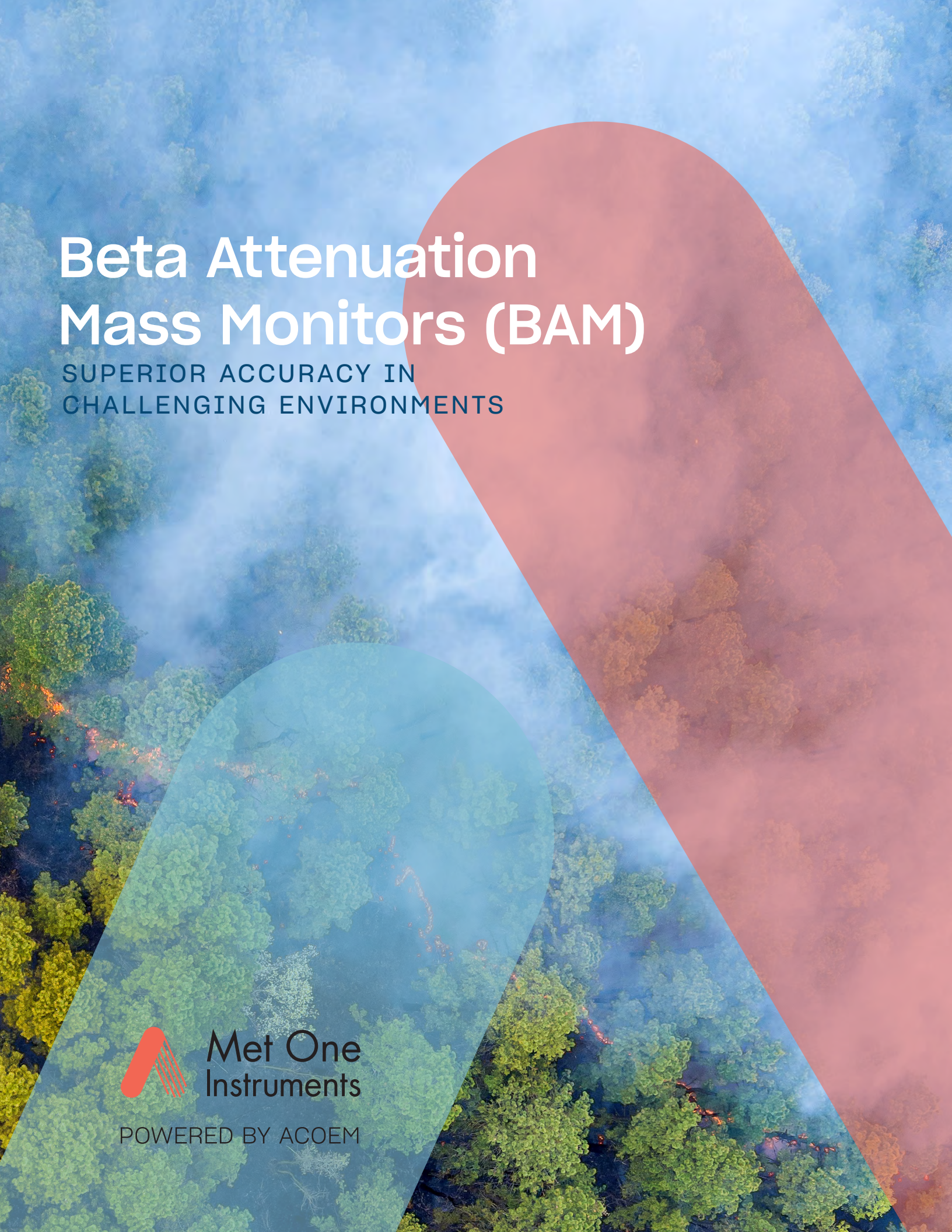


Beta Attenuation Mass Monitors (BAM)

SUPERIOR ACCURACY IN CHALLENGING ENVIRONMENTS

Met One Instruments

POWERED BY ACOEM

Met One Instruments Powered by Acoem BAM Series: Real-time precision where it matters most

Beta Attenuation Mass Monitors (BAMs) from Met One Instruments set the benchmark for continuous ambient particulate mass measurement in air quality monitoring. Renowned for their simplicity, reliability, and unmatched accuracy, Met One BAMs are the preferred choice for large air quality monitoring networks worldwide. Their exceptional precision and user-friendly design make them indispensable across various applications, from regulatory compliance to advanced research.

Unmatched Accuracy

Provides extremely accurate results in diverse application settings, ensuring reliable data for air quality assessments. Demonstrates consistent comparability with reference methods, regardless of environmental conditions.

