

CONDENSATION PARTICLE COUNTER MODEL 3756

THE ULTRAFINE PARTICLE SPECIALIST

The 4th generation of TSI Butanol-CPCs (Condensation Particle Counters) makes the best CPCs even better: providing easier use for everyone with an intuitive direct-touch user-interface, new software and secure internal data storage for months of data. Users can rely on the proven compact and rugged instrument with new wired or optional wireless communication capabilities accommodating the modern needs of researchers, enabling full remote access to instruments located in monitoring sites around the world.



Features and Benefits

- + Extended concentration range up to 300,000 particles/cm³
- + Size range down to 2.5 nm (D50)
- + Data rate up to 50 Hz -
Capture highly dynamic processes
- + Water-removal system -
Compatible to high-humidity environments
- + Improved Diagnostics with Pulse Height Monitoring

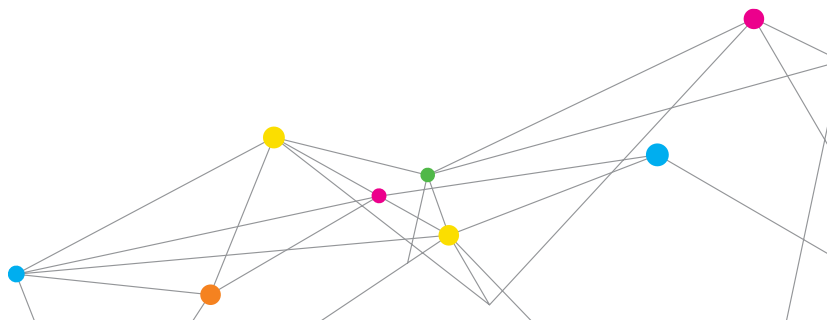
The Ultrafine CPC model 3756 fits seamlessly into the family of four Butanol-based CPCs including the Standard model, the High Concentration and the 1-nm model, and is fully integrated into the SMPS¹ family series 3938. With its concentration and size range it serves all applications from filter testing, basic aerosol research, combustion, health and atmospheric studies, specifically serving researchers in need of reaching down to smallest particles.

All TSI CPCs are equipped with a removable saturator wick for easy transport and maintenance to allow longer operation time by simple user maintenance.

¹ SMPS stands for Scanning Mobility Sizer, another reference system by TSI to measure nanoparticle size distributions.



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SPECIFICATIONS

CONDENSATION PARTICLE COUNTER MODEL 3756

Particle Size Range

2.5 nm min. detectable particle size (D50), verified with monodisperse sucrose particles
>3 µm max. detectable particle size

Particle Concentration Range

Up to 300,000 (3x10⁵) particles/cm³
Single particle counting with continuous live-time coincidence correction

Particle Concentration Accuracy

±10% at < 300,000 particles/cm³

False Background Counts

0.01 particles/cm³ based on 12-hour average

Response Time

Response time described in percentage to concentration step change

High flow

<0.2 seconds for 90% to 10% (T10-90, T90-10)
<1 seconds for 0 to 95% (T95)

Low flow

<2 seconds for 90% to 10% (T10-90, T90-10)
<3 seconds for 0 to 95% (T95)

Flow System

0.3 ± 0.015 L/min or 1.5 ± 0.05 L/min inlet flow (volumetric)
0.05 ± 0.005 L/min counting flow (volumetric)

Liquid System

Butanol (n-Butyl alcohol, not included) used as working fluid
Use of the internal water removal pump to remove condensate is recommended for use in humid environments

Communication Interfaces

Embedded touch-display
Pulse output: BNC connector, TTL level pulse, nominally 350 nanoseconds wide
USB type C to connect CPC directly to computer operating control software Aerosol Instrument Manager (included)

Ethernet port (8-wire RJ-45 jack, 10/100 BASE-T, TCP/IP) for remote connection. Configurable for automated (DHCP) or manual network settings

USB type B for external memory drives

Ambient Operating Conditions

Temperature 10 to 35°C (50 to 95°F)
Humidity 0 to 90% RH, noncondensing
Pressure 75 to 105 kPa (0.75 to 1.05 atm)

Accessories

Required

Electrical: 100 to 240 VAC, 50/60 Hz, 335 W maximum.
Auto recovery from power failure built in.

Included

Fill and drain bottles
Aerosol Instrument Manager for Count products license
USB C to A cable for connecting to a computer

Data Storage

Internal memory lasts for approx. 1 year of data at 50 Hz data rate

Dimensions (H x W x D)

30.1 cm x 28.1 cm x 35.4 cm (11.84 in. x 11.05 in. x 13.92 in.), not including fill bottle and bracket

Weight

~9.1 kg (~20 lbs)

CATALOG ITEMS

Specify	Description
3756	Condensation Particle Counter
3756-MKIT	Maintenance Kit for CPC
3756-WKIT	Wick Replacement Kit for CPC
6005740	Replacement Diaphragm for Pump
3772200	Environmental Sampling System

Specifications are subject to change without notice.

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