

Trusted solutions
for cloud and aerosol measurements

mOPC Miniature Optical Particle Counter

Model 9405

Measure aerosol number size distributions between 0.15 and 3 μm rapidly in a very compact package.



Features:

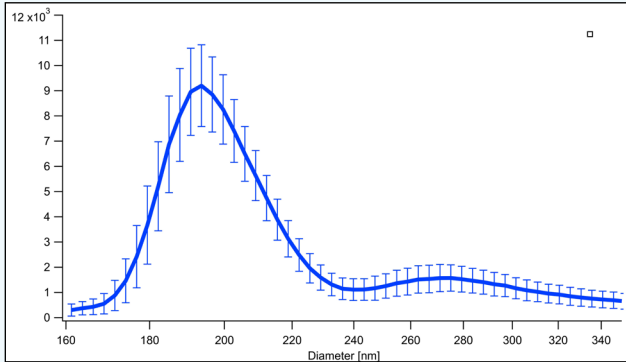
- Broad size range
- High size resolution
- Compact, lightweight, low power use
- UAV ready
- Sheath flow to improve detection and background
- No external pump required
- Precise flow measurements

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Dedicated to furthering scientific discovery

Sample Data from mOPC



mOPC sampling 195 nm diameter DMA-selected aerosol

Applications

- Mobile platform sampling: UAVs, Balloons, Kites, Aircraft, Vehicles
- Personal exposure monitoring
- Climate change field studies
- Air quality monitoring
- Studies of health impacts by aerosols
- Particle hygroscopicity
- Ambient size distribution measurements

Specifications

Parameter	Value
Particle Diameter Range (100% detection)	0.16 to 3 μm
50% Detection Diameter	0.15 μm
Size bins	72 (48 bins 0.15-0.5 μm ; 24 bins 0.5-3 μm)
Concentration range	0 to 50,000 cm^{-3} (Error <10%)
Laser	404 nm, 150mW, Class IIIB
Sample flow	0.06 lpm
Sheath flow	0.6 lpm
Vacuum Requirement	None
Noise level (1 sigma)	<0.001 cm^{-3}
Communications	USB and RS-232
Operating Temperature	-20 to 35 $^{\circ}\text{C}$
Operating Pressure	200-1,100 mb
Operating Humidity	0-95% RH non-condensing
Physical size	3.7 x 4.7 x 6.0 in 9.4 x 11.9 x 15.2 cm
Weight	2.0 lbs/0.9 kg
Supply voltage	12 VDC (9-16 VDC)
Power usage	6/9 watts (without/with display)
Mounting	Multiple hard mounting points through metal body brackets

How to Order

Part No.	Description
9405	Advanced Mixing-based Condensation Particle Counter
9400	ACCESS Base Module (ruggedized mini-PC with small LCD, keyboard & UAV Reader software)
ACC-mOPCKit	Maintenance kit, 9405 mOPC
ACC-PC	Laptop computer pre-loaded with UAV Reader software
ACC-Dryer	Sample Flow Dryer (desiccant and pump not included)
8008	Particle Round Jet Impactor (0.5 μm cut size, 0.7 lpm flow)
8009	Particle Round Jet Impactor (1.0 μm cut size, 0.7 lpm flow)
ACC-PWR	External 12 VDC power supply for ground operation of any 94XX series instrument
ACC-Battery	Universal lithium ion battery pack, industrial version with outputs 5V to 19V
ACC-UAV-Inlet	Isokinetic inlet for UAVs and other mobile platforms
ACC-UAV-Inlet-3DA	Isokinetic UAV inlet for large particle transmission
ACC-UAV-Reader	UAV Reader Software Installation Package on USB Drive



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*Some products may be shown with optional accessories, which are sold separately. Items shown may not be to scale.