



SISTEMA-MK

SISTEMA-MK GMBH | RICARDA-HUCH-STRASSE 32 | D-73760 OSTFILDERN | GERMANY

ATOMIZER AEROSOL GENERATOR ATM 226



ATM226

PRODUCT DESCRIPTION

Aerosol generators are used to reliably test the performance of filter elements: They produce a liquid aerosol at a sufficiently high concentration with a peak particle size in the range of the most penetrating particle size (MPPS) of the filter.

The Atomizer Aerosol Generator ATM 226 is especially suited for clean room and filter testing applications according to international standards.

The ATM 226 is built for mobile use and has a very compact and rugged design. It can be operated with a minimum of other utilities, i.e. no compressed air supply is required. Its design is focused on long life, high availability and robustness of the device.

By high particle numbers generated at a particle size distribution in the range of the MPPS (Most Penetration Particle Size = 0.2 ... 0.3 μm) of the filter the locating of leaks in the system is possible fast and safe. Using an oily aerosol substance (e.g. DOP, DEHS) the aerosol generator produces spherical particles mainly in the size range 0.1 ... 0.5 μm with a calculable residence time.

A further range of application for aerosol generators / liquid aerosol nebulizers is calibration of measuring devices and visualization of currents. That enables measurements of local velocities and flow profiles of the tracer particles by means of optical methods.

ADVANTAGES

- ✓ Compact stainless steel housing - suitable for clean room application
- ✓ Designed for portable use with small dimensions and low weight
- ✓ Very high permanence of the generated particle size distribution
- ✓ Defined and high particle number concentration
- ✓ Easy to use and low-maintenance
- ✓ Long-term stability of the generated aerosol
- ✓ Easy adjustment of particle concentration and particle production rate
- ✓ Rugged design provides high reliability

APPLICATIONS

- ✓ Testing of HEPA and ULPA filter media
- ✓ Acceptance measurements of clean rooms and safety cabinets
- ✓ Generation of tracer particles at low flow rates



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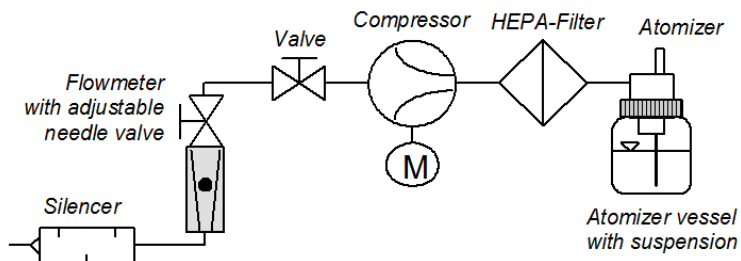
TECHNICAL DATA

- ✓ Aerosol materials DEHS, PAO (Emery 3004), paraffin oil, saline solution, Latex-suspensions, etc.
- ✓ Flow rate 70...300 l/h
- ✓ Mass flow max. 2.5 g/h ATM 226
- ✓ Filling volume 10 ... 80 ml
- ✓ Counter pressure 200 mbar
- ✓ Aerosol outlet \varnothing 8 mm
- ✓ Compressed air supply
- ✓ Max. 8 bar (ATM 220)
- ✓ Power supply 100...240 V AC
- ✓ Dimensions 30 x 12 x 20 cm
- ✓ Weight 4,8 kg

PRINCIPLE

The newly developed atomizer is the key part of the ATM 226. It is made of high quality stainless steel and works as a two-stream nozzle, based on the injection principle. The unique feature is that the outlet points towards the wall of the glass vessel which works as the baffle plate. This particle impaction section removes coarse spray droplets and results in a particle size distribution mainly below $1\mu\text{m}$. With increasing flow rates the cut point of the impactor is improved, but in the submicrometer range that has only slight influence on the particle size distribution of the aerosol.

A low-noise compressor produces the compressed air required for generating the aerosol. The air is cleaned by a HEPA-filter before it is introduced to the atomizer.



Schematic of the ATM 226, aerosol flow rate adjustable