

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

Holtest / Borematic

Small Tool Instruments
and Data Management



World Class, High Performance, High Accuracy Three-Point / Two-Point Holtest

Lever operation allows easy and speedy measurement

Borematic



Digimatic Holtest

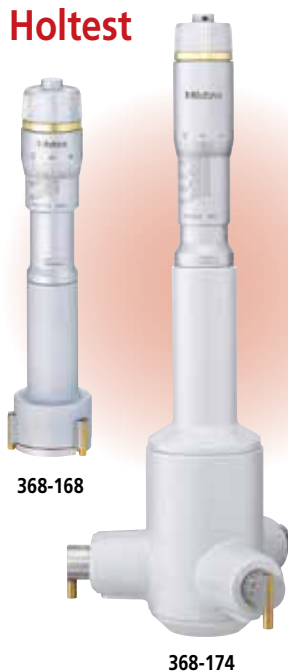


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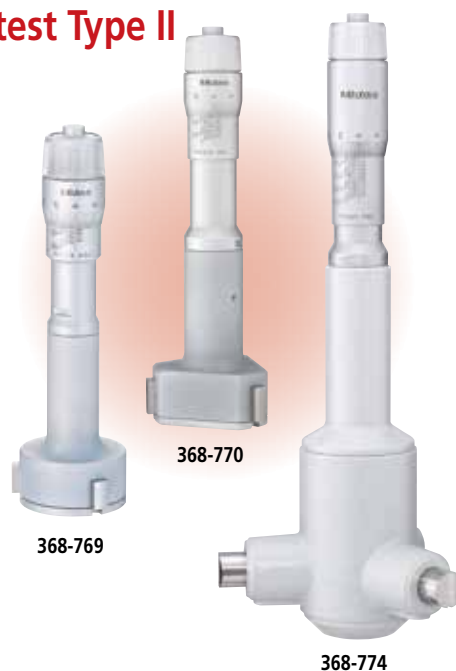


Micrometer adjustment provides tactile feedback

Holtest



Holtest Type II



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

A titanium-nitride coating is applied to the contact faces of the measuring pins (over 6mm range models).



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.

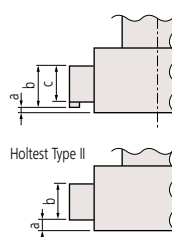


Measuring a Blind Hole

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.

Unit: mm



Measuring Range	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 rod (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 rod
6-8mm	568-361	0.275 in - 0.350 in	568-461	±5µm (within 5µm) ±0.00025 in (within 0.00025 in)	100mm (952322)
8-10mm	568-362	0.350 in - 0.425 in	568-462		
10-12mm	568-363	0.425 in - 0.500 in	568-463	±5µm (within 5µm) ±0.00025 in (within 0.00025 in)	150mm (952621)
12-16mm	568-364	0.50 in - 0.65 in	568-464		
16-20mm	568-365	0.65 in - 0.80 in	568-465	±6µm (within 6µm) ±0.0003 in (within 0.0003 in)	150mm (952622)
20-25mm	568-366	0.8 in - 1.0 in	568-466		
25-30mm	568-367	1.0 in - 1.2 in	568-467	±6µm (within 6µm) ±0.0003 in (within 0.0003 in)	150mm (952623)
30-40mm	568-368	1.2 in - 1.6 in	568-468		
40-50mm	568-369	1.6 in - 2.0 in	568-469	±6µm (within 6µm) ±0.0003 in (within 0.0003 in)	
50-63mm	568-370	2.0 in - 2.5 in	568-470		
62-75mm	568-371	2.5 in - 3.0 in	568-471	±6µm (within 6µm) ±0.0003 in (within 0.0003 in)	
75-88mm	568-372	3.0 in - 3.5 in	568-472		
87-100mm	568-373	3.5 in - 4.0 in	568-473	±6µm (within 6µm) ±0.0003 in (within 0.0003 in)	
100-113mm	568-374	4.0 in - 4.5 in	568-474		
112-125mm	568-375	4.5 in - 5.0 in	568-475		

*Instrumental error excluding quantizing error (maximum error)

Technical Data

Resolution: 0.001mm or 0.00005 in/0.001mm

Display: LCD

Response speed: Infinite

Battery: SR44 (1 pc), **938882**,
for initial operational checks (standard accessory)

