



# Agilent InfinityLab LC Series

## Specification Compendium



# Notices

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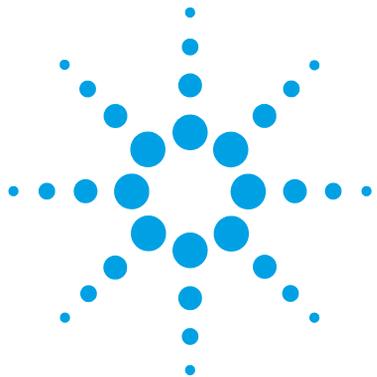
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# Agilent 1290 Infinity II Flexible Pump (G7104A)

## 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<br>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 %<br>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.<br>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

| <b>Feature</b>                                 | <b>Specification</b>  |
|--|---|
| Degassing unit                                 | Integrated.<br>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<br>LC and CE Drivers A.02.11 or above<br>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 %<br>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.<br>External 2 x 12 solvent valve as option, fully integrated in the pump control interface. |
| Integrated degassing unit    | Number of channels: 4,<br>Internal volume per channel: 1.5 mL   |

## 1 Pumps

### Agilent 1260 Infinity II Flexible Pump (G7104C)

**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<br>Instrument Control Framework (ICF) A.02.05 or above<br>InfinityLab LC Companion (G7108AA) with firmware D.07.25 or above<br>Instant Pilot (G4208A) with firmware B.02.22 or above<br>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.<br>No hazardous voltages in major maintenance areas.<br>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.<br>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 <sub>2</sub> O at 10 MPa (100 bar)   |
| Pressure operating range     | Operating range up to 60 MPa (600 bar, 8700 psi) up to 5 mL/min<br>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<br>LC and CE Drivers A.02.14 or above<br>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  $\mu\text{L}/\text{min}$  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 <sub>2</sub> O at 10 MPa (100 bar)   |
| Pressure operating range     | Operating range up to 60 MPa (600 bar, 8700 psi) up to 5 mL/min<br>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<br>Internal volume per channel: 1.5 mL  |

## 1 Pumps

### Agilent 1260 Infinity II Quaternary Pump (G7111B)

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

| Type                   | Specification  |
|------------------------|--|
| Instrument Control     | Lab Advisor B.02.08 or above<br>LC and CE Drivers A.02.14 or above<br>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 × 396 × 436 mm (7.1 × 15.6 × 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 <sub>2</sub> O at 10 MPa (100 bar)   |
| Pressure operating range     | Operating range up to 40 MPa (400 bar, 5880 psi) up to 5 mL/min<br>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<br>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<br>LC and CE Drivers A.02.14 or above<br>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<br>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<br><i>Low delay volume configuration:</i> < 5 % amplitude (typically < 2 %)  |
| Compressibility compensation | Pre-defined, based on mobile phase compressibility   |
| Recommended pH range         | 1.0 – 12.5   |
| Gradient formation           | High-pressure binary mixing  |
| Delay volume                 | <i>Standard delay volume configuration:</i> 600 – 900 µL, (includes 400 µL mixer), dependent on back pressure<br><i>Low delay volume configuration:</i> 120 µL   |
| Composition range            | settable: 0 – 100 %<br>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<br>Internal volume per channel: 1.5 mL   |
| Instrument Control           | Agilent control software with LC and CE Drivers A.02.14 or above<br>Lab Advisor B.02.09 or above<br>Agilent Instant Pilot (G4208A) with firmware B.02.20 or above<br>Instrument Control Framework (ICF) A.02.04 or above |

## 1 Pumps

### Agilent 1260 Infinity II Binary Pump (G7112B)

**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 × 396 × 436 mm (7.9 × 15.6 × 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<br>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.<br>External 2x 12 solvent valve as option, fully integrated in the pump control interface.           |
| Integrated degassing unit    | Included<br>Number of channels: 2<br>Internal volume per channel: 1.5 mL<br>Materials in contact with solvent: TFE/PDD Copolymer, FEP, PEEK, PPS. |

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

| <b>Feature</b>                                 | <b>Specification</b>  |
|--|---|
| Automatic Purge Valve                          | Included  |
| Active Seal wash                               | Included  |
| Intelligent System Emulation Technology (ISET) | Included  |
| Instrument Control                             | Lab Advisor B.02.06 or above<br>LC and CE Drivers A.02.11 or above<br>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 × 396 × 436 mm (7.1 × 15.6 × 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<br>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 <sup>1</sup>   |
| 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<br>LC and CE Drivers A.02.14 or above<br>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<br>Extended Remote Interface: ready, start, stop and shut-down signals  |

## 1 Pumps

### Agilent 1260 Infinity II Bio-Inert Pump (G5654A)

**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  |

<sup>1</sup> 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)<br>G4294B:<br>43 kg (94 lbs)   |                         |
| Dimensions (height × width × depth) | 640 × 370 × 420 mm (25.2 × 14.6 × 16.5 inches)<br>G4294B:<br>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<br>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<br>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 %<br>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<br>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<br>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 %<br>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                | <i>50 mL head</i> : 0.01 – 50 mL/min, in 0.01 mL/min increments<br><i>200 mL head</i> : 0.01 – 200 mL/min, in 0.01 mL/min increments   |
| Recommended Flow range             | <i>50 mL head</i> : ≥ 1 mL/min<br><i>200 mL head</i> : ≥ 4 mL/min  |
| Pressure operating range           | <i>50 mL head</i> : 60 MPa (600 bar, 8702 psi) up to 50 mL/min<br><br><i>200 mL head</i> : 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      | <i>50 mL head</i> : 2 – 98 % or 20 µL/min per channel, whichever is greater<br><br><i>200 mL head</i> : 2 – 98 % or 80 µL/min per channel, whichever is greater  |
| Flow accuracy <sup>1</sup>         | <±1.0 %  |
| Composition accuracy <sup>1</sup>  | ±1.0 % from 2 – 98 %   |
| Flow precision <sup>1</sup>        | ≤0.3 % RSD or ≤0.1 min SD whichever is greater, based on retention time at constant room temperature   |
| Composition precision <sup>1</sup> | ≤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<br>Instrument Control Framework (ICF) A.02.04 or above<br>Lab Advisor software B.02.10 or above   |

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

| <b>Feature</b>                  | <b>Specification</b>  |
|---------------------------------|---|
| 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  |

<sup>1</sup> 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 $\mu$ L/min per channel, whichever is greater   |
| Flow accuracy <sup>1</sup>         | < $\pm$ 1.0 %  |
| Composition accuracy <sup>1</sup>  | $\pm$ 1.0 % from 5 – 95 %  |
| Flow precision <sup>1</sup>        | $\leq$ 0.3 % RSD or $\leq$ 0.1 min SD whichever is greater, based on retention time at constant room temperature   |
| Composition precision <sup>1</sup> | $\leq$ 0.3 % RSD or $\leq$ 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<br>Instrument Control Framework (ICF) A.02.04 or above<br>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. |

## 1 Pumps

### Agilent 1260 Infinity II Preparative Binary Pump (G7161A)

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

| <b>Feature</b> | <b>Specification</b>  |
|----------------|---|
| 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  |

<sup>1</sup> 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)

