



SCOPE OF ACCREDITATION

Laboratory Name:

INDIGENOUS SERVICES, MITTAL INDUSTRIAL ESTATE BUILDING NO-6, GALA NO-132

MAROL NAKA ANDHERI (EAST)., MUMBAI, MAHARASHTRA, INDIA

Accreditation Standard

ISO/IEC 17025:2017

Certificate Number

CC-2091

Page No

1 of 23

Validity

23/03/2023 to 22/03/2025

Last Amended on

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|------|---|---|---|--|--|
| | | 2.0 | Permanent Facility | | |
| 1 | MECHANICAL- ACCELERATION AND SPEED | Centrifuge Machine | Using Precision Digital Tachometer by Direct Method | 1000 rpm to 20000 rpm | 6.02rpm |
| 2 | MECHANICAL- ACCELERATION AND SPEED | Centrifuge Machine | Using Precision Digital Tachometer by Direct Method | 200 rpm to 1000 rpm | 5.68rpm |
| 3 | MECHANICAL- ACCELERATION AND SPEED | RPM Indicator and Rotation Motor | Using Precision Digital Tachometer by Direct Method | 1000 rpm to 20000 rpm | 6.02rpm |
| 4 | MECHANICAL- ACCELERATION AND SPEED | RPM Indicator and Rotation Motor | Using Precision Digital Tachometer by Direct Method | 200 rpm to 1000 rpm | 5.68rpm |
| 5 | MECHANICAL- ACCELERATION AND SPEED | Tachometer(Non- Contact) | Using Precision Digital Tachometer and Variable Power Source by Comparison Method | 1000 rpm to 20000 rpm | 10.95rpm |
| 6 | MECHANICAL- ACCELERATION AND SPEED | Tachometer(Non- Contact) | Using Precision digital tachometer & Variable Power Source by Comparison Method | 200 rpm to 1000 rpm | 10.91rpm |
| 7 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Bevel Protractor(Digital/An alogue) (L.C: 5 min) | Using Angle Gauges by comparison Method | 0 ° to 90 ° | 447sec of Arc |





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Accreditation Standard

ISO/IEC 17025:2017

Certificate Number

CC-2091

Page No

2 of 23

Validity

23/03/2023 to 22/03/2025

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|------|---|---|---|--|--|
| 8 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Bore Dial Gauge(Transmission Error) (L.C: 0.001 mm) | Using Micrometer Head & Digital Probe by Comparison Method | 0 to 2 mm | 2.21 μm |
| 9 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Caliper - (Vernier, Dial, Digital) (L.C:0.01 mm) | Using Gauge Block Grade '0', Long Slip Gauges by Comparison Method | 0 to 1000 mm | 15 μm |
| 10 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Caliper - (Vernier, Dial, Digital) (L.C:0.01 mm) | Using Caliper Checker by Comparison method | 0 to 300 mm | 12.26 μm |
| 11 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Caliper - (Vernier, Dial, Digital) (L.C:0.01 mm) | Using Gauge Block Grade '0', Long Slip Gauge by Comparison Method | 0 to 300 mm | 12.26μm |
| 12 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Caliper - (Vernier, Dial, Digital) (L.C:0.01 mm) | Using Caliper Checker by Comparison Method | 0 to 600 mm | 14 μm |





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Accreditation Standard

ISO/IEC 17025:2017

Certificate Number

CC-2091

Page No

3 of 23

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23/03/2023 to 22/03/2025

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| 13 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Caliper - (Vernier, Dial, Digital) (L.C:0.01 mm) | Using Gauge Block Grade '0', Long Slip Gauge by Comparison Method | 0 to 600 mm | 13 μm |
| 14 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Coating Thickness Gauge (L.C: 0.0001 mm) | Using Thickness Foils by Comparison Method | 50 μm to 100 μm | 2.37 μm |
| 15 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Coating Thickness Gauge (L.C: 0.001 mm) | Using Thickness Foils by Comparison Method | 50 μm to 1950 μm | 8.6 μm |
| 16 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Combination Sets (L.C: 1°) | Using angle gauges by comparison method | 0 ° to 90 ° | 30min of arc |
| 17 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Comparator Stand (only Flatness) | Using Digital Probe by Comparison Method | Up to 300 X 300 mm | 2.90 μm |





