



National Accreditation Board for  
Testing and Calibration Laboratories

**CERTIFICATE OF ACCREDITATION**

**ROOTS METROLOGY & TESTING LABORATORY (A UNIT  
OF ROOTS INDUSTRIES INDIA PRIVATE LIMITED)**

has been assessed and accredited in accordance with the standard

**ISO/IEC 17025:2017**

**"General Requirements for the Competence of Testing &  
Calibration Laboratories"**

for its facilities at

R.K.G INDUSTRIAL ESTATE, GANAPATHY, COIMBATORE, TAMIL NADU, INDIA

in the field of

**CALIBRATION**

Certificate Number: CC-3792

Issue Date: 21/12/2023

Valid Until:

09/09/2025

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.

(To see the scope of accreditation of this laboratory, you may also visit NABL website [www.nabl-india.org](http://www.nabl-india.org))

Name of Legal Entity: ROOTS INDUSTRIES INDIA PRIVATE LIMITED

Signed for and on behalf of NABL



N. Venkateswaran  
Chief Executive Officer



# National Accreditation Board for Testing and Calibration Laboratories

## SCOPE OF ACCREDITATION

**Laboratory Name :**

ROOTS METROLOGY & TESTING LABORATORY (A UNIT OF ROOTS INDUSTRIES INDIA PRIVATE LIMITED), R.K.G INDUSTRIAL ESTATE, GANAPATHY, COIMBATORE, TAMIL NADU, INDIA

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S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
Permanent Facility					
1	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current @ 50Hz	Using 6½ Digit Multimeter by Direct method	1 mA to 10 mA	0.21 % to 0.26 %
2	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current @ 50Hz	Using 6½ Digit Multimeter by Direct method	10 mA to 100 mA	0.26 % to 0.18 %
3	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current @ 50Hz	Using 6½ Digit Multimeter by Direct method	100 mA to 10 A	0.18 % to 0.65 %
4	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current @ 50Hz	Using 6½ Digit Multimeter by Direct method	100 µA to 1 mA	0.33 % to 0.21 %



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5	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current @ 50Hz	Using 6½ Digit Multimeter by Direct method	20 µA to 100 µA	0.57 % to 0.33 %
6	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC High Voltage @ 50 Hz	Using High Voltage Probe with Digital Multimeter by Direct method	0.5 kV to 28 kV	5.80 % to 6.32 %
7	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 50Hz	Using 6½ Digit Multimeter by Direct method	1 mV to 10 mV	4.74 % to 0.55 %
8	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 50Hz	Using 6½ Digit Multimeter by Direct method	10 mV to 100 mV	0.55 % to 0.13 %
9	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 50Hz	Using 6½ Digit Multimeter by Direct method	100 mV to 750 V	0.13 % to 0.13 %





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10	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 50Hz	Using 6½ Digit Multimeter by Direct method	750 V to 1000 V	0.13 % to 0.12 %
11	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Capacitance @ 1kHz	Using LCR Meter by Direct method	1 nF to 10 nF	5.27 % to 1.93 %
12	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Capacitance @1kHz	Using LCR Meter by Direct method	10 µF to 100 µF	1.81 % to 2.17 %
13	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Capacitance @1kHz	Using LCR Meter by Direct method	10 nF to 10 µF	1.93 % to 1.81 %
14	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Inductance @ 1kHz	Using LCR Meter by Direct method	100 µH to 10 H	0.14%



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15	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @ 50Hz	Using Multiproduct calibrator with 2 turn Current coil by Direct method	10 A to 60 A	1.20 % to 2.77 %
16	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @ 50Hz	Using Multi Product Calibrator by Direct method	20 A to 30 A	0.09 % to 1.90 %
17	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @ 50Hz	Using Multiproduct calibrator with 50 turn Current coil by Direct method	250 A to 1500 A	1.72 % to 1.68 %
18	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @ 50Hz	Using Multiproduct calibrator with 10 turn Current coil by Direct method	50 A to 300 A	2.67 % to 1.72 %
19	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @ 50Hz to 1kHz	Using Multi product calibrator by Direct method	10 µA to 100 µA	3.24 % to 1.17 %
20	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @ 50Hz to 1kHz	Using Multi product calibrator by Direct method	100 µA to 100 mA	1.17 % to 0.51 %



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21	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @ 50Hz to 1kHz	Using Multi Product Calibrator by Direct method	100 mA to 20 A	0.51 % to 0.49 %
22	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Power @ 50Hz, 40 V to 240 V, 0.5 A to 30 A, 0.25 Lag PF	Using Multi product Calibrator by Direct Method	5 W to 1.80 kW	0.67 % to 5.52 %
23	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Power @ 50Hz, 40 V to 240 V, 0.5A to 30 A, 0.5 Lag PF	Using Multi Product Calibrator by Direct method	10 W to 3.6 kW	0.18 % to 2.77%
24	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Power @ 50Hz, 40 V to 240 V, 0.5A to 30 A, 0.8 Lead PF	Using Multi Product Calibrator by Direct method	16 W to 5.76 kW	0.14% to 1.74%
25	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Power @ 50Hz, 40V to 240 V, 0.5A to 30 A, UPF	Using Multi Product Calibrator by direct Method	20 W to 7.2 kW	0.12 % to 1.40%
26	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Voltage @ 50Hz to 10kHz	Using Multi Product Calibrator by Direct Method	1 mV to 10 mV	3.26 % to 0.44 %





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27	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Voltage @ 50Hz to 10kHz	Using Multi Product Calibrator by Direct Method	1 V to 10 V	0.10 % to 0.10 %
28	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Voltage @ 50Hz to 10kHz	Using Multi Product Calibrator by Direct Method	10 mV to 100 mV	0.44 % to 0.10 %
29	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Voltage @ 50Hz to 10kHz	Using Multi Product Calibrator by Direct Method	10 V to 100 V	0.10 % to 0.08 %
30	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Voltage @ 50Hz to 10kHz	Using Multi Product Calibrator by Direct Method	100 V to 1000 V	0.08 % to 0.04 %
31	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	Capacitance @ 100Hz	Using Multi Product Calibrator by Direct method	1 µF to 10 µF	0.47 % to 0.70 %
32	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	Capacitance @ 100Hz	Using Multi Product Calibrator by Direct method	10 µF to 100 µF	0.70 % to 0.71 %



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33	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	Capacitance @ 100Hz	Using Multi Product Calibrator by Direct method	100 $\mu$ F to 10 mF	0.71 % to 1.29 %
34	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	Capacitance @ 1kHz	Using Multi Product Calibrator by Direct method	1 nF to 100 nF	0.33 % to 0.29 %
35	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	Capacitance @ 1kHz	Using Multi Product Calibrator by Direct method	100 nF to 1 $\mu$ F	0.29 % to 0.47 %
36	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	Inductance @ 1kHz	Using Multiproduct calibrator by Direct method	1 H to 10 H	0.61 % to 1.36 %
37	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	Inductance @ 1kHz	Using Multi Product Calibrator by Direct method	1 mH to 1 H	0.59 % to 0.61 %
38	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	Oscilloscope Amplitude (1kHz Sinewave)	Using Multi Product Calibrator by Direct Method	2 mV/div to 50 V/div	0.29 % to 0.07 %





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39	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	Oscilloscope Bandwidth	Using Multi Product Calibrator by Direct Method	5 MHz to 600 MHz	5.6%
40	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	Oscilloscope Timebase (p-p)	Using Multi Product Calibrator by Direct method	2 ns/div to 5 s /div	0.38 % to 0.12 %
41	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	Power Factor @ 50Hz (Lag & Lead)	Using Multi Product Calibrator by Direct Method	0.25 PF to Unity PF	0.066 PF
42	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Current	Using 6½ Digit Multimeter by Direct method	1 µA to 10 µA	2.95 % to 0.43 %
43	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Current	Using 6½ Digit Multimeter by Direct method	1 A to 10 A	0.13 % to 0.19 %
44	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Current	Using 6½ Digit Multimeter by Direct method	1 mA to 1 A	0.08 % to 0.13 %



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45	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 6½ Digit Multimeter by Direct method	10 µA to 100 µA	0.43 % to 0.12 %
46	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 6½ Digit Multimeter by Direct method	100 µA to 1 mA	0.12 % to 0.08 %
47	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC High Voltage	Using High Voltage probe with Digital Multimeter by Direct method	0.5 kV to 40 kV	2.37 % to 2.31 %
48	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 6½ Digit Multimeter by Direct method	1 mV to 10 mV	0.43 % to 0.05 %
49	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 6½ Digit Multimeter by Direct method	1 V to 10 V	0.016 % to 0.007 %
50	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 6½ Digit Multimeter by Direct method	10 mV to 100 mV	0.05 % to 0.02 %



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51	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 6½ Digit Multimeter by Direct method	10 V to 100 V	0.007 % to 0.011 %
52	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 6½ Digit Multimeter by Direct method	100 mV to 1 V	0.02 % to 0.016 %
53	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 6½ Digit Multimeter by Direct method	100 V to 1000 V	0.011 % to 0.012 %
54	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance	Using 6½ Digit Multimeter by Direct method	1 Mohm to 10 Mohm	0.042 % to 0.051 %
55	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance	Using 6½ Digit Multimeter by Direct method	1 Ohm to 10 Ohm	0.49 % to 0.06 %
56	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance	Using 6½ Digit Multimeter by Direct method	10 MOhm to 100 MOhm	0.051 % to 1.21 %





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57	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance	Using 6½ Digit Multimeter by Direct method	10 Ohm to 100 Ohm	0.06 % to 0.02 %
58	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance	Using 6½ Digit Multimeter by Direct method	100 MOhm to 1000 MOhm	1.21 % to 2.32 %
59	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance	Using 6½ Digit Multimeter by Direct method	100 Ohm to 1 MOhm	0.02 % to 0.042 %
60	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multi Product Calibrator by Direct Method	1 A to 10 A	0.01 % to 0.03 %
61	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multi Product Calibrator by Direct Method	1 mA to 100 mA	0.02 % to 0.007 %
62	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multi Product Calibrator by Direct Method	10 µA to 100 µA	0.13 % to 0.02 %



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63	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multi Product Calibrator by Direct Method	10 A to 30 A	0.03 % to 0.26 %
64	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multiproduct calibrator with 2 turn Current coil by Direct method	10 A to 60 A	1.16 % to 0.47 %
65	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multi Product Calibrator by Direct Method	100 $\mu$ A to 1 mA	0.02%
66	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multi Product Calibrator by Direct Method	100 mA to 1 A	0.007 % to 0.01 %
67	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multiproduct calibrator with 50 turn Current coil by Direct method	250 A to 1500 A	0.93 % to 1.50 %
68	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multiproduct calibrator with 10 turn Current coil by Direct method	50 A to 300 A	0.45 % to 0.90 %



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69	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using Multi Product Calibrator by Direct Method	1 mV to 10 mV	0.23 % to 0.03 %
70	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using Multi Product Calibrator by Direct method	1 V to 10 V	0.001 % to 0.001 %
71	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using Multi Product Calibrator by Direct Method	10 mV to 100 mV	0.03 % to 0.004 %
72	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using Multi Product Calibrator by Direct Method	10 V to 1000 V	0.0010 % to 0.002 %
73	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using Multi Product Calibrator by Direct Method	100 mV to 1 V	0.004 % to 0.001 %
74	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance	Using High stability decade Megohm Box by Direct method	1 Mohm to 10 Mohm	0.004 % to 0.017 %





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75	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance	Using Decade Resistance box by Direct method	1 Ohm to 10 Ohm	0.58 % to 0.06 %
76	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance	Using 4 wire low resistance standard by Direct method	10 mohm	0.14%
77	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance	Using High stability decade Megohm Box by Direct method	10 Mohm to 1000 Mohm	0.017 % to 2.44 %
78	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance	Using Decade Resistance box by Direct method	10 Ohm to 100 Ohm	0.06 % to 0.06 %
79	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance	Using 4 wire low resistance standard box by Direct method	100 µohm	0.51%
80	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance	Using High stability decade Megohm Box by Direct method	100 kohm to 1 Mohm	0.002 % to 0.004 %



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81	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance	Using 4 wire low resistance standard by Direct method	100 mohm	0.14%
82	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance	Using Decade Resistance box by Direct method	100 mohm to 1 Ohm	0.14 % to 0.58 %
83	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance	Using Decade Resistance box by Direct method	100 Ohm to 100 kohm	0.06 % to 0.06 %
84	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	B-Type Thermocouple	Using Multi product calibrator by Direct Method	600 °C to 1800 °C	1.26°C
85	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	E-Type Thermocouple	Using Multi product calibrator by Direct Method	(-)250 °C to 1000 °C	0.59°C
86	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	J-Type Thermocouple	Using Multi product calibrator by Direct Method	(-)200 °C to 1200 °C	0.37°C



