

Sapphire Engineering™ PVM

Pump & Valve Module

The compact digital Pump and Valve Module (PVM) is a self contained, stepper motor dispensing module designed for various liquid handling applications such as automated pipetting, diluting and dispensing. This unit is 100 percent compatible with the Cavo™ XP 3000, Hamilton PSD/4 and TriContinent C3000 syringe pumps, but uses a more robust, direct-drive leadscrew technology – not belts and pulleys.

- ▶ Pump size and mounting identical to industry-standard 30 mm syringe pumps
- ▶ Multiple valve configurations available
- ▶ Piston resolution: 3000 full steps or 24,000 microsteps per full stroke
- ▶ Valve configurations: three-way "Y" valve, three-way "T" valve, three-port distribution valve, four-way valve

Testing and Certification

We test and document each pump's performance before shipment. The PVM meets the CE EMC Class B Specifications.

Easily Integrated Solutions

Used with either our Integrated Piston & Valve (IPV), or with a standard 30 mm syringe and a stand-alone ceramic valve, the PVM includes sensors for step and position monitoring along with an analog-to-digital converter to support blockage detection.



Control Options

The PVM can be operated as a stand-alone module or in automated instruments controlled by an external computer or microprocessor. Each pump communicates with a controlling device via RS-232, RS-485, or CANBUS using either data terminal or OEM protocols. External devices may be controlled via integral TTL inputs (two) and TTL outputs (three).



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