

VOC Zeroing

Quick Start Guide



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VOC Zeroing

Zero calibration for PID measurements in the ppm range can usually be done using ambient air in an office or laboratory. For high-sensitivity work in the ppb range, a cleaner air source may be needed because indoor air often contains background levels of VOCs.

Clean Air Sources

We suggest 3 options for clean air sources for low-ppb PID measurements:

- **Outdoor air** gives a good zero in most cases if away from known pollution sources.
- **Cylinder zero air** (PN: M600-0040-000) as long as the regulator is not used for other gases.
- **VOC zeroing tubes** (PN: M070-3005-000) to scrub VOCs from ambient air. The remainder of this document describes operation of these tubes.

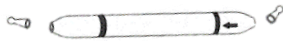
VOC Zeroing Tube Procedures

These instructions are primarily for NEO PPB zeroing but can also be used for other PID instruments.

- Let the PID warm up for at least several minutes to allow the lamp output to stabilize.
- If a water-trap filter is used, make sure it is clean by removing it and looking for no change in reading. If readings go down, replace filter.

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- Break open a new VOC zeroing tube using the tube-tip breaker provided.



- Attach the Tygon tubing connector to the PID inlet. If using a water trap filter, attach the connector to the filter inlet.
- Insert the VOC zeroing tube into the Tygon connector. The direction of the tube does not matter as long as it is not changed after starting.
- Allow about 1 minute (with the pump on) for the zero gas to fully purge the instrument before initiating the Zero Calibration on the instrument.

NOTES:

- For best results at ppb concentrations, perform Span Calibrations with a low concentration such as 1 ppm or 10 ppm isobutylene.
- For best accuracy, zero and span calibrate at the same pump speed as used for measurements.
- For best results, use a new zeroing tube each time. Tubes can sometimes be re-used a few times the same day if working in a clean environment. Attaching the red caps (provided) over the tube ends helps extend tube storage time, but typically not for more than a few days.

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