

# Micrometer

The origin of Mitutoyo's trustworthy brand of small tool instruments



An inspection certificate is attached as standard. Refer to page IX for details.

## Outside Micrometers SERIES 102

- Heat-insulated frame.
- Cut-away frame (behind anvil) for measuring in hard-to-reach places.
- A ratchet stop or a friction thimble for a constant measuring force.
- Measuring faces: Carbide



Ratchet stop  
102-301



Ratchet stop type



Friction thimble type

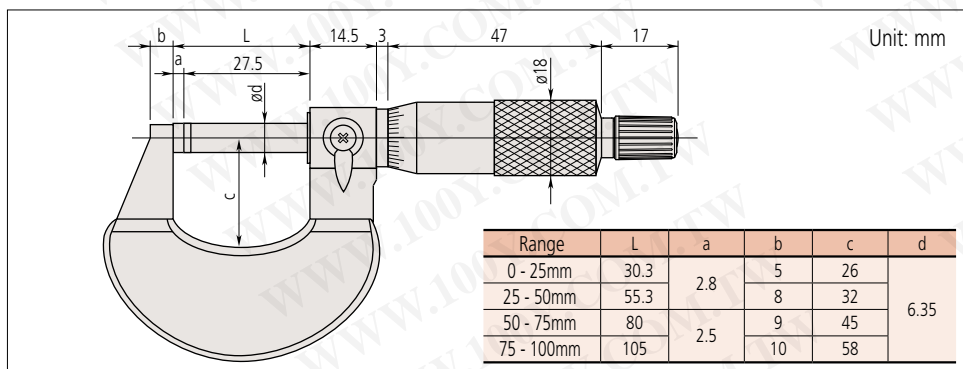
## SPECIFICATIONS

Metric						
Order No.	Range	Graduation	Accuracy	Flatness	Parallelism	Constant-force device
102-301	0 - 25mm	0.01mm	±2μm	0.6μm	2μm	Ratchet stop
102-311		0.001mm	±1μm	0.3μm	1μm	
102-313		0.001mm				Ratchet stop
102-302	25 - 50mm	0.01mm	±2μm	0.6μm	2μm	
102-312		0.001mm	±1μm	0.3μm	1μm	
102-303		0.01mm	±2μm	0.6μm	2μm	
102-304	75 - 100mm	0.01mm	±3μm			3μm

Metric			Micrometer set
Order No.	Range	Models included	
102-911-01	0 - 100mm (Four micrometers per set)	<ul style="list-style-type: none"> <li>• 102-701*</li> <li>• 102-302</li> <li>• 102-303</li> <li>• 102-304</li> <li>• 3 micrometer standards</li> </ul>	

\* Ratchet thimble micrometer.

## DIMENSIONS



勝特力材料 886-3-5753170  
 勝特力电子(上海) 86-21-34970699  
 勝特力电子(深圳) 86-755-83298787  
[Http://www.100y.com.tw](http://www.100y.com.tw)

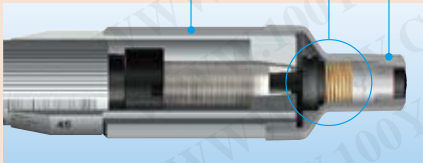
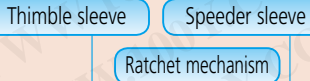


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### Technical Data

Flatness: 0.6µm/.000024"  
 Parallelism: 2µm/.00008"  
 Measuring force: 5-10N

### Internal structure

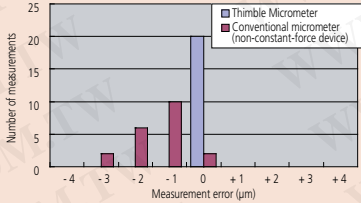


### Greatly improved accuracy and repeatability

#### Measurement results of one-handed operation

A beginner performed a test by measuring a workpiece 20 times using a conventional micrometer and a Ratchet Thimble Micrometer.

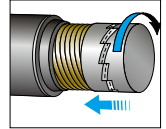
Table showing results of test



## Ratchet Thimble Micrometer SERIES 102 — Outside Micrometers

- More accurate in one-handed operation: inexperienced operators measure significantly more accurately with the new micrometer.
- Ratchet function works both from the thimble and the speeder.

- Rotating the thimble/speeder when the workpiece is between the anvil and spindle causes the ratchet mechanism to operate and apply a constant measuring force to the workpiece.
- Clearly audible ratchet operation for reassurance that measurement is being performed at constant, preset force.
- The speeder is always available for quick rotation of spindle.
- A simple mechanism, which requires neither parts maintenance nor special technique, is employed in the constant-force device.
- Heat-insulated frame.
- Measuring faces: Carbide



### SPECIFICATIONS

Metric					Inch						
Order No.	Range	Graduation	Accuracy	Mass	Order No.	Range	Graduation	Accuracy	Mass		
102-701	0 - 25mm	0.01mm	±2µm	180g	101-717	0 - 1"	.0001"	±.0001"	180g		
102-702		0.001mm			102-718					1" - 2"	270g
102-702	25 - 50mm	0.01mm		270g	102-718	1" - 2"			.0001"	±.0001"	270g
102-708		0.001mm									

### DIMENSIONS

