

Gauge Blocks



Mitutoyo offers a complete selection of gauge blocks available in a choice of rectangular or square, metric or inch and steel (Gauge Blocks) or ceramic (CERA Blocks) types. Mitutoyo CERA Blocks are some of the finest gauge blocks available anywhere in the world.

TOLERANCES ON LENGTH OF GAUGE BLOCKS

JIS B 7506-1997 (Japan)/DIN 861-1980 (Germany)

Length Over – Up to	Accuracy at 20°C (μm)			
	Grade K*	Grade 0	Grade 1	Grade 2
0.5 – 10mm	±0.20	±0.12	±0.20	±0.45
10 – 25mm	±0.30	±0.14	±0.30	±0.60
25 – 50mm	±0.40	±0.20	±0.40	±0.80
50 – 75mm	±0.50	±0.25	±0.50	±1.00
75 – 100mm	±0.60	±0.30	±0.60	±1.20
100 – 150mm	±0.80	±0.40	±0.80	±1.60
150 – 200mm	±1.00	±0.50	±1.00	±2.00
200 – 250mm	±1.20	±0.60	±1.20	±2.40
250 – 300mm	±1.40	±0.70	±1.40	±2.80
300 – 400mm	±1.80	±0.90	±1.80	±3.60
400 – 500mm	±2.20	±1.10	±2.20	±4.40
500 – 600mm	±2.60	±1.30	±2.60	±5.00
600 – 700mm	±3.00	±1.50	±3.00	±6.00
700 – 800mm	±3.40	±1.70	±3.40	±6.50
800 – 900mm	±3.80	±1.90	±3.80	±7.50
900 – 1000mm	±4.20	±2.00	±4.20	±8.00

*Accuracy is more strict than Grade 0 on permissible length variation.

ASME (US)

Length Over – Up to	Accuracy at 20°C (μinch)	Grade 1	Grade 2	Grade 3	Grade B**
1" – 2"	±2	+4 –2	+8 –4	+10 –6	+12 –8
2" – 3"	±4	+8 –4	+16 –8	+20 –10	+24 –12
3" – 4"	±5	+10 –5	+20 –10	+30 –15	+36 –18
4" – 5"	±6	+12 –6	+24 –12	+36 –18	+40 –20

**This grade is not specified by GGG-G-15C.

BS 4311: Part 1: 1993 (UK)

Length Over – Up to	Accuracy at 20°C (μinch)				
	Grade K***	Grade 0	Grade 1	Grade 2	
0 – 10mm	±0.12	±0.12	±0.25	±0.50	
10 – 25mm	±0.15	±0.15	±0.30	±0.60	
25 – 50mm	±0.20	±0.20	±0.40	±0.80	
50 – 75mm	±0.25	±0.25	±0.50	±1.00	
75 – 100mm	±0.30	±0.30	±0.60	±1.20	

***Accuracy is more strict than Grade 0 on parallelism and flatness.

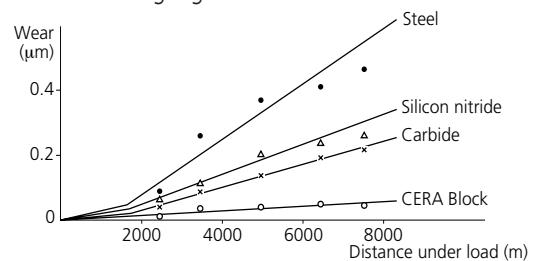
FEATURES

Inspection Certificates

- Each Mitutoyo gauge block set is supplied in a high quality wooden case with:
 - Certificate of Inspection (Grade 0, 1, 2, 3, B) or
 - Certificate of Calibration, and Certificate of Inspection (Grade K only)

CERA Blocks

- Corrosion-resistant: The CERA Block is made from zirconium-based ceramic which will not corrode unless subjected to the most corrosive chemicals. Anti-corrosion treatment is not required when handled normally (i.e. with fingers), resulting in simple maintenance and storage.
- Abrasion resistant: CERA Blocks have 10 times the abrasion resistance of steel gauge blocks.



Distance under load and wear

(Each block was put under exactly the same load and rubbed on a cast iron plate.)

- Dimensional stability: CERA Blocks are free from dimensional change over time.
- Marking: The black characters, indicating the nominal size, are inscribed by laser and are clearly visible against the white surface of the block.

1mm Base Block Set



516-338-10

Metric Rectangular Gauge Block Sets

SERIES 516

1mm Base Block Sets

Blocks per set	Blocks included in set (mm)	ISO/DIN/ JIS	Order No. Steel	Order No. CERA	ASME	Order No. Steel	Order No. CERA	BS	Order No. Steel	Order No. CERA
122	1.0005 (1 pc.)	—	—	—	—	—	—	—	—	—
	Step of 0.001: 1.001 - 1.009 (9 pcs.)	—	—	—	—	—	—	—	—	—
	Step of 0.01: 1.01 - 1.49 (49 pcs.)	—	—	—	—	—	—	—	—	—
	Step of 0.1: 1.6 - 1.9 (4 pcs.)	Grade K	516-896-60	—	Grade K	—	—	Grade K	—	—
	Step of 0.5: 0.5 - 24.5 (49 pcs.)	Grade 0	516-597R-10	—	Grade 0	—	—	Grade 0	—	—
	Step of 10: 30 - 100 (8 pcs.)	Grade 1	516-598R-10	—	Grade 1	—	—	Grade 1	—	—
	25, 75 (2 pcs.)	Grade 2	516-599R-10	—	Grade 2	—	—	Grade 2	—	—
112	1.0005 (1 pc.)	—	—	—	—	—	—	—	—	—
	Step of 0.001: 1.001 - 1.009 (9 pcs.)	Grade K	516-937-60	516-337-60	Grade 1	516-938-16	516-337-16	Grade K	516-937-71	516-37-71
	Step of 0.01: 1.01 - 1.49 (49 pcs.)	Grade 0	516-938R-10	516-338-10	Grade 2	516-939-16	516-338-16	Grade 0	516-938-11	516-338-11
	Step of 0.5: 0.5 - 24.5 (49 pcs.)	Grade 1	516-939R-10	516-339-10	Grade 3	—	—	Grade 1	516-939-11	516-339-11
	Step of 25: 25 - 100 (4 pcs.)	Grade 2	516-904R-10	516-340-10*	Grade B	—	—	Grade 2	516-940-11	516-340-11
103	1.0005 (1 pc.)	Grade K	516-937-60	516-341-60	Grade 1	516-941-16	516-341-16	Grade K	516-941-71	516-341-71
	Step of 0.01: 1.01 - 1.49 (49 pcs.)	Grade 0	516-942R-10	516-342-10	Grade 2	516-942-16	516-342-16	Grade 0	516-942-11	516-342-11
	Step of 0.5: 0.5 - 24.5 (49 pcs.)	Grade 1	516-943R-10	516-343-10	Grade 3	516-943-16	516-343-16	Grade 1	516-943-11	516-343-11
	Step of 25: 25 - 100 (4 pcs.)	Grade 2	516-944R-10	516-344-10*	Grade B	—	—	Grade 2	516-944-11	516-344-11
88	1.0005 (1 pc.)	—	—	—	—	—	—	—	—	—
	Step of 0.001: 1.001 - 1.009 (9 pcs.)	Grade K	—	—	Grade 1	—	—	Grade K	516-969-71	516-369-71
	Step of 0.01: 1.01 - 1.49 (49 pcs.)	Grade 0	516-970R-10	—	Grade 2	—	—	Grade 0	516-970-11	516-370-11
	Step of 0.5: 0.5 - 9.5 (19 pcs.)	Grade 1	516-971R-10	—	Grade 3	—	—	Grade 1	516-971-11	516-371-11
	Step of 10: 25 - 100 (10 pcs.)	Grade 2	516-972R-10	—	Grade B	—	—	Grade 2	516-972-11	516-372-11
87	Step of 0.001: 1.001 - 1.009 (9 pcs.)	Grade K	516-945-60	516-345-60	Grade 1	516-945-16	516-345-16	Grade K	516-945-71	516-345-71
	Step of 0.01: 1.01 - 1.49 (49 pcs.)	Grade 0	516-946R-10	516-346-10	Grade 2	516-946-16	516-346-16	Grade 0	516-946-11	516-346-11
	Step of 0.5: 0.5 - 9.5 (19 pcs.)	Grade 1	516-947R-10	516-347-10	Grade 3	516-947-16	516-347-16	Grade 1	516-947-11	516-347-11
	Step of 10: 10 - 100 (10 pcs.)	Grade 2	516-948R-10	516-348-10*	Grade B	—	—	Grade 2	516-948-11	516-348-11
76	1.0005 (1 pc.)	—	—	—	—	—	—	—	—	—
	Step of 0.01: 1.01 - 1.49 (49 pcs.)	Grade K	516-949-60	516-349-60	Grade 1	—	—	Grade K	—	—
	Step of 0.5: 0.5 - 9.5 (19 pcs.)	Grade 0	516-950R-10	516-350-10	Grade 2	—	—	Grade 0	—	—
	Step of 10: 10 - 40 (4 pcs.)	Grade 1	516-951R-10	516-351-10	Grade 3	—	—	Grade 1	—	—
	Step of 25: 50 - 100 (3 pcs.)	Grade 2	516-952R-10	516-352-10*	Grade B	—	—	Grade 2	—	—
56	0.5 (1 pc.)	—	—	—	—	—	—	—	—	—
	Step of 0.001: 1.001 - 1.009 (9 pcs.)	—	—	—	—	—	—	—	—	—
	Step of 0.01: 1.01 - 1.49 (9 pcs.)	Grade K	516-953-60	516-353-10	Grade 1	516-953-16	516-353-16	Grade K	—	—
	Step of 0.1: 0.5 - 24.5 (9 pcs.)	Grade 0	516-954R-10	516-354-10	Grade 2	516-954-16	516-354-16	Grade 0	—	—
	Step of 1: 1 - 24 (24 pcs.)	Grade 1	516-955R-10	516-355-10*	Grade 3	516-955-16	516-355-16	Grade 1	—	—
	Step of 25: 25 - 100 (4 pcs.)	Grade 2	516-956R-10	516-356-10*	Grade B	—	—	Grade 2	—	—
47	1.005 (1 pc.)	—	—	—	—	—	—	—	—	—
	Step of 0.01: 1.01 - 1.09 (9 pcs.)	Grade K	516-957-60	516-357-60	Grade 1	516-957-16	516-357-16	Grade K	—	—
	Step of 0.1: 1.1 - 1.9 (9 pcs.)	Grade 0	516-958R-10	516-358-10	Grade 2	516-958-16	516-358-16	Grade 0	—	—
	Step of 1: 1 - 24 (24 pcs.)	Grade 1	516-959R-10	516-359-10	Grade 3	516-959-16	516-359-16	Grade 1	—	—
	Step of 25: 25 - 100 (4 pcs.)	Grade 2	516-960R-10	516-360-10*	Grade B	—	—	Grade 2	—	—
47	:	—	—	—	—	—	—	—	—	—
	Step of 0.01: 1.01 - 1.09 (9 pcs.)	Grade K	516-961-60	516-361-60	Grade 1	—	—	Grade K	516-961-71	516-361-71
	Step of 0.1: 1.1 - 1.9 (9 pcs.)	Grade 0	516-962R-10	516-362-10	Grade 2	—	—	Grade 0	516-962-11	516-362-11
	Step of 1: 1 - 24 (24 pcs.)	Grade 1	516-963R-10	516-363-10	Grade 3	—	—	Grade 1	516-963-11	516-363-11
	Step of 10: 10 - 100 (4 pcs.)	Grade 2	516-964R-10	516-364-10*	Grade B	—	—	Grade 2	516-964-11	516-364-11
46	Step of 0.001: 1.001 - 1.009 (9 pcs.)	—	—	—	—	—	—	—	—	—
	Step of 0.01: 1.01 - 1.09 (9 pcs.)	Grade K	516-944-60	516-394-60	Grade 1	—	—	Grade K	—	—
	Step of 0.1: 1.1 - 1.9 (9 pcs.)	Grade 0	516-995R-10	516-395-10	Grade 2	—	—	Grade 0	—	—
	Step of 1: 1 - 9 (9 pcs.)	Grade 1	516-996R-10	516-396-10	Grade 3	—	—	Grade 1	—	—
	Step of 10: 10 - 100 (4 pcs.)	Grade 2	516-997R-10	516-397-10*	Grade B	—	—	Grade 2	—	—
34	1.005 (1 pc.)	—	—	—	—	—	—	—	—	—
	Step of 0.001: 1.001 - 1.009 (9 pcs.)	Grade K	516-128-60	516-178-60	Grade 1	—	—	Grade K	516-128-71	516-178-71
	Step of 0.01: 1.01 - 1.09 (9 pcs.)	Grade 0	516-129-10	516-179-10	Grade 2	—	—	Grade 0	516-129-11	516-179-11
	Step of 0.1: 1.1 - 1.9 (9 pcs.)	Grade 1	516-130-10	516-180-10	Grade 3	—	—	Grade 1	516-130-11	516-180-11
	Step of 1: 1-5, 10 (6 pcs.)	Grade 2	516-131-10	516-181-10	Grade B	—	—	Grade 2	516-131-11	516-181-11
32	1.005 (1 pc.)	—	—	—	—	—	—	—	—	—
	Step of 0.01: 1.01 - 1.09 (9 pcs.)	Grade K	516-965-60	516-365-60	Grade 1	—	—	Grade K	516-965-71	516-365-71
	Step of 0.1: 1.1 - 1.9 (9 pcs.)	Grade 0	516-966R-10	516-366-10	Grade 2	—	—	Grade 0	516-966-11	516-366-11
	Step of 1: 1 - 9 (9 pcs.)	Grade 1	516-967R-10	516-367-10	Grade 3	—	—	Grade 1	516-967-11	516-367-11
	Step of 10: 10 - 30 (3 pcs.)	Grade 2	516-968R-10	516-368-10	Grade B	—	—	Grade 2	516-968-11	516-368-11

