

Holtest

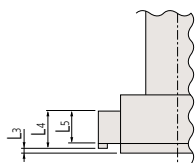
For easy and accurate measurement of inside diameters

Digimatic Holtest SERIES 468 — Three-point Internal Micrometers

MeasurLink[®] ENABLED
Data Management Software by Mitutoyo

- Three-point internal micrometer with large LCD readout. (Character height 7.4 mm)
- Titanium-coated measuring pins provide excellent durability and impact resistance and allow the instrument to measure right to the bottom of a blind hole.
- Only one SR44 battery is required and battery life is approx. 1.2 years under normal use.
- ABSolute and INCRemental measurement modes allow highly efficient operation.
- The IP65 protection rating allows the instrument to be used in the presence of splashing coolant.
- Measurements can be made close to the bottom of a blind hole.
- Deep holes can be measured by attaching an extension rod (optional).
- A function lock prevents accidental change of reference point.
- Measurement data output enables operation with Statistical Process Control (SPC) and measurement control systems. Refer to page A-3.
- An interface input tool is available for transferring measurement data, under keyboard control, directly to commercial spreadsheet software. Refer to page A-5.
- Interchangeable-Head Sets (interchangeable measuring heads type) covering an extended measuring range using multiple heads and Non-interchangeable-Head Sets are available.
- For Setting Rings, refer to page C-47.

Range (mm)	L ₃ (mm)	L ₄ (mm)	L ₅ (mm)
6 - 12	2 or below	—	2.5
12 - 20	0.3 or below	5.6	3.5
20 - 30		8.3	5.2
30 - 50		13.0	10.0
50 - 100		17.0	14.0
100 - 300	12.4 or below	21.0	13.8



468-161

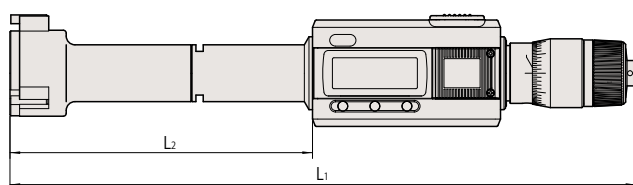


468-168



468-174

DIMENSIONS



Unit: mm

Range	L ₂	L ₁
6-8, 8-10, 10-12 mm	59	175 - 177
12-16, 16-20 mm	84	197.5 - 201.5
20-25, 25-30 mm	93	206.9 - 211.9
30-40, 40-50 mm	103.8	214.7 - 224.7
50-63, 62-75, 75-88, 87-100 mm	105.4	219.6 - 232.6
100-125, 125-150, 150-175, 175-200, 200-225, 225-250, 250-275, 275-300 mm	151.4	286.3 - 311.3

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

MeasurLink[®] ENABLED
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Products equipped with the measurement data output function can be connected to the measurement data network system MeasurLink (refer to page A-5 for details).

IP65

These marks indicate that a product has successfully passed IP65-level testing, which is carried out by the independent German certification organization TÜV Rheinland.



(Refer to page X for details.)



An inspection certificate is supplied as standard. Refer to page X for details.

IP Codes

Level 6: Dustproof.

No ingress of dust allowed.

Level 5: Protected against water jets.

Water projected in jets against the enclosure from any direction shall have no harmful effects.



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

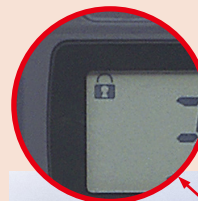
Zero-setting

Origin restoration

Data hold

2-point Preset

Function lock (see illustration of lock symbol below)



inch/mm readout (inch/mm models)

Automatic power ON/OFF

Error alarm

Data output

Optional Accessories

Refer to page A-25 for details.

• USB Input Tool Direct (2 m): **06AFM380B**

• Connecting cables for **U-WAVE-T**

For standard (160 mm): **02AZD790B**

For foot switch: **02AZE140B**

Optional Accessories

Shown mounted on stand using bracket



Mounting bracket
04AZB157

For details of Special-order Products,
refer to page C-49.

SPECIFICATIONS

Metric						
Order No.	Range*2	Resolution	Accuracy*1	Optional Accessories		
				Extension rod	SPC cable	
468-161	6 - 8 mm	0.001 mm	±2 μm (within 2 μm)	952322 (100 mm)	05CZA662 (1 m) 05CZA663 (2 m)	
468-162	8 - 10 mm			952621 (150 mm)		
468-163	10 - 12 mm					±3 μm (within 3 μm)
468-164	12 - 16 mm					
468-165	16 - 20 mm					
468-166	20 - 25 mm					
468-167	25 - 30 mm					
468-168	30 - 40 mm		±5 μm (within 5 μm)	952623 (150 mm)		
468-169	40 - 50 mm					
468-170	50 - 63 mm					
468-171	62 - 75 mm					
468-172	75 - 88 mm					
468-173	87 - 100 mm					
468-174	100 - 125 mm					
468-175	125 - 150 mm					
468-176	150 - 175 mm					
468-177	175 - 200 mm					
468-178	200 - 225 mm					
468-179	225 - 250 mm					
468-180	250 - 275 mm					
468-181	275 - 300 mm					

Inch/Metric					
Order No.	Range*2	Resolution	Accuracy*1	Optional Accessories	
				Extension rod	SPC cable
468-261	0.275 - 0.35 in	0.00005 in/ 0.001 mm	±0.0001 in (within 0.0001 in)	952322 (100 mm)	05CZA662 (1 m) 05CZA663 (2 m)
468-262	0.35 - 0.425 in			952621 (150 mm)	
468-263	0.425 - 0.5 in		±0.00015 in (within 0.00015 in)	952622 (150 mm)	
468-264	0.5 - 0.65 in				
468-265	0.65 - 0.8 in				
468-266	0.8 - 1 in				
468-267	1 - 1.2 in				
468-268	1.2 - 1.6 in				
468-269	1.6 - 2 in				
468-270	2 - 2.5 in				
468-271	2.5 - 3 in				
468-272	3 - 3.5 in	0.0001 in/ 0.001 mm	±0.00025 in (within 0.00025 in)	952623 (150 mm)	
468-273	3.5 - 4 in				
468-274	4 - 5 in				
468-275	5 - 6 in				
468-276	6 - 7 in				
468-277	7 - 8 in				
468-278	8 - 9 in				
468-279	9 - 10 in				
468-280	10 - 11 in				
468-281	11 - 12 in				

*1 Excluding quantizing error.

