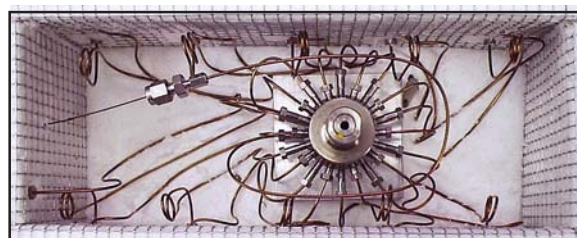


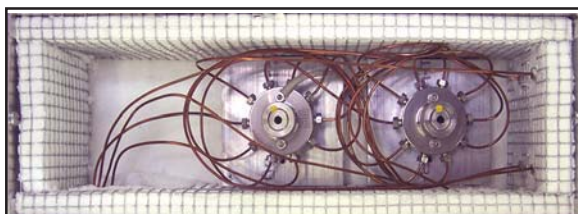
10-Port Gas Sampling Valves and 22-Port Selector Valves

- **Heated, Thermostatted Valve Oven**
- **Standard & Custom Plumbing Configurations**
- **Electronically Actuated with PeakSimple Control or Manually Actuated**
- **1, 2, or 3 Valve Capability**



22-port stream selector valve on our 10 position Method 5030 Purge & Trap Autosampler

SRI uses 10-port gas sampling valves because they provide more analytical flexibility for the same cost as 4 or 6 port valves. 10-port gas sampling valves can easily be plumbed to replicate the function of the simpler valves, while offering many other possible configurations. SRI offers standard plumbing configurations, including: *Inject Only*, *Inject and Backflush*, *Precolumn Backflush to Vent*, *Column Sequence Reversal*, *Alternate Loop Inject*, and *Dual Loop-Dual Column*. Many more plumbing configurations are possible, especially when multiple valves are plumbed together.



Dual 10-port gas sampling valves in the heated valve oven of a customized dual TO-14 injector

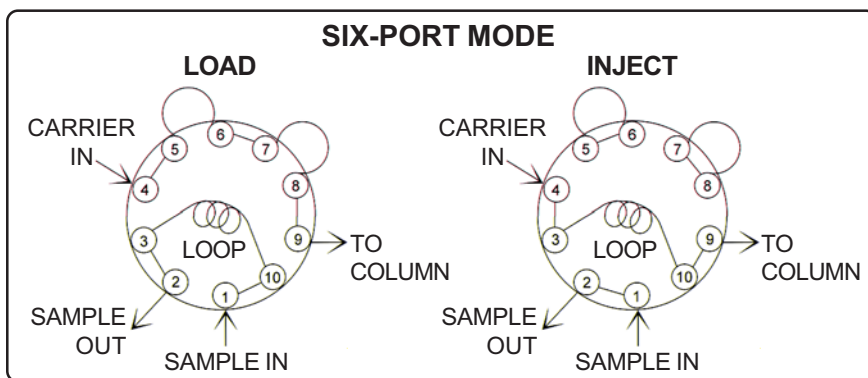
The optional valve oven, mounted on the 8610C GC, can accommodate two electrically operated plus one manually operated valve, and can be adjusted from ambient to 175°C (up to 300°C for the manual valve). Because the valve oven is immediately next to the column oven, tubing runs are short with no cold spots, which results in sharper peaks.

Each valve includes 1/8" stainless steel bulkhead fittings on the front of the optional valve oven for sample in/out connections. A single heated (375°C max) fast-cooling adsorbent trap plumbed as the loop of the gas sampling valve is also available for applications where sample concentration is desired. The trap cools to a user-controlled setpoint, not just to ambient temperature, so the adsorbent characteristics (water rejection, etc.) can be manipulated. Also available is a 10-port pneumatic diaphragm valve for use within the 8610D's valve oven, which is too narrow for the regular 10-port gas sampling valves.

