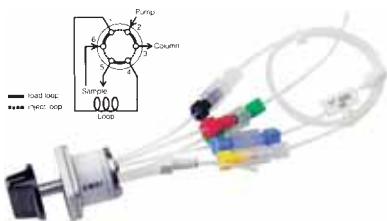


# Rheodyne Low Pressure Valves



## Sample Injection Valve

The Model 5020 is a fixed volume loop injector. Flow passages are 0.8mm (.03 inch) I.D. Supplied with female luer adapter and 0.5mL loop. This valve is rated for 300 psi.



Cat. No.	Description
5020	Sample injection valve
5051	0.1mL Sample loop
5052	0.25mL Sample loop
5053	0.5mL Sample loop
5054	1.0mL Sample loop
5055	5.0mL Sample loop
5056	10.0mL Sample loop

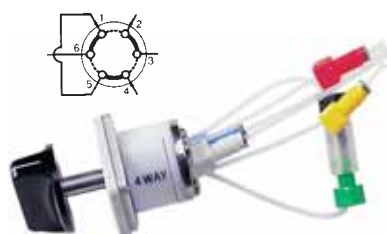
## 3-way Rotary Valves

This valve is rated for 300 psi.

Cat. No.	Description	Bore
5031	3-way Teflon rotary valve	0.8mm
5032	3-way Teflon rotary valve	1.5mm

## 4-way Rotary Valves

Models 5041 and 5042 are four-way valves. An external loop converts the six-port architecture to a four-port design in which two streams are interchanged: 2-3 and 4-6 to 2-6 and 4-3. This valve is rated for 300 psi.



Cat. No.	Description	Bore
5041	4-way Teflon rotary valve	0.8mm
5042	4-way Teflon rotary valve	1.5mm

## 6-Position Rotary Valves

Models 5011 and 5012 are six-position selector valves. A common port connects one of six peripheral ports by rotating the handle to one of six positions. This valve is rated for 300 psi.



Cat. No.	Description	Bore
5011	6-position Teflon rotary valve	0.8mm
5012	6-position Teflon rotary valve	1.5mm

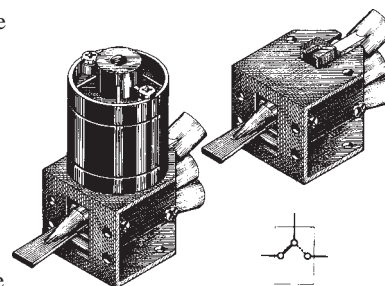
### Electrically Actuated Valve

EV100-105	6 position electric valve	1/16"
EV100-106	6 position electric valve	1/8"

## 3-way Slider Valves

Models 5301 and 5302 are three-way slider valves.

The center port is connected to one of the two side ports depending on the slider position. A handle moves the slider with a snap-action. The valves can be mounted so that only the toggle handle protrudes from the mounting panel.



The female ports accept 1/4-28 threaded tube end fittings for flanged Teflon tubing. The flat bottom of the port seals against the right-angle flange of the tubing. Flowing liquid contacts only the Teflon slider and the Tefzel stator. External structural parts are polypropylene and steel.

The Model 5300 Pneumatic Actuator is sold as a separate accessory and is easily installed in the field. It is a double-acting type but is supplied with a spring that can convert it to a single-acting actuator. It requires 25 psi minimum (50 psi with spring installed), 100 psi maximum.

Cat. No.	Description	Bore
5301	3-way Slider valve	0.8mm
5302	3-way Slider valve	1.5mm
5300	Pneumatic actuator	-

## Mounting Bracket

Model 5060 mounting bracket accommodates Rheodyne Teflon rotary valves (not the slider valves).

