

Laboratory

S. V. Engineering Centre, Plot No. E-3, Sanjay Colony, Sector - 23,  
Faridabad, Haryana

Accreditation Standard

ISO/IEC 17025: 2005

Certificate Number

CC-2472 (in lieu of C-0080)

Page 1 of 10

Validity

11.02.2018 to 10.02.2020

Last Amended on -

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability ( $\pm$ )	Remarks
<b><u>MECHANICAL CALIBRATION</u></b>				
<b>1.</b>	<b>DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)</b>			
1.	Vernier Caliper <sup>s</sup> L.C.: 0.01mm	Upto 300 mm Upto 1000 mm Upto 2000 mm	7.4 $\mu$ m 12.0 $\mu$ m 15.0 $\mu$ m	Using Caliper Checker Length Bar & Gauge Block
2.	External Micrometer <sup>s</sup> L.C.: 0.001mm L.C.: 0.01mm	0 to 100 mm 100 mm to 300 mm 300 mm to 500 mm 500 mm to 1500 mm	1.0 $\mu$ m 1.3 $\mu$ m 4.0 $\mu$ m 15.0 $\mu$ m	Using Gauge Blocks/ Optical Flat, Length Bar
3.	Internal Micrometer <sup>s</sup> L.C.: 0.001mm	5 mm to 50 mm 50 mm to 600 mm	6.2 $\mu$ m 7.0 $\mu$ m	Using Caliper Checker, Gauge Blocks/Optical Flat, Lever Type Dial Gauge
4.	Length Standards- All Axis <sup>s</sup> (i)Length Bars (ii)Micrometer Setting Rods (iii)Setting Rods (iv)Level Calibrator	Upto 500 mm 500 mm to 1500 mm  Upto 500 mm	1.5 $\mu$ m 12.0 $\mu$ m  2.7 $\mu$ m	Using Gauge Blocks, Electronic Probe  Using Gauge Blocks, Electronic Probe & Length bars on CMM
5.	Depth Micrometer <sup>s</sup> L.C 0.001mm	0 to 300 mm	3.1 $\mu$ m	Using Gauge Blocks
6.	Micrometer Head <sup>s</sup> L.C.: 0.2 $\mu$ m	0 to 50 mm	0.183 $\mu$ m	Using Gauge Blocks, Electronic Probe, Comparator Stand
7.	Height Micrometer/ Check Master <sup>s</sup> L.C.: 0.001mm	Upto 600 mm	1.8 $\mu$ m	Using Gauge Blocks, Electronic Probe

**Abhinav Thakur**  
Convenor

**Avijit Das**  
Program Director

Laboratory

S. V. Engineering Centre, Plot No. E-3, Sanjay Colony, Sector - 23,  
Faridabad, Haryana

Accreditation Standard

ISO/IEC 17025: 2005

Certificate Number

CC-2472 (in lieu of C-0080)

Page 2 of 10

Validity

11.02.2018 to 10.02.2020

Last Amended on -

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability ( $\pm$ )	Remarks
	(ii) Extensimeter (iii) Depth / Inside Micro Checker	0 to 150 mm 0 to 300 mm	1.8 $\mu$ m 1.8 $\mu$ m	
8.	Riser Block <sup>§</sup>	Upto 300 mm	1.3 $\mu$ m	Using Gauge Blocks, Electronic Probe
9.	Height Gauge (Digital Electronic Comparator) <sup>§</sup> L.C.: 0.0001mm Squareness L.C.: 0.01mm	Upto 600 mm Upto 1000 mm  Upto 450 mm Upto 1500 mm	2.0 $\mu$ m 4.9 $\mu$ m  3.208 $\mu$ m 9.5 $\mu$ m	Using Gauge Blocks, Electronic Probe, Length Bar  Using Cylindrical Square
10.	Depth Gauge / Depth Venirer <sup>§</sup> L.C.: 0.01mm	Upto 500 mm	15.0 $\mu$ m	Using Gauge Blocks
11.	Thread Pitch Micrometer <sup>§</sup> L.C.: 0.001 mm	0.7 mm to 2.5 mm	4.6 $\mu$ m	Using Standard Wear Check Plug
12.	Dial Gauge / Plunger, Lever Type Dial <sup>§</sup> L.C.: 0.001 mm	Upto 25 mm	0.292 $\mu$ m	Using Dial Calibration Tester / Gauge Blocks
13.	Dial Snap Gauge <sup>§</sup>	Upto 200 mm	1.1 $\mu$ m	Using Gauge Blocks
14.	Bore Gauge <sup>§</sup> (i) 2 Points (ii) 3 Points	Travel 2 mm Only  Upto 100 mm	2.5 $\mu$ m  2.5 $\mu$ m	Using Dial Calibration Tester, Gauge Blocks, Master Ring Gauge