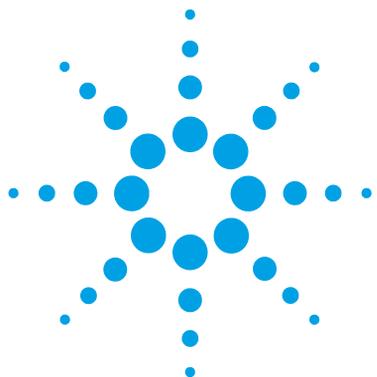
| Type                            | Specification  |
|---------------------------------|--|
| Hydraulic system                | Two dual piston in series pumps with servo-controlled variable stroke drive, power transmission by gears and ball screws, floating pistons   |
| Flow range                      | 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<br>Internal volume per channel: 1.5 mL   |
| Instrument Control              | LC and CE Drivers A.02.16 or above<br>Instrument Control Framework (ICF) A.02.04 or above<br>Instant Pilot (G4208A) with firmware B.02.21 or above<br>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  |

## **1 Pumps**

**Agilent 1260 Infinity II SFC Binary Pump (G4782A)**



## 2 Injectors

|   |    |
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## 2 Injectors

### Agilent 1260 Infinity II SFC Binary Pump (G4782A)

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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) <sup>1</sup>                | 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<br>Boiling point ≥56 °C |                         |

<sup>1</sup> 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<br><i>Single-needle</i> 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<br>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<br><i>Dual-needle</i> 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<br><i>Single-needle</i> instruments | <0.15 % RSD or SD <10 nL, whatever is greater  |
| Injection precision for<br><i>Dual-needle</i> instruments   | <0.2 % RSD or SD <10 nL, whatever is greater   |
| Injection linearity   | 0.9999 in the range of 0.1 – 100 µL  |
| Pressure range  | Up to 1300 bar   |
| Sample viscosity range                                      | 0.2 – 5 cp   |
| Sample capacity   | 1H Drawer up to 8 drawers and 16 positions<br>Shallow well plates (MTP)  |
|   | 2H Drawer up to 4 drawers and 8 positions<br>MTP, deep well plates, vials, Eppendorf   |
|   | 3H Drawer up to 2 drawers and 4 positions<br>MTP, deep well plates, vials up to 6 mL, Eppendorf  |
| Injection cycle time  | <10 s using following standard conditions:<br>Default draw speed: 100 µL/min<br>Default eject speed: 400 µL/min<br>Injection volume: 1 µL  |
| Carry Over  | <0.003 % (30 ppm) Multisampler Standard and Dual Needle<br><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<br>Instrument Control Framework (ICF) A.02.03 or above<br>Instant Pilot (G4208A) with firmware B.02.19 or above<br>Lab Advisor B.02.06 or above   |
| Communications                          | Controller-area network (CAN), Local Area Network (LAN)<br>ERI: ready, start, stop and shut-down signals   |
| Maintenance and safety-related features | Extensive diagnostics, error detection and display with Agilent Lab Advisor software<br>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.<br>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 combustible. 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<br>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) <sup>1</sup>                | 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<br>Boiling point ≥56 °C |                         |

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

## 2 Injectors

### Agilent 1260 Infinity II Multisampler (G7167A)

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

| Type                                    | Specification  |
|---|--|
| Carry Over                              | <0.003 % (30 ppm) Multisampler Standard and Dual Needle<br><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<br>Instrument Control Framework (ICF) A.02.03 or above<br>Instant Pilot (G4208A) with firmware B.02.19 or above<br>Lab Advisor B.02.06 or above   |
| Communications                          | Controller-area network (CAN), Local Area Network (LAN)<br>ERI: ready, start, stop and shut-down signals   |
| Maintenance and safety-related features | Extensive diagnostics, error detection and display with Agilent Lab Advisor software<br>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.<br>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               |

## 2 Injectors

### Agilent 1260 Infinity II Multisampler (G7167A)

**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 combustible. 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<br>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   |

## 2 Injectors

### Agilent 1260 Infinity II Multisampler (G7167A)

**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) <sup>1</sup>                    | 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<br>Boiling point ≥56 °C     |                         |

<sup>1</sup> 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 $\mu$ L in 0.1 $\mu$ L increments (default)<br>0.1 – 40 $\mu$ L in 0.1 $\mu$ L increments if 40 $\mu$ L loop is installed<br>0.1 – 120 $\mu$ L in 0.1 $\mu$ L increments with 1290 Infinity large volume injection kit (hardware modification required)<br>0.1 – 100 $\mu$ L in 0.1 $\mu$ L (if 100 $\mu$ L-loop and 100 $\mu$ L-head is installed) |
| Precision              | <0.25 % RSD of peak areas from 5 $\mu$ L to 100 $\mu$ L  |
| 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)<br>100 x 2 mL vial (two classic trays optional)<br>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 $\mu$ L/min<br>Ejection speed: 200 $\mu$ L/min<br>Injection volume: 1 $\mu$ L  |
| Minimum sample volume  | 1 $\mu$ L from 5 $\mu$ L sample in 100 $\mu$ L microvial, or 1 $\mu$ L from 10 $\mu$ L sample in 300 $\mu$ L microvial.  |
| Instrument Control     | Lab Advisor B.02.07 or above<br>LC and CE Drivers A.02.12 or above   |
| Local control          | Agilent Instant Pilot (G4208A)   |
| Communications         | Controller-area network (CAN), Local Area Network (LAN)<br>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               |

## 2 Injectors

### Agilent 1290 Infinity II Vialsampler (G7129B)

**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 combustible. 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<br>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   |

## 2 Injectors

### Agilent 1290 Infinity II Vialsampler (G7129B)

**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) <sup>1</sup>                    | 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<br>Boiling point ≥56 °C     |                         |

<sup>1</sup> 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<br>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)<br>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)<br>100 x 2 mL vial (two classic trays optional)<br>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<br>Ejection speed: 200 µL/min<br>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<br>LC and CE Drivers A.02.12 or above   |
| Local control          | Agilent Instant Pilot (G4208A)   |
| Communications         | Controller-area network (CAN), Local Area Network (LAN)<br>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               |

## 2 Injectors

### Agilent 1260 Infinity II Vialsampler (G7129A)

**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 combustible. 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<br>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   |

## 2 Injectors

### Agilent 1260 Infinity II Vialsampler (G7129A)

**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) <sup>1</sup>                    | 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<br>Boiling point ≥56 °C     |                         |

<sup>1</sup> 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 $\mu$ L in 0.1 $\mu$ L increments with 100 $\mu$ L up to 80 MPa  |
| Injection precision                     | <0.25 % RSD of peak areas from 5 $\mu$ L to 100 $\mu$ L  |
| 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)<br>100 x 2 mL vial (two classic trays optional)<br>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 $\mu$ L/min<br>Ejection speed: 200 $\mu$ L/min<br>Injection volume: 1 $\mu$ L  |
| Minimum sample volume                   | 1 $\mu$ L from 5 $\mu$ L sample in 100 $\mu$ L microvial, or 1 $\mu$ L from 10 $\mu$ L sample in 300 $\mu$ L microvial.  |
| Instrument Control                      | LC & CE Drivers A.02.17 or above<br>Instrument Control Framework (ICF) A.02.05 or above<br>Instant Pilot (G4208A) with firmware B.02.22 or above<br>InfinityLab LC Companion (G7108A)<br>Lab Advisor B.02.10 or above      |
| Communications                          | Controller-area network (CAN), Local Area Network (LAN)<br>ERI: ready, start, stop and shut-down signals   |
| Maintenance and safety-related features | Extensive diagnostics, error detection and display with Agilent Lab Advisor software<br>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.<br>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               |

