

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 $6.3 \cdot 10^7$ 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:

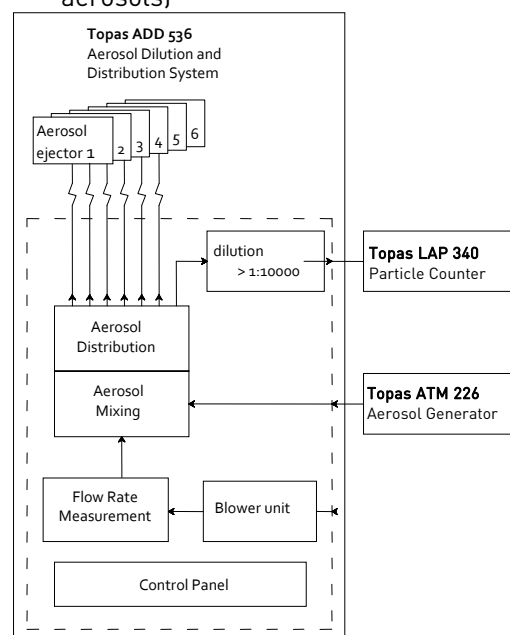
- Internal generation of a total nominal flow (free of particles) for supplying the six aerosol ejectors
- Homogeneous mixing of the test aerosol coming from an external aerosol generator with this total transportation flow
- Internal adjustable aerosol dilution ratio for direct connection of a particle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



Aerosolgenerator ATM226



Particle Counter LAP340

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 µm, e.g. Topas LAP 340, Lighthouse Solair)
- Aerosol Generator, (flow rate <300 l/h, particle rate >6.3·10⁹ 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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