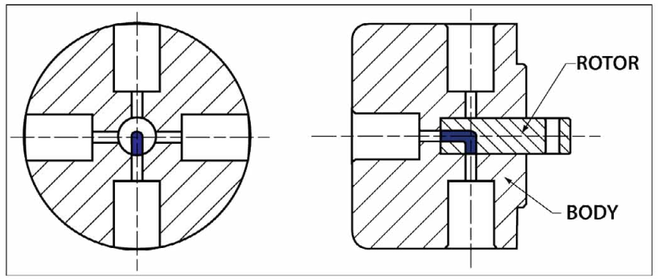
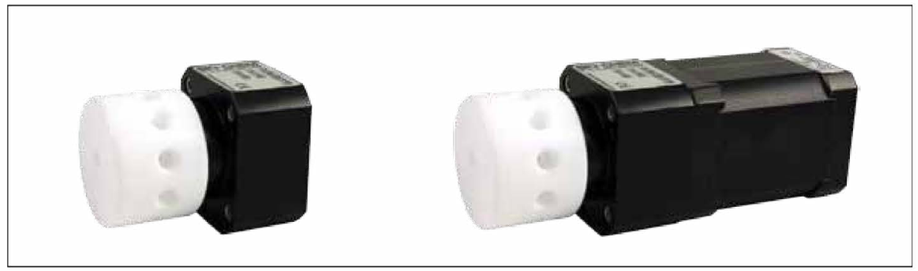
CONSTRUCTION



The inert flow path within the valve is achieved by aligning orifices in a CTFE rotor with orifices in the PTFE body. The valve's rotor and body employ a high-precision press-fit construction which ensures a tightly sealing interface. Motion is provided by a optional stepper motor. An optoelectronic position sensor inside the valve provides the position of the rotor to a control circuit.

AVAILABLE DRIVE CONFIGURATIONS

Bio-Chem Fluidics Electric Rotary Valves are available in one of two drive configurations, regardless of fluidic configuration. The drive configurations are: Valve head only (designated as series RV-EN) and Valve with motor (RV-SN).



Same valve (10-way selection valve) in both styles, RV-EN (Valve head only) & RV-SN (Valve with motor)

Polymers referenced in the brochure:
CTFE = polychlorotrifluoroethylene
PTFE = polytetrafluoroethylene

BIO·CHEM FLUIDICS
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BIO·CHEM FLUIDICS Electric Rotary Valves

The Bio-Chem Fluidics Electric Rotary Valve is a stepper motor operated valve used for sample collection, loop injection, or flow path selection applications. It is designed to provide an inert flow path for aggressive and/or reactive fluids. A CTFE rotor mates with the PTFE valve body. The optional direct-drive stepper motor drives the rotor so as to align rotor and stator orifices and complete the flow path.

8-way Electric Rotary Valve Series RV-SN2 (selection valve with motor).

10-way Electric Rotary Valve Series RV-SN2 (selection valve with motor).

12-way Electric Rotary Valve Series RV-SN2 (selection valve with motor).

Also available 4-way and 6-way valves (not shown here)

VALVE CHARACTERISTICS AND BENEFITS

- **A truly chemically resistant, inert valve**
  Benefit from the chemical resistance that only TFE polymers can offer. Using a CTFE Rotor and PTFE Body these valves use **no metal parts in the fluid path**. If chemical resistance or inert sample control is important to you, these valves offer exceptional performance.
- **Compact geometry**
  The valves have been designed to provide multiple fluid path selection options within a small footprint. The 8, 10 & 12 port valves are only slightly larger than their 4 & 6 port counterparts.
- **Simple yet precise control**
  Each valve is supplied with an optoelectronic position sensor allowing for referencing the "home" and port positions. The stepper motor provides the precision to ensure that the correct path is selected. (Motor is optional, as is an integrated control board for prototyping).
- **Optimize flow rates and minimize internal volumes**
  Our Rotary Valves minimize dead volume by offering clean, easily flushed flow paths. The flow paths are optimized to achieve the **lowest possible internal volumes**. Valves are available in a range of orifice sizes from 0.032" (0.8mm) to 0.096" (2.4mm) - 0.125" (3.2mm) available upon special request.
- **Choice of flow paths**
  Choose between Selection / Distribution (where the valve has a central common port that mates with one of the available flow paths) or Switching / Loop injection (valve is configured with pairs of adjacent ports) configurations.
- **OEM focused**
  The flow configurations match commonly found applications and the use of standard 1/4"-28 UNF fluid port connections with stainless steel threaded inserts and NEMA 17 stepper motors allow easy integration into sophisticated systems.

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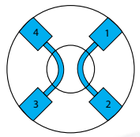
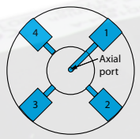
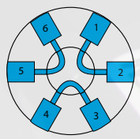
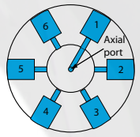
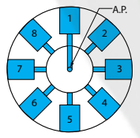
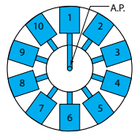
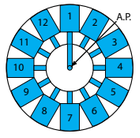
Flow Configurations		Part numbers							
		RV-EN Series Electric Rotary Valve (valve head only) Orifice diameter (ins)				RV-SN Series Electric Rotary Valve (valve with motor) Orifice diameter (ins)			
		0.032	0.052	0.096	0.125*	0.032	0.052	0.096	0.125*
	Four Port Switching	RV-EN0-J4C-PTHB	RV-EN0-J4C-PTNB	RV-EN0-J4C-PTTB	RV-EN0-J4C-PTVB*	RV-SN2-J4C-PTHB	RV-SN2-J4C-PTNB	RV-SN2-J4C-PTTB	RV-SN2-J4C-PTVB*
	Four-way Selection	RV-EN0-S4C-PTHB	RV-EN0-S4C-PTNB	RV-EN0-S4C-PTTB	RV-EN0-S4C-PTVB*	RV-SN2-S4C-PTHB	RV-SN2-S4C-PTNB	RV-SN2-S4C-PTTB	RV-SN2-S4C-PTVB*
	Six Port Switching	RV-EN0-J6B-PTHB	RV-EN0-J6B-PTNB	RV-EN0-J6B-PTTB		RV-SN2-J6B-PTHB	RV-SN2-J6B-PTNB	RV-SN2-J6B-PTTB	
	Six-way Selection	RV-EN0-S6B-PTHB	RV-EN0-S6B-PTNB	RV-EN0-S6B-PTTB	RV-EN0-S6B-PTVB*	RV-SN2-S6B-PTHB	RV-SN2-S6B-PTNB	RV-SN2-S6B-PTTB	RV-SN2-S6B-PTVB*
	Eight-way Selection	RV-EN0-S8B-PTHB	RV-EN0-S8B-PTNB	RV-EN0-S8B-PTTB		RV-SN2-S8B-PTHB	RV-SN2-S8B-PTNB	RV-SN2-S8B-PTTB	
	Ten-way Selection	RV-EN0-SAB-PTHB	RV-EN0-SAB-PTNB			RV-SN2-SAB-PTHB	RV-SN2-SAB-PTNB		
	Twelve-way Selection	RV-EN0-SCB-PTHB	RV-EN0-SCB-PTNB			RV-SN2-SCB-PTHB	RV-SN2-SCB-PTNB		

* 0.125" orifice valves are available as OEM special order items only (Please contact factory for details)
RV-EN and RV-SN refer to the two available styles. See page 4 for more details.
All valves provided with 1/4-28 flat bottom ports with stainless steel threaded inserts.

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