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87	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	K-Type Thermocouple	Using Multi product calibrator by Direct Method	(-)200 °C to 1370 °C	0.47°C
88	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	N-Type Thermocouple	Using Multi product calibrator by Direct Method	(-)200 °C to 1300 °C	0.49°C
89	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	R-Type Thermocouple	Using Multi Product calibrator by Direct Method	0 °C to 1750 °C	0.94°C
90	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	RTD (PT-100)	Using Multi function calibrator by Direct Method	(-)200 °C to 800 °C	0.41°C
91	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	S-Type Thermocouple	Using Multi product calibrator by Direct Method	0 °C to 1750 °C	1.16°C
92	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	T-Type Thermocouple	Using Multi product calibrator by Direct Method	(-)250 °C to 400 °C	0.69°C





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93	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	B-Type Thermocouple	Using Multi product calibrator by Direct Method	600 °C to 1800 °C	1.26°C
94	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	E-Type Thermocouple	Using Multi product calibrator by Direct Method	(-)250 °C to 1000 °C	0.59°C
95	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	J-Type Thermocouple	Using Multi product calibrator by Direct Method	(-)200 °C to 1200 °C	0.37°C
96	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	K-Type Thermocouple	Using Multi product calibrator by Direct Method	(-)200 °C to 1370 °C	0.47°C
97	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	N-Type Thermocouple	Using Multi product calibrator by Direct Method	(-)200 °C to 1300 °C	0.49°C
98	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	R-Type Thermocouple	Using Multi product calibrator by Direct Method	0 °C to 1750 °C	0.94°C



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99	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	RTD (PT-100)	Using Multi product calibrator by Direct Method	(-)-200 °C to 800 °C	0.64°C
100	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	S-Type Thermocouple	Using Multi Product calibrator by Direct Method	0 °C to 1750 °C	1.16°C
101	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	T-Type Thermocouple	Using Multi Product calibrator by Direct Method	(-)-250 °C to 400 °C	0.69°C
102	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Frequency	Using 6½ Digit Multimeter by Direct method	10 Hz to 100 kHz	0.06 % to 0.015 %
103	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Frequency	Using 6½ Digit Multimeter by Direct method	100 kHz to 1 MHz	0.015 % to 0.012 %
104	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Frequency	Using 6½ Digit Multimeter by Direct method	3 Hz to 10 Hz	0.19 % to 0.06 %



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105	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Time	Using Time totalizer by Comparison method	1 s to 24 hr	0.12 s to 5.36 s
106	ELECTRO-TECHNICAL-TIME & FREQUENCY (Source)	Frequency	Using Multi Product Calibrator by Direct method	1 Hz to 10 Hz	0.004 % to 0.003 %
107	ELECTRO-TECHNICAL-TIME & FREQUENCY (Source)	Frequency	Using Multi Product Calibrator by Direct method	10 Hz to 10 MHz	0.003 % to 0.017 %
108	MECHANICAL-ACCELERATION AND SPEED	Digital/Analog Tachometer (Contact Type)	Using Digital Tachometer & rotating disc by Electric Motor as source by comparison method	10 rpm to 100 rpm	2.99%rdg
109	MECHANICAL-ACCELERATION AND SPEED	Digital/Analog Tachometer (Non-Contact Type)	Using Digital Tachometer using rotating disc by Electric Motor as source	10 rpm to 100 rpm	2.93%rdg





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110	MECHANICAL-ACCELERATION AND SPEED	Digital/Analog Tachometer (Contact Type)	Using Digital Tachometer & rotating disc by Electric Motor as a source by comparison method.	1001 rpm to 9200 rpm	0.06%rdg
111	MECHANICAL-ACCELERATION AND SPEED	Digital/Analog Tachometer (Contact Type)	Using Digital Tachometer & rotating disc by Electric Motor as a source by comparison method.	101 rpm to 1000 rpm	0.35%rdg
112	MECHANICAL-ACCELERATION AND SPEED	Digital/Analog Tachometer (Non-Contact Type)	Using Digital Tachometer & rotating disc by Electric Motor as source by comparison method.	1001 rpm to 90000 rpm	0.23%rdg
113	MECHANICAL-ACCELERATION AND SPEED	Digital/Analog Tachometer (Non-Contact Type)	Using Digital Tachometer using rotating disc by Electric Motor as source	101 rpm to 1000 rpm	0.37%rdg
114	MECHANICAL-ACCELERATION AND SPEED	RPM Measurement (Centrifuge / Stirrer etc with RPM Indicator etc)	Using Digital Tachometer by Comparison method	10 rpm to 100 rpm	2.99%rdg



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115	MECHANICAL-ACCELERATION AND SPEED	RPM Measurement (Centrifuge / Stirrer etc with RPM Indicator)	Using Digital Tachometer by Comparison method	1001 rpm to 90000 rpm	0.23%rdg
116	MECHANICAL-ACCELERATION AND SPEED	RPM Measurement (Centrifuge / Stirrer etc with RPM Indicator)	Using Digital Tachometer by Comparison method	101 rpm to 1000 rpm	0.67%rdg
117	MECHANICAL-ACOUSTICS	Sound Level Meter @1 kHz	Using Sound Level Calibrator by Comparison method	94 dB & 114 dB	0.57dB
118	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Air Gauge Unit (Linearity)	Using setting Plug / Ring Gauge by comparison method	± 0.05 mm	0.69µm
119	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Angle Plate (Flatness)	Using Co-ordinate measuring machine ,Height measuring system with dial gauge	Up to 600 mm	6.80µm
120	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Angle Plate (Parallelism)	Using Co-ordinate measuring machine / Height measuring system with Dial gauge	Up to 600 mm	6.80µm



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121	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Angle Plate (Squareness)	Using Co-ordinate measuring machine / Height measuring system with Dial gauge	Up to 600 mm	6.80µm
122	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Bevel Protractor (L.C:1' )	Using Profile projector / Vision Measuring machine by Comparison method	Up to 360 °	37.05Arc sec
123	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Bevel Protractor (L.C:5')	Using Profile projector / Vision Measuring machine by Comparison method	Up to 360 °	1 min27.45 arc sec
124	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Bore Dial Gauges (Transmission only) Span Diameter(1.5mm to 600mm) L.C : (1.0 µm & Coarser)	Using Universal Length Measuring System by Comparison method	Up to 1.5 mm	1.24µm
125	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Bore Micrometer (Three point) (Analog / Digital) (L.C : 0.001 mm & Coarser)	Using Setting Ring gauge by Comparison method	2.5 mm to 150 mm	1.9µm





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126	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Caliper-Vernier / Digital / Dial / Groove (L.C : 0.01mm & Coarser)	Using Slip Gauges / Long Slip gauges / Slip gauge accessories by Comparison method	0 to 300 mm	6.51µm
127	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Caliper-Vernier / Digital / Dial / Groove (L.C : 0.01mm & Coarser)	Using Slip Gauges / Long Slip gauges / Slip gauge accessories / External Micrometer - Digital by Comparison method	300 mm to 600 mm	6.62µm
128	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Caliper-Vernier / Digital / Dial / Groove (L.C : 0.01mm & Coarser)	Using Slip Gauges / Long Slip gauges / Slip gauge accessories / External Micrometer - Digital by Comparison method	600 mm to 1000 mm	8.73µm
129	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Caliper-Vernier / Digital / Dial / Groove (L.C : 0.02mm & Coarser)	Using Slip Gauges / Long Slip gauges / Slip gauge accessories / External Micrometer - Digital by Comparison method	1000 mm to 2000 mm	11.26µm



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130	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Caliper-Vernier / Digital / Dial / Groove (L.C : 0.02mm & Coarser)	Using Slip Gauges / Long Slip gauges / Slip gauge accessories / External Micrometer - Digital by Comparison method	2000 mm to 3000 mm	16.42µm
131	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Coating Thickness Foil	Using Universal Length measuring system / Electronic Probe with Indicator (LVDT) by Comparison method	0.01 mm to 2 mm	0.23µm
132	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Coating Thickness Gauge (L.C : 0.1µm)	Using Standard Coating Thickness Foils by Comparison method	0.01 mm to 2 mm	0.68µm
133	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Coating Thickness Gauge (L.C : 1µm)	Using Standard Coating Thickness Foils by Comparison method	0.01 mm to 2 mm	1.67µm
134	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Coating Thickness Gauge (L.C : 10µm)	Using Standard Coating Thickness Foils by Comparison method	0.01 mm to 2 mm	6.37µm



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135	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Combination set (L.C:1° & Coarser)	Using Profile projector / Vision measuring machine by Comparison method	0 to 180 °	17 min19.32 arc sec
136	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Comparator Stand (Flatness only)	Using Co-Ordinate measuring machine by Comparison method	Up to 300 mm	5.68µm
137	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Cylindrical Measuring Pin	Using Universal Length measuring system by Comparison method	0.5 mm to 20 mm	0.19µm
138	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Cylindrical Setting Master	Using Universal Length measuring system by Comparison method	1 mm to 100 mm	0.43µm
139	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Degree Protractor (L.C:1° & Coarser)	Using Profile projector by Comparison method	Up to 180 °	17 min





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140	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Depth Gauge - Vernier / Digital / Dial / Hook (L.C : 0.01mm & Coarser)	Using Slip Gauges / Long Slip gauges by Comparison method	0 to 300 mm	6.31µm
141	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Depth Gauge - Vernier / Digital / Dial / Hook (L.C : 0.01mm & Coarser)	Using Slip Gauges / Long Slip gauges by Comparison method	300 mm to 600 mm	8.2µm
142	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Depth Gauge - Vernier / Digital / Dial / Hook (L.C : 0.01mm & Coarser)	Using Slip Gauges / Long Slip gauges by Comparison method	600 mm to 1000 mm	8.2µm
143	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Depth Micrometer (Analog / Digital) (L.C: 0.001mm & Coarser)	Using Slip Gauges / Long Slip gauges by Comparison method	0 to 100 mm	1.5µm
144	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Depth Micrometer (Analog / Digital) (L.C: 0.001mm & Coarser)	Using Slip Gauges / Long Slip gauges by Comparison method	100 mm to 300 mm	1.75µm



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145	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Dial / Digital Thickness gauge (L.C: 0.001mm & Coarser)	Using Universal Length Measuring System & Slip gauges by Comparison method	0 to 25 mm	0.70µm
146	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Dial Caliper gauge / Dial groove gauge (L.C : 0.005mm & Coarser)	Using Slip Gauges / Long Slip gauges / Slip gauge accessories by Comparison method	12.5 mm to 150 mm	3.2µm
147	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Dial Caliper gauge / Dial groove gauge (L.C : 0.005mm & Coarser)	Using Slip Gauges / Long Slip gauges / Slip gauge accessories by Comparison method	2.5 mm to 12.5 mm	3.19µm
148	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Dial Gauges (One Revolution) (L.C: 0.0005mm & Coarser)	Using Universal Length Measuring System by Comparison method	0 to 25 µm	0.3µm
149	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Dial Gauges (One Revolution) (L.C: 0.001mm & Coarser)	Using Universal Length Measuring System by Comparison method	0 to 50 µm	0.36µm



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150	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Dial Snap Gauge (Parallelism)	Using Slip Gauges / Long slip gauges / Optical parallels by comparison method	2 mm to 200 mm	1.2µm
151	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Digital Indicator / LVDT / Electronic probe / Extensometer (L.C: 0.0001mm & Coarser)	Using Universal Length Measuring System / LVDT by Comparison method	0 to 25 mm	0.2µm
152	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Electronic Level (L.C.: 0.001 mm/m)	Using Electronic level & Tilting table by Comparison method	up to 2 mm/m	5.8µm
153	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Elongation Gauge	Using Profile projector By Comparison Method	up to 100 mm	4.7µm
154	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Engineer's Square / Granite Square (Squareness)	Using Co-ordinate measuring machine by Comparison method	Up to 1000 mm	7.2µm





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155	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Engineer's Square / Granite Square (Straightness)	Using Co-ordinate measuring machine by Comparison method	Up to 1000 mm	7.1µm
156	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Engineers Parallels (Flatness)	Using Co-ordinate measuring machine by Comparison method	Up to 500 mm	5.8µm
157	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Engineers Parallels (Parallelism)	Using Co-ordinate measuring machine by Comparison method	Up to 500 mm	5.8µm
158	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Feeler Gauge / Thickness Standards	Using External Micrometer - Digital by Comparison method	0.01 mm to 1 mm	1.17µm
159	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Fillet Gauge (Angular)	Using Profile projector / Vision Measuring Machine by Comparison method	Up to 200 mm	13.32 arc sec



