

Bore Micrometers

HOLTEST / BOREMATIC

Catalog No. E4280-568, 468, 368



Holtest Series micrometers make three-point / two-point bore diameter measurements at top accuracy

Mitutoyo

World Class, High Performance, High Accuracy Three-Point / Two-Point bore Micrometers

Lever operation allows easy and speedy measurement

Borematic



Digimatic Holtest



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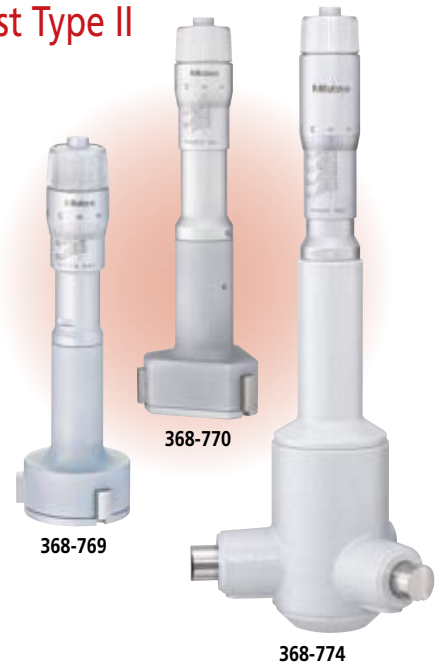


Micrometer adjustment provides tactile feedback

Holtest



Holtest Type II



Mitutoyo

The performance of the well-established Mitutoyo Holtest series, well-known for their highly stable three-point self-centering action, has been further enhanced by coating the contact surfaces with titanium nitride.

Borematic

- Titanium-coated measuring pins provide excellent durability and impact resistance and allow the instrument to measure right to the bottom of a blind hole.
- Digital display with quick-action lever operation enables easy and speedy measurement.
- Built-in Absolute System eliminates the necessity to set the origin point at every power-on. The system is also immune to over-speed errors, thus increasing the reliability of measurement.
- A tolerance judgment function is built in to allow GO/NG judgment based on user-defined upper and lower limit settings.

Holtest Type II

- Affordably priced, popular Holtest
- The anvils and cone are made from an alloy tool steel with a hardness of HRC60.5 or more.
- Versions for measurement of special forms can be custom manufactured in tool steel.

Digimatic Holtest

- Titanium-coated measuring pins provide excellent durability and impact resistance and allow the instrument to measure right to the bottom of a blind hole.
- DIGIMATIC Holtest is equipped with a digital display for easy readability.
- ABS (absolute) and INC (incremental) measuring modes promote highly efficient working.
- DIGIMATIC Holtest is compatible with statistical process control systems and measurement support systems.
- DIGIMATIC Holtest is able to memorize two preset values for the datum point.
- Function lock key prevents changing the datum point accidentally.

Holtest

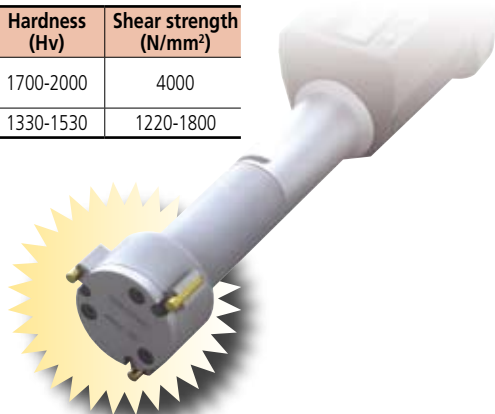
- Titanium-coated measuring pins provide excellent durability and impact resistance and allow the instrument to measure right to the bottom of a blind hole.
- Three-point design assures self-centering action for stable measurements in the range above 8mm bore diameter.
- Bore micrometers fitted with the constant-force ratchet enable consistent measurements with minimum variation between operators.

Titanium Coated Measuring Pins

Applying a titanium-nitride coating to the contact faces of the measuring pins has improved durability and abrasion resistance. With this coating the pin material can be changed from carbide to hardened steel to provide extra toughness for preventing a contact face being chipped during measurement.

Comparison of Pin Materials

	Hardness (Hv)	Shear strength (N/mm ²)
Titanium-coated steel	1700-2000	4000
Carbide	1330-1530	1220-1800



Inspection Certificate Supplied as Standard.