* Economy CERA/steel combination sets including steel blocks for sizes 50, 75, and 100mm in place of CERA Blocks for shop-floor use are available.

Use suffix "-13" in place of "-10" when ordering: **516-340-13** (112-block), **516-344-13** (103-block), **516-352-13** (76-block), **516-356-13** (56-block), **516-360-13** (47-block).

Note 1: Use suffix "-60" in place of "-10" to order the ISO/DIN/JIS grade 0, 1, or 2 gauge block sets with Certificate of Calibration. (The charge for calibration is not included in the prior set price.)

Note 2: Gauge block sets with NKO Certificate are also available. Contact your Mitutoyo distributor or the Mitutoyo regional office near you for more information.



Metric Rectangular Gauge Block Sets

SERIES 516

2mm Base Block Sets

Blocks per set	Blocks included in set (mm)	ISO/DIN/JIS	Order No. Steel	Order No. CERA	ASME	Order No. Steel	Order No. CERA	BS	Order No. Steel	Order No. CERA
112	2.0005 (1 pc.)	—	—	—	—	—	—	—	—	—
	Step of 0.001: 2.001 - 2.009 (9 pcs.)	Grade K	516-513-30	—	Grade 1	516-514-16	—	Grade K	516-513-71	—
	Step of 0.01: 2.01 - 2.49 (49 pcs.)	Grade 0	516-514-10	—	Grade 2	516-515-16	—	Grade 0	516-514-11	—
	Step of 0.5: 0.5 - 24.5 (49 pcs.)	Grade 1	516-515-10	—	Grade 3	516-516-16	—	Grade 1	516-515-11	—
	Step of 25: 25 - 100 (4 pcs.)	Grade 2	516-516-10	—	Grade B	—	—	Grade 2	516-516-11	—
88	1.0005 (1 pc.)	—	—	—	—	—	—	—	—	—
	Step of 0.001: 2.001 - 2.009 (9 pcs.)	Grade K	516-501-60	—	Grade 1	—	—	Grade K	516-501-71	—
	Step of 0.01: 2.01 - 2.49 (49 pcs.)	Grade 0	516-502-10	—	Grade 2	—	—	Grade 0	516-502-11	—
	Step of 0.5: 0.5 - 9.5 (19 pcs.)	Grade 1	516-503-10	—	Grade 3	—	—	Grade 1	516-503-11	—
	Step of 10: 10 - 100 (10 pcs.)	Grade 2	516-504-10	—	Grade B	—	—	Grade 2	516-504-11	—
88	2.0005 (1 pc.)	—	—	—	—	—	—	—	—	—
	Step of 0.001: 2.001 - 2.009 (9 pcs.)	Grade K	516-517-60	—	Grade 1	516-518-16	—	Grade K	—	—
	Step of 0.01: 2.01 - 2.49 (49 pcs.)	Grade 0	516-518-10	—	Grade 2	516-519-16	—	Grade 0	—	—
	Step of 0.5: 0.5 - 9.5 (19 pcs.)	Grade 1	516-519-10	—	Grade 3	516-520-16	—	Grade 1	—	—
	Step of 10: 10 - 100 (10 pcs.)	Grade 2	516-520-10	—	Grade B	—	—	Grade 2	—	—
47	2.0005 (1 pc.)	—	—	—	—	—	—	—	—	—
	Step of 0.001: 2.001 - 2.009 (9 pcs.)	—	—	—	—	—	—	—	—	—
	Step of 0.01: 2.01 - 2.09 (49 pcs.)	Grade K	516-521-60	—	Grade 1	516-522-16	—	Grade K	—	—
	Step of 0.1: 2.1 - 2.9 (9 pcs.)	Grade 0	516-522-10	—	Grade 2	516-523-16	—	Grade 0	—	—
	Step of 1: 1 - 9 (9 pcs.)	Grade 1	516-523-10	—	Grade 3	516-524-16	—	Grade 1	—	—
	Step of 10: 10 - 100 (10 pcs.)	Grade 2	516-524-10	—	Grade B	—	—	Grade 2	—	—
46	Step of 0.001: 2.001 - 2.009 (9 pcs.)	—	—	—	—	—	—	—	—	—
	Step of 0.01: 2.01 - 2.09 (9 pcs.)	Grade K	516-505-60	—	Grade 1	—	—	Grade K	516-505-71	—
	Step of 0.1: 2.1 - 2.9 (9 pcs.)	Grade 0	516-506-10	—	Grade 2	—	—	Grade 0	516-506-11	—
	Step of 1: 1 - 9 (9 pcs.)	Grade 1	516-507-10	—	Grade 3	—	—	Grade 1	516-507-11	—
	Step of 10: 10 - 100 (10 pcs.)	Grade 2	516-508-10	—	Grade B	—	—	Grade 2	516-508-11	—
33	2.005 (1 pc.)	—	—	—	—	—	—	—	—	—
	Step of 0.01: 2.01 - 2.09 (9 pcs.)	—	—	—	—	—	—	—	—	—
	Step of 0.1: 2.1 - 2.9 (9 pcs.)	Grade K	516-509-60	—	Grade 1	516-510-16	—	Grade K	516-509-71	—
	Step of 1: 1 - 9 (9 pcs.)	Grade 0	516-510-10	—	Grade 2	516-511-16	—	Grade 0	516-510-11	—
	Step of 10: 10 - 30 (3 pcs.)	Grade 1	516-511-10	—	Grade 3	516-512-16	—	Grade 1	516-511-11	—
	60 (1 pc.), 100 (1 pc.)	Grade 2	516-512-10	—	Grade B	—	—	Grade 2	516-512-11	—

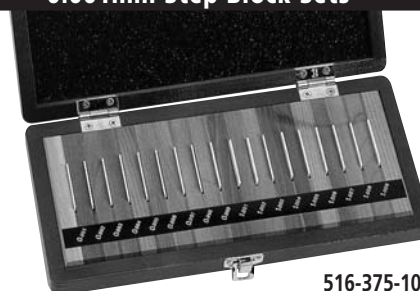
Note: Gauge block sets with NKO Certificate are also available. Contact your Mitutoyo distributor or the Mitutoyo regional office near you for more information.

2mm Base Block Sets



516-515-10

0.001mm Step Block Sets



516-375-10

Thin Block Sets



516-991-10

0.001mm Step Block Sets

Blocks per set	Blocks included in set (mm)	ISO/DIN/JIS	Order No. Steel	Order No. CERA	ASME	Order No. Steel	Order No. CERA	BS	Order No. Steel	Order No. CERA
18	Step of 0.001: 0.991 – 0.999 (9 pcs.) 1.001 – 1.009 (9 pcs.)	Grade K	516-973-60	516-373-60	Grade 1	—	—	Grade K	—	—
		Grade 0	516-974-10	516-374-10	Grade 2	—	—	Grade 0	—	—
		Grade 1	516-975-10	516-375-10	Grade 3	—	—	Grade 1	—	—
		Grade 2	516-976-10	516-376-10	Grade B	—	—	Grade 2	—	—
9	Step of 0.001: 1.001 – 1.009 (9 pcs.)	Grade K	516-981-60	516-381-60	Grade 1	—	—	Grade K	516-981-71	516-381-71
		Grade 0	516-982-10	516-382-10	Grade 2	—	—	Grade 0	516-982-11	516-382-11
		Grade 1	516-983-10	516-383-10	Grade 3	—	—	Grades 1	516-983-11	516-383-11
		Grade 2	516-984-10	516-384-10	Grade B	—	—	Grade 2	516-984-11	516-384-11
9	Step of 0.001: 0.991 – 0.999 (9 pcs.)	Grade K	516-985-60	516-385-60	Grade 1	—	—	Grade K	—	—
		Grade 0	516-986-10	516-386-10	Grade 2	—	—	Grade 0	—	—
		Grade 1	516-987-10	516-387-10	Grade 3	—	—	Grade 1	—	—
		Grade 2	516-988-10	516-388-10	Grade B	—	—	Grade 2	—	—

Thin Block Sets

Blocks per set	Blocks included in set (mm)	ISO/DIN/JIS	Order No. Steel	Order No. CERA	ASME	Order No. Steel	Order No. CERA	BS	Order No. Steel	Order No. CERA
9	Step of 0.05: 0.10 – 0.50 (9 pcs.)	Grade K	—	—	Grade 1	—	—	Grade K	—	—
		Grade 0	516-990-10	—	Grade 2	—	—	Grade 0	—	—
		Grade 1	516-991-10	—	Grade 3	—	—	Grade 1	—	—
		Grade 2	516-992-10	—	Grade B	—	—	Grade 2	—	—

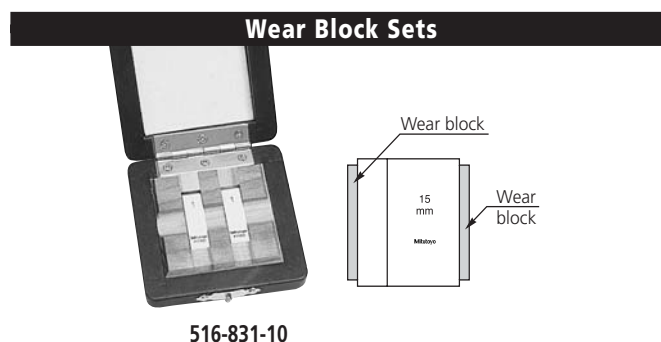
Long Block Sets

Blocks per set	Blocks included in set (mm)	ISO/DIN/JIS	Order No. Steel	Order No. CERA	ASME	Order No. Steel	Order No. CERA	BS	Order No. Steel	Order No. CERA
8	125 (1 pc.), 150 (1 pc.), 175 (1 pc.), 200 (1 pc.), 250 (1 pc.), 300 (1 pc.), 400 (1 pc.), 500 (1 pc.),	Grade K	516-701-60	516-731-60	Grade 1	516-701-16	516-731-16	Grade K	—	—
		Grade 0	516-702-10	516-732-10	Grade 2	516-702-16	516-732-16	Grade 0	—	—
		Grade 1	516-703-10	516-733-10	Grade 3	516-703-16	516-733-16	Grade 1	—	—
		Grade 2	516-704-10	516-734-10	Grade B	—	—	Grade 2	—	—

Wear Block Sets

Blocks per set	Blocks included in set (mm)	ISO/DIN/JIS	Order No. Steel	Order No. CERA	ASME	Order No. Steel	Order No. CERA	BS	Order No. Steel	Order No. CERA
2	1 (2 pcs.)	Grade K	—	—	Grade 1	—	—	Grade K	—	—
		Grade 0	516-807-10	516-832-10	Grade 2	516-807-16	516-832-16	Grade 0	—	—
		Grade 1	516-806-10	516-833-10	Grade 3	516-806-16	516-833-16	Grade 1	—	—
		Grade 2	—	—	Grade B	—	—	Grade 2	—	—
2	2 (2 pcs.)	Grade K	—	—	Grade 1	—	—	Grade K	—	—
		Grade 0	516-803-10	516-830-10	Grade 2	516-803-16	516-830-16	Grade 0	—	—
		Grade 1	516-802-10	516-831-10	Grade 3	516-802-16	516-831-16	Grade 1	—	—
		Grade 2	—	—	Grade B	—	—	Grade 2	—	—

Note: Use suffix "-60" in place of "-10" to order the ISO/DIN/JIS grade 0, 1, or 2 gauge block sets with Certificate of Calibration. (The charge for calibration is not included in the prior set price.)