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160	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Fillet Gauge (Linear)	Using Profile projector / Vision Measuring Machine by Comparison method	Up to 200 mm	1.48µm
161	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Flakiness gauge	Using Profile projector by comparison Method	up to 35 mm	3.3µm
162	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Flush Pin Gauge	Using Height measuring system & Co-ordinate measuring machine by Comparison method	Up to 50 mm	5.30µm
163	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Gear Tooth Vernier (L.C : 0.01mm & Coarser)	Using Slip Gauges by Comparison method	0 to 50 mm	6.37µm
164	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Groove / Inside / Caliper Type micrometer (L.C : 0.001 mm & Coarser)	Using Slip Gauges & Slip gauge accessories by Comparison method	5 mm to 100 mm	0.85µm



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165	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Height Gauge - Vernier / Digital / Dial (L.C : 0.01mm & Coarser)	Using Slip Gauges / Long Slip gauges by Comparison method	>300 mm to 600 mm	6.85µm
166	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Height Gauge - Vernier / Digital / Dial (L.C : 0.01mm & Coarser)	Using Slip Gauges / Long Slip gauges by Comparison method	>600 mm to 1000 mm	8.1µm
167	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Height Gauge - Vernier / Digital / Dial (L.C : 0.01mm & Coarser)	Using Slip Gauges / Long Slip gauges by Comparison method	0 to 300 mm	6.51µm
168	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Height Master (L.C : 0.001 mm & Coarser)	Using Co-ordinate measuring machine / Height measuring system by Comparison method	5 mm to 310 mm	4.2µm
169	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Jigs and Fixtures / Receiver gauge (Radius)	Using Coordinate measuring Machine by comparison method	up to 1200 mm	7.73µm





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170	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Lever type Dial Gauge (L.C: 0.001mm & Coarser)	Using Universal Length Measuring System by Comparison method	0 to 0.14 mm	0.32µm
171	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Lever type Dial Gauge (L.C: 0.002mm & Coarser)	Using Universal Length Measuring System by Comparison method	0 to 0.6 mm	0.7µm
172	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Lever type Dial Gauge (L.C: 0.01mm & Coarser)	Using Universal Length Measuring System by Comparison method	0 to 2 mm	2.91µm
173	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Limit Gauge (Angle)	Using Vision Measuring Machine by comparison method	Up to 360 °	30.2Arc sec
174	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Limit Gauge (Height / Depth / Length / Width / Radius)	Using Co-ordinate measuring machine by Comparison method	>500 mm to 1000 mm	7.8µm



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175	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Limit Gauge (Height / Depth / Length / Width / Radius)	Using Co-ordinate measuring machine / Vision Measuring Machine by Comparison method	Up to 500 mm	5.9µm
176	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Micrometer (Analog / Digital) (L.C: 0.001mm & Coarser)	Using Slip Gauges / Long Slip gauges by Comparison method	>100 mm to 300 mm	1.51µm
177	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Micrometer (Analog / Digital) (L.C: 0.001mm & Coarser)	Using Slip Gauges / Long Slip gauges by Comparison method	>25 mm to 100 mm	0.84µm
178	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Micrometer (Analog / Digital) (L.C: 0.001mm & Coarser)	Using Slip Gauges / Long Slip gauges by Comparison method	>300 mm to 500 mm	2.7µm
179	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Micrometer (Analog / Digital) (L.C: 0.001mm & Coarser)	Using Slip Gauges / Long Slip gauges by Comparison method	>500 mm to 1000 mm	5.1µm



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180	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Micrometer (Analog / Digital) (L.C: 0.001mm & Coarser)	Using Slip Gauges by Comparison method	0 to 25 mm	0.66µm
181	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Micrometer (Analog / Digital) (L.C: 0.01mm & Coarser)	Using Slip Gauges / Long Slip gauges by Comparison method	>1000 mm to 1500 mm	7.78µm
182	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Micrometer Head (L.C : 0.0001 mm & Coarser)	Using Universal Length measuring system / Electronic Probe with Indicator (LVDT) by Comparison method	Up to 100 mm	0.44µm
183	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	PI Tape (L.C : 0.1mm & Coarser)	Using Profile projector / Scale and Tape Measuring Calibrator by Comparison method	Up to 3 m	45 x Sqrt (L) µm (where L in meter)
184	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Pistol Caliper / OD Caliper / OD Groove dial gauge (L.C : 0.01mm & Coarser)	Using Slip Gauges by Comparison method	0 to 100 mm	3.97µm





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185	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Pistol Caliper / OD Caliper / OD Groove dial gauge (L.C : 0.1mm & Coarser)	Using Slip Gauges by Comparison method	0 to 100 mm	35.13µm
186	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Pitch Micrometer (Angular)	Using Profile projector / Vision Measuring Machine by Comparison method	55 ° to 60 °	11.17Arc sec
187	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Pitch Micrometer (Linear) (L.C : 0.001mm & Coarser)	Using Slip Gauges / Long Slip gauges by Comparison method	> 25 mm to 100 mm	0.84µm
188	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Pitch Micrometer (Linear) (L.C : 0.001mm & Coarser)	Using Slip Gauges / Long Slip gauges by Comparison method	Up to 25 mm	0.66µm
189	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Plain Plug Gauge / Air Plug Gauge / Setting Plug Gauge	Using Universal Length measuring system by Comparison method	>400 mm to 500 mm	2.45µm



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190	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Plain Plug Gauge / Air Plug Gauge / Setting Plug Gauge / Width gauge / Slot checking gauge/Segmental plug gauge	Using Universal Length measuring system by Comparison method	1 mm to 100 mm	0.6µm
191	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Plain Plug Gauge / Air Plug Gauge / Setting Plug Gauge /Segmental plug gauge	Using Universal Length measuring system by Comparison method	>200 mm to 300 mm	1.5µm
192	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Plain Plug Gauge / Air Plug Gauge / Setting Plug Gauge/Segmental plug gauge	Using Universal Length measuring system by Comparison method	>100 mm to 200 mm	1.03µm
193	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Plain Plug Gauge / Air Plug Gauge / Setting Plug Gauge/Segmental plug gauge	Using Universal Length measuring system by Comparison method	>300 mm to 400 mm	2µm
194	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Plain Ring Gauge / Setting Ring Gauge / Air Ring Gauge/Master Ring gauge	Using Universal Length measuring system by Comparison method	>140 mm to 230 mm	2.42µm



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195	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Plain Ring Gauge / Setting Ring Gauge / Air Ring Gauge/Master Ring gauge	Using Universal Length measuring system by Comparison method	>230 mm to 320 mm	3.25µm
196	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Plain Ring Gauge / Setting Ring Gauge / Air Ring Gauge/Master Ring gauge	Using Universal Length measuring system by Comparison method	1 mm to 50 mm	1.53µm
197	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Plain Ring Gauge / Setting Ring Gauge / Air Ring Gauge/Master Ring gauge	Using Universal Length measuring system by Comparison method	>320 mm to 400 mm	3.7µm
198	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Plain Ring Gauge / Setting Ring Gauge / Air Ring Gauge/Master Ring gauge	Using Universal Length measuring system by Comparison method	>50 mm to 140 mm	1.40µm
199	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Plunger type Dial Gauge (Mechanical / Digital) (L.C: 0.001mm & Coarser)	Using Universal Length Measuring System by Comparison method	0 to 50 mm	0.63µm





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200	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Plunger type Dial Gauge (Mechanical / Digital) (L.C: 0.01mm & Coarser)	Using Universal Length Measuring System by Comparison method	0 to 100 mm	2.92µm
201	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Radius Gauge	Using Profile projector / Vision Measuring Machine by Comparison method	Up to 50 mm	4.5µm
202	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Raiser Block	Using Co-ordinate measuring machine / Height measuring system by Comparison method	Up to 300 mm	5.74µm
203	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Scale (L.C : 0.5 mm & Coarser)	Using Profile projector / Scale & Tape Measuring Calibrator by Comparison method	Up to 2000 mm	147 x Sqrt (L) µm (where L in m)
204	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Setting Rod for Micrometer	Using Universal Length Measuring System / Height Measuring System by Comparison method	>100 mm to 500 mm	2.18µm



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205	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Setting Rod for Micrometer	Using Universal Length Measuring System / Height Measuring system by Comparison method	>500 mm to 1000 mm	4.71µm
206	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Setting Rod for Micrometer	Using Universal Length Measuring System / Height Measuring system by Comparison method	25 mm to 100 mm	0.43µm
207	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Sine Bar (Angle)	Using Angle Gauge Block, Co-Ordinate measuring machine & Slip gauges by Comparison method	Up to 200 mm	4.68Arc sec
208	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Slip gauge Accessories (Flatness only)	Using Optical parallels by Comparison method	Up to 300 mm	0.40µm
209	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Snap Gauge - Fixed / Adjustable / Gap Gauge	Using Universal Length measuring system / Slip Gauge / Long Slip Gauges by Comparison method	100 mm to 200 mm	1.01µm



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210	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Snap Gauge - Fixed / Adjustable / Gap Gauge	Using Universal Length measuring system / Slip Gauge / Long Slip Gauges by Comparison method	200 mm to 300 mm	1.8µm
211	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Snap Gauge - Fixed / Adjustable / Gap Gauge	Using Universal Length measuring system / Slip Gauge / Long Slip Gauges by Comparison method	3 mm to 50 mm	0.53µm
212	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Snap Gauge - Fixed / Adjustable / Gap Gauge	Using Universal Length measuring system / Slip Gauge / Long Slip Gauges by Comparison method	300 mm to 400 mm	1.89µm
213	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Snap Gauge - Fixed / Adjustable / Gap Gauge	Using Universal Length measuring system / Slip Gauge / Long Slip Gauges by Comparison method	50 mm to 100 mm	0.63µm
214	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Snap Micrometer (L.C : 0.001 mm & Coarser)	Using Slip Gauges by Comparison method	0 to 100 mm	0.84µm





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215	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Spirit Level (Type 1, 2 & 3) (Sensitivity : 0.02 mm/m & Coarser)	Using Electronic level (Blue Level), Tilting table & Height measuring system by Comparison method	Up to 300 mm	7.03µm/m
216	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Spirit Level (Type 1, 2 & 3) (Sensitivity : 0.01 mm/m)	Using Electronic level (Blue Level), Height measuring system & Tilting table by Comparison method	Up to 300 mm	4.94µm/m
217	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Stick Micrometer / Tubular (L.C : 0.01 mm & Coarser)	Using Universal Length Measuring System, Slip Gauges / Long Slip gauges by Comparison method	50 mm to 500 mm	3.62µm
218	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Stick Micrometer / Tubular (L.C : 0.01 mm & Coarser)	Using Universal Length Measuring System, Slip Gauges / Long Slip gauges by Comparison method	500 mm to 1000 mm	6µm
219	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Straight Edge (Parallelism)	Using Co-ordinate measuring machine by Comparison method	Up to 1000 mm	7.2µm



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220	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Straight Edge (Straightness)	Using Co-ordinate measuring machine by Comparison method	Up to 1000 mm	7.12µm
221	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Surface Plate	Using Electronic Level (Blue Level) by comparison method	upto 3500 mm x 2600 mm	0.54 x sqrt(L+W)/100µm, L, W is in mm
222	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Surface Roughness Specimen	Using Surface Roughness Tester & Surface Roughness Specimens by Comparison tester	Up to 10 µm	6% of rdg
223	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Surface Roughness Tester	Using Surface Roughness Specimens & Surface Roughness Specimen - Depth Master by Comparison method	Up to 6 µm	10.2% of rdg
224	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Tape (L.C : 1mm & Coarser)	Using Profile projector / Scale & Tape Measuring Calibrator by Comparison method	Up to 30 m	289.55x sqrt(L) (Where L in "m")



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225	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Taper scale	Using Profile projector / Vision Measuring Machine by Comparison method	Up to 200 mm	1.72µm
226	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Taper Thread Plug Gauge (Effective diameter)	Using Universal Length measuring system / Profile projector & Thread Measuring Cylinders by Comparison method	7 mm to 100 mm	1.29µm
227	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Taper Thread Plug Gauge (Effective diameter)	Using Universal Length measuring system / Profile projector & Thread Measuring Cylinders by Comparison method	100 mm to 200 mm	1.8µm
228	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Taper Thread Ring Gauge (Effective diameter)	Using Universal Length measuring system by Comparison method	100 mm to 200 mm	1.56µm





