

Laboratory Adcon Test & Calibration Lab, 44, Udyog Vihar, Phase-I, Gurgaon, Haryana
Accreditation Standard ISO/IEC 17025:2005
Discipline Mechanical Calibration **Issue Date** 17.03.2016
Certificate Number C-0481 **Valid Until** 16.03.2018
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Quantity Measured / Instrument	Range/ Frequency	* Calibration Measurement Capability (\pm)	Remarks
I. DIMENSION			
1. Caliper ^{\$} L. C.: 0.01 mm ^Φ	0 to 300 mm	7.0 μ m	Using 'K' grade slip gauge set and slip gauge accessories Using Caliper checker
L. C.: 0.01mm ^Φ	0 to 600 mm	16.0 μ m	
2. Height Gauge ^{\$} L. C.: 0.01mm ^Φ	0 to 300 mm 0 to 600 mm	8.0 μ m 16.0 μ m	Using 'K' grade slip gauge set & Caliper checker.
3. External Micrometer ^{\$} L. C.: 0.001 mm	0 to 25 mm 0 to 100 mm	1.0 μ m 1.5 μ m	Using 'K' grade slip gauge set and slip gauge accessories
L. C.: 0.01 mm	0 to 300 mm	7.0 μ m	
4. Plunger Type Dial Gauge/Digimatic Indicator ^{\$} L. C.: 0.001 mm ^Φ L. C.: 0.01 mm	0 to 25 mm 0 to 50 mm	1.41 μ m 6.0 μ m	Using Electronic Dial Calibration Tester
5. Lever Type Dial Gauge ^{\$} L. C.: 0.001 mm L. C.: 0.01 mm	0 to 0.14 mm 0 to 0.80 mm	1.2 μ m 6.0 μ m	Using Electronic Dial Calibration Tester
6. Dial Thickness Gauge ^{\$} L. C.: 0.01 mm	0 to 25 mm	6.0 μ m	Using 'K' grade slip gauge set
7. Depth Micrometer ^{\$} L. C.: 0.01mm	0 to 300 mm	7.0 μ m	Using 'K' grade slip gauge set

Shally Sharma
 Convenor

Avijit Das
 Program Manager

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8. Plain Plug Gauge \$	0 to 100 mm	6.4 μ m	Using 'K' grade slip gauge set & Plunger type dial gauge
9. Feeler Gauge \$	0 to 2 mm	2.0 μ m	Using External Micrometer
10. Snap Gauge \$	0 to 200 mm	2.0 μ m	Using 'K' grade slip gauge set
11. Depth gauge \$ L. C.: 0.01 mm	0 to 300 mm	7.0 μ m	Using 'K' grade slip gauge set and slip gauge accessories
12. Bore Gauge \$ L. C.: 0.01 mm	0 to 300 mm	9.0 μ m	Using 'K' grade slip gauge set and slip gauge accessories
For Plunger movement L.C : 0.001 mm Travel only	0 to 300 mm	1.70 μ m	
13. Length bar/Cylindrical Setting Bar \$	0 to 300 mm	5.0 μ m	Using 'K' grade slip gauge set & Plunger Dial Gauge
14. Surface Plate #	160 mm X 100 mm to 2500 mm X 1600 mm	0.6 $\sqrt{(L+W/125)}$ μ m L&W in mm	Using Electronic Level
15. Magnetic V Block \$ Squareness, parallelism Flatness	150 mm	9.86 μ m	Using Master Mandrel & Lever Type Dial Gauge
16. Straight Edge # (Straightness)	0 to 2500 m	1.4 $\sqrt{(L/125)}$ μ m L in mm	Using Electronic Level
17. Comparator Stand \$ (Flatness)	300 mm X 300 mm	6.2 μ m	Using 'K' grade slip gauge set & Lever Dial gauge.
18. Angle Plate/ Box Plate \$ (Squareness)	Upto 450 mm	12.0 μ m	Using Master Cylinder, Slip gauge set and Lever type Dial Gauge

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19. Tri Square / Engineer's Square Squareness, Parallelism, Flatness \$	Upto 300 mm	10.0 μ m	Using Master Cylinder, Slip gauge set and Lever type Dial Gauge
20. Master Cylinder \$	Upto 450 mm	10.5 μ m	Using 'K' grade slip gauge set and Master Cylinder
21. Master Mandrel \$	Upto 600 mm	7.0 μ m	Using 'K' grade slip gauge set and Lever type dial
22. Bench Centre Co-axiality only *	Upto 3000 mm	5.3 μ m	Using Master Mandrel & Lever Type Dial Gauge
II. PRESSURE & VACUUM			
1. Pneumatic Pressure \$ (Manometer, Pressure Gauge/Indicator, Pressure Switch, Pressure Transmitter, Pressure Transducer, Magnehelic Gauge)	0 to 200 mmWC >200 mmWC to 2000 mmWC 0 to 735 mmHg	0.12 mmWC 0.61 mmWC 0.58 mmHg	Using Digital Pressure Calibrators By Direct Comparison as per DKD R-6-1
2. Hydraulic Pressure \$ (Pressure Gauge/Indicator, Pressure Switch, Pressure Transmitter, Pressure Transducer)	0 to 7 bar >7 bar to 70 bar >70 bar to 700 bar >700 kg/cm ² to 1000 kg/cm ²	0.02 % of rdg 0.03 % of rdg 0.02 % of rdg 0.02 % of rdg	Using Digital Test Gauges (Druck) By Direct Comparison as per DKD R-6-1

