

# Micrometer

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

## Blade Micrometers SERIES 422, 122 — Non-Rotating Spindle Type

- The anvil and spindle are blade-shaped for measuring the groove diameter of shafts, keyways, and other hard-to-reach features.
- Carbide-tipped measuring faces are available.
- Non-rotating spindle type.
- Equipped with Ratchet Stop for constant measuring force.

**MeasurLink** ENABLED  
Data Management Software by Mitutoyo



Digimatic (LCD)  
422-230-30



122-101



Quickmike Type (LCD)  
422-411-20 **IP65**

**ABSOLUTE**<sup>™</sup>

### SPECIFICATIONS

Metric					
Order No.	Range	Resolution	Accuracy*	Remark	
Digimatic (LCD)					
422-230-30	0 - 25 mm	0.001 mm	±3 μm	Type A	
422-231-30	25 - 50 mm				
422-232-30	50 - 75 mm				
422-233-30	75 - 100 mm				
422-260-30	0 - 25 mm		±3 μm	Type B	
422-261-30	25 - 50 mm				
422-270-30	0 - 25 mm				
422-271-30	0 - 25 mm		Type C		
				Type D	

\* Excluding quantizing error of ±1 count

Metric Quickmike type					
Order No.	Range	Resolution	Accuracy*	Remark	
Digimatic (LCD)					
422-411-20	0 - 30 mm	0.001 mm	±3 μm	Type A	
422-412-20	25 - 55 mm				

\* Excluding quantizing error of ±1 count

Metric					
Order No.	Range	Graduation	Accuracy	Remark	
Analog					
122-101	0 - 25 mm	0.01 mm	±3 μm	Type A	
122-102	25 - 50 mm				
122-103	50 - 75 mm				
122-104	75 - 100 mm		±4 μm		
122-105	100 - 125 mm				
122-106	125 - 150 mm		±5 μm		
122-107	150 - 175 mm				
122-108	175 - 200 mm				
122-109	200 - 225 mm		±6 μm		
122-110	225 - 250 mm				
122-115	250 - 275 mm				
122-116	275 - 300 mm	±3 μm	Type B		
122-111	0 - 25 mm				
122-112	25 - 50 mm				
Analog (With carbide tip)					
122-161	0 - 25 mm	0.01 mm	±3 μm	Type C	
122-162	25 - 50 mm				
122-141	0 - 25 mm				
122-142	25 - 50 mm				

Notes: 1) A heat shield is provided with Digimatic models and 122-101, 122-161, 122-141 as standard.

Inch/Metric					
Order No.	Range	Resolution	Accuracy*	Remark	
Digimatic (LCD)					
422-330-30	0-1 in	0.0005 in/ 0.001 mm	±0.00015 in	Type A	
422-331-30	1-2 in				
422-332-30	2-3 in				
422-333-30	3-4 in				
422-360-30	0-1 in	±0.00015 in		Type B	
422-361-30	1-2 in				
422-370-30	2-3 in				
422-371-30	0-1 in			Type C	
				Type D	

\* Excluding quantizing error of ±1 count

Inch/Metric Quickmike type					
Order No.	Range	Resolution	Accuracy*	Remark	
Digimatic (LCD)					
422-421-20	0-1.2 in	0.00005 in/ 0.001 mm	±0.00015 in	Type A	

\* Excluding quantizing error of ±1 count

Inch					
Order No.	Range	Graduation	Accuracy	Remark	
Analog					
122-125	0 - 1 in	0.0001 in	±0.00015 in	Type A	
122-126	1 - 2 in				
122-127	2 - 3 in				
122-128	3 - 4 in		±0.0002 in		
122-135	0 - 1 in				
122-151	0 - 1 in				

Notes: 1) A heat shield is provided with Digimatic models and 122-125, 122-135, 122-151 as standard.

