-Freon refrigerant (isobutane). This material is harmless to the environment and does not affect the ozone layer and global warming but it is combustable. Please adhere to the warnings listed in the manual.

Table 69 Physical Specifications of the Sample Thermostat

Type	Specification	Comment
Weight	<6 kg	
Dimensions (height x width x depth)	205 mm x 340 mm x 370 mm	
Refrigerant gas	R600a (0.030 kg)	Ozone depletion potential (ODP) =0 Global warming potential (GWP) =3
Supply voltage	24VDC (nominal)	
Current	10 A max.	
Ambient operating temperature	4 – 40 °C (39.2 – 104 °F)	
Ambient non-operating temperature	-40 – 70 °C (-20 – 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 (15091 ft)	
Safety standards: IEC, EN, CSA, UL	Installation category II, Pollution degree 2	For indoor use only
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Table 70 Performance Specifications for the Sample Thermostat

Type	Specifications
Operating principle	High performance, low-energy consumption micro-compressor based cooler with natural R600a coolant (Butane 30 g), user-upgradable
Temperature range	from 4 – 40 °C
Temperature settable	from 4 – 40 °C in 1 ° increments
Temperature accuracy (<25 °C, <50 % r.H.)	2 – 6 °C at a setpoint of 4 °C

NOTE

Minimum firmware revision for the sample thermostat is D.07.22.

Minimum LC driver revision for the sample thermostat is A.02.14.

Agilent 1260 Infinity II SFC Multisampler (G4767A)

Physical Specifications

Table 71 Physical Specifications

Type	Specification	Comments
Weight	22 kg (48.5 lbs)	w/o Thermostat
Dimensions (height × width × depth)	320 x 396 x 468 mm (12.6 x 15.6 x 18.4 inches)	
Line voltage	100 – 240 V~, ± 10 %	Wide-ranging capability
Line frequency	50 or 60 Hz, ± 5 %	
Power consumption	180 VA, 180 W	
Ambient operating temperature	4 – 40 °C (39 – 104 °F)	
Ambient non-operating temperature	-40 – 70 °C (-40 – 158 °F)	
Humidity	< 95 % r.h. at 40 °C (104 °F)[1]	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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11
Permitted solvents	Auto-ignition temperature ≥200 °C Boiling point ≥56 °C	

[1] If a sample cooler or thermostat is included the upper value for humidity can be reduced. Please check your lab conditions to stay beyond dew point values for non–condensing operation.

Performance Specifications

Table 72 Performance Specifications Agilent 1260 Infinity II SFC Multisampler (G4767A)

Type	Specification
Injection range	Default 0.1 – 90 µL in 0.1 µL increments
Injection precision in LC mode	<0.15 % RSD or SD <10 nL, whatever is greater
Injection precision in SFC mode	0.1 – 10 µl: <0.3 % RSD or 10 nL whatever is greater. At 10 µl: <0.25 % RSD
Injection linearity in SFC mode	0.9999 in the range of 0.1 – 10 µl
Injection linearity in LC mode	0.9999 in the range of 0.1 – 100 µl
Pressure range	Up to 600 bar
Sample viscosity range	0.2 – 5 cp
Sample capacity	1H Drawer up to 8 drawers and 16 positions Shallow well plates (MTP)
	2H Drawer up to 4 drawers and 8 positions MTP, deep well plates, vials, Eppendorf
	3H Drawer up to 2 drawers and 4 positions MTP, deep well plates, vials up to 6 mL, Eppendorf
LC Injection cycle time	<10 s using following standard conditions: Default draw speed: 100 µL/min Default eject speed: 400 µL/min Injection volume: 1 µL
SFC Injection cycle time	<13 s using following conditions: Default draw speed: 100 µL/min Feed Speed: 1000 µL/min Injection volume: 1 µL
Carry over in LC mode	<0.003 % (30 ppm)
Carry over in SFC mode	<0.002 % (20 ppm)

Table 72 Performance Specifications Agilent 1260 Infinity II SFC Multisampler (G4767A)

Type	Specification
Instrument Control	LC & CE Drivers A.02.16 or above Instrument Control Framework (ICF) A.02.04 or above Instant Pilot (G4208A) with firmware B.02.21 or above Lab Advisor B.02.09 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.

Physical Specifications of the Sample Cooler

Cooling unit is designed as vapor-compression refrigeration system. Contains fluorinated greenhouse gas (refrigerant) according to the Kyoto protocol. For specifications of refrigerant, charge capacity, carbon dioxide equivalent (CDE), and global warming potential (GWP) see instrument label.

Table 73 Physical Specification of the Sample Cooler

Type	Specification	Comments
Weight	< 6 kg	
Dimensions (height × width × depth)	205 mm x 340 mm x 370 mm	
Refrigerant gas	HFC-134a (0.042 kg)	Ozone depletion potential (ODP) = 0
Supply voltage	24 VDC (nominal)	
Current	10 A max.	
Ambient operating temperature	4 – 40 ° C (39.2 – 104 ° F)	
Ambient non-operating temperature	-40 – 70 ° C (-20 – 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 (15091 ft)	
Safety standards: IEC, EN, CSA, UL	Installation category II, Pollution degree 2	For indoor use only.
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Table 74 Performance Specifications Agilent 1290 Sample Cooler

Type	Specifications
Operating principle	High performance, low-energy consumption micro-compressor based cooler with ozone-friendly HFC-134a coolant (42 g), user-upgradable.
Temperature range	from 4 °C to 5 °C below ambient
Temperature settable	from 4 – 40 °C in 1 ° increments
Temperature accuracy (<25 °C, <50 % r.H.)	2 °C to 6 °C at a setpoint of 4 °C

Specifications of the Sample Thermostat

The sample thermostat is designed as a combination of a heater and vapor-compression refrigeration system. It uses non-Freon refrigerant (isobutane). This material is harmless to the environment and does not affect the ozone layer and global warming but it is combustable. Please adhere to the warnings listed in the manual.

Table 75 Physical Specifications of the Sample Thermostat

Type	Specification	Comment
Weight	<6 kg	
Dimensions (height x width x depth)	205 mm x 340 mm x 370 mm	
Refrigerant gas	R600a (0.030 kg)	Ozone depletion potential (ODP) =0 Global warming potential (GWP) =3
Supply voltage	24VDC (nominal)	
Current	10 A max.	
Ambient operating temperature	4 – 40 °C (39.2 – 104 °F)	
Ambient non-operating temperature	-40 – 70 °C (-20 – 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 (15091 ft)	
Safety standards: IEC, EN, CSA, UL	Installation category II, Pollution degree 2	For indoor use only
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Table 76 Performance Specifications for the Sample Thermostat

Type	Specifications
Operating principle	High performance, low-energy consumption micro-compressor based cooler with natural R600a coolant (Butane 30 g), user-upgradable
Temperature range	from 4 – 40 °C
Temperature settable	from 4 – 40 °C in 1 ° increments
Temperature accuracy (<25 °C, <50 % r.H.)	2 – 6 °C at a setpoint of 4 °C

NOTE

Minimum firmware revision for the sample thermostat is D.07.22.

Minimum LC driver revision for the sample thermostat is A.02.14.

3
UV-Detectors

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Agilent 1290 Infinity II Variable Wavelength Detector (G7114B)

Physical Specifications

Table 77 Physical Specifications

Type	Specification	Comments
Weight	11 kg (24.3 lbs)	
Dimensions (height × width × depth)	140 x 396 x 436 mm (5.5 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	80 VA, 70 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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Performance Specifications

Table 78 Agilent 1290 Infinity II Variable Wavelength Detector (G7114B) Performance Specifications

Feature	Specification
Detection type	Double-beam photometer
Light source	Deuterium lamp
Number of signals	Single and dual wavelength detection
Maximum data rate	240 Hz (single wavelength detection) 2.5 Hz (dual wavelength detection)
Noise	$<\pm 0.15 \cdot 10^{-5}$ AU, at 230 nm (single wavelength detection) $<\pm 0.80 \cdot 10^{-5}$ AU, at 230 nm and 254 nm (dual wavelength detection)
Drift	$<1 \cdot 10^{-4}$ AU/h, at 230 nm
Linearity	>2.5 AU upper limit
Wavelength range	190 – 600 nm
Wavelength accuracy	±1 nm, self-calibration with deuterium lines, verification with holmium oxide filter
Wavelength precision	<±0.1 nm
Slit width	6.5 nm typical over whole wavelength range
Time programmable	Wavelength, polarity, peak width, lamp on/off

Table 78 Agilent 1290 Infinity II Variable Wavelength Detector (G7114B) Performance Specifications

Feature	Specification
Flow cells	*Standard:* 14 µL volume, 10 mm cell path length and 40 bar (588 psi) pressure maximum *Micro:* 2 µL volume, 3 mm cell path length and 120 bar (1760 psi) pressure maximum *Semi-micro:* 5 µL volume, 6 mm cell path length and 40 bar (588 psi) pressure maximum *Preparative:* 4 µL volume, 3 mm cell path length and 120 bar (1760 psi) pressure maximum *Preparative:* 0.3 mm cell path length and 50 bar (725 psi) pressure maximum *Preparative:* 0.06 mm cell path length and 50 bar (725 psi) pressure maximum *High pressure:* 14 µL volume, 10 mm cell path length and 400 bar (5801 psi) pressure maximum
Spectral tools	Stop-flow wavelength scan
Analog output	Recorder/Integrator 100 mV or 1 V, 1 output
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
Communication	LAN, Controller-area network (CAN), ERI: ready, start, stop and shut-down signals, USB
GLP	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. RFID for electronics records of flow cell and UV lamp conditions (path length, volume, product number, serial number, test passed, and usage). Verification of wavelength accuracy with built-in holmium oxide filter.
Safety and maintenance	Extensive diagnostics, error detection and display through Agilent Instant Pilot and Agilent Lab Advisor software. Leak detection, safe leak handling, leak output signal for shutdown of pumping system. Low voltages in major maintenance areas. Tracking of flow cells and lamps with RFID (radio frequency identification) tags