Accuracy: values measured across the entire measuring face.

Maximum difference: differences between the maximum and minimum values.

*2 The measurement range cannot be enlarged by measuring heads that are not standard-supplied (the accuracy is not guaranteed).

Note: Setting rings are optional.



Interchangeable-Head Sets (interchangeable
measuring heads type)
For details, refer to page C-5.



Non-interchangeable-Head Sets
For details, refer to page C-6.

Holtest

For easy and accurate measurement of inside diameters

Interchangeable-Head Sets

Metric			
Set Order No.	Range*	Content of set	Accessories (optional)
468-971	6 - 12 mm	Display unit 6 - 12 mm 1 pc Measuring head 6 - 8 mm 1 pc 8 - 10 mm 1 pc 10 - 12 mm 1 pc Setting ring (ø8, ø10) 1 pc each Extension rod (100 mm) 1 pc Spanner 2 pcs Hex wrench 1 pc Phillips screwdriver 1 pc	SPC cable with data switch 05CZA662 (1 m) 05CZA663 (2 m)
468-972	12 - 20 mm	Display unit 12 - 20 mm 1 pc Measuring head 12 - 16 mm 1 pc 16 - 20 mm 1 pc Setting ring (ø16) 1 pc Extension rod (150 mm) 1 pc Spanner 2 pcs Hex wrench 1 pc Phillips screwdriver 1 pc	
468-973	20 - 50 mm	Display unit 20 - 50 mm 1 pc Measuring head 20 - 25 mm 1 pc 25 - 30 mm 1 pc 30 - 40 mm 1 pc 40 - 50 mm 1 pc Setting ring (ø25, ø40) 1 pc each Extension rod (150 mm) 1 pc Spanner 2 pcs Hex wrench 1 pc Phillips screwdriver 1 pc	
468-974	50 - 100 mm	Display unit 50 - 100 mm 1 pc Measuring head 50 - 63 mm 1 pc 62 - 75 mm 1 pc 75 - 88 mm 1 pc 87 - 100 mm 1 pc Setting ring (ø62, ø87) 1 pc each Extension rod (150 mm) 1 pc Spanner 2 pcs Hex wrench 1 pc Phillips screwdriver 1 pc	
468-975	100 - 200 mm	Display unit 100 - 200 mm 1 pc Measuring head 100 - 125 mm 1 pc 125 - 150 mm 1 pc 150 - 175 mm 1 pc 175 - 200 mm 1 pc Setting ring (ø125, ø175) 1 pc each Extension rod (150 mm) 1 pc Spanner 2 pcs Hex wrench 1 pc Phillips screwdriver 1 pc	

Inch/Metric			
Set Order No.	Range*	Content of set	Accessories (optional)
468-976	0.275 - 0.5 in	Display unit 0.275 - 0.5 in 1 pc Measuring head 0.275 - 0.35 in 1 pc 0.35 - 0.425 in 1 pc 0.425 - 0.5 in 1 pc Setting ring (0.35 in DIA., 0.425 in DIA.) 1 pc each Extension rod (100 mm) 1 pc Spanner 2 pcs Hex wrench 1 pc Phillips screwdriver 1 pc	SPC cable with data switch 05CZA662 (1 m) 05CZA663 (2 m)
468-977	0.5 - 0.8 in	Display unit 0.5 - 0.8 in 1 pc Measuring head 0.5 - 0.65 in 1 pc 0.65 - 0.8 in 1 pc Setting ring (0.65 in DIA.) 1 pc Extension rod (150 mm) 1 pc Spanner 2 pcs Hex wrench 1 pc Phillips screwdriver 1 pc	
468-978	0.8 - 2 in	Display unit 0.8 - 2 in 1 pc Measuring head 0.8 - 1 in 1 pc 1 - 1.2 in 1 pc 1.2 - 1.6 in 1 pc 1.6 - 2 in 1 pc Setting ring (1 in DIA., 1.6 in DIA.) 1 pc each Extension rod (150 mm) 1 pc Spanner 2 pcs Hex wrench 1 pc Phillips screwdriver 1 pc	
468-979	2 - 4 in	Display unit 2 - 4 in 1 pc Measuring head 2 - 2.5 in 1 pc 2.5 - 3 in 1 pc 3 - 3.5 in 1 pc 3.5 - 4 in 1 pc Setting ring (2.5 in DIA., 3.5 in DIA.) 1 pc each Extension rod (150 mm) 1 pc Spanner 2 pcs Hex wrench 1 pc Phillips screwdriver 1 pc	
468-980	4 - 8 in	Display unit 4 - 8 in 1 pc Measuring head 4 - 5 in 1 pc 5 - 6 in 1 pc 6 - 7 in 1 pc 7 - 8 in 1 pc Setting ring (5 in DIA., 7 in DIA.) 1 pc each Extension rod (150 mm) 1 pc Spanner 2 pcs Hex wrench 1 pc Phillips screwdriver 1 pc	

* The measurement range cannot be enlarged by measuring heads that are not standard-supplied (the accuracy is not guaranteed).



Optional Accessories

Refer to page A-25 for details.
 USB Input Tool Direct (2 m): **06AFM380B**
 Connecting cables for **U-WAVE-T**
 For standard (160 mm): **02AZD790B**
 For foot switch: **02AZE140B**

