Holtest

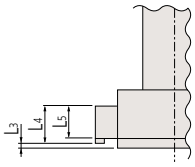
For easy and accurate measurement of inside diameters

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



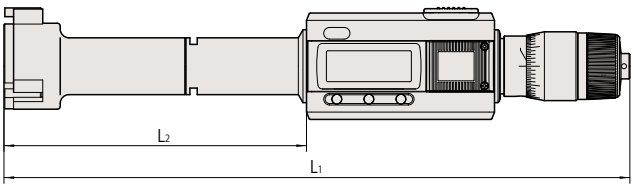
468-161

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) L_2 is maximum depth of measurement possible.
2) External view differs depending on measurement range.

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).

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.

TÜVRheinland CERTIFIED www.tuv.com ID 0000021605 — (Refer to page X for details.)

PROPRIETARY INSPECTION CERTIFICATE — 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**

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Optional Accessories

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	Optional Accessories: 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				
468-163	10 - 12 mm				
468-164	12 - 16 mm			**952621** (150 mm)	
468-165	16 - 20 mm				
468-166	20 - 25 mm		±3 µm (within 3 µm)	**952622** (150 mm)	
468-167	25 - 30 mm				
468-168	30 - 40 mm				
468-169	40 - 50 mm			**952623** (150 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		±5 µm (within 5 µm)		
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	Optional Accessories: 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				
468-263	0.425 - 0.5 in				
468-264	0.5 - 0.65 in			**952621** (150 mm)	
468-265	0.65 - 0.8 in				
468-266	0.8 - 1 in		±0.00015 in (within 0.00015 in)	**952622** (150 mm)	
468-267	1 - 1.2 in				
468-268	1.2 - 1.6 in				
468-269	1.6 - 2 in			**952623** (150 mm)	
468-270	2 - 2.5 in				
468-271	2.5 - 3 in				
468-272	3 - 3.5 in				
468-273	3.5 - 4 in				
468-274	4 - 5 in	0.0001 in/ 0.001 mm	±0.00025 in (within 0.00025 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.

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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 1 pc each (0.35 in DIA., 0.425 in DIA.) 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 pc each (1 in DIA., 1.6 in DIA.) 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 1 pc each (2.5 in DIA., 3.5 in DIA.) 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).

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**

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Non-Interchangeable-Head Sets

Metric

Set Order No.	Range*2	Content of set	Accessories (optional) Extension rod	Accessories (optional) 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)
468-982	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	
468-983	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	
468-984	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	
468-985	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	

Inch/Metric

Set Order No.	Range*2	Content of set	Accessories (optional) Extension rod	Accessories (optional) SPC cable
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 1 pc each (0.35 in DIA., 0.425 in DIA) 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)
468-987	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 1 pc each (0.65 in DIA., 0.8 in DIA) Spanner 2 pcs Hex wrench 1 pc Phillips screwdriver 1 pc	150 mm 2 pcs*1	
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 pc each (1.2 in DIA., 1.6 in DIA) 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	
468-990	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**

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