

CHEMINERT VALVES



FOR INJECTION, SWITCHING, AND STREAM SELECTION

- Pressure ratings from 100 psi to 20,000 psi liq
- Inert, biocompatible construction
- Automated operation – pneumatic or electric
- 4, 6, 8, and 10 port and internal sample two position models
- Multiposition stream selection versions with up to 28 positions

DESIGN

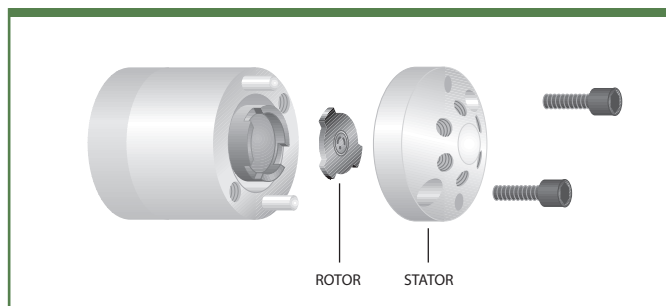
The basic Cheminert design involves a flat rotor which is engraved with slots which connect the ports. A stator is held at a constant, preset force against the rotor.

When repairs are required, all that is necessary for rotor access is the removal of two or three screws. Remove the old rotor and replace it, put the screws back in and tighten them, and the valve is ready for use

at the factory-set pressure specification. No adjustments are possible, much less required. Other advantages of the design include easy panel mounting, low actuating torque, and compact size.

The flat plate design offers flow paths for basic flow switching, sample injection, and stream selection up to 10 positions (28 positions in some models).

EXPLODED VIEW OF A CHEMINERT VALVE



MATERIALS OF CONSTRUCTION

UHPLC models have stators of specially coated stainless steel, with PAEK rotors.

HPLC models have stators of Nitronic 60 stainless steel, PAEK, Hastelloy C, or titanium, all of which are compatible with common HPLC solvents. Many are available with a proprietary long-

life coating. Valcon H rotors are used with metal stators, and Valcon E with PAEK.

LOW PRESSURE models have PPS stators and rotors of Valcon E2, a proprietary reinforced PTFE composite.

SEE ALSO

Decoding product no's for Cheminert valves 256-257

Actuation 172-179

Applications .. 152-153

Materials

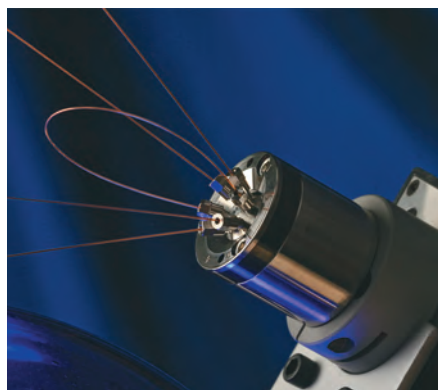
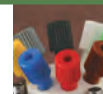
Metals..... 246-247
Polymers 248
Valve rotors..... 249

Valve descriptions

Cheminert
for OEMs.... 131, 133
HPLC 129
Low pressure 130
Nanovolume®..... 127
Selectors 132-133
UHPLC..... 127, 128
Diaphragm 122-123
Valco
Injectors..... 82-83
Selectors 84-85

Cheminert valve product numbers

HPLC..... 138-147, 162-167
Low pressure 148-151, 168-169
Nanovolume™... 134-135, 138-139, 154-155
OEM 162-171
Selectors..... 154-161
UHPLC 134-137, 154-155




NANOVOLUME® VALVES


Cheminert Nanovolume® injectors, switching valves, and selectors are ideal for high speed, high throughput techniques which demand a valve and fitting system that minimize internal volume and eliminate dead volume.

A proprietary rotor material and stator coating achieve pressures to 20,000 psi. All models are compatible with any VICI actuation option.



NANOVOLUME® INJECTORS AND SWITCHING VALVES

Application	Fittings	Bore size	Pressure rating	More info		
UHPLC 20,000 psi 15,000 psi 10,000 psi	360 micron	 100 or 150 µm	20,000 psi 15,000 psi 10,000 psi	vici.com PAGE 134 vici.com		
	1/32" stainless		100 or 150 µm	20,000 psi 15,000 psi 10,000 psi	vici.com PAGE 135 vici.com	
			150 µm	15,000 psi 10,000 psi	vici.com vici.com	
			1/16" stainless		150 µm	15,000 psi 10,000 psi
	HPLC 5,000 psi	1/32" PEEK or stainless		100 or 150 µm	5,000 psi	PAGE 138
						

NANOVOLUME® INTERNAL SAMPLE INJECTORS

Application	Fittings	Bore size	Sample sizes	Pressure rating	More info
UHPLC 20,000 psi 15,000 psi 10,000 psi	360 micron	100 µm	4, 10, or 20 nl	20,000 psi	vici.com
				15,000 psi	vici.com
				10,000 psi	vici.com
		150 µm	10, 20, or 30 nl	20,000 psi	vici.com
				15,000 psi	vici.com
				10,000 psi	vici.com
	1/32" stainless	100 µm	4, 10, or 20 nl	20,000 psi	vici.com
				15,000 psi	vici.com
				10,000 psi	vici.com
		150 µm	10, 20, or 30 nl	20,000 psi	vici.com
				15,000 psi	PAGE 135
				10,000 psi	vici.com
1/16" stainless	150 µm	10, 20, or 50 nl	20,000 psi	vici.com	
			15,000 psi	vici.com	
			10,000 psi	vici.com	
HPLC 5,000 psi	1/32" PEEK or stainless	100 µm or 150 µm	4, 10, or 20 nl	5,000 psi	PAGE 139
					

NANOVOLUME® SELECTORS

Application	Fittings	Bore size	Pressure rating	More info			
UHPLC 20,000 psi 15,000 psi 10,000 psi	1/32" stainless		100 or 150 µm	20,000 psi 15,000 psi 10,000 psi	vici.com PAGE 154 vici.com		
			1/16" stainless		150 µm	20,000 psi 15,000 psi 10,000 psi	vici.com PAGE 155 vici.com

i NANOVOLUME® VALVES ON VICI.COM

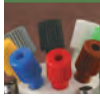
For complete lists of all valve options described here, go to:
www.vici.com/cval/cval_nano.php



t TECH TIP

For optimal zero dead volume connections, make sure your tubing meets the best industry standards. OD tolerance should be nominal dimension ± .002".

Fractional dimension	Nominal dimension
1/32"	.031"
1/16"	.062"
1/8"	.125"
1/4"	.250"
3/8"	.375"
1/2"	.500"

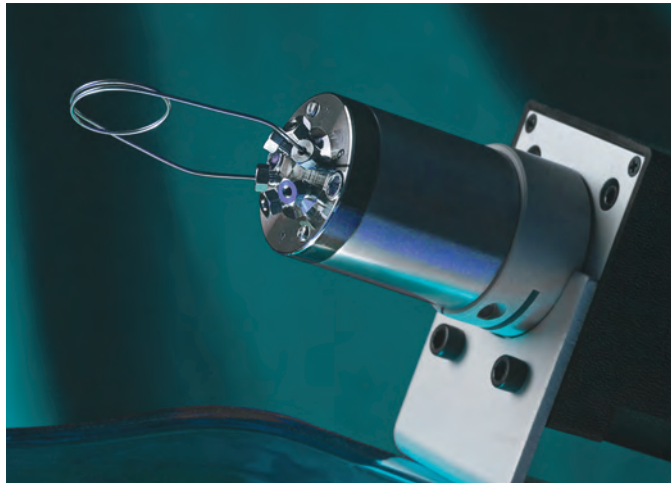


CHEMINERT VALVES

UHPLC VALVES

Cheminert UHPLC injectors, switching valves, and selectors are ideal for high speed, high throughput techniques which demand a valve and fitting system that minimize internal volume and eliminate dead volume.


VICI offers UHPLC versions for nanobore and microbore applications.



NANOVOLUME® UHPLC VALVES

See previous page for information about Nanovolume® UHPLC injectors, switching valves, and selectors.



MICROBORE UHPLC INJECTORS AND SWITCHING VALVES

Application	Fittings	Bore size	Pressure rating	Catalog page	
UHPLC 20,000 psi 15,000 psi 10,000 psi	1/32" stainless		250 µm	20,000 psi	vici.com
				15,000 psi	vici.com
				10,000 psi	vici.com
	1/16" stainless		250 µm	20,000 psi	vici.com
				15,000 psi	PAGE 136
				10,000 psi	vici.com

MICROBORE UHPLC INTERNAL SAMPLE INJECTORS

Application	Fittings	Bore size	Sample sizes	Pressure rating	Catalog page		
UHPLC 20,000 psi 15,000 psi 10,000 psi	1/32" stainless		250 µm	20, 50, or 100 nl	20,000 psi	vici.com	
					15,000 psi	vici.com	
					10,000 psi	vici.com	
	1/16" stainless		250 µm	20, 50, or 100 nl	20,000 psi	vici.com	
						15,000 psi	PAGE 137
						10,000 psi	vici.com

MICROBORE UHPLC SELECTORS

Application	Fittings	Bore size	Pressure rating	Catalog page		
UHPLC 20,000 psi 15,000 psi 10,000 psi	1/32" stainless		250 µm	20,000 psi	vici.com	
				15,000 psi	vici.com	
				10,000 psi	vici.com	
	1/16" stainless		250 µm	20,000 psi	vici.com	
					15,000 psi	PAGE 155
					10,000 psi	vici.com

i UHPLC VALVES AT VICI.COM

For more information on all valve options listed here, go to:
www.vici.com/cval/cval_uhplc.php






➔ MORE INFO

Nanovolume® injectors and selectors 127



HPLC INJECTORS AND SWITCHING VALVES




Application	Fittings	Bore size		Ports	Catalog page
NANOVOLUME 5,000 psi	1/32" PEEK or stainless 	100 or 150 µm	Injector or switching valve	6 and 10	PAGE 138
MICROBORE 5,000 psi	1/16" stainless 	0.25 mm	Injector or switching valve	4, 6, 8, and 10	PAGE 140
			Through-the-handle injector		
			Continuous flow through-the-handle injector	6	PAGE 142
			Continuous flow injector	6	PAGE 143
ANALYTICAL 5,000 psi	1/16" stainless 	0.40 mm	Injector or switching valve	4, 6, 8, and 10	PAGE 144
			Through-the-handle injector		
			Continuous flow through-the-handle injector	6	PAGE 146
			Continuous flow injector	6	PAGE 147

The **THROUGH-THE-HANDLE INJECTOR** (front-loading) is designed for direct replacement of existing competitive models. These injectors are manual, with position feedback standard.

In the 6 port **CONTINUOUS FLOW THROUGH-THE-HANDLE INJECTOR**, an engraving on the stator maintains pump flow to the column during most of the switching cycle, virtually eliminating pressure spikes. Because the handle is integral to the design, all Model C1CF valves are manual, with position feedback standard.

The **CONTINUOUS FLOW INJECTOR** is designed to maintain pump flow during most of the switching cycle, virtually eliminating pressure spikes. This valve is available with a variety of actuation options.

HPLC INTERNAL SAMPLE INJECTORS

Application	Fittings	Bore size	Sample sizes	Catalog page
NANOVOLUME 5,000 psi	1/32" PEEK or stainless 	100 µl	4 nL, 10 nL, or 20 nL	PAGE 139
MICROBORE 5,000 psi	1/16" stainless 	0.15 mm	10 nL, 20 nL, or 50 nL	PAGE 141
ANALYTICAL 5,000 psi	1/16" stainless 	0.25 mm	0.1 µl, 0.2 µl, or 0.5 µl	PAGE 145

i AUTOSAMPLER REPLACEMENTS

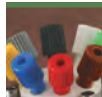
We supply direct replacements for injectors in many popular autosamplers. Call technical support to determine which replacement is best for your application.

i SEMI-PREP HPLC

Our basic injector/switching valves are available with flow passages optimized for semi-preparative HPLC. Choose from 4, 6, 8, or 10 port versions. Contact our sales or technical support departments for more information.





➔ MORE INFO

HPLC selectors 132
Injectors and selectors for OEMs 162-171



CHEMINERT VALVES

LOW PRESSURE INJECTORS



	Fittings	Bore size	Specifications	Ports	Catalog page
VALCO ZDV FITTINGS Low pressure	1/16" PEEK (10-32) 	0.75 mm	250 psi liq/ 75° C	4, 6, 8, and 10	PAGE 148
CHEMINERT 1/4-28 FITTINGS Low pressure	1/4-28 for 1/16" tubing 	0.75 mm	250 psi liq/ 75° C	4, 6, 8, and 10	PAGE 149
	1/4-28 for 1/8" tubing 	1.50 mm	250 psi liq/ 75° C	4, 6, 8, and 10	PAGE 149
1/2-20 FITTINGS Low pressure	1/2-20 for 1/4" tubing 	2.8 mm - 4.6 mm (varies with number of ports)	100 psi liq/ 50° C	4, 6, and 8	PAGE 151

LOW PRESSURE VALVES WITH ZERO DEAD VOLUME FITTINGS (10-32 thread) are shipped with standard PEEK nuts and ferrules. Zero dead volume fingertight fittings and nuts and ferrules of other materials may be ordered separately. Standard specifications are 100 psi gas/250 psi liquid at 75°C. On request, the pressure rating can be as high as 600 psi liquid. **Caution:** Metal fittings will damage the threads and details of low pressure valves. Use of metal fittings voids the warranty.

LOW PRESSURE VALVES FOR 1/4-28 FITTINGS come with multicolored Cheminert 1/4-28 flangeless fittings for 1/16" or 1/8" OD tubing (depending on the valve model.) Valve caps have female threads for direct connection of lines – no couplings are required.



LOW PRESSURE INTERNAL SAMPLE INJECTORS

Application	Fittings	Bore size	Specifications	Sample sizes	Catalog page
VALCO ZDV FITTINGS Low pressure	1/16" PEEK (10-32) 	0.40 mm	250 psi liq/ 75° C	0.2 µl, 0.5 µl, or 1.0 µl	PAGE 150
CHEMINERT 1/4-28 FITTINGS Low pressure	1/4-28 for 1/16" tubing 	0.50 mm	250 psi liq/ 75° C	4, 6, 8, and 10	PAGE 150

! CAUTION

Metal fittings will damage the threads and details of C20Z series valves (models C22Z, C24Z, C25Z). Use of metal fittings in a C20Z valve voids the warranty.

t TECH TIP

Our life tests indicate that these valves will typically give more than 100,000 cycles before requiring any service. This assumes that the fluid used is free of particulates and not reactive toward the valve components. If the stream may contain particulates, or if it has high salt content which could precipitate within the sample lines, use an in-line filter.

Note: Valves with purge ports are available on request.

➔ MORE INFO

Decoding product no's for Cheminert valves 256-257

Actuation 172-179

Applications .. 152-153

Materials

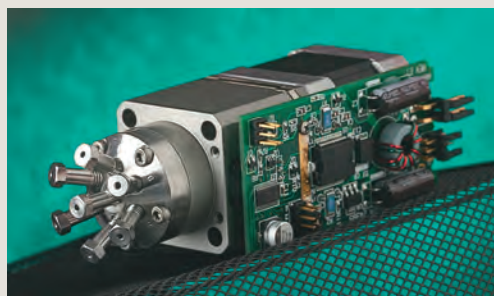
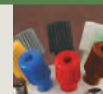
Metals 246-247
Polymers 248
Valve rotors 249

Valve descriptions

Cheminert
for OEMs 131, 133
HPLC 129
Low pressure 130
Nanovolume® 127
Selectors 132-133
UHPLC 127, 128
Diaphragm 122-123
Valco
Injectors 82-83
Selectors 84-85

Cheminert valve product numbers

HPLC 138-147, 162-167
Low pressure 148-151, 168-169
Nanovolume™ ... 134-135, 138-139, 154-155
OEM 162-171
Selectors 154-161
UHPLC 134-137, 154-155



INJECTORS FOR OEMS

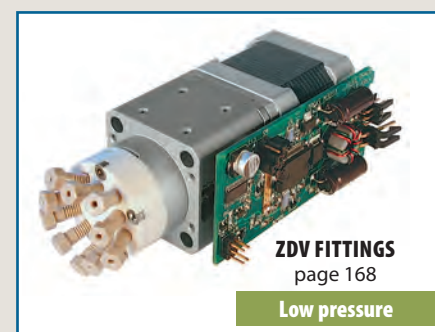
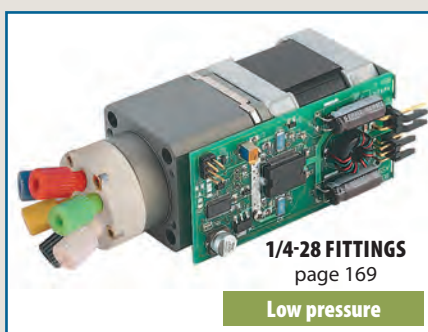
INTEGRATED MOTOR/INJECTOR ASSEMBLIES

Cheminert's HPLC and low pressure integrated motor/injectors are assemblies designed specifically to be built into an OEM system. Using the well-proven Cheminert injector designs and the 24 volt motor from our popular microelectric actuators, they need only to be connected to the instrument's power supply.

Control is simplified to require a single contact closure; the injector's position is determined by whether the closure is held high or low. There's even an easy way for the instrument to confirm the valve's position by sensing the output from a built-in sensor. In the default control mode, one contact

closure shifts the injector to inject and a second is required to shift it back to load. A simple jumper change shifts the mode to single contact closure, in which a contact closure moves the injector from load to inject, where it remains until the contact is broken and the injector reverts to the load position. Jumper settings can also be modified to change the motor's degree of rotation so it can be used with any of the valve models available.

