

# HAZ-DUST I Real-time Particulate Monitor

## Portable Particulate Survey Tool



The HAZ-DUST I is designed as a screening tool for IH, IAQ, and fence-line/perimeter monitoring of construction and other projects. HAZ-DUST I is factory calibrated for respirable particulate mass (50% cut-point of 4  $\mu\text{m}$ ) at  $\pm 10\%$  with SAE fine dust test. An alternative 10- $\mu\text{m}$  cut-point calibration is available as a special order. When combined with the datalogger accessory, maximum automation is achieved for data collection, statistical analysis, graphs, and report generation.

### The HAZ-DUST I Advantage

- **Saves time and money:** No cassettes to purchase or weigh and no lab analysis needed.
- **Immediate results:** Turn on HAZ-DUST I and the reading is displayed.
- **Flexibility:** Handheld for survey monitoring or add optional datalogger for continuous unattended monitoring.

### HAZ-DUST I Applications

HAZ-DUST I is ideal for industrial and remedial particulate air monitoring applications, such as:

- Determining level of respiratory protection
- Survey of workplace for OSHA/EPA compliance
- Qualifying off-site particulate migration
- Surveying for PM-10 and TSP levels
- Monitoring dust generation during drilling/excavation
- Evaluating dust generation/suppression
- Locating/identifying "Hot Spots"
- Emergency Response and SARA Title III fugitive emissions compliance
- OSHA and EPA personal and ambient particulate air sampling

- ▶ **Easy operation and instantaneous readings in  $\text{mg}/\text{m}^3$**
- ▶ **Highly sensitive — measurements down to  $0.01 \text{ mg}/\text{m}^3$** 
  - Monitors OSHA/NIOSH reference methods
- ▶ **Selectable dual measuring range feature**
  - Particulate concentration measurements between  $0.01$  and  $20 \text{ mg}/\text{m}^3$  and from  $0.1$  to  $200 \text{ mg}/\text{m}^3$
- ▶ **Easy-to-read digital display**
- ▶ **NiMH rechargeable battery**
- ▶ **Low battery indicator**
- ▶ **Unique design provides protection from RFI/EMI; CE marked**
- ▶ **Lightweight, rugged, and portable**
- ▶ **Optional tripod mounting**
- ▶ **Optional datalogger with display and user-selectable alarm threshold**
- ▶ **Includes DustComm Pro Software for downloading, basic trend analysis, and comprehensive graphical reporting**

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### Performance Profile

<b>Sensing Range:</b>	0.01 to 200 mg/m <sup>3</sup>
<b>Display:</b>	LCD 3.5 digits; concentration in mg/m <sup>3</sup>
<b>Calibration:</b>	SAE fine test dust compared with NIOSH 0600
<b>Particle Size Range:</b>	0.1 to 50 µm
<b>Precision:</b>	± 0.02 mg/m <sup>3</sup>
<b>Accuracy:</b>	± 10% to NIOSH 0600
<b>Power:</b>	NiMH rechargeable battery
<b>Operating Time:</b>	> 8 hours on rechargeable NiMH battery
<b>Charging Time:</b>	10 to 12 hrs
<b>Humidity:</b>	95% non-condensing
<b>Dimensions:</b>	9 x 3 x 1.5 in (23 x 7.6 x 3.8 cm)
<b>Weight:</b>	1.25 lbs (0.6 kg)
<b>Data Storage:</b> (with datalogger accessory)	21,500 data points
<b>Optional Datalogger:</b>	Two-key programmable operation. Real-time clock, display, and user-selectable alarm threshold. Includes software for statistics, graphs, and reports. PC compatible
<b>Recording Time:</b>	1 sec to 15 mos
<b>Sampling Rate:</b>	1 sec, 10 sec, 1 min, 10 min, and 30 min averaging
<b>Signal Input:</b>	0 to 2 volt
<b>Output:</b>	RS-232C (9600 baud rate)

#### SKC Limited Warranty and Return Policy

SKC products are subject to the SKC Limited Warranty and Return Policy, which provides SKC's sole liability and the buyer's exclusive remedy. To view the complete SKC Limited Warranty and Return Policy, go to <http://www.skcinc.com/warranty>.

### Principle of Operation

HAZ-DUST I uses the principle of near-forward light scattering to measure dust concentration. Inside the instrument, an infrared light source is positioned at a 90-degree angle from a photodetector. As airborne particles enter the infrared beam, they scatter the light. The amount of light received by the photodetector is directly proportional to the aerosol concentration. No filter or gravimetric analysis is required. Airflow through the HAZ-DUST I is passive.


### A Note about Calibration

The HAZ-DUST I is factory calibrated for respirable particulate mass (size range 0.1 to 50 µm) with a 50% cut-point of 4 µm (± 10% with SAE fine test dust), which falls under the ACGIH/ISO/CEN criteria. Alternative calibration for thoracic particulate mass with a 10-µm cut-point is available as a special order.

### Optional Datalogger

For maximum automation of data collection, use the HAZ-DUST I Dust Monitor with the optional datalogger to provide data storage, on-screen display of statistics, and a user-selectable alarm threshold. The datalogger includes DustComm Pro Software for PC that provides statistical analysis, graphs, and detailed reports that can be printed for record keeping.

### Ordering Information

Description	Cat. No.
<b>HAZ-DUST I Monitor</b> includes battery, charger, and carry case  <b>110-240 V</b>	<b>770-1100</b>
<b>Accessories</b>	
<b>Datalogger</b> , provides data storage, on-screen display of statistics, and user-selectable alarm threshold, includes analog signal cable, computer interface cable, and DustComm Pro Software, <i>printer required for hard copy reports</i>	<b>770-113</b>
<b>Tripod Stand</b> , adjustable stand and mounting plate for unattended monitoring	<b>770-129</b>
<b>Calibration Standard</b> , light scattering device provides a constant value for verifying calibration	<b>770-102</b>
<b>Zeroing Accessory</b> , for pumping filtered air into a sensor for a zero reading in contaminated environments	<b>770-130</b>
<b>Replacement Battery Pack</b> , NiMH	<b>770-108</b>
<b>Charger</b> , 110-240 V	<b>770-131</b>

 Requires calibration with equipment that is sold separately, see Accessories

