ACCURATE
Metrology & Automation
Since 1984

GAUGE BLOCKS

Steel Gauge Block Carbide Gauge Block

CERTI.NO. CC- 2082

FRANK World-class German Gauge Blocks now manufactured by ACCURATE METROLOGY

100 Years of Technology Excellence

- 100 Years of Technology Excellence of know-how gained in manufacturing of highest precision quality gauge blocks by Karl Frank and earlier by Carl Zeiss, Germany
- Gauge blocks are completely finish lapped on machines give very low deviation in flatness and parallelism of measuring faces with excellent accuracy
- Unique flat lapping polishing and edge rounding techniques lead to superior wringability
- Each gauge block is identified with clear, crisp and highly visible marking for Size, Logo and Serial number
- Available in Grade K,0,1 and 2 either in sets or Individual gauge block upto 100 mm
- Gauge blocks are housed in attracted wooden casing with clearly reference strips to facilitate easy selection

Steel Gauge Blocks

Features

- Made of special Alloy Steel, rolled to specific size to ensure high wear resistance and impact strength. Stabilized by multiple tempering and Sub-zero treatment at-80°C to achieve total martensitic structure for absolute dimensional stability
- Coefficient of thermal expansion 11.5 X 10^{-6} K^{-1}
- Hardness guaranteed to 800 HV
- **Gauge Blocks with Metric** nominal length conform to ISO 3650:1998 /DIN EN ISO 3650/IS 2984. **Gauge Blocks with inch** nominal lengths comply with British standard BS 4311 Part 1

Calibration & Certification

- NABL Calibration certificate traceable to National / International standard is provided with Gauge Block Sets & Individual Gauge Blocks
- Calibration Certificate includes following :
  a) Nominal Size, Central Length Deviation,Grade, Fo, Fu.,
  b) Identificacation Number

Accuracy / Grade

ISO 3650 Specification
Permissible errors on Parallelism & Length of Gauge Blocks at 20°C permissible errors in µm

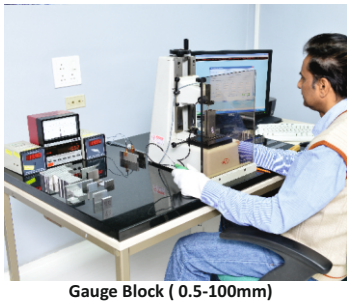
Tungsten Carbide Gauge Blocks

Features

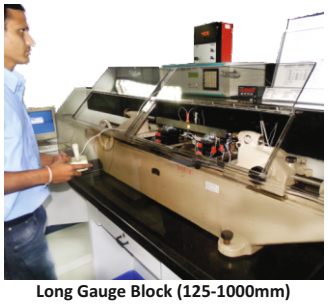
- Tungsten Carbide Gauge Blocks are 10 times wear resistant compared to Steel gauge blocks
- Hardness guaranteed to 1400 HV
- Coefficient of thermal expansion 4.7 X 10^{-6} K^{-1}
- While checking steel components correction factor for temperature compensation should be considered

Manufacturing Facility

Double Disc Lapping Machine



Gauge Block (0.5-100mm)



Long Gauge Block (125-1000mm)

Inspection & Calibration

SPECIFICATIONS

Range of Nominal		Grade K		Grade 0		Grade 1		Grade 2	
Over	Upto & Including mm	Parallelism µm	Gauge Length µm (±)	Parallelism µm	Gauge Length µm (±)	Parallelism µm	Gauge Length µm (±)	Parallelism µm	Gauge Length µm (±)
-	10	0.05	0.2	0.10	0.12	0.16	0.20	0.30	0.45
10	25	0.05	0.3	0.10	0.14	0.16	0.30	0.30	0.60
25	50	0.06	0.4	0.10	0.20	0.18	0.40	0.30	0.80
50	75	0.06	0.5	0.12	0.25	0.18	0.50	0.35	1.00
75	100	0.07	0.6	0.12	0.30	0.20	0.60	0.35	1.20
Flatness		0.10	0.10	0.10	0.10	0.15	0.15	0.25	0.25

* For nominal length from 0.5 to 100 mm

Standard Sets, Metric System (Steel & Carbide)

Set Size Pieces	Nominal Value mm	Steps mm	No. of Pieces
M32	1.005 1.01 to 1.09 1.10 to 1.90 1.00 to 9.00 10, 20, 30,50	 0.01 0.10 1.00	1 9 9 9 4
M46	1.001 to 1.009 1.01 to 1.09 1.10 to 1.90 1.00 to 9.00 10.00 to 100.00	0.001 0.01 0.10 1.00 10.00	9 9 9 9 10
M47	1.005 1.01 to 1.20 1.30 to 1.90 1.00 to 9.00 10.00 to 100.00	 0.01 0.10 1.00 10.00	1 20 7 9 10
M79	1.005 1.01 to 1.49 0.5 to 9.50 10.00 to 100.00	 0.01 0.50 10.00	1 49 19 10
M88	1.0005 1.001 to 1.009 1.01 to 1.49 0.5 to 9.5 10.00 to 100.00	 0.001 0.01 0.50 10.00	1 9 49 19 10
M103	1.005 1.01 to 1.49 0.5 to 24.50 25.00 to 100.00	 0.01 0.50 25.00	1 49 49 4
M112	1.0005 1 .001 to 1.009 1.01 to 1.49 0.50 to 24.50 25.00 to 100.00	 0.001 0.01 0.50 25.00	1 9 49 49 4
M122	1.0005 1 .001 to 1.009 1.01 to 1.49 1.60 to 1.90 0.50 to 24.50 25,30,40,50,60,70,75,80, 90,100	 0.001 0.01 0.10 0.50	1 9 49 4 49 10

Standard Sets, Inch System (Carbide)

Set Size Pieces	Nominal Value Inch	Steps Inch	No. of Pieces
E81	0.1001 to 0.1009 0.101 to 0.149 0.050 to 0.950 1,2,3,4	0.0001 0.001 0.05	9 49 19 4

Long Gauge Blocks

Features

- Manufactured as per ISO 3650 from high quality steel
- Cross section (35x9 mm) with holes for clamping two slips together
- Long Gauge Blocks are available in Grade 0, Grade 1 & 2, 125 mm to 1000 mm in the following sizes : 125, 150,175, 200, 250, 300, 400, 500, 600, 700, 800, 900, 1000 mm as set or as individual piece supplied with safety cap.

Length Bars

Features

- Manufactured as per IS : 7014 :1973
- Hardened, Ground, Precisely Lapped length bars are manufactured from special high quality steel
- Length Bars Sizes available from 25 mm to 1000 mm in the following sizes : 25, 50, 75, 100, 125, 150, 175, 200, 250, 300, 400, 500, 600, 700, 800, 900, 1000 mm.

*As set or as individual piece in inspection and workshop grade

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Since 1984

Accurate Metrology And Automation Company

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MKT-2025

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Note : Due to continuous Improvements at our end, Specifications are subject to change without prior notice.