

# Holtest

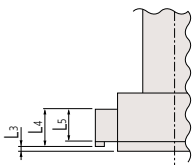
For easy and accurate measurement of inside diameters

## 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-5.
- 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



468-161

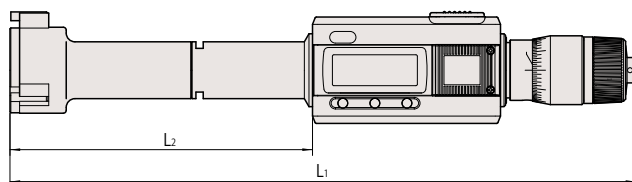


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## DIMENSIONS



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-5 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.



An inspection certificate is supplied as standard. Refer to page U-11 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

- 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				Optional Accessories	
Order No.	Range*2 (mm)	Resolution (mm)	Accuracy*1 (µm)	Extension rod	SPC cable
468-161	6 - 8	0.001	±2 (within 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 (within 3)	952622 (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				
468-174	100 - 125				
468-175	125 - 150				
468-176	150 - 175				
468-177	175 - 200				
468-178	200 - 225				
468-179	225 - 250				
468-180	250 - 275				
468-181	275 - 300				

Inch / Metric				Optional Accessories		
Order No.	Range*2 (in)	Resolution	Accuracy*1 (in)	Extension rod	SPC cable	
468-261	0.275 - 0.35	0.00005 in/ 0.001 mm	±0.0001 (within 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					±0.00015 (within 0.00015)
468-267	1 - 1.2					
468-268	1.2 - 1.6					
468-269	1.6 - 2					
468-270	2 - 2.5					
468-271	2.5 - 3		0.0001 in/ 0.001 mm	±0.00025 (within 0.00025)		
468-272	3 - 3.5					
468-273	3.5 - 4					
468-274	4 - 5					
468-275	5 - 6					
468-276	6 - 7					
468-277	7 - 8					
468-278	8 - 9					
468-279	9 - 10					
468-280	10 - 11					
468-281	11 - 12					

\*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: Interchangeable/Non-Interchangeable-Head Sets are also available. Refer to page C-5 and C-6.



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For easy and accurate measurement of inside diameters

## Interchangeable-Head Sets

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

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

SPC cable with data switch  
**05CZA662**  
(1 m)

**05CZA663**  
(2 m)

SPC cable with data switch  
**05CZA662**  
(1 m)

**05CZA663**  
(2 m)

\* 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



Standard accessory  
(packed separately)  
Setting rings (ø125, ø175)

468-975

### 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* <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	100 mm	1 pc	468-986	0.275 - 0.5	Display unit	100 mm	1 pc		
		6 - 8 mm					1 pc			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			Setting ring (0.35 in DIA., 0.425 in DIA)	1 pc each
Spanner	2 pcs	Spanner	2 pcs								
Hex wrench	1 pc	Hex wrench	1 pc								
Phillips screwdriver	1 pc	Phillips screwdriver	1 pc								
468-982	12 - 25	Display unit	150 mm	2 pcs* <sup>1</sup>	468-987	0.5 - 1	Display unit	150 mm	2 pcs* <sup>1</sup>		
		12 - 16 mm					1 pc			0.5 - 0.65 in	1 pc
		16 - 20 mm					1 pc			0.65 - 0.8 in	1 pc
		20 - 25 mm					1 pc			0.8 - 1 in	1 pc
		Setting ring (ø16, ø20)					1 pc each			Setting ring (0.65 in DIA., 0.8 in DIA)	1 pc each
Spanner	2 pcs	Spanner	2 pcs								
Hex wrench	1 pc	Hex wrench	1 pc								
Phillips screwdriver	1 pc	Phillips screwdriver	1 pc								
468-983	25 - 50	Display unit	150 mm	1 pc	468-988	1 - 2	Display unit	150 mm	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 (ø30, ø40)					1 pc each			Setting ring (1.2 in DIA., 1.6 in DIA)	1 pc each
Spanner	1 pc	Spanner	1 pc								
Hex wrench	1 pc	Hex wrench	1 pc								
Phillips screwdriver	1 pc	Phillips screwdriver	1 pc								
468-984	50 - 75	Display unit	150 mm	1 pc	468-989	2 - 3	Display unit	150 mm	1 pc		
		50 - 63 mm					1 pc			2 - 2.5 in	1 pc
		62 - 75 mm					1 pc			2.5 - 3 in	1 pc
		Setting ring (ø62)					1 pc			Setting ring (2.5 in DIA)	1 pc
		Spanner					1 pc			Spanner	1 pc
Hex wrench	1 pc	Hex wrench	1 pc								
Phillips screwdriver	1 pc	Phillips screwdriver	1 pc								
468-985	75 - 100	Display unit	150 mm	1 pc	468-990	3 - 4	Display unit	150 mm	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 (ø87)					1 pc			Setting ring (3.5 in DIA)	1 pc
		Spanner					1 pc			Spanner	1 pc
Hex wrench	1 pc	Hex wrench	1 pc								
Phillips screwdriver	1 pc	Phillips screwdriver	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**