

HAZ-DUST IV

It's Small, It's Personal, It's Real Time

- **Immediate display of particle concentration in mg/m³**
 - TWA, STEL, Max, and Min
 - Data is also stored for downloading
- **Miniaturized sensor mounts directly in breathing zone**
- **Easily interchangeable sampling heads for true breathing zone measurements of specific fractions**
 - Inhalable adapts to IOM Sampler to meet inhalable convention
 - Thoracic sampling head (*included*) meets thoracic convention
 - Respirable adapts to SKC GS-3 Cyclone to meet respirable convention
- **Internal adjustable sample pump — 1.0 to 3.3 L/min**
- **In-line cassette directly behind sensor for concurrent filter sampling**
 - Use sample to correct data for local dust
- **Audible alarm with adjustable threshold**
- **Worker comfort**
 - Small, lightweight case easily attaches at the waist
 - Miniature sensor clips in the breathing zone
- **DustComm Pro Software for downloading, basic trend analysis, and comprehensive graphical reporting**
- **Run time over 8 hours with rechargeable NiMH battery**



The HAZ-DUST, with new infrared detector, displays immediate breathing zone measurements and comprehensive graph reporting of aerosol and dust for industrial hygiene and environmental air investigations. Target specific particle fractions by installing an inhalable, thoracic, or respirable sampling head. An in-line 37-mm cassette behind the sensor may be used to collect a concurrent filter sample for gravimetric or chemical analysis.

Easy-to-use HAZ-DUST IV

Four simple keys and menu-driven instructions displayed on an easy-to-read LCD make HAZ-DUST IV operation easy. Simply select from the menus the desired particle type, connect the appropriate sampling head to the sensor, and place a filter in the filter cassette behind the sensor if collecting a concurrent filter sample. Zero the unit and then clip the sensor to a worker's collar. Attach the HAZ-DUST IV onto the worker's belt. Use the four-button keypad to set the threshold alarm and begin monitoring.



HAZ-DUST IV Aerosol Monitor

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HAZ-DUST IV Sampling Heads

- **Inhalable** — SKC IOM Sampler (Cat. No. 770-115A)
- **Thoracic** — sampling head included with the HAZ-DUST IV
- **Respirable** — SKC GS-3 Cyclone (Cat. No. 225-103) with adapter (Cat. No. 770-313)



Principle of Operation

HAZ-DUST IV operates on the principle of near-forward light scattering of infrared radiation. It immediately and continuously measures the concentration of airborne dust particles and displays the result in mg/m^3 .

***What is near-forward light scattering?** This measurement technique uses an infrared light source positioned at a 90-degree angle from a photodetector. As the 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. Unique signal processing internally compensates for noise and drift.*

Applications

- Determining levels of worker respirator protection for OSHA compliance
- Reviewing compliance programs
- Evaluating work practices and controls of any dust-generating practice
- Performing safety audits
- Combine with NIOSH video exposure monitor for real-time graphical overlays
- Monitoring welding fume exposures
- Performing air quality studies in occupational health and industrial hygiene
- Performing Haz-Mat air quality investigations and monitoring waste site remediation
- All air monitoring applications involving lung-damaging particulates



Performance Profile

Accuracy:	$\pm 10\%$ to filter gravimetric SAE fine test dust
Sensing Range:	0.01 to 200 mg/m^3
Resolution:	0.01 mg/m^3
Particle Size Range:	0.1 to 100 μm
Precision:	$\pm 0.02 \text{ mg}/\text{m}^3$
Calibration:	NIOSH Method 0600 gravimetric reference - NIST-traceable SAE fine test dust
Sample Flow Rate:	1.0 to 3.3 L/min
Power:	Rechargeable NiMH battery
Operating Time:	≥ 8 hours
Charging Time:	10 to 12 hours
Data Storage:	21,500 data points
Digital Output:	RS-232
Dimensions:	Case: 5.5 x 3.25 x 2.75 in (14 x 8.3 x 7 cm) Sensor: 1.75 x 1.5 in (4.4 x 3.8 cm)
Weight:	2 lbs (0.9 kg)

Ordering Information

Description	Cat. No.
HAZ-DUST IV Monitor includes monitor, thoracic head, in-line filter cassette, carry case, computer cable, battery charger, HAZ-DUST Media CD with instruction manual, and DustComm Pro Software  110-240 V	770-4004
HAZ-DUST IV Monitor Kit includes all items listed above plus GS Cyclone and adapter, IOM and adapter, calibration jar, and standard 110-240 V	770-4004K
Sampling Heads	
Inhalable Sampling Head and Adapter , IOM Sampler, mounts on HAZ-DUST IV sensor	770-115A
Thoracic Sampling Head , mounts on inlet or HAZ-DUST IV sensor	770-4107
Respirable Sampling Head , GS-3 Cyclone, mounts on HAZ-DUST IV sensor	225-103
Adapter for Respirable Sampling Head , required when using GS-3 Cyclone	770-313
Accessories	
Calibration Standard for Monitor , for verifying span and optical sensor performance	770-140
Calibration Jar , for calibrating and setting pump flow when using respirable sampling head	225-112
Zeroing Accessory , for clean-air zeroing of HAZ-DUST IV sensor when using inhalable sampling head	770-4202A
Zeroing Filter , for use with respirable and thoracic sampling heads	770-4102
Replacement Battery Pack , NiMH	770-4105
Charger , 110-240 V	770-319

 Requires calibration with equipment sold separately, see accessories

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.asp>.