Non-Interchangeable-Head Sets

Metric					Inch/Metric				
Set Order No.	Range* ²	Content of set	Accessories (optional)		Set Order No.	Range* ²	Content of set	Accessories (optional)	
			Extension rod	SPC cable				Extension rod	SPC cable
468-981	6 - 12 mm	Display unit 6 - 8 mm 1 pc 8 - 10 mm 1 pc 10 - 12 mm 1 pc Setting ring (ø8, ø10) 1 pc each Spanner 2 pcs Hex wrench 1 pc Phillips screwdriver 1 pc	100 mm 1 pc	SPC cable with data switch 05CZA662 (1 m) 05CZA663 (2 m)	468-986	0.275 - 0.5 in	Display unit 0.275 - 0.35 in 1 pc 0.35 - 0.425 in 1 pc 0.425 - 0.5 in 1 pc Setting ring (0.35 in DIA., 0.425 in DIA) 1 pc each Spanner 2 pcs Hex wrench 1 pc Phillips screwdriver 1 pc	100 mm 1 pc	SPC cable with data switch 05CZA662 (1 m) 05CZA663 (2 m)
468-982	12 - 25 mm	Display unit 12 - 16 mm 1 pc 16 - 20 mm 1 pc 20 - 25 mm 1 pc Setting ring (ø16, ø20) 1 pc each Spanner 2 pcs Hex wrench 1 pc Phillips screwdriver 1 pc	150 mm 2 pcs* ¹		468-987	0.5 - 1 in	Display unit 0.5 - 0.65 in 1 pc 0.65 - 0.8 in 1 pc 0.8 - 1 in 1 pc Setting ring (0.65 in DIA., 0.8 in DIA) 1 pc each Spanner 2 pcs Hex wrench 1 pc Phillips screwdriver 1 pc	150 mm 2 pcs* ¹	
468-983	25 - 50 mm	Display unit 25 - 30 mm 1 pc 30 - 40 mm 1 pc 40 - 50 mm 1 pc Setting ring (ø30, ø40) 1 pc each Spanner 1 pc Hex wrench 1 pc Phillips screwdriver 1 pc	150 mm 1 pc		468-988	1 - 2 in	Display unit 1 - 1.2 in 1 pc 1.2 - 1.6 in 1 pc 1.6 - 2 in 1 pc Setting ring (1.2 in DIA., 1.6 in DIA) 1 pc each Spanner 1 pc Hex wrench 1 pc Phillips screwdriver 1 pc	150 mm 1 pc	
468-984	50 - 75 mm	Display unit 50 - 63 mm 1 pc 62 - 75 mm 1 pc Setting ring (ø62) 1 pc Spanner 1 pc Hex wrench 1 pc Phillips screwdriver 1 pc	150 mm 1 pc		468-989	2 - 3 in	Display unit 2 - 2.5 in 1 pc 2.5 - 3 in 1 pc Setting ring (2.5 in DIA) 1 pc Spanner 1 pc Hex wrench 1 pc Phillips screwdriver 1 pc	150 mm 1 pc	
468-985	75 - 100 mm	Display unit 75 - 88 mm 1 pc 87 - 100 mm 1 pc Setting ring (ø87) 1 pc Spanner 1 pc Hex wrench 1 pc Phillips screwdriver 1 pc	150 mm 1 pc		468-990	3 - 4 in	Display unit 3 - 3.5 in 1 pc 3.5 - 4 in 1 pc Setting ring (3.5 in DIA) 1 pc Spanner 1 pc Hex wrench 1 pc Phillips screwdriver 1 pc	150 mm 1 pc	

*1 Total 2 pcs of extension rods: 1 pcs of Part **No. 952621** (for measuring range 12 to 16 mm, 16 to 20 mm) and Part **No. 952622** (for measuring range 20 to 25 mm).
Two extension rods cannot be connected due to the different mounting positions.

*2 The measurement range cannot be enlarged by measuring heads that are not standard-supplied (the accuracy is not guaranteed).



468-981



468-982



468-983



468-984



468-985

Optional Accessories

Refer to page A-25 for details.

USB Input Tool Direct (2 m): **06AFM380B**

Connecting cables for **U-WAVE-T**

For standard (160 mm): **02AZD790B**

For foot switch: **02AZE140B**

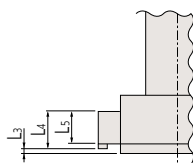
Holtest

For easy and accurate measurement of inside diameters

Holtest SERIES 368 — Three-point/Two-point Internal Micrometers

- Titanium-coated measuring pins on the three-point type (over 6 mm range models) provide excellent durability and impact resistance and allow the instrument to measure right to the bottom of a blind hole.
- Three-point bore micrometer with measuring range 6 mm or longer allows stable measurement through automatic centering.
- Can measure deep holes using an Extension rod (optional) which is available on models over 6 mm (0.275 in) measuring range.
- Ratchet Stop ensures constant-force, repeatable measurement.
- Setting Rings for accurately setting the instrument are optional. Refer to page C-47 for details.

Range (mm)	L3 (mm)	L4 (mm)	L5 (mm)
2 - 6	—	—	2
6 - 12	2 or below	—	2.5
12 - 20	0.3 or below	5.6	3.5
20 - 30		8.3	5.2
30 - 50		13.0	10.0
50 - 100	12.4 or below	17.0	14.0
100 - 300		21.0	13.8



368-001
(Two-point contact model)



368-168



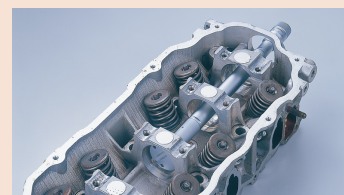
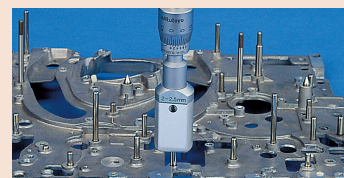
368-170



368-174



An inspection certificate is supplied as standard. Refer to page X for details.



Application using an extension rod

For details of Special-order Products, refer to page C-49.