## 2 Injectors

### Agilent 1260 Infinity II Vialsampler (G7129C)

**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 combustible. 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<br>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   |

## 2 Injectors

### Agilent 1260 Infinity II Vialsampler (G7129C)

**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) <sup>1</sup>                | 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<br>Boiling point ≥56 °C |                         |

<sup>1</sup> 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 $\mu$ L in 0.1 $\mu$ L increments  |
|                        | Default: 0.1 – 250 $\mu$ L or 1000 $\mu$ L in 0.1 $\mu$ L 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<br>Shallow well plates (MTP)   |
|                        | 2H Drawer up to 4 drawers and 8 positions<br>MTP, deep well plates, vials, Eppendorf                                      |
|                        | 3H Drawer up to 2 drawers and 4 positions<br>MTP, deep well plates, vials up to 6 mL, Eppendorf                           |
| Injection cycle time   | <10 s using following standard conditions:<br>Default draw speed: 100 $\mu$ L/min   |
|                        | Default eject speed: 400 $\mu$ L/min Injection volume: 1 $\mu$ L  |
| 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<br>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<br>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 combustible. 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<br>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 $\mu$ L in 0.1 $\mu$ L increments  |
| Precision              | <1 % RSD of peak areas from 1 $\mu$ L to 5 $\mu$ L<br><0.25 % RSD of peak areas from 5 $\mu$ L to 100 $\mu$ L  |
| 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 $\times$ 2 mL vials in 1 tray<br>40 $\times$ 2 mL vials in $\frac{1}{2}$ tray<br>15 $\times$ 6 mL vials in $\frac{1}{2}$ 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 $\mu$ L from 5 $\mu$ L sample in 100 $\mu$ L microvial, or 1 $\mu$ L from 10 $\mu$ L sample in 300 $\mu$ L 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) <sup>1</sup>                    | 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<br>Boiling point ≥56 °C     |                         |

<sup>1</sup> 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 $\mu$ L, up to 3600 $\mu$ L with seat extension  |
| Injection precision      | 1 $\mu$ L: <5 %<br>5 $\mu$ L: <2 %<br>10 $\mu$ L, 50 $\mu$ L: <1 %<br>500 – 3600 $\mu$ L: <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)<br>100 x 2 mL vial (two classic trays optional)<br>36 x 6 mL vials (two trays optional)  |
| Carry over               | <0.005 % (50 ppm)  |
| Injection cycle time     | <60 s for injection volume 900 $\mu$ L   |
| Instrument Control       | LC & CE Drivers A.02.17 or above<br>Instrument Control Framework (ICF) A.02.04 or above<br>Instant Pilot (G4208A) with firmware B.02.22 or above<br>Lab Advisor B.02.10 or above   |
| Communications           | Controller-area network (CAN), Local Area Network (LAN)<br>ERI: ready, start, stop and shut-down signals   |
| Safety and maintenance   | Extensive diagnostics, error detection and display with Agilent Lab Advisor software<br>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.<br>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 combustible. 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<br>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) <sup>1</sup>                | 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<br>Boiling point ≥56 °C |                         |

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

## 2 Injectors

### Agilent 1260 Infinity II SFC Multisampler (G4767A)

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

| Type                                    | Specification  |
|---|--|
| Instrument Control                      | LC & CE Drivers A.02.16 or above<br>Instrument Control Framework (ICF) A.02.04 or above<br>Instant Pilot (G4208A) with firmware B.02.21 or above<br>Lab Advisor B.02.09 or above   |
| Communications                          | Controller-area network (CAN), Local Area Network (LAN)<br>ERI: ready, start, stop and shut-down signals   |
| Maintenance and safety-related features | Extensive diagnostics, error detection and display with Agilent Lab Advisor software<br>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               |

## 2 Injectors

### Agilent 1260 Infinity II SFC Multisampler (G4767A)

**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 combustible. 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<br>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   |

## 2 Injectors

### Agilent 1260 Infinity II SFC Multisampler (G4767A)

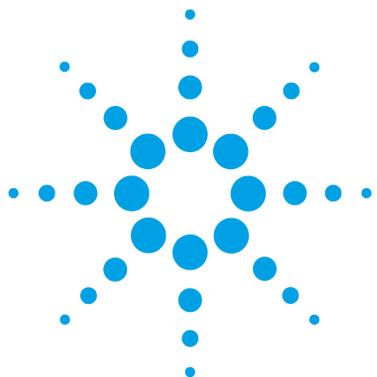
**Table 76** Performance Specifications for the Sample Thermostat

| 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)<br>2.5 Hz (dual wavelength detection)  |
| Noise                | < $\pm 0.15 \cdot 10^{-5}$ AU, at 230 nm (single wavelength detection)<br>< $\pm 0.80 \cdot 10^{-5}$ 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  | $\pm 1$ nm, self-calibration with deuterium lines, verification with holmium oxide filter   |
| Wavelength precision | < $\pm 0.1$ 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             | <p><i>Standard</i>: 14 <math>\mu</math>L volume, 10 mm cell path length and 40 bar (588 psi) pressure maximum</p> <p><i>Micro</i>: 2 <math>\mu</math>L volume, 3 mm cell path length and 120 bar (1760 psi) pressure maximum</p> <p><i>Semi-micro</i>: 5 <math>\mu</math>L volume, 6 mm cell path length and 40 bar (588 psi) pressure maximum</p> <p><i>Preparative</i>: 4 <math>\mu</math>L volume, 3 mm cell path length and 120 bar (1760 psi) pressure maximum</p> <p><i>Preparative</i>: 0.3 mm cell path length and 50 bar (725 psi) pressure maximum</p> <p><i>Preparative</i>: 0.06 mm cell path length and 50 bar (725 psi) pressure maximum</p> <p><i>High pressure</i>: 14 <math>\mu</math>L volume, 10 mm cell path length and 400 bar (5801 psi) pressure maximum</p> |
| Spectral tools         | Stop-flow wavelength scan   |
| Analog output          | Recorder/Integrator 100 mV or 1 V, 1 output   |
| Instrument Control     | <p>Lab Advisor B.02.06 or above</p> <p>LC and CE Drivers A.02.11 or above</p> <p>For details about supported software versions refer to the compatibility matrix of your version of the LC and CE Drivers</p>   |
| Local Control          | Agilent Instant Pilot (G4208A) B.02.19 or above   |
| Communication          | LAN, Controller-area network (CAN),<br>ERI: ready, start, stop and shut-down signals,<br>USB  |
| GLP                    | <p>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.</p>  |
| Safety and maintenance | <p>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</p>  |