Inch Rectangular Gauge Block Set SERIES 516

SERIES 516

Blocks per set	Blocks included in set (inch)	ASME	Order No. Steel	Order No. CERA	BS	Order No. Steel	Order No. CERA
82	.10005 (1 pc.)						
	Step of .0001: .1001 – .1009 (9 pcs.)	Grade 1	516-905-16	516-305-16	Grade K	—	—
	Step of .001: .101 – .149 (49 pcs.)	Grade 2	516-906-16	516-306-16	Grade 0	516-906-11	—
	Step of .05: .05 – .95 (19 pcs.)	Grade 3	516-907-16	516-307-16	Grade 1	516-907-11	—
	Step of 1: 1 – 4 (4 pcs.)	Grade B	516-908-16	516-308-16	Grade 2	516-908-11	—
81	Step of .0001: .1001 – .1009 (9 pcs.)	Grade 1	516-901-16	516-301-16*	Grade K	—	—
	Step of .001: .101 – .149 (49 pcs.)	Grade 2	516-902-16	516-302-16*	Grade 0	516-902-11	516-302-11
	Step of .05: .05 – .95 (19 pcs.)	Grade 3	516-903-16	516-303-16	Grade 1	516-903-11	516-303-11
	Step of 1: 1 – 4 (4 pcs.)	Grade B	516-904-16	516-304-16	Grade 2	516-904-11	516-304-11
49	Step of .0001: .1001 – .1009 (9 pcs.)						
	Step of .001: .101 – .109 (9 pcs.)	Grade 1	—	—	Grade K	—	—
	Step of .01: .01 – .19 (19 pcs.)	Grade 2	—	—	Grade 0	516-910-11	—
	Step of .1: .2 – .9 (8 pcs.)	Grade 3	—	—	Grade 1	516-911-11	—
	Step of 1: 1 – 4 (4 pcs.)	Grade B	—	—	Grade 2	516-912-11	—
35	.10005 (1 pc.)						
	Step of .0001: .1001 – .1009 (9 pcs.)						
	Step of .001: .101 – .109 (9 pcs.)	Grade 1	516-913-16	516-313-16*	Grade K	—	—
	Step of .01: .11 – .19 (9 pcs.)	Grade 2	516-914-16	516-314-16*	Grade 0	516-914-11	516-314-11
	.1 (1 pc.), .2 (1 pc.), .3 (1 pc.), .5 (1 pc.), 1 (1 pc.), 2 (1 pc.), 4 (1 pc.)	Grade 3	516-915-16	516-315-16	Grade 1	516-915-11	516-315-11
		Grade B	516-916-16	516-316-16	Grade 2	516-916-11	516-316-11
28	.02005 (1 pc.)						
	Step of .0001: .0201 – .0209 (9 pcs.)	Grade 1	516-917-16	—	Grade K	—	—
	Step of .001: .021 – .029 (9 pcs.)	Grade 2	516-918-16	—	Grade 0	—	—
	Step of .01: .01 – .09 (9 pcs.)	Grade 3	516-919-16	—	Grade 1	—	—
		Grade B	516-920-16	—	Grade 2	—	—

*Economy CERA/steel combination sets including steel blocks for sizes 2", 3", and 4" in place of CERA Blocks for shop-floor use are available. Use suffix "-14" in place of "-12" when ordering: **516-301-14** (81-block), **516-302-14** (81-block), **516-313-14** (35-block), **516-314-14** (35-block).

Thin Block Sets

Blocks per set	Blocks included in set (inch)	ASME	Order No. Steel	Order No. CERA	BS	Order No. Steel	Order No. CERA
10	Step of .005: .005 – .050 (10 pcs.)	Grade 1	—	—	Grade K	—	—
		Grade 2	516-926-16	—	Grade 0	516-926-11	—
		Grade 3	516-927-16	—	Grade 1	516-927-11	—
		Grade B	—	—	Grade 2	516-928-11	—

Long Block Sets

Blocks per set	Blocks included in set (inch)	ASME	Order No. Steel	Order No. CERA	BS	Order No. Steel	Order No. CERA
8	5 (1 pc.), 6 (1 pc.), 7 (1 pc.), 8 (1 pc.), 10 (1 pc.), 12 (1 pc.), 16 (1 pc.), 20 (1 pc.)	Grade 1	—	516-741-16	Grade K	—	—
		Grade 2	516-712-16	516-742-16	Grade 01	—	—
		Grade 3	516-713-16	516-743-16	Grade 1	—	—
		Grade B	—	—	Grade 2	—	—

Wear Block Sets

Blocks per set	Blocks included in set (inch)	ASME	Order No. Steel	Order No. CERA	BS	Order No. Steel	Order No. CERA
2	.05 (2 pc.)	Grade 1	—	—	Grade K	—	—
		Grade 2	516-809-16	516-836-16	Grade 0	—	—
		Grade 3	516-808-16	516-837-16	Grade 1	—	—
		Grade B	—	—	Grade 2	—	—
2	.1 (2 pc.)	Grade 1	—	—	Grade K	—	—
		Grade 2	516-805-16	516-834-16	Grade 0	—	—
		Grade 3	516-804-16	516-835-16	Grade 1	—	—
		Grade B	—	—	Grade 2	—	—



Steel / CERA Gauge Block Sets

SERIES 516

Blocks per set	Blocks included in set (mm)	ISO/DIN/JIS	Order No. Steel/CERA	ASME	Order No. Steel/CERA	BS	Order No. Steel/CERA
47	1.005 (1 pc.)	—	—	—	—	—	—
	Step of 0.01: 1.01 – 1.09 (9 pcs.)	—	—	—	—	—	—
	Step of 0.01: 1.1 – 1.9 (9 pcs.)	Grade 0	516-958-13	—	—	—	—
	Step of 1: 1 – 24 (24 pcs.)	Grade 1	516-959-13	Grade 2	516-958-17	—	—
47	Step of 10: 25 – 100 (4 pcs.)	Grade 2	516-960-13	Grade 3	518-959-17	—	—
	1.005mm (1 pc.)	—	—	—	—	—	—
	Step of 0.01: 1.00 – 1.20 (21 pcs.)	Grade 0	516-962-13	—	—	Grade 0	516-962-15
	Step of 1: 3 – 10 (8 pcs.)	Grade 1	516-963-13	—	—	Grade 1	516-963-15
32	Step of 10: 20 – 100 (9 pcs.)	Grade 2	516-964-13	—	—	Grade 2	516-964-15
	1.005mm (1 pc.)	—	—	—	—	—	—
	Step of 0.01: 1.01 – 1.09 (9 pcs.)	—	—	—	—	—	—
	Step of 1: 1 – 9 (3 pcs.)	Grade 0	516-966-13	—	—	Grade 0	516-966-15
35	Step of 10: 10 – 30 (3 pcs.)	Grade 1	516-967-13	—	—	Grade 1	516-967-15
	60 (1 pc.)	Grade 2	516-968-13	—	—	Grade 2	516-968-15
	0.10005mm (1 pc.)	—	—	—	—	—	—
	Step of 0.0001: 0.1001 – 0.1009 (9 pcs.)	—	—	—	—	—	—
49	Step of 0.001: 0.101 – 0.109 (9 pcs.)	—	—	—	—	—	—
	Step of 0.01: 0.11 – 0.19 (9 pcs.)	—	—	—	—	Grade 0	516-914-15
	Step of 0.1: 0.1 – 0.3 (3 pcs.)	—	—	Grade 2	516-914-17	Grade 1	516-915-15
	0.5, 1, 2, 4 (4 pcs.)	—	—	Grade 3	516-915-17	Grade 2	516-916-15
49	Step of 0.0001: 0.1001 – 0.1009 (9 pcs.)	—	—	—	—	—	—
	Step of 0.001: 0.101 – 0.109 (9 pcs.)	—	—	—	—	—	—
	Step of 0.01: 0.01 – 0.09 (9 pcs.)	—	—	—	—	—	—
	Step of 0.01: 0.11 – 0.19 (9 pcs.)	—	—	—	—	Grade 0	516-910-15
49	Step of 0.1: 0.1 – 0.9 (9 pcs.)	—	—	—	—	Grade 1	516-911-15
	Step of 1: 1 – 4 (4 pcs.)	—	—	—	—	Grade 2	516-912-151

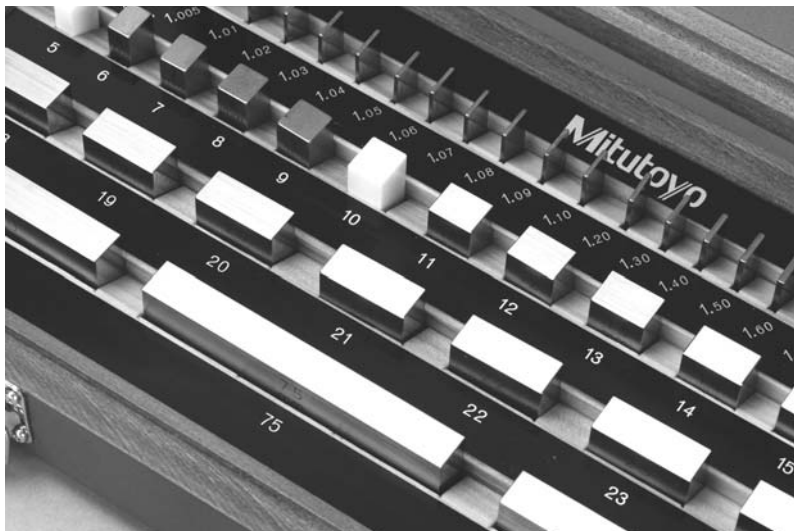
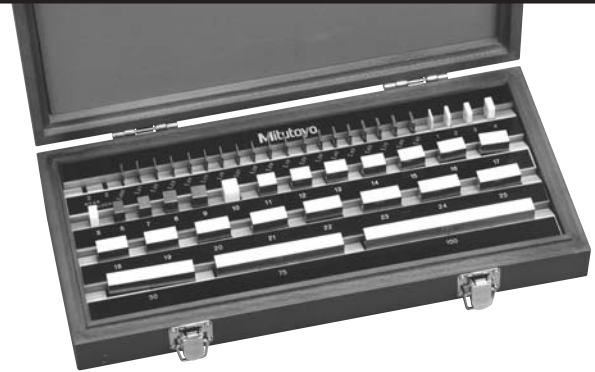
GAGE BLOCKS



