

Laboratory	HTA Instrumentation Pvt. Ltd., 73, Rama Chandra Agrahara, Near T. R. Mills, Chamrajpet, Bangalore, Karnataka		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Mechanical Calibration	Issue Date	24.07.2014
Certificate Number	C-0617	Valid Until	23.07.2016
Last Amended on	30.07.2014	Page	1 of 4

Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability (\pm)	Remarks
I. DIMENSION			
1. VERNIER CALIPER^{\$} ANALOG/DIAL/DIGITAL L.C : 0.01 mm	Upto 150 mm	8.1 μ m	Using Grade I slip gauge set
2. EXTERNAL MICROMETER^{\$} L.C.: 0.001 mm	Upto 25 mm	1.34 μ m	Using Grade I slip gauge set
II. PRESSURE AND VACUUM			
1. PRESSURE (Pneumatic) / DIGITAL AND ANALOG GAUGES, PRESSURE TRANSMITTERS^{\$}	0 bar to 20 bar	0.008 bar	Using Digital Pressure Calibrator Druck/ DPI – 610
2. PRESSURE (Hydraulic)/ DIGITAL AND ANALOG GAUGES, PRESSURE TRANSMITTERS^{\$}	20 bar to 700 bar	0.251 bar	Using Digital Pressure Calibrator Druck/ DPI – 610 with external transducer
3. VACUUM / VACUUM GAUGES, VACUUM TRANSMITTERS^{\$}	-0.85 bar to 0 bar	0.006 bar	Using Digital Pressure Calibrator Druck/ DPI – 610

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4.	PRESSURE (Pneumatic)/ DIGITAL AND ANALOG GAUGES, DIFF. PRESSURE TRANSMITTERS, MANOMETERS[§]	-25 mbar to 25 mbar	0.071 mbar	Using Digital Pressure Calibrator Druck/ DPI – 610 with Low Pressure transducer
5.	PRESSURE (Pneumatic) / DIGITAL AND ANALOG GAUGES, PRESSURE TRANSMITTERS*	0 bar to 3 bar	±0.007 bar	Using Pneumatic Pressure pump with Digital Gauge -1 to 3 bar
6.	PRESSURE (Pneumatic) / DIGITAL AND ANALOG GAUGES, PRESSURE TRANSMITTERS*	3 bar to 30 bar	±0.058 bar	Using Pneumatic Pressure pump with Digital Gauge -1 to 30 bar
7.	PRESSURE (Hydraulic)/ DIGITAL AND ANALOG GAUGES , PRESSURE TRANSMITTERS*	30 bar to 700 bar	±0.632 bar	Using Hydraulic Pressure Pump with Digital Gauge 700 bar
8.	PRESSURE (Hydraulic)/ DIGITAL AND ANALOG GAUGES , PRESSURE TRANSMITTERS*	700 bar to 1000 bar	±0.782 bar	Using Hydraulic Pressure Pump with Digital Gauge 1000 bar

Avijit Das
Program Manager

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Convenor

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9.	VACUUM (Vacuum Gauges & Vacuum Transmitters) *	-0.85 bar to 0 bar	± 0.006 bar	Using Pneumatic Pressure Pump with Digital Gauge -1 to 3 bar
10.	DIFFERENTIAL PRESSURE*	-20 mbar to 20 mbar	± 0.072 mbar	Using Digital Manometer Delta ohm
III. ACCELERATION AND SPEED				
1.	RPM[§]	300 RPM to 10000 RPM	0.56% to 0.03%	Using Tachometer – Contact Type Using Digital Tachometer Checkline with Variable Speed Motor
		60 RPM to 30000 RPM	2.01% to 0.03%	Using Tachometer – Non Contact Using Digital Tachometer Checkline and Light Source
		300 RPM to 10000 RPM	0.69% to 0.03%	Using Stroboscope Using Digital Tachometer Checkline with Variable Speed Motor
IV. ACCOUSTICS				
1.	SOUND LEVEL METER[§]	94 dB & 114 dB @ 1kHz	1.33 dB	Using Sound level Calibrator Delta Ohm HD2020

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2. VIBRATION^{\$}	5.5 mm/sec to 140 mm/sec	14.43% to 6.48%	Using Digital Vibration Meter Equinox / VM – 6360 with Vibrator

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

^{\$}Only in Permanent Laboratory

^{*}Only for Site Calibration