

Scopes of Calibration and Accreditation

Field of Calibration	Properties of Measured / Equipment Under Calibration	Capability Range	Calibration Methods	ISO/IEC 17025 Accredited by ONSC-TISI (Thailand)		ISO/IEC 17025 Accredited by ANAB (USA)	
				LAB	ON-SITE	LAB	ON-SITE
Dimension	Gauge Blocks [Steel, Ceramic, Carbide] Grade: 0, 1, 2 - Steel Gauge Blocks - Ceramic Gauge Blocks - Cera Blocks - Carbide Gauge Blocks - Tungsten Carbide Gauge Blocks	0.1 mm - 100 mm (Accredited 0.1-100mm)	JIS B 7506-2004 Cal. central deviation and variation in length	Yes Yes Yes Yes Yes Yes	- - - - - -	Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes Yes
	Long Gauge Blocks [Steel, Ceramic, Carbide] Grade: 0, 1, 2 - Steel Gauge Blocks - Ceramic Gauge Blocks - Cera Blocks - Carbide Gauge Blocks - Tungsten Carbide Gauge Blocks	>100 mm - 500 mm	Comparison method Cal. central deviation and variation in length	- - - - - -	- - - - - -	Yes Yes Yes Yes Yes Yes	- - - - - -
	Calibration Testers (Analog / Digital) - Calibration Testers - Dial Gauge Testers - Bore Gauge Testers - Cylinder Gauge Testers	0 - 100 mm (ONSC accredited 0-25mm)	Direct measurement by Laser Hologauge	Yes Yes Yes Yes	- - - -	Yes Yes Yes Yes	Yes Yes Yes Yes
	Caliper Checkers - Caliper Checkers - Check Masters	Up - 1,000 mm (ONSC accredited 0-670mm)	Comparison gauge block	Yes Yes	- -	Yes Yes	Yes Yes
	Height Masters (Analog / Digital) - Height Master - Digimatic Height Master - Digital Cera Height Master - Universal Height Master - Height Setting Micrometer	Up - 1010 mm	ISO 7863-1984 comparison gauge block	- - - - -	- - - - -	Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes
	Riser Block - Riser Block	Up - 600 mm	ISO 7863-1984 comparison gauge block	-	-	Yes	Yes
	Depth Micro Checkers - Depth Micro Checker	Up - 300 mm	ISO 7863-1984 comparison gauge block	Yes	-	Yes	Yes
	Electrical Comparators / Mu-Checkers (include: Probe and Display Unit) - Electrical Comparator - Mu-Checker with Probe - Linear Measuring Gauge - Laser Hologauges - Digital Comparators - Microindicators - Tesa Module with Probe	Up - 10 mm	JIS B 7536-1982	Yes Yes Yes Yes Yes Yes Yes	- - - - - - -	Yes Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes Yes Yes
	Universal Length Machines (ULM) - ULM	Up - 500 mm	Long Gauge Block Grade K	-	-	Yes	Yes