Abhinav Thakur  
Convenor

Avijit Das  
Program Director

Laboratory

S. V. Engineering Centre, Plot No. E-3, Sanjay Colony, Sector - 23,  
Faridabad, Haryana

Accreditation Standard

ISO/IEC 17025: 2005

Certificate Number

CC-2472 (in lieu of C-0080)

Page

3 of 10

Validity

11.02.2018 to 10.02.2020

Last Amended on -

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability ( $\pm$ )	Remarks
15.	Plain Cylindrical <sup>s</sup> (i) Plug Gauge (ii) Cylindrical Pins (iii) Measuring Prism (iv) Setting Master Wire	Upto 100 mm Upto 500 mm Upto 500 mm	0.7 $\mu$ m 1.3 $\mu$ m 3.2 $\mu$ m	Using Gauge Blocks, Electronic Probe / LMM/ on CMM
16.	Comparator Stand <sup>s</sup>	200 mm x 200 mm Base  Upto 500 mm x 500 mm	2.5 $\mu$ m  2.5 $\mu$ m	Gauge Blocks Optical Flat, Dial Gauge  Using Spirit Level 10 $\mu$ m/m
17.	V Block <sup>s</sup> (Parallelism/ Flatness Squareness Angle of 'V')	Upto 150 mm  Upto 150 mm  Upto 200 mm	7.2 $\mu$ m  7.2 $\mu$ m 9.0 s 4.0 $\mu$ m 4.0 s	Gauge Blocks Cylindrical Square, Cyl. Mandrel On CMM
18.	Cylindrical Square <sup>s</sup> Angle Plate Box Plate Engineer Square	Upto 450 mm   Upto 700 mm	6.0 $\mu$ m/m   3.0 $\mu$ m/m	Gauge Blocks Cylindrical Square  On CMM
19.	Measuring Scale <sup>s</sup> L.C.: 0.5 mm	0 to 1000 mm	50 $\mu$ m	Scale & Tape Calibrator
20.	Measuring Tape /PI Tape / Count Meter <sup>s</sup>	Upto 50 m	50 $\mu$ m/m	Scale & Tape Calibrator
21.	Standard Foils Set <sup>s</sup>	Upto 1 mm	1.4 $\mu$ m	Gauge Blocks, Electronic Probe
22.	In Side Dial Caliper <sup>s</sup> L.C.: 0.01mm	5 mm to 95 mm	8.0 $\mu$ m	Caliper Checker

Abhinav Thakur  
Convenor

Avijit Das  
Program Director

Laboratory

S. V. Engineering Centre, Plot No. E-3, Sanjay Colony, Sector - 23,  
Faridabad, Haryana

Accreditation Standard

ISO/IEC 17025: 2005

Certificate Number

CC-2472 (in lieu of C-0080)

Page

4 of 10

Validity

11.02.2018 to 10.02.2020

Last Amended on -

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability ( $\pm$ )	Remarks
23.	Coating Thickness Meter <sup>§</sup> L.C.: 0.001 mm	0.01 mm to 1 mm	2.5 $\mu$ m	Using Standard Foils
24.	Slip Gauge Accessories <sup>§</sup>	0 to 300 mm	2.0 $\mu$ m	Using Gauge Blocks, Electronic Probe, Optical Flat
25.	(i) Optical Flat Type A Flatness <sup>§</sup> (ii) Optical Parallels, Optical Flat – Type B Flatness of both <sup>§</sup> faces Grade I and II Size	Dia 50 mm  Dia 50 mm	0.202 $\mu$ m  0.202 $\mu$ m  0.069 $\mu$ m	Using Monochromatic Light, Master, Optical Flat  Using Gauge Blocks & Electronic Comparator
26.	Thickness and Elongation Gauge dimension only <sup>§</sup>	4.8 mm to 33.9 mm 14.7 mm to 81.0 mm	10.58 $\mu$ m	Using Digital Caliper (IS : 2386)
27.	Plain Snap Gauge <sup>§</sup>	Upto 200 mm 200 mm to 400 mm Upto 500 mm	1.0 $\mu$ m 4.0 $\mu$ m 4.0 $\mu$ m	Using Gauge Blocks, LMM On CMM
28.	Plain Ring Gauge <sup>§</sup>	2 mm to 100 mm 100 mm to 400 mm 2 mm to 500 mm	1.1 $\mu$ m 3.0 $\mu$ m 1.5 + $\frac{L}{300}$ $\mu$ m L is in mm	Using Gauge Blocks & Electronic Probe LMM on CMM
29.	Filler Gauge <sup>§</sup>	Upto 1 mm	1.4 $\mu$ m	Using Digital Micrometer
30.	Radius Gauge / Radius Charts <sup>§</sup>	0.5 mm to 30 mm 30 mm to 100 mm Upto 700 mm	5.5 $\mu$ m 6.0 $\mu$ m 1.5 + $\frac{L}{300}$ $\mu$ m L is in mm	Using Profile Projector  CMM