# 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)<br>2.5 Hz (dual wavelength detection)  |
| Noise                | < $\pm 0.25 \cdot 10^{-5}$ AU, at 230 nm (single wavelength detection)<br>< $\pm 0.80 \cdot 10^{-5}$ 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  | $\pm 1$ nm, self-calibration with deuterium lines, verification with holmium oxide filter   |
| Wavelength precision | < $\pm 0.1$ 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             | <p><i>Standard:</i> 14 <math>\mu</math>L volume, 10 mm cell path length and 40 bar (588 psi) pressure maximum</p> <p><i>Micro:</i> 2 <math>\mu</math>L volume, 3 mm cell path length and 120 bar (1760 psi) pressure maximum</p> <p><i>Semi-micro:</i> 5 <math>\mu</math>L volume, 6 mm cell path length and 40 bar (588 psi) pressure maximum</p> <p><i>Preparative:</i> 4 <math>\mu</math>L volume, 3 mm cell path length and 120 bar (1760 psi) pressure maximum</p> <p><i>Preparative:</i> 0.3 mm cell path length and 50 bar (725 psi) pressure maximum</p> <p><i>Preparative:</i> 0.06 mm cell path length and 50 bar (725 psi) pressure maximum</p> <p><i>High pressure:</i> 14 <math>\mu</math>L volume, 10 mm cell path length and 400 bar (5801 psi) pressure maximum</p> |
| Spectral tools         | Stop-flow wavelength scan   |
| Analog output          | Recorder/Integrator 100 mV or 1 V, 1 output   |
| Instrument Control     | <p>Lab Advisor B.02.08 or above</p> <p>LC and CE Drivers A.02.14 or above</p> <p>For details about supported software versions refer to the compatibility matrix of your version of the LC and CE Drivers</p>   |
| Local Control          | Agilent Instant Pilot (G4208A) B.02.19 or above   |
| Communication          | <p>Controller-area network (CAN), USB</p> <p>ERI: ready, start, stop and shut-down signals</p>  |
| GLP                    | <p>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.</p>  |
| Safety and maintenance | <p>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</p>  |

## 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)<br>Single and<br>Multi-Wavelength | $< \pm 0.7 \cdot 10^{-5}$ AU at 254 and 750 nm |
| Drift   | $< 0.9 \cdot 10^{-3}$ AU/h at 254 nm           |
| Linear absorbance range                                   | $> 2$ AU (5 %) at 265 nm                       |
| Wavelength accuracy                                       | $\pm 1$ nm                                     |
| Wavelength bunching                                       | 1 – 400 nm                                     |
| Slit width  | 1, 2, 4, 8, 16 nm                              |
| Diode width   | $< 1$ nm                                       |

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

| Type               | Specification   |
|--------------------|---|
| Flow cells         | <p>Standard: 13 <math>\mu</math>L volume, 10 mm cell path length and 120 bar (1740 psi) pressure maximum</p> <p>Standard bio-inert: 13 <math>\mu</math>L volume, 10 mm cell path length and 120 bar (1740 psi) pressure maximum</p> <p>Semi-micro: 5 <math>\mu</math>L volume, 6 mm cell path length and 120 bar (1740 psi) pressure maximum</p> <p>Micro: 2 <math>\mu</math>L volume, 3 mm cell path length, 120 bar (1740 psi) pressure maximum</p> <p>Semi-nano: 500 nL volume, 10 mm cell path length and 50 bar (725 psi) pressure maximum</p> <p>Nano: 80 nL volume, 6 mm cell path length and 50 bar (725 psi) pressure maximum</p> <p>High pressure: 1.7 <math>\mu</math>L volume, 6 mm cell path length and 400 bar (5800 psi) pressure maximum</p> <p>Prep SST: 3 mm cell path length and 120 bar (1740 psi) pressure maximum</p> <p>Prep Quartz: 0.3 mm cell path length and 20 bar (290 psi) pressure maximum</p> <p>Prep Quartz: 0.06 mm cell path length and 20 bar (290 psi) pressure maximum</p> <p>SFC Flow Cell: Light path 10 mm, Pressure Rating 400 bar, Internal Volume 13 <math>\mu</math>L</p> <p>SFC Flow Cell LD: Light Path 3 mm, Pressure Rating 400 bar, Internal Volume 2 <math>\mu</math>L</p> |
| Time programmable  | Wavelength, polarity, peak width, lamp bandwidth, autobalance, wavelength range, threshold, spectra storage mode  |
| Spectral tools     | Data analysis software for spectra evaluation, including spectral libraries and peak purity functions   |
| Instrument Control | Lab Advisor B.02.08 or above<br>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<br>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)<br>Early maintenance feedback (EMF) for continuous tracking of instrument usage in terms of lamp burn time with user-settable limits and feedback messages. Electronic records of maintenance and errors. Verification of wavelength accuracy with built-in holmium oxide filter. |
| Housing                | All materials recyclable.   |
| Others                 | Second generation of Electronic temperature control (ETC) for the complete optical unit   |

## 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<br>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<br>Typically 2.5 AU (5 %)   |
| Wavelength range      | 190 – 640 nm  |
| Wavelength accuracy   | $\pm 1$ nm, self-calibration with deuterium lines   |
| Wavelength precision  | $<\pm 0.1$ nm   |
| Slit width            | Programmable: 1, 2, 4, 8 nm   |
| Diode width           | $\sim 0.5$ 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

| <b>Feature</b>         | <b>Specification</b>  |
|------------------------|---|
| Flow cells             | User-exchangeable, self-aligning cartridge cells with RFID tags.<br>Max-Light Cartridge Cell (Standard): 10 mm, $\sigma_V = 1.0 \mu\text{L}$<br>Max-Light Cartridge Cell (High Sensitivity): 60 mm, $\sigma_V = 4 \mu\text{L}$<br>Max-Light Cartridge Ultra Low Dispersion (ULD) Cell: 10 mm, $\sigma_V = 0.6 \mu\text{L}$<br>Max-Light Cartridge High Dynamic Range (HDR) Cell: 3.7 mm, $\sigma_V = 0.8 \mu\text{L}$<br>Maximum Operating Pressure (MOP) <sup>1</sup> : 70 bar<br>Maximum Incidental Pressure (MIP) <sup>2</sup> : 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<br>LC and CE Drivers A.02.11 or above<br>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),<br>ERI: ready, start, stop and shut-down signals,<br>USB  |
| GLP features           | RFID for electronics records of flow cell and UV lamp conditions (path length, volume, product number, serial number, test passed, usage)<br>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   |

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

<sup>2</sup> 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<br>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<br>Typically 2.5 AU (5 %)   |
| Wavelength range      | 190 – 640 nm  |
| Wavelength accuracy   | $\pm 1$ nm, self-calibration with deuterium lines   |
| Wavelength precision  | $<\pm 0.1$ nm   |
| Diode width           | $\sim 0.5$ nm   |
| Wavelength bunching   | Programmable, 2 – 400 nm, in steps of 1 nm  |
| Flow cells            | User-exchangeable, self-aligning cartridge cells with RFID tags.<br>Max-Light Cartridge Cell (Standard): 10 mm, $\sigma_V = 1.0$ $\mu$ L<br>Max-Light Cartridge Cell (High Sensitivity): 60 mm, $\sigma_V = 4$ $\mu$ L<br>Max-Light Cartridge Ultra Low Dispersion (ULD) Cell: 10 mm, $\sigma_V = 0.6$ $\mu$ L<br>Max-Light Cartridge High Dynamic Range (HDR) Cell: 3.7 mm, $\sigma_V = 0.8$ $\mu$ L<br>Maximum Operating Pressure (MOP) <sup>1</sup> : 70 bar<br>Maximum Incidental Pressure (MIP) <sup>2</sup> : 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<br>LC and CE Drivers A.02.11 or above<br>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),<br>ERI: ready, start, stop and shut-down signals<br>USB   |
| GLP features           | RFID for electronics records of flow cell and UV lamp conditions (path length, volume, product number, serial number, test passed, usage)<br>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   |