	Outside Micrometers (Digital / Analog) - Blade Micrometers - Bench Micrometers - Caliper Type Micrometers - Can Seam Micrometers - Crimp Height Micrometers - Disk Micrometers - Dial Micrometers - Digimatic Micrometers - Gear Tooth Micrometers - Groove Micrometers - Hub Micrometers - Limit Micrometers - Micrometer Heads - Point Micrometers - Quick-Mike Micrometers - Screw Thread Micrometers - Spline Micrometers - Tube Micrometers - Uni-Mike Micrometers - Universal Micrometers - V-Anvil Micrometers (*Not accredited) - Wire Micrometers	0 - 25 mm > 25 mm - 100 mm > 100 mm - 200 mm > 200 mm - 500 mm > 500 mm - 700 mm > 700 mm - 1000 mm > 1000 mm - 2000 mm (ONSC accredited 0-500 mm)	JIS B 7502-1994 JIS B 7502-1994 JIS B 7502-1994 JIS B 7502-1994 Long Gauge Blocks Long Gauge Blocks Long Gauge Blocks	Yes Yes	- -	Yes Yes	Yes Yes
	Micrometer Heads - Micrometer Heads - Digimatic Microme Heads - Digital Microme Heads	0 - 100 mm	JIS B 7502-1994	Yes Yes Yes	- - -	Yes Yes Yes	Yes Yes Yes
	Micrometer Standards - Micrometer Standards - Setting Rod for Micrometers	25 mm - 500 mm	Direct measurement by ULM	- -	- -	Yes Yes	Yes Yes
	Indicating Micrometers / Snap Micrometers - Indicating Micrometers - Snap Micrometers - Outside Micrometers with Dial Indicators	0 - 100 mm	JIS B 7520: 1981	Yes Yes Yes	- - -	Yes Yes Yes	Yes Yes Yes
	Inside Micrometers (Digital / Analog) - Digimatic Inside Micrometers - Digimatic Tubular Inside Micrometers - Inside Micrometers - Tubular Inside Micrometers	5 - 30 mm > 25 mm - 100 mm > 100 mm - 200 mm > 200 mm - 500 mm > 500 mm - 700 mm > 700 mm - 1000 mm	JIS B 7502-1994 JIS B 7502-1994 JIS B 7502-1994 Long Gauge Blocks / ULM Long Gauge Blocks / ULM	Yes Yes Yes Yes Yes	- - - - -	Yes Yes Yes Yes Yes	Yes Yes Yes - -
	Depth Micrometers (Digital / Analog) - Depth Micrometers - Digimatic Depth Micrometers - Digit Depth Micrometers	0 - 25 mm > 25 mm - 150 mm > 150 mm - 300 mm	JIS B 7544-1994 JIS B 7544-1994 Long Gauge Blocks	Yes Yes Yes	- - -	Yes Yes Yes	Yes Yes Yes
	Holtestes (Digital / Analog) - 3-Points Internal Micrometers - Boremetrics - Digimatic Holtestes	2 mm - 100 mm >100 mm - 300 mm (ONSC accredited 2-100 mm)	Direct measurement to Standard Ring Gauge	Yes Yes Yes	- - -	Yes Yes Yes	Yes Yes Yes



