National Accreditation Board for Testing and Calibration Laboratories

CERTIFICATE OF ACCREDITATION

DEPARTMENT OF METROLOGY & CALIBRATION LABORATORY, INSTITUTE FOR AUTOPARTS AND HAND TOOLS TECHNOLOGY

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2017

"General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

A9, PHASE V, FOCAL POINT, LUDHIANA, PUNJAB, INDIA

in the field of

CALIBRATION

Certificate Number: CC-2308

Issue Date: 07/08/2024 **Valid Until:** 06/08/2026

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.
(To see the scope of accreditation of thislaboratory, you may also visit NABL website www.nabl-india.org)

Name of Legal Entity: Institute for Autoparts and Handtools Technology, Ludhiana

Signed for and on behalf of NABL

N. Venkateswaran
Chief Executive Officer

National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

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Validity 07/08/2024 to 06/08/2026 **Last Amended on** 20/08/2024

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)(±)
Permanent Facility					
1	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Bore Gauge (upto 150mm)	Using Universal Length Measuring Machine By Comparison Method.	0 to 1.6 mm	3.75 µm
2	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Calipers(Vernier / Dial / Digital) L.C.: 0.01 mm & Coarser	Using Gauge Blocks & Ring gauges by comparison method	0 to 450 mm	17µm
3	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Coating thickness Foils	Using Universal length Measuring Machine by Comparison Method.	0.01 mm to 1 mm	3.24 µm
4	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Depth Gauge (Vernier / Dial / Digital) L.C.: 0.01 mm	Using Slip Gauge set & Surface Plate by Comparison Method	0 to 300 mm	17µm

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5	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Dial Gauge (Lever Type) L.C.: 0.001 mm	Using Universal Length Measuring Machine by comparison Method	0 to 0.14 mm	1.35 mm
6	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Dial Gauges (Plunger Type) L.C.: 0.001 mm	Using Universal Length Measuring Machine by Comparison Method	0 to 10 mm	1.90 µm
7	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	External Micrometers L.C.: 0.001 mm & Coarser	Using Slip Gauge Set by Comparison Method	0 to 100 mm	3.6 µm
8	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Feeler Gauge	Using Universal Length Machine by Comparison Method	0 to 1 mm	3.32 µm
9	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Height gauges (Vernier / Dial / Digital) L.C.: 0.01 mm & Coarser	Using Slip Gauge Set & Surface Plate by comparison Method.	0 to 450 mm	18.1 µm

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10	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Lever Type Dial Gauge , L.C.: 0.010 mm	Using Universal Length Measuring Machine by comparison Method	0 to 0.80 mm	1. 7 µm
11	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Micrometer Setting Rod	Using Universal Length Measuring Machine by Comparison Method	0 to 75 mm	2.7 µm
12	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Plain Plug Gauge	Using Universal Length Measuring Machine by Comparison Method	3 mm to 100 mm	3.0 µm
13	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Plain Ring Gauge	Using Universal Length Measuring Machine by Comparison Method	20 mm to 100 mm	7.7 µm
14	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Snap Gauges	Using Slip Gauge set by Comparison Method	5 mm to 100 mm	3.0 µm

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15	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Thread Plug Gauge (Major Diameter & Effective Diameter)	Using ULM & thread Measuring wire by comparison method	5 mm to 100 mm mm	3.7 µm
16	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Thread Ring Gauge (Minor Diameter & Effective Diameter)	Using Universal Length Measuring Machine by Comparison Method	20 mm to 100 mm	5.90 µm
17	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Gauge Block Set (Steel)	Using Gauge Block Comparator & Gauge Block by using Comparison Method	>50 mm to 100 mm mm	0.63 µm to 100 mm
18	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Gauge Block Set (Steel)	Using Gauge Block Comparator & Gauge Block by using Comparison Method	0.5 mm to 50 mm	0.35 µm

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Site Facility					
1	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Surface Plate (Grade 0,1,2,3)	Using Electronic Leveller by comparison Method	(100 x 100) mm to (2500 x 2500) mm	2.0 Sqrt (L+W)/125 ,L&W in mm

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