

HIGH-PRESSURE PRECISION METERING PUMPS

Unbeatable Design, Performance, and Value!

DESIGN

- ◆ Ball screw drive for accuracy & longevity
- ◆ Integrated Vindum valves, rupture discs & transducers
- ◆ Ultra-compact modular design
- ◆ Constant-Rate and Constant-Pressure Modes
- ◆ USB & RS232 connectivity
- ◆ Hastelloy[®] wetted parts for corrosive fluids
- ◆ Low-maintenance, easy serviceability

Model	Pressure	Flow Rate	Options
VP-3K	3,500 psi	0.00004 - 97 ml/min	SS or HC, HT
VP-6K	6,500 psi	0.00002 - 54 ml/min	SS or HC, HT
VP-12K	12,000 psi	0.00001 - 29 ml/min	SS or HC, HT
VP-20K	20,000 psi	0.00001 - 12 ml/min	SS or HC
VP-25K	25,000 psi	0.00001 - 12 ml/min	SS or HC



PERFORMANCE

- ◆ Pulse-free, Continuous Flow standard
- ◆ 13 Operating modes: Constant Rate & Pressure
- ◆ 0.1% Pressure Accuracy Transducers
- ◆ High Temperature (HT) models up to 160°C



VALUE

- ◆ FREE VPWare software & LabVIEW VI Libraries
- ◆ Many control options, including Fieldbus/IE
- ◆ Pump Training Included
- ◆ Responsive Support Team

EORLAB Research Equipment

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Get more information or request a quote at: www.vindum.com

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VP PUMP SPECIFICATIONS

VP Pump Model	VP-3K Ambient VP-3K Extended Temp VP-3K High Temp	VP-6K Ambient VP-6K Extended Temp VP-6K High Temp	VP-12K Ambient VP-12K Extended Temp VP-12K High Temp	VP-20K Ambient VP-25K Ambient
Maximum Pressure Rating:	3,500 psi (207 bar)	6,500 psi (413 bar)	12,000 psi (827 bar)	20,000 psi (1,379 bar) 25,000 psi (1,725 bar)
Minimum Flow Rate:	0.00004ml/min	0.00002 ml/min	0.00001 ml/min	0.00001ml/min
Maximum Flow Rate:	97 ml/min (0-2,000 psi)	54 ml/min (0-4,000 psi)	29 ml/min (0-7,500 psi)	12 ml/min (0-12,000 psi)
Flow rate & volume accuracy:	+/- 0.1% of set point	+/- 0.1% of set point	+/- 0.1% of set point	+/- 0.1% of set point
Rate & volume repeatability:	+/-0.05% of set point	+/-0.05% of set point	+/-0.05% of set point	+/-0.05% of set point
Displacement Resolution:	0.0240 µl/step	0.0135 µl/step	0.0074 µl/step	0.0034 µl/step
Single Stroke Volume:	40 ml	20 ml	10 ml	5 ml
Compression Ratio:	5.4 : 1	4.5 : 1	3.7 : 1	3.8 : 1
Pressure Accuracy:	+/- 0.1% of Full Scale	+/- 0.1% of Full Scale	+/- 0.1% of Full Scale	+/- 0.1% of Full Scale
Pressure Resolution:	0.1 psi	0.1 psi	0.1 psi	0.1 psi
Capable of Vacuum Filling:	Yes	Yes	Yes	Yes
Operating Environment	5°C - 40°C (41°F-104°F)	5°C - 40°C (41°F-104°F)	5°C - 40°C (41°F-104°F)	5°C - 40°C (41°F-104°F)
Operating Environment (EXT)	5°C - 40°C (41°F-104°F)	5°C - 40°C (41°F-104°F)	5°C - 40°C (41°F-104°F)	5°C - 40°C (41°F-104°F)
Operating Environment (HT) (portion of pump inside oven)	5°C-160°C (41°F-320°F)	5°C-160°C (41°F-320°F)	5°C-160°C (41°F-320°F)	
Fluid Temp.	To 65°C (150°F)	To 65°C (150°F)	To 65°C (150°F)	To 65°C (150°F)
Fluid Temp (EXT)	To 100°C (212°F)	To 100°C (212°F)	To 100°C (212°F)	
Fluid Temp (HT)	To 160°C (320°F)	To 160°C (320°F)	To 160°C (320°F)	
Pump Dimensions (HxWxL) (excludes cables)	19 x 6 x 9 inches 19 x 6 x 9 inches 26 x 9 x 10 inches	19 x 6 x 9 inches 19 x 6 x 9 inches 26 x 9 x 10 inches	19 x 6 x 9 inches 19 x 6 x 9 inches 26 x 9 x 10 inches	19 x 6 x 9 inches
Fluid Connection Fittings	Autoclave Engineers SW250 Female (1/4" Speed-Bite)	Autoclave Engineers SW250 Female (1/4" Speed-Bite)	Autoclave Engineers W125 Female (1/8" Speed-Bite)	Autoclave Engineers F250C Female (1/4" High Pressure)
Safety Blowout Disk Port Connection (tubing connection to SBD assembly)	Autoclave Engineers W125 Female (1/8" Speed-Bite)	Autoclave Engineers W125 Female (1/8" Speed-Bite)	Autoclave Engineers W125 Female (1/8" Speed-Bite)	3/8" NPT Female
Power Supply Requirement	100-240VAC, 47-63 Hz	100-240VAC, 47-63 Hz	100-240VAC, 47-63 Hz	100-240VAC, 47-63 Hz

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VINDUM ENGINEERING, Manufacturer and worldwide supplier of next generation high-precision pulse-free pumps