Battery life: Approx. 5,000 hours in continuous use

Scale type: Electrostatic capacitance type absolute encoder

Functions

GO/NO-GO judgment, GO/NO-GO judgment zoom,
2-Point Preset, Zero-setting, Data hold, Error alarm,
Low battery voltage alert, Data output, Function Lock,
330° rotary display, inch/mm conversion (inch/mm models)

Optional Accessory

905338: SPC cable (1m)

905409: SPC cable (2m)

06ADV380F: USB Input Tool Direct (2m)

Connecting cables for U-WAVE-T

02AZD790F: For standard (160mm)

02AZE140F: For foot switch

-----: Extension rod (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	568-955	6-8, 8-10, 10-12mm	ø8mm, ø10mm
12-25mm	568-956	12-16, 16-20, 20-25mm	ø16mm, ø20mm
25-50mm	568-957	25-30, 30-40, 40-50mm	ø30mm, ø40mm
50-75mm	568-958	50-63, 62-75mm	ø62mm
75-100mm	568-959	75-88, 87-100mm	ø87mm

Inch/Metric		with titanium coated measuring pins	
Overall range	Order No.	Range of Individual gages	Setting rings included
0.275 in-0.5 in	568-965	0.275-0.35 in, 0.35-0.425 in, 0.425-0.5 in	0.35 in DIA., 0.425 in DIA.
0.5 in-1 in	568-966	0.5-0.65 in, 0.65-0.8 in, 0.8-1 in	0.65 in DIA., 0.8 in DIA.
1 in-2 in	568-967	1-1.2 in, 1.2-1.6 in, 1.6-2 in	1.2 in DIA., 1.6 in DIA.
2 in-3 in	568-968	2-2.5 in, 2.5-3 in	2.5 in DIA.
3 in-4 in	568-969	3-3.5 in, 3.5-4 in	3.5 in DIA.

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 rod

Metric		with titanium coated measuring pins	
Overall range	Order No.	Range of each head	Setting rings included
6-12mm	568-924	6-8, 8-10, 10-12mm	ø8mm, ø10mm
12-25mm	568-925	12-16, 16-20, 20-25mm	ø16mm, ø20mm
25-50mm	568-926	25-30, 30-40, 40-50mm	ø30mm, ø40mm
50-100mm	568-927	50-63, 62-75, 75-88, 87-100mm	ø62mm, ø87mm

Inch/Metric		with titanium coated measuring pins	
Overall range	Order No.	Range of Individual gages	Setting rings included
0.275 in-0.5 in	568-928	0.275-0.35 in, 0.35-0.425 in, 0.425-0.5 in	0.35 in DIA., 0.425 in DIA.
0.5 in-1 in	568-929	0.5-0.65 in, 0.65-0.8 in, 0.8-1 in	0.65 in DIA., 0.8 in DIA.
1 in-2 in	568-930	1-1.2 in, 1.2-1.6 in, 1.6-2 in	1.2 in DIA., 1.6 in DIA.
2 in-4 in	568-936	2-2.5 in, 2.5-3 in, 3-3.5 in, 3.5-4 in	2.5 in DIA., 3.5 in DIA.



