

New Products



Digimatic Holtest

Refer to pages C-3–C-6 for details.



Holtest

Refer to pages C-7–C-12 for details.



ABSOLUTE Borematic

Refer to pages C-13–C-16 for details.



Inside Micrometers (Caliper Type)

Refer to pages C-23–C-24 for details.



Bore Gages

Refer to pages C-33–C-36 for details.

Bore Gages for Blind Holes

Refer to pages C-41 - C-42 for details.





Holtest ABSOLUTE Borematic

Holtest·ABSOLUTE Borematic



Inside Micrometers

Inside Micrometers



Bore Gages

Bore Gages



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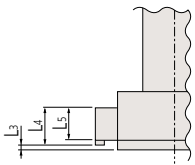
Holtest

For easy and accurate measurement of inside diameters

Digimatic Holtest SERIES 468 — Three-point Internal Micrometers

- Three-point internal micrometer with large LCD readout. (Character height 7.4mm)
- Titanium-coated measuring pins provide excellent durability and impact resistance and allow the instrument to measure right to the bottom of a blind hole.
- 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

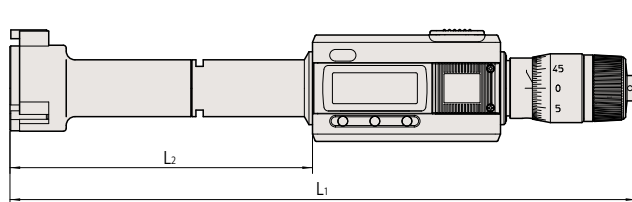


468-168



468-174

DIMENSIONS



Unit: mm

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

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



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: Dust-proof.

Degree of protection against solid foreign objects. No ingress of dust allowed.

Level 5: Protected against water jets.

Degree of protection against water. 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-21 for details.

- USB Input Tool Direct (2m): **06ADV380B**
- Connecting cables for **U-WAVE-T**

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

For foot switch: **02AZE140B**

Optional accessories

Shown mounted on stand using bracket



Mounting bracket
No.04AZB157

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

SPECIFICATIONS

Metric					
Order No.	Range	Resolution	Accuracy* ¹	Optional Accessories* ²	
				Extension rod	SPC cable
468-161	6 - 8mm	0.001mm	±2μm (within 2μm)	952322 (100mm)	05CZA662 (1m) 05CZA663 (2m)
468-162	8 - 10mm				
468-163	10 - 12mm				
468-164	12 - 16mm				
468-165	16 - 20mm		±3μm (within 3μm)	952621 (150mm)	
468-166	20 - 25mm				
468-167	25 - 30mm				
468-168	30 - 40mm				
468-169	40 - 50mm		±5μm (within 5μm)	952622 (150mm)	
468-170	50 - 63mm				
468-171	62 - 75mm				
468-172	75 - 88mm				
468-173	87 - 100mm		952623 (150mm)		
468-174	100 - 125mm				
468-175	125 - 150mm				
468-176	150 - 175mm				
468-177	175 - 200mm				
468-178	200 - 225mm				
468-179	225 - 250mm				
468-180	250 - 275mm				
468-181	275 - 300mm				

*1 Excluding quantizing error.

Accuracy: values measured with the entire measuring face.

Maximum difference: differences between the maximum and minimum values.

*2 Setting ring and extension rod: optional.

* It is not advisable to use measuring heads other than as supplied as a standard accessory, or widen a measuring range by using any other multiple sub-measuring heads. (The measuring accuracy in such cases is not guaranteed.)

Inch/Metric					
Order No.	Range	Resolution	Accuracy* ¹	Optional Accessories* ²	
				Extension rod	SPC cable
468-261	275" - .35"	.00005" / 0.001mm	±.0001" (within .0001")	952322 (100mm)	05CZA662 (1m) 05CZA663 (2m)
468-262	.35" - .425"				
468-263	.425" - .5"				
468-264	.5" - .65"				
468-265	.65" - .8"				
468-266	.8" - 1"				
468-267	1" - 1.2"				
468-268	1.2" - 1.6"		±.00025" (within .00025")	952622 (150mm)	
468-269	1.6" - 2"				
468-270	2" - 2.5"				
468-271	2.5" - 3"				
468-272	3" - 3.5"		.0001" / 0.001mm	952623 (150mm)	
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 Setting ring and extension rod: optional.

* It is not advisable to use measuring heads other than as supplied as a standard accessory, or widen a measuring range by using any other multiple sub-measuring heads. (The measuring accuracy in such cases is not guaranteed.)



