

PRODUCT

INFORMATION

Model 3306 Impactor Inlet

for Aerosol Research

The Model 3306 Impactor Inlet is an accessory for use with TSI Aerodynamic Particle Sizer® (APS) spectrometers and the TSI Aerosol Time-of-Flight Mass Spectrometer (ATOFMS). 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.

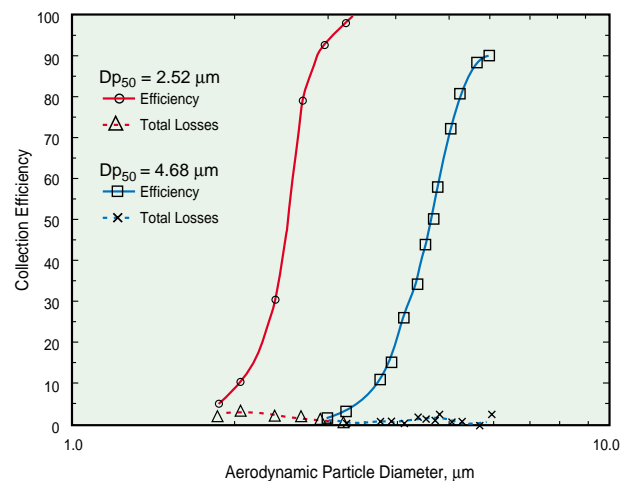
APPLICATIONS

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

Mimics typical cascade impactor measurement conditions

Calibration of Impactor Inlet at 2.5 µm and 4.7 µm Cutpoints



OPERATION

As shown in the flow schematic on the back of this document, 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 glass-fiber afterfilter. The impactor jet-plate can be changed easily to vary particle cutpoints.



SPECIFICATIONS

Impactor cut points: 2.5 or 4.7 μm , aerodynamic diameter (Contact your TSI representative for additional cut-points)

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 (LWH): 30.5 cm \times 36.8 cm \times 39.4 cm (12 in. \times 14.5 in. \times 15.5 in.) with MDI inlet throat

Weight: 7.0 kg (15.5 lb.)

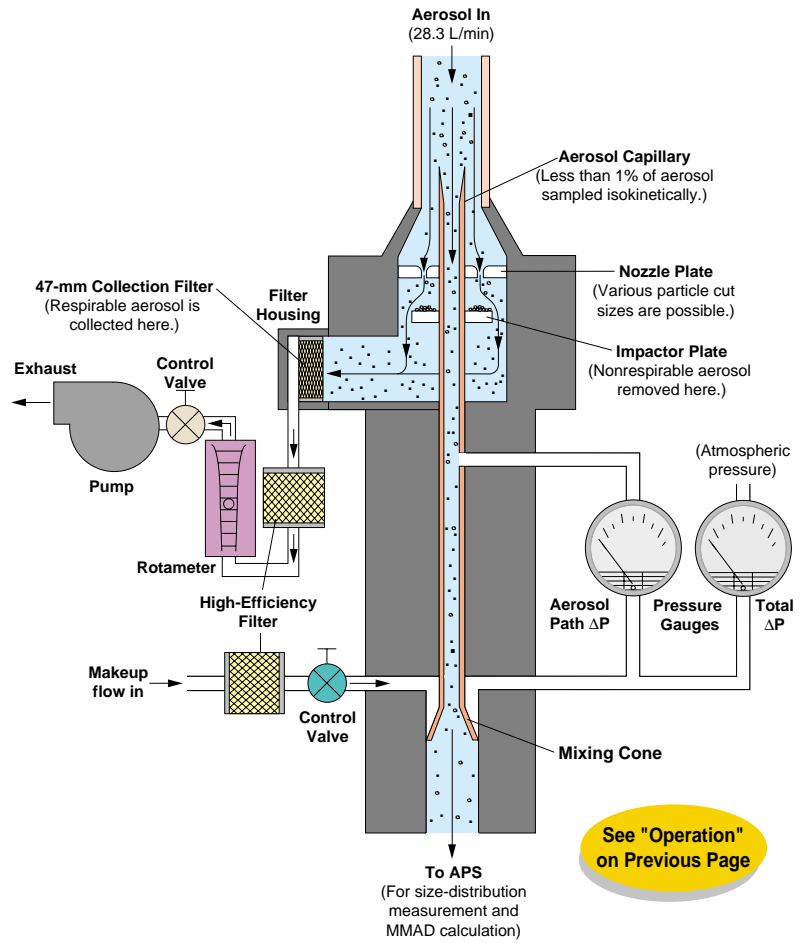
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TO ORDER

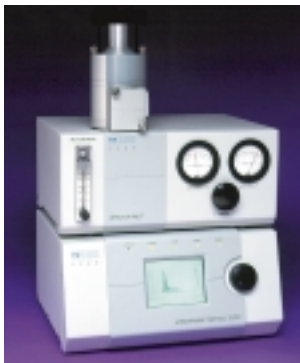
Specify	Description
3306	Impactor Inlet with standard and MDI throats

Optional Accessory

Specify	Description
3033	Vacuum Pump



See "Operation" on Previous Page



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



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