Steel / CERA Sets

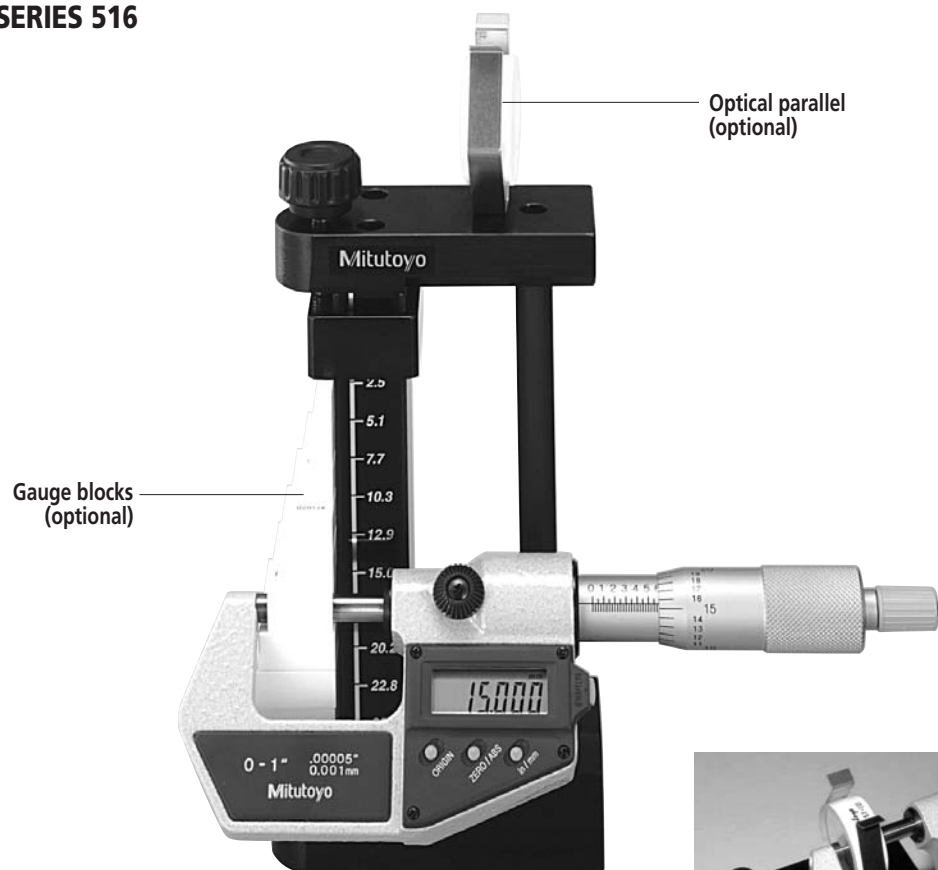


Steel / CERA Sets



Micro Checker for Micrometer Inspection

SERIES 516



- Can be measured in both vertical and horizontal posture.
- Parallelism is measured by attaching the optical parallel (optional accessory) to the GB set.



SPECIFICATIONS

Metric	Micro Checker (holder only)
Order No.	516-607
Applicable gauge block set	516-106, 516-107, 516-108, 516-156, 516-157, 516-158
Applicable gauge block size (mm)	2.5, 5.1, 7.7, 10.3, 12.9, 15, 17.6, 20, 22.8, 25
Mass	1300g

Inch / Metric	Micro Checker (holder only)
Order No.	516-608
Applicable gauge block set	516-921, 516-922, 516-923, 516-321, 516-322, 516-323
Applicable gauge block size (inch)	.105, .210, .315, .420, .5, .605, .815, .920
Mass	2.87 lbs.

Metric	Micro Checker Set	
Order No.	ISO/DIN/JIS	Blocks included in set (mm)
516-132-10	Grade 0	1.25, 1, 1.5, 2, 3, 5, 10, 15, 20, 25
516-133-10	Grade 1	• Gauge block holder (516-607),
516-134-10	Grade 2	• Optical parallel (157-101)
516-132-10	Grade 0	2.5, 5.1, 7.7, 10.3, 12.9, 15, 17.6, 20, 22.8, 25
516-133-10	Grade 1	• Gauge block holder (516-607),
516-134-10	Grade 2	• Optical parallel (157-101)

Inch / Metric		Micro Checker Set
Order No.	BS	Blocks included in set (inch)
516-138-11	Grade 0	.105, .210, .315, .420, .500, .605, .710, .815, .920, 1
516-139-11	Grade 1	• Gauge block holder (516-608),
516-140-11	Grade 2	• Optical parallel (157-109)

Rectangular Gauge Block Sets for Micrometer Inspection

SERIES 516

Metric Block Sets

Blocks per set	Blocks included in set (mm)	ISOS/DIN/JIS	Order No. Steel	Order No. CERA	ASME	Order No. Steel	Order No. CERA	BS	Order No. Steel	Order No. CERA
16	Step of 0.25: 1.00 – 1.50 (3 pcs.) Step of 5: 5 – 50 (10 pcs.) 2 (1 pc.), 3 (1 pc.), 25.25 (1 pc.) • Arkansas grinding stone • Optical parallels (12mm and 25mm)	Grade K	—	—	Grade 1	—	—	Grade K	—	—
		Grade 0	516-111-10	516-161-10	Grade 2	—	—	Grade 0	—	—
		Grade 1	516-112-10	516-162-10	Grade 3	—	—	Grade 1	—	—
		Grade 2	516-113-10	516-163-10	Grade B	—	—	Grade 2	—	—
10	Step of 0.25: 1.00 – 1.50 (3 pcs.) Step of 5: 5 – 25 (5 pcs.) 2 (1 pc.), 3 (1 pc.)	Grade K	—	—	Grade 1	—	—	Grade K	—	—
		Grade 0	516-103-10	516-152-10	Grade 2	516-103-16	—	Grade 0	—	—
		Grade 1	516-101-10	516-153-10	Grade 3	516-101-16	—	Grade 1	—	—
		Grade 2	—	516-154-10	Grade B	—	—	Grade 2	—	—
10	Step of 0.25: 1.00 – 1.50 (3 pcs.) Step of 5: 5 – 25 (5 pcs.) 2 (1 pc.), 3 (1 pc.) • Optical parallel (12mm)	Grade K	516-977-60	—	Grade 1	—	—	Grade K	—	—
		Grade 0	516-978-10	516-378-10	Grade 2	—	—	Grade 0	—	—
		Grade 1	516-979-10	516-379-10	Grade 3	—	—	Grade 1	—	—
		Grade 2	516-980-10	516-380-10	Grade B	—	—	Grade 2	—	—
10	2.5 (1 pc.), 5.1 (1 pc.), 7.7 (1 pc.), 10.3 (1 pc.), 12.9 (1 pc.), 15 (1 pc.), 17.6 (1 pc.), 20.2 (1 pc.), 22.8 (1 pc.), 25 (1 pc.) • Optical parallel (12mm)	Grade K	—	—	Grade 1	—	—	Grade K	—	—
		Grade 0	516-106-10	516-156-10	Grade 2	—	—	Grade 0	—	—
		Grade 1	516-107-10	516-157-10	Grade 3	—	—	Grade 1	—	—
		Grade 2	516-108-10	516-158-10	Grade B	—	—	Grade 2	—	—
8	Step of 0.25: 25 – 200 (8 pcs.)	Grade K	—	516-164-60	Grade 1	—	516-164-16	Grade K	—	—
		Grade 0	516-115-10	516-165-10	Grade 2	—	516-165-16	Grade 0	—	—
		Grade 1	516-116-10	516-166-10	Grade 3	—	516-166-16	Grade 1	—	—
		Grade 2	516-117-10	516-167-10	Grade B	—	—	Grade 2	—	—

Note: Use suffix "-60" in place of "-10" to order the ISO/DIN/JIS grade 0, 1, or 2 gauge block sets with Certificate of Calibration. (The charge for calibration is not included in the prior set price.)

Inch Block Sets

Blocks per set	Blocks included in set (inch)	ASME	Order No. Steel	Order No. CERA	BS	Order No. Steel	Order No. CERA
10	.105 (1 pc.), .210 (1 pc.), .315 (1 pc.), .420 (1 pc.), .500 (1 pc.), .605 (1 pc.), .710 (1 pc.), .815 (1 pc.), .920 (1 pc.), 1 (1 pc.)	Grade 1	516-921-16	516-321-16	Grade K	—	—
		Grade 2	516-922-16	516-322-16	Grade 0	516-921-11	516-321-11
		Grade 3	516-923-16	516-323-16	Grade 1	516-922-11	516-322-11
		Grade B	—	—	Grade 2	516-923-11	516-323-11
9	.0625 (1 pc.), .100 (1 pc.), .125 (1 pc.), .200 (1 pc.), .250 (1 pc.), .300 (1 pc.), .500 (1 pc.), 1 (1 pc.), 2 (1 pc.) • Optical parallel .5" (1 pc.)	Grade 1	516-929-16	516-321-16	Grade K	—	—
		Grade 2	516-930-16	516-334-16	Grade 0	—	—
		Grade 3	516-931-16	516-335-16	Grade 1	—	—
		Grade B	516-932-16	516-336-16	Grade 2	—	—
9	.0625 (1 pc.), .100 (1 pc.), .125 (1 pc.), .200 (1 pc.), .250 (1 pc.), .300 (1 pc.), .500 (1 pc.), 1 (1 pc.), 2 (1 pc.)	Grade 1	—	516-329-16	Grade K	—	—
		Grade 2	516-934-16	516-330-16	Grade 0	—	—
		Grade 3	516-935-16	516-331-16	Grade 1	—	—
		Grade B	516-936-16	516-332-16	Grade 2	—	—
8	Step of 1: 1 – 8 (8 pcs.)	Grade 1	—	—	Grade K	—	—
		Grade 2	516-126-16	516-176-16	Grade 0	—	—
		Grade 3	516-127-16	516-177-16	Grade 1	—	—
		Grade B	—	—	Grade 2	—	—



Rectangular Gauge Block Sets for Caliper Inspection

SERIES 516

Blocks per set	Blocks included in set (mm)	ISOS/DIN/JIS	Order No. Steel	Order No. CERA	ASME	Order No. Steel	Order No. CERA	BS	Order No. Steel	Order No. CERA
2	41.3 (1 pc.), 131.4 (1 pc.) • Setting ring (ø20mm) • Inspecting glove	Grade K	—	—	Grade 1	—	—	Grade K	—	—
		Grade 0	—	—	Grade 2	—	—	Grade 0	—	—
		Grade 1	516-122-10	516-172-10	Grade 3	—	—	Grade 1	—	—
		Grade 2	516-123-10	516-173-10	Grade B	—	—	Grade 2	—	—

Individual Metric Rectangular Gauge Blocks



NOTE: If ordering a gauge block, append either of the following suffixes to the order number to specify the grade of the gauge block and the standard to which the block must conform.
(e.g. **611671-021** for a grade 0 ISO/DIN/JIS steel gauge block with a nominal length of 10mm)

Suffixes	Grade and relevant standard	
016	Grade K	ISO/DIN/JIS
021	Grade 0	ISO/DIN/JIS
031	Grade 1	ISO/DIN/JIS
041	Grade 2	ISO/DIN/JIS
221	Grade 1	Federal Specification
231	Grade 2	Federal Specification
241	Grade 3	Federal Specification
117	Grade K	British Standard
121	Grade 0	British Standard
131	Grade 1	British Standard
141	Grade 2	British Standard

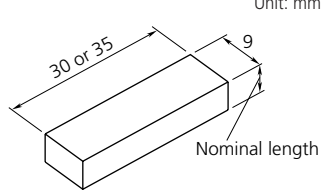
• Applicable accuracy grade depends on the block length.

