

Laboratory Shweta Instruments, 1, Vedkiran Apartment, Kamatwada, Ambad Link Road, Ambad, Nashik, Maharashtra

Accreditation Standard ISO/IEC 17025: 2005

Discipline Mechanical Calibration **Issue Date** 01.08.2015

Certificate Number C-0960 **Valid Until** 31.07.2017

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Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability (\pm)	Remarks
I. DIMENSION			
1. Caliper ^{\$} (Vernier/ Dial/ Electronic) L.C.: 0.01 mm ^Φ	0 to 600 mm	18.0 μ m	Using Caliper Checker by Comparison Method
2. Height Gauge ^{\$} (Vernier/ Dial/ Electronic) L.C.: 0.01 mm ^Φ	Upto 600 mm	16.0 μ m	Using Caliper Checker & Slip Gauge Set by Comparison Method
3. Vernier Depth Gauge ^{\$} L.C.: 0.01 mm ^Φ	Upto 300 mm	15.0 μ m	Using Caliper Checker & Slip Gauge Set by Comparison Method
4. External Micrometer ^{\$} (Vernier/ Dial/ Electronic) L.C.: 0.01 mm L.C.: 0.001 mm	0 to 400 mm 0 to 300 mm	6.5 μ m 3.0 μ m	Using Gauge Block & Slip Gauge Set by Comparison Method
5. Micrometer Setting Standard	Upto 375 mm	7.1 μ m	Using Gauge Block, Slip Gauge Set & Comparator with Stand by Comparison Method

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Convenor

Avijit Das
Program Manager

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Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability (\pm)	Remarks
6. Internal Micrometer 2-Points [§] L.C.: 0.01 mm	Upto 200 mm	5.3 μ m	Using Slip Gauge Set & Accessories Set, by Direct/Comparison Method
7. Depth Micrometer [§] L.C.: 0.001 mm ^Φ	Upto 300 mm	3.0 μ m	Using Gauge Block & Slip Gauge Set by Comparison Method
8. Dial Gauge [§] (Plunger Type) L.C.: 0.001 mm ^Φ	Upto 25 mm	2.6 μ m	Using Dial Calibration Tester by Comparison Method
9. Dial Gauge [§] (Lever Type) L.C.: 0.001 mm ^Φ	Upto 2.0 mm	2.6 μ m	Using Dial Calibration Tester by Comparison Method
10. Bore Gauge [§] (For Transmission Accuracy check only)	Upto 1 mm	4.0 μ m	Using Dial Calibration Tester by Direct/Comparison Method
11. Inside Micrometer L.C.: 0.01 mm	5 mm to 30 mm	3.9 μ m	Using Slip Gauge Ste & Accessories Set by Direct/Comparison Method

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	Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability (\pm)	Remarks
12.	Dial Thickness Gauge \$ L.C.: 0.001 mm Φ	Upto 25 mm	1.0 μ m	Using Slip Gauge Set by Direct/Comparison Method
13.	Dial Snap Gauge \$ L.C.: 0.001 mm	Upto 150 mm	2.9 μ m	Using Gauge Block & Slip Gauge Set by Comparison Method
14.	Bevel Protractor \$ L.C.: 5 min	0°-90°-0°	4.0 min	Using Angle Gauge Block by Comparison Method
15.	Degree Protractor \$ L.C.: 1° C	0°-90°-0°	35 min	Using Angle Gauge Block by Comparison Method
16.	Combination Protractor \$ L.C.: 1° C	0°-90°-0°	35 min	Using Angle Gauge Block by Comparison Method
17.	Engineer's Square\$ (Squareness)	Upto 150 mm	11.0 μ m	Using Indicating Square Cylindrical Square by Comparison Method
18.	Feeler Gauge/Shims (Foil) of Coating Thickness Gauge \$	Upto 2 mm	3.0 μ m	Using Digital Micrometer by Comparison Method

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Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability (\pm)	Remarks
19. Plain Plug Gauge/ Measuring Pin ^{\$}	Upto 300 mm	4.5 μ m	Using Gauge Block, Slip Gauge Set & Comparator Stand with Digital Plunger by Comparison Method
20. Plain Snap Gauge ^{\$}	2.0 mm to 300 mm	5.0 μ m	Using Gauge Block & Slip Gauge Set by Comparison Method
21. Thread Plug Gauge ^{\$} (Effective Diameter Only)	Upto 100 mm	4.0 μ m	Using FCDM/ Cylindrical Setting Master/ Thread Master Wires by Direct/Comparison Method
22. V-Block ^{\$} Parallelism Symmetricity Squareness	Upto 150 mm Upto 150 mm Upto 150 mm	9.0 μ m 9.0 μ m 10.0 μ m	Using Master Cylinders/ Master Square & Comparator by Direct/Comparison Method
23. Holetest/Three Point Micrometer ^{\$} L.C.: 0.01 mm	Upto 100 mm	4.5 μ m	Using Setting Ring Set by Direct/Comparison Method

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Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability (\pm)	Remarks
24. Inside Caliper ^{\$} (Dial Type) L.C.: 0.01 mm	Upto 200 mm	5.0 μ m	Using Caliper Checker, Slip Gauge & Accessories Set by Comparison Method
25. Pistol Caliper ^{\$} L.C.: 0.01 mm ^Φ	Upto 200 mm	6.0 μ m	Using Gauge Block Set by Comparison Method
26. Surface Plate [*]	2000 mm x 2000 mm	$4.6 \sqrt{\frac{L+W}{100}}$ μ m Where L is in mm	Using Precision Spirit Level by Direct Comparison Method
27. Electronic Height Gauge [*]	Upto 600 mm	3.0 μ m	Using Slip Gauge by Direct Comparison Method
II. PRESSURE			
1. Hydraulic Pressure [#] Dial & Digital Pressure Gauges	0 to 30 kg/cm ² 30 kg/cm ² to 700 kg/cm ²	0.6 kg/cm ² 6.3 kg/cm ²	Digital Pressure Gauges of respective ranges—with Hydraulic Pump by Comparison method as per DKD-R6-1

* Measurement Capability is expressed as an uncertainty (\pm) at a confidence probability of 95%

^{\$}Only in Permanent Laboratory

^{*}Only for Site Calibration

^Φ Laboratory 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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