



Knowledge Beyond Measure.

# DustTrak™ II Aerosol Monitors

Models 8530, 8530EP and 8532



**The DustTrak™ II monitors measure aerosol contaminants such as dust, smoke, fumes and mists. Desktop or Handheld units for any environment, any application.**

DustTrak™ II Aerosol Monitors are battery-operated, data-logging, light-scattering laser photometers that give you real-time aerosol mass readings. They use a sheath air system that isolates the aerosol in the optics chamber to keep the optics clean for improved reliability and low maintenance. From desktop and desktop with external pump models to a handheld model, the DustTrak II offers a suitable solution for harsh industrial workplaces, construction and environmental sites and other outdoor applications, as well as clean office settings.

## Features and Benefits

### All Models

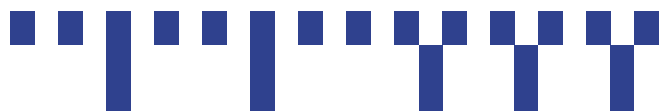
- Real-time mass concentration readings and data-logging allow for data analysis during and after sampling
- Measure aerosol concentrations corresponding to PM1, PM2.5, Respirable, and PM10 size fractions, using a variety of inlet conditioners
- Easy-to-use graphical user interface with color touch-screen for effortless operation

### Handheld Model (8532)

- Long life internal pump for continuous sampling
- Single-point data collection for walk through surveys
- Lightweight design with ergonomic handle for portable applications

### Desktop Models (8530 and 8530EP)

- Energy-efficient, long lasting external pump for continuous, unattended, 24/7, outdoor monitoring applications (Model 8530EP only)
- Long life internal pump for shorter work-shift or IAQ sampling applications (Model 8530)
- Gravimetric reference sampling capability for custom reference calibrations
- Automatic zeroing (with optional zero module) to minimize the effect of zero drift
- STEL alarm setpoint for tracking 15-minute average mass concentrations
- Environmental protected and tamper-proof secure (with an optional environmental enclosure)
- Inlet sample conditioning (with optional heated inlet sample conditioner) to reduce the effect of humidity on photometric mass measurements (for use with an environmental enclosure)



## Desktop Models: Ideal for Long-Term Surveys and Remote Monitoring Applications

The DustTrak™ II is offered as a standard desktop (Model 8530), as well as a desktop with external pump (Model 8530EP.) Both models have manual and programmable data logging functions, making them ideal for unattended applications. The standard desktop model is most suitable for indoor, continuous monitoring, while the desktop with external pump is designed for 24/7 unattended, remote monitoring outdoors.

The DustTrak™ II desktop models come with USB (device and host), Ethernet, and analog and alarm outputs allowing remote access to data. User adjustable alarm setpoints for instantaneous or 15-minute short-term excursion limit (STEL) are also available on desktop models. The alarm output with user-defined setpoint alerts you when upset or changing conditions occur.

The DustTrak™ II desktop monitors have several unique features:

- Measure aerosols in high concentrations up to 400 mg/m<sup>3</sup>.
- External pump (Model 8530EP) with low power consumption for continuous, unattended monitoring in remote outdoor locations.
- Gravimetric sampling capability using a 37-mm filter cassette which can be inserted in-line with the aerosol stream allowing you to perform an integral gravimetric analysis for custom reference calibrations.
- Zeros automatically using the external zeroing module. This optional accessory is used when sampling over extended periods of time. By zeroing the monitor during sampling, the effect of zero drift is minimized.
- STEL alarm feature for tracking 15-minute average mass concentrations when alarm setpoint has been reached for applications like monitoring fugitive emissions at hazardous waste sites.
- Provide for environmental protection and tamper-proof security using an environmental enclosure. This optional accessory encloses the instrument within a waterproof, lockable, custom-designed case.
- Condition the sample air stream before entering the instrument optics using a heated inlet sample conditioner (designed for use with an environmental enclosure.) This optional accessory is used in humid environments. By conditioning the sample, the humidity and water vapor are minimized, reducing elevated measurements.

## Handheld Models: Perfect for Walk-Through Surveys and Single-Point Data Collection Applications

The DustTrak II Handheld Model 8532 is lightweight and portable. It is perfect for industrial hygiene surveys, point source location monitoring, indoor air quality investigations, engineering control evaluations/validation, and for baseline trending and screening. Like the desktop models, it has manual and programmable data logging functions. In addition, the handheld model also has a single-point data logging capability. Single-point data collection is used for walk-through industrial hygiene surveys and indoor air quality investigations.

Applications	Desktop	Handheld
Aerosol research studies	▪	▪
Baseline trending and screening	▪	▪
Engineering control evaluations		▪
Engineering studies		▪
Epidemiology studies	▪	▪
Indoor air quality investigations	▪	▪
Industrial/occupational hygiene surveys	▪	▪
Point source monitoring		▪
Outdoor environmental monitoring	▪	
Process monitoring	▪	▪
Remote monitoring	▪	

Battery Performance		
Models 8530 and 8530EP (Typical) 7800 mAh Li-Ion Battery Pack (P/N 801680)	1 Battery	2 Batteries
Battery runtime (hours)	Up to 6	Up to 12
Charge time* (hours) in DustTrak	4	8
Charge time* (hours) in external battery charger (P/N 801685)	4	8

Model 8532 (Typical) 4200 mAh Li-Ion Battery Pack (P/N 801681)	Battery
Battery runtime (hours)	Up to 6
Charge time* (hours) in DustTrak	4
Charge time* (hours) in external battery charger (P/N 801686)	4

