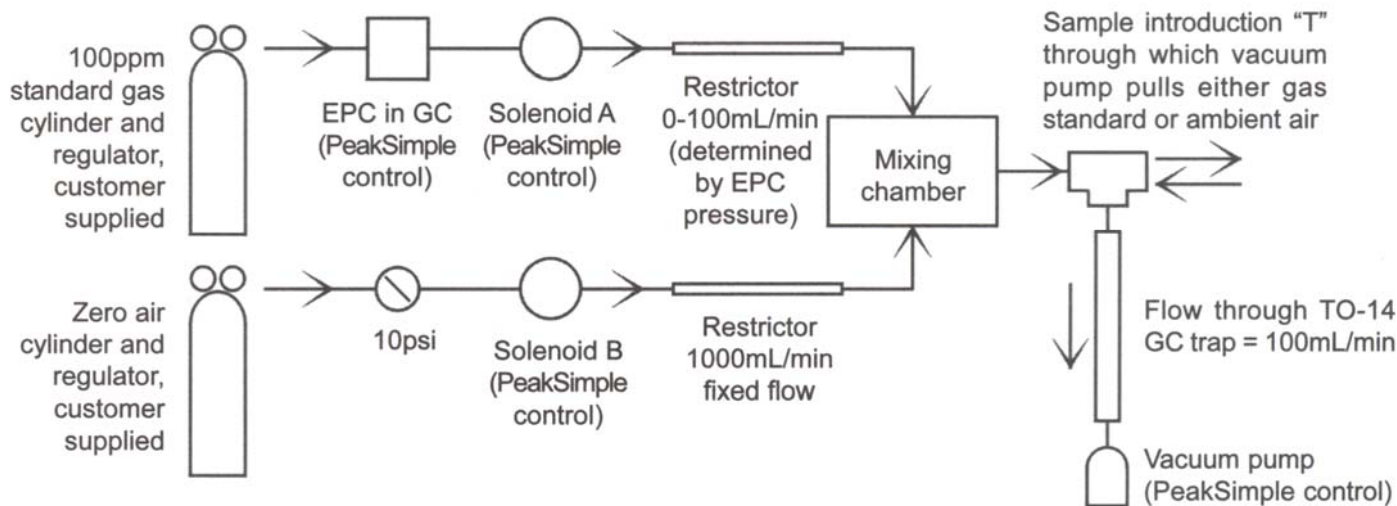


Automated Calibration System (ACS)

For the SRI TO-14 Air Monitoring GC

The SRI Automatic Calibration System (ACS) allows for automatic, unattended recalibration when using an SRI GC equipped with the TO-14 Air Concentrator for ambient air analysis.



Under control of the PeakSimple software included with the GC, the ACS can make dilutions of the customer-supplied standard gas and Zero Air at ratios of 10,000 to 1. For example, if the standard EPC on the TO-14 GC is set to 50psi, a 100ppm standard gas flows through the restrictor at a rate of 100 milliliters per minute; the Zero Air flows at a rate of 1,000 milliliters per minute. This produces a 10ppm diluted gas, which is sampled into the TO-14 Air Concentrator by the vacuum pump (supplied with the TO-14 Air Concentrator).

By manipulating both the EPC pressure and time, the 100ppm standard can be diluted over a 10,000 to 1 concentration. For example, let's say you've decided to use 300 seconds as the length of time the vacuum pump is sampling the standard gas. If the standard EPC pressure is reduced to 10psi, the standard gas flow rate is reduced to 10 milliliters per minute, and the resulting diluted concentration is 1ppm. If solenoid A is open for 30 seconds (10% of the total 300 second time period during which the vacuum pump is pulling sample through the TO-14 trap), the resulting time-averaged concentration is 100ppb. Because PeakSimple controls the dilution ratio, a multi-point calibration curve can be automatically constructed as part of the Autosampler Queue feature. The Autosampler Queue permits PeakSimple to periodically recalibrate without operator intervention.

8640-0050 TO-14 Automatic Calibration System (ACS)