

## OUR MANUFACTURING FACILITIES



Laser Marking



Internal Grinding Shop



Grinding Shop



Carl Zeiss ULM



Horizontal Length M Mc



Tooling Section



Thread Grinding Shop



Inprocess Inspection



Digital Profile Projector



Plain Gauge Inspection

## OUR CALIBRATION FACILITIES



**MASTER METROLOGY**

ONE STOP SOLUTION FOR ALL YOUR  
**PRECISION LENGTH  
MEASUREMENT** NEEDS



## OUR CLIENTS

### SAILENT FEATURE

- We are a TUV certified ISO 9001-2008 Company, manufacturing thread gauges, air gauges and plain limit gauges from stabilized AISI 001 Steel. Gauges are also manufactured in tungsten carbide for extra wear resistance.
- Our calibration lab is temperature controlled to 20 deg +/-1 degree and follows ISO 17025 QMS Practices.
- A Calibration certificate traceable to NPL New Delhi is supplied with each gauge. The master instruments are NABL CERTIFIED.
- All the gauge handles are laser marked with size, serial nos and make.
- Gauges are supplied duly, anti-rusted coated to protect them from dirt, dust and rust.
- Most of the standard gauges are available ex-stock.
- Special gauges can be designed and manufactured as per customer requirement.
- Calibration services for plain and thread gauges are available using Carl Zeiss Metroscope and Heidenhain Digital read outs.



**MASTER METROLOGY**

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### MANUFACTURERS OF:

- THREAD PLUG GAUGES
- SNAP GAUGES
- AIR SNAP GAUGES
- THREAD RING GAUGES
- WIDTH GAUGES
- AIR GAUGING UNIT
- PLAIN PLUG GAUGES
- AIR PLUG GAUGES
- SPECIAL CUSTOMIZED GAUGES
- PLAIN RING GAUGES
- AIR RING GAUGES

# THREAD GAUGES

We manufacture Thread plug and Thread Ring Gauges of various types on machine Matrix (UK), NRK –Reishauer (Germany), Linder (Germany) and SIP (Swiss).

We Manufactures various types of Thread Gauges:

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ISO Metric Thread Gauges

ISO Metric thread plugs and rings are manufactures as per the below standards:  
**Indian Standard:**  
IS: 4218 Part iii -1976  
IS: 4218 Part iv -1976  
**Gauging Practice:** IS:2334 -1976  
**International Organization For Standards:**  
ISO : 724 – 1978 (E)  
ISO : 956/1 -1980 (E)  
ISO: 1502 – 1978 (E)  
**Diameter Range from:** 1mm to 400mm



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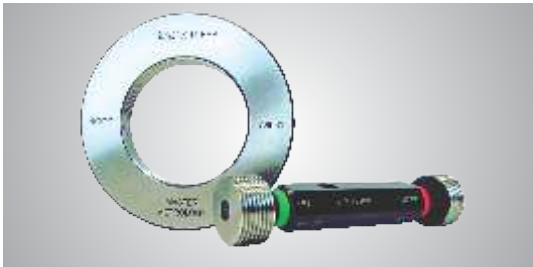
Unified Thread Gauges

**British Standard:**  
**Basic Dimension:** B.S. 1580-1962  
**Gauging Practice :** B.S. 919. Part I/1960  
**American Standard:**  
**Basic Dimension:** ANSI/ASME B1. 1 - 1982  
**Gauging Practice :** ANSI/ASME B1. 1 – 1983  
**Class of Fit :** Plugs: 2B (Medium), Rings: 2A (Medium)  
**Range:** No 0x80 TPI to 4”

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B.S.P Thread Gauges (G-series)

**Basic Dimension:** B.S. 2779 – 1986 IS-2643-1975, ISO 228 Pt 1-1982€  
**Gauging Practice:** B.S.919, Part II, 1971, IS: 10216-1982, ISO 228 Pt II - 1987  
**Class of fit:** screw plug: General. Screw Rings: General (B), Close (A)  
Screw Rings are generally manufactured to class B Unless otherwise specified.  
**Range:** 1/8” to 12”



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British Standard Witworth form Thread Gauges

**Basic Dimension:** B.S. 84-1956  
**Gauging Practice:** B.S. 919, Part II. 1971  
**Range:** 1/8” to 12”

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B.A. Thread Gauges

**Basic Dimension:** B.S. 93-1951  
**Gauging Practice:** B.S. 919, Part I, 1971  
**Range:** 0 to 10B

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B.S. Cycle Thread Gauges

**Standards:** Basic Dimension: B.S. 811 - 1950  
**Gauging Practices:** BS 919 Part 2:1971  
**Range:** 7/32” to 12”

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N.P.T. Taper Thread Gauges

**Basic Dimension and Gauging Practices:** ANSI/ASME B1.20.01.1983  
**Class of fit:** Basic/step-limit.  
**Range:** 1/16” to 12”

