

HOLTEST / BOREMATIC

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



High-accuracy world-class performing Three-Point / Two-Point Holtest

Spring-loaded operation for quick and easy measurement

Micrometer adjustment provides stable tactile feedback

Borematic



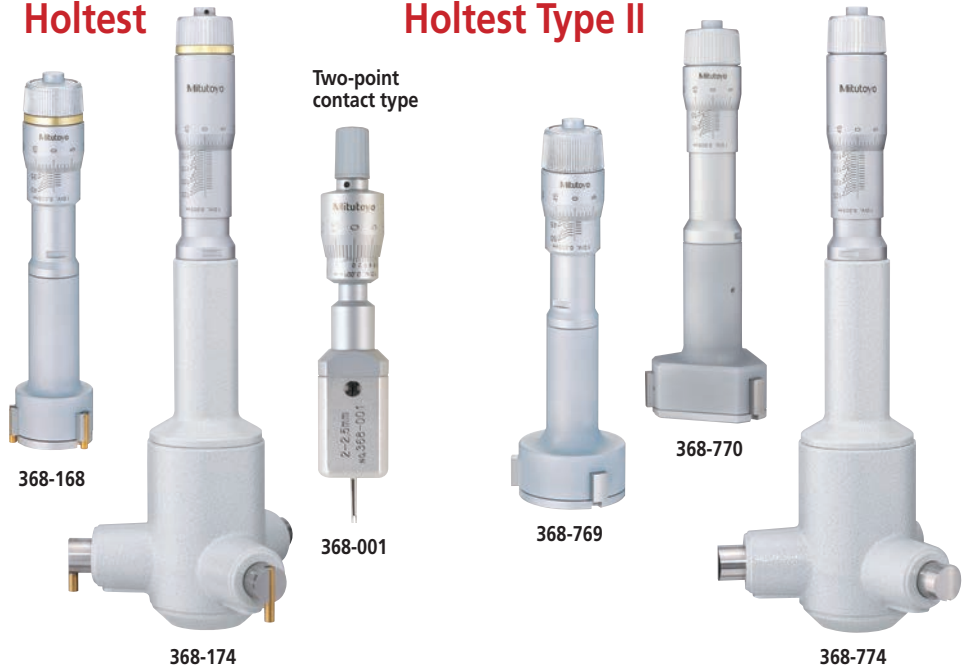
Digimatic Holtest



Micrometer adjustment provides stable tactile feedback

Holtest

Holtest Type II



The Mitutoyo Holtest series, known for its highly stable three-point self-centering action has been further enhanced with titanium nitride coated contact surfaces.

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 quick and easy measurement.
- Built-in Absolute System eliminates the need to set the origin point every time the unit is turned on. The system is immune to over-speed errors, thus increasing the reliability of measurement.
- DIGIMATIC Borematic is compatible with statistical process control systems and measurement support systems.
- Built-in tolerance judgment function allows go/no-go judgment based on user-defined upper and lower limit settings.

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 ensures 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 minimal operator variation.

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 are supported for maximum efficiency.
- DIGIMATIC Holtest is compatible with statistical process control systems and measurement support systems.
- DIGIMATIC Holtest can memorize two preset values for the datum point.
- Function lock key prevents changing the datum point accidentally.
- Constant-force ratchet enable consistent measurements with minimal operator variation.

Holtest Type II

- The anvils and cone are made from an alloy tool steel with a hardness of HRC60.5 or more.
- Custom dimensions are available by special order.

Titanium-coated Measuring Pins

A titanium-nitride coating is applied to the contact faces of the measuring pins (over 6mm range models). Titanium-nitride coated measuring pins provide excellent durability and impact resistance.



Inspection Certificate Included

The inspection certificate supplied with each instrument ensures product quality and safety. Mitutoyo will issue an A2LA/NIST calibration certificate on request for an additional cost.