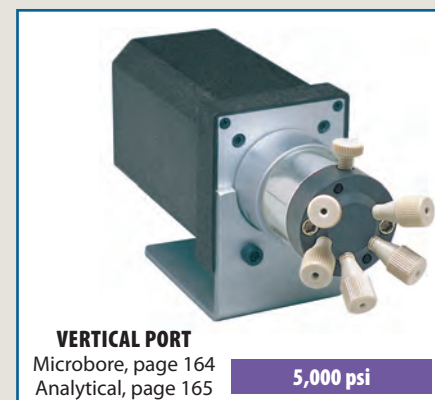
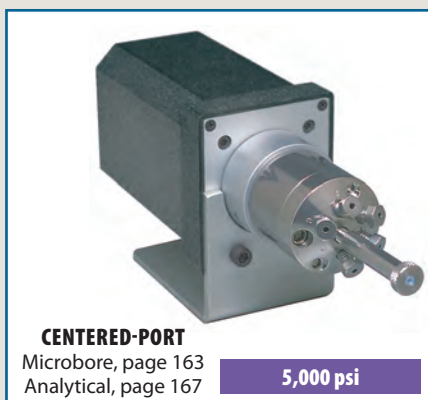
All these features are built into a compact and lightweight package and are available in 4, 6, 8, and 10 port configurations. Serial communication via RS-232 or RS-485 is optional.



AUTOSAMPLER AND OTHER OEM INJECTORS

CENTERED-PORT INJECTORS offer a syringe injection port centered on the rear face of the valve (opposite the handle or actuator), allowing convenient syringe insertion when the valve is mounted on an actuator inside an instrument.

The **VERTICAL PORT INJECTOR** is designed specifically for use in an autosampler. It is like our standard injector except that the sample port is perpendicular to the valve axis. This permits the valve and actuator to be installed horizontally, while the syringe loads the injector vertically.

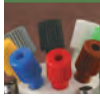


i UNIVERSAL ACTUATOR

The VICI universal actuator operates virtually any Valco or Cheminert rotary valve – two position and selector alike – greatly simplifying the electronic aspect of instrument design. See pages 174-175.

➔ OEM SELECTOR VALVES

See page 133 for selector (multiposition) valves for OEMs.



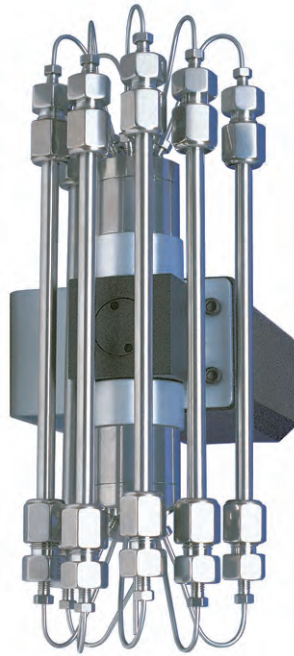
CHEMINERT VALVES

UHPLC AND HIGH PRESSURE SELECTORS

UHPLC SELECTORS offer pressure ratings of 20,000 psi, 15,000 psi and 10,000 psi with 1/32" and 1/16" fittings for nanobore and microbore applications.





Our **HPLC SELECTOR** with Valco ZDV fitting details is available with 4, 6, 8, or 10 positions. Stators are available in Nitronic 60 stainless, titanium, and Hastelloy C-22, with rotors of Valcon H, all of which are compatible with common HPLC solvents. PAEK stators are used in combination with Valcon E rotors. This valve is the backbone of the Cheminert **HPLC COLUMN SELECTOR SYSTEM**, which includes two stream selection valves mounted on a single microelectric actuator. (Columns are not included.)

Consult the factory for information about a **UHPLC COLUMN SELECTOR SYSTEM**.



HPLC COLUMN SELECTOR SYSTEM



	Fittings		Bore size	Positions	Catalog page
NANOVOLUME 20,000 psi 15,000 psi 10,000 psi	1/32" stainless		150 µm (100 µm optional)	4, 6, 8, and 10	PAGE 154
	1/16" stainless		150 µm	20,000 psi	vici.com
MICROBORE 20,000 psi 15,000 psi 10,000 psi	1/32" stainless		250 µm	4, 6, 8, and 10	vici.com
	1/16" stainless		250 µm	4, 6, 8, and 10	PAGE 155

HPLC SELECTORS

	Fittings		Bore size	Positions	Catalog page
STREAM SELECTOR 5,000 psi	1/16" stainless		0.40 mm	4, 6, 8, and 10	PAGE 156
COLUMN SELECTOR SYSTEM 5,000 psi	1/16" stainless		0.40 mm	6, 8, and 10	PAGE 157

i UNIVERSAL ACTUATOR

VICI's universal actuator operates virtually any Valco or Cheminert rotary valve – two position and selector alike – greatly simplifying the electronic aspect of instrument design. See page 174.

! CAUTION

Metal fittings will damage the threads and details of C25Z, C25G, and C65Z series valves.

Use of metal fittings in these valves voids the warranty.

➔ MORE INFO

Actuation 172-179

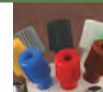
Applications .. 152-153

Materials

Metals..... 246-247
Polymers 248
Valve rotors..... 249

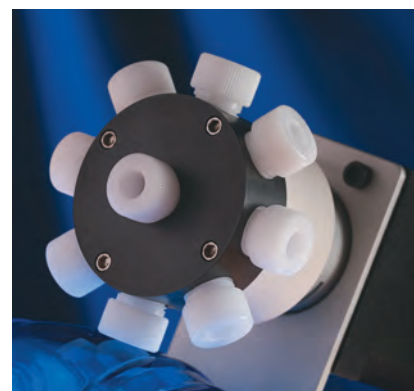
Cheminert valve product numbers

HPLC..... 138-147, 162-167
Low pressure 148-151, 168-169
Nanovolume™... 134-135, 138-139, 154-155
OEM 162-171
Selectors 154-161
UHPLC 134-137, 154-155



LOW PRESSURE SELECTORS

	Fittings	Bore size	Specifications	Positions	Catalog page
VALCO ZDV FITTINGS Low pressure	1/16" PEEK (10-32) 	0.75 mm	250 psi liq/ 75° C	4, 6, 8, 10, 12, and 14	PAGE 158
CHEMINERT 1/4-28 FITTINGS Low pressure	1/4-28 for 1/16" tubing 	0.75 mm	250 psi liq/ 75° C	4, 6, 8, and 10	PAGE 159
	1/4-28 for 1/8" tubing 	1.50 mm	250 psi liq/ 75° C	4, 6, 8, and 10	PAGE 159
20-28 STREAMS Low pressure	1/16" PEEK (6-40) 	0.67 mm - 0.56 mm	100 psi liq/ 50° C	20, 24, and 28	PAGE 160
1/2-20 FITTINGS Low pressure	1/2-20 for 1/4" tubing 	2.9 mm - 4.6 mm (varies with number of ports)	100 psi liq/ 50° C	4, 6, and 8	PAGE 161



SELECTORS FOR OEMS

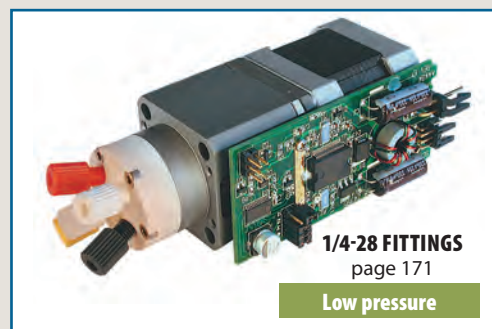
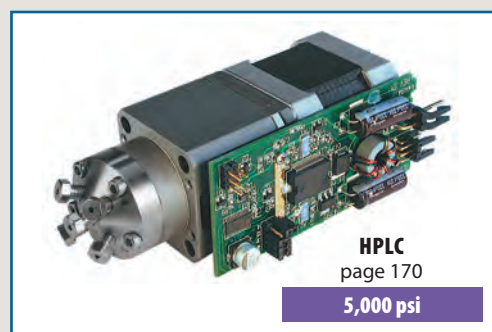
INTEGRATED MOTOR/STREAM SELECTORS

Cheminert's HPLC and low pressure integrated motor/stream selectors are assemblies designed specifically to be built into an OEM system. The compact, light-weight package is available in 4, 6, 8, and 10 position configurations.

Using the well-proven Cheminert stream selector design and the 24 volt motor from our microelectric actuators, the Models C55, C65, and C65Z need only to be connected to an instrument's power supply. A single momentary contact closure steps the valve to the next position; a separate contact closure moves the valve to position 1 (Home).

See how our stream selectors can simplify your instrument design and minimize time to market – all while trimming your costs.

Serial communication via RS-232 or RS-485 is optional.



OEM INJECTORS

See pages 131 for injectors for OEMs.



CHEMINERT VALVES

UHPLC Nanovolume® valves

15,000 psi

360 MICRON FITTINGS, 150 MICRON BORE (.006")

- 15,000 psi
- Nanobore
- 360 µm
- 150 µm

Model C72MX includes stainless 360 micron fittings.
 Universal actuator: 24 VDC, with autosensing 24 VDC power supply.
 Includes RS232/485 serial interface. See page 174 for other interface options.

SPECIFICATIONS

15,000 psi liq
50°C max
 Stator: Stainless with inert coating
 Rotor: Valcon E3



6 Port

Prod No



10 Port

Prod No

Coated stainless stator		
Manual	C72MX-6676	C72MX-6670
With universal actuator	C72MX-6676EUHA	C72MX-6670EUDA
Replacement valve	C72MX-6676D	C72MX-6670D
Replacement rotor	C72M-66R6	C72M-66R0
Replacement stator	C72M-6C76	C72M-6C70

OPTIONS

- 100 micron (.004") bore
- Internal sample injector (4 - 20 nl)
- 10,000 and 20,000 psi versions available
- 4 and 8 port versions available



6 PORT VALVE
 360 micron fittings

t TECH TIP

Increasing the pressure rating shortens valve lifetime.

➔ MORE INFO

360 micron Nanovolume® fittingspp 42-44



UHPLC Nanovolume® valves

15,000 psi

1/32" VALCO STAINLESS FITTINGS, 150 MICRON BORE (.006")

SPECIFICATIONS

15,000 psi liq
50°C maxStator: Stainless with
inert coating
Rotor: Valcon E3

Model C72NX includes stainless nuts and ferrules.

Universal actuator: 24 VDC, with autosensing 24 VDC power supply.

Includes RS232/485 serial interface. See page 174 for other interface options.

15,000 psi

Nanobore

1/32"

150 µm

OPTIONS

- 100 micron (.004") bore
- 250 micron (.010") bore
- 10,000 and 20,000 psi versions available
- 4 and 8 port versions available



6 Port

Prod No



10 Port

Prod No

Coated stainless stator		
Manual	C82NX-6676	C82NX-6670
With universal actuator	C82NX-6676EUHA	C82NX-6670EUDA
Replacement valve	C82NX-6676D	C82NX-6670D
Replacement rotor	C72N-66R6	C72N-66 R0
Replacement stator	C72N-6C76	C72N-6C70



6 PORT VALVE

1/32" Valco stainless fittings

Sample loops

Each stainless steel loop includes two stainless 1/32" Valco fittings. Pressure rating > 20,000 psi.

Volume Prod No

1 µl	CSLN1K
1.5 µl	CSLN1.5K
2 µl	CSLN2K
5 µl	CSLN5K
10 µl	CSLN10K



INTERNAL SAMPLE INJECTOR

1/32" Valco stainless fittings

UHPLC Nanovolume® internal sample injectors

15,000 psi

1/32" VALCO STAINLESS FITTINGS, 150 MICRON BORE (.006")

SPECIFICATIONS

15,000 psi liq
50°C maxStator: Stainless with
inert coating
Rotor: Valcon E3

Model C74NX includes stainless nuts and ferrules.

Universal actuator: 24 VDC, with autosensing 24 VDC power supply.

Includes serial interface. See page 174 for other interface options.



15,000 psi

Nanobore

Internal sample

1/32"

150 µm

OPTIONS

- 100 micron (.004") bore
- 250 micron (.010") bore
- 10,000 and 20,000 psi versions available

Sample size:

10 nanoliters

20 nanoliters

30 nanoliters

Prod No

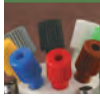
Prod No

Prod No

Coated stainless stator			
Manual	C84NX-6674-.01	C84NX-6674-.02	C84NX-6674-.03
With universal actuator	C84NX-6674-.01EUHA	C84NX-6674-.02EUHA	C84NX-6674-.03EUHA
Replacement valve	C84NX-6674-.01D	C84NX-6674-.02D	C84NX-6674-.03D
Replacement rotor	C74N-66R-.01	C74N-66R-.02	C74N-66R-.03
Replacement stator	C74N-6C7	C74N-6C7	C74N-6C7

MORE INFO

1/32" Valco nuts and
ferrules. pp 12, 14



CHEMINERT VALVES

UHPLC microbore valves

15,000 psi

1/16" VALCO FITTINGS, 0.25 MM PORTS (.010")

15,000 psi

Microbore

1/16" **0.25 mm**

Model C72X includes stainless steel nuts and ferrules.
 Universal actuator: 24 VDC, with autosensing 24 VDC power supply.
 Includes RS232/485 serial interface. See page 174 for other interface options.

SPECIFICATIONS

15,000 psi liq
50°C max
 Stator: Stainless with inert coating
 Rotor: Valcon E3

OPTIONS

- 0.15 mm ports (.006")
- 10,000 and 20,000 psi versions available



4 Port

Prod No



6 Port

Prod No



8 Port

Prod No



10 Port

Prod No

Manual	C82X-1674	C82X-1676	C82X-1678	C82X-1670
With universal act.	C82X-1674EUHA	C82X-1676EUHA	C82X-1678EUHA	C82X-1670EUHA
Replacement valve	C82X-1674D	C82X-1676D	C82X-1678D	C82X-1670D
Replacement rotor	C72-16R4	C72-16R6	C72-16R8	C72-16R0
Replacement stator	C72-1C74	C72-1C76	C72-1C78	C72-1C70



6 PORT VALVE
 1/16" Valco stainless fittings

Stainless steel sample loops

Each loop includes two stainless steel nuts and ferrules.

These loops are for use with valves on this page.



Volume	Prod No	Volume	Prod No	Volume	Prod No
2 µl	CSL2	20 µl	CSL20	250 µl	CSL250
5 µl	CSL5	50 µl	CSL50	500 µl	CSL500
10 µl	CSL10	100 µl	CSL100	1 ml	CSL1K

ABOUT LOOPS

- Metal loops > 2 ml are made from 1/8" OD tubing with TIG welded 1/16" tube ends or reducing unions, and are not suitable for UHPLC use.
- Sample loop shape and dimensions may vary from batch to batch due to fluctuations in tubing ID. Loop volume is controlled as closely as possible, but is not calibrated.



UHPLC microbore internal sample injectors

15,000 psi

1/16" VALCO FITTINGS, 0.25 MM PORTS (.010")

SPECIFICATIONS

15,000 psi liq
50°C maxStator: Stainless with
inert coating
Rotor: Valcon E3

Model C74X includes stainless steel nuts and ferrules.

Universal actuator: 24 VDC, with autosensing 24 VDC power supply.

Includes RS232/485 serial interface. See page 174 for other interface options.



15,000 psi

Microbore

Internal sample

1/16"

0.25 mm

OPTIONS

- 0.15 mm ports (.006")
- Other internal volumes are available on request
- 10,000 and 20,000 psi versions available

Sample volume

Sample volume	20 nanoliters	50 nanoliters	100 nanoliters
	<i>Prod No</i>	<i>Prod No</i>	<i>Prod No</i>
Manual	C84X-1674-.02	C84X-1674-.05	C84X-1674-.1
With universal actuator	C84X-1674-.02EUHA	C84X-1674-.05EUHA	C84X-1674-.1EUHA
Replacement valve	C84X-1674-.02D	C84X-1674-.05D	C84X-1674-.1D
Replacement rotor	C74-16R-.02	C74-16R-.05	C74-16R-.1
Replacement stator	C74-1C7	C74-1C7	C74-1C7



INTERNAL SAMPLE INJECTOR
1/16" Valco
stainless fittings

TECH TIP

Increasing the pressure rating shortens valve lifetime.

MORE INFO

Actuators

Microelectric 176

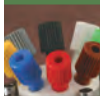
Universal 174-175

Materials

Metals 246-247

Polymers 248

Valve rotors 249



Nanovolume® valves
5,000 psi

1/32" FITTINGS, 100 MICRON PORTS (.004")

5,000 psi

Nanobore

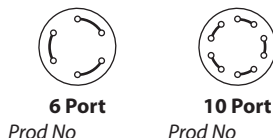
1/32" **100 µm**

Model C2N includes nuts and ferrules.
 Valves with stainless stators have stainless fittings.
 Valves with PEEK stators have PEEK fittings.
 Universal actuator: 24 VDC, with autosensing 24 VDC power supply.
 Includes RS232/485 serial interface. See page 174 for other interface options.