\* Of a fully depleted battery

## DustTrak™ II Aerosol Monitor Features

### All Models

- Li-Ion rechargeable batteries
- Internal and external battery charging capabilities
- Outlet port for isokinetic sampling applications
- User serviceable sheath flow and pump filters
- Logged test pause and restart feature
- Logged test programming
  - Color touch screen—either manual mode or program mode
  - TrakPro™ Data Analysis Software via a PC
- User adjustable custom calibration settings
- Instantaneous alarm settings with visual and audible warnings
- Real-time graph display
- View statistical information during and after sampling
- On-screen instrument status indicators: FLOW, LASER and FILTER
- Filter service indicator for user preventative maintenance

### Desktop Models (8530 and 8530EP)

- Long life external pump (8530EP)
- Internal pump (8530)
- Hot swappable batteries
- Gravimetric reference sample capability
- STEL alarm setpoint

### Optional Accessories

- Auto zeroing module
- Protective environmental enclosure (8535 and 8537)
- Heated inlet sample conditioner (for use with an environmental enclosure)

### Handheld Model (8532)

- Long life internal pump
- Single-point data collection for walk through surveys

## Easy to Program and Operate

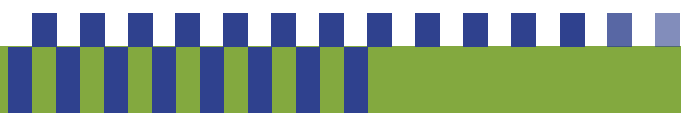
The graphical user interface with color touch-screen puts everything at your fingertips. The easy-to-read display shows real-time mass concentration and graphical data, as well as other statistical information along with instrument pump, laser and flow status, and much more. Perform quick walk-through surveys or program the instrument's advanced logging modes for long-term sampling investigations. Program start times, total sampling times, logging intervals, alarm setpoints and many other parameters. You can even set up the instrument for continuous unattended operation.

## TrakPro™ Software Makes Monitoring Easier than Ever

TrakPro™ Data Analysis Software allows you to set up and program directly from a PC. It even features the ability for remote programming and data acquisition from your PC via wireless communication options or over an Ethernet network. As always, you can print graphs, raw data tables, and statistical and comprehensive reports for recordkeeping purposes.



Desktop Monitor with External Pump, Model 8530EP



## Specifications

# DustTrak™ II Aerosol Monitors

Models 8530, 8530EP and 8532

### Sensor Type

90° light scattering

### Particle Size Range

0.1 to 10 µm

### Aerosol Concentration Range

8530 Desktop 0.001 to 400 mg/m<sup>3</sup>

8530EP Desktop  
with External Pump 0.001 to 400 mg/m<sup>3</sup>

8532 Handheld 0.001 to 150 mg/m<sup>3</sup>

### Resolution

±0.1% of reading or 0.001 mg/m<sup>3</sup>, whichever is greater

### Zero Stability

±0.002 mg/m<sup>3</sup> per 24 hours at 10 sec time constant

### Flow Rate

3.0 L/min set at factory, 1.40 to 3.0 L/min, user adjustable

### Flow Accuracy

±5% of factory set point, internal flow controlled

### Temperature Coefficient

+0.001 mg/m<sup>3</sup> per °C

### Operational Temp

32 to 120°F (0 to 50°C)

### Storage Temp

-4 to 140°F (-20 to 60°C)

### Operational Humidity

0 to 95% RH, non-condensing

### Time Constant

User adjustable, 1 to 60 seconds

### Data Logging

5 MB of on-board memory (>60,000 data points)

45 days at 1 minute logging interval

### Log Interval

User adjustable, 1 second to 1 hour

### Physical Size (H x W x D)

Handheld 4.9 x 4.8 x 12.5 in.  
(12.5 x 12.1 x 31.6 cm)

Desktop 5.3 x 8.5 x 8.8 in.  
(13.5 x 21.6 x 22.4 cm)

External Pump 4.0 x 7.0 x 3.5 in.  
(10.0 x 18.0 x 9.0 cm)

### Weight

Handheld 2.9 lb (1.3 kg),  
3.3 lb (1.5 kg) with battery

Desktop 3.5 lb (1.6 kg),  
4.5 lb (2.0 kg) – 1 battery,  
5.5 lb (2.5 kg) – 2 batteries

External Pump 3.0 lb (1.4 kg)

### Communications

8530 USB (host and device) and Ethernet. Stored data accessible using flash memory drive

8530EP USB (host and device) and Ethernet. Stored data accessible using flash memory drive plus, cable assembly for external pump

8532 USB (host and device). Stored data accessible using flash memory drive

### Power-AC

Switching AC power adapter with universal line cord included, 115–240 VAC

### Analog Out

8530/8530EP User selectable output, 0 to 5 V or 4 to 20 mA. User selectable scaling range

### Alarm Out

8530/8530EP Relay or audible buzzer  
Relay  
Non-latching MOSFET switch  
▪ User selectable set point  
▪ –5% deadband  
▪ Connector 4-pin,  
Mini-DIN connectors

8532 Audible buzzer

### Screen

8530 5.7 in. VGA color touchscreen

8532 3.5 in. VGA color touchscreen

### Gravimetric Sampling

8530/8530EP Removable 37 mm cartridge (user supplied)

### CE Rating

Immunity EN61236-1:2006

Emissions EN61236-1:2006

Specifications are subject to change without notice.

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