

Dekati® Axial Diluter DAD

- ▶ Aerosol dilution
- ▶ High temperature operation
- ▶ Low consumption of dilution air



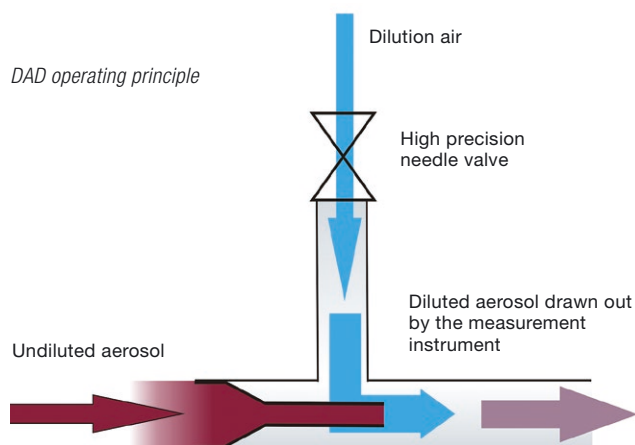
Excellence in Particle Measurements

Dekati® Axial Diluter DAD

The Dekati® Axial Diluter DAD is a simple and cost-effective dilution tool that can be used as a stand-alone unit or as a part of other aerosol sampling and dilution systems. The DAD is especially designed for use with Dekati® Fine Particle Measurement Instruments and applications where low consumption of dilution air is a requirement. The Dekati® Axial Diluter is made of stainless steel which allows the use of the DAD also in high temperature applications up to 500 °C.

The operating principle of the Dekati® Axial Diluter is based on axial dilution of the sample in which the dilution air is introduced as a 'sheath flow' around the raw sample. One of the advantages associated with this type of dilution is very low particle losses for all particle sizes. The amount of sample drawn by the measurement instruments and the flow of dilution air need to be known accurately to calculate the dilution factor. The amount of dilution air is controlled with a high-quality needle valve which is adjusted and locked into place during calibration at Dekati.

If the DAD is used together with Dekati® Fine Particle Measurement Instruments, the amount of drawn sample is accurately known and can be found in the instrument specific data sheet. The DAD is always delivered with a calibration certificate and a calculation sheet to calculate the dilution factor in different measurement conditions.



Specifications

Inlet/sample flow	0.1-10 lpm (1-3 lpm typical)
Dilution air flow	1-30 lpm, check instrument datasheet for exact value
Outlet flow	Inlet sample flow + dilution air flow
Dilution factor	Up to 1:10, fixed setting agreed before delivery
Sample temperature range	Up to 500 °C
Sample pressure range	Check measurement instrument specifications: pressure at the outlet of the DAD = sample pressure
Dilution air pressure	Agreed before delivery, typical 2-3 bar
Material	AISI 316 (Stainless steel)
Inlet/outlet	12 mm pipe
Pressurised air inlet	12 mm female Swagelok®
Pressure sensor range	0-4000 mbar abs

Features

- Up to 1:10 dilution factor
- Available with different sample flows and dilution factors
- Provided with a calculation sheet for dilution factor calculation
- Low consumption of dilution medium
- Low losses for all particle sizes from 10 nm to 10 µm
- Extremely robust, simple and easy to clean
- Suitable for high temperature applications up to 500 °C
- Each unit manufactured and calibrated in Finland

Accessories

- Pressurised air heater for heating dilution air
- Temperature controller for pressurised air heater
- Pressurised air cleaning and drying unit

For more information, please contact: sales@dekati.com



► **Dekati Ltd.** is a world leader in designing and manufacturing innovative fine particle measurement solutions. We have over 25 years of experience in providing measurement instruments and complete measurement solutions to a wide variety of environments and sample conditions. All Dekati® Products are developed and manufactured in Finland and are available with up to five-year warranty.