SPECIFICATIONS

5,000 psi liq
50°C max
 Stator: Metal
 Rotor: Valcon H

5,000 psi liq
50°C max
 Stator: PEEK
 Rotor: Valcon E



N60 stainless stator		
Manual	C2N-4006	C2N-4000
With universal actuator	C2N-4006EUHA	C2N-4000EUHA
Replacement valve	C2N-4006D	C2N-4000D
Replacement rotor	C2N-40R6	C2N-40R0
Replacement stator	C2N-4C06	C2N-4C00
PEEK stator		
Manual	C2N-4346	C2N-4340
With universal actuator	C2N-4346EUHA	C2N-4340EUHA
Replacement valve	C2N-4346D	C2N-4340D
Replacement rotor	C2N-43R6	C2N-43R0
Replacement stator	C2N-4C46	C2N-4C40

OPTIONS

- 150 micron (.006") and 250 micron (.010") ports



6 PORT NANOVOLUME VALVE
1/32" stainless ZDV fittings



Sample loops

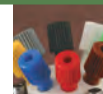
Each stainless loop includes two stainless steel nuts and ferrules.
 Each PEEK loop includes two PEEK nuts and ferrules.

These loops are for use with valves on this page.

Volume	Stainless steel	PEEK
	Prod No	Prod No
1 µl	CSLN1K	CSLN1KPK
2 µl	CSLN2K	CSLN2KPK
5 µl	CSLN5K	CSLN5KPK
10 µl	CSLN10K	CSLN10KPK

ABOUT LOOPS

- Sample loop shape and dimensions may vary from batch to batch due to fluctuations in tubing ID. Loop volume is controlled as closely as possible, but is not calibrated.


Nanovolume® internal sample injectors
5,000 psi
1/32" FITTINGS, 100 MICRON PORTS (.004")
SPECIFICATIONS
5,000 psi liq
50°C max

 Stator: Metal
 Rotor: Valcon H

5,000 psi liq
50°C max

 Stator: PAEK
 Rotor: Valcon E

Model C4N includes nuts and ferrules.

Valves with stainless stators have stainless fittings.

Valves with PAEK stators have PEEK fittings.

Universal actuator: 24 VDC, with autosensing 24 VDC power supply.

Includes RS232/485 serial interface. See page 174 for other interface options.


5,000 psi
Nanobore
Internal sample
1/32"
100 µm
OPTIONS

- 0.15 mm ports (.006")

Sample volume	4 nanoliters <i>Prod No</i>	10 nanoliters <i>Prod No</i>	20 nanoliters <i>Prod No</i>
---------------	--------------------------------	---------------------------------	---------------------------------

N60 stainless stator			
Manual	C4N-4004-.004	C4N-4004-.01	C4N-4004-.02
With universal actuator	C4N-4004-.004EUHA	C4N-4004-.01EUHA	C4N-4004-.02EUHA
Replacement valve	C4N-4004-.004D	C4N-4004-.01D	C4N-4004-.02D
Replacement rotor	C4N-40R-.004	C4N-40R-.01	C4N-40R-.02
Replacement stator	C4N-4C0	C4N-4C0	C4N-4C0
PAEK stator			
Manual	C4N-4344-.004	C4N-4344-.01	C4N-4344-.02
With universal actuator	C4N-4344-.004EUHA	C4N-4344-.01EUHA	C4N-4344-.02EUHA
Replacement valve	C4N-4344-.004D	C4N-4344-.01D	C4N-4344-.02D
Replacement rotor	C4N-43R-.004	C4N-43R-.01	C4N-43R-.02
Replacement stator	C4N-4C4H	C4N-4C4H	C4N-4C4H

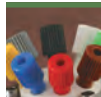

INTERNAL SAMPLE INJECTOR
 1/32" PEEK ZDV fittings

MORE INFO
Actuators

 Microelectric 176
 Universal 174-175

Materials

 Metals 246-247
 Polymers 248
 Valve rotors 249



CHEMINERT VALVES

Microbore valves

1/16" VALCO FITTINGS, 0.25 MM PORTS (.010")

5,000 psi

Microbore

1/16" **0.25 mm**

Model C2 includes nuts and ferrules.
 Valves with metal stators have stainless steel nuts and ferrules of the stator material.
 Valves with PEEK stators have PEEK nuts and ferrules.
 Universal actuator: 24 VDC, with autosensing 24 VDC power supply.
 Includes RS232/485 serial interface. See page 174 for other interface options.
 Note: The fitting detail pilot depth in PEEK HPLC stators is slightly longer than standard.

SPECIFICATIONS

5,000 psi liq
75°C max
 Stator: Metal
 Rotor: Valcon H

5,000 psi liq
50°C max
 Stator: PEEK
 Rotor: Valcon E



4 Port

Prod No



6 Port

Prod No



8 Port

Prod No



10 Port

Prod No

N60 stainless stator				
Manual	C2-1004	C2-1006	C2H-1008	C2H-1000
With universal act.	C2-1004EUHA	C2-1006EUHA	C2H-1008EUHA	C2H-1000EUHA
Replacement valve	C2-1004D	C2-1006D	C2H-1008D	C2H-1000D
Replacement rotor	C2-10R4	C2-10R6	C2-10R8H	C2-10R0H
Replacement stator	C-1C04	C-1C06	C-1C08H	C-1C00H
PEAK stator				
Manual	C2-1344	C2-1346	C2H-1348	C2H-1340
With universal act.	C2-1344EUHA	C2-1346EUHA	C2H-1348EUHA	C2H-1340EUHA
Replacement valve	C2-1344D	C2-1346D	C2H-1348D	C2H-1340D
Replacement rotor	C2-13R4	C2-13R6	C2-13R8H	C2-13R0H
Replacement stator	C-1C44	C-1C46	C-1C48H	C-1C40H
Titanium stator				
Manual	C2-1034	C2-1036	C2H-1038	C2H-1030
With universal act.	C2-1034EUHA	C2-1036EUHA	C2H-1038EUHA	C2H-1030EUHA
Replacement valve	C2-1034D	C2-1036D	C2H-1038D	C2H-1030D
Replacement rotor	C2-10R4	C2-10R6	C2-10R8H	C2-10R0H
Replacement stator	C-1C34	C-1C36	C-1C38H	C-1C30H

OPTIONS

- Continuous flow version is available as Model C6. See page 143.
- Hastelloy C stators
- Loop fill port assembly for injection from front of the valve. See page 31.
- 0.15 mm (0.006") bore



10 PORT VALVE
 1/16" PEEK ZDV fittings

Sample loops

Each metal loop includes two stainless steel nuts and ferrules.
 Each PEEK loop includes two PEEK nuts and ferrules.
 These loops are for use with valves on pages 140, 142, 143, 144, 146, 147, 163, 164, 165, and 167.



Volume	Stainless Steel Prod No	PEEK (for PEEK stators) Prod No	Titanium Prod No
2 µl	CSL2	CZSL2PK	CSL10TI
5 µl	CSL5	CZSL5PK	CSL20TI
10 µl	CSL10	CZSL10PK	CSL50TI
20 µl	CSL20	CZSL20PK	CSL100TI
50 µl	CSL50	CZSL50PK	CSL250TI
100 µl	CSL100	CZSL100PK	CSL500TI
250 µl	CSL250	CZSL250PK	CSL10TI
500 µl	CSL500	CZSL500PK **	CSL20TI
1 ml	CSL1K	CZSL1KPK **	CSL50TI
2 ml	CSL2K	CZSL2KPK **	CSL10TI
5 ml	CSL5K	CZSL5KPK **	CSL20TI
10 ml	CSL10K	** max pressure 2500 psi	CSL50TI

ABOUT LOOPS

- Other materials are available in many sizes: Electroformed Nickel, Hastelloy C, Nickel 200, and PTFE.
- Metal loops > 2 ml are made from 1/8" OD tubing with TIG welded 1/16" tube ends or reducing unions.
- Sample loop shape and dimensions may vary from batch to batch due to fluctuations in tubing ID. Loop volume is controlled as closely as possible, but is not calibrated.

OPTIONAL FLOWPATH

Model C2 6 port valves can also be ordered with a dual 3-way rotor, as described in EPA Method 555.



To specify this flowpath, substitute "6X" for "6" in the valve or rotor prod no (e.g. C2-1006XEUA).



Nanoliter internal sample injectors

1/16" VALCO FITTINGS, 0.15 MM PORTS (.006")

SPECIFICATIONS

5,000 psi liq
75°C max

Stator: Metal
 Rotor: Valcon H

5,000 psi liq
50°C max

Stator: PEEK
 Rotor: Valcon E

Model C4 includes nuts and ferrules.

Valves with stainless stators have stainless fittings.

Valves with PEEK stators have PEEK fittings.

Universal actuator: 24 VDC, with autosensing 24 VDC power supply.

Includes RS232/485 serial interface. See page 174 for other interface options.

Note: The fitting detail pilot depth in PEEK HPLC stators is slightly longer than standard.



5,000 psi

Microbore

Internal sample

1/16"

0.15 mm

OPTIONS

- 100, 200, and 500 nl sample volumes are also available in 0.25 mm bore.
See page 145.
- Loop fill port assembly for injection from front of the valve.
See page 31.
- 0.25 mm (0.010") bore

Sample volume **10 nanoliters** **20 nanoliters** **50 nanoliters**
Prod No *Prod No* *Prod No*

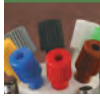
N60 stainless stator			
Manual	C4-0004-.01	C4-0004-.02	C4-0004-.05
With universal actuator	C4-0004-.01EUHA	C4-0004-.02EUHA	C4-0004-.05EUHA
Replacement valve	C4-0004-.01D	C4-0004-.02D	C4-0004-.05D
Replacement rotor	C4-00R-.01	C4-00R-.02	C4-00R-.05
Replacement stator	C4-0C0	C4-0C0	C4-0C0
PEEK stator			
Manual	C4-0344-.01	C4-0344-.02	C4-0344-.05
With universal actuator	C4-0344-.01EUHA	C4-0344-.02EUHA	C4-0344-.05EUHA
Replacement valve	C4-0344-.01D	C4-0344-.02D	C4-0344-.05D
Replacement rotor	C4-03R-.01	C4-03R-.02	C4-03R-.05
Replacement stator	C4-0C4	C4-0C4	C4-0C4



INTERNAL SAMPLE INJECTOR
 1/16" stainless ZDV fittings

➔ MORE INFO

Actuators	
Microelectric	176
Universal	174-175
Materials	
Metals	246-247
Polymers	248
Valve rotors	249
Nuts	
Metal	12
PEEK	48
Ferrules	
Metal	14
PEEK	48



CHEMINERT VALVES

Microbore continuous flow through-the-handle injectors


1/16" VALCO FITTINGS, 0.25 MM PORTS (.010")

- 5,000 psi
- Microbore
- Continuous flow
- Through-handle
- 1/16"
0.25 mm

Model C1CFI is available only in manual version.
 Position feedback included.
 Includes nuts and ferrules.
 Valves with stainless stators have stainless fittings.
 Valves with PEEK stators have PEEK fittings.
Note: The fitting detail pilot depth in PEEK HPLC stators is slightly longer than standard.



Prod No

N60 stainless stator	
6 port injector	C1CFI-1006
Replacement rotor	C1-10R6
Replacement stator	C1CF-1C06
PEAK stator	
6 port injector	C1CFI-1346
Replacement rotor	C1-13R6
Replacement stator	C1CF-1C46
Replacement injector fitting	
	C-261

SPECIFICATIONS

5,000 psi liq
75°C max
 Stator: Metal
 Rotor: Valcon H

5,000 psi liq
50°C max
 Stator: PEEK
 Rotor: Valcon E

OPTIONS

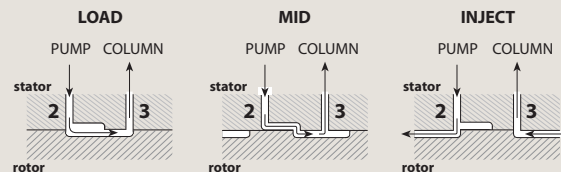
- 0.40 mm bore (.016") on page 146.



Model C1CFI
 1/16" ZDV fittings

i CONTINUOUS FLOWPATH THROUGH-THE-HANDLE INJECTORS

An engraving on the stator maintains pump flow between the pump connection port (2) and the column connection port (3) during most of the switching cycle, virtually eliminating pressure spikes.



MODEL C1CFI



Microbore continuous flow injectors

1/16" VALCO FITTINGS, 0.25 MM PORTS (.010")

SPECIFICATIONS

5,000 psi liq
75°C max

Stator: Metal
Rotor: Valcon H

5,000 psi liq
50°C max

Stator: PEEK
Rotor: Valcon E

Model C6 includes nuts and ferrules.

Valves with stainless stators have stainless fittings.

Valves with PEEK stators have PEEK fittings.

Universal actuator: 24 VDC, with autosensing 24 VDC power supply.

Includes RS232/485 serial interface. See page 174 for other interface options.

Note: The fitting detail pilot depth in PEEK HPLC stators is slightly longer than standard.

5,000 psi

Microbore

Continuous flow

1/16"

0.25 mm

OPTIONS

- 0.40 mm bore (.016") on page 147.



CONTINUOUS FLOW INJECTOR
1/16" stainless ZDV fittings

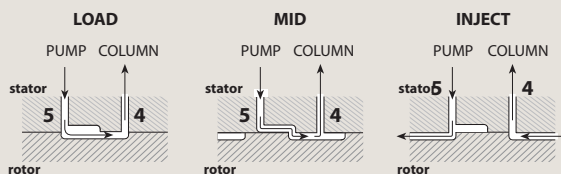


Prod No

N60 stainless stator	
Manual	C6-1006
With universal actuator	C6-1006EUHA
Replacement valve	C6-1006D
Replacement rotor	C2-10R6
Replacement stator	C6-1C06
PEAK stator	
Manual	C6-1346
With universal actuator	C6-1346EUHA
Replacement valve	C6-1346D
Replacement rotor	C2-13R6
Replacement stator	C6-1C46

CONTINUOUS FLOWPATH INJECTORS

An engraving on the stator maintains pump flow between the pump connection port (5) and the column connection port (4) during most of the switching cycle, virtually eliminating pressure spikes.



MODEL C6

Sample loops

Each metal loop includes two stainless steel nuts and ferrules. Each PEEK loop includes two PEEK nuts and ferrules.

These loops are for use with valves on pages 140, 142, 143, 144, 146, 147, 163, 164, 165, and 167.



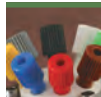
MORE INFO

- Actuators
 - Microelectric 176
 - Universal 174-175
- Materials
 - Metals 246-247
 - Polymers 248
 - Valve rotors 249
- Nuts
 - Metal 12
 - PEEK 48
- Ferrules
 - Metal 14
 - PEEK 48

ABOUT LOOPS

- Other materials are available in many sizes: Electroformed Nickel, Hastelloy C, Nickel 200, and PTFE.
- Metal loops > 2 ml are made from 1/8" OD tubing with TIG welded 1/16" tube ends or reducing unions.
- Sample loop shape and dimensions may vary from batch to batch due to fluctuations in tubing ID. Loop volume is controlled as closely as possible, but is not calibrated.

Volume	Stainless Steel	PEEK (for PEEK stators)	Titanium
	Prod No	Prod No	
2 µl	CSL2	CZSL2PK	Prod No
5 µl	CSL5	CZSL5PK	
10 µl	CSL10	CZSL10PK	
20 µl	CSL20	CZSL20PK	
50 µl	CSL50	CZSL50PK	
100 µl	CSL100	CZSL100PK	
250 µl	CSL250	CZSL250PK	
500 µl	CSL500	CZSL500PK **	
1 ml	CSL1K	CZSL1KPK **	
2 ml	CSL2K	CZSL2KPK **	
5 ml	CSL5K	CZSL5KPK **	
10 ml	CSL10K	** max pressure 2500 psi	



CHEMINERT VALVES

Analytical valves

1/16" VALCO FITTINGS, 0.40 MM PORTS (.016")

5,000 psi

Analytical

1/16" **0.40 mm**

Model C2 includes nuts and ferrules.
 Valves with metal stators have stainless steel nuts and ferrules of the stator material.
 Valves with PEEK stators have PEEK nuts and ferrules.
 Universal actuator: 24 VDC, with autosensing 24 VDC power supply.
 Includes RS232/485 serial interface. See page 174 for other interface options.
 Note: The fitting detail pilot depth in PEEK HPLC stators is slightly longer than standard.

SPECIFICATIONS

5,000 psi liq
75°C max
 Stator: Metal
 Rotor: Valcon H

5,000 psi liq
50°C max
 Stator: PEEK
 Rotor: Valcon E



4 Port

Prod No



6 Port

Prod No



8 Port

Prod No



10 Port

Prod No

N60 stainless stator				
Manual	C2-2004	C2-2006	C2H-2008	C2H-2000
With universal actuator	C2-2004EUHA	C2-2006EUHA	C2H-2008EUHA	C2H-2000EUHA
Replacement valve	C2-2004D	C2-2006D	C2H-2008D	C2H-2000D
Replacement rotor	C2-20R4	C2-20R6	C2-20R8H	C2-20R0H
Replacement stator	C-2C04	C-2C06	C-2C08H	C-2C00H
PEAK stator				
Manual	C2-2344	C2-2346	C2H-2348	C2H-2340
With universal actuator	C2-2344EUHA	C2-2346EUHA	C2H-2348EUHA	C2H-2340EUHA
Replacement valve	C2-2344D	C2-2346D	C2H-2348D	C2H-2340D
Replacement rotor	C2-23R4	C2-23R6	C2-23R8H	C2-23R0H
Replacement stator	C-2C44	C-2C46	C-2C48H	C-2C40H
Titanium stator				
Manual	C2-2034	C2-2036	C2H-2038	C2H-2030
With universal actuator	C2-2034EUHA	C2-2036EUHA	C2H-2038EUHA	C2H-2030EUHA
Replacement valve	C2-2034D	C2-2036D	C2H-2038D	C2H-2030D
Replacement rotor	C2-20R4	C2-20R6	C2-20R8H	C2-20R0H
Replacement stator	C-2C34	C-2C36	C-2C38H	C-2C30H

OPTIONS

- Continuous flow version is available as Model C6. See page 143.
- Hastelloy C stators
- Semi-prep version with 0.75 mm ports (.030") available
- Loop fill port assembly for injection from front of the valve. See page 41.



