



SEIMITSU[®]

— PRECISION IN EVERY MEASUREMENT —

PRODUCT CATALOGUE

PRECISION

STABILITY

RELIABILITY

PRECISION GAUGE BLOCKS

Steel • Tungsten Carbide • Zirconia Ceramic



— ACCURACY • STABILITY • RELIABILITY —



SEIMITSU[®]
— PRECISION IN EVERY MEASUREMENT —

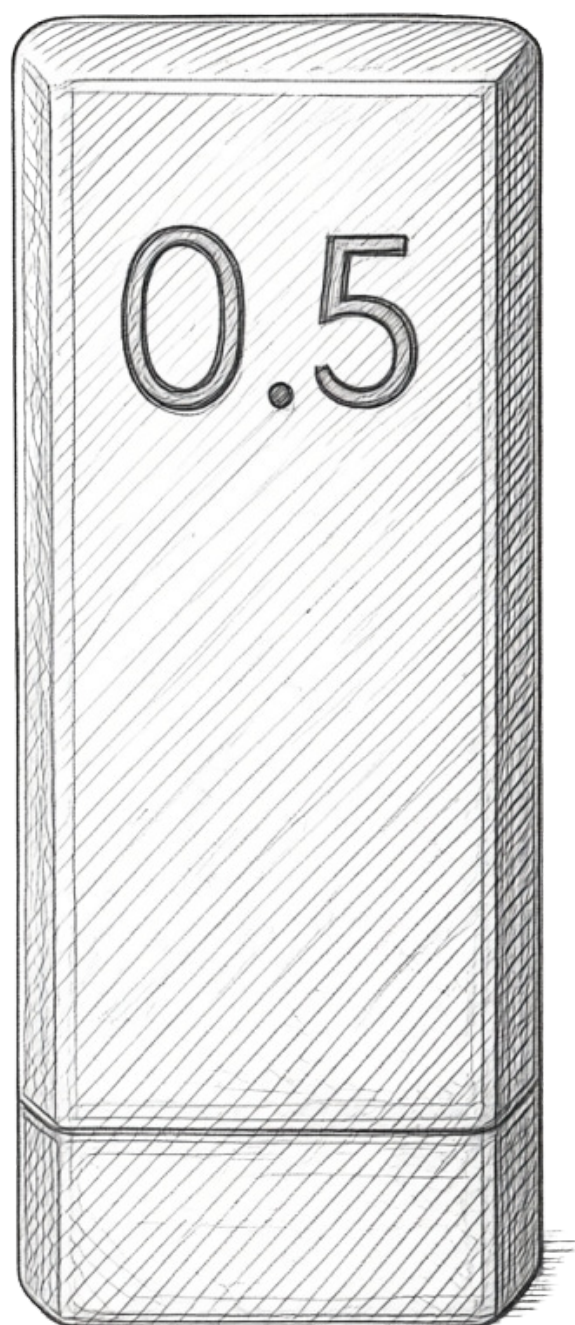
High-Precision Zirconia Ceramic Gauge Blocks

Designed for high-precision length measurement, ceramic gauge blocks—also called ceramic gauges—are made from zirconia (ZrO_2), an ultra-hard material. Each block has a rectangular cross-section with two parallel measuring faces.

Molecular force allows these faces to adhere to the measuring surfaces of another gauge block or an object with similar surfaces.



Product Overview



SEIMITSU'S Ceramic Gauge Blocks are engineered for demanding dimensional metrology applications. They address the limitations of conventional steel gauges by resisting corrosion caused by skin acids and humidity.

Thus making them suitable for high-precision laboratories and challenging shop-floor environments.



Exceptional Wear Resistance (Hardness: 1350 HV)

Our zirconia ceramic is considerably harder than steel and tungsten carbide. Its high wear resistance minimizes scratches and burrs that may compromise measurement accuracy, helping to extend calibration intervals and reduce the overall cost of ownership.



Non-Magnetic Properties & Thermal Compatibility

The fully non-magnetic ceramic construction prevents magnetic attraction of metal chips and dust. Its thermal expansion coefficient of $(9.5-10) \times 10^{-6}/^{\circ}\text{C}$ closely matches that of steel, allowing easy integration into established engineering processes.