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				Inch/Metric			
Set Order No.	Range*	Content of set	Accessories (optional)	Set Order No.	Range*	Content of set	Accessories (optional)
468-971	6 - 12mm	Display unit 6 - 12mm 1 pc Measuring head 6 - 8mm 1 pc 8 - 10mm 1 pc 10 - 12mm 1 pc Setting ring (ø8, ø10) 1 pc each Extension rod (100mm) 1 pc Spanner 2 pcs Hex wrench 1 pc Phillips screw driver 1 pc		468-976	.275-.5"	Display unit .275-.5" 1 pc Measuring head .275-.35" 1 pc .35-.425" 1 pc .425-.5" 1 pc Setting ring (.35" DIA., .425" DIA.) 1 pc each Extension rod (100mm) 1 pc Spanner 2 pcs Hex wrench 1 pc Phillips screw driver 1 pc	
468-972	12 - 20mm	Display unit 12 - 20mm 1 pc Measuring head 12 - 16mm 1 pc 16 - 20mm 1 pc Setting ring (ø16) 1 pc Extension rod (150mm) 1 pc Spanner 2 pcs Hex wrench 1 pc Phillips screw driver 1 pc		468-977	.5-.8"	Display unit .5-.8" 1 pc Measuring head .5-.65" 1 pc .65-.8" 1 pc Setting ring (.65" DIA.) 1 pc Extension rod (150mm) 1 pc Spanner 2 pcs Hex wrench 1 pc Phillips screw driver 1 pc	
468-973	20 - 50mm	Display unit 20 - 50mm 1 pc Measuring head 20 - 25mm 1 pc 25 - 30mm 1 pc 30 - 40mm 1 pc 40 - 50mm 1 pc Setting ring (ø25, ø40) 1 pc each Extension rod (150mm) 1 pc Spanner 2 pcs Hex wrench 1 pc Phillips screw driver 1 pc	SPC cable with data switch 05CZA662 (1m) 05CZA663 (2m)	468-978	.8-2"	Display unit .8-2" 1 pc Measuring head .8-1" 1 pc 1-1.2" 1 pc 1.2-1.6" 1 pc 1.6-2" 1 pc Setting ring (1" DIA., 1.6" DIA.) 1 pc each Extension rod (150mm) 1 pc Spanner 2 pcs Hex wrench 1 pc Phillips screw driver 1 pc	SPC cable with data switch 05CZA662 (1m) 05CZA663 (2m)
468-974	50 - 100mm	Display unit 50 - 100mm 1 pc Measuring head 50 - 63mm 1 pc 62 - 75mm 1 pc 75 - 88mm 1 pc 87 - 100mm 1 pc Setting ring (ø62, ø87) 1 pc each Extension rod (150mm) 1 pc Spanner 2 pcs Hex wrench 1 pc Phillips screw driver 1 pc		468-979	2-4"	Display unit 2-4" 1 pc Measuring head 2-2.5" 1 pc 2.5-3" 1 pc 3-3.5" 1 pc 3.5-4" 1 pc Setting ring (2.5" DIA., 3.5" DIA.) 1 pc each Extension rod (150mm) 1 pc Spanner 2 pcs Hex wrench 1 pc Phillips screw driver 1 pc	
468-975	100 - 200mm	Display unit 100 - 200mm 1 pc Measuring head 100 - 125mm 1 pc 125 - 150mm 1 pc 150 - 175mm 1 pc 175 - 200mm 1 pc Setting ring (ø125, ø175) 1 pc each Extension rod (150mm) 1 pc Spanner 2 pcs Hex wrench 1 pc Phillips screw driver 1 pc		468-980	4-8"	Display unit 4-8" 1 pc Measuring head 4-5" 1 pc 5-6" 1 pc 6-7" 1 pc 7-8" 1 pc Setting ring (5" DIA., 7" DIA.) 1 pc each Extension rod (150mm) 1 pc Spanner 2 pcs Hex wrench 1 pc Phillips screw driver 1 pc	

