



# APM 550



## APPLICATION

APM 550 system has been designed for regular monitoring PM 2.5 in ambient air. Also, since it allows the removal of PM 2.5 from the sample stream so the same system may be optionally used as a PM10 Sampler. Owing to its modular design, APM 550 can be easily paired with a gaseous sampling attachment (for monitoring SO<sub>2</sub>, NO<sub>x</sub>, NH<sub>3</sub>, Ozone etc.) as gaseous sampling requires only a few LPM of air flow.

## NEED

Studies sponsored by USEPA have concluded that Fine Particles, (PM<sub>2.5</sub>) which penetrates deep into the lungs, are more likely to contribute to adverse health effects and also adversely affects the visibility. PM<sub>2.5</sub> has been included in the National Air Quality standard in November 2009. Instrument is very suitable for regular monitoring of PM<sub>2.5</sub> particulates in ambient air.

## WORKING PRINCIPAL

The APM 550 system is a manual method for sampling fine particles (PM<sub>2.5</sub> fraction) and is based on impactor designs standardized by USEPA for ambient air quality monitoring. Ambient air enters the APM 550 system through an omni-directional inlet designed to provide a clean aerodynamic cut -point for particles greater than 10 microns. Particles in the air stream finer than 10 microns proceed to a second impactor that has an aerodynamic cut point at 2.5 microns. The air sample and fine particulates exiting from the PM<sub>2.5</sub> impactor are passed through a 47mm diameter Teflon filter membrane that retains the FPM. The sampling rate of the system is held constant at 1m<sup>3</sup>/hr by a suitable critical orifice. By locating all power dissipating components in a separate cabinet the APM 550 ensures that the temperature of the PM 2.5 filter remains close to ambient temperature and there is no chance of losing volatile fractions of the PM 2.5. The system uses a continuous rated, oil free pump for providing suction pressure. The standard system is supplied with a Dry Gas Meter to provide a direct measure of the total air volume sampled.



# APM 550



## FEATURES

- PM10 and PM2.5 impactors as per designs standardized by US EPA.
- Two part cabinet ensures that temperature of PM 2.5 filter remains close to ambient temperature.
- The APM 550 uses a brush-less pump with a low noise.
- Same instrument can be used for PM 2.5 sampling.
- Lower sampling rate of 1m<sup>3</sup>/hr reduces filter choking even in areas having high FPM levels.
- Critical orifice maintains constant sampling rate of 1m<sup>3</sup>/hour.
- Compact and portable for convenient field operation.

## SPECIFICATIONS

Particle Size	Omni-Directional Air Inlet With PM 10 Separation Through an impactor Followed By PM 2.5 Separation Through a Wins Impactor.
Sampling Rate	Constant Sampling Rate of 1m <sup>3</sup> /hr Unaffected by Voltage Fluctuation and Filter Choking Maintained By Critical Orifice System.
Filter Media	Filter Holder Designed to Accept any Standard 47mm Diameter Filter Media.
Sample Volume	Dry Gas Meter Records The Total Air Volume Sampled.
Power Requirement	Single Phase AC 220 Volts, 50 Hertz Supply. Sampler Unaffected By +/-10% Fluctuation in Supply Voltage.

# 1 Year Warranty

\*Specifications are subject to change without any prior notification