

# Setting Rings

## SERIES 177 — Accessories for Inside Micrometers, Holtest and Dial Bore Gages

### FEATURES

- Used for quick and accurate setting of dial bore gages, Holtest, and inside micrometers.
- Actual calibration value for the diameter is marked on each ring.
- No anticorrosion treatment is required when handling Ceramic Setting Rings normally, resulting in simple maintenance and storage.

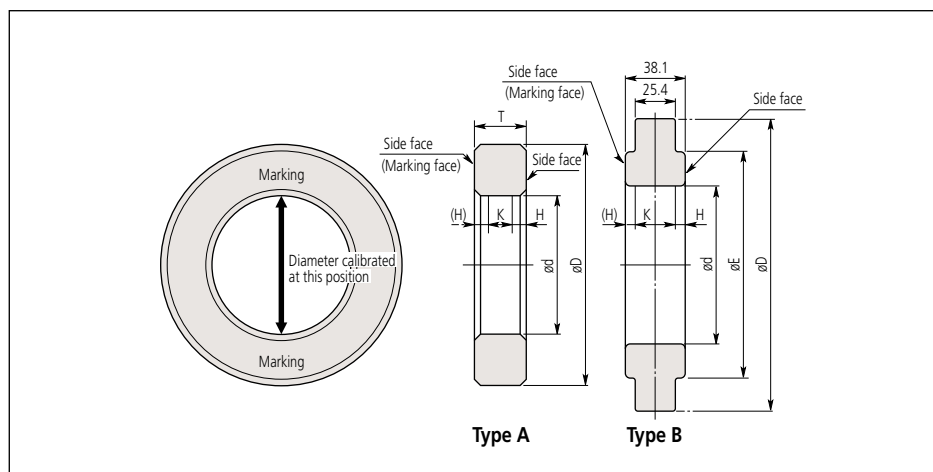
### Steel Setting Rings



### Ceramic Setting Rings



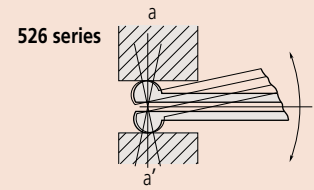
### DIMENSIONS



#### Suffix

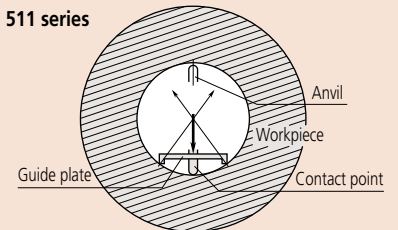
- 177-\*\*\*-12: With Inspection Certificate
- 177-\*\*\*-62: With Inspection Certificate and Calibration Certificate
- 177-\*\*\*-82: With Inspection Certificate, Calibration Certificate, and Traceability System Chart

### Reading the indicated value



- The 526 series has a gage head with high curvature. Alignment with the diameter (a-a') is achieved by rotating the gage head in the direction indicated by the arrow, and the reading is the minimum value read from the dial indicator.

### 511 series



- The 511 series provides a guide plate to align the setting ring diameter with the measurement axis of the bore gage.