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Accreditation Standard

ISO/IEC 17025:2017

Certificate Number

CC-2091

Page No

4 of 23

Validity

23/03/2023 to 22/03/2025

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| 18 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Depth Micrometer (L.C: 0.001 mm) | Using Gauge Blocks grade 0, Surface plate by comparison method | 0 to 150 mm | 3.66 μm |
| 19 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Depth Micrometer (L.C: 0.001 mm) | Using Gauge Blocks Grade 0, Surface Plate by comparison method | 0 to 300 mm | 4.6 μm |
| 20 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Depth Vernier Gauge (L.C: 0.010 mm) | Using Gauge Blocks Grade 0, Surface plate by comparison method | 0 to 300 mm | 8.89 μm |
| 21 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Depth Vernier Gauge - (Dial, Digital) (L.C: 0.020 mm) | Using Slip Gauge Set by Comparison Method | 0 to 150 mm | 12.8 μm |
| 22 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Dial Depth Gauge (L.C: 0.001 mm) | Using Gauge Blocks Grade 0, Surface plate by Comparison Method | 0 to 300 mm | 4.37 μm |





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MAROL NAKA ANDHERI (EAST)., MUMBAI, MAHARASHTRA, INDIA

Accreditation Standard

ISO/IEC 17025:2017

Certificate Number

CC-2091

Page No

5 of 23

Validity

23/03/2023 to 22/03/2025

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| 23 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Dial Gauge Tester/Dial Gauge Calibrator/Floating Carriage Drum Micrometer -only (L.C: 0.0002 mm) | Using Digital Probe, Slip Gauges by comparison method | 0 to 25 mm | 1.74 μm |
| 24 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Dial Thickness Gauge (L.C.: 0.01 mm) | Using Gauge Block Set by comparison method | 0 to 50 mm | 7.58 μm |
| 25 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Dial Thickness Gauge (L.C: 0.001 mm) | Using Gauge Block Set by Comparison Method | 0 to 25 mm | 0.95 μm |
| 26 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Digital Micrometer Head (L.C: 0.001 mm) | Using Digital Probe, Slip Gauges by comparison method: | 0 to 25 mm | 1.83 μm |
| 27 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Digital Protractor/ Inclinometer/ Clinometers (L.C: 0.05°) | Using Angle Gauges by comparison method | 0 ° to 90 ° | 7.5min of Arc |





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Accreditation Standard

ISO/IEC 17025:2017

Certificate Number

CC-2091

Page No

6 of 23

Validity

23/03/2023 to 22/03/2025

Last Amended on

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| 28 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Engineer's Parallels(parallelism error) | Using Gauge Block set, Digital Probe, Surface Plate by comparison method | Up to 100 x 100 mm | 2.43 μm |
| 29 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Engineer's Parallels(size variation) | Using Gauge Block set, Digital Probe, Surface Plate by comparison method | Up to 100 X 100 mm | 6.62 μm |
| 30 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | External Micrometer (L.C.: 0.001 mm) | Using Slip Gauge Set by Comparison Method | 0 to 25 mm | 1.1 μm |
| 31 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | External Micrometer (L.C: 0.001 mm) | Using Gauge Block set & Micrometer Setting Standards & Long Slip Gauges by Comparison Method | 150 mm to 300 mm | 3.39 µm |
| 32 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | External Micrometer (L.C: 0.001 mm) | Using Gauge Block set & Micrometer Setting standards & Long Slip Gauges by comparison method | 25 mm to 150 mm | 1.50 μm |