6 PORT VALVE
 1/16" stainless ZDV fittings

Sample loops

Each metal loop includes two stainless steel nuts and ferrules.
 Each PEEK loop includes two PEEK nuts and ferrules.
 These loops are for use with valves on pages 140, 142, 143, 144, 146, 147, 163, 164, 165, and 167.



Volume	Stainless Steel		PEEK (for PEEK stators)		Titanium
	Prod No	Prod No	Prod No	Prod No	
2 µl	CSL2	CZSL2PK			
5 µl	CSL5	CZSL5PK			
10 µl	CSL10	CZSL10PK			CSL10TI
20 µl	CSL20	CZSL20PK			CSL20TI
50 µl	CSL50	CZSL50PK			CSL50TI
100 µl	CSL100	CZSL100PK			CSL100TI
250 µl	CSL250	CZSL250PK			CSL250TI
500 µl	CSL500	CZSL500PK **			CSL500TI
1 ml	CSL1K	CZSL1KPK **			CSL1KTI
2 ml	CSL2K	CZSL2KPK **			
5 ml	CSL5K	CZSL5KPK **			
10 ml	CSL10K	** max pressure 2500 psi			

ABOUT LOOPS

- Metal loops > 2 ml are made from 1/8" OD tubing with TIG welded 1/16" tube ends or reducing unions.
- Other materials are available in many sizes.

AUTOSAMPLER REPLACEMENT VALVES

The Cheminert Model C2 6 port valve is an excellent replacement for the valve originally supplied in many autosamplers, including autosamplers manufactured by Beckman, Gilson, Spark-Holland, CTC, Thermo Fisher, and Varian. Call technical support to determine which replacement is best for your application.

OPTIONAL FLOWPATH

Model C2 6 port valves can also be ordered with a dual 3-way rotor, as described in EPA Method 555.



To specify this flowpath, substitute "6X" for "6" in the valve or rotor prod no (e.g. C2-2006XEUHA).



Analytical internal sample injector

1/16" VALCO FITTINGS, 0.25 MM PORTS (.010")

SPECIFICATIONS

5,000 psi liq
75°C max

Stator: Metal
Rotor: Valcon H

5,000 psi liq
50°C max

Stator: PAEK
Rotor: Valcon E

Model C4 includes nuts and ferrules.

Valves with metal stators have stainless steel nuts and ferrules of the stator material.

Valves with PAEK stators have PEEK nuts and ferrules.

Universal actuator: 24 VDC, with autosensing 24 VDC power supply.

Includes RS232/485 serial interface. See page 174 for other interface options.

Note: The fitting detail pilot depth in PAEK HPLC stators is slightly longer than standard.



5,000 psi

Analytical

Internal sample

1/16"

0.25 mm

OPTIONS

- 0.05 µl sample volumes are also available.
- Loop fill port assembly for injection from front of the valve.
See page 41.

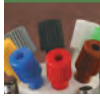
Sample volume	0.1 µl	0.2 µl	0.5 µl
	Prod No	Prod No	Prod No
N60 stainless stator			
Manual	C4-1004-.1	C4-1004-.2	C4-1004-.5
With universal actuator	C4-1004-.1EUHA	C4-1004-.2EUHA	C4-1004-.5EUHA
Replacement valve	C4-1004-.1D	C4-1004-.2D	C4-1004-.5D
Replacement rotor	C4-10R-.1	C4-10R-.2	C4-10R-.5
Replacement stator	C4-1C0	C4-1C0	C4-1C0
PAEK stator			
Manual	C4-1344-.1	C4-1344-.2	C4-1344-.5
With universal actuator	C4-1344-.1EUHA	C4-1344-.2EUHA	C4-1344-.51EUHA
Replacement valve	C4-1344-.1D	C4-1344-.2D	C4-1344-.5D
Replacement rotor	C4-13R-.1	C4-13R-.2	C4-13R-.5
Replacement stator	C4-1C4	C4-1C4	C4-1C4
Titanium stator			
Manual	C4-1034-.1	C4-1034-.2	C4-1034-.5
With universal actuator	C4-1034-.1EUHA	C4-1034-.2EUHA	C4-1034-.5EUHA
Replacement valve	C4-1034-.1D	C4-1034-.2D	C4-1034-.5D
Replacement rotor	C4-10R-.1	C4-10R-.2	C4-10R-.5
Replacement stator	C4-1C3	C4-1C3	C4-1C3



INTERNAL SAMPLE INJECTOR
1/16" stainless ZDV fittings

MORE INFO

- Actuators
 Microelectric 176
 Universal 174-175
 Materials
 Metals 246-247
 Polymers 248
 Valve rotors 249



CHEMINERT VALVES

Analytical continuous flow through-the-handle injectors


1/16" VALCO FITTINGS, 0.40 MM PORTS (.016")

- 5,000 psi
- Analytical
- Continuous flow
- Through-handle
- 1/16"
0.40 mm

Model C1CFI is available only in manual version.
 Position feedback included.
 Includes nuts and ferrules.
 Valves with stainless stators have stainless fittings.
 Valves with PEEK stators have PEEK fittings.
Note: The fitting detail pilot depth in PEEK HPLC stators is slightly longer than standard.



Prod No

N60 stainless stator	
6 port injector	C1CFI-2006
Replacement rotor	C1-20R6
Replacement stator	C1CF-2C06
PEAK stator	
6 port injector	C1CFI-2346
Replacement rotor	C1-23R6
Replacement stator	C1CF-2C46
Replacement injector fitting	
	C-261

SPECIFICATIONS

- 5,000 psi liq**
75°C max
Stator: Metal
Rotor: Valcon H
- 5,000 psi liq**
50°C max
Stator: PEEK
Rotor: Valcon E

OPTIONS

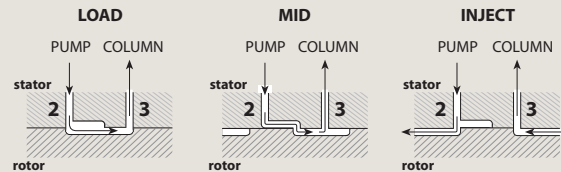
- 0.25 mm bore (.010") on page 142.



Model C1CFI
1/16" ZDV fittings

i CONTINUOUS FLOWPATH THROUGH-THE-HANDLE INJECTORS

An engraving on the stator maintains pump flow between the pump connection port (2) and the column connection port (3) during most of the switching cycle, virtually eliminating pressure spikes.



MODEL C1CFI



Analytical continuous flow injectors

1/16" VALCO FITTINGS, 0.40 MM PORTS (.016")

SPECIFICATIONS

5,000 psi liq
75°C max

Stator: Metal
Rotor: Valcon H

5,000 psi liq
50°C max

Stator: PEEK
Rotor: Valcon E

Model C6 includes nuts and ferrules.

Valves with stainless stators have stainless fittings.

Valves with PEEK stators have PEEK fittings.

Universal actuator: 24 VDC, with autosensing 24 VDC power supply.

Includes RS232/485 serial interface. See page 174 for other interface options.

Note: The fitting detail pilot depth in PEEK HPLC stators is slightly longer than standard.

5,000 psi

Analytical

Continuous flow

1/16"

0.40 mm

OPTIONS

- 0.25 mm bore (.010") on page 143.



CONTINUOUS FLOW INJECTOR
1/16" stainless ZDV fittings

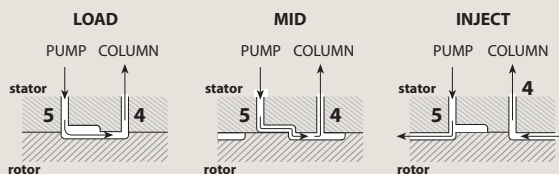


Prod No

N60 stainless stator	
Manual	C6-2006
With universal actuator	C6-2006EUHA
Replacement valve	C6-2006D
Replacement rotor	C2-20R6
Replacement stator	C6-2C06
PEAK stator	
Manual	C6-2346
With universal actuator	C6-2346EUHA
Replacement valve	C6-2346D
Replacement rotor	C2-23R6
Replacement stator	C6-2C46

CONTINUOUS FLOWPATH INJECTORS

An engraving on the stator maintains pump flow between the pump connection port (5) and the column connection port (4) during most of the switching cycle, virtually eliminating pressure spikes.



MODEL C6

Sample loops

Each metal loop includes two stainless steel nuts and ferrules. Each PEEK loop includes two PEEK nuts and ferrules.

These loops are for use with valves on pages 140, 142, 143, 144, 146, 147, 163, 164, 165, and 167.



Volume	Stainless Steel	PEEK (for PEEK stators)	Titanium
	Prod No	Prod No	
2 µl	CSL2	CZSL2PK	Prod No
5 µl	CSL5	CZSL5PK	
10 µl	CSL10	CZSL10PK	CSL10TI
20 µl	CSL20	CZSL20PK	CSL20TI
50 µl	CSL50	CZSL50PK	CSL50TI
100 µl	CSL100	CZSL100PK	CSL100TI
250 µl	CSL250	CZSL250PK	CSL250TI
500 µl	CSL500	CZSL500PK **	CSL500TI
1 ml	CSL1K	CZSL1KPK **	CSL1KTI
2 ml	CSL2K	CZSL2KPK **	
5 ml	CSL5K	CZSL5KPK **	
10 ml	CSL10K	** max pressure 2500 psi	

MORE INFO

Actuators

Microelectric 176
Universal 174-175

Materials

Metals 246-247
Polymers 248
Valve rotors 249

Nuts

Metal 12
PEEK 48

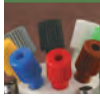
Ferrules

Metal 14
PEEK 48

ABOUT LOOPS

- Other materials are available in many sizes: Electroformed Nickel, Hastelloy C, Nickel 200, and PTFE.
- Metal loops > 2 ml are made from 1/8" OD tubing with TIG welded 1/16" tube ends or reducing unions.
- Sample loop shape and dimensions may vary from batch to batch due to fluctuations in tubing ID. Loop volume is controlled as closely as possible, but is not calibrated.

Low pressure



CHEMINERT VALVES

Valves with 1/16" VALCO ZDV FITTINGS

0.75 MM PORTS (.030")

Low pressure

10-32 ZDV

1/16"

0.75 mm

Model C22Z includes Valco ZDV PEEK nuts and ferrules.
 Universal actuator: 24 VDC, with autosensing 24 VDC power supply.
 Includes RS232/485 serial interface. See page 174 for other interface options.
 Sample loops are not included with valves. Order separately.

SPECIFICATIONS

250 psi liq

75°C max

Stator: PPS

Rotor: Valcon E2

OPTIONS

- Purge option
- Other polymeric rotors and stators are available.
- 12 and 14 port versions are available.



4 Port

Prod No



6 Port

Prod No



8 Port

Prod No



10 Port

Prod No

Manual	C22Z-3184	C22Z-3186	C22Z-3188	C22Z-3180
With universal act.	C22Z-3184EUHA	C22Z-3186EUHA	C22Z-3188EUHA	C22Z-3180EUHA
Replacement valve	C22Z-3184D	C22Z-3186D	C22Z-3188D	C22Z-3180D
Replacement rotor	C12-314	C12-316	C12-318	C12-310
Replacement stator	C22Z-384	C22Z-386	C22Z-388	C22Z-380



10 PORT VALVE
1/16" PEEK ZDV fittings



Sample loops

Loops include PEEK nuts and ferrules. Loops smaller than 500 µl are made from 1/16" OD tubing; loops 500 µl or bigger are made from 1/8" OD tubing with polymeric unions and 1/16" ends.

These loops are for use with valves on this page.

	FEP	PTFE	PEEK
Volume	Prod No	Prod No	Prod No
5 µl	CZSL5FEP	CZSL5TF	CZSL5PK
10 µl	CZSL10FEP	CZSL10TF	CZSL10PK
20 µl	CZSL20FEP	CZSL20TF	CZSL20PK
50 µl	CZSL50FEP	CZSL50TF	CZSL50PK
100 µl	CZSL100FEP	CZSL100TF	CZSL100PK
250 µl	CZSL250FEP	CZSL250TF	CZSL250PK
500 µl	CZSL500FEP	CZSL500TF	CZSL500PK
1 ml	CZSL1KFEP	CZSL1KTF	CZSL1KPK
2 ml	CZSL2KFEP	CZSL2KTF	CZSL2KPK

ABOUT LOOPS

- Sample loop shape and dimensions may vary from batch to batch due to fluctuations in tubing ID. Loop volume is controlled as closely as possible, but is not calibrated.

PURGE OPTION

The purge option permits a flow of liquid or gas to flush the valve interior of potentially toxic or corrosive components. We recommend this option for applications using materials (such as salt solutions) that could damage the metal parts of the valve.

Consult our technical staff for details.



Valves WITH 1/4-28 FITTING DETAILS FOR 1/16" TUBING

0.75 MM PORTS (.030")

SPECIFICATIONS

250 psi liq
75°C max

Stator: PPS
Rotor: Valcon E2

Model C22 includes multicolored Cheminert 1/4-28 flangeless fittings for 1/16" tubing.
Universal actuator: 24 VDC, with autosensing 24 VDC power supply.
Includes RS232/485 serial interface. See page 174 for other interface options.
Sample loops are not included with valves. Order separately.

Low pressure

1/4-28 Internal

1/16"

0.75 mm



4 Port

Prod No



6 Port

Prod No



8 Port

Prod No



10 Port

Prod No

Manual	C22-3184	C22-3186	C22-3188	C22-3180
With universal actuator	C22-3184EUHA	C22-3186EUHA	C22-3188EUHA	C22-3180EUHA
Replacement valve	C22-3184D	C22-3186D	C22-3188D	C22-3180D
Replacement rotor	C22-314	C22-316	C22-318	C22-310
Replacement stator	C22-384	C22-386	C22-388	C22-380



6 PORT VALVE
1/4-28 fittings

Valves WITH 1/4-28 FITTING DETAILS FOR 1/8" TUBING

1.50 MM PORTS (.060")

SPECIFICATIONS

250 psi liq
75°C max

Stator: PPS
Rotor: Valcon E2

Model C22 includes multicolored Cheminert 1/4-28 flangeless fittings for 1/8" tubing.
Universal actuator: 24 VDC, with autosensing 24 VDC power supply.
Includes RS232/485 serial interface. See page 174 for other interface options.
Sample loops are not included with valves. Order separately.

Low pressure

1/4-28 Internal

1/8"

1.50 mm

4 Port

Prod No

6 Port

Prod No

8 Port

Prod No

10 Port

Prod No

Manual	C22-6184	C22-6186	C22-6188	C22-6180
With universal actuator	C22-6184EUHA	C22-6186EUHA	C22-6188EUHA	C22-6180EUHA
Replacement valve	C22-6184D	C22-6186D	C22-6188D	C22-6180D
Replacement rotor	C22-614	C22-616	C22-618	C22-610
Replacement stator	C22-684	C22-686	C22-688	C22-680

Sample loops

Loops include flangeless fittings with white color nuts.
Loops smaller than 250 µl are made from 1/16" OD tubing; loops 250 µl or bigger are made from 1/8" OD tubing.
These loops are for use with valves on this page.



Volume	FEP	PTFE	PEEK
	Prod No	Prod No	Prod No
20 µl	CFSL20FEP	CFSL20TF	CFSL20PK
50 µl	CFSL50FEP	CFSL50TF	CFSL50PK
100 µl	CFSL100FEP	CFSL100TF	CFSL100PK
250 µl	CFSL250FEP	CFSL250TF	CFSL250PK
500 µl	CFSL500FEP	CFSL500TF	CFSL500PK
1 ml	CFSL1KFEP	CFSL1KTF	CFSL1KPK
2 ml	CFSL2KFEP	CFSL2KTF	CFSL2KPK

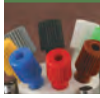
MORE INFO

Actuators
Microelectric 176
Universal 174-175
Materials
Polymers 248
Valve rotors 249

ABOUT LOOPS

- Sample loop shape and dimensions may vary from batch to batch due to fluctuations in tubing ID. Loop volume is controlled as closely as possible, but is not calibrated.

Low pressure



CHEMINERT VALVES

Internal sample injectors

1/16" VALCO ZDV FITTINGS, 0.40 MM PORTS (.016")

Low pressure

Internal sample

10-32 ZDV

1/16"

0.40 mm

Model C24Z includes Valco ZDV PEEK nuts and ferrules.
 Universal actuator: 24 VDC, with autosensing 24 VDC power supply.
 Includes RS232/485 serial interface. See page 174 for other interface options.



SPECIFICATIONS

250 psi liq
 75°C max
 Stator: PPS
 Rotor: Valcon E2

Sample volume	0.2 µl	0.5 µl	1 µl
	Prod No	Prod No	Prod No
Manual	C24Z-2184-.2	C24Z-2184-.5	C24Z-2184-1
With universal actuator	C24Z-2184-.2EUHA	C24Z-2184-.5EUHA	C24Z-2184-1EUHA
Replacement valve	C24Z-2184-.2D	C24Z-2184-.5D	C24Z-2184-1D
Replacement rotor	C24-10R-.2	C24-10R-.5	C24-10R-1
Replacement stator	C24Z-1C8	C24Z-1C8	C24Z-1C8

OPTIONS

- 2.0 µl sample volumes are also available.
- Purge option



INTERNAL SAMPLE INJECTOR
 1/16" PEEK ZDV fittings

Internal sample injectors, 1/4-28 FOR 1/16" TUBING

0.50 MM PORTS (.020")

Low pressure

Internal sample

1/4-28 Internal

1/16"

0.50 mm

Model C24 includes multicolored Cheminert 1/4-28 flangeless fittings for 1/16" tubing.
 Universal actuator: 24 VDC, with autosensing 24 VDC power supply.
 Includes RS232/485 serial interface. See page 174 for other interface options.