Cat. No.	Description
5060	Mounting bracket

## Column Selector

- 3 and 6 column capacity models
- Single, front mounted valve (SS and PEEK)
- Accepts analytical and prep columns
- Communications compatible with all systems

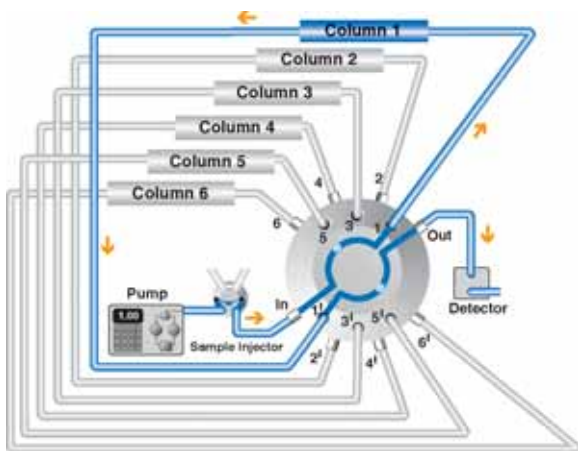
Chrom Tech's Column Selectors are the "faster, easier, and better" solutions to make your laboratory more productive by automating selection of multiple columns. Attractively encased in a space-saving, vertical unit, the column selector incorporates a variety of features to make HPLC applications easier. The column selector offers a broad range of solutions to common laboratory situations.

- **Methods development**
- **Validation studies**
- **Column selectivity**
- **SPE sample preparation**
- **Ideal for multi-method labs**

Rheodyne's patented TeleFLO™ valve architecture distinguishes Chrom Tech's selection valves from other multi-position valves. This valve design eliminates unswept volume within the valve and minimizes dispersion. The new TeleFLO design eliminates potential carryover problems during switching applications. Both the six column selector and the three column selector incorporate TeleFLO architecture.

*Four-line BCD code for random access to any position.*

Cat. No.	Description
EV500-100	3 Column selector, SS
EV500-104	6 Column selector, SS
EV501-100	3 Column selector, SS, low profile
EV501-104	6 Column selector, SS, low profile
EV550-100	3 Column selector, PEEK
EV550-104	6 Column selector, PEEK
EV551-100	3 Column selector, PEEK, low profile
EV551-104	6 Column selector, PEEK, low profile



### Chrom Tech Column Selector Specifications

<b>Max pressure:</b>	5,000 psi
<b>Solvent compatibility:</b>	Not recommended for use with concentrated HNO <sub>3</sub> or concentrated H <sub>2</sub> SO <sub>4</sub>
<b>Flow passage diameters:</b>	0.61mm (.024") and 0.46mm (.018") Fittings: 10-32 threaded nuts and ferrules
<b>Dimensions (H x W x D):</b>	Patented TeleFLO™ design 55.9cm x 24.9cm x 32.5cm 22.0" x 9.8" x 12.8"
<b>Operating environment:</b>	4°-40° C, non-condensing
<b>Power supply req.:</b>	Input 100-240VAC, 50-60Hz Output 24 VDC, 1.7A
<b>Environment:</b>	Spark-free, brushless power train for use in volatile environments
<b>Supplied:</b>	10-32 threaded nuts and ferrules for all tubing, Universal Power Supply, Cord Set and Discrete Logic Interface cable
<b>Certification:</b>	CE Mark

## Temperature Controlled Column Selector

- 10° C Below ambient to 55° C
- Automatic shutdown at end of run
- Externally control column selection and temperature



Chemists can now accurately cool and heat liquid chromatography columns with the PowerSELECTOR™ automated column selector.

The PowerSELECTOR incorporates state-of-the-art selector valves and a Peltier Bi-directional heat pump to accurately switch columns while cooling or heating the column compartment to maintain stability. An external contact automatically ramps the

temperature of the PowerSELECTOR down to protect the columns after method development is complete.

We designed the PowerSELECTOR to accommodate chemists needs for automated methods development and column compartment stability for resolution enhancement. The microprocessor-based temperature controller has a digital display and features quick response. Temperature range is 10° C below ambient to 55° C. Precision of repeatability is ± 0.5° C and accuracy is ± 1° C.

