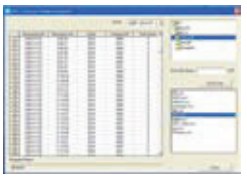
Piezobalance Dust Monitor Model 3521/3522

Optimal Tool for Monitoring Oil Mist

Features:

- Measures PM 10, Respirable, or PM 2.5 particle matters, such as dust, oil mist, fume, and soot
- Real-time measurements of dust concentration
- Data logging up to 500 measurements and data might be reviewed on screen or printed
- PC interface with RS232C and software for downloading data to your PC
- Easy operation and requires no special training
- Simple cleaning mechanism for easy maintenance
- Includes data processing software, RS232C cable, 4 & 10μm impactor (only 3521), cleaning kit, Ni-MH battery pack, AC adapter, carrying case, and calibration certificate



Software Included

Specifications

Model	3521	3522
Measuring Method	Piezobalance	
Particle Size Range	0.1 to 10 μm	0.1 to 2.5 μm
Measuring Range	0.01 to 10.00 mg/m^3	
Flow Rate	1.0 L/min	
Datalogging	500 measurements	
Interface	RS232C	
Power Supply	Ni-MH Battery or AC 100 - 240 V	
Dimensions	W2.6" x H7.1" x D5.9"	
Weight	3.9 lbs (1.75 kg)	

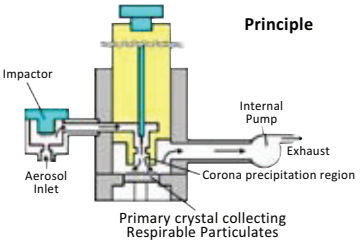
Accessories

3521-01:	Rechargeable Battery Pack
3521-02:	Carrying Case
3521-03:	10 μm Impactor Nozzle (for 3521)
3521-04:	4 μm Impactor Nozzle (for 3521)
3521-05:	AC Adapter
3521-06:	Cleaning Sponges (3 pieces)
3521-07:	Cleaning Fluid
3521-08:	Communication Cable to PC
3521-20:	Printer Cable
DPU-H245:	Portable Thermal Printer
TP-202L:	Rolled Printer Paper (10 rolls)

Dust Measuring Methods

Piezobalance Method

An air sample enters the system, it travels through the impactor, which captures and removes larger particulates away from the sample. Smaller particulates become electrically charged and deposited on the piezo-crystal. The total mass of the deposited particulates affects the piezo-crystal's frequency. Since the change in frequency is proportional to the mass of the particulates, the actual weight of the particulates is obtained.



Since some particle matters such as oil mist absorb lasers, the Piezobalance dust monitor would be ideal (the light scattering method would not give correct measurements).

Applications:

- Monitoring milling operation
- Monitoring honing
- Monitoring boring operation

Monitoring Milling Operation

Light Scattering Method

When a laser hits particle matter, light scattering occurs. A dust monitor collects the amount of scattering light and calculates the mass concentration in proportion to the scattering light. Mass concentration is based on the density of particle matter, thus gravimetric sampling is required if density is unknown.

Applications for light scattering dust monitor include Indoor air quality investigations, Point source monitoring, and Personal exposure monitoring.

Monitoring Welding Operation