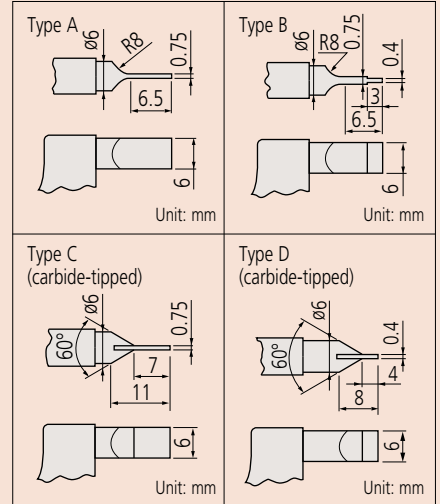
**MeasurLink** ENABLED  
Data Management Software by Mitutoyo

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

Parallelism  
3 μm for models up to 75 mm  
0.00015 in for models up to 3 in  
(3+R/100) μm for models over 75 mm  
0.0002 in for models over 3 in  
R = max. range (mm)  
fraction rounded up

### Type and Dimensions



### Battery for Series 422

**SR44** (1 pc, **938882**, for initial operational checks (standard accessory)  
Battery life: Approx. 2.4 years under normal use (for series 422-2XX, 3XX)  
Approx. 5 year under normal use (for series 422-4XX)  
Approx. 18,000 hours in continuous use

Length standard: Electromagnetic rotary sensor (for series 422-2XX, 3XX)

Electrostatic capacity absolute sensor (for series 422-4XX)

Standard accessories: Reference bar, 1 pc (except for measuring range 0-25 mm / 0-30 mm (0-1 in/0-1.2 in) models)

Spanner (301336), 1 pc (for series 122-1XX, 422-2XX, 3XX)

### Optional Accessories

Connecting cables for digital models

1 m: **05CZA662**

2 m: **05CZA663**

### USB Input Tool Direct

**USB-ITN-B** (2 m): **06AFM380B**

Connecting for **422-230-30** to

**422-271-30, 422-330-30** to **422-371-30**

Wireless data output **U-WAVE** fit

**U-WAVE-TM 264-622** IP67 type

**264-623** Buzzer type

Connecting unit for U-WAVE-TM

**02AZF310** (IP67 type)

Note: cannot be used with Quickmike type

Refer to page A-15 for details

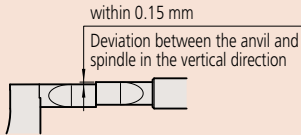


## DIMENSIONS

### Quickmike

Provides a speedy spindle feed of 10mm per thimble rotation which enables widely differently sized features to be measured quickly.

### Deviation Between the Anvil and Spindle in the Vertical Direction

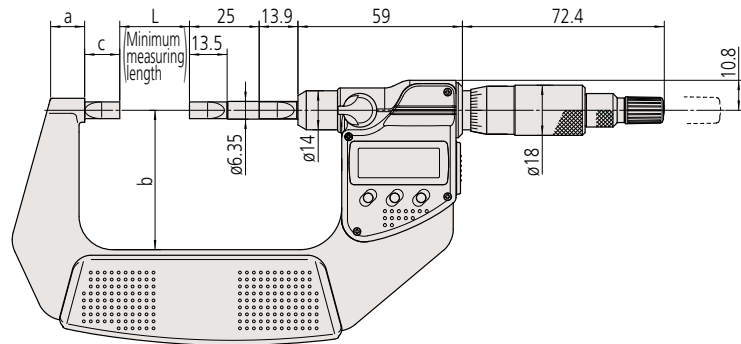


Deviation of 0.15 mm or less\* is guaranteed between the anvil and spindle in the vertical direction.

