The Impactor Inlet Model 3306 is an accessory for use with TSI Aerodynamic Particle Sizer® (APS) spectrometers. The Impactor Inlet combines a single-stage impactor and a sophisticated APS sampling probe into one instrument. It directs a small aerosol sample to the spectrometer for size distribution measurement. The remaining aerosol passes through a single-stage impactor with an afterfilter, allowing you to perform mass or chemical analysis.

**Applications**
The Model 3306 Impactor Inlet should be used with the APS in applications requiring collection of a sample for analysis. Sample may be size-segregated. Specific applications include:

- Inhalation toxicology
- Ambient monitoring
- Analysis of MDIs, DPIs, and other pharmaceutical aerosols
- Atmospheric studies
- Indoor air-quality monitoring
- Basic research

**Features and Benefits**

- Collects sample for mass or chemical analysis
- Includes two inlet throats
- Works with any APS spectrometer

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**Calibration of Impactor Inlet at 2.5 µm and 4.7 µm Cutpoints**

<table>
<thead>
<tr>
<th>Aerodynamic Particle Diameter, µm</th>
<th>Collection Efficiency</th>
<th>Total Losses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dp_{50} = 2.52 µm</td>
<td>Efficiency</td>
<td></td>
</tr>
<tr>
<td>Dp_{50} = 4.68 µm</td>
<td>Efficiency</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total Losses</td>
<td></td>
</tr>
</tbody>
</table>
**Impactor Inlet for Aerosol Research**  
**Model 3306**

**Specifications**

**Impactor Cut Points**
2.5 or 4.7 μm, aerodynamic diameter  
(Contact your TSI representative for additional cutpoints)

**Typical Total Particle Loss at Impactor**
<3% (monodisperse oleic acid)

**Collection Filter**
47-mm glass fiber

**Flow Rates**
- Inlet flow: 28.3 L/min
- Collection-filter flow: 28.24 L/min
- APS sample flow: 0.062 L/min
- Makeup flow to APS: 4.94 L/min
- Effective APS dilution ratio: 80 to 1

**Construction Materials**
- Anodized aluminum, stainless steel, glass fiber (filter material), Buna-N, nylon

**Vacuum Source**
460 mm Hg at 28.3 L/min

**Power Requirements**
None (flow created by APS and external pump, not included)

**Dimensions (L x W x H)**
30.5 cm × 36.8 cm × 39.4 cm (12 in. × 14.5 in. × 15.5 in.)
with MDI inlet throat

**Weight**
7.0 kg (15.5 lb.)

**Operation**
As shown in the flow schematic below, the Model 3306 draws aerosol into the inlet throat at 28.3 L/min. The aerosol is then sampled isokinetically by the spectrometer at 0.062 L/min. Filtered makeup air mixes with the sample before it is delivered to the spectrometer for aerodynamic size measurement.

The remaining 99.8 percent of the aerosol passes through a single-stage impactor with a 47 mm glassfiber afterfilter. The impactor jet-plate can be changed easily to vary particle cutpoints.

**TO ORDER**

**Impactor Inlet for Aerosol Research**
Specify Description
3306 Impactor Inlet with standard and MDI throats

**Accessories**
Specify Description
3033 Vacuum Pump

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Specifications are subject to change without notice.

APS is a trademark, and Aerodynamic Particle Sizer, TSI, and the TSI logo are registered trademarks of TSI Incorporated.

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The Model 3306 with standard throat installed is shown atop a Model 3321 APS spectrometer. The spectrometer is sold separately.

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