



# PumpCatalog

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2021



# Applications

## ■ Medical

- Reagent Kits
- Device Assembly
- Hazardous Materials

## ■ Pharma

- Gel Caps
- Hydrogels
- CBD Oil
- Pre-Filled Doses

## ■ Food & Beverage

- Form-Fill-Seal
- Additives
- Coloring
- Coatings

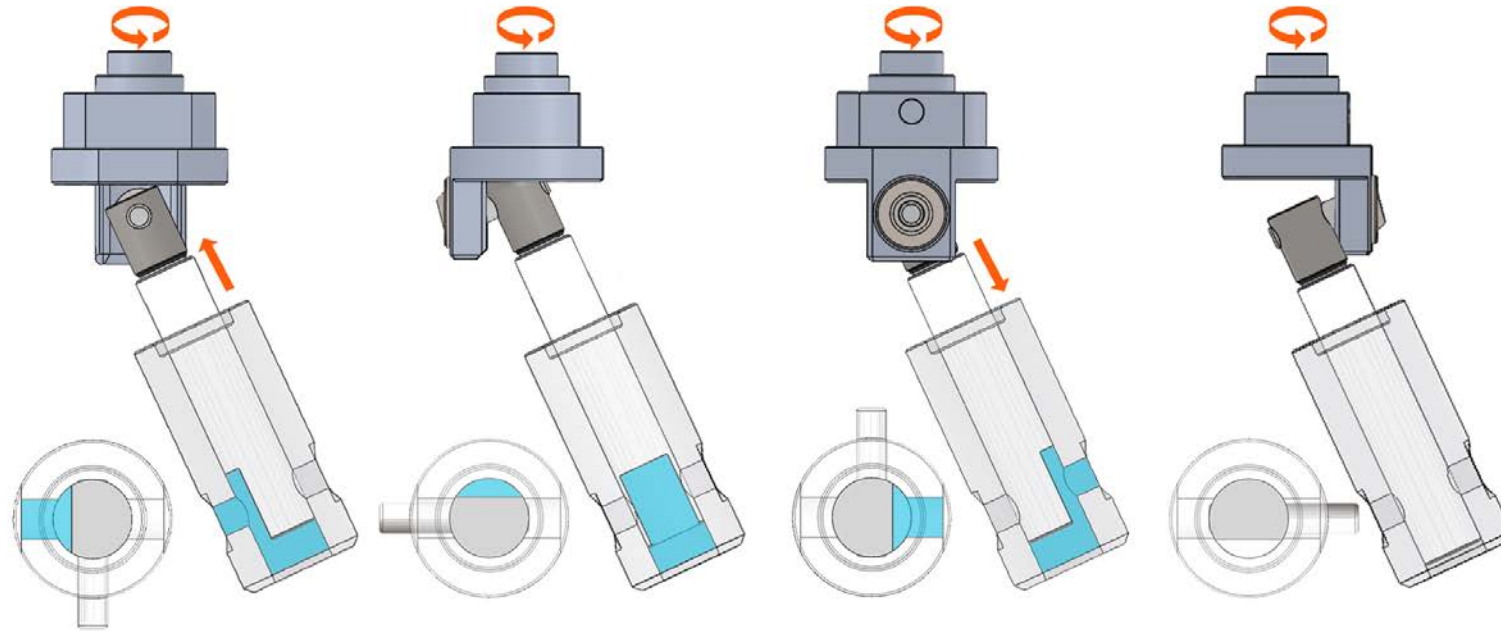
## ■ Automotive

- Coating
- Lubrication
- Conditioning
- Audio Systems

## ■ Other

- Cosmetics
- Water Conditioning
- Robotic Lubrication
- Toy Manufacturing

# Rotating & Reciprocating Pump



## Suction

Fluid fills pump chamber.

## Crossover

Only one port is open at any time, at no time are both ports interconnected.

