



Defined dilution system for large droplets up to 10 μm

Model Variations



LDD 100 H

Heatable dilution system up to 150 °C for large droplets up to 10 μm

Description

The dilution of large droplets is particularly important when measuring highly concentrated droplet aerosols. Since large droplets are difficult to dilute, standard systems only work up to a size of 1 - 2 μm . The newly developed dilution system LDD 100 (dilution factor 100) is the first system to dilute almost loss-free large droplets up to 10 μm . The good dilution factor of large droplets was tested with monodisperse DEHS droplets (oil) of different sizes. The results for the sizes 5 μm and 7 μm are shown in Table 1.

LDD 100:

Particle size	Number counts without dilution	Number counts with dilution	Dilution factor
5 μm	304322	3043	100.01
7 μm	236687	2370	99.87

Chart 1: Dilution of monodisperse DEHS droplets with LDD 100

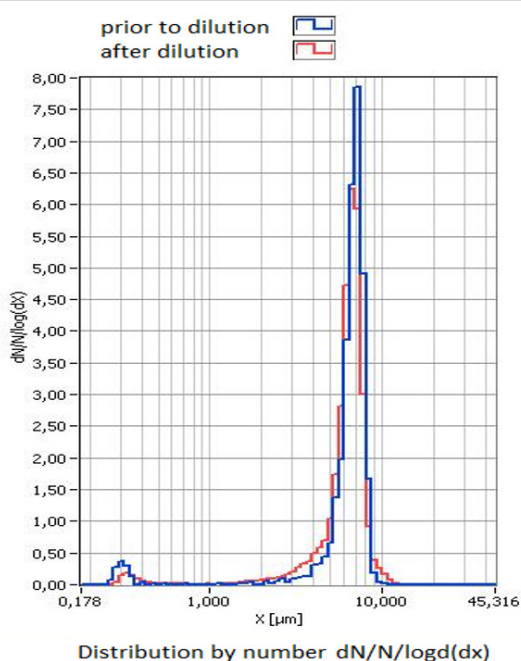


Fig. 1: Distribution of LDD 100 (7 μm)

Benefits

- Defined dilution of large droplets of factor 100
- Proven dilution factor 100 for droplet sizes up to 7 μm
- Easy connection with Promo® and welas® digital aerosol spectrometers
- Internal pump for autonomous operations
- Resistant to pressure fluctuations of ± 200 mbar
- Simple handling
- Robust, durable, low maintenance
- Cost effective

Applications

- Measurement of blow-by aerosols according to ISO 17536
- Dilution of compressed air
- Measurement of cooling lubricant aerosols

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