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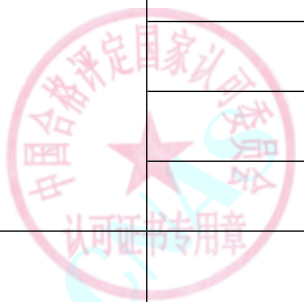
Registration No. CNAS L0128

Accreditation Criteria: ISO/IEC 17025:2017 and relevant requirements of CNAS

Effective Date: 2024-09-20 Expiry Date: 2030-10-11

SCHEDULE 5 ACCREDITED CALIBRATION AND MEASUREMENT CAPABILITY SCOPE

Note: The instruments with * represents onsite calibration can be performed.

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
一、Gvometric sense							
1	Radius Gauges	Length	Verification Regulation of Radius Gauges JJG58	(1.0~25)mm	$U=5\mu m+0.32\times 10^{-3}R$		
2	Plain Limit Gauges	Length	Verification Regulation of Plain Limit Gauges JJG343	Plug gauge Φ (1~200)mm	$U=1.0\mu m$		
				Ring gauge Φ (2~50)mm	$U=1.0\mu m$		
				Ring gauge Φ (50~100)mm	$U=1.1\mu m$		
				Ring gauge Φ (100~200)mm	$U=1.2\mu m$		
				Caliper Gauge:(10~100)mm	$U=1.1\mu m$		
3	Cylindrical Thread Gauges	Length	Caliration Specification for Cylindrical Thread Gauges JJF1345	Plug gauge Φ (1~200)mm	$U=2.8\mu m+2\times 10^{-6}l_n$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				Ring gauge Φ (2.5~200)mm	$U=3.4 \mu\text{m}+2 \times 10^{-6} l_n$		
4	Cylindrical Measuring Pin	Length	Calibration Specification for Cylindrical Measuring Pin JJF1207	Three wires: Φ (0.118~6.585)mm Pin gauges: Φ (0.1~25)mm	$U=0.56 \mu\text{m}$ $U=0.5 \mu\text{m}$		
5	Screw Templates	Length	Verification Regulation of Screw Templates JJG60	P(0.40~6.00)mm	$U=3.1 \mu\text{m}$		
		Angle		Half of thread angle: $55^\circ/60^\circ$	$U=7'$		
6	*Surface Plates	Flatness	Verification Regulation of Surface Plates JJG117	(160×100) mm~(600×450) mm	$U=1.0 \mu\text{m}$		
				(600×450) mm~(1000×750)mm	$U=1.7 \mu\text{m}$		
				(1000×750)mm ~ (1500×1000)mm	$U=2.5 \mu\text{m}$		
				(1500×1000)mm ~ (2000×1500)mm	$U=2.8 \mu\text{m}$		
				(2000×1500)mm ~ (3000×2000)mm	$U=4.1 \mu\text{m}$		
7	*Height Measuring Instrument with Digital Display	Length	Calibration Specification for Height Measuring Instrument with Digital Display JJF1254	(0~1000)mm	$U=1.8 \mu\text{m}$		
8	Feeler	Length	Verification Regulation of Feeler Gauges JJG62	(0.02~0.10) mm	$U=2 \mu\text{m}$		
				(0.15~3.00) mm	$U=3 \mu\text{m}$		
9	Test sieve	Length	Calibration Specification for Test Sieves JJF1175	(4~125)mm	$U=27 \mu\text{m}$		
				(0.045~4)mm	$U=2 \mu\text{m}+5 \times 10^{-4} l_n$		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
10	Gauge Blocks	Length	Verification Regulation of Gauge Blocks JJG146	(0.5~1000)mm	$U=0.10 \mu\text{m}+1 \times 10^{-6}l_n$		
11	Optical Flats	Flatness	Verification Regulation of Optical Flats JJG28	(D30~D100)mm	$U=0.02 \mu\text{m}$		
		Parallelism		(15.00~91.00)mm	$U=0.1 \mu\text{m}$		
12	Angle Gauge Blocks	Angle	Verification Regulation of Angle Gauge Blocks JJG70	(0~360)°	$U=7''$		
13	Levels	Angle	Calibration Specification for Frame Levels and Shaft Levels JJF1084	(0.02~0.10) mm/m	$U_{\text{rel}}=5.8\%$		
14	*Magnetic and Eddy Current Measuring Instrument for Coating Thickness	Length	Verification Regulation of Magnetic and Eddy Current Measuring Instrument for Coating Thickness JJG818	(0~12) μm	$U=1 \mu\text{m}$		
				(12~506) μm	$U=6 \mu\text{m}$		
				(506~1000) μm	$U=12 \mu\text{m}$		
15	Internal Micrometers	Length	Verification Regulation of Internal Micrometers JJG22	(50~500)mm	$U=5 \mu\text{m}$		
				(500~1000)mm	$U=8 \mu\text{m}$		
				(1000~1500)mm	$U=11 \mu\text{m}$		
				(1500~2000)mm	$U=15 \mu\text{m}$		
16	Steel Rule	Length	Verification Regulation of Steel Rule JJG1	(0~500)mm	$U=0.09\text{mm}$		