Length (mm)	Order No. Steel	Order No. CERA
0.1	611821-■■■	—
0.11	611860-■■■	—
0.12	611861-■■■	—
0.13	611862-■■■	—
0.14	611863-■■■	—
0.15	611822-■■■	—
0.16	611864-■■■	—
0.17	611865-■■■	—
0.18	611866-■■■	—
0.19	611867-■■■	—
0.2	611823-■■■	—
0.21	611868-■■■	—
0.22	611869-■■■	—
0.23	611870-■■■	—
0.24	611871-■■■	—
0.25	611824-■■■	—
0.26	611872-■■■	—
0.27	611873-■■■	—
0.28	611874-■■■	—
0.29	611875-■■■	—
0.3	611825-■■■	—
0.31	611876-■■■	—
0.32	611877-■■■	—
0.33	611878-■■■	—
0.34	611879-■■■	—
0.35	611826-■■■	—
0.36	611880-■■■	—
0.37	611881-■■■	—
0.38	611882-■■■	—
0.39	611883-■■■	—
0.4	611827-■■■	—
0.41	611884-■■■	—
0.42	611885-■■■	—
0.43	611886-■■■	—
0.44	611887-■■■	—
0.45	611828-■■■	—
0.46	611888-■■■	—
0.47	611889-■■■	—
0.48	611890-■■■	—
0.49	611891-■■■	—
0.5	611506-■■■	613506-■■■
0.51	611892-■■■	—
0.52	611893-■■■	—

Length (mm)	Order No. Steel	Order No. CERA
0.53	611894-■■■	—
0.54	611895-■■■	—
0.55	611896-■■■	—
0.56	611897-■■■	—
0.57	611898-■■■	—
0.58	611899-■■■	—
0.59	611900-■■■	—
0.6	611901-■■■	—
0.61	611902-■■■	—
0.62	611903-■■■	—
0.63	611904-■■■	—
0.64	611905-■■■	—
0.65	611906-■■■	—
0.66	611907-■■■	—
0.67	611908-■■■	—
0.68	611909-■■■	—
0.69	611910-■■■	—
0.7	611911-■■■	—
0.71	611912-■■■	—
0.72	611913-■■■	—
0.73	611914-■■■	—
0.74	611915-■■■	—
0.75	611916-■■■	—
0.76	611917-■■■	—
0.77	611918-■■■	—
0.78	611919-■■■	—
0.79	611920-■■■	—
0.8	611921-■■■	—
0.81	611922-■■■	—
0.82	611923-■■■	—
0.83	611924-■■■	—
0.84	611925-■■■	—
0.85	611926-■■■	—
0.86	611927-■■■	—
0.87	611928-■■■	—
0.88	611929-■■■	—
0.89	611930-■■■	—
0.9	611931-■■■	—
0.91	611932-■■■	—
0.92	611933-■■■	—
0.93	611934-■■■	—
0.94	611935-■■■	—
0.95	611936-■■■	—

Length (mm)	Order No. Steel	Order No. CERA
0.96	611937-■■■	—
0.97	611938-■■■	—
0.98	611939-■■■	—
0.99	611940-■■■	—
0.991	611551-■■■	613551-■■■
0.992	611552-■■■	613552-■■■
0.993	611553-■■■	613553-■■■
0.994	611554-■■■	613554-■■■
0.995	611555-■■■	613555-■■■
0.996	611556-■■■	613556-■■■
0.997	611557-■■■	613557-■■■
0.998	611558-■■■	613558-■■■
0.999	611559-■■■	613559-■■■
1	611611-■■■	613661-■■■
1.0005	611520-■■■	613520-■■■
1.001	611521-■■■	613521-■■■
1.002	611522-■■■	613522-■■■
1.003	611523-■■■	613523-■■■
1.004	611524-■■■	613524-■■■
1.005	611525-■■■	613525-■■■
1.006	611526-■■■	613526-■■■
1.007	611527-■■■	613527-■■■
1.008	611528-■■■	613528-■■■
1.009	611529-■■■	613529-■■■
1.01	611561-■■■	613561-■■■
1.02	611562-■■■	613562-■■■
1.03	611563-■■■	613563-■■■
1.04	611564-■■■	613564-■■■
1.05	611565-■■■	613565-■■■
1.06	611566-■■■	613566-■■■
1.07	611567-■■■	613567-■■■
1.08	611568-■■■	613568-■■■
1.09	611569-■■■	613569-■■■
1.1	611570-■■■	613570-■■■
1.11	611571-■■■	613571-■■■
1.12	611572-■■■	613572-■■■
1.13	611573-■■■	613573-■■■
1.14	611574-■■■	613574-■■■
1.15	611575-■■■	613575-■■■
1.16	611576-■■■	613576-■■■
1.17	611577-■■■	613577-■■■
1.18	611578-■■■	613578-■■■
1.19	611579-■■■	613579-■■■

Dimensions



Rectangular Gauge Block

Length (mm)	Order No. Steel	Order No. CERA
1.2	611580-███	613580-███
1.21	611581-███	613581-███
1.22	611582-███	613582-███
1.23	611583-███	613583-███
1.24	611584-███	613584-███
1.25	611585-███	613585-███
1.26	611586-███	613586-███
1.27	611587-███	613587-███
1.28	611588-███	613588-███
1.29	611589-███	613589-███
1.3	611590-███	613590-███
1.31	611591-███	613591-███
1.32	611592-███	613592-███
1.33	611593-███	613593-███
1.34	611594-███	613594-███
1.35	611595-███	613595-███
1.36	611596-███	613596-███
1.37	611597-███	613597-███
1.38	611598-███	613598-███
1.39	611599-███	613599-███
1.4	611600-███	613600-███
1.41	611601-███	613601-███
1.42	611602-███	613602-███
1.43	611603-███	613603-███
1.44	611604-███	613604-███
1.45	611605-███	613605-███
1.46	611606-███	613606-███
1.47	611607-███	613607-███
1.48	611608-███	613608-███
1.49	611609-███	613609-███
1.5	611641-███	613641-███
1.6	611516-███	613516-███
1.7	611517-███	613517-███
1.8	611518-███	613518-███
1.9	611519-███	613519-███
2	611612-███	613612-███
2.0005	611690-███	—
2.001	611691-███	—
2.002	611692-███	—
2.003	611693-███	—
2.004	611694-███	—
2.005	611695-███	—
2.006	611696-███	—
2.007	611697-███	—
2.008	611698-███	—
2.009	611699-███	—
2.01	611701-███	—
2.02	611702-███	—
2.03	611703-███	—
2.04	611704-███	—
2.05	611705-███	—
2.06	611706-███	—
2.07	611707-███	—
2.08	611708-███	—
2.09	611709-███	—

Length (mm)	Order No. Steel	Order No. CERA
2.1	611710-███	—
2.11	611711-███	—
2.12	611712-███	—
2.13	611713-███	—
2.14	611714-███	—
2.15	611715-███	—
2.16	611716-███	—
2.17	611717-███	—
2.18	611718-███	—
2.19	611719-███	—
2.2	611720-███	—
2.21	611721-███	—
2.22	611722-███	—
2.23	611723-███	—
2.24	611724-███	—
2.25	611725-███	—
2.26	611726-███	—
2.27	611727-███	—
2.28	611728-███	—
2.29	611729-███	—
2.3	611730-███	—
2.31	611731-███	—
2.32	611732-███	—
2.33	611733-███	—
2.34	611734-███	—
2.35	611735-███	—
2.36	611736-███	—
2.37	611737-███	—
2.38	611738-███	—
2.39	611739-███	—
2.4	611740-███	—
2.41	611741-███	—
2.42	611742-███	—
2.43	611743-███	—
2.44	611744-███	—
2.45	611745-███	—
2.46	611746-███	—
2.47	611747-███	—
2.48	611748-███	—
2.49	611749-███	—
2.5	611642-███	613642-███
2.6	611750-███	—
2.7	611751-███	—
2.8	611752-███	—
2.9	611753-███	—
3	611613-███	613613-███
3.5	611643-███	613643-███
4	611614-███	613614-███
4.5	611644-███	613644-███
5	611615-███	613615-███
5.1	611850-███	613850-███
5.5	611645-███	613645-███
6	611616-███	613616-███
6.5	611646-███	613646-███
7	611617-███	613617-███
7.5	611647-███	613647-███
7.7	611851-███	613851-███
8	611618-███	613618-███
8.5	611648-███	613648-███
9	611619-███	613619-███
9.5	611649-███	613649-███
10	611671-███	613671-███
10.3	611852-███	613852-███
10.5	611650-███	613650-███
11	611621-███	613621-███

Length (mm)	Order No. Steel	Order No. CERA
11.5	611651-███	613651-███
12	611622-███	613622-███
12.5	611652-███	613652-███
12.9	611853-███	613853-███
13	611623-███	613623-███
13.5	611653-███	613653-███
14	611624-███	613624-███
14.5	611654-███	613654-███
15	611625-███	613625-███
15.5	611655-███	613655-███
16	611626-███	613626-███
16.5	611656-███	613656-███
17	611627-███	613627-███
17.5	611657-███	613657-███
17.6	611854-███	613854-███
18	611628-███	613628-███
18.5	611658-███	613658-███
19	611629-███	613629-███
19.5	611659-███	613659-███
20	611672-███	613672-███
20.2	611855-███	613855-███
20.5	611660-███	613660-███
21	611631-███	613631-███
21.5	611661-███	613661-███
22	611632-███	613632-███
22.5	611662-███	613662-███
22.8	611856-███	613856-███
23	611633-███	613633-███
23.5	611663-███	613663-███
24	611634-███	613634-███
24.5	611664-███	613664-███
25	611635-███	613635-███
25.25	611754-███	613754-███
30	611673-███	613673-███
35	611755-███	613755-███
40	611674-███	613674-███
45	611756-███	613756-███
50	611675-███	613675-███
60	611676-███	613676-███
70	611677-███	613677-███
75	611801-███	613801-███
80	611678-███	613678-███
90	611679-███	613679-███
100	611681-███	613681-███
125	611802-███	613802-███
150	611803-███	613803-███
175	611804-███	613804-███
200	611682-███	613682-███
250	611805-███	613805-███
300	611683-███	613683-███
400	611684-███	613684-███
500	611685-███	613685-███
600	611840-███	—
700	611841-███	—
750	611842-███	—
800	611843-███	—
900	611844-███	—
1000	611845-███	—

Wear Blocks

Length (mm)	Order No. Tungsten carbide
1	612611-███
2	612612-███



Individual Inch Rectangular Gauge Blocks

Length (mm)	Order No. Steel	Order No. CERA
.004	611304-███	—
.005	611305-███	—
.006	611306-███	—
.007	611307-███	—
.008	611308-███	—
.009	611309-███	—
.01	611310-███	—
.011	611311-███	—
.012	611312-███	—
.013	611313-███	—
.014	611314-███	—
.015	611315-███	—
.016	611316-███	—
.017	611317-███	—
.018	611318-███	—
.019	611319-███	—
.02	611320-███	—
.02005	611240-███	—
.0201	611231-███	—
.0202	611232-███	—
.0203	611233-███	—
.0204	611234-███	—
.0205	611235-███	—
.0206	611236-███	—
.0207	611237-███	—
.0208	611238-███	—
.0209	611239-███	—
.021	611321-███	—
.022	611322-███	—
.023	611323-███	—
.024	611324-███	—
.025	611325-███	—
.026	611326-███	—
.027	611327-███	—
.028	611328-███	—
.029	611329-███	—
.03	611330-███	—
.031	611331-███	—
.03125 (1/32)	611101-███	613103-███
.032	611332-███	—
.033	611333-███	—
.034	611334-███	—
.035	611335-███	—
.036	611336-███	—
.037	611337-███	—
.038	611338-███	—
.039	611339-███	—
.04	611340-███	—
.041	611341-███	—
.042	611342-███	—
.043	611343-███	—
.044	611344-███	—
.045	611345-███	—
.046	611346-███	—
.046875 (3/64)	611102-███	613104-███
.047	611347-███	—
.048	611348-███	—
.049	611349-███	—
.05	611105-███	613105-███
.06	611106-███	—
.0625	611303-███	613303-███
.07	611107-███	—
.078125 (5/64)	611103-███	613100-███

Length (mm)	Order No. Steel	Order No. CERA
.08	611108-███	—
.09	611109-███	—
.09375 (3/32)	611104-███	613101-███
.1	611191-███	613191-███
.100025	611111-███	613110-███
.10005	611135-███	613135-███
.100075	611112-███	613111-███
.1001	611121-███	613121-███
.1002	611122-███	613122-███
.1003	611123-███	613123-███
.1004	611124-███	613124-███
.1005	611125-███	613125-███
.1006	611126-███	613126-███
.1007	611127-███	613127-███
.1008	611128-███	613128-███
.1009	611129-███	613129-███
.101	611141-███	613141-███
.102	611142-███	613142-███
.103	611143-███	613143-███
.104	611144-███	613144-███
.105	611145-███	613145-███
.106	611146-███	613146-███
.107	611147-███	613147-███
.108	611148-███	613148-███
.109	611149-███	613149-███
.109375 (7/64)	611110-███	613102-███
.11	611150-███	613150-███
.111	611151-███	613151-███
.112	611152-███	613152-███
.113	611153-███	613153-███
.114	611154-███	613154-███
.115	611155-███	613155-███
.116	611156-███	613156-███
.117	611157-███	613157-███
.118	611158-███	613158-███
.119	611159-███	613159-███
.12	611160-███	613160-███
.121	611161-███	613161-███
.122	611162-███	613162-███
.123	611163-███	613163-███
.124	611164-███	613164-███
.125	611165-███	613165-███
.126	611166-███	613166-███
.127	611167-███	613167-███
.128	611168-███	613168-███
.129	611169-███	613169-███
.13	611170-███	613170-███
.131	611171-███	613171-███
.132	611172-███	613172-███
.133	611173-███	613173-███
.134	611174-███	613174-███
.135	611175-███	613175-███
.136	611176-███	613176-███
.137	611177-███	613177-███
.138	611178-███	613178-███
.139	611179-███	613179-███
.14	611180-███	613180-███
.141	611181-███	613181-███
.142	611182-███	613182-███
.143	611183-███	613183-███
.144	611184-███	613184-███
.145	611185-███	613185-███
.146	611186-███	613186-███

NOTE: If ordering a gauge block, append either of the following suffixes to the order number to specify the grade of the gauge block and the standard to which the block must conform.