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229	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Taper Thread Ring Gauge (Effective diameter)	Using Universal Length measuring system by Comparison method	7 mm to 100 mm	1.42µm
230	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Test Sieves (Perforated Plate / Wire cloth)	Using Digital caliper by Comparison method	10 mm to 125 mm	9.38µm
231	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Test Sieves (Perforated Plate / Wire cloth)	Using Profile projector / Vision Measuring Machine by Comparison method	4 mm to 10 mm	4.3µm
232	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Test Sieves (Perforated Plate / Wire cloth)	Using Profile projector / Vision Measuring Machine by Comparison method	Up to 4 mm	3.7µm
233	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Thread Measuring Cylinders	Using Universal Length measuring system by Comparison method	0.17 mm to 10 mm	0.15µm



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234	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Thread Pitch Gauge	Using Profile projector / Vision Measuring Machine by Comparison method	0.2 mm to 7 mm	3.7µm
235	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Thread Plug Gauge (Major diameter, Effective Diameter, Pitch)	Using Universal Length Measuring System / Profile Projector & Thread Measuring Cylinders by Comparison method	200 mm to 300 mm	1.7µm
236	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Thread Plug Gauge (Major diameter, Effective Diameter, Pitch)	Using Universal Length Measuring System / Profile Projector & Thread Measuring Cylinders by Comparison method	300 mm to 400 mm	1.85µm
237	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Thread Plug Gauge / Wear Check Plug Gauge (Major diameter, Effective Diameter, Pitch)	Using Universal Length Measuring System / Profile Projector & Thread Measuring Cylinders by Comparison method	100 mm to 200 mm	1.34µm



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238	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Thread Plug Gauge / Wear Check Plug Gauge (Major diameter, Effective Diameter, Pitch)	Using Universal Length Measuring System / Profile Projector & Thread Measuring Cylinders by Comparison method	1 mm to 100 mm	1.2µm
239	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Thread Ring Gauge (Effective diameter)	Using Universal Length measuring system by Comparison method	300 mm to 400 mm	3.36µm
240	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Thread Ring Gauge (Effective diameter)	Using Universal Length measuring system by Comparison method	200 mm to 300 mm	3µm
241	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Thread Ring Gauge / Wear Check Ring Gauge (Effective diameter)	Using Universal Length measuring system by Comparison method	100 mm to 200 mm	1.5µm
242	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Thread Ring Gauge / Wear Check Ring Gauge (Effective diameter)	Using Universal Length measuring system by Comparison method	2.5 mm to 100 mm	1.31µm





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243	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Ultrasonic Thickness gauge (L.C: 0.01mm & Coarser)	Using Slip gauges by comparison method	0 to 100 mm	16.8µm
244	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Ultrasonic Thickness gauge (L.C: 0.1mm & Coarser)	Using Slip gauges by Comparison method	0 to 100 mm	61.1µm
245	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	V-Block (Flatness)	Using Co-ordinate measuring machine by Comparison method	Up to 300 mm	5.47µm
246	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	V-Block (Parallelism)	Using Co-ordinate measuring machine by comparison method	Up to 300 mm	5.49µm
247	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	V-Block (Perpendicularity)	Using Co-ordinate measuring machine by comparison method	Up to 300 mm	5.48µm



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248	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	V-Block (Symmetry)	Using Co-ordinate measuring machine by comparison method	Up to 300 mm	5.48µm
249	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Angular Graticule	Using Profile projector / Vision Measuring Machine by Comparison method	Up to 360 °	13.32Arc sec
250	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Ball Bar Calibrator	Using Coordinate Measuring Machine by Comparison method	50 mm to 300 mm	3.71+(L/5096)µm where "L" in mm
251	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Ball Bar System (Transducer) (L.C 0.0001 mm)	Using Universal Length measuring system by Comparison method	±1 mm	0.22µm
252	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Caliper Checker	Using Laser Interferometer & Height Measuring System by comparison method	up to 1000 mm	( 0.05 + 0.45 L ) µm where "L" in m
253	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Caliper Checker / Depth Micro Checker	Using Co-ordinate measuring machine / Height measuring system	Up to 1000 mm	0.31+ (L/220) µm where "L" in mm



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254	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Co ordinate Measuring Machine (Linear)	Using Laser Interferometer by Comparison method	0 mm to 6000 mm	( 0.05+ 0.53 L ) $\mu\text{m}$ where "L" in m
255	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Co-ordinate measuring machine (Linear)	Using "K" Grade Slip gauges, long slip gauges by Comparison method	Up to 1000 mm	0.91+(L/212) $\mu\text{m}$ where "L" in mm
256	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Dial Calibration Tester (L.C: 0.0001 mm & Coarser)	Using Universal Length measuring system / Electronic Probe with Indicator (LVDT)	0 to 25 mm	0.18 $\mu\text{m}$
257	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Floating carriage Diameter Measuring Machine (Overall Accuracy)	Using Cylindrical Setting masters by comparison Method	Up to 25 mm	0.88 $\mu\text{m}$
258	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Glass Scale / Glass Graticule	using Laser Interferometer and Vision Measuring Machine combined by Comparison method	Up to 300 mm	(0.050+ 0.25 L) $\mu\text{m}$ where "L" in m
259	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Height Measuring System (L.C: 0.0001 mm & Coarser)	Using "K" Grade Slip gauges by Comparison method	0 to 1000 mm	5.62 $\mu\text{m}$





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260	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Height Measuring System - Linear (L.C: 0.0001 mm & Coarser)	Using Laser Interferometer by Comparison method	0 to 1000 mm	( 0.14 + 0.38 L)µm. where "L" in m
261	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Length Bar / Length Rod / Long Slip Gauges	Using Universal Length measuring system & "K" Grade Long Slip Gauges by Comparison method	1000 mm	4.71µm
262	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Length Bar / Length Rod / Long Slip Gauges	Using Universal Length measuring system & "K" Grade Long Slip Gauges by Comparison method	125 mm	0.74µm
263	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Length Bar / Length Rod / Long Slip Gauges	Using Universal Length measuring system & "K" Grade Long Slip Gauges by Comparison method	150 mm	0.79µm
264	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Length Bar / Length Rod / Long Slip Gauges	Using Universal Length measuring system & "K" Grade Long Slip Gauges by Comparison method	175 mm	0.86µm
265	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Length Bar / Length Rod / Long Slip Gauges	Using Universal Length measuring system & "K" Grade Long Slip Gauges by Comparison method	200 mm	0.93µm



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266	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Length Bar / Length Rod / Long Slip Gauges	Using Universal Length measuring system & "K" Grade Long Slip Gauges by Comparison method	250 mm	1.19µm
267	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Length Bar / Length Rod / Long Slip Gauges	Using Universal Length measuring system & "K" Grade Long Slip Gauges by Comparison method	300 mm	1.34µm
268	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Length Bar / Length Rod / Long Slip Gauges	Using Universal Length measuring system & "K" Grade Long Slip Gauges by Comparison method	400 mm	1.80µm
269	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Length Bar / Length Rod / Long Slip Gauges	Using Universal Length measuring system & "K" Grade Long Slip Gauges by Comparison method	500 mm	2.18µm
270	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Length Measuring Machine - Horizontal / Vertical (Linear Axis) (L.C 0.0001 mm)	Using Laser Interferometer by comparison method	1000 mm to 3000 mm	( 0.50+ 0.34 L)µm where "L" in m
271	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Length Measuring Machine - Horizontal / Vertical (Linear Axis) (L.C 0.0001 mm)	Using Laser Interferometer by comparison method	up to 1000 mm	(0.020+0.48 L) µm (L in m )



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272	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Profile Projector / Tool maker Microscope / Vision measuring machine (Angular) (L.C: 1 Arc sec)	Using Angle Gauge Block / Angular graticule by Comparison method	0 to 360 °	13.68Arc sec
273	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Profile Projector / Tool maker Microscope / Vision measuring machine (Linear) (L.C : 0.1µm & Coarser)	Using Glass Scale by Comparison method	400 mm x 400 mm	2.53µm
274	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Profile Projector / Tool maker Microscope / Vision measuring machine (Linear) (L.C : 0.1µm & Coarser)	Using Laser Interferometer by Comparison method	0 to 400 mm	(0.02+ 0.46 L)µm where "L" in m
275	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Profile Projector / Tool maker Microscope / Vision measuring machine (Magnification)	Using Glass Scale / Digital Vernier caliper by Comparison method	100 X	0.24%
276	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Scale & Tape measuring Machine / Calibrator (L.C : 0.001 mm)	Using Laser Interferometer by comparison method	Up to 1000 mm	(0.15+ 0.35 L)µm where "L" in m





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277	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Scale & Tape measuring Machine / Calibrator (L.C : 0.001 mm)	Using "K" Grade Slip gauges, long slip gauges by Comparison method	Up to 1000 mm	5.78µm
278	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Slip Gauge	Using Gauge block comparator with reference grade slip gauges by Comparison method	>25 mm to 50 mm	0.28µm
279	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Slip Gauge	Using Gauge block comparator with reference grade slip gauges by Comparison method	>50 mm to 75 mm	0.40µm
280	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Slip Gauge	Using Gauge block comparator with reference grade slip gauges by Comparison method	>75 mm to 100 mm	0.54µm
281	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Slip Gauge	Using Gauge block comparator with reference grade slip gauges by Comparison method	0.5 mm to 25 mm	0.18µm
282	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Universal Length Measuring System / Length Measuring Machine / Metroscope (L.C : 0.01µm & coarser)	Using "K" Grade Slip gauges by Comparison method	0 to 100 mm (absolute)	0.17+(L/238) µm, where "L" in mm



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283	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Universal Length Measuring System / Length Measuring Machine / Metroscope (L.C : 0.01µm & coarser)	Using "K" Grade Slip gauges & "K" Grade Long slip gauges by Comparison method	100 mm to 500 mm	0.46 + +(L/240)µm, where "L" in mm
284	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Universal Length Measuring System / Length Measuring Machine / Metroscope (L.C : 0.01µm & coarser)	Using "K" Grade Slip gauges & "K" grade long slip gauges by Comparison method	500 mm to 1000 mm	2.67+(L/340) µm, where "L" in mm
285	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Universal Length Measuring System / Metroscope (L.C : 0.01µm & coarser)	Using Laser Interferometer by Comparison method	0 to 100 mm (Absolute)	(0.012 + 0.44 L) µm where "L" in m
286	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Universal Length Measuring System / Metroscope (L.C : 0.01µm & coarser)	Using Laser Interferometer by comparison method	100 mm to 1000 mm	(0.053+ 0.45 L)µm where "L" in m
287	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Universal Length Measuring System / Metroscope (L.C : 0.01µm & coarser)	Using Laser Interferometer by comparison method	1000 mm to 3000 mm	(0.50+ 0.34 L)µm where "L" in m



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288	MECHANICAL-PRESSURE INDICATING DEVICES	Hydraulic Pressure: Digital & Dial pressure gauges / Pressure Transmitter /Transducers with or without indicators, Indicator of Pressure switches	Using Digital Pressure gauge with Hydraulic pressure Pump, Multifunction calibrator & Portable Pressure calibrator by comparison method based on DKD R-6-1	0 bar to 700 bar	0.05% of rdg
289	MECHANICAL-PRESSURE INDICATING DEVICES	Hydraulic Pressure: Digital & Dial pressure gauges / Pressure Transmitter /Transducers with or without indicators Indicator of Pressure switches	Using Digital Pressure Test Gauge, Multifunction calibrator by comparison method based on DKD R-6-1	0 to 2800 bar	0.16% of rdg
290	MECHANICAL-PRESSURE INDICATING DEVICES	Low Pressure (Pneumatic): Maghnelic Gauges, Manometer, Low Pressure Gauges/Vacuum gauges, Differential Pressure Gauge, Pressure calibrators	Using Digital manometer with Pneumatic pressure pump by comparison method based on DKD R-6-1 & 2	(-)0.25 kpa to 0.25 kpa	2.9% of rdg





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291	MECHANICAL-PRESSURE INDICATING DEVICES	Low Pressure (Pneumatic): Maghnelic Gauges, Manometer, Low Pressure Gauges/Vacuum gauges, Differential Pressure Gauge, Pressure calibrators	Using Digital manometer with Pneumatic pressure pump by comparison method based on DKD R-6-1 & 2	(-)-2.5 kpa to 2.5 kpa	2.2% of rdg
292	MECHANICAL-PRESSURE INDICATING DEVICES	Pressure - Pneumatic Digital & Dial pressure gauges / Pressure Transmitter /Transducers with or without indicators, Indicator of Pressure switches	Using Digital Pressure gauge with Pneumatic pressure Pump, Multifunction calibrator & Portable Pressure calibrator by comparison method based on DKD R-6-1	0 to 20 bar	0.05% of rdg
293	MECHANICAL-PRESSURE INDICATING DEVICES	Vacuum - Digital & Dial Vacuum gauges / Vacuum Transmitter/Transducer, with or without indicators Indicator of Pressure switches	Using Digital Pressure gauge with Pneumatic pressure Pump, Multifunction calibrator & Portable Pressure calibrator by comparison method based on DKD R-6-1	(-)-1.0 bar to 0	0.75% of rdg



