Objective
Provide a reliable, repeatable and rapid measuring method for the diameter and geometry of aerosol spray nozzles (actuator).

Main components
- Solex pneumatic flowmeter
- Adaptor between flowmeter and actuator

Advantages
SOLEX pneumatic flowmeters can give a rapid measurement (in less than 10 seconds) with an accuracy of better than 5% of the orifice section.

Application
Modern aerosols have three major parts:
- A metal container with gas under pressure and the fluid to be vaporised
- A valve
- A propellant stopper or actuator

The user pushes on the actuator to open the valve and this causes fluid to be ejected from the container.

The diameter and geometry of the exiting orifice in the actuator are the determining elements for creating the characteristics of the aerosol spray cloud. These elements include length, angle, and droplet mean size and distribution patterns.

From the manufacturing point of view, it is essential to have a reliable, repeatable and quick dimensional checking method. This is provided by SOLEX pneumatic flowmeters.

Their principle rests on taking a direct reading of the fall or rise in pressure following any variation in a flow of air through an orifice. The Solex flowmeter here measures the pressure differential linked to the exit flow of the actuator under test, attached to the flowmeter output by an adaptor. The value measured is compared to that from "good" and "bad" standardised nozzles.
Dimensional control of aerosol spray nozzle

Options and Developments
SOLEX flowmeters are now also available in a NEW electronic version that can record and store the data from the measurements and allow for statistical processing, for an advanced analysis of the manufacturing performance.

<table>
<thead>
<tr>
<th>Measurable diameter</th>
<th>0.1 to 3.0 mm standard version (others available on request)</th>
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</thead>
<tbody>
<tr>
<td>Measuring time</td>
<td>between 1 and 10 seconds</td>
</tr>
<tr>
<td>Accuracy</td>
<td>5% of the section of the orifice measured</td>
</tr>
<tr>
<td>Reading</td>
<td>In SOLEX water height on graduated rule</td>
</tr>
<tr>
<td>Monitoring pressure</td>
<td>0.015 to 0.045 bar according to orifice measured</td>
</tr>
<tr>
<td>Instrument dimensions</td>
<td>Pneumatic: 730 / 112 / 96 mm – Pneumatic-electronic: 330 / 185 / 95 mm</td>
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</tbody>
</table>

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