Agilent 1260 Infinity II Variable Wavelength Detector (G7114A)

Physical Specifications

Table 79 Physical Specifications

Type	Specification	Comments
Weight	11 kg (24.3 lbs)	
Dimensions (height × width × depth)	140 x 396 x 436 mm (5.5 x 15.6 x 17.0 inches)	
Line voltage	100 – 240 V~, ± 10 %	Wide-ranging capability
Line frequency	50 or 60 Hz, ± 5 %	
Power consumption	80 VA, 70 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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Performance Specifications

Table 80 Performance Specifications 1260 Infinity II Variable Wavelength Detector (G7114A)

Feature	Specification
Detection type	Double-beam photometer
Light source	Deuterium lamp
Number of signals	Single and dual wavelength detection
Maximum data rate	120 Hz (single wavelength detection) 2.5 Hz (dual wavelength detection)
Noise	$<\pm 0.25 \cdot 10^{-5}$ AU, at 230 nm (single wavelength detection) $<\pm 0.80 \cdot 10^{-5}$ AU, at 230 nm and 254 nm (dual wavelength detection)
Drift	$<1 \cdot 10^{-4}$ AU/h, at 230 nm
Linearity	>2.5 AU upper limit
Wavelength range	190 – 600 nm
Wavelength accuracy	±1 nm, self-calibration with deuterium lines, verification with holmium oxide filter
Wavelength precision	<±0.1 nm
Slit width	6.5 nm typical over whole wavelength range
Time programmable	Wavelength, polarity, peak width, lamp on/off

Table 80 Performance Specifications 1260 Infinity II Variable Wavelength Detector (G7114A)

Feature	Specification
Flow cells	*Standard:* 14 µL volume, 10 mm cell path length and 40 bar (588 psi) pressure maximum *Micro:* 2 µL volume, 3 mm cell path length and 120 bar (1760 psi) pressure maximum *Semi-micro:* 5 µL volume, 6 mm cell path length and 40 bar (588 psi) pressure maximum *Preparative:* 4 µL volume, 3 mm cell path length and 120 bar (1760 psi) pressure maximum *Preparative:* 0.3 mm cell path length and 50 bar (725 psi) pressure maximum *Preparative:* 0.06 mm cell path length and 50 bar (725 psi) pressure maximum *High pressure:* 14 µL volume, 10 mm cell path length and 400 bar (5801 psi) pressure maximum
Spectral tools	Stop-flow wavelength scan
Analog output	Recorder/Integrator 100 mV or 1 V, 1 output
Instrument Control	Lab Advisor B.02.08 or above LC and CE Drivers A.02.14 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
Communication	Controller-area network (CAN), USB ERI: ready, start, stop and shut-down signals
GLP	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. RFID for electronics records of flow cell and UV lamp conditions (path length, volume, product number, serial number, test passed, and usage). Verification of wavelength accuracy with built-in holmium oxide filter.
Safety and maintenance	Extensive diagnostics, error detection and display through Agilent Instant Pilot and Agilent Lab Advisor software. Leak detection, safe leak handling, leak output signal for shutdown of pumping system. Low voltages in major maintenance areas. Tracking of flow cells and lamps with RFID (radio frequency identification) tags

Agilent 1260 Infinity II Diode Array Detector WR (G7115A)

Physical Specifications

Table 81 Physical Specifications

Type	Specification	Comments
Weight	12 kg (26.5 lbs)	
Dimensions (height × width × depth)	140 x 396 x 436 mm (5.5 x 15.6 x 17.0 inches)	
Line voltage	100 – 240 V~, ± 10 %	Wide-ranging capability
Line frequency	50 or 60 Hz, ± 5 %	
Power consumption	110 VA / 100 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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11

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	< ± $0.7 \cdot 10^{-5}$ 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	Standard: 13 µL volume, 10 mm cell path length and 120 bar (1740 psi) pressure maximum Standard bio-inert: 13 µL volume, 10 mm cell path length and 120 bar (1740 psi) pressure maximum Semi-micro: 5 µL volume, 6 mm cell path length and 120 bar (1740 psi) pressure maximum Micro: 2 µL volume, 3 mm cell path length, 120 bar (1740 psi) pressure maximum Semi-nano: 500 nL volume, 10 mm cell path length and 50 bar (725 psi) pressure maximum Nano: 80 nL volume, 6 mm cell path length and 50 bar (725 psi) pressure maximum High pressure: 1.7 µL volume, 6 mm cell path length and 400 bar (5800 psi) pressure maximum Prep SST: 3 mm cell path length and 120 bar (1740 psi) pressure maximum Prep Quartz:0.3 mm cell path length and 20 bar (290 psi) pressure maximum Prep Quartz: 0.06 mm cell path length and 20 bar (290 psi) pressure maximum SFC Flow Cell: Light path 10 mm, Pressure Rating 400 bar, Internal Volume 13 µL SFC Flow Cell LD: Light Path 3 mm, Pressure Rating 400 bar, Internal Volume 2 µL
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-setable 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

Agilent 1290 Infinity II DAD (G7117B)

Physical Specifications

Table 83 Physical Specifications

Type	Specification	Comments
Weight	11.5 kg (25.4 lbs)	
Dimensions (height × width × depth)	140 x 396 x 436 mm (5.5 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	110 VA, 100 W	
Ambient operating temperature	4 – 40 °C (39 – 104 °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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Performance Specifications

Table 84 Agilent 1290 Infinity II Diode Array Detector (G7117B) Performance Specifications

Feature	Specification
Detector type	1024-element diode array
Light source	Deuterium
Number of signals	8
Maximum sampling rate	240 Hz (both spectra and signals)
Short-term noise	with 10 mm Max-Light cartridge cell: $<\pm 3 \cdot 10^{-6}$ AU at 230/4 nm, slit width 4 nm, TC 2 s, ASTM with 60 mm Max-Light cartridge cell: $<\pm 0.6 \cdot 10^{-6}$ AU/cm at 230/4 nm, slit width 4 nm, TC 2 s, ASTM
Drift	$<0.5 \cdot 10^{-3}$ AU/h at 230 nm
Linearity	>2.0 AU (5 %) at 265 nm Typically 2.5 AU (5 %)
Wavelength range	190 – 640 nm
Wavelength accuracy	±1 nm, self-calibration with deuterium lines
Wavelength precision	<±0.1 nm
Slit width	Programmable: 1, 2, 4, 8 nm
Diode width	~0.5 nm
Wavelength bunching	Programmable, 2 – 400 nm, in steps of 1 nm
Spectral tools	Data analysis software for spectra evaluation, including spectral libraries and peak purity functions

Table 84 Agilent 1290 Infinity II Diode Array Detector (G7117B) Performance Specifications

Feature	Specification
Flow cells	User-exchangeable, self-aligning cartridge cells with RFID tags. Max-Light Cartridge Cell (Standard): 10 mm, σ_V = 1.0 µL Max-Light Cartridge Cell (High Sensitivity): 60 mm, σ_V = 4 µL Max-Light Cartridge Ultra Low Dispersion (ULD) Cell: 10 mm, σ_V = 0.6 µL Max-Light Cartridge High Dynamic Range (HDR) Cell: 3.7 mm, σ_V = 0.8 µL Maximum Operating Pressure (MOP)[1]: 70 bar Maximum Incidental Pressure (MIP)[2]: 150 bar
Analog output	Recorder/integrator: 100 mV or 1 V, output range 0.001 – 2 AU, one output
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	LAN, controller-area network (CAN), ERI: ready, start, stop and shut-down signals, USB
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 deuterium lines.
Safety and maintenance	Extensive diagnostics, error detection and display through Agilent Instant Pilot and Agilent Lab Advisor software. Leak detection, safe leak handling, leak output signal for shutdown of pumping system. Low voltages in major maintenance areas.
Others	Second generation of Electronic temperature control (ETC) for the complete optical unit

1 Maximum operating pressure (MOP): Maximum pressure at which a system can operate continuously under normal conditions.

2 Maximum incidental pressure (MIP): The maximum pressure which the system can experience during a short time.

Agilent 1290 Infinity II DAD FS (G7117A)

Physical Specifications

Table 85 Physical Specifications

Type	Specification	Comments
Weight	11.5 kg (25.4 lbs)	
Dimensions (height × width × depth)	140 x 396 x 436 mm (5.5 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	110 VA, 100 W	
Ambient operating temperature	4 – 40 °C (39 – 104 °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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Performance Specifications

Table 86 Agilent 1290 Infinity II Diode Array Detector FS (G7117A) Performance Specifications