				(500~1000)mm	$U=0.10\text{mm}$		
				(1000~2000)mm	$U=0.14\text{mm}$		
17	*Connector gauges	length	Calibration Specification for Connector Gauges (Geometric, Force value,	(0~80) m	$U=0.3 \mu\text{m}+0.5 \times 10^{-6}L$		
		Verticality		(0~200)mm	$U=0.8 \mu\text{m}$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
		Straightness	Quality Parameters) SQI/JL-JF-35	(0~200)mm	$U=0.8\text{ }\mu\text{m}$		
		Symmetry		(0~200)mm	$U=0.8\text{ }\mu\text{m}$		
		Parallelism		(0~200)mm	$U=0.8\text{ }\mu\text{m}$		
		Position degree		(0~200)mm	$U=0.8\text{ }\mu\text{m}$		
		Flatness		(0~200) mm	$U=0.8\text{ }\mu\text{m}$		
		Coaxiality		(0~200) mm	$U=0.8\text{ }\mu\text{m}$		
		concentricity		(0~200) mm	$U=0.8\text{ }\mu\text{m}$		
		total runout		(0~200) mm	$U=0.8\text{ }\mu\text{m}$		
		Profile of Line		(0~200) mm	$U=0.8\text{ }\mu\text{m}$		
		roughness		(0.04~10) μm	$U_{\text{rel}}=5.6\%$		
		Cylindricity		(0~200) mm	$U=0.8\text{ }\mu\text{m}$		
		Length		Arc radius of lamp head thread:(0~5)mm	$U=0.011\text{mm}$		
		Length		Large diameter of lamp head thread:(0~40)mm	$U=0.011\text{mm}$		
		Length		Small diameter of lamp head thread:(0~40)mm	$U=0.015\text{mm}$		
		Length		Pitch of lamp head thread:(0~10)mm	$U=0.010\text{mm}$		
		Roundness		(0~200)mm	$U=0.6\text{ }\mu\text{m}$		
		Angle		(0~360) $^{\circ}$	$U=0.70''$		



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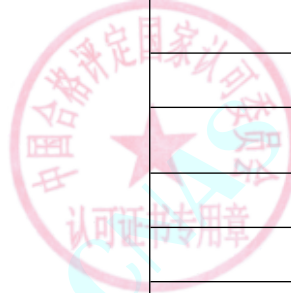
No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Force value		(0.1~500) N	U=0.6N		
		mass		(0.001~620) g	U=0.002g		
				(0.62~6.2) kg	U=0.02g		
				(6.2~70.2) kg	U=3g		
18	*Safety test kit	length	Calibration Specification for Safety Test Kit (Geometric,Force Value, Quality Parameters) SQI/JL- JF-34	(0~80) m	$U=0.3\text{ }\mu\text{ m}+0.5\times10^{-6}L$		
		Verticality		(0~200)mm	$U=0.8\text{ }\mu\text{ m}$		
		Straightness		(0~200)mm	$U=0.8\text{ }\mu\text{ m}$		
		Symmetry		(0~200)mm	$U=0.8\text{ }\mu\text{ m}$		
		Parallelism		(0~200)mm	$U=0.8\text{ }\mu\text{ m}$		
		Position degree		(0~200)mm	$U=0.8\text{ }\mu\text{ m}$		
		Flatness		(0~200) mm	$U=0.8\text{ }\mu\text{ m}$		
		Coaxiality		(0~200) mm	$U=0.8\text{ }\mu\text{ m}$		
		concentricity		(0~200) mm	$U=0.8\text{ }\mu\text{ m}$		
		total runout		(0~200) mm	$U=0.8\text{ }\mu\text{ m}$		
		Profile of Line		(0~200) mm	$U=0.8\text{ }\mu\text{ m}$		
		roughness		(0.04~10) $\mu\text{ m}$	$U_{\text{rel}}=5.6\%$		
		Cylindricity		(0~200) mm	$U=0.8\text{ }\mu\text{ m}$		
		Length		Arc radius of lamp head thread:(0~5)mm	$U=0.011\text{ mm}$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (<i>k</i> =2)	Note	Effective Date
		Length		Large diameter of lamp head thread:(0~40)mm	<i>U</i> =0.011mm		
		Length		Small diameter of lamp head thread:(0~40)mm	<i>U</i> =0.015mm		
		Length		Pitch of lamp head thread:(0~10)mm	<i>U</i> =0.010mm		
		Roundness		(0~200)mm	<i>U</i> =0.6 μ m		
		Angle		(0~360)°	<i>U</i> =0.70″		
		Force value		(0.1~500) N	<i>U</i> =0.6N		
		mass		(0.001~620) g	<i>U</i> =0.002g		
				(0.62~6.2) kg	<i>U</i> =0.02g		
				(6.2~70.2) kg	<i>U</i> =3g		
19	*Toy testing equipment	length	Calibration specification for Toy Testing Equipment (Geometric, Force Values, and Quality Parameters) SQI/JL-JF-37	(0~80) m	<i>U</i> =0.3 μ m+0.5×10 ⁻⁶ <i>L</i>		
		Verticality		(0~200)mm	<i>U</i> =0.8 μ m		
		Straightness		(0~200)mm	<i>U</i> =0.8 μ m		
		Symmetry		(0~200)mm	<i>U</i> =0.8 μ m		
		Parallelism		(0~200)mm	<i>U</i> =0.8 μ m		