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

Quick, spring-loaded lever action/movement



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)	150mm (952623)
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)	150mm (952623)
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)	150mm (952623)
100-113mm	568-374	4.0 in - 4.5 in	568-474		
112-125mm	568-375	4.5 in - 5.0 in	568-475		

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 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

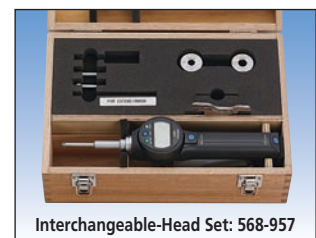
Metric				Inch/Metric			
Overall range	Order No.	Range of Individual gages	Setting rings included	Overall range	Order No.	Range of Individual gages	Setting rings included
6-12mm	568-955	6-8, 8-10, 10-12mm	ø8mm, ø10mm	0.275 in-0.5 in	568-965	0.275-0.35 in, 0.35-0.425 in, 0.425-0.5 in	0.35 in DIA., 0.425 in DIA.
12-25mm	568-956	12-16, 16-20, 20-25mm	ø16mm, ø20mm	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.
25-50mm	568-957	25-30, 30-40, 40-50mm	ø25mm, ø40mm	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.
50-75mm	568-958	50-63, 62-75mm	ø62mm	2 in-3 in	568-968	2-2.5 in, 2.5-3 in	2.5 in DIA.
75-100mm	568-959	75-88, 87-100mm	ø87mm	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				Inch/Metric			
Overall range	Order No.	Range of each head	Setting rings included	Overall range	Order No.	Range of Individual gages	Setting rings included
6-12mm	568-924	6-8, 8-10, 10-12mm	ø8mm, ø10mm	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.
12-25mm	568-925	12-16, 16-20, 20-25mm	ø16mm, ø20mm	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.
25-50mm	568-926	25-30, 30-40, 40-50mm	ø30mm, ø40mm	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.
50-100mm	568-927	50-63, 62-75, 75-88, 87-100mm	ø62mm, ø87mm	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.



Complete-Unit Set: 568-924



Interchangeable-Head Set: 568-957

Digimatic Holtest

Stable, micrometer-based movement

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



Metric		Inch/Metric		Accuracy	Extension rod
Range	Order No.	Range	Order No.		
6-8mm	468-161	0.275 in - 0.35 in	468-261	±2µm (max diff. of 2µm) ±0.0001 in (max diff. of 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	±3µm (max diff. of 2µm) ±0.00015 in (max diff. of 0.00015 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 (max diff. of 3µm) ±0.00015 in (max diff. of 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	±4µm (max diff. of 4µm) ±0.0002 in (max diff. of 0.0002 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 (max diff. of 5µm) ±0.00025 in (max diff. of 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	±6µm (max diff. of 6µm) ±0.0003 in (max diff. of 0.0003 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	±6µm (max diff. of 6µm) ±0.0003 in (max diff. of 0.0003 in)	150mm (952623)
100-125mm	468-174	4 in - 5 in	468-274		
125-150mm	468-175	5 in - 6 in	468-275	±6µm (max diff. of 6µm) ±0.0003 in (max diff. of 0.0003 in)	150mm (952623)
150-175mm	468-176	6 in - 7 in	468-276		
175-200mm	468-177	7 in - 8 in	468-277	±6µm (max diff. of 6µm) ±0.0003 in (max diff. of 0.0003 in)	150mm (952623)
200-225mm	468-178	8 in - 9 in	468-278		
225-250mm	468-179	9 in - 10 in	468-279	±6µm (max diff. of 6µm) ±0.0003 in (max diff. of 0.0003 in)	150mm (952623)
250-275mm	468-180	10 in - 11 in	468-280		
275-300mm	468-181	11 in - 12 in	468-281		

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 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)



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

Metric	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	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	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	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.



Holtest

Stable, micrometer-based movement



Individual Gages: includes a micrometer thimble with measuring head

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

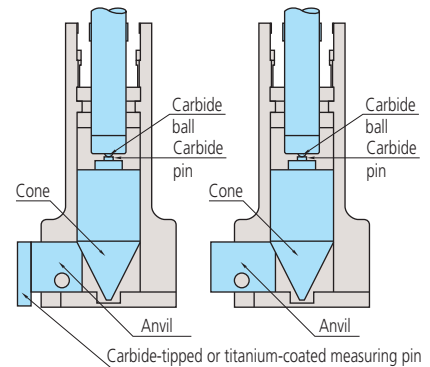
Metric		Inch/Metric		Accuracy	Extension rod
Size range	Order No.	Size range	Order No.		
2-2.5mm	368-001	0.08 in - 0.1 in	368-021	±2µm (max diff. 2µm) ±0.0001 in (max diff. 0.0001 in)	100mm (952322)
2.5-3mm	368-002	0.1 in - 0.12 in	368-022		
3-4mm	368-003	0.12 in - 0.16 in	368-023		
4-5mm	368-004	0.16 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	±3µm (max diff. 3µm) ±0.00015 in (max diff. 0.00015 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	±4µm (max diff. 4µm) ±0.0002 in (max diff. 0.0002 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	±5µm (max diff. 5µm) ±0.00025 in (max diff. 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	±6µm (max diff. 6µm) ±0.0003 in (max diff. 0.0003 in)	
250-275mm	368-180	10 in - 11 in	368-280		
275-300mm	368-181	11 in - 12 in	368-281		