* It is not advisable to use measuring heads other than as supplied as a standard accessory, or widen a measuring range by using any other multiple sub-measuring heads. (The measuring accuracy in such cases 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-21 for details.
USB Input Tool Direct (2m): **06ADV380B**
Connecting cables for **U-WAVE-T**
For standard (160mm): **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 - 12mm	Display unit 6 - 8mm 1 pc 8 - 10mm 1 pc 10 - 12mm 1 pc Setting ring (ø8, ø10) 1 pc each Spanner 2 pcs Hex wrench 1 pc Phillips screw driver 1 pc	100mm 1 pc		468-986	.275"-.5"	Display unit .275-.35" 1 pc .35-.425" 1 pc .425-.5" 1 pc Setting ring (.35" DIA., .425" DIA) 1 pc each Spanner 2 pcs Hex wrench 1 pc Phillips screw driver 1 pc	100mm 1 pc	
468-982	12 - 25mm	Display unit 12 - 16mm 1 pc 16 - 20mm 1 pc 20 - 25mm 1 pc Setting ring (ø16, ø20) 1 pc each Spanner 2 pcs Hex wrench 1 pc Phillips screw driver 1 pc	150mm 2 pcs* ¹	SPC cable with data switch 05CZA662 (1m) 05CZA663 (2m)	468-987	.5"-1"	Display unit .5-.65" 1 pc .65-.8" 1 pc .8-1" 1 pc Setting ring (.65" DIA., .8" DIA) 1 pc each Spanner 2 pcs Hex wrench 1 pc Phillips screw driver 1 pc	150mm 2 pcs* ¹	SPC cable with data switch 05CZA662 (1m) 05CZA663 (2m)
468-983	25 - 50mm	Display unit 25 - 30mm 1 pc 30 - 40mm 1 pc 40 - 50mm 1 pc Setting ring (ø30, ø40) 1 pc each Spanner 1 pc Hex wrench 1 pc Phillips screw driver 1 pc	150mm 1 pc		468-988	1"-2"	Display unit 1-1.2" 1 pc 1.2-1.6" 1 pc 1.6-2" 1 pc Setting ring (1.2" DIA., 1.6" DIA) 1 pc each Spanner 1 pc Hex wrench 1 pc Phillips screw driver 1 pc	150mm 1 pc	
468-984	50 - 75mm	Display unit 50 - 63mm 1 pc 62 - 75mm 1 pc Setting ring (ø62) 1 pc Spanner 1 pc Hex wrench 1 pc Phillips screw driver 1 pc	150mm 1 pc		468-989	2"-3"	Display unit 2-2.5" 1 pc 2.5-3" 1 pc Setting ring (2.5" DIA) 1 pc Spanner 1 pc Hex wrench 1 pc Phillips screw driver 1 pc	150mm 1 pc	
468-985	75 - 100mm	Display unit 75 - 88mm 1 pc 87 - 100mm 1 pc Setting ring (ø87) 1 pc Spanner 1 pc Hex wrench 1 pc Phillips screw driver 1 pc	150mm 1 pc		468-990	3"-4"	Display unit 3-3.5" 1 pc 3.5-4" 1 pc Setting ring (3.5" DIA) 1 pc Spanner 1 pc Hex wrench 1 pc Phillips screw driver 1 pc	150mm 1 pc	

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

*2 It is not advisable to use measuring heads other than as supplied as a standard accessory, or widen a measuring range by using any other multiple sub-measuring heads. (The measurement accuracy in such cases 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 (2m): **06ADV380B**
Connecting cables for **U-WAVE-T**
For standard (160mm): **02AZD790B**
For foot switch: **02AZE140B**

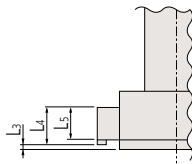
Holtest

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 6mm 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 6mm or longer allows stable measurement through automatic centering.
- Can measure deep holes using an Extension rod (optional) which is available on models over 6mm (.275") 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)	L ₃ (mm)	L ₄ (mm)	L ₅ (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		17.0	14.0
100 - 300	12.4 or below	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	Graduation	Accuracy*1	Extension Rod (optional)	Order No.	Range	Graduation	Accuracy*1	Extension Rod (optional)
(Two-point) 368-001	2 - 2.5mm	0.001mm	±2μm (within 2μm)	—	(Two-point) 368-021	.08" - .1"	.0001"	±.0001" (within .0001")	—
368-002	2.5 - 3mm				368-022	.1" - .12"			
368-003	3 - 4mm				368-023	.12" - .16"			
368-004	4 - 5mm				368-024	.16" - .2"			
368-005	5 - 6mm				368-025	.2" - .24"			
(Three-point) 368-161	6 - 8mm	0.005mm	±3μm (within 3μm)	952322 (100mm)	368-026	.24" - .28"			
368-162	8 - 10mm				368-261	.275" - .35"			
368-163	10 - 12mm				368-262	.35" - .425"			
368-164	12 - 16mm				368-263	.425" - .5"			
368-165	16 - 20mm				368-264	.5" - .65"			
368-166	20 - 25mm				368-265	.65" - .8"			
368-167	25 - 30mm				368-266	.8" - 1"			
368-168	30 - 40mm				368-267	1" - 1.2"			
368-169	40 - 50mm				368-268	1.2" - 1.6"			
368-170	50 - 63mm				368-269	1.6" - 2"			
368-171	62 - 75mm	0.002"	±5μm (within 5μm)	952623 (150mm)	368-270	2" - 2.5"	±.00025" (within .00025")	952623 (150mm)	
368-172	75 - 88mm				368-271	2.5" - 3"			
368-173	87 - 100mm				368-272	3" - 3.5"			
368-174	100 - 125mm				368-273	3.5" - 4"			
368-175	125 - 150mm				368-274	4" - 5"			
368-176	150 - 175mm				368-275	5" - 6"			
368-177	175 - 200mm				368-276	6" - 7"			
368-178	200 - 225mm				368-277	7" - 8"			
368-179	225 - 250mm				368-278	8" - 9"			
368-180	250 - 275mm				368-279	9" - 10"			
368-181	275 - 300mm	368-280	10" - 11"						
					368-281	11" - 12"			

