

# Valve selection

## QUICK OVERVIEW OF OUR LINE-UP

Following is an overview of the many types of valves available from VICI.

### Valco Injectors and Valves for GC

*pages 98-101, 104-113*

For over 40 years Valco valves have been the industry standard in gas chromatography. Models are available with 3, 4, 6, 8, 10, 12, or 14 ports, with 1/32", 1/16", 1/8", or 1/4" fittings, and with bore sizes from 0.25 mm (.010") to 4 mm (.156"). In addition, Valco valves offer the widest range of rotor and body materials of any valve available, with alloys and polymer composites capable of meeting virtually any system requirement. All models can be ordered in manual, pneumatic, or electrically actuated versions.



### Valco Injectors and Valves for HPLC

*pages 101, 114-118*

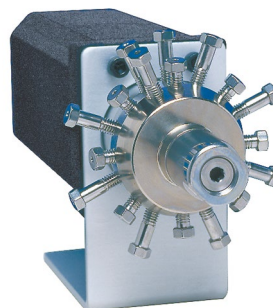
A pioneer and industry leader in products for HPLC, Valco continues to offer the market's most diverse line in terms of number of ports, fitting sizes, materials of construction, and actuation. Versions with 3, 4, 6, 8, 10, 12 port are offered, with 1/32", 1/16", or 1/8" fittings. As with the GC line, Valco valves offer the widest range of rotor and body materials of any valves available, with alloys and polymer composites capable of meeting virtually any system requirement. All models can be ordered in manual, pneumatic, or electrically actuated versions.



### Valco Selectors

*pages 102-103, 124-135*

One inherent benefit of the Valco conical rotary design is that it allows multiple planes of ports, facilitating unique multiposition configurations useful for stream selection, column selection, or trapping. Versions are available for GC and HPLC applications, with 1/16", 1/8", or 1/4" fittings, with bore sizes from 0.40 to 4.0 mm (.016" to .156"). Selectors are available for up to 16 streams (34 ports), all with Valco's trademark flexibility in terms of actuation and material options.



### Diaphragm Valves for GC

*pages 142-145*

A diaphragm valve consists of plungers and ports arranged in a circular pattern, with the plungers controlled by the reciprocating action of two air actuated pistons. Extremely long lifetime (typically 1,000,000 cycles at ambient temperature; approximately 500,000 cycles at elevated temperatures), very short actuation time (10 milliseconds), minimum internal dead volume, and reliability have made this type of valve very successful in process gas chromatography for both sample injection and column switching. Our miniature version features 1/16" or 1/32" zero dead volume fittings, and is the first to offer a 10 port configuration in addition to the 6 port and internal sample 4 port models.





### Cheminert UHPLC Injectors

pages 146-148, 154-157

Many current analytical techniques require systems capable of pressures as high as 20,000 psi. UHPLC injectors from Cheminert feature a proprietary rotor material and stator coating that permit these pressures. Injectors are available in a variety of configurations, including models with a vertical injection port.

Nanovolume® UHPLC injectors feature a uniform flowpath as small as 100 microns (.004"). Specially-designed fittings allow direct connection of 360 micron OD PEEK, fused silica, or electroformed nickel tubing. Versions are also available with standard 1/32" or 1/16" fittings. Microbore UHPLC injectors offer flowpaths of 0.25 mm (.010"), with a choice of 1/32" or 1/16" fittings.



### Cheminert HPLC Injectors and Valves

pages 146-149, 158-165

The Cheminert HPLC line includes 4, 6, 8, and 10 port versions. The submicroliter injector has an injection volume as small as 10 nanoliters, and Nanovolume® internal sample injectors offer a volume down to 4 nanoliters. Valves feature 1/32" and 1/16" zero dead volume fittings, with bore sizes from 100 µm (.006") to 0.75 mm (.030") for nanobore, microbore, and analytical applications. Most models are available in manual, air, or electrically actuated versions, and some can be ordered with a proprietary coated stainless stator and high-strength PAEK rotor to ensure long periods of maintenance-free operation.



### Cheminert Injectors and Valves for Low Pressure Applications

pages 146, 150, 166-169

Cheminert's two position design offers 4, 6, 8, or 10 port configurations. The design features a choice of Valco 1/16" zero dead volume fittings or 1/4-28 Cheminert internal fittings for 1/16" or 1/8" OD tubing. All models are available in manual, air, or electrically actuated versions.



### Cheminert Selectors

pages 152-153, 172-179

Choose among 4, 6, 8, 10, 14, 20, 24, or 28 position stream selection valves, in high pressure and low pressure models, plus UHPLC selectors for up to 10 streams. A variety of configurations are available with bore sizes from 0.10 mm (.004") for HPLC column selection to 4.6 mm (.180") for applications requiring minimal restriction across the valve. Metal or all-polymeric valves can be ordered, with models available in manual, pneumatic, or electrically actuated versions.



### 40,000 psi Ultra-High Pressure Injector System

page 84

The VICI 40K injector is comprised of six miniature air actuated needle valves, plumbed to simulate the flow path of a conventional rotor/stator injector. An integral controller sends the on/off positioning signals to each valve, coordinating them to perform load, inject, and flush functions.

#### FOR OEMs

See our injectors for autosamplers and our new low and high pressure integrated motor/injector and motor/selector assemblies designed specifically to be built into OEM systems.

HPLC ..... pages 151, 180-183  
 Low pressure ..... 151, 184-185  
 Selectors ..... 153, 186-187