Real-Time Data

Delivers immediate results, allowing for prompt decision-making and responsive actions. Simplicity and Reliability: Engineered for ease of use, reducing operational complexity and enhancing durability.

Cost-Effective Operation

Designed to be less expensive to operate and maintain compared to other methods like the TEOM.

Versatile Applications

Suitable for a wide range of environments, including areas with high wood smoke concentrations, where optical methods may overestimate measurements.

Choose Met One BAM Series for accurate, real-time air quality monitoring you can depend on.

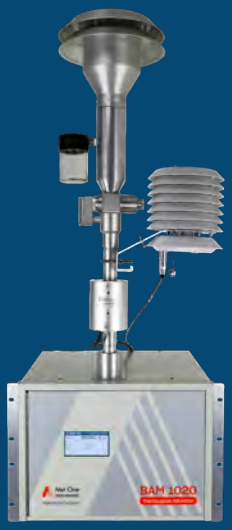
BAM 1020

BAM 1022

BAM 1022 PLUS

E-BAM

E-BAM PLUS



BAM 1020

- US-EPA Designated PM_{10}, $PM_{2.5}$, $PM_{10-2.5}$
- Worldwide regulatory approvals and certifications
- Rack mounted or bench top
- Time-proven technology
- Cloud modem compatible
- Air quality monitoring networks
- Roadside monitoring

The BAM 1020 beta attenuation mass monitor is the de facto US standard for continuous PM monitoring. It was first introduced in 1995, received EPA designation for PM_{10} in 1998, EPA designation for $PM_{2.5}$ in 2008 (almost 2 years ahead of the competition) and EPA designation for $PM_{10-2.5}$ in 2009. It possesses more than a dozen international certifications including CNEMC (China), TUV (EU), Korea, Taiwan, and more.

E-BAM

- Lightweight, portable
- Easily operated from battery or solar power
- Self-contained: no shelter/enclosure necessary
- Simultaneous 1-hour and real-time output
- Time-proven technology
- Real-time output: 1-minute time resolution
- Roadside monitoring
- Emergency responder applications
- Community monitoring

E-BAM PLUS

- US-EPA Designated PM_{10}
- Lightweight, portable
- Self-contained: no shelter/ enclosure necessary
- Simultaneous 1-hour and real-time output
- Time-proven technology
- Cloud modem compatible
- Air quality monitoring networks
- Roadside monitoring
- Emergency responder applications
- Community monitoring
- Ideal field-audit device

BAM 1022

- US-EPA Designated $PM_{2.5}$
- Self-contained: no shelter/enclosure necessary
- Simultaneous 1-hour and real-time output
- Time-proven technology
- Cloud modem compatible
- Air quality monitoring networks
- Roadside monitoring
- Emergency responder applications
- Community monitoring
- Ideal field audit device
- Weatherproof.

The BAM 1022 represents the future of regulatory air quality monitoring. It is self-contained; no shelter or enclosure is required. This relieves the user of having to appropriate the space, the power, the expense, and the hassle of having to set up an environmentally controlled shelter on-site in order to perform a simple PM measurement.

Unlike most air quality monitors, which are generally set up and perform their measurements at or near room temperature inside of a shelter or enclosure, the BAM 1022 performs its measurement under near ambient conditions. This approach can improve the accuracy of the measurement

BAM 1022 PLUS

- US-EPA Designated $PM_{2.5}$
- In-Situ measurement of PM that provides high accuracy, minimal measurement artifacts.
- Reduced background determination frequency.
- Unsurpassed performance under high ambient dew point operation.
- Advanced communications features allowing remote operation and cloud-based communication.
- Advanced diagnostics.
- Improved sensitivity compared to other in-line beta attenuation mass monitors.
- Meteorological and other sensor inputs.

The new BAM 1022 PLUS includes all of the familiar features and functionality of the BAM 1022, upgraded for unsurpassed sensitivity. Our new BAM 1022 PLUS is the most sensitive BAM instrument manufactured, with nearly double the sensitivity of the standard BAM 1022.