*1 Excluding quantizing error.

Accuracy: values measured across the entire measuring face.

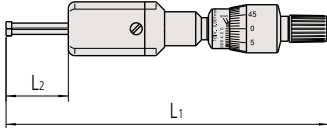
Maximum difference: differences between the maximum and minimum values.

* Setting ring and extension rod: optional.

* It is not advisable to use measuring heads other than as supplied as a standard accessory, or widen a measuring range by using any other multiple sub-measuring heads. (The measuring accuracy in such cases is not guaranteed.)

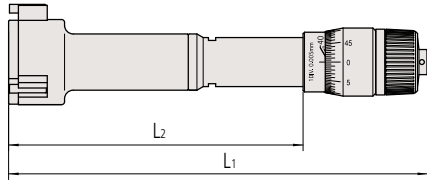
DIMENSIONS

Unit: mm



Range	L ₂	L ₁
2 - 2.5, 2.5 - 3mm	12	103.5 - 104
3 - 4, 4 - 5, 5 - 6mm	22	113 - 114

External appearance differs depending on the measuring range.



Range	L ₂	L ₁
6 - 8, 8 - 10, 10 - 12mm	59	102 - 104
12 - 16, 16 - 20mm	82	126 - 130
20 - 25, 25 - 30mm	94	137 - 142
30 - 40, 40 - 50mm	102	145 - 155
50 - 63, 62 - 75, 75 - 88, 87 - 100mm	105	150 - 163
100 - 125, 125 - 150, 150 - 175, 175 - 200, 200 - 225, 225 - 250, 250 - 275, 275 - 300mm	161	227 - 252

External appearance differs depending on the measuring range.

Holtest

For easy and accurate measurement of inside diameters



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

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 - 3mm	0.001mm	Micrometer head unit 2 - 2.5mm 1 pc 2.5 - 3mm 1 pc Setting ring (ø2.5) 1 pc Hex wrench 1 pc
368-907	3 - 6mm		Micrometer head unit 3 - 4mm 1 pc 4 - 5mm 1 pc 5 - 6mm 1 pc Setting ring (ø4, ø5) 1pc each Hex wrench 1 pc
(Three-point) 368-911	6 - 12mm		Micrometer head unit 6 - 8mm 1 pc 8 - 10mm 1 pc 10 - 12mm 1 pc Setting ring (ø8, ø10) 1pc each Extension rod (100mm) 1 pc Spanner 2 pcs Hex wrench 1 pc
368-912	12 - 20mm	0.005mm	Micrometer head unit 12 - 16mm 1 pc 16 - 20mm 1 pc Setting ring (ø16) 1 pc Extension rod (150mm) 1 pc Spanner 2 pcs Hex wrench 1 pc
368-913	20 - 50mm		Micrometer head unit 20 - 25mm 1 pc 25 - 30mm 1 pc 30 - 40mm 1 pc 40 - 50mm 1 pc Setting ring (ø25, ø40) 1pc each Extension rod (150mm) 1 pc Spanner 2 pcs Hex wrench 1 pc
368-914	50 - 100mm		Micrometer head unit 50 - 63mm 1 pc 62 - 75mm 1 pc 75 - 88mm 1 pc 87 - 100mm 1 pc Setting ring (ø62, ø87) 1pc each Extension rod (150mm) 1 pc Spanner 2 pcs Hex wrench 1 pc
368-915	100 - 200mm		Micrometer head unit 100 - 125mm 1 pc 125 - 150mm 1 pc 150 - 175mm 1 pc 175 - 200mm 1 pc Setting ring (ø125, ø175) 1pc each Extension rod (150mm) 1 pc Spanner 2 pcs Hex wrench 1 pc

