

# Micrometer

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

## V-Anvil Micrometers SERIES 314, 114 — 3 Flutes and 5 Flutes

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

- Measures the outside diameter of cutting tools (such as taps, reamers, end mills) which have three or five flutes.
- Measures pitch diameter: refer to "Quick Guide to Precision Measuring Instruments" on page B-72.
- Measuring faces: Carbide.
- Equipped with Ratchet Stop for constant measuring force.



314-251-30



114-121



114-102



114-101

**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).

### Technical Data

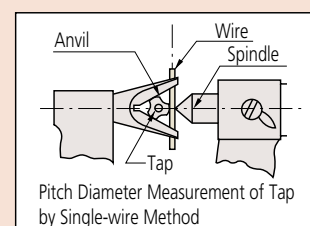
- Flatness: (**series 114**) 0.6  $\mu\text{m}$ /0.000024 in (Spindle)  
1.3  $\mu\text{m}$ /0.000052 in (Anvil)  
(**series 314**) 0.3  $\mu\text{m}$ /0.000012 in (Spindle)  
1.0  $\mu\text{m}$ /0.00004 in (Anvil)
- Battery for **series 314**  
**SR44** (1 pc.), **938882**, for initial operational checks (standard accessory)
- Battery life: Approx. 2.4 years under normal use (for **series 314**)
- Length standard: Electromagnetic rotary sensor (for **series 314**)
- Standard accessories:  
Reference bar, 1 pc.  
Spanner (**301336**), 1 pc.  
(Maximum measuring range up to 55 mm/2.2 in 114-114)\*<sup>1</sup>  
(Maximum measuring range up to 45 mm/1 in)\*<sup>2</sup>  
Spanner (**200877**), 1 pc.  
(for maximum measuring range 70 mm or over)\*<sup>1</sup>  
(for maximum measuring range 65 mm or over)\*<sup>2</sup>  
\*<sup>1</sup> For analog type with 3-flute cutting tools.  
\*<sup>2</sup> For analog type with 5-flute cutting tools.
- Setting Standards for V-Anvil Micrometer

### Optional Accessories

- Connecting cables for **series 314**  
1 m: **05CZA662**  
2 m: **05CZA663**
- USB Input Tool Direct  
**USB-ITN-B** (2 m): **06AFM380B**
- **U-WAVE-T** dedicated connection cable  
160 mm: **02AZD790B**  
For foot switch: **02AZE140B**  
Refer to page A-25 for details.

### Wireless Data Output **U-WAVE™**

- **U-WAVE-TM** 264-622 (IP67 type)  
264-623 (Buzzer type)
- Connecting unit for **U-WAVE-TM**  
**02AZF310** (IP67/buzzer type common specification)  
Refer to page A-15 for details.



## SPECIFICATIONS

Metric For 3-flute cutting tools					
Order No.	Range (mm)	Resolution (mm)	Accuracy* (μm)	Anvil	Remarks
Digimatic (LCD)					
314-251-30	1 - 15	0.001	±4	60°	w/groove
314-252-30	10 - 25		±5		—
314-253-30	25 - 40		±4		—
314-262-30	10 - 25		±4		—

\* Excluding quantizing error of ±1 count

Metric For 3-flute cutting tools							
Order No.	Range (mm)	Graduation (mm)	Accuracy (μm)	Anvil	Remarks		
Analog Anvil, Spindle (With carbide tip)							
114-204	2.3 - 25	0.01	±4	60°	—		
Analog Spindle (With carbide tip)							
114-101	1 - 15		±4		w/groove		
114-102	10 - 25		±5		—		
114-103	25 - 40		±6		—		
114-104	40 - 55		±7		—		
114-105	55 - 70		±4		—		
114-106	70 - 85		±4		—		
114-161	1 - 15		±4		—		
114-162	10 - 25		±4		—		

Metric For 5-flute cutting tools							
Order No.	Range (mm)	Graduation (mm)	Accuracy (μm)	Anvil	Remarks		
Analog Anvil, Spindle (With carbide tip)							
114-137	2.3 - 25	0.01	±4	108°	—		
Analog Spindle (With carbide tip)							
114-121	5 - 25		±4		w/groove		
114-122	25 - 45		±5		—		
114-123	45 - 65		±6		—		
114-124	65 - 85		±7		—		
114-165	5 - 25		±4		—		

Note: For functional details of series 314 refer to page B-8.