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Accreditation Standard

ISO/IEC 17025:2017

Certificate Number

CC-2091

Page No

7 of 23

Validity

23/03/2023 to 22/03/2025

Last Amended on

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| 33 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | External Micrometer (L.C: 0.001 mm) | Using Gauge Block set & Micrometer Setting Standards & Long slip Gauges by comparison method | 300 mm to 800 mm | 7.65 μm |
| 34 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | External Micrometer (L.C: 0.001 mm) | Using Slip Gauge Set by Comparison Method | 75 mm to 100 mm | 1.3 μm |
| 35 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | External Micrometer (L.C: 0.01 mm) | Using Slip Gauge set by Comparison Method | 25 mm to 50 mm | 3 μm |
| 36 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | External Micrometer (L.C: 0.01 mm) | Using Slip Set by Comparison Method | 50 mm to 75 mm | 3.5 μm |
| 37 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Feeler Gauge | Using Digital probe , Comparator Stand & Digital Micrometer by Comparison Method | 0.01 mm to 1 mm | 2.4 μm |





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Accreditation Standard

ISO/IEC 17025:2017

Certificate Number

CC-2091

Page No

8 of 23

Validity

23/03/2023 to 22/03/2025

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| 38 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Height Gauge - Linear (L.C: 0.0005 mm) | Using Gauge Blocks Grade 0, Long Slip Gauges, Caliper Checker by comparison Method | 0 to 600 mm | 9.47 μm |
| 39 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Height Gauge - Squareness (L.C: 0.0005 mm) | Using Digital Probe,Surface Plate, Cylindrical Mandrel by comparison Method | 0 to 600 mm | 5.76μm |
| 40 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Inside Dial Caliper (L.C: 0.010 mm) | Using Gauge Block Set, External Micrometer by Comparison Method | 5 mm to 135 mm | 7.12 μm |
| 41 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Inside Digital Caliper (L.C: 0.010 mm) | Usingg Gauge Block Set, External Micrometer by comparison Method | 5 mm to 135 mm | 7.6 μm |
| 42 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Internal Micrometer (Caliper Type) (L.C: 0.001 mm) | Using Slip Gauge set by Comparison Method | 3 mm to 100 mm | 1.86 μm |





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Accreditation Standard

ISO/IEC 17025:2017

Certificate Number

CC-2091

Page No

9 of 23

Validity

23/03/2023 to 22/03/2025

Last Amended on

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| 43 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Internal Micrometer (Stick/Tubular Type) L.C: 0.010 mm | Using Slip Gauge Set by Comparison Method | 13 mm to 1300 mm | 9.91 μm |
| 44 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Lever Type Dial Gauges (L.C.: 0.001 mm) | Using Slip gauges by comparison method | 0 to 0.2 mm | 0.68 μm |
| 45 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Lever Type Dial Gauges (L.C.: 0.001 mm) | Using Calibration Tester & Digital Probe by comparison method | 0 to 0.2 mm | 2.21 μm |
| 46 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Lever Type Dial Gauges (L.C.: 0.010 mm) | Using Dial Calibration Tester & Digital Probe by comparison method | 0 to 1.6 mm | 3.36 μm |
| 47 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Lever Type Dial Gauges (L.C.: 0.010 mm) | Using Slip Gauges by comparison method | 0 to 1.6 mm | 3.36 μm |





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Accreditation Standard

ISO/IEC 17025:2017

Certificate Number

CC-2091

Page No

10 of 23

Validity

23/03/2023 to 22/03/2025

Last Amended on

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| 48 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | LVDT/ Digital Probe/Digital Dial Indicator L.C ; 0.0001 mm | Using Slip Gauges by Comparison Method | 0 to 25 mm | 1.24 μm |
| 49 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Measuring Cylindrical Pins | Using Digital Probe, Slip Gauges & Comparator Stand by Comparison Method | 0.1 mm to 20 mm | 2.42 μm |
| 50 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Measuring Scale (LC: 0.5 mm) | Using Scale & Tape Calibrator by comparison Method | 0 to 2000 mm | 144.73xSQRT (L) μm, where L in meter |
| 51 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Measuring Tape (L.C.: 0.1 mm) | Using Scale & Tape Calibrator by comparison method | 0 to 10 m | 289.4 sqrt(L) μm, Where L in mt |
| 52 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Measuring Tape (L.C: 0.1 mm) | Using Scale & Tape Calibrator by comparison method | 0 to 50000 mm | 461.18sqrt (L) μm, Where L in mt |