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N.P.T.F. Thread Gauges

**Basic Dimension and Gauging Practices:** ANSI/ASME B1.20.6/1984B1.20-5-1978  
**Class of fit:** Basic/step-limit  
**Range:** 1/16” to 12”



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B.S.P.T. Taper Thread Gauges

**Standards:** Basic Dimension: BS 21:1985, IS 8999 – 1979  
**Class of fit:** System B for both Screw Rings and Screw Plugs.  
**Range:** 1/16” to 12”

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N.G.T. Taper Thread Gauges

**Standards:** Basic Dimension IS:3224:1979  
**Gauging Practices:** IS:9121:1979  
**Range:** ¼ NGT

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Trapezoidal Thread Gauge

**Standards:** DIN 103, ISO 2901  
**Gauging Practice:** DIN 103-9:1985

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ACME Threads

**Basic dimension:** ANSI B1.5 :1997  
**Gauging Practice:** ANSI B1.5: 1997



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Stub ACME Thread

**Basic Dimension:** ANSI B1.8 :1998  
**Gauging Practice:** ANSI B1.8 :1998

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Metric Buttress Thread 3 ° - 30 °

**Basic Dimension:** DIN 513:1985, IS 4696:2004  
**Gauging Practice:** ISO 1502:1996 (ISI 2334:2001)

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ANSI Buttress Thread

**Basic Dimension:** ANSI B1.9:1973  
**Gauging Practice:** ANSI B1.9:1973

- Features:
- Thread gauges are manufactured from prime quality AISI 001 hardened, tempered, stabilized steel for better dimensional accuracy and wear resistance.
  - Each Gauge is supplied with a calibration certificate report as per ISO 17028 Quality norms, with or without NABL Certificate.
  - All the gauges are laser marked with their size and serial numbers.
  - Gauges are anti-rust coated to prevent rusting during pre-use storage
  - Thread gauges of special sizes and profiles can be manufactured on customer request.
  - All thread gauges are calibrated on Carl Zeiss ULM and Ocatgon-Heidenhain Length Measuring Machine.



# PIN GAUGES

We manufacture pin gauges/measuring pins in various sizes and tolerances

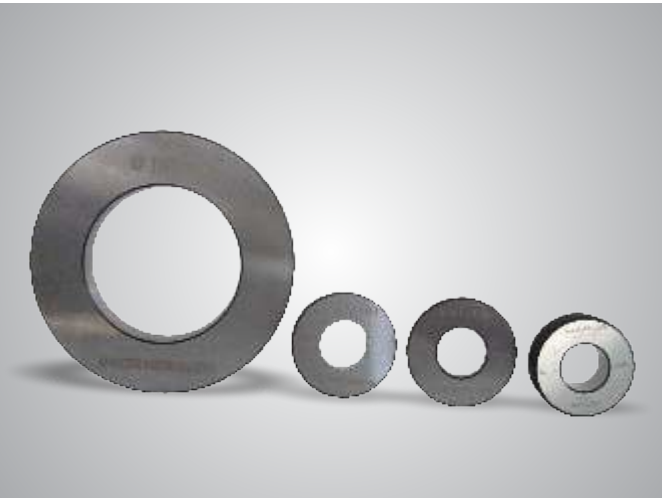
MATERIAL
● Steel and Carbide
SIZE
● Ranging from 0.2 to 200mm can be manufactured
FEATURES
● Pins are manufactured loose as well as in sets. ● Loose pins can be supplied with Knobs for easy identification and handling. ● Sets are supplied in attractive melamine coated wooden boxes. ● Inch sizes can also be supplied on demand.



# RING GAUGES AND MASTER SETTING RINGS

We manufacture Ring Gauges in GO-NOGO Pairs as well as single mastersetting rings to specified nominal sizes.

MATERIAL
<b>Steel dia:</b> 1mm to 450mm <b>Carbide dia:</b> 2mm to 60mm
FEATURES
● Made from AISI001 Special tool steel (OHNS With Tungsten) and submicron Tungsten Carbide. ● Stabilised and sub-zero treated (-80deg C) for better dimension retention and wear resistance. ● Calibrated on CarlZeiss/ Octagon-Heidenhain Universal length measuring machine (NABL). ● Actual dimension are laser marked on master setting rings.



# PLAIN PLUG GAUGES

We Manufacture Plain Plug Gauges in various types and material mentioned below.