Feature	Specification
Detector type	1024-element diode array
Light source	Deuterium
Number of signals	8
Maximum sampling rate	120 Hz (both spectra and signals)
Short-term noise	with 10 mm Max-Light cartridge cell: $<\pm 3 \cdot 10^{-6}$ AU at 230/4 nm, slit width 4 nm, TC 2 s, ASTM with 60 mm Max-Light cartridge cell: $<\pm 0.6 \cdot 10^{-6}$ AU/cm at 230/4 nm, slit width 4 nm, TC 2 s, ASTM
Drift	$<0.5 \cdot 10^{-3}$ AU/h at 230 nm
Linearity	>2.0 AU (5 %) at 265 nm Typically 2.5 AU (5 %)
Wavelength range	190 – 640 nm
Wavelength accuracy	±1 nm, self-calibration with deuterium lines
Wavelength precision	<±0.1 nm
Diode width	~0.5 nm
Wavelength bunching	Programmable, 2 – 400 nm, in steps of 1 nm
Flow cells	User-exchangeable, self-aligning cartridge cells with RFID tags. Max-Light Cartridge Cell (Standard): 10 mm, σ_V = 1.0 µL Max-Light Cartridge Cell (High Sensitivity): 60 mm, σ_V = 4 µL Max-Light Cartridge Ultra Low Dispersion (ULD) Cell: 10 mm, σ_V = 0.6 µL Max-Light Cartridge High Dynamic Range (HDR) Cell: 3.7 mm, σ_V = 0.8 µL Maximum Operating Pressure (MOP)[1]: 70 bar Maximum Incidental Pressure (MIP)[2]: 150 bar

Table 86 Agilent 1290 Infinity II Diode Array Detector FS (G7117A) Performance Specifications

Feature	Specification
Spectral tools	Data analysis software for spectra evaluation, including spectral libraries and peak purity functions
Analog output	Recorder/integrator: 100 mV or 1 V, output range 0.001 – 2 AU, one output
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	LAN, controller-area network (CAN), ERI: ready, start, stop and shut-down signals USB
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 deuterium lines.
Safety and maintenance	Extensive diagnostics, error detection and display through Agilent Instant Pilot and Agilent Lab Advisor software. Leak detection, safe leak handling, leak output signal for shutdown of pumping system. Low voltages in major maintenance areas.
Others	Second generation of Electronic temperature control (ETC) for the complete optical unit

[1] Maximum operating pressure (MOP): Maximum pressure at which a system can operate continuously under normal conditions.

[2] Maximum incidental pressure (MIP): The maximum pressure which the system can experience during a short time.

Agilent 1260 Infinity II Diode Array Detector HS (G7117C)

Physical Specifications

Table 87 Physical Specifications

Type	Specification	Comments
Weight	11.5 kg (25.4 lbs)	
Dimensions (height × width × depth)	140 x 396 x 436 mm (5.5 x 15.6 x 17.0 inches)	
Line voltage	100 – 240 V~, ± 10 %	Wide-ranging capability
Line frequency	50 or 60 Hz, ± 5 %	
Power consumption	110 VA, 100 W	
Ambient operating temperature	4 – 40 °C (39 – 104 °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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Performance Specifications

Table 88 Performance Specifications 1260 Infinity II Diode Array Detector HS (G7117C)

Feature	Specification
Detector type	1024-element diode array
Light source	Deuterium
Number of signals	8
Maximum sampling rate	120 Hz (both spectra and signals)
Short-term noise	with 10 mm Max-Light cartridge cell: $<\pm 3 \cdot 10^{-6}$ AU at 230/4 nm, slit width 4 nm, TC 2 s, ASTM with 60 mm Max-Light cartridge cell: $<\pm 0.6 \cdot 10^{-6}$ AU/cm at 230/4 nm, slit width 4 nm, TC 2 s, ASTM
Drift	$<0.5 \cdot 10^{-3}$ AU/h at 230 nm
Linearity	>2.0 AU (5 %) at 265 nm Typically 2.5 AU (5 %)
Wavelength range	190 – 640 nm
Wavelength accuracy	±1 nm, self-calibration with deuterium lines
Wavelength precision	<±0.1 nm
Diode width	~0.5 nm
Wavelength bunching	Programmable, 2 – 400 nm, in steps of 1 nm
Flow cells	User-exchangeable, self-aligning cartridge cells with RFID tags. Max-Light Cartridge Cell (Standard): 10 mm, σ_V = 1.0 µL Max-Light Cartridge Cell (High Sensitivity): 60 mm, σ_V = 4 µL Maximum Operating Pressure (MOP)[1]: 70 bar Maximum Incidental Pressure (MIP)[2]: 150 bar
Spectral tools	Data analysis software for spectra evaluation, including spectral libraries and peak purity functions

Table 88 Performance Specifications 1260 Infinity II Diode Array Detector HS (G7117C)

Feature	Specification
Analog output	Recorder/integrator: 100 mV or 1 V, output range 0.001 – 2 AU, one output
Instrument Control	Lab Advisor B.02.08 or above LC and CE Drivers A.02.14 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.02.20 or above
Communications	Controller-area network (CAN), USB Extended Remote Interface: ready, start, stop and shut-down signals
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 deuterium lines.
Safety and maintenance	Extensive diagnostics, error detection and display through Agilent Instant Pilot and Agilent Lab Advisor software. Leak detection, safe leak handling, leak output signal for shutdown of pumping system. Low voltages in major maintenance areas.
Others	Second generation of Electronic temperature control (ETC) for the complete optical unit

[1] Maximum operating pressure (MOP): Maximum pressure at which a system can operate continuously under normal conditions.

[2] Maximum incidental pressure (MIP): The maximum pressure which the system can experience during a short time.

Agilent 1260 Infinity II Multiple Wavelength Detector (G7165A)

Physical Specifications

Table 89 Physical Specifications

Type	Specification	Comments
Weight	12 kg (26.5 lbs)	
Dimensions (height × width × depth)	140 x 396 x 436 mm (5.5 x 15.6 x 17.0 inches)	
Line voltage	100 – 240 V~, ± 10 %	Wide-ranging capability
Line frequency	50 or 60 Hz, ± 5 %	
Power consumption	110 VA / 100 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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Performance Specifications

Table 90 Performance Specifications 1260 Infinity II Multiple Wavelength Detector (G7165A)

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	< ± $0.7 \cdot 10^{-5}$ 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 90 Performance Specifications 1260 Infinity II Multiple Wavelength Detector (G7165A)

Type	Specification
Flow cells	Standard: 13 µL volume, 10 mm cell path length and 120 bar (1740 psi) pressure maximum Standard bio-inert: 13 µL volume, 10 mm cell path length and 120 bar (1740 psi) pressure maximum Semi-micro: 5 µL volume, 6 mm cell path length and 120 bar (1740 psi) pressure maximum Micro: 2 µL volume, 3 mm cell path length, 120 bar (1740 psi) pressure maximum Semi-nano: 500 nL volume, 10 mm cell path length and 50 bar (725 psi) pressure maximum Nano: 80 nL volume, 6 mm cell path length and 50 bar (725 psi) pressure maximum High pressure: 1.7 µL volume, 6 mm cell path length and 400 bar (5800 psi) pressure maximum Prep SST: 3 mm cell path length and 120 bar (1740 psi) pressure maximum Prep Quartz:0.3 mm cell path length and 20 bar (290 psi) pressure maximum Prep Quartz: 0.06 mm cell path length and 20 bar (290 psi) pressure maximum SFC Flow Cell: Light path 10 mm, Pressure Rating 400 bar, Internal Volume 13 µL SFC Flow Cell LD: Light Path 3 mm, Pressure Rating 400 bar, Internal Volume 2 µL
Time programmable	Wavelength, polarity, peak width, lamp bandwidth, autobalance, wavelength range, threshold, spectra storage mode
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 90 Performance Specifications 1260 Infinity II Multiple Wavelength Detector (G7165A)

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-setable 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

Agilent 1220 Infinity II LC Variable Wavelength Detector

Physical Specifications

Table 91 Physical Specifications

Type	Specification	Comments
Weight	30 kg (66 lbs)	
Dimensions (height × width × depth)	640 × 370 × 420 mm (25.2 × 14.6 × 16.5 inches)	
Line voltage	100 – 240 V~, ± 10 %	Wide-ranging capability
Line frequency	50 or 60 Hz, ± 5 %	
Power consumption	240 VA / 210 W / 717 BTU	Maximum
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 2000 m (6562 ft)	
Non-operating altitude	Up to 4600 m (15092 ft)	For storing the module
Safety standards: IEC, CSA, UL	Installation category II, Pollution degree 2	For indoor use only.

Performance Specifications

Table 92 Performance Specifications Agilent 1220 Infinity II LC VWD

Type	Specification
Detection type	Double-beam photometer
Light source	Deuterium lamp
Maximum data rate	80 Hz
Short term noise (ASTM)	<± $0.25 \cdot 10^{-5}$ AU at 230 nm
Drift	< $1 \cdot 10^{-4}$ AU/h at 230 nm
Linearity	> 2 AU (5 %) upper limit
Wavelength range	190 – 600 nm
Wavelength accuracy	± 1 nm
Slit width	6.5 nm typical over whole wavelength range
Flow cells	Standard: 14 µL volume, 10 mm cell path length and 40 bar (580 psi) pressure maximum High pressure: 14 µL volume, 10 mm cell path length and 400 bar (5800 psi) pressure maximum Micro: 1 µL volume, 5 mm cell path length and 40 bar (580 psi) pressure maximum Semi-micro: 5 µL volume, 6 mm cell path length and 40 bar (580 psi) pressure maximum

Agilent 1220 Infinity II LC Diode Array Detector

Physical Specifications

Table 93 Physical Specifications

Type	Specification	Comments
Weight	30 kg (66 lbs)	
Dimensions (height × width × depth)	640 × 370 × 420 mm (25.2 × 14.6 × 16.5 inches)	
Line voltage	100 – 240 V~, ± 10 %	Wide-ranging capability
Line frequency	50 or 60 Hz, ± 5 %	
Power consumption	240 VA / 210 W / 717 BTU	Maximum
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 2000 m (6562 ft)	
Non-operating altitude	Up to 4600 m (15092 ft)	For storing the module
Safety standards: IEC, CSA, UL	Installation category II, Pollution degree 2	For indoor use only.

