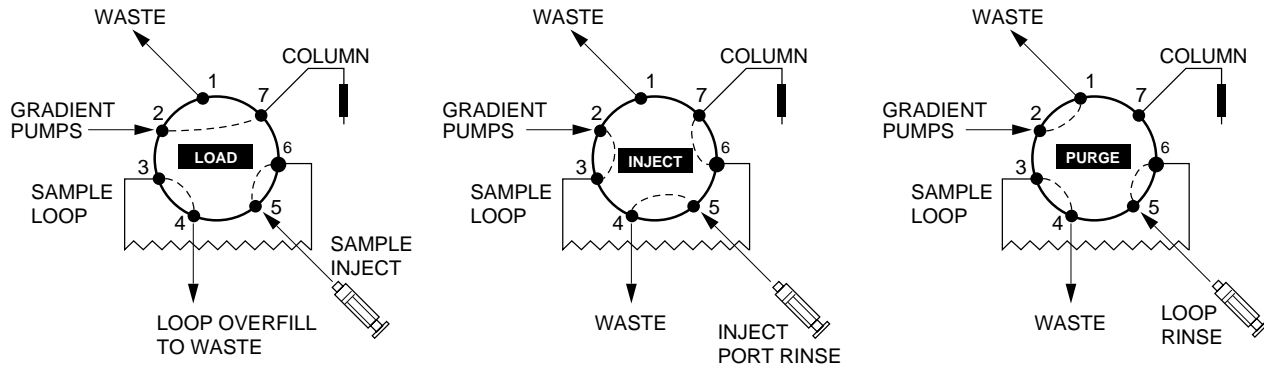


Valve Plumbing

Both the V7-3 and the AV7-3 valves accept 1/4-28 flat bottom fittings. For all applications, 1/16" OD/0.020" ID Tefzel tubing is recommended. To maintain bio-compatibility, all wetted parts are non-metallic.

Example 1. Plumbing for a static or dynamic sample loop.

For precise sample application, the V7-3 or AV7-3 inject valve is used with a sample loop. Connect the sample loop between ports 6 and 3. The sample loop can be filled manually using a syringe or automatically using the Model EP-1 Econo Pump. Make the remaining plumbing connections as shown below.



In the configuration shown above, the valve operates as follows:

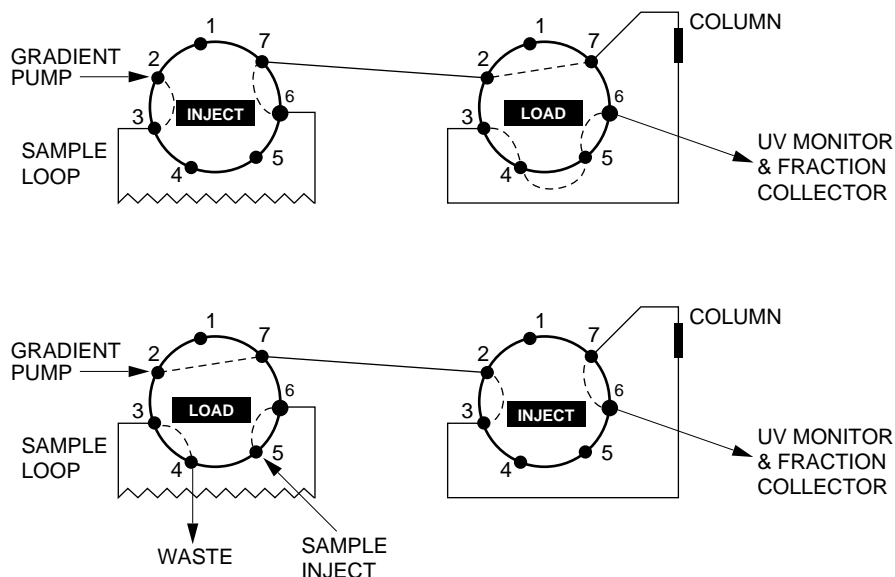
- **LOAD.** While in this position the valve connects ports 2 and 7 for equilibration of the column and for column elution. In this position, sample loop is loaded via port 5. Overfilling the loop will result in liquid going to waste through port 4.
- **INJECT.** While in this position the valve connects ports 2 and 3 and ports 6 and 7 for applying the sample onto the column.
- **PURGE.** While in this position the valve connects ports 1 and 2 and allows purging or buffer changes of the BioLogic Gradient Pumps without the need to remove the column from the system.



Example 4. Inject Valve Plumbing for Reverse Flow Chromatography

Using an additional Inject valve for reverse flow chromatography is advantageous for certain applications such as affinity chromatography where minimal dilution during sample elution is important.

In the configuration shown below, the top diagram shows Inject Valve #1 in its INJECT position as the Sample is loaded via the sample loop to inject Valve #2, which is in its LOAD position. The sample is thus applied to the top of the column.



After the Sample has been applied, Inject Valve #1 is changed to LOAD position and non-binding components washed from the column in the normal direction. Inject Valve #2 is then changed to INJECT position. This directs the flow of eluent up through the bottom of the column to elute the sample components of interest in a concentrated form.

Valve Maintenance and Repair

Model V7-3 and AV7-3 valves should be rinsed with water following use with aqueous buffers, or 20% ethanol following use with non-aqueous solutions. Never allow salt solutions to dry inside the valve. For repair of Model V7-3 and AV7-3 valves, contact your local Bio-Rad office.

Ordering Information

750-0401	Manual Inject Valve, V7-3
750-0406	Automated Inject Valve, AV7-3
750-0471	Sample Inject Port
125-0224	22 gauge needle
750-0480*	Injection Loop Kit, small volume. Includes 25 μ l, 50 μ l, 100 μ l, 250 μ l, 500 μ l loops, 22 gauge needle and syringe
750-0481*	Injection Loop Kit, large volume. Includes 1 ml, 2 ml, 5 ml loops; 22 gauge needle and syringe

*Individual sample loops available. Consult the BioLogic System Instruction Manual.