DCI VPA Syringe Pumps

A VPA offers more.

- More Affordable
- More Integratable
- More User-Friendly
- More Pressure and Flowrate Options
- More than Just a Pump

DCI
TEST SYSTEMS

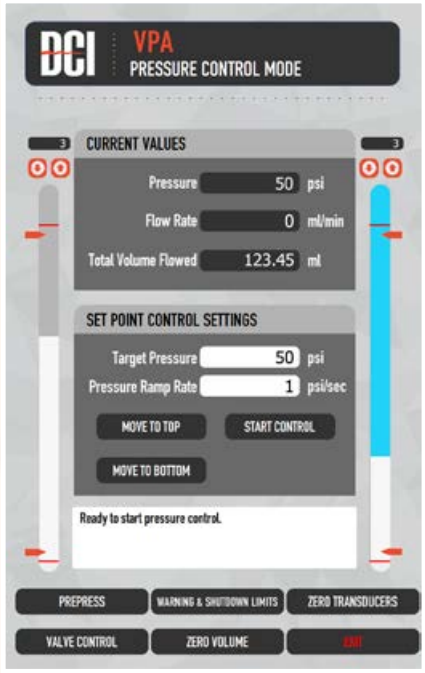
DCI VPA Syringe Pumps

More User-Friendly

The large 10 inch touchscreen interface makes the pump display easy to see and use. Each pump is equipped with a local user interface mounted directly to the pump with intuitive software making use of the pump effortless. With just a few simple steps, the VPA can be set to operate in flow control mode or pressure control mode.

More Precise

The control algorithm for both pressure and flow modes have been fine-tuned to provide superior control for the best pressure and flow control available. Users with the most difficult control applications select the DCI VPA syringe pump for the precision and reliability of control.

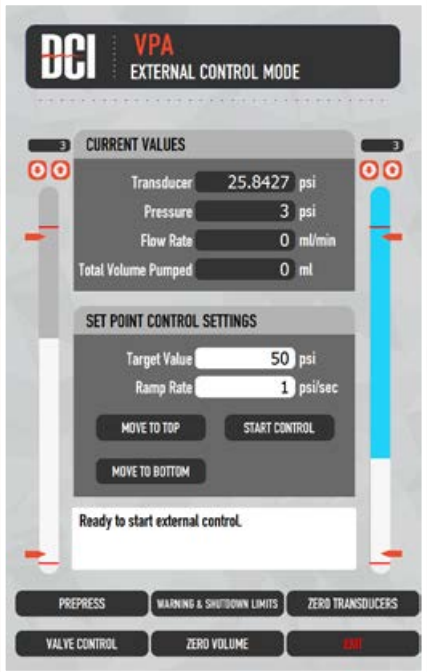


More Integratable

Seldom is the VPA the only piece of equipment in an experimental setup. The VPA Software makes controlling the pump remotely easy. Connect to the pump from any computer attached to the same network. The local operator interface panel is replicated in the software emulator and allows the VPA to be controlled from a PC via LAN connection. A LabView API is available to allow advanced users to readily integrate VPA control in custom software.

More Pressure and Flowrate Options

DCI offers two series of VPA's that cover a wide range of flow rate, pressure, and cylinder volume options. In addition, DCI can customize a pump to meet your exact requirements



More Affordable

To find out how affordable the VPA line is, contact DCI for a quotation.

More than just a pump

The same features that make a VPA (Volume-Pressure-Actuator) ideal for use as a pump also make it ideal for many other applications.

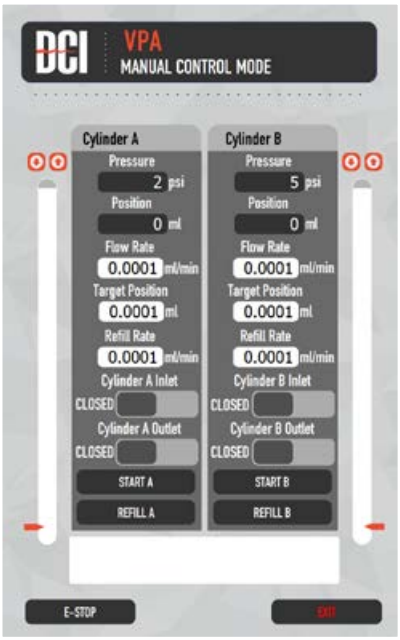
- Servo-motor/encoder, precisely controlled with state-of-the-art digital electronics, provides the smoothest possible drive performance with nano-liter volume resolution.
- High-speed positive feedback control loops that allow for precisely controlled constant flow rate, or accurate pressure control.
- Air-operated, zero-volume valves to allow pulse-free switching between cylinders.
- Large ports in valves and cylinder connections allow pressure control to be unaffected by small particles in the fluid.

