

Trusted solutions
for cloud and aerosol measurements

CVI Aircraft-based Counterflow Virtual Impactor Inlet

Model 1204

Explore aerosol-cloud interactions in cloud, right where the action happens.



Features:

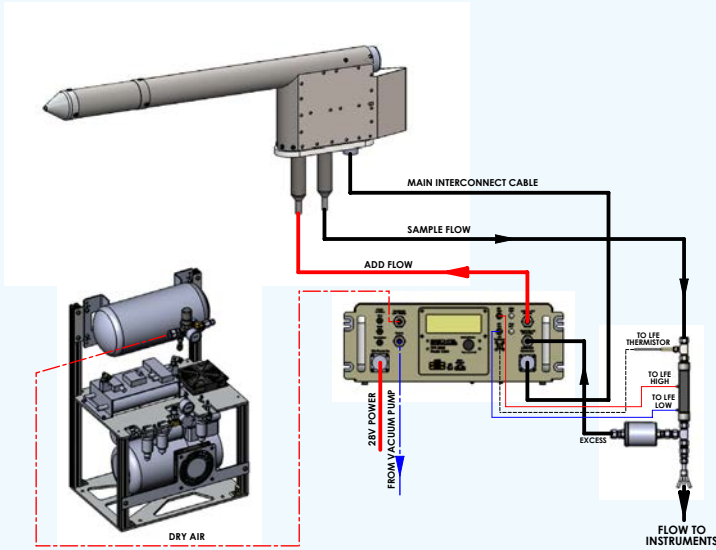
- Fully automated hands-off operation
- Controllable droplet cut size (7 to 15 μm)
- Wind tunnel tested, field validated, and peer-reviewed
- Easy to remove tip for cleaning and replacement
- Custom mounting solutions available
- 15 lpm of instrument sample flow
- Automatic adjustment to changing instrument flows
- Easy to vary droplet cut size in real-time
- Easy to use control software
- Heated Add Flow to evaporate cloud droplets
- Anti-icing system

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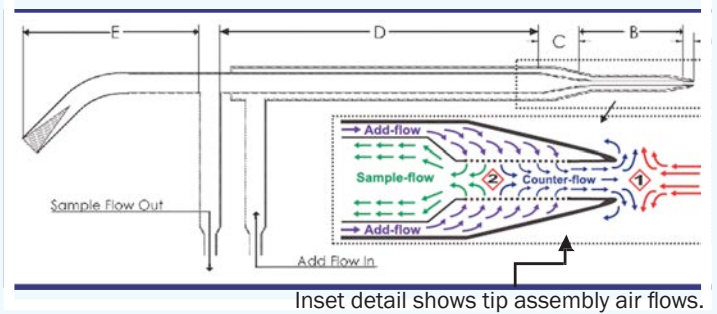
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Dedicated to furthering scientific discovery

Schematic of the CVI Inlet System



Schematic of the CVI Inlet Probe



Applications

- Aircraft-based CCN measurements
- Ground-based CCN measurements with GCVi
- Weather modification studies
- Cloud condensation nucleus studies
- Cloud microphysics & radiation studies
- Pollution impacts on clouds
- Visibility impacts of fogs
- CCN & precipitation feedbacks
- Global climate model CCN datasets

Specifications

Parameter	Value
Droplet diameter cut size range	7-15 μm
Add flow rate range to tip	16-25 lpm
Add flow temperature range	20-45 $^{\circ}\text{C}$
Range of counterflow air flow rate	1-10 lpm
Constant air sample flow rate	15 lpm
Total air sample flow available to instruments	15 lpm
Compressor, vacuum pump	850 watts @ 230 VAC
Anti-icing/flow heater power	917 watts @ 28 VDC
Operating temperature range	-50-35 $^{\circ}\text{C}$
Operating pressure range	200-1,000 mb (abs)
Rack mountable electronics chassis size	17 x 7 x 12 in/ 43.2 x 17.8 x 30.5 cm
Electronics chassis weight	20 lb/9 kg
CVI Probe weight	21 lb/9.5 kg
Total system weight	106 lb/48.2 kg

Publication:

T. Shingler, S. Dey, A. Sorooshian, F. J. Brechtel, Z.Wang, A. Metcalf, M. Coggon, J. Mulmenstadt, L. M. Russell, H. H. Jonsson, and J. H. Seinfeld (2012). Characterisation and airborne deployment of a new counterflow virtual impactor inlet, *Atmos. Measurement Techniques*, 5, 1259-1269, 2012.

How to Order

Part No.	Description
1204-115V	Counterflow Virtual Impactor Inlet System (CVI, 115VAC)
1204-230V	Counterflow Virtual Impactor Inlet System (CVI, 230VAC)
Options:	
CVI-MFCp	Mass flow controller for CVI, pressure downstream of valve
CVI-MFCv	Mass flow controller for CVI, vacuum downstream of valve
CVIVP-Mkit	Maintenance Kit, CVI Vacuum Pump
CVI-GND-115V	Ground-based Operation kit for 1204 CVI, 115VAC
CVI-GND-230V	Ground-based Operation kit for 1204 CVI, 230VAC
CVI-Tip	Tip Assembly for 1204 CVI
CVI-Kit	Maintenance Kit, CVI



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Email us at sales@brechtel.com

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