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Issue Date: 23 October 2025

Ref: HOKLAS077-35

South China National Centre of Metrology

華南國家計量測試中心

ADDRESS : No. 30, Songbaidong Street, Guangyuanzhong Road, Guangzhou, China

地址 中國廣州市廣園中路松柏東街 30 號

ACCREDITED TEST

CATEGORY 認可測試類別 : Calibration Services 校正服務



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No. 30, Songbaidong Street, Guangyuanzhong Road, Guangzhou, China

Calibration Services 校正服務		
ITEM TESTED OR MEASURED 測試或量度項目	SPECIFIC TEST OR PROPERTY MEASURED [®] 特定測試或量度的特性 [®]	CALIBRATION AND MEASUREMENT CAPABILITY (CMC)* 校準和測量能力*
Length and related measurement		
- Angle		
- Angle gauge	Verification for angle in accordance with JJG 70-2004 over the following range:	
- Grade 0	0° to 360°	0.9 second of arc
- Grade 1 and 2	0° to 360°	1.4 seconds of arc
- Angular polygon	Verification for angle in accordance with JJG 283-2007 over the following range:	
	0° to 360°	0.4 second of arc
- General bevel protractor	Verification for angle in accordance with JJF 1959-2021 over the following range:	
- Resolution: 2'	0° to 320°	1 minute of arc
- Resolution: 5'	0° to 360°	3 minutes of arc
- Level	Verification for angle to horizontal level using parallel light tube in accordance with JJG 425-2003 over the following range:	
- Bubble level		20
- Grade DS1	-30' to +30'	2.0 seconds of arc
- Grade DS3	-30' to +30'	2.7 seconds of arc
- Automatic level - Grade DSZ1	-30' to +30'	2.0 seconds of arc
- Grade DSZ3	-30' to +30'	2.4 seconds of arc

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Length and related measurement		
- Angle		
- Level	Verification for angle using small angle measurement machine in accordance with JJG 103-2005 over the following range:	
- Coincidence level	-5 mm/m to +5 mm/m	0.002 mm/m
- Electronic level		
- Resolution: 0.001 mm/m	-5 mm/m to +5 mm/m	0.002 mm/m
- Resolution: 0.01 mm/m	-5 mm/m to +5 mm/m	0.02 mm/m
- Level	Verification for angle using level tester in accordance with JJF 1084-2002 over the following range:	
 Frame level Resolution: 0.02 mm/m, 0.05 mm/m and 0.10 mm/m 	0.02 mm/m to 1.5 mm/m	4 %
 Strip level Resolution: 0.02 mm/m, 0.05 mm/m and 0.10 mm/m 	0.02 mm/m to 1.5 mm/m	4 %
- Level ruler	Verification for angle in accordance with JJF 1085-2002 over the following range:	
- Resolution: 5 mm/m and 10 mm/m	0.5 mm/m to 10 mm/m	8 %

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Length and related measurement		
- Angle		
- Numerically controlled machine tool	On-site calibration for rotary axis in accordance with JJF 1251-2010 over the following range:	
	- Bidirectional accuracy of positioning A 0° to 360°	1.4 second of arc
	- Mean bidirectional deviation M 0° to 360°	1.2 second of arc
	- Bidirectional systematic positional deviation E 0° to 360°	1.2 second of arc
	- Reversal value B 0° to 360°	0.3 second of arc
	- Unidirectional repeatability of positioning R \uparrow or R \downarrow 0° to 360°	0.6 second of arc
	- Bidirectional repeatability of positioning R $$0^{\circ}$$ to 360°	0.7 second of arc

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Length and related measurement		
- Angle		
- Optical theodolite	Verification for angle using parallel light in accordance with JJG 414-2011 over the following range:	
- Class DJ ₁	0° to 360°	0.33 second of arc
- Class DJ ₂	0° to 360°	0.54 second of arc
- Class DJ ₆	0° to 360°	2.0 seconds of arc
- Precise angle dividing table	Verification for angle in accordance with JJG 472-2007 over the following range:	
- Class 0	0° to 360°	0.09 second of arc
- Class 1	0° to 360°	0.11 second of arc
- Class 2	0° to 360°	0.13 second of arc
- Square (Cylindrical, rectangular, triangular, knife cast-iron, wide-stand, straight square)	Verification for squareness in accordance with JJG 7-2004 over the following range:	
- Length: 63 mm to below 300 mm	0 to 300 μm	1.8 μm
- Length: 300 mm to below 500 mm	0 to 300 μm	2.4 μm
- Length: 500 mm to 1000 mm	0 to 300 μm	5.0 μm

