

**Laboratory**                      **Electronics Test & Development Centre, B-108, Phase-VIII, Industrial Area, (SAS Nagar), Mohali, Punjab**

**Accreditation Standard**   **ISO/IEC 17025:2005**

**Discipline**                      **Mechanical Calibration**                      **Issue Date**      **20.02.2015**

**Certificate Number**        **C-0898**                      **Valid Until**      **19.02.2017**

**Last Amended on**        **21.07.2015**                      **Page**              **1 of 4**

Quantity Measured / Instrument	Range/ Frequency	* Calibration Measurement Capability ( $\pm$ )	Remarks
<b>I.      DIMENSION</b>			
<b>1.      EXTERNAL MICROMETER<sup>\$</sup> (Analog/Digital) L.C. : 0.001 mm</b>	Upto 25 mm	2.0 $\mu$ m	Using Gauge Blocks By Comparison Method
<b>2.      CALIPER<sup>\$</sup> (Vernier/Digital) L.C. : 0.01 mm</b>	Upto 600 mm	24.4 $\mu$ m	Using Gauge Blocks / Length Bars By Comparison Method
<b>3.      DIAL GAUGE – PLUNGER TYPE<sup>\$</sup> (Analog/Digital) L.C. : 0.001 mm</b>	Upto 25 mm	8.0 $\mu$ m	Using Dial Calibrator Tester By Comparison Method
<b>4.      HEIGHT GAUGE<sup>\$</sup> (Vernier/Digital) L.C. : 0.02 mm</b>	Upto 600 mm	26.0 $\mu$ m	Using Gauge Blocks / Length Bars By Comparison Method
<b>5.      TEST SIEVES <sup>\$</sup></b>	0.03 mm to 3.5 mm	5.0 $\mu$ m	Using Profile Projector By Comparison Method
<b>6.      CYLINDRICAL MEASURING PINS<sup>\$</sup></b>	0.5 mm to 10 mm	2.1 $\mu$ m	Using Digital Micrometer By Comparison Method
<b>7.      FEELER GAUGES<sup>\$</sup></b>	0.03 mm to 2 mm	2.1 $\mu$ m	Using Digital Micrometer By Comparison Method

**Naveen Jangra**  
**Convenor**

**Avijit Das**  
**Program Manager**

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<b>II. ACCELERATION &amp; SPEED</b>			
1. TACHOMETER <sup>\$</sup> (Contact Type) L.C. : 1 RPM	90 rpm to 10000 rpm	0.30 % of reading	Using Tachometer/Stroboscope By Comparison Method
2. TACHOMETER <sup>#</sup> (Non Contact Type) L.C. : 1 RPM	90 rpm to 10000 rpm	0.24 % of reading	Using Stroboscope By Comparison Method
<b>III. PRESSURE &amp; VACUUM</b>			
1. HYDRAULIC PRESSURE – DIAL PRESSURE GAUGES, DIGITAL PRESSURE GAUGES <sup>#</sup>	0 to 700 bar	0.03 % rdg	Using Dead Weight Tester and An Electronic Digital Pressure Gauge (DPG) by Comparison Method
2. PNEUMATIC PRESSURE – DIAL PRESSURE GAUGES, DIGITAL PRESSURE GAUGES <sup>\$</sup>	1 bar to 20 bar	0.026 bar	Using Digital Pressure Gauge with Reference to Calibrated DPG By Comparison Method
3. VACUUM-NEGATIVE PRESSURE DIAL,PRESSURE GAUGES, DIGITAL PRESSURE GAUGES <sup>#</sup>	(-)0.9 bar to 0 bar	0.025 bar	Using Digital Pressure Gauge with Reference to Calibrated DPG by Comparison Method

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#### IV. MASS

1. <b>WEIGHT</b> \$ (F2 and coarser)	1 mg	0.01 mg	Using E2 Class standard Weights and Mass Comparator ( Readability: 0.01 mg)
	2 mg	0.01 mg	
	5 mg	0.01 mg	
	10 mg	0.011 mg	
	20 mg	0.011 mg	
	50 mg	0.01 1mg	
	100 mg	0.011 mg	
	200 mg	0.011 mg	
	500 mg	0.013 mg	
	1 g	0.016 mg	
	2 g	0.016 mg	
	5 g	0.016 mg	
	10 g	0.031 mg	
	20 g	0.031 mg	
	50 g	0.031 mg	
	100 g	0.124 mg	
	200 g	0.124 mg	
<b>M2 and coarser</b>	500 g	0.087 g	Using E2 Class standard Weights and Mass Comparator ( Readability : 0.1 g)
	1 kg	0.087 g	
	2 kg	0.087 g	
	5 kg	0.103 g	
	10 kg	0.103 g	
	20 kg	0.980 g	Using E2 Class standard Weights and Mass Comparator ( Readability:1 g)
	50 kg	0.935 g	

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2. <b>WEIGHING BALANCE *</b>			
<b>Readability: 0.01 mg</b>	0 to 200 g	0.126 mg	Using E2 class weights Calibration of Electronic weighing balance of Class II and coarser as per OIML R-76-1
<b>Readability: 0.1 g</b>	0 to 12 kg	0.1 g	
<b>Readability: 1g</b>	0 to 50 kg	1 g	

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

\$Only in Permanent Laboratory

\*Only for Site Calibration

# 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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