



KANOMAX
The Ultimate Measurements

Aerosol Particle Mass Analyzer

Model 3602 APM-II

Aerosol Particle Mass Analyzer (APM-II) classifies particles by mass based on the balance between centrifugal force and electrostatic force.

Particle size distribution measurement is normally used in order to measure nanosized particle distribution. While DMA (Differential Mobility Analyzer) classifies particles by particle size utilizing electrostatic force, APM-II classifies particles by mass based on classification principles.

Applications

- Mass distribution measurement
- Particle density research
- Monodispersal aerosol generation

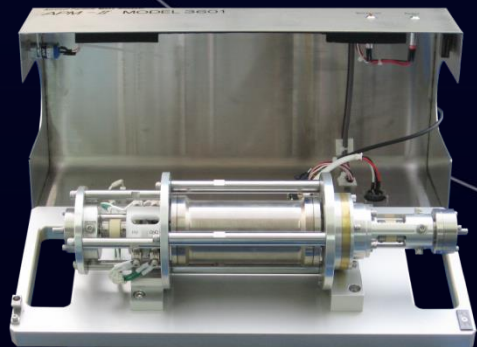


Features & Benefits

- Desktop and lightweight unit
- APM-II classifies aerosol particles of 0.001 to 565 femtograms
- Particle density distribution can be attained by combining the APM and DMA, sheath flow rate and classifying voltage of some DMAs can be controlled by the APM software.

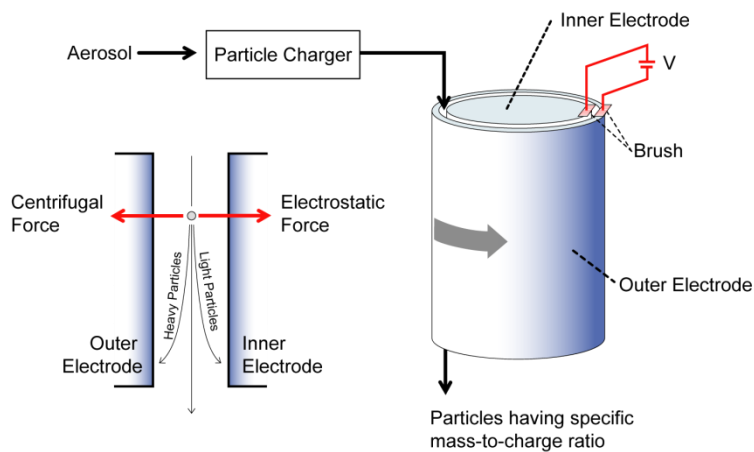


Control Unit



Classifying Unit Assembly

■ Operating Principle of APM (Particle charger not included)



APM Force Balance Equation

$$mr\omega^2 = q \frac{V}{r \ln(r_2/r_1)}$$

m = particle mass
 ω = APM angular speed
 r = particle location relative to axis of rotation
 q = particle charge
 r_1, r_2 = radii of inner & outer electrodes
 V = applied voltage

Aerosol Particle Mass Analyzer Model 3602 APM-II Specifications

| Main Unit (Classifier) | |
|------------------------------|---|
| Classification Method | Classification based on the balance between centrifugal force and electrostatic force |
| Particle Mass Range | Approx. 0.001 ~ 565 femtograms (Equivalent to approx. 12 ~ 1,008 nm for particle density of 1 g/cm ³) |
| Rotation Speed | 1,000 ~ 14,000 rpm |
| Maximum Voltage | Up to -2,000 V |
| Rotation Cylinder Dimensions | Inner Cylinder Diameter : 48 mm Gap between Inner and Outer Cylinders : 1 mm Cylinder Length : 100 mm |
| Classification Accuracy | Tolerance < 1.3 % (calculated by rotation speed and applied voltage) |
| Sampling Flow Rate | 0.3 to 1.0 L/min (0.3 L/min is recommended) |
| Control Unit | |
| Control Function | Rotation Speed and Applied Voltage |
| Display Function | Applied Voltage / Rotation Speed / Differential Pressure between inlet and outlet (panel display) |
| Input / Output Function | Input : Applied Voltage Setting / Rotation Speed Setting Output : Applied Voltage / Rotation Speed / Differential Pressure between Inlet and outlet |
| Dimensions / Weight | Main Unit : 430 (W) × 200 (L) × 165 (H) mm (excluding projection) / approx. 11 kg Control Unit : 430 (W) × 350 (L) × 40 (H) mm (excluding projection) / approx. 8 kg |
| Power Supply | Single phase AC 100~240 V 50/60 Hz 400 VA |
| Optional Extras | Software, USB Cable |

Specifications subject to change without notice.



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