Performance Specifications

Table 94 Performance Specifications Agilent 1220 Infinity II LC DAD

Type	Specification
Detection type	1024-element diode array
Light source	Deuterium and tungsten lamps
Number of signals	8
Maximum sampling rate	80 Hz
Short term noise (ASTM) Single and Multi-Wavelength	< ± $0.7 \cdot 10^{-5}$ AU at 254 nm and 750 nm
Drift	< $0.9 \cdot 10^{-3}$ AU/h at 254 nm
Linearity	> 2 AU (5 %)
Wavelength range	190 – 950 nm
Wavelength accuracy	± 1 nm
Slit width	1, 2, 4 , 8, 16 nm
Diode width	~ 1 nm
Flow cell	Standard: 13 µL volume, 10 mm cell path length and 120 bar (1740 psi) pressure maximum
Time programmable	Wavelength, polarity, peak width, lamp bandwidth, autobalance, wavelength range, threshold, spectra storage mode

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Special Detectors

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Agilent 1290 Infinity II Evaporative Light Scattering Detector (G7102A)

Physical Specifications

Table 95 Physical Specifications

Type	Specification	Comments
Weight	11 kg (non-cooled), 13.3 kg (cooled)	
Dimensions (height × width × depth)	415 x 200 x 450 mm (16.3 x 7.9 x 17.7 inches)	
Line voltage	100 – 240 V~, ± 10 %	Wide-ranging capability
Line frequency	50 or 60 Hz, ± 5 %	
Power consumption	2 A (max)	
Ambient operating temperature	10–35 °C (50–95 °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 2000 m (6562 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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Performance Specifications

The instrument is suitable for indoor use only and is classified suitable under the following categories (EN 61010- 1):2010

- Installation category II
- Pollution degree 2
- Safety class 1

Table 96 Agilent 1290 Infinity II Evaporative Light Scattering Detector (G7102A) Performance Specifications

Type	Specification
Light Source	LASER 405 nm, 10 mW (Class 3B)
Detector	Dual PMT with digital signal processing
Nebuliser	OFF, 25 – 90 °C
Evaporator	
Non-cooled	OFF, 25 – 120 °C
Cooled	OFF, 10 – 80 °C
Gas Flow Range	0.9 – 3.25 SLM (controlled gas shut-off)
Dynamic Range	4 orders of magnitude
Short Term Noise	<0.1 LSU/h (1 mL/min water).
Drift	<1 LSU/h (1 mL/min water).
Operating Pressure	60 – 100 psi (4.1 – 6.9 bar)
Eluent Flow Range	0.2 – 5.0 mL/min
Digital Output	10, 40 or 80 Hz (24 bit)
Remote Operation	Remote Start Input
Communication	Ethernet Serial (RS232) Remote Start Input Pump Stop: 1 Contact closure

Table 96 Agilent 1290 Infinity II Evaporative Light Scattering Detector (G7102A) Performance Specifications

Type	Specification
PC Control	ELSD driver for OpenLAB ChemStation edition ELSD driver for OpenLAB EZChrom edition LC and CE Drivers Rev. A.02.11
Safety and maintenance	Gas shut-off Valve, Leak Detection, Laser Interlock

Agilent 1260 Infinity II Infinity Fluorescence Detector Spectra (G7121B)

Physical Specifications

Table 97 Physical Specifications

Type	Specification	Comments
Weight	11.9 kg (26.2 lbs)	
Dimensions (height × width × depth)	140 x 396 x 436 mm (5.5 x 15.6 x 17.0 inches)	
Line voltage	100 – 240 V~, ± 10 %	Wide-ranging capability
Line frequency	50 or 60 Hz, ± 5 %	
Power consumption	70 VA, 60 W	
Ambient operating temperature	4-40 °C (39-104 °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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Performance Specifications

Table 98 Performance Specifications Agilent 1260 Infinity II Fluorescence Detector SPECTRA (G7121B)

Type	Specification
Detection type	Multi-signal wavelength fluorescence detector with rapid on-line scanning capabilities and spectral data analysis
Single wavelength operation	• RAMAN (H_2O) > 500 (noise reference measured at signal) Ex=350 nm, Em=397 nm, dark value 450 nm, standard flow cell • RAMAN (H_2O) > 3000 (noise reference measured at dark value) Ex=350 nm, Em=397 nm, dark value 450 nm, standard flow cell
Dual wavelength operation	• RAMAN (H_2O) > 300 Ex 350 nm, Em 397 nm, standard flow cell • RAMAN (H_2O) > 300 Ex 350 nm, Em 450 nm, standard flow cell.
Light source	Xenon Flash Lamp, normal mode 20 W, economy mode 5 W, lifetime 4000 h
Pulse frequency	296 Hz for single signal mode 74 Hz for economy/multi-wavelength/spectra mode
Maximum data rate	74 Hz, 148 Hz
Excitation monochromator	Range: settable 200 nm - 1200 nm and zero-order Bandwidth: 20 nm (fixed) Monochromator: concave holographic grating, F/1.6, blaze: 300 nm
Emission monochromator	Range: settable 200 nm - 1200 nm and zero-order Bandwidth: 20 nm (fixed) Monochromator: concave holographic grating, F/1.6, blaze: 400 nm
Reference system	in-line excitation measurement
Timetable programing	up to 4 signal wavelengths, response time, PMT Gain, baseline behavior (append, free, zero), spectral parameters
Spectrum acquisition	Excitation or Emission spectra Scan speed: 28 ms per datapoint (e.g. 0.6 s/spectrum 200 – 400 nm, 10 nm step) Step size: 1 – 20 nm Spectra storage: All
Wavelength characteristic	Repeatability +/- 0.2 nm Accuracy +/- 3 nm setting

Table 98 Performance Specifications Agilent 1260 Infinity II Fluorescence Detector SPECTRA (G7121B)

Type	Specification
Flow cells	Standard: 8 µL volume and 20 bar (2 MPa) pressure maximum, fused silica block Optional: • Bio-inert: 8 µL volume and 20 bar (2 MPa) pressure maximum, (pH 1-12) • Micro: 4 µL volume and 20 bar (2 MPa) pressure maximum
Analog outputs	Recorder/integrator: 100 mV or 1 V, output range > 100 LU, two outputs
Instrument Control	LC & CE Drivers A.02.14 or above Instrument Control Framework (ICF) A.02.03 or above InfinityLab LC Companion (G7108AA) with firmware D.07.25 or above Instant Pilot (G4208A) with firmware B.02.19 or above Lab Advisor software B.02.09 or above
Communications	Controller-area network (CAN), USB, ERI: ready, start, stop and shut-down signals
Safety features and maintenance	Leak detection, safe leak handling, leak output signal for shutdown of the pumping system. No hazardous voltages in major maintenance areas. Extensive diagnostics, error detection and display with Agilent Lab Advisor software.
GLP features	Early maintenance feedback (EMF) for continuous tracking of instrument usage in terms of lamp burn time with pre-defined and user settable limits and feedback messages. Electronic records of maintenance and errors.
Housing	All materials are recyclable.

Agilent 1260 Infinity II Fluorescence Detector (G7121A)

Physical Specifications

Table 99 Physical Specifications

Type	Specification	Comments
Weight	11.9 kg (26.2 lbs)	
Dimensions (height × width × depth)	140 x 396 x 436 mm (5.5 x 15.6 x 17.0 inches)	
Line voltage	100 – 240 V~, ± 10 %	Wide-ranging capability
Line frequency	50 or 60 Hz, ± 5 %	
Power consumption	70 VA, 60 W	
Ambient operating temperature	4-40 °C (39-104 °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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Performance Specifications

Table 100 Performance Specifications 1260 Infinity II Fluorescence Detector (G7121A)

Type	Specification
Detection type	One signal wavelength (excitation and emission)
Single wavelength operation	• RAMAN (H_2O) > 500 (noise reference measured at signal) Ex=350 nm, Em=397 nm, dark value 450 nm, standard flow cell • RAMAN (H_2O) > 3000 (noise reference measured at dark value) Ex=350 nm, Em=397 nm, dark value 450 nm, standard flow cell
Light source	Xenon Flash Lamp, normal mode 20 W, economy mode 5 W, lifetime 4000 h
Pulse frequency	296 Hz for single signal mode 74 Hz for economy mode
Maximum data rate	74 Hz
Excitation monochromator	Range: settable 200 nm - 1200 nm and zero-order Bandwidth: 20 nm (fixed) Monochromator: concave holographic grating, F/1.6, blaze: 300 nm
Emission monochromator	Range: settable 200 nm - 1200 nm and zero-order Bandwidth: 20 nm (fixed) Monochromator: concave holographic grating, F/1.6, blaze: 400 nm
Reference system	in-line excitation measurement
Timetable programing	Single signal wavelength, response time, PMT Gain, baseline behavior (append, free, zero)
Wavelength characteristic	Repeatability +/- 0.2 nm Accuracy +/- 3 nm setting
Flow cells	Standard: 8 µL volume and 20 bar (2 MPa) pressure maximum, fused silica block
Analog outputs	Recorder/integrator: 100 mV or 1 V, output range > 100 LU, two outputs

Table 100 Performance Specifications 1260 Infinity II Fluorescence Detector (G7121A)

Type	Specification
Instrument Control	LC & CE Drivers A.02.14 or above Instrument Control Framework (ICF) A.02.03 or above InfinityLab LC Companion (G7108AA) with firmware D.07.25 or above Instant Pilot (G4208A) with firmware B.02.19 or above Lab Advisor software B.02.09 or above
Communications	Controller-area network (CAN), USB, ERI: ready, start, stop and shut-down signals
Safety features and maintenance	Leak detection, safe leak handling, leak output signal for shutdown of the pumping system. No hazardous voltages in major maintenance areas. Extensive diagnostics, error detection and display with Agilent Lab Advisor software.
GLP features	Early maintenance feedback (EMF) for continuous tracking of instrument usage in terms of lamp burn time with pre-defined and user-settable limits and feedback messages. Electronic records of maintenance and errors.
Housing	All materials are recyclable.

