Carbon monitoring on a granular scale has never been more affordable, opening up an array of opportunities that were previously economically out of reach for many applications.

Introducing the NEW Met One Instruments, Inc. C-12 Portable Carbon Monitor. This revolutionary device measures and reports the concentration of black carbon "BC" continuously with a 1-minute time resolution.

Using the principle of optical attenuation of 880 nm near-infrared light through filter media upon which particulate matter containing BC deposits in real-time, the C-12 has the capability of making more than 1,000 filter advances, meaning that this sensor can operate unattended for more than two months.

The C-12 is an industrial-grade device, providing the user with an array of diagnostic information in real-time that will allow them to monitor its performance continuously. Although it is inexpensive compared to other commercially available carbon monitors, one can expect its operating life to be more than ten years.

The C-12 Portable Carbon Monitor is self-contained, eliminating the need for an expensive, space- and power-consuming environmental shelter. Instead, the device sets up in a matter of minutes virtually anywhere.

PORTABLE CARBON MONITOR

FEATURES:

- *Unmatched Value for Granular Data*
- **Real-Time Cloud Communications**
- **Data Logger Compatible**
- **Accessible Price Point**
- **Time Tested, Long-Lasting, Reliable Technology**
- **Precision Measurements**

Because of its modest sampling rate (1 LPM), the C-12 can easily be operated off modestly-sized solar panels in most regions. It comes standard with an AC power adapter.

The standard configuration of the C-12 enables the user to measure and report the BC (880 nm illumination) concentration with sensitivity better than 70 ng/m^3 at 1-minute time intervals.

Equipped with an integrated CCS+ COMET Cloud modem, the data is available in real-time on a customized webpage dashboard. The C-12 Portable Carbon Monitor samples total suspended particulate matter "TSP" and, if desired, the user may opt to mount the C-12 onto an optional tripod for rapid, flexible deployment.

C-12

PORTABLE CARBON MONITOR

APPLICATIONS:

- **Governmental Air Quality Surveillance**
- **Community Monitoring Applications**
- **Saturation Studies**
- **Nuisance Monitoring**
- **Source Apportionment Studies**
- **Academic Research**

The groundbreaking new C-12 has a low initial acquisition cost and low ongoing operational costs. One roll of filter tape permits more than 1,000 independent measurements.

With a standard sampling rate of 1 LPM, the unit may be flow-checked and flow-calibrated using most commercially available flow calibrators such as those used to support governmental air quality surveillance systems. An optional flow calibration system may also be purchased to support operation. The C-12 employs the same span calibration value (MACS) used by the Met One Instruments, Inc. Model BC-1054, Model BC-1060, and other commercially available tape-based carbon measurement devices (Aethalometer).

Principle of Operation	Optical attenuation across filter media
Illumination Wavelength	880 nm standard 880 nm/ 370 nm optional
Output	BC standard (880 nm) BC/ BrC, Source-Apportionment (880 nm, 370 nm) optional
Particle Measurement	TSP
Sampling Rate	1 LPM
Lower Detection Limit (2σ)	< 70 ng/m^3 (1-minute time scale) 880 nm illumination
Communications	USB, Built-in CCS+COMET Cloud Modem: Verizon™ 4G LTE (U.S. Domestic); GSM (Internationally with Over 550 Networks)

Power

Input Power:	100 - 240 VAC, 50/ 60 Hz; optional solar panel
Power Consumption:	6 W

Environmental

Operating Temperature Range:	-20°C to 50°C (-4° F to 122° F)
Ambient Humidity Range:	0 - 90% RH, non-condensing

Physical

Weight:	16 lbs 11 oz (7.57 kg)
Size:	15 in (38.1 cm) width x 12 in (30.48 cm) height (to top of sun shield) x 12 in (30.48 cm) depth

Specifications are subject to change at any time.

Met One Instruments