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294	MECHANICAL-TORQUE GENERATING DEVICES	Torque Generating Devices TYPE I (Class A,B,C,D,E) Type II (Class A,B,C,D,E,F,G)	Torque Transducer with indicator & Torque wrench calibration system based on IS: 16906-2018.	20 Nm to 500 Nm	1.26% of rdg
295	MECHANICAL-TORQUE GENERATING DEVICES	Torque Generating Devices TYPE I (Class A,B,C,D,E) Type II (Class A,B,C,D,E,F,G)	Torque Transducer with indicator & Torque wrench calibration system based on IS: 16906-2018.	0.5 Nm to 20 Nm	1.17% of rdg
296	MECHANICAL-TORQUE GENERATING DEVICES	Torque Generating Devices TYPE I (Class A,B,C,D,E) Type II (Class A,B,C,D,E,F,G)	Torque Transducer with indicator & Torque wrench calibration system based on IS: 16906-2018.	500 Nm to 2000 Nm	1.21% of rdg
297	MECHANICAL-VOLUME	Glass Ware (Measuring Cylinder, Volumetric Flask & Bottle Top Dispenser)	Using Weighing balance (Readability:10mg) & Distilled water by Volumetric Method as per ISO 4787	1000 ml to 5000 ml	0.28ml
298	MECHANICAL-VOLUME	Glass Ware (Measuring Cylinder, Volumetric Flask & Bottle Top Dispenser)	Using Weighing balance (Readability:100mg) & Distilled water by Volumetric Method as per ISO 4787	5000 ml to 20000 ml	0.37ml



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299	MECHANICAL-VOLUME	Glass Ware (Measuring Cylinder, Volumetric Flask & Bottle Top Dispenser)	Using Weighing balance (Readability:1mg) & Distilled water by Volumetric Method as per ISO 4787	100 ml to 1000 ml	0.059ml
300	MECHANICAL-VOLUME	Glass Ware (Pipette, Burette)	Using Weighing balance (Readability:0.01mg , 0.1mg) & Distilled water by Volumetric Method as per ISO 4787	0.5 ml to 10 ml	0.088ml
301	MECHANICAL-VOLUME	Glass Ware (Pipette, Burette, Measuring Cylinder)	Using Weighing balance (Readability:0.01mg , 0.1mg) & Distilled water by Volumetric Method as per ISO 4787	10 ml to 100 ml	0.09ml
302	MECHANICAL-VOLUME	Micro Pipettes	Using Micro-balance (Readability: 0.001mg) & Distilled water by Volumetric Method as per ISO 8655	1 µl to 10 µl	0.17µl





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303	MECHANICAL-VOLUME	Micro Pipettes	Using Microbalance (Readability: 0.001mg) & Distilled water by Volumetric Method as per ISO 8655	1 ml to 5 ml	1.63µl
304	MECHANICAL-VOLUME	Micro Pipettes	Using Microbalance (Readability: 0.001mg) & Distilled water by Volumetric Method as per ISO 8655	10 µl to 100 µl	0.10µl
305	MECHANICAL-VOLUME	Micro Pipettes	Using Microbalance (Readability: 0.001mg) & Distilled water by Volumetric Method as per ISO 8655	100 µl to 1 ml	3.30µl
306	MECHANICAL-VOLUME	Micro Pipettes	Using Microbalance (Readability: 0.001mg) & Distilled water by Volumetric Method as per ISO 8655	5 ml to 10 ml	2.74µl
307	MECHANICAL-WEIGHING SCALE AND BALANCE	Spring Balance (Mechanical) (Readability : 200g)	Using E2 & M1 class weights based on IS 1702	25 kg to 50 kg	61.22g



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308	MECHANICAL-WEIGHING SCALE AND BALANCE	Spring Balance (Mechanical) (Readability: 100g)	Using E2 class weights based on IS 1702	10 kg to 25 kg	29.31g
309	MECHANICAL-WEIGHING SCALE AND BALANCE	Spring Balance (Mechanical) (Readability: 10g)	Using E1 class weights & E2 class weights based on IS 1702	100 g to 1 kg	3.06g
310	MECHANICAL-WEIGHING SCALE AND BALANCE	Spring Balance (Mechanical) (Readability: 1g)	Using E1 class weights based on OIML R 76-1 and IS 1702	0 to 100 g	0.31g
311	MECHANICAL-WEIGHING SCALE AND BALANCE	Spring Balance (Mechanical) (Readability: 20g)	Using E2 class weights based on IS 1702	1 kg to 10 kg	6.12g
312	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Balance (Class I & Coarser, Readability: 0.001mg & Coarser)	Using E1 class weights based on OIML R 76-1	1 mg to 20 g	0.025mg
313	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Balance (Class I & Coarser, Readability: 0.01mg & Coarser)	Using E1 class weights based on OIML R 76-1	1 mg to 60 g	0.035mg
314	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Balance (Class I & Coarser, Readability: 0.1mg & Coarser)	Using E1 class weights based on OIML R 76-1	10 mg to 220 g	0.070mg



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315	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Balance (Class II & Coarser, Readability: 0.2g & Coarser)	Using E2 class weights based on OIML R 76-1	50 g to 12 kg	0.12g
316	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Balance (Class II & Coarser, Readability: 10mg & Coarser)	Using E2 class weights based on OIML R 76-1	500 mg to 6 kg	9.70mg
317	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Balance (Class II & Coarser, Readability: 1mg & Coarser)	Using E2 class weights based on OIML R 76-1	100 mg to 1 kg	0.93mg
318	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Balance (Class III & Coarser, Readability: 10g & Coarser)	Using M1 class weights based on OIML R 76-1	200 g to 150 kg	6.09g
319	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Balance (Class III & Coarser, Readability: 20g & Coarser)	Using M1 class weights based on OIML R 76-1	400 g to 300 kg	12.17g
320	MECHANICAL-WEIGHTS	Weights (E2 class & Coarser)	Using E1 class weights & Micro balance (Readability:0.001m g) as per OIML R111 by Substitution method through ABBA Cycles	1 g	0.0035mg





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321	MECHANICAL-WEIGHTS	Weights (E2 class & Coarser)	Using E1 class weights & Micro balance (Readability:0.001mg) as per OIML R111 by Substitution method through ABBA Cycles	1 mg	0.0015mg
322	MECHANICAL-WEIGHTS	Weights (E2 class & Coarser)	Using E1 class weights & Micro balance (Readability:0.001mg) as per OIML R111 by Substitution method through ABBA Cycles	10 g	0.0070mg
323	MECHANICAL-WEIGHTS	Weights (E2 class & Coarser)	Using E1 class weights & Micro balance (Readability:0.001mg) as per OIML R111 by Substitution method through ABBA Cycles	10 mg	0.0014mg
324	MECHANICAL-WEIGHTS	Weights (E2 class & Coarser)	Using E1 class weights & Weighing balance (Readability:0.1mg) as per OIML R111 by Substitution method through ABBA Cycles	100 g	0.087mg



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325	MECHANICAL-WEIGHTS	Weights (E2 class & Coarser)	Using E1 class weights & Micro balance (Readability:0.001mg) as per OIML R111 by Substitution method through ABBA Cycles	100 mg	0.0015mg
326	MECHANICAL-WEIGHTS	Weights (E2 class & Coarser)	Using E1 class weights & Micro balance (Readability:0.001mg) as per OIML R111 by Substitution method through ABBA Cycles	2 g	0.004mg
327	MECHANICAL-WEIGHTS	Weights (E2 class & Coarser)	Using E1 class weights & Micro balance (Readability:0.001mg) as per OIML R111 by Substitution method through ABBA Cycles	20 g	0.008mg



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328	MECHANICAL-WEIGHTS	Weights (E2 class & Coarser)	Using E1 class weights & Micro balance (Readability:0.001mg) as per OIML R111 by Substitution method through ABBA Cycles	20 mg	0.0014mg
329	MECHANICAL-WEIGHTS	Weights (E2 class & Coarser)	Using E1 class weights & Weighing balance (Readability:0.1mg) as per OIML R111 by Substitution method through ABBA Cycles	200 g	0.087mg
330	MECHANICAL-WEIGHTS	Weights (E2 class & Coarser)	Using E1 class weights & Micro balance (Readability:0.001mg) as per OIML R111 by Substitution method through ABBA Cycles	200 mg	0.002mg
331	MECHANICAL-WEIGHTS	Weights (E2 class & Coarser)	Using E1 class weights & Micro balance (Readability:0.001mg) as per OIML R111 by Substitution method through ABBA Cycles	5 g	0.005mg





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332	MECHANICAL-WEIGHTS	Weights (E2 class & Coarser)	Using E1 class weights & Micro balance (Readability:0.001mg) as per OIML R111 by Substitution method through ABBA Cycles	5 mg	0.0015mg
333	MECHANICAL-WEIGHTS	Weights (E2 class & Coarser)	Using E1 class weights & Weighing balance (Readability:0.01mg) as per OIML R111 by Substitution method through ABBA Cycles	50 g	0.015mg
334	MECHANICAL-WEIGHTS	Weights (E2 class & Coarser)	Using E1 class weights & Micro balance (Readability:0.001mg) as per OIML R111 by Substitution method through ABBA Cycles	50 mg	0.0015mg
335	MECHANICAL-WEIGHTS	Weights (E2 class & Coarser)	Using E1 class weights & Micro balance (Readability:0.001mg) as per OIML R111 by Substitution method through ABBA Cycles	500 mg	0.003mg



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336	MECHANICAL-WEIGHTS	Weights (F1 class & Coarser)	Using E2 class weights & Weighing balance (Readability:1mg) as per OIML R111 by Substitution method through ABBA Cycles	1 kg	0.99mg
337	MECHANICAL-WEIGHTS	Weights (F1 class & Coarser)	Using E2 class weights & Weighing balance (Readability:0.01g) as per OIML R111 by Substitution method through ABBA Cycles	2 kg	8.55mg
338	MECHANICAL-WEIGHTS	Weights (F1 class & Coarser)	Using E2 class weights & Weighing balance (Readability:0.01g) as per OIML R111 by Substitution method through ABBA Cycles	5 kg	8.68mg
339	MECHANICAL-WEIGHTS	Weights (F1 class & Coarser)	Using E2 class weights & Weighing balance (Readability:1mg) as per OIML R111 by Substitution method through ABBA Cycles	500 g	0.83mg



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340	MECHANICAL-WEIGHTS	Weights (F2 class & Coarser)	Using E2 class weights & Weighing balance (Readability:0.1g) as per OIML R111 by Substitution method through ABBA Cycles	20 kg	95.48mg
341	MECHANICAL-WEIGHTS	Weights (M1 class & Coarser)	Using E2 class weights & Weighing balance (Readability:0.1g) as per OIML R111 by Substitution method through ABBA Cycles	10 kg	85.3mg
342	MECHANICAL-WEIGHTS	Weights (E2 class & Coarser)	Using E1 class weights & Micro balance (Readability:0.001mg) as per OIML R111 by Substitution method through ABBA Cycles	2 mg	0.0017mg
343	THERMAL-TEMPERATURE	Liquid-In-Glass Thermometers	Using 4 Wire RTD sensor with Multifunction calibrator in Ultra Cryogenic Liquid bath by Comparison Method	(-)80 °C to 30 °C	0.40°C





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344	THERMAL-TEMPERATURE	Liquid-In-Glass Thermometers	Using 4 Wire RTD sensor with Multifunction calibrator in High Temperature liquid bath by Comparison Method	30 °C to 150 °C	0.42°C
345	THERMAL-TEMPERATURE	RTD's , Thermocouples , Temperature Gauges , Pyrometer with sensors , Temp sensors with or without Indicators/Controllers, Data logger with sensors, Thermometer with probe, Temperature Transmitter	Using 4 Wire RTD sensor with multifunction calibrator, portable furnace, Temperature bath by Comparison Method	140 °C to 400 °C	0.36°C
346	THERMAL-TEMPERATURE	RTD's , Thermocouples ,Temperature sensors with or without Indicators/Controllers, Temperature Transmitters, Data logger with sensors, Thermometer with probe	Using 4 Wire RTD sensor with Multifunction calibrator in Ultra Cryogenic Liquid bath by Comparison Method	(-)-80 °C to (-)25 °C	0.28°C