		Position degree		(0~200)mm	<i>U</i> =0.8 μ m		
		Coaxiality		(0~200) mm	<i>U</i> =0.8 μ m		
		concentricity		(0~200) mm	<i>U</i> =0.8 μ m		
		total runout		(0~200) mm	<i>U</i> =0.8 μ m		



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		Profile of Line		(0～200) mm	<i>U</i> =0.8 μ m		
		roughness		(0.04～10) μ m	<i>U</i> _{rel} =5.6%		
		Flatness		(0～200) mm	<i>U</i> =0.8 μ m		
		Cylindricity		(0～200) mm	<i>U</i> =0.8 μ m		
		Length		Arc radius of lamp head thread:(0～5)mm	<i>U</i> =0.011mm		
		Length		Large diameter of lamp head thread:(0～40)mm	<i>U</i> =0.011mm		
		Length		Small diameter of lamp head thread:(0～40)mm	<i>U</i> =0.015mm		
		Length		Pitch of lamp head thread:(0～10)mm	<i>U</i> =0.010mm		
		Roundness		(0～200)mm	<i>U</i> =0.6 μ m		
		Angle		(0～360)°	<i>U</i> =0.70″		
		Force value		(0.1～500) N	<i>U</i> =0.6N		
		mass		(0.001～620) g	<i>U</i> =0.002g		
				(0.62～6.2) kg	<i>U</i> =0.02g		
				(6.2～70.2) kg	<i>U</i> =3g		
20	*Shell protection grade test equipment	length	Calibration Specification for shell protection grade test equipment (geometric, force values, and quality parameters) SQI/JL-JF-36	(0～80) m	<i>U</i> =0.3 μ m+0.5×10 ⁻⁶ <i>L</i>		
		Verticality		(0～200)mm	<i>U</i> =0.8 μ m		
		Straightness		(0～200)mm	<i>U</i> =0.8 μ m		
		Symmetry		(0～200)mm	<i>U</i> =0.8 μ m		

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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
		Parallelism		(0~200)mm	$U=0.8 \mu m$		
		Position degree		(0~200)mm	$U=0.8 \mu m$		
		Coaxiality		(0~200) mm	$U=0.8 \mu m$		
		concentricity		(0~200) mm	$U=0.8 \mu m$		
		total runout		(0~200) mm	$U=0.8 \mu m$		
		Profile of Line		(0~200) mm	$U=0.8 \mu m$		
		roughness		(0.04~10) μm	$U_{rel}=5.6\%$		
		Flatness		(0~200) mm	$U=0.8 \mu m$		
		Cylindricity		(0~200) mm	$U=0.8 \mu m$		
		Length		Arc radius of lamp head thread:(0~5)mm	$U=0.011mm$		
		Length		Large diameter of lamp head thread:(0~40)mm	$U=0.011mm$		
		Length		Small diameter of lamp head thread:(0~40)mm	$U=0.015mm$		
		Length		Pitch of lamp head thread:(0~10)mm	$U=0.010mm$		
		Roundness		(0~200)mm	$U=0.6 \mu m$		
		Angle		(0~360) °	$U=0.70''$		
		Force value		(0.1~500) N	$U=0.6N$		
		mass		(0.001~620) g	$U=0.002g$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				(0.62~6.2) kg	U=0.02g		
				(6.2~70.2) kg	U=3g		
21	*Ultrasonic Thickness Instruments	Length	Calibration Specification for Ultrasonic Thickness Instruments JJF1126	resolution 0.1mm:(0~200)mm	U=0.1mm		
				resolution 0.01mm:(0~10)mm	U=0.01mm		
				resolution 0.01mm:(10~75)mm	U=0.02mm		
				resolution 0.01mm:(75~200)mm	U=0.03mm		
22	*Current Calipers	Length	Verification Regulation of Current Calipers JJG30	(0~500)mm	U=0.01mm		
				(500~1000) mm	U=0.04mm		
				(1000~1500) mm	U=0.05mm		
				(1500~2000) mm	U=0.06mm		
23	*Height Caliper	Length	Verification Regulation of Height Caliper JJG31	(0~600) mm	U=0.01 mm		
24	*Dial Gauges	Length	Verification Regulation of Dial Gauges JJG 34	dialgage (0~10) mm	U=5.8 μ m	(>50~100)mm do not perform on-site calibration	
				dialgage (10~20) mm	U=6.1 μ m		
				dialgage (20~30) mm	U=7.2 μ m		
				dialgage (30~40) mm	U=8.0 μ m		
				dialgage (40~50) mm	U=9.2 μ m		
				dialgage (50~100) mm	U=13 μ m		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
				micrometer gauge (0~0.5) mm	$U=1.3 \mu\text{m}$		
				micrometer gauge (0.5~1.0) mm	$U=1.5 \mu\text{m}$		
				micrometer gauge (1.0~2.0) mm	$U=1.7 \mu\text{m}$		
				micrometer gauge (2.0~3.0) mm	$U=2.1 \mu\text{m}$		
