



# Aeroqual AQS 1



**Fenceline Particulate Monitoring with AQS 1 and Dust Sentry**

Modular hardware systems with robust, cloud-enabled software,  
provided by the world's best in technical rental support.



## Who We Are

*World-Class technical support, equipment and equipment servicing... Beyond Measure.*

Since 1972, CleanAir Engineering has provided the air quality industry with leading-edge technology, technical expertise, and innovative thinking. We are one of the world's oldest independent environmental monitoring companies, with our roots firmly planted in source testing.

Today, in addition to air and gas measurement equipment rental and sales, CleanAir offers services across the environmental testing spectrum: ambient air monitoring, consulting, lab analysis, source gas testing, and thermal performance and efficiency testing.

Our vast equipment resources enable us to exceed expectations, providing clients with the tools they need to collect the defensible data they demand—even for the most challenging applications.

Our **Instrument Rental** and **Express Sales** divisions provide solutions for CEMS, ambient, leak detection, industrial hygiene, and stack testing.

## World-Class Technical Service

- Five Technical Centers Worldwide
- Full Inspections on Every Rental
- Expert Consultation

## Best-in-Class Instruments

- Over \$14MM in Inventory
- CEMS design
- Next Generation Emission Measurement
- Custom Manufacturing
- Unmatched Rental Equipment Quality

## Unparalleled Assistance

- Technical Training in the Field and In-House
- Data Collection
- Troubleshooting and Live Support

## Calibration and Repair

- Over 50 Years of Experience
- Repair available for Most Modern Analyzers
- Industry-Leading Service, Guaranteed
- Calibration Gas Rentals



Custom CEMS and  
Monitoring Solutions



EPA Reference  
Method Sampling



Technical Support  
and Training

# Aeroqual AQS 1 and Dust Sentry Pro

## Feature Overview

### Customizable and Built to Suit

- With AQS 1 or Dust Sentry with PCX, measure multi-fraction PM simultaneously
- With AQS 1, measure up to 3 gases plus PM, weather and noise

### Versatile, Robust Hardware

- IP65 Glass-Fibre Reinforced Polyester (GRP) cabinet with aluminum solar shielding
- Lockable enclosure
- Tripod or wall mountable, with bracket
- Optional solar power with battery backup

### Flexible Communication, Powerful Software

- Out-of-the-Box Wi-Fi capable, or add an optional cellular modem
- Access real-time data remotely
- Set real-time, customizable email/SMS alerts
- Beautiful, browser-based web interface

## Measurement Parameters

- Simultaneous PM10, PM2.5, PM4, PM1 and TSP
- 3 gases simultaneously:
  - $O_3$
  - $NO_2$
  - CO
  - VOC (high)
  - $H_2S$
  - $SO_2$
  - $CH_4$
  - VOC (low)
- Weather
  - Built-In RH and temperature
  - Optional Airmar or Met One multi-sensor

Nephelometer-Equipped units measure only one particulate fraction: TSP, PM10, PM2.5, or PM1.



**Near Reference, real-time particle monitor, plus gas and weather**

**Pre-approved for South Coast AQMD 1466 PM<sub>10</sub>**

# Sensor Technology

## Measuring Particulate

### Nephelometer

Hardware component that reads all particulate in the air sample and uses a cyclone to separate out the PM cut to be measured. Can only read one PM cut at a time, depending on the inlet cyclone installed. These units can be set up to read  $PM_{1}$ ,  $PM_{2.5}$ ,  $PM_{10}$  or TSP.



Aeroqual  
Cyclone  
(in Silver)

### Laser Particle Counter / PCX

An LPC module pulls a complete sample and uses a laser to count particles based on size, calculating readings based on the counts. These modules can simultaneously measure  $PM_{1}$ ,  $PM_{2.5}$ ,  $PM_{10}$  and TSP.

## Measuring Gases



Aeroqual AQS 1 can be equipped with up to three modular gas sensors. Modules for measuring seven various gases plus VOCs are available, making units easily customizable to suit the needs of your project. Sensors use various measurement technologies suited to each compound,

including: gas sensing semiconductors (GSS), gas-sensing electrodes (GSE) and photoionization detectors (PID).

## Environmental Sensors

### Acoem/Met One MSO

- Wind Speed and Direction
- Temperature
- Humidity
- Barometric Pressure



### Airmar 200WX

- GPS Location
- Wind Speed and Direction
- Temperature
- Humidity
- Barometric Pressure
- Compass



### Cirrus MK427 NoiseSensor

- 30 to 100dB(A) standard range
- Automatic self-calibration
- 1 meter length



### Vaisala WXT536

- Wind Speed and Direction
- Temperature
- Humidity
- Barometric Pressure
- Rain





# CleanAir and Aeroqual

## Aeroqual Cloud



**Aeroqual's integration of hardware and software shines on Aeroqual Cloud, web-based data analysis and visualization suite.**

## CleanAir Expert Services

### Industry-Leading Technical Support

CleanAir service begins on your first call, when we pair you with the best air measurement solution for your project. Leverage our expertise throughout your project or over the lifetime of your Aeroqual product.

### Custom Solar System and Power Backup Design

For all remote monitor deployments, CleanAir can design a solar power solution that works for you, wherever you are.

### Deployment, Installation, and Maintenance

CleanAir's technical field team is available to install and maintain your AQS 1 or Dust Sentry systems. Or, we can train you on-site!

### Custom Data Analysis Solutions

Utilizing the Aeroqual Cloud API and Bentley Systems' eagle.io data platform, CleanAir experts can help you customize an analysis solution or visualization that compliments your workflow and meets your needs for any project.



- Actionable data
- Powerful visualizations
- Alerts via SMS / email within 60 sec.
- Remotely control monitor settings
- Easily share data
- Enhanced remote tech support tools
- Customizable reports



A light blue world map is centered on the page. Six black circular markers with white centers are placed on the map to indicate office locations: one in the western United States, one in the central United States, one in the eastern United States, one in the United Kingdom, one in France, and one in Japan.

***Global Leaders in Air and Gas Measurement  
and Thermal Performance Testing.***

### **Chicago**

500 West Wood Street  
Palatine, IL 60067

### **Pittsburgh**

110 Technology Drive  
Pittsburgh, PA 15275

### **Knoxville**

7936 Conner Road  
Powell, TN 37849

### **Houston**

321 Century Plaza  
Suite 110  
Houston, TX 77073

### **Seattle**

13720 24th Street East  
Units 102 and 109  
Building E  
Sumner, WA 98390

### **France**

360, avenue de la Rasclave  
Z.1. Braye de Cau  
13821 La Penne-Sur-Huveaune  
France

*Performance Beyond Measure. Since 1972.*