SPECIFICATIONS

250 psi liq
 75°C max
 Stator: PPS
 Rotor: Valcon E2

Sample volume	0.5 µl	1 µl	2 µl
	Prod No	Prod No	Prod No
Manual	C24-2184-.5	C24-2184-1	C24-2184-2
With universal act.	C24-2184-.5EUHA	C24-2184-1EUHA	C24-2184-2EUHA
Replacement valve	C24-2184-.5D	C24-2184-1D	C24-2184-2D
Replacement rotor	C24-10R-.5	C24-10R-1	C24-10R-2
Replacement stator	C24-1C8	C24-1C8	C24-1C8

OPTIONS

- 0.2 µl sample volumes are also available.
- Purge option
- Other polymeric rotors and stators are available. Consult the factory for prices and information.



INTERNAL SAMPLE INJECTOR
 1/4-28 fittings

PURGE OPTION

The purge option permits a flow of liquid or gas to flush the valve interior of potentially toxic or corrosive components. We recommend this option for applications using materials (such as salt solutions) that could damage the metal parts of the valve.

Consult our technical staff for details.



Valves WITH 1/2-20 FITTINGS FOR 1/4" TUBING

2.9 – 3.2 mm (.110" – .125") PORTS

SPECIFICATIONS

100 psi liq
50°C max

Stator: PAEK
Rotor: Valcon E2

Manual version not available.
Model C42R includes Cheminert 1/2-20 flangeless fittings for 1/4" tubing, Delrin nuts, and CTFE ferrules.
Universal actuator: 24 VDC, with autosensing 24 VDC power supply.
Includes RS232/485 serial interface. See page 174 for other interface options.

Low pressure

1/2-20 Internal

1/4" 2.8 - 3.2 mm

OPTIONS

- 10 port version available with 2mm (.080") bore
- Other polymeric rotors and stators are available.



4 Ports
3.2 mm (.125")
Prod No



6 Ports
3.2 mm (.125")
Prod No



8 Ports
2.8 mm (.110")
Prod No

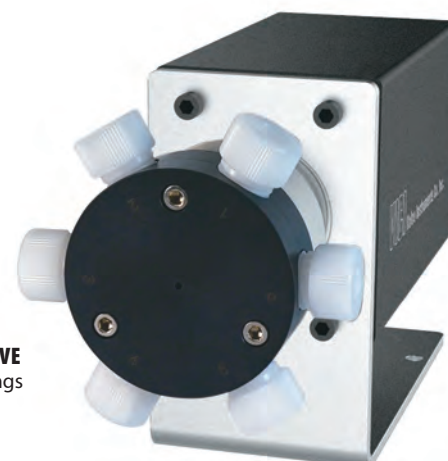
With universal actuator	C42R-8144EUTA	C42R-8146EUTA	C42R-8148EUTA
Replacement valve	C42R-8144D	C42R-8146D	C42R-8148D
Replacement rotor	C42R-81R4	C42R-81R6	C42R-81R8
Replacement stator	C42R-8C44	C42R-8C46	C42R-8C48

Fittings 1/2-20



	Prod No
Delrin nut	CFL-4D
CTFE ferrule	CFL-CB4KF-S

Call for a quote on CTFE or PPS 1/2-20 nuts and plugs.



6 PORT VALVE
1/2-20 fittings

Valves WITH 1/2-20 FITTINGS FOR 1/4" TUBING

3.9 – 4.6 mm (.155" – .180") PORTS

SPECIFICATIONS

100 psi liq
50°C max

Stator: PAEK
Rotor: Valcon E2

Manual version not available.
Model C42R includes Cheminert 1/2-20 flangeless fittings for 1/4" tubing, Delrin nuts, and CTFE ferrules.
Universal actuator: 24 VDC, with autosensing 24 VDC power supply.
Includes RS232/485 serial interface. See page 174 for other interface options.

Low pressure

1/2-20 Internal

1/4" 3.9 - 4.6 mm

OPTIONS

- Other polymeric rotors and stators are available.



4 Ports
4.6 mm (.180")
Prod No

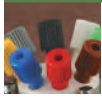


6 Ports
3.9 mm (.155")
Prod No

With universal actuator	C42R-9144EUTA	C42R-9146EUTA
Replacement valve	C42R-9144D	C42R-9146D
Replacement rotor	C42R-91R4	C42R-91R6
Replacement stator	C42R-9C44	C42R-9C46

MORE INFO

- Actuators
Microelectric176
Universal 174-175
Materials
Metals. 246-247
Polymers248
Valve rotors.249



CHEMINERT VALVES

APPLICATIONS FOR CHEMINERT TWO POSITION VALVES

These illustrations show basic sample injection techniques using Cheminert two position valves. With rare exceptions, there is no difference between switching valves and external volume sampling valves, so the same valve can be used for either function.

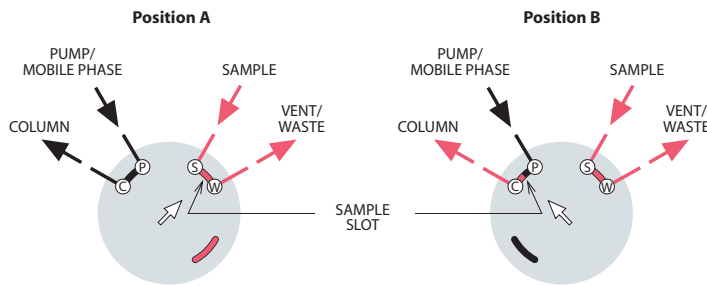
The unique advantage of 8 and 10 port valves is that they reduce extra column volume by combining sampling and switching functions in a single valve. This minimizes expense, maintenance, service, and risk of leaks as compared to multiple 6 port valve systems.

SEE VIDEOS

See VICI valve applications in motion in the support section of vici.com.



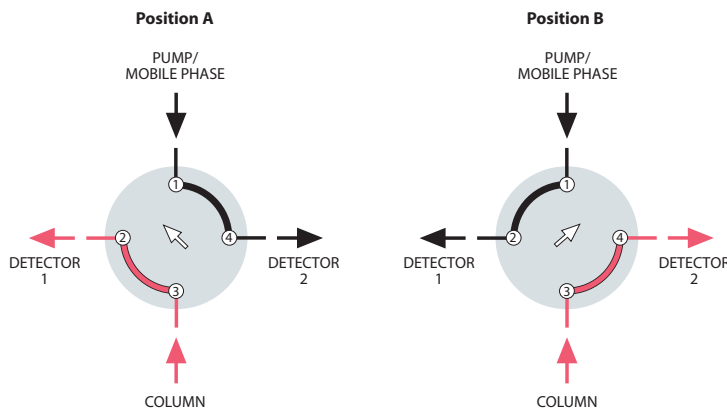
4 PORT – INTERNAL SAMPLE INJECTOR



MICROVOLUME SAMPLE INJECTION

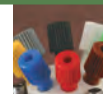
The internal sample (fixed volume) flowpath is used when very small sample volumes are required. The sample size is determined by a passage engraved on the valve rotor, allowing precise, repeatable injections. In Position A, the sample flows through the sample passage while the mobile phase flows through to the column. The third passage is inactive. In Position B, the sample passage is in line with the column and the mobile phase injects the contents of the sample passage into the column. The passage which was inactive in Position A allows the sample to continue flowing without interruption.

4 PORT – SWITCHING VALVE

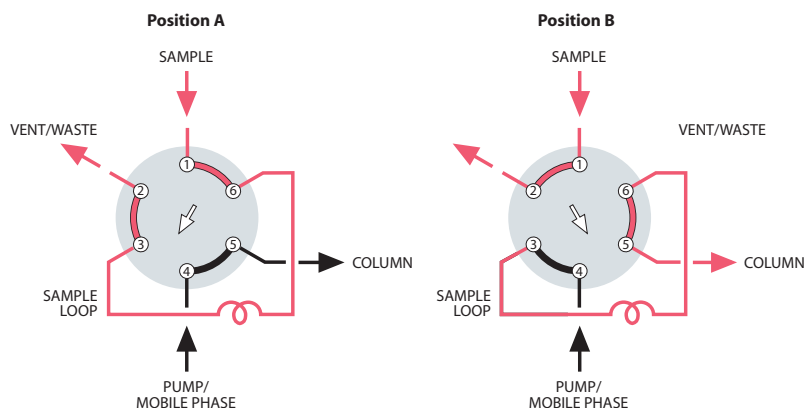


DETECTOR SELECTION FROM TWO COLUMNS OR ONE COLUMN AND AUXILIARY CARRIER

This unique configuration allows analyses of different parts of one analysis with two different detectors, without splitting or multiple injections.



6 PORT – EXTERNAL SAMPLE INJECTOR



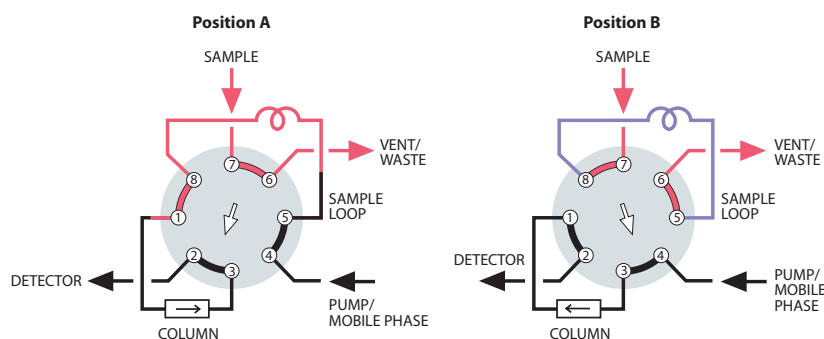
SAMPLE INJECTION

With the valve in Position A, sample flows through the external loop while the mobile phase flows directly through to the column. When the valve is switched to Position B, the sample contained in the sample loop and valve flow passage is displaced by the mobile phase and is carried into the column.

Note: Especially for partial-filled loops, the flow direction of the mobile phase through the loop should be opposite (backflush) to the flow direction during the loading of the loop.

More applicationspages 100-101

8 PORT – SAMPLING/SWITCHING

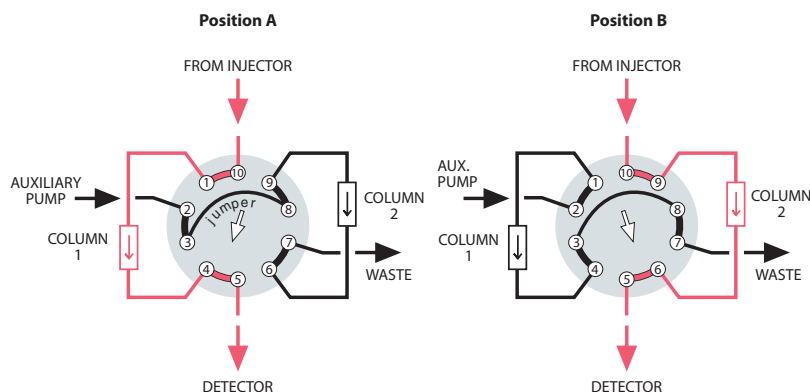


LOOP SAMPLING WITH BACKFLUSH TO DETECTOR

One valve performs the functions of sampling and backflush valves, simplifying operation and reducing cost. When components of interest are detected, the strongly retained components are backflushed and removed from the column without temperature programming.

More applications page 101

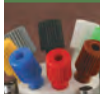
10 PORT – SAMPLING/SWITCHING



ALTERNATE COLUMN REGENERATION

When columns must be regenerated following each analysis, this technique permits automation of the process. While one column performs the analysis, the second column undergoes regeneration through use of an auxiliary pump. Once the first analysis is complete, the valve is switched and the regenerated column is ready for analytical use.

More applicationspages 102-103



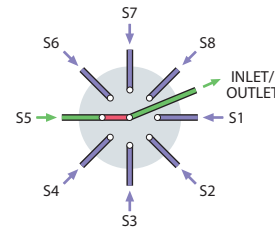
CHEMINERT VALVES

15,000 psi UHPLC Nanovolume® selectors

- 15,000 psi**
- Nanobore**
- Stream selector**
- 1/32"**
150 µm

Model C85NX includes Valco stainless steel fittings.
 Manual version not available.
 Universal actuator: 24 VDC, with autosensing 24 VDC power supply.
 Includes RS232/485 serial interface.
 See page 174 for other interface options.

1/32" VALCO FITTINGS, 150 MICRON PORTS (.006")



SPECIFICATIONS

15,000 psi liq
50°C max
 Stator: Stainless with inert coating
 Rotor: Valcon E3

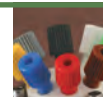
OPTIONS

- 100 micron (.004") bore
- 250 micron (.010") bore
- 10,000 and 20,000 psi versions available
- 4 positions

	6 Position	8 Position	10 Position
	<i>Prod No</i>	<i>Prod No</i>	<i>Prod No</i>
With universal actuator	C85NX-6676EUHA	C85NX-6678EUHA	C85NX-6670EUHA
Replacement valve	C85NX-6676D	C85NX-6678D	C85NX-6670D
Replacement rotor	C75N-66R6	C75N-66R8	C75N-66R0
Replacement stator	C75N-6C76	C75N-6C78	C75N-6C70



10 POSITION SELECTOR
 1/32" stainless Valco fittings



15,000 psi UHPLC microbore selectors

1/16" VALCO FITTINGS, 0.25 MM PORTS (.010")

SPECIFICATIONS

15,000 psi liq
50°C max

Stator: Stainless with inert coating

Rotor: Valcon E3

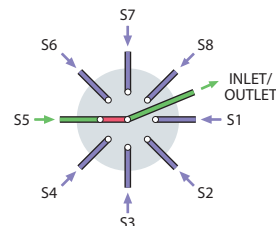
Model C85 includes Valco stainless steel fittings.

Manual version not available.

Universal actuator: 24 VDC, with autosensing 24 VDC power supply.

Includes RS232/485 serial interface.

See page 174 for other interface options.



15,000 psi

Microbore

Stream selector

1/16"

0.25 mm

OPTIONS

- 150 micron (.006") bore
- 10,000 and 20,000 psi versions available
- 4 positions

	6 Position Prod No	8 Position Prod No	10 Position Prod No
With universal actuator	C85-1676EUHA	C85-1678EUHA	C85-1670EUHA
Replacement valve	C85-1676D	C85-1678D	C85-1670D
Replacement rotor	C75-16R6	C75-16R8	C75-16R0
Replacement stator	C75-1C76	C75-1C78	C75-1C70



10 POSITION SELECTOR
1/16" stainless Valco fittings

TECH TIP

Increasing the pressure rating shortens valve lifetime.

MORE INFO

Actuators

Microelectric176

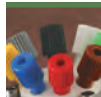
Universal 174-175

Materials

Metals 246-247

Polymers248

Valve rotors.249



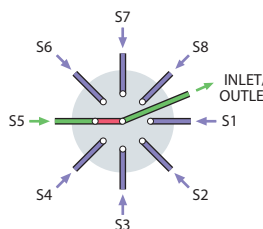
CHEMINERT VALVES

HPLC stream selectors

1/16" VALCO ZDV FITTINGS, 0.40 MM PORTS (.016")

- 5,000 psi
- Stream selector
- 10-32 ZDV
- 1/16"
0.40 mm

Model C5 includes nuts and ferrules.
 Valves with metal stators have stainless steel nuts and ferrules of the stator material.
 Valves with PEEK stators have PEEK nuts and ferrules.
 Universal actuator: 24 VDC, with autosensing 24 VDC power supply.
 Includes RS232/485 serial interface.
 See page 174 for other interface options.



SPECIFICATIONS

5000 psi liq
75°C max
 Stator: Metal
 Rotor: Valcon H
5000 psi liq
50°C max
 Stator: PEEK
 Rotor: Valcon E

OPTIONS

- 2", 3", 4", and 6" standoffs
- Hastelloy C stator
- Optional 0.15 mm (.006") and 0.25 mm (.010") bores available
- Optional 0.75 mm (.030") bore for Prep HPLC available

	4 Position <i>Prod No</i>	6 Position <i>Prod No</i>	8 Position <i>Prod No</i>	10 Position <i>Prod No</i>
N60 stainless stator				
Manual	C5-2004	C5-2006	C5H-2008	C5H-2000
With universal actuator	C5-2004EUHA	C5-2006EUHA	C5H-2008EUHA	C5H-2000EUHA
Replacement valve	C5-2004D	C5-2006D	C5H-2008D	C5H-2000D
Replacement rotor	C5-20R4	C5-20R6	C5-20R8H	C5-20R0H
Replacement stator	C5-2C04	C5-2C06	C5-2C08H	C5-2C00H
PEAK stator				
Manual	C5-2344	C5-2346	C5H-2348	C5H-2340
With universal actuator	C5-2344EUHA	C5-2346EUHA	C5H-2348EUHA	C5H-2340EUHA
Replacement valve	C5-2344D	C5-2346D	C5H-2348D	C5H-2340D
Replacement rotor	C5-23R4	C5-23R6	C5-23R8H	C5-23R0H
Replacement stator	C5-2C44	C5-2C46	C5-2C48H	C5-2C40H
Titanium stator				
Manual	C5-2034	C5-2036	C5H-2038	C5H-2030
With universal actuator	C5-2034EUHA	C5-2036EUHA	C5H-2038EUHA	C5H-2030EUHA
Replacement valve	C5-2034D	C5-2036D	C5H-2038D	C5H-2030D
Replacement rotor	C5-20R4	C5-20R6	C5-20R8H	C5-20R0H
Replacement stator	C5-2C34	C5-2C36	C5-2C38H	C5-2C30H

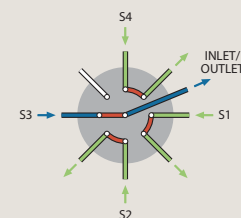


6 POSITION SELECTOR
 1/16" stainless Valco fittings

i OPTIONAL FLOWPATH

Model C5F, the flow-through version, is similar to the C5 but its non-selected streams continue flowing through individual outlets. 3, 4, and 5 positions are available.

