

VERITY® 3240 High Pressure Binary Gradient Pump

Designed for Performance and High Throughput Preparative Chromatography



SPEC SHEET | PURIFICATION

HIGH-PRESSURE AND MULTI-SOLVENT PUMP WITH 150 ML HEAD

PURIFY WITH CONFIDENCE

The VERITY® 3240 Pump delivers reproducible and precise elution gradients to achieve repetitive isolations of targeted compounds with Gilson automated purification platforms.

SCALE UP CAPABILITIES

The VERITY 3240 Pump has been designed to effectively work with preparative HPLC columns from 10 mm to 50 mm ID allowing for scaling up purification from milligrams up to tens of grams on the same Gilson automated purification platform.

WORKHORSE IN THE LABORATORY

The large flow rate and pressure range allows the VERITY 3240 Pump to cover most semi-preparative to preparative HPLC purification needs.

SAFE AND EFFICIENT

The VERITY 3240 Pump has an optional leak sensor to secure purifications. The optional inlet solvent selectors support high throughput purification on different column types and allow for quick column regeneration. The rinse pump allows for dynamic rinsing of the pump heads to increase piston seal life when pumping mobile phase containing high concentrations of aqueous salt.



Figure 1
VERITY® 3240 High Pressure Binary Gradient Pump with 150 mL Head and Two Inlets Solvent Selectors

VERITY® 3240 HIGH PRESSURE BINARY GRADIENT PUMP SPECIFICATIONS

VERITY® 3240 High Pressure Binary Gradient Pump	
Specification	Description
Pump Type	High Pressure Binary Gradient Pump
Hydraulic System	Reciprocating Dual Piston Pumps
Flow Rate	<p>Range 0.1-150 mL/min Recommended flow rate ≥ 3 mL/min</p> <p>Increment 0.1 mL/min</p>
Flow Accuracy ¹	$\pm 1\%$ with a minimum pressure of 10 bar
Flow Precision / Repeatability ¹	$\leq 0.3\%$ from 15 to 150 mL/min
Gradient	<p>Solvents Two</p> <p>Formation High Pressure Mixing with Static Mixer as part of Pressure, Purge, and Mixing Module (PPMM)</p> <p>Composition Increment 0.1%</p>
Gradient Accuracy ²	$\pm 1\%$
Gradient Precision / Repeatability ²	$\leq 0.3\%$
Operating Pressure	5-420 bar (70-6090 psi) up to 110 mL/min 5-320 bar (70-4640 psi) from 110 to 150 mL/min
Priming	Manual with built-in prime/purge valve via TRILUTION LC® Software or syringe
Communication	USB Serial Communication
Software Control	PC Control Via USB and TRILUTION LC V4.5 or higher
Electrical	<p>Line Voltage 110-120 V~ (Single-Phase, $\pm 10\%$) (P/N 21144001, 21144002, and 21144003) or 220-240 V~ (Single-Phase, $\pm 10\%$) (P/N 21144004, 21144005, and 21144006)</p> <p>Line Frequency 50 or 60 Hz</p> <p>Power Consumption 220 W max.</p> <p>Overvoltage Category CAT II</p> <p>Electrical Protection Required at customer facility: differential circuit breaker 30 mA General: delayed action fuses 3.15A H 250V~, T-type 24VDC: delayed action fuses with different ratings, L 250V~, T-type</p>

VERITY® 3240 HIGH PRESSURE BINARY GRADIENT PUMP SPECIFICATIONS

VERITY® 3240 High Pressure Binary Gradient Pump	
Specification	Description
Environmental	<p>Indoor Use Only</p> <p>Operating Temperature 5°C to 40°C (41°F to 104°F)</p> <p>Operating Relative Humidity Up to 80% for temperatures up to 31°C, decreasing linearly to 50% at 40°C</p> <p>Operating Altitude Up to 2000 m</p> <p>Temperature Of Liquid Pumped 5°C to 40°C (41°F To 104°F)</p> <p>Pollution Degree Degree 2 (normally only nonconductive pollution occurs, temporary conductivity caused by condensation is to be expected)</p>
Physical	<p>Dimensions (W X D X H): 36 x 45.5 x 24 cm (14.2 x 17.7 x 9.4 in.)</p> <p>Weight: 30 kg (66 lbs.)</p> <p>Shipping Weight: 35 kg (77 lbs.)</p>
Safety Devices	<p>Overpressure Safety</p> <p>Leak Sensor (Optional)</p> <p>Colored Light for Pump Status</p>
Airborne Noise Emission	<p>LAS < 70 dB</p> <p>A frequency weighting, slow time constant, 1 m distance between front of the pump and sound level meter, pump at 150 mL/min – 320 bar – 100%A</p>
Liquid Contact Materials	<p>316 / 316L / 316 Ti Stainless Steel, PEEK, PFA, PTFE, ETFE, PCTFE, Ketron® CA30 PEEK, FFKM (Kalrez®, Perlast®), Inconel®, Ruby, Sapphire, Zirconium Oxide, GFP</p>

¹ Flow specifications determined with a minimum pressure of 10 bar with H₂O degassed at 20°C, on average value from a batch of pumps

² Gradient specifications are determined for 5-95% with a minimum pressure of 50 bar, with water/water spiked with marker, on average value from a batch of pumps

VERITY® 3240 HIGH PRESSURE BINARY GRADIENT PUMP SPECIFICATIONS

VERITY® 3240 Pump Accessories		
Accessory	Part Number	Description
Column Holder	21044037	Holder for up to two LC columns from 4.6 to 30 mm ID — four sets of clips are included to hold 4.6, 10, 21, and 30 mm ID columns
VALVEMATE II Holder	21044038	Holder for a VALVEMATE® II Valve Actuator that can be equipped with any compatible low or high pressure valve to support column switching
Rinse Pump	21044040	Pump for active rinsing of the pistons — this accessory is recommended when pump is used with buffers; the rinse pump is delivered with the required low pressure tubing
Manual Injection Valve Holder	21044039	Holder for a Rheodyne® manual injection valve — injection valve must be ordered separately
Large Solvent Bottle Tray	21044034	Tray for up to nine 1 L, four 2 L, twelve 0.5 L or three 5 L solvent bottles delivered with waste tubing — this tray covers the full top of the pump
Narrow Solvent Bottle Tray	21044035	Tray for up to six 1 L, three 2 L, eight 0.5 L or two 5 L solvent bottles delivered with waste tubing — this tray covers 2/3 of the top of the pump
Tray for VERITY 1741 Detector	21044036	Tray to support installing a VERITY® 1741 UV-VIS Detector on the top of the pump
Leak Sensor	21044004	Sensor to be installed on the pump tray to detect any leakage from the heads
Two Inlets Solvent Selector	21044001	2X2 IN Selector for up to two solvents per pump head
Four Inlets Solvent Selector	21044002	2X4 IN Selector for up to four solvents per pump head