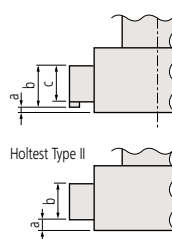
The Inspection Certificate supplied with each instrument, which assures product quality and safety, cannot be used for obtaining a Calibration Certificate since the purchase date is not stated. Mitutoyo will issue a calibration certificate, at cost, on request.



Measuring a Blind Hole

Measuring pins attached to the anvils permit measuring the diameter of a blind hole almost down to the bottom.

*The Holtest type II does not use measuring pins.



Measuring Range	Unit: mm		
	a	b	c
2-6	—	—	2
6-12	2	—	2.5
12-20	0.3 (2.6)	5.6	3.5 (3.5)
20-30	0.3 (3.4)	8.3	5.2 (5.2)
30-50	0.3 (3.4)	13	10 (10)
50-100 / 50-125* *Borematic	0.3 (3.4)	17	14 (14)
100-300	12.4 (19.6)	21	13.8 (13.8)

() : Holtest Type II

Measuring Deep Holes

An extension tube (optional accessory) can be fitted to enable measurement of deep holes.



Borematic

Individual Gages: includes one digital display unit and one interchangeable measuring head (plus adapter if required)

Metric		Inch/Metric		with titanium coated measuring pins	
Size range	Order No.	Size range	Order No.	Accuracy*	Extension tube
6-8mm	568-331	.275"-.350"	568-431	±5µm (within 5µm)	100mm (952322)
8-10mm	568-332	.350"-.425"	568-432	±5µm (within 5µm)	100mm (952322)
10-12mm	568-333	.425"-.500"	568-433	±5µm (within 5µm)	100mm (952322)
12-16mm	568-334-10	.50"-.65"	568-434-10	±5µm (within 5µm)	150mm (952621)
16-20mm	568-335-10	.65"-.80"	568-435-10	±5µm (within 5µm)	150mm (952621)
20-25mm	568-336-10	.8"-1.0"	568-436-10	±6µm (within 6µm)	150mm (952622)
25-30mm	568-337-10	1.0"-1.2"	568-437-10	±6µm (within 6µm)	150mm (952622)
30-40mm	568-338-10	1.2"-1.6"	568-438-10	±6µm (within 6µm)	150mm (952622)
40-50mm	568-339-10	1.6"-2.0"	568-439-10	±6µm (within 6µm)	150mm (952622)
50-63mm	568-340-10	2.0"-2.5"	568-440-10	±6µm (within 6µm)	150mm (952622)
62-75mm	568-341-10	2.5"-3.0"	568-441-10	±6µm (within 6µm)	150mm (952623)
75-88mm	568-342-10	3.0"-3.5"	568-442-10	±6µm (within 6µm)	150mm (952623)
87-100mm	568-343-10	3.5"-4.0"	568-443-10	±6µm (within 6µm)	150mm (952623)
100-113mm	568-344-10	4.0"-4.5"	568-444-10	±6µm (within 6µm)	150mm (952623)
112-125mm	568-345-10	4.5"-5.0"	568-445-10	±6µm (within 6µm)	150mm (952623)
50-75mm	568-346-10	2.0"-3.0"	568-446-10	±6µm (within 6µm)	150mm (952623)
75-100mm	568-347-10	3.0"-4.0"	568-447-10	±6µm (within 6µm)	150mm (952623)
100-125mm	568-348-10	4.0"-5.0"	568-448-10	±6µm (within 6µm)	150mm (952623)

*Instrumental error excluding quantizing error (maximum error)

Technical Data

Accuracy: Refer to the order No. list.
 Resolution: 0.001mm or .00005"/0.001mm
 Measuring pins: Carbide or titanium-coated alloy steel* (*over 12mm/.5" models)
 Measuring method: Three-point contact
 Display: LCD
 Battery: SR44 (1pc.) (938882)
 Battery life: Approx. 1 year

Functions

Zero-Set, presetting, GO/NO-GO judgment, power on/off, inch/mm conversion (inch/mm type only), SPC data output, data hold

Optional Accessory

937387: SPC cable (1m)
 965013: SPC cable (2m)
 —: Extension tube (refer to the order No. list)



Extension rod

Complete-Unit Gage Sets: includes several individual gages to cover the overall size range of the set