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Length and related measurement		
- Form		
- Optical flat	Verification for flatness in accordance with JJG 28-2019 over the following range:	
- Diameter: 30 mm	0 to 0.2 μm	0.008 μm
- Diameter: 45 mm	0 to 0.2 μm	0.008 μm
- Diameter: 60 mm	0 to 0.2 μm	0.009 μm
- Diameter: 80 mm	0 to 0.2 μm	0.014 μm
- Diameter: 100 mm	0 to 0.2 μm	0.017 μm
- Optical parallel - Thickness: 15.00 mm to 91.00 mm	Verification for the following parameters in accordance with JJG 28-2019 over the following range:	
	- Flatness 0 to 0.2 μm	0.02 μm
	- Parallelism	
	0 to 2 μm	0.2 μm
- Roughness comparison sample	Verification for roughness in accordance with JJF 1099-2018 at the following values:	
	0.1 μm 0.2 μm 0.4 μm 0.8 μm 1.6 μm 3.2 μm 6.3 μm	6.8 % of reading 5.8 % of reading 4.9 % of reading 4.2 % of reading 4.2 % of reading 4.2 % of reading 4.2 % of reading

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Length and related measurement		
- Form		
- Straight edge	Verification for straightness in accordance with JJF 1097-2021 over the following range:	
- Length: 800 mm	0 to 1 mm	0.6 μm
- Length: 1000 mm	0 to 1 mm	0.6 µm
- Length: 2000 mm	0 to 1 mm	1.0 μm
- Length: 3000 mm	0 to 1 mm	1.3 μm
- Surface plate and surface table	On-site verification for flatness in accordance with JJG 117-2013 over the following range:	
- Dimensions: 300 mm x 300 mm, 400 mm x 300 mm, 400 mm x 400 mm	0 to 70 μm	0.6 μm
- Dimensions: 500 mm x 500 mm, 600 mm x 450 mm, 630 mm x 400 mm	0 to 90 μm	0.9 μm
- Dimensions: 800 mm x 500 mm, 800 mm x 600 mm	0 to 100 μm	1.2 μm
- Dimensions: 1000 mm x 630 mm, 1000 mm x 750 mm, 1000 mm x 800 mm	0 to 120 μm	1.5 μm
- Dimensions: 1500 mm x 1000 mm	0 to 150 μm	1.8 μm
- Dimensions: 3000 mm x 2000 mm	0 to 200 μm	6.0 μm

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Length and related measurement		
- Form		
- Toolmaker's straight edge	Verification for straightness in accordance with JJG 63-2007 over the following range:	
- Length: 75 mm, 125 mm, 175 mm	0 to 5 μm	0.3 μm
- Length: 225 mm, 300 mm	0 to 5 μm	0.6 μm

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Length and related measurement		
- Length		
- Caliper	Verification for length in accordance with JJG 30-2012 over the following ranges:	
- Dial type		
- Scale division: 0.01 mm	0.5 mm to 70 mm	0.004 mm
	Above 70 mm to 150 mm	0.004 mm
	Above 150 mm to 200 mm	0.005 mm
	Above 200 mm to 300 mm	0.008 mm
- Scale division: 0.02 mm	0.5 mm to 70 mm	0.004 mm
	Above 70 mm to 150 mm	0.005 mm
	Above 150 mm to 200 mm	0.006 mm
	Above 200 mm to 300 mm	0.009 mm
- Scale division: 0.05 mm	0.5 mm to 70 mm	0.006 mm
	Above 70 mm to 150 mm	0.007 mm
	Above 150 mm to 200 mm	0.008 mm
	Above 200 mm to 300 mm	0.010 mm
- Digital type		
- Resolution: 0.01 mm	0.5 mm to 450 mm	0.01 mm
	Above 450 mm to 600 mm	0.02 mm
	Above 600 mm to 1500 mm	0.03 mm
	Above 1500 mm to 2000 mm	0.04 mm
- Vernier type		
- Scale division: 0.02 mm	0.5 mm to 300 mm	0.01 mm
	Above 300 mm to 600 mm	0.02 mm
	Above 600 mm to 1500 mm	0.03 mm
	Above 1500 mm to 2000 mm	0.04 mm
- Scale division: 0.05 mm	0.5 mm to 500 mm	0.02 mm
	Above 500 mm to 1000 mm	0.03 mm
	Above 1000 mm to 1500 mm	0.04 mm
	Above 1500 mm to 2000 mm	0.05 mm

