

# IMPACTOR INLET FOR AEROSOL RESEARCH MODEL 3306

MIMICS TYPICAL CASCADE IMPACTOR  
MEASUREMENT CONDITIONS

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

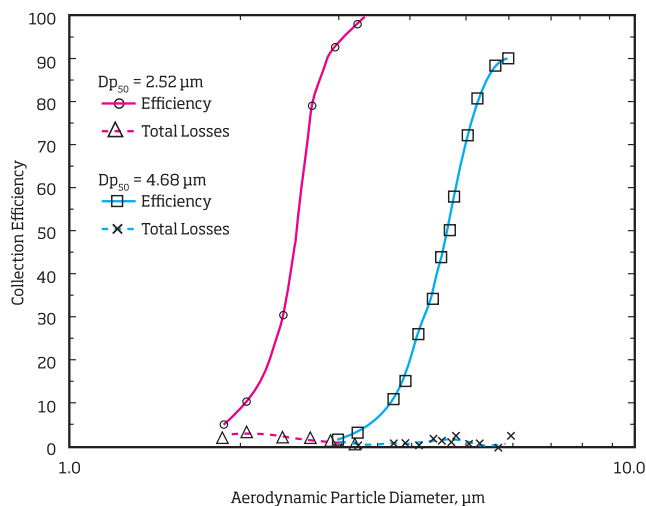
The Model 3306 Impactor Inlet should be used with the APS in applications requiring collection of a sample for analysis. Sample may be size-segregated. Specific applications include:

- + 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

Calibration of Impactor Inlet at 2.5  $\mu\text{m}$  and 4.7  $\mu\text{m}$  Cutpoints



UNDERSTANDING, ACCELERATED

## SPECIFICATIONS

### IMPACTOR INLET FOR AEROSOL RESEARCH MODEL 3306

#### Impactor Cut Points

2.5 or 4.7  $\mu\text{m}$ , 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 x 36.8 cm x 39.4 cm (12 in. x 14.5 in. x 15.5 in.)  
with MDI inlet throat

#### Weight

7.0 kg (15.5 lb.)



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

Specifications are subject to change without notice.

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#### 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