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 rod
6-8mm	468-161	0.275 in - 0.35 in	468-261	±2µm (within 2µm) ±0.0001 in (within 0.0001 in)	100mm (952322)
8-10mm	468-162	0.35 in - 0.425 in	468-262		
10-12mm	468-163	0.425 in - 0.5 in	468-263	±2µm (within 2µm) ±0.0001 in (within 0.0001 in)	150mm (952621)
12-16mm	468-164	0.5 in - 0.65 in	468-264		
16-20mm	468-165	0.65 in - 0.8 in	468-265	±3µm (within 3µm) ±0.00015 in (within 0.00015 in)	150mm (952622)
20-25mm	468-166	0.8 in - 1 in	468-266		
25-30mm	468-167	1 in - 1.2 in	468-267	±5µm (within 5µm) ±0.00025 in (within 0.00025 in)	150mm (952623)
30-40mm	468-168	1.2 in - 1.6 in	468-268		
40-50mm	468-169	1.6 in - 2 in	468-269	±5µm (within 5µm) ±0.00025 in (within 0.00025 in)	150mm (952623)
50-63mm	468-170	2 in - 2.5 in	468-270		
62-75mm	468-171	2.5 in - 3 in	468-271	±5µm (within 5µm) ±0.00025 in (within 0.00025 in)	150mm (952623)
75-88mm	468-172	3 in - 3.5 in	468-272		
87-100mm	468-173	3.5 in - 4 in	468-273	±5µm (within 5µm) ±0.00025 in (within 0.00025 in)	150mm (952623)
100-125mm	468-174	4 in - 5 in	468-274		
125-150mm	468-175	5 in - 6 in	468-275	±5µm (within 5µm) ±0.00025 in (within 0.00025 in)	150mm (952623)
150-175mm	468-176	6 in - 7 in	468-276		
175-200mm	468-177	7 in - 8 in	468-277	±5µm (within 5µm) ±0.00025 in (within 0.00025 in)	150mm (952623)
200-225mm	468-178	8 in - 9 in	468-278		
225-250mm	468-179	9 in - 10 in	468-279	±5µm (within 5µm) ±0.00025 in (within 0.00025 in)	150mm (952623)
250-275mm	468-180	10 in - 11 in	468-280		
275-300mm	468-181	11 in - 12 in	468-281	±5µm (within 5µm) ±0.00025 in (within 0.00025 in)	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		Inch/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		Inch/Metric		with titanium coated measuring pins	
Overall range	Order No.	Range of Individual gages	Setting rings included		
0.275 in-0.5 in	468-986	0.275-0.35 in, 0.35-0.425 in, 0.425-0.5 in	0.35 in DIA., 0.425 in DIA.		
0.5 in-1 in	468-987	0.5-0.65 in, 0.65-0.8 in, 0.8-1 in	0.65 in DIA., 0.8 in DIA.		
1 in-2 in	468-988	1-1.2 in, 1.2-1.6 in, 1.6-2 in	1.2 in DIA., 1.6 in DIA.		
2 in-3 in	468-989	2-2.5 in, 2.5-3 in	2.5 in DIA.		
3 in-4 in	468-990	3-3.5 in, 3.5-4 in	3.5 in DIA.		

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

Metric		Inch/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		Inch/Metric		with titanium coated measuring pins	
Range	Order No.	Range of each head	Setting rings included		
0.275 in-0.5 in	468-976	0.275-0.35 in, 0.35-0.425 in, 0.425-0.5 in	0.35 in DIA., 0.425 in DIA.		
0.5 in-0.8 in	468-977	0.5-0.65 in, 0.65-0.8 in	0.65 in DIA.		
0.8 in-2 in	468-978	0.8-1 in, 1-1.2 in, 1.2-1.6 in, 1.6-2 in	1 in DIA., 1.6 in DIA.		
2 in-4 in	468-979	2-2.5 in, 2.5-3 in, 3-3.5 in, 3.5-4 in	2.5 in DIA., 3.5 in DIA.		
4 in-8 in	468-980	4-5 in, 5-6 in, 6-7 in, 7-8 in	5 in DIA., 7 in DIA.		



Technical Data

Display: LCD
 Battery: SR44 (1 pc), **938882**,
 for initial operational checks (standard accessory)
 Battery life: Approx. 1.2 years under normal use
 Scale type: Electromagnetic induction-type rotary encoder

Functions

Zero-setting, Origin restoration, Data hold, 2-point Preset
 Function lock (see illustration of lock symbol below)

Optional Accessories

05CZA662: SPC cable (1m)
05CZA663: SPC cable (2m)
06ADV380B: USB Input Tool Direct (2m)
 Connecting cables for U-WAVE-T
02AZD790B: For standard (160mm)
02AZE140B: For foot switch
04AZB157: Mounting bracket
 -----: Extension rod (refer to the order No. list)



