See the smallest particles!

Study and monitor particles smaller than the detection threshold of any CPC. **Airmodus Particle Size Magnifier A10** grows nano sized aerosol particles into sizes that can be detected with a standard CPC. Particles as small as **1 nm** can be counted.

For a complete nanoparticle counting system – an nCNC system – please ask for the Airmodus A11. The A11 combines the A10 PSM with the Airmodus A20 CPC and an easy to use operating software.

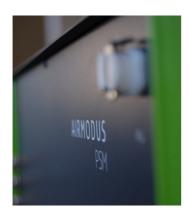


Benefits of the A10

- Detect particles as small as 1 nm in diameter in real time
- Also the electrically neutral particles
- Detect nucleation in-situ as it happens
- Study the formation and growth of 1-4 nm particles
- Use the activation spectrum for information of size or composition of the sampled particles

Three operation modes

- Fixed mode: One fixed cut-off* for monitoring the appearance of nanoparticles.
- Stepping mode: Steps through several user-defined cut-offs*. Use to observe pre-defined size classes.
- Scanning mode: scans through the operation range in less than 5 minutes, giving the activation spectrum of 1 – 4 nm* particles



The A10 PSM is calibrated with nickel chromium nanoparticles. Based on the calibration, you can easily adjust your system for a particular nickel chromium equivalent cut-off diameter using the PSM management software. The possible equivalent 50% cut-off diameters range from 1 to 4 nm.

Several researchers share their expertize with the PSM User Community.

You are welcome to join!

Measurement range 1 - 1000 nm.

50% cut-off selectable: 1.3 - 3.5 nm*

Aerosol sample flow

Sample flow to CPC 1 - 1.5 lpm. Other flows possible. Please contact for details.

Working fluid Diethylene Glycol (>99%)

Pressure: 90 to 105 kPa Sample

conditions Relative humidity: 0 to 95% non-condensing**

Environmental Temperature: 15°C to 30°C Pressure: 90 to 105 kPa conditions

Relative humidity: 0 to 95% non-condensing

Communication Serial: RS-232

USB: type B connector

Analog out: BNC connector 0 to 10 V for external devices, e.g. controlling of a DMA

or ion filter.

All communication based on ASCII character-encoding scheme.

Fittings External vacuum: fitting for 1/4 in. tubing

External compressed air: fitting for 1/4 in. tubing

Inlet: 1/4 in. stainless steel tube Outlet: 1/4 in. stainless steel tube

Software Airmodus A1X software for online data inversion and data acquisition (for Microsoft

Note: Online data inversion only when used with an Airmodus CPC.

External vacuum requirement

100 - 350 mbar pressure at NTP

External compressed air requirement

1.5 - 2.5 bar at NTP

The air should be free of particles, oil and water (dew point below 0°C); maximum

operating pressure is 3.0 bar at NTP.

Power requirements 100 - 240 VAC

max. 320 W

universal AC input/full range

Depends on the particle counter used with the PSM. PSM has minor losses inside it Concentration

> and dilutes the sample depending on the saturator flow rate used. The PSM software takes the dilution into account, and the concentration data saved by the program is $\frac{1}{2}$

corrected for it.

290x450x465 (height x width x depth in mm) **Dimensions**

and weight 17.0 kg

Shipping conditions Temperature: 0 - 40°C

Relative humidity: <95% non-condensing

The instrument should be shipped in upright position and should be protected

against tremor and blows.

*) Nickel chromium equivalent activation diameter
**) Above 40% please dry the sample to avoid excess water condensation inside the instrument
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