SPECIFICATIONS

Metric					Inch				
Order No.	Range*2	Graduation	Accuracy*1	Extension Rod (optional)	Order No.	Range*2	Graduation	Accuracy*1	Extension Rod (optional)
(Two-point)		0.001 mm	$\pm 2 \mu\text{m}$ (within 2 μm)	—	(Two-point)		0.0001 in	± 0.0001 in (within 0.0001 in)	—
368-001	2 - 2.5 mm				368-021	0.08 - 0.1 in			
368-002	2.5 - 3 mm				368-022	0.1 - 0.12 in			
368-003	3 - 4 mm				368-023	0.12 - 0.16 in			
368-004	4 - 5 mm				368-024	0.16 - 0.2 in			
368-005	5 - 6 mm				368-025	0.2 - 0.24 in			
		0.001 mm	$\pm 2 \mu\text{m}$ (within 2 μm)	952322 (100 mm)	368-026	0.24 - 0.28 in	0.0001 in	± 0.0001 in (within 0.0001 in)	952322 (100 mm)
(Three-point)					(Three-point)				
368-161	6 - 8 mm				368-261	0.275 - 0.35 in			
368-162	8 - 10 mm				368-262	0.35 - 0.425 in			
368-163	10 - 12 mm				368-263	0.425 - 0.5 in			
368-164	12 - 16 mm	0.005 mm	$\pm 3 \mu\text{m}$ (within 3 μm)	952621 (150 mm)	368-264	0.5 - 0.65 in	0.0002 in	± 0.00015 in (within 0.00015 in)	952621 (150 mm)
368-165	16 - 20 mm				368-265	0.65 - 0.8 in			
368-166	20 - 25 mm				368-266	0.8 - 1 in			
368-167	25 - 30 mm				368-267	1 - 1.2 in			
368-168	30 - 40 mm				368-268	1.2 - 1.6 in			
368-169	40 - 50 mm	0.005 mm	$\pm 3 \mu\text{m}$ (within 3 μm)	952622 (150 mm)	368-269	1.6 - 2 in	0.0002 in	± 0.00015 in (within 0.00015 in)	952622 (150 mm)
368-170	50 - 63 mm				368-270	2 - 2.5 in			
368-171	62 - 75 mm				368-271	2.5 - 3 in			
368-172	75 - 88 mm				368-272	3 - 3.5 in			
368-173	87 - 100 mm				368-273	3.5 - 4 in			
368-174	100 - 125 mm	0.005 mm	$\pm 5 \mu\text{m}$ (within 5 μm)	952623 (150 mm)	368-274	4 - 5 in	0.0002 in	± 0.00025 in (within 0.00025 in)	952623 (150 mm)
368-175	125 - 150 mm				368-275	5 - 6 in			
368-176	150 - 175 mm				368-276	6 - 7 in			
368-177	175 - 200 mm				368-277	7 - 8 in			
368-178	200 - 225 mm				368-278	8 - 9 in			
368-179	225 - 250 mm	0.005 mm	$\pm 5 \mu\text{m}$ (within 5 μm)	952623 (150 mm)	368-279	9 - 10 in	0.0002 in	± 0.00025 in (within 0.00025 in)	952623 (150 mm)
368-180	250 - 275 mm				368-280	10 - 11 in			
368-181	275 - 300 mm				368-281	11 - 12 in			

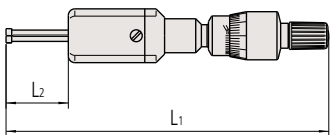
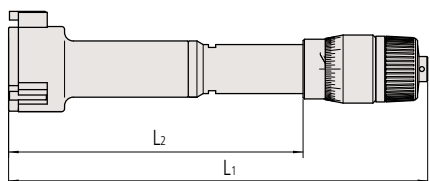
*1 Accuracy: values measured across the entire measuring face.

Maximum difference: differences between the maximum and minimum values.

*2 The measurement range cannot be enlarged by measuring heads that are not standard-supplied (the accuracy is not guaranteed).

Note: Setting rings are optional.

DIMENSIONS

			Unit: mm
Range	L2	L1	
2 - 2.5, 2.5 - 3 mm	12	103.5 - 104	
3 - 4, 4 - 5, 5 - 6 mm	22	113 - 114	
External appearance differs depending on the measuring range.			
			
Range	L2	L1	
6 - 8, 8 - 10, 10 - 12 mm	59	102 - 104	
12 - 16, 16 - 20 mm	82	126 - 130	
20 - 25, 25 - 30 mm	94	137 - 142	
30 - 40, 40 - 50 mm	102	145 - 155	
50 - 63, 62 - 75, 75 - 88, 87 - 100 mm	105	150 - 163	
100 - 125, 125 - 150, 150 - 175, 175 - 200, 200 - 225, 225 - 250, 250 - 275, 275 - 300 mm	161	227 - 252	
External appearance differs depending on the measuring range.			

Holtest

For easy and accurate measurement of inside diameters

Holtest SERIES 368 — Three-point/Two-point Internal Micrometers

Non-Interchangeable-Head Sets

Metric			
Set Order No.	Range*	Graduation	Content of Set
(Two-point) 368-906	2 - 3 mm	0.001 mm	Micrometer head unit 2 - 2.5 mm 1 pc 2.5 - 3 mm 1 pc Setting ring (ø2.5) 1 pc Hex wrench 1 pc
368-907	3 - 6 mm		Micrometer head unit 3 - 4 mm 1 pc 4 - 5 mm 1 pc 5 - 6 mm 1 pc Setting ring (ø4, ø5) 1pc each Hex wrench 1 pc
(Three-point) 368-911	6 - 12 mm		Micrometer head unit 6 - 8 mm 1 pc 8 - 10 mm 1 pc 10 - 12 mm 1 pc Setting ring (ø8, ø10) 1pc each Extension rod (100 mm) 1 pc Spanner 2 pcs Hex wrench 1 pc
368-912	12 - 20 mm	0.005 mm	Micrometer head unit 12 - 16 mm 1 pc 16 - 20 mm 1 pc Setting ring (ø16) 1 pc Extension rod (150 mm) 1 pc Spanner 2 pcs Hex wrench 1 pc
368-913	20 - 50 mm		Micrometer head unit 20 - 25 mm 1 pc 25 - 30 mm 1 pc 30 - 40 mm 1 pc 40 - 50 mm 1 pc Setting ring (ø25, ø40) 1pc each Extension rod (150 mm) 1 pc Spanner 2 pcs Hex wrench 1 pc
368-914	50 - 100 mm		Micrometer head unit 50 - 63 mm 1 pc 62 - 75 mm 1 pc 75 - 88 mm 1 pc 87 - 100 mm 1 pc Setting ring (ø62, ø87) 1pc each Extension rod (150 mm) 1 pc Spanner 2 pcs Hex wrench 1 pc
368-915	100 - 200 mm		Micrometer head unit 100 - 125 mm 1 pc 125 - 150 mm 1 pc 150 - 175 mm 1 pc 175 - 200 mm 1 pc Setting ring (ø125, ø175) 1pc each Extension rod (150 mm) 1 pc Spanner 2 pcs Hex wrench 1 pc

