



Sensortronic Scale Enterprises Ltd
T-A Sensortronic Weighing & Inspection Australasia

Client Number 7608

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Authorised Representative
Mr Jay Attanagoda
General Manager of Operations

Programme
Metrology & Calibration Laboratory

Accreditation Number 1107

Initial Accreditation Date 3 July 2014

Conformance Standard

ISO/IEC 17025:2017

General requirements for the competence of testing and calibration laboratories

Laboratory Services Summary

- 5.21 Masses
- 5.22 Precision Laboratory Balances
- 5.23 Industrial Balances
- 5.24 Industrial Weighing Appliances
- 5.51 Force Measuring Devices
- 5.53 Testing Machines

Key Technical Personnel

- Mr Gurdarshan Gill 5.21, 5.22, 5.23, 5.24, 5.51, 5.53
- Mr Joshua Nolley 5.21, 5.22, 5.23, 5.24, 5.51, 5.53
- Mr Cameron Thomson 5.21, 5.22, 5.23, 5.24, 5.51, 5.53

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Metrology & Calibration Laboratory

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SCOPE OF ACCREDITATION

Calibration and Measurement Capabilities (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.

Calibrations are normally performed at the customer's premises, apart from masses.

Branch laboratories are also maintained at the following addresses:

- Unit 1, 4 Freeman Way, Manukau City, Auckland
- 17 Te Arakura Road, Feilding
- 186 Hazeldean Road, Addington, Christchurch

5.21 Masses

- (a) Examination of laboratory standards of mass
- (b) Examination of industrial standards of mass
- (c) Determination of the mass of solid objects

In accordance with an in-house procedure based on the Measurement Standards Laboratory of New Zealand (MSL) Technical Guide 7 and OIML R 111-1. Mass calibrations are performed at the branch laboratories in a controlled environment at 20 °C ± 1 °C.

| | CMC Uncertainty |
|------------------------|------------------------|
| Stainless steel masses | |
| 1 mg to 100 mg | 0.02 mg to 0.05 mg |
| 200 mg to 2 g | 0.06 mg to 0.12 mg |
| 5 g to 50 g | 0.16 mg to 0.3 mg |
| 100 g to 5 kg | 0.5 x 10 ⁻⁵ |
| 10 kg to 20 kg | 1.6 x 10 ⁻⁵ |
| Cast iron masses | |
| 20 kg to 200 kg | 5 x 10 ⁻⁵ |
| 200 kg to 500 kg | 11 x 10 ⁻⁵ |
| 500 kg to 12000 kg | 7 x 10 ⁻⁵ |

5.22 Precision Laboratory Balances

In accordance with an in-house procedure based on the MSL Technical Guide 25 and OIML R 111-1

| | CMC Uncertainty |
|-----------------|-----------------|
| Balance reading | |

| | | | | |
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| | |
|----------------|----------------------|
| 1 mg to 100 mg | 0.02 mg to 0.05 mg |
| 200 mg to 2 g | 0.06 mg to 0.12 mg |
| 5 g to 50 g | 0.16 mg to 0.3 mg |
| 100 g to 5 kg | 0.5×10^{-5} |
| 10 kg to 20 kg | 1.6×10^{-5} |
| 20 kg to 65 kg | 5×10^{-5} |

5.23 Industrial Balances

In accordance with an in-house procedure based on the MSL Technical Guide 25 and OIML R 111-1

CMC Uncertainty

Balance reading

| | |
|------------------|----------------------|
| 1 mg to 100 mg | 0.02 mg to 0.05 mg |
| 200 mg to 2 g | 0.06 mg to 0.12 mg |
| 5 g to 50 g | 0.16 mg to 0.3 mg |
| 100 g to 5 kg | 0.5×10^{-5} |
| 10 kg to 20 kg | 1.6×10^{-5} |
| 20 kg to 200 kg | 5×10^{-5} |
| 200 kg to 500 kg | 11×10^{-5} |

5.24 Industrial Weighing Appliances

i) In accordance with an in-house procedure based on the MSL Technical Guide 25 and OIML R 111-1

CMC Uncertainty

Scale reading

| | |
|--------------------|--------------------|
| 500 kg to 12000 kg | 7×10^{-5} |
|--------------------|--------------------|

ii) Dynamic weighers (checkweighers, catchweighers), in accordance with an in-house procedure based on OIML R 51-1 2006

| | |
|-----------------|----------------------|
| 1 mg to 100 mg | 0.02 mg to 0.05 mg |
| 200 mg to 2 g | 0.06 mg to 0.12 mg |
| 5 g to 50 g | 0.16 mg to 0.3 mg |
| 100 g to 5 kg | 0.5×10^{-5} |
| 10 kg to 20 kg | 1.6×10^{-5} |
| 20 kg to 100 kg | 5×10^{-5} |

5.51 Force Measuring Devices

(b) Elastic force measuring devices and force dynamometers

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Spring balances, load cells and other mechanical or digital force gauges in accordance with an in-house procedure based on the requirements of the MSL Technical Guide 25 and OIML R 111-1.

i) By comparison with reference masses

Up to 12 tonnes (117.6 kN) in tension or compression – CMC Uncertainty as above in 5.21

ii) By comparison with reference load cells

Up to 100 tonnes (981 kN) in tension or compression – CMC Uncertainty as below in 5.53

5.53 Testing Machines

(a) Tension and universal machines in tension

(b) Compression and universal machines in compression

Tension, compression and universal machines by comparison with load cells of Class 2.0 and higher in accordance with BS EN ISO 7500-1

| Load | CMC Uncertainty |
|------------------|------------------------|
| 49 kN | 0.40 % of applied load |
| 98 kN | 0.41 % of applied load |
| 196 kN to 610 kN | 0.39 % of applied load |
| 687 kN to 982 kN | 0.38 % of applied load |

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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