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347	THERMAL-TEMPERATURE	RTD's, Thermocouples, Temperature Gauges, Pyrometer with sensors, Data logger with sensor, Thermometer with probe, Temperature sensors/ Temperature Transmitters with or without Indicators/ Controllers	Using 4 Wire RTD sensor with Multifunction calibrator, Dry well calibrator by Comparison Method	(-)25 °C to 140 °C	0.29°C
348	THERMAL-TEMPERATURE	Temperature Indicator with sensor of Deep Freezer, Freezer ,Refrigerator, Liquid bath, Low temperature Bath, Incubator, Environmental Chamber, Cold chamber, Temperature bath (Single Position)	Using 4 Wire RTD sensor with multifunction calibrator by Comparison Method	(-)80 °C to 0	0.15°C



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349	THERMAL-TEMPERATURE	Temperature Indicator with sensor of Freezer Incubator (for all non-medical applications),Refrigerator, Oven, Furnace, Autoclave, Temperature bath, Hot air oven Liquid bath, Salt spray chamber, Environmental chamber (Single Position)	Using 4 Wire RTD sensor with Multifunction calibrator by Comparison Method	0 to 200 °C	0.23°C
350	THERMAL-TEMPERATURE	Temperature Indicator with sensor of Oven, Furnace, Temperature bath, (Single position)	Using S-Type Thermocouple with Multifunction calibrator by Comparison Method	1200 °C to 1500 °C	2.70°C
351	THERMAL-TEMPERATURE	Temperature Indicator with sensor of Oven, Furnace, Temperature bath, Hot air Oven (Single Position)	Using 4 Wire RTD sensor with Multifunction calibrator by Comparison Method	200 °C to 400 °C	0.23°C
352	THERMAL-TEMPERATURE	Temperature Indicator with sensor of Oven, Furnace, Temperature bath, Muffle furnace (Single position)	Using S-Type Thermocouple with Multi Function calibrator by Comparison Method	400 °C to 1200 °C	1.50°C





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353	THERMAL-TEMPERATURE	Thermocouples, Pyrometer with sensors ,Temperature sensors with or without Indicators/Controllers, Temperature Transmitters, Data logger with sensors, Thermometer with probe	Using S-Type Thermocouple with Multifunction calibrator in Dry Block Furnace by Comparison Method	1200 °C to 1500 °C	2.77°C
354	THERMAL-TEMPERATURE	Thermocouples, Pyrometer with sensors , Temperature sensors / Transmitters/ transducer with or without Indicators/Controllers ,Data logger with sensors, Thermometer with probe.	Using S-Type Thermocouple with Multi Function calibrator in Portable Furnace by Comparison Method	400 °C to 1200 °C	1.53°C



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Site Facility					
1	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current @ 50Hz	Using 6½ Digit Multimeter by Direct method	1 mA to 10 mA	0.21 % to 0.26 %
2	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current @ 50Hz	Using 6½ Digit Multimeter by Direct method	10 mA to 100 mA	0.26 % to 0.18 %
3	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current @ 50Hz	Using 6½ Digit Multimeter by Direct method	100 mA to 10 A	0.18 % to 0.65 %
4	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current @ 50Hz	Using 6½ Digit Multimeter by Direct method	100 µA to 1 mA	0.33 % to 0.21 %



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5	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current @ 50Hz	Using 6½ Digit Multimeter by Direct method	20 µA to 100 µA	0.57 % to 0.33 %
6	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC High Voltage @ 50 Hz	Using High Voltage Probe with Digital Multimeter by Direct method	0.5 kV to 28 kV	5.80 % to 6.32 %
7	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 50Hz	Using 6½ Digit Multimeter by Direct method	1 mV to 10 mV	4.74 % to 0.55 %
8	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 50Hz	Using 6½ Digit Multimeter by Direct method	10 mV to 100 mV	0.55 % to 0.13 %
9	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 50Hz	Using 6½ Digit Multimeter by Direct method	100 mV to 750 V	0.13 % to 0.13 %





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10	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 50Hz	Using 6½ Digit Multimeter by Direct method	750 V to 1000 V	0.13 % to 0.12 %
11	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Capacitance @ 1kHz	Using LCR Meter by Direct method	1 nF to 10 nF	5.27 % to 1.93 %
12	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Capacitance @1kHz	Using LCR Meter by Direct method	10 µF to 100 µF	1.81 % to 2.17 %
13	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Capacitance @1kHz	Using LCR Meter by Direct method	10 nF to 10 µF	1.93 % to 1.81 %
14	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Inductance @ 1kHz	Using LCR Meter by Direct method	100 µH to 10 H	0.14%



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15	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @ 50Hz	Using Multiproduct calibrator with 2 turn Current coil by Direct method	10 A to 60 A	1.20 % to 2.77 %
16	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @ 50Hz	Using Multi Product Calibrator by Direct method	20 A to 30 A	0.09 % to 1.90 %
17	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @ 50Hz	Using Multiproduct calibrator with 50 turn Current coil by Direct method	250 A to 1500 A	1.72 % to 1.68 %
18	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @ 50Hz	Using Multiproduct calibrator with 10 turn Current coil by Direct method	50 A to 300 A	2.67 % to 1.72 %
19	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @ 50Hz to 1kHz	Using Multi product calibrator by Direct method	10 µA to 100 µA	3.24 % to 1.17 %
20	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @ 50Hz to 1kHz	Using Multi product calibrator by Direct method	100 µA to 100 mA	1.17 % to 0.51 %



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21	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @ 50Hz to 1kHz	Using Multi Product Calibrator by Direct method	100 mA to 20 A	0.51 % to 0.49 %
22	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Power @ 50Hz, 40 V to 240 V, 0.5 A to 30 A, 0.25 Lag PF	Using Multi product Calibrator by Direct Method	5 W to 1.80 kW	0.67 % to 5.52 %
23	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Power @ 50Hz, 40 V to 240 V, 0.5A to 30 A, 0.5 Lag PF	Using Multi Product Calibrator by Direct method	10 W to 3.6 kW	0.18 % to 2.77%
24	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Power @ 50Hz, 40 V to 240 V, 0.5A to 30 A, 0.8 Lead PF	Using Multi Product Calibrator by Direct method	16 W to 5.76 kW	0.14% to 1.74%
25	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Power @ 50Hz, 40V to 240 V, 0.5A to 30 A, UPF	Using Multi Product Calibrator by direct Method	20 W to 7.2 kW	0.12 % to 1.40%
26	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Voltage @ 50Hz to 10kHz	Using Multi Product Calibrator by Direct Method	1 mV to 10 mV	3.26 % to 0.44 %





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27	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage @ 50Hz to 10kHz	Using Multi Product Calibrator by Direct Method	1 V to 10 V	0.10 % to 0.10 %
28	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage @ 50Hz to 10kHz	Using Multi Product Calibrator by Direct Method	10 mV to 100 mV	0.44 % to 0.10 %
29	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage @ 50Hz to 10kHz	Using Multi Product Calibrator by Direct Method	10 V to 100 V	0.10 % to 0.08 %
30	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage @ 50Hz to 10kHz	Using Multi Product Calibrator by Direct Method	100 V to 1000 V	0.08 % to 0.04 %
31	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 100Hz	Using Multi Product Calibrator by Direct method	1 µF to 10 µF	0.47 % to 0.70 %
32	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 100Hz	Using Multi Product Calibrator by Direct method	10 µF to 100 µF	0.70 % to 0.71 %



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33	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	Capacitance @ 100Hz	Using Multi Product Calibrator by Direct method	100 $\mu$ F to 10 mF	0.71 % to 1.29 %
34	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	Capacitance @ 1kHz	Using Multi Product Calibrator by Direct method	1 nF to 100 nF	0.33 % to 0.29 %
35	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	Capacitance @ 1kHz	Using Multi Product Calibrator by Direct method	100 nF to 1 $\mu$ F	0.29 % to 0.47 %
36	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	Inductance @ 1kHz	Using Multiproduct calibrator by Direct method	1 H to 10 H	0.61 % to 1.36 %
37	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	Inductance @ 1kHz	Using Multi Product Calibrator by Direct method	1 mH to 1 H	0.59 % to 0.61 %
38	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	Oscilloscope Amplitude (1kHz Sinewave)	Using Multi Product Calibrator by Direct Method	2 mV/div to 50 V/div	0.29 % to 0.07 %



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39	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	Oscilloscope Bandwidth	Using Multi Product Calibrator by Direct Method	5 MHz to 600 MHz	5.6%
40	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	Oscilloscope Timebase (p-p)	Using Multi Product Calibrator by Direct method	2 ns/div to 5 s /div	0.38 % to 0.12 %
41	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	Power Factor @ 50Hz (Lag & Lead)	Using Multi Product Calibrator by Direct Method	0.25 PF to Unity PF	0.066 PF
42	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Current	Using 6½ Digit Multimeter by Direct method	1 µA to 10 µA	2.95 % to 0.43 %
43	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Current	Using 6½ Digit Multimeter by Direct method	1 A to 10 A	0.13 % to 0.19 %
44	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Current	Using 6½ Digit Multimeter by Direct method	1 mA to 1 A	0.08 % to 0.13 %





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45	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 6½ Digit Multimeter by Direct method	10 µA to 100 µA	0.43 % to 0.12 %
46	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using Shunt with 6½ Digit Multimeter by Direct method	10 A to 100 A	5.805 % to 1.069 %
47	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using Shunt with 6½ Digit Multimeter by Direct method	10 Amps to 600 Amps	6.646 % to 0.905 %
48	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 6½ Digit Multimeter by Direct method	100 µA to 1 mA	0.12 % to 0.08 %
49	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using Shunt with 6½ Digit Multimeter by Direct method	20 Amps to 1000 Amps	3.199 % to 1.002 %
50	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC High Voltage	Using High Voltage probe with Digital Multimeter by Direct method	0.5 kV to 40 kV	2.37 % to 2.31 %



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51	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 6½ Digit Multimeter by Direct method	1 mV to 10 mV	0.43 % to 0.05 %
52	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 6½ Digit Multimeter by Direct method	1 V to 10 V	0.016 % to 0.007 %
53	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 6½ Digit Multimeter by Direct method	10 mV to 100 mV	0.05 % to 0.02 %
54	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 6½ Digit Multimeter by Direct method	10 V to 100 V	0.007 % to 0.011 %
55	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 6½ Digit Multimeter by Direct method	100 mV to 1 V	0.02 % to 0.016 %
56	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 6½ Digit Multimeter by Direct method	100 V to 1000 V	0.011 % to 0.012 %



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57	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance	Using 6½ Digit Multimeter by Direct method	1 Mohm to 10 Mohm	0.042 % to 0.051 %
58	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance	Using 6½ Digit Multimeter by Direct method	1 Ohm to 10 Ohm	0.49 % to 0.06 %
59	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance	Using 6½ Digit Multimeter by Direct method	10 MOhm to 100 MOhm	0.051 % to 1.21 %
60	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance	Using 6½ Digit Multimeter by Direct method	10 Ohm to 100 Ohm	0.06 % to 0.02 %
61	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance	Using 6½ Digit Multimeter by Direct method	100 MOhm to 1000 MOhm	1.21 % to 2.32 %
62	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance	Using 6½ Digit Multimeter by Direct method	100 Ohm to 1 MOhm	0.02 % to 0.042 %





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63	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multi Product Calibrator by Direct Method	1 A to 10 A	0.01 % to 0.03 %
64	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multi Product Calibrator by Direct Method	1 mA to 100 mA	0.02 % to 0.007 %
65	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multi Product Calibrator by Direct Method	10 $\mu$ A to 100 $\mu$ A	0.13 % to 0.02 %
66	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multi Product Calibrator by Direct Method	10 A to 30 A	0.03 % to 0.26 %
67	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multiproduct calibrator with 2 turn Current coil by Direct method	10 A to 60 A	1.16 % to 0.47 %
68	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multi Product Calibrator by Direct Method	100 $\mu$ A to 1 mA	0.02%



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69	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multi Product Calibrator by Direct Method	100 mA to 1 A	0.007 % to 0.01 %
70	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multiproduct calibrator with 50 turn Current coil by Direct method	250 A to 1500 A	0.93 % to 1.50 %
71	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multiproduct calibrator with 10 turn Current coil by Direct method	50 A to 300 A	0.45 % to 0.90 %
72	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using Multi Product Calibrator by Direct Method	1 mV to 10 mV	0.23 % to 0.03 %
73	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using Multi Product Calibrator by Direct method	1 V to 10 V	0.001 % to 0.001 %
74	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using Multi Product Calibrator by Direct Method	10 mV to 100 mV	0.03 % to 0.004 %