*Four-line BCD code for random access to any position.*

Cat. No.	Description
HC-6000	Temperature controlled 6 column selector

# Rheodyne Automated Switching Valves



Chrom Tech's automated modules increases productivity of laboratory applications such as protein purification, chiral and multi-dimensional chromatography, combinatorial chemistry, and QC/QA analysis. Chemical, pharmaceutical, environmental, governmental, academic university, and biotechnology firms all need fast, reliable, inexpensive and reproducible results. The automated Chrom Tech Fluidics Instrument family meets these expectations.

All valves are pressure rated to 5,000 psi except the solvent selector which is rated to 300 psi.

Communications: Four-line BCD code for random access to any position.

Dimensions for most models (H x W x D): 4.4" x 2.9" x 10.7"

## Easy to Service

The front-accessible valve contains liquid contact materials that provide long-lasting seal life. The valve should only be serviced with genuine Rheodyne parts to ensure its continued reliable performance. RheBuild® Kits containing Rheodyne replacement parts, tools, and instructions are listed below to help maintain the precision performance of your valve.

## RheBuild® Kits for Automated Switching Valves

Cat. No.	Kit for Model
1005-999	EV100-105
1006-999	EV100-106
5001-999	EV500-101 and EV550-101
5100-999	EV500-100 and EV550-100
5104-999	EV500-104 and EV550-104
7112-999	EV700-112 and EV750-112
7501-999	EV700-100 and EV750-100
7502-999	EV700-102 and EV750-102
7507-999	EV700-107 and EV750-107
7004-999	EV700-104 and EV750-104

## Double 3-Way Diverter Valves

The diverter uniquely combines in one valve dual three-way paths for switching two independent streams.



Cat. No.	Description
EV700-104	2 position, 3 way, SS
EV750-104	2 position, 3 way, PEEK

## Ten-Position Selector

The Ten-Position Selector is a stand-alone, ready-to-use, automated fluid processor. The ten-position selector automates repetitive switching tasks among ten positions to boost productivity. The stainless steel model and the biocompatible PEEK model can both be used with a wide variety of solvents.



- Accelerates and simplifies methods development
- Automates selection of up to 10 samples for precise injection
- Eliminates the need to disconnect and reconnect fittings
- Frees up valuable research time

Cat. No.	Description
EV700-107	10 position selector, SS
EV750-107	10 position selector, PEEK

## Six-Position Selector

Cat. No.	Description
EV700-105	6 position, 7 port selector, SS
EV750-105	6 position, 7 port selector, PEEK

## Two Channel Selector with By-Pass

The selector performs injection applications while providing continuous system flow.

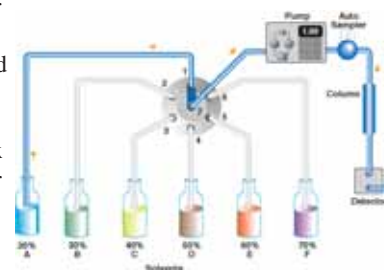


- Automates UV and MS analyses on the same system
- Eliminates cross contamination of mobile phase during column change
- Reduces equilibration time during solvent changeover and enables unattended operation without interruption

Cat. No.	Description
EV500-101	Two channel selector with by-pass, SS
EV550-101	Two channel selector with by-pass, PEEK

## Inert Low Pressure Solvent Selector

Rheodyne's Solvent Selector for HPLC is a stand alone, ready-to-use, automated fluid processor. The solvent selector eliminates manual valves and supports up to six different solvents, buffers, or eluents for isocratic and step gradient applications. Pressure rated up to 300 psi.



Typical applications for the solvent selector include:

- Automates mobile phase composition selection for separation optimization
- Automates column cleaning/conditioning for overnight, unattended operation
- Automates selection of up to six samples for precise injection

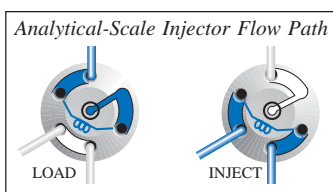
Cat. No.	Description
EV100-105	Inert automated solvent selector, 1/16"
EV100-106	Inert automated solvent selector, 1/8"

# Rheodyne MX Series Automated Modules

Rheodyne's MX series automation modules are a complete family of productivity enhancing solutions for laboratory automation. MX modules can be operated by push button, allowing them to function as a "manual" valve, or in remote mode, automatically by contact closure with a controlling instrument.



