Laboratory	**Valco Calibration Services,"S" Block, Plot No. 230/1, MIDC, Bhosari, Pune, Maharashtra**		
Accreditation Standard	**ISO/IEC 17025: 2005**		
Discipline	**Mechanical Calibration**	**Issue Date**	**30.07.2014**
Certificate Number	**C-0188**	**Valid Until**	**29.07.2016**
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Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability (±)	Remarks
I. DIMENSION			
1. CALIPER[$]			
Vernier/Dial/Digital			
L. C. : 10µm[Φ]	Upto 600 mm	16.0 µm	Using Caliper Checker & External Micrometer
2. DEPTH CALIPER[$]			
Vernier/Dial / Digtial			
L.C.: 10 µm	Upto 600 mm	13.0 µm	Using Gauge Block Set & Surface Plate
3. HEIGHT GAUGE[$]			
Vernier/Dial/ Digital			
L.C.: 10 µm	Upto 600 mm	12.42 µm	Using Caliper Checker
4. EXTERNAL MICROMETER[$]			
L.C.: 1 µm	Up to 100	1.53 µm	Using Gauge Block set
L.C.: 10 µm	Up to 300	6.80 µm	
5. INTERNAL MICROMETER[$]			
2-POINTS			
BASIC TARAVEL OF MICROMETER			
L.C.: 10 µm	50 mm to 63 mm	1.30 µm	Using LMM
OVERALL LENGTH ACCURACEY WITH EXTENSION ROD[$]	Upto 300 mm	8.00 µm	

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6.	**DEPTH MICROMETER[$]**			
	L.C. 1 µm	Upto 100 mm	1.8 µm	Using Gauge
	L.C. : 10 µm	Upto 300 mm	6.0 µm	Block Set
7.	**MICROMETER SETTING STANDARD[$]**	Upto 300 mm	3.50 µm	Using Gauge Block & Electronic Probe with DRO
8.	**DIAL GAUGE[$] (Plunger Type)**			
	L.C.: 1 µm	0 to 25 mm	1.15 µm	Using LMM
9.	**DIAL GAUGE[$] (Lever Type)**			
	L.C.: 1 µm	0 to 0.12 mm	1.20 µm	Using LMM
	L.C.: 10 µm	0 to 0.8 mm	5.90 µm	
10.	**BORE GAUGE WITH DIAL[$] (For Transmission Accuracy)**	Upto 1 mm	1.16 µm	Using LMM
11.	**DIAL THICKNESS GAUGE[$]**			
	L.C.: 1 µm	Upto 10 mm	0.84 µm	Using Gauge
	L.C: 10 µm	Upto 20 mm	5.80 µm	Block Set
12.	**DIAL SNALP GAUGE[$]**	Upto 100 mm	1.65 µm	Using Gauge Block Set
13.	**PLAIN PLUG GAUGE, OD MASTER[$]**	Upto 100 mm	2.30 µm	Using Gauge Block
		>100mm to 400 mm	3.66 µm	& Electronic Probe with DRO

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	Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability (±)	Remarks
14.	**PLAIN RING GAUGE$**	5 mm to 100 mm 100mm to 300 mm	1.90 µm 2.90 µm	Using LMM & Master Ring Gauge
15.	**SNAP GAUGE$**	Upto 100 mm 100mm to 500 mm	2.10 µm 4.30 µm	Using Gauge Block Set
16.	**CYLINDRICAL MEASRUING PIN$**	0 to 20 mm	2.22 µm	Using Gauge Block & Electronic Probe with DRO
17.	**CYLINDRICAL SETTING MASTER$**	Upto 100 mm 100mm to 400 mm	2.22 µm 3.66 µm	Using Gauge Block & Electronic Probe with DRO
18.	**LENGTH BAR$**	Upto 100mm 100mm to 500 mm	2.9 µm 3.02 µm	Using Gauge Block & Electronic Probe with DRO
19.	**PLAIN TRHREAD PLUG GAUGE$ (Effective Diameter)**	M3 to M100	2.40 µm	Using LMM
20.	**PLAIN THREAD RING GAUGE$ (Effective Diameter)**	M4 to M 100	1.90 µm	Using LMM
21.	**THREAD MEASURING WIRE$**	0.17 mm to 6.35 mm	2.20 µm	Using Gauge Block & Electronic Probe with DRO
22.	**PLAIN TAPER PLUG GAUGE$** **Maj/Min. Diameter** **Angle**	Upto 200 mm Half included angle 22° 30°	3.90 µm 40 sec of arc	Using LMM Roller & Gauge Block Set

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	Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability (±)	Remarks
23.	**PLAIN TAPER RING GAUGE$**	Upto 200 mm	3.20 µm	Using LMM Roller & Master Ring Gauge
	Maj/Min Diameter			
	Angle	Half included angle 22º 30º	30 sec of arc	
24.	**FEELER GAUGE$**	0 to 1mm	2.80 µm	Using Gauge Block & Electronic Probe with DRO
25.	**BEVEL PROTRACTOR$**			
	L.C. : 0 º ,5′	0 º to 90 º to 0 º	4.1 min of arc	Using Sine Bar & Gauge Block
26.	**COMBINATION SET ANGLE PROTRACTOR$**			
	L.C. : 1 µm	0 º to 180 º	38 min of arc	Using Sine Bar & Gauge Block
27.	**STRAIGHE EDGE$**	Upto 1000 mm	8.80 µm	Using Gauge Block & Comparator Stand
	(Straightness)	Upto 1000 mm	8.40 µm	
	(Parallelism)			
28.	**ANGLE PLATE$**	250x175x150	8.70 µm	Using Electronic Height
	(Parallelism)		8.80 µm	
	(Squarness)			
29.	**BOX ANGLE PLATE$**		8.70 µm	Using Electronic Height
	(Parallelism)	250x175x150	8.80 µm	
	(Squareness)			

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Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability (±)	Remarks
30. ENGINEERS SQUARE$ (Squareness)	Upto 500 mm	8.60 µm	Using Electronic Height
31. V-BLOCK$		6.95 µm	Using Electronic Height
(Parallelism)	300x300	7.60 µm	
(Squarness)			
32. COMPARATOR STAND$ (Flatness)	Upto 150 mm	7.00 µm	Using Electronic Height
33. PISTOL CALIPER$ L.C. : 100 µm	0 to 50 mm	58.56 µm	Using Gauge Block
34. ELECTRONIC HEIGHT$ GAUGE L.C. : 1.0 µm	Upto 600 mm	5.70 µm	Using Long Gauge Block
35. SURFACE PLATE FLATNESS♣	2500 mm x2500mm	$3.73\sqrt{\frac{L+W}{100}}$ L & W in mm	Using Spirit Level LC: 10 µm/mt.

*** Measurement Capability is expressed as an uncertainty (±) at a confidence probability of 95%.**

$Only in Permanent Laboratory

♣Only for Site Calibration

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