				micrometer gauge (3.0~5.0) mm	$U=2.7 \mu\text{m}$		
				micrometer gauge (5.0~10.0) mm	$U=3.6 \mu\text{m}$		
				Digital dial indicator (0~3) mm	$U=2 \mu\text{m}$		
				Digital dial indicator (3~10) mm	$U=3 \mu\text{m}$		
				Digital dial indicator (10~30) mm	$U=4 \mu\text{m}$		
25	*Tester for Dial Gauges	Length	Verification Regulation of Tester for Dial Gauges JJG201	Reading in 0.001mm (0~1.0) mm	$U=0.2 \mu\text{m}$	合格评定国家认可 CNAS 认可证书专用章	
				Reading in 0.001mm (1.0~2.0) mm	$U=0.3 \mu\text{m}$		
				Reading in 0.01mm (0~10) mm	$U=1.0 \mu\text{m}$		
				Reading in 0.01mm (10~25) mm	$U=1.3 \mu\text{m}$		
				Grating type (0~50) mm	$U=(0.3\sim2.0) \mu\text{m}$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
26	*Bore Dial Indicator	Length	Calibration Specification for Bore Dial Indicators JJF1102	(2~35) mm/0.01mm	$U=3.3 \mu\text{m}$		
				(35~450) mm/0.01mm	$U=4.1 \mu\text{m}$		
				(2~450) mm/0.001mm	$U=2.0 \mu\text{m}$		
27	*Large Dimension Outside Micrometers	Length	Calibration Specification for Large Dimension Outside Micrometers JJF1088	(500~600)mm	$U=5.4 \mu\text{m}$		
				(600~900)mm	$U=7.1 \mu\text{m}$		
				(900~1200) mm	$U=8.5 \mu\text{m}$		
				(1200~1500) mm	$U=10 \mu\text{m}$		
				(1500~1800) mm	$U=12 \mu\text{m}$		
				(1800~2000) mm	$U=13 \mu\text{m}$		
				Measuring Rod: (500~1000) mm	$U=1.5 \mu\text{m}+4.3 \times 10^{-6} l_n$		
28	Wide Seating Square	Verticality	Verification Regulation of Squares JJG7	(0~600) mm	$U=4 \mu\text{m}$		
29	*Straight Edge	Straightness	Verification Regulation of Straight Sraight Edge JJG63	(0~175) mm	$U=0.3 \mu\text{m}$		
				(175~300)mm	$U=0.5 \mu\text{m}$		
30	*Micrometer	Length	Verification Regulation of Micrometer JJG21	(0~50)mm	$U=1.2 \mu\text{m}$		
				(50~100)mm	$U=1.3 \mu\text{m}$		
				(100~200)mm	$U=1.6 \mu\text{m}$		
				(200~300)mm	$U=1.9 \mu\text{m}$		
				(300~400)mm	$U=2.2 \mu\text{m}$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
				(400~ 500)mm	$U=2.5 \mu m$		
				Measuring Rod: (25~ 500) mm	$U=1.5 \mu m+4.3 \times 10^{-6} l_n$		
31	*Dial test indicator	Length	Calibration Specification for Dial Test Indicator JJF35	Reading in 0.01mm(0~ 1) mm	$U=3.8 \mu m$		
				Reading in 0.001mm: (0~0.4) mm	$U=2.0 \mu m$		
32	*General Bevel Protractors	Angle	Calibration Specification for General Bevel JJF1959	(0~360)°	$U=1'$		
33	Steel Measuring Tapes	Length	Verification Regulation of Steel Measuring Tapes JJG4	(0~5) m	$U=0.14mm+2 \times 10^{-5} L$		
				(5~200) m	$U=0.22mm+2 \times 10^{-5} L$		
34	Roughness Comparison Specimen	roughness	Calibration Specification of Roughness Comparison Specimens JJF1099	Ra (0.2~6.3) μm	$U_{rel}=5.2 \%$		
35	**Contact(Stylus) Instruments of Surface Roughness Measurement by Profile Method roughness	roughness	Calibration Specification for Contact(Stylus) Instruments of Surface Roughness Measurement by Profile Method JJF1105	Ra:(0.1~0.2) μm	$U_{rel}=6.6\%$		
				Ra:(0.2~10) μm	$U_{rel}=4.6\%$		
36	*Measurement Standard Instrument of Roundness and Cylindricity	roundness	Verification Regulation of Measurement Standard Instrument of Roundness and Cylindricity JJG429	(1~20) μm	$U_{rel}=1.8\%$		
		Cylindricity		0.01 $\mu m \sim 100mm$	$U_{rel}=1.8\%$		
37	*Optimeter	length	Verification Regulation of Optimeter JJG45	(-100~+100) μm	$U=0.12 \mu m$		



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38	*Length Measuring Machine	length	Calibration Specification for Length Measuring Machine JJF1066	(0~6000)mm	$U=0.1 \mu m+1.5 \times 10^{-6}L$		