Holtest Type II

Individual Gages: includes a micrometer thimble with measuring head

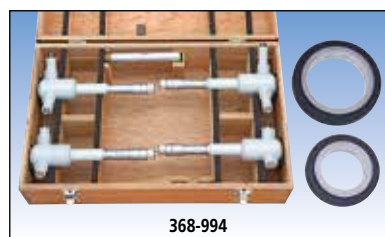
Metric		Inch/Metric		Accuracy	Extension rod
Range	Order No.	Range	Order No.		
12-16mm	368-764	0.5 in - 0.65 in	368-864	±2µm (within 2µm)	150mm (952621)
16-20mm	368-765	0.65 in - 0.8 in	368-865	±0.0001 in (within 0.0001 in)	
20-25mm	368-766	0.8 in - 1 in	368-866		
25-30mm	368-767	1 in - 1.2 in	368-867		150mm (952622)
30-40mm	368-768	1.2 in - 1.6 in	368-868		
40-50mm	368-769	1.6 in - 2 in	368-869	±3µm (within 3µm)	
50-63mm	368-770	2 in - 2.5 in	368-870	±0.00015 in (within 0.00015 in)	
62-75mm	368-771	2.5 in - 3 in	368-871		
75-88mm	368-772	3 in - 3.5 in	368-872		
87-100mm	368-773	3.5 in - 4 in	368-873		
100-125mm	368-774	4 in - 5 in	368-874		
125-150mm	368-775	5 in - 6 in	368-875		150mm (952623)
150-175mm	368-776	6 in - 7 in	368-876		
175-200mm	368-777	7 in - 8 in	368-877	±5µm (within 5µm)	
200-225mm	368-778	8 in - 9 in	368-878	±0.00025 in (within 0.00025 in)	
225-250mm	368-779	9 in - 10 in	368-879		
250-275mm	368-780	10 in - 11 in	368-880		
275-300mm	368-781	11 in - 12 in	368-881		

Technical Data

Accuracy: Refer to the list of specifications.
 Graduation: 0.005mm or 0.0002 in
 Measuring method: Three-point method
 Contact point: Hardened steel

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

Metric				Inch/Metric			
Overall range	Order No.	Range of each gage	Setting rings included	Overall range	Order No.	Range of each gage	Setting rings included
12-20mm	368-991	12-16, 16-20mm	ø16mm	0.5 in-0.8 in	368-995	0.5-0.65 in, 0.65-0.8 in	0.65 in DIA.
20-50mm	368-992	20-25, 25-30, 30-40, 40-50mm	ø25mm, ø40mm	0.8 in-2 in	368-996	0.8-1 in, 1-1.2 in, 1.2-1.6 in, 1.6-2 in	1 in DIA., 1.6 in DIA.
50-100mm	368-993	50-63, 62-75, 75-88, 87-100mm	ø62mm, ø87mm	2 in-4 in	368-997	2-2.5 in, 2.5-3 in, 3-3.5 in, 3.5-4 in	2.5 in DIA., 3.5 in DIA.
100-200mm	368-994	100-125, 125-150, 150-175, 175-200mm	ø125mm, ø175mm	4 in-8 in	368-998	4-5 in, 5-6 in, 6-7 in, 7-8 in	5 in DIA., 7 in DIA.



Holtest

Individual Gages: includes a micrometer thimble with measuring head

Metric		Inch/Metric		with titanium coated measuring pins	
Size range	Order No.	Size range	Order No.	Accuracy*	Extension rod
2-2.5mm	368-001	0.08 in - 0.1 in	368-021	$\pm 2\mu\text{m}$ (within $2\mu\text{m}$) ± 0.0001 in (within 0.0001 in)	100mm (952322)
2.5-3mm	368-002	0.1 in - 0.12 in	368-022		
3-4mm	368-003	0.12 in - 0.16 in	368-023		
4-5mm	368-004	0.16 in - 0.2 in	368-024		
5-6mm	368-005	0.2 in - 0.24 in	368-025		
—	—	0.24 in - 0.28 in	368-026		
6-8mm	368-161	0.275 in - 0.35 in	368-261	$\pm 2\mu\text{m}$ (within $2\mu\text{m}$) ± 0.0001 in (within 0.0001 in)	150mm (952621)
8-10mm	368-162	0.35 in - 0.425 in	368-262		
10-12mm	368-163	0.425 in - 0.5 in	368-263		
12-16mm	368-164	0.5 in - 0.65 in	368-264		
16-20mm	368-165	0.65 in - 0.8 in	368-265		
20-25mm	368-166	0.8 in - 1 in	368-266		
25-30mm	368-167	1 in - 1.2 in	368-267	$\pm 3\mu\text{m}$ (within $3\mu\text{m}$) ± 0.00015 in (within 0.00015 in)	150mm (952622)
30-40mm	368-168	1.2 in - 1.6 in	368-268		
40-50mm	368-169	1.6 in - 2 in	368-269		
50-63mm	368-170	2 in - 2.5 in	368-270		
62-75mm	368-171	2.5 in - 3 in	368-271		
75-88mm	368-172	3 in - 3.5 in	368-272		
87-100mm	368-173	3.5 in - 4 in	368-273	$\pm 5\mu\text{m}$ (within $5\mu\text{m}$) ± 0.00025 in (within 0.00025 in)	150mm (952623)
100-125mm	368-174	4 in - 5 in	368-274		
125-150mm	368-175	5 in - 6 in	368-275		
150-175mm	368-176	6 in - 7 in	368-276		
175-200mm	368-177	7 in - 8 in	368-277		
200-225mm	368-178	8 in - 9 in	368-278		
225-250mm	368-179	9 in - 10 in	368-279		
250-275mm	368-180	10 in - 11 in	368-280		
275-300mm	368-181	11 in - 12 in	368-281		