Abhinav Thakur  
Convenor

Avijit Das  
Program Director

Laboratory

S. V. Engineering Centre, Plot No. E-3, Sanjay Colony, Sector - 23,  
Faridabad, Haryana

Accreditation Standard

ISO/IEC 17025: 2005

Certificate Number

CC-2472 (in lieu of C-0080)

Page

5 of 10

Validity

11.02.2018 to 10.02.2020

Last Amended on -

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability ( $\pm$ )	Remarks
31.	Pitch Gauge Angle Pitch <sup>§</sup>	Upto 60° Upto 7 mm	4.0 min 2.0 $\mu$ m	Using Profile Projector
32.	Sieve <sup>§</sup>	0.02 mm to 4 mm > 4 mm to 100 mm	5.0 $\mu$ m 16.0 $\mu$ m	Using Profile Projector Digital Caliper
33.	Thread Plug Gauge / WCP <sup>§</sup> (Plain / Taper)	1 mm to 100 mm 100 mm to 400 mm	1.61 $\mu$ m	Using LMM, Cylinder Setting Master/ Standard Wires
34.	Thread Ring Gauge/ Taper Thread Ring Gauge <sup>§</sup>	Upto 100 mm	1.0 $\mu$ m	Using LMM
35.	Spline Ring Gauge/ Plug Gauge <sup>§</sup>	Upto 500 mm	1.5 + $\underline{L}$ $\mu$ m 300 L is in mm	Using CMM, Standard Pins
36.	Dial Thickness Gauge/Flush pin Gauge <sup>§</sup> L.C. 0.001 mm	0 to 25 mm	1.0 $\mu$ m	Using Gauge Blocks
37.	Plain Taper Gauge <sup>§</sup> (Plug / Ring)	0 to 180° Upto 500 mm	1.5 s 1.2 s	Using Sine Bar & Standard Pins, Gauge Blocks Micrometer On CMM
38.	Bevel Angle Protector <sup>§</sup> L.C. 5'	0 to 180° - 0°	4.0 min	Using Standard Angle Gauge
39.	(i) Sine Bar (Parallelism / Flatness/ Centre Distance) <sup>§</sup>	Upto 500 mm Angle	1.0 $\mu$ m 1.2 s 3.2 $\mu$ m 1.56 s	Using Gauge Blocks, Electronic Probe Angle Gauge, CMM

Abhinav Thakur  
Convenor

Avijit Das  
Program Director

Laboratory

S. V. Engineering Centre, Plot No. E-3, Sanjay Colony, Sector - 23,  
Faridabad, Haryana

Accreditation Standard

ISO/IEC 17025: 2005

Certificate Number

CC-2472 (in lieu of C-0080)