Metric		with titanium coated measuring pins	
Overall range	Order No.	Range of Individual gages	Setting rings included
6-12mm	568-981	6-8, 8-10, 10-12mm	ø8mm, ø10mm
12-25mm	568-982-10	12-16, 16-20, 20-25mm	ø16mm, ø20mm
25-50mm	568-983-10	25-30, 30-40, 40-50mm	ø30mm, ø40mm
50-75mm	568-984-10	50-63, 62-75mm	ø62mm
75-100mm	568-985-10	75-88, 87-100mm	ø87mm
50-100mm	568-986-10	50-75*, 75-100mm*	ø62mm, ø87mm

*with interchangeable measuring pins (4 sets)

Inch/Metric		with titanium coated measuring pins	
Overall range	Order No.	Range of Individual gages	Setting rings included
.275"-.5"	568-987	.275-.35", .35-.425", .425-.5"	.35" DIA., .425" DIA.
.5"-1"	568-988-10	.5-.65", .65-.8", .8-1"	.65" DIA., .8" DIA.
1"-2"	568-989-10	1-1.2", 1.2-1.6", 1.6-2"	1.2" DIA., 1.6" DIA.
2"-3"	568-990-10	2-2.5", 2.5-3"	2.5" DIA.
3"-4"	568-991-10	3-3.5", 3.5-4"	3.5" DIA.
2"-4"	568-992-10	2-3"*, 3-4"*	2.5" DIA., 3.5" DIA.

*with interchangeable measuring pins (4 sets)

Interchangeable-Head Sets: includes one digital display unit with several interchangeable measuring heads (and adapters as required) to cover the total size range plus one extension tube

Metric		with titanium coated measuring pins	
Overall range	Order No.	Range of each head	Setting rings included
6-12mm	568-971	6-8, 8-10, 10-12mm	ø8mm, ø10mm
12-25mm	568-972-10	12-16, 16-20, 20-25mm	ø16mm, ø20mm
25-50mm	568-973-10	25-30, 30-40, 40-50mm	ø30mm, ø40mm
50-100mm	568-974-10	50-63, 62-75, 75-88, 87-100mm	ø62mm, ø87mm
50-100mm	568-975-10	50-75*, 75-100mm*	ø62mm, ø87mm

*with interchangeable measuring pins (4 sets)

Inch/Metric		with titanium coated measuring pins	
Overall range	Order No.	Range of each head	Setting rings included
.275"-.5"	568-976	.275-.35", .35-.425", .425-.5"	.35" DIA., .425" DIA.
.5"-1"	568-977-10	.5-.65", .65-.8", .8-1"	.65" DIA., .8" DIA.
1"-2"	568-978-10	1-1.2", 1.2-1.6", 1.6-2"	1" DIA., 1.6" DIA.
2"-4"	568-979-10	2-2.5", 2.5-3", 3-3.5", 3.5-4"	2.5" DIA., 3.5" DIA.
2"-4"	568-980-10	2-3"*, 3-4"*	2.5" DIA., 3.5" DIA.

*with interchangeable measuring pins (4 sets)



Complete-Unit Set: 568-971



Interchangeable-Head Set: 568-983-10

Digimatic Holtest

Digimatic Holtest

Individual Gages: includes one combination display unit and one interchangeable measuring head

Metric		Inch/Metric		with titanium coated measuring pins	
Range	Order No.	Range	Order No.	Accuracy*	Extension tube
6-8mm	468-161	.275"-.35"	468-261	±2µm (within 2µm)	100mm (952322)
8-10mm	468-162	.35"-.425"	468-262	±2µm (within 2µm)	100mm (952322)
10-12mm	468-163	.425"-.5"	468-263	±2µm (within 2µm)	100mm (952322)
12-16mm	468-164	.5"-.65"	468-264	±2µm (within 2µm)	150mm (952621)
16-20mm	468-165	.65"-.8"	468-265	±2µm (within 2µm)	150mm (952621)
20-25mm	468-166	.8"-1"	468-266	±3µm (within 3µm)	150mm (952622)
25-30mm	468-167	1"-1.2"	468-267	±3µm (within 3µm)	150mm (952622)
30-40mm	468-168	1.2"-1.6"	468-268	±3µm (within 3µm)	150mm (952622)
40-50mm	468-169	1.6"-2"	468-269	±3µm (within 3µm)	150mm (952622)
50-63mm	468-170	2"-2.5"	468-270	±3µm (within 3µm)	150mm (952623)
62-75mm	468-171	2.5"-3"	468-271	±3µm (within 3µm)	150mm (952623)
75-88mm	468-172	3"-3.5"	468-272	±3µm (within 3µm)	150mm (952623)
87-100mm	468-173	3.5"-4"	468-273	±3µm (within 3µm)	150mm (952623)
100-125mm	468-174	4"-5"	468-274	±5µm (within 5µm)	150mm (952623)
125-150mm	468-175	5"-6"	468-275	±5µm (within 5µm)	150mm (952623)
150-175mm	468-176	6"-7"	468-276	±5µm (within 5µm)	150mm (952623)
175-200mm	468-177	7"-8"	468-277	±5µm (within 5µm)	150mm (952623)
200-225mm	468-178	8"-9"	468-278	±5µm (within 5µm)	150mm (952623)
225-250mm	468-179	9"-10"	468-279	±5µm (within 5µm)	150mm (952623)
250-275mm	468-180	10"-11"	468-280	±5µm (within 5µm)	150mm (952623)
275-300mm	468-181	11"-12"	468-281	±5µm (within 5µm)	150mm (952623)

