



Homersham Limited

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Authorised Representative

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Laboratory Manager
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Programme

Metrology & Calibration Laboratory

Accreditation Number 132

Initial Accreditation Date 5 March 1980

Conformance Standard

ISO/IEC 17025:2017

General requirements for the competence of testing and calibration laboratories

Laboratory Services Summary

5.35	Hygrometry
5.42	Differential Pressure Measuring Devices
5.44	Pressure and Vacuum
5.61	Temperature Measuring Equipment

Key Technical Personnel

Ms Rachelle Crause	5.35, 5.42, 5.44, 5.61
Mrs Anne Evans	5.42, 5.44, 5.61
Mr Joshua Jourdain	5.35, 5.42, 5.44, 5.61
Mr Aidan Lindsay	5.35, 5.42, 5.44, 5.61

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Calibration and Measurement Capability (CMC) uncertainties are expressed as an expanded uncertainty corresponding to a level of confidence of 95 % ^{Note1}.

Measurement results are traceable to the International System of Units (SI) via an unbroken chain of comparisons to the New Zealand National Standards or to the National Standards of other Signatories to the CIPM MRA.

Unless stated elsewhere in this schedule, calibrations are performed at the premises of the accredited laboratory.

5.35 Hygrometry

(a) Humidity measuring devices (hygrometers)

Industrial instruments in accordance with an in-house method by comparison with a reference Relative Humidity meter in a controlled humidity chamber

Range	CMC Uncertainty
10 %rh to 90 %rh	1.1 %rh

5.42 Differential Pressure Measuring Devices

- (a) Diaphragm types
- (b) Liquid column types, inclined and vertical
- (c) Transducers and transmitters
- (d) Other types

Pressure and vacuum gauges by comparison with reference gauges at a line pressure of approximately 100 kPa (in the laboratory or on-site)

Pressure	CMC Uncertainty
0 to 250 Pa	0.36 Pa

5.44 Pressure and Vacuum

- (a) Pressure gauges
- (b) Vacuum gauges
- (c) Pressure transducers
- (d) Pressure recorders

Accuracy classes: 0.1, 0.25, 0.6, 1.0, 1.6, 2.5, 4.0 in accordance with AS 1349:1986 and BS EN 837-1:1998; gauges of accuracy 3A, 2A, 1A and below as defined in ASME B40.100-2013

i) By comparison with dead weight tester

Pressure	CMC Uncertainty
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-102 kPa to -3 kPa	0.001 kPa or 0.006 %, whichever is greater
3 kPa to 102 kPa	0.001 kPa or 0.006 %, whichever is greater
102 kPa to 3020 kPa	0.05 kPa or 0.006 %, whichever is greater

ii) Pressure and vacuum gauges by comparison with reference gauges (in the laboratory or on-site)

Gauge Pressure	CMC Uncertainty
-35 kPa to 35 kPa	0.012 kPa
-100 kPa to 70000 kPa	0.025 % or 0.03 kPa, whichever is greater
Absolute Pressure	
3 kPa to 200 kPa	0.07 kPa
200 kPa to 3000 kPa	0.37 kPa

Maximum vacuum achievable is subject to ambient barometric pressure conditions.

Controllers, indicators, recorders and transmitter systems, wholly or in part, by electrical simulation or measurement using a process calibrator either in the laboratory or on-site for the ranges and CMCs above

5.61 Temperature Measuring Equipment

(including temperature calibration of electronic thermometers)

- (d) Germanium thermometers
- (e) Thermistors and other semi-conductor thermometers
- (g) Clinical thermometers
- (j) Radiation pyrometers, including infrared thermometers
- (k) Vapour pressure thermometers
- (l) Filled metal systems
- (m) Bimetallic systems
- (o) Indicators, recorders and controllers
- (p) Other direct reading temperature measuring equipment, excluding liquid in glass thermometers

Range	CMC Uncertainty
Range applies to (d),(e),(g),(k),(l),(m),(o),(p) for laboratory calibrations	
-30 °C to < -20 °C	0.08 °C
Ice point	0.01 °C
-20 °C to < 60 °C	0.03 °C
60 °C to 199 °C	0.05 °C

Range applies to (d),(e),(g),(k),(l),(m),(o),(p) for field (on-site) calibrations

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-30 °C to 200 °C 0.3 °C

Range applies to (j)

-30 °C to 140 °C (where $\epsilon = 1$) 0.5 °C

Controllers, indicators, recorders and transmitter systems, wholly or in part, by electrical simulation or measurement using a process calibrator either in the laboratory or on-site for the ranges and CMCs listed above and for additional sensor types listed below

Sensor type

RTD (source and measure), Pt100 385 (3W)

-200 °C to 0 °C 0.7 °C

0 °C to 400 °C 0.9 °C

400 °C to 800 °C 1.2 °C

Thermocouples

Type K thermocouple – Measure

-200 °C to -100 °C 0.7 °C

-100 °C to 400 °C 0.3 °C

400 °C to 1200 °C 0.5 °C

1200 °C to 1372 °C 0.7 °C

Type K thermocouple – Source

-200 °C to -100 °C 0.4 °C

-100 °C to 400 °C 0.3 °C

400 °C to 1200 °C 0.3 °C

1200 °C to 1372 °C 0.3 °C

Type J thermocouple – Measure

-210 °C to -100 °C 0.6 °C

-100 °C to 800 °C 0.3 °C

800 °C to 1200 °C 0.5 °C

Type J thermocouple – Source

-210 °C to -100 °C 0.3 °C

-100 °C to 800 °C 0.2 °C

800 °C to 1200 °C 0.2 °C

Type N thermocouple – Measure

-210 °C to -100 °C 1.0 °C

-100 °C to 900 °C 0.5 °C

900 °C to 1300 °C 0.6 °C

Type N thermocouple – Source

-210 °C to -100 °C 0.6 °C

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-100 °C to 900 °C		0.5 °C
900 °C to 1300 °C		0.3 °C
Type T thermocouple – Measure		
-250 °C to -200 °C		1.7 °C
-200 °C to 0 °C		0.6 °C
0 °C to 400 °C		0.4 °C
Type T thermocouple – Source		
-250 °C to -200 °C		0.9 °C
-200 °C to 0 °C		0.4 °C
0 °C to 400 °C		0.3 °C
Type R thermocouple – Measure		
-20 °C to 0 °C		2.3 °C
0 °C to 100 °C		1.5 °C
100 °C to 1767 °C		1.0 °C
Type R thermocouple – Source		
-20 °C to 0 °C		1.2 °C
0 °C to 100 °C		1.1 °C
100 °C to 1767 °C		0.9 °C
Current		
Measure	0 to 24 mA	0.025 % of reading + 0.025 % of range
Source	0 to 22 mA	0.01 % of reading + 0.04 % of range
Voltage		
Measure	0 to 30 V	0.05 % of reading + 0.005 % of full scale
Source	0 to 10 V	0.015 % of reading + 0.005 % of full Scale

Note 1:

Unless stated otherwise the CMC is based on the performance of the best available device and measurement uncertainties achieved for specific calibrations may be greater than the CMC Uncertainty. A laboratory may not report measurement uncertainties lower than its CMC. However, if the device under calibration has a greater accuracy than the device used to calculate the CMC the laboratory may be able to use the calibration data to lower its CMC Uncertainty. Please contact the laboratory to discuss your specific requirements.

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