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

<sup>2</sup> 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<br>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<br>Typically 2.5 AU (5 %)  |
| Wavelength range      | 190 – 640 nm   |
| Wavelength accuracy   | $\pm 1$ nm, self-calibration with deuterium lines  |
| Wavelength precision  | $<\pm 0.1$ nm  |
| Diode width           | $\sim 0.5$ nm  |
| Wavelength bunching   | Programmable, 2 – 400 nm, in steps of 1 nm   |
| Flow cells            | User-exchangeable, self-aligning cartridge cells with RFID tags.<br>Max-Light Cartridge Cell (Standard): 10 mm, $\sigma_V = 1.0$ $\mu$ L<br>Max-Light Cartridge Cell (High Sensitivity): 60 mm, $\sigma_V = 4$ $\mu$ L<br>Maximum Operating Pressure (MOP) <sup>1</sup> : 70 bar<br>Maximum Incidental Pressure (MIP) <sup>2</sup> : 150 bar |
| Spectral tools        | Data analysis software for spectra evaluation, including spectral libraries and peak purity functions  |

### 3 UV-Detectors

#### Agilent 1260 Infinity II Diode Array Detector HS (G7117C)

**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<br>LC and CE Drivers A.02.14 or above<br>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<br>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)<br>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   |

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

<sup>2</sup> 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)<br>Single and<br>Multi-Wavelength | $< \pm 0.7 \cdot 10^{-5}$ AU at 254 and 750 nm |
| Drift   | $< 0.9 \cdot 10^{-3}$ AU/h at 254 nm           |
| Linear absorbance range                                   | $> 2$ AU (5 %) at 265 nm                       |
| Wavelength accuracy                                       | $\pm 1$ 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         | <p>Standard: 13 <math>\mu</math>L volume, 10 mm cell path length and 120 bar (1740 psi) pressure maximum</p> <p>Standard bio-inert: 13 <math>\mu</math>L volume, 10 mm cell path length and 120 bar (1740 psi) pressure maximum</p> <p>Semi-micro: 5 <math>\mu</math>L volume, 6 mm cell path length and 120 bar (1740 psi) pressure maximum</p> <p>Micro: 2 <math>\mu</math>L volume, 3 mm cell path length, 120 bar (1740 psi) pressure maximum</p> <p>Semi-nano: 500 nL volume, 10 mm cell path length and 50 bar (725 psi) pressure maximum</p> <p>Nano: 80 nL volume, 6 mm cell path length and 50 bar (725 psi) pressure maximum</p> <p>High pressure: 1.7 <math>\mu</math>L volume, 6 mm cell path length and 400 bar (5800 psi) pressure maximum</p> <p>Prep SST: 3 mm cell path length and 120 bar (1740 psi) pressure maximum</p> <p>Prep Quartz: 0.3 mm cell path length and 20 bar (290 psi) pressure maximum</p> <p>Prep Quartz: 0.06 mm cell path length and 20 bar (290 psi) pressure maximum</p> <p>SFC Flow Cell: Light path 10 mm, Pressure Rating 400 bar, Internal Volume 13 <math>\mu</math>L</p> <p>SFC Flow Cell LD: Light Path 3 mm, Pressure Rating 400 bar, Internal Volume 2 <math>\mu</math>L</p> |
| Time programmable  | Wavelength, polarity, peak width, lamp bandwidth, autobalance, wavelength range, threshold, spectra storage mode  |
| Instrument Control | Lab Advisor B.02.08 or above<br>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<br>Extended Remote Interface (ERI): ready, start, stop and shut-down signals   |

### 3 UV-Detectors

#### Agilent 1260 Infinity II Multiple Wavelength Detector (G7165A)

**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)<br>Early maintenance feedback (EMF) for continuous tracking of instrument usage in terms of lamp burn time with user-settable limits and feedback messages. Electronic records of maintenance and errors. Verification of wavelength accuracy with built-in holmium oxide filter. |
| Housing                | All materials recyclable.   |
| Others                 | Second generation of Electronic temperature control (ETC) for the complete optical unit   |

# 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) | $< \pm 0.25 \cdot 10^{-5}$ 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     | $\pm 1$ nm   |
| Slit width              | 6.5 nm typical over whole wavelength range   |
| Flow cells              | Standard: 14 $\mu$ L volume, 10 mm cell path length and 40 bar (580 psi) pressure maximum<br>High pressure: 14 $\mu$ L volume, 10 mm cell path length and 400 bar (5800 psi) pressure maximum<br>Micro: 1 $\mu$ L volume, 5 mm cell path length and 40 bar (580 psi) pressure maximum<br>Semi-micro: 5 $\mu$ L volume, 6 mm cell path length and 40 bar (580 psi) pressure maximum |

# Agilent 1220 Infinity II LC Diode Array Detector

## Physical Specifications

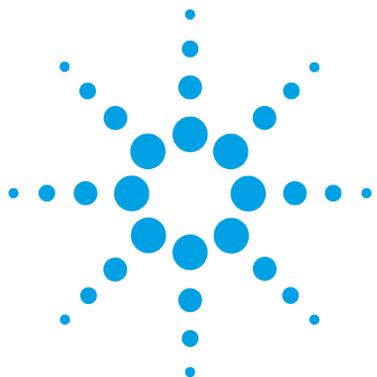
**Table 93** Physical Specifications

| 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)<br>Single and<br>Multi-Wavelength | $< \pm 0.7 \cdot 10^{-5}$ 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                                       | $\pm 1$ nm   |
| Slit width  | 1, 2, 4, 8, 16 nm  |
| Diode width   | $\sim 1$ nm  |
| Flow cell   | Standard: 13 $\mu$ L 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 |



## 4 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  |
| <b>Evaporator</b>  |  |
| 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<br>Serial (RS232)<br>Remote Start Input<br>Pump Stop: 1 Contact closure |

## 4 Special Detectors

### Agilent 1290 Infinity II Evaporative Light Scattering Detector (G7102A)

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

| Type                   | Specification  |
|------------------------|--|
| PC Control             | ELSD driver for OpenLAB ChemStation edition<br>ELSD driver for OpenLAB EZChrom edition<br>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 | <ul style="list-style-type: none"> <li>• RAMAN (H<sub>2</sub>O) &gt; 500 (noise reference measured at signal)<br/>Ex=350 nm, Em=397 nm, dark value 450 nm, standard flow cell</li> <li>• RAMAN (H<sub>2</sub>O) &gt; 3000 (noise reference measured at dark value)<br/>Ex=350 nm, Em=397 nm, dark value 450 nm, standard flow cell</li> </ul> |
| Dual wavelength operation   | <ul style="list-style-type: none"> <li>• RAMAN (H<sub>2</sub>O) &gt; 300 Ex 350 nm, Em 397 nm, standard flow cell</li> <li>• RAMAN (H<sub>2</sub>O) &gt; 300 Ex 350 nm, Em 450 nm, standard flow cell.</li> </ul>   |
| Light source                | Xenon Flash Lamp, normal mode 20 W, economy mode 5 W, lifetime 4000 h   |
| Pulse frequency             | 296 Hz for single signal mode<br>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<br>Bandwidth: 20 nm (fixed)<br>Monochromator: concave holographic grating, F/1.6, blaze: 300 nm   |
| Emission monochromator      | Range: settable 200 nm - 1200 nm and zero-order<br>Bandwidth: 20 nm (fixed)<br>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<br>Scan speed: 28 ms per datapoint (e.g. 0.6 s/spectrum 200 – 400 nm, 10 nm step)<br>Step size: 1 – 20 nm<br>Spectra storage: All  |
| Wavelength characteristic   | Repeatability +/- 0.2 nm<br>Accuracy +/- 3 nm setting   |