Inch			
Set Order No.	Range*	Graduation	Content of Set
(Two-point) 368-926	0.08 - 0.12 in	0.0001 in	Micrometer head unit 0.08 - 0.1 in 1 pc 0.1 - 0.12 in 1 pc Setting ring (0.1 in DIA) 1 pc Hex wrench 1 pc
368-927	0.12 - 0.28 in		Micrometer head unit 0.12 - 0.16 in 1 pc 0.16 - 0.2 in 1 pc 0.2 - 0.24 in 1 pc 0.24 - 0.28 in 1 pc Setting ring (0.16 in DIA., 0.24 in DIA) 1pc each Hex wrench 1 pc
(Three-point) 368-916	0.275 - 0.5 in		Micrometer head unit 0.275 - 0.35 in 1 pc 0.35 - 0.425 in 1 pc 0.425 - 0.5 in 1 pc Setting ring (0.35 in DIA., 0.5 in DIA) 1pc each Extension rod (100 mm) 1 pc Spanner 2 pcs Hex wrench 1 pc
368-917	0.5 - 0.8 in	0.0002 in	Micrometer head unit 0.5 - 0.65 in 1 pc 0.65 - 0.8 in 1 pc Setting ring (0.65 in DIA) 1 pc Extension rod (150 mm) 1 pc Spanner 2 pcs Hex wrench 1 pc
368-918	0.8 - 2 in		Micrometer head unit 0.8 - 1 in 1 pc 1 - 1.2 in 1 pc 1.2 - 1.6 in 1 pc 1.6 - 2 in 1 pc Setting ring (1 in DIA., 1.6 in DIA) 1pc each Extension rod (150 mm) 1 pc Spanner 2 pcs Hex wrench 1 pc
368-919	2 - 4 in		Micrometer head unit 2 - 2.5 in 1 pc 2.5 - 3 in 1 pc 3 - 3.5 in 1 pc 3.5 - 4 in 1 pc Setting ring (2.5 in DIA., 3.5 in DIA) 1pc each Extension rod (150 mm) 1 pc Spanner 2 pcs Hex wrench 1 pc
368-920	4 - 8 in		Micrometer head unit 4 - 5 in 1 pc 5 - 6 in 1 pc 6 - 7 in 1 pc 7 - 8 in 1 pc Setting ring (5 in DIA., 7 in DIA) 1pc each Extension rod (150 mm) 1 pc Spanner 2 pcs Hex wrench 1 pc

* The measurement range cannot be enlarged by measuring heads that are not standard-supplied (the accuracy is not guaranteed).



368-906



368-907



An inspection certificate is supplied as standard.
Refer to page X for details.



368-911



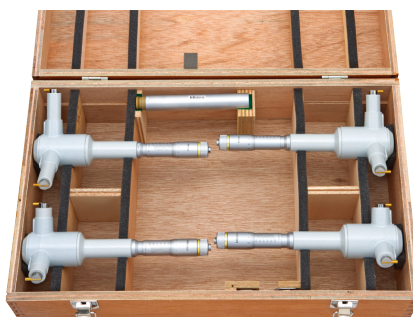
368-912



368-913



368-914



Setting rings supplied as standard
($\phi 125$, $\phi 175$) (Packed separately)

368-915

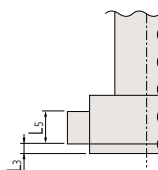
Holtest

For easy and accurate measurement of inside diameters

Holtest (Type II) SERIES 368 — Three-point Internal Micrometers

- Hardened tool-steel anvils (instead of titanium-coated carbide) for a more economically priced tool.
- Same accuracy as the titanium-coated Holtest models.
- For details of setting rings, refer to page C-47.
- Constant-force device allows repeatable measurement.

Range (mm)	L ₃ (mm)	L ₅ (mm)
12 - 20	2.6 or below	3.5
20 - 30	3.4 or below	5.2
30 - 50		10
50 - 100		14
100 - 300	19.6 or below	13.8



- Can measure deep holes using an Extension Rod (optional).



368-769



368-770



368-774

SPECIFICATIONS

Metric individual				
Order No.	Range* ²	Graduation	Accuracy* ¹	Extension Rod (optional)
368-764	12 - 16 mm	0.005 mm	±2 μm (within 2 μm)	952621 (150 mm)
368-765	16 - 20 mm			
368-766	20 - 25 mm			
368-767	25 - 30 mm		±3 μm (within 3 μm)	952622 (150 mm)
368-768	30 - 40 mm			
368-769	40 - 50 mm			
368-770	50 - 63 mm			
368-771	62 - 75 mm		±5 μm (within 5 μm)	952623 (150 mm)
368-772	75 - 88 mm			
368-773	87 - 100 mm			
368-774	100 - 125 mm			
368-775	125 - 150 mm			
368-776	150 - 175 mm			
368-777	175 - 200 mm			
368-778	200 - 225 mm			
368-779	225 - 250 mm			
368-780	250 - 275 mm			
368-781	275 - 300 mm			

*1 Accuracy: values measured across the entire measuring face.

Maximum difference: differences between the maximum and minimum values.

*2 The measurement range cannot be enlarged by measuring heads that are not standard-supplied (the accuracy is not guaranteed).

Note: Setting rings are optional.

Inch individual				
Order No.	Range* ²	Graduation	Accuracy* ¹	Extension Rod (optional)
368-864	0.5 - 0.65 in	0.0002 in	±0.0001 in (within 0.0001 in)	952621 (150 mm)
368-865	0.65 - 0.8 in			
368-866	0.8 - 1 in			
368-867	1 - 1.2 in		±0.00015 in (within 0.00015 in)	952622 (150 mm)
368-868	1.2 - 1.6 in			
368-869	1.6 - 2 in			
368-870	2 - 2.5 in			
368-871	2.5 - 3 in		±0.00025 in (within 0.00025 in)	952623 (150 mm)
368-872	3 - 3.5 in			
368-873	3.5 - 4 in			
368-874	4 - 5 in			
368-875	5 - 6 in			
368-876	6 - 7 in			
368-877	7 - 8 in			
368-878	8 - 9 in			
368-879	9 - 10 in			
368-880	10 - 11 in			
368-881	11 - 12 in			

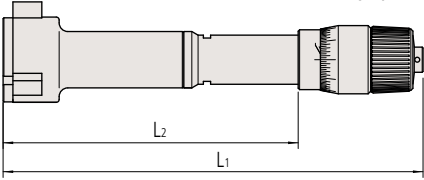


An inspection certificate is supplied as standard.
Refer to page X for details.