Some of the applications for which the VPA is ideally suited include:

- Permeability or relative permeability experiments where pulse-free, precisely controlled constant flow rate is required.
- Permeability or relative permeability experiments where a constant pressure drop across a sample is required.
- Drainage-Imbibition tests, where the VPA can act as a receiver to control back pressure in one part of the test, and then subsequently as a pump to push fluid back through a sample.
- Pore-volume compressibility tests where a precise measurement of pore fluid volume expressed from (or injected into) a sample is required while maintaining constant pressure.
- Sample desaturation measurements where the precise volume of fluid expressed from a sample is required. The VPA allows these values to be read automatically so that saturation values can be calculated in real time.
- Flow experiments where precise back pressure must be maintained even with some solids in the fluid that would plug a conventional back-pressure regulator.
- Any application where constant pressure must be generated and controlled.

In short, if your application requires:

- Precisely controlled, pulseless flow
- Exact pressure control in either dynamic flow or static pressure conditions
- Accurate volume measurement to nano-liter resolution either in volume pumped or in volume received
- High pressure/low flow rate or high pressure/high flow rate capability
- Ability to handle some solids in the flow stream
- Ability to handle corrosive fluids



The VPA is right for your application.

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Specifications

Model Number	Maximum Pressure	Minimum Flow Rate	Maximum Flow Rate	Cylinder Volume	Volume Resolution	Wetted Parts
Series-Cylinder(s)-Pressure-Volume-Flow-Material	psi(bar)	nl/min	ml/min	ml	nl	Material
Series 16						
16(S/D*)-0.7-270-400-(SS/HC**)	700 (48)	150	400	270	2.5	SS or HC
16(S/D*)-2.5-80-400-(SS/HC**)	2,500 (170)	50	400	80	0.74	SS or HC
16(S/D*)-5-40-200-(SS/HC**)	5,000 (345)	20	200	40	0.37	SS or HC
16(S/D*)-10-20-100-(SS/HC**)	10,000 (689)	10	100	20	0.18	SS or HC
16(S/D*)-15-15-70-(SS/HC**)	15,000 (1034)	8.2	70	15	0.14	SS or HC
16(S/D*)-20-10-50-(SS/HC**)	20,000 (1379)	5	50	10	0.09	SS or HC
Series 32						
32(S/D*)-3.5-550-550-(SS/HC**)	3,500 (238)	330	550	550	5.44	SS or HC
32(S/D*)-5-375-400-(SS/HC**)	5,000 (345)	230	400	375	3.77	SS or HC
32(S/D*)-10-200-195-(SS/HC**)	10,000 (689)	100	195	200	1.96	SS or HC
32(S/D*)-15-120-120-(SS/HC**)	15,000 (1,034)	70	120	120	1.18	SS or HC
32(S/D*)-20-90-70-(SS/HC**)	20,000 (1,379)	43	70	90	0.73	SS or HC

*Available in a (S) Single or (D) Dual Cylinder configuration

**Available in (SS) Stainless Steel or (HC) Hastelloy C 276 construction

Dimensions D x W x H (in)		
Series 16	10.5 x 10.5 x 41	Integral Controller
Series 32	13.5 x 11.5 x 61	Integral Controller

Utilities

- Power: 110 VAC 60 Hz or 220 VAC 50 Hertz – Specify
- Air (Dual Cylinder Models): 80 – 100 psi (clean and dry)

DCI TEST SYSTEMS

DCI Corporation
982 North 675 West
North Salt Lake, UT 84054

Phone: 801-298-4899
Fax: 801-298-4875
sales@dcitestsystems.com
www.dcitestsystems.com