Dekati® Gravimetric Impactor DGI

- High sample flow rate cascade impactor
- Particle size distribution measurement
- Directly applicable into standard emission measurement systems

DEKATI Excellence in Particle Measurements

Dekati®
Gravimetric Impactor DGI

ENG

Dekati® Gravimetric Impactor (DGI) is a high sample flow rate cascade impactor that measures gravimetric particle size distribution of particles < 2.5 µm. The nominal sample flow rate though the DGI is 70 lpm which enables high sample yield even during short measurement periods. Typical measurement applications of the DGI impactor include engine emission measurements, air quality studies and other applications where high sample flow rate is needed.

Standard DGI setup classifies particles into 5 size fractions with impactor stage cutpoints of 2.5, 1.0, 0.5 and 0.2 µm. If detailed information on the size distribution is not needed, some of the impactor stages can be removed from the DGI assembly. The impactor can then be used to determine e.g. only PM2.5 and PM1.0 concentrations. The DGI collects size classified particles on Ø47 mm substrates that are analysed gravimetrically or chemically after the measurement. The smallest particle size fraction is collected on a Ø70 mm filter.

Features

- Particle size distribution in five size fractions <2.5 µm
- High sample flow rate; each unit calibrated for 50, 60, 70, 80, 90 and 100 lpm
- Easy-to-use stainless steel construction
- Each unit manufactured and calibrated in Finland
- Complete measurement solutions available from Dekati Ltd.

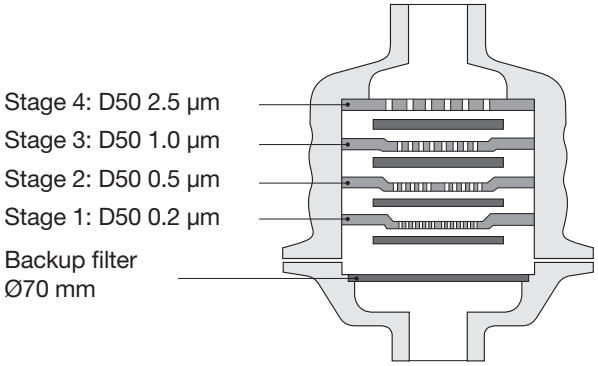
Specifications

Stage cutpoints	@ 70 lpm: 2.5 – 1.0 – 0.5 – 0.2 µm
Nominal flow rate	70 lpm nominal, calibration values provided for 50, 60, 70, 80, 90 and 100 lpm. Mass flow controller recommended for flow control.
Collection substrates	Ø47 mm, aluminium foils
Backup filter	Ø70 mm, Teflon coated fiberglass
Inlet	ISO ½" female
Outlet	ISO ½" female
Weight	1.5 kg
Dimensions	110 mm x 100 mm

Stage D50 Cutpoints

Sample flow rate, lpm	50	60	70	80	90	100
Stage 4, µm	3.0	2.7	2.5	2.3	2.2	2.1
Stage 3, µm	1.2	1.1	1.0	0.9	0.9	0.8
Stage 2, µm	0.61	0.55	0.50	0.46	0.43	0.40
Stage 1, µm	0.26	0.23	0.20	0.18	0.15	0.13

Each DGI impactor is individually calibrated before delivery for exact D50% values with the specified flow rates.



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Dekati Ltd. is specialized in the design and manufacture of innovative fine particle measuring and sampling devices. Since its founding in 1994, Dekati has become the technological market leader in producing fine particle measurement instrumentation for various applications and thousands of customers.

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