Agilent 1290 Infinity II Refractive Index Detector (Micro) (G7162B)

Physical Specifications

Table 101 Physical Specifications

Type	Specification	Comments
Weight	15 kg (33 lbs)	
Dimensions (height × width × depth)	180 x 396 x 436 mm (7.1 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	80 VA / 70 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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Performance Specifications

Table 102 Agilent 1290 Infinity II Refractive Index Detector (G7162B) Performance Specifications

Type	Specification
Detection type	Refractive Index
Refractive index range	1.00 – 1.75 RIU, calibrated
Measurement range	$\pm 600 \cdot 10^{-6}$ RIU
Optical zeroing	
Optics temperature control	5 °C above ambient to 55 °C
Sample cell	Volume: 2.5 µL Maximum pressure: 5 bar (0.5 MPa) Maximum flow rate: 1 mL/min (100 % water)
Valves	Automatic purge and automatic solvent recycle
Volumes	Inlet port to sample cell 2.5 µL, inlet port to outlet port 265 µL
Liquid contact materials	316 stainless steel, PTFE and quartz glass
pH range	2.3 – 9.5
Performance specifications	Short term noise: $<\pm 1.75 \cdot 10^{-9}$ RIU Drift: $<200 \cdot 10^{-9}$ RIU/hr
Time programmable parameters	polarity, peak width
Maximum data rate	148 Hz
Detector zero	automatic zero before analysis
Instrument Control	Lab Advisor B.02.07 or above LC and CE Drivers A.02.12 or above
Local control	Agilent Instant Pilot (G4208A)
Analog outputs	Recorder/integrator: 100 mV or 1 V, output range selectable, one output

Table 102 Agilent 1290 Infinity II Refractive Index Detector (G7162B) Performance Specifications

Type	Specification
Communications	LAN, controller-area network (CAN), ERI: ready, start, stop and shut-down signals
Safety and maintenance	Extensive diagnostics, error detection and display, leak detection, safe leak handling, leak output signal for shutdown of pumping system. Low voltages in major maintenance areas.
GLP features	Early maintenance feedback (EMF) for continuous tracking of instrument usage with user-selectable limits and feedback messages. Electronic records of maintenance and errors. Automated operational qualification/performance verification (OQ/PV).
Housing	All materials recyclable.

Agilent 1260 Infinity II Refractive Index Detector (G7162A)

Physical Specifications

Table 103 Physical Specifications

Type	Specification	Comments
Weight	15 kg (33 lbs)	
Dimensions (height × width × depth)	180 x 396 x 436 mm (7.1 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	80 VA / 70 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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Performance Specifications

Table 104 Agilent 1260 Infinity II Refractive Index Detector (G7162A) Performance Specifications

Type	Specification
Detection type	Refractive Index
Refractive index range	1.00 – 1.75 RIU, calibrated
Measurement range	$\pm 600 \cdot 10^{-6}$ RIU
Optical zeroing	
Optics temperature control	5 °C above ambient to 55 °C
Sample cell	Volume: 8 µL Maximum pressure: 5 bar (0.5 MPa) Maximum flow rate: 5 mL/min
Valves	Automatic purge and automatic solvent recycle
Volumes	Inlet port to sample cell 62 µL, inlet port to outlet port 590 µL
Liquid contact materials	316 stainless steel, PTFE and quartz glass
pH range	2.3 – 9.5
Performance specifications	Short term noise: $<\pm 1.25 \cdot 10^{-9}$ RIU Drift: $<200 \cdot 10^{-9}$ RIU/hr
Time programmable parameters	polarity, peak width
Maximum data rate	74 Hz
Detector zero	automatic zero before analysis
Instrument Control	Lab Advisor B.02.07 or above LC and CE Drivers A.02.12 or above
Local control	Agilent Instant Pilot (G4208A)
Analog outputs	Recorder/integrator: 100 mV or 1 V, output range selectable, one output

Table 104 Agilent 1260 Infinity II Refractive Index Detector (G7162A) Performance Specifications

Type	Specification
Communications	LAN, controller-area network (CAN), ERI: ready, start, stop and shut-down signals
Safety and maintenance	Extensive diagnostics, error detection and display, leak detection, safe leak handling, leak output signal for shutdown of pumping system. Low voltages in major maintenance areas.
GLP features	Early maintenance feedback (EMF) for continuous tracking of instrument usage with user-selectable limits and feedback messages. Electronic records of maintenance and errors. Automated operational qualification/performance verification (OQ/PV).
Housing	All materials recyclable.

Agilent 1260 Infinity II Evaporative Light Scattering Detector (G4260B)

Physical Specifications

Table 105 Physical Specifications

Type	Specification	Comments
Weight	11 kg	
Dimensions (height × width × depth)	415 x 200 x 450 mm (16.3 x 7.9 x 17.7 inches)	
Line voltage	100 – 240 V~, ± 10 %	Wide-ranging capability
Line frequency	50 or 60 Hz, ± 5 %	
Power consumption	150 W (max)	
Ambient operating temperature	10–35 °C (50–95 °F)	
Ambient non-operating temperature	-40 – 70 °C (-40 – 158 °F)	
Humidity	< 95 % r.h. at 40 °C (104 °F) < 80 % 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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Performance Specifications

Specifications

The instrument is suitable for indoor use only and is classified suitable under the following categories (EN 61010-1):2010

- Installation category II
- Pollution degree 2
- Safety class 1

Table 106 Performance Specifications 1260 Infinity II ELSD (G4260B)

Type	Specification
Light Source	
G4260B	LED 480 nm (Class 1 LED product)
G4261B	LASER 405 nm, 10 mW (Class 3B)
Detector	PMT with digital signal processing
Nebulizer	OFF, 25 – 90 °C
Evaporator	OFF, 25 – 120 °C
Gas Flow Range	0.9 – 3.25 SLM (controlled gas shut-off)
Short Term Noise	For G4260B <0.2 mV
Drift	For both modules <1 mV/h under specified condtions.
Operating Pressure	60 – 100 psi (4 – 6.7 bar)
Eluent Flow range	0.2 – 5.0 mL/min
Digital Output	10, 40 or 80 Hz (24 bit)
Analogue Output	0 – 1.25 V FSD
Communication	Ethernet Serial (RS232) Remote Start Input Pump Stop: 1 Contact closure

Table 106 Performance Specifications 1260 Infinity II ELSD (G4260B)

Type	Specification
PC control (software)	ELSD driver for Rev B ChemStation (RC.NET driver) ELSD driver for OpenLAB ChemStation edition ELSD driver for OpenLAB EZChrom edition ELSD Dimension Software
Remote operation	Remote Start Input
Safety features	Gas shut off Valve, Leak Detection, Laser Interlock

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Column Compartments

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Agilent 1290 Infinity II Multicolumn Thermostat (G7116B)

Physical Specifications

Table 107 Physical Specifications

Type	Specification	Comments
Weight	12.5 kg (27.6 lbs)	
Dimensions (height × width × depth)	160 x 435 x 436 mm (6.3 x 17.1 x 17.2 inches), Width 472 mm with column ID option	
Line voltage	100 – 240 V~, ± 10 %	Wide-ranging capability
Line frequency	50 or 60 Hz, ± 5 %	
Power consumption	150 VA, 150 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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11

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.

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.

Agilent 1260 Infinity II Multicolumn Thermostat (G7116A)

Physical Specifications

Table 109 Physical Specifications

Type	Specification	Comments
Weight	12.5 kg (27.6 lbs)	
Dimensions (height × width × depth)	160 x 435 x 436 mm (6.3 x 17.1 x 17.2 inches), Width with column identification kit: 460 mm	
Line voltage	100 – 240 V~, ± 10 %	Wide-ranging capability
Line frequency	50 or 60 Hz, ± 5 %	
Power consumption	150 VA, 150 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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Performance Specifications

Table 110 Performance Specifications 1260 Infinity II Multicolumn Thermostat (G7116A)

Feature	Specification[1]
Operating principle	Thermostatted column compartment with dual, independent Peltier-element. Solvent pre-heating and still-air operation for reduction of chromatographic band-broadening under UHPLC-conditions.
Temperature range	10 °C below ambient (minimum 4 °C) to 85 °C settable in steps of 0.1 K
Temperature stability	±0.1 °C
Temperature accuracy	±0.5 °C (with calibration for 40 °C)
Temperature precision	0.05 °C
Independent Temperature zones	2 in single device
Column capacity	4 columns of up to 300 mm length plus InfinityLab Quick-Connect fittings or pre-column The number of precolumn Quick-Connect Heat Exchangers is scalable - each column can be equipped with individual heat exchanger for best performance 4-column selector valve is available to access each column without replumbing
Heat-up/cool-down time	5 min from ambient to 40 °C 10 min from 40 °C to 20 °C <25 min from 25 °C to 85 °C
Solvent heat exchangers	For pre-column solvent heating, G7116A is equipped with a Quick-Connect Heat Exchanger Large ID (0.17 mm capillary, 3 µL internal volume) as default. Other dimensions of Quick-Connect Heat Exchangers are optionally available, as well as heat exchangers made from bio-inert materials (metal-free).

