

Laboratory Elite Metrology, No. 269/3, 4th Phase, Peenya Industrial Area, Bangalore, Karnataka
Accreditation Standard ISO/IEC 17025: 2005
Certificate Number CC-2691 **Page** 1 of 6
Validity 18.05.2018 to 17.05.2020 **Last Amended on** -

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability ($\pm$)	Remarks
<u>MECHANICAL CALIBRATION</u>				
I.	DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.			
1.	Caliper ^{\$} (Vernier / Dial / Digital) LC: 0.01mm LC: 0.02mm	0 to 300mm 0 to 600mm 0 to 1000mm	16.0 μ m 20.0 μ m 21.0 μ m	Using Caliper Checker/ Gauge Blocks '0' Grade & Long Gauge Blocks
2.	Depth Caliper ^{\$} (Vernier / Dial / Digital) LC 0.01 mm	0 to 300 mm 0 to 600 mm	13.4 μ m 14.5 μ m	Using Gauge Blocks, Caliper checker & Long Gauge Blocks
3.	Height Gauge ^{\$} LC : 0.01 mm	0 to 300 mm 0 to 600 mm	13.4 μ m 14.5 μ m	Using Caliper Checker/ Gauge Blocks '0' Grade Long Gauge Blocks
4.	External Micrometer ^{\$} LC : 0.001 mm LC : 0.01 mm	0 to 100 mm 100 mm to 300 mm 300mm to 500 mm 500mm to 700 mm	2.7 μ m 5.4 μ m 7.0 μ m 8.9 μ m	Using Gauge Blocks, Microchecker, Optical Flats & Optical Parallels, Long Gauge Blocks

Mohit Kaushik
 Convenor

Avijit Das
 Program Director

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5.	Depth Micrometer ^{\$} LC : 0.001 mm	Up to 150 mm 100mm to 300 mm	3.0 μ m 5.3 μ m	Using Gauge Blocks, Microchecker, Long Gauge Blocks
6.	Plunger Dial Gauges ^{\$} LC : 0.001 mm	Up to 25 mm	2.4 μ m	Using Universal Length Measuring Machine
7.	Lever Dial Gauges ^{\$} LC : 0.001 mm	Up to 1 mm	1.4 μ m	Using Universal Length Measuring Machine
8.	Bore Dial Gauges ^{\$} (Transmission Only) LC:0.001mm	Upto 1 mm	3.6 μ m	Using Universal Length Measuring Machine
9.	Plain Plug Gauge ^{\$}	Up to 100 mm 100 mm to 200 mm	1.9 μ m 3.4 μ m	Using Universal Length Measuring Machine
10.	Plain Ring Gauge ^{\$}	3mm to 100 mm 100mm to 200 mm	2.3 μ m 3.3 μ m	Using Universal Length Measuring Machine
11.	Thread Plug Gauge ^{\$} (Effective Pitch & Major Dia)	Up to M 100 M100 to M200 mm	2.0 μ m 3.6 μ m	Using Universal Length Measuring Machine
12.	Thread Ring Gauge ^{\$}	3mm to 100mm	2.6 μ m	Using Universal Length Measuring Machine

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Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability ($\pm$)	Remarks
13.	Snap Gauge ^{\$} (Fixed & Adjustable)	6mm to 100 mm 100mm to 200 mm 200 mm to 500 mm	3.0 μ m 4.0 μ m 6.5 μ m	Using Gauge Blocks, Long Gauge Blocks
14.	Feeler Gauge ^{\$}	Upto 1 mm	3.2 μ m	Using Dig Micrometer
15.	Cylindrical Measuring Pin ^{\$}	0.5mm to 20 mm	1.5 μ m	Using Universal Length Measuring Machine
16.	Caliper Checker / Step Gauge ^{\$}	Up to 600 mm	3.2+(L/75)	Using Long gauge blocks
17.	Micrometer Setting Stds. ^{\$}	25 mm to 700 mm	1.0+(L/375)	Using Long gauge blocks & Gauge blocks
18.	Length Bars Inspection Grade ^{\$}	50mm to 700 mm	0.3+(L/375)	Using Long gauge blocks & Gauge blocks
19.	Thread Measuring Wires ^{\$}	$\varnothing$.17mm to $\varnothing$ 6.35mm	0.9 μ m	Using Universal Length Measuring Machine
20.	Cylindrical Setting Master ^{\$}	6 mm to $\varnothing$ 200mm	1.5 μ m	Using Universal Length Measuring Machine
21.	Radius Gauge ^{\$}	0 to 25mm	8.0 μ m	Using Vision Measuring System
22.	V-Block ^{\$} (Parallelism & Symmetry)	300mmx100mmx100mm	4.5 μ m	Using Co-Ordinate Measuring M/C
23.	Engineers Square ^{\$}	Upto 400mm	6.0 μ m	Using Co-Ordinate Measuring M/C

