

U.S. EPA Automated Equivalent  $PM_{10}$   
Method: EQPM-1102-150

CARB California Approved Sampler  
(CAS) for  $PM_{10}$  and  $PM_{2.5}$

True "Continuous Real-Time"  
Measurement

## **FH 62 C14 Series**

Continuous Ambient Particulate Monitor

### **Key Features:**

New technology that provides continuous "real-time" measurement by a C14 monitor

Radon gas activity measurement eliminates interference of natural airborne radioactivity

Control and data exchange over two serial interfaces possible

Storage of half-hour average concentrations over a whole year

User selectable reporting of mass concentration based on standard or actual flow rate

Processor controlled calibration of all sensors

Insensitive to vibration and diurnal temperatures



### **Refined Sensitivity**

The FH 62 C14 Continuous Ambient Particulate Monitor measures the mass concentration of suspended particulate matter (e.g., TSP,  $PM_{10}$ ,  $PM_{2.5}$ ,  $PM_C$  and  $PM_1$ ) by use of beta attenuation. In addition, the ambient radioactive influence of natural Radon ( $Rn-222$ ) gas is measured as a refinement step toward better sensitivity at lower ambient particulate concentrations.

### **Accurate Results**

The FH 62 C14 particulate sample collection area is located between both the C14 source and the proportional detector. While ambient particulate matter is being deposited onto a filter tape sample spot, the dynamic filter loading is measured continuously by the attenuation of the C14 source beta rays. As a result, a continuous "real-time" measurement of airborne particulate is provided. It is not necessary to move the filter spot from the sample position to the detector position for zero and mass determination.



## FH 62 C14 Series Specifications

<b>Measuring Principle</b>	Continuous & simultaneous particulate collection coupled with beta ray attenuation
<b>Source</b>	Carbonium-14 (C14), <3.7 MBq (<100µCi)
<b>Ranges</b>	0 to 5,000 µg/m <sup>3</sup> or 0 to 10,000 µg/m <sup>3</sup>
<b>Minimum Detection Limit</b>	<1 µg/m <sup>3</sup> (24-hour average); <4 µg/m <sup>3</sup> (1-hour average)
<b>Precision of Two Monitors</b>	+ 2 µg/m <sup>3</sup> (24-hour)
<b>Resolution</b>	+ 1 µg/m <sup>3</sup> (instantaneous)
<b>Correlation Coefficient</b>	R > 0.98
<b>Measurement Cycle</b>	Single filter spot in position for 24 hours (default); user selectable 30-minutes to 24 hours
<b>Data Averages values displayed</b>	Each full 1/2, and 24 hour values automatically stored; each full 1/2, 1, 3 and 24 hour
<b>Air Flow Rate</b>	1 m <sup>3</sup> /h (16.67 lpm) measured across an internal subsonic orifice; user selectable from 0 to 20 lpm
<b>Output</b>	Serial interface RS 232 Analog output: 4-20mA or 0-10V output of concentration (µg/m <sup>3</sup> )
<b>Operating Temperature</b>	-22 to 140°F (-30 to 60°C)
<b>Power Supply</b>	Instrument: 100-240V, 50/60Hz, 330W max., 15W without pump or heater Pump: 100-110/100-120V, 50/60Hz or 220/240V, 50/60Hz, 100W
<b>Dimensions</b>	Instrument: 19" (W) x 12.25" (H) x 13" (D) / 483mm (W) x 311mm (H) x 330mm (D) Pump: 8.25" (W) x 8.75" (H) x 4.25" (D) / 210mm (W) x 222mm (H) x 108mm (D)
<b>Weight</b>	Instrument: 50 lbs (22.5 kg) / Pump: 18 lbs (8.16 kg)

## Available Options

Adjustable Tube Heaters	TSP or PM <sub>10</sub> Inlets
Analog I/O Expansion Board	Mass & Flow Rate Calibration Kits
Filter Tape Printer	WINS Impactor, Sharp-Cut Cyclone & Very Sharp-Cut Cyclone for PM <sub>2.5</sub>
Foil Separation	



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