

## CALIBRATION & MEASUREMENT SERVICES

We provide an extensive industrial calibration service, covering a wide range of measurements which are traceable to National / International Standards, established through reference standards maintained by us. Our test/calibration reports consists all information as per requirements of ISO17025.

<b>Scope of Accreditation</b>	
Force	: Force Testing Machines, Proving Rings
Mass	: Electronic Balance, Weights
Temperature	: Thermometers, Laboratory Furnaces, Autoclaves, Incubators, Liquid Baths, Cold Rooms, PRT, Thermocouples.

Item	Method of calibration
<b>1. Mass and Related Measurements</b>	
<b>1.1</b> Balances/Mechanical & electronic Capacities up to 250 kg	DM/M/TM/03
<b>1.2</b> Weights up to 30 kg OIML Class F1	DM/M/TM/02
<b>1.3</b> Weights up to 30 kg OIML Class F2 , M1, M2, M2-3 & M3	DM/M/TM/01
<b>1.4.</b> Volumetric Calibration Beaker, Volumetric Flask, Pipette, Burette, Measuring Cylinder, Micro Pipette, Flow Cup, Volume Cup	Gravity method
<b>1.5</b> Hydrometers	
<b>2. Force, Torque and Pressure</b>	
<b>2.1</b> Testing Machines Capacities up to 100 kN (Tension Mode)	ISO 7500-using Standard Load Cells & Proving Rings
<b>2.2</b> Testing Machines Capacities up to 2000 kN (Compression)	ISO 7500-using Standard Load Cells & Proving Rings
<b>2.3</b> Proving Rings (CBR rings) Capacities up to 200 kN	ISO 376 –using Standard Load Cells & Proving Rings
<b>2.4</b> Torque Wrenches and torque meters up to 1000 Nm	Calibration - using standard weights or comparison with calibrated torque meters
<b>2.5</b> Hydraulic Pressure gauges/transducers (Gauge pressure) Up to 60 MPa (600 bar)	Dead – Weight Piston Gauge
<b>2.6</b> Pneumatic Pressure gauges/transducers(Gauge pressure) Up to 2 MPa (20 bar)	Comparison against calibrated pressure indicator/pump
<b>2.7</b> Vacuum Gauges	Comparison against Hg manometer

<b>3. Temperature</b>	
<b>3.1</b> Liquid-in-glass thermometers -80 °C to 550 °C	DM/T/TM 01
<b>3.2</b> Dial thermometers -80 °C to 550 °C	DM/T/TM 02
<b>3.3</b> Digital Thermometers with immersion probes -80 °C to 550 °C	DM/T/TM 03
<b>3.4</b> Autoclave 50 °C to 150 °C	DM/T/TM 04
<b>3.5</b> Laboratory Furnace 200 °C to 1450 °C	DM/T/TM 05
<b>3.6</b> Laboratory Liquid Baths -30 °C to 200 °C	DM/T/TM 06
<b>3.7</b> Laboratory Ovens 50 °C to 200 °C	DM/T/TM 07
<b>3.8</b> Incubators 0 °C to 50 °C	DM/T/TM 08
<b>3.9</b> Cold Room -40 °C to 20 °C	DM/T/TM 09
<b>3.10</b> PRT by Comparison method 0 °C to 420 °C	DM/T/TM 10
<b>3.11</b> Thermocouples 0 °C to 1450 °C	DM/T/TM 11
<b>3.15</b> IR Thermometers Up to 500 °C	Calibrated Black Body Surface
<b>3.16</b> Digital Thermometers with surface probes 50 °C to 550 °C	Calibrated surface probe calibrator
<b>5. Length &amp; related measurements</b>	
<b>5.1</b> End gauges	Comparison against calibrated gauge blocks
<b>5.2</b> Vernier Caliper- Up to 1500 mm	Comparison against calibrated gauge blocks
<b>5.3</b> Micrometer(external) - Up to 600 mm	
<b>5.3</b> Micrometer(internal) - Up to 100 mm	
<b>5.4</b> Bore gauge - Up to 200 mm	
<b>5.5</b> Protractors	Comparison against calibrated angle gauge blocks
<b>5.6</b> Profile projectors	Comparison against calibrated gauge blocks
<b>5.7</b> Rules - Up to 1 m	Comparison against calibrated digimatic scale
<b>5.8</b> Screw thread measurements	Using calibrated three-wire units
<b>5.9</b> Geometrical shapes	Measurement using CNC machine