Scopes of Calibration and Accreditation

Field of Calibration	Properties of Measured / Equipment Under Calibration	Capability Range	Calibration Methods	ISO/IEC 17025 Accredited by ONSC-TISI (Thailand)		ISO/IEC 17025 Accredited by ANAB (USA)	
				LAB	ON-SITE	LAB	ON-SITE
	- Digital Holtests - Digital Three Points Internal Micrometers - Holtests			Yes	-	Yes	Yes
				Yes	-	Yes	Yes
				Yes	-	Yes	Yes
				Applied accreditation 0-200 mm			
	Vernier Caliper (Vernier / Dial / Digital) - Digital Calipers / Digimatic Calipers - Vernier Calipers - Dial Calipers - Offset Calipers - Offset Centerline Calipers - Point Calipers - Neck Type Calipers - Outside Point Type Calipers - Tube Thickness Type Calipers - Inside Calipers	Up - 300 mm > 300 mm - 600 mm > 600 mm - 1000 mm > 1000 mm - 1500 mm > 1500 mm - 2000 mm (ONSC accredited 0-1000 mm)	JIS B 7507-1993 JIS B 7507-1993 JIS B 7507-1993 Long Gauge Blocks Long Gauge Blocks	Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes	- - - - - - - - - -	Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes
	Depth Gauges (Vernier / Dial / Digital) - Vernier Depth Gauges - Dial Depth Gauges - Digital Depth Gauges - Digimatic Depth Gauges	Up - 300 mm > 300 mm - 600 mm > 600 mm - 1000 mm	JIS B 7518-1993	- - - -	- - - -	Yes Yes Yes Yes	Yes Yes Yes Yes
	Dial Caliper Gauges (Analog / Digital) - Dial Caliper Gauges (Internal Type) - Dial Caliper Gauges (External Type) - Digital Caliper Gauges (Internal Type) - Digital Caliper Gauges (External Type) - Internal Dial Caliper Gauges	Up - 300 mm	Direct measurement by Gauge Blocks	- - - - -	- - - - -	Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes
	Height Gauges (Vernier / Dial / Digital) - Digital Height Gauges - Digimatic Height Gauges - Digital Counter Type Dial Height Gauges - Dial Height Gauges - Vernier Height Gauges	Up - 300 mm > 300 mm - 600 mm > 600 mm - 1000 mm > 1000 mm - 1500 mm (ONSC accredited 0-1000 mm)	JIS B 7517-1993 Long Gauge Blocks	Yes Yes Yes Yes Yes	- - - - -	Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes
	Dial Gauges / Digital Indicators - Dial Gauges - Dial Indicators - Digital Indicators - Digimatic Indicators - Linear Gauges	0 mm - 25 mm > 25 mm - 50 mm > 50 mm - 75 mm > 75 mm - 100 mm (ONSC accredited 0-25 mm)	JIS B 7503-1997	Yes Yes Yes Yes Yes	- - - - -	Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes
	Dial Test Indicators - Dial Test Indicator (Lever Type)	Up - 1 mm	JIS B 7533-1990	Yes	-	Yes	Yes
	Thickness Gauges (Dial / Digital Types) - Digimatic Thickness Gauge - Digital Thickness Gauge - Digimatic Upright Gauge - Dial Thickness Gauge - Dial Upright Gauge - Digital Passmeter	0 - 12 mm > 12 mm - 50 mm > 50 mm - 100 mm (ONSC accredited 0-12 mm)	Direct measurement to gauge block	Yes Yes Yes Yes Yes Yes	- - - - - -	Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes Yes
	Bore Gauges / Cylinder Gauges - Bore Gauges - Dial Bore Gauges - Cylinder Gauges	Up - 18 mm > 18 mm - 400 mm	Direct measurement and JIS B 7515-1982	- - -	- - -	Yes Yes Yes	Yes Yes Yes
	Coating Thickness Plates (Film/Copper) - Precision Thickness Standard - Precision Standard Foil - Precision Calibration Foil - Standard Foil - Thickness Film - Thickness Plate	Up - 10 mm	Direct measurement by ULM / Laser Hologauge	- - - - - -	- - - - - -	Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes Yes
	Coating Thickness Meters (without customer thickness plate) - Coating Thickness Tester - Electronic Thickness Tester - Ultrasonic Coating Thickness Gauge - Coating Thickness Gauge - Digital Coating Thickness Gauge - Microprocessor Coating Thickness Gauge	Up - 3000 µm	Direct comparison to Thickness Standards	- - - - - -	- - - - - -	Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes Yes
	Ultrasonic Thickness Meter - Ultrasonic Thickness Gauge - Ultrasonic Thickness Meter	0 - 100 mm	Standard Thickness Block/ Gauge Block	- -	- -	Yes Yes	Yes Yes
	Measuring Microscopes - Microscopes - Measuring Microscopes - Toolmakers Microscopes - Vision Measuring Machines - Zoom Stereo Microscopes - Smartsopes	X-Y Axis Linearity Up - 300 mm	JIS B 7153-1995	- - - - - -	- - - - - -	Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes Yes
	Scale Lupes / Stand Micrometers - Scale Lupes - Zoom Lupes - Clear Lupes - Stand Micrometers - Shop Micrometers - Pocket Magnifiers - Pocket Comparators	Up - 100 mm	Standard Glass Scale	- - - - - - -	- - - - - - -	Yes Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes Yes Yes
Dimension	Profile Projectors - Profile Projector - Profile Micrometer - Profile Measuring Machine	Up - 300 mm	JIS B 7184-1999	- - -	- - -	Yes Yes Yes	Yes Yes Yes
	Micrometer Microscopes - Micrometer Microscopes - Stereo Microscopes	Up - 10 mm	JIS B 7150-1977 by Objective Micrometer	- -	- -	Yes Yes	Yes Yes



