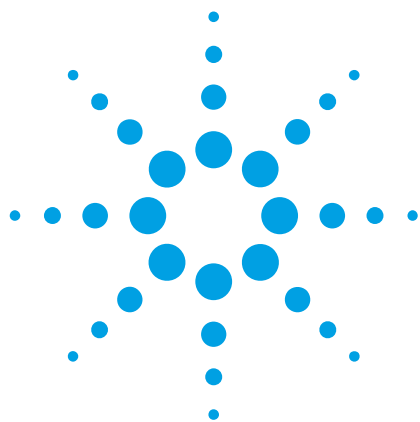




# Agilent 1260 Infinity Quaternary Pump

## Features and Specifications



### A versatile pump now with extended power range

The Agilent 1260 Infinity Quaternary Pump now comes with an extended pressure range of up to 600 bar. This allows the usage of smaller particle size columns and results in higher resolution or faster separations. The design ensures virtually pulse-free and stable solvent flow, with dual floating pistons in series, precisely servo-controlled. The variable stroke volume allows pulse-free solvent delivery and efficient mixing. The Agilent 1260 Infinity Quaternary Pump provides highest flexibility in automated solvent blending and is recommended for a wide range of research and routine applications as well as for method development.

## Features

- A maximum pressure of 600 bar to utilize smaller particle size columns for higher resolution and faster separations.
- This power range allows the usage of longer columns and/or higher viscous solvents as an alternative to acetonitrile.
- A wide flow range up to 10 mL/min perfectly supports standard up to semi-preparative applications. The perfect choice for 4.6 and 3.0 mm id columns.
- Speeds up method development, preparation of mobile phases and flushing the HPLC system by offering convenient access of up to four solvents for isocratic or gradient analysis.
- Easy, fast and secure transfer of methods from HPLC to sub-2-micron columns.
- New degasser technology integrated in pump.
- Application focus: Routine applications in the environmental and food area, as well as method development in the pharmaceutical industry.
- Keeps maintenance to a minimum for lower operation costs by using robust materials such as stainless steel, titanium, gold, ruby, sapphire, ceramics, PEEK and PTFE. Optional active seal wash option for high salt mobile phases to prevent corrosion.



**Agilent Technologies**

## Specifications – Agilent 1260 Infinity Quaternary Pump

| Specifications Agilent 1260 Infinity Quaternary Pump (G1311B) and VL version (G1311C) |                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Hydraulic system</b>                                                               | Dual piston in series pump with servo-controlled variable stroke drive, floating pistons.                                                                                                                                                                                                                                                                                                                    |
| <b>Settable flow range</b>                                                            | Set points 0.001 - 5 mL/min, in 0.001 mL/min increments.                                                                                                                                                                                                                                                                                                                                                     |
| <b>Flow range</b>                                                                     | 0.2 - 10.0 mL/min                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Flow precision</b>                                                                 | ≤ 0.07 % RSD or ≤ 0.02 min SD, whatever is greater; based on retention time at constant room temperature.                                                                                                                                                                                                                                                                                                    |
| <b>Flow accuracy</b>                                                                  | ± 1 % or 10 µL/min whatever is greater; pumping degassed H <sub>2</sub> O at 10 MPa (100 bar).                                                                                                                                                                                                                                                                                                               |
| <b>Pressure operating range</b>                                                       | <p>1260 Infinity Quaternary pump:<br/>           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</p> <p>1260 Infinity Quaternary pump VL:<br/>           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</p> |
| <b>Pressure pulsation</b>                                                             | < 2 % amplitude (typically < 1.3 %) or < 0.3 MPa (3 bar), whatever is greater, at 1 mL/min isopropanol, at all pressures > 1 MPa (10 bar, 147 psi).                                                                                                                                                                                                                                                          |
| <b>Compressibility compensation</b>                                                   | User selectable, based on mobile phase compressibility.                                                                                                                                                                                                                                                                                                                                                      |
| <b>Recommended pH range</b>                                                           | 1.0 - 12.5, solvents with pH < 2.3 should not contain acids which attack stainless steel.                                                                                                                                                                                                                                                                                                                    |
| <b>Gradient formation</b>                                                             | Low pressure quaternary mixing/gradient capability using high-speed proportioning valve.                                                                                                                                                                                                                                                                                                                     |
| <b>Delay volume</b>                                                                   | 600 – 900 µL, dependent on back pressure; measured with water at 1 mL/min (water/cafeine tracer).                                                                                                                                                                                                                                                                                                            |
| <b>Composition range</b>                                                              | 0 - 95 % or 5 - 100 %, user selectable.                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Composition precision</b>                                                          | < 0.2 % RSD or < 0.04 min SD, whatever is greater, at 1 mL/min; based on retention time at constant room temperature.                                                                                                                                                                                                                                                                                        |
| <b>Integrated degassing unit</b>                                                      | Number of channels: 4<br>Internal volume per channel: 1.5 mL<br>Materials in contact with solvent: TFE/PDD Copolymer, FEP, PEEK, PPS                                                                                                                                                                                                                                                                         |
| <b>Control</b>                                                                        | Agilent control software (e.g. ChemStation, EZChrom, OL, MassHunter).                                                                                                                                                                                                                                                                                                                                        |
| <b>Local control</b>                                                                  | Agilent Instant Pilot                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Communications</b>                                                                 | Controller-area network (CAN), RS-232C, APG Remote: ready, start, stop and shut-down signals, LAN optional.                                                                                                                                                                                                                                                                                                  |
| <b>Safety and maintenance</b>                                                         | 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.                                                                                                                                                                                            |
| <b>GLP features</b>                                                                   | 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.                                                                                                                                                          |
| <b>Housing</b>                                                                        | All materials are recyclable.                                                                                                                                                                                                                                                                                                                                                                                |