

Aerosol Distribution and Dilution System

ADD 536



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Hospital operating rooms are specially designed to avoid contaminations and therefore additional infections of patients during operations. To assure a low level of particle contaminations a laminar air flow is applied to the operating table. To verify the retention efficiency of this flow regime a verification with a defined test aerosol is required according to the standards DIN 1946-4 and SWKI 99-3. For that reason a total particle rate of $6.3 \cdot 10^9$ P/min has to be distributed to six different positions and emitted with a reliable long term stability. From the standards it is also required that this total particle rate is continuously monitored and controlled by a particle counter. The Topas Aerosol Distribution and Dilution system ADD 536 meets all these required demands for providing a defined test aerosol with the following features:

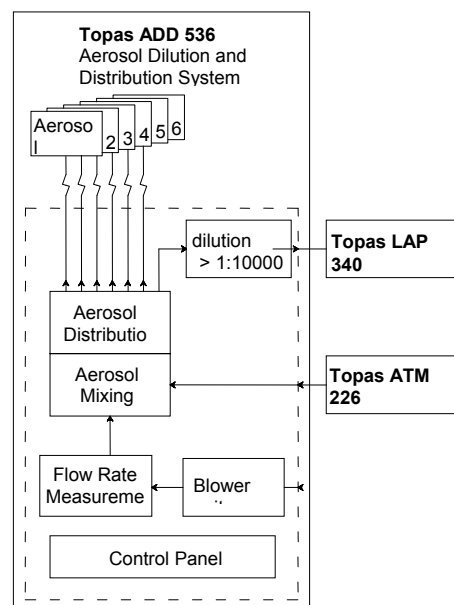
- Internal generation of a total nominal flow (free of particles) for supplying the six aerosol ejectors
- Homogeneous mixing of the test aerosol coming from an external aerosol generator with this total transportation flow
- Internal adjustable aerosol dilution ratio for direct connection of a particle counter used for controlling a stable particle rate
- Uniform aerosol distribution to six aerosol ejectors

Special Advantages

- Designed to comply with the requirements of the German standard DIN 1946-4 and the Swiss guideline SWKI 99-3
- Reliable particle generation rate with an excellent long term stability (particles/time)
- Status information on dilution ratio and total flow rate integrated at the front

Applications

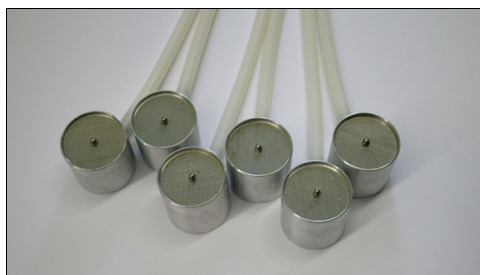
- Protection grade measurement of operating rooms/theatres according to German DIN 1946-4 and Swiss SWKI 99-3 and VDI 2167 Part 1
- Generation of test aerosols by providing a reliable, reproducible, long term constant, but concentration variable particle stream in connection with a high-concentration particle source e.g. for verification or calibration of particle counters (dilution series with PSL aerosols)



Setup of the ADD 536



Specifications



Aerosol-Ejectors



Aerosol Generator ATM 226



Partikelzähler LAP 340

Details

- By an external particle counter continuously controlled particle production rate
- Compact portable design, easy to setup
- Internal generation of particle free transportation flow without requesting a compressed air source
- Integrated, highly efficient aerosol dilution, with a wide range of adjustable dilution ratios with excellent reproducibility to be directly connected to particle counter
- Electronically controlled and adjusted dilution ratio adapted to particle counter in use

Necessary Accessories

- Optical Particle Counter (flow rate: 0.1...1 cfm, lower detection limit $>0.3 \mu\text{m}$, e.g. *Topas LAP 340, Lighthouse Solair*)
- Aerosol Generator, (flow rate $<300 \text{ l/h}$, particle rate $>6.3 \cdot 10^9 \text{ P/min}$, particle output adjustable, e.g. *Topas ATM 226*)

Complementary Accessories

- Software package *CREWin* for automated data acquisition and printout protocol as result according to current standards or guidelines of protection grade measurements
- Software package *PASWin* for automated data acquisition and device control of optical particle counters

Technical Data

Dilution Ratio	Adjustable to the used particle counter, $> 1:10000$
Flow Rate of the Particle Counter	2.83 l/min (0.1 cfm) ... 28.3 l/min (1 cfm)
Flow Rate of the Aerosol Generator	max. 5 l/min
Internal additional carrier airstream	100 l/min
Aerosol Ejectors	6 pieces, diameter 65 mm
Power Supply	230 V AC
Dimensions	250 x 340 x 330 mm
Hose Connector	10 mm
Weight	8.5 kg
Dilution Ratio	Adjustable to the used particle counter, $> 1:10000$
Flow Rate of the Particle Counter	2.83 l/min (0.1 cfm) ... 28.3 l/min (1 cfm)

QMS certified to
DIN EN ISO 9001.



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For more information please visit our website at www.topas-gmbh.de

Specifications are subject to change without notice.

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