# SPECIFICATION

## Steel Setting Rings

### Metric

Nominal size $\phi$ D	Order No.	Dimensions (mm)			Type	Accuracy				
		$\phi$ D	$\phi$ E	T		Tolerance between the nominal size and the actual diameter ( $\mu$ m)	Uncertainty of marked dimension value ( $\mu$ m)	Roundness/Cylindricity ( $\mu$ m)	Distance from the side face H (mm)	Size of warranted calibration surface K (mm)
1mm	177-220	20	—	4	A	$\pm 10$	$\pm 1.5$	1	1.6	0.8
1.1mm	177-222	20	—	4	A	$\pm 10$	$\pm 1.5$	1	1.6	0.8
1.2mm	177-225	20	—	4	A	$\pm 10$	$\pm 1.5$	1	1.6	0.8
1.3mm	177-227	20	—	4	A	$\pm 10$	$\pm 1.5$	1	1.6	0.8
1.4mm	177-230	20	—	4	A	$\pm 10$	$\pm 1.5$	1	1.6	0.8
1.75mm	177-236	25	—	5	A	$\pm 10$	$\pm 1.5$	1	1.6	1.8
2mm	177-239	25	—	5	A	$\pm 10$	$\pm 1.5$	1	1.6	1.8
2.25mm	177-242	25	—	5	A	$\pm 10$	$\pm 1.5$	1	1.6	1.8
2.5mm	177-208	25	—	7	A	$\pm 10$	$\pm 1.5$	1	1.7	3.6
2.75mm	177-246	25	—	7	A	$\pm 10$	$\pm 1.5$	1	1.7	3.6
3mm	177-248	25	—	7	A	$\pm 10$	$\pm 1.5$	1	1.7	3.6
3.25mm	177-250	25	—	7	A	$\pm 10$	$\pm 1.5$	1	1.7	3.6
3.5mm	177-252	25	—	7	A	$\pm 10$	$\pm 1.5$	1	1.7	3.6
3.75mm	177-255	25	—	7	A	$\pm 10$	$\pm 1.5$	1	1.7	3.6
4mm	177-204	25	—	7	A	$\pm 10$	$\pm 1.5$	1	1.7	3.6
4.5mm	177-257	25	—	7	A	$\pm 10$	$\pm 1.5$	1	1.7	3.6
5mm	177-205	25	—	7	A	$\pm 10$	$\pm 1.5$	1	1.7	3.6
5.5mm	177-263	25	—	7	A	$\pm 10$	$\pm 1.5$	1	1.7	3.6
6mm	177-267	25	—	7	A	$\pm 10$	$\pm 1.5$	1	1.7	3.6
6.5mm	177-271	25	—	7	A	$\pm 10$	$\pm 1.5$	1	1.7	3.6
7mm	177-275	25	—	7	A	$\pm 10$	$\pm 1.5$	1	1.7	3.6
8mm	177-125	32	—	10	A	$\pm 10$	$\pm 1.5$	1	2.0	6.0
9mm	177-279	32	—	10	A	$\pm 10$	$\pm 1.5$	1	2.0	6.0
10mm	177-126	32	—	10	A	$\pm 10$	$\pm 1.5$	1	2.0	6.0
12mm	177-284	32	—	10	A	$\pm 10$	$\pm 1.5$	1	2.0	6.0
14mm	177-132	38	—	10	A	$\pm 10$	$\pm 1.5$	1	2.0	6.0

Nominal size $\phi$ D	Order No.	Dimensions (mm)			Type	Accuracy				
		$\phi$ D	$\phi$ E	T		Tolerance between the nominal size and the actual diameter ( $\mu$ m)	Uncertainty of marked dimension value ( $\mu$ m)	Roundness/Cylindricity ( $\mu$ m)	Distance from the side face H (mm)	Size of warranted calibration surface K (mm)
16mm	177-177	45	—	10	A	$\pm 10$	$\pm 1.5$	1	2.0	6.0
17mm	177-133	45	—	10	A	$\pm 10$	$\pm 1.5$	1	2.0	6.0
18mm	177-285	45	—	10	A	$\pm 10$	$\pm 1.5$	1	2.0	6.0
20mm	177-286	45	—	10	A	$\pm 10$	$\pm 1.5$	1	2.0	6.0
25mm	177-139	53	—	15	A	$\pm 10$	$\pm 1.5$	1	3.2	8.6
30mm	177-288	71	—	15	A	$\pm 10$	$\pm 1.5$	1	3.2	8.6
35mm	177-140	71	—	15	A	$\pm 10$	$\pm 1.5$	1	3.2	8.6
40mm	177-290	71	—	15	A	$\pm 10$	$\pm 1.5$	1	3.2	8.6
45mm	177-178	85	—	15	A	$\pm 10$	$\pm 1.5$	1	3.7	7.6
50mm	177-146	85	—	20	A	$\pm 20$	$\pm 1.5$	1	3.7	12.6
60mm	177-292	112	—	20	A	$\pm 20$	$\pm 1.5$	1	3.7	12.6
62mm	177-314	112	—	20	A	$\pm 20$	$\pm 1.5$	1.5	3.7	12.6
70mm	177-147	112	—	20	A	$\pm 20$	$\pm 1.5$	1.5	3.7	12.6
75mm	177-316	125	—	25	A	$\pm 20$	$\pm 1.5$	1.5	4.2	16.6
80mm	177-294	125	—	25	A	$\pm 20$	$\pm 1.5$	1.5	4.2	16.6
87mm	177-318	140	—	25	A	$\pm 20$	$\pm 1.5$	1.5	4.2	16.6
90mm	177-148	140	—	25	A	$\pm 20$	$\pm 1.5$	1.5	4.2	16.6
100mm	177-296	160	—	25	A	$\pm 20$	$\pm 1.5$	2	4.2	16.6
125mm	177-298	210	168		B	$\pm 20$	$\pm 1.5$	2	5.3	27.5
150mm	177-300	235	187		B	$\pm 20$	$\pm 1.5$	2	5.3	27.5
175mm	177-302	260	215		B	$\pm 20$	$\pm 1.5$	2.5	5.3	27.5
200mm	177-304	311	244	38.1 (25.4)	B	$\pm 20$	$\pm 1.5$	2.5	5.3	27.5
225mm	177-306	337	264		B	$\pm 20$	$\pm 1.5$	2.5	5.3	27.5
250mm	177-308	362	290		B	$\pm 20$	$\pm 1.5$	3	5.3	27.5
275mm	177-310	413	321		B	$\pm 20$	$\pm 1.5$	3	5.3	27.5
300mm	177-312	438	340		B	$\pm 20$	$\pm 1.5$	3	5.3	27.5

