

The Thermo Scientific pDR-1500 personal DataRAM is a fully integrated, active sampling personal scale instrument with greater accuracy, increased capabilities, low size and weight, maximum ease-of-use and increased operating time.

The pDR-1500 personal DataRAM accurately measures aerosol concentration in real-time, with relative humidity compensation, true volumetric flow control and legacy pDR nephelometry. An integrated sample filter enables post-gravimetric validation of data.

## FEATURES

- True volumetric flow control
- Interchangeable cyclones for higher accuracy cut points
- Personal aerosol instrument with benchtop performance
- Full compensation for environmental variables
- Suitable for NIOSH Methods 0500 and 0600t

## APPLICATIONS

- Site Remediation
- Size Discrimination
- Mass Validation
- Exposure Modeling
- Protection of Asthma Patients

## ACCESSORIES & OPTIONS

### Standard Accessories

The pDR-1500 is provided to the user with the following standard accessories:

- Universal power supply cable
- RS-232 communications cable
- USB communications cable
- pDR Port Software CD ROM
- Belt clip kit
- Total particulate inlet
- 8 alkaline batteries
- 2 ea. stainless steel filter support and holder assembly\*
- 1pk/100 37-mm glass fiber filters\*
- Zeroing/recirculation tubing
- Zeroing filter
- Instruction manual \*One of each is installed in the instrument at the time of shipping.



### Optional Accessories

The pDR-1500 is available with the following options:

- Red Cyclone – provides an ACGIH traceable D50 AED cut point ranging from 3 to 12 micrometers
- Blue Cyclone – provides an ACGIH traceable D50 AED cut point ranging from 1 to 4 micrometers
- 5 Micron PVC Filters – for NIOSH gravimetric methods (use glass fiber filters, as backing filter)
- Stainless Steel Filter Support Screen
- Carrying Case
- Analog Data Cable – supporting both concentration output and alarm status
- Tripod Support Kit

**CALL GEOTECH TODAY**

**(800) 833-7958**

**Geotech Environmental Equipment, Inc.**

2650 East 40th Avenue Denver, Colorado 80205

(303) 320-4764 FAX (303) 322 7242

email: sales@geotechenv.com website: www.geotechenv.com

Technical Specifications	
<b>Concentration Measurement Range</b>	0.001 to 400 mg/m <sup>3</sup> range (auto ranging) <sup>1</sup>
<b>Scattered Coefficient Range</b>	1.5 x 10 <sup>-6</sup> to 0.6 m <sup>-1</sup> (approx) @ lambda= 880nm (not displayed)
<b>Precision/Repeatability Over 30 Days</b>	±2% of reading or ±0.005 mg/m <sup>3</sup> , whichever is larger, for 1 second (2-sigma) <sup>2</sup> averaging time ±0.5 of reading or ±0.0015 mg/m <sup>3</sup> , whichever is larger, for 10 second averaging time ±0.2% of reading or ±0.0005 mg/m <sup>3</sup> , whichever is larger, for 60 second averaging time
<b>Accuracy<sup>1</sup></b>	1 ±5% of reading ±precision (traceable to SAE Fine Test Dust)
<b>Resolution</b>	0.1% of reading or 0.001 mg/m <sup>3</sup> , whichever is larger
<b>Particle Size Range of Max. Response</b>	0.1 to 10 µm
<b>Flow Rate Range</b>	1.0 to 3.5 liters/minute
<b>Aerodynamic Particle Cut-Point Range</b>	1.0 to 10 µm
<b>Concentration Display Updating Interval</b>	1 second
<b>Concentration Display Averaging Time<sup>3</sup></b>	1 to 60 seconds (user selectable)
<b>Data logging Averaging Periods<sup>3</sup></b>	1 second to 1 hour
<b>Total # of Data Points That Can Be Logged in Memory</b>	>500,000
<b>Number of Data Tags</b>	99 (maximum)
<b>Logged Data</b>	Averaging concentration, temperature, RH, barometric pressure, time/date, and data point number
<b>Readout Display</b>	LCD 16 characters (4 mm height) x 2 lines
<b>Serial Interface</b>	USB/RS-232, 19, 200 baud
<b>Computer Requirements</b>	IBM-PC compatible, Pentium I or higher processor, Windows 95® or higher, 32 MB RAM, 10 MB hard disc drive, CD drive, VGA or higher resolution monitor
<b>Real Time Analog Signal</b>	0 to 5V and 4 to 20 mA. Selectable full scale ranges of: 0 - 0.1, 0 - 0.4, 0 - 1.0, 0 - 4.0, 0 - 10, 0 - 40, 0 - 100, and 0 - 400
<b>Internal Battery Run time</b>	4 AA alkaline, >24 hr run time, 5 V peak-to-peak @ 1.2 L/min; > 6 hour @ 3.5 L/min
<b>Run Time @ 25°C</b>	Run time may vary with temperature
<b>Current Consumption</b>	70 to 450 mA (in Run Mode); 32 mA (in Ready Mode)
<b>Operation Environment</b>	-10° to 50°C (14° to 122°F), 10 to 95% RH, non-condensing
<b>Storage Environment</b>	-20° to 70°C (-4° to 158°F)
<b>Dimensions (Maximum External)</b>	181 mm (7.1in) H X 143mm (5.6in) W x 84mm (3.3in) D
<b>Weight</b>	1.2kg (41oz.)

**Notes:**

1. Referred to gravimetric calibration with SAE Fine (ISO Fine) test dust (mmd = 2 to 3 µm. g = 2.5, as aerosolized).
2. At constant temperature and full battery voltage.
3. User selectable.

**CALL GEOTECH TODAY**  
**(800) 833-7958**

**Geotech Environmental Equipment, Inc.**  
2650 East 40th Avenue Denver, Colorado 80205  
(303) 320-4764 FAX (303) 322 7242  
email: sales@geotechenv.com website: www.geotechenv.com

## pDR-1500 Option Configuration Reference

Configuration Options	Model Code	Description
<b>Instrument</b>		
	pDR1500	Personal DataRAM pDR-1500 Monitor
		NOTE: Each pDR1500 includes a pDR-Port software, operators manual, RS-232 cable, USB cable (version 2.0), universal power supply (including plug adaptors), a box of 100 fiberglass filters, 2 filter holders, 2 O-rings and 8 "AA" batteries.
<b>1. Nominal Supply Voltage and Frequency</b>		
	U	110V Power Cord
<b>2. Inlets</b>		
	N	No Cyclones
	B	Blue Cyclone, PM 1.0 - 4.0 micron cutpoint
	R	Red Cyclone PM 4.0 - 10.0 micron cutpoint
	D	Both Cyclones
<b>3. Carrying Case</b>		
	C	Case included
	N	Case not included
<b>4. Analog Cable</b>		
	A	Cable included
	N	Cable not included
<b>Order Model Code: pDR1500 - _ _ _ _ _</b>		

CALL GEOTECH TODAY

**(800) 833-7958**

**Geotech Environmental Equipment, Inc.**

2650 East 40th Avenue Denver, Colorado 80205

(303) 320-4764 FAX (303) 322 7242

email: sales@geotechenv.com website: www.geotechenv.com