Medical and Biotech Developments, Inc.

Examples of Applications Using Switcher Systems

• Unattended solution switching
Avoid vibrations from switching valves by hand. The ValveBank® or ValveLink8.2® controller handles all solution delivery so that you can watch results – not switch stopcocks. Many special features are included for easy perfusion control. Low noise circuitry.

• Increased reproducibility
Valve switching is accurate to 0.01 seconds with programs up to 99 hours long under microprocessor control. Consistent liquid delivery means better data.

• Pinch & Teflon™ and Lee™ Valves
Choose between speed, cost, and ease of cleaning. Several options are available for fittings and reservoirs.

• Manual and external valve control
Flexible design. Easy cleaning and calibration. Slave mode valve operation controlled by your computer, pClamp, Pulse, Acquire, LabView, AxoGraph, etc.

Valve Choices:
• Pinch Valves for Reduced Maintenance
Easiest valves to clean and switch tubing. Liquids never touch the valves. Switches in 30-50 ms. 1/32” i.d. silicone tube passes through, and is pinched closed by solenoid activation. All AutoMate Scientific valves include an individual indicator LED. Our new aluminum enclosure keeps the valves dry from spills and offers luer lock ports for syringe reservoirs.

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• Teflon™ Valves for Fast Switching

Required for fast kinetics applications. Excellent chemical and corrosion resistance. Non-stick surface resists particles and chemical deposits. Switches in less than 10 ms, with 20 µl of dead volume from port to port. Threaded female inlet and outlet ports accept Hose Barb, Luer Lock and Nut & Ferrule fittings.

• Lee™ Mini Valves for Extremely Fast Switching and Minimal Pressure Pulse

Offers tiny valves from the Lee Company. Enclosed in our new aluminum box with luer locks for syringe reservoirs, these valves can open and close in 1.5-4 ms with a ValveLink8.2 controller.

Systems Include:

Controller, valves, 60 ml syringe reservoirs and drippers (or 35 ml syringes in Luer-lock systems), 2-way stopcocks, reservoir bracket, ringstand, 1/16" i.d. tubing and four-, eight- or sixteen-into-one micro-manifold with built-in flow control. 5, 15, 35, 60 or 140 ml syringe reservoirs available. .

The Economy Pinch Valve System includes ValveLink8 controller, four pinch valves, 35 ml syringes, 2-way stopcocks, reservoir bracket, ringstand, 1/16” i.d. tubing and four-into-one micro-manifold with built-in flow control.

Computer Interfacing:

Systems can be controlled by a computer using data acquisition hardware (i.e., DigiData, ITC-16, or National Instruments board) and software (i.e., pCLAMP, Pulse, or LabView). Both ValveBanks and ValveLinks accept real-time TTL inputs to control valves. Most acquisition software already being used in your experiments can talk to our controllers. Offers an optional program called EasyCode® for the Macintosh and PC/ Windows to program ValveBanks (not ValveLinks). This software is used before an experiment – valve sequences are downloaded into the memory of the ValveBank where they are run.

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