

## Agasthya Series BI 9000 Ambient Air Quality Monitoring System



BI 9000 AQMS Air Quality Station delivers accurate measurement data in real time for a wide range of air quality criteria in a compact and modular package. Measurable parameters include Ozone (O<sub>3</sub>), Nitrogen Dioxide (NO<sub>2</sub>), Nitric Oxide (NO), Carbon Monoxide (CO), Carbon Dioxide (CO<sub>2</sub>), Sulphur Dioxide (SO<sub>2</sub>), Hydrogen Sulphide (H<sub>2</sub>S), and other toxic gases.

Also the other particulate matter by parts measured are PM 2.5, PM10 and TSP.

Electrochemical, IR and Optical Sensor technology deliver high performance within a flexible platform.

The modular design of the BI 9000 AQM also facilitates cost-effective service. External sensors can be integrated that measure temperature, humidity, wind speed, wind direction, environmental noise, solar radiation and other meteorological parameters. Data is stored on in memory and remotely accessible in real time via GSM modem, Ethernet or Mod Bus communications.

The BI 9000 AQMS Air Quality Station meets the global trend for real time measurement of air quality in the micro-environment.

### Features

- 5.7 Inch Touch Screen Display
- 32 Bit powerful ARM PROCESSOR
- Remote site operation
- PC software included
- Climate-controlled compact enclosure
- Built-in zero air scrubber
- Real time data acquisition
- Negligible zero and span calibration slope drift
- Zero and Span calibration of gases at site
- Multiple gas measurements
- Measurement up to 12 parameters under one roof
- Multi-point factory calibration
- Particle monitoring PM2.5, PM10 & TSP
- Excellent linearity and sensitivity
- Meteorological sensors as option
- Analytic Electrochemical Technology
- Active sampling via brushless pumps
- Temperature and humidity sensors
- GSM / MODBUS / Ethernet communication
- Lower capital cost for affordable profiling and assessments

### Specifications

Parameters	Range	Resolution	Accuracy
<b>GAS MEASUREMENT - ELECTROCHEMICAL</b>			
Oxygen	0 - 25%	0.1%	< ±1% of reading
Carbon Monoxide	0 - 100 ppm	0.01 ppm	< ±1% of reading
Nitrogen Oxide	0 - 2 ppm	0.005 ppm	< ±1% of reading
Nitrogen Dioxide	0 - 2 ppm	0.005 ppm	< ±1% of reading
Sulpher Dioxide	0 - 2 ppm	0.003 ppm	< ±1% of reading
Hydrogen Sulphide	0 - 10 ppm	0.004 ppm	< ±1% of reading
Ozone	0 - 1 ppm	0.03 ppm	< ±1% of reading
Ammonia	0 - 25 ppm	1 ppm	< ±1% of reading
Chlorine	0 - 10 ppm	0.05 ppm	< ±1% of reading
<b>GAS MEASUREMENT - INFRARED</b>			
Carbon Dioxide	0 - 2000 ppm	1 ppm	< ±3% of reading
Methane	0 - 2000 ppm	1 ppm	< ±3% of reading
<b>PARTICULATE MATTER - OPTICAL SENSOR</b>			
PM 10	0.001-20 mg/m <sup>3</sup>	0.001 mg/m <sup>3</sup>	1% of reading
PM 2.5	0.001-20 mg/m <sup>3</sup>	0.001 mg/m <sup>3</sup>	1% of reading
<b>OTHER PARAMETERS</b>			
Barometric Pressure	800 to 1100 hPa	1hPa	±0.3 hPa
Ambient Temperature	-40°C to 60°C	0.1°C	±0.2°C
Humidity	0-100% Rh	0.1 Rh	±1% Rh

### Systems Specifications

- Gas Connections : 1/4 Inch fitting, rear panel entries
- Operating Conditions : -20 to 50° C Ambient Temperature. 0-96 rh Relative humidity
- Power Requirements : 110 / 230 V AC, 250 VA Maximum
- Analog Output : 4-20 mA for each gas
- Computer Interface : RS 232, RS485 & MODBUS PROTOCOL, ETHERNET as option
- Dimensions : H 1500 mm X W 600 mm X D 800 mm
- Weight : From 200 kg to 300 kg dependent upon configuration
- Relative Humidity Range : 15 to 85%
- Pressure Range : Atmospheric  $\pm$  10%

### Applications

- Environmental impact assessments
- Park and forest monitoring
- Indoor air quality monitoring
- Industrial perimeter air quality monitoring
- Construction site monitoring
- Local community exposure: residential, schools, hospitals
- Urban air quality monitoring
- Near road air quality monitoring
- Ecological mobility management
- Long term air quality trend analysis
- Low cost air quality networks to support reference AAQM stations

### Bhoomi Advantages

- Spares and accessories availability guaranteed for years
- Ensured after sales & service support
- Emission monitoring according to local regulations
- Low cost of ownership, maintenance and installation
- Combination of technologies and integration under one roof
- Single sample inlet for sample gases with air driven eductor or pump option

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