Table 110 Performance Specifications 1260 Infinity II Multicolumn Thermostat (G7116A)

Feature	Specification[1]
Valve options	1 x integrated valve drive as option to host user-exchangeable Quick-Change valve heads (up to 800 bar) of different formats: 2-position/6-port, 2-position/10-port, 4-column selection. Also available in bio-inert materials. Valve heads are automatically identified by their tag.
Column identification	Optionally, column identification kit to track history of up to four columns. Mounted left hand-side of module.
Instrument Control	LC and CE Drivers A.02.14 or above Instrument Control Framework (ICF) A.02.04 or above Agilent Instant Pilot (G4208A) B.02.20 or above InfinityLab LC Companion (G7108A) Lab Advisor B.02.08 or above For details about supported software versions refer to the compatibility matrix of your version of the LC & CE Drivers
Communications	G7116A is a hosted module. (The LC stack needs to contain suitable host module or a LAN card for communication and control).
Maintenance and safety-related features	Extensive diagnostics, error detection and display with Agilent LabAdvisor software. Leak detection, safe leak handling, leak output signal for shutdown of pumping system, low voltages in major maintenance areas.
GLP features	Valve heads carrying tags with serial number, pressure rating, number of switches and valve type. Concept of column identification.
Housing	All materials recyclable.

[1] 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.

Agilent InfinityLab LC Series Integrated Column Compartment (G7130A)

NOTE The Agilent InfinityLab LC Series Integrated Column Compartment (G7130A) is not available as a separate module, but as an option for use with the Agilent InfinityLab LC Series Vialsamplers (G7129A/B).

Physical Specifications

Table 111 Physical Specifications (G7130A)

Type	Specification	Comment
Weight	1.8 kg	
Dimensions (height x width x depth)	86.5 x 396 x 106.5 mm	maximum outside
Supply Voltage	24 V DC	
Power consumption	110 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)[1]	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
ISM Classification	ISM Group 1 Class B	According to CISPR 11

[1] If a sample cooler or sample thermostat is included the upper value for humidity can be reduced. Please check your lab conditions to stay beyond dew point values for non–condensing operation.

Performance Specifications

Table 112 Performance Specifications Agilent InfinityLab LC Series Integrated Column Compartment (G7130A)

Type	Specification
Temperature range	5 °C above ambient to 80 °C
Column capacity	2 columns up to 30 cm and 4.6 mm ID
Temperature stability	±0.10 °C
Temperature accuracy	±0.8 K (±0.5 K with calibration)
Warm up time	20 – 40 °C in 5 min

Agilent 1220 Infinity LC Column Compartment

Physical Specifications

Table 113 Physical Specifications

Type	Specification	Comments
Weight	30 kg (66 lbs)	
Dimensions (height × width × depth)	640 × 370 × 420 mm (25.2 × 14.6 × 16.5 inches)	
Line voltage	100 – 240 V~, ± 10 %	Wide-ranging capability
Line frequency	50 or 60 Hz, ± 5 %	
Power consumption	240 VA / 210 W / 717 BTU	Maximum
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 2000 m (6562 ft)	
Non-operating altitude	Up to 4600 m (15092 ft)	For storing the module
Safety standards: IEC, CSA, UL	Installation category II, Pollution degree 2	For indoor use only.

Performance Specifications

Table 114 Performance Specifications Agilent 1220 Infinity II LC Column Oven

Type	Specification
Temperature range	5 °C above ambient to 80 °C 10 °C above ambient to 80 °C (G4294B with DAD)
Column capacity	1 column up to 25 cm
Temperature stability	± 0.15 °C
Temperature accuracy	± 0.8 °C
Internal volume	6 µL

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Degasser

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Agilent 1260 Infinity II Degasser (G7122A)

Physical Specifications

Table 115 Physical Specifications

Type	Specification	Comments
Weight	7 kg	
Dimensions (height × width × depth)	80 × 396 × 436 mm	
Line voltage	100 – 240 V~, ± 10 %	Wide-ranging capability
Line frequency	50 or 60 Hz, ± 5 %	
Power consumption	5 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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Performance Specifications

Table 116 Performance Specifications 1260 Infinity II Degasser (G7122A)

Type	Specification
Maximum flow rate	10 mL/min per channel
Number of channels	4
Internal volume per channel	Typically 12 mL
Materials in contact with solvent	PTFE, PEEK
pH range	1 – 14
Analog output (AUX)	For pressure monitoring, range 0 – 3 V

7
Fraction Collectors

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Agilent 1260 Infinity II Preparative Fraction Collector (G1364E)

Physical Specifications

Table 117 Physical Specifications

Type	Specification	Comments
Weight	13.5 kg (29.8 lbs)	w/o Thermostat
Dimensions (height × width × depth)	200 x 345 × 440 mm (8 x 13.5 × 17 inches)	
Line voltage	100 – 240 V~, ± 10 %	Wide-ranging capability
Line frequency	50 or 60 Hz, ± 5 %	
Power consumption	200 VA / 180 W	
Ambient operating temperature	4 – 40 °C (41 – 104 °F)	
Ambient non-operating temperature	-40 – 70 °C (-40 – 158 °F)	
Humidity	< 95 %, at 25 – 40 °C (77 – 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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11
Permitted solvents	Auto-ignition temperature ≥200 °C Boiling point ≥56 °C Ignition Class IIA, IIB (IEC60079-20-1)	

Performance Specifications

Table 118 Performance Specifications 1260 Infinity II Preparative Fraction Collector (G1364E)

Type	Specification
Delay Volume (in µL)	Fraction collector inlet to diverter valve: ~500 (typical, depends on length of the tubing) Diverter valve: ~15 Diverter valve to needle: ~110 Needle: ~5
Minimum system flow	Depending on the recommended flowrates of the installed tubing kit
Maximum system flow	100 mL/min
Maximum collection volume	45 mL
Maximum capacity	3 fraction collectors in parallel plus one recovery fraction collector
Trigger modes	Time slices Peak (threshold, up- / downslope Timetable (combination of time intervals and peak) Manual trigger (supported only with Agilent Instant Pilot G4208A)
Trigger Sources	G7115A, 1260 Infinity II DAD G7165A, 1260 Infinity II MWD G7114A, 1260 Infinity II VWD G6125BA, Single Quadrupole LC/MSD G6135BA, Single Quadrupole LC/MSD XT G7121A, 1260 Infinity II FLD G4260B, 1260 Infinity II ELSD G7162A, 1260 Infinity II RID Other detectors can be used but are not supported for fraction collection.
Operating Modes	*Discrete fractions: default mode for all vessels.* The flow is diverted to waste, while moving from one vessel position to the next vessel position *Continuous flow: optional, available only when using well plates.* It is possible to move from one well plate position to the next one without diverting the flow into the well plate to waste
Diverter valve	3/2 valve, with switching time <100 ms

Table 118 Performance Specifications 1260 Infinity II Preparative Fraction Collector (G1364E)

Type	Specification
Maximum pressure	6 bar at the diverter valve during switching
Plates/Trays	4 x well-plates full tray (MTP) * (for use with deep well plates only) 2 × well-plates std. tray (MTP) (for use with deep well plates, only) + 10 × 2 mL vials* (+ 1 half tray) 100 x 2 mL in std. tray (+ 1 half tray)* 3 x 40 x 2 mL in half tray* 3 x 15 x 6 mL in half tray* Full tray with 40 test tubes (30 mm OD, max. height 100 mm, 45 mL / tube) Full tray with 60 test tubes (25 mm OD, max. height 100 mm, 25 mL / tube) Full tray with 126 test tubes (16 mm OD, max. height 100 mm, 12 mL / tube) Full tray with 215 test tubes (12 mm OD, max. height 100 mm, 7 mL / tube) Installed trays are automatically detected and identified. *Only one type of well-plates can be used at a time in one tray.* *Only the 96 deep well-plates can be used (without closing mats)*
Fraction Containers	30 x 100 mm (OD x L) tubes, 45 mL / tube 25 x 100 mm (OD x L) tubes, 25 mL / tube 16 x 100 mm (OD x L) tubes, 12 mL / tube 12 x 100 mm (OD x L) tubes, 7 mL / tube Vials can be used as recommended by Agilent Technologies *For use with uncapped vials, tests tubes and well plates only!*
Minimum tube height	48 mm
Maximum tube height	100 mm
Instrument Control	LC & CE Drivers A.02.17 or above Instrument Control Framework (ICF) A.02.04 or above Instant Pilot (G4208A) with firmware B.02.22 or above Lab Advisor B.02.10 or above
Communications	Controller-area network (CAN), Local Area Network (LAN) ERI: ready, start, stop and shut-down signals

Table 118 Performance Specifications 1260 Infinity II Preparative Fraction Collector (G1364E)

Type	Specification
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.