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Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability ($\pm$)	Remarks
24.	Internal / Stick Micrometer ^{\$} LC : 0.001 mm	Upto 300mm	2.9 μ m	Using Universal Length measuring Machine, Gauge Blocks & Long Gauge Block
25.	Comparator With Stand ^{\$}	Up to 300mm	1.8 μ m	Using Co-Ordinate Measuring M/C
26.	Angle Plate ^{\$} (Flatness, Parallelism & Perpendicularity)	Upto 300mm & Upto 90°	7.6 μ m	Using Co-Ordinate Measuring M/C
27.	Straight Edge ^{\$}	Upto 1000mm	5.1 μ m	Using Co-Ordinate Measuring M/C
28.	Bevel Protractor/ Combination Set ^{\$} LC: 5 Arc Mins	0 – 90 – 0 0 to 360°	5 Arc Mins	Using Co-Ordinate Measuring M/C
29.	Groove Dial /Leg Calipers ^{\$} LC : 0.01 mm	25mm to 200mm	6.2 μ m	Using Gauge blocks & Accessories
30.	Dial Snap/ Thickness Gauge ^{\$} LC: 0.001 mm	0 to 100mm 100mm to 300mm	3.0 μ m	Using Gauge block & long gauge blocks
31.	Gap/Width Gauge ^{\$}	6mm to 50mm	3.2 μ m	Using Universal Length measuring Machine & Gauge Blocks

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32.	Dial/Precision Comparators ^{\$} LC.: 0.0005 mm	0.05mm	3.8 μ m	Using Universal Length Measuring Machine
33.	Plain Taper Plug Gauges ^{\$}	Up to 200mm	2.9 μ m	Using Co-Ordinate Measuring M/C
34.	Plain Taper Ring Gauges ^{\$}	Up to 200mm	2.9 μ m	Using Co-Ordinate Measuring M/C
35.	Thread Pitch Gauges ^{\$}	Pitch Up to 6mm Thread Angle 60°	6.1 μ m 2 mins of arcs	Using Vision Measuring System
36.	Sine Bar ^{\$} (Centre Distance Between Rollers & Angular Measurements)	Up to 500mm	5.3 μ m 9mins of arcs	Using Co-Ordinate Measuring M/C
37.	Engineer Parallels ^{\$}	Up to 400 mm	8.2 μ m	Using Co-Ordinate Measuring M/C
38.	Granite Square ^{\$}	Up to 400mm	8.2 μ m	Using Co-Ordinate Measuring M/C
39.	Height Measuring System [#] LC.: 0.0001mm	Up to 700 mm	3.0+L/150	Using Long gauge block & Gauge Block

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40.	Vision Measuring Machine [#] (Linearity)	Up to 300mm	5.2 μ m	Using Precision Glass Scale
II.	Dimension (Precision Instruments)			
1.	Co-Ordinate Measuring Machine [#]	1000x1200X1000mm	(1.9+L/450)	Using Long Gauge Blocks
2.	Profile Projector [#] (Linearity Angle Magnification)	Up to 300mm 0-360° Up to 100%	5.3 μ m 1.3mins of arc 0.1%	Using Precision Glass Scale & Angular Graticule

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

^s Only in Permanent Laboratory

[#] 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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