

Laboratory	M. S. Metric Instruments, # NHB 8/A, KHB Colony, Hunsur Road, Hootgalli, Mysore, Karnataka		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Mechanical Calibration	Issue Date	23.09.2015
Certificate Number	C-0977	Valid Until	22.09.2017
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Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability (\pm)	Remarks
I. DIMENSION			
1. Calipers ^{\$} (Vernier/Dial/Digital) LC.: 0.01 mm ^Φ	Upto 600 mm	$\pm 13.7 \mu\text{m}$	Using Gauge Blocks & Caliper Checker By Comparison Method
2. Height Gauge ^{\$} (Vernier/Digital) LC.: 0.01 mm ^Φ	Upto 600 mm	$\pm 13.7 \mu\text{m}$	Using Gauge Blocks/ Caliper Checker By Comparison Method
3. Depth Gauge ^{\$} (Vernier/Digital) LC.: 0.01 mm ^Φ	Upto 300 mm	$\pm 9.5 \mu\text{m}$	Using Depth Micro checker/ Gauge Blocks By Comparison Method
4. External Micrometer ^{\$} LC.: 0.001 mm ^Φ	Up to 150 mm	$\pm 2.4 \mu\text{m}$	Using Gauge Blocks By Comparison Method
5. Depth Micrometer ^{\$} LC.: 0.001 mm ^Φ	Upto 300 mm	$\pm 6.8 \mu\text{m}$	Using Depth Micro checker/ Gauge Blocks Comparison Method
6. Plunger Dial Gauge ^{\$} (Analog/Digital) LC.: 0.001 mm LC.: 0.01 mm	Upto 12.7 mm Upto 25 mm	$\pm 1.6 \mu\text{m}$ $\pm 6.1 \mu\text{m}$	Using Electronic Dial Calibration Tester By Comparison Method

**Srikanth R
Convenor**

**Avijit Das
Program Manager**

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7. Lever Dial Gauge \$ LC.: 0.001 mm LC.: 0.01 mm	Upto 1 mm Upto 2 mm	$\pm 1.6 \mu\text{m}$ $\pm 6.0 \mu\text{m}$	Using Electronic Dial Calibration Tester By Comparison Method
8. Bore Gauge \$ (For Transmission)	Upto 3.0 mm travel	$\pm 2.6 \mu\text{m}$	Using Electronic Dial Calibration Tester By Comparison Method
9. Snap Gauge \$	1.5mm Upto 50 mm Above 50 mm Upto 200 mm	$\pm 2.9 \mu\text{m}$ $\pm 4.9 \mu\text{m}$	Using Gauge Blocks By Comparison Method
10. Plain Plug Gauge \$	Upto \varnothing 100 mm	$\pm 1.1 \mu\text{m}$	Using Electronic Comparator By Comparison Method
11. Dial Thickness Gauge \$ LC.: 0.01 mm	Upto 10 mm	$\pm 6.6 \mu\text{m}$	Using Gauge Blocks By Comparison Method
12. Feeler Gauge \$	Upto 1.0 mm	$\pm 1.7 \mu\text{m}$	Using Digital Micrometer By Comparison Method
13. Cylindrical Measuring Pin Grade "1" & Coarser \$	Upto \varnothing 20 mm	$\pm 1.0 \mu\text{m}$	Using Electronic Comparator By Comparison Method
II. PRESSURE			
1. Pressure Gauges / Pressure Transmitters #	0 to 100 bar (Hydraulic) 100 to 960 bar (Hydraulic) 0 to 200 mbar (Pneumatic)	1.2 % rdg 2.9 % rdg 4.1 % rdg	Using Hydraulic Comparison Screw Pump & Digital Indicator/ Pneumatic Pump & Digital Manometer as per DKD R-6-1:2003

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2. Vacuum Gauges #	-0.8 bar to 0 bar	2.1 % rdg	Using Vacuum calibrator & Vacuum Pump as per ISO 3567:2011

III. ACCELERATION & SPEED

1. Tachometer \$ (Non Contact Type)	60 RPM to 90,000 RPM	0.67 % to 1.67 % rdg	Using Tachometer Calibrator with Optical Output (Not Stroboscope) as per SANAS TR 45-01 With assumption of linear conservative equation $U=0.00001x+0.578$ Where U=uncertainty % rdg, x=value of RPM
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* Measurement Capability is expressed as an uncertainty (±) at a confidence probability of 95%

\$Only in Permanent Laboratory

^oLaboratory can also calibrate instruments/devices of coarser resolution / least count within the accredited range using same reference standard/ master equipment under the scope of accreditation.

The laboratory is also capable for site calibration however, the uncertainty at site depends on the prevailing actual environmental conditions and master equipment used.

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