

# Holtest

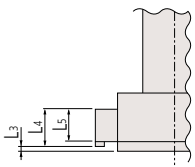
For easy and accurate measurement of inside diameters

## Digimatic Holtest SERIES 468 — Three-point Internal Micrometers

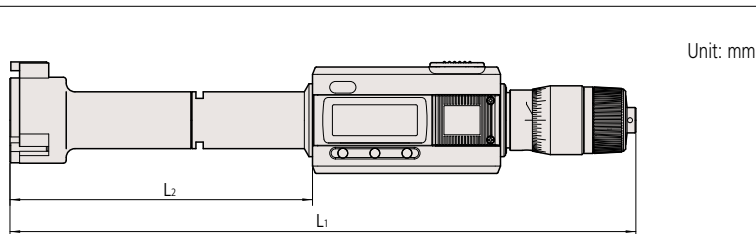
**MeasurLink® ENABLED**  
Data Management Software by Mitutoyo

- Three-point internal micrometer with large LCD readout. (Character height 7.4 mm)
- Titanium-coated measuring pins provide excellent durability and impact resistance.
- 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-25)
- Interchangeable-Head Sets (interchangeable measuring heads type) covering an extended measuring range using multiple heads and Non-interchangeable-Head Sets are available.
- For details of Setting Rings, refer to page C-47.

Range (mm)	L <sub>3</sub> (mm)	L <sub>4</sub> (mm)	L <sub>5</sub> (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



## DIMENSIONS



Unit: mm

Range	L <sub>2</sub> *	L <sub>1</sub>
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

\* L<sub>2</sub> is maximum depth of measurement possible.  
Note: External view differs depending on measurement range.

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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-25 for details).

**IP 65**

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



Dust- and Water-Protected

www.tuv.com  
ID 0000051605



An inspection certificate is supplied as standard. Refer to page U-9 for details.

## IP Codes

**Level 6:** Dust-proof.

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

- 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-21 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* <sup>2</sup> (mm)	Resolution (mm)	Maximum permissible error <i>J<sub>MPE</sub></i> (μm)* <sup>1</sup>	Optional Accessories	
				Extension rod	SPC cable
468-161	6 - 8	0.001	±2 (maximum difference 2)	952322 (100 mm)	05CZA662 (1 m)  05CZA663 (2 m)
468-162	8 - 10				
468-163	10 - 12				
468-164	12 - 16				
468-165	16 - 20				
468-166	20 - 25				
468-167	25 - 30		±3 (maximum difference 3)	952621 (150 mm)	
468-168	30 - 40				
468-169	40 - 50				
468-170	50 - 63				
468-171	62 - 75				
468-172	75 - 88				
468-173	87 - 100		±4 (maximum difference 4)	952622 (150 mm)	
468-174	100 - 125				
468-175	125 - 150				
468-176	150 - 175				
468-177	175 - 200				
468-178	200 - 225				
468-179	225 - 250	±5 (maximum difference 5)	952623 (150 mm)		
468-180	250 - 275				
468-181	275 - 300				

Inch / Metric					
Order No.	Range* <sup>2</sup> (in)	Resolution	Maximum permissible error <i>J<sub>MPE</sub></i> (in)* <sup>1</sup>	Optional Accessories	
				Extension rod	SPC cable
468-261	0.275 - 0.35	0.00005 in/ 0.001 mm	±0.0001 (maximum difference 0.0001)	952322 (100 mm)	05CZA662 (1 m)  05CZA663 (2 m)
468-262	0.35 - 0.425				
468-263	0.425 - 0.5				
468-264	0.5 - 0.65				
468-265	0.65 - 0.8				
468-266	0.8 - 1				
468-267	1 - 1.2		±0.00015 (maximum difference 0.00015)	952621 (150 mm)	
468-268	1.2 - 1.6				
468-269	1.6 - 2				
468-270	2 - 2.5				
468-271	2.5 - 3				
468-272	3 - 3.5				
468-273	3.5 - 4	±0.0002 (maximum difference 0.0002)	952622 (150 mm)		
468-274	4 - 5				
468-275	5 - 6				
468-276	6 - 7				
468-277	7 - 8				
468-278	8 - 9				
468-279	9 - 10	0.0001 in/ 0.001 mm	±0.00025 (maximum difference 0.00025)	952623 (150 mm)	
468-280	10 - 11				
468-281	11 - 12				

\*1 Additionally, the difference in permissible error allowable is limited to a value within this range, as given in parentheses, and is measured with the entire measuring surface in contact with the object measured.