Inch			
Set Order No.	Range*	Graduation	Content of Set
(Two-point) 368-926	.08" - .12"	.0001"	Micrometer head unit .08-1" 1 pc .1-.12" 1 pc Setting ring (.1" DIA) 1 pc Hex wrench 1 pc
368-927	.12" - .28"		Micrometer head unit .12-.16" 1 pc .16-.2" 1 pc .2-.24" 1 pc .24-.28" 1 pc Setting ring (.16" DIA., .24" DIA) 1pc each Hex wrench 1 pc
(Three-point) 368-916	.275" - .5"		Micrometer head unit .275-.35" 1 pc .35-.425" 1 pc .425-.5" 1 pc Setting ring (.35" DIA., .5" DIA) 1pc each Extension rod (100mm) 1 pc Spanner 2 pcs Hex wrench 1 pc
368-917	.5" - .8"	.0002"	Micrometer head unit .5-.65" 1 pc .65-.8" 1 pc Setting ring (.65" DIA) 1 pc Extension rod (150mm) 1 pc Spanner 2 pcs Hex wrench 1 pc
368-918	.8" - 2"		Micrometer head unit .8-1" 1 pc 1-1.2" 1 pc 1.2-1.6" 1 pc 1.6-2" 1 pc Setting ring (1" DIA., 1.6" DIA) 1pc each Extension rod (150mm) 1 pc Spanner 2 pcs Hex wrench 1 pc
368-919	2" - 4"		Micrometer head unit 2-2.5" 1 pc 2.5-3" 1 pc 3-3.5" 1 pc 3.5-4" 1 pc Setting ring (2.5" DIA., 3.5" DIA) 1pc each Extension rod (150mm) 1 pc Spanner 2 pcs Hex wrench 1 pc
368-920	4" - 8"		Micrometer head unit 4-5" 1 pc 5-6" 1 pc 6-7" 1 pc 7-8" 1 pc Setting ring (5" DIA., 7" DIA) 1pc each Extension rod (150mm) 1 pc Spanner 2 pcs Hex wrench 1 pc

* It is not advisable to use measuring heads other than as supplied as a standard accessory, or widen a measuring range by using any other multiple sub-measuring heads. (The measuring accuracy in such cases is not guaranteed.)



368-906



368-907



368-911



368-912



368-913



368-914



Setting rings supplied as standard
($\varnothing 125$, $\varnothing 175$) (Packed separately)
368-915

Holtest

For easy and accurate measurement of inside diameters

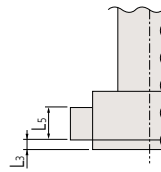


An inspection certificate is supplied as standard. Refer to page X for details.

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		5.2
30 - 50	3.4 or below	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	Graduation	Accuracy*1	Extension Rod (optional)
368-764	12 - 16mm	0.005mm	±2μm (within 2μm)	952621 (150mm)
368-765	16 - 20mm			
368-766	20 - 25mm			
368-767	25 - 30mm			
368-768	30 - 40mm			
368-769	40 - 50mm		±3μm (within 3μm)	952622 (150mm)
368-770	50 - 63mm			
368-771	62 - 75mm			
368-772	75 - 88mm			
368-773	87 - 100mm			
368-774	100 - 125mm	±5μm (within 5μm)	952623 (150mm)	
368-775	125 - 150mm			
368-776	150 - 175mm			
368-777	175 - 200mm			
368-778	200 - 225mm			
368-779	225 - 250mm			
368-780	250 - 275mm			
368-781	275 - 300mm			

Inch individual				
Order No.	Range	Graduation	Accuracy*1	Extension Rod (optional)
368-864	.5" - .65"	.0002"	±.0001" (within .0001")	952621 (150mm)
368-865	.65" - .8"			
368-866	.8" - 1"			
368-867	1" - 1.2"			
368-868	1.2" - 1.6"			
368-869	1.6" - 2"		±.00015" (within .00015")	952622 (150mm)
368-870	2" - 2.5"			
368-871	2.5" - 3"			
368-872	3" - 3.5"			
368-873	3.5" - 4"			
368-874	4" - 5"	±.00025" (within .00025")	952623 (150mm)	
368-875	5" - 6"			
368-876	6" - 7"			
368-877	7" - 8"			
368-878	8" - 9"			
368-879	9" - 10"			
368-880	10" - 11"			
368-881	11" - 12"			

*1 Excluding quantizing error.

Accuracy: values measured across the entire measuring face.

Maximum difference: differences between the maximum and minimum values.

* Setting ring and extension rod: optional.

* It is not advisable to use measuring heads other than as supplied as a standard accessory, or widen a measuring range by using any other multiple sub-measuring heads. (The measuring accuracy in such cases is not guaranteed.)