## Discharge

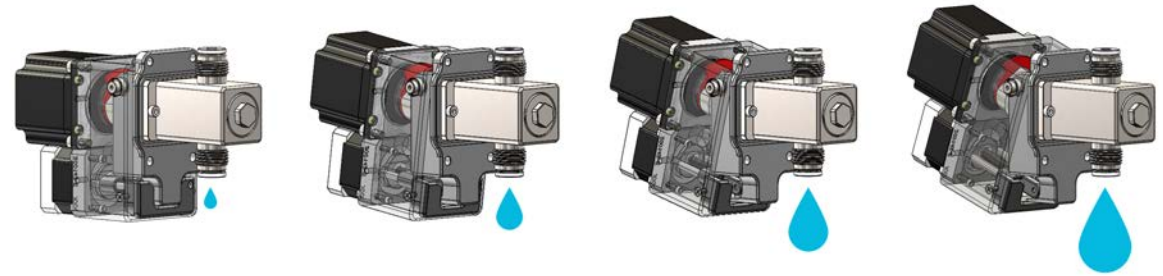
Expel all fluid contained in the pump chamber.

## Crossover

Seal off outlet port, leaving pump chamber empty.

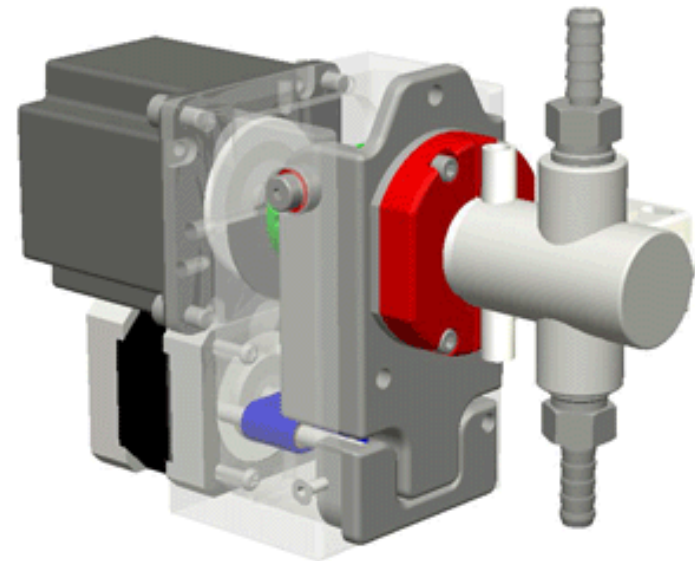
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# eVMP

