

Schedule of Accreditation

issued by

United Kingdom Accreditation Service

2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

 0625 Accredited to ISO/IEC 17025:2005	Labcal Limited	
	Issue No: 040 Issue date: 22 August 2016	
	Unit 265 Ampress Park Lymington Hampshire SO41 8JU	Contact: Mr C Clifford-Smith Tel: +44 (0)1590 670146 Fax: +44 (0)1590 673313 E-Mail: contact@labcal.co.uk Website: www.labcal.co.uk
Calibration performed by the Organisation at the locations specified		

Locations covered by the organisation and their relevant activities

Laboratory locations:

Location details	Activity	Location code	
Address Labcal Limited Unit 265 Ricardo Way Ampress Park Lymington Hampshire SO41 8JU	Local contact Mr C Clifford-Smith	Air velocity calibration Electrical calibration Flow calibration Humidity calibration Pressure calibration Temperature calibration	A
Address Saltmarsh Park 67 Gosport Street Lymington SO41 9EG	Local contact Mr C Clifford-Smith	Air velocity calibration	B



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DETAIL OF ACCREDITATION

Measured Quantity Instrument or Gauge	Range	Calibration and Measurement Capability (CMC) Expressed as an Expanded Uncertainty ($k = 2$)	Remarks	Location Code
FLOW				
Gas - Flow-rate and Quantity passed	0.024 ml/min to 0.5 ml/min 0.5 ml /min to 8 l/min 8 l/min to 1200 l/min 1200 l/min to 12983 l/min	1.14 % + 0.0016 ml/min 0.15 % 0.18 % 0.30 %	Calibrations of pressure and flow devices with an electrical output may be undertaken. Calibration medium Air Other gases may be used up to 300 l/min	A
Water Mass, Volume, Flow rate and Quantity passed	0.5 ml/min to 500 ml/min 500 ml/min to 2 l/min 2 l/min to 500 l/min	0.20 % 0.32 % 0.12 %		
AIR VELOCITY				
Calibration of Anemometers:				
Pitot Tubes	2 m/s to 5 m/s 5 m/s to 27 m/s	0.18% + 0.030 m/s 0.18% + 0.10 m/s	Anemometer up to 125 mm diameter can be calibrated. Uncertainty is dependent on instrument under test	A
Thermal anemometers	0.1 m/s to 5 m/s 5 m/s to 27 m/s	0.18 % + 0.030 m/s 0.18 % + 0.10 m/s	Calibration using laser Doppler anemometer or by comparison	
Vane anemometers	0.3 m/s to 5 m/s 5 m/s to 27 m/s	0.23 % + 0.030 m/s 0.23 % + 0.10 m/s		
Calibration of anemometers and Pitot tubes (including ultrasonic anemometers)	5 m/s to 32 m/s 32 m/s to 50 m/s 50 m/s to 80 m/s	1.2 % + 0.20 m/s 1.2 % + 0.40 m/s 1.3 % + 0.40 m/s	Large anemometers can be calibrated	B
PRESSURE				
<u>Hydraulic pressure (gauge)</u>				A
Calibration of pressure indicating instruments and gauges	500 kPa to 7 MPa 7 MPa to 140 MPa	0.010 % 0.012 %		
<u>Hydraulic pressure (absolute)</u>				A
Calibration of pressure indicating instruments and gauges	600 kPa to 7 MPa 7 MPa to 140 MPa	0.010 % + 10 Pa 0.012 %		



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Measured Quantity Instrument or Gauge	Range	Calibration and Measurement Capability (CMC) Expressed as an Expanded Uncertainty ($k = 2$)	Remarks	Location Code
<u>Gas pressure (gauge)</u> Calibration of pressure indicating instruments and gauges	- 100 kPa to 0 Pa 0 Pa to 3 kPa 3 kPa to 4.7 kPa 4.7 kPa to 40 kPa 40 kPa to 500 kPa 500 kPa to 8.2 MPa	0.010 % + 43 Pa 0.028% + 0.070 Pa 0.028 % + 0.31 Pa 0.010 % + 2.9 Pa 0.010 % + 43 Pa 0.010 % + 390 Pa		A
"Pressure equivalent" Calibration of dead weight testers (Pressure balance supplied with associated mass set)	0 kPa to 500 kPa 500 kPa to 8.2 MPa	0.015 % + 43 Pa 0.015 % + 390 Pa		A
<u>Gas pressure (absolute)</u> Calibration of pressure indicating instruments and gauges	80 kPa to 115 kPa	0.010 % + 1.0 Pa	Absolute pressure calibrations can be undertaken using associated barometric pressure measurement correction. The uncertainties quoted will be increased by 10 Pa	A
ELECTRICAL				
DC Voltage	0 V to 120 mV 120 mV to 1.2 V 1.2 V to 12 V 12. V to 120 V	21 ppm + 5.0 μ V 21 ppm + 31 μ V 21 ppm + 65 μ V 21 ppm + 300 μ V		A
DC Current	0 A to 12 mA 12 mA to 120 mA	110 ppm + 3.0 μ A 110 ppm + 6.0 μ A		
DC Resistance	10 Ω to 1.2 k Ω 1.2 k Ω to 12 k Ω	12 ppm + 13 m Ω 13 ppm + 130 m Ω		
FREQUENCY	1 Hz to 50 kHz	0.0020 % + 10 μ Hz		
TIME INTERVAL				
Elapsed time, single event Stop watches and timers	5 s to 24 Hours	20 ms		



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ELECTRICAL CALIBRATION OF TEMPERATURE INDICATORS AND SIMULATORS				
Base Metal thermocouples	- 200 °C to 1372 °C	0.50 °C	Including Reference Junction Compensation	A
Noble Metal	0 °C to 100 °C	0.90 °C		
Reference Junction Temperature	100 °C to 1768 °C	0.70 °C		
	Nominal Zero Ambient 16 °C to 25 °C	0.10 °C 0.30 °C		
PRT simulation (Pt 50 to 1000)	- 200 °C to 200 °C 200 °C to 600 °C 600 °C to 850 °C	0.16 °C 0.26 °C 0.36 °C		
TEMPERATURE				
Resistance thermometers	-30 °C to +140 °C	0.10 °C		A
Thermocouples	-30 °C to +140 °C	0.25 °C		
Temperature indicators with probes				
Resistance thermometers	- 30 °C to + 70 °C 70 °C to +140 °C	0.10 °C 0.15 °C		
Thermocouples	-30 °C to +140 °C	0.25 °C		
Temperature probes in air	10 °C to 50 °C	0.15 °C		
HUMIDITY				
Relative humidity measuring instruments	10 %rh to 90 %rh 10 °C to 40 °C	1.5 %rh	Dependant on probe length	A
Temperature probes built into humidity meters	10 °C to 40 °C	0.15 °C	Dependant on probe length	
Dew Point	- 20 °C to 0 °C 0 °C to 20 °C 20 °C to 40 °C	0.35 °C 0.18 °C 0.21 °C		
END				