BioLogic DuoFlow™ Valves

Expand Your Application Potential with Versatile and Reliable BioLogic DuoFlow Valves
The numerous valve options available for the BioLogic DuoFlow Chromatography Systems easily accommodate simple to complex laboratory experiments. Valves can be easily added and programmed to expand the BioLogic DuoFlow System’s capabilities, ensuring that you will always be able to run the experiments you need.

Flexible Setup Leads to Optimized Results

The flexible setup design of the BioLogic DuoFlow System allows you to position valves for easy access and improved results. For example, place the sample valve outlet close to the column inlet for improved sample resolution.

Expanding Applications Through Valving Options

BioLogic DuoFlow Systems are easily upgraded to meet your changing applications with valve additions. A total of 6 valves (3 low pressure and 3 high pressure) can be used at one time, allowing you to run more complex methods. Additionally, by adding a BioLogic Maximizer™ Valve System, the number of valves is doubled to 12 (6 low pressure and 6 high pressure).

Intuitive Software Automates Valve Functions

The easily programmed BioLogic DuoFlow Software incorporates valve functions into a method and allows each valve to be uniquely named to reflect its function.

SVS-4 Valve
A 5-port, 4-way low-pressure valve for:
- Selecting from up to 4 buffers or solutions
- Autosample loading from up to 4 samples directly onto a column or into an injection loop

SVT3-2 Valve
A 3-port, 2-way low-pressure valve for:
- Selecting from 2 buffers or solutions
- Loading from 2 samples directly onto a column or into an injection loop
- Diverting buffer flow

AVR7-3 Sample Inject Valve
A 7-port, 3-way high-pressure valve for:
- Loading samples into a static loop or a DynaLoop™ Dynamic Loop for injection onto a column
- Reverse-flow applications
- Switching between 2 columns

AVR9-8 Select Valve
A 9-port, 8-way high-pressure valve for:
- Selecting from up to 8 buffers or solutions
- Autosample loading from up to 8 samples directly onto a column or into an injection loop
- Switching among 8 columns
- Collection of large-volume fractions
Valve Applications

**Flexible Sample Loading Options**
- Basic AVR7-3 Sample Injection Valve operation using load, inject, and purge positions
- DynaLoop Dynamic Loops for large-volume sample loading or repetitive injections of smaller volumes
- Combination of a peristaltic pump, Model EP-1 Econo™ Pump, or Econo Gradient Pump with an inlet valve for:
  - Autosampling with automated loop fill and rinse
  - Sample loading directly onto a low-backpressure column
  - Repetitive loading of portions of large sample onto a column

**Multiple Buffer Selection**
- Automated selection of multiple buffers, solutions, or samples

**Column Switching**
- Automated switching between multiple columns
- Column scouting to compare separation characteristics within method

**Reverse Flow**
- Elution of compounds bound to the top of a column by reverse flow

**Large-Volume Fraction Collection**
- Collection of 2–8 large-volume sample fractions without a fraction collector

**Multidimensional Chromatography**
- Automatic collection of selected fractions from one column and injection onto a second or third column

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**The Make-Before-Break Advantage**
The unique make-before-break design of the high-pressure valves rotates the inlet/outlet ports in a sequence that keeps the flow rate constant during port changes to:
- Prevent pressure spikes that cause baseline interference
- Prevent pump shutdowns from overpressure occurrences
- Protect fragile low-pressure columns and flow-sensitive detectors

### Valve Specifications

<table>
<thead>
<tr>
<th>Valve</th>
<th>Type</th>
<th>Ports</th>
<th>Pressure Rating</th>
<th>Fitting</th>
<th>Tubing size</th>
</tr>
</thead>
<tbody>
<tr>
<td>SV5-4</td>
<td>Low-pressure solenoid, 4-way stream selection valve</td>
<td>5 ports</td>
<td>30 psi (2 bar)</td>
<td>1/4–28</td>
<td>1/8” (3.2 mm) OD</td>
</tr>
<tr>
<td>SVT3-2</td>
<td>Low-pressure solenoid, 2-way flow diversion or stream selection valve</td>
<td>3 ports</td>
<td>30 psi (2 bar)</td>
<td>1/4–28</td>
<td>1/8” (3.2 mm) OD</td>
</tr>
<tr>
<td>AVR7-3</td>
<td>High-pressure, 3-way (load, inject, and purge) valve</td>
<td>7 ports</td>
<td>3,500 psi (233 bar)</td>
<td>1/4–28</td>
<td>1/16” (1.6 mm) OD</td>
</tr>
<tr>
<td>AVR9-8</td>
<td>High-pressure, 8-way stream selection valve</td>
<td>9 ports</td>
<td>3,500 psi (233 bar)</td>
<td>1/4–28</td>
<td>1/16” (1.6 mm) OD</td>
</tr>
</tbody>
</table>

### Guaranteed Reliability

Thousands of BioLogic DuoFlow Valves are in daily use worldwide. Composed of biocompatible PEEK polymer with no metallic parts, the valves are compatible with a wide range of buffers, salt solutions, and solvents (1.0 M salt to 100% acetonitrile) to accommodate any application requirement.

### Ordering Information

<table>
<thead>
<tr>
<th>Catalog #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>760-0406</td>
<td>BioLogic DuoFlow Valves</td>
</tr>
<tr>
<td>760-0401</td>
<td>AVR7-3 Automated Sample Injection Valve, 7-port, 3-position high-pressure valve, 3,500 psi (233 bar) limit</td>
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<tr>
<td>760-0403</td>
<td>AVR9-8 Stream-Select Valve, 9-port, 8-position high-pressure valve, 3,500 psi (233 bar) limit</td>
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<tr>
<td>760-0410</td>
<td>SVT3-2 Diverter Valve, 3-port, 2-position solenoid valve, 30 psi (2 bar) limit</td>
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<td>760-0411</td>
<td>SVT3-2 Valve Rebuild Kit</td>
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<tr>
<td>750-0415</td>
<td>SV5-4 Select Valve, 5-port, 4-position solenoid valve, 30 psi (2 bar) limit</td>
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<td>750-0471</td>
<td>BioLogic Single Injection Sample Loops</td>
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<td>750-0482</td>
<td>25 µl Tefzel Sample Loop</td>
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<td>750-0483</td>
<td>50 µl Tefzel Sample Loop</td>
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<td>750-0492</td>
<td>100 µl PEEK Sample Loop</td>
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<td>750-0493</td>
<td>250 µl PEEK Sample Loop</td>
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<td>750-0494</td>
<td>500 µl PEEK Sample Loop</td>
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<td>1 ml PEEK Sample Loop</td>
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<td>750-0496</td>
<td>2 ml PEEK Sample Loop</td>
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<tr>
<td>750-0497</td>
<td>5 ml PEEK Sample Loop</td>
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</tbody>
</table>

Contact your local Bio-Rad representative or visit us on the Web at bio-rad.com for more information.

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