

EPS 4410

(Electrical Particle Sizer)

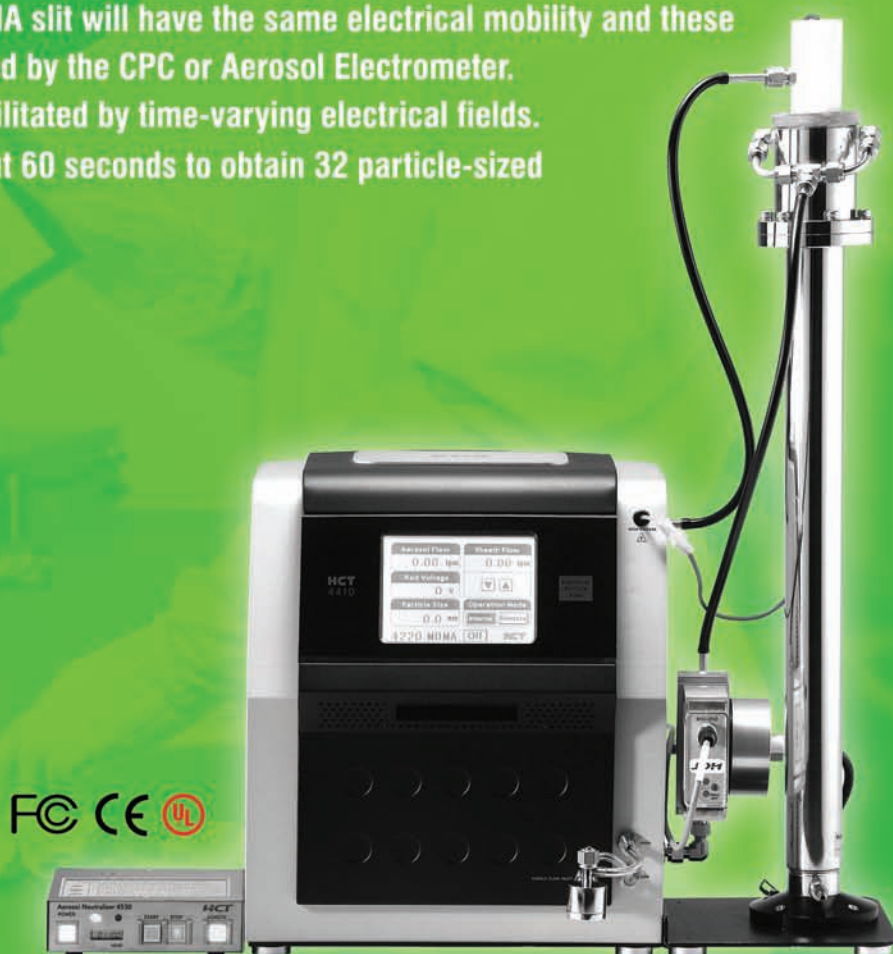
Measuring particle size distributions is a necessary task in present day aerosol and atmospheric research and other industrial applications. The HCT EPS 4410 is a powerful and useful technique for quasi-real time nano particle monitoring in almost any environment. The EPS consists of an aerosol charger, Differential Mobility Analyzer (DMA) and Condensation Particle Counter (CPC) or Aerosol Electrometer. Polydisperse, air-borne particles pass through the electrostatic or radioactive bipolar charger, where the charged particles are induced into an electrical equilibrium state.

The DMA then classifies the neutralized particles by applying DMA voltage.

The extracted particles in the DMA slit will have the same electrical mobility and these concentrations are then measured by the CPC or Aerosol Electrometer.

The measurement process is facilitated by time-varying electrical fields.

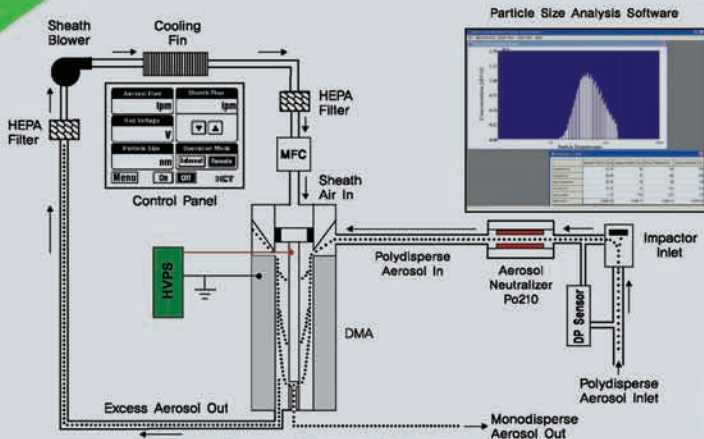
The EPS technique requires about 60 seconds to obtain 32 particle-sized channels of information.



Specifications

- Particle Size Range (User Selectable)
 - Use Mini DMA : 5 ~ 100 nm
 - Use Long DMA : 15 ~ 700 nm
- Maximum Particle Concentration : 10^7 particles/ cm^3
- Flow Rates
 - Aerosol : 0 ~ 1.5 L/min
 - Sheath Air : 3 ~ 15 L/min
- Aerosol Temperature Range : 10 ~ 35 °C
- Aerosol Pressure Range : 1 ± 0.5 ATM
- Neutralizer (Option)
 - Soft X-ray Charger
 - Radioactive Source
- Front Panel Display : Touch Screen LCD Panel
- Dimensions (L x H x W) : 290 x 310 x 340 mm
- Weight : 20 kg
- Power : 100~230 VAC, 50~65 Hz

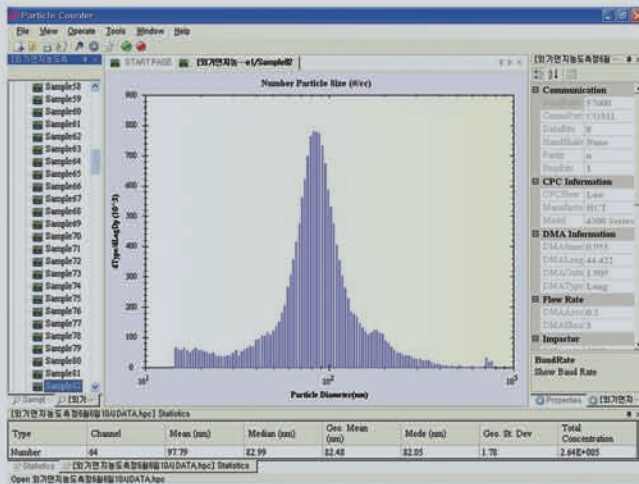
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Schematic of EPS System

Applications

- Aerosol Research
- Material Processing and Nano-Particle Synthesis
- Clean-Room Particle Monitoring
- Diesel Vehicle Exhaust Particle Monitoring
- Instrument Measurement as Calibration Standard
- Particle Generator for Wafer Deposition Systems
- Filter Media Test for Filter Efficiency



EPS Operating Program



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