

333/334 HPLC Pumps

Preparative Chromatography Delivery System

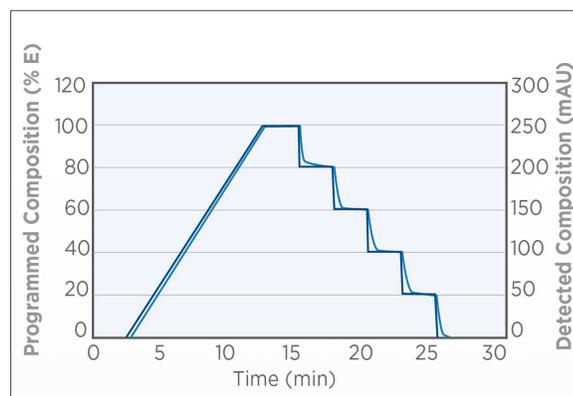
SPEC SHEET | PURIFICATION

333/334 HPLC PUMPS

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

Features and Benefits

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



333/334 HPLC Pumps gradient linearity and accuracy



Applications

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

333/334 HPLC PUMPS

Pump Type	Single Solvent Pump
Hydraulic System	Reciprocating Dual-Piston Pump
Pump Head	H3: Up to 200 mL/min
Flow Rate	Range - Single Pump H3: 0.2-200 mL/min Range (Recommended) - Two Pumps H3: 2-200 mL/min Increment: 0.01 mL/min
Flow Accuracy	± 2%
Flow Precision	≤ 0.7% RSD
Gradient	Solvents: Two Formation: High Pressure Mixing with Static Mixer as Part of Pressure, Purge, and Mixing Module (PPMM) Composition Increment: 0.1%
Gradient Accuracy	± 2%
Gradient Precision	≤ 0.7% RSD
Operating Pressure	H3: 5-210 bar (70-3040 psi)
Compressibility Compensation	Programmable Compensation Range 0-2000 Mbar ⁻¹
Piston Seal Wash	Pump Head Inlet and Outlet Ports to/from a Rinsing Chamber
Priming	Manual with Built-in Purge Valve via Control Software or Syringe
Liquid Contact Materials	316L Stainless Steel, Sapphire, Ceramic, UHMWPE, PTFE, Ruby, Titanium, FEP, PCTFE, ETFE
Control and Communication	Communication: GSIOC (Gilson Serial Input Output Channel) Inputs (333 Pump): Four Digital Inputs; Start/End; Pause/Resume; Wait; Emergency Outputs (333 Pump): Four 30V, 2A Relay Outputs; One 12V, 0.5A DC Power Supply; One Output Channel for Pressure, Flow Rate, or Composition; One Analog Output Channel for Pressure Sensor Reading Software Control: TRILUTION® LC Software
Electrical	Line Voltage: 90-260 V Frequency: 50 or 60 Hz Power Consumption: 600 W
Environmental	Operating Temperature 333 Pump: 10°C to 40°C 334 Pump: 4°C to 40°C Operating Humidity: 15%-80% Operating Altitude: Up to 2000 m (81 kPa or 604 mmHg)
Physical	Dimensions (W x D x H) 333 Pump: 26 x 41 x 50.7 cm (10.2 x 16.2 x 20 in.) 334 Pump: 26 x 41 x 38.7 cm (10.2 x 16.2 x 15.2 in.) Weight 333 Pump: 33.1 kg (73 lbs.) Shipping Weight: 36.3 kg (80 lbs.) 334 Pump: 29 kg (64 lbs.) Shipping Weight 33.1 kg (73 lbs.)

333 Pump

PN: 38103331

H3 primary solvent,
dual-piston, reciprocating
master pump



334 Pump

PN: 38103341

H3 secondary solvent,
dual-piston, reciprocating
remote-controlled pump