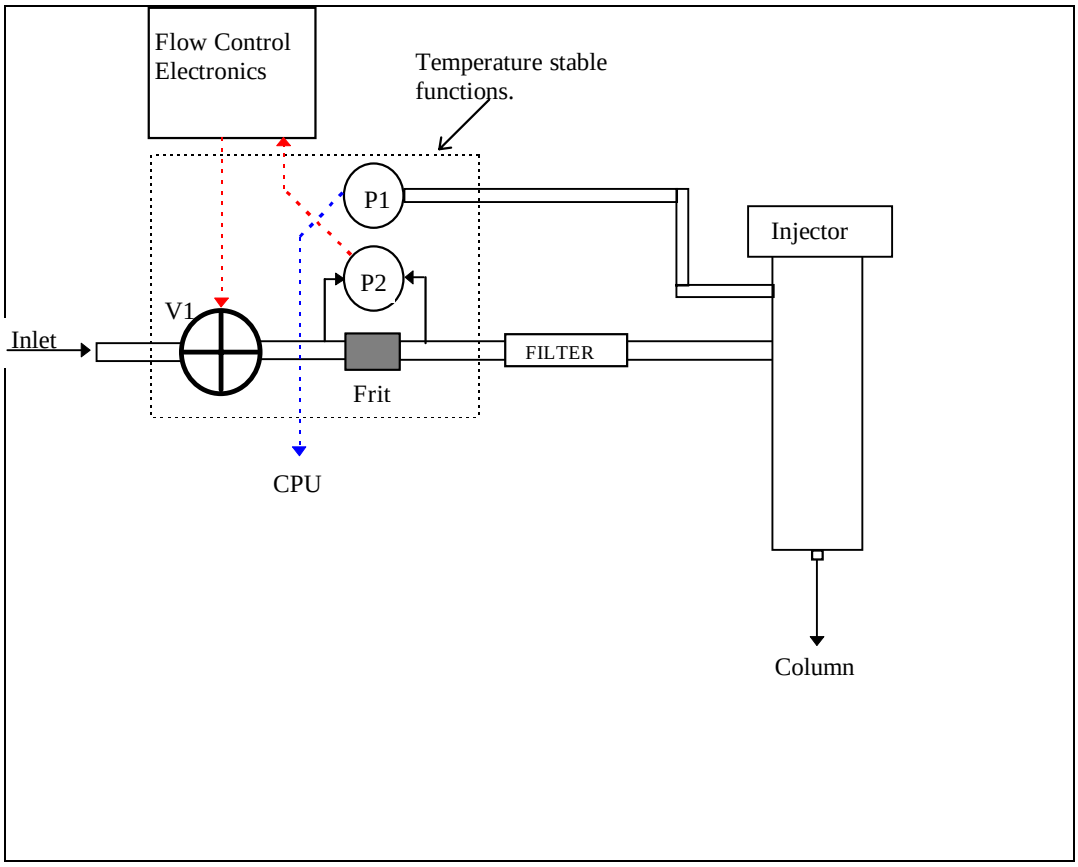
Type 3 Electronic Injector Controller



Functional description:

The Type 3 Electronic Injector Controller is designed to support a non splitting type of injector such as the Varian 1041 under flow control.

Gas flow into the injector is controlled using a closed loop mass flow controller. Inlet gas is connected to the input of linear control valve V1, and passes through V1 to the flow sensing restrictor element F1. A differential pressure transducer P2 senses the pressure drop across F1 and feeds back a flow rate signal to the control electronics. The desired flow rate is computed by the CPU in the GC which provides a control value to the control electronics. True mass flow rate control is achieved by software which utilizes the injector pressure measured by P1 in conjunction with data that is stored in computer memory during calibration. This calibration data relates values of P1 and P2 to standard milliliters per minute. P1,P2,V1 and the flow sensing frit are controlled at a fixed temperature.