Page

6 of 10

Validity

11.02.2018 to 10.02.2020

Last Amended on -

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability ( $\pm$ )	Remarks
	(ii) Sine Centre <sup>§</sup>	Upto 500 mm Angle	2.0 $\mu$ m 1.02 s 3.2 $\mu$ m 1.56 s	Using Gauge Blocks, Electronic Probe, Angle Gauge, CMM
40.	Combination Set <sup>§</sup> L.C. 30 min / 1 $^\circ$	0 - 180 $^\circ$ - 0 $^\circ$	35.0 min	Using Sin Bar, Gauge Blocks & Angle Gauge
41.	Clinometers / Inclinometer <sup>§</sup> L.C. 1'	0 - 180 $^\circ$ - 0 $^\circ$	40.0 s	Using Sine Bar / Gauge Blocks
42.	Level / Electronic Level (Sensitivity 0.001 mm / m) <sup>§</sup>	0 to 5 mm / m	0.7 s	Using Level Calibrator C/C 500 mm
43.	Angle Gauge <sup>§</sup>	Upto 90 $^\circ$  Upto 170 $^\circ$	2.0 s  1.33 s	Using Sine Bar, Gauge Blocks, Electronic Probe On CMM
44.	Plain / Taper Mandrel Variation in diameter/ Total Runout <sup>§</sup>	Upto 500 mm Angle	2.787 $\mu$ m 1.1 s	Using Sine Centre, Dial Indicator, Gauge Blocks
45.	Gauge Blocks <sup>§</sup>	0.5 mm to 10 mm 10 mm to 25 mm 25 mm to 50 mm 50 mm to 100 mm	0.061 $\mu$ m 0.066 $\mu$ m 0.083 $\mu$ m 0.131 $\mu$ m	Using Gauge Blocks Comparator / Gauge Blocks
46.	Caliper Checker/ Step Gauge <sup>§</sup>	Upto 600 mm  Upto 1000 mm	2.1 $\mu$ m  4.4 $\mu$ m	Using Gauge Blocks, Electronic Probe Gauge Blocks, Length Bars, Electronic Probe

Abhinav Thakur  
Convenor

Avijit Das  
Program Director

Laboratory

S. V. Engineering Centre, Plot No. E-3, Sanjay Colony, Sector - 23,  
Faridabad, Haryana

Accreditation Standard

ISO/IEC 17025: 2005

Certificate Number

CC-2472 (in lieu of C-0080)

Page 7 of 10

Validity

11.02.2018 to 10.02.2020

Last Amended on -

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability ( $\pm$ )	Remarks
47.	Floating Carriage DMM <sup>§</sup> L.C. 0.02 $\mu$ m Straightness / Concentricity / Micrometer Travel / Flatness of Measuring Faces	Upto 175 mm	3.0 $\mu$ m	Using Gauge Blocks, Electronic Probe Cylindrical Setting Master
48.	Dial Calibration Tester <sup>§</sup> L.C. 0.0001 mm	0 to 25 mm	0.22 $\mu$ m	Using Gauge Blocks
49.	Electronic Probe <sup>§</sup> L. C. 0.01 $\mu$ m / 0.1 $\mu$ m	0 to 25 mm	0.12 $\mu$ m	Using Gauge Block Comparator
50.	Profile Projector <sup>§</sup> Magnification Upto 100 x Linear Scale L.C.: 0.001 mm Angular Scale L.C. 1 arc sec	Travel Upto 200 mm 0-360°	0.16 % 3.108 $\mu$ m 21 sec	Glass scale Angle Gauges
51.	Tool Maker Microscope <sup>§</sup> L.C. 0.001mm	Travel upto 50 mm	7.12 $\mu$ m	Using Glass scale
52.	Surface plate <sup>§</sup> (Flatness)	Upto 6000 mm x 2000 mm	$1.3 \left( \sqrt{\frac{L+W}{100}} \right)^{1/2} \mu\text{m}$ L & W in mm	Using Spirit Level
53.	Straight Edge <sup>§</sup> (Straightness)	Length Up to 2000 mm	$1.9 (L/100)^{1/2} \mu\text{m}$	Using Spirit Level

Abhinav Thakur  
Convenor

Avijit Das  
Program Director

Laboratory

S. V. Engineering Centre, Plot No. E-3, Sanjay Colony, Sector - 23,  
Faridabad, Haryana

Accreditation Standard

ISO/IEC 17025: 2005

Certificate Number

CC-2472 (in lieu of C-0080)

