



ENVIRONMENT
AGENCY

PRODUCT CONFORMITY CERTIFICATE

This is to certify that the

***Model DT280/780 Dust Monitor
with standard & insulated sensor***

manufactured by:

PCME Limited

Clearview Buildings

Edison Road

St Ives

Cambridgeshire

PE17 4GH

UK

has been assessed by Sira Certification Service
and for the conditions stated on this certificate complies with:

**MCERTS Performance Standards for Continuous Emission
Monitoring Systems, Version 2, Revision 1 (April 2003)**

Certification Range :

Particulate concentration 0 to 30mgm⁻³

Certificate No: Sira MC 990004/03
Initial Certification: 06 September 1999
This Certificate Issued: 21 July 2006
Renewal Date: 05 September 2009

Technical Director

MCERTS is operated on behalf of the Environment Agency by

Sira Certification Service

12 Acorn Industrial Park, Crayford Road, Crayford

Dartford, Kent, UK, DA1 4AL

Tel: 01322 520500 Fax: 01322 520501

This certificate may only be reproduced in its entirety and without change



ENVIRONMENT
AGENCY

Field Test Site

The DT780 analyser was assessed on the basis of a three month field trial mounted on a waste incinerator. Fuel capacity of the incinerator was 11 tonnes/hour. Abatement techniques were carbon and lime injection, and bag filters.

A second field trial of 3 months was performed on Process Drier application with 780 insulated probe.

Approved Site Application

On the basis of these tests this certificate is valid when the DT780 instrument is used on waste incineration and large combustion plant applications, provided that the uncertainties and ranges meet the Environment Agency's requirements

The manufacturer should be consulted if the instrument is to be mounted upstream of an electrostatic precipitator or after a wet collector.

The instrument is suitable for use in dust arrestment applications where velocities are greater than 7.5m/s. The manufacturer should be consulted if the instrument is to be used in applications where the air velocity is less than 7.5m/s. In applications where the flow rate varies, users should determine whether the system requires re-calibration.

Particulate monitors may exhibit sensitivity to various in-stack effects. Potential interferences are site specific and may vary from stack to stack.

Any potential user should ensure, in consultation with the manufacturer, that the emission monitoring system is suitable for the process on which it will be installed.

For general guidance on stack emission monitoring techniques refer to Environment Agency Technical Guidance Note M2: Monitoring of stack emissions to air. This is available on the Agency's website at www.environment-agency.gov.uk

Basis of Certification

This certification is based on the following Test Report(s) and on Sira's assessment and ongoing surveillance of the product and the manufacturing process:

AEAT Report	MCT/WTC/B.01/SO1 dated March 1999
AEAT Report	MCT/ESTC/B.01/SO2 dated July 1999
NPL Report	QE21/N99/005 dated August 1999
Sira Report	N 0317 dated August 1999

Certificate No: Sira MC 990004/03
This Certificate Issued: 21 July 2006

This certificate may only be reproduced in its entirety and without change



ENVIRONMENT
AGENCY

Certified Performance

The instrument was evaluated for use under the following conditions:

Ambient Temperature Range:	Stack Components	-20 to +70°C
	Control Unit	-10 to +55°C
Relative Humidity:	Stack Components	5 to 95% (including condensation)
	Control Unit	20 to 80%(excluding condensation)

Minimum stack gas velocity: This certificate is only valid for stack gas velocities $>7.5\text{ms}^{-1}$. The manufacturer should be consulted if the instrument is to be used on applications where the air velocity is less than 7.5m/s.

This instrument is not suitable for sample streams that may contain condensing water.

Unless otherwise stated the evaluation was carried out on the certification range 0 to 30 mg/m³.

Test	Results expressed as % of certification range				Other results	MCERTS specification
	<0.5	<1	<2	<5		
Linearity					>0.958	>0.95 ⁽¹⁾
Drift	0.04					<±2%
Ambient temperature: Zero shift					0.06% per °C	<0.3% per °C
Response time					13.5s	<200s
Detection limit	<0.5					<2%
Repeatability				4.7		<15%
Maintenance interval: (field test)					>3 months	To be reported
Availability (field test)					100%	>95%
Analysis function/integral performance (field test)				2.17		C/<20%
Effect of particulate velocity (7.5 to 15 m/s)					-10% to +16.7%	Not specified
Effect of particulate size (change from 18 to 9 µm)					-23%	Not specified
Vibration 10-150Hz at 19.6m/s ²					no effect	Not specified
Reproducibility					60.2	>30

⁽¹⁾ Correlation coefficient requirement (as specified in ISO 10155)

Certificate No: Sira MC 990004/03
This Certificate Issued: 21 July 2006

This certificate may only be reproduced in its entirety and without change



ENVIRONMENT
AGENCY

Description:

The DT780 utilizes PCME's "electrodynamic" or "charge induction principle" (derived from the tribo-electric effect).

Calibration is by a standard reference method (iso-kinetic sampling). The system comprises a separate sensor connected by a multi-core cable to a control unit. The control unit is able to manage up to 4 sensors and software is available for downloading stored data and producing reports suitable for environmental compliance. Additionally the DT780 can be utilised to perform diagnostics on filter performance and maintenance condition. The Model DT280 is similar but does not incorporate the data logging facility.

The Ordering Code of the instrument tested was 780C – ½ (control unit) and 780S – S/N/1000/S-20 (probe unit). The probe length was 1m.

The insulated sensor (patented option) is suitable for use after process drier applications in which there are high levels of steam and is used to extend the instrument maintenance interval of the standard stainless steel sensor by overcoming any shorting of the insulator in the standard stainless sensor (caused by condensation or conductive dust).

Note: The manufacturer states that the performance of the instrument is a function of probe length.

General Notes

1. This certificate is based upon the equipment tested. The Manufacturer is responsible for ensuring that on-going production complies with the standard(s) and performance criteria defined in this Certificate. The Manufacturer is required to maintain an approved quality management system controlling the manufacture of the certified product. Both the product and the quality management system shall be subject to regular surveillance according to 'Regulations Applicable to the Holders of Sira Certificates'. The design of the product certified is defined in the Sira Design Schedule for certificate No. Sira MC990004/03.
2. If certified product is found not to comply, Sira Certification Service should be notified immediately at the address shown on this certificate.
3. The Certification Marks that can be applied to the product or used in publicity material are defined in 'Regulations Applicable to the Holders of Sira Certificates'.
4. This document remains the property of Sira and shall be returned when requested by the company.

Certificate No: Sira MC 990004/03
This Certificate Issued: 21 July 2006