*Instrumental error excluding quantizing error (maximum error)

Complete-Unit Sets: includes several individual gages to cover the overall size range of the set

Metric		with titanium coated measuring pins	
Overall range	Order No.	Range of Individual gages	Setting rings included
6-12mm	468-981	6-8, 8-10, 10-12mm	ø8mm, ø10mm
12-25mm	468-982	12-16, 16-20, 20-25mm	ø16mm, ø20mm
25-50mm	468-983	25-30, 30-40, 40-50mm	ø30mm, ø40mm
50-75mm	468-984	50-63, 62-75mm	ø62mm
75-100mm	468-985	75-88, 87-100mm	ø87mm

Inch/Metric		with titanium coated measuring pins	
Overall range	Order No.	Range of Individual gages	Setting rings included
.275"-.5"	468-986	.275-.35", .35-.425", .425-.5"	.35" DIA., .425" DIA.
.5"-1"	468-987	.5-.65", .65-.8", .8-1"	.65" DIA., .8" DIA.
1"-2"	468-988	1-1.2", 1.2-1.6", 1.6-2"	1.2" DIA., 1.6" DIA.
2"-3"	468-989	2-2.5", 2.5-3"	2.5" DIA.
3"-4"	468-990	3-3.5", 3.5-4"	3.5" DIA.

Interchangeable-Head Gage Sets: includes one combination display unit with several interchangeable measuring heads to cover the total size range plus one extension tube

Metric		with titanium coated measuring pins	
Range	Order No.	Range of each head	Setting rings included
6-12mm	468-971	6-8, 8-10, 10-12mm	ø8mm, ø10mm
12-20mm	468-972	12-16, 16-20mm	ø16mm
20-50mm	468-973	20-25, 25-30, 30-40, 40-50mm	ø25mm, ø40mm
50-100mm	468-974	50-63, 62-75, 75-88, 87-100mm	ø62mm, ø87mm
100-200mm	468-975	100-125, 125-150, 150-175, 175-200mm	ø125mm, ø175mm

Inch/Metric		with titanium coated measuring pins	
Range	Order No.	Range of each head	Setting rings included
.275"-.5"	468-976	.275-.35", .35-.425", .425-.5"	.35" DIA., .425" DIA.
.5"-.8"	468-977	.5-.65", .65-.8"	.65" DIA.
.8"-2"	468-978	.8-1", 1-1.2", 1.2-1.6", 1.6-2"	1" DIA., 1.6" DIA.
2"-4"	468-979	2-2.5", 2.5-3", 3-3.5", 3.5-4"	2.5" DIA., 3.5" DIA.
4"-8"	468-980	4-5", 5-6", 6-7", 7-8"	5" DIA., 7" DIA.



