

Aerosol Distribution and Dilution System

ADD 536





Aerosol distribution and dilution System ADD 536 with integrated compressor for protection grade measurements in operating theatres according to DIN 1946-4.

The Aerosol Distribution and Dilution System ADD 536 was developed for protection grade measurement in operating theatres according to DIN 1946-4 and SWKI VA105-01 (before SWKI 99-3).

The primary aerosol supplied by an additional aerosol generator (e.g.: ATM 228) is mixed within the ADD 536 with a particle-free air flow rate of 100 L/min and split homogeneously to six vents, which are positioned during the measurement on different locations in the room. For the characterisation of the test aerosol, the ADD 536 provides an additional port for a clean room counter. The aerosol at this port is already defined diluted (dilution ration is customisable), so that no additional dilution system is required.

Applications

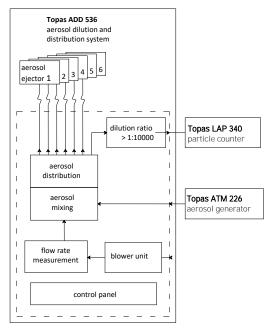
- protection grade measurement of operating theatres according to DIN 1946-4, VDI 2167-1 and SWKI VA105-01 (before SWKI 99-3)
- verification and/or calibration of particle counters

Features

- for mobile use (compact design, integrated compressor)
- internal generation of particle-free transportation flow
- to be connected directly with a particle counter (internal defined and controlled dilution)
- status information on dilution ratio and total flow rate at the front of the device

Principle of operation

The ADD 536 mixes the aerosol provided by an aerosol generator (e.g.: ATM 228) with a defined transport flow rate and distributed it to six vents and a particle counter port.



Schematic operational principle of the ADD 536.



Specifications

Details

The operation of the ADD 536 requires an additional suitable aerosol generator (aerosol flow rate up to 5 L/min, particle generation rate $> 6.3 \times 10^9$ min⁻¹) and a suitable particle counter (sample flow rate of 2,83 L/min or 28,3 L/min).



Atomizer Aerosol Generator ATM 228.



Particle Counter LAP 340.



Aerosol vents with diffusor sieve for uniform aerosol outlet.

Accessories (optional)

- particle counter LAP 340 (28,3 L/min) or LAP 340/L (2,83 L/min)
- Atomizer aerosol generator ATM 228 or ATM 226
- software package OPQWin for automated data acquisition and printout protocol for standardised protection grade measurements
- software PASWin[®] for data acquisition and device control of particle counters

Technical specifications

| dilution ratio | 1:100'000 (static, specifiable) |
|---------------------------------------|---|
| flow rate of the particle counter | 2,83 L/min (0,1 cfm), 28,3 L/min (1,0 cfm) |
| flow rate of aerosol generator | max 5 L/min |
| internal additional carrier airstream | 100 L/min |
| aerosol vents | 6 pieces, diameter 65 mm |
| power supply | 230 V AC |
| hose connector | 10 mm (particle counter) 10 mm (vents) |
| dimensions (w \times h \times d) | 250 × 330 × 340 mm |
| weight | 8,5 kg |

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