39	*Length Measuring Instrument	length	Calibration Specification for Length Measuring Instrument JJF1189	(1~20)mm	$U=0.2 \mu m$		
				(20~50)mm	$U=L \times 10^{-5}$		
				(50~100)mm	$U=0.1 \mu m+8 \times 10^{-6}L$		
40	*Toolmaker's Microscope	length	Verification Regulation of Toolmaker's Microscope JJG56	(0~50)mm	$U=0.5 \mu m$		
				(50~75)mm	$U=0.6 \mu m$		
				(75~100)mm	$U=(0.7 \mu m$		
				(100~125)mm	$U=0.9 \mu m$		
				(125~150)mm	$U=1.0 \mu m$		
				(150~175)mm	$U=1.2 \mu m$		
				(175~200)mm	$U=1.3 \mu m$		
41	*Coordinate Measuring Machine	length	Calibration Specification for Coordinate Measuring Machine JJF1064	(0~1.35)m	$U=0.20 \mu m+0.67 \times 10^{-6}L$		
				(1.35~3)m	$U=0.23 \mu m+1.57 \times 10^{-6}L$		
				(3~22.5)m	$U=0.5 \mu m+1.6 \times 10^{-6}L$		
42	*Projector	length	Calibration Specification for Projectors JJF1093	(0~10)mm	$U=1.6 \mu m$		
				(10~100)mm	$U=(1.6 \sim 1.8) \mu m$		
				(100~200)mm	$U=(1.8 \sim 2.4) \mu m$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
43	*Concentricity Tester	length	Calibration Specification for Concentricity Tester JJF1109	(0~1000)mm	$U=1.5 \mu m$		
44	*Metallurgical microscopes	Magnification rate	Calibration Specification for metallurgical microscopes JJF1914	$4\times \sim 100\times$	$U_{rel}=1.2\%$		
		Length		(0~10)mm	$U=4 \mu m$		
45	*X-Ray Fluorescence Coating Thickness Instrument	Length	Calibration Specification for X-Ray Fluorescence Coating Thickness Instruments JJF1306	Au/Ni: $1.48 \mu m$	$U_{rel}=5.5\%$		
				Ni/Cu: $5.3 \mu m$	$U_{rel}=5.2\%$		
				Au/Ni/Cu: Au $0.79 \mu m$ Ni $2.38 \mu m$	$U_{rel}=5.5\%$		
				Zn/Fe: $1.56 \mu m, 4.1 \mu m, 13.2 \mu m, 33.1 \mu m$	$U_{rel}=5.8\%$		
				Ag: $2.09 \mu m, 8.5 \mu m, 18.7 \mu m$	$U_{rel}=5.6\%$		
				Au: $0.053 \mu m, 3.28 \mu m$	$U_{rel}=10\%$		
				Cu: $2.78 \mu m, 9.6 \mu m, 24.5 \mu m$	$U_{rel}=6.0\%$		
				Ni: $3.12 \mu m, 10.7 \mu m, 23.1 \mu m$	$U_{rel}=5.9\%$		
46	*Pneumatic Measuring Instruments for Micrometers	length	Verification Regulation of Pneumatic Measuring Instruments for Micrometers JJG356	$(-80 \sim +80) \mu m$	$U=0.5 \mu m$		
47	*Reading Microscope	length	Reading Microscope and Measuring Microscope	Reading Microscope: (0~8)mm	$U=3.6 \mu m$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
	Measuring Microscope		JJG571	Measuring Microscope:(0~50)mm	$U=3.3 \mu\text{m}$		
48	*Tool Presetting and Measuring Instruments	length	Verification Regulation of Tool Presetting and Measuring Instruments JJG938	(0~1000)mm	$U=5.6 \mu\text{m}$		
49	*Image Probe Measuring Machines	length	Calibration Specification for Imaging Probe Measuring Machines JJF1318	XY axis:(0~700)mm	$U=2.2 \mu\text{m}$		
				Z axis:(0~100)mm	$U=0.46 \mu\text{m}$		
50	*Measuring System of Coordinate Position	length	Calibration Specification for Measuring System of Coordinate Position JJF1251	(0~40) m	$U=2.5 \mu\text{m}+1.8 \times 10^{-6}L$		
		angle		$0^\circ \sim 360^\circ$	$U=1.4''$		
51	Coordinate Measuring Spheres	length	Calibration Specification for Coordinate Measuring Spheres JJF1422	(0~100)mm	$U=0.15 \mu\text{m}$		
		Roundness		(0~100)mm	$U=0.03 \mu\text{m}$		
52	Roundness Flick Calibration Standard	Roundness	Calibration Specification for Roundness Flick Calibration Standard JJF1485	(1~50) μm	$U=5.5\%H$		
53	*Laser Diameter Measuring Gauges	Length	Calibration Specification for Laser Diameter Measuring Gauges JJF 1250	(1~10)mm	$U=0.48 \mu\text{m}$		
				(10~20) mm	$U=0.68 \mu\text{m}$		
				(20~30) mm	$U=0.90 \mu\text{m}$		
