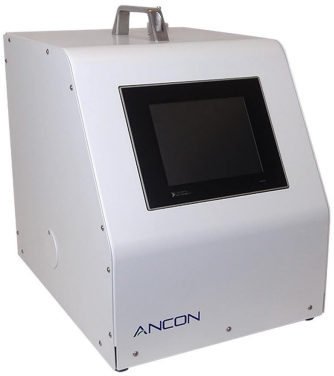
Aero Particle Sizer

Wide Range Particle Spectrometer

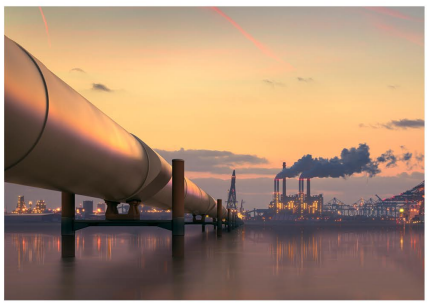
The only high resolution scanning electrical mobility particle sizer of its kind, ANCON's Aero Particle Sizer provides the performance of a laboratory grade instrument in a portable, self-contained package to enable field studies and in-situ research. Setting a new standard for high sensitivity and selectivity aerosol measurements, the Aero Particle Sizer provides the ability to measure particle size distributions over a range of 10nm to 20µm with over 100 size channels.

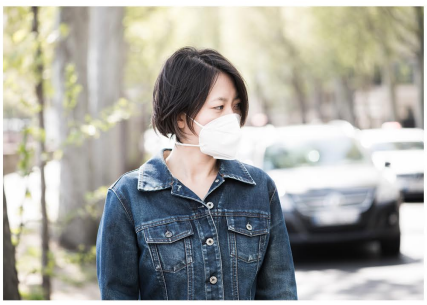
Featuring operator selectable dual functionality between Spectrometer and Condensation Particle Counter (CPC) modes and utilising odourless, non-hazardous consumables with a high flash point, the Aero Particle Sizer can be transported easily without any strict handling or safety requirements. A proprietary low-energy X-ray charger system is used instead of traditional radioactive sources making it ideal for many applications including:

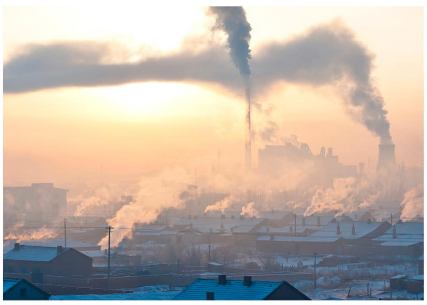
- Nanotechnology (including nanotubes and graphene)
- Dust characterisation (in association with Aerosoliser)
- Aerosol science and technology research
- Atmospheric science
- Source apportionment
- Health risk assessment
- Air quality monitoring
- Process control
- Occupational health
- Automotive research.



A touch-screen display and intuitive user interface allows measurement parameters to be configured and sampling to begin within a matter of minutes. The on-board computer allows unattended operation, data storage and processing. This product satisfies the long-standing need for a research-grade instrument that is portable and straightforward to integrate into application- specific testing and research.







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ANCON

MOVING AEROSOL STUDIES OUT OF THE LAB

Size, weight, complexity and the use of radioactive sources in traditional high sensitivity aerosol spectrometers has largely confined measurements to the lab. Utilising non-toxic, organic working fluid, the Aero Particle Sizer has been specifically designed to provide the same sensitivity and selectivity for these particle size distribution measurements to be made wherever the application requires them: the field, the manufacturing floor, or even the office.

SIMPLE TO CONFIGURE AND OPERATE

Sampling can begin within minutes of sample preparation. The on-board computer with touch-screen display, low working fluid consumption and high data storage capacity means the Aero Particle Sizer is ideal for long periods of unattended operation.

SPECIFICATIONS

Particle size range:	Spectrometer mode (SMPS & OPS) 10 nm – 20 µm
	Particle Counter mode (CPC) >10 nm
Aerosol flow rate:	1.5 LPM ± 5%
Number of channels:	64 per decade <400 nm
	18 total >400 nm
Measurement scan time:	SMPS mode – 30 seconds minimum, user selectable
Sample interval (CPC mode):	1 – 30 seconds, user selectable
Maximum particle concentration:	Spectrometer mode $10^7/cm^3$
	Particle Counter mode $10^5/cm^3$
Instrument warm-up time:	<400 seconds, nominal, at 22°C ambient
Charger:	Soft X-ray (4.9 kV) lifetime 5,000 hours, nominal
SMPS sizing accuracy:	± 3% mean mobility diameter
Working fluid:	Proprietary, non-toxic, odourless working fluid
	Reservoir volume 10 ml
Laser classification:	Class I - EN60825-1 (internally a Class IIIB laser is used - EN60825)
Data storage:	>5 years continuous running
Dimensions:	400 (L) x 300 (W) x 370 (H) mm
Weight:	9.5 kg
Production:	Manufactured and assembled in the United Kingdom

Utility Requirements

Power:	100 – 240 V, 50 – 60 Hz, 5 A
Battery:	Battery option available

Communications

Data output:	USB, Ethernet and Wi-Fi
User interface:	6-inch colour touch screen

Environmental Conditions

Temperature range:	10 – 37°C, 10 – 90% RH, non-condensing
Operating pressure:	1 atmosphere
Class:	Class 1 equipment (Requires a grounded type power supply)
Ambient pollution:	Degree 2 per EN61010-1
Installation (over-voltage):	Category II for transient over-voltages per EN61010-1