Find the perfect solution for your air quality monitoring needs

Parameter	BAM 1020	BAM 1022
Regulatory Designation	**US-EPA $PM_{2.5}$** Equivalent Method **US-EPA PM_{10}** Equivalent Method **US-EPA $PM_{10-2.5}$** Equivalent Method **TUV, CNEMC, Korea, Other International Certifications**	**US-EPA $PM_{2.5}$** Equivalent Method
Installation	Rack or Bench Mount	Self-Contained, Weatherproof
Measurement Cycle	1-Hour	Dual Outputs: 1-Hour, Continuous (1-Minute Minimum Resolution)
Lower Limit of Detection	4.8 µg/m³ (1-Hour) 1 µg/m³ (24-Hour)	4.8 µg/m³ (1-Hour) 1 µg/m³ (24-Hour)
Pump Type	AC-Powered Rotary Vane or AC-Powered Reciprocating	AC-Powered Rotary Vane or AC-Powered Reciprocating
Communications	RS-232, Cellular Modem, Ethernet,USB	RS-232, USB, Ethernet, Cellular Modem, Modbus
Power Requirements	115-240 VAC 5.4 Peak Amps (Shelter Not Included)	100-230 VAC 50/60 Hz, 300 W
Data Storage	182 Days Expandable	22,528 Records (2.6 Years @ 1 Rec./Hour)

BAM 1022 PLUS 	E-BAM PLUS 	E-BAM 
US-EPA $PM_{2.5}$ Equivalent Method	**US-EPA PM_{10}** Equivalent Method	**China** Pattern Approval
Self-Contained, Weatherproof	Portable, Self-Contained, Weatherproof	Portable, Self-Contained, Weatherproof
Primary: Automatic Hourly PM Measurement (Required for $PM_{2.5}$ FEM Operation). Secondary: 1-Minute Minimum Resolution with User-Selectable Averaging Period.	Dual Outputs: 1-Hour, Continuous (1-Minute Minimum Resolution)	Dual Outputs: 1-Hour, Continuous (1-Minute Minimum Resolution)
< 2.4 µg/m³ (Hourly, 2σ) / < 0.5 µg/m³ (24 Hour, 2σ).	4.8 µg/m³ (1-Hour) 1 µg/m³ (24-Hour)	6 µg/m³ (1-Hour) 1.2 µg/m³ (24-Hour)
AC-Powered Rotary Vane or AC-Powered Reciprocating	AC-Powered Rotary Vane or AC-Powered Reciprocating	DC-Powered Internal Diaphragm
RS-232, USB, Ethernet, Cellular Modem, Modbus	RS-232, Cellular Modem, USB, Modbus	RS-232, Cellular Modem, USB, Modbus
100-230 VAC 50/60 Hz, 300 W	100-230 VAC 50/60 Hz 150 W	12VDC AC Power Supply:100-230 VAC, 50/60 Hz, 102W
22,528 Records (2.6 Years @ 1 Rec./Hour)	1.3 Years @ 60 Minute Average	2.6 Years @ 60 Minute Average

Government certified

Air Quality Monitoring Networks

The vast majority of PM monitors used in governmental air quality monitoring networks are BAMs. PM monitors used in these networks generally require government certification for PM_{10} or $PM_{2.5}$. The BAM-1020, BAM-1022, BAM 1022 PLUS and E-BAM PLUS monitors are government certified for operation in such networks.

Emergency Responder Applications

Forest fires, structure fires, or industrial accidents can lead to the release of massive amounts of particulate matter into the air thereby imperiling the health of local residents and emergency responders. Because of the unplanned nature of such events, it is often impossible to set up air quality monitoring equipment in order to accurately assess health threats to the surrounding community. The E-BAM is the only portable beta gauge available that may be easily and economically operated on battery or solar power. If EPA-designated measurements are required, then either the BAM-1022 or the E-BAM PLUS may be quickly and easily deployed.

Identify fugitive emissions and local sources

Community and Fence-line Monitoring

Communities in close proximity to stationary emission sources such as petroleum refineries, petrochemical plants, waste incineration facilities, or ports may be subjected to pollutant levels higher than is seen at air quality monitoring stations located in the surrounding areas. A portable particulate monitor could be useful in identifying fugitive emissions and easily identifying local sources of pollution.

Roadside Monitoring

Often there is an interest in monitoring mobile-source emissions originating from motor vehicle exhaust in close proximity to heavily traveled roadways. For these applications, portable or self-contained BAM instruments are often ideal, unless environmental shelters are already in place. The BAM 1022 and BAM 1022 PLUS are both ideal for near-roadside particulate monitoring.

About

Met One Instruments Powered by Acoem

Established in 1989 with a primary emphasis placed on exceptional customer service, Met One Instruments Powered by Acoem is committed to providing innovation-driven, quality solutions and technology for ambient air measurement and air quality monitoring.

We continue to fulfill our mission of innovating and bringing new products and services into the market, delivering the full range of Acoem offerings plus the in-house expertise to ensure your instruments always operate to their optimal potential.

For more information visit **metone.com**

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