

**SINGAPORE LABORATORY  
ACCREDITATION SCHEME**



Number : **LA-2002-0265-C-3**

Date of Issue : **11 November 2022**

Date of Expiry : **10 November 2026**

# Certificate of Accreditation

This certifies that

**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**

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, consisting of several loops and a long vertical stroke, positioned above 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 (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

Certificate No. : LA-2002-0265-C-3  
Issue No. : 10  
Date : 14 February 2025  
Expiry of Certificate : 10 November 2026  
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 *)
1. Co-ordinate Measuring Machine (Contact Type)	In-house Calibration Procedure (WI 15-05, V7)	
a) Range : $X \leq 650$ mm $Y \leq 500$ mm $Z \leq 450$ mm Resolution : 0.1 to 0.5 $\mu\text{m}$		1.5 $\mu\text{m}$
b) Range : $X \leq 1000$ mm $Y \leq 1500$ mm $Z \leq 800$ mm Resolution : 0.1 to 0.5 $\mu\text{m}$		2.4 $\mu\text{m}$
2. Accretech TSK Roundness Measurement Machine Probing diameter up to 450 mm	In-house Calibration Procedure (WI 15-01, V7)	
Feature examined Roundness Parallelism		0.006 $\mu\text{m}$ 0.2 $\mu\text{m}$

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Certificate No. : LA-2002-0265-C-3

Issue No. : 10

Date : 14 February 2025

Page : 2 of 4

MEASURED QUANTITIES / RANGE / INSTRUMENTS TO BE CALIBRATED	METHOD OF CALIBRATION / INSTRUMENTS USED	CALIBRATION & MEASUREMENT CAPABILITY (CMC *)
<p>3. Accretech TSK Contour Testing Machine Tracing Range X and Z up to 200 mm and 50 mm respectively Resolution : 0.1 to 1 <math>\mu\text{m}</math></p> <p>Feature Examined Profile: Ball Diameter Step Height: Z-Axis</p>	In-house Calibration Procedure (WI 15-02, V7)	0.7 $\mu\text{m}$ 0.7 $\mu\text{m}$
<p>4. Nikon Measuring Microscope Range X &amp; Y: 300 x 200 mm Resolution : 0.1 <math>\mu\text{m}</math></p>	In-house Calibration Procedure (WI 15-12, V1)	1.2 $\mu\text{m}$
<p>5. Nikon Measuring Profile Projector Range X &amp; Y: 200 x 150mm Resolution : 0.1 <math>\mu\text{m}</math> Magnification</p>	In-house Calibration Procedure (WI 15-12, V1)	1.0 $\mu\text{m}$ 0.1%
<p>6. Optical Non-Contact Coordinate</p> <p>Nikon Optical Non-Contact Coordinate Measuring Machine Resolution : 0.1 <math>\mu\text{m}</math> X &amp; Y-axis (up to 300 mm) X &amp; Y-axis (&gt; 300 mm to 1000 mm) Z-axis (up to 200 mm)</p>	In-house Calibration Procedure (WI 15-13, V1)	0.7 $\mu\text{m}$ 1.2 $\mu\text{m}$ 0.9 $\mu\text{m}$
<p>7. Universal Length Metroscope Zeiss Jena, OKM and EKM brands Resolution : 0.01 <math>\mu\text{m}</math> Range of Measuring Headstock: X <math>\leq</math> 100 mm</p>	In-house Calibration Procedure (WI 15-08, V7)	0.10 $\mu\text{m}$

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Certificate No. : LA-2002-0265-C-3

Issue No. : 10

Date : 14 February 2025

Page : 3 of 4

MEASURED QUANTITIES / RANGE / INSTRUMENTS TO BE CALIBRATED	METHOD OF CALIBRATION / INSTRUMENTS USED	CALIBRATION & MEASUREMENT CAPABILITY (CMC *)
8. Accretech TSK Surface Roughness Testing Machine (Contact Type) Measuring Range : 80 $\mu\text{m}$ Resolution : 0.001 $\mu\text{m}$ Roughness, Ra	In-house Calibration Procedure (WI 15-03, V7)	0.06 $\mu\text{m}$
9 ( # ) Portable Co-ordinate Measuring Machine (Hexagon Absolute RA7 and older) Resolution : 1 $\mu\text{m}$	In-house Calibration Procedure (WI 15-06, V1) ASME B89.4.22-2004 (R2014)	
a) Error Indication of Single Point Articulated Test (SPAT) is determined using Steel Trihedral Length Bar		5 $\mu\text{m}$
b) Error indication of Volumetric Performance Test is determined using Steel Trihedral Length bar: 1) 185, 390, 580 and 800 mm 2) 220, 410, 610, 805, 1005 and 1200 mm		5 $\mu\text{m}$
10 ( # ) Portable Co-ordinate Measuring Machine (Hexagon Absolute RA8 and newer) Resolution : 1 $\mu\text{m}$	In-house Calibration Procedure (WI 15-18, V1) ISO 10360-12 V2016	
a) Length measurement error, $E_{\text{UNI}}$ : L up to 2400 mm		Q [ 0.006, 3.5E-06L ], L in mm

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

# Calibration Facility located at: Unit: 6, GF, Paz Madrigal Plaza, Lot-1 Finance St. Corner Industry St., Madrigal Business Park, Ayala Alabang, Muntinlupa City, 1780 Philippines.

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Certificate No. : LA-2002-0265-C-3      Issue No. : 10  
Date : 14 February 2025      Page : 4 of 4

## Approved Signatories:

Mr Lim Chen Kee	- For all items
Mr Loh Kum Seng	- For items 1 to 9 only
Mr Lim Seng Hoo	- For items 1 to 8 only
Mr Wong Kian Wah	- For Items 1, 2, 3, 7, 8 only
Mr Louie B. Eustaquio	- For items 1, 2, 3, 8 only
Mr Sutthipong Denkaew	- For item 9 to 10 only
Mr Jakkaphan Sripapat	- For item 9 to 10 only

## 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. 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.