DIMENSIONS

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

Unit: mm

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 - 20mm	0.005mm	Micrometer head unit	368-995	.5" - .8"	.0002"	Micrometer head unit
			12 - 16mm 1 pc				.5-.65" 1 pc
			16 - 20mm 1 pc				.65-.8" 1 pc
			Setting ring (ø16) 1 pc				Setting ring (.65" DIA.) 1 pc
			Extension rod (150mm) 1 pc				Extension rod (150mm) 1 pc
Spanner 2 pcs	Spanner 2 pcs						
Hex wrench 1 pc	Hex wrench 1 pc						
368-992	20 - 50mm	0.005mm	Micrometer head unit	368-996	.8" - 2"	.0002"	Micrometer head unit
			20 - 25mm 1 pc				.8-1" 1 pc
			25 - 30mm 1 pc				1-1.2" 1 pc
			30 - 40mm 1 pc				1.2-1.6" 1 pc
			40 - 50mm 1 pc				1.6-2" 1 pc
Setting ring (ø25, ø40) 1 pc each	Setting ring (1" DIA., 1.6" DIA.) 1 pc each						
Extension rod (150mm) 1 pc	Extension rod (150mm) 1 pc						
Spanner 2 pcs	Spanner 2 pcs						
Hex wrench 1 pc	Hex wrench 1 pc						
368-993	50 - 100mm	0.005mm	Micrometer head unit	368-997	2" - 4"	.0002"	Micrometer head unit
			50 - 63mm 1 pc				2-2.5" 1 pc
			62 - 75mm 1 pc				2.5-3" 1 pc
			75 - 88mm 1 pc				3-3.5" 1 pc
			87 - 100mm 1 pc				3.5-4" 1 pc
Setting ring (ø62, ø87) 1 pc each	Setting ring (2.5" DIA., 3.5" DIA.) 1 pc each						
Extension rod (150mm) 1 pc	Extension rod (150mm) 1 pc						
Spanner 2 pcs	Spanner 2 pcs						
Hex wrench 1 pc	Hex wrench 1 pc						
368-994	100 - 200mm	0.005mm	Micrometer head unit	368-998	4" - 8"	.0002"	Micrometer head unit
			100 - 125mm 1 pc				4-5" 1 pc
			125 - 150mm 1 pc				5-6" 1 pc
			150 - 175mm 1 pc				6-7" 1 pc
			175 - 200mm 1 pc				7-8" 1 pc
Setting ring (ø125, ø175) 1 pc each	Setting ring (5" DIA., 7" DIA.) 1 pc each						
Extension rod (150mm) 1 pc	Extension rod (150mm) 1 pc						
Spanner 2 pcs	Spanner 2 pcs						
Hex wrench 1 pc	Hex wrench 1 pc						

* It is not advisable to use measuring heads other than as supplied as a standard accessory, or widen a measuring range by using any other multiple sub-measuring heads. (The measuring accuracy in such cases is not guaranteed.)



368-991



368-992



368-993



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

368-994

Holtest

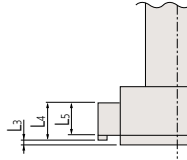
For easy and accurate measurement of inside diameters

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

- 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.

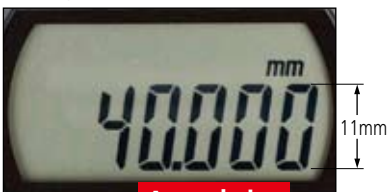


Extension rod (optional)

- 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

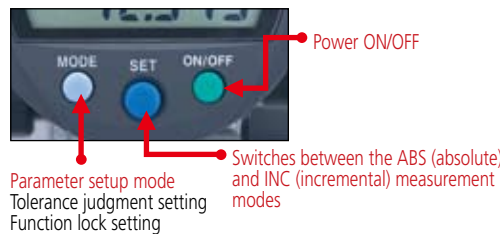
Character height of 11mm (1.5 times the character area of conventional 8.5mm products)



Actual size

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.



Function locking

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



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

ABSOLUTE™ (Refer to page X for details.)