with titanium-coated measuring pins

Optional Accessories

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

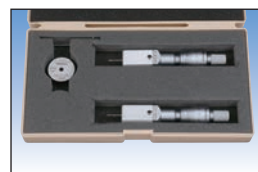
Name of Each Part



Complete Unit 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
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	368-911	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			
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.



368-906



368-912



368-913

Holtest Type II

Stable, micrometer-based movement



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) ±0.0001 in (within 0.0001 in)	150mm (952621)
16-20mm	368-765	0.65 in - 0.8 in	368-865		
20-25mm	368-766	0.8 in - 1 in	368-866	±3µm (within 3µm) ±0.00015 in (within 0.00015 in)	150mm (952622)
25-30mm	368-767	1 in - 1.2 in	368-867		
30-40mm	368-768	1.2 in - 1.6 in	368-868		
40-50mm	368-769	1.6 in - 2 in	368-869		
50-63mm	368-770	2 in - 2.5 in	368-870		
62-75mm	368-771	2.5 in - 3 in	368-871		
75-88mm	368-772	3 in - 3.5 in	368-872	±5µm (within 5µm) ±0.00025 in (within 0.00025 in)	150mm (952623)
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		
150-175mm	368-776	6 in - 7 in	368-876		
175-200mm	368-777	7 in - 8 in	368-877		
200-225mm	368-778	8 in - 9 in	368-878		
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		

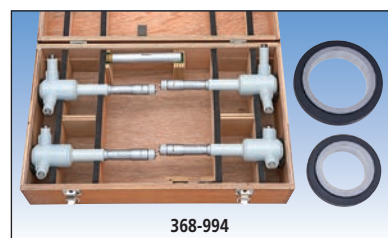
Technical Data

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

Complete Unit 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
0.5 in-0.8 in	368-995	0.5-0.65 in, 0.65-0.8 in	0.65 in DIA.
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.
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.
4 in-8 in	368-998	4-5 in, 5-6 in, 6-7 in, 7-8 in	5 in DIA., 7 in DIA.



Optional Setting Rings

Setting Rings



Ceramic Setting Rings

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 do not require anti-corrosion treatment and have extremely high wear-resistance, resulting in simple maintenance and long life.

Technical Data

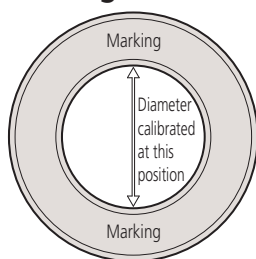
The marked value may differ from nominal size by:

- ±10µm for ø1-100mm
- ±20µm for ø125-300mm
- ±0.0004" for 0.1" - 1.8" in DIA.
- ±0.0008" for 2" - 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" for 0.1" - 2.4" DIA.
- 0.00006" for 2.5" - 3.6" DIA.
- 0.00008" for 4" - 6" DIA.
- 0.00010" for 7" - 9" DIA.
- 0.00012" for 10" - 12" DIA.

