



# DMS500 High Ratio Diluter

## Concentrated Aerosol Sampling

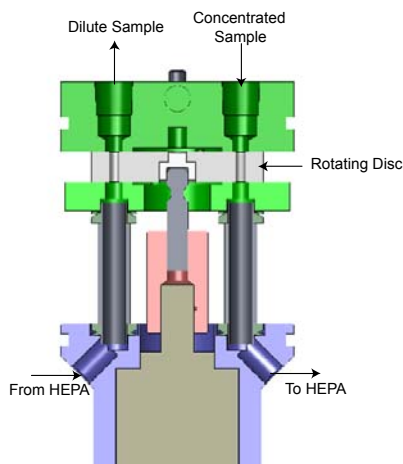
### Improved Concentration Range, Reduced Maintenance

The DMS500 is now available with a High Ratio Diluter, in addition to the internal compressed air dilution.

Based on a rotating disc, this accessory extends the concentration range of the DMS500, allowing the instrument to sample high concentration aerosol for prolonged periods, without the need for frequent cleaning.

The high ratio diluter is ideal for use downstream of a low ratio diluter, e.g. a CVS tunnel.

### Description



Concentrated sample enters via the inlet, and passes through the rotating disk. The sample is then HEPA filtered, to provide particle free diluent gas. The flow rate is measured using a mass flow meter, to allow continuous and accurate dilution flow reading. Particle free gas then passes through the rotating disc again, and into the main instrument.

With the rotating disc stationary, all incoming sample is filtered, and no particles will reach the instrument. When the disc is rotated, chambers of gas containing particles are introduced downstream of the HEPA. The volume of sample gas which bypasses the filter is thus proportional to the disc rotation speed, which may be accurately measured.

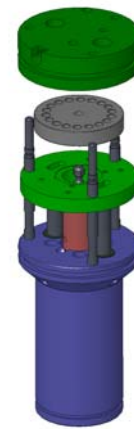
### Advantages

This approach provides accurate, repeatable dilution ratios between 1:20 and 1:500.

Careful material selection and assembly minimises particle losses, zero leakage and erroneous particle generation.

The large number of chambers in the rotating disc allows a wide range of dilution ratios, without compromising instrument time response.

The dynamic range of the instrument is increased, and the frequency of cleaning greatly reduced.



<i>Specifications</i>	
Dilution range of HRD	20:1 – 500:1 continuous
Sample flow (typical)	8 slpm
Time response of DMS500 (20:1 dilution)	<300 ms
Dilution factor correction	Selectable, automatic and continuous.
Maximum inlet concentration	>1E9 particles / cc
Zero leakage	<1 part in 5,000
Dilution accuracy	10% of setpoint or better
Dilution repeatability	3% of setpoint or better

<b>Cambustion Ltd</b> J6 The Paddocks, 347 Cherry Hinton Rd, Cambridge, CB1 8DH United Kingdom	<a href="mailto:info@cambustion.co.uk">info@cambustion.co.uk</a> <a href="http://www.cambustion.co.uk">www.cambustion.co.uk</a> Tel: +44 1223 210250 Fax: +44 1223 210190
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