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Length and related measurement		
- Length		
- Dial gauge	Verification for length in accordance with JJG 34-2022 over the following range:	
- Scale division or resolution: 0.001 mm	0.001 mm to 1 mm Above 1 mm to 2 mm Above 2 mm to 5 mm	1.2 μm 1.8 μm 3.5 μm
- Scale division or resolution: 0.01 mm	0.01 mm to 10 mm Above 10 mm to 30 mm Above 30 mm to 50 mm	5 μm 7 μm 10 μm

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Length and related measurement		
- Length		
- Digital indicator	Verification for length in accordance with in-house method FFC9907-2009 over the following ranges:	
- Resolution: 0.001 mm	0.5 mm to 50 mm Above 50 mm to 100 mm	1 μm 2 μm
- Resolution: 0.01 mm	0.5 mm to 100 mm	10 μm
- Feeler gauge	Verification for length in accordance with JJG 62-2017 over the following range:	
	0.02 mm to 1.00 mm	1 μm



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Length and related measurement		
- Length		
- Grade 3 gauge block	Verification for length using electronic comparator in accordance with JJG 146-2011 over the following range:	
	0.5 mm to 100 mm	$(0.05 + 0.7 \times 10^{-6} L) \mu m$ where L is the length in mm
	Verification for length using interferometer in accordance with JJG 146-2011 over the following range:	
	125 mm to 500 mm	$(0.05 + 0.7 \times 10^{-6} L) \mu m$ where L is the length in mm
- Grade 4 gauge block	Verification for length using length measurement machine in accordance with JJG 146-2011 at the following values:	
	600 mm 700 mm 800 mm 900 mm 1000 mm	0.8 μm 0.9 μm 1.1 μm 1.2 μm 1.3 μm

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Length and related measurement		
- Length		
- Height caliper	Verification for height in accordance with JJG 31-2011 over the following ranges:	
- Dial height caliper		
- Scale division: 0.01 mm	10 mm to 300 mm	0.009 mm
	Above 300 mm to 500 mm	0.013 mm
	Above 500 mm to 600 mm	0.016 mm
	Above 600 mm to 1000 mm	0.025 mm
	Above 1000 mm to 1500 mm	0.043 mm
	Above 1500 mm to 2000 mm	0.063 mm
- Digital height caliper		
- Resolution: 0.01 mm	10 mm to 300 mm	0.01 mm
	Above 300 mm to 600 mm	0.02 mm
	Above 600 mm to 1000 mm	0.03 mm
	Above 1000 mm to 1500 mm	0.05 mm
	Above 1500 mm to 2000 mm	0.07 mm
- Vernier height caliper		
- Scale division: 0.02 mm	10 mm to 300 mm	0.01 mm
	Above 300 mm to 600 mm	0.02 mm
	Above 600 mm to 1000 mm	0.03 mm
	Above 1000 mm to 1500 mm	0.05 mm
	Above 1500 mm to 2000 mm	0.07 mm
- Scale division: 0.05 mm	10 mm to 600 mm	0.03 mm
- Scare division. 0.05 mm	Above 600 mm to 1000 mm	0.04 mm
	Above 1000 mm to 1500 mm	0.05 mm
	Above 1500 mm to 2000 mm	0.07 mm
	1200 1200 11111 10 2000 11111	

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Length and related measurement		
- Length		
- Inductive micrometer	Calibration for length in accordance with JJF 1331-2011 over the following range:	
- Pointer type - Scale division: 0.1 μm	-3 μm to 3 μm	0.03 μm
- Scale division: 1 μm	-30 μm to 30 μm	0.23 μm
- Scale division: 10 μm	-300 μm to 300 μm	2 μm
- Digital type - Resolution: 0.01 μm	-10 μm to 10 μm	0.02 μm
- Resolution: 0.1 μm	-100 μm to 100 μm	0.3 μm
- Resolution: 1 μm	-500 μm to 500 μm	2 μm
- Level rod	Verification for length in accordance with JJG 8-1991 over the following ranges:	
	0.01 m to 3 m Above 3 m to 5 m	0.6 mm 0.9 mm