### Inch

Nominal size $\phi$ D	Order No.	Dimensions (mm)			Type	Accuracy				
		$\phi$ D	$\phi$ E	T		Tolerance between the nominal size and the actual diameter (inch)	Uncertainty of marked dimension value (inch)	Roundness/Cylindricity (inch)	Distance from the side face H (inch)	Size of warranted calibration surface K (inch)
.1"	177-209	25	—	7	A	$\pm .0004$ "	$\pm .00006$ "	.00004"	.067"	.142"
.16"	177-206	25	—	7	A	$\pm .0004$ "	$\pm .00006$ "	.00004"	.067"	.142"
.24"	177-207	25	—	7	A	$\pm .0004$ "	$\pm .00006$ "	.00004"	.067"	.142"
.275"	177-281	25	—	7	A	$\pm .0004$ "	$\pm .00006$ "	.00004"	.079"	.118"
.35"	177-179	32	—	10	A	$\pm .0004$ "	$\pm .00006$ "	.00004"	.079"	.236"
.425"	177-283	32	—	10	A	$\pm .0004$ "	$\pm .00006$ "	.00004"	.079"	.236"
.5"	177-180	32	—	10	A	$\pm .0004$ "	$\pm .00006$ "	.00004"	.079"	.236"
.6"	177-181	38	—	10	A	$\pm .0004$ "	$\pm .00006$ "	.00004"	.079"	.236"
.65"	177-182	45	—	10	A	$\pm .0004$ "	$\pm .00006$ "	.00004"	.079"	.236"
.7"	177-183	45	—	10	A	$\pm .0004$ "	$\pm .00006$ "	.00004"	.079"	.236"
.8"	177-287	45	—	10	A	$\pm .0004$ "	$\pm .00006$ "	.00004"	.079"	.236"
1"	177-184	53	—	15	A	$\pm .0004$ "	$\pm .00006$ "	.00004"	.126"	.339"
1.2"	177-289	71	—	15	A	$\pm .0004$ "	$\pm .00006$ "	.00004"	.126"	.339"
1.4"	177-185	71	—	15	A	$\pm .0004$ "	$\pm .00006$ "	.00004"	.126"	.339"
1.6"	177-291	71	—	15	A	$\pm .0004$ "	$\pm .00006$ "	.00004"	.126"	.339"
1.8"	177-186	85	—	15	A	$\pm .0004$ "	$\pm .00006$ "	.00004"	.146"	.299"