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Accreditation Standard

ISO/IEC 17025:2017

Certificate Number

CC-2091

Page No

11 of 23

Validity

23/03/2023 to 22/03/2025

Last Amended on

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| 53 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Micrometer Head (L.C : 0.001 mm) | Using Grade 0 Gauge Blocks and Digital Probe by comparison method | 0 to 25 mm | 1.66 μm |
| 54 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Micrometer Setting Standard | Using Gauge Blocks Grade 0 & Long Slip Gauges, Digital Probe, Surface plate by comparison method | 25 mm to 150 mm | 2.14 μm |
| 55 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Micrometer Setting Standard | Using Gauge Blocks Grade 0 & Long Slip Gauges, Digital Probe, Surface plate by comparison method | 300 mm to 500 mm | 4.56 μm |
| 56 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Micrometer Setting Standard | Using Gauge Blocks Grade 0 & Long Slip Gauges, Digital Probe, Surface plate by comparison method | 500 mm to 800 mm | 6.49 μm |
| 57 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Micrometer Setting Standard | Using Gauge Blocks Grade 0 & Long Slip Gauges, Digital Probe, Surface plate by comparison method | 150 mm to 300 mm | 3.08 μm |





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Accreditation Standard

ISO/IEC 17025:2017

Certificate Number

CC-2091

Page No

12 of 23

Validity

23/03/2023 to 22/03/2025

Last Amended on

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| 58 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Outside Dial Caliper (L.C: 0.010 mm) | Using Gauge Block Set by comparison Method | 0 to 10 mm | 7.03 μm |
| 59 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Pie Tape (L.C: 0.010 mm) | Using Scale & Tape Calibrator by comparison method | up to Diameter 50000 mm | 429x SQRT(L) μm, Where L in meter |
| 60 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Pistol Caliper (L.C: 0.1 mm) | Using Gauge Block Set by comparison method | 0 to 50 mm | 50 μm |
| 61 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Plain Plug Gauge | Using Slip Gauges & Digital Probe by comparison method | diameter 100 mm to diameter 300 mm | 3.17 μm |
| 62 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Plain Plug Gauge | Using Slip Gauges & Digital Probe by comparison method | upto to diameter 100 mm | 1.82 μm |





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Accreditation Standard

ISO/IEC 17025:2017

Certificate Number

CC-2091

Page No

13 of 23

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23/03/2023 to 22/03/2025

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| 63 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Plunger Dial Gauge (L.C: 0.01 mm) | Using Digital Micrometer Head by Comparison Method | 0 to 10 mm | 4.6 μm |
| 64 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Plunger Type Dial Gauge (L.C: 0.0005 mm) | Using Slip Gauge by comparison method | 0 to +/- 0.100 mm | 1.02 μm |
| 65 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Plunger Type Dial Gauge (L.C: 0.0005 mm) | Using Dial Gauge Tester and Digital Probe by comparison method | 0 to +/- 0.100 mm | 7.24 μm |
| 66 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Plunger Type Dial Gauge (L.C: 0.001 mm) | Using Dial Gauge Tester And Digital Probe by comparison method | 0 mm to 25 mm | 7.26 μm |
| 67 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Sine Bar(Center Distance between two Rollers) | Using Slip Gauges, Angle Gauges & Digital Probe by comparison method | Up to Distance Length 300 mm | 4.20 μm |





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MAROL NAKA ANDHERI (EAST)., MUMBAI, MAHARASHTRA, INDIA

Accreditation Standard

ISO/IEC 17025:2017

Certificate Number

CC-2091

Page No

14 of 23

Validity

23/03/2023 to 22/03/2025

Last Amended on

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| 68 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Sine Bar(Error of angular measurement) | Using Slip Gauges, Angle Gauges & Digital Probe by comparison method | Up to Center Distance Length 30 | 9.41arc of sec |
| 69 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Sine Bar(Parallelism Error of Working Surface to Contact roller surface) | Using Surface Plate & Digital Probe by comparison method | Up to Center Distance Length 30 mm | 6.9 μm |
| 70 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Snap Gauge | Using Gauge Block Set by Comparison method | 2 mm to 160 mm | 1.24 μm |
| 71 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Step Block (Thickness) | Using Gauge Block Set, Digital Probe by Comparison Method | 0 to 210 mm | 4.04 μm |
| 72 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Straight Edge (Straightness) | Using Digital Probe, Lever Dial Indicator, Surface Plate by Comparison Method | Up to 300 mm | 6.95 μm |





