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Test & Measurement

- sales
- rentals
- calibration
- repair
- disposal

Complimentary Reference Material

This PDF has been made available as a complimentary service for you to assist in evaluating this model for your testing requirements.

TMG offers a wide range of test equipment solutions, from renting short to long term, buying refurbished and purchasing new. Financing options, such as Financial Rental, and Leasing are also available on application.

TMG will assist if you are unsure whether this model will suit your requirements.

Call TMG if you need to organise repair and/or calibrate your unit.

If you click on the "Click-to-Call" logo below, you can call us for FREE!

TMG Corporate Website

TMG Products Website



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Expanded Technical Support coverage

Our highly trained and experienced technical support team is ready to provide application expertise and work with you to determine the product and configuration that best meets your needs. The team is also there to troubleshoot instruments.

Customer Service

Our customer service team processes orders, provides status of current orders as well as pricing and availability of product. Our international customer service team is export-compliant trained and extremely experienced in shipping to all regions of the world.

Call us

Our team can be reached between 8:00 AM and 8:00 PM, Monday through Friday, Eastern Standard Time by calling 866-282-0430 or 508-520-0430. Or fax us at 508-520-2800.

For more information about the *personal*DataRAM™ Series or other Industrial Hygiene products, visit us at www.thermo.com/IH.

For ordering information, please contact your local dealer or Thermo Fisher Scientific representative.

Two compelling arguments for
better personal aerosol monitoring.

Thermo Scientific *personal*DataRAM™ Series

pDR-1000
pDR-1500



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Thermo Scientific *pDR-1000AN*

Passive, real-time, personal aerosol monitor/datalogger



Measure airborne particulate concentration in real-time

The Thermo Scientific *pDR-1000AN personalDataRAM* measures mass concentrations of dust, smoke, mists, and fumes in real time, and sounds an audible alarm whenever the user-defined level is exceeded. Conventional filter-based monitoring methods cannot indicate dangerous, real-time dust levels. In contrast, the *pDR-1000AN* alerts you within seconds, allowing immediate action. With datalogging enabled, the instrument automatically tags and time stamps the data collected, and stores it for subsequent retrieval, printing, or graphing via computer.

Highest performance of any real-time personal particulate monitor

With a measurement range from 0.001 to 400 mg/m³ (auto-ranging), and an optical feedback stabilized sensing system, the *pDR-1000AN* sets the standard for sensitivity, long-term stability and reliability.

The palm-sized *pDR-1000AN* weighs only 18 oz (0.5kg) for easy portability and attachment to a belt or a shoulder strap. The absence of moving parts, such as pumps, motors and valves, and the use of low-power semiconductors, housed in a ruggedized case, ensures long life and dependable operation.

High correlation with gravimetric measurement

The *pDR-1000AN* is a light-scattering photometer (nephelometer) incorporating a pulsed, high output, near-infrared light emitting diode source, a silicon detector/hybrid preamplifier, collimating optics and a source reference feedback PIN silicon detector. The intensity of the light scattered over the forward angle of 50° to 90° by airborne particles passing through the sensing chamber is linearly proportional to their concentration. This optical configuration produces optimal response to particles in the size range of 0.1-10 µm, achieving high correlation with standard gravimetric measurements of the respirable and thoracic fractions.

Simple zeroing and calibration

The unit arrives practically ready to use after an easy zeroing step. It comes gravimetrically calibrated in mg/m³ (NIST traceable) using standard SAE Fine test dust (ISO Fine). Zeroing with particle-free air is quick and effective under field conditions, using the zeroing kit included. Internal firmware controls an automatic calibration check. To maximize field efficiency, gravimetric calibration can be performed by comparison with a filter sampler and programming the calibration constant.

Typical applications

- Indoor air quality monitoring
- Walk-through surveys
- Personal exposure monitoring
- Time & motion studies
- Workplace & plant monitoring
- Remediation personal surveillance
- Mobile monitoring in vehicles & aircraft
- Toxicology & epidemiology studies
- Emergency response
- Testing air filtration efficiency

Thermo Scientific *pDR-1500*

Active, real-time, personal aerosol monitor/datalogger, with aerodynamic sizing



A personal aerosol instrument with benchtop performance

The Thermo Scientific *pDR-1500* was developed to meet the need for a fully integrated, active sampling, personal instrument with greater precision, increased capabilities, decreased size and weight in an easy to use package.

The flexible design permits use across a wide range of applications. From site remediation monitoring to health effects studies to construction/demolition projects, the *pDR-1500* provides the power and flexibility to provide both real time results and gravimetric validation.

Full compensation for environmental variables

A lot gets in the way of accurately measuring aerosol concentration in real-time – temperature, humidity, barometric pressure and sample representation. The *pDR-1500* handles all four – with relative humidity compensation, true volumetric flow control, pressure compensation and legacy *pDR* nephelometry. An integrated sample filter enables post-gravimetric validation of data.

Interchangeable cyclones for higher accuracy cut points

Superior particle-cut points compared to those achieved using impactors are delivered through accurate volumetric flow control and ACGIH traceable cyclones – available in two models, for PM₁₀ and PM₄ or PM_{2.5} and PM₁. A toroidal entrance assures optimized aerosol aspiration and a representative sample even without a cyclone.

A fully integrated platform

An internal HEPA filter provides fast zeroing in the field and assures a clean exhaust for the most sensitive research. Together with an internal pump, this makes the *pDR-1500* a complete, one-component system. Yet at only 36 oz. and a compact size of 7.1" x 5.6" x 3.3", it's as easily worn on the belt as run in a fixed location.

The system features both USB and digital/analog output connections providing flexible communication options.

Proven legacy *pDR* optics, volumetrically controlled pump, off-the-shelf batteries and sample filter are just a few more ways the next-generation *pDR-1500* provides bench-top performance in a small, light, easy-to-use personal monitor.

