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Aerosol Diluter AD60

New!

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MORE INFO

Aerosol Rotating Disc Diluter

Variable diluter for general-purpose lab applications

controllable dilution over more than two orders of magnitude
feedback control and monitoring for accuracy and stability
compatible with solid and/or liquid aerosols

Introduction

Dilution is a common requirement in aerosol experiments, both to match instruments to sources and to tune complex experiments.

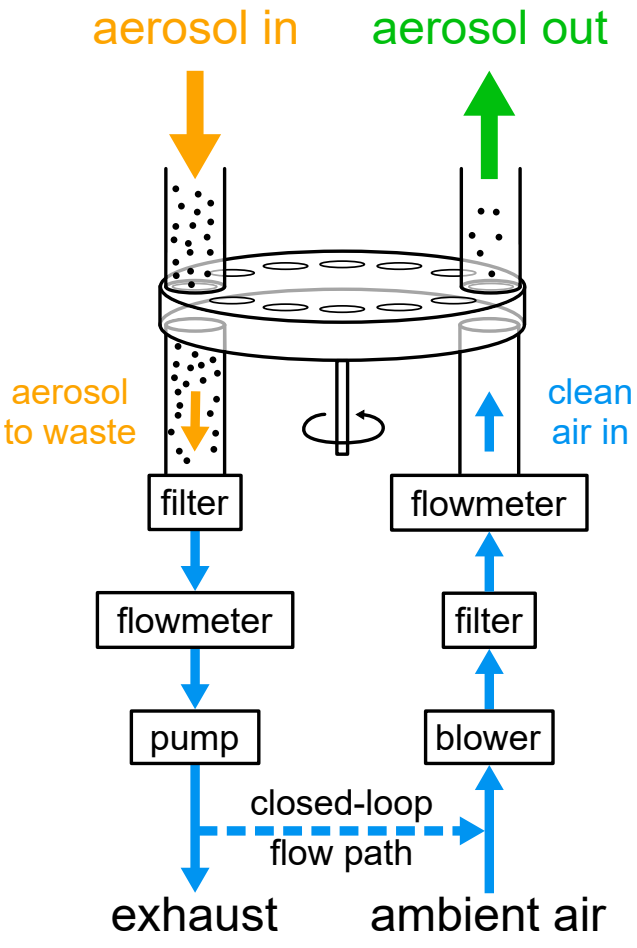
Low dilution ratios can be achieved with a simple dilution bridge, but accurate calculation of dilution ratio is challenging, and gradual clogging can cause deviations and errors.

Rotating disc diluter

The AD60 embodies Cambustion's twenty years of experience with rotating disc diluters (DMS500) to offer a general-purpose laboratory aerosol diluter, capable of reliably tackling a variety of the most common aerosols.

Inlet and outlet flow rates may both be controlled by the AD60, offering greater flexibility to decouple flows in different parts of the experiment. Closed loop operation is also possible in a recirculation mode, e.g. when volatiles are of interest.

The required dilution ratio can be set by the user across a wide operating envelope (÷5 – ÷800), while measurement & control of flows, pressures and motor speed ensures accuracy and stability.



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Compatible with both solid and liquid aerosols

The AD60 is compatible with both liquid- and solid-based high concentration aerosols, thanks to a selective sample handling system.

Dedicated filters are used depending on the aerosol type, maximising filter lifetime and minimising user-maintenance requirements even with sustained high concentration sampling.

Filter pressure drop is monitored to allow the user to replace the filter before performance is compromised.

Easy standalone operation

For the fastest setup when dilution is needed, the AD60 is operated via the touch screen interface.

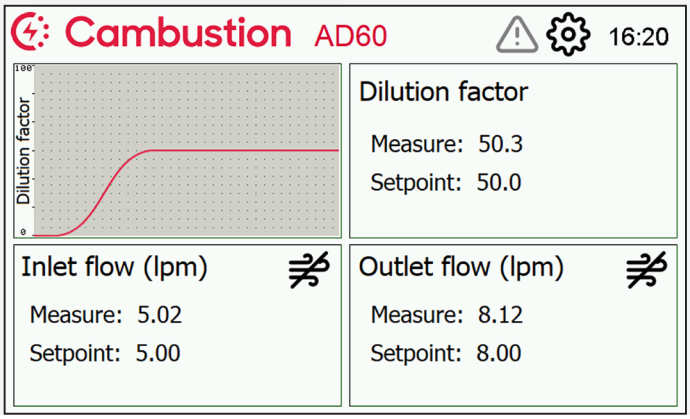
Setpoints for flows and dilution may be monitored and adjusted, and all settings are directly accessible.

Full data logging is integrated for traceability.

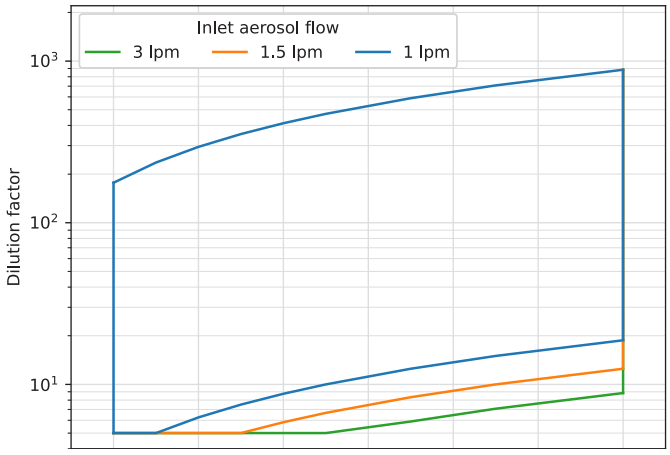
Sophisticated integration options

For more complex experiments, or longer term applications, interfacing via analogue output and Ethernet is available.

Control of the diluter in response to external changes is supported. For example, the diluter may be automatically varied to ensure the downstream device remains in a required signal strength band.



Operating map



Specifications

Supported aerosols	Non-corrosive solid and/or liquid aerosols in air
Dilution method	Rotating disc
Achievable dilution ratio	5 – 800 (see map above)
Inlet flow	1 – 3 lpm
Outlet flow	3 – 15 lpm
Flow modes	Open loop or recirculating
Ambient conditions	+10 – +40˚C (0 – 95% RH)
User Interface	Built-in touchscreen
Interfaces	Serial (RS-232), Ethernet
Analogue output	1 – 5 V (software configurable)
Power requirements	90 – 240 VAC, 50/60 Hz
Dimensions (W × D × H)	35 × 38 × 33 cm
Weight	15 kg

Preliminary specifications subject to review and change without notice

Cambustion is an independent, privately owned company with headquarters in Cambridge, UK and customers in more than 35 countries worldwide.

We continue to research & develop novel instrumentation, and now also offer **measurement consultancy**, helping our global clients to solve a wide range of particle and gas measurement issues.

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To learn more, visit:

cambustion.com

or contact: support@cambustion.com

Global HQ: J6 The Paddocks
347 Cherry Hinton Road
Cambridge
CB1 8DH
United Kingdom

Tel. +44 1223 210250
US & Canada: 1-800-416-9304

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