

# 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 taps and reamers with an odd number of 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

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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).

### Technical Data

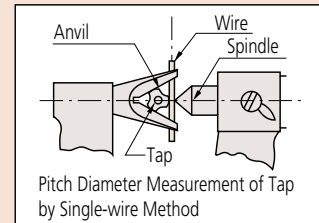
- Flatness: (**series 114**) 0.6  $\mu\text{m}$ /0.000024 in (Spindle)  
1.3  $\mu\text{m}$ /0.000052 in (Anvil)  
(**series 314**) 0.3  $\mu\text{m}$ /0.000012 in (Spindle)  
1.0  $\mu\text{m}$ /0.00004 in (Anvil)
- Battery for **series 314**  
SR44 (1 pc.), **938882**, for initial operational checks (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.

### 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-27 for details.

### Wireless Data Output **U-WAVE™**

- **U-WAVE-TM** **264-622** (IP67 type)  
**264-623** (Buzzer type)
- **U-WAVE-TMB** Transmitter  
**Mitutoyo Bluetooth® U-WAVE**  
**264-626** (IP type)  
**264-627** (Buzzer type)  
Refer to page A-16 for details.
- Connecting unit for **U-WAVE-TM/TMB**  
**02AZF310** (IP67/buzzer type common specification)  
Refer to pages A-16 and A-18 for details.



## SPECIFICATIONS

**Metric** For 3-flute cutting tools

Order No.	Range (mm)	Resolution (mm)	Maximum permissible error $J_{MPE}$ ( $\mu$ m)	Anvil	Remarks
Digimatic (LCD)					
314-251-30	1 - 15	0.001	$\pm 4$	60°	w/groove
314-252-30	10 - 25				
314-253-30	25 - 40				
314-261-30	1 - 15				
314-262-30	10 - 25				

**Metric** For 3-flute cutting tools

Order No.	Range (mm)	Graduation (mm)	Maximum permissible error $J_{MPE}$ ( $\mu$ m)	Anvil	Remarks								
Analog Anvil, Spindle (With carbide tip)													
114-204	2.3 - 25	0.01	$\pm 4$	60°	—								
Analog Spindle (With carbide tip)													
114-101	1 - 15					$\pm 4$	60°	w/groove	—				
114-102	10 - 25												
114-103	25 - 40												
114-104	40 - 55												
114-105	55 - 70												
114-106	70 - 85												
114-161	1 - 15									$\pm 4$	60°	—	—
114-162	10 - 25												

**Metric** For 5-flute cutting tools

Order No.	Range (mm)	Graduation (mm)	Maximum permissible error $J_{MPE}$ ( $\mu$ m)	Anvil	Remarks				
Analog Anvil, Spindle (With carbide tip)									
114-137	2.3 - 25	0.01	$\pm 4$	108°	—				
Analog Spindle (With carbide tip)									
114-121	5 - 25					$\pm 4$	108°	w/groove	—
114-122	25 - 45								
114-123	45 - 65								
114-124	65 - 85								
114-165	5 - 25								

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	Maximum permissible error $J_{MPE}$ (in)	Anvil	Remarks
Digimatic (LCD)					
314-351-30	0.05 - 0.6	0.00005 in/ 0.001 mm	$\pm 0.0002$	60°	w/groove
314-352-30	0.4 - 1				
314-353-30	1 - 1.6				
314-361-30	0.05 - 0.6				
314-362-30	0.4 - 1				

**Inch** For 3-flute cutting tools

Order No.	Range (in)	Graduation (in)	Maximum permissible error $J_{MPE}$ (in)	Anvil	Remarks
Analog Anvil, Spindle (With carbide tip)					
114-202	0.09 - 1	0.0001	$\pm 0.0002$	60°	—
Analog Spindle (With carbide tip)					
114-163	0.05 - 0.6	0.001	$\pm 0.0002$	60°	—
114-113	1 - 1.6		$\pm 0.00025$		
114-114	1.6 - 2.2		$\pm 0.0003$		

**Inch** For 5-flute cutting tools

Order No.	Range (in)	Graduation (in)	Maximum permissible error $J_{MPE}$ (in)	Anvil	Remarks
Analog Anvil, Spindle (With carbide tip)					
114-135	0.09 - 1	0.0001	$\pm 0.0002$	108°	—

## DIMENSIONS

