

Dust Master Pro 7000

FIVE CHANNEL PARTICLE COUNTER

Dust Master Pro 7000 Series

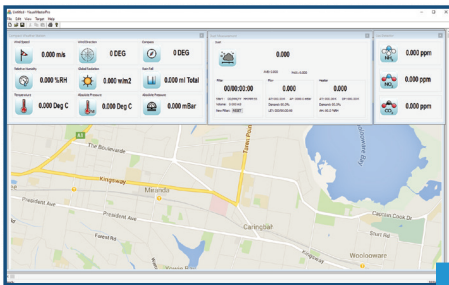
The Dust Master Pro 7000 particle counter, from the QAMS range by TES, uses laser technology for real-time, simultaneous measurement of five PM fractions; Total PM, PM10, PM4, PM2.5 and PM1.

The 5LPM flow rate ensures heavier particles remain entrained and are collected onto the 37mm filter for gravimetric reference and real-time data correlation.

The quick deploy design, graphical display and dedicated keypad with intuitive menu simplify on-site operation, while the new Visual Master Pro Software gives remote users unprecedented capabilities.

Visual Master Pro Software

VMP is a revolutionary remote interface, empowering non-technical users to access data and adjust instrument settings at an advanced level. This easy to operate platform delivers efficiency, peace of mind, real-time decision making and cost savings. With features including; live data viewing, data download and complete system and settings control, VMP sets a new standard for industry interfaces. View the VMP brochure to find out more.



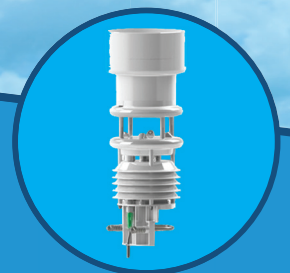
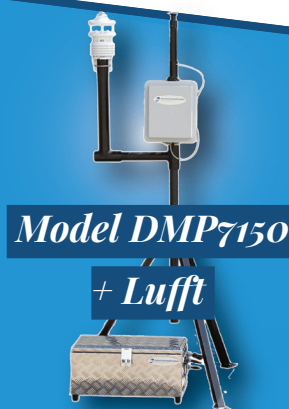
“The new standard for industry interfaces.”

Key Features:

- Manufactured in Australia
- Accurate real-time dust readings of five PM channels
- Doubled Memory (New!)
- Heated inlet - eliminates moisture interference. Robust design, manufactured from anodised aluminium and no more external cables. (New!)
- Visual Master Pro Remote Interface (New!)
- Mains, Battery or Solar Power
- Long term filter option (New!)
- Australian Standards 3580.9.9.2006 Compliant
- Visual, Audio or SMS Alarms
- Available for purchase or rent!

How's the weather?

We know data loggers can be costly, so we designed the DMP7000 with the ability to log all parameters with full meteorological Connectivity to Lufft weather sensors.



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Dust Master Pro 7000 Specifications

Particle Size Range
0.2um to 18um

Dust Measurement Range
0.001 to 150mg/m³

Simultaneous PM Fraction Measurements

Simultaneously measures all 3 popular PM fractions; PM_{2.5}, PM₁₀ and Total PM with option to add PM₇ and PM₄. Other PM fractions available upon request.

Individual K-Factors for each fraction

TES offers the unique ability to assign a K-Factor to each size fraction, allowing size specific correlation.

Lower Detection Limit
0.2um (200nm)

Measurement Resolution
0.001mg/m³ (1ug/m³)

Flow Rate
5.0 litre per minute (default), user adjustable from 2 to 8 lpm

Dual Pump System

Features dual pumps, one for zero calibration each 30 minutes, the other for aerosol sampling

Flow Accuracy

Precision automatic flow control to within +/- 1%

Temperature Coefficient
+0.001 mg/m³ per deg C

Temperature Compensation
2 precision sensors (internal & external) for flow compensation and sample humidity control

Barometric Pressure

Built-in barometer for ambient static pressure measurements for precise flow control

Data Download

Data can be polled or automatically and continually pushed to your server.