\*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.

# Holtest

For easy and accurate measurement of inside diameters

## Interchangeable-Head Sets

Metric				Inch / Metric									
Set Order No.	Range* (mm)	Content of set	Accessories (optional)	Set Order No.	Range* (in)	Content of set	Accessories (optional)						
468-971	6 - 12	Display unit 6 - 12 mm	1 pc.	468-976	0.275 - 0.5	Display unit 0.275 - 0.5 in	1 pc.						
		Measuring head 6 - 8 mm				1 pc.		Measuring head 0.275 - 0.35 in	1 pc.				
		8 - 10 mm						1 pc.		0.35 - 0.425 in	1 pc.		
		10 - 12 mm								1 pc.		0.425 - 0.5 in	1 pc.
		Setting ring (ø8, ø10)										1 pc. each	
Extension rod (100 mm)	1 pc.	Extension rod (100 mm)	1 pc.										
Spanner		2 pcs.		Spanner	2 pcs.								
Hex wrench				1 pc.		Hex wrench	1 pc.						
Phillips screwdriver						1 pc.		Phillips screwdriver	1 pc.				
468-972								12 - 20		Display unit 12 - 20 mm	1 pc.	468-977	0.5 - 0.8
	Measuring head 12 - 16 mm		1 pc.							Measuring head 0.5 - 0.65 in			
	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.		
Phillips screwdriver		1 pc.				Phillips screwdriver				1 pc.			
468-973				20 - 50		Display unit 20 - 50 mm	1 pc.					468-978	0.8 - 2
					Measuring head 20 - 25 mm	1 pc.			Measuring head 0.8 - 1 in				
	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.					
Spanner					2 pcs.	Spanner			2 pcs.				
Hex wrench			1 pc.			Hex wrench					1 pc.		
Phillips screwdriver		1 pc.				Phillips screwdriver				1 pc.			
468-974	50 - 100					Display unit 50 - 100 mm	1 pc.					468-979	2 - 4
				Measuring head 50 - 63 mm		1 pc.		Measuring head 2 - 2.5 in					
				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.			
Setting ring (ø62, ø87)	1 pc. each	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.		
Phillips screwdriver			1 pc.			Phillips screwdriver				1 pc.			
468-975	100 - 200					Display unit 100 - 200 mm	1 pc.					468-980	4 - 8
		Measuring head 100 - 125 mm				1 pc.		Measuring head 4 - 5 in					
		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.		
Phillips screwdriver			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).



468-971

468-972

468-973

468-974



Setting rings are supplied as standard (ø125, ø175) (Packed separately)  
468-975

### Optional Accessories

Refer to page A-21 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* <sup>2</sup> (mm)	Content of set	Accessories (optional)		Set Order No.	Range* <sup>2</sup> (in)	Content of set	Accessories (optional)	
			Extension rod	SPC cable				Extension rod	SPC cable
468-981	6 - 12	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.		468-986	0.275 - 0.5	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.	
468-982	12 - 25	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.* <sup>1</sup>		468-987	0.5 - 1	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.* <sup>1</sup>	
468-983	25 - 50	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.	SPC cable with data switch <b>05CZA662</b> (1 m) <b>05CZA663</b> (2 m)	468-988	1 - 2	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.	SPC cable with data switch <b>05CZA662</b> (1 m) <b>05CZA663</b> (2 m)
468-984	50 - 75	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	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	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	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 pc. of Order No. **952621** (for measuring range 12 to 16 mm, 16 to 20 mm) and Order 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-21 for details.

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