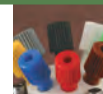
Consult the factory for C5F prices and information.



Model C5F
 schematic diagram

➔ MORE INFO

Manifolds page 36



HPLC column selector systems

WITH 1/16" VALCO ZDV FITTINGS, 0.40 MM PORTS (.016")

SPECIFICATIONS

5000 psi liq
75°C max
 Stator: Metal
 Rotor: Valcon H

5000 psi liq
50°C max
 Stator: PAEK
 Rotor: Valcon E

The system comprises two stream selection valves mounted on a single universal actuator. (See plumbing diagram below.) The actuator as supplied is set up for control via serial interface, but other options are available. (See page 174.)

5,000 psi
Column selector system
10-32 ZDV
1/16" 0.40 mm

Model C5 column selector system includes nuts and ferrules.
 Valves with stainless stators have stainless fittings.
 Valves with PAEK stators have PEEK fittings.
 Includes universal actuator: 24 VDC, with autosensing 24 VDC power supply.
 Includes RS232/485 serial interface. See page 174 for other interface options.

OPTIONS

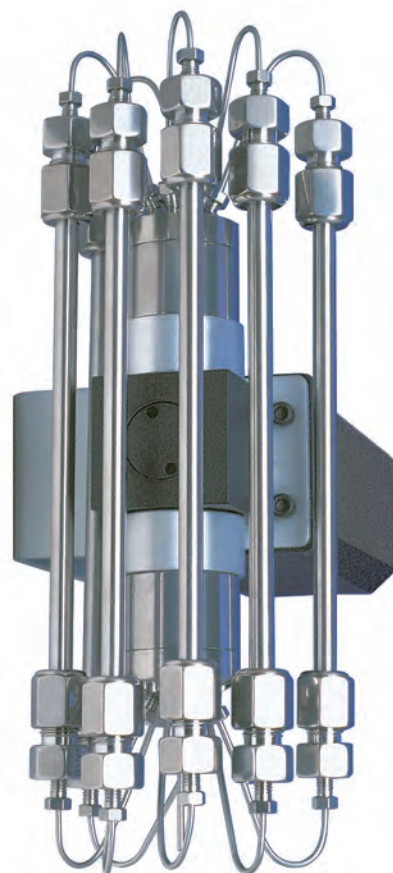
- 2", 3", 4", and 6" standoffs
- Hastelloy C stator
- Optional 0.25 mm (.010") and 0.15 mm (.006") bores available
- Optional 0.75 mm (.030") bore for Prep HPLC available

	6 Column Prod No	8 Column Prod No	10 Column Prod No
N60 stainless stator			
System	C5-2006EUTDA	C5H-2008EUTDA	C5H-2000EUTDA
Replacement rotor	C5-20R6	C5-20R8H	C5-20R0H
PAEK stator			
System	C5-2346EUTDA	C5H-2348EUTDA	C5H-2340EUTDA
Replacement rotor	C5-23R6	C5-23R8H	C5-23R0H

Note: Contact factory for replacement valves and stators, as valves for dual drive assemblies have mirror image stators.

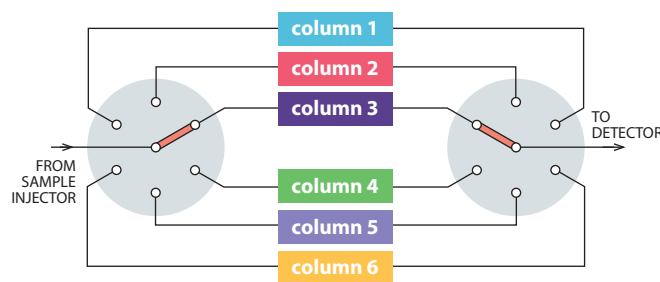
Prod No

RS-232 interface cable
I-22697



HPLC COLUMN SELECTOR SYSTEM
 Columns not included

SCHEMATIC



ORDERING STATORS

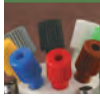
Valves for dual drive assemblies have mirror image stators. Consult Technical Support for correct product number before ordering.

UHPLC COLUMN SELECTOR SYSTEMS

Consult the factory for more information on UHPLC systems.

MORE INFO

- Actuators
 Microelectric 176
 Universal 174-175
- Materials
 Metals 246-247
 Polymers 248
 Valve rotors 249
- Standoff assemblies 187-189



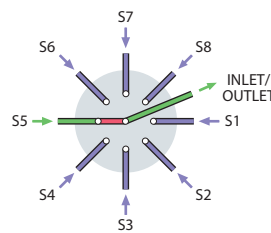
CHEMINERT VALVES

Stream selectors

1/16" VALCO ZDV FITTINGS, 0.75 MM PORTS (.030")

- Low pressure
- Stream selector
- 10-32 ZDV
- 1/16" 0.75 mm

Model C25Z includes Valco ZDV PEEK nuts and ferrules.
 Universal actuator: 24 VDC, with autosensing 24 VDC power supply.
 Includes RS232/485 serial interface.
 See page 174 for other interface options.



SPECIFICATIONS

250 psi liq
75°C max
 Stator: PPS
 Rotor: Valcon E2

OPTIONS

- 4 and 12 positions available
- 2", 3", 4", and 6" standoffs
- Other polymeric materials are available. Consult the factory.

	6 Position <i>Prod No</i>	8 Position <i>Prod No</i>	10 Position <i>Prod No</i>	14 Position <i>Prod No</i>
Manual	C25Z-3186	C25Z-3188	C25Z-3180	C25Z-31814
With universal act.	C25Z-3186EUHA	C25Z-3188EUHA	C25Z-3180EUHA	C25Z-31814EUHA
Replacement valve	C25Z-3186D	C25Z-3188D	C25Z-3180D	C25Z-31814D
Replacement rotor	C15-310	C15-310	C15-310	C25Z-325
Replacement stator	C25Z-386	C25Z-388	C25Z-380	C25Z-38-14

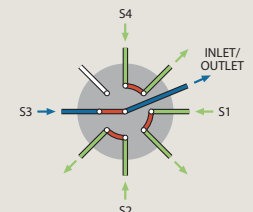


10 POSITION SELECTOR
 1/16" PEEK ZDV fittings

i OPTIONAL FLOWPATH

Model C25ZF, the flow-through version, is similar to the C25Z but its non-selected streams continue flowing through individual outlets, instead of being dead-ended. 3, 4, 5, 6, and 7 positions are available.

Consult the factory for C25ZF prices and information.





Stream selectors

1/4-28 FITTINGS FOR 1/16" TUBING, 0.75 MM PORTS (.030")

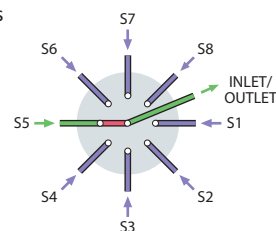
SPECIFICATIONS

250 psi liq
75°C max

Stator: PPS
Rotor: Valcon E2

Model C25 includes multicolored Cheminert 1/4-28 flangeless fittings for 1/16" tubing.

Universal actuator: 24 VDC, with autosensing 24 VDC power supply. Includes RS232/485 serial interface. See page 174 for other interface options.



Low pressure

Stream selector

1/4-28 Internal

1/16"

0.75 mm

OPTIONS

- 2", 3", 4", and 6" standoffs
- CTFE stator

	4 Position <i>Prod No</i>	6 Position <i>Prod No</i>	8 Position <i>Prod No</i>	10 Position <i>Prod No</i>
Manual	C25-3184	C25-3186	C25-3188	C25-3180
With universal actuator	C25-3184EUHA	C25-3186EUHA	C25-3188EUHA	C25-3180EUHA
Replacement valve	C25-3184D	C25-3186D	C25-3188D	C25-3180D
Replacement rotor	C25-314	C25-316	C25-318	C25-310
Replacement stator	C25-384	C25-386	C25-388	C25-380

Stream selectors

1/4-28 FITTINGS FOR 1/8" TUBING, 1.50 MM PORTS (.060")

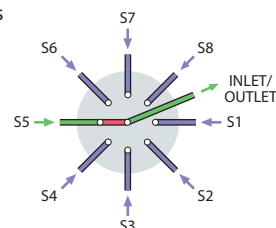
SPECIFICATIONS

250 psi liq
75°C max

Stator: PPS
Rotor: Valcon E2

Model C25 includes multicolored Cheminert 1/4-28 flangeless fittings for 1/8" tubing.

Universal actuator: 24 VDC, with autosensing 24 VDC power supply. Includes RS232/485 serial interface. See page 174 for other interface options.



Low pressure

Stream selector

1/4-28 Internal

1/8"

1.50 mm

OPTIONS

- 2", 3", 4", and 6" standoffs
- CTFE stator

	4 Position <i>Prod No</i>	6 Position <i>Prod No</i>	8 Position <i>Prod No</i>	10 Position <i>Prod No</i>
Manual	C25-6184	C25-6186	C25-6188	C25-6180
With universal actuator	C25-6184EUHA	C25-6186EUHA	C25-6188EUHA	C25-6180EUHA
Replacement valve	C25-6184D	C25-6186D	C25-6188D	C25-6180D
Replacement rotor	C25-614	C25-616	C25-618	C25-610
Replacement stator	C25-684	C25-686	C25-688	C25-680

i OPTIONAL FLOWPATH

Model C25F is the flow-through version of C25. (See discussion on facing page.) 3, 4, 5, 6, and 7 positions are available.

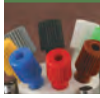
Consult the factory for C25F prices and information.

➔ MORE INFO

- Actuators
Microelectric 176
Universal 174-175
- Materials
Metals. 246-247
Polymers 248
Valve rotors. 249
- Standoff assemblies 187-189



10 POSITION SELECTOR
1/4-28 Cheminert flangeless fittings



CHEMINERT VALVES

Stream selectors

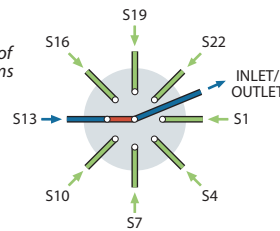
1/16" CHEMINERT FITTINGS

- Low pressure
- Stream selector
- 6-40 flat bottom
- 1/16"

Model C25G includes 6-40 PEEK nut/bushings for 1/16" OD tubing.

Universal actuator: 24 VDC, with autosensing 24 VDC power supply. Includes RS232/485 serial interface. See page 174 for other interface options.

(For clarity, only eight of the twenty-four streams are illustrated.)



SPECIFICATIONS

100 psi liq
50°C max
 Stator: PEEK
 Rotor: Valcon M

OPTIONS

- Fittings for use with 1/32" tubing
- 2", 3", 4", and 6" standoffs
- Consult the factory for optional materials.

	20 Position 0.67 mm (.026") <i>Prod No</i>	24 Position 0.61 mm (.024") <i>Prod No</i>	28 Position 0.56 mm (.022") <i>Prod No</i>
--	---	---	---

With universal actuator	C25G-24520EUTA	C25G-24524EUTA	C25G-24528EUTA
Replacement valve	C25G-24520D	C25G-24524D	C25G-24528D
Replacement rotor	C25G-24R20	C25G-24R24	C25G-24R28
Replacement stator	C25G-2C520	C25G-2C524	C25G-2C528

Fittings

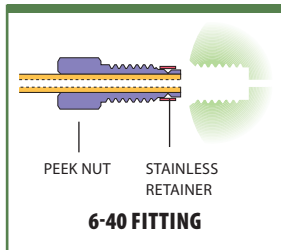
6-40

The C25G selector uses unique 6-40 fittings for flat-bottomed fitting details. As the fitting is tightened, the grooved area (supported by the stainless retainer) compresses enough to grip the tube for a low pressure connection. The bushing/nut is natural PEEK.

	<i>Tube size</i>	<i>Prod No</i>	
6-40 one piece nut/bushing with retainer	1/16"	CNNF1PK	
	1/32"	CNNF.5PK	
Tightening tool		CGFT	



24 POSITION SELECTOR
1/16" 6-40 PEEK fittings



MORE INFO

See Technical Note 824 for installation of these fittings.
www.vici.com/support/tn/tn824.pdf

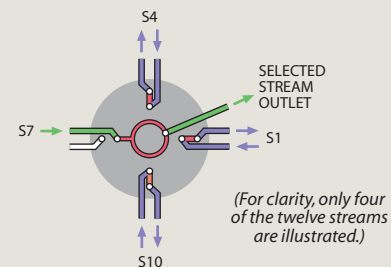


OPTIONAL FLOWPATHS

Model C25G valves select and isolate one of 20-28 streams, with the remainder dead-ended.

Model C25GF, the flow-through version, is similar to the C25G but its non-selected streams continue flowing through individual outlets. 10, 12, and 14 positions are available.

Call for pricing and information.



MODEL C25GF SCHEMATIC



Stream selectors WITH 1/2-20 FITTINGS FOR 1/4" TUBING

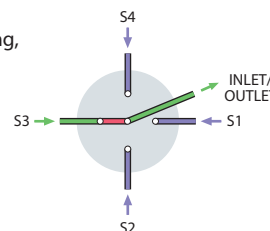
2.9 – 3.2 mm (.110" – .125") PORTS

SPECIFICATIONS

100 psi liq
50°C max

Stator: PAEK
Rotor: Valcon E2

Manual version not available.
Model C45R includes Cheminert 1/2-20 flangeless fittings for 1/4" tubing, Delrin nuts, and CTFE ferrules.
Universal actuator: 24 VDC, with autosensing 24 VDC power supply. Includes RS232/485 serial interface.
See page 174 for other interface options.



Low pressure

Stream selector

1/2-20 Internal

1/4" 2.8 - 3.2 mm

OPTIONS

- Other polymeric rotors and stators are available.
- 10 position version available.

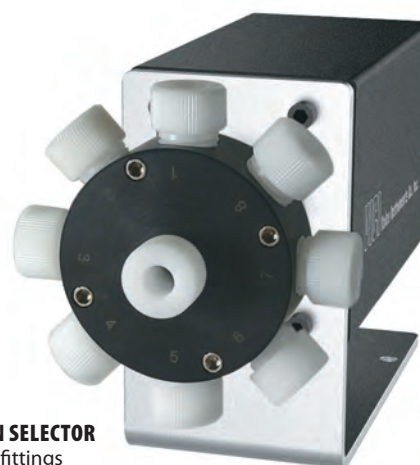
	4 Position 3.2 mm (.125") <i>Prod No</i>	6 Position 3.2 mm (.125") <i>Prod No</i>	8 Position 2.8 mm (.110") <i>Prod No</i>
With universal actuator	C45R-8144EUTA	C45R-8146EUTA	C45R-8148EUTA
Replacement valve	C45R-8144D	C45R-8146D	C45R-8148D
Replacement rotor	C45R-81R4	C45R-81R6	C45R-81R8
Replacement stator	C45R-8C44	C45R-8C46	C45R-8C48

Fittings 1/2-20



	<i>Prod No</i>
Delrin nut	CFL-4D
CTFE ferrule	CFL-CB4KF-S

Call for a quote on CTFE nuts and 1/2-20 plugs.



8 POSITION SELECTOR
1/2-20 fittings

Stream selectors WITH 1/2-20 FITTINGS FOR 1/4" TUBING

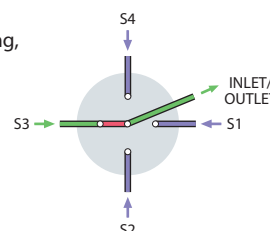
3.9 – 4.6 mm (.155" – .180") PORTS

SPECIFICATIONS

100 psi liq
50°C max

Stator: PAEK
Rotor: Valcon E2

Manual version not available.
Model C45R includes Cheminert 1/2-20 flangeless fittings for 1/4" tubing, Delrin nuts, and CTFE ferrules.
Universal actuator: 24 VDC, with autosensing 24 VDC power supply. Includes RS232/485 serial interface.
See page 174 for other interface options.



Low pressure

Stream selector

1/2-20 Internal

1/4" 3.9 - 4.6 mm

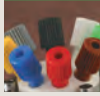
OPTIONS

- Other polymeric rotors and stators are available.

