

105. Complex geometry

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Bench centers Bed surface Height difference of center	10502	(0 ~ 250) mm	1.4 μm 1.5 μm	Electronic Micrometers, Test bars/SRST-CI-10502
Coordinate measuring machines, 3 dimensional Directed accuracy Space accuracy Squareness Straightness	10503	(0 ~ 1 000) mm	$\sqrt{0.80^2 + (0.0033 \times l_0)^2}$ μm ( $l_0$ :mm) $\sqrt{0.80^2 + (0.0033 \times l_0)^2}$ μm ( $l_0$ :mm) 2.0 μm 2.0 μm	Step gauge, Squares, /SRST-CI-10503
Coordinate measuring machines, non contact Directed accuracy Straightness Squareness	10504	(0 ~ 300) mm	$\sqrt{0.41^2 + (0.0032 \times l_0)^2}$ μm ( $l_0$ :mm) 2.0 μm 2.0 μm	Standard scales, Squares /SRST-CI-10504
Microscopes, measuring /toolmakers Directed accuracy Straightness Squareness	10511	(0 ~ 300) mm	$\sqrt{0.87^2 + (0.0027 \times l_0)^2}$ μm ( $l_0$ :mm) 2.1 μm 2.1 μm	Standard scales, Squares /SRST-CI-10511
Plug gauges, taper Dia. Of Small Part Dia. Of Large Part height Taper Half-Angle	10514	∅(5 ~ 175) mm	1.1 μm 1.1 μm 1.5 μm 4.2"	Standard measuring machine, Master roller, Gauge block /SRST-CI-10514
Profile projectors Directed accuracy Scale errors Squareness Splitting angle accuracy	10515	(0 ~ 300) mm	$\sqrt{1.1^2 + (0.0027 \times l_0)^2}$ μm ( $l_0$ :mm) $2 \times 10^{-4}$ 2.2 μm 1.1'	Standard scale, Squares /SRST-CI-10515
Roughness testers, stylus type Ra Rz RSm H	10518	(0 ~ 20) μm (0 ~ 20) μm (0 ~ 1) mm (0 ~ 1) mm	0.010 μm 0.024 μm 1.3 μm 0.11 μm	Specimens, roughness standard/SRST-CI-10518

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Thread plug gauges Outside Dia. Effective Dia. Pitch Half angle of Thread	10527	Ø (1 ~ 150) mm	$\sqrt{0.62^2 + (0.0032 \times l_0)^2} \mu\text{m} \quad (l_0 : \text{mm})$ $\sqrt{1.9^2 + (0.0032 \times l_0)^2} \mu\text{m} \quad (l_0 : \text{mm})$ 1.3 $\mu\text{m}$ 0.7'	Standard measuring machine, Thread measuring wires, Profile projectors /SRST-CI-10527
Thread ring gauges Inside Dia. Effective Dia. pitch	10529	Ø (5 ~ 100) mm	$\sqrt{3.4^2 + (0.0133 \times l_0)^2} \mu\text{m} \quad (l_0 : \text{mm})$ $\sqrt{1.0^2 + (0.0039 \times l_0)^2} \mu\text{m} \quad (l_0 : \text{mm})$ $\sqrt{2.4^2 + (0.0031 \times l_0)^2} \mu\text{m} \quad (l_0 : \text{mm})$	Electronic micrometer Thread measuring ball, Profile projectors /SRST-CI-10529