Nominal size $\phi$ D	Order No.	Dimensions (mm)			Type	Accuracy				
		$\phi$ D	$\phi$ E	T		Tolerance between the nominal size and the actual diameter (inch)	Uncertainty of marked dimension value (inch)	Roundness/Cylindricity (inch)	Distance from the side face H (inch)	Size of warranted calibration surface K (inch)
2"	177-187	85	—	20	A	$\pm .0008$ "	$\pm .00006$ "	.00004"	.146"	.496"
2.4"	177-293	112	—	20	A	$\pm .0008$ "	$\pm .00006$ "	.00004"	.146"	.496"
2.5"	177-315	112	—	20	A	$\pm .0008$ "	$\pm .00006$ "	.00006"	.165"	.457"
2.8"	177-188	112	—	20	A	$\pm .0008$ "	$\pm .00006$ "	.00006"	.165"	.457"
3"	177-317	125	—	25	A	$\pm .0008$ "	$\pm .00006$ "	.00006"	.165"	.654"
3.2"	177-295	125	—	25	A	$\pm .0008$ "	$\pm .00006$ "	.00006"	.165"	.654"
3.5"	177-319	140	—	25	A	$\pm .0008$ "	$\pm .00006$ "	.00006"	.165"	.654"
3.6"	177-189	140	—	25	A	$\pm .0008$ "	$\pm .00006$ "	.00006"	.165"	.654"
4"	177-297	160	—	25	A	$\pm .0008$ "	$\pm .00006$ "	.00008"	.165"	.654"
5"	177-299	210	168	38.1	B	$\pm .0008$ "	$\pm .00010$ "	.00008"	.209"	1.083"
6"	177-301	235	187	38.1	B	$\pm .0008$ "	$\pm .00010$ "	.00008"	.209"	1.083"
7"	177-303	260	215	38.1	B	$\pm .0008$ "	$\pm .00010$ "	.00010"	.209"	1.083"
8"	177-305	311	244	38.1	B	$\pm .0008$ "	$\pm .00010$ "	.00010"	.209"	1.083"
9"	177-307	337	264	38.1	B	$\pm .0008$ "	$\pm .00010$ "	.00010"	.209"	1.083"
10"	177-309	362	290	38.1	B	$\pm .0008$ "	$\pm .00010$ "	.00012"	.209"	1.083"
11"	177-311	413	321	38.1	B	$\pm .0008$ "	$\pm .00010$ "	.00012"	.209"	1.083"
12"	177-313	438	340	38.1	B	$\pm .0008$ "	$\pm .00010$ "	.00012"	.209"	1.083"

## Cera Setting Rings

### Metric

Nominal size $\phi$ D	Order No.	Dimensions (mm)			Type	Accuracy				
		$\phi$ D	$\phi$ E	T		Tolerance between the nominal size and the actual diameter ( $\mu$ m)	Uncertainty of marked dimension value ( $\mu$ m)	Roundness/Cylindricity ( $\mu$ m)	Distance from the side face H (mm)	Size of warranted calibration surface K (mm)
4mm	177-418	25	—	7	A	$\pm 10$	$\pm 1.5$	1	1.7	3.6
6mm	177-420	25	—	7	A	$\pm 10$	$\pm 1.5$	1	1.7	3.6
8mm	177-423	32	—	10	A	$\pm 10$	$\pm 1.5$	1	2.0	6.0
10mm	177-424	32	—	10	A	$\pm 10$	$\pm 1.5$	1	2.0	6.0
12mm	177-425	45	—	10	A	$\pm 10$	$\pm 1.5$	1	2.0	6.0
16mm	177-427	45	—	10	A	$\pm 10$	$\pm 1.5$	1	2.0	6.0
20mm	177-429	45	—	10	A	$\pm 10$	$\pm 1.5$	1	2.0	6.0
25mm	177-430	53	—	15	A	$\pm 10$	$\pm 1.5$	1	3.2	8.6
30mm	177-431	71	—	15	A	$\pm 10$	$\pm 1.5$	1	3.2	8.6
35mm	177-432	71	—	15	A	$\pm 10$	$\pm 1.5$	1	3.2	8.6
40mm	177-433	71	—	15	A	$\pm 10$	$\pm 1.5$	1	3.2	8.6
45mm	177-434	85	—	15	A	$\pm 10$	$\pm 1.5$	1	3.2	8.6

### Inch

Nominal size $\phi$ D	Order No.	Dimensions (mm)			Type	Accuracy				
		$\phi$ D	$\phi$ E	T		Tolerance between the nominal size and the actual diameter (inch)	Uncertainty of marked dimension value (inch)	Roundness/Cylindricity (inch)	Distance from the side face H (inch)	Size of warranted calibration surface K (inch)
.16"	177-518	25	—	7	A	$\pm .0004$ "	$\pm .00006$ "	.00004"	.067"	.142"
.24"	177-520	25	—	7	A	$\pm .0004$ "	$\pm .00006$ "	.00004"	.067"	.142"
.275"	177-522	25	—	7	A	$\pm .0004$ "	$\pm .00006$ "	.00004"	.067"	.142"
.35"	177-523	32	—	10	A	$\pm .0004$ "	$\pm .00006$ "	.00004"	.079"	.236"
.425"	177-524	32	—	10	A	$\pm .0004$ "	$\pm .00006$ "	.00004"	.079"	.236"
.5"	177-525	32	—	10	A	$\pm .0004$ "	$\pm .00006$ "	.00004"	.079"	.236"
.65										