54	Electronic Levels、Coincidence Levels	Angle	Verification Regulation of Electronic Levels and Coincidence Levels JJG103	(-10~10)mm/m	$U=0.002\text{mm/m}$		
55	*Rubber and Plastic Film Gage	Length	Calibration Specification for Rubber and Plastic Film Gage JJF1488	(0~10) mm/DIV.: 0.01mm	$U=7.0 \mu\text{m}$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
		Force		(10~30) mm/DIV.:0.01mm	$U=7.2 \mu\text{m}$		
				(0~12) mm/DIV.:0.001mm	$U=3.7 \mu\text{m}$		
				(12~20) mm/DIV.:0.001	$U=3.8 \mu\text{m}$		
				(20~30) mm/DIV.:0.001mm	$U=4.1 \mu\text{m}$		
				(0.01~3) N	$U_{\text{rel}}=0.6\%$		
56	*Straight Edges	Straightness	Calibration Specification for Straight Edges JJF1097	(0~1000)mm	$U=0.6 \mu\text{m}$		
				(1000~2000)mm	$U=0.9 \mu\text{m}$		
				(2000~3000)mm	$U=1.3 \mu\text{m}$		
				(3000~4000)mm	$U=1.7 \mu\text{m}$		
				(4000~5000)mm	$U=1.9 \mu\text{m}$		
				(5000~6000)mm	$U=2.1 \mu\text{m}$		
57	*Articulated Arm Coordinate Measuring Machines	Length	Calibration Specification for Articulated Arm Coordinate Measuring Machines JJF1408	Uniaxial coordinate measurement consistency: (0~ 25)mm	$U=8 \mu\text{m}$		
				(0~2960)mm	$U=12 \mu\text{m}$		
				(2960~4040)mm	$U=14 \mu\text{m}$		
58	Laser Tracker 3- Dimensional Measuring System	Length	Calibration Specification for Laser Tracker 3-Dimensional Measuring System JJF1242	(0~80)m	$U=2.4 \mu\text{m}+1.4 \times 10^{-6}L$		
				Reverse Target: (0~ 80)m	$U=2.9 \mu\text{m}$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
		Rotational speed	ilac-MAS CHINA NATIONAL ACCREDITATION SERVICE FOR COERCITIVE CALIBRATION CERTIFICATE	Dynamic indication: (0~80)m	$U=11 \mu m$		
				Dynamic Indicator Variation: (0~80)m	$U=4.0 \mu m$		
				Dynamic velocity limit:(0~180)r/min	$U=2.7\%R$ (R: 实际转速)		
59	*Contact (Stylus) Surface Contour Tester	Length	Calibration Specification for Contace (Stylus) Surface Contour Tester JJF (Min) 1043	(0~100)mm	$U=2.0 \mu m+0.50 \times 10^{-6}L$		
		Angle		$0^{\circ} \sim 360^{\circ}$	$U=0.002^{\circ}$		
60	Depth Micrometers	length	Verification Regulation of Depth Micrometers JJG 24	(0~300)mm	$U=1.1 \mu m+7.9 \times 10^{-6}L$		
61	*Common Normal Micrometer	length	Verification Regulation of Common Normal Micrometer JJG 82	(0~200)mm	$U=1 \mu m+7 \times 10^{-6}L$		
62	*Dial Snap Gauges	length	Calibration Specification for Dial Snap Gauges JJF1253	(5~100) mm/DIV.: 0.005mm	$U=8.2 \mu m$		
				(5~100) mm/DIV.: 0.01mm	$U=11 \mu m$		
				(5~100) mm/DIV.: 0.02mm	$U=18 \mu m$		
				(5~100) mm/DIV.: 0.05mm	$U=42 \mu m$		
				(5~100) mm/DIV.: 0.1mm	$U=82 \mu m$		
63	*Biological Microscopes	length	Calibration Specification for Biological Microscopes JJF1402	1X~100X	$U_{rel}=1.2\%$		
				(0~10)mm	$U=4 \mu m$		
64	*Gear Measuring Centers	length	Calibration Specification for Gear Measuring Centers	module: 2.5mm	$U=1.6 \mu m$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
			JJF1561	Involute, Helix: (100~200)mm	$U=1.7 \mu\text{m}$		
65	Laser Interferometers	length	Verification Regulation of Laser Interferometers JJG739	(0~22) m	$U=0.2 \mu\text{m}+0.2 \times 10^{-6}L$		
66	Single parameter gauge	length	Calibration Specification for Instruments of Thread Inspection of Casing, Tubing, Line Pipe and New Rotary Shouldered Connection JJF1063	(0~50.8)mm	$U=5.5 \mu\text{m}$		
67	Hand-held Laser Distance Meters	length	Verification Regulation of Hand-held Laser Distance Meters JJG966	(0~40) m	$U=1.0\text{mm}$		
