Trusted solutions
for cloud and aerosol measurements

# PCVI
# Pumped Counterflow Virtual Impactor

## Model 8100

On-line separation of coarse and fine aerosol over the 0.3 to 5 micron diameter range

### Features:

- Coarse particles delivered with sharp size cut into exit flow
- Cut size performance characterized in the peer-reviewed literature
- Changeable cut size by changing air flow rates
- Broad pressure operating range
- Optimized inlet design for high transmission efficiency

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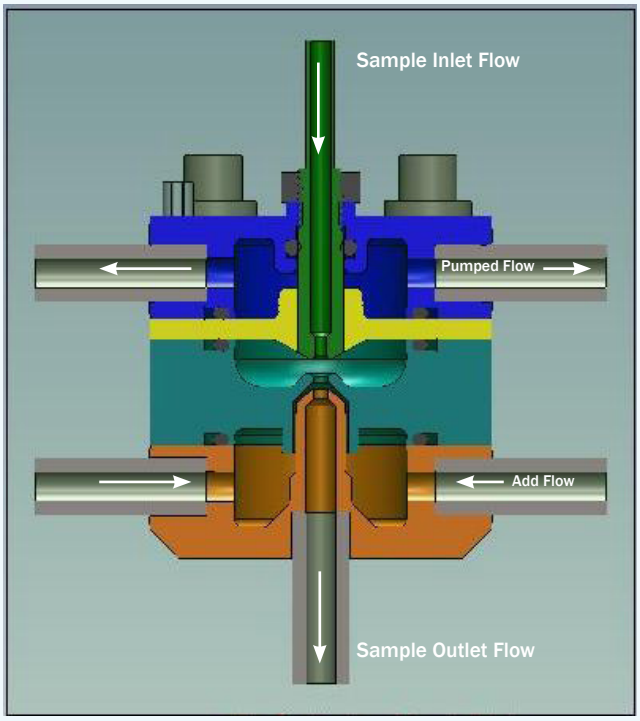
# Dedicated to furthering scientific discovery

## PCVI Schematic Diagram




## Specifications

| Parameter | Value |
|---|---|
| Diameter cut size | 0.3 to 5 microns |
| Sample inlet flow rate | 5-20 lpm |
| Sample outlet flow rate | 0.5-3 lpm |
| Add flow rate | 2-8 lpm |
| Operating pressure | 50-1,000 mb |
| Operating temperature | 10-50°C |

## Applications

- Separation of activated from unactivated CCN
- Separation of coarse from fine aerosol
- Ice chamber/ice nucleation studies
- Ambient dust composition and size distribution studies
- Laboratory cloud condensation nucleus studies
- Fine/coarse PM chemical composition monitors
- Any experiment or sampling situation requiring separation of coarse from fine aerosol

## How to Order

| Part No. | Description |
|---|---|
| 8100 | Pumped Counter Flow Virtual Impactor |
| PCVI-MFCv | Mass flow controller for PCVI (0-50 lpm flow range, vacuum downstream of valve) |
| PCVI-MFCp | Mass flow controller for PCVI (0-50 lpm flow range, pressure upstream of valve) |
| PCVI-Noz | Nozzle for 8100 PCVI |
| PCVI-Kit | Maintenance Kit for 8100 PCVI |

**Publication:**

J. E. Boulter, D. J. Cziczo, A. M. Middlebrook, D. S. Thomson, and D. M. Murphy (2006), Design and Performance of a Pumped Counterflow Virtual Impactor, Aerosol Science and Technology, 40:969–976, 2006, DOI: 10.1080/02786820600840984

Gourihar Kulkarni, Mikhail Pekour, Armin Afchine, Daniel M. Murphy, and Daniel J. Cziczo (2011). Comparison of Experimental and Numerical Studies of the Performance Characteristics of a Pumped Counterflow Virtual Impactor, Aerosol Science and Technology, 45:382–392, 2011, DOI: 10.1080/02786826.2010.539291

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*Some products may be shown with optional accessories, which are sold separately. Items shown may not be to scale.