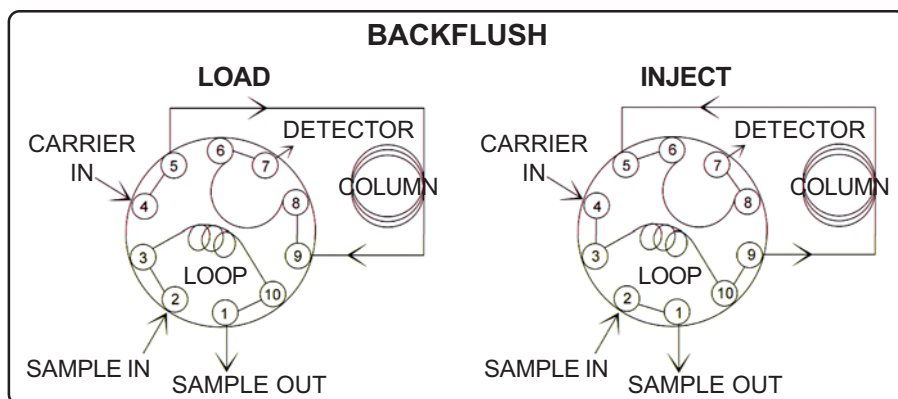
8690-0063	10-Port Manually Actuated valve, plumbed & tested
8690-0065	10-Port Electrically Actuated valve, plumbed & tested
8690-0077	Automated 22-port, 10-Stream Selection valve, plumbed & tested
8690-0088	Heated, thermostatted valve oven mounted on an 8610C GC
8690-0061	10-port Pneumatic Diaphragm valve, plumbed & tested
8690-0091	Narrow heated, thermostatted valve oven mounted on an 8610D GC

10-Port Gas Sampling Valve Plumbing Option Examples

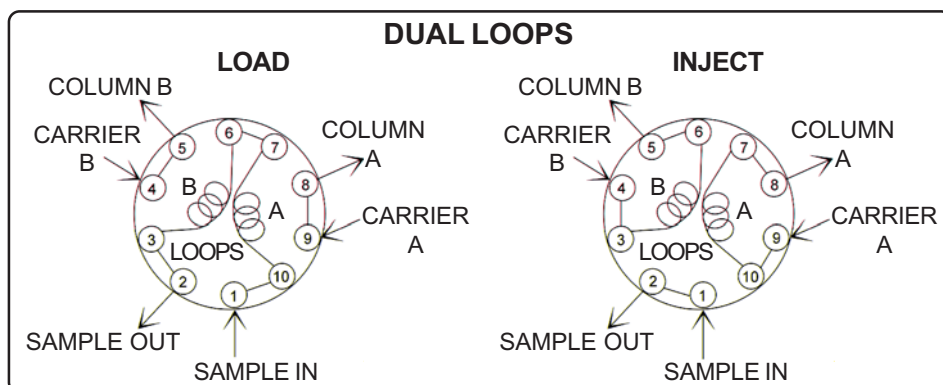
The valve plumbing configuration shown at right is the standard 6-port configuration. The sample loop connected between ports 3 and 10 is inserted into the carrier gas stream when the valve is rotated to the INJECT position.



The same 10-port valve can also be configured to backflush the column when the valve is rotated. Backflushing can often shorten the analysis by eliminating the need to program the column temperature up to elute high boiling analytes.



A single 10-port valve can be plumbed to inject the same sample onto two separate columns using two separate loops. This is especially useful where two different carrier gas types are used, or where the detectors employed have very different sensitivities and need different sample sizes injected.



The 10-port valve configuration shown at right is our Multiple Gas Analyzer #1 (MG#1) valve. In the LOAD position, the sample loop is filled with new sample gas, and the Silica Gel column is downstream of the MoleSieve column. In the INJECT position (shown), the contents of the loop are flushed into the Silica Gel column, which is now upstream. The lightest analytes blow through onto the MoleSieve for separation. The valve is then rotated back to the LOAD position, just prior to the elution of ethane for the separation of C_2-C_6 .

