

# Microdust Pro



## Real-Time Dust Monitor



## Introduction

The Microdust Pro is a rugged, hand-held, data-logging meter for the real-time detection of airborne dusts, fumes and aerosols.

It has a large LCD display and a unique graphical facility, allowing the user to instantly view the dust level and trends. It is ideal for walk-through surveys of ambient and indoor workplace environments. A quick, easy to use instrument, giving the user additional qualitative data which cannot be gained by gravimetric air sampling methods alone.

This extremely versatile instrument can also be used with a range of accessories for static and size selective sampling applications.



## Applications

- Construction / demolition sites
- Boundary monitoring
- Occupational health surveys
- Process monitoring
- Filter efficiency testing
- Walk through workplace surveys
- Pharmaceutical manufacturing & testing
- Spray booths / powder coating

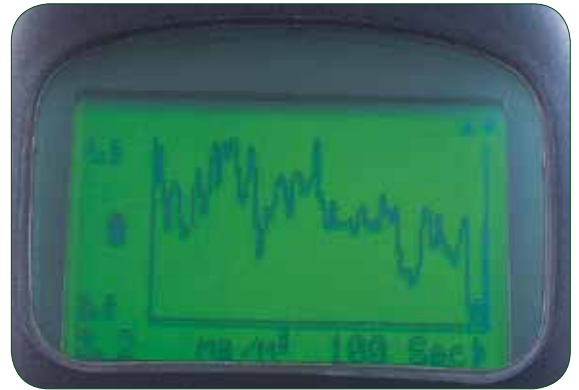
## Key Features

- Unique real-time graphical display
- Extensive range from 0.001 to 2500 mg/m<sup>3</sup>
- Removable sampling probe
- Rugged design for harsh environments
- Multi language operation
- Sampling for Respirable, PM2.5 & PM10
- Field calibration check
- Rechargeable or dry cell operation



## Real-Time Graphical Display

- Instant real-time trend analysis
- Shows graphical & numeric dust levels
- Ideal for walk-through surveys
- Enables user to quickly identify "hot spots".



## Static Monitoring

The Microdust Pro can be used in conjunction with an enclosure system allowing the unit to be operated in static monitoring applications.

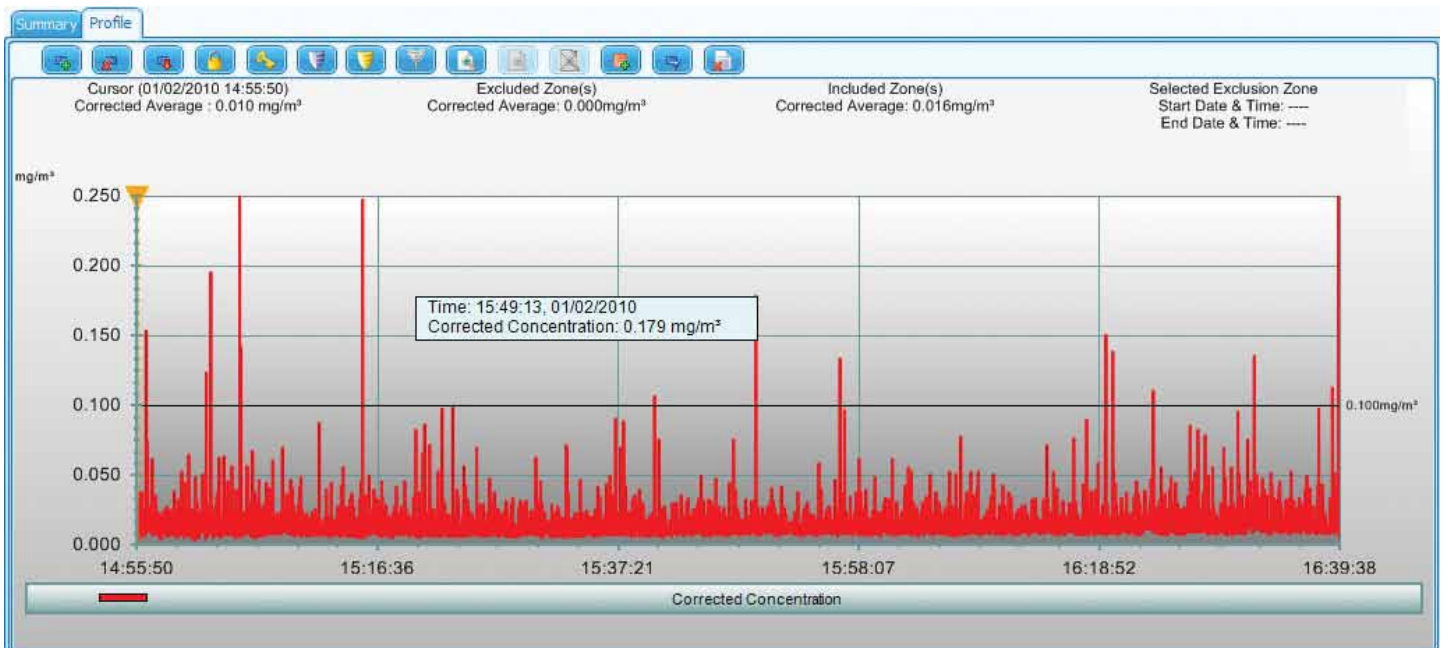
The system integrates the Microdust Pro with a personal air sampling pump. The particulate is passed through the optical sampling chamber and is deposited onto a filter media. This allows users to obtain both real-time and gravimetric data. The filtered sample can then be weighed or sent for analysis.