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INDIGENOUS SERVICES, MITTAL INDUSTRIAL ESTATE BUILDING NO-6, GALA NO-132

MAROL NAKA ANDHERI (EAST)., MUMBAI, MAHARASHTRA, INDIA

Accreditation Standard

ISO/IEC 17025:2017

Certificate Number

CC-2091

Page No

15 of 23

Validity

23/03/2023 to 22/03/2025

Last Amended on

| 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)(±) |
|------|---|---|--|--|--|
| 73 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Straight Edge (Parallelism) | Using Digital Probe, Lever Dial Indicator, Surface Plate by Comparison Method | Up to 300 mm | 2.77 μm |
| 74 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Taper Scale (L.C: 0.1 mm) | Using Tape and Scale Calibrator by Comparison method | 0 to 100 mm | 29.94 μm |
| 75 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Thickness Foils | Using Digital Probe, Surface Plate, Slip Gauges and Comparator Stand | 0.025 mm to 2 mm | 1.85 μm |
| 76 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Ultrasonic Thickness Gauge (L.C: 0.010 mm) | Using Thickness Step Block by Comparison Method | Up to 100 mm | 7.83 μm |
| 77 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Ultrasonic Thickness Gauge (L.C: 0.1 mm) | Using Thickness Step Block by Comparison Method | Up to 200 mm | 70.33 μm |





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MAROL NAKA ANDHERI (EAST)., MUMBAI, MAHARASHTRA, INDIA

Accreditation Standard

ISO/IEC 17025:2017

Certificate Number

CC-2091

Page No

16 of 23

Validity

23/03/2023 to 22/03/2025

Last Amended on

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|------|---|---|---|--|--|
| 78 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Vee Block (For Squareness) | Using Slip Gauge, Cylindrical Mandrels, Digital Probe by Comparison Method | Up to 100 mm | 8 μm |
| 79 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Vee Block (Parallelism of Vee Flank) | Using Surface Plate & Digital Probe by comparison method | up to 100 mm | 7.67 μm |
| 80 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Vee Block (Symmetricity of Vee Flank) | Using Cylindrical Mandrels, Lever Dial Indicator by Comparison Method | Up to 100 mm | 7.67 μm |
| 81 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Width gauge/Height Block | Using slip Gauges & Digital Probe by comparison method | 0.1 mm to 100 mm | 1.82 μm |
| 82 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Width gauge/Height Block | Using Slip Gauges & Digital Probe by comparison method | 100 mm to 300 mm | 3.17 μm |





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MAROL NAKA ANDHERI (EAST)., MUMBAI, MAHARASHTRA, INDIA

Accreditation Standard

ISO/IEC 17025:2017

Certificate Number

CC-2091

Page No

17 of 23

Validity

23/03/2023 to 22/03/2025

Last Amended on

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|------|--|---|---|--|--|
| 83 | MECHANICAL- DUROMETER | Rubber Hardness Tester/ Durometer (Shore A) | Using Digital Micrometer Head with by Depth indentation Method as per ISO 48-9 | 0 to 100 Shore A | 3.55Shore A |
| 84 | MECHANICAL- PRESSURE INDICATING DEVICES | Pressure Hydraulic Digital/Analog Pressure Gauge, indicator, pressure Transmitter, Pressure Switches. | Using Digital Pressure Gauge, Multimeter & Pressure Comparator by Comparison Method as per DKD-R-6-1 | 0 to 350 bar | 2.9bar |
| 85 | MECHANICAL- PRESSURE INDICATING DEVICES | Pressure Hydraulic Digital/Analog Pressure Gauge, indicator, pressure Transmitter, Pressure Switches. | Using Digital Pressure Gauge, Multimeter & Pressure Comparator by Comparison Methodas per DKD- R-6-1 | 0 to 686 bar | 2.9bar |
| 86 | MECHANICAL- PRESSURE INDICATING DEVICES | Pressure Pneumatic Digital/Analog Pressure Gauge, indicator, pressure Transmitter, Pressure Switches. | Using digital Pressure Gauge, Multimeter & Pneumatic Pressure Hand Pump by Comparison Methodas per DKD- R-6-1 | 0 to 30 bar | 0.2bar |





