

E-BAM Plus Portable Beta Gauge

The Met One E-BAM Plus has been built to satisfy users, regulators and those from the health community by providing truly accurate, precise, real time measurement of fine particulate matter automatically. In addition, it is rugged, portable, and deployable in 15 minutes.

The E-BAM Plus Offers the Following Advanced Features:

- Accuracy and precision approval with U.S. EPA requirements for PM₁₀ measurement.
- Real-time, accurate results without correction factors, regardless of season or geographic location.
- True ambient sampling provides accurate measurement of semi-volatile nitrates and organic compounds.
- Lightweight, rugged construction is easily mounted on a tripod in minutes.
- All-weather construction allows for true ambient sampling.
- Operates on AC power.

E-Bam Plus is a Complete Measurement System That Comes With the Following Standard Components:

- Internal Data-logger
- External AC Vacuum Pump Standard
- Real-Time Concentration
- PM₁₀ Inlet
- Aluminum Tripod
- Temp/RH/Pressure Sensor
- Volumetric Flow Control
- Weatherproof Enclosure
- Filter Temperature Sensor
- Filter RH Sensor
- Filter Pressure Sensor
- Calibration Membrane



The Met One E-BAM Plus is a Portable, Real-time Beta Gauge which is comparable to U.S. EPA Methods for PM₁₀ Particulate Measurements.



Measurement Principle	Particulate Concentration by Beta Attenuation
U.S. EPA Designations Measurement	Designation Number: EQPM-1215-226
Range	-15 $\mu\text{g}/\text{m}^3$ – 10,000 $\mu\text{g}/\text{m}^3$
Measurement Resolution Sensitivity	1.0 $\mu\text{g}/\text{m}^3$
Standard Deviation Lower Detection Limit	(σ) (1 hour) Less than 3.0 $\mu\text{g}/\text{m}^3$ (2 σ) (1 hour) Less than 6 $\mu\text{g}/\text{m}^3$ (2 σ) (24 hour) Less than 1.2 $\mu\text{g}/\text{m}^3$
Measurement Sample Time	1 Hour
Flow Rate	16.7 L/min inlet flow rate; actual volumetric flow
Filter Tape	Continuous glass fiber filter; 30 mm x 21 m roll; > 60 days/roll
Span Check	Manual, 800ug (typical), span foil included.
Beta Source	C-14 (carbon-14); 60 $\mu\text{Ci} \pm 15 \mu\text{Ci}$ (< 2.22 X 10 ⁶ Beq); Half-Life 5730 years
Beta Detector Type	Photomultiplier tube with organic plastic scintillator
Operating Temperature Range	-25° to +50°C.
Operating Humidity Range	0 – 90% RH, noncondensing
Inlet Humidity Control	Actively controlled inlet heater module
User Interface	4.3" graphical touch screen
Ambient Sensor	Model 597A combination AT, RH, and BP serial sensor AT: -50° to +70°C; RH: 0 to 98%; BP: 375 to 825 mmHg
Analog Outputs	2 Channels; optically Isolated; Voltage Range 0-1, 0-2.5 or 0-5 VDC, Current Ranges 4-20 MA
7500 Digital Serial Interface	2 channels, half duplex RS-485
Serial Interface	1 channel; full duplex RS-232, USB (Shared common serial output) 1 channel; half duplex RS-485
Internal Data Storage	Baud rates 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200
External Data Storage	8 Days 1-minute average, 1.3 years 60-minute average
Compatible Software	1 USB Flash drive device
Power Supply	Air Plus 5, Comet™, HyperTerminal®
Weight	AC Version: 100 - 230 VAC; 50/60 Hz; 150W, 3A @ 115 VAC/ 2A @ 230 VAC
Dimensions (Without Tripod)	75 lbs. (34.1 kg) Height: 18 in (46 cm) Width: 16 in (41 cm) Depth: 12 in (31 cm)

Standard Accessories

- BX-802 PM₁₀ Inlet EPA Spec.
- EX-597 Ambient RH Pressure Sensor
- 460180 Filter Tape, Roll
- COMET Software
- External Pump 115 or 230 VAC Option (Specify Medo or Gast)

Specifications are subject to change at any time.

Optional Accessories

- BX-302 Zero Calibration Kit
- BX-307 Flow Calibrator
- BX-807 PM2.5 Sharp-Cut Cyclone
- BX-803 TSP Inlet
- EX-MSO Wind Speed and Direction Sensor
- EX-AIO 2 Sonic Wind Speed and Direction Sensor