Scopes of Calibration and Accreditation

Field of Calibration	Properties of Measured / Equipment Under Calibration	Capability Range	Calibration Methods	ISO/IEC 17025 Accredited by ONSC-TISI (Thailand)		ISO/IEC 17025 Accredited by ANAB (USA)		
				LAB	ON-SITE	LAB	ON-SITE	
	Surface Roughness Testers - Roughness Tester - Surface Roughness Instrument - Surface Roughness Measuring Machine - Surface Roughness Tester - Surface Texture Measurement - Surftracer - Surftest - Handysurf - Universal Surface Roughness Tester	Ra : 2.97, 4 µm Rz : 9.4, 10 µm	Direct measurement by Surface Roughness Standard, based on JIS B 0651 : 1996	-	-	Yes	Yes	
	Surface Roughness Specimen - Roughness Specimen - Roughness Standard - Step Gauge	Ra : 0 - 4 µm Rz : 0 - 10 µm	Direct measurement by Laser Hologauge	-	-	Yes	Yes	
	Roundness Testers - Roundness Tester - Roundtest - Roundness Measuring Machine	Ø : Up - 300mm	Direct measurement by Standard Ball, based on JIS B 7451-1997	-	-	Yes	Yes	
	Digimatic Scale Units - Digimatic Scale Unit - Digital Linear Scale	Up - 300 mm > 300 mm - 600 mm > 600 mm - 1000 mm	Standard Gauge Block	-	-	Yes	Yes	
	Standard Glass Scales - Glass Scales - Reading Scales - Standard Scales - Working Standard Scales - Objective Micrometer	0 mm - 300 mm > 300 mm - 500 mm > 500 mm - 750 mm > 750 mm - 1000 mm	Comparison with Standard Glass Scale	-	-	Yes	Yes	
	Metal Rules / Steel Rules - Metal Rules - Steel Rulers	0 - 1000 mm (0 - 1 m) 0 - 2000 mm (0 - 2 m) 0 - 5000 mm (0 - 5 m)	JIS B 7516-2005	-	-	Yes	Yes	
	Steel Tape Measures - Steel Tape Measures - Tape Measures - Digimatic Tape Measures - Digital Tape Measures - Steel Tape Scales - Measuring Tapes - Measuring Wheel	0 - 1000 mm (0 - 1 m) 0 - 2000 mm (0 - 2 m) 0 - 5000 mm (0 - 5 m) > 5000 mm (> 5 m)	JIS B 7512-1993	-	-	Yes	Yes	
	Textile Tape Measures - Textile Tape	Up to 50 m	JIS B 7522-1993	-	-	Yes	Yes	
	Taper Gauges - Scale Type Taper Gauge	0 - 100 mm	Direct measurement by Scale Calibrator	-	-	Yes	Yes	
	Radius Gauges - Radius Gauge	0 - 25 mm	Direct measurement by Scale Calibrator	-	-	Yes	Yes	
	Pitch Gauges - Pitch Gauge	0 - 7 mm	Direct measurement by Scale Calibrator	-	-	Yes	Yes	
	Feeler Gauges - Feeler Gauge	0.01 mm - 3 mm	JIS B 7524-1992	-	-	Yes	Yes	
	Precision Levels - Spirit Level - Precision Level - Electric Level - Inclinator	Full range	JIS B 7510-1993	Yes	-	Yes	Yes	
	Precision Squares (Grade 1, 2) - Beveled-Edge Square - Regular Square - Regular Squares with Stand - Precision Dial Square	Height : Up - 500 mm Height : > 500 mm - 1000 mm	JIS B 7526-1995 JIS B 7526-1995	-	-	Yes	Yes	
	Protectors (Analog / Digital) - Bevel Protectors - Universal Bevel Protectors - Digital Protectors - Protectors - Angle Gauges / Angle Levels	0 - 360°	Direct measurement by Angle Gauge Standard	-	-	Yes	Yes	
	Granite Surface Plates [Site calibration available]	≤ 300 mm x 300 mm ≤ 600 mm x 450 mm ≤ 750 mm x 500 mm ≤ 1000 mm x 1000 mm ≤ 2000 mm x 1500 mm	JIS B 7513-1992 by Electronic Level	Yes	Yes	Yes	Yes	
	Steel Surface Plates [Site calibration available]	≤ 300 mm x 300 mm ≤ 600 mm x 450 mm ≤ 750 mm x 500 mm ≤ 1000 mm x 1000 mm ≤ 2000 mm x 1500 mm	JIS B 7513-1992 by Electronic Level	Yes	Yes	Yes	Yes	
	Dimension	Steel Straightedges - Knife Type Straight Edge - Straightedge - Steel Straightedge	as JIS B 7514-1977	JIS B 7514-1977	-	-	-	-
		Thread Plug Gauges - Thread Plug Gauge - Screw Gauge - Wear Check Thread for Screw Ring Gauge - Go/No-Go Thread Plug Gauge	M1 - M250 (1mm - 250mm)	JIS B 0261-2004 by 3-wire method	-	-	Yes	Yes
		Thread Ring Gauges	M3 - M250 (3mm - 250mm)	JIS B 0261-2004 by thread	-	-	-	-



