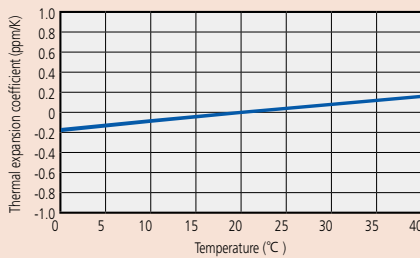


Thermal expansion coefficient–Temperature characteristic



Comparison of maximum errors at 23 °C (500 mm size)

Temperature compensation error of typical ISO/JIS-certified product: $\pm 1.5 \mu\text{m}$
 Temperature compensation error of Mitutoyo standard gauge blocks: $\pm 0.75 \mu\text{m}$
 Temperature compensation error of gauge blocks with thermal expansion coefficient: $\pm 0.075 \mu\text{m}$
 Maximum thermal expansion of ZERO CERA Blocks: $+0.03 \mu\text{m}$
 Thermal expansion of steel gauge blocks: $+16.2 \mu\text{m}$
 Thermal expansion of CERA Blocks: $+13.95 \mu\text{m}$

ZERO CERA Blocks (Ultra-low Thermal Expansion)

- ZERO CERA Blocks are gauge blocks made of special ceramic materials that have extremely low thermal expansion. They are lightweight, easy to handle, and slow in aging (thermal expansion coefficient: $0 \pm 0.02 \times 10^{-6}/\text{K}$ (20 °C), specific gravity 2.4 g/cm^3). Many research institutions and academic institutions rely on ZERO CERA Blocks in various applications, including the study of methods of calibrating CMM.
- Each block is marked with “ZERO CERA BLOCK” logo.
- Available in the nominal sizes (30 to 1,000 mm) of rectangular gauge blocks.



SPECIFICATIONS

Metric Blocks			
Code No.			Length (mm)
JIS/ISO	BS	ASME	
617673-016	617673-116	617673-516	30
617675-016	617675-116	617675-516	50
617681-016	617681-116	617681-516	100
617682-016	617682-116	617682-516	200
617683-016	617683-116	617683-516	300
617684-016	617684-116	617684-516	400
617685-016	617685-116	617685-516	500
617840-016	617840-116	617840-516	600
617841-016	617841-116	617841-516	700
617843-016	617843-116	617843-516	800
617844-016	617844-116	617844-516	900
617845-016	617845-116	617845-516	1000
516-771-60	516-771-61	516-771-66	Above set