Complete-Unit Set: 468-963-10



Interchangeable-Head Set: 468-953-10

Technical Data

Accuracy: Refer to the order No. list.
 Resolution: 0.001mm or .00005"/0.001mm (over 5" models: .0001"/0.001mm)
 Measuring pins: Carbide or titanium-coated alloy steel* (*over 12mm/.5" models)
 Measuring method: Three-point contact
 Display: LCD
 Battery: SR44 (1pc.), **938882**
 Battery life: Approx. 8 months under normal use

Functions

Zero-setting, Data hold, Data output, Preset, inch/mm reading (inch/mm models)
 Alarm: Low voltage, Counting value composition error

Optional Accessories

937387: SPC cable (1m)
965013: SPC cable (2m)
982693: Mounting plate for micrometer stand
 — : Extension tube (refer to the order No. list)



156-101: Micrometer stand



Mounting plate for stand

Individual Gages: includes a micrometer thimble with measuring head

Technical Data

Accuracy: Refer to the order No. list.
 Graduation: 0.001mm, 0.005mm*, .0001" or .0002"*
 (*over 12mm or .5" models)

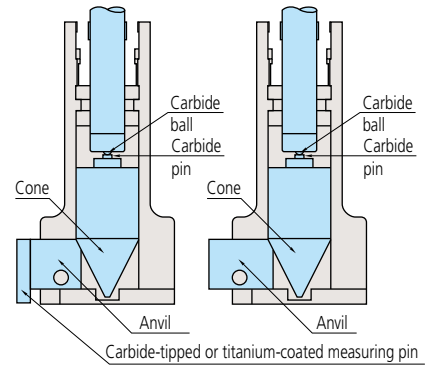
Metric		Inch/Metric		with titanium coated measuring pins	
Size range	Order No.	Size range	Order No.	Accuracy*	Extension rod
2-2.5mm	368-001	.08"-.1"	368-021	±2µm (within 2µm)	—
2.5-3mm	368-002	.1"-.12"	368-022	±2µm (within 2µm)	—
3-4mm	368-003	.12"-.16"	368-023	±2µm (within 2µm)	—
4-5mm	368-004	.16"-.2"	368-024	±2µm (within 2µm)	—
5-6mm	368-005	.2"-.24"	368-025	±2µm (within 2µm)	—
—	—	.24"-.28"	368-026	±2µm (within 2µm)	—
6-8mm	368-101-10	.275"-.35"	368-201-10	±2µm (within 2µm)	100mm (952322)
8-10mm	368-102-10	.35"-.425"	368-202-10	±2µm (within 2µm)	100mm (952322)
10-12mm	368-103-10	.425"-.5"	368-203-10	±2µm (within 2µm)	100mm (952322)
12-16mm	368-164	.5"-.65"	368-264	±2µm (within 2µm)	150mm (952621)
16-20mm	368-165	.65"-.8"	368-265	±2µm (within 2µm)	150mm (952621)
20-25mm	368-166	.8"-1"	368-266	±3µm (within 3µm)	150mm (952622)
25-30mm	368-167	1"-1.2"	368-267	±3µm (within 3µm)	150mm (952622)
30-40mm	368-168	1.2"-1.6"	368-268	±3µm (within 3µm)	150mm (952622)
40-50mm	368-169	1.6"-2"	368-269	±3µm (within 3µm)	150mm (952622)
50-63mm	368-170	2"-2.5"	368-270	±3µm (within 3µm)	150mm (952623)
62-75mm	368-171	2.5"-3"	368-271	±3µm (within 3µm)	150mm (952623)
75-88mm	368-172	3"-3.5"	368-272	±3µm (within 3µm)	150mm (952623)
87-100mm	368-173	3.5"-4"	368-273	±3µm (within 3µm)	150mm (952623)
100-125mm	368-174	4"-5"	368-274	±5µm (within 5µm)	150mm (952623)
125-150mm	368-175	5"-6"	368-275	±5µm (within 5µm)	150mm (952623)
150-175mm	368-176	6"-7"	368-276	±5µm (within 5µm)	150mm (952623)
175-200mm	368-177	7"-8"	368-277	±5µm (within 5µm)	150mm (952623)
200-225mm	368-178	8"-9"	368-278	±5µm (within 5µm)	150mm (952623)
225-250mm	368-179	9"-10"	368-279	±5µm (within 5µm)	150mm (952623)
250-275mm	368-180	10"-11"	368-280	±5µm (within 5µm)	150mm (952623)
275-300mm	368-181	11"-12"	368-281	±5µm (within 5µm)	150mm (952623)

*Instrumental error (maximum error)

Range	Measuring method	Measuring pin material
2-3mm .08-.12"	Two-point	Hardened steel (HRC60.5 or more)
3-6mm .12-.28"	Two-point	Hardened steel (HRC60.5 or more)
6-12mm .28-.5"	Three-point	Carbide
over 12mm over .5"	Three-point	Titanium-coated alloy steel (1700-2000Hv)