Agilent 1260 Infinity II Analytical Fraction Collector (G1364F)

Physical Specifications

Table 119 Physical Specifications

Type	Specification	Comments
Weight	13.5 kg (29.8 lbs)	w/o Thermostat
Dimensions (height × width × depth)	200 x 345 × 440 mm (8 x 13.5 × 17 inches)	
Line voltage	100 – 240 V~, ± 10 %	Wide-ranging capability
Line frequency	50 or 60 Hz, ± 5 %	
Power consumption	200 VA / 180 W	
Ambient operating temperature	4 – 40 °C (41 – 104 °F)	
Ambient non-operating temperature	-40 – 70 °C (-40 – 158 °F)	
Humidity	< 95 %, at 25 – 40 °C (77 – 104 °F)[1]	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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11
Permitted solvents	Auto-ignition temperature ≥200 °C Boiling point ≥56 °C Ignition Class IIA, IIB (IEC60079-20-1)	

[1] If a thermostat is used the upper value for humidity can be reduced. Please check your lab conditions to stay beyond dew point values for non–condensing operation.

Performance Specifications

Table 120 Performance Specifications 1260 Infinity II Analytical Fraction Collector (G1364F)

Type	Specification
Delay Volume (in µL)	Fraction collector inlet to diverter valve: ~50 (typical, depends on length of the tubing) Diverter valve: ~15 Diverter valve to needle: ~10 Needle: ~4
Minimum system flow	Depending on the recommended flowrates of the installed tubing kit
Maximum system flow	10 mL/min
Maximum collection volume	~20 mL with 30 x 48 mm (OD x L) tube ~30 mL with 30 x 75 mm (OD x L) tube
Maximum capacity	3 fraction collectors in parallel plus one recovery fraction collector
Cooling	Optional (with additional G1330B), performance depending on ambient conditions and the volume of collected fractions
Trigger modes	Time slices Peak (threshold, up- / downslope) Timetable (combination of time intervals and peak) Manual trigger (supported only with Agilent Instant Pilot G4208A)
Trigger Sources	G7115A, 1260 Infinity II DAD G7165A, 1260 Infinity II MWD G7114A, 1260 Infinity II VWD G6120BA, LC/MS Single Quad VL G6130BA, LC/MS Single Quad SL G7121A, 1260 Infinity II FLD G4260B, 1260 Infinity II ELSD G7162A, 1260 Infinity II RID Other detectors can be used but are not supported for fraction collection.

Table 120 Performance Specifications 1260 Infinity II Analytical Fraction Collector (G1364F)

Type	Specification
Operating Modes	**Discrete fractions: default mode for all vessels.** The flow is diverted to waste, while moving from one vessel position to the next vessel position **Continuous flow: optional, available only when using deep well plates.** It is possible to move from one well plate position to the next one without diverting the flow into the well plate to waste **Needle into location:** Needle pushes into the vessel as deep as specified, for the use with capped vials and test tubes and well plates with closing mats **Droplet setup mode:** enables the fraction collector to collect small fractions without bubbles. The tip of the fraction collector needle initially moves down to the bottom of the well. Then it slowly moves upwards while the fraction is collected.
Maximum time to move between neighboring vessels	Movement in x-direction: < 0.15 s Movement in y-direction: < 0.3 s
Diverter valve	3/2 valve, with switching time < 100 ms
Maximum pressure	6 bar at the diverter valve during switching

Table 120 Performance Specifications 1260 Infinity II Analytical Fraction Collector (G1364F)

Type	Specification
Plates/Trays	4 x well-plates full tray (MTP)[1] 2 × well-plates std. tray + 10 funnels with external containers[1] (+ 1 half tray) 2 × well-plates std. tray (MTP) + 10 × 2 mL vials[1] (+ 1 half tray) 100 x 2 mL in std. tray (+ 1 half tray)[1] 3 x 40 x 2 mL in half tray[1] 3 x 40 funnels in half tray 3 x 15 x 6 mL in half tray[1] Full tray with 40 test tubes (30 mm OD, max. height 48 mm, ~20 mL / tube) Full tray with 60 test tubes (25 mm OD, max. height 48 mm, ~15 mL / tube) Full tray with 126 test tubes (16 mm OD, max. height 48 mm, ~11 mL / tube) Full tray with 215 test tubes (12 mm OD, max. height 48 mm, ~8 mL / tube) Installed trays are automatically detected and identified. In operation mode "Needle into location" installed plates and vials can be detected. *Only one type of well-plates can be used at a time in one tray.*
Fraction Containers	30 x 48 mm (OD x L) tubes, ~20 mL / tube 25 x 48 mm (OD x L) tubes, ~15 mL / tube 16 x 48 mm (OD x L) tubes, ~11 mL / tube 12 x 48 mm (OD x L) tubes, ~8 mL / tube Vials, well plates, capped vials, and well plates with closing mats can be used as recommended by Agilent Technologies
Maximum tube height	48 mm with long needle assembly G1367-87200 75 mm with short needle assembly G1364-87202
Instrument Control	LC and CE Drivers A.02.17 or above Instrument Control Framework (ICF) A.02.04 or above Instant Pilot (G4208A) with firmware B.02.22 or above Lab Advisor B.02.10 or above
Communications	Controller-area network (CAN), Local Area Network (LAN) ERI: ready, start, stop and shut-down signals

Table 120 Performance Specifications 1260 Infinity II Analytical Fraction Collector (G1364F)

Type	Specification
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.

[1] max. height can be extended by using the short needle assembly G1364-87202

Agilent 1260 Infinity Bio-inert Fraction Collector (G5664B)

Physical Specifications

Table 121 Physical Specifications

Type	Specification	Comments
Weight	13.5 kg (29.8 lbs)	w/o Thermostat
Dimensions (height × width × depth)	200 x 345 × 440 mm (8 x 13.5 × 17 inches)	
Line voltage	100 – 240 V~, ± 10 %	Wide-ranging capability
Line frequency	50 or 60 Hz, ± 5 %	
Power consumption	200 VA / 180 W	
Ambient operating temperature	4 – 40 °C (41 – 104 °F)	
Ambient non-operating temperature	-40 – 70 °C (-40 – 158 °F)	
Humidity	< 95 %, at 25 – 40 °C (77 – 104 °F)[1]	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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11
Permitted solvents	Auto-ignition temperature ≥200 °C Boiling point ≥56 °C Ignition Class IIA, IIB (IEC60079-20-1)	

[1] If a thermostat is used the upper value for humidity can be reduced. Please check your lab conditions to stay beyond dew point values for non–condensing operation.

Performance Specifications

Table 122 Performance Specifications 1260 Infinity II Bio-inert Fraction Collector (G5664B)

Type	Specification
Delay Volume (in µL)	Fraction collector inlet to diverter valve: ~50 (typical, depends on length of the tubing) Diverter valve: ~15 Diverter valve to needle: ~10 Needle: ~4
Minimum system flow	Depending on the recommended flowrates of the installed tubing kit
Maximum system flow	10 mL/min
Maximum collection volume	~20 mL with 30 x 48 mm (OD x L) tube
Maximum capacity	3 fraction collectors in parallel plus one recovery fraction collector
Cooling	Optional (with additional G1330B), performance depending on ambient conditions and the volume of collected fractions
Trigger modes	Time slices Peak (threshold, up- / downslope) Timetable (combination of time intervals and peak) Manual trigger (supported only with Agilent Instant Pilot G4208A)
Trigger Sources	G7115A, 1260 Infinity II DAD G7165A, 1260 Infinity II MWD G7114A, 1260 Infinity II VWD G6120BA, LC/MS Single Quad VL G6130BA, LC/MS Single Quad SL G7121A, 1260 Infinity II FLD G4260B, 1260 Infinity II ELSD G7162A, 1260 Infinity II RID Other detectors can be used but are not supported for fraction collection.

Table 122 Performance Specifications 1260 Infinity II Bio-inert Fraction Collector (G5664B)

Type	Specification
Operating Modes	**Discrete fractions: default mode for all vessels.** The flow is diverted to waste, while moving from one vessel position to the next vessel position **Continuous flow: optional, available only when using deep well plates.** It is possible to move from one well plate position to the next one without diverting the flow into the well plate to waste **Needle into location:** Needle pushes into the vessel as deep as specified, for the use with capped vials and test tubes and well plates with closing mats **Droplet setup mode:** enables the fraction collector to collect small fractions without bubbles. The tip of the fraction collector needle initially moves down to the bottom of the well. Then it slowly moves upwards while the fraction is collected.
Maximum time to move between neighboring vessels	Movement in x-direction: < 0.15 s Movement in y-direction: < 0.3 s
Diverter valve	3/2 valve, with switching time < 100 ms
Maximum pressure	6 bar at the diverter valve during switching

Table 122 Performance Specifications 1260 Infinity II Bio-inert Fraction Collector (G5664B)

Type	Specification
Plates/Trays	4 x well-plates full tray (MTP) 2 × well-plates std. tray + 10 funnels with external containers (+ 1 half tray) 2 × well-plates std. tray (MTP) + 10 × 2 mL vials (+ 1 half tray) 100 x 2 mL in std. tray (+ 1 half tray) 3 x 40 x 2 mL in half tray 3 x 40 funnels in half tray 3 x 15 x 6 mL in half tray Full tray with 40 test tubes (30 mm OD, max. height 48 mm, ~20 mL / tube) Full tray with 60 test tubes (25 mm OD, max. height 48 mm, ~15 mL / tube) Full tray with 126 test tubes (16 mm OD, max. height 48 mm, ~11 mL / tube) Full tray with 215 test tubes (12 mm OD, max. height 48 mm, ~8 mL / tube) Installed trays are automatically detected and identified. In operation mode "Needle into location" installed plates and vials can be detected. *Only one type of well-plates can be used at a time in one tray.*
Fraction Containers	30 x 48 mm (OD x L) tubes, ~20 mL / tube 25 x 48 mm (OD x L) tubes, ~15 mL / tube 16 x 48 mm (OD x L) tubes, ~11 mL / tube 12 x 48 mm (OD x L) tubes, ~8 mL / tube Vials, well plates, capped vials, and well plates with closing mats can be used as recommended by Agilent Technologies
Maximum tube height	48 mm (with bio-inert needle assembly G5667-87200)
Instrument Control	LC and CE Drivers A.02.17 or above Instrument Control Framework (ICF) A.02.04 or above Instant Pilot (G4208A) with firmware B.02.22 or above Lab Advisor B.02.10 or above
Communications	Controller-area network (CAN), Local Area Network (LAN) ERI: ready, start, stop and shut-down signals

Table 122 Performance Specifications 1260 Infinity II Bio-inert Fraction Collector (G5664B)

Type	Specification
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.