For details of Special-order Products,
refer to page C-49.



DIMENSIONS

	Unit: mm		
	Range	L ₂	L ₁
	12 - 16, 16 - 20	82	126 - 130
	20 - 25, 25 - 30	94	137 - 142
	30 - 40, 40 - 50	102	145 - 155
	50 - 63, 62 - 75, 75 - 88, 87 - 100	105	150 - 163
	100 - 125, 125 - 150, 150 - 175, 175 - 200 200 - 225, 225 - 250, 250 - 275, 275 - 300	161	227 - 252

External appearance differs depending on the measuring range.

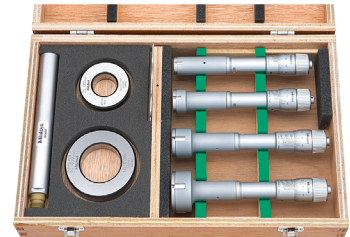
Non-Interchangeable-Head Sets

Metric				Inch			
Order No.	Range*	Graduation	Content of Set	Order No.	Range*	Graduation	Content of Set
368-991	12 - 20 mm	0.005 mm	Micrometer head unit	368-995	0.5 - 0.8 in	0.0002 in	Micrometer head unit
			12 - 16 mm 1 pc				0.5 - 0.65 in 1 pc
			16 - 20 mm 1 pc				0.65 - 0.8 in 1 pc
			Setting ring (ø16) 1 pc				Setting ring (0.65 in DIA.) 1 pc
			Extension rod (150 mm) 1 pc				Extension rod (150 mm) 1 pc
			Spanner 2 pcs				Spanner 2 pcs
			Hex wrench 1 pc				Hex wrench 1 pc
368-992	20 - 50 mm		Micrometer head unit	368-996	0.8 - 2 in		Micrometer head unit
			20 - 25 mm 1 pc				0.8 - 1 in 1 pc
			25 - 30 mm 1 pc				1 - 1.2 in 1 pc
			30 - 40 mm 1 pc				1.2 - 1.6 in 1 pc
			40 - 50 mm 1 pc				1.6 - 2 in 1 pc
			Setting ring (ø25, ø40) 1 pc each				Setting ring (1 in DIA., 1.6 in DIA.) 1 pc each
			Extension rod (150 mm) 1 pc				Extension rod (150 mm) 1 pc
368-993	50 - 100 mm		Spanner 2 pcs	368-997	2 - 4 in		Spanner 2 pcs
			Hex wrench 1 pc				Hex wrench 1 pc
			Micrometer head unit				Micrometer head unit
			50 - 63 mm 1 pc				2 - 2.5 in 1 pc
			62 - 75 mm 1 pc				2.5 - 3 in 1 pc
			75 - 88 mm 1 pc				3 - 3.5 in 1 pc
			87 - 100 mm 1 pc				3.5 - 4 in 1 pc
368-994	100 - 200 mm		Setting ring (ø62, ø87) 1 pc each	368-998	4 - 8 in		Setting ring (2.5 in DIA., 3.5 in DIA.) 1 pc each
			Extension rod (150 mm) 1 pc				Extension rod (150 mm) 1 pc
			Spanner 2 pcs				Spanner 2 pcs
			Hex wrench 1 pc				Hex wrench 1 pc
			Micrometer head unit				Micrometer head unit
			100 - 125 mm 1 pc				4 - 5 in 1 pc
			125 - 150 mm 1 pc				5 - 6 in 1 pc
			150 - 175 mm 1 pc				6 - 7 in 1 pc
			175 - 200 mm 1 pc				7 - 8 in 1 pc
			Setting ring(ø125, ø175) 1 pc each				Setting ring (5 in DIA., 7 in DIA.) 1 pc each
			Extension rod (150 mm) 1 pc				Extension rod (150 mm) 1 pc
			Spanner 2 pcs				Spanner 2 pcs
			Hex wrench 1 pc				Hex wrench 1 pc

* The measurement range cannot be enlarged by measuring heads that are not standard-supplied (the accuracy is not guaranteed).



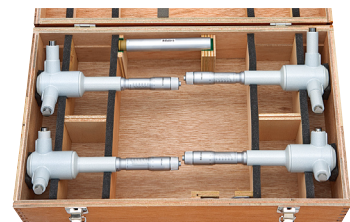
368-991



368-992



368-993



Setting rings are supplied as standard (ø125, ø175) (Packed separately)

368-994

Holtest

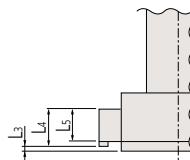
For easy and accurate measurement of inside diameters

ABSOLUTE Borematic SERIES 568 — ABSOLUTE Digimatic Snap-Open Bore Gages

MeasurLink[®] ENABLED
Data Management Software by Mitutoyo

- A snap-type digital display, inside-diameter measuring instrument allows quick and easy measurement with lever operation.
- 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 contact measuring head enables highly repeatable measurement data to be obtained.
- The ABSOLUTE linear encoder eliminates overspeed errors.
- GO/NO-GO judgment function.
- Dual HOLD function buttons, optimally located, enable high operability.
- 330-degree rotatable display unit for easy reading at any angle.
- Measurement can be made close to the bottom of a blind hole.

Range (mm)	L3 (mm)	L4 (mm)	L5 (mm)
6 - 12	2 or below	—	2.5
12 - 20	0.3 or below	5.6	3.5
20 - 30		8.3	5.2
30 - 50		13.0	10
50 - 125		17.0	14



- Can measure deep holes by attaching an optional extension rod.