Technical Data

Resolution: 0.001mm or .00005"/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 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-21 for details
USB Input Tool Direct (2m): 06ADV380F
 Connecting cables for **U-WAVE-T**
 For standard (160mm): **02AZD790F**
 For foot switch: **02AZE140F**

SPECIFICATIONS

Metric		individual			
Order No.	Range*2	Accuracy*1	Mass	Accessories (optional)*2	
				Extension Rod	SPC cable
568-361	6 - 8mm	±5μm (within 5μm)	480g	952322 (100mm)	905338 (1mm)
568-362	8 - 10mm		485g		
568-363	10 - 12mm		475g	952621 (150mm)	
568-364	12 - 16mm				
568-365	16 - 20mm	540g	952622 (150mm)	905409 (2mm)	
568-366	20 - 25mm	555g			
568-367	25 - 30mm	565g			
568-368	30 - 40mm	610g			
568-369	40 - 50mm	±6μm (within 6μm)	730g	952623 (150mm)	
568-370	50 - 63mm		740g		
568-371	62 - 75mm		790g		
568-372	75 - 88mm		800g		
568-373	87 - 100mm		900g		
568-374	100 - 113mm		910g		
568-375	112 - 125mm		910g		

Inch/Metric		individual				
Order No.	Range*2	Accuracy*1	Mass	Extension Rod (optional)*2		
				Extension Rod	SPC cable	
568-461	.275" - .35"	±.00025" (within .00025")	480g	952322 (100mm)	905338 (1mm)	
568-462	.35" - .425"		485g			
568-463	.425" - .5"		475g			952621 (150mm)
568-464	.5" - .65"					
568-465	.65" - .8"		540g			952622 (150mm)
568-466	.8" - 1"	555g				
568-467	1" - 1.2"	565g				
568-468	1.2" - 1.6"	610g				
568-469	1.6" - 2"	±.0003" (within .0003")	730g	952623 (150mm)		
568-470	2" - 2.5"		740g			
568-471	2.5" - 3"		790g			
568-472	3" - 3.5"		800g			
568-473	3.5" - 4"		900g			
568-474	4" - 4.5"		910g			
568-475	4.5" - 5"		910g			

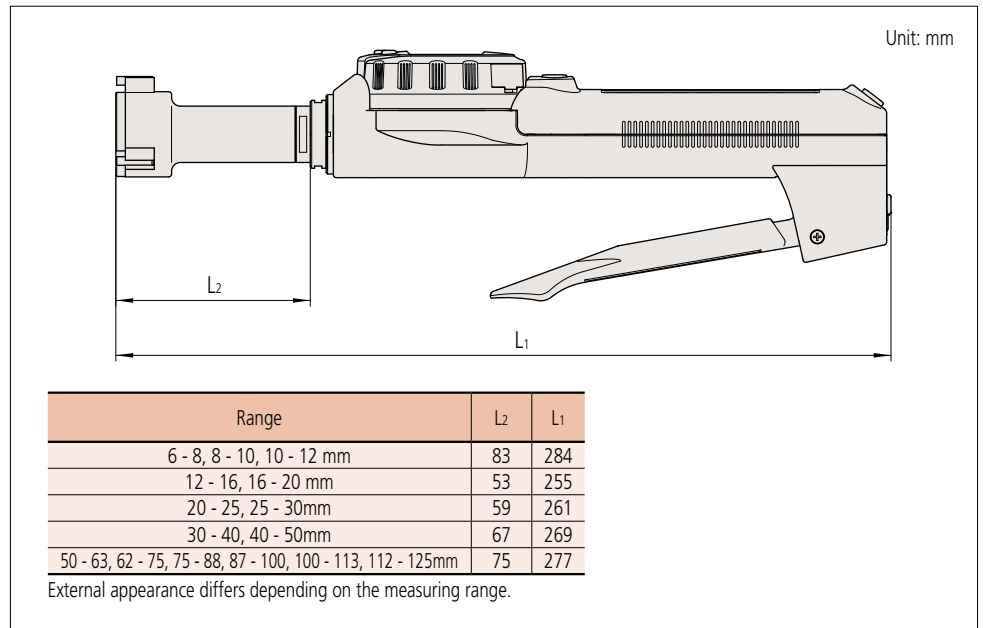
*1 Excluding quantizing error

Instrumental error excluding quantizing error (maximum error)

