

491 M - GF Gas Feed Module

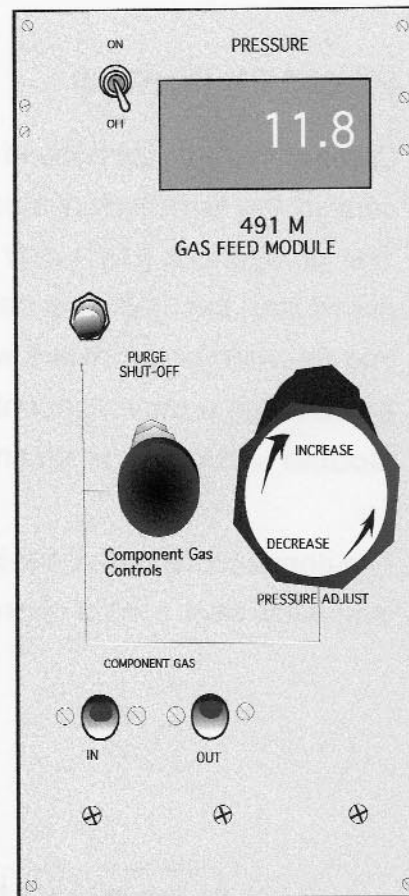
DESCRIPTION

The **491M** system uses permeation tubes to generate gas standards for analyzer calibration. Most calibrations can be performed with liquid filled permeation tubes.

However, some compounds retain very high vapor pressures and require a special mechanism of control to achieve desired concentrations levels.

The **491M Gas Feed Module** enables the **491M** permeation system to create gas standards from high vapor pressure gases such as **NO, CO, O₂**, and others not available in liquid filled tubes.

Used in conjunction with a certified Trace Source™ Series 57 gas permeation source, the **491M-GF** allows control of component gas pressure and purge rates while the permeation tube is contained in an adjacent **491M Base Module** oven. Oven temperature and dilution gas flow rates are easily adjusted through the base module to achieve a wide concentration range for calibration.



PRIMARY DESIGN

Component gas introduced into the **491M Gas Feed Module** is regulated and sent to the permeation tube housed in an adjacent **491M Base Module** oven. The component gas vapor surrounds the internal membrane of the tube and permeates the wall at a certified emission rate. Component gas vapor flowing into the membrane mixes with dilution gas controlled through the **Base Module** and creates a trace concentration mixture. The span gas mixture exits the **Base Module** and is sent to an analyzer for calibration.

The connections of the **491M-GF** supply component gas to the permeation tube and allow user control of pressure, purge, and refill requirements as needed.