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3. Vacuum (Negative Pressure) (Vacuum Gauge/Indicator, Vacuum Switch, Vacuum Transmitter, Vacuum Transducer)	(-)730 mmHg to 0	0.58 mmHg	Using Digital Pressure Calibrator By Direct Comparison as per DKD R-6-1
4. Pneumatic Pressure * (Manometer, Pressure Gauge/Indicator, Pressure Switch, Pressure Transmitter, Pressure Transducer, Magnehelic Gauge)	0 to 200 mmWC >200 to 1000 mmWC 0 to 735 mmHg	0.41 mmWC 2.13 mmWC 1.39 mmHg	Using Manometer By Direct Comparison
5. Hydraulic Pressure * (Pressure Gauge/Indicator, Pressure Switch, Pressure Transmitter, Pressure Transducer)	0 to 3 kg/cm ² >3 kg/cm ² to 70 kg/cm ² >70 kg/cm ² to 700 kg/cm ²	0.006 kg/cm ² 0.06 kg/cm ² 0.32 kg/cm ²	Using Digital Test Gauges By Direct Comparison
6. Vacuum * (Negative Pressure) (Vacuum Gauge/Indicator, Vacuum Switch, Vacuum Transmitter, Vacuum Transducer)	(-)730 mmHg to 0	1.39 mmHg	Using U-Tube Manometer By Direct Comparison

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III. MASS			
1. Weight ^{\$}			
(Conventional mass)			
M1 Class & Coarser	1 mg	24 μ g	Using Standard weights of F ₁ class and weighing balance(s) with resolution(s) of 0.01 mg(1mg to 100g), 0.1 mg (200 g), 1 mg (500 g & 1kg), 0.01 g(2 kg & 5 kg) & 0.1 g(10 kg & 20 kg) Substitution method as per OIML R 111:2004
	2 mg	24 μ g	
F2 Class & Coarser	5 mg	24 μ g	
	10 mg	24 μ g	
	20 mg	24 μ g	
	50 mg	33 μ g	
	100 mg	33 μ g	
	200 mg	33 μ g	
	500 mg	50 μ g	
	1 g	0.05 mg	
	2 g	0.05 mg	
	5 g	0.06 mg	
	10 g	0.07 mg	
	20 g	0.12 mg	
	50 g	0.12 mg	
	100 g	0.20 mg	
	200 g	0.5 mg	
	500 g	1 mg	
	1 kg	2.1 mg	
M1 Class & Coarser	2 kg	0.011g	
F2 Class & Coarser	5 kg	0.02 g	
M1 Class & Coarser	10 kg	0.1 g	
	20 kg	0.2 g	
2. Weighing balance ^{\$}			
	1 mg \leq m \leq 200 mg	0.04 mg	Using Standard weights of F 1 class Method as per OIML R 76: 2006.
	200 mg < m \leq 2 g	0.05 mg	
	2 g < m \leq 10 g	0.07 mg	
	10g<m \leq 100 g	0.16 mg	
	100g<m \leq 200 g	0.3 mg	
	200g<m \leq 1 kg	1.6 mg	
	1 kg<m \leq 5 kg	0.008 g	
	5 kg<m \leq 20 kg	0.03 g	

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3. Weighing balance *	1 mg \leq m \leq 500 mg 500 mg < m \leq 10 g 10g < m \leq 100 g 100g < m \leq 1 kg 1 kg < m \leq 5 kg 5 kg < m \leq 50 kg 50kg < m \leq 500 kg 500kg < m \leq 1000 kg	0.06 mg 0.08 mg 0.12 mg 0.004 g 0.2 g 0.4 g 0.1 kg 0.3 kg	Using Standard weights of F ₂ class Method as per OIML R 76 :2006.
IV. VOLUME			
1. Micropipette \$ (Piston operated pipette)	10 μ l \leq V \leq 100 μ l 100 μ l < V \leq 1000 μ l 1000 μ l < V \leq 2000 μ l	0.20 μ l 0.30 μ l 0.50 μ l	Using Standard weights of F ₁ class, weighing balance with resolution of 0.01 mg and distilled water by Gravimetric method as per ISO 8655-6:2002. Reference temperature : 27°C
2. Laboratory glassware \$	1 ml \leq V \leq 10 ml 10 ml < V \leq 100 ml 100 ml < V \leq 200 ml 200 ml < V \leq 1 L 1 L < V \leq 2 L	0.001 ml 0.005 ml 0.006 ml 0.007 ml 0.04 ml	Using Standard weights of F ₁ class, weighing balance(s) with resolution(s) of 0.01 mg (1ml to 100 ml), 0.1 mg (200 ml), 1mg(500 ml & 1 L) & 0.01 g(2 L) and distilled water / by Gravimetric method as per ISO 8655-6:2002. Reference temperature : 27°C

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

\$ Only in Permanent Laboratory

* Only for Site Calibration

The laboratory is also capable for site calibration however, the uncertainty at site depends on the prevailing actual environmental conditions and master equipment used.

Φ Laboratory can also calibrate instruments/devices of coarser resolution / least count within the accredited range using same reference standard/ master equipment under the scope of accreditation.

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