

333/334 HPLC Pumps

Preparative chromatography delivery system

Capable of fast separations with high-efficiency columns in normal and reversed-phase modes. Choose the 333 Pump for isocratic applications or a 333/334 combination for binary gradient applications.

Time (min)



Features & Benefits

- ► Capable of milligram-to-gram level mass-throughput per injection up to 15 g depending on column size and loading capacity at flow rates up to 200 mL/min.
- ▶ Integrated keypad control for standalone operation.
- ▶ Ability to operate additional pumps in parallel to double the flow rate up to 400 mL/min.
- ▶ Composition gradient with highpressure mixing: 333/334 binary system (third pump for ternary); solvent selection on each pump with optional 4-solvent valve accommodating up to eight solvents.
- ▶ Quiet operation, durable design.
- ► Stackable to conserve bench space.
- ► Control 33X Pumps and an entire HPLC system via TRILUTION® LC Software.





333/334 HPLC Pumps

Applications

- ▶ Preparative scale purification of synthetic and biological compounds
- ▶ Preparative reversed-phase HPLC
- ▶ Normal-phase HPLC

| 333/334 HPLC Pumps | |
|--------------------------|--|
| Composition and Mixing | Increment: 0.1% Dwell volume: 3.7 mL, pressure independent Gradient linearity range: 1 – 98% B for 10 mL/min and higher |
| Flow Rate | Flow rate: 1 – 200 mL/min (3,040 psi) Accuracy: ±1% or 5.3 µL/min Repeatability: RSD <0.5% or 2.7 µL/min Selectible units: L/hr and mL/min Adjustment increment: 0.01 mL/min Minimum adjustment value: 20 µL/min |
| Pump Options | 333: Single-solvent mast pump (w/control panel), 0.2 – 200 mL/min, 21 MPa (3,040 psi) 333/334: 2-solvent pumping system, 2 – 200 mL/min, 21 MPa (3,040 psi) 334: 3-solvent, remote controlled pump, 2 – 200 mL/min, 21 MPa (3,040 psi) |
| Pressure | Nominal range: 0.5 MPa (5 bar, 70 psi) to 21 MPa (210 bar, 3,040 psi) |
| Front Panel (333 Pump) | 25 functional keys, including six soft keys |
| Display Panel (333 Pump) | 40-character, 8-line display, adjustable contrast and screen saver |
| Liquid Contact Materials | 316 L stainless steel, titanium, FEP, PTFE, PCTFE, ETFE, PEEK, UHMWP, ruby and ceramics |
| Manufacturing Standards | Meets applicable safety and EMC certification standards; UL and CE certified |
| Software Control | Trilution® LC Software |
| Power Requirements | Frequency: $50 - 60 \text{Hz}$ Voltage: $90 - 120 \text{or} 220 - 260 \text{V}$; main voltage flucuations not to exceed $\pm 10\%$ of the nomial voltage |
| Weight | 34 kg (75 lb) |
| Dimensions (w x d x h) | 333: 26 x 41 51 cm (10.2 x 16.2 x 20.1 in) 334: 26 x 41 x 39 cm (10.2 x 16.2 x 15.3 in) |

Product #s

- ▶ 38103331 (333, H3 primary solvent, dual-piston, reciprocating master pump)
- ▶ 38103341 (334, H3 secondary solvent, dual-piston, reciprocating remote-controlled pump)