	4 Position 4.6 mm (.180") <i>Prod No</i>	6 Position 3.9 mm (.155") <i>Prod No</i>
With universal actuator	C45R-9144EUTA	C45R-9146EUTA
Replacement valve	C45R-9144D	C45R-9146D
Replacement rotor	C45R-91R4	C45R-91R6
Replacement stator	C45R-9C44	C45R-9C46

MORE INFO

- Actuators
Microelectric176
Universal 174-175
- Materials
Metals 246-247
Polymers248
Valve rotors.....249



CHEMINERT VALVES

Integrated motor/valves

1/16" VALCO FITTINGS, 0.25 MM PORTS (.010")

- 5,000 psi**
- Microbore**
- Integrated**
- 1/16"**
- 0.25 mm**
- CE ready***

Model C52 includes nuts and ferrules.
 Valves with stainless stators have stainless fittings.
 Valves with PAEK stators have PEEK fittings.
 See page 131 for more information on integrated motor/valves.
Also available in vertical port version. Contact the factory.
 Note: The fitting detail pilot depth in PAEK HPLC stators is slightly longer than standard.



4 Port
Prod No



6 Port*
Prod No



8 Port
Prod No



10 Port
Prod No

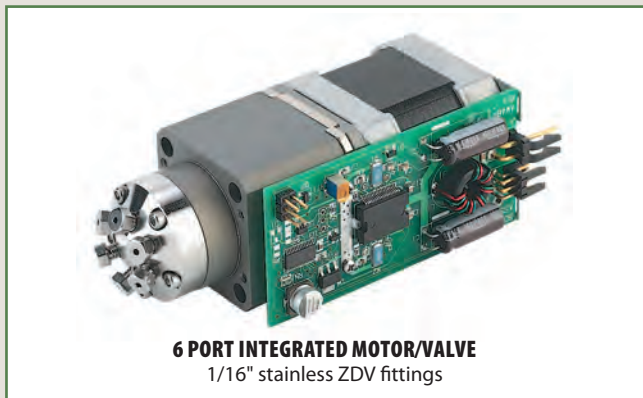
N60 stainless stator				
With integrated actuator	C52-1004I	C52-1006I	C52-1008I	C52-1000I
Add RS-232 interface	C52-1004IA	C52-1006IA	C52-1008IA	C52-1000IA
With motor/sensor only	C52-1004I-S	C52-1006I-S	C52-1008I-S	C52-1000I-S
With motor only	C52-1004IX	C52-1006IX	C52-1008IX	C52-1000IX
Replacement rotor	C2-10R4	C2-10R6	C2-10R8H	C2-10R0H
Replacement stator	C52-1C04	C52-1C06	C52-1C08	C52-1C00
PAEK stator				
With integrated actuator	C52-1344I	C52-1346I	C52-1348I	C52-1340I
Add RS-232 interface	C52-1344IA	C52-1346IA	C52-1348IA	C52-1340IA
With motor/sensor only	C52-1344I-S	C52-1346I-S	C52-1348I-S	C52-1340I-S
With motor only	C52-1344IX	C52-1346IX	C52-1348IX	C52-1340IX
Replacement rotor	C2-13R4	C2-13R6	C2-13R8H	C2-13R0H
Replacement stator	C52-1C44	C52-1C46	C52-1C48	C52-1C40

SPECIFICATIONS

- 5,000 psi liq**
- 50°C max**
- Stator: N60 stainless
- Rotor: Valcon H
- 5,000 psi liq**
- 50°C max**
- Stator: PAEK
- Rotor: Valcon E

OPTIONS

- **Vertical port version.** (Model C52V)
Contact the factory for more information.
- Optional 0.40 mm (.016") and 0.75 mm ports (.030") available
- Titanium and Hastelloy stators available
- Serial communication via RS-232 or RS-485 is available.

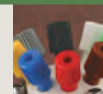


6 PORT INTEGRATED MOTOR/VALVE
1/16" stainless ZDV fittings

CE * CE READY

Since these integrated VICI motor/valves are designed as components to be embedded into other systems, they do not include a power supply. They have been tested according to the following EMC Standards:
 EN61326-1: 2006
 Conducted emissions
 Radiated emissions

However, these results do not substitute for, preclude, or guarantee passage of any or all relevant compliance testing as required for a final product that includes these components.



Microbore centered port injectors

1/16" VALCO FITTINGS, 0.25 MM PORTS (.010")

SPECIFICATIONS

5000 psi liq
75°C max
 Stator: N60 stainless
 Rotor: Valcon H
5000 psi liq
50°C max
 Stator: PAEK
 Rotor: Valcon E

Model C3 includes nuts and ferrules.
 Valves with stainless stators have stainless fittings.
 Valves with PAEK stators have PEEK fittings.
 Includes syringe fill port for 22 gauge 3/4" and 2" needle.
 Universal actuator: 24 VDC, with autosensing 24 VDC power supply.
 Includes RS232/485 serial interface. See page 174 for other interface options.
Note: The fitting detail pilot depth in PAEK HPLC stators is slightly longer than standard.

5,000 psi

Microbore

Centered port

1/16" **0.25 mm**

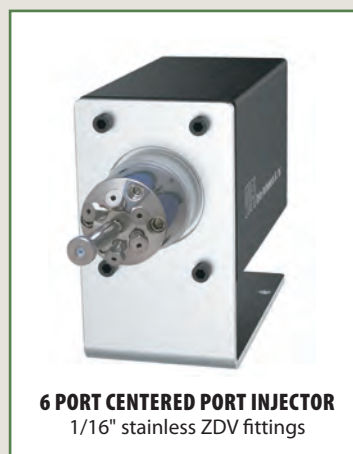
OPTIONS

- Titanium and Hastelloy stators available



Prod No

N60 stainless stator	
Manual	C3-1006
With universal actuator	C3-1006EUHA
Replacement valve	C3-1006D
Replacement rotor	C2-10R6
Replacement stator	C3-1C06
PAEK stator	
Manual	C3-1346
With universal actuator	C3-1346EUT
Replacement valve	C3-1346D
Replacement rotor	C2-13R6
Replacement stator	C3-1C46



6 PORT CENTERED PORT INJECTOR
 1/16" stainless ZDV fittings

Sample loops

Each metal loop includes two stainless steel nuts and ferrules. Each PEEK loop includes two PEEK nuts and ferrules. These loops are for use with valves on pages 140, 142, 143, 144, 146, 147, 163, 164, 165, and 167.

Volume	Stainless Steel Prod No	PEEK (for PAEK stators) Prod No
2 µl	CSL2	CZSL2PK
5 µl	CSL5	CZSL5PK
10 µl	CSL10	CZSL10PK
20 µl	CSL20	CZSL20PK
50 µl	CSL50	CZSL50PK
100 µl	CSL100	CZSL100PK
250 µl	CSL250	CZSL250PK
500 µl	CSL500	CZSL500PK **
1 ml	CSL1K	CZSL1KPK **
2 ml	CSL2K	CZSL2KPK **
5 ml	CSL5K	CZSL5KPK **
10 ml	CSL10K	** max pressure 2500 psi

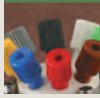
MORE INFO

- Actuators
 Microelectric 176
 Universal 174-175
- Materials
 Metals 246-247
 Polymers 248
 Valve rotors 249

ABOUT LOOPS

- Other materials are available in many sizes: Electroformed Nickel, Hastelloy C, Nickel 200, and PTFE.
- Metal loops > 2 ml are made from 1/8" OD tubing with brazed or welded 1/16" tube ends or reducing unions.
- Sample loop shape and dimensions may vary from batch to batch due to fluctuations in tubing ID. Loop volume is controlled as closely as possible, but is not calibrated.





CHEMINERT VALVES

Microbore vertical port injectors

1/16" VALCO FITTINGS, 0.25 MM PORTS (.010")

- 5,000 psi**
- Microbore**
- Vertical port**
- 1/16"**
- 0.25 mm**

Model C2V includes nuts and ferrules.
 Valves with stainless stators have stainless fittings.
 Valves with PEEK stators have PEEK fittings.
 Universal actuator: 24 VDC, with autosensing 24 VDC power supply.
 Includes RS232/485 serial interface. See page 174 for other interface options.
 Note: The fitting detail pilot depth in PEEK HPLC stators is slightly longer than standard.

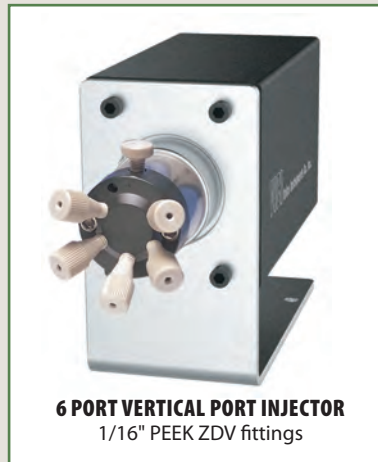
SPECIFICATIONS

5000 psi liq
75°C max
 Stator: N60 stainless
 Rotor: Valcon H
5000 psi liq
50°C max
 Stator: PEEK
 Rotor: Valcon E



Prod No

N60 stainless stator	
Manual	C2V-1006
With universal actuator	C2V-1006EUHA
Replacement valve	C2V-1006D
Replacement rotor	C2-10R6
Replacement stator	C2V-1C06
PEEK stator	
Manual	C2V-1346
With universal actuator	C2V-1346EUHA
Replacement valve	C2V-1346D
Replacement rotor	C2-13R6
Replacement stator	C2V-1C46



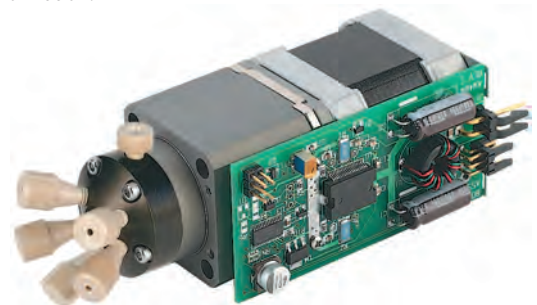
6 PORT VERTICAL PORT INJECTOR
 1/16" PEEK ZDV fittings

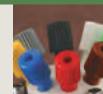
OPTIONS

- Titanium and Hastelloy stators available

i INTEGRATED MOTOR/VERTICAL PORT INJECTOR

Available in analytical and microbore versions. Contact the factory for information.





Analytical vertical port injectors

1/16" VALCO FITTINGS, 0.40 MM PORTS (.016")

SPECIFICATIONS

5000 psi liq

75°C max

Stator: N60 stainless

Rotor: Valcon H

5000 psi liq

50°C max

Stator: PEEK

Rotor: Valcon E

Model C2V includes nuts and ferrules.

Valves with stainless stators have stainless fittings.

Valves with PEEK stators have PEEK fittings.

Universal actuator: 24 VDC, with autosensing 24 VDC power supply.

Includes RS232/485 serial interface. See page 174 for other interface options.

Note: The fitting detail pilot depth in PEEK HPLC stators is slightly longer than standard.

5,000 psi

Analytical

Vertical port

1/16"

0.40 mm

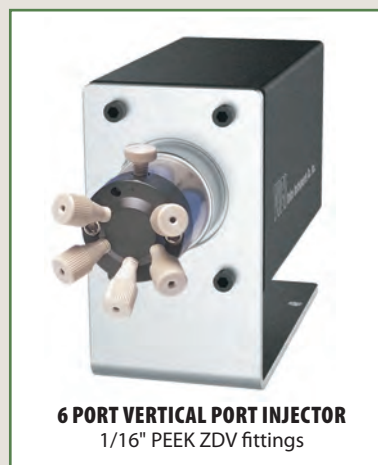
OPTIONS

- Titanium and Hastelloy stators available



Prod No

N60 stainless stator	
Manual	C2V-2006
With universal actuator	C2V-2006EUHA
Replacement valve	C2V-2006D
Replacement rotor	C2-20R6
Replacement stator	C2V-2C06
PEEK stator	
Manual	C2V-2346
With universal actuator	C2V-2346EUHA
Replacement valve	C2V-2346D
Replacement rotor	C2-23R6
Replacement stator	C2V-2C46



MORE INFO

Actuators

Microelectric176

Universal 174-175

Materials

Metals 246-247

Polymers248

Valve rotors.....249

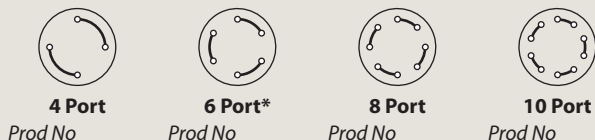


Integrated motor/valves

1/16" VALCO FITTINGS, 0.40 MM PORTS (.016")

- 5,000 psi
- Analytical
- Integrated
- 1/16" 0.40 mm
- CE ready*

Model C52 includes nuts and ferrules.
 Valves with stainless stators have stainless fittings.
 Valves with PEEK stators have PEEK fittings, nuts and ferrules.
 See page 131 for more information on integrated motor/valves.
 Note: The fitting detail pilot depth in PEEK HPLC stators is slightly longer than standard.



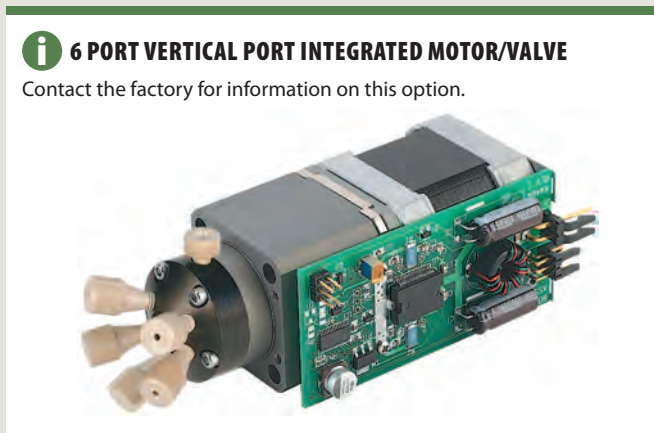
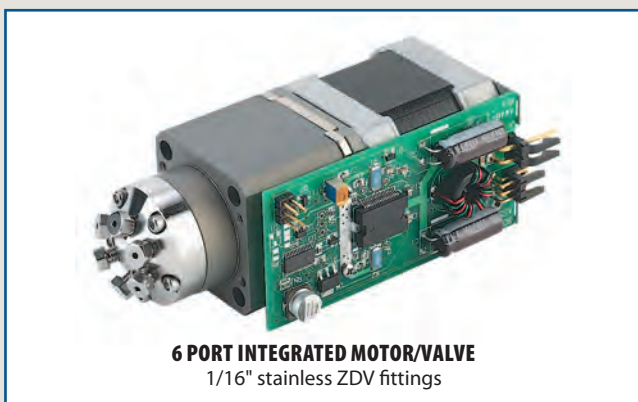
SPECIFICATIONS

- 5,000 psi liq**
- 50°C max**
- Stator: N60 stainless
- Rotor: Valcon H
- 5,000 psi liq**
- 50°C max**
- Stator: PEEK
- Rotor: Valcon E

OPTIONS

- **Vertical port version.** (Model C52V)
Contact the factory for more information.
- Optional 0.25 mm (.010") and 0.75 mm ports (.030") available
- Titanium and Hastelloy stators available
- Serial communication via RS-232 or RS-485 is available.

N60 stainless stator				
With integrated actuator	C52-2004I	C52-2006I	C52-2008I	C52-2000I
Add RS-232 interface	C52-2004IA	C52-2006IA	C52-2008IA	C52-2000IA
With motor/sensor only	C52-2004I-S	C52-2006I-S	C52-2008I-S	C52-2000I-S
With motor only	C52-2004IX	C52-2006IX	C52-2008IX	C52-2000IX
Replacement rotor	C2-20R4	C2-20R6	C2-20R8H	C2-20R0H
Replacement stator	C52-2C04	C52-2C06	C52-2C08	C52-2C00
PEAK stator				
With integrated actuator	C52-2344I	C52-2346I	C52-2348I	C52-2340I
Add RS-232 interface	C52-2344IA	C52-2346IA	C52-2348IA	C52-2340IA
With motor/sensor only	C52-2344I-S	C52-2346I-S	C52-2348I-S	C52-2340I-S
With motor only	C52-2344IX	C52-2346IX	C52-2348IX	C52-2340IX
Replacement rotor	C2-23R4	C2-23R6	C2-23R8H	C2-23R0H
Replacement stator	C52-2C44	C52-2C46	C52-2C48	C52-2C40



CE * CE READY

Since these integrated VICI motor/valves are designed as components to be embedded into other systems, they do not include a power supply. They have been tested according to the following EMC Standards:
 EN61326-1: 2006
 Conducted emissions
 Radiated emissions

However, these results do not substitute for, preclude, or guarantee passage of any or all relevant compliance testing as required for a final product that includes these components.



Analytical centered port injectors

1/16" VALCO FITTINGS, 0.40 MM PORTS (.016")

SPECIFICATIONS

5000 psi liq
75°C max

Stator: N60 stainless
Rotor: Valcon H

5000 psi liq
50°C max

Stator: PAEK
Rotor: Valcon E

Model C3 includes nuts and ferrules.

Valves with stainless stators have stainless fittings.

Valves with PAEK stators have PEEK fittings.

Includes syringe fill port for 22 gauge 3/4" and 2" needle.

Universal actuator: 24 VDC, with autosensing 24 VDC power supply.

Includes RS232/485 serial interface. See page 174 for other interface options.

Note: The fitting detail pilot depth in PAEK HPLC stators is slightly longer than standard.