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

| Type                            | Specification   |
|---------------------------------|---|
| Flow cells                      | Standard: 8 $\mu$ L volume and 20 bar (2 MPa) pressure maximum, fused silica block<br><br>Optional: <ul style="list-style-type: none"> <li>• Bio-inert: 8 <math>\mu</math>L volume and 20 bar (2 MPa) pressure maximum, (pH 1-12)</li> <li>• Micro: 4 <math>\mu</math>L volume and 20 bar (2 MPa) pressure maximum</li> </ul> |
| 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<br>Instrument Control Framework (ICF) A.02.03 or above<br>InfinityLab LC Companion (G7108AA) with firmware D.07.25 or above<br>Instant Pilot (G4208A) with firmware B.02.19 or above<br>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.<br>No hazardous voltages in major maintenance areas.<br>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.<br>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 | <ul style="list-style-type: none"> <li>• RAMAN (H<sub>2</sub>O) &gt; 500 (noise reference measured at signal)<br/>Ex=350 nm, Em=397 nm, dark value 450 nm, standard flow cell</li> <li>• RAMAN (H<sub>2</sub>O) &gt; 3000 (noise reference measured at dark value)<br/>Ex=350 nm, Em=397 nm, dark value 450 nm, standard flow cell</li> </ul> |
| Light source                | Xenon Flash Lamp, normal mode 20 W, economy mode 5 W, lifetime 4000 h   |
| Pulse frequency             | 296 Hz for single signal mode<br>74 Hz for economy mode   |
| Maximum data rate           | 74 Hz   |
| Excitation monochromator    | Range: settable 200 nm - 1200 nm and zero-order<br>Bandwidth: 20 nm (fixed)<br>Monochromator: concave holographic grating, F/1.6, blaze: 300 nm   |
| Emission monochromator      | Range: settable 200 nm - 1200 nm and zero-order<br>Bandwidth: 20 nm (fixed)<br>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<br>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  |

## 4 Special Detectors

### Agilent 1260 Infinity II Fluorescence Detector (G7121A)

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

| Type                            | Specification  |
|---------------------------------|--|
| Instrument Control              | LC & CE Drivers A.02.14 or above<br>Instrument Control Framework (ICF) A.02.03 or above<br>InfinityLab LC Companion (G7108AA) with firmware D.07.25 or above<br>Instant Pilot (G4208A) with firmware B.02.19 or above<br>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.<br>No hazardous voltages in major maintenance areas.<br>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.<br>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 $\mu$ L<br>Maximum pressure: 5 bar (0.5 MPa)<br>Maximum flow rate: 1 mL/min (100 % water) |
| Valves                       | Automatic purge and automatic solvent recycle   |
| Volumes                      | Inlet port to sample cell 2.5 $\mu$ L,<br>inlet port to outlet port 265 $\mu$ L                       |
| Liquid contact materials     | 316 stainless steel, PTFE<br>and quartz glass   |
| pH range                     | 2.3 – 9.5   |
| Performance specifications   | Short term noise: $< \pm 1.75 \cdot 10^{-9}$ RIU<br>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<br>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                               |

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

**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 $\mu$ L<br>Maximum pressure: 5 bar (0.5 MPa)<br>Maximum flow rate: 5 mL/min   |
| Valves                       | Automatic purge and automatic solvent recycle   |
| Volumes                      | Inlet port to sample cell 62 $\mu$ L,<br>inlet port to outlet port 590 $\mu$ L          |
| Liquid contact materials     | 316 stainless steel, PTFE<br>and quartz glass   |
| pH range                     | 2.3 – 9.5   |
| Performance specifications   | Short term noise: $< \pm 1.25 \cdot 10^{-9}$ RIU<br>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<br>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                 |

## 4 Special Detectors

### Agilent 1260 Infinity II Refractive Index Detector (G7162A)

**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 × 200 × 450 mm (16.3 × 7.9 × 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)<br>< 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  |
|---------------------|--|
| <b>Light Source</b> |  |
| 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  |
| <b>Evaporator</b>   | 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 conditions.                             |
| 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<br>Serial (RS232)<br>Remote Start Input<br>Pump Stop: 1 Contact closure |

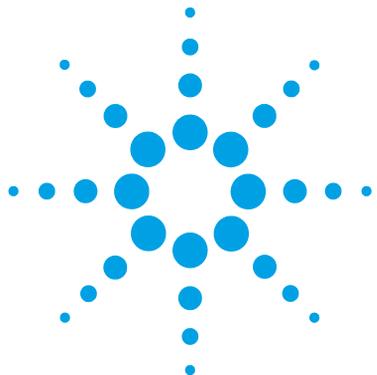
## Agilent 1260 Infinity II Evaporative Light Scattering Detector (G4260B)

**Table 106** Performance Specifications 1260 Infinity II ELSD (G4260B)

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

## **4 Special Detectors**

### **Agilent 1260 Infinity II Evaporative Light Scattering Detector (G4260B)**



## 5 Column Compartments

|  |     |
|--|-----|
| Agilent 1290 Infinity II Multicolumn Thermostat (G7116B)             | 150 |
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| Agilent 1260 Infinity II Multicolumn Thermostat (G7116A)             | 153 |
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| Agilent InfinityLab LC Series Integrated Column Compartment (G7130A) | 156 |
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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 <sup>1</sup> .  |
| 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)<br>up to 6 in clustered configuration <sup>1</sup>  |
| Column capacity               | 8 columns of 100 mm length plus Quick-Connect fittings or pre-columns<br>4 columns of 300 mm length plus Quick-Connect fittings or pre-columns<br>Selection of columns by single optional integrated 8-column selection valve (1300 bar)<br>Maximum of<br>24 columns of 100 mm length plus Quick-Connect fittings or pre-columns<br>12 columns of 300 mm length plus Quick-Connect fittings or pre-columns<br>with clustering <sup>1</sup> of three devices. |
| Heat-up/cool-down time        | 5 min from ambient to 40 °C<br>10 min from 40 °C to 20 °C<br><30 min from 25 °C to 100 °C  |
| Solvent heat exchangers       | Individually quick-installable for every column.<br>Available at 1 µL delay volume, 0.075 mm i.d. capillary (ultra-low dispersion), 1.6 µL delay volume, 0.12 mm i.d. capillary (standard) and 3 µL delay volume, 0.12 mm i.d. capillary (high-flow) volume.   |

## 5 Column Compartments

### Agilent 1290 Infinity II Multicolumn Thermostat (G7116B)

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

| Feature                | Specification  |
|------------------------|--|
| Valve options          | 1x integrated valve drive as option<br>2x external valve drives as option<br>to host user-exchangeable Quick-Change valve heads of different formats, materials and pressure ratings (up to 1300 bar):<br>2-position/6-port, 2-position/10-port, 6-column selection (6-pos/14-port), 8-column selection (8-pos/18-port).<br>Equipped with tags, valve heads are automatically identified by SW |
| Instrument Control     | Lab Advisor B.02.06 or above<br>LC and CE Drivers A.02.11 or above<br>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.  |