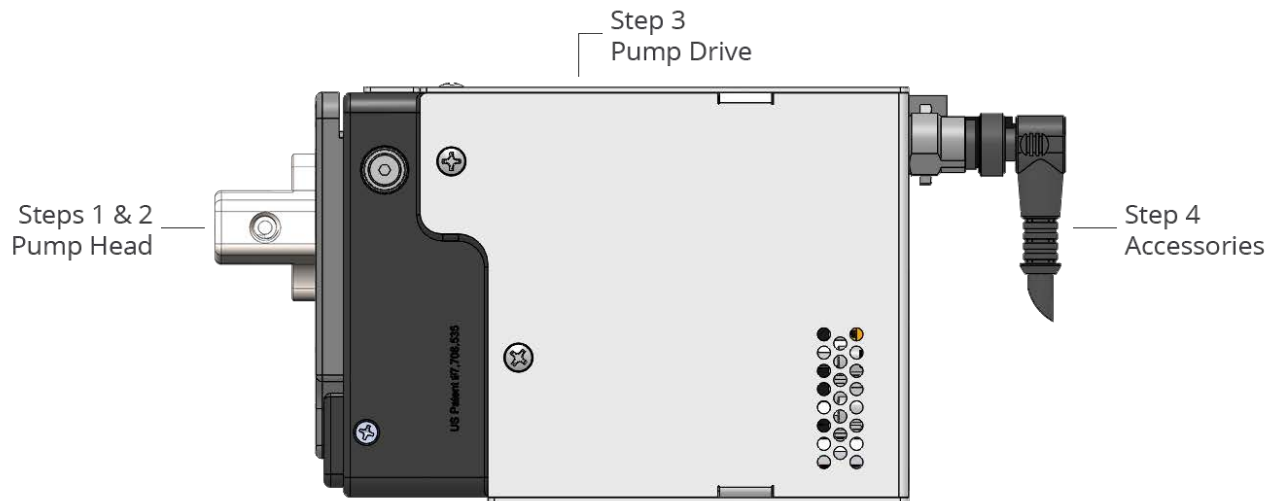


## Electronic Control

The VMP pump is able to electronically control volume. A Precision stepper motor is used for both stroke rate and stroke volume adjustment. Zaxis holds a US Patent, est 2006.



# Selecting a Pump



- Volume
  - Pump Head Size
- Drive
  - Desired Production Speed
- Accessories
  - How to best fit a pump into your automation process.

<sup>§</sup>USB and EtherNet/IP can not exist on the same device.

