

Environmental Dust Monitors Comparison Chart



Dust Sentry



Dust Sentry Pro



AirMetER-DX



ES-642



DustTrak 8530

Sensor Type

Nephelometer

Optical Particle Counter

Optical Particle Counter

Nephelometer

Laser Photometer

Measures

Single PM₁, PM_{2.5}, PM₁₀ or TSP

Multiple PM₁, PM_{2.5}, PM₁₀, TSP

Dual PM_{2.5}, PM₁₀ with TSP option

Single PM₁, PM_{2.5}, PM₁₀ or TSP

Single/multiple PM₁, PM_{2.5}, PM₁₀, TSP

Range

0–60,000µg/m³

PM₁ 200µg/m³
PM_{2.5} 2000µg/m³
PM₁₀ 5000µg/m³
TSP 5000µg/m³

PM_{2.5} 0.01–1999.9µg/m³
PM₁₀ 0.01–2999.9µg/m³

0–100,000µg/m³

1–400,000µg/m³

Accuracy

<±(2µg/m³ + 5% of reading)

<±(5µg/m³ + 15% of reading)

±(8µg/m³ + 10% of reading)

±5% traceable standard with 0.6µm PSL

±0.1% of reading or 1µg/m³, whichever is greater

Data

Aeroqual Cloud (annual subscription)

Aeroqual Cloud (annual subscription)

Air-Met LiveSense (6 monthly subscription)

Air-Met LiveSense (6 monthly subscription)

TSI Netronix

Certifications

MCERTS/SLAQMD

MCERTS/SLAQMD

N/A

N/A

N/A

Accessories

Noise, gas, tripod, solar, gravimetric filter & more

Noise, gas, tripod, solar, gravimetric filter & more

Gas, weather, tripod, solar & more

Noise, gas, tripod, solar & more

Enclosure, heat shield, solar, gravimetric filter & more

Instrument Service Requirements



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Calibration Interval	2 years	1 year	1 year	2 years	1 year
Filter Replacement	3 months	3 months	N/A	1 year	3 months
Flow Rate Check	1 month	1 month	N/A	1 month	1 month
Cyclone/Inlet Clean	1 month	1 month	3 months	1 month	1 month
On-Site Serviceable	Yes	Yes	Yes	Yes	Yes
Maintenance Cost (annual)	\$\$\$\$	\$\$\$\$	\$	\$\$\$	\$
Maintenance Cost (4 years)	\$\$\$\$\$	\$\$\$\$\$	\$	\$\$\$\$	\$\$\$\$