*Instrumental error (maximum error)

Technical Data

Accuracy: Refer to the order No. list.

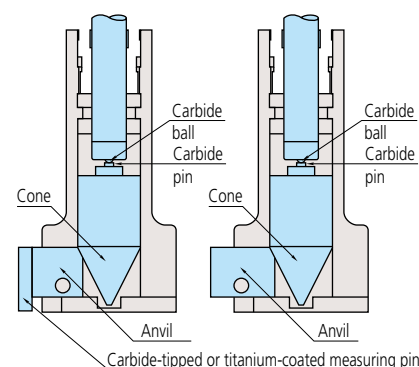
Graduation: 0.001mm, 0.005mm*, 0.0001 in or 0.0002 in* (*over 12mm or 0.5 in models)

Range	Measuring method	Measuring pin material
2-3mm 0.08-0.12 in	Two-point	Carbide
3-6mm 0.12-0.28 in	Two-point	Carbide
6-12mm 0.28-0.5 in	Three-point	Carbide
over 12mm over 0.5 in	Three-point	Titanium-coated alloy steel

Optional Accessories

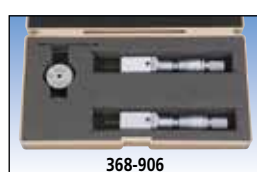
-----: Extension rod (refer to the order No. list)

Name of Each Part

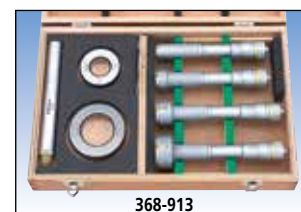


Gage Sets: includes several individual gages to cover the overall size range of the set

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	$\varnothing 2.5\text{mm}$
3-6mm	368-907	3-4, 4-5, 5-6mm	$\varnothing 4\text{mm}$, $\varnothing 5\text{mm}$
6-12mm	368-911	6-8, 8-10, 10-12mm	$\varnothing 8\text{mm}$, $\varnothing 10\text{mm}$
12-20mm	368-912	12-16, 16-20mm	$\varnothing 16\text{mm}$
20-50mm	368-913	20-25, 25-30, 30-40, 40-50mm	$\varnothing 25\text{mm}$, $\varnothing 40\text{mm}$
50-100mm	368-914	50-63, 62-75, 75-88, 87-100mm	$\varnothing 62\text{mm}$, $\varnothing 87\text{mm}$
100-200mm	368-915	100-125, 125-150, 150-175, 175-200mm	$\varnothing 125\text{mm}$, $\varnothing 175\text{mm}$



Inch/Metric		with titanium coated measuring pins	
Overall range	Order No.	Range of each gage	Setting rings included
0.08 in-0.12 in	368-926	0.08-0.1 in, 0.1-0.12 in	0.1 in DIA.
0.12 in-0.28 in	368-927	0.12-0.16 in, 0.16-0.2 in, 0.2-0.24 in, 0.24-0.28 in	0.16 in DIA., 0.24 in DIA.
0.275 in-0.5 in	368-916	0.275-0.35 in, 0.35-0.425 in, 0.425-0.5 in	0.35 in DIA., 0.5 in DIA.
0.5 in-0.8 in	368-917	0.5-0.65 in, 0.65-0.8 in	0.65 in DIA.
0.8 in-2 in	368-918	0.8-1 in, 1-1.2 in, 1.2-1.6 in, 1.6-2 in	1 in DIA., 1.6 in DIA.
2 in-4 in	368-919	2-2.5 in, 2.5-3 in, 3-3.5 in, 3.5-4 in	2.5 in DIA., 3.5 in DIA.
4 in-8 in	368-920	4-5 in, 5-6 in, 6-7 in, 7-8 in	5 in DIA., 7 in DIA.



