

# Wireless Video Dust Monitoring System Model VDM-7500

**Environmental Devices Corporation** is an innovative global leader in real-time particulate monitors and is the first manufacturer to offer a turnkey portable wireless video dust monitor that is complete and affordable.

The VDM-7500 system is a Windows based system and is designed to be portable, easily deployable and user friendly. System is expandable up to four dust monitors with video.

## Digitally Record Work Place Exposures:

The **VDM-7500** is the only commercially available instrumentation which measures the levels of lung damaging particulates while simultaneously overlaying dust concentration on to video images. All data is displayed real-time on the computer screen. This technique allows the investigator to record and obtain certain events that are clearly linked to workers exposure of airborne contaminants. This provides a more effective and focused way to implementing recommendations for controlling employee health.

Actually see, record, and store streaming video and dust particulate concentration level of lung damaging exposures. This new technique is essential to employee health monitoring programs.

Traditional air sampling method for the collection of dust particulates uses only an air pump and filter technique. This method only provides average (TWA) exposures and does NOT provide a visual time profile of the exposure. **The new HAZ-DUST "V" method utilizes the model VDM-7500 to overcome traditional limitations.** The integration of video coupled with real-time particulate exposure measurements allows a more dynamic assessment in identifying and analyzing the contamination of air. Thus allowing for better control documentation for improved decision-making, and reduces liability for occupational lung disease.

## Document Lung Damaging Particulates Features:

- ☞ Completely digital and wireless for unattended operation
- ☞ Immediate real-time video and dust readings of any type of aerosol
- ☞ Record to disk feature allows for visual proof of any exposure and concrete documentation for liability and compliance purposes
- ☞ True breathing zone measurements and size selective air sampling of lung damaging particles
- ☞ Unique design allows for concurrent filter gravimetric samples for further laboratory and chemical analysis
- ☞ Compact and rapidly deployable system that is easy to use and transport

- ❖ ***This Advanced Technique allows both visual and direct readings of lung damaging dust exposure.***
- ❖ ***Allows the air quality investigator the most dynamic dust assessment tool on the market.***



## ... Reduce Liability for Occupational Lung Disease:



*Toxic Waste*



*Emergency Response*



*Welding Fumes*



*Paint Spray*

## Applications:

- ✓ Determining levels of worker respiratory protection for OSHA compliance
- ✓ Compliance program reviews
- ✓ Evaluating work practices and controls of any dust generating practices
- ✓ Safety audits
- ✓ NIOSH Video exposure monitoring for real-time graphical overlays
- ✓ Welding fume exposures
- ✓ Air quality studies in occupational health and industrial hygiene
- ✓ Haz-Mat air quality investigation and waste site remediation
- ✓ VDM-7500 Monitor is a useful tool for all monitoring applications involving lung-damaging particulates

***“The HAZ-DUST V method is our most useful tool for respiratory hazard prevention and control of airborne dust.”***

The VDM-7500 has application in all industrial processes that generate dust. A few are listed below but the list can be considered endless

***Think of the possibilities... See and Record what you have been missing***

***Agricultural/Mining Industry:***

- ✓ Coal Dust
- ✓ Silica and Mineral Dust
- ✓ Farming Operations; such as, sugar dust, cotton, grain, etc.

***Furniture/Wood/Construction Industry:***

- ✓ Wood Dust
- ✓ Paint Spray

***Pharmaceutical Industry:***

- ✓ Dry Chemical Dust
- ✓ Dust from Manufacturing Process

***Hazardous Waste Industry:***

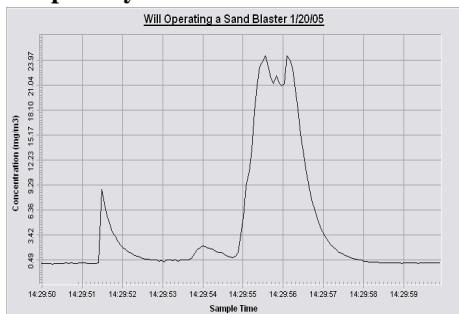
- ✓ Toxic Soil Remediation
- ✓ Dust from the Disposal of Cadmium, Lead, Chromate, Silica, etc.

***Welding/Heavy Industry:***

- ✓ Welding Fumes
- ✓ Grinding Dust

***Insurance/Security Industry:***

- ✓ Document, Measure, and Video Tape any airborne dust that can be considered a potential liability or threat of human respiratory health



*Actual video clip of sandblasting operation*

***Specifications:***

***System Includes:***

Wireless real-time particulate monitor, wireless video camera, customized portable PC with radio receiver and all software and hardware setup packaged in rolling carrying case with handle.

***VDM-7500 Particulate Monitor***

**Display:** LCD-4line, 20 character mg/m<sup>3</sup> and wireless TX to PC  
**Operations:** Four key splash proof membrane switch – menu driven  
**Calibration:** NIOSH gravimetric reference – NIST Traceable – SAE Fine test dust  
**Accuracy:** +/- 10% to filter gravimetric SAE fine test dust  
**Sensing Range:** 0.01-200 mg/m<sup>3</sup>  
**Particulate Size Range:** 0.1 to 100µm  
**Precision:** +/- 0.02- mg/m<sup>3</sup>  
**Sampling Flow Rate:** 1.0 – 3.3 liters/minute  
**Filter Cassette:** 37mm disposable  
**Analog Output:** 0-2 vdc  
**Alarm Output:** 90db at 3ft  
**Recording Time:** 1 second to 21 weeks  
**Sampling Time:** 1 sec., 1min. and 10min. intervals  
**Data Storage:** 21,500 data points  
**Security Code:** 4 digit combinations  
**Memory & Time Storage:** > 5 years  
**Real-Time Clock and Data Display:** Hours, min., sec., day, month, year  
**Data Display:** Concentration in mg/m<sup>3</sup> & TWA, MAX, MIN, STEL, date, time  
**Digital Output:** RS-232  
**DustComm Software:** Windows based  
**Power:** NiMH rechargeable battery  
**Operating Time:** >8 hours  
**Charging Time:** 10-12 hours  
**Dimensions (case):** 5.4” x 3.3” x 2.7”  
**Sensor Dimensions:** 1.75” x 1.5”  
**Weight:** 1.5 lbs.  
**Operating Temperature:** 0 to 50° C  
**Storing Temperature:** -20 to 70° C  
**Humidity:** 95% non-condensing

***Video Camera/Radio Modem Wireless TX/RX***

**Video Camera.....**Color 2.4 GHz, NTSC to Video Board  
**Modem Interface.....**RS-232 (serial COM) port  
**Serial Data Rate.....**Variable 1200 bytes/sec.–38,400 bytes/sec.  
**RF Data Rate.....**20,000 bits per second  
**RF Distance.....**Up to 350 feet (150 meters), line-of- sight  
**Power Source.....**Rechargeable Battery  
**Operating Time.....**8 Hours battery life or continuous AC

***Complete System***

- Windows XP English/US.
- Video card 30 frame per/sec full monitor color optional 4 camera video system
- Intel Motherboard model: serial com port
- Power Supply PS2 400 watt Auto switch 110/220
- HDD 80GB IDE (7,200RPM)
- CD Rom
- 14.1” TFT display

***Manufactured by:***

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