<sup>1</sup> 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)

| <b>Feature</b>                | <b>Specification<sup>1</sup></b>   |
|-------------------------------|--|
| 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<br>The number of precolumn Quick-Connect Heat Exchangers is scalable - each column can be equipped with individual heat exchanger for best performance<br>4-column selector valve is available to access each column without replumbing |
| Heat-up/cool-down time        | 5 min from ambient to 40 °C<br>10 min from 40 °C to 20 °C<br><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.<br>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 <sup>1</sup>  |
|---|---|
| Valve options                           | 1 x integrated valve drive as option<br>to host user-exchangeable Quick-Change valve heads (up to 800 bar) of different formats:<br>2-position/6-port, 2-position/10-port, 4-column selection.<br>Also available in bio-inert materials.<br>Valve heads are automatically identified by their tag.  |
| Column identification                   | Optionally, column identification kit to track history of up to four columns.<br>Mounted left hand-side of module.  |
| Instrument Control                      | LC and CE Drivers A.02.14 or above<br>Instrument Control Framework (ICF) A.02.04 or above<br>Agilent Instant Pilot (G4208A) B.02.20 or above<br>InfinityLab LC Companion (G7108A)<br>Lab Advisor B.02.08 or above<br>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.<br>(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.<br>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.<br>Concept of column identification.  |
| Housing                                 | All materials recyclable.   |

<sup>1</sup> 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) <sup>1</sup>      | 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<br>IEC, EN, CSA, UL | Installation category II,<br>Pollution degree 2 | For indoor use only    |
| ISM Classification                   | ISM Group 1 Class B                             | According to CISPR 11  |

<sup>1</sup> 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

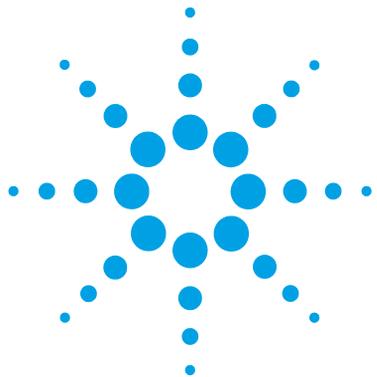
| Type                                | Specification                                  | Comments                |
|-------------------------------------|--|-------------------------|
| Weight                              | 30 kg (66 lbs)                                 |                         |
| 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<br>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  |

**5 Column Compartments**  
Agilent 1220 Infinity LC Column Compartment



## 6 Degasser

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## Agilent 1260 Infinity II Degasser (G7122A)

### Physical Specifications

**Table 115** Physical Specifications

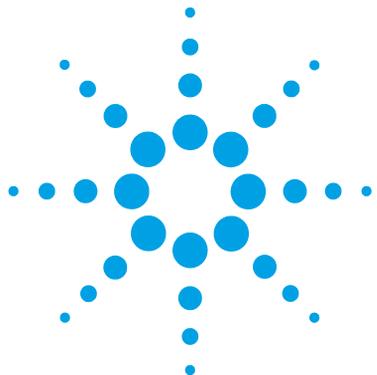
| Type                                | Specification                                | Comments                |
|-------------------------------------|--|-------------------------|
| Weight                              | 7 kg   |                         |
| Dimensions (height × width × depth) | 80 × 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 |

**6 Degasser**  
Agilent 1260 Infinity II Degasser (G7122A)



## 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 × 345 × 440 mm (8 × 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<br>Boiling point ≥56 °C<br>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 $\mu\text{L}$ ) | Fraction collector inlet to diverter valve: $\sim 500$ (typical, depends on length of the tubing)<br>Diverter valve: $\sim 15$<br>Diverter valve to needle: $\sim 110$<br>Needle: $\sim 5$  |
| 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<br>Peak (threshold, up- / downslope)<br>Timetable (combination of time intervals and peak)<br>Manual trigger (supported only with Agilent Instant Pilot G4208A)   |
| Trigger Sources                  | G7115A, 1260 Infinity II DAD<br>G7165A, 1260 Infinity II MWD<br>G7114A, 1260 Infinity II VWD<br>G6125BA, Single Quadrupole LC/MSD<br>G6135BA, Single Quadrupole LC/MSD XT<br>G7121A, 1260 Infinity II FLD<br>G4260B, 1260 Infinity II ELSD<br>G7162A, 1260 Infinity II RID<br>Other detectors can be used but are not supported for fraction collection.                |
| Operating Modes                  | <i>Discrete fractions: default mode for all vessels.</i><br>The flow is diverted to waste, while moving from one vessel position to the next vessel position<br><i>Continuous flow: optional, available only when using well plates.</i><br>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   |

## 7 Fraction Collectors

### Agilent 1260 Infinity II Preparative Fraction Collector (G1364E)

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

**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<br>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.<br>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 × 345 × 440 mm (8 × 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) <sup>1</sup>   | 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<br>Boiling point ≥56 °C<br>Ignition Class IIA, IIB (IEC60079-20-1) |                         |

<sup>1</sup> 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 $\mu\text{L}$ ) | Fraction collector inlet to diverter valve: $\sim 50$ (typical, depends on length of the tubing)<br>Diverter valve: $\sim 15$<br>Diverter valve to needle: $\sim 10$<br>Needle: $\sim 4$  |
| Minimum system flow              | Depending on the recommended flowrates of the installed tubing kit  |
| Maximum system flow              | 10 mL/min   |
| Maximum collection volume        | $\sim 20$ mL with 30 x 48 mm (OD x L) tube<br>$\sim 30$ 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<br>Peak (threshold, up- / downslope)<br>Timetable (combination of time intervals and peak)<br>Manual trigger (supported only with Agilent Instant Pilot G4208A)   |
| Trigger Sources                  | G7115A, 1260 Infinity II DAD<br>G7165A, 1260 Infinity II MWD<br>G7114A, 1260 Infinity II VWD<br>G6120BA, LC/MS Single Quad VL<br>G6130BA, LC/MS Single Quad SL<br>G7121A, 1260 Infinity II FLD<br>G4260B, 1260 Infinity II ELSD<br>G7162A, 1260 Infinity II RID<br>Other detectors can be used but are not supported for fraction collection. |