All MX modules incorporate Rheodyne's time tested miniature mighty valve – the choice of instrument manufacturers worldwide. All three Nano-Scale MX modules take advantage of Rheodyne's proprietary biocompatible DuraLife™ III technology for greatly extended duty cycles in a typical laboratory automation application. For multiple automated valve applications, a unique "Snap n' Stack" System allows units to be stacked vertically or connected horizontally to conserve bench space and reduce connection volumes.



## MX Series Sample Injector

The nano-scale injector has a 10nL internal sample chamber and outstanding low dispersion characteristics. With its 0.1mm flow passages, the MX nano injector can be used for micro-scale applications. The analytical-scale sample injector combines the ease of use of the 7725i with the precision actuation of a motorized valve.

Cat. No.	Description
MX7984	MX Nano injector, biocompatible
MX7925	MX Analytical injector, SS
MX9925	MX Analytical injector, biocompatible

## MX Series Two-Position, Six-Port Switching Valves

Typical applications include:

- Two column selection
- Column backflushing
- High speed sample clean up and enrichment
- MS solvent diversion

Cat. No.	Description
MX7980	Nano-scale, 2-pos, 6-port, biocompatible
MX7900	Analytical-scale, 2-pos, 6-port, SS
MX9900	Analytical-scale, 2-pos, 6-port, biocomp.

## MX Series Two-Position, Ten-Port Switching Valves

Typical applications include:

- Alternating column regeneration
- High speed sample enrichment
- Multi-dimensional proteomic peptide separation

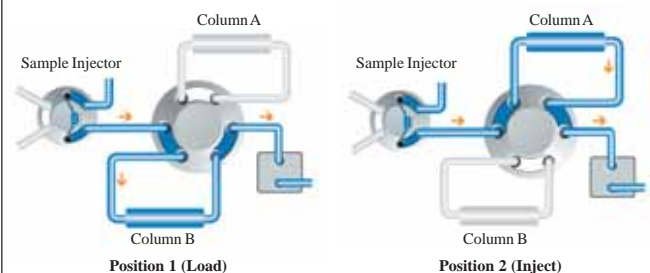
Cat. No.	Description
MX7986	Nano-scale, 2-pos, 10-port, biocompatible
MX7960	Analytical-scale, 2-pos, 10-port, SS
MX9960	Analytical-scale, 2-pos, 10-port, biocomp.

## MX Series Specifications

<b>Max pressure:</b>	5,000 psi
<b>Flow passages:</b>	Nano 0.1mm (0.004") diameter Analytical 0.25mm (.010") diameter
<b>Power requirements:</b>	100-120 V, 50-60 Hz
<b>Regulatory compliance:</b>	CE marked
<b>Remote control:</b>	One line contact closure
<b>Operating temperature:</b>	4° - 75° C
<b>Storage temperature:</b>	-40° - 75° C
<b>Dimensions (H x W x D):</b>	102mm x 76mm x 1270mm 4.5" x 3.0" x 5.0"

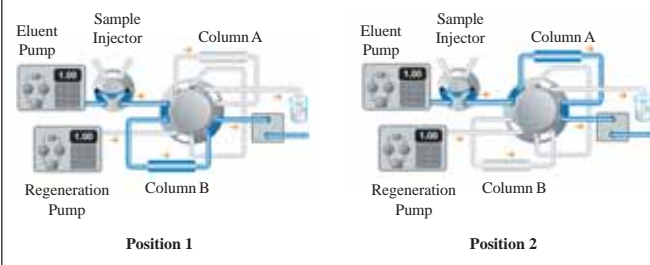
## Two-Column Selection Flow Diagram

### Two-Position, Six-Port Valve



## Alternating Column Regeneration Flow Diagram

### Two-Position, Ten-Port Valve



## Multi-Dimensional Proteomic Peptide Separation

### Two-Position, Ten-Port Valve