Head Size	Piston Size	Wetted Path Material	Pump Drive	PSIG	Max mL/rev	Max mL/Min	RPM*
M0	3/16"	CKC	VMP-OEM-M	100	0.05	50	1,000
M1	1/4"	CKC	VMP-OEP-M	100	0.10	100	1,000
V1	1/4"	SAN	VMP-OEM-V	100	0.32	320	1,000
			VMP-OEM-VS	200	0.32	450	1,500
V2	3/8"	SAN	VMP-OEM-V	100	0.72	720	1,000
			VMP-OEM-VS	200	0.72	1,080	1,500
V3	1/2"	SAN	VMP-OEM-V	100	1.28	1,280	1,000
			VMP-OEM-VS	200	1.28	1,920	1,500
V6	1"	SAN	VMP-OEM-VS10	25	10	6,000	600

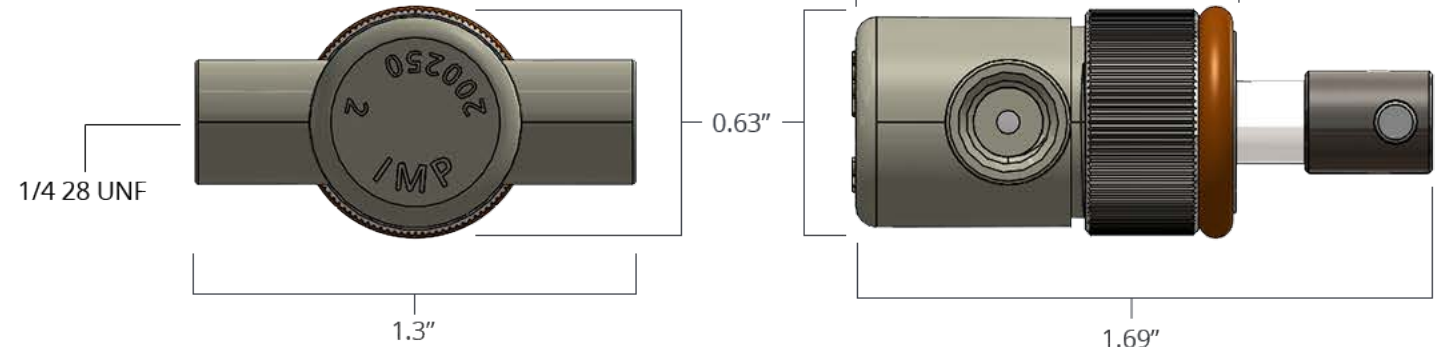
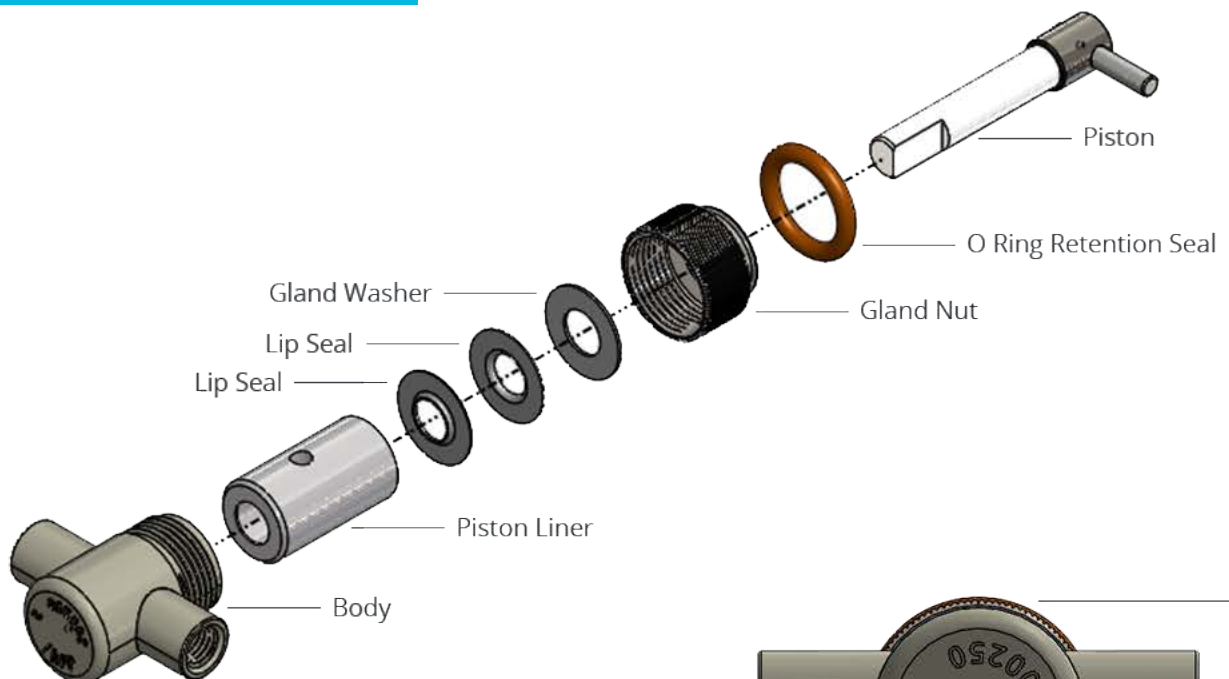
# Microliter

