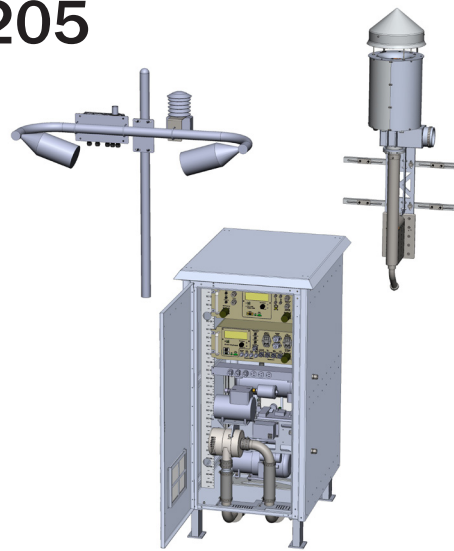


BRECHTEL

**Solutions for your
research challenges**

GCVI Ground-based Counterflow Virtual Impactor Inlet Model 1205



Explore aerosol-cloud interactions with the ease of ground operation. The GCVI is the ideal tool for probing the detailed properties of actual CCN within real clouds.

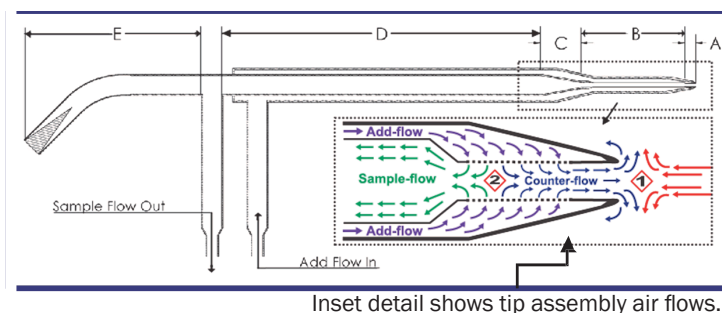
Features:

- Peer-reviewed & characterized CVI Inlet
- Droplet cut size diameters between 7 and 15 μm
- 15 lpm total instrument sample flow
- Fully automated for long-term operation
- Weather-proof rugged design
- Automatic power on/off with cloud arrival
- Wind tunnel lid opens & closes automatically
- Integrated rain/snow sensor
- Tower mountable
- Integrated anti-icing systems
- Removable and easily cleaned porous tube tip assembly

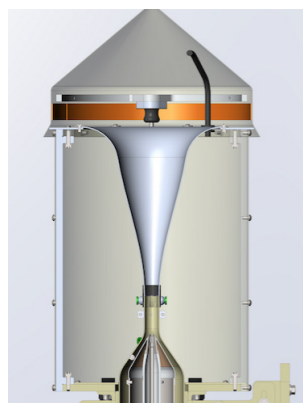
**www.brechtel.com
sales@brechtel.com**

Providing Aerosol Measurement Solutions

Schematic of CVI inlet used in the GCVI



Inset detail shows tip assembly air flows.



Cross-section of wind tunnel lid, horn and CVI tip assemblies.

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 °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 and blower power (max)	2000 watts @ 230 VAC
Anti-icing power (max, provided by GCVI)	1160 watts @ 28 VDC
Other power (external laptop)	50 watts @ 115 VAC
Weather-proof enclosure size	25"W x 50"H x 34"D
Weather-proof electronics enclosure weight	220 lb/99.8 kg
Total system weight	290 lb/131.5 kg
Wind tunnel inlet height (tower mounted)	2 to 10 meters AGL
Wind tunnel flow rate	750-1,500 lpm
Wind tunnel throat velocity range	50-100 m/sec
System footprint size	2x2 meters
Operating temperature range	-20-35 °C
Operating pressure range	500-1,000 mb (abs)

Copyright ©2020 All specifications are subject to change without notice. BMI assumes no responsibility for inaccuracies in this document or for any obligation to update information in this document. BMI reserves the right to change, modify, transfer or otherwise revise this publication without prior notice.

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

Publications:

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.



Photo of CVI inlet with wind tunnel assembly installed.

Applications

- Mountain station sampling sites
- Aerosol-cloud interactions
- Cloud condensation nucleus studies
- Cloud microphysics & radiation studies
- Pollution impacts on clouds
- Visibility impacts of fogs
- CCN & precipitation feedbacks
- Global climate model CCN datasets
- Weather modification studies

How to Order

Part No.	Description
1205	Ground-based CVI Sampling Inlet System with Model 1204 CVI inlet system
GCVI-I	Automated 3-way valve chassis
GCVI-PC	Computer with 1205 GCVI control software
GCVI-Kit	Maintenance Kit for 1205 GCVI