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75	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using Multi Product Calibrator by Direct Method	10 V to 1000 V	0.0010 % to 0.002 %
76	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using Multi Product Calibrator by Direct Method	100 mV to 1 V	0.004 % to 0.001 %
77	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance	Using High stability decade Megohm Box by Direct method	1 Mohm to 10 Mohm	0.004 % to 0.017 %
78	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance	Using Decade Resistance box by Direct method	1 Ohm to 10 Ohm	0.58 % to 0.06 %
79	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance	Using 4 wire low resistance standard by Direct method	10 mohm	0.14%
80	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance	Using High stability decade Megohm Box by Direct method	10 Mohm to 1000 Mohm	0.017 % to 2.44 %





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81	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance	Using Decade Resistance box by Direct method	10 Ohm to 100 Ohm	0.06 % to 0.06 %
82	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance	Using 4 wire low resistance standard box by Direct method	100 μohm	0.51%
83	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance	Using High stability decade Megohm Box by Direct method	100 kohm to 1 Mohm	0.002 % to 0.004 %
84	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance	Using 4 wire low resistance standard by Direct method	100 mohm	0.14%
85	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance	Using Decade Resistance box by Direct method	100 mohm to 1 Ohm	0.14 % to 0.58 %
86	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance	Using Decade Resistance box by Direct method	100 Ohm to 100 kohm	0.06 % to 0.06 %



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87	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	B-Type Thermocouple	Using Multi product calibrator by Direct Method	600 °C to 1800 °C	1.26°C
88	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	E-Type Thermocouple	Using Multi product calibrator by Direct Method	(-)250 °C to 1000 °C	0.59°C
89	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	J-Type Thermocouple	Using Multi product calibrator by Direct Method	(-)200 °C to 1200 °C	0.37°C
90	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	K-Type Thermocouple	Using Multi product calibrator by Direct Method	(-)200 °C to 1370 °C	0.47°C
91	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	N-Type Thermocouple	Using Multi product calibrator by Direct Method	(-)200 °C to 1300 °C	0.49°C
92	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	R-Type Thermocouple	Using Multi Product calibrator by Direct Method	0 °C to 1750 °C	0.94°C



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93	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	RTD (PT-100)	Using Multi function calibrator by Direct Method	(-)-200 °C to 800 °C	0.41°C
94	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	S-Type Thermocouple	Using Multi product calibrator by Direct Method	0 °C to 1750 °C	1.16°C
95	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	T-Type Thermocouple	Using Multi product calibrator by Direct Method	(-)-250 °C to 400 °C	0.69°C
96	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	B-Type Thermocouple	Using Multi product calibrator by Direct Method	600 °C to 1800 °C	1.26°C
97	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	E-Type Thermocouple	Using Multi product calibrator by Direct Method	(-)-250 °C to 1000 °C	0.59°C
98	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	J-Type Thermocouple	Using Multi product calibrator by Direct Method	(-)-200 °C to 1200 °C	0.37°C





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99	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	K-Type Thermocouple	Using Multi product calibrator by Direct Method	(-)-200 °C to 1370 °C	0.47°C
100	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	N-Type Thermocouple	Using Multi product calibrator by Direct Method	(-)-200 °C to 1300 °C	0.49°C
101	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	R-Type Thermocouple	Using Multi product calibrator by Direct Method	0 °C to 1750 °C	0.94°C
102	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	RTD (PT-100)	Using Multi product calibrator by Direct Method	(-)-200 °C to 800 °C	0.64°C
103	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	S-Type Thermocouple	Using Multi Product calibrator by Direct Method	0 °C to 1750 °C	1.16°C
104	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	T-Type Thermocouple	Using Multi Product calibrator by Direct Method	(-)-250 °C to 400 °C	0.69°C



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105	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Frequency	Using 6½ Digit Multimeter by Direct method	10 Hz to 100 kHz	0.06 % to 0.015 %
106	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Frequency	Using 6½ Digit Multimeter by Direct method	100 kHz to 1 MHz	0.015 % to 0.012 %
107	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Frequency	Using 6½ Digit Multimeter by Direct method	3 Hz to 10 Hz	0.19 % to 0.06 %
108	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Time	Using Time totalizer by Comparison method	1 s to 24 hr	0.12 s to 5.36 s
109	ELECTRO-TECHNICAL-TIME & FREQUENCY (Source)	Frequency	Using Multi Product Calibrator by Direct method	1 Hz to 10 Hz	0.004 % to 0.003 %
110	ELECTRO-TECHNICAL-TIME & FREQUENCY (Source)	Frequency	Using Multi Product Calibrator by Direct method	10 Hz to 10 MHz	0.003 % to 0.017 %



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111	FLUID FLOW-FLOW MEASURING DEVICES	Flow Media: Liquid Analog and Digital Flow meters, Flow Transmitters,Ultra Sonic Flow Meter, Flow indicator Devices, & Electromagnetic Flow meter	Using Clamp on Ultrasonic flow meter by comparison method	1 m3/hr to 150 m3/hr	2.34%
112	MECHANICAL-ACCELERATION AND SPEED	RPM Measurement (Centrifuge / Stirrer etc with RPM Indicator etc)	Using Digital Tachometer by Comparison method	10 rpm to 100 rpm	2.99%rdg
113	MECHANICAL-ACCELERATION AND SPEED	RPM Measurement (Centrifuge / Stirrer etc with RPM Indicator)	Using Digital Tachometer by Comparison method	1001 rpm to 90000 rpm	0.23%rdg
114	MECHANICAL-ACCELERATION AND SPEED	RPM Measurement (Centrifuge / Stirrer etc with RPM Indicator)	Using Digital Tachometer by Comparison method	101 rpm to 1000 rpm	0.67%rdg
115	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Bench Centre (Parallelism and Co axiality)	Using Test Mandrel / Digital Dial Gauge by Comparison method	Up to 500 mm	2.5µm





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116	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Caliper-Vernier / Digital / Dial / Groove (L.C : 0.02mm & Coarser)	Using Slip Gauges / Long Slip gauges / Slip gauge accessories / External Micrometer - Digital by Comparison method	1000 mm to 2000 mm	11.26µm
117	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Caliper-Vernier / Digital / Dial / Groove (L.C : 0.02mm & Coarser)	Using Slip Gauges / Long Slip gauges / Slip gauge accessories / External Micrometer - Digital by Comparison method	2000 mm to 3000 mm	16.42µm
118	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Digital Indicator / LVDT / Electronic probe / Extensometer (L.C: 0.0001mm & Coarser)	Using Universal Length Measuring System / LVDT by Comparison method	0 to 25 mm	0.2µm
119	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Micrometer (Analog / Digital) (L.C: 0.01mm & Coarser)	Using Slip Gauges / Long Slip gauges by Comparison method	>1000 mm to 1500 mm	7.78µm



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120	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Surface Plate	Using Electronic Level (Blue Level) by comparison method	upto 3500 mm x 2600 mm	0.54 x $\sqrt{L+W}/100\mu\text{m}$ , L, W is in mm
121	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Surface Roughness Specimen	Using Surface Roughness Tester & Surface Roughness Specimens by Comparison tester	Up to 10 $\mu\text{m}$	6% of rdg
122	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Surface Roughness Tester	Using Surface Roughness Specimens & Surface Roughness Specimen - Depth Master by Comparison method	Up to 6 $\mu\text{m}$	10.2% of rdg
123	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	CNC Machine Tools (Positioning Accuracy only)	Using Laser Interferometer by comparison method	0 mm to 10000 mm	$(0.41 + 0.46 L)\mu\text{m}$ where "L" in m
124	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Co ordinate Measuring Machine (Linear)	Using Laser Interferometer by Comparison method	0 mm to 6000 mm	$(0.05 + 0.53 L)\mu\text{m}$ where "L" in m



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125	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Co-ordinate measuring machine (Linear)	Using "K" Grade Slip gauges, long slip gauges by Comparison method	Up to 1000 mm	$0.91+(L/212)$ $\mu\text{m}$ where "L" in mm
126	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Height Measuring System (L.C: 0.0001 mm & Coarser)	Using "K" Grade Slip gauges by Comparison method	0 to 1000 mm	5.62 $\mu\text{m}$
127	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Height Measuring System - Linear (L.C: 0.0001 mm & Coarser)	Using Laser Interferometer by Comparison method	0 to 1000 mm	( 0.14 + 0.38 L) $\mu\text{m}$ . where "L" in m
128	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Length Measuring Machine - Horizontal / Vertical (Linear Axis) (L.C 0.0001 mm)	Using Laser Interferometer by comparison method	1000 mm to 3000 mm	( 0.50+ 0.34 L) $\mu\text{m}$ where "L" in m
129	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Length Measuring Machine - Horizontal / Vertical (Linear Axis) (L.C 0.0001 mm)	Using Laser Interferometer by comparison method	up to 1000 mm	(0.020+0.48 L) $\mu\text{m}$ (L in m )
130	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Profile Projector / Tool maker Microscope / Vision measuring machine (Angular) (L.C: 1 Arc sec)	Using Angle Gauge Block / Angular graticule by Comparison method	0 to 360 °	13.68Arc sec





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131	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Profile Projector / Tool maker Microscope / Vision measuring machine (Linear) (L.C : 0.1µm & Coarser)	Using Glass Scale by Comparison method	400 mm x 400 mm	2.53µm
132	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Profile Projector / Tool maker Microscope / Vision measuring machine (Linear) (L.C : 0.1µm & Coarser)	Using Laser Interferometer by Comparison method	0 to 400 mm	(0.02+ 0.46 L)µm where "L" in m
133	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Profile Projector / Tool maker Microscope / Vision measuring machine (Magnification)	Using Glass Scale / Digital Vernier caliper by Comparison method	100 X	0.24%
134	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Scale & Tape measuring Machine / Calibrator (L.C : 0.001 mm)	Using Laser Interferometer by comparison method	Up to 1000 mm	(0.15+ 0.35 L)µm where "L" in m
135	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Scale & Tape measuring Machine / Calibrator (L.C : 0.001 mm)	Using "K" Grade Slip gauges, long slip gauges by Comparison method	Up to 1000 mm	5.78µm



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136	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Universal Length Measuring System / Length Measuring Machine / Metroscope (L.C : 0.01µm & coarser)	Using "K" Grade Slip gauges by Comparison method	0 to 100 mm (absolute)	0.17+(L/238) µm, where "L" in mm
137	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Universal Length Measuring System / Length Measuring Machine / Metroscope (L.C : 0.01µm & coarser)	Using "K" Grade Slip gauges & "K" Grade Long slip gauges by Comparison method	100 mm to 500 mm	0.46 + +(L/240)µm, where "L" in mm
138	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Universal Length Measuring System / Length Measuring Machine / Metroscope (L.C : 0.01µm & coarser)	Using "K" Grade Slip gauges & "K" grade long slip gauges by Comparison method	500 mm to 1000 mm	2.67+(L/340) µm, where "L" in mm
139	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Universal Length Measuring System / Metroscope (L.C : 0.01µm & coarser)	Using Laser Interferometer by Comparison method	0 to 100 mm (Absolute)	(0.012 + 0.44 L) µm where "L" in m
140	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Universal Length Measuring System / Metroscope (L.C : 0.01µm & coarser)	Using Laser Interferometer by comparison method	100 mm to 1000 mm	(0.053+ 0.45 L)µm where "L" in m
141	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Universal Length Measuring System / Metroscope (L.C : 0.01µm & coarser)	Using Laser Interferometer by comparison method	1000 mm to 3000 mm	(0.50+ 0.34 L)µm where "L" in m



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142	MECHANICAL-HARDNESS TESTING MACHINES	Brinell Hardness Testing Machines	Using standard reference blocks as per IS 1500 (Part 2) : 2021, ISO 6506-2 : 2017 by Indirect method	HBW 10 / 1000	2.50%
143	MECHANICAL-HARDNESS TESTING MACHINES	Brinell Hardness Testing Machines	Using standard reference blocks as per IS 1500 (Part 2) : 2021, ISO 6506-2 : 2017 by Indirect method	HBW 10 / 1500	1.70%
144	MECHANICAL-HARDNESS TESTING MACHINES	Brinell Hardness Testing Machines	Using standard reference blocks as per IS 1500 (Part 2) : 2021, ISO 6506-2 : 2017 by Indirect method	HBW 10 / 3000	2.3%
145	MECHANICAL-HARDNESS TESTING MACHINES	Brinell Hardness Testing Machines	Using standard reference blocks as per IS 1500 (Part 2) : 2021, ISO 6506-2 : 2017 by Indirect method	HBW 10 / 500	1.60%
146	MECHANICAL-HARDNESS TESTING MACHINES	Brinell Hardness Testing Machines	Using standard reference blocks as per IS 1500 (Part 2) : 2021, ISO 6506-2 : 2017 by Indirect method	HBW 2.5 / 187.5	2.07%





