
Ceramic shear valve

Long life

Precision drive and control



The ultra-hard ceramic piston, rotor and stator surfaces, manufactured by Sapphire Engineering, mean significantly less wear, less downtime and reduced cost of ownership. Lasts 5 – 20 times longer than typical glass barrel syringes with Teflon® plug valves

Direct plug in replacement for Cattro™ XP-3000 and Hamilton PSD4 Syringe Pumps

Analytical Sciences can handle software and hardware OEM projects where manufacturers wish to incorporate the syringe pump

Syringe Pumps

Precision, robustness

We offer a self-contained, stepper-motor driven pump and valve module. This product works in various liquid handling applications such as automated pipetting, processing and dispensing. The module includes sensors for step and position monitoring along with an A/D converter to support clot detection.

The SAP 500 can be operated as a stand-alone module or in automated instruments controlled by an external computer or microprocessor. Each pump has an RS-232, RS-485 and CANBUS connection for communication with a controlling device using data terminal and OEM protocols. (RS-232 and RS-485 are Cavro™ compatible.)

- Programmable ramps, cut-offs, backlash compensation, plunger speeds, delays and loops
- Select piston / syringe speed
- Absolute and relative positioning of pistons / syringes
- Start and terminate piston / syringe movement
- Check pump with self-test
- Selectively work with up to 15 modules
- Other devices can be started and stopped with two integral TTL inputs while three TTL outputs enable you to control external devices.
- Meets the CE EMC Class B Specifications.

Available sizes	50µl, 100µl, 250µl, 500µl, 1000µl, 2.5ml, 5.0ml
Available valve configurations	3-way “Y” valve, 3-way “T” valve, 3-port distribution valve, 4-way valve
Wetted Parts	HIP’d TZP Ceramic, Ultem, UHMWPE and Viton
Piston Drive	DC Stepper Motor with step control sensor, self lubricating, 30mm stroke
Motor resolution	3,000 steps; standard resolution
Dispense speed	1.1 to 600 seconds (full stroke)
Valve Drive	DC Stepper motor; optical encoder
Valve Drive Speed	250ms between adjacent ports
Valve ports	¼-28 ports
Power	24 VDC ± 5%; 1.2A
Dimensions	Height: 127mm Width: 45mm Depth: 114mm Weight: 1.1Kg
Operating range	17° to 37°c 10-85% RH
Storage	5° to 45°c 10-95% RH
Baud Rate	9,600 to 38,400 (RS232, 485)
I/O	3 outputs, 2 inputs. TTL

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