Extension rod (optional)

- Digimatic output port enables inclusion in a statistical process control or networked measurement system. (Refer to page A-3 for details.)
- Interface Input Tools are available that enable the conversion of measurement data to keyboard signals that are then directly input to cells in off-the-shelf spreadsheet software such as Excel. (Refer to page A-5 for details.)
- Interchangeable-Head Bore Gages are available in part sets and full sets.
- For details of Setting rings, refer to page C-47.



• Large LCD

Character height of 11 mm (1.5 times the character area of conventional 8.5 mm products)



Actual size

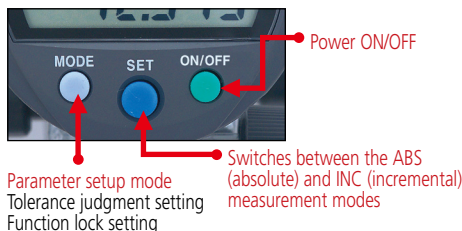
• Function locking

Ensures reliability of measurement by locking the settings to prevent preset function settings from being changed by mistake.



• Three large buttons

The three large-button design employed by ID-N/ID-B, the ABSOLUTE coolant proof Digimatic indicators, enables easier and simpler operation.



MeasurLink[®] ENABLED
Data Management Software by Mitutoyo

Products equipped with the measurement data output function can be connected to the measurement data network system MeasurLink (refer to page A-5 for details).



An inspection certificate is supplied as standard. Refer to page X for details.

ABSOLUTE[™] (Refer to page X for details.)

Technical Data

Resolution: 0.001 mm or 0.00005 in/0.001 mm
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)

For details of Custom-ordered Products, refer to page C-49.

Optional Accessories

Refer to page A-25 for details
USB Input Tool Direct (2 m): 06AFM380F
Connecting cables for **U-WAVE-T**
For standard (160 mm): **02AZD790F**
For foot switch: **02AZE140F**

SPECIFICATIONS

Metric		individual				
Order No.	Range* ²	Accuracy* ¹	Mass	Accessories (optional)		
				Extension Rod	SPC cable	
568-361	6 - 8 mm	±5 μm (within 5 μm)	480 g	952322 (100 mm)	905338 (1 mm)	
568-362	8 - 10 mm		485 g			
568-363	10 - 12 mm					
568-364	12 - 16 mm		475 g			
568-365	16 - 20 mm		480 g			
568-366	20 - 25 mm	±6 μm (within 6 μm)	540 g	952622 (150 mm)		905338 (1 mm)
568-367	25 - 30 mm		555 g			
568-368	30 - 40 mm		565 g			
568-369	40 - 50 mm		610 g			
568-370	50 - 63 mm		730 g			
568-371	62 - 75 mm		740 g	952623 (150 mm)		905409 (2 mm)
568-372	75 - 88 mm		790 g			
568-373	87 - 100 mm		800 g			
568-374	100 - 113 mm		900 g			
568-375	112 - 125 mm		910 g			

*1 Excluding quantizing error.

Accuracy: values measured across the entire measuring face.

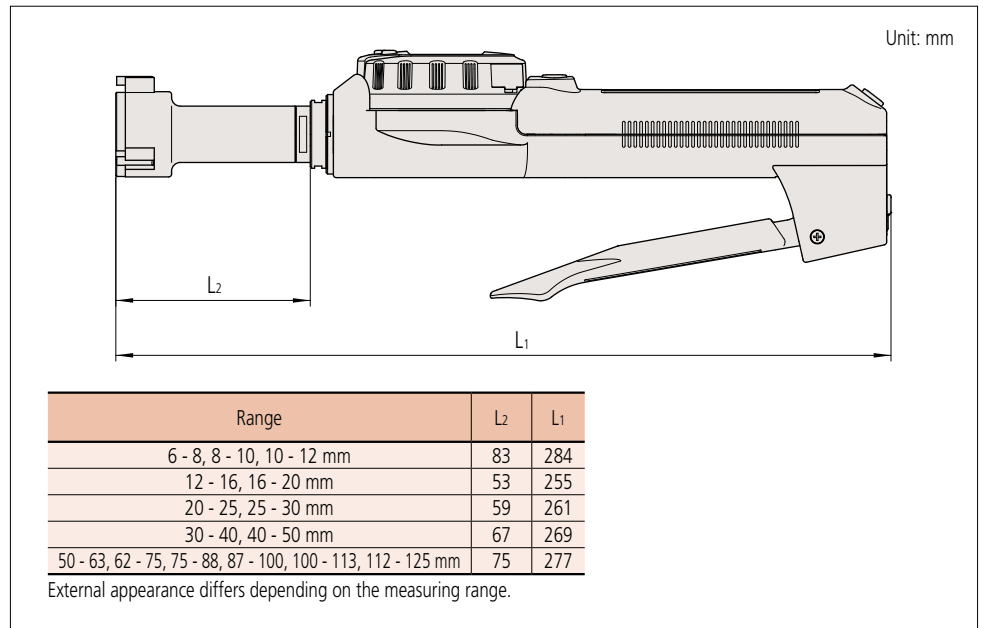
Maximum difference: differences between the maximum and minimum values.

*2 The measurement range cannot be enlarged by measuring heads that are not standard-supplied (the accuracy is not guaranteed).

Note: Setting rings are optional.

Inch/Metric		individual				
Order No.	Range* ²	Accuracy* ¹	Mass	Extension Rod (optional)		
				Extension Rod	SPC cable	
568-461	0.275 - 0.35 in	±0.00025 in (within 0.00025 in)	480 g	952322 (100 mm)	905338 (1 mm)	
568-462	0.35 - 0.425 in		485 g			
568-463	0.425 - 0.5 in		475 g			
568-464	0.5 - 0.65 in		480 g			
568-465	0.65 - 0.8 in					
568-466	0.8 - 1 in	±0.0003 in (within 0.0003 in)	540 g	952622 (150 mm)		905338 (1 mm)
568-467	1 - 1.2 in		555 g			
568-468	1.2 - 1.6 in		565 g			
568-469	1.6 - 2 in		610 g			
568-470	2 - 2.5 in		730 g	952623 (150 mm)		905409 (2 mm)
568-471	2.5 - 3 in		740 g			
568-472	3 - 3.5 in		790 g			
568-473	3.5 - 4 in		800 g			
568-474	4 - 4.5 in		900 g			
568-475	4.5 - 5 in		910 g			

DIMENSIONS



Holtest

For easy and accurate measurement of inside diameters

ABSOLUTE Borematic SERIES 568 — ABSOLUTE Digimatic Snap-Open Bore Gages

MeasurLink[®] ENABLED
Data Management Software by Mitutoyo

MeasurLink[®] ENABLED
Data Management Software by Mitutoyo

Products equipped with the measurement data output function can be connected to the measurement data network system MeasurLink (refer to page A-5 for details).



