

# QuantuMike

## SERIES 293 — IP65 Coolant Proof Micrometer with 2mm/rev Spindle Feed

Speedy measurement is achieved thanks to 2mm of spindle feed for every thimble revolution!

Mitutoyo is proud to have reached its leading position in the micrometer market through a spirit of innovation, imagination and creating added value.

The QuantuMike brand of micrometer, inspired by this Mitutoyo Spirit, provides users with an excellent measuring experience with higher speed, quality and stability than ever before owing to the integration of sophisticated manufacturing and processing technologies.



(Refer to page VIII for details.)



(Refer to page VIII for details.)



Metric	
Range	Order No.
0 - 25mm	293-180 / 293-145*

Inch/Metric	
Range	Order No.
0 - 1"	293-180 / 293-185*

\*without SPC data output



Metric	
Range	Order No.
25 - 50mm	293-141 / 293-146*

Inch/Metric	
Range	Order No.
1" - 2"	293-181 / 293-186*

\*without SPC data output



Metric	
Range	Order No.
50 - 75mm	293-142 / 293-147*

Inch/Metric	
Range	Order No.
2" - 3"	293-182 / 293-187*

\*without SPC data output



Metric	
Range	Order No.
75 - 100mm	293-143 / 293-148*

Inch/Metric	
Range	Order No.
3" - 4"	293-183 / 293-188*

\*without SPC data output



Certificate of inspection

### Technical Data

Accuracy:  $\pm 1\mu\text{m}/\pm.00005"$  or  $\pm 2\mu\text{m}/\pm.0001"$  (over 75mm/3")

(excluding quantizing error)

Resolution: 0.001mm, .00005"/0.001mm

Flatness: 0.3 $\mu\text{m}/0.00012"$

Parallelism: 1 $\mu\text{m}/0.0004"$  for models up to 50mm/2"  
2 $\mu\text{m}/0.0008"$  for models up to 100mm/4"

Measuring faces: Carbide

Display: LCD

Length standard: Electromagnetic rotary sensor

\*Patent pending (in Japan, USA, Europe, and China)

Battery: SR44 (1 pc.), 938882

Battery life: Approx. 1.2 years under normal use

Dust/Water protection level: IP65

### Functions

Origin-set, Zero-setting, Function lock, Automatic power ON/OFF, Data hold, Data output, inch/mm conversion (inch/mm models)

Alarm: Low voltage, Counting value composition error





### Optional Accessories

- 05CZA662:** SPC cable with data switch (1m)
- 05CZA663:** SPC cable with data switch (2m)
- 06ADV380B:** USB Input Tool Direct with data switch (2m)
- 02AZD790B:** SPC cable for U-WAVE water-proof model (160mm)



Measurement data output function is available with a water-resistant connection cable.

### Useful application of measurement data

A statistical process control system and a measurement network system can be established to share information regarding quality with a model equipped with the data output function.



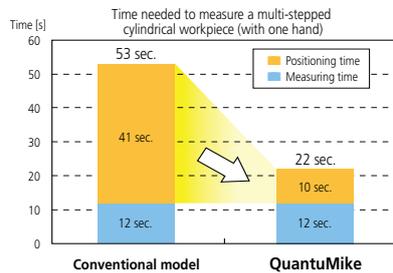
## FEATURES

### • Speedy measurement

Faster measurement is achieved by using a coarser thread which feeds the spindle by 2mm per revolution of the thimble instead of the standard 0.5mm. This increase in thread lead has been made possible thanks to new high precision thread-cutting and test techniques.

Trials show that a reduction in positioning times of 60% and measuring times of 35%\* can be obtained, compared with a conventional micrometer.

\* According to Mitutoyo's comparison test data for measuring time on typical workpieces.



The time needed to measure 6 diameters on a workpiece, from the smallest to the largest with the micrometer held in one hand, was recorded for a conventional digital micrometer and for the QuantuMike

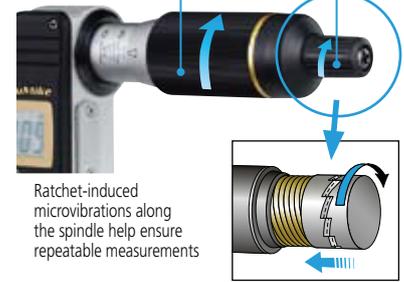
### • Repeatable measurement

The patented ratchet thimble mechanism\* helps ensure repeatable results by transmitting microvibrations along the spindle to the contact face to provide a constant measuring force and encourage good contact with the workpiece. The ratchet works from the thimble as well as the speeder so it is always easy to use – even when making measurements one-handed. The sound of the ratchet provides the user with a sense of confidence and the speeder enables the rapid spindle feed needed when measuring widely different dimensions.

\* Patent registered (in Japan, USA, China, Germany, UK, and France)



Ratchet on thimble Ratchet on speeder



### • Function lock

QuantuMike is equipped with a function lock feature to prevent the origin point being moved by mistake during measurement.



### • Dust/water resistance with IP65 protection level

Excellent resistance against oil, water and dust enables this product to be used in machining situations that include splashing coolant fluid.



## DIMENSIONS AND MASS