Measuring Direction



Inch

Size	Order No.	Accuracy*
0.1"	177-209	±0.00006"
0.16"	177-206 / 177-518**	
0.24"	177-207 / 177-520**	
0.275"	177-281 / 177-522**	
0.35"	177-179 / 177-523**	
0.425"	177-283 / 177-524**	
0.50"	177-180 / 177-525**	
0.60"	177-181	
0.65"	177-182 / 177-527**	
0.70"	177-183	
0.80"	177-287 / 177-529**	
1.0"	177-184 / 177-530**	
1.2"	177-289 / 177-531**	
1.4"	177-185 / 177-532**	
1.6"	177-291 / 177-533**	
1.8"	177-186 / 177-534**	
2.0"	177-187	
2.4"	177-293	
2.5"	177-315	
2.8"	177-188	
3.0"	177-317	
3.2"	177-295	
3.5"	177-319	
3.6"	177-189	
4.0"	177-297	
5.0"	177-299	
6.0"	177-301	
7.0"	177-303	
8.0"	177-305	
9.0"	177-307	
10.0"	177-309	
11.0"	177-311	
12.0"	177-313	
		±0.0001"

*Accuracy of marked diameter
**Ceramic

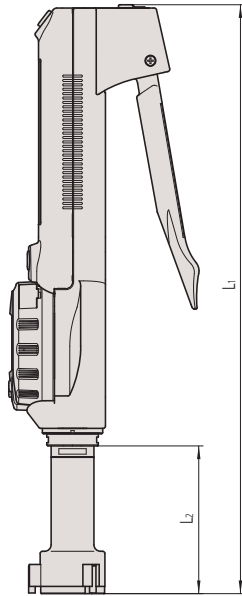
Metric

Size	Order No.	Accuracy*
1mm	177-220	±1.5µm
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	
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	
		±2.5µm

*Accuracy of marked diameter
**Ceramic

Dimensions

Borematic

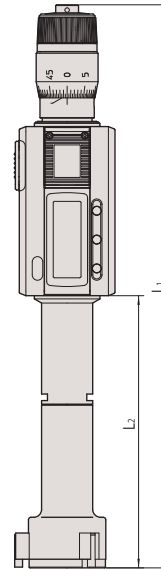


Unit: mm

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



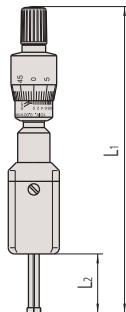
Unit: mm

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

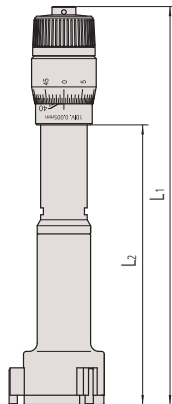
1) L2 is maximum depth of measurement possible.

2) External view differs depending on measurement range.

Holtest



Unit: mm



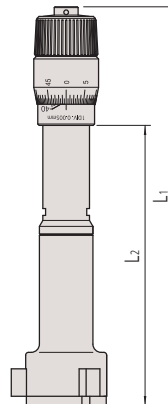
Range	L2	L1
2-3	12	103.5 - 104
3-6	22	113 - 114

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 by comprehensive services that ensure your staff can make the very best use of the investment.

Apart from the basics of calibration and repair, Mitutoyo offers product and metrology training, as well as IT support for the sophisticated software used in modern measuring technology. We can also design, build, test and deliver measuring solutions and even, if deemed cost-effective, take your critical measurement challenges in-house on a sub-contract basis.



**Find additional product literature
and our product catalog**

www.mitutoyo.com

Note: All information regarding our products, and in particular the illustrations, drawings, dimensional and performance data contained in this printed matter as well as other technical data are to be regarded as approximate average values. We therefore reserve the right to make changes to the corresponding designs. The stated standards, similar technical regulations, descriptions and illustrations of the products were valid at the time of printing. In addition, the latest applicable version of our General Trading Conditions will apply. Only quotations submitted by ourselves may be regarded as definitive. Specifications are subject to change without notice.

Mitutoyo products are subject to US Export Administration Regulations (EAR). Re-export or relocation of our products may require prior approval by an appropriate governing authority.

Trademarks and Registrations

Designations used by companies to distinguish their products are often claimed as trademarks. In all instances where Mitutoyo America Corporation is aware of a claim, the product names appear in initial capital or all capital letters. The appropriate companies should be contacted for more complete trademark and registration information.



Mitutoyo America Corporation

www.mitutoyo.com

One Number to Serve You Better
1-888-MITUTOYO (1-888-648-8869)

M³ Solution Centers:

- Aurora, Illinois (Headquarters)
- Boston, Massachusetts
- Huntersville, North Carolina
- Mason, Ohio
- Detroit, Michigan
- City of Industry, California
- Birmingham, Alabama
- Renton, Washington
- Houston, Texas