Page

8 of 10

Validity

11.02.2018 to 10.02.2020

Last Amended on -

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability ( $\pm$ )	Remarks
54.	Bench Centre <sup>§</sup> Co axiality, Parallelism	Upto 1500 mm	4.4 $\mu$ m	Using Level & Standard Mandrels, Lever Type Dial Gauge
55.	Gauge block Comparator <sup>§</sup> L.C.: 0.01 $\mu$ m	Upto 100 mm	0.05 $\mu$ m	Using Gauge blocks Standard M10
56.	3D Co ordinate Measuring Machine <sup>§</sup>	1 x1 x 1 m	6 x L ( $\mu$ m) Where L is in m	Using Step Gauge & Hemisphere, Std Angle fixture
57.	Length Measuring Machine <sup>§</sup> L.C.: 0.01 $\mu$ m	Upto 100 mm	0.7 $\mu$ m	Using Gauge Blocks
58.	Surface Roughness Tester <sup>§</sup> L.C.: 0.01 $\mu$ m	Upto Ra 5 $\mu$ m Rmax 15 $\mu$ m	6.4%	Using Surface Roughness Master / Optical Flat / Step gauge
59.	Scale / Tape Calibrator <sup>§</sup>	0 to 1000 mm	42 $\mu$ m/m	Using Gauge Blocks, Length bar
60.	Air gauge Unit <sup>§</sup> L.C.: 0.0005 mm	0.040 mm	1.5 $\mu$ m	Using Plain Plug & Ring Gauge A,B,C
61.	Profile Projector <sup>*</sup> Magnification upto 100 x Linear Scale L. C . 0.001mm Angular Scale L.C.: 1 arc sec	Travel upto 200mm  0 to 360°	0.16%  3.108 $\mu$ m  21 sec	Using Glass scale  Angle Gauge
62.	Surface Plate <sup>*</sup> ( Flatness)	Upto 6000 mm x 2000 mm	$1.3 \left( \sqrt{\frac{L+W}{100}} \right)^{1/2} \mu$ m  L & W in mm	Using Spirit Level

Abhinav Thakur  
Convenor

Avijit Das  
Program Director



Laboratory

S. V. Engineering Centre, Plot No. E-3, Sanjay Colony, Sector - 23,  
Faridabad, Haryana

Accreditation Standard

ISO/IEC 17025: 2005

Certificate Number

CC-2472 (in lieu of C-0080)

Page

9 of 10

Validity

11.02.2018 to 10.02.2020

Last Amended on -

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability ( $\pm$ )	Remarks
63.	Straight Edge* ( Straightness)	Length Upto 2000 mm	$1.9(L/100)^{1/2} \mu\text{m}$	Using Spirit Level
64.	Bench Centre* Co axiality, Parallelism	Upto 1500 mm	4.4 $\mu\text{m}$	Using Level & Standard Mandrels, Lever Type Dial Gauge
65.	Gauge block Comparator* L.C. 0.01 $\mu\text{m}$	Upto 100 mm	0.05 $\mu\text{m}$	Using Gauge blocks Standard M10
66.	3D Co ordinate Measuring Machine*	1 x1 x 1 m	6 x L ( $\mu\text{m}$ ) Where L is in m	Using Step Gauge & Hemisphere, Std Angle fixture
67.	Length Measuring Machine* L.C. 0.01 $\mu\text{m}$	Upto 100 mm	0.7 $\mu\text{m}$	Using Gauge Blocks
68.	Surface Roughness Tester* L.C. 0.01 $\mu\text{m}$	Upto Ra 5 $\mu\text{m}$ Rmax 15 $\mu\text{m}$	6.4%	Using Surface Roughness Master / Optical Flat / Step gauge
69.	Scale / Tape Calibrator*	0 to 1000 mm	42 $\mu\text{m}/\text{m}$	Using Gauge Blocks, Length bar
70.	Air gauge Unit* L.C. 0.0005 mm	0.040 mm	1.5 $\mu\text{m}$	Using Plain Plug & Ring Gauge A,B,C
71.	Roundness Tester* Radial / Axial  Straightness	Upto 300 x 350 h mm	0.15 $\mu\text{m}$  4.0 $\mu\text{m}$	Using Gauge Blocks Master Cylinder, Hemisphere

Abhinav Thakur  
Convenor

Avijit Das  
Program Director

**Laboratory** S. V. Engineering Centre, Plot No. E-3, Sanjay Colony, Sector - 23, Faridabad, Haryana

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

**Certificate Number** CC-2472 (in lieu of C-0080) **Page** 10 of 10

**Validity** 11.02.2018 to 10.02.2020 **Last Amended on** -

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability ( $\pm$ )	Remarks
II.	<b>HARDNESS TESTING MACHINES</b>			
1.	Rubber Hardness Tester Calibrator <sup>§</sup>	Shore A & Shore D	0.06 N (= 0.80 Shore A) 0.13 N (= 0.29 Shore D)	Using Load cell with indicator and Dead Weights
2.	Rubber Hardness Tester (Durometer) i/ Spring Force Calibration <sup>§</sup>	Shore A & Shore D	0.072 N (= 0.95 Shore A) 0.31 N (= 0.70 Shore D)	Rubber Hardness Tester Calibrator

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

<sup>§</sup>Only in Permanent Laboratory

\*Only for Site Calibration

---

Abhinav Thakur  
Convenor

---

Avijit Das  
Program Director