

EVM-7 Environmental Monitor



Particulate and air quality monitoring in one portable unit.

Seven Available Measurements

- Particulates (mass concentration)
- Toxic Gas
- Relative Humidity
- Air Velocity (with optional accessory)
- Volatile Organic Compounds (PID)
- Carbon Dioxide (CO₂)
- Temperature



Industrial hygienists and safety professionals worldwide encounter air quality hazards and pollutants. These range from unacceptable temperature and humidity levels to elevated levels of toxic gases and particulates, which can lead to health effects on workers or building inhabitants.

Quest Technologies EVM-7 offers the capability to measure and evaluate the quality of air, and mass concentration of dust. With the unique, patent-pending dial-in impactors, changing particulate settings is quick and easy. A built-in sampling pump allows the user to measure particulates with a gravimetric filter and send off the removable cassette for laboratory analysis. The EVM-7 advanced environmental monitor provides a cost effective solution for air quality screening and reduces the need for multiple instruments.



Applications Include:

- Work Site Monitoring
- Air Quality Assessment
- Military Site Evaluation
- Construction / Mining Site Monitoring
- Regulatory Compliance
- Time-History Assessment
- Internal Vehicle Sampling
- Industrial Hygiene Surveys
- Regulatory Compliance



Key Features

- Dial-in rotary impactors with settings: PM2.5, PM4, PM10 or TSP*
- Intelligent sensors (auto-detectable at power on)
- 90° optical light scattering photometer (total mass concentration)
- Removable internal filter cassette (gravimetric analysis)
- Factory calibrated to ISO 12103-1, A2 (Arizona Road Dust)
- Standard Quest user interface with 10 pushbuttons / 4 softkeys
- Internal Sampling Pump
- Real-time particulate measurement
- Rechargeable Lithium-Ion battery pack
- Multilingual Display (five languages)
- User supplied site factors for dust

*Within the instrument's measurement range

Method	Base Units	Reading Minimum	Reading Maximum	Accuracy-Repeatability
Temperature				
Junction Diode	deg C	0	60	+/-1.1 deg C
	deg F	32	140	+/-2 deg F
Relative Humidity				
Capacitive	% humidity	0	100	+/-2% RH*
Particulate				
90° Light Scattering/ Integrating Photometer	mg / m ³	0.001	199.9	+/-15% (rel ARD*)
Particle Size Range	µm	0.1	10	**
VOC (Option)				
(PID) 10.6eV Photo-Ionization Detector	ppm	0	2000	+/-5% / 2% (rel Isobutylene)
CO₂ (Option)				
NDIR (Non-Dispersive Infrared)	ppm	0	20,000	+/-50 ppm 2% of signal
Toxic Electrochemical Sensor				
CO Carbon Monoxide Sensor	ppm	0	1000	+/-5% / 2% of signal
Cl ₂ Chlorine Sensor	ppm	0	20	+/-5% / 2% of signal
EtO Ethylene Oxide Sensor	ppm	0	20	+/-5% / 2% of signal
HCN Hydrogen Cyanide Sensor	ppm	0	50	+/-5% / 2% of signal
H ₂ S Hydrogen Sulfide Sensor	ppm	0	500	+/-5% / 2% of signal
NO Nitric Oxide Sensor	ppm	0	100	+/-5% / 2% of signal
NO ₂ Nitrogen Dioxide Sensor	ppm	0	50	+/-5% / 2% of signal
O ₂ Oxygen Sensor	%O ₂	0	30	+/-5% / 2% of signal
SO ₂ Sulfur Dioxide Sensor	ppm	0	50	+/-5% / 2% of signal
Air Velocity				
Omni-directional Heated Thermistor Windprobe	meter/ sec	0.0	20.0	+/-0.12 m/s + 4.5% of signal
	feet/ min	0	3940	+/-23.6 ft/min + 4.5% of signal

*RH- Relative Humidity, ARD- Arizona Road Dust

**The photometer can detect particles up to 100 µm, however accuracy is reduced for sizes greater than 10 µm.

General

Display Languages	English, French, German, Italian, Portuguese and Spanish
User Interface	10 pushbuttons and 4 softkeys, menu driven
Display Type	Transreflective 128 X 64 LCD with backlighting
Software Compatibility	QuestSuite® Professional II
Standards	CE Mark and RoHS compliant

Displayed Data

Measurements	Level, Minimum, Maximum, Average, Short-Term Exposure Level (STEL), Time Weighted Average (TWA)
Real-time measurement	Once per second display update rate
Time History Data Logging Intervals	Seconds: 1, 5, 15, 30 Minutes: 1, 5, 10, 15, 30, 60
Trend Graphing Intervals For All Parameters	Minutes: 1.5, 3, 15 Hours: 1.5, 3, 8, 12, 24
Status Indicators	Battery, Run, Pause, Stop, Overload and UnderRange

Physical Characteristics

Size	19 cm X 19 cm X 7 cm (7.5" X 7.5" X 2.75")
Weight	1.3 kg (2.9 lb)
Housing	Static Dissipative ABS Polycarbonate Housing
Tripod Mount	Standard photographic mount on bottom, 1/4" - 20 screw heads

Operating Conditions

Temperature Range	0°C to 50°C (32°F to 122°C)
Pressure Range	65 kPa to 108 kPa
Relative Humidity Range	10% to 90% non-condensing

Storage Conditions

Temperature	-20°C to 60°C (-4°F to 140°F)
Humidity	0% to 95% RH, non-condensing

Electrical Characteristics

Intelligent Sensors	Auto-detectable when inserted at power-off mode
Battery Pack	Rechargeable Lithium-Ion
Battery Life	Minimum of 8 hours under continuous operation
External DC Power Input	10 to 16 Volt power inlet (nominal 12V DC) 1.5A
Power Adapter	Universal AC adapter 100 to 240 Volt AC, 50-60 Hz