



E-FRM-DC

REGULATORY PM SAMPLER

APPLICATIONS:

- CRITERIA PM SAMPLING
- AUDIT SAMPLING
- REMOTE SAMPLING
- HEALTH STUDIES
- PERIMETER SAMPLING
- REGULATORY ENFORCEMENT

The NEW and improved Met One Instruments, Inc. E-FRM-DC sampler is a single-event filter sampler to determine daily $PM_{2.5}$ or PM_{10} particulate concentrations in ambient air.

The E-FRM-DC has an innovative design and unique features that provide a versatile, reliable, and simple platform for your ambient air sampling needs. This versatile instrument is used for fixed or portable ambient particulate sampling applications. The E-FRM-DC sampler is designed for easy setup and deployment, which allows it to be used for either permanent long-term sampling at a fixed site or as an audit sampler for frequent relocation.

The E-FRM-DC can be configured for PM_{10} as well as TSP, PM_{1} , and $PM_{2.5}$ as optional accessories. Featuring modern components paired with innovative design and state-of-the-art manufacturing practices, the E-FRM-DC is the premier single event sampler in the industry of particulate collection. The E-FRM-DC is ideal for Environmental Monitoring, Perimeter Sampling, and Industrial Monitoring.

The E-FRM-DC user interface is a full-color, 4.3" graphical touchscreen which utilizes intuitive control. The touchscreen was developed specifically to satisfy the recommendations of instrumentation operators. Data can be retrieved through any serial compatible data acquisition system or easily downloaded and transported with the filter on a USB drive.



FEATURES:

- Designed and tested to meet all current EPA PM_{2.5} Federal Reference Method specifications.
- Accommodates one EPA PM_{2.5} reference method 47mm sample filter cassette.
- Compatible with the VSCC™ cyclone or the classic WINS Impactor for PM_{2.5} sampling.
- Manufactured and supported in the United States at our ISO-9001 certified facilities.



INCLUDED ACCESSORIES:

- ✓ BX-802 EPA PM₁₀ Inlet
- ✓ BX-305 Leak Test Valve
- ✓ 81210 PM₁₀ Adapter
- ✓ 460128 FRM Filter Cassette (1 included with sampler)
- ✓ 460122 FRM 47mm PTFE Filters
- ✓ 80866-1 Ambient Temperature Sensor
- ✓ 82537-2 Aluminum Stand
- ✓ Operator's Manual
- ✓ Software

OPTIONAL ACCESSORIES:

- BX-808 PM_{2.5} VSCC™
- Cyclone BX-804 PM_{2.5} WINS Impactor
- BX-811 PM₁ Cyclone
- BX-803 TSP Inlet
- BX-307 Flow Calibrator



SPECIFICATIONS

E-FRM-DC

Measurement Principle	Programmable-event filter sampler for determination of particulate matter concentrations
Resulting Data Units	Micrograms per actual or standard cubic meter $\mu\text{g}/\text{m}^3$. Calculated from lab filter weights and actual or standard sampled volumes.
Design Specifications	Title 40 CFR, Part 50 Appendix L
U.S. EPA Designations	RFPS-0315-221, RFPS-0216-231, RFPS-0316-232
Main Inlet Type	EPA-pattern PM_{10} size-selective louvered inlet standard (MOI part no. BX-802)
$\text{PM}_{2.5}$ Separator Type	Options: BX-808 Very Sharp Cut Cyclone or BX-804 WINS Impactor
PM_{10} Sampling Configuration	Pass-through tube (used in place of cyclone) included for PM_{10} sampling.
Other Configurations	Compatible with $\text{PM}_{2.5}$ or PM_1 SCC cyclones. TSP inlet available.
Filter Type	47mm PTFE disc filters standard. Other filter material types available.
Filter Holder	Accommodates standard EPA-pattern white Delrin filter cassettes.
Filter Temperature Control	Filter Temp within 5°C of ambient during sampling and standby. Logged in data.
Operating Temperature	-30 to $+50^\circ\text{C}$ Ambient
Operating Pressure	400 to 800 mm Hg, Ambient
Sample Events	24 hour samples standard. Programmable start date, time and duration.
Flow Rate	16.67 L/min (1 $\text{m}^3/\text{hr.}$). With flow sensor and real-time actual flow control.
Flow Accuracy	$\pm 2\%$ (± 0.33 L/min)
Flow Records	Flow rate, temperature, pressure logged in 5 minute intervals.
Vacuum Pump	Single-head diaphragm 12 VDC pump
Data Collection	RS-232 port (9-pin). USB data port. USB flash drive port. Software supplied.
Memory Capacity	24 sample events
Compatible Software	FSCommAQ
User Interface	4.3" graphical touch screen
Enclosure Type	Active fan ventilation
Deployed Dimensions	2.0 meters (78.75") high, 65.5 cm (25.75") wide, 64.1 cm (25.25") deep
Footprint Dimensions	65.5 cm (25.75") wide, 64.1 cm (25.25") deep
Weight	Sampler 33 Lbs (except PM_{10} inlet head); Stand 10.5 Lbs
External Power Supply	Input: 100- 240 VAC, 50/60 Hz, 1.4 A; Output: 12 VDC, 8.5 A (102 W) Maximum
E-FRM-DC Power	12 VDC @ 2.75 A (33 W) Maximum

Specifications are subject to change at any time.