Outstanding Wringing Capability

Our advanced, proprietary lapping process produces measuring surfaces with flatness exceeding international standards. These finely finished faces adhere securely through molecular attraction, forming a firm, stable gauge-block stack for the most demanding precision measurements.

STANDARDS



Product Labelling is laser-engraved onto the surface

Comes With Manufacturer Instruction Certificate

Nominal Length	Cross-Section
0.5–10 mm (inclusive)	30 × 9 mm
Over 10 mm and up to 150 mm	35 × 9 mm

Available Classifications

- Measurement Units: Metric (mm)
- Packaging Options: Individual blocks and sets.
- Accuracy Grades: Metric—K,0,1 and 2
- Size Options: Standard and non-standard dimensions.

Set Available

Block set	Detailed dimensions (mm)	Grade
83 pieces, DIN EN ISO 3650 ASME B89.1.9 GB/T 6093	0.5 , 1 block	K,0,1 & 2
	1.005, 1 block	
	1-1.49, total 50 blocks	
	1.5–1.9, interval 0.1, total 5 blocks	
	2.0–9.5, interval 0.5, total 16 blocks	
	10–100, interval 10, total 10 blocks	
87 pieces, ISO standard	1.001–1.009, in increments of 0.001, 9 values in total	K,0,1 & 2
	1.01–1.49, in increments of 0.01, 49 values in total	
	0.5–9.5, in increments of 0.5, 19 values in total	
	10–100, in increments of 10, 10 values in total	

Block set	Detailed dimensions (mm)	Grade
112 pieces, ISO standard	1.0005	K,0,1 & 2
	1.001–1.009, in increments of 0.001, 9 intervals in total	
	1.01–1.49, in increments of 0.01, 49 intervals in total	
	0.5–24.5, in increments of 0.5, 49 intervals in total	
	25–100, in increments of 25, 4 intervals in total	

Key Features

Extended Service Life

High hardness and wear resistance provide a service life 5–10 times longer than steel blocks and 4–5 times longer than carbide blocks. It currently offers the longest service life and calibration intervals among materials used in measuring instruments.



Excellent Corrosion Resistance

Resistant to common chemical reagents, the blocks can be handled with bare hands without anti-rust treatment. They require no special treatment during use or long-term storage.

High Stability

Minimal annual variation ensures excellent dimensional stability and allows calibration intervals to be appropriately extended.

Superior Surface Finish

Made from fine-grade material and super-finely ground, the blocks offer smooth surfaces, high lapping force and superior lapping accuracy.

Steel-Compatible Thermal Expansion

A linear expansion coefficient similar to commonly used steel allows these blocks to replace metal blocks. No temperature correction is required when measuring steel products.

Non-Magnetic and Non-Conductive

These properties make the blocks suitable for specialized applications.

(optional)

**Calibration
Certificate By NABL
As Per ISO/IEC 17025**



NABL

FAQ about Ceramic Gauges

Why are ceramic blocks better than steel for daily use?

Rust-proof ceramic blocks require no oiling before or after use, making handling cleaner and more efficient. If dropped, they may chip or remain flat rather than develop burrs that affect measurement accuracy.

Can I mix ceramic blocks with steel blocks in one stack?

Yes, they can be wrung together. However, an all-ceramic stack is recommended for consistent thermal expansion and to prevent potential scratching of steel surfaces by harder ceramic blocks.

Is the thermal expansion of ceramic different from steel?

Ceramic's coefficient is slightly lower: $9.5 \times 10^{-6}/^{\circ}\text{C}$ versus $11.5 \times 10^{-6}/^{\circ}\text{C}$ for steel. The difference is generally negligible in workshops, but ultra-high-precision laboratory measurements require temperature compensation.

Do these come with a calibration certificate?

Every Meter Precision gauge block includes a factory inspection report. You can also opt for NABL Certificate which is completely optional.



SEIMITSU®
— PRECISION IN EVERY MEASUREMENT —

Marketed by:

FOR MORE INFORMATION PLEASE CONTACT:



BHAGWATI

Hardware & Mill Store Since 1976

Address: 4769, 1ST Floor, Old Post Office Building,
Hauz Qazi, Delhi - 110006

Mobile: 9212012856, 9350076343

Website: www.bhagwathardware.com
www.bhagwathardwaredelhi.in

E-mail: sandeep@bhagwatimail.com

AN ISO 9001 : 2015 CERTIFIED COMPANY