Sensing Technology

Precision optical photometer utilizing 660nm light source with long life laser diode technology. Auto laser light level sensing and adjustments.

Gravimetric Filter Sampling

Integrated filter holder, 37mm filter cartridge

Data Logging Interval

Fully user adjustable from 5 to 999s

Internal Data Logging

8MB internal data logging with full flash memory backup. Time and date stamped and capable of logging data from the various analogue and digital inputs

Extended Data Logging

TES are happy to cooperate with other data logger suppliers to allow integration of our system into existing networks.

Optics Protection

Laminar gap

NIOSH 5040 Capable Sampling

Yes, using 37mm filter cassette

Power Requirements

Consult TES for specifics.

Power Options

Mains Power, Battery Power or Solar Power (all waterproof)

Mains Power - Operates from 80 to 260 VAC and is fully weatherproof.

Battery Power - Standard or Portable. Includes rechargeable battery, regulator and battery box. 'Standard Battery System' provides approx.

210 hours of operation with the inlet heater OFF or 70 hours with the inlet heater ON.

'Portable Battery System' provides approx. 48 hours of operation with the inlet heater OFF or 12 hours with inlet heater ON.

Solar Power System provides continuous operation based on average of >4.5 hours of sunlight per day, and will continue for up to 3 days no sun. System includes Solar Panel & Stand, Battery & Battery box, Regulator

Meteorological Inputs

Multiple channels including wind speed, wind direction, humidity, temperature, precipitation, barometric pressure, solar radiation, evaporation, sigma theta, lightning & more.

Digital Inputs

3 optically isolated inputs, voltage free

Relay Contacts

3 relay contacts (NC/COM/NO), Alarm 1 set point, Alarm 2 set point, Instrument fault alert Max. contact switching 5A

Alarm Capabilities

3G / NEXTG SMS messaging to mobile phone, external siren, visual beacon and email alerts

Communications

2 x RS232 digital ports, RS485/RS422 and analogue

Inputs

2 x RS232, RS485, 2 x Analogue Inputs (0 to 5 volt or 4-20mA [jumper selectable]), 2 x Counter Channels, 2 x PT100 & SHT75X Inputs Included.

Outputs

3 x Analogue Outputs (0 to 5 volt or 4-20mA [jumper selectable]), RS232 Output, Ethernet Module Optional, 3 x Solid State Relays for Audio and Visual Alarms

Enclosure Type

NEMA4 / IP66 rated, excluding heated inlet and exhaust

Display Type

128 x 64 bit low energy graphical LCD display

Keypad / User Interface

12 button function with keys

Tripod or Post Mounting

May be easily mounted on a 50mm di-iameter post or on TES transportable heavy duty tripod

Optional Inlet Heads

PM₁, PM_{2.5} (supplied with unit), PM₄, PM₇, PM₁₀ (supplied with unit), Total PM (supplied with unit) More upon request

Heated Inlet Option

Precision heated inlet option controls inlet temperature to ensure sampling at 45% Relative Humidity.

Calibration Method

Fully calibrated to ISO12103-1 international standards by TES

Web Based Data Collection

Optional

Weight

System 7Kg
Heated inlet 1.0Kg

Dimensions - System

Width 300mm
Depth 200mm
Height 350mm

Dimensions - Heated Inlet

Length 500mm
Width 48mm

Operating Conditions

-10 to 50°C temperature range
0 to 95% humidity range

QAMS by TES Master Pro Range

MMP1000 Series
MET MASTER PRO DATA LOGGERS

FMP5000 Series
LOW VOLUME FILTER SAMPLER

DMP6000 Series
REAL-TIME SINGLE CHANNEL
PHOTOMETER

DMP7000 Series
REAL-TIME FIVE CHANNEL PARTICLE
COUNTER

HVMP
HIGH VOLUME AIR SAMPLER

Annual Calibration

TES's unique design allows the user to return only the optical engine for annual calibrations, instead of the entire monitor. Once calibrated, the optical engine, two new pumps and a replacement internal filter are returned to the customer who then performs temperature, pressure and flow calibrations to complete the process. Alternatively, TES can perform the entire calibration.