5,000 psi

Analytical

Centered port

1/16"

0.40 mm

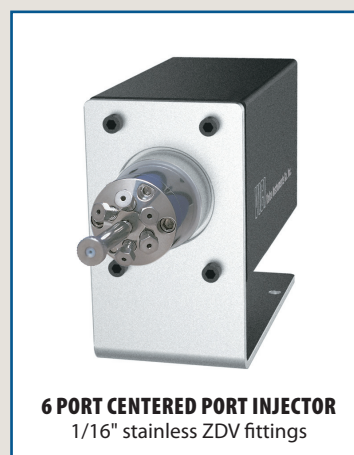
OPTIONS

- Titanium and Hastelloy stators available



Prod No

N60 stainless stator	
Manual	C3-2006
With universal actuator	C3-2006EUHA
Replacement valve	C3-2006D
Replacement rotor	C2-20R6
Replacement stator	C3-2C06
PAEK stator	
Manual	C3-2346
With universal actuator	C3-2346EUHA
Replacement valve	C3-2346D
Replacement rotor	C2-23R6
Replacement stator	C3-2C46



6 PORT CENTERED PORT INJECTOR
1/16" stainless ZDV fittings

Sample loops

Each metal loop includes two stainless steel nuts and ferrules. Each PEEK loop includes two PEEK nuts and ferrules.

These loops are for use with valves on pages 140, 142, 143, 144, 146, 147, 163, 164, 165, and 167.

Volume	Stainless Steel	PEEK (for PAEK stators)
	Prod No	Prod No
2 µl	CSL2	CZSL2PK
5 µl	CSL5	CZSL5PK
10 µl	CSL10	CZSL10PK
20 µl	CSL20	CZSL20PK
50 µl	CSL50	CZSL50PK
100 µl	CSL100	CZSL100PK
250 µl	CSL250	CZSL250PK
500 µl	CSL500	CZSL500PK **
1 ml	CSL1K	CZSL1KPK **
2 ml	CSL2K	CZSL2KPK **
5 ml	CSL5K	CZSL5KPK **
10 ml	CSL10K	** max pressure 2500 psi

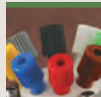
MORE INFO

- Actuators
- Microelectric 176
 - Universal 174-175
- Materials
- Metals 246-247
 - Polymers 248
 - Valve rotors 249

ABOUT LOOPS

- Other materials are available in many sizes: Electroformed Nickel, Hastelloy C, Nickel 200, and PTFE.
- Metal loops > 2 ml are made from 1/8" OD tubing with brazed or welded 1/16" tube ends or reducing unions.
- Sample loop shape and dimensions may vary from batch to batch due to fluctuations in tubing ID. Loop volume is controlled as closely as possible, but is not calibrated.





CHEMINERT VALVES

Integrated motor/valves

1/16" VALCO ZDV FITTINGS, 0.75 MM PORTS (.030")

Low pressure

Integrated

10-32 ZDV

1/16" 0.75 mm

CE ready*

Model C62Z includes Valco ZDV PEEK nuts and ferrules. Sample loops are not included with valves. Order separately.

SPECIFICATIONS

250 psi liq
50°C max
 Stator: PPS
 Rotor: Valcon E2

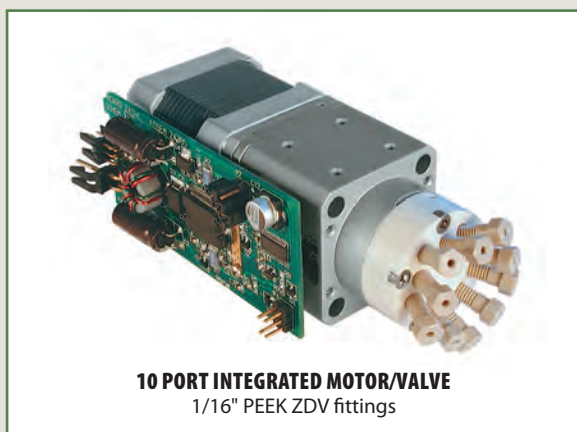
OPTIONS

- Other polymeric rotors and stators are available
- Consult the factory for prices and information.
- Serial communication via RS-232 or RS-485 is available.



4 Port Prod No **6 Port** Prod No **8 Port** Prod No **10 Port** Prod No

With integrated actuator	C62Z-3184I	C62Z-3186I	C62Z-3188I	C62Z-3180I
Add RS-232 interface	C62Z-3184IA	C62Z-3186IA	C62Z-3188IA	C62Z-3180IA
With motor and sensor only	C62Z-3184I-S	C62Z-3186I-S	C62Z-3188I-S	C62Z-3180I-S
Replacement rotor	C62-314	C62-316	C62-318	C62-310
Replacement stator	C62Z-384	C62Z-386	C62Z-388	C62Z-380



10 PORT INTEGRATED MOTOR/VALVE
 1/16" PEEK ZDV fittings

Sample loops

Loops include PEEK nuts and ferrules. Loops less than 500 µl are made from 1/16" OD tubing; loops 500 µl or greater are made from 1/8" OD tubing with polymeric unions and 1/16" ends.

These loops are for use with valves on this page.



	FEP	PTFE	PEEK
Volume	Prod No	Prod No	Prod No
5 µl	CZSL5FEP	CZSL5TF	CZSL5PK
10 µl	CZSL10FEP	CZSL10TF	CZSL10PK
20 µl	CZSL20FEP	CZSL20TF	CZSL20PK
50 µl	CZSL50FEP	CZSL50TF	CZSL50PK
100 µl	CZSL100FEP	CZSL100TF	CZSL100PK
250 µl	CZSL250FEP	CZSL250TF	CZSL250PK
500 µl	CZSL500FEP	CZSL500TF	CZSL500PK
1 ml	CZSL1KFEP	CZSL1KTF	CZSL1KPK
2 ml	CZSL2KFEP	CZSL2KTF	CZSL2KPK

ABOUT LOOPS

Sample loop shape and dimensions may vary from batch to batch due to fluctuations in tubing ID. Loop volume is controlled as closely as possible, but is not calibrated.

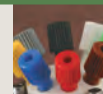
CE * CE READY

Since these integrated VICI motor/valves are designed as components to be embedded into other systems, they do not include a power supply. They have been tested according to the following EMC Standards:
 EN61326-1: 2006
 Conducted emissions
 Radiated emissions

However, these results do not substitute for, preclude, or guarantee passage of any or all relevant compliance testing as required for a final product that includes these components.

MORE INFO

- Materials
- Metals..... 246-247
 - Polymers 248
 - Valve rotors..... 249



Integrated motor/valves

1/4-28 FITTING DETAILS FOR 1/16" TUBING, 0.75 MM PORTS (.030")

SPECIFICATIONS

250 psi liq
50°C max
 Stator: PPS
 Rotor: Valcon E2

Model C62 includes multicolored Cheminert flangeless fittings for 1/16" tubing. Sample loops are not included with valves. Order separately.

Low pressure

Integrated

1/4-28 Internal

1/16" 0.75 mm

CE ready*

OPTIONS

- Serial communication via RS-232 or RS-485 is available.



	4 Port <i>Prod No</i>	6 Port <i>Prod No</i>	8 Port <i>Prod No</i>	10 Port <i>Prod No</i>
With integrated actuator	C62-3184I	C62-3186I	C62-3188I	C62-3180I
Add RS-232 interface	C62-3184IA	C62-3186IA	C62-3188IA	C62-3180IA
With motor and sensor only	C62-3184I-S	C62-3186I-S	C62-3188I-S	C62-3180I-S
Replacement rotor	C62-314	C62-316	C62-318	C62-310
Replacement stator	C62-384	C62-386	C62-388	C62-380

Integrated motor/valves

1/4-28 FITTING DETAILS FOR 1/8" TUBING, 1.50 MM PORTS (.060")

SPECIFICATIONS

250 psi liq
50°C max
 Stator: PPS
 Rotor: Valcon E2

Model C62 includes multicolored Cheminert flangeless fittings for 1/8" tubing. Sample loops are not included with valves. Order separately.

Low pressure

Integrated

1/4-28 Internal

1/8" 1.50 mm

CE ready*

OPTIONS

- Serial communication via RS-232 or RS-485 is available.



	4 Port <i>Prod No</i>	6 Port <i>Prod No</i>	8 Port <i>Prod No</i>	10 Port <i>Prod No</i>
With integrated actuator	C62-6184I	C62-6186I	C62-6188I	C62-6180I
Add RS-232 interface	C62-6184IA	C62-6186IA	C62-6188IA	C62-6180IA
With motor and sensor only	C62-6184I-S	C62-6186I-S	C62-6188I-S	C62-6180I-S
Replacement rotor	C62-614	C62-616	C62-618	C62-610
Replacement stator	C62-684	C62-686	C62-688	C62-680

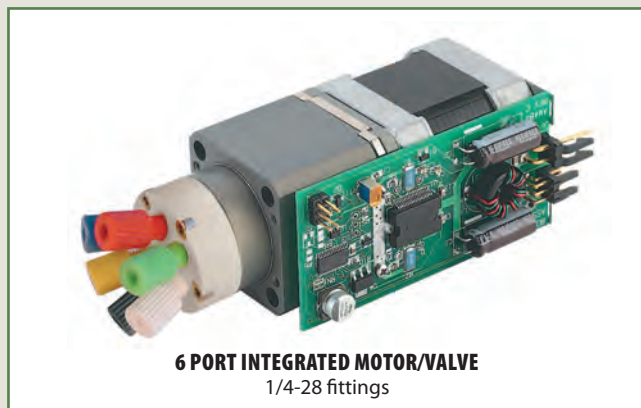
Sample loops

Loops include flangeless fittings with natural color nuts. Loops less than 250 µl are made from 1/16" OD tubing; loops 250 µl or greater are made from 1/8" OD tubing.

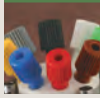
These loops are for use with valves on this page.



Volume	FEP	PTFE	PEEK
	<i>Prod No</i>	<i>Prod No</i>	<i>Prod No</i>
20 µl	CFSL20FEP	CFSL20TF	CFSL20PK
50 µl	CFSL50FEP	CFSL50TF	CFSL50PK
100 µl	CFSL100FEP	CFSL100TF	CFSL100PK
250 µl	CFSL250FEP	CFSL250TF	CFSL250PK
500 µl	CFSL500FEP	CFSL500TF	CFSL500PK
1 ml	CFSL1KFEP	CFSL1KTF	CFSL1KPK
2 ml	CFSL2KFEP	CFSL2KTF	CFSL2KPK



6 PORT INTEGRATED MOTOR/VALVE
 1/4-28 fittings



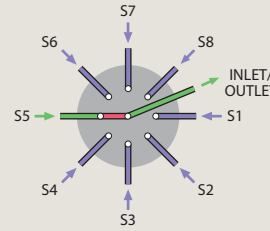
CHEMINERT VALVES

Integrated motor/stream selectors

1/16" VALCO ZDV FITTINGS, 0.40 MM PORTS (.016")

- 5,000 psi**
- Integrated**
- Stream selector**
- 10-32 ZDV**
- 1/16"**
0.40 mm
- CE ready***

Model C55 includes nuts and ferrules.
 Valves with stainless stators have stainless fittings.
 Valves with PAEK stators have PEEK fittings.
 See page 133 for more information on integrated motor/selectors.



SPECIFICATIONS

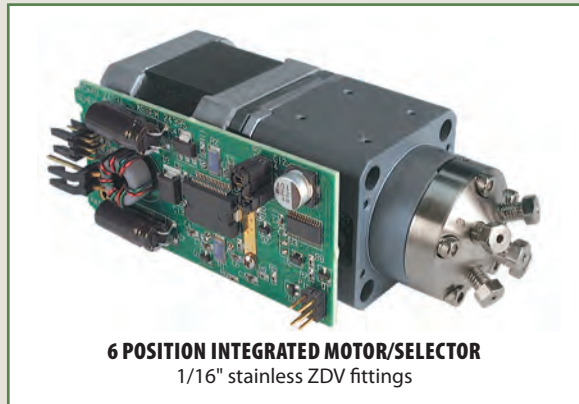
- 5000 psi liq**
50°C max
Stator: Metal
Rotor: Valcon H
- 5000 psi liq**
50°C max
Stator: PAEK
Rotor: Valcon E

4 Position
Prod No
6 Position
Prod No
8 Position
Prod No
10 Position
Prod No

N60 stainless stator				
With integrated actuator Add RS-232 interface	C55-2004I	C55-2006I	C55-2008I	C55-2000I
	C55-2004IA	C55-2006IA	C55-2008IA	C55-2000IA
With motor/sensor only	C55-2004I-S	C55-2006I-S	C55-2008I-S	C55-2000I-S
With motor only	C55-2004IX	C55-2006IX	C55-2008IX	C55-2000IX
Replacement rotor	C5-20R4	C5-20R6	C5-20R8H	C5-20R0H
Replacement stator	C55-2C04	C55-2C06	C55-2C08	C55-2C00
PAEK stator				
With integrated actuator (Includes RS-232 interface)	C55-2344I	C55-2346I	C55-2348I	C55-2340I
	C55-2344IA	C55-2346IA	C55-2348IA	C55-2340IA
With motor/sensor only	C55-2344I-S	C55-2346I-S	C55-2348I-S	C55-2340I-S
With motor only	C55-2344IX	C55-2346IX	C55-2348IX	C55-2340IX
Replacement rotor	C5-23R4	C5-23R6	C5-23R8H	C5-23R0H
Replacement stator	C55-2C44	C55-2C46	C55-2C48	C55-2C40

OPTIONS

- Optional bore:
0.25 mm (.010")
0.75 mm (.030")
- 4 and 8 positions available
- Stators are available in other metals and polymeric materials. Rotors are available in other materials
- Serial communication via RS-232 or RS-485 is available.



CE * CE READY

Since these integrated VICI motor/valves are designed as components to be embedded into other systems, they do not include a power supply. They have been tested according to the following EMC Standards:
 EN61326-1: 2006
 Conducted emissions
 Radiated emissions

However, these results do not substitute for, preclude, or guarantee passage of any or all relevant compliance testing as required for a final product that includes these components.

MORE INFO

- Materials
- Metals..... 246-247
 - Polymers 248
 - Valve rotors..... 249

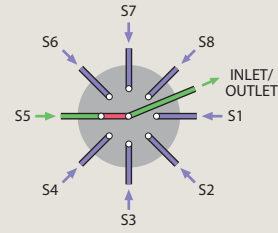


Integrated motor/stream selectors

1/16" VALCO ZDV FITTINGS, 0.75 MM PORTS (.030")

SPECIFICATIONS
250 psi liq
50°C max
 Stator: PPS
 Rotor: Valcon E2

Model C65Z includes Valco ZDV PEEK nuts and ferrules.
 See page 133 for more information on integrated motor/selectors.



Low pressure
 Integrated
 Stream selector
 10-32 ZDV
 1/16" 0.75 mm
 CE ready*

	4 Position <i>Prod No</i>	6 Position <i>Prod No</i>	8 Position <i>Prod No</i>	10 Position <i>Prod No</i>
With integrated actuator	C65Z-3184I	C65Z-3186I	C65Z-3188I	C65Z-3180I
Add RS-232 interface	C65Z-3184IA	C65Z-3186IA	C65Z-3188IA	C65Z-3180IA
With motor and sensor only	C65Z-3184I-S	C65Z-3186I-S	C65Z-3188I-S	C65Z-3180I-S

Integrated motor/stream stream selectors

1/4-28 FITTINGS FOR 1/16" TUBING, 0.75 MM PORTS (.030")

SPECIFICATIONS
250 psi liq
50°C max
 Stator: PPS
 Rotor: Valcon E2

Model C65 includes multicolored Cheminert flangeless fittings for 1/16" tubing.
 See page 133 for more information on integrated motor/selectors.

Low pressure
 Integrated
 Stream selector
 1/4-28 Internal
 1/16" 0.75 mm
 CE ready*

	4 Position <i>Prod No</i>	6 Position <i>Prod No</i>	8 Position <i>Prod No</i>	10 Position <i>Prod No</i>
With integrated actuator	C65-3184I	C65-3186I	C65-3188I	C65-3180I
Add RS-232 interface	C65-3184IA	C65-3186IA	C65-3188IA	C65-3180IA
With motor and sensor only	C65-3184I-S	C65-3186I-S	C65-3188I-S	C65-3180I-S

Integrated motor/stream stream selectors

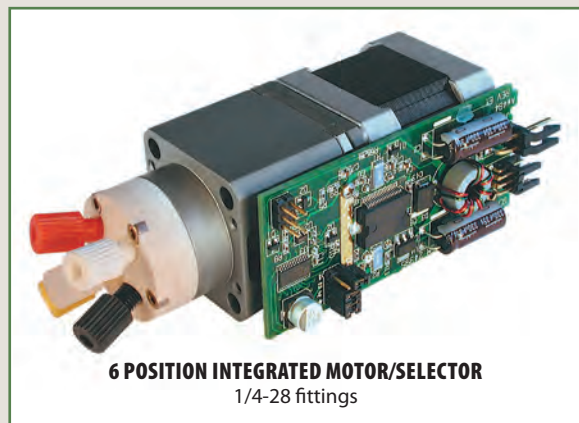
1/4-28 FITTINGS FOR 1/8" TUBING, 1.50 MM PORTS (.060")

SPECIFICATIONS
250 psi liq
50°C max
 Stator: PPS
 Rotor: Valcon E2

Model C65 includes multicolored Cheminert flangeless fittings for 1/8" tubing.
 See page 133 for more information on integrated motor/selectors.

Low pressure
 Integrated
 Stream selector
 1/4-28 Internal
 1/8" 1.50 mm
 CE ready*

	4 Position <i>Prod No</i>	6 Position <i>Prod No</i>	8 Position <i>Prod No</i>	10 Position <i>Prod No</i>
With integrated actuator	C65-6184I	C65-6186I	C65-6188I	C65-6180I
Add RS-232 interface	C65-6184IA	C65-6186IA	C65-6188IA	C65-6180IA
With motor and sensor only	C65-6184I-S	C65-6186I-S	C65-6188I-S	C65-6180I-S



CE * CE READY
 See note on facing page.