## 7 Fraction Collectors

### Agilent 1260 Infinity II Analytical Fraction Collector (G1364F)

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

| Type   | Specification  |
|--|--|
| Operating Modes                                  | <p><b>Discrete fractions: default mode for all vessels.</b><br/>The flow is diverted to waste, while moving from one vessel position to the next vessel position</p> <p><b>Continuous flow: optional, available only when using deep well plates.</b><br/>It is possible to move from one well plate position to the next one without diverting the flow into the well plate to waste</p> <p><b>Needle into location:</b><br/>Needle pushes into the vessel as deep as specified, for the use with capped vials and test tubes and well plates with closing mats</p> <p><b>Droplet setup mode:</b><br/>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.</p> |
| Maximum time to move between neighboring vessels | Movement in x-direction: < 0.15 s<br>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        | <p>4 x well-plates full tray (MTP)<sup>1</sup></p> <p>2 x well-plates std. tray + 10 funnels with external containers<sup>1</sup> (+ 1 half tray)</p> <p>2 x well-plates std. tray (MTP) + 10 x 2 mL vials<sup>1</sup> (+ 1 half tray)</p> <p>100 x 2 mL in std. tray (+ 1 half tray)<sup>1</sup></p> <p>3 x 40 x 2 mL in half tray<sup>1</sup></p> <p>3 x 40 funnels in half tray</p> <p>3 x 15 x 6 mL in half tray<sup>1</sup></p> <p>Full tray with 40 test tubes (30 mm OD, max. height 48 mm, ~20 mL / tube)</p> <p>Full tray with 60 test tubes (25 mm OD, max. height 48 mm, ~15 mL / tube)</p> <p>Full tray with 126 test tubes (16 mm OD, max. height 48 mm, ~11 mL / tube)</p> <p>Full tray with 215 test tubes (12 mm OD, max. height 48 mm, ~8 mL / tube)</p> <p>Installed trays are automatically detected and identified.<br/>In operation mode "Needle into location" installed plates and vials can be detected.<br/><i>Only one type of well-plates can be used at a time in one tray.</i></p> |
| Fraction Containers | <p>30 x 48 mm (OD x L) tubes, ~20 mL / tube</p> <p>25 x 48 mm (OD x L) tubes, ~15 mL / tube</p> <p>16 x 48 mm (OD x L) tubes, ~11 mL / tube</p> <p>12 x 48 mm (OD x L) tubes, ~8 mL / tube</p> <p>Vials, well plates, capped vials, and well plates with closing mats can be used as recommended by Agilent Technologies</p>  |
| Maximum tube height | <p>48 mm with long needle assembly G1367-87200</p> <p>75 mm with short needle assembly G1364-87202</p>  |
| Instrument Control  | <p>LC and CE Drivers A.02.17 or above</p> <p>Instrument Control Framework (ICF) A.02.04 or above</p> <p>Instant Pilot (G4208A) with firmware B.02.22 or above</p> <p>Lab Advisor B.02.10 or above</p>   |
| Communications      | <p>Controller-area network (CAN), Local Area Network (LAN)</p> <p>ERI: ready, start, stop and shut-down signals</p>   |

## 7 Fraction Collectors

### Agilent 1260 Infinity II Analytical Fraction Collector (G1364F)

**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<br>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.<br>Electronic records of maintenance and errors   |
| Housing                                 | All materials recyclable.  |

<sup>1</sup> 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 × 345 × 440 mm (8 × 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) <sup>1</sup>   | 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<br>Boiling point ≥56 °C<br>Ignition Class IIA, IIB (IEC60079-20-1) |                         |

<sup>1</sup> 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 $\mu\text{L}$ ) | Fraction collector inlet to diverter valve: ~50 (typical, depends on length of the tubing)<br>Diverter valve: ~15<br>Diverter valve to needle: ~10<br>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<br>Peak (threshold, up- / downslope)<br>Timetable (combination of time intervals and peak)<br>Manual trigger (supported only with Agilent Instant Pilot G4208A)   |
| Trigger Sources                  | G7115A, 1260 Infinity II DAD<br>G7165A, 1260 Infinity II MWD<br>G7114A, 1260 Infinity II VWD<br>G6120BA, LC/MS Single Quad VL<br>G6130BA, LC/MS Single Quad SL<br>G7121A, 1260 Infinity II FLD<br>G4260B, 1260 Infinity II ELSD<br>G7162A, 1260 Infinity II RID<br>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                                  | <p><b>Discrete fractions: default mode for all vessels.</b><br/>The flow is diverted to waste, while moving from one vessel position to the next vessel position</p> <p><b>Continuous flow: optional, available only when using deep well plates.</b><br/>It is possible to move from one well plate position to the next one without diverting the flow into the well plate to waste</p> <p><b>Needle into location:</b><br/>Needle pushes into the vessel as deep as specified, for the use with capped vials and test tubes and well plates with closing mats</p> <p><b>Droplet setup mode:</b><br/>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.</p> |
| Maximum time to move between neighboring vessels | <p>Movement in x-direction: &lt; 0.15 s<br/>Movement in y-direction: &lt; 0.3 s</p>  |
| Diverter valve                                   | 3/2 valve, with switching time < 100 ms  |
| Maximum pressure                                 | 6 bar at the diverter valve during switching   |

## 7 Fraction Collectors

### Agilent 1260 Infinity Bio-inert Fraction Collector (G5664B)

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

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

**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<br>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.<br>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.<br>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<br>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<br>G7165A, 1260 Infinity II MWD<br>G7114A, 1260 Infinity II VWD<br>G6120BA, LC/MS Single Quad VL<br>G6130BA, LC/MS Single Quad SL<br>G7121A, 1260 Infinity II FLD<br>G4260B, 1260 Infinity II ELSD<br>G7162A, 1260 Infinity II RID |
| Diverter valve                     | 3/2 valve   |

## 7 Fraction Collectors

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

**Table 124** Performance Specifications

| Type                                    | Specification  |
|---|--|
| Maximum pressure                        | 6 bar (switching)  |
| Drawers                                 | Drawer ambient   |
| Fraction Containers                     | <b>Tube Containers, ambient:</b><br>Tube Container for 30 x 150 mm tubes, ambient, 10 tubes<br>Tube Container for 30 x 100 mm tubes, ambient, 10 tubes<br>Tube Container for 25 x 150 mm tubes, ambient, 18 tubes<br>Tube Container for 25 x 100 mm tubes, ambient, 18 tubes<br>Tube Container for 16 x 150 mm tubes, ambient, 36 tubes<br>Tube Container for 16 x 100 mm tubes, ambient, 36 tubes<br>Tube Container for 12 x 150 mm tubes, ambient, 72 tubes<br>Tube Container for 12 x 100 mm tubes, ambient, 72 tubes |
| Minimum tube height                     | 50 mm  |
| Maximum tube height                     | 160 mm   |
| Instrument Control                      | LC & CE Drivers A.02.17 or above<br>Instrument Control Framework (ICF) A.02.04 or above<br>Instant Pilot (G4208A) with firmware B.02.22 or above<br>Lab Advisor B.02.10 or above   |
| Communications                          | Controller-area network (CAN), Local Area Network (LAN)<br>ERI: ready, start, stop and shut-down signals   |
| Maintenance and safety-related features | Extensive diagnostics, error detection and display with Agilent Lab Advisor software<br>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<br>Boiling point ≥56 °C<br>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 <sup>1,2</sup>   |
| Instrument Control                      | LC & CE Drivers A.02.17 or above<br>Instrument Control Framework (ICF) A.02.04 or above<br>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<br>Leak detection, safe leak handling, leak output signal for shutdown of pumping system, and low voltages in major maintenance areas |

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

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

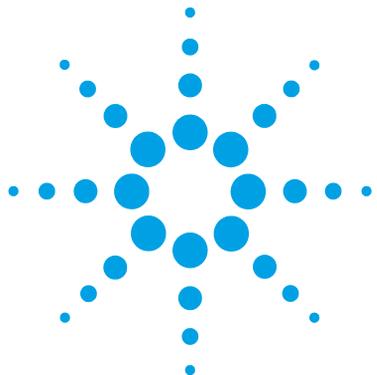
| Type         | Specification  |
|--------------|--|
| GLP features | Early maintenance feedback (EMF) for continuous tracking of instrument usage with user- settable limits and feedback messages.<br>Electronic records of maintenance and errors |
| Housing      | All materials recyclable.  |

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

<sup>2</sup> Solvents with a pH of 1, in particular any halogenated acids, can only be used for the cleaning of each of the ports

## **7 Fraction Collectors**

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



## 8 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<br>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<br>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 Columns                     | 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.<br>Exhaust tube adapter for connection to the laboratory venting system with a minimum flow of 6 L/s or 21.6 m <sup>3</sup> /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.<br>Exhaust tube adapter for connection to the laboratory venting system with a minimum flow of 6 L/s or 21.6 m <sup>3</sup> /h. |
| Housing                                 | All materials recyclable  |

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