Please note that these models are not water-proof, and that origin setting is by presetting. Optional connecting cable is available only for water-proof type (Digimatic model).

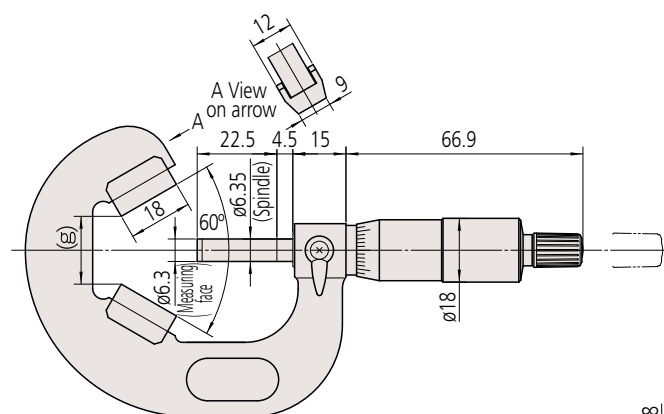
Inch/Metric For 3-flute cutting tools					
Order No.	Range (in)	Resolution (in)	Accuracy* (in)	Anvil	Remarks
Digimatic (LCD)					
314-351-30	0.05 - 0.6	0.00005 in/ 0.001 mm	±0.0002	60°	w/groove
314-352-30	0.4 - 1		±0.00025		—
314-353-30	1 - 1.6		±0.0002		—
314-361-30	0.05 - 0.6		±0.0002		—
314-362-30	0.4 - 1		±0.0002		—

\* Excluding quantizing error of ±1 count

Inch For 3-flute cutting tools						
Order No.	Range (in)	Graduation (in)	Accuracy (in)	Anvil	Remarks	
Analog Anvil, Spindle (With carbide tip)						
114-202	0.09 - 1	0.0001	±0.0002	60°	—	
Analog Spindle (With carbide tip)						
114-163	0.05 - 0.6	0.001	±0.0002		—	
114-113	1 - 1.6		±0.00025		—	
114-114	1.6 - 2.2		±0.0003		—	

Inch For 5-flute cutting tools					
Order No.	Range (in)	Graduation (in)	Accuracy (in)	Anvil	Remarks
Analog Anvil, Spindle (With carbide tip)					
114-135	0.09 - 1	0.0001	±0.0002	108°	—

## DIMENSIONS

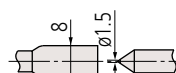


114-103

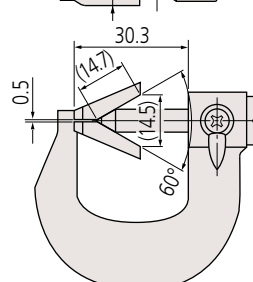
For 3-flute cutting tools

Range (mm)	(g)
10 - 25	6.2
25 - 40	19.14
40 - 55	32.13
55 - 70	45.12
70 - 85	58.11

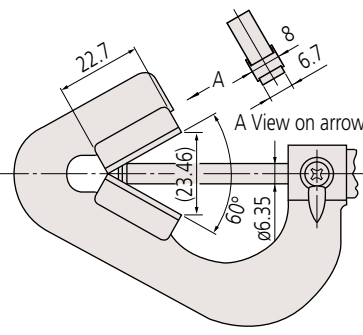
w/o groove model



w/ groove model



114-101



114-204

Unit: mm