

# 333/334 HPLC Pumps



## Preparative Chromatography Delivery System

- Capable of fast separations with high-efficiency columns in normal- and reverse-phase modes
- Choose the 333 Master Pump for isocratic applications or a 333/334 combination for binary gradient applications
- Gram-level sample mass-throughput per injection; up to 15 g, depending on column size and loading capacity
- Composition gradient with high-pressure mixing: 333/334 Binary System (third pump for ternary); solvent selection on each pump with optional four-solvent valve (up to 8 solvents)
- Control from 333 Master Pump: flow-rate gradient, four-solvent selection and step gradient (additional valve), composition gradient (one or two additional pumps), sample-injection pump, UV/VIS detector, and electrical input/output contacts with any other associated equipment
- Quiet operation, durable design
- Stackable to conserve bench space
- Control 33X Pumps and an entire HPLC system via UniPoint™ LC System Software

# Technical Specifications

<b>Manufacturing Standards</b>	Meets applicable Safety and EMC certification standards; UL and CE certified
<b>Composition and Mixing</b>	Increment: 0.1% Dwell volume: 3.7 mL, pressure independent Gradient linearity range: 1–98% B for 10 mL/min and higher
<b>Flow Rate</b>	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 Selectable units: L/hr and mL/min Adjustment increment: 0.01 mL/min Minimum adjustable value: 20 µL/min
<b>Front Panel (333 Pump)</b>	25 functional keys, including six soft keys
<b>Display Panel (333 Pump)</b>	40-character, eight-line display, adjustable contrast and screen saver
<b>Liquid Contact Materials</b>	316L stainless steel, titanium, FEP, PTFE, PCTFE, ETFE, PEEK, UHMWPE, ruby, and ceramics
<b>Power Requirements</b>	Frequency: 50–60 Hz Voltage: 90–120 or 220–260V; mains voltage fluctuations not to exceed ±10% of the nominal voltage
<b>Pressure</b>	Nominal range: from 0.5 MPa (5 bar, 70 psi) up to 21 MPa (210 bar, 3,040 psi)
<b>Pump Options</b>	333: single-solvent master pump (w/control panel), 0.2–200 mL/min, 21 MPa (3,040 psi) 333/334: two-solvent pumping system, 2–200 mL/min, 21 MPa (3,040 psi) 334: third-solvent, remote controlled pump (w/o control panel), 2–200 mL/min, 21 MPa (3,040 psi)
<b>Software</b>	Via Gilson UniPoint™ System Software and 506C interface or GSIOC slave bus
<b>Dimensions (w x d x h)</b>	333: 26 x 41 x 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.)
<b>Weight</b>	34 kg (75 lbs.)

For applications or additional information, contact your local Gilson Technical Sales Representative or visit [www.gilson.com](http://www.gilson.com).

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