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147	MECHANICAL-HARDNESS TESTING MACHINES	Brinell Hardness Testing Machines	Using standard reference blocks as per IS 1500 (Part 2) : 2021, ISO 6506-2 : 2017 by Indirect method	HBW 5 / 250	2.35%
148	MECHANICAL-HARDNESS TESTING MACHINES	Brinell Hardness Testing Machines	Using standard reference blocks as per IS 1500 (Part 2) : 2021, ISO 6506-2 : 2017 by Indirect method	HBW 5 / 750	2.13%
149	MECHANICAL-HARDNESS TESTING MACHINES	Micro Vickers Hardness Testing Machines	Using standard reference blocks as per IS 1501 (Part 2) : 2020, ISO 6507-2 : 2018 by Indirect method	HV 1	3.40%
150	MECHANICAL-HARDNESS TESTING MACHINES	Rockwell Hardness Testing Machines	Using standard reference blocks as per IS 1586 (Part 2) : 2018, ISO 6508-2 : 2015 by Indirect method	HR15N	0.86HR15N
151	MECHANICAL-HARDNESS TESTING MACHINES	Rockwell Hardness Testing Machines	Using standard reference blocks as per IS 1586 (Part 2) : 2018, ISO 6508-2 : 2015 by Indirect method	HR15TW	1.11HR15TW



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152	MECHANICAL-HARDNESS TESTING MACHINES	Rockwell Hardness Testing Machines	Using standard reference blocks as per IS 1586 (Part 2) : 2018, ISO 6508-2 : 2015 by Indirect method	HR30N	0.87HR30N
153	MECHANICAL-HARDNESS TESTING MACHINES	Rockwell Hardness Testing Machines	Using standard reference blocks as per IS 1586 (Part 2) : 2018, ISO 6508-2 : 2015 by Indirect method	HR30TW	1.12HR30TW
154	MECHANICAL-HARDNESS TESTING MACHINES	Rockwell Hardness Testing Machines	Using standard reference blocks as per IS 1586 (Part 2) : 2018, ISO 6508-2 : 2015 by Indirect method	HR45N	1.03HR45N
155	MECHANICAL-HARDNESS TESTING MACHINES	Rockwell Hardness Testing Machines	Using standard reference blocks as per IS 1586 (Part 2) : 2018, ISO 6508-2 : 2015 by Indirect method	HR45TW	1.18HR45W
156	MECHANICAL-HARDNESS TESTING MACHINES	Rockwell Hardness Testing Machines	Using standard reference blocks as per IS 1586 (Part 2) : 2018, ISO 6508-2 : 2015 by Indirect method	HRA	0.71HRA



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157	MECHANICAL-HARDNESS TESTING MACHINES	Rockwell Hardness Testing Machines	Using standard reference blocks as per IS 1586 (Part 2) : 2018, ISO 6508-2 : 2015 by Indirect method	HRBW	1.07HRBW
158	MECHANICAL-HARDNESS TESTING MACHINES	Rockwell Hardness Testing Machines	Using standard reference blocks as per IS 1586 (Part 2) : 2018, ISO 6508-2 : 2015 by Indirect method	HRC	0.67HRC
159	MECHANICAL-HARDNESS TESTING MACHINES	Vickers Hardness Testing Machines	Using standard reference blocks as per IS 1501 (Part 2) : 2020, ISO 6507-2 : 2018 by Indirect method	HV 10	2.17%
160	MECHANICAL-HARDNESS TESTING MACHINES	Vickers Hardness Testing Machines	Using standard reference blocks as per IS 1501 (Part 2) : 2020, ISO 6507-2 : 2018 by Indirect method	HV 20	1.06%
161	MECHANICAL-HARDNESS TESTING MACHINES	Vickers Hardness Testing Machines	Using standard reference blocks as per IS 1501 (Part 2) : 2020, ISO 6507-2 : 2018 by Indirect method	HV 30	1.57%





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S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
162	MECHANICAL-HARDNESS TESTING MACHINES	Vickers Hardness Testing Machines	Using standard reference blocks as per IS 1501 (Part 2) : 2020, ISO 6507-2 : 2018 by Indirect method	HV 5	3.96%
163	MECHANICAL-HARDNESS TESTING MACHINES	Vickers Hardness Testing Machines	Using standard reference blocks as per IS 1501 (Part 2) : 2020, ISO 6507-2 : 2018 by Indirect method	HV 50	2.19%
164	MECHANICAL-PRESSURE INDICATING DEVICES	Hydraulic Pressure: Digital & Dial pressure gauges / Pressure Transmitter /Transducers with or without indicators, Indicator of Pressure switches	Using Digital Pressure gauge with Hydraulic pressure Pump, Multifunction calibrator & Portable Pressure calibrator by comparison method based on DKD R-6-1	0 bar to 700 bar	0.05% of rdg
165	MECHANICAL-PRESSURE INDICATING DEVICES	Hydraulic Pressure: Digital & Dial pressure gauges / Pressure Transmitter /Transducers with or without indicators Indicator of Pressure switches	Using Digital Pressure Test Gauge, Multifunction calibrator by comparison method based on DKD R-6-1	0 to 2800 bar	0.16% of rdg



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166	MECHANICAL-PRESSURE INDICATING DEVICES	Low Pressure (Pneumatic): Maghnelic Gauges, Manometer, Low Pressure Gauges/Vacuum gauges, Differential Pressure Gauge, Pressure calibrators	Using Digital manometer with Pneumatic pressure pump by comparison method based on DKD R-6-1 & 2	(-)0.25 kpa to 0.25 kpa	2.9% of rdg
167	MECHANICAL-PRESSURE INDICATING DEVICES	Low Pressure (Pneumatic): Maghnelic Gauges, Manometer, Low Pressure Gauges/Vacuum gauges, Differential Pressure Gauge, Pressure calibrators	Using Digital manometer with Pneumatic pressure pump by comparison method based on DKD R-6-1 & 2	(-)2.5 kpa to 2.5 kpa	2.2% of rdg
168	MECHANICAL-PRESSURE INDICATING DEVICES	Pressure - Pneumatic Digital & Dial pressure gauges / Pressure Transmitter /Transducers with or without indicators, Indicator of Pressure switches	Using Digital Pressure gauge with Pneumatic pressure Pump, Multifunction calibrator & Portable Pressure calibrator by comparison method based on DKD R-6-1	0 to 20 bar	0.05% of rdg



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169	MECHANICAL-PRESSURE INDICATING DEVICES	Vacuum - Digital & Dial Vacuum gauges / Vacuum Transmitter/Transducer, with or without indicators Indicator of Pressure switches	Using Digital Pressure gauge with Pneumatic pressure Pump, Multifunction calibrator & Portable Pressure calibrator by comparison method based on DKD R-6-1	(-)1.0 bar to 0	0.75% of rdg
170	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Balance (Class I & Coarser, Readability: 0.001mg & Coarser)	Using E1 class weights based on OIML R 76-1	1 mg to 20 g	0.025mg
171	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Balance (Class I & Coarser, Readability: 0.01mg & Coarser)	Using E1 class weights based on OIML R 76-1	1 mg to 60 g	0.035mg
172	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Balance (Class I & Coarser, Readability: 0.1mg & Coarser)	Using E1 class weights based on OIML R 76-1	10 mg to 220 g	0.070mg
173	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Balance (Class II & Coarser, Readability: 0.2g & Coarser)	Using E2 class weights based on OIML R 76-1	50 g to 12 kg	0.12g
174	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Balance (Class II & Coarser, Readability: 10mg & Coarser)	Using E2 class weights based on OIML R 76-1	500 mg to 6 kg	9.70mg





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175	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Balance (Class II & Coarser, Readability: 1mg & Coarser)	Using E2 class weights based on OIML R 76-1	100 mg to 1 kg	0.93mg
176	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Balance (Class III & Coarser, Readability: 10g & Coarser)	Using M1 class weights based on OIML R 76-1	200 g to 150 kg	6.09g
177	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Balance (Class III & Coarser, Readability: 20g & Coarser)	Using M1 class weights based on OIML R 76-1	400 g to 300 kg	12.17g
178	THERMAL-SPECIFIC HEAT & HUMIDITY	Humidity Indicator of Humidity Chamber, Environmental & Humidity Chamber (Single Position) @ (20°C to 60°C)	Using Digital Temperature & Humidity Indicator with sensor by comparison method	20 % rh to 95 % rh	1.42% rh
179	THERMAL-TEMPERATURE	Deep Freezer, Freezer, Refrigerator, Incubator Environmental Chamber, Cold chamber ( Multi position)	Using RTD Sensors (minimum 9 sensors) with Data Logger by Comparison Method as per IEC 60068-3-11/DKD R-5-7	(- )80 °C to 0°C	0.88°C



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180	THERMAL-TEMPERATURE	Freezer, Incubator (for all non- medical applications), Oven, Hot air oven, Furnace, Auto clave, Hot chamber, Salt spray chamber, Environmental chamber ( Multi position)	Using RTD Sensors (minimum 9 sensors) with Data Logger by Comparison Method as per IEC 60068-3-11/DKD R-5-7	0 °C to 200 °C	0.42°C
181	THERMAL-TEMPERATURE	Oven, Furnace, Thermal Chamber, Vacuum Furnace, Hot air oven (Multi position)	Using N type Thermocouples (minimum 9 sensors) with Data logger by Comparison Method as per AMS 2750	200 °C to 1200 °C	2.59°C
182	THERMAL-TEMPERATURE	RTD's , Thermocouples , Temperature Gauges , Pyrometer with sensors , Temp sensors with or without Indicators/Controller s, Data logger with sensors, Thermometer with probe, Temperature Transmitter	Using 4 Wire RTD sensor with multifunction calibrator, portable furnace, Temperature bath by Comparison Method	140 °C to 400 °C	0.36°C



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183	THERMAL-TEMPERATURE	RTD's, Thermocouples, Temperature Gauges, Pyrometer with sensors, Data logger with sensor, Thermometer with probe, Temperature sensors/ Temperature Transmitters with or without Indicators/ Controllers	Using 4 Wire RTD sensor with Multifunction calibrator, Dry well calibrator by Comparison Method	(-)25 °C to 140 °C	0.29°C
184	THERMAL-TEMPERATURE	Temperature Indicator with sensor of Nitrogen liquid bath (Single Position)	Using PRT with Multifunction calibrator by Comparison Method	(-)196 °C	0.20°C
185	THERMAL-TEMPERATURE	Temperature Indicator with sensor of Deep Freezer, Freezer ,Refrigerator, Liquid bath, Low temperature Bath, Incubator, Environmental Chamber, Cold chamber, Temperature bath (Single Position)	Using 4 Wire RTD sensor with multifunction calibrator by Comparison Method	(-)80 °C to 0	0.15°C





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186	THERMAL-TEMPERATURE	Temperature Indicator with sensor of Freezer Incubator (for all non-medical applications),Refrigerator, Oven, Furnace, Autoclave, Temperature bath, Hot air oven Liquid bath, Salt spray chamber, Environmental chamber (Single Position)	Using 4 Wire RTD sensor with Multifunction calibrator by Comparison Method	0 to 200 °C	0.23°C
187	THERMAL-TEMPERATURE	Temperature Indicator with sensor of Oven, Furnace, Temperature bath, (Single position)	Using S-Type Thermocouple with Multifunction calibrator by Comparison Method	1200 °C to 1500 °C	2.70°C
188	THERMAL-TEMPERATURE	Temperature Indicator with sensor of Oven, Furnace, Temperature bath, Hot air Oven (Single Position)	Using 4 Wire RTD sensor with Multifunction calibrator by Comparison Method	200 °C to 400 °C	0.23°C
189	THERMAL-TEMPERATURE	Temperature Indicator with sensor of Oven, Furnace, Temperature bath, Muffle furnace (Single position)	Using S-Type Thermocouple with Multi Function calibrator by Comparison Method	400 °C to 1200 °C	1.50°C



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190	THERMAL-TEMPERATURE	Thermocouples, Pyrometer with sensors ,Temperature sensors with or without Indicators/Controllers, Temperature Transmitters, Data logger with sensors, Thermometer with probe	Using S-Type Thermocouple with Multifunction calibrator in Dry Block Furnace by Comparison Method	1200 °C to 1500 °C	2.77°C
191	THERMAL-TEMPERATURE	Thermocouples, Pyrometer with sensors , Temperature sensors / Transmitters/ transducer with or without Indicators/Controllers ,Data logger with sensors, Thermometer with probe.	Using S-Type Thermocouple with Multi Function calibrator in Portable Furnace by Comparison Method	400 °C to 1200 °C	1.53°C

\* CMCs represent expanded uncertainties expressed at approximately the 95% level of confidence, using a coverage factor of k = 2.