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MAROL NAKA ANDHERI (EAST)., MUMBAI, MAHARASHTRA, INDIA

Accreditation Standard

ISO/IEC 17025:2017

Certificate Number

CC-2091

Page No

18 of 23

Validity

23/03/2023 to 22/03/2025

Last Amended on

| 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)(±) |
|------|--|---|--|--|--|
| 87 | MECHANICAL- PRESSURE INDICATING DEVICES | Vacuum gauge(Dial or Analogue/Digital) | Using Digital Pressure Gauge & Vacuum Pump by Comparison Method per DKD-R-6-1 | (-)0.9 bar to 0 | 0.007bar |
| 88 | MECHANICAL- TORQUE GENERATING DEVICES | Torque Wrench and Torque Screwdrivers (Type I Class A to Class E) and (Type II Class A to Class G) | Using Torque Sensor with indicator, Automated electronic torque wrench calibration tester (mechanized) by comparison method as per ISO 6789:2017 | 0.300 Nm to 1.200 Nm | 2.9% of reading |
| 89 | MECHANICAL- TORQUE GENERATING DEVICES | Torque Wrench and Torque Screwdrivers (Type I Class A to Class E) and (Type II Class A to Class G) | Using Torque Sensor with indicator, Automated electronic torque wrench calibration tester (mechanized) by comparison method as per ISO 6789:2017 | 1.20 Nm to 6.00 Nm | 2.9% of reading |





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Laboratory Name:

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MAROL NAKA ANDHERI (EAST)., MUMBAI, MAHARASHTRA, INDIA

Accreditation Standard

ISO/IEC 17025:2017

Certificate Number

CC-2091

Page No

19 of 23

Validity

23/03/2023 to 22/03/2025

Last Amended on

| 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)(±) |
|------|--|---|--|--|--|
| 90 | MECHANICAL- TORQUE GENERATING DEVICES | Torque Wrench and Torque Screwdrivers (Type I Class A to Class E) and (Type II Class A to Class G) | Using Torque Sensor with indicator, Automated electronic torque wrench calibration tester (mechanized) by comparison method as per ISO 6789:2017 | 0.040 Nm to 0.300 Nm | 2.32% of reading |
| 91 | MECHANICAL- TORQUE GENERATING DEVICES | Torque Wrench and Torque Screwdrivers (Type I Class A to Class E) and (Type II Class A to Class G) | Using Torque Sensor with indicator, Automated electronic torque wrench calibration tester (mechanized) by comparison method as per ISO 6789:2017 | 100 Nm to 300 Nm | 0.6% of reading |
| 92 | MECHANICAL- TORQUE GENERATING DEVICES | Torque Wrench and Torque Screwdrivers (Type I Class A to Class E) and (Type II Class A to Class G) | Using Torque Sensor with indicator, Automated electronic torque wrench calibration tester (mechanized) by comparison method as per ISO 6789:2017 | 20 Nm to 100 Nm | 0.9% of reading |





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MAROL NAKA ANDHERI (EAST)., MUMBAI, MAHARASHTRA, INDIA

Accreditation Standard

ISO/IEC 17025:2017

Certificate Number

CC-2091

Page No

20 of 23

Validity

23/03/2023 to 22/03/2025

Last Amended on

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|------|--|---|--|--|--|
| 93 | MECHANICAL- TORQUE GENERATING DEVICES | Torque Wrench and Torque Screwdrivers (Type I Class A to Class E) and (Type II Class A to Class G) | Using Torque Sensor with indicator, Automated electronic torque wrench calibration tester (mechanized) by comparison method as per ISO 6789:2017 | 300 Nm to 1000 Nm | 0.21% of Reading |
| 94 | MECHANICAL- TORQUE GENERATING DEVICES | Torque Wrench and Torque Screwdrivers (Type I Class A to Class E) and (Type II Class A to Class G) | Using Torque Sensor with indicator, Automated electronic torque wrench calibration tester (mechanized) by comparison method as per ISO 6789:2017 | 6 Nm to 20 Nm | 1,0% of reading |





