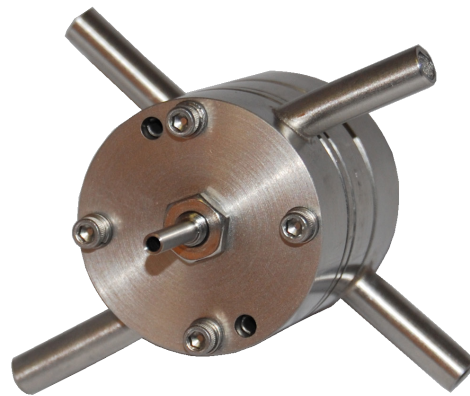


# BRECHTEL

**Solutions for your  
research challenges**

## **PCVI Pumped Counterflow Virtual Impactor**

**Model 8100**



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

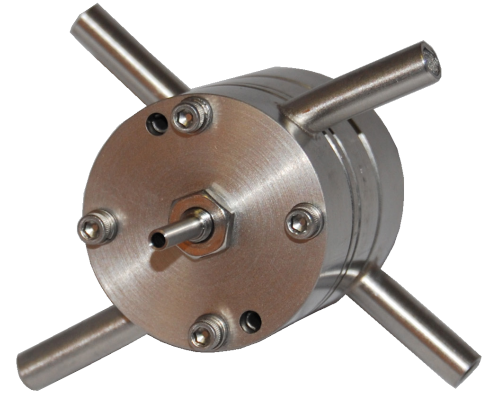
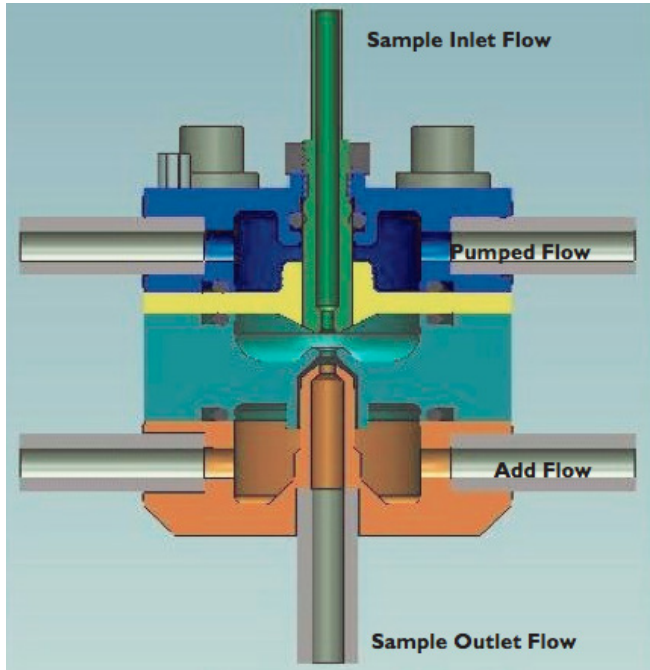
**Features:**

- Coarse particles delivered with sharp size cut into exit flow
- Characterized cut size performance in the peer-reviewed literature
- Changeable cut size by changing air flow rates
- Broad pressure operating range
- Compatible with automated 3-way valve to allow switching between coarse & fine particle flows

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[sales@brechtel.com](mailto:sales@brechtel.com)**

# Providing Aerosol Measurement Solutions

## 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

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

### 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

## Applications

- 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 and 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