PUF size-selective sampling foams can be used in conjunction with this system which enables pre-selection of PM10, PM2.5 & Respirable particulate fractions.



## Comprehensive Data-Logging and Software

The Microdust features an internal data-logger with the capacity for storing up to 15,700 data points. Casella Insight Data Management Software operates with the Microdust Pro. This easy to use software enables data to be downloaded, analysed in tabular and graphical format or exported into other software packages.



# Key Features

A range of adaptors are available for use with the Microdust instruments:-

**Gravimetric adaptor:** Allows samples to be collected on a filter media using an external sampling pump.

**Respirable adaptor:** Provides size-selective measurement and filter collection of the Respirable dust fraction.

**Size-selective adaptor:** Used with PUF size-selective foams for PM10, PM2.5 & Respirable sampling.

**Aspirated unit:** Utilises a small ventilation fan. Ideal for area sampling where a simultaneous gravimetric filter sample is not required.



## TECHNICAL SPECIFICATION: MICRODUST PRO

Sensing technique:	Near forward light scattering - 880 nm infra-red
Ranges:	0-2.5, 0-25, 0-250, 0-2500 mg/m <sup>3</sup>
Sensitivity:	0.001 mg/m <sup>3</sup>
Operating temp:	0-50°C (non-condensing)
Zero stability:	+/-0.002 mg/m <sup>3</sup> /°C
Power:	4xAA rechargeable NiMH cells (Alkaline optional)
Operating time:	NiMH cells (950 mAh) typically >9 hrs Alkaline (2700 mAh) typically >20 hrs
Charging:	Internal NiMH fast charger circuitry (disabled for dry cell)
Power adaptor:	Universal input voltage range 100-240 VAC, 47-63 Hz
Analogue output:	0-2.5 VDC FSD (500 Ohm output impedance).
Weight:	Instrument only 0.97 kg (In carry case 4.5 kg)
Dimensions:	Instrument (H x W x D) 245 x 95 x 50 mm
Internal memory:	64K EEprom providing 15,700 data points
Logging interval:	Adjustable from 1 to 600 seconds
Recorded values:	Average, Max / Min concentrations over logging interval
Serial interface:	RS232 (USB Adaptor available)
Display:	128 x 64 pixel LCD graphics with backlight

## ORDERING INFORMATION

### 176000A:

Microdust Pro Kit includes:  
Microdust Pro (0-2500 mg/m<sup>3</sup>), bellows, calibration insert,  
batteries, universal PSU, RS232 cable,  
in carrying case.

### 176106A (High range version):

As above but with unit range 0-2500 mg/L.

### Options:

CEL-90336 RS232 to USB Adaptor.

For software options please refer to 'Casella insight' data sheet.



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