Optional Accessory

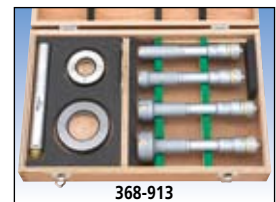
—: Extension tube (refer to the order No. list)



Gage Sets: includes several individual gages to cover the overall size range of the set

Metric		with titanium coated measuring pins	
Overall range	Order No.	Range of each gage	Setting rings included
2-3mm	368-906	2-2.5, 2.5-3mm	ø2.5mm
3-6mm	368-907	3-4, 4-5, 5-6mm	ø4mm, ø5mm
6-12mm	368-901-10	6-8, 8-10, 10-12mm	ø8mm, ø10mm
12-20mm	368-912	12-16, 16-20mm	ø16mm
20-50mm	368-913	20-25, 25-30, 30-40, 40-50mm	ø25mm, ø40mm
50-100mm	368-914	50-63, 62-75, 75-88, 87-100mm	ø62mm, ø87mm
100-200mm	368-915	100-125, 125-150, 150-175, 175-200mm	ø125mm, ø175mm

Inch/Metric		with titanium coated measuring pins	
Overall range	Order No.	Range of each gage	Setting rings included
.08"-.12"	368-926	.08-.1", .1-.12"	.1" DIA.
.12"-.28"	368-927	.12-.16", .16-.2", .2-.24", .24-.28"	.16" DIA., .24" DIA.
.275"-.5"	368-921-10	.275-.35", .35-.425", .425-.5"	.35" DIA., .5" DIA.
.5"-.8"	368-917	.5-.65", .65-.8"	.65" DIA.
.8"-2"	368-918	.8-1", 1-1.2", 1.2-1.6", 1.6-2"	1" DIA., 1.6" DIA.
2"-4"	368-919	2-2.5", 2.5-3", 3-3.5", 3.5-4"	2.5" DIA., 3.5" DIA.
4"-8"	368-920	4-5", 5-6", 6-7", 7-8"	5" DIA., 7" DIA.



Holtest Type II

Holtest Type II

Individual Gages: includes a micrometer thimble with measuring head

Technical Data

Accuracy: Refer to the list of specifications.
 Graduation: 0.001mm or .0002"
 Measuring method: Three-point method
 Contact point: Carbide-tipped

Metric		Inch/Metric		Accuracy	Extension tube
Range	Order No.	Range	Order No.		
12-16mm	368-764	.5"-.65"	368-864	±2µm (within 2µm)	150mm (952621)
16-20mm	368-765	.65"-.8"	368-865	±2µm (within 2µm)	150mm (952621)
20-25mm	368-766	.8"-1"	368-866	±3µm (within 3µm)	150mm (952622)
25-30mm	368-767	1"-1.2"	368-867	±3µm (within 3µm)	150mm (952622)
30-40mm	368-768	1.2"-1.6"	368-868	±3µm (within 3µm)	150mm (952622)
40-50mm	368-769	1.6"-2"	368-869	±3µm (within 3µm)	150mm (952622)
50-63mm	368-770	2"-2.5"	368-870	±3µm (within 3µm)	150mm (952623)
62-75mm	368-771	2.5"-3"	368-871	±3µm (within 3µm)	150mm (952623)
75-88mm	368-772	3"-3.5"	368-872	±3µm (within 3µm)	150mm (952623)
87-100mm	368-773	3.5"-4"	368-873	±3µm (within 3µm)	150mm (952623)
100-125mm	368-774	4"-5"	368-874	±5µm (within 5µm)	150mm (952623)
125-150mm	368-775	5"-6"	368-875	±5µm (within 5µm)	150mm (952623)
150-175mm	368-776	6"-7"	368-876	±5µm (within 5µm)	150mm (952623)
175-200mm	368-777	7"-8"	368-877	±5µm (within 5µm)	150mm (952623)
200-225mm	368-778	8"-9"	368-878	±5µm (within 5µm)	150mm (952623)
225-250mm	368-779	9"-10"	368-879	±5µm (within 5µm)	150mm (952623)
250-275mm	368-780	10"-11"	368-880	±5µm (within 5µm)	150mm (952623)
275-300mm	368-781	11"-12"	368-881	±5µm (within 5µm)	150mm (952623)

Gage Sets: includes several individual gages to cover the overall size range of the set