Optional Setting Rings

Setting Rings



177-300

Ceramic Setting Rings



177-424

177-429

177-432



177-147



177-146



177-139



177-205

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

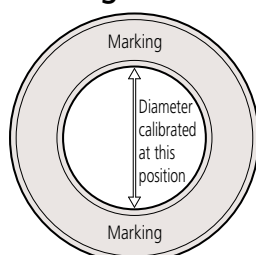
Uncertainty of marked diameter value:

- ±1.5μm for ø1-100mm
- ±2.5μm for ø125-300mm
- ±0.00006 in for 0.1 in-1.8 in DIA.
- ±0.00010 in for 2 in-12 in 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
- 0.00004 in for 0.1 in-2.4 in DIA.
- 0.00006 in for 2.5 in-3.6 in DIA.
- 0.00008 in for 4 in-6 in DIA.
- 0.00010 in for 7 in-9 in DIA.
- 0.00012 in for 10 in-12 in DIA.

Measuring Direction



Inch

Size	Order No.	Accuracy*
0.1 in	177-209	±0.0004 in
0.16 in	177-206 / 177-518**	
0.24 in	177-207 / 177-520**	
0.275 in	177-281 / 177-522**	
.35 in	177-179 / 177-523**	
.425 in	177-283 / 177-524**	
.50 in	177-180 / 177-525**	
.60 in	177-181	
.65 in	177-182 / 177-527**	
.70 in	177-183	
.80 in	177-287 / 177-529**	
1.0 in	177-184 / 177-530**	
1.2 in	177-289 / 177-531**	
1.4 in	177-185 / 177-532**	±0.0008 in
1.6 in	177-291 / 177-533**	
1.8 in	177-186 / 177-534**	
2.0 in	177-187	
2.4 in	177-293	
2.5 in	177-315	
2.8 in	177-188	
3.0 in	177-317	
3.2 in	177-295	
3.5 in	177-319	
3.6 in	177-189	
4.0 in	177-297	
5.0 in	177-299	
6.0 in	177-301	
7.0 in	177-303	
8.0 in	177-305	
9.0 in	177-307	
10.0 in	177-309	
11.0 in	177-311	
12.0 in	177-313	

*Tolerance between the nominal size and the actual diameter
**Ceramic

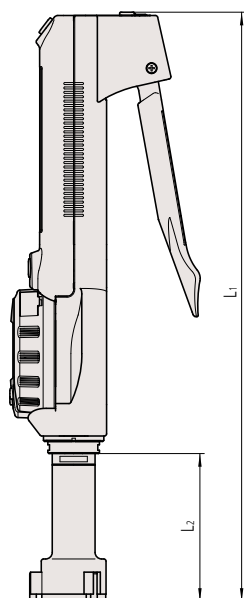
Metric

Size	Order No.	Accuracy*
1mm	177-220	±10μm
1.1mm	177-222	
1.2mm	177-225	
1.3mm	177-227	
1.4mm	177-230	
1.75mm	177-236	
2mm	177-239	
2.25mm	177-242	
2.5mm	177-208	
2.75mm	177-246	
3mm	177-248	
3.25mm	177-250	
3.5mm	177-252	
3.75mm	177-255	
4mm	177-204 / 177-418**	
4.5mm	177-257	
5mm	177-205	
5.5mm	177-263	
6mm	177-267 / 177-420**	
6.5mm	177-271	
7mm	177-275	
8mm	177-125 / 177-423**	
9mm	177-279	
10mm	177-126 / 177-424**	
12mm	177-284 / 177-425**	
14mm	177-132	±20μm
16mm	177-177 / 177-427**	
17mm	177-133	
18mm	177-285	
20mm	177-286 / 177-429**	
25mm	177-139 / 177-430**	
30mm	177-288 / 177-431**	
35mm	177-140 / 177-432**	
40mm	177-290 / 177-433**	
45mm	177-178 / 177-434**	
50mm	177-146	
60mm	177-292	
62mm	177-314	
70mm	177-147	
75mm	177-316	
80mm	177-294	
87mm	177-318	
90mm	177-148	
100mm	177-296	
125mm	177-298	
150mm	177-300	
175mm	177-302	
200mm	177-304	
225mm	177-306	
250mm	177-308	
275mm	177-310	
300mm	177-312	

*Tolerance between the nominal size and the actual diameter
**Ceramic

Dimensions

Borematic

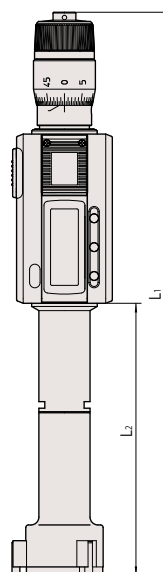


Unit: mm

Range	L2	L1
6-12	83	284
12-20	53	255
20-30	59	261
30-50	67	269
50-125	75	277

External appearance differs depending on the measuring range.