TYPES
● Rev, Taperlock, Trilock and Plate-type
MATERIAL
1) Steel 2) Carbide 3) GO Carbide NOGO Steel.
FEATURES
● User has the freedom to choose the gauge material based on the usage frequency and criticality. ● Carbide gauges are more wear resistant than steel hence saves cost in long run. ● Paddle type Progressive gauges and Morse taper and ISO taper plug and Ring gauges are Manufactured as per customer requirement.



# WIDTH GAUGES

These are used to check inter-distance between grooves and key-way widths.
<b>Size Range:</b> (1) Solid Type : 0.5 to 10 mm (2) Hollow Type : 10 mm to 100 mm



# SLIP GAUGES

We manufacture slip gauges/Gauge blocks in steel as well as in carbide as per IS,DIN/ BS/ JIS Stds along with Mike check sets, wear protector sets. Slips are manufactured in various grades like Grade K, Grade O, Grade I and Grade II.

MATERIAL
1) Steel 2) Tungsten Carbide 3) Ceramic.
LONG SLIPS ARE MANUFACTURED IN SIZES
125 mm, 150 mm, 175 mm, 200 mm, 250 mm, 300 mm, 400 mm, 500 mm, 600 mm, 700 mm, 800 mm, 900 mm, 1000 mm.



# SNAP GAUGES/GAP GAUGES

- We manufacture of different type and sizes

Gauge Material	
No.	Contact Area
1	Tungsten Carbide Tipped
2	OHNS- AISI 001

No.	Type of Gauge	Diameter Range	Sketch
1	Single Ended Progressive (Fixed Type)	4 to 300mm	
2	Double Ended Type	4 to 200mm	
3	Adjustable Type	0.2 to 250mm	
4	Built-up Type	0.2 to 4mm	

# AIR PLUG GAUGES AND PNEUMATIC SETTING RINGS

We manufacture Air Plug Gauge and Setting Rings to check the size, taper and ovality.

USE
They are used for rapid measurement of internal diameters.
TYPES
Through bore or blind type measurement
RANGE
5mm to 200mm



# AIR RING GAUGES AND SETTING PLUG

We manufacture Air ring Gauge and Setting Plug

USE
<ul style="list-style-type: none"><li>Useful for external diameters measurement.</li><li>Two jetted air ring gauge for measuring size, taper and ovality.</li><li>Three jetted air ring gauge for measuring average size and lobing.</li></ul>
RANGE
<ul style="list-style-type: none"><li>10mm to 100 mm</li></ul>



# AIR SNAP GAUGE/ AIR CALIPER

These air calipers are used to measure outer diameter of rigidly held jobs viz cylindrical ground jobs, crankshaft grinding, Rest pads made out of tungsten carbide enhance life. Special jetted air snap to check ‘crowning effect’ on crankshaft dia can be manufactured.



# AIR GAUGE UNIT-DIAL TYPE

We manufacturers dial type air gauge units for quick checking of precision components in mass/batch production.

APPLICATION
<ul style="list-style-type: none"><li>Ideal for small sized diameters where typically diameters based segregation is done.</li><li>Works on ‘Null Balance’ Principle.</li><li>The two setting master ensure correct linear setting.</li></ul>
SYSTEM PRESSURE
50psi, 3.5kg/cm ^ 2
RANGE
<ol style="list-style-type: none"><li>+/- 0.04mm with 1 micron LC</li><li>+/-0.02mm with 0.5 micron LC</li></ol> Differential Air gauge can be supplied on request



# AIR ELECTRONIC COLUMN AND DIGITAL DISPLAY

Air electronic column and digital displays are microprocessor based measuring instruments which easily segregate components into three categories of OK, Rework and Reject. With the change in size there is change in back pressure sensed by the converter. The converter translate this change into linear displacement. The air probes used in the column convert this displacement into digital signal which is shown by the instrument in the form of bar graph and /or seven segment display.

FEATURES
<ul style="list-style-type: none"><li>The readings can be directly sent to the computer using a foot switch.</li><li>No need to write down any reading thus eliminating any chance of manipulation/error.</li></ul>



# MULTIGAUGING STATIONS

Master Metrology manufactured multigauging stations as per customer requirement. Often, multiple parameters are required to be checked to reasonable accuracies and precision without fatigue. Our Multigauging sustems are designed taking the same into consideration. These are sophisticated measuring and segregating stations which are manufactured jointly with our techno-commercial partner M/S VGAGE of USA. These stations could be simple manual types, semi-sutomatic types aor fully automatic types.



Brakedrum Gauging Station



Crank-shaft Gauging Station



Cylinder Block Bore Gauging Station