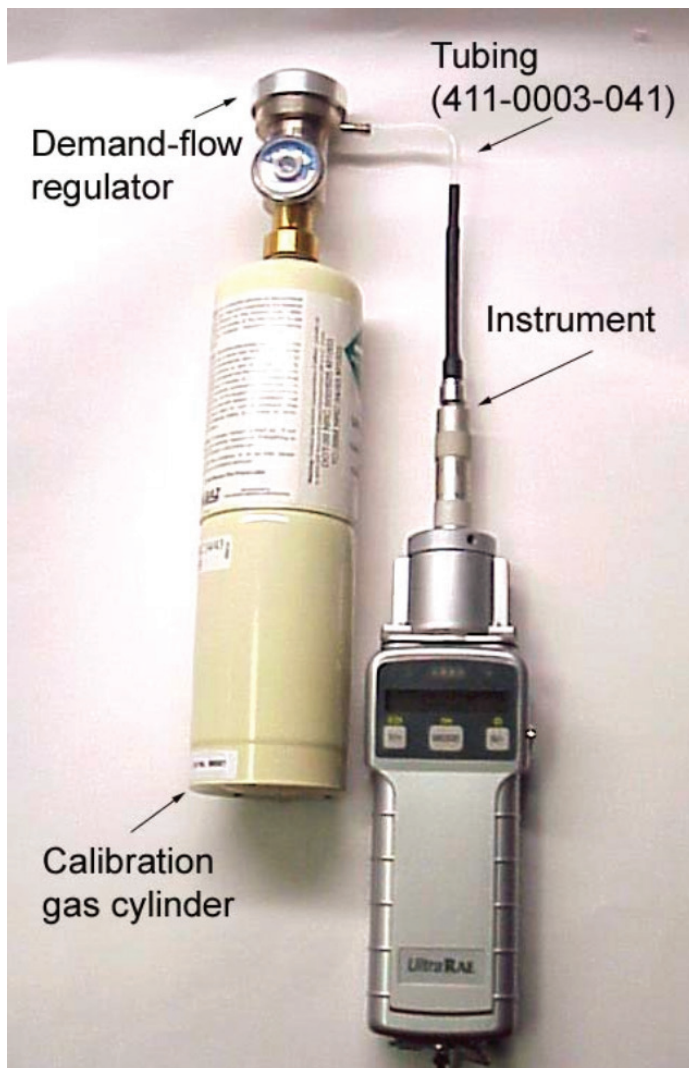


# OPERATION GUIDE FOR DEMAND-FLOW REGULATORS FOR CALIBRATION GASES

## INTRODUCTION

RAE Systems' demand-flow regulators (DFR) are designed for use with the RAE Systems instruments that utilize a pump to draw the calibration gas. The regulator provides the exact amount of gas the instrument pump requires. This type of regulator makes calibration quick and easy by eliminating the need for sample bags, flow meters, or special operator training. In addition, it saves calibration gas because it only transfers as much gas as the instrument demands. The DFR is normally off and is only turned on by a downstream suction of greater than 3" water (5.6mm Hg), which is exceeded by all pumped RAE Systems Instruments.



## TYPES OF DFRS

There are three versions of the DFR:

- P/N 002-3051-000, DFR with female thread for 34L steel cylinders.
- P/N 008-3052-000, DFR for non-corrosive gases, with male thread for 34L or 58L aluminum cylinders.
- P/N 008-3053-000, DFR for corrosive gases, with male thread for 34L or 58L aluminum cylinders.

## PROCEDURES

**Note:** There is no manual on/off switch on a DFR.

To use the DFR:

1. Screw the DFR tightly onto the applicable compressed gas cylinder.
2. When needed, connect the outlet port of the DFR and the sample probe of the instrument with soft tubing (e.g., a short piece of Tygon tubing, p/n: 411-0003-041).
3. After the calibration gas operation (either a span calibration or a span check) is done, disconnect the sample probe of the instrument from the upstream soft tubing;
4. Unscrew the DFR from the compressed calibration gas bottle if needed for other applications (it can be left in place).
5. Put all the components back in place for storage.