*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



Holtest

For easy and accurate measurement of inside diameters



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

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

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 - 12mm	Display unit	1 pc
		Measuring head	
		6 - 8mm	1 pc
		8 - 10mm	1 pc
		10 - 12mm	1 pc
		Attachment	1 pc
568-925	12 - 25mm	Display unit	1 pc
		Measuring head	
		12 - 16mm	1 pc
		16 - 20mm	1 pc
		20 - 25mm	1 pc
		Attachment	2 pcs
568-926	25 - 50mm	Display unit	1 pc
		Measuring head	
		25 - 30mm	1 pc
		30 - 40mm	1 pc
		40 - 50mm	1 pc
		Attachment	1 pc
568-927	50 - 100mm	Display unit	1 pc
		Measuring head	
		50 - 63mm	1 pc
		62 - 75mm	1 pc
		75 - 88mm	1 pc
		87 - 100mm	1 pc
568-928	.275" - .5"	Display unit	1 pc
		Measuring head	
		.275-.35"	1 pc
		.35-.425"	1 pc
		.425-.5"	1 pc
		Attachment	1 pc
568-929	.5" - 1"	Display unit	1 pc
		Measuring head	
		.5-.65"	1 pc
		.65-.8"	1 pc
		.8-1"	1 pc
		Attachment	2 pcs
568-930	1" - 2"	Display unit	1 pc
		Measuring head	
		1-1.2"	1 pc
		1.2-1.6"	1 pc
		1.6-2"	1 pc
		Attachment	1 pc
568-936	2" - 4"	Display unit	1 pc
		Measuring head	
		2-2.5"	1 pc
		2.5-3"	1 pc
		3-3.5"	1 pc
		3.5-4"	1 pc
568-936	2" - 4"	Attachment	1 pc
		Setting ring (2.5" DIA, 3.5" DIA)	1 pc each
		Spanner	2 pcs
		Setting ring (ø8, ø10)	1 pc each
		Spanner	2 pcs
		Setting ring (ø16, ø20)	1 pc each
Spanner	2 pcs		
Setting ring (ø30, ø40)	1 pc each		
Spanner	2 pcs		

Inch/Metric			
Order No.	Range	Content of Set	
568-928	.275" - .5"	Display unit	1 pc
		Measuring head	
		.275-.35"	1 pc
		.35-.425"	1 pc
		.425-.5"	1 pc
		Attachment	1 pc
568-929	.5" - 1"	Display unit	1 pc
		Measuring head	
		.5-.65"	1 pc
		.65-.8"	1 pc
		.8-1"	1 pc
		Attachment	2 pcs
568-930	1" - 2"	Display unit	1 pc
		Measuring head	
		1-1.2"	1 pc
		1.2-1.6"	1 pc
		1.6-2"	1 pc
		Attachment	1 pc
568-936	2" - 4"	Display unit	1 pc
		Measuring head	
		2-2.5"	1 pc
		2.5-3"	1 pc
		3-3.5"	1 pc
		3.5-4"	1 pc
568-936	2" - 4"	Attachment	1 pc
		Setting ring (2.5" DIA, 3.5" DIA)	1 pc each
		Spanner	2 pcs
		Setting ring (.35" DIA, .425" DIA)	1 pc each
		Spanner	3 pcs
		Setting ring (.65" DIA, .8" DIA)	1 pc each
Spanner	2 pcs		
Setting ring (1.2" DIA, 1.6" 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 - 12mm	Display unit	
		6 - 8mm	1 pc
		8 - 10mm	1 pc
		10 - 12mm	1 pc
		Setting ring (ø8, ø10)	1 pc each
568-956	12 - 25mm	Display unit	
		12 - 16mm	1 pc
		16 - 20mm	1 pc
		20 - 25mm	1 pc
		Setting ring (ø16, ø20)	1 pc each
568-957	25 - 50mm	Display unit	
		25 - 30mm	1 pc
		30 - 40mm	1 pc
		40 - 50mm	1 pc
		Setting ring (ø30, ø40)	1 pc each
568-958	50 - 75mm	Display unit	
		50 - 63mm	1 pc
		62 - 75mm	1 pc
		Setting ring (ø62)	1 pc
		Spanner	2 pcs
568-959	75 - 100mm	Display unit	
		75 - 88mm	1 pc
		87 - 100mm	1 pc
		Setting ring (ø87)	1 pc
		Spanner	2 pcs

Inch/Metric			
Order No.	Range	Content of Set	
568-965	.275" - .5"	Display unit	
		.275-.35"	1 pc
		.35-.425"	1 pc
		.425-.5"	1 pc
		Setting ring (.35" DIA, .425" DIA)	1 pc each
568-966	.5" - 1"	Display unit	
		.5-.65"	1 pc
		.65-.8"	1 pc
		.8-1"	1 pc
		Setting ring (.65" DIA, .8" DIA)	1 pc each
568-967	1" - 2"	Display unit	
		1-1.2"	1 pc
		1.2-1.6"	1 pc
		1.6-2"	1 pc
		Setting ring (1.2" DIA, 1.6" DIA)	1 pc each
568-968	2" - 3"	Display unit	
		2-2.5"	1 pc
		2.5-3"	1 pc
		Setting ring (2.5" DIA)	1 pc
		Spanner	2 pcs
568-969	3" - 4"	Display unit	
		3-3.5"	1 pc
		3.5-4"	1 pc
		Setting ring (3.5" DIA)	1 pc
		Spanner	2 pcs



568-924



568-926



568-955



568-957



568-959