



## CO<sub>2</sub> Diffusion Head Calibration Instructions

### Valtronics CO<sub>2</sub> Diffusion Head Calibration Kit:

2 cylinders of calibration gas:  
one of 99.8% Nitrogen  
one of 5.0±0.1% CO<sub>2</sub>

Regulator:

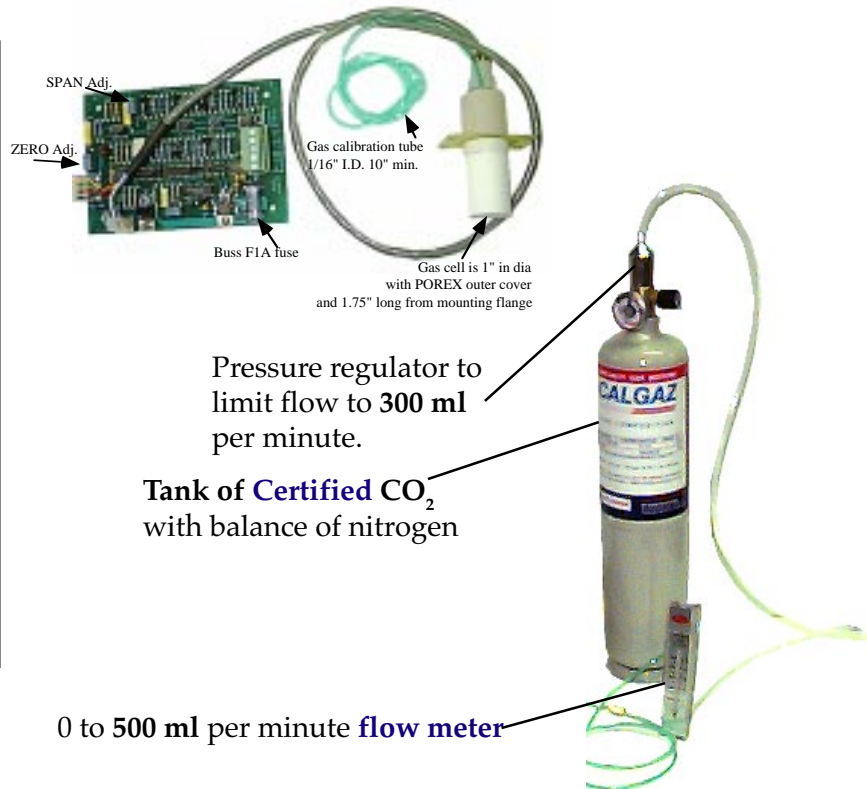
reusable 0.3 LPM  
with on/off valve

Flow meter - 1-500 ml/min

Tubing

Twin-pack carrying case

To order please call (209) 754-0707  
or FAX (209) 754-0104

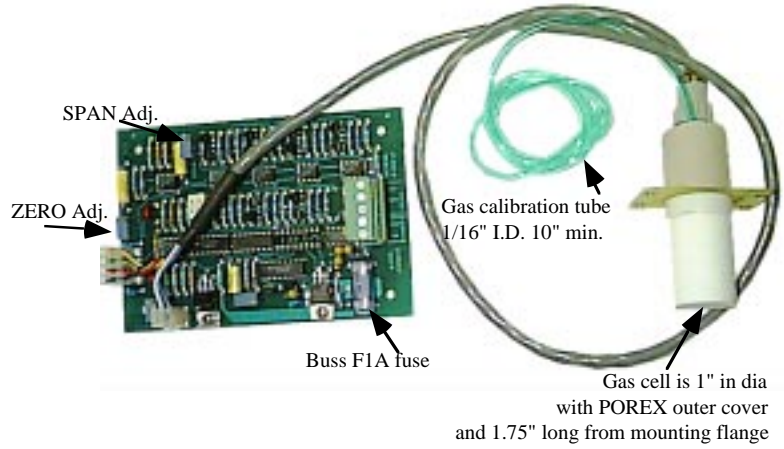


Gas calibration should be done a minimum of once every six months (at least ZERO calibration).

### CALIBRATION INSTRUCTIONS:

1. Remove protective cap from top of nitrogen cylinder. Push and thread pressure regulator valve onto cylinder outlet.
2. Connect plastic tubing from pressure regulator outlet to flow meter inlet (bottom conn. of meter).
3. Connect plastic tubing from flow meter outlet (top connection) to unit to be tested via 1/16 ID tubing to tubing connector or directly to the top hose barb on the flow meter.
4. Make sure unit to be tested is turned on and has had a 5 minute warm-up.
5. Connect voltmeter to voltage signal output and look for signal output stability.
6. Make sure flow meter is in an upright position. Open flow valve slowly while observing flow meter.
7. Adjust the flow to about 300 ml/min.
8. After 3 minutes of continuous nitrogen flow, observe signal output and perform zero adjustment (0.00 volts) if required.
9. Turn off flow valve and remove pressure regulator valve from nitrogen cylinder.
10. Replace nitrogen cylinder with cylinder containing 5.0% CO<sub>2</sub>.
11. Open flow valve and observe signal output. (see scale data for voltage reading)
12. Allow sample to flow until final indication is obtained. Adjust span potentiometer if required. (see scale data for voltage reading at 5.0%) 0.250 volts for a Model 2007 or 2008 20% CO<sub>2</sub> full scale.
13. Turn off flow valve and remove pressure regulator from cylinder.

Application Note A 34



Replacement 5% CO<sub>2</sub>  
SPAN Gas: order# 0612

Replacement nitrogen N<sub>2</sub>  
ZERO Gas: order# 0616



23 by 8.5  
inches



Carrying case with  
instructions on cover



Regulator, flow  
meter and tubing

**VALTRONICS** part #  
030339

Certified CO<sub>2</sub> concentration  
5.00% (50000 ppm) CO<sub>2</sub> ±2% of reading **Certified** = 5.00±0.10% CO<sub>2</sub>