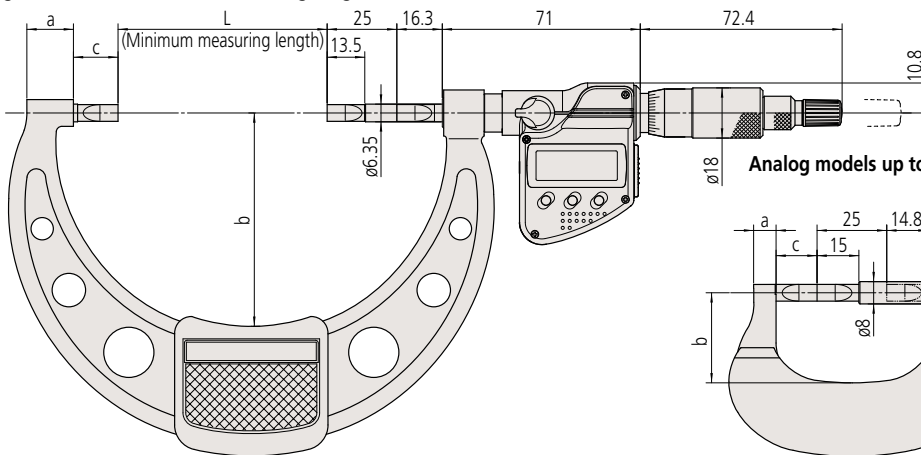
\* When the measuring range is 0 - 25 mm

### Digital models up to 50 mm measuring range

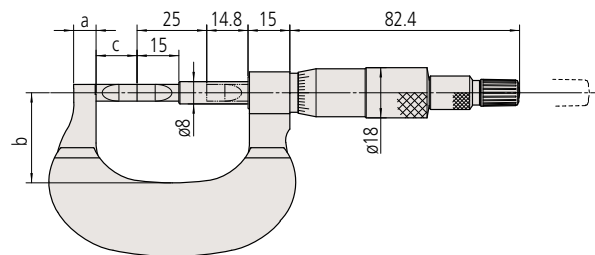
Unit: mm



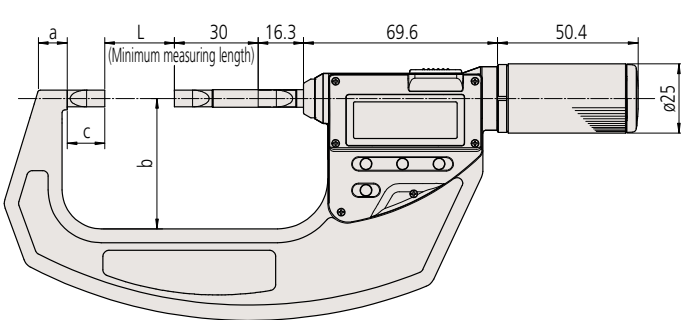
### Digital models over 75 mm measuring range



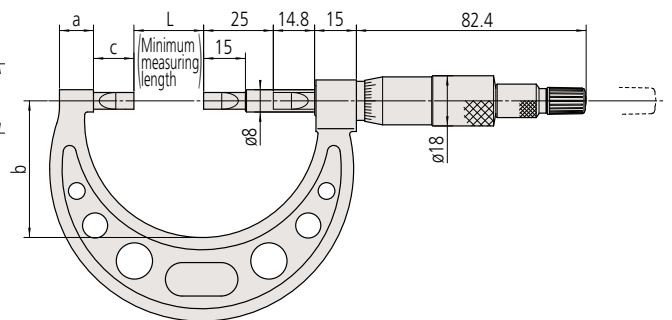
### Analog models up to 25 mm measuring range



### Quickmike type



### Analog models over 50 mm measuring range



Order No.	L	a	b	C
422-230-30	0	11	31	12.5
422-231-30	25	12.2	50	12.6
422-232-30	50	14.6	57	13
422-233-30	75	16.7	76	16
422-260-30	0	11	31	12.5
422-261-30	25	12.2	50	12.6
422-270-30	0	11	31	12.5
422-271-30				
122-101	25	7.8	32	15
122-102		12.2	49	14.5
122-103		14.6	60	
122-104		16.7	79	
122-105	100	18.8	94	17.9
122-106	125	19.1	106	18.3
122-107	150	18.2	118	18.5
122-108	175	16.8	130	18.9
122-109	200	18	143	17.7
122-110	225		156	18.7
122-115	250		169	
112-116	275		181	
422-411	0	8.5	36	13.5
422-412	25	10.3	47	