

# Micrometer

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

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

**MeasurLink<sup>1</sup> 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.



**MeasurLink<sup>1</sup> 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

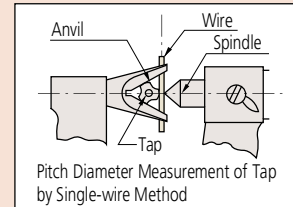
- Flatness: (series 114) 0.6  $\mu\text{m}$ /0.000024 in (Spindle)  
1.3  $\mu\text{m}$ /0.000052 in (Anvil)  
(series 314) 0.3  $\mu\text{m}$ /0.000012 in (Spindle)  
1.0  $\mu\text{m}$ /0.00004 in (Anvil)
- Battery for series 314  
SR44 (1 pc.), 938882, for initial operational checks (standard accessory)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

### 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<sup>fit</sup>

- U-WAVE-TM 264-622 (IP67 type)  
264-623 (Buzzer type)
- U-WAVE-TMB Transmitter  
Mitutoyo Bluetooth<sup>®</sup> 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)					
<b>314-251-30</b>	1 - 15	0.001	$\pm 4$	60°	w/groove
<b>314-252-30</b>	10 - 25				
<b>314-253-30</b>	25 - 40				
<b>314-261-30</b>	1 - 15				
<b>314-262-30</b>	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)									
<b>114-204</b>	2.3 - 25	0.01	$\pm 4$	60°	—				
Analog Spindle (With carbide tip)									
<b>114-101</b>	1 - 15					w/groove			
<b>114-102</b>	10 - 25								
<b>114-103</b>	25 - 40								
<b>114-104</b>	40 - 55								
<b>114-105</b>	55 - 70								
<b>114-106</b>	70 - 85	$\pm 7$	—	—	—				
<b>114-161</b>	1 - 15	$\pm 4$	—	—	—				
<b>114-162</b>	10 - 25	$\pm 4$	—	—	—				

### 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)									
<b>114-137</b>	2.3 - 25	0.01	$\pm 4$	108°	—				
Analog Spindle (With carbide tip)									
<b>114-121</b>	5 - 25					w/groove			
<b>114-122</b>	25 - 45								
<b>114-123</b>	45 - 65								
<b>114-124</b>	65 - 85								
<b>114-165</b>	5 - 25	$\pm 4$	—	—	—				

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

### Inch For 3-flute cutting tools

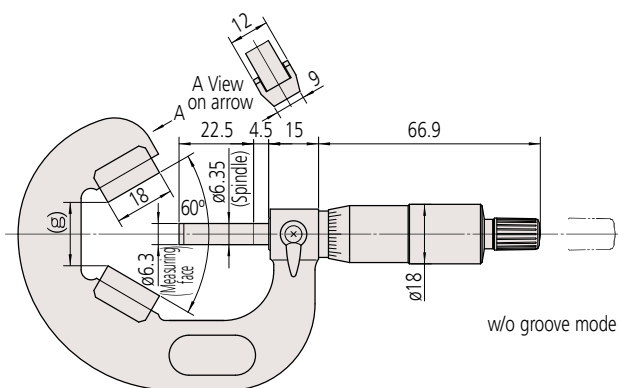
Order No.	Range (in)	Graduation (in)	Maximum permissible error $J_{MPE}$ (in)	Anvil	Remarks
Analog Anvil, Spindle (With carbide tip)					
<b>114-202</b>	0.09 - 1	0.0001	$\pm 0.0002$	—	—
Analog Spindle (With carbide tip)					
<b>114-163</b>	0.05 - 0.6	0.001	$\pm 0.00025$	60°	—
<b>114-113</b>	1 - 1.6	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

### 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)					
<b>114-135</b>	0.09 - 1	0.0001	$\pm 0.0002$	108°	—

## DIMENSIONS

Unit: mm

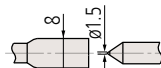


114-103

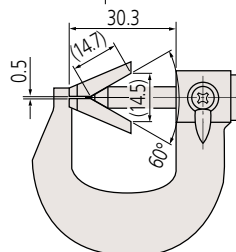
For 3-flute cutting tools

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

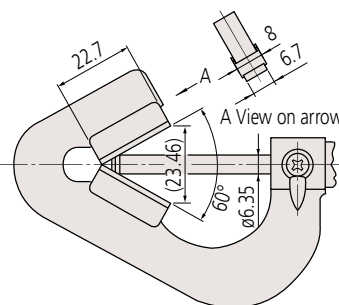
w/o groove model



w/ groove model



114-101



114-204