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Length and related measurement		
Length		
- Micrometer		
- External digital type	Verification for length in accordance with JJG 21-2008 over the following range:	
	5.12 mm to 25 mm Above 25 mm to 50 mm Above 50 mm to 75 mm Above 100 mm to 125 mm Above 125 mm to 150 mm Above 150 mm to 175 mm Above 175 mm to 225 mm Above 225 mm to 250 mm Above 250 mm to 300 mm Above 300 mm to 325 mm Above 325 mm to 350 mm Above 350 mm to 375 mm Above 375 mm to 400 mm Above 400 mm to 425 mm Above 425 mm to 500 mm Above 475 mm to 500 mm	0.7 μm 0.8 μm 0.9 μm 1.0 μm 0.9 μm 1.1 μm 1.2 μm 1.3 μm 1.4 μm 1.5 μm 1.6 μm 1.7 μm 1.8 μm 1.9 μm 2.0 μm 2.1 μm

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Length and related measurement		
- Length		
- Micrometer		
- External vernier type	Verification for length in accordance with JJG 21-2008 over the following range:	
	5.12 mm to 25 mm Above 25 mm to 50 mm Above 50 mm to 75 mm Above 75 mm to 100 mm Above 100 mm to 125 mm Above 125 mm to 150 mm Above 150 mm to 175 mm Above 175 mm to 200 mm Above 200 mm to 225 mm Above 225 mm to 250 mm Above 250 mm to 275 mm Above 275 mm to 300 mm Above 300 mm to 325 mm Above 325 mm to 350 mm Above 350 mm to 375 mm Above 375 mm to 400 mm Above 400 mm to 425 mm Above 425 mm to 450 mm Above 450 mm to 475 mm Above 475 mm to 500 mm	0.7 μm 0.8 μm 0.9 μm 1.1 μm 1.2 μm 1.4 μm 1.7 μm 1.9 μm 2.4 μm 2.6 μm 2.8 μm 3.1 μm 3.3 μm 3.5 μm 3.8 μm 4.0 μm 4.3 μm 4.5 μm 4.7 μm 5.0 μm
- Internal type	Verification for length in accordance with JJG 22-2014 at the following values: 100 mm 200 mm 300 mm 1000 mm 1200 mm 1500 mm 2000 mm	2 μm 2 μm 2 μm 4 μm 5 μm 6 μm 7 μm 10 μm

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Length and related measurement		
- Length		
- Numerically controlled machine tool	On-site calibration for length at linear axis in accordance with JJF 1251-2010 over the following range:	
	- Bidirectional accuracy of positioning A 0.01 mm to 2 m	$(1.7 + 1.1 L) \mu m$ where L is the length in m
	- Unidirectional accuracy of positioning A ↑ or A ↓	
	0.01 mm to 2 m	$(1.7 + 1.1 L) \mu m$ where L is the length in m
	- Mean bidirectional deviation M 0.01 mm to 2 m	$(0.4 + 1.8 L) \mu m$ where L is the length in m
	- Bidirectional systematic positional deviation E 0.01 mm to 2 m	$(0.4 + 1.8 L) \mu m$ where L is the length in m
	- Unidirectional systematic positional deviation E \uparrow or E \downarrow 0.01 mm to 2 m	(0.4 + 1.8 L) μm where L is the length in m
	- Reversal value B 0.01 mm to 2 m	0.9 μm
	- Mean reversal value \overline{B} 0.01 mm to 2 m	0.9 μm
	- Unidirectional repeatability of positioning R \uparrow or R \downarrow 0.01 mm to 2 m	2.0 μm
	- Bidirectional repeatability of positioning R	2.0 μπ
	0.01 mm to 2 m	2.2 μm

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Length and related measurement		
- Length		
- Projector	On-site calibration for length in accordance with JJF 1093-2015 over the following range:	
	0.01 mm to 200 mm	$(1.2 + 2.0 \times 10^{-6} L) \mu m$ where L is the length in mm
- Steel rule	Verification for length in accordance with JJG 1-1999 over the following range:	
	0.5 mm to 150 mm Above 150 mm to 1000 mm Above 1000 mm to 2000 mm	0.05 mm 0.05 mm 0.07 mm
- Steel tape	Verification for length in accordance with JJG 4-2015 over the following range:	
	0.001 m to 200 m	(0.15 + 0.015L) mm where L is the length in m