Agilent 1290 Infinity II Preparative Open-Bed Fraction Collector (G7159B)

Physical Specifications

Table 123 Physical Specifications

Type	Specification	Comments
Weight	30.6 kg	
Dimensions (height × width × depth)	781 mm x 393 mm x 622 mm	
Line voltage	100 – 240 V~, ± 10 %	Wide-ranging capability
Line frequency	50 or 60 Hz, ± 5 %	
Power consumption	350 VA, 350 W	
Ambient operating temperature	4-40°C (39.2 -104°F)	
Ambient non-operating temperature	-40 – 70 °C (-40 – 158 °F)	
Humidity	≤80 % r.h. up to 31 °C, decreasing to 50 % r.h. at 40 °C	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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Performance Specifications

Table 124 Performance Specifications

Type	Specification
Delay volume	Calculated by Lab Advisor. Dead volume in Valve tip appr. 30 µL
Time to move from vessel to vessel	0.3 s
Minimum system flow	1 mL/min
Maximum system flow	200 mL/min
Maximum collection volume	78 mL
Maximum capacity	432 fractions 5.9 L
Trigger modes	Off
	Peak-based
	Peak-based, collecting time slices
	Peak-based, collecting volume slices
	Peak-based with time slice recovery
	Peak-based with volume slice recovery
	Time-based, collecting a number of fractions
	Time-based, collecting time slices
	Time-based, collecting volume slices
Trigger sources	G7115A, 1260 Infinity II DAD G7165A, 1260 Infinity II MWD G7114A, 1260 Infinity II VWD G6120BA, LC/MS Single Quad VL G6130BA, LC/MS Single Quad SL G7121A, 1260 Infinity II FLD G4260B, 1260 Infinity II ELSD G7162A, 1260 Infinity II RID
Diverter valve	3/2 valve

Table 124 Performance Specifications

Type	Specification
Maximum pressure	6 bar (switching)
Drawers	Drawer ambient
Fraction Containers	**Tube Containers, ambient:** Tube Container for 30 x 150 mm tubes, ambient, 10 tubes Tube Container for 30 x 100 mm tubes, ambient, 10 tubes Tube Container for 25 x 150 mm tubes, ambient, 18 tubes Tube Container for 25 x 100 mm tubes, ambient, 18 tubes Tube Container for 16 x 150 mm tubes, ambient, 36 tubes Tube Container for 16 x 100 mm tubes, ambient, 36 tubes Tube Container for 12 x 150 mm tubes, ambient, 72 tubes Tube Container for 12 x 100 mm tubes, ambient, 72 tubes
Minium tube height	50 mm
Maximum tube height	160 mm
Instrument Control	LC & CE Drivers A.02.17 or above Instrument Control Framework (ICF) A.02.04 or above Instant Pilot (G4208A) with firmware B.02.22 or above Lab Advisor B.02.10 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.

Agilent 1260 Infinity II Preparative Valve-Based Fraction Collector (G7166A)

Physical Specifications

Table 125 Physical Specifications

Type	Specification	Comments
Weight	1.9 kg (4.2 lbs)	
Dimensions (height × width × depth)	95 x 95 × 300 mm (3.7 x 3.7 × 11.8 inches)	
Line voltage	100 – 240 V~, ± 10 %	Wide-ranging capability
Line frequency	50 or 60 Hz, ± 5 %	
Power consumption	23 VA / 7 W	
Ambient operating temperature	4 – 40 °C (39 – 104 °F)	
Ambient non-operating temperature	-40 – 70 °C (-40 – 158 °F)	
Humidity	<80 % r.h. at 4 – 31 °C, decreasing to 50 % r.h. at 40 °C	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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11
Permitted solvents	Auto-ignition temperature ≥200 °C Boiling point ≥56 °C Ignition Class IIA, IIB (IEC60079-20-1)	

Performance Specifications

Table 126 Agilent 1260 Infinity II Preparative Valve-Based Fraction Collector (G7166A) Performance Specifications

Type	Specification
Number of solvent channels	13 (including inlet and waste)
Fittings	¼-28
External leak sensor	YES, same function as internal sensor
Solvent Flow Range	0 – 200 mL/min per channel
Operating pressure (gas and solvent)	2 bar (29 psi) per channel
Maximum pressure (gas and solvent)	2.5 bar (36 psi) per channel
Gas specification	Dry filtered compressed air or nitrogen
Gas flow range	0.9 – 3.25 SLM (controlled gas shut-off)
Maximum inlet gas pressure	7 bar (101 psi)
Internal volume per channel	200 µL per channel
Fuse	2.0 A / 250 V High breaking capacity fuse, exchangeable
Materials in contact with solvent	PEEK, FFKM
pH range	2 – 13, short term 14[1,2]
Instrument Control	LC & CE Drivers A.02.17 or above Instrument Control Framework (ICF) A.02.04 or above Lab Advisor B.02.10 or above
Communications	CAN (2 x)
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

Table 126 Agilent 1260 Infinity II Preparative Valve-Based Fraction Collector (G7166A) Performance Specifications

Type	Specification
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.

[1] For solvent compatibility, refer to section “Solvent information for parts of the 1260 Infinity Bio-inert LC system” in the Bio-inert system manual.

[2] Solvents with a pH of 1, in particular any halogenated acids, can only be used for the cleaning of each of the ports

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LC Support Modules

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Agilent 1290 Infinity II Preparative Column Compartment (G7163B)

Physical Specifications

Table 127 Physical Specifications

Type	Specification	Comment
Weight	22.7 kg (50 lbs)	
Dimensions (width x height x depth)	396 x 640 x 436 mm (15.6 x 25.2 x 17.2 inches)	
Ambient operating temperature	4 – 40 °C (39 – 104 °F)	See specification of the modules used with the 1290 Infinity II Preparative Column Compartment
Ambient non- operating temperature	-40 – 70 °C (-40 – 158 °F)	
Humidity	<95 % r.h. at 40 °C (104 °F)	Non-condensing See specification of the modules used with the 1290 Infinity II Preparative Column Compartment
Operating altitude	Up to 3000 m (9842 ft)	See specification of the modules used with the 1290 Infinity II Preparative Column Compartment
Non-operating altitude	Up to 4600 m (15092 ft)	For storing the module
Safety standards: IEC, EN, CSA, UL	Installation category see specification of the modules used with the Column Compartment Pollution degree 2	For indoor use only

Performance Specifications

Table 128 Performance Specifications

Type	Specification
External Leak Sensor	Yes
Multi-purpose Slots	5 x
Preparative Colums	max. 6
Analytical Columns	max. 4
Manual Injector	Can be mounted inside
Maintenance and safety-related features	Leak handling with external leak sensor and leak pane. Leak detection, safe leak handling, leak output signal for shutdown of pumping system. Exhaust tube adapter for connection to the laboratory venting system with a minimum flow of 6 L/s or 21.6 m^3/h.
Housing	All materials recyclable

Agilent 1260 Infinity II Preparative Column Organizer (G9328A)

Physical Specifications

Table 129 Physical Specifications

Type	Specification	Comment
Weight	3.6 kg (8 lbs)	
Dimensions (height × width × depth)	485 x 185 x 320 mm (19 x 7.3 x 12.6 inches)	
Ambient operating temperature	4 – 40 °C (39 – 104 °F)	See specification of the modules used with the 1260 Infinity II Column Organizer
Ambient non- operating temperature	-40 – 70 °C (-40 – 158 °F)	
Humidity	< 95 % r.h. at 40 °C (104 °F)	Non-condensing. See specification of the modules used with the 1260 Infinity II Column Organizer

Performance Specifications

Table 130 Performance Specifications

Type	Specification
External Leak Sensor	Yes
Manual Injector	Can be mounted
Maintenance and safety-related features	Leak handling with external leak sensor and leak pane. Leak detection, safe leak handling, leak output signal for shutdown of pumping system. Exhaust tube adapter for connection to the laboratory venting system with a minimum flow of 6 L/s or 21.6 m^3/h.
Housing	All materials recyclable

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In This Book

The compendium contains specifications of Agilent InfinityLab LC Series modules:

- Pumps
- Injectors
- UV-Detectors
- Special Detectors
- Column Compartments
- Degasser
- Fraction Collectors

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