An inspection certificate is supplied as standard. Refer to page X for details.

Interchangeable-Head Bore Gage Sets

Each set includes one display unit with interchangeable measuring heads of the sizes specified.

Metric		
Order No.	Range	Content of Set
568-924	6 - 12 mm	Display unit 1 pc
		Measuring head 6 - 8 mm 1 pc
		8 - 10 mm 1 pc
		10 - 12 mm 1 pc
		Attachment 1 pc
		Setting ring (ø8, ø10) 1 pc each
		Spanner 3 pcs
568-925	12 - 25 mm	Display unit 1 pc
		Measuring head 12 - 16 mm 1 pc
		16 - 20 mm 1 pc
		20 - 25 mm 1 pc
		Attachment 2 pcs
		Setting ring (ø16, ø20) 1 pc each
		Spanner 2 pcs
568-926	25 - 50 mm	Display unit 1 pc
		Measuring head 25 - 30 mm 1 pc
		30 - 40 mm 1 pc
		40 - 50 mm 1 pc
		Attachment 1 pc
		Setting ring (ø30, ø40) 1 pc each
		Spanner 2 pcs
568-927	50 - 100 mm	Display unit 1 pc
		Measuring head 50 - 63 mm 1 pc
		62 - 75 mm 1 pc
		75 - 88 mm 1 pc
		87 - 100 mm 1 pc
		Attachment 1 pc
		Setting ring (ø62, ø87) 1 pc each
		Spanner 2 pcs

Inch/Metric		
Order No.	Range	Content of Set
568-928	0.275 in - 0.5 in	Display unit 1 pc
		Measuring head 0.275 - 0.35 in 1 pc
		0.35 - 0.425 in 1 pc
		0.425 - 0.5 in 1 pc
		Attachment 1 pc
		Setting ring (0.35 in DIA, 0.425 in DIA) 1 pc each
		Spanner 3 pcs
568-929	0.5 in - 1 in	Display unit 1 pc
		Measuring head 0.5 - 0.65 in 1 pc
		0.65 - 0.8 in 1 pc
		0.8 - 1 in 1 pc
		Attachment 2 pcs
		Setting ring (0.65 in DIA, 0.8 in DIA) 1 pc each
		Spanner 2 pcs
568-930	1 in - 2 in	Display unit 1 pc
		Measuring head 1 - 1.2 in 1 pc
		1.2 - 1.6 in 1 pc
		1.6 - 2 in 1 pc
		Attachment 1 pc
		Setting ring (1.2 in DIA, 1.6 in DIA) 1 pc each
		Spanner 2 pcs
568-936	2 in - 4 in	Display unit 1 pc
		Measuring head 2 - 2.5 in 1 pc
		2.5 - 3 in 1 pc
		3 - 3.5 in 1 pc
		3.5 - 4 in 1 pc
		Attachment 1 pc
		Setting ring (2.5 in DIA, 3.5 in DIA) 1 pc each
		Spanner 2 pcs

Non-Interchangeable-Head Snap-Open Bore Gage Sets

Each set includes complete gages (display units and measuring heads for each size).

Metric		
Order No.	Range	Content of Set
568-955	6 - 12 mm	Display unit 1 pc
		6 - 8 mm 1 pc
		8 - 10 mm 1 pc
		10 - 12 mm 1 pc
		Setting ring (ø8, ø10) 1 pc each
		Spanner 3 pcs
568-956	12 - 25 mm	Display unit 1 pc
		12 - 16 mm 1 pc
		16 - 20 mm 1 pc
		20 - 25 mm 1 pc
		Setting ring (ø16, ø20) 1 pc each
		Spanner 2 pcs
568-957	25 - 50 mm	Display unit 1 pc
		25 - 30 mm 1 pc
		30 - 40 mm 1 pc
		40 - 50 mm 1 pc
		Setting ring (ø30, ø40) 1 pc each
		Spanner 2 pcs
568-958	50 - 75 mm	Display unit 1 pc
		50 - 63 mm 1 pc
		62 - 75 mm 1 pc
		Setting ring (ø62) 1 pc
		Spanner 2 pcs
568-959	75 - 100 mm	Display unit 1 pc
		75 - 88 mm 1 pc
		87 - 100 mm 1 pc
		Setting ring (ø87) 1 pc
		Spanner 2 pcs

Inch/Metric		
Order No.	Range	Content of Set
568-965	0.275 - 0.5 in	Display unit 1 pc
		0.275 - 0.35 in 1 pc
		0.35 - 0.425 in 1 pc
		0.425 - 0.5 in 1 pc
		Setting ring (0.35 in DIA, 0.425 in DIA) 1 pc each
		Spanner 3 pcs
568-966	0.5 - 1 in	Display unit 1 pc
		0.5 - 0.65 in 1 pc
		0.65 - 0.8 in 1 pc
		0.8 - 1 in 1 pc
		Setting ring (0.65 in DIA, 0.8 in DIA) 1 pc each
		Spanner 2 pcs
568-967	1 - 2 in	Display unit 1 pc
		1 - 1.2 in 1 pc
		1.2 - 1.6 in 1 pc
		1.6 - 2 in 1 pc
		Setting ring (1.2 in DIA, 1.6 in DIA) 1 pc each
		Spanner 2 pcs
568-968	2 - 3 in	Display unit 1 pc
		2 - 2.5 in 1 pc
		2.5 - 3 in 1 pc
		Setting ring (2.5 in DIA) 1 pc
		Spanner 2 pcs
568-969	3 - 4 in	Display unit 1 pc
		3 - 3.5 in 1 pc
		3.5 - 4 in 1 pc
		Setting ring (3.5 in DIA) 1 pc
		Spanner 2 pcs



568-924



568-926



568-955



568-957



568-959