Scopes of Calibration and Accreditation

Field of Calibration	Properties of Measured / Equipment Under Calibration	Capability Range	Calibration Methods	ISO/IEC 17025 Accredited by ONSC-TISI (Thailand)		ISO/IEC 17025 Accredited by ANAB (USA)	
				LAB	ON-SITE	LAB	ON-SITE
	- Thread Ring Gauge - Screw Ring Gauge - Wear Check Thread for Screw Plug Gauge - Go/No-Go Thread Ring Gauge		plug gauge Go/No-Go check, and Direct measurement by ULM	-	-	Yes	-
	Ring Gauges - Plain Ring Gauges - Setting Ring Gauges - Master Ring Gauges	M3 mm - M200 mm	Direct measurement by ULM	-	-	Yes	-
	Plug Gauges - Plug Gauge - Plain Plug Gauge - Plain Limit Plug Gauge - Plain Go - No Go Gauge - Master Plug Gauge	Up - 10 mm > 10 mm - 200 mm (ONSC accredited 0.1-10 mm)	Direct measurement by ULM & Laser Scan Micrometer	Yes	-	Yes	Yes
	Pin Gauges - Pin Gauge - GO/NOGO Pin Gauge	Up - 10 mm > 10 mm - 200 mm (ONSC accredited 0.1-10 mm)	Direct measurement by ULM & Laser Scan Micrometer	Yes	-	Yes	Yes
	3-Wires - 3 Wire Set	Up - 10 mm	Direct measurement by ULM & Laser Scan Micrometer	Yes	-	Yes	Yes
	Laser Scan Micrometers - Laser Scan Micrometers - Laser Scan Diameters	0.1 mm - 30 mm	Standard Pin Gauges	-	-	Yes	Yes
	Coordinate Measuring Machines - CMM - Coordinate Measuring Machine - 3D CNC Vision Measuring Machine - CNC CMM - Ultra-High Accuracy CNC CMM	X-Axis: Up-1,000 mm Y-Axis: Up-1,000 mm Z-Axis: Up-600 mm	ISO 10360-2	-	-	Yes	Yes
	Air Gauges - Air Gauges - Air Micrometers	Up - 1000 µm	JIS B 7535	-	-	-	-
	Laser Displacement Meter - Laser Displacement Meters - Laser Distance Meters	Up - 100 m	Direct measurement	-	-	Yes	Yes
	Optical Flat, Optical Parallel - Optical Flat - Optical Parallel	Flatness: Up-10 µm Thickness: Up-25 mm Parallel: Up-1 mm	Comparison with Optical Flat, Optical Parallel, Laser Hologauge	-	-	Yes	Yes
	Jig, Fixture, Mold, and Die Dimension - 2D, 3D Jig, Fixture, Mould, Die	Up-1000 mm	ULM, Scale Calibrator, Micrometer, Linear Scale	-	-	Yes	Yes

Yes = Accredited ISO/IEC 17025
 - = Not accredited scopes of ISO/IEC 17025