(2.5 $\mu$ l/rev to 100 $\mu$ l/rev)

Designed for neat chemistry, with flow rates under 100mL/min and pressure less than 100 PSIG.

- Ultra-low Volume
  - As low as 2.5 $\mu$ l
- Ceramic Internals
- Valve-less Design
- Electronic Variability
- Positive Displacement





**Selection**

Select piston size closest to your max volume

**3/16" BORE**

Max output of 50mL/min

**1/4" BORE**

Max output of 100mL/min

**Materials**

CKC: Ceramic, Kynar®, Ceramic





## Dimensions

2.8" wide, 4" high,  
5.7" deep



## Max Pressure

100 PSIG



## Rotations Per Minute

1000



## Connectivity

RS485, PLC I/O,  
EtherNet/IP

# Milliliter

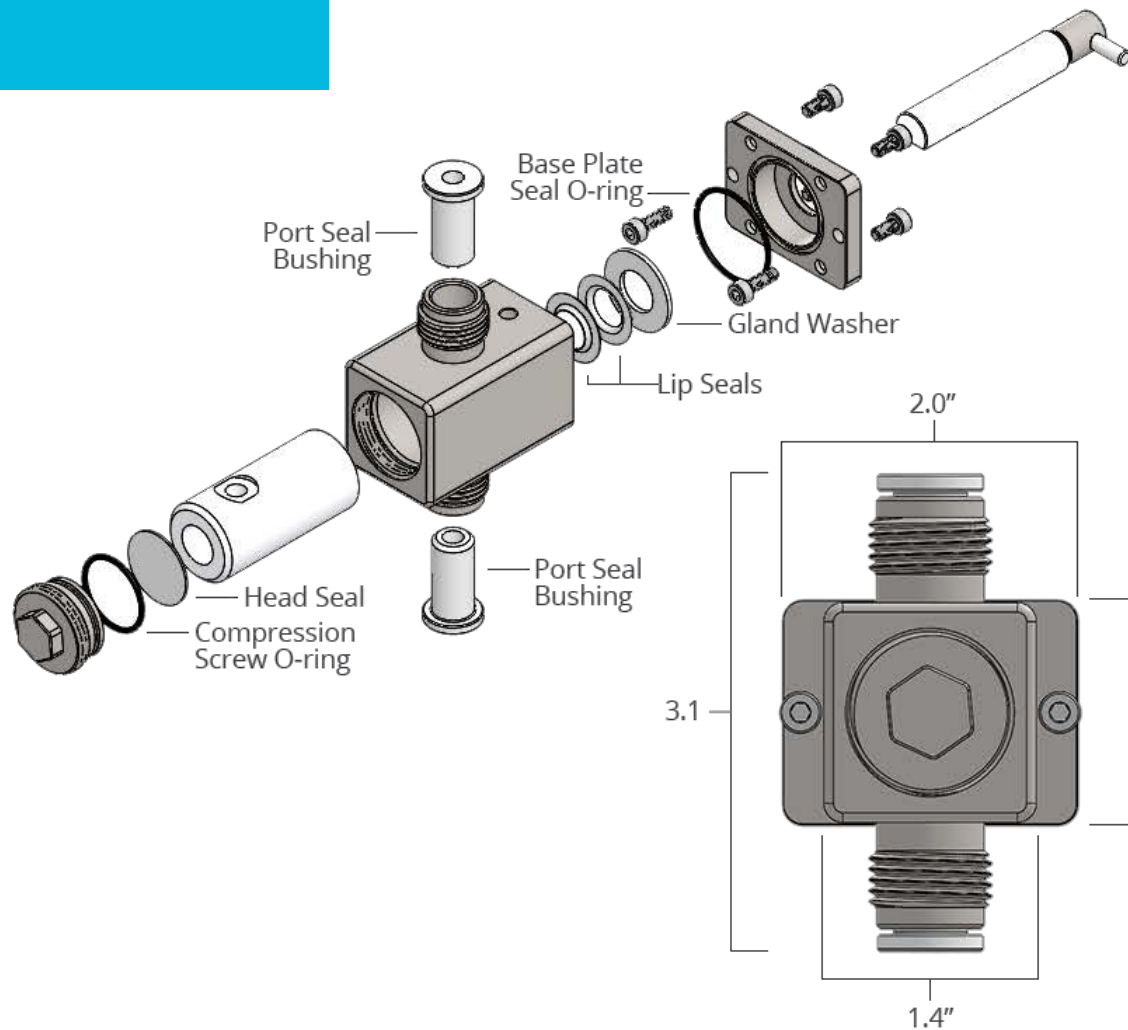
(2.5 $\mu$ l/rev to 100 $\mu$ l/rev)

**VMP-OEM-V** stepper-driven motor, creates a reliable choice for a variety of applications.

- Versatile
- Ceramic Internals
- Valve-less Design
- Electronic Variability
- Positive Displacement