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MAROL NAKA ANDHERI (EAST)., MUMBAI, MAHARASHTRA, INDIA

Accreditation Standard

ISO/IEC 17025:2017

Certificate Number

CC-2091

Page No

21 of 23

Validity

23/03/2023 to 22/03/2025

Last Amended on

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|------|---|---|--|--|--|
| | | 2.0 | Site Facility | | |
| 1 | MECHANICAL- ACCELERATION AND SPEED | Centrifuge Machine | Using Precision Digital Tachometer by Direct Method | 1000 rpm to 20000 rpm | 6.02rpm |
| 2 | MECHANICAL- ACCELERATION AND SPEED | Centrifuge Machine | Using Precision Digital Tachometer by Direct Method | 200 rpm to 1000 rpm | 5.68rpm |
| 3 | MECHANICAL- ACCELERATION AND SPEED | RPM Indicator and Rotation Motor | Using Precision Digital Tachometer by Direct Method | 1000 rpm to 20000 rpm | 6.02rpm |
| 4 | MECHANICAL- ACCELERATION AND SPEED | RPM Indicator and Rotation Motor | Using Precision Digital Tachometer by Direct Method | 200 rpm to 1000 rpm | 5.68rpm |
| 5 | MECHANICAL- ACCELERATION AND SPEED | Tachometer(Non- Contact) | Using Precision Digital Tachometer and Variable Power Source by Comparison Method | 1000 rpm to 20000 rpm | 10.95rpm |
| 6 | MECHANICAL- ACCELERATION AND SPEED | Tachometer(Non- Contact) | Using Precision digital tachometer & Variable Power Source by Comparison Method | 200 rpm to 1000 rpm | 10.91rpm |
| 7 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Height Gauge - Linear (L.C: 0.0005 mm) | Using Gauge Blocks Grade 0, Long Slip Gauges, Caliper Checker by comparison Method | 0 to 600 mm | 9.47 μm |





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Accreditation Standard

ISO/IEC 17025:2017

Certificate Number

CC-2091

Page No

22 of 23

Validity

23/03/2023 to 22/03/2025

Last Amended on

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|------|---|---|---|--|--|
| 8 | MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.) | Height Gauge - Squareness (L.C: 0.0005 mm) | Using Digital Probe,Surface Plate, Cylindrical Mandrel by comparison Method | 0 to 600 mm | 5.76μm |
| 9 | MECHANICAL- PRESSURE INDICATING DEVICES | Pressure Hydraulic Digital/Analog Pressure Gauge, indicator, pressure Transmitter, Pressure Switches. | Using Digital Pressure Gauge, Multimeter & Pressure Hand Pump by Comparison Method as per DKD- R-6-1 | 0 to 350 bar | 2.9bar |
| 10 | MECHANICAL- PRESSURE INDICATING DEVICES | Pressure Hydraulic Digital/Analog Pressure Gauge, indicator, pressure Transmitter, Pressure Switches. | Using Digital Pressure Gauge, Multimeter & Pressure Hand Pump by Comparison Methodas per DKD- R-6-1 | 0 to 686 bar | 2.9bar |
| 11 | MECHANICAL- PRESSURE INDICATING DEVICES | Pressure Pneumatic Digital/Analog Pressure Gauge, indicator, pressure Transmitter, Pressure Switches. | Using Digital Pressure Gauge, Multimeter & Pneumatic Pressure Hand Pump by Comparison Methodas per DKD- R-6-1 | 0 to 30 bar | 0.5bar |





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Accreditation Standard

ISO/IEC 17025:2017

Certificate Number

CC-2091

Page No

23 of 23

Validity

23/03/2023 to 22/03/2025

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|------|--|---|---|--|--|
| 12 | MECHANICAL- PRESSURE INDICATING DEVICES | Vacuum gauge(Dial or Analogue/Digital) | Using Digital Pressure Gauge & Vacuum Pump by Comparison Method per DKD-R-6-1 | (-)0.9 bar to 0 | 0.007bar |

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

