



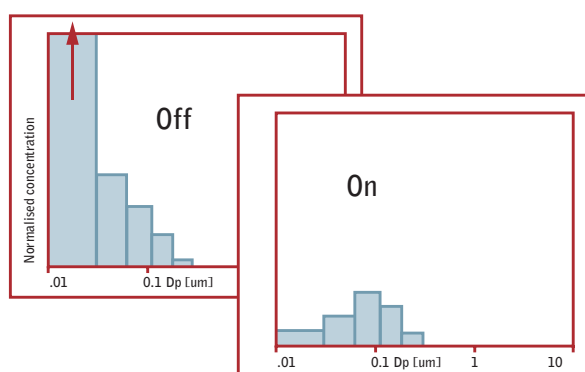
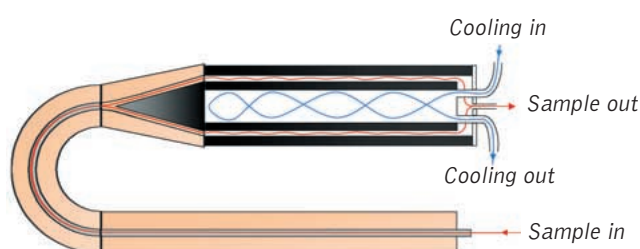
## Dekati Thermodenuder

Aerosol sample conditioning instrument  
Optimised removal of volatile hydrocarbons  
Easy to operate



REAL-TIME PARTICLE MEASUREMENTS

# Dekati Thermodenuder



The effect of the Dekati Thermodenuder on a diesel exhaust emission measured with an Electrical Low Pressure Impactor (ELPI)- the volatile nucleated particles smaller than ca. 50 nm in size are removed with the Dekati Thermodenuder.

The Dekati Thermodenuder (ELA-111, ELA-230) is designed to remove volatile and semi-volatile compounds from the aerosol sample stream. The flow rate of 10–20 lpm makes it especially suitable for use with the ELPI™ (Electrical Low Pressure Impactor) and Dekati Mass Monitor CDMM-230, also manufactured by Dekati Ltd.

Volatile and semi-volatile compounds can cause variation in particle measurements due to semi-volatile component condensation and nucleation. With the Dekati Thermodenuder these unwanted compounds are vaporized by heating the sample aerosol with an aerosol heater up to 250 °C. After heating, the volatile compounds are adsorbed in active charcoal in the adsorber section. Remaining solid and liquid particles follow the gas flow to the particle measurement devices. Diffusion velocity of the vaporised species towards the denuder walls is about 100 times higher than for 10 nm particles, resulting in low internal losses.

## Specifications

Flow rate	10–20 lpm
Maximum operating temperature	300 °C
Cooling medium	Air or water
Adsorber material	Active charcoal
Weight	7.5 kg without filter cartridges
Electrical power requirements	230 V/230 W 110 V/230 W



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Dekati Ltd.  
Osuusmyllynkatu 13  
FIN-33700 Tampere, Finland  
Tel. int. +358 3 3578 100  
Fax int. +358 3 3578 140

E-mail [sales@dekati.fi](mailto:sales@dekati.fi)  
[www.dekati.fi](http://www.dekati.fi)

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