**VMP-OEM-VS** servo drive has 2-times the torque. More power to overcome backpressure or move highly viscous fluids.





■ Isolated Gland  
Optional washport to isolate the pump chamber

■ 1/4" BORE  
Max output of 0.32mL/rev

■ 3/8" BORE  
Max output of 0.72mL/rev

■ 1/2" BORE  
Max output of 1.28mL/rev

■ Materials  
SAN: 316SS



## Dimensions

**VMP-OEM-V:** 2.8"  
wide, 4" high,  
5.7" deep

**VMP-OEM-VS:** 3"  
wide, 4.2" high,  
7.4" deep



## Max Pressure

**VMP-OEM-V:** 100 PSIG  
**VMP-OEM-VS:** 200  
PSIG



## Rotations Per Minute

**VMP-OEM-V:** 1000  
**VMP-OEM-VS:** 1500



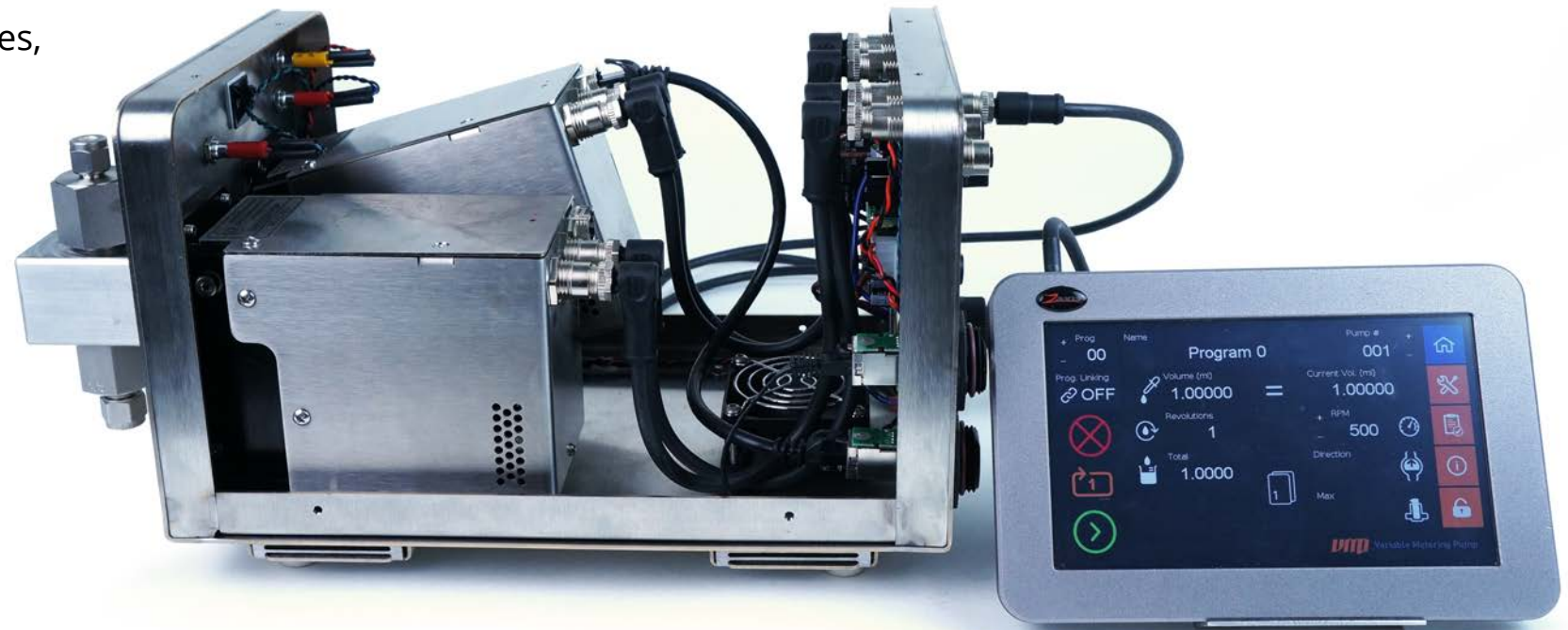
## Connectivity

RS485, PLC I/O,  
EtherNet/IP

# 2-Up Series

Two different metered fluids in one machine. It can double your throughput.

- Can House 2 Micro-Series, 2 V-Series, or 2 VS-Series Pumps
- Dimensions: 7.5" wide, 7" high, 12" deep
- Connectivity: RS485, PLC I/O, EtherNet/IP