Suffixes	Grade and relevant standard	
221	Grade 1	Federal Specification
231	Grade 2	Federal Specification
241	Grade 3	Federal Specification
121	Grade 0	British Standard
131	Grade 1	British Standard
141	Grade 2	British Standard

• Applicable accuracy grade depends on the block length.

Length (mm)	Order No. Steel	Order No. CERA
.147	611187-███	613187-███
.148	611188-███	613188-███
.149	611189-███	613189-███
.15	611115-███	613115-███
.16	611116-███	613116-███
.17	611117-███	613117-███
.18	611118-███	613118-███
.19	611119-███	613119-███
.2	611192-███	613192-███
.21	611221-███	—
.25	611212-███	613212-███
.3	611193-███	613193-███
.35	611213-███	613213-███
.375 (3/8)	611113-███	613112-███
.4	611194-███	613194-███
.45	611214-███	613214-███
.5	611195-███	613195-███
.55	611215-███	613215-███
.6	611196-███	613196-███
.65	611216-███	613216-███
.7	611197-███	613197-███
.75	611217-███	613217-███
.8	611198-███	613198-███
.85	611218-███	613218-███
.9	611199-███	613199-███
.95	611219-███	613219-███
1	611201-███	613201-███
2	611202-███	613202-███
3	611203-███	613203-███
4	611204-███	613204-███
5	611205-███	613205-███
6	611206-███	613206-███
7	611207-███	613207-███
8	611208-███	613208-███
10	611222-███	613222-███
12	611223-███	613223-███
16	611224-███	613224-███
20	611225-zzz	613225-███

Wear Blocks

Length (inch)	Order No. Tungsten carbide
.05	612105-███
.1	612191-███

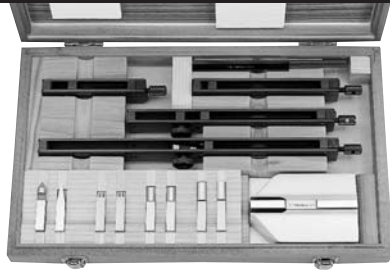
Rectangular Gauge Block Accessories

SERIES 516

To expand the variety of rectangular gauge block (steel and CERA) applications, Mitutoyo offers the gauge block accessories set. By assembling the items in the set, you can easily and quickly build up a precision measuring instrument.



Accessories Set



516-602

Holder base



619009

Half round jaws



619012

619013

Holders



619002

619005

Scriber point



619019

Center point



619020

Plain jaw



619018

Triangular straight edge



619022

Tram point

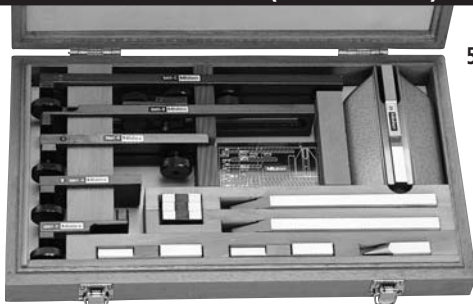


619021

Accessories for gauge blocks over 100mm:

Specially designed for the long gauge blocks over 100mm which have two holes on the body for coupling.

Accessories Set (Over 100mm)



516-605

SPECIFICATIONS

Accessories for gauge blocks up to 100mm

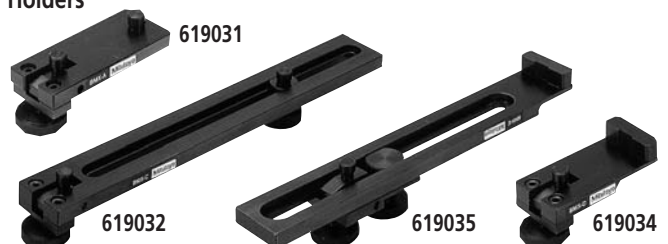
Order No. 22 pcs./set	Order No. 14 pcs./set	Assortment of (●: Included in set)
516-601	516-602	
●	●	Holder 15 - 60mm (619002)
●	●	Holder 5 - 100mm (619003)
●	●	Holder 15 - 160mm (619004)
●	●	Holder 20 - 250mm (619005)
●	●	Holder base 35mm (619009)
●	●	Half round jaw 2mm x 2 pcs. (619010)
●	●	Half round jaw 5mm x 2 pcs. (619011)
●	●	Half round jaw 8mm x 2 pcs. (619012)
●	●	Half round jaw 12mm x 2 pcs. (619013)
●	●	Half round jaw 20mm x 2 pcs. (619014)
●	●	Plain jaw x 2 pcs. (619018)
●	●	Scriber point (619019)
●	●	Center point (619020)
●	●	Tram point x 2 pcs. (619021)
●	●	Triangular straight edge 100mm (619022)
●	●	Triangular straight edge 160mm (619023)

Accessories for gauge blocks over 100mm

Order No.	Assortment of accessories
516-605	Holder (619031) for coupling two gauge blocks
	Holder (619032) for coupling long blocks together with other blocks
	Holder (619034) for attaching to the holder base
	Holder (619035) for attaching to the holder base together with other blocks
	Adaptor x 3 pcs. (619036) for attaching jaws to the holder
	Holder base 35mm (619009)
	Half round jaw 12mm x 2 pcs. (619013)
	Plain jaw x 2 pcs. (619018)
	Scriber point (619019)

Note: These accessories can be used for inch rectangular gauge blocks.

Holders



Metric Square Gauge Block Sets

SERIES 516

A Square Gauge Block can retain stable orientation both longitudinally and laterally. A wide range of application measurements can be made, including cutting tool positioning, angle measurement with a sine bar, taper measurement with a roller, and inspection of depth micrometers.

Blocks per set	Blocks included in set (mm)	ISO/DIN/JIS	Order No. Steel	Order No. CERA	ASME	Order No. Steel	Order No. CERA
112	1.0005 (1 pc.)	Grade K	—	—	Grade 1	516-437-16	—
	Step of 0.001: 1.001 – 1.009 (9 pcs.)	Grade 0	516-438-10	—	Grade 2	516-438-16	—
	Step of 0.01: 1.01 – 1.49 (49 pcs.)	Grade 1	516-439-10	—	Grade 3	516-439-16	—
	Step of 0.5: 0.5 – 24.5 (49 pcs.)	Grade 2	516-440-10	—	Grade B	—	—
	Step of 25: 25 – 100 (4 pcs.)	Grade K	—	—	Grade 1	516-441-16	—
103	1.005 (1 pc.)	Grade 0	516-442-10	—	Grade 2	516-442-16	—
	Step of 0.01: 1.01 – 1.49 (49 pcs.)	Grade 1	516-443-10	—	Grade 3	516-443-16	—
	Step of 0.5: 0.5 – 24.5 (49 pcs.)	Grade 2	516-444-10	—	Grade B	—	—
	Step of 25: 25 – 100 (4 pcs.)	Grade K	—	—	Grade 1	516-449-16	—
	Step of 0.01: 1.01 – 1.49 (49 pcs.)	Grade 0	516-450-10	—	Grade 2	516-450-16	—
76	1.005 (1 pc.)	Grade 1	516-451-10	—	Grade 3	516-451-16	—
	Step of 0.5: 0.5 – 9.5 (19 pcs.)	Grade 2	516-452-10	—	Grade B	—	—
	Step of 10: 10 – 40 (4 pcs.)	Grade K	—	—	Grade 1	516-457-16	—
	Step of 25: 50 – 100 (3 pcs.)	Grade 0	516-458-10	—	Grade 2	516-458-16	—
	Step of 0.01: 1.01 – 1.09 (9 pcs.)	Grade 1	516-459-10	—	Grade 3	516-459-16	—
47	1.005 (1 pc.)	Grade 2	516-460-10	—	Grade B	—	—
	Step of 0.01: 1.01 – 1.09 (9 pcs.)	Grade K	—	—	Grade 1	516-465-16	—
	Step of 0.1: 1.1 – 1.9 (9 pcs.)	Grade 0	516-466-10	—	Grade 2	516-466-16	—
	Step of 1: 1 – 24 (24 pcs.)	Grade 1	516-467-10	—	Grade 3	516-467-16	—
	Step of 25: 25 – 100 (4 pcs.)	Grade 2	516-468-10	—	Grade B	—	—
32	1.005 (1 pc.)	Grade K	—	—	Grade 1	516-465-16	—
	Step of 0.01: 1.01 – 1.09 (9 pcs.)	Grade 0	516-466-10	—	Grade 2	516-466-16	—
	Step of 0.1: 1.1 – 1.9 (9 pcs.)	Grade 1	516-467-10	—	Grade 3	516-467-16	—
	Step of 1: 1 – 9 (9 pcs.)	Grade 2	516-468-10	—	Grade B	—	—
	Step of 10: 10 – 30 (3 pcs.)	Grade K	—	—	Grade 1	516-465-16	—
50 (1 pc.)	50 (1 pc.)	Grade 0	516-466-10	—	Grade 2	516-466-16	—
		Grade 1	516-467-10	—	Grade 3	516-467-16	—
		Grade 2	516-468-10	—	Grade B	—	—
		Grade K	—	—	Grade 1	516-465-16	—
		Grade 0	516-466-10	—	Grade 2	516-466-16	—

Note: Use suffix "-60" in place of "-10" to order the ISO/DIN/JIS grade 0, 1, or 2 gauge block sets with Certificate of Calibration. (The charge for calibration is not included in the prior set price.)