Digimatic Holtest

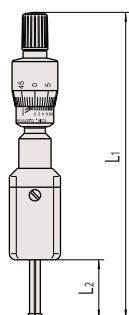


Unit: mm

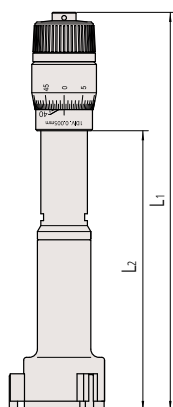
Range	L2	L1
6-12	59	175 - 177
12-20	84	197.5 - 201.5
20-30	93	206.9 - 211.9
30-50	103.8	214.7 - 224.7
50-100	105.4	219.6 - 232.6
100-300	151.4	286.3 - 311.3

- 1) L2 is maximum depth of measurement possible.
- 2) External view differs depending on measurement range.

Holtest



Unit: mm



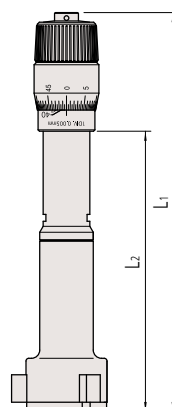
Range	L2	L1
2-3	12	103.5 - 104
3-6	22	113 - 114

External appearance differs depending on the measuring range.

Range	L2	L1
6-12	59	102 - 104
12-20	82	126 - 130
20-30	94	137 - 142
30-50	102	145 - 155
50-100	105	150 - 163
100-300	161	227 - 252

External appearance differs depending on the measuring range.

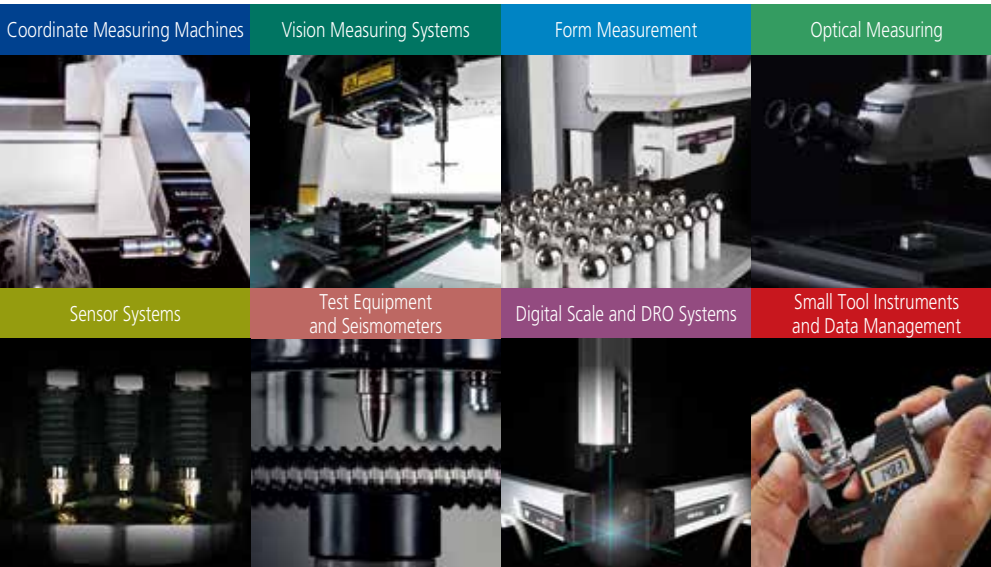
Holtest Type II



Unit: mm

Range	L2	L1
12-20	82	126 - 130
20-30	94	137 - 142
30-50	102	145 - 155
50-100	105	150 - 163
100-300	161	227 - 252

External appearance differs depending on the measuring range.



**Whatever your challenges are,
Mitutoyo supports you from start to finish.**

Mitutoyo is not only a manufacturer of top quality measuring products but one that also offers qualified support for the lifetime of the equipment, backed up by comprehensive services that ensure your staff can make the very best use of the investment.

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