**Double**  
*the Throughput*

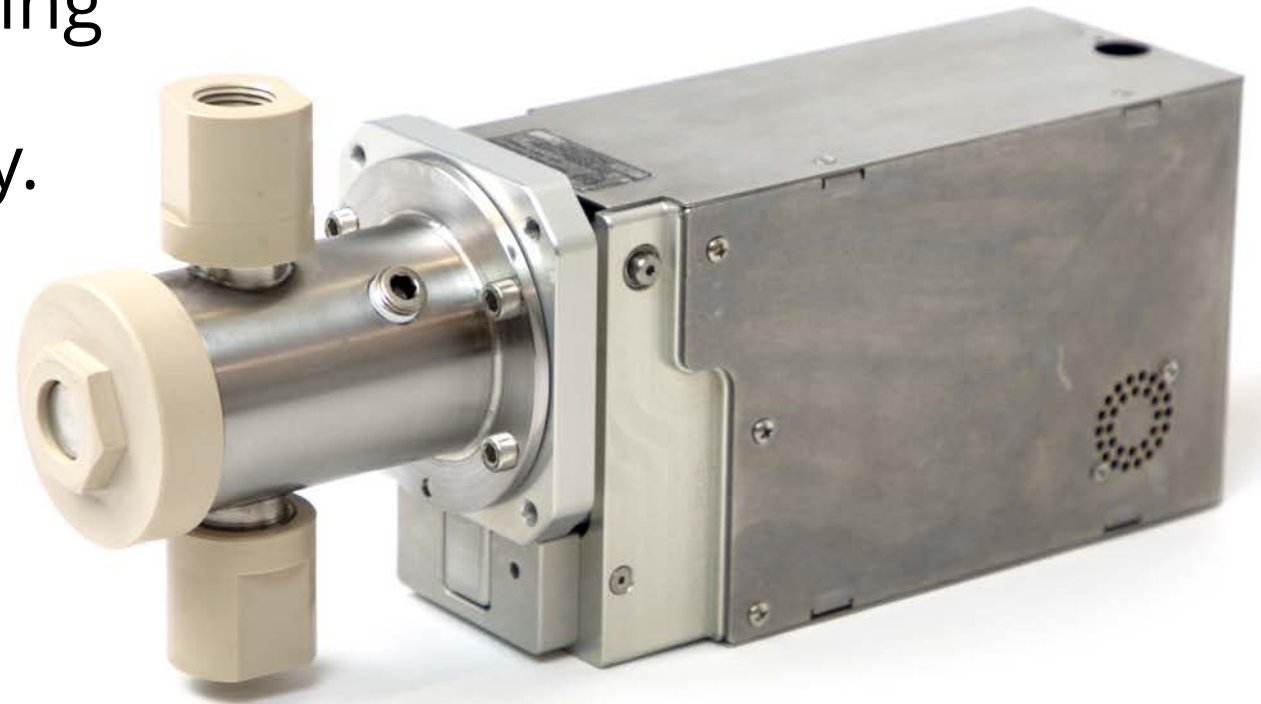
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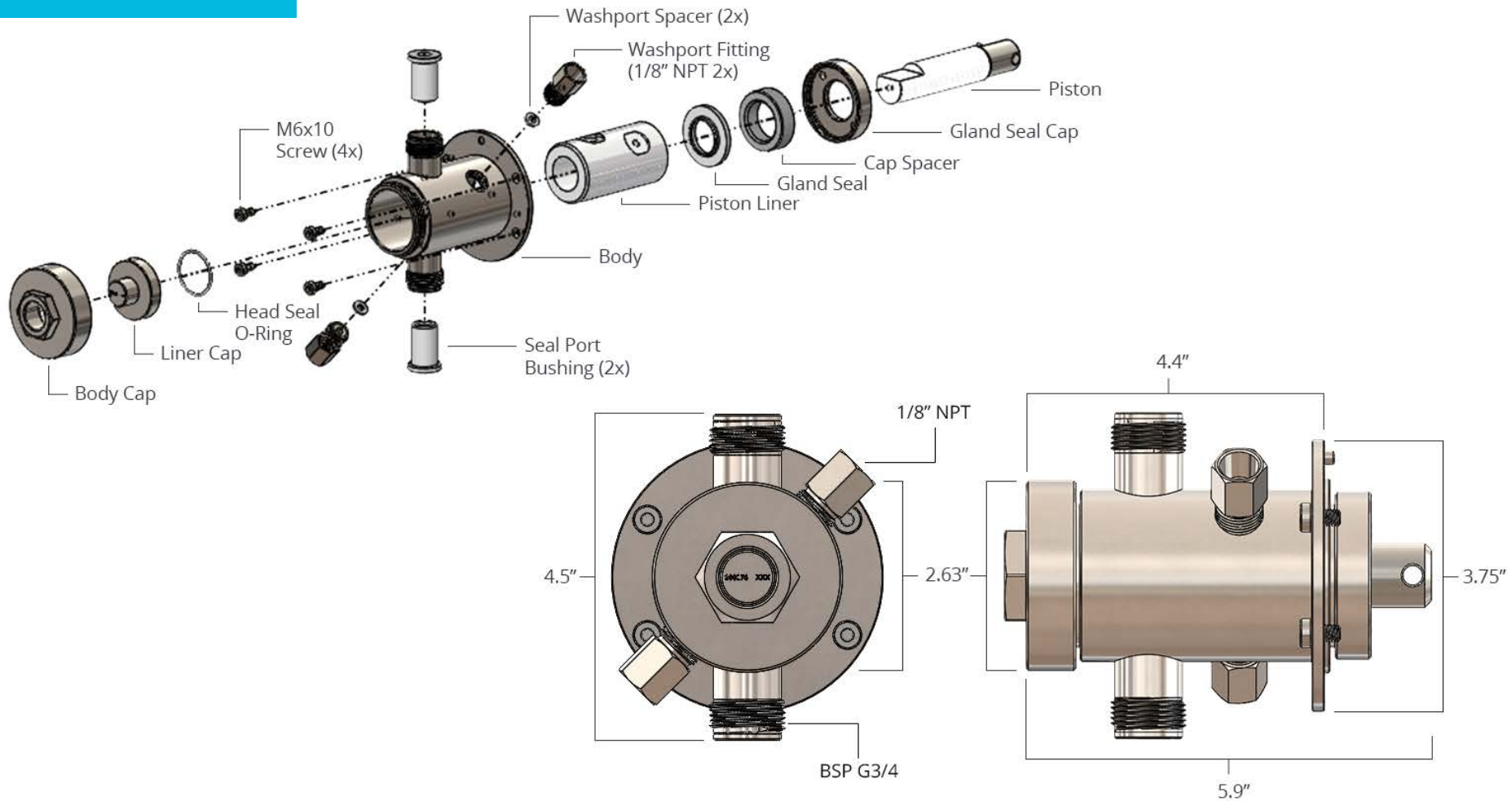
# Milliliter