Long Block Sets

Blocks per set	Blocks included in set (mm)	ISO/DIN/JIS	Order No. Steel	Order No. CERA	ASME	Order No. Steel	Order No. CERA
8	125 (1 pc.), 150 (1 pc.)	Grade K	—	—	Grade 1	—	—
	175 (1 pc.), 200 (1 pc.)	Grade 0	516-752-10	—	Grade 2	—	—
	250 (1 pc.), 300 (1 pc.)	Grade 1	516-753-10	—	Grade 3	—	—
	400 (1 pc.), 500 (1 pc.)	Grade 2	516-754-10	—	Grade B	—	—
		Grade K	—	—	Grade 1	—	—

Wear Block Sets

Blocks per set	Blocks included in set (mm)	ISO/DIN/JIS	Order No. Steel	Order No. CERA	ASME	Order No. Steel	Order No. CERA
2	1 (2 pcs.)	Grade K	—	—	Grade 1	—	—
		Grade 0	516-820-10	—	Grade 2	—	—
		Grade 1	516-821-10	—	Grade 3	—	—
		Grade 2	—	—	Grade B	—	—
		Grade K	—	—	Grade 1	—	—
2	2 (2 pcs.)	Grade 0	516-822-10	—	Grade 2	—	—
		Grade 1	516-823-10	—	Grade 3	—	—
		Grade 2	—	—	Grade B	—	—
		Grade K	—	—	Grade 1	—	—
		Grade 0	516-822-10	—	Grade 2	—	—

Metric Block Set



516-440-10

Inch Square Gauge Block Sets

SERIES 516

Blocks per set	Blocks included in set (inch)	ASME	Order No. Steel	Order No. CERA
81	.05" (1 pc.)			
	Step of .0001: .1000 – .1009 (10 pcs.)	Grade 1	516-401-16	516-201-16
	Step of .001: .101 – .149 (49 pcs.)	Grade 2	516-402-16	516-202-16
	Step of .05: .15 – .95 (17 pcs.)	Grade 3	516-403-16	516-203-16
	Step of 1: 1 – 4 (4 pcs.)	Grade B	516-404-16	516-204-16
36	.05" (1 pc.)			
	Step of .0001: .1000 – .1009 (10 pcs.)			
	Step of .001: .101 – .109 (9 pcs.)	Grade 1	516-421-16	516-221-16
	Step of .01: .11 – .19 (9 pcs.)	Grade 2	516-422-16	516-222-16
	Step of .1: .2 – .5 (4 pcs.)	Grade 3	516-423-16	516-223-16
	1 (1 pc.), 2 (1 pc.), 4 (1 pc.)	Grade B	516-424-16	516-224-16
28	.02005" (1 pc.)	Grade 1	516-417-16	—
	Step of .0001: .0201 – .0209 (9 pcs.)	Grade 2	516-418-16	—
	Step of .001: .021 – .029 (9 pcs.)	Grade 3	516-419-16	—
	Step of .01: .01 – .09 (9 pcs.)	Grade B	516-420-16	—

Long Block Sets

Blocks per set	Blocks included in set (inch)	ASME	Order No. Steel	Order No. CERA
8	5 (1 pc.), 6 (1 pc.), 7 (1 pc.), 8 (1 pc.), 10 (1 pc.), 12 (1 pc.), 16 (1 pc.), 20 (1 pc.)	Grade 1	—	—
		Grade 2	516-762-16	—
		Grade 3	516-763-16	—
		Grade B	—	—

Wear Block Sets

Blocks per set	Blocks included in set (inch)	ASME	Order No. Steel	Order No. CERA
2	.05 (2 pcs.)	Grade 1	—	—
		Grade 2	516-824-16	516-846-16
		Grade 3	516-825-16	516-847-16
		Grade B	—	—
2	.1 (2 pcs.)	Grade 1	—	—
		Grade 2	516-826-16	516-844-16
		Grade 3	516-827-16	516-845-16
		Grade B	—	—



516-222-12

Individual Metric Square Gauge Blocks



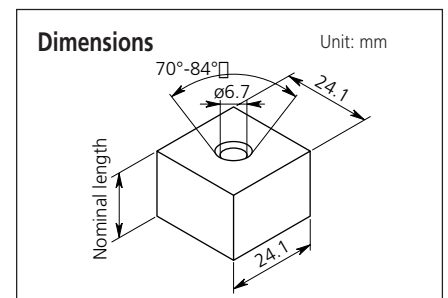
NOTE: If ordering a gauge block, append either of the following suffixes to the order number to specify the grade of the gauge block and the standard to which the block must conform. (e.g. **614671-031** for a grade 1 ISO/DIN/JIS steel gauge block with a nominal length of 10mm).

Suffixes	Grade and relevant standard	
021	Grade 0	ISO/DIN/JIS
031	Grade 1	ISO/DIN/JIS
041	Grade 2	ISO/DIN/JIS
221	Grade 1	Federal Specification
231	Grade 2	Federal Specification
241	Grade 3	Federal Specification

• Applicable accuracy grade depends on the block length.

Length (mm)	Order No. Steel	CERA
.5	614506-■■■	—
1	614611-■■■	—
1.0005	614520-■■■	—
1.001	614521-■■■	—
1.002	614522-■■■	—
1.003	614523-■■■	—
1.004	614524-■■■	—
1.005	614525-■■■	—
1.006	614526-■■■	—
1.007	614527-■■■	—
1.008	614528-■■■	—
1.009	614529-■■■	—
1.01	614561-■■■	—
1.02	614562-■■■	—
1.03	614563-■■■	—
1.04	614564-■■■	—
1.05	614565-■■■	—
1.06	614566-■■■	—
1.07	614567-■■■	—
1.08	614568-■■■	—
1.09	614569-■■■	—
1.1	614570-■■■	—
1.11	614571-■■■	—
1.12	614572-■■■	—
1.13	614573-■■■	—
1.14	614574-■■■	—
1.15	614575-■■■	—
1.16	614576-■■■	—
1.17	614577-■■■	—
1.18	614578-■■■	—
1.19	614579-■■■	—
1.2	614580-■■■	—
1.21	614581-■■■	—
1.22	614582-■■■	—
1.23	614583-■■■	—
1.24	614584-■■■	—
1.25	614585-■■■	—
1.26	614586-■■■	—
1.27	614587-■■■	—
1.28	614588-■■■	—
1.29	614589-■■■	—
1.3	614590-■■■	—
1.31	614591-■■■	—
1.32	614592-■■■	—
1.33	614593-■■■	—
1.34	614594-■■■	—
1.35	614595-■■■	—
1.36	614596-■■■	—
1.37	614597-■■■	—

Length (mm)	Order No. Steel	CERA
1.38	614598-■■■	—
1.39	614599-■■■	—
1.4	614600-■■■	—
1.41	614601-■■■	—
1.42	614602-■■■	—
1.43	614603-■■■	—
1.44	614604-■■■	—
1.45	614605-■■■	—
1.46	614606-■■■	—
1.47	614607-■■■	—
1.48	614608-■■■	—
1.49	614609-■■■	—
1.5	614641-■■■	—
1.6	614516-■■■	—
1.7	614517-■■■	—
1.8	614518-■■■	—
1.9	614519-■■■	—
2	614612-■■■	—
2.5	614642-■■■	—
3	614613-■■■	—
3.5	614643-■■■	—
4	614614-■■■	—
4.5	614644-■■■	—
5	614615-■■■	—
5.5	614645-■■■	—
6	614616-■■■	—
6.5	614646-■■■	—
7	614617-■■■	—
7.5	614647-■■■	—
8	614618-■■■	—
8.5	614648-■■■	—
9	614619-■■■	—
9.5	614649-■■■	—
10	614671-■■■	—
10.5	614650-■■■	—
11	614621-■■■	—
11.5	614651-■■■	—
12	614622-■■■	—
12.5	614652-■■■	—
13	614623-■■■	—
13.5	614653-■■■	—
14	614624-■■■	—
14.5	614654-■■■	—
15	614625-■■■	—
15.5	614655-■■■	—
16	614626-■■■	—
16.5	614656-■■■	—
17	614627-■■■	—
17.5	614657-■■■	—



Length (mm)	Order No. Steel	CERA
18	614628-■■■	—
18.5	614658-■■■	—
19	614629-■■■	—
19.5	614659-■■■	—
20	614672-■■■	—
20.5	614660-■■■	—
21	614631-■■■	—
21.5	614661-■■■	—
22	614632-■■■	—
22.5	614662-■■■	—
23	614633-■■■	—
23.5	614663-■■■	—
24	614634-■■■	—
24.5	614664-■■■	—
25	614635-■■■	—
30	614673-■■■	—
40	614674-■■■	—
50	614675-■■■	—
60	614676-■■■	—
75	614801-■■■	—
100	614681-■■■	—
125	614802-■■■	—
150	614803-■■■	—
175	614804-■■■	—
200	614682-■■■	—
250	—	—
300	—	—
400	—	—
500	—	—

Wear Blocks

Length (mm)	Order No. Tungsten carbide
1	615611-■■■
2	615612-■■■

Individual Inch Square Gauge Blocks

NOTE: If ordering a gauge block, append either of the following suffixes to the order number to specify the grade of the gauge block and the standard to which the block must conform.

Suffixes	Grade and relevant standard	
221	Grade 1	Federal Specification
231	Grade 2	Federal Specification
241	Grade 3	Federal Specification

• Applicable accuracy grade depends on the block length.

Length (inch)	Order No. Steel	CERA
.01	614310-███	—
.02005	614240-███	—
.0201	614231-███	—
.0202	614232-███	—
.0203	614233-███	—
.0204	614234-███	—
.0205	614235-███	—
.0206	614236-███	—
.0207	614237-███	—
.0208	614238-███	—
.0209	614239-███	—
.02	614320-███	—
.021	614321-███	—
.022	614322-███	—
.023	614323-███	—
.024	614324-███	—
.025	614325-███	—
.026	614326-███	—
.027	614327-███	—
.028	614328-███	—
.029	614329-███	—
.03	614330-███	—
.03125 (1/32)	614301-███	—
.04	614340-███	—
.046875 (3/64)	614302-███	—
.05	614105-███	616105-███
.06	614106-███	—
.0625	—	616303-███
.07	614107-███	—
.078125 (5/64)	614304-███	—
.08	614108-███	—
.09	614109-███	—
.09375 (3/32)	614305-███	—
.1	614191-███	616191-███
.100025	614307-███	—
.10005	614135-███	616135-███
.100075	614308-███	—
.1001	614121-███	616121-███
.1002	614122-███	616122-███
.1003	614123-███	616123-███
.1004	614124-███	616124-███
.1005	614125-███	616125-███
.1006	614126-███	616126-███
.1007	614127-███	616127-███
.1008	614128-███	616128-███
.1009	614129-███	616129-███
.101	614141-███	616141-███
.102	614142-███	616142-███
.103	614143-███	616143-███
.104	614144-███	616144-███
.105	614145-███	616145-███

Length (inch)	Order No. Steel	CERA
.106	614146-███	616146-███
.107	614147-███	616147-███
.108	614148-███	616148-███
.109	614149-███	616149-███
.109375 (7/64)	614306-███	—
.11	614150-███	616146-███
.111	614151-███	616146-███
.112	614152-███	616146-███
.113	614153-███	616146-███
.114	614154-███	616146-███
.115	614155-███	616146-███
.116	614156-███	616146-███
.117	614157-███	616146-███
.118	614158-███	616146-███
.119	614159-███	616156-███
.12	614160-███	616160-███
.121	614161-███	616161-███
.122	614162-███	616162-███
.123	614163-███	616163-███
.124	614164-███	616164-███
.125	614165-███	616165-███
.126	614166-███	616166-███
.127	614167-███	616167-███
.128	614168-███	616168-███
.129	614169-███	616169-███
.13	614170-███	616170-███
.131	614171-███	616171-███
.132	614172-███	616172-███
.133	614173-███	616173-███
.134	614174-███	616174-███
.135	614175-███	616175-███
.136	614176-███	616176-███
.137	614177-███	616177-███
.138	614178-███	616178-███
.139	614179-███	616179-███
.14	614180-███	616180-███
.141	614181-███	616181-███
.142	614182-███	616182-███
.143	614183-███	616183-███
.144	614184-███	616184-███
.145	614185-███	616185-███
.146	614186-███	616186-███
.147	614187-███	616187-███
.148	614188-███	616188-███
.149	614189-███	616189-███
.15	614115-███	616115-███
.16	614116-███	616116-███
.17	614117-███	616117-███
.18	614118-███	616118-███
.19	614119-███	616119-███
.2	614192-███	616192-███

Length (inch)	Order No. Steel	CERA
.25	614212-███	616212-███
.3	614193-███	616193-███
.35	614213-███	616213-███
.375 (3/8)	614309-███	—
.4	614194-███	616194-███
.45	614214-███	616214-███
.5	614195-███	616195-███
.55	614215-███	616215-███
.6	614196-███	616196-███
.65	614216-███	616216-███
.7	614197-███	616197-███
.75	614217-███	616217-███
.8	614198-███	616198-███
.85	614218-███	616218-███
.9	614199-███	616199-███
.95	614219-███	616219-███
1	614201-███	616201-███
2	614202-███	616202-███
3	614203-███	616203-███
4	614204-███	616204-███
5	614205-███	—
6	614206-███	—
7	614207-███	—
8	614208-███	—
10	614222-███	—
12	614223-███	—
16	614224-███	—
20	614225-███	—

Wear Blocks

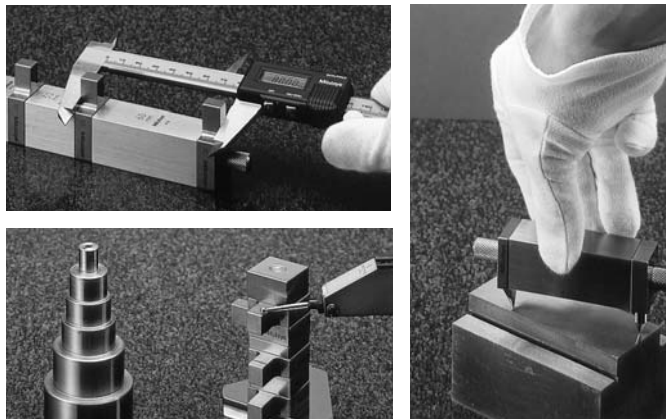
Length (inch)	Order No. Tungsten carbide
.05	615105-███
.1	615191-███



Square Gauge Block Accessories

SERIES 516

To expand the variety of Square Gauge Block applications, Mitutoyo offers the Gauge Block Accessories Set. By assembling the items in the set, you can easily and quickly build up a precision measuring instrument.