68	*Roller length counter	length	Calibration Specification for Roller length counter SQI/JL-JF-65	(0~99999) m	$U=1.4\text{mm}+2 \times 10^{-7}L$		
69	*Micrometers of Measuring Inside Dimension	length	Calibration Specification for Micrometers of Measuring Inside Dimension JJF1411	(5~50) mm	$U=2 \mu\text{m}$		
				(50~200) mm	$U=3 \mu\text{m}$		
70	*Thickness Gauges	length	Calibration Specification for Thickness Gauges JJF1255	(0~1) mm	$U=2.4 \mu\text{m}$		
				(1~10) mm	$U=2.8 \mu\text{m}$		
				(10~20) mm	$U=3.3 \mu\text{m}$		
				(20~30) mm	$U=3.6 \mu\text{m}$		
71	Depth Dial Gauge	length	Verification Regulation of Depth Dial Gauge JJG830	Reading in 0.01mm: (0~300) mm	$U=4 \mu\text{m}$		
				Reading in 0.001mm: (0~30) mm	$U=1.9 \mu\text{m}$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
		length		calibrating gauge (1~100) mm	$U=1.0 \mu\text{m}$		
72	Step gauge	length	Calibration Specification for Step Gauge JJF1258	(0~1100) mm	$U=0.29 \mu\text{m}+1 \times 10^{-6}L$		
73	Clinometers	angle	Optical Clinometers (-180~180) ° Calibration Specification for Clinometers JJF1915 Digital Inclonometers (0~360) °	(0~100) mm	$U=6''$		
				(0~360) °	$U=0.01^\circ$		
74	Micropattern Standards	Length	Calibration Specification for Micropattern Standards JJF1917	(0~100) mm	$U=0.20 \mu\text{m}$		
		Angle		(0~360) °	$U=50''$		
75	Photoelectric Shaft Encoders	Angle	Calibration Specification for Photoelectric Shaft Encoders JJF1115	(0~360) °	$U=2.6''$		
76	*Linear Displacement Sensors	Length	Calibration Specification for Linear Displacement Sensors JJF1305	0.1mm~22m	$U_{\text{rel}}=0.05\%$		
二、Mechanics							
1	Standard Torque Wrench	torque	Verification Regulation of Standard Torque Wrench JJG 1103	(0.1~1) Nm	$U_{\text{rel}}=0.16\%$		
				(1~1000) Nm	$U_{\text{rel}}=0.05\%$		
2	Static Torque Measuring Devices	torque	Verification Regulation of Static Torque Measuring Devices JJG 995	(0.1~1) Nm	$U_{\text{rel}}=0.16\%$		
				(1~1000) Nm	$U_{\text{rel}}=0.05\%$		
3	Tacho-Torque Measuring Devices	torque	Verification Regulation of Tacho-Torque Measuring Device JJG 924	(0.1~1) Nm	$U_{\text{rel}}=0.16\%$		
				(1~1000) Nm	$U_{\text{rel}}=0.05\%$		
		Rotate Speed		(20~20000) r/min	$U_{\text{rel}}=0.17\%$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
4	Standard Torque-meters	torque	Verification Regulation of Standard Torque-meters JJG 557	(0.1~1) Nm	$U_{rel}=0.16\%$		
				(1~1000) Nm	$U_{rel}=0.05\%$		
5	Multi-Component Force Transducer	Torque	Calibration Specification for Multi-Component Force Transducer JJF1560	(0.1~100) Nm	$U_{rel}=0.19\%$		
				(100~1000) Nm	$U_{rel}=0.21\%$		
6	*Differential Pressure Flowmeters	flow	Verification Regulation of Differential Pressure Flowmeters JJG 640	(0.2~40) m ³ /h DN(8~80)mm	$U_{rel}=0.16\%$	Accredited only for water medium, Tele-Calibration if necessary	
7	*Goriolis Mass Flow Meters	flow	Verification Regulation of Goriolis Mass Flow Meters JJG 1038	(0.2~40) t/h DN(8~80)mm	$U_{rel}=0.14\%$	Accredited only for water medium, Tele-Calibration if necessary	
8	*Electromagnetic Flowmeters	flow	Verification Regulation of Electromagnetic Flowmeters JJG 1033	(0.2~40) m ³ /h DN(8~80)mm	$U_{rel}=0.15\%$	Accredited only for water medium, Tele-Calibration if necessary	



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
9	*Float Meter	flow	Verification Regulation of Float Meter JJG 257	(0.2~40) m ³ /h DN(8~80)mm	$U_{rel}=0.38\%$	Accredited only for water medium, Tele- Calibration if necessary	