(0.5mL/rev - 10mL/rev)

Extra-large flow capacity, using one of the most powerful servo motors in the industry.

- Largest Throughput
- Ceramic Internals
- Valve-less Design
- Electronic Variability
- Positive Displacement





■ Isolated Gland  
Optional washport to isolate the pump chamber

■ 1" BORE  
Max output of 10mL/rev

■ Materials  
SAN: 316SS



## Dimensions

3.6" wide, 4.9" high,  
9.3" deep



## Max Pressure

25 PSIG



## Rotations Per Minute

600



## Connectivity

RS485, PLC I/O,  
EtherNet/IP



# Accessories



## ■ TSi

Detachable 7" HD  
Touchscreen interface



## ■ Power

Power Supply kits and  
cables including 12 Pin,  
8 Pin, and 4 Pin connectors.



## ■ Fittings

Stainless steel compression  
fittings in multiple sizes



## Consumables

- Lip Seal
- Lip Seal Insertion Tool
- Gland Washer
- Head Seal
- Port Seal Bushing
- Preventative Maintenance Kits



# Custom Fabrication

## ■ Materials

It is not unusual for Zaxis to work with very specific wetted path requirements, where SAN and CKC components have been substituted with PEEK and even molded solutions for high quantity.

## ■ Fixtures

Your eVmP pump may require that little extra something to complete a benchtop trial or design of experiments, for example Zaxis can design custom nozzles, reservoirs, tubing sets and mounting stands to help complete your project.