Metric			
Overall range	Order No.	Range of each gage	Setting rings included
12-20mm	368-991	12-16, 16-20mm	ø16mm
20-50mm	368-992	20-25, 25-30, 30-40, 40-50mm	ø25mm, ø40mm
50-100mm	368-993	50-63, 62-75, 75-88, 87-100mm	ø62mm, ø87mm
100-200mm	368-994	100-125, 125-150, 150-175, 175-200mm	ø125mm, ø175mm

Inch/Metric			
Overall range	Order No.	Range of each gage	Setting rings included
.5"-.8"	368-995	.5-.65", .65-.8"	.65" DIA.
.8"-2"	368-996	.8-1", 1-1.2", 1.2-1.6", 1.6-2"	1" DIA., 1.6" DIA.
2"-4"	368-997	2-2.5", 2.5-3", 3-3.5", 3.5-4"	2.5" DIA., 3.5" DIA.
4"-8"	368-998	4-5", 5-6", 6-7", 7-8"	5" DIA., 7" DIA.



Optional Setting Rings

Setting Rings

Setting Rings



177-300

Ceramic Setting Rings



177-424

177-429

177-432



177-147



177-146



177-139



177-205

Metric

Size	Order No.	Accuracy
1mm	177-220	±1.5µm
1.1mm	177-222	±1.5µm
1.2mm	177-225	±1.5µm
1.3mm	177-227	±1.5µm
1.4mm	177-230	±1.5µm
1.75mm	177-236	±1.5µm
2mm	177-239	±1.5µm
2.25mm	177-242	±1.5µm
2.5mm	177-208	±1.5µm
2.75mm	177-246	±1.5µm
3mm	177-248	±1.5µm
3.25mm	177-250	±1.5µm
3.5mm	177-252	±1.5µm
3.75mm	177-255	±1.5µm
4mm	177-204	±1.5µm
4.5mm	177-257	±1.5µm
5mm	177-205	±1.5µm
5.5mm	177-263	±1.5µm
6mm	177-267 / 177-420*	±1.5µm
6.5mm	177-271	±1.5µm
7mm	177-275	±1.5µm
8mm	177-125 / 177-423*	±1.5µm
10mm	177-126 / 177-424*	±1.5µm
12mm	177-284 / 177-425*	±1.5µm
14mm	177-132	±1.5µm
16mm	177-177 / 177-427*	±1.5µm
17mm	177-133	±1.5µm
20mm	177-286 / 177-429*	±1.5µm
25mm	177-139 / 177-430*	±1.5µm
30mm	177-288 / 177-431*	±1.5µm
35mm	177-140 / 177-432*	±1.5µm
40mm	177-290 / 177-433*	±1.5µm
45mm	177-178 / 177-434*	±1.5µm
50mm	177-146	±1.5µm
60mm	177-292	±1.5µm
62mm	177-314	±1.5µm
70mm	177-147	±1.5µm
75mm	177-316	±1.5µm
80mm	177-294	±1.5µm
87mm	177-318	±1.5µm
90mm	177-148	±1.5µm
100mm	177-296	±1.5µm
125mm	177-298	±2.5µm
150mm	177-300	±2.5µm
175mm	177-302	±2.5µm
200mm	177-304	±2.5µm
225mm	177-306	±2.5µm
250mm	177-308	±2.5µm
275mm	177-310	±2.5µm
300mm	177-312	±2.5µm

*Ceramic

Inch

Size	Order No.	Accuracy
.1"	177-209	±.00004"
.16"	177-206	±.00004"
.24"	177-207	±.00004"
.275"	177-281 / 177-522*	±.00004"
.35"	177-179 / 177-523*	±.00004"
.425"	177-283 / 177-524*	±.00004"
.50"	177-180 / 177-525*	±.00004"
.60"	177-181	±.00004"
.65"	177-182 / 177-527*	±.00004"
.70"	177-183	±.00004"
.80"	177-287 / 177-529*	±.00004"
1.0"	177-184 / 177-530*	±.00004"
1.2"	177-289 / 177-531*	±.00004"
1.4"	177-185 / 177-532*	±.00004"
1.6"	177-291 / 177-533*	±.00004"
1.8"	177-186 / 177-534*	±.00004"
2.0"	177-187	±.00004"
2.4"	177-293	±.00004"
2.5"	177-315	±.00006"
2.8"	177-188	±.00006"
3.0"	177-317	±.00006"
3.2"	177-295	±.00006"
3.5"	177-319	±.00006"
3.6"	177-189	±.00006"
4.0"	177-297	±.00008"
5.0"	177-299	±.00008"
6.0"	177-301	±.00008"
7.0"	177-303	±.00010"
8.0"	177-305	±.00010"
9.0"	177-307	±.00010"
10.0"	177-309	±.00012"
11.0"	177-311	±.00012"
12.0"	177-313	±.00012"