10	*Vortex-shedding Flowmeter	flow	Verification Regulation of Vortex-shedding Flowmeter JJG 1029	(0.2~40) m ³ /h DN(8~80)mm	$U_{rel}=0.17\%$	Accredited only for water medium, Tele- Calibration if necessary	
11	*Liquid Positive Displacement Flowmeter	flow	Verification Regulation of Liquid Positive Displacement Flowmeter JJG 667	(0.2~40) m ³ /h DN(8~80)mm	$U_{rel}=0.17\%$	Accredited only for water medium, Tele- Calibration if necessary	
12	*Ultrasonic Flowmeters	flow	Verification Regulation of Ultrasonic Flowmeters JJG 1030	(0.2~40) m ³ /h DN(8~80)mm	$U_{rel}=0.16\%$	Accredited only for water medium, Tele- Calibration if necessary	



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (<i>k</i> =2)	Note	Effective Date
13	*Cold Potable Water Meters	flow	Verification Regulation of Cold Potable Water Meters JJG 162	(0.2~40) m ³ /h DN(8~80)mm	<i>U</i> _{rel} =0.25%	Accredited only for water medium, Tele-Calibration if necessary	
14	*Turbine Flowmeter	flow	Verification Regulation of Turbine Flowmeter JJG 1037	(0.2~40) m ³ /h DN(8~80)mm	<i>U</i> _{rel} =0.16%	Accredited only for water medium, Tele-Calibration if necessary	
15	*Flow switch	Flow	Calibration Specification for the Flow Set Point of Flow Switch SQI/JL-JF-63.F0	(0.2~40) m ³ /h DN(8~80)mm	<i>U</i> _{rel} = (2.50~1.20) %	Accredited only for water medium, Tele-Calibration if necessary	
16	*Working Torque-meters	torque	Verification Regulation of Working Torque-meters JJG 1146	(0.1~1) Nm	<i>U</i> _{rel} =0.16%		
				(1~1000) Nm	<i>U</i> _{rel} =0.1%		
				(1~50) kNm	<i>U</i> _{rel} =0.15%		
三、Optic							
1	Optical Power Meters in Telecommunication	Optical Power	Verification Regulation of Optical Power Meters in Telecommunication JJG 965	(-60~5) dBm, λ = 1310nm,1550nm	<i>U</i> =0.18dB		
				(5~10) dBm, λ = 1310nm,1550nm	<i>U</i> =0.43dB		

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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
2	Laser Power Meters	Laser Power	Verification Regulation of 0.1mW~200W Laser Power Meters JJG 249	(1~90) mW	$U_{rel}=3.2\%$		
九、Special test							
1	*Circle Sample Cutters	Length	Calibration Specification for Circle Sample Cutters JJF (FZ) 061	(0~300)mm	$U=0.05\text{mm}$		
2	*Fiber Diameter Analyzer	Length	Calibration Specification for Fiber Diameter Analyzer JJF (FZ) 065	(0~1)mm (1~150)mm	$U=1.6\text{ }\mu\text{m}$ $U=0.16\text{mm}$		
3	*Textile Needle Detector	Length	Calibration Specification for Textile Needle Detector JJF (FZ) 080	(0~5000)mm	$U=1.6\text{mm}+0.56\times 10^{-5}L$		
		Sensitivity		(0.8~3.0)mm	$U=0.006\text{mm}$		
		Speed		(0~50)m/min	$U=0.2\text{ m/min}$		
4	*Fabrics Water spray Testers	Length	Calibration Specification for Fabrics Water spray Testers JJF (FZ) 083	(0~10)mm (10~300) mm	$U=0.013\text{mm}$ $U=0.05\text{mm}$		
		Angle		(0~320)°	$U=0.3^\circ$		
		Time		0.01s~1h	$U=0.16\text{s}$		
5	*Capillary effect tester calibration	Length	Calibration Specification for Capillary Effect Tester JJF (FZ) 056	(0~300)mm	$U=0.10\text{mm}$		
		Time		0.01s~1h	$U=0.16\text{s}$		
		Mass		(0.001~620)g	$U=0.06\text{g}$		
6	*Fiber Cutter	Length	Calibration Specification for Fiber Cutter JJF (FZ) 022	(0~50)mm	$U=3\text{ }\mu\text{m}$		
7	*Fabric Thickness Instruments	Length	Calibration specification for Fabric Thickness Instruments	(0~10) mm	$U=0.9\text{ }\mu\text{m}$		



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			JJF (FZ) 020	(10~300) mm	$U=0.06\text{mm}$		
		Time		0.01s~1h	$U=0.16\text{s}$		
		Mass		(0.001~620)g	$U=0.06\text{g}$		

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