Micrometer

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

MeasurLink® ENABLED
Data Management Software by Mitutoyo

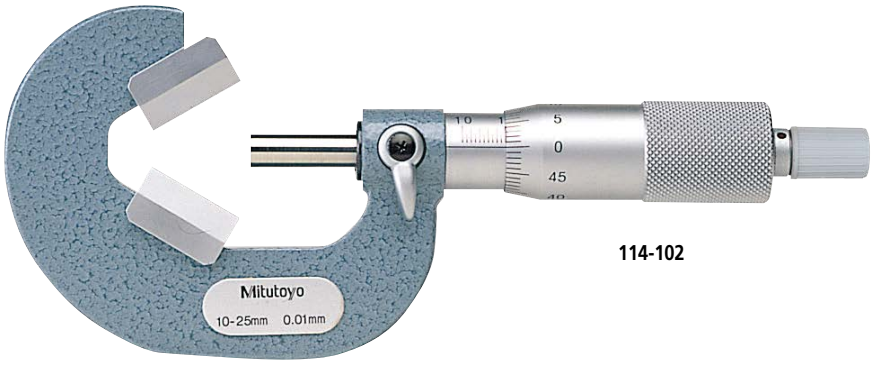
Products equipped with the measurement data output function can be connected to the measurement data network system MeasurLink (refer to page A-5 for details).

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

- 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

Technical Data

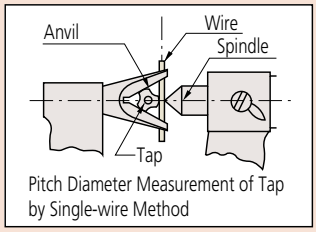
- Flatness: (**series 114**) 0.6 µm/0.000024 in (Spindle)
  1.3 µm/0.000052 in (Anvil)
  (**series 314**) 0.3 µm/0.000012 in (Spindle)
  1.0 µm/0.00004 in (Anvil)
- Battery for **series 314**
  SR44 (1 pc.), **938882**, for initial operational checks (standard accessory)
- Battery life: Approx. 2.4 years 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 fit

- **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.



Pitch Diameter Measurement of Tap by Single-wire Method

SPECIFICATIONS

Metric For 3-flute cutting tools

Order No.	Range (mm)	Resolution (mm)	Maximum permissible error J_{MPE} (µm)	Anvil	Remarks
Digimatic (LCD)					
314-251-30	1 - 15	0.001	±4	60°	w/groove
314-252-30	10 - 25				
314-253-30	25 - 40		±5		—
314-261-30	1 - 15		±4		—
314-262-30	10 - 25				—

Metric For 3-flute cutting tools

Order No.	Range (mm)	Graduation (mm)	Maximum permissible error J_{MPE} (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				
114-103	25 - 40		±5		—
114-104	40 - 55		±6		—
114-105	55 - 70				—
114-106	70 - 85		±7		—
114-161	1 - 15		±4		—
114-162	10 - 25				—

Metric For 5-flute cutting tools

Order No.	Range (mm)	Graduation (mm)	Maximum permissible error J_{MPE} (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		—

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	±0.0002	60°	w/groove
314-352-30	0.4 - 1				
314-353-30	1 - 1.6		±0.00025		—
314-361-30	0.05 - 0.6		±0.0002		—
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	±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		—

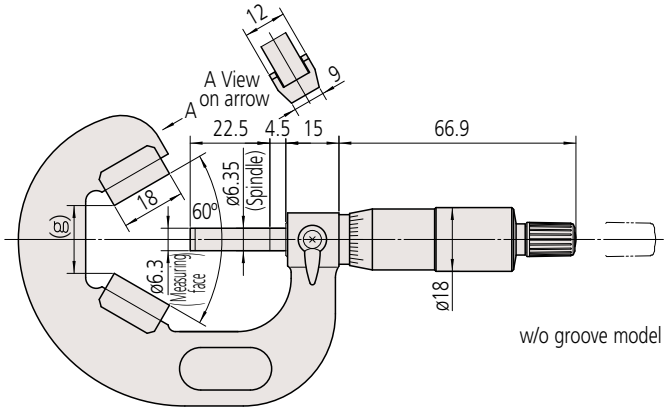
Inch For 5-flute cutting tools

Order No.	Range (in)	Graduation (in)	Maximum permissible error J_{MPE} (in)	Anvil	Remarks
Analog Anvil,Spindle (With carbide tip)					
114-135	0.09 - 1	0.0001	±.0002	108°	—

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).

DIMENSIONS

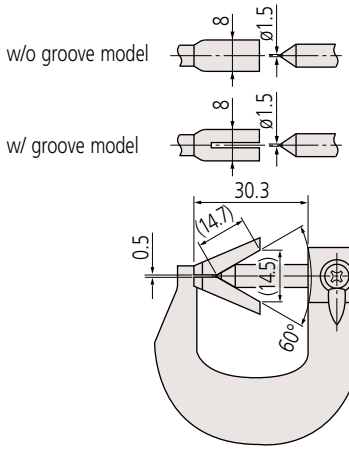
Unit: mm



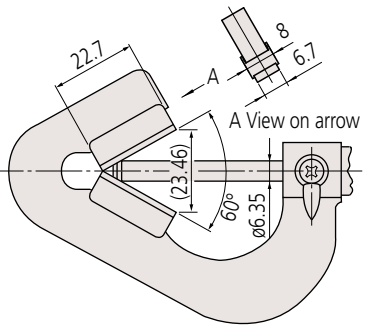
114-103

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



114-101



114-204