SPECIFICATIONS

Metric

Order No.	Assortment of accessories
516-611	Half round jaw 2mm x 2 pcs. (619070)
	Half round jaw 5mm x 2 pcs. (619071)
	Plain jaw x 2 pcs. (619072)
	Center point (619073)
	Scriber point (619054)
	Block base (619074)
	Flat head screw 31.6mm x 2 pcs. (619057)
	Flat head screw 15.8mm x 2 pcs. (619058)
	Slotted head nut x 2 pcs. (619059)
	Adjustable tie rod 124.5mm (619060)
	Adjustable tie rod 86.5mm (619061)
	Tie rod 76mm (619062)
	Tie rod 57mm (619063)
	Tie rod 38mm (619064)
	Tie rod 19mm (619065)
	Stud x 2 pcs. (619056)
	Knurled head screw x 2 pcs. (619066)

Inch

Order No.	Assortment of accessories
516-612	Half round jaw .125" x 2 pcs. (619050)
	Half round jaw .25" x 2 pcs. (619051)
	Plain jaw x 2 pcs. (619052)
	Center point (619053)
	Scriber point (619054)
	Block base (619055)
	Flat head screw 5/4" x 2 pcs. (619057)
	Flat head screw 5/8" x 2 pcs. (619058)
	Slotted head nut x 2 pcs. (619059)
	Adjustable tie rod 4.9" (619060)
	Adjustable tie rod 3.41" (619061)
	Tie rod 3" (619062)
	Tie rod 9/4" (619063)
	Tie rod 3/2" (619064)
	Tie rod 3/4" (619065)
	Stud x 2 pcs. (619056)
	Knurled head screw x 2 pcs. (619066)

Accessories Set



516-611

Half round jaw



619070

Plain jaw



619072

Center point



619073

Scriber point



619054

Block base



619074

Flat head screws



619057

619058

Slotted head nut



619059

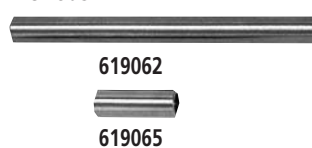
Adjustable tie rods



619060

619061

Tie rods



619062

619065

Knurled head screw



619066

Stud



619056

Ceraston

Accessory for Gauge Blocks



601644

601645

FEATURES

- Alumina-ceramic grinding stone for removing burrs from hard materials such as ceramics that ordinary grinding stones cannot handle.
- Can be used both for steel gauge blocks and CEAR Blocks.



SPECIFICATIONS

Order No.	Dimensions (WxDxH)	Mass
601645	100x25x12mm	110g
601644	150x50x20mm	530g

Maintenance Kit for Gauge Blocks

SERIES 516



516-650



FEATURES

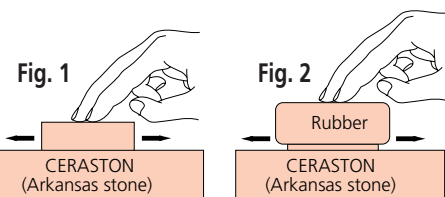
- Includes all necessary maintenance tools for daily care and storage of gauge blocks.
- Supplied in a fitted wooden case for portable use.

SPECIFICATIONS

Order No.	Assortment of tools and accessories
516-650	Anti-corrosive oil
	Ceraston (601645)
	Optical flat
	Tweezers
	BlowGloveser brush
	Cleaning paper
	Artificial leather mat
	Reagent bottle
	Gloves

Removing burrs

- (1) Wipe any dust and oil films from the gauge block and the Ceraston (or Arkansas stone) using a solvent.
- (2) Place the gauge block on the Ceraston so that the measuring face that has burrs is on the abrasive surface of the stone. While applying light pressure, move the gauge block to and fro about ten times (Fig. 1). Use a block rubber for thin gauge blocks to apply even pressure (Fig. 2).
- (3) Check the measuring face for burrs with an optical flat. If the burrs have not been removed, repeat step (2). If burrs are too large, they may not be removed with a grinding stone. If so, discard the gauge block.



Note: The abrasive surface of a Ceraston must be made flat by lapping it from time to time. After lapping the Ceraston, the lapping powder must be completely removed from the surface to prevent the surface of the gauge block from being scratched.



Automatic Gauge Block Interferometer



SPECIFICATIONS

Model No.	GBI
Light source	632.8μm wavelength system He-Ne laser 543.5μm wavelength system He-Ne laser
Measuring range	0.5mm - 250mm
Accuracy (Uncertainty 95%)	±0.02μm (when measuring a gauge block of 100mm length), ±0.04μm (when measuring a gauge block of 200mm length)
Number of gauge blocks to be mounted on the measuring table	12

FEATURES

- Automatic measuring instrument for gauge block lengths between 0.1mm and 250mm using optical interference.
- The intensity and wavelength of the He-Ne laser light source is highly stable. This allows high-accuracy measurement.
- To reduce the effects of operator body heat, automatic remote measurement can be performed.
- The GBI automatically detects the light quantity distribution of interference fringes and processes data, thus eliminating human errors.
- Both the refractive index and the thermal expansion of gauge blocks are automatically compensated for by the computer which is linked to the thermometer, hygrometer, and digital barometer.

GBCD-100A

SERIES 565 — Dual-head Type Automatic Gauge Block Comparator



The GBCD-100A Automatic Gauge Block Comparator is an easy-to-operate dual-head type gauge block inspecting system. It automatically compares workpieces with the standard gauge block and determines accuracies of such as central length, maximum length, minimum length, and parallelism through the operation of the connected personal computer.

OPTIONAL ACCESSORIES

Order No.	Description
962723	Gauge block set for probe calibration
962764	Gauge block holder for probe calibration
611615-02	5mm gauge block (grade 0) for origin setting
243989	Auxiliary stage (Size: 360x253mm)
218-007	Work bench

SPECIFICATIONS

Model No.	GBCD-100A
Order No.	100V AC 565-111K 110V AC 565-111C 120V AC 565-111A 240V AC 565-111E
Resolution	0.00001mm (0.01μm)
Range	0.5mm - 100mm (.02" - 4")
Measuring unit	Differential (dual-head) type Mu-Checker
Accuracy in narrow range (20°C)	±(0.03+0.3L/1000)μm* L= Gauge block length (mm) *Uncertainty of measurement is 95% (not including the calibration error of the standard gauge block).
Measuring force	Upper gage head: 1N (100gf) Lower gage head: 0.6N (60gf)
Air requirement	400kPa (4kgf/cm²)
Operating condition	Temperature: 20°C ±1°C Humidity: 58%RH ±15%RH
Power supply	100 - 120V/200 - 240V AC, 50/60Hz
Dimensions (WxDxH)	Main unit: 710x366x783mm Electronic unit: 160x410x382mm
Mass	Main unit: 120kg Electronic unit: 14kg

GBCD-250

SERIES 565 — Dual-head Type Gauge Block Comparator



FEATURES

- Gauge blocks between 0.1mm and 250mm can be easily compared with the standard gauge block on the GBCD-250.
- The upper and lower gaging heads assure the operator of a high-accuracy measurement with ease of use.

SPECIFICATIONS

Metric	
Model No.	GBCD-250
Order No.	100V AC 565-130
	110V AC 565-130A
	120V AC 565-130D
	240V AC 565-130E
Range	0.1mm - 250mm
Resolution	0.0001mm (0.01μm)
Accuracy in narrow range (20°C)	$\pm(0.03+0.3L/1000)\mu\text{m}^*$ L= Gauge block length (mm)
Measuring units	Laser Hologage (upper), Mu-checker (lower)
Operating condition	Temperature: 20°C $\pm$ 1°C Humidity: 58%RH $\pm$ 15%RH
Data output	Via SPC output port
Power supply	100 - 120V/200 - 240V AC, 50/60Hz
Dimensions (WxDxH)	Main unit: 455x318x691mm Display unit: 345x397x187mm
Mass	Main unit: Approx. 50kg Display unit: Approx. 9kg

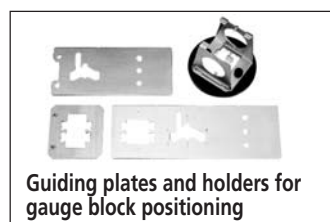
*Uncertainty of measurement is 95% (not including the calibration error of the standard gauge block).

OPTIONAL ACCESSORIES

Order No.	Description
962723	Gage head calibration kit
02ASD130	Square gauge block measuring kit
02ASF040	Heat cover
02ASD100	Gauge block set for accuracy inspection

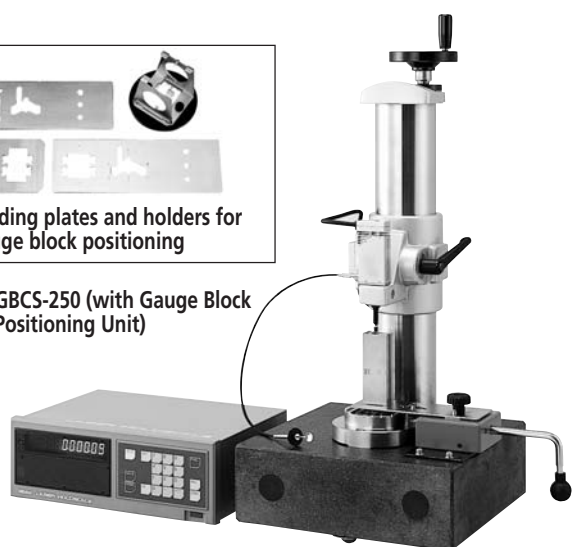
GBCS-250

SERIES 565 — Single-head Type Gauge Block Comparator



Guiding plates and holders for gauge block positioning

GBCS-250 (with Gauge Block Positioning Unit)



FEATURES

- By using the gauge block positioning unit, the operator can perform accuracy checking of many pieces of gauge blocks efficiently.
- A gauge block handling arm is provided for the GBCS which does not include a gauge block positioning unit.

SPECIFICATIONS

Model No.	GBCS-250	
Order No.	100V AC	565-120
	110V AC	565-120A
	120V AC	565-120D
	240V AC	565-120E
Standard accessory	Gauge block positioning unit	Gauge block handling arm
Range	0.1mm - 250mm	
Resolution	0.0001mm (0.01μm)	
Accuracy in narrow range (20°C)	$\pm(0.03+0.3L/1000)\mu\text{m}^*$ L= Gauge block length (mm)	
Measuring unit	Laser Hologage	
Measuring force	Approx. 0.4N (40gf)	
Operating condition	Temperature: 20°C $\pm$ 1°C Humidity: 58%RH $\pm$ 15%RH	
Data output	Via RS-232C interface unit	
Power supply	100 - 120V/200 - 240V AC, 50/60Hz	
Dimensions (WxDxH)	Main unit: 300x300x687mm Display unit: 235x115x118mm	
Mass	Main unit: Approx. 60kg Display unit: Approx. 2kg	

*Uncertainty of measurement is 95% (not including the calibration error of the standard gauge block).

OPTIONAL ACCESSORIES

Order No.	Description
02ASB530	Heat cover
02ASD130	Square gauge block measuring kit*
02ASD150	Square gauge block measuring kit**

*For the GBCS-250 with gauge block positioning unit only

**For the GBCS-250 with gauge block handling arm only