*Ceramic

Features

- Used for quick zero adjustment of dial bore gages, Holtest, and inside micrometers.
- Actual inside diameter is marked on each ring.
- Ceramic Setting Rings are also available. Anticorrosion treatment is usually not required when handling Ceramic Setting Rings, resulting in simple maintenance and storage.

Technical Data

Maximum difference between the nominal size and the actual diameter of setting rings:

- ±0.01mm for ø1-45mm
- ±0.02mm for ø50-300mm
- ±.0004" for .1"-1.8" DIA.
- ±.0008" for 2"-12" DIA.

Cylindricity of setting rings:

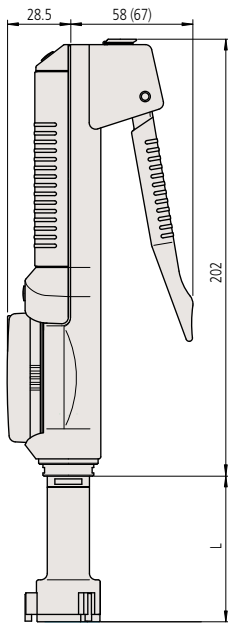
- 1.0µm for ø1-60mm
- 1.5µm for ø62-90mm
- 2.0µm for ø100-150mm
- 2.5µm for ø175-225mm
- 3.0µm for ø250-300mm
- .00004" for .1"-2.4" DIA.
- .00006" for 2.5"-3.6" DIA.
- .00008" for 4"-6" DIA.
- .00010" for 7"-9" DIA.
- .00012" for 10"-12" DIA.

Mitutoyo

Dimensions

Dimensions

Borematic

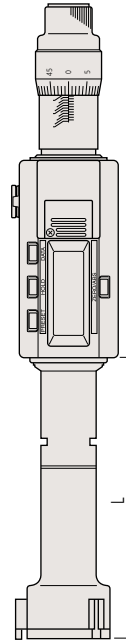


Unit: mm

Range	L
6-12	83
12-20	53
20-30	59
30-50	67
50-125	75

() : 50-125mm model

Digimatic Holtest

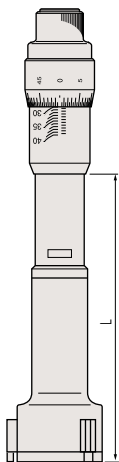


Unit: mm

Range	L
6-8	59
8-10	59
10-12	59
12-16	84
16-20	84
20-25	93
25-30	93
30-40	103.8
40-50	103.8
50-63	105.4
62-75	105.4
75-88	105.4
87-100	105.4
100-125	151.4
125-150	151.4
150-175	151.4
175-200	151.4
200-225	151.4
225-250	151.4
250-275	151.4
275-300	151.4

Holtest

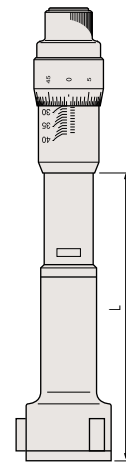
Unit: mm



Range	L	Range	L
2-2.5	12	100-125	161
2.5-3	12	125-150	161
3-4	22	150-175	161
4-5	22	175-200	161
5-6	22	200-225	161
6-8	59	225-250	161
8-10	59	250-275	161
10-12	59	275-300	161
12-16	82		
16-20	82		
20-25	94		
25-30	94		
30-40	102		
40-50	102		
50-63	105		
62-75	105		
75-88	105		
87-100	105		

Holtest Type II

Unit: mm



Range	L
12-16	82
16-20	82
20-25	94
25-30	94
30-40	102
40-50	102
50-63	105
62-75	105
75-88	105
87-100	105
100-125	161
125-150	161
150-175	161
175-200	161
200-225	161
225-250	161
250-275	161
275-300	161



Bore Micrometers

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PAT. JP1783035, JP1783036, JP1845485, JP1745486, US4879508, US4878013, US5053715, EP0248165, EP0404980, EP0240020, CN87102580, CN87102624, CN89106051

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