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ITEM TESTED OR MEASURED 測試或量度項目	SPECIFIC TEST OR PROPERTY MEASURED [®] 特定測試或量度的特性 [®]	CALIBRATION AND MEASUREMENT CAPABILITY (CMC)*
	付尺侧码以里及的付任	校準和測量能力*
ength and related measurement		
Length		
Thickness gauge		
- Coating thickness gauge		
- Eddy current type	Verification for thickness in accordance with JJG 818-2018 over the following range:	
	12 μm to 982 μm	$(0.3 + 0.004H) \mu m$ where H is the thickness in mm
- Magnetic resistance type	Verification for thickness in accordance with JJG 818-2018 over the following range:	
	12 μm to 982 μm	$(0.3 + 0.004H) \mu m$ where H is the thickness in mm
- Ultrasonic type	Calibration for thickness in accordance with JJF 1126-2004 over the following range:	
- Resolution: 0.01 mm	0.5 mm to 200 mm	0.02 mm
- Resolution: 0.1 mm	0.5 mm to 200 mm	0.1 mm
- Film thickness gauge		
- Dial type	Calibration for thickness in accordance with JJF 1255-2010 over the following range:	
- Scale division: 0.001 mm	0.1 mm to 1 mm	1.0 μm
- Scale division: 0.01 mm	0.1 mm to 10 mm	2 μm
- Scale division: 0.1 mm	0.1 mm to 30 mm	0.01 mm

Unless otherwise specified, accredited activities are conducted at the laboratory.

^{*} The calibration uncertainty of a device under test, which is usually reported at 95% confidence level, depends on both the CMC of the laboratory and the performance of the device during calibration.



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South China National Centre of Metrology

華南國家計量測試中心

No. 30, Songbaidong Street, Guangyuanzhong Road, Guangzhou, China

	Calibration Services 校正服務	
ITEM TESTED OR MEASURED 測試或量度項目	SPECIFIC TEST OR PROPERTY MEASURED [@] 特定測試或量度的特性 [@]	CALIBRATION AND MEASUREMENT CAPABILITY (CMC)* 校準和測量能力*
Length and related measurement		
- Length		
- Length - Three coordinates measuring machine	On-site calibration for length in accordance with JJF 1064-2024 at the following values: 30 mm 125 mm 150 mm 200 mm 250 mm 300 mm 400 mm 500 mm 700 mm 800 mm 900 mm 1000 mm On-site calibration for probing error (form) using sphere of diameter 25 mm in accordance with JJF 1064-2024	0.5 μm 0.6 μm 0.7 μm 0.8 μm 0.9 μm 1.2 μm 1.5 μm 1.7 μm 2.0 μm 2.2 μm 2.5 μm 2.8 μm 0.5 μm

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華南國家計量測試中心

Calibration Services 校正服務		
ITEM TESTED OR MEASURED 測試或量度項目	SPECIFIC TEST OR PROPERTY MEASURED [@] 特定測試或量度的特性 [@]	CALIBRATION AND MEASUREMENT CAPABILITY (CMC)* 校準和測量能力*
Temperature measurement		
- Digital thermometer	Calibration for temperature in accordance with in-house method FFR 9903-2014 over the following ranges:	
- Resolution: 1 °C	-40 °C to 5 °C Above 5 °C to 95 °C Above 95 °C to 250 °C	1.0 °C 1.0 °C 1.2 °C
- Resolution: 0.1 °C	-40 °C to 5 °C Above 5 °C to 95 °C Above 95 °C to 250 °C	0.2 °C 0.2 °C 0.2 °C
- Resolution: 0.01 °C	-40 °C to 5 °C Above 5 °C to 95 °C Above 95 °C to 250 °C	0.024 °C 0.023 °C 0.044 °C

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華南國家計量測試中心

Calibration Services 校正服務		
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Verification of toy testing tool and fixture		
- Accessibility probe A & B,	Verification for the following parameters in accordance with in-house method FFC 0003-2009:	
	- Length - Radius	0.02 mm 0.008 mm
- Bite test clamp	Verification for the following parameters in accordance with in-house method FFC 0005-2009:	
	- Length - Radius - Angle	0.05 mm 0.02 mm 5 minutes of arc
- Rattle test fixture	Verification for the following parameters in accordance with in-house method FFC 0004-2009:	
	- Length - Radius	0.009 mm 0.005 mm
- Sharp point tester	Verification for the following parameters in accordance with in-house method FFC 9812-2009:	
	- Length - Force	0.005 mm 0.05 N
- Small parts cylinder	Verification for length in accordance with in-house method FFC 0002-2009	0.006 mm

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