

**SINGAPORE LABORATORY
ACCREDITATION SCHEME**



Number : **LA-2002-0265-C**

Date of Issue : **11 November 2022**

Date of Expiry : **10 November 2026**

Certificate of Accreditation

This certifies that

**Cairnhill Metrology Pte Ltd
5 Jalan Kilang Barat
#07-05/06 Petro Centre
Singapore 159349**

is accredited by the Singapore Accreditation Council to

ISO / IEC 17025 : 2017

for specific scope within the field of

Calibration & Measurement

as detailed in the attached schedule.

A handwritten signature in black ink, appearing to be "X.M.", written over a horizontal line.

Chairman

This Certificate is awarded subject to the organisation's compliance with the stated criteria and terms and conditions laid down by the Singapore Accreditation Council.

This Certificate may not be reproduced except with the written permission of the Chairman.

Schedule

Cairnhill Metrology Pte Ltd
5 Jalan Kilang Barat
#07-05/06 Petro Centre
Singapore 159349

Certificate No. : LA-2002-0265-C
Issue No. : 18
Date : 04 November 2022
Page : 1 of 4

FIELD OF TESTING : Calibration and Measurement

MEASURED QUANTITIES / RANGE / INSTRUMENTS TO BE CALIBRATED	METHOD OF CALIBRATION / INSTRUMENTS USED	CALIBRATION & MEASUREMENT CAPABILITY (CMC *)
<p>1. Profile Projector Travel 300 mm x 200 mm Resolution : 1 to 5 μm</p> <p>(a) Starrett Measurement Projector</p> <p>(b) Generic Brands</p>	In-house Calibration Procedure (WI 15-10, V7)	2.0 μm
<p>2. Accretech TSK Roundness Measurement Machine Probing diameter up to 450 mm Resolution : 0.0001 μm <u>Feature examined</u> Roundness Parallelism</p>	In-house Calibration Procedure (WI 15-01, V7)	0.006 μm 0.3 μm
<p>3. Accretech TSK Contour Testing Tracing Range X and Z up to 200 mm and 50 mm respectively Resolution : 0.1 to 1 μm <u>Feature Examined</u> Profile: Ball Diameter Step Height: Z-Axis</p>	In-house Calibration Procedure (WI 15-02, V7)	0.5 μm 0.5 μm
<p>4. Accretech TSK Surface Roughness Testing (Contact Type)</p> <p>Measuring Range : 80 μm Resolution : 0.001 μm <u>Feature examined</u> Roughness, Ra</p>	In-house Calibration Procedure (WI 15-03, V7)	0.12 μm

Schedule



Certificate No. : LA-2002-0265-C

Issue No. : 18

Date : 04 November 2022

Page : 2 of 4

MEASURED QUANTITIES / RANGE INSTRUMENT TO BE CALIBRATED	METHOD OF CALIBRATION / INSTRUMENTS USED	CALIBRATION & MEASUREMENT CAPABILITY (CMC *)
5. Co-ordinate Measuring Machine (Contact Type)		
5a. Accretech TSK Range : X ≤ 800 mm Y ≤ 1200 mm Z ≤ 600 mm Resolution : 0.1 to 0.5 μm	In-house Calibration Procedure (WI 15-05, V7)	1.8 μm
5b. Generic Brands Range : X ≤ 1200 mm Y ≤ 3000 mm Z ≤ 1000 mm Resolution : 0.02 to 1 μm		1.7 μm
6. Optical / Non-Contact Co-ordinate Measuring Machine Starrett Non-Contact CMM Range : X ≤ 350 mm Y ≤ 350 mm Z ≤ 200 mm Resolution : 0.1 to 0.5 μm X and Y- axes Z-axis (For Contact Probe)	In-house Calibration Procedure (WI 15-11, V1)	2.0 μm 1.5 μm
7. Universal Length Metroscope ULM Calibration Range of Measuring Headstock: X ≤ 100 mm Resolution : 0.01 μm	In-house Calibration Procedure (WI 15-08, V7)	0.21 μm

Schedule



Certificate No. : LA-2002-0265-C

Issue No. : 18

Date : 04 November 2022

Page : 3 of 4

MEASURED QUANTITIES / RANGE INSTRUMENT TO BE CALIBRATED	METHOD OF CALIBRATION / INSTRUMENTS USED	CALIBRATION & MEASUREMENT CAPABILITY (CMC *)														
8. Weighing Scales Anritsu Checkweigher (Static, On-site) <table><thead><tr><th><u>Range</u></th><th><u>Resolution</u></th></tr></thead><tbody><tr><td>0 to 600 g</td><td>0.01 g</td></tr><tr><td>0 to 3000 g</td><td>0.05 g</td></tr><tr><td>0 to 15000 g</td><td>1 g</td></tr><tr><td>0 to 25000 g</td><td>2 g</td></tr><tr><td>0 to 35000g</td><td>2 g</td></tr><tr><td>0 to 60000g</td><td>2 g</td></tr></tbody></table>	<u>Range</u>	<u>Resolution</u>	0 to 600 g	0.01 g	0 to 3000 g	0.05 g	0 to 15000 g	1 g	0 to 25000 g	2 g	0 to 35000g	2 g	0 to 60000g	2 g	In-house Calibration Procedure (WI 15-16, V1)	0.02 g 0.07 g 2 g 4 g 18 g 15 g
<u>Range</u>	<u>Resolution</u>															
0 to 600 g	0.01 g															
0 to 3000 g	0.05 g															
0 to 15000 g	1 g															
0 to 25000 g	2 g															
0 to 35000g	2 g															
0 to 60000g	2 g															

* CMC is expressed as an expanded uncertainty estimated at a level of confidence of approximately 95%.

Approved signatories

Mr Lim Seng Hoo	For Items 1 to 7
Mr Tan Peng	For Items 1 to 7
Mr Loh Kum Seng	For Items 1 to 7
Mr Lim Chen Kee	For all accredited calibrations

Schedule



Certificate No. : LA-2002-0265-C

Issue No. : 18

Date : 04 November 2022

Page : 4 of 4

Branch Offices

MALAYSIA

Cairnhill Metrology Sdn Bhd
18 Jalan Serendah 26/41,
Sekitar 26, Seksyen 26
40400 Shah Alam, Selangor Darul Ehsan
Malaysia

LA-2002-0265-C-1

THAILAND

Cairnhill Metrology (Thai) Ltd
89 Cosmo Office Park
7th Floor Unit N
Popular Road, Ban Mai
Pakkret, Nonthaburi, 11120, Thailand

LA-2002-0265-C-2

PHILIPPINES

Cairnhill Metrology (Phils) Inc
Unit 7-10 8F, Paz Madrigal Plaza, Lot-1 Finance St.
Corner Industry St., Madrigal Business Park
Ayala Alabang, Muntinlupa City
1780 Philippines

LA-2002-0265-C-3

Note :

This laboratory is accredited in accordance with the recognised International Standard ISO/IEC 17025. A laboratory's fulfilment of the requirements of ISO/IEC 17025 means the laboratory meets both the technical competence requirements and **management system requirements** that are necessary for it to consistently deliver technically valid calibration results. The **management system requirements** in ISO/IEC 17025 are written in language relevant to laboratory operations and operate generally in accordance with the principles of ISO 9001.