



# VariPump™

## VMP Servo Metering & Dispense Pump

NEW

### VMP - Servo



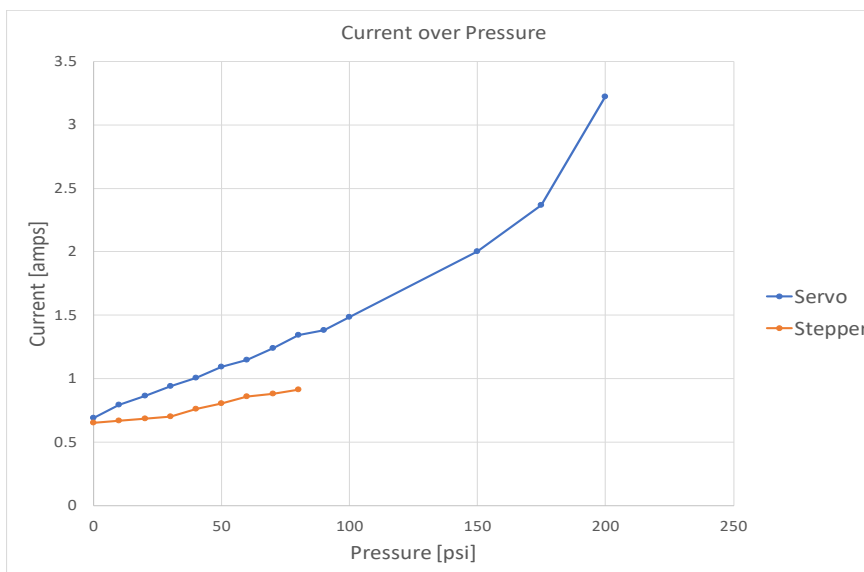
US PATENT #: 7,708,535

### SELECTED FEATURES

- Automatic adjustment mL to  $\mu$ L
- Patented
- Designed, Manufactured & Assembled in the USA
- Ethernet & RS485
- No Valves
- Independently controlled stroke rate, displacement, and fine adjust
- Touch Screen Interface allows you to control up to 32 pumps at once
- Control RPM, forward, reverse, quick-prime, suck-back and more.
- Store up to 100 programs
- Foot switch or remote start

### SERVO BENEFITS

- Absolute position monitor
- Torque limiting and current monitoring
- Higher operating pressure - up to 200 PSI



### AUTOMATE AND EXPAND

The VariPump™ is a patented, programmable, fluid dispense and metering device, complete with integrated industrial Ethernet and serial controls. Dispense volume is automatically adjustable from mL's to  $\mu$ L's. Changing system and fluid dynamics are easily overcome by electronic changes to stroke volume. VariPump's small size allows it to be utilized in close proximity to bulk chemistry, or onboard management of discrete, fluid recipe and process control. VariPump™ uses Zaxis' internal ceramics, designed for millions of maintenance free cycles, and drift free accuracy. Valve-less, ceramic internals provide syringe-like precision and accuracy without the throughput limitations or excessive maintenance costs to wear items, or the costly inaccuracy of tubing and diaphragm pumps. Complete with our Touch Screen Interface (TSi), all fluid control parameters are programmable, utilizing two precision stepper motors for pump volume and speed adjustments. TSi allows for plug and play with up to 32 systems. PLC communication is RS485 selectable, with control up to 128 systems.

## VMP SPECIFICATION/BENEFIT MATRIX

	SPECIFICATION	BENEFIT
VMP Dimensions	3W x 4.4H x 9D in. 7.6 x 11.2 x 22.9 cm	A miniture footprint enables you to maximize your floor space.
VMP Weight	7 lbs	Pump, Drive, and embedded stepper controls all in a small 7lb package.
TSi Dimensions TSi Weight	4W x 2.7H x 6D in. 10.2 x 6.9 x 15.2 cm 12 oz	The VMP comes with an intuitive touch screen interface. Multiple TSi's can be controlled at once using a single touch screen interface.
Accuracy and Precision	+/- 0.5% full scale, 0.5 CV with 0.01 $\mu$ L resolution	
TSi Controls	Graphical touch screen, 22.5 mm NEMA 13 illuminated push buttons and indicators	With up to 13 illuminated button controls accessible through the touch screen interface, you can easily adjust your required specifications.
System Power	4 Amps, 24 VDC 110—240 VAC	Both for domestic and international use, CE
Pressure Range	0—200 psi	With a variable pressure range, we can ensure the VMP satisfies the requirements of your application. The key is flexibility.
Dispense and Flow Range	0—1.28 mL/rev, up to 1000 mL/min continuous	Ideal for low volume dispensing and high flow prime, clean, and purge.
Wetted Path Options	Ceramic (Medical grade alumina-oxide), 316SS, 303/304SS, PVDF, PEEK (customization available)	With flexibility in mind, we can ensure the VMP meets even the most challenging applications including: chemically inert as well as Food and Pharma options.
VMP operational temperature	-20°C — 70 °C, non-condensing	The VMP's stable design is ideal for manufacturing and OEM instrumentation. Ask about our IP and NEMA options.
Operational Types	Continuous metering, Single/Multiple Dispense, Flow Direction, and Suck back	Fluid can be controlled bi-directional, allowing for fast purge or prime, clean in place, and accurate dispensing and metering.
Stored Programs	Link, Loop, Cycle, Delay Up to 100 programs on each pump drive.	Automate your dispensing process thereby minimizing user error while simultaneously increasing efficiency of your manufacturing/dispensing process.
Interface	Ethernet TCP/IP, RS485 1/2 Duplex	Zaxis offers a number of communication options for OEM applications perfectly poised for automation.