



**WILLRICH PRECISION
INSTRUMENT**
THINK MEASUREMENT... THINK WILLRICH

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High-speed and High-Accuracy Digimatic Micrometer QuantuMike

Small Tool Instruments
and Data Management



DIGIMATIC S1

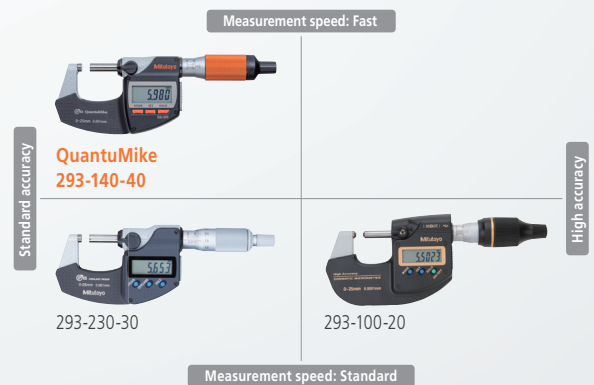


COOLANT PROOF™ IP65

Higher Precision, Quicker Results

Significantly reduces the time needed for approaching and releasing the workpiece

With a 2 mm high-lead screw, you can reduce the approach time by approximately 60%. Furthermore, the workpiece release time is also shortened, making it possible to dramatically reduce time when measuring multi-stepped workpieces. This unit is designed for ease of use in various workplaces.



1

High speed & high accuracy

The Quantumike achieves spindle movement 4 times faster than standard micrometers. Thanks to its speedy movement and excellent accuracy with a maximum permissible error (J mpe) of just $\pm 1 \mu\text{m}$, it enables even more efficient measurement work.

2

Reliable

This micrometer can easily detect excessive speed collisions with workpieces. Is also equipped with functions such as tolerance judgment, calculation, and calibration timing notification that allow measurement work to be performed reliably, without human error.

3

Easy to Use

Thanks to its wide array of functions, including a large display and bidirectional communication, the Quantumike is suitable to meet the needs of measuring workers. Designed for ease of use, the main unit enables comfortable measurement in actual manufacturing processes.

QuantuMike

The product name QuantuMike is a combination of Quantum* and Micrometer. This name reflects the quantum* leap forward in precision measurement that our company has pioneered, as well as our commitment to advancement and innovation.

*Quantum = the smallest amount of any physical entity

U-WAVE fit

MeasurLink[®] ENABLED
Data Management Software by Mitutoyo

DIGIMATIC S1

COOLANT PROOF™ IP65



ABSOLUTE™





See video from here



TECHNOLOGY

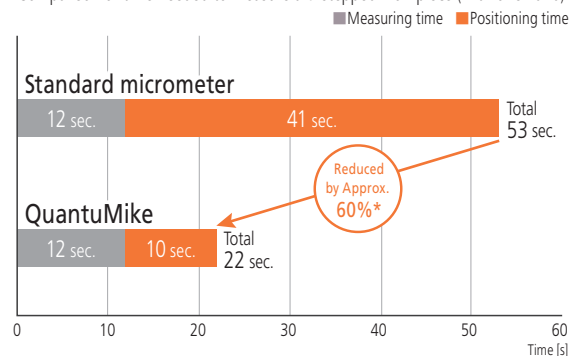
1 High Speed & High Accuracy



High-speed movement for faster measurement

Using our unique processing technology, we have produced a highly accurate, high-lead screw for the slim spindle. Unlike a typical micrometer with a 0,5 mm screw lead, the thimble moves the spindle 2 mm in a single rotation, allowing for rapid measurement. Because the spindle can be released by a large amount with just a small amount of rotation, it is ideal for cases such as when various dimensions need to be measured.

Comparison of time needed to measure a 6-stepped workpiece (with one hand)



*According to Mitutoyo's comparison test data

High accuracy measurement of $\pm 1 \mu\text{m}$

With a maximum permissible error (V_{MPE}) of just $\pm 1 \mu\text{m}^*$, QuantuMike is suitable for workpieces that require increasingly high accuracy.

* $\pm 2 \mu\text{m}$ in a measurement range of 50 - 100 mm

Can be used in environments where there is water, oil, or dust

The micrometer achieves protection level IP65 for water-resistant and dust-resistant performance. It can be used with confidence even at sites where it may be splashed by coolant liquid.



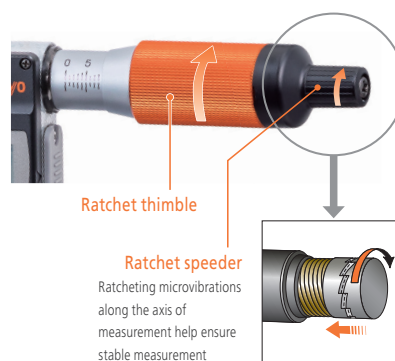
COOLANT PROOF™ IP65



Ratchet thimble mechanism for stable measurement

The micrometer features a ratchet thimble mechanism that allows stable measurement to be performed, even when operated one-handed. Ratcheting works with both the thimble and the speeder. The sound of the ratchet allows the user to verify the certainty of operation, and the speeder ratchet is convenient for rapid spindle feed.

Ratchet thimble mechanism



Reliable operation through the sound of the ratchet

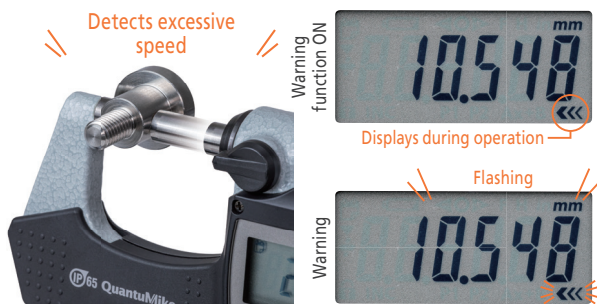


ACCESSIBILITY

2 Reliable

Approach speed warning function

NEW



The approach speed warning function detects collisions with workpieces due to excessive speed. This way, even inexperienced workers can obtain stable and accurate measurement results.

Calibration schedule alert function

NEW



Calibration advance warning date and calibration date can be set. A warning is displayed when the calibration time approaches and on the calibration date to prevent skipped calibration. This is an effective function for proper management of the digimatic gauge.

Supports measuring workers with tolerance judgment and calculation functions

NEW

Measurement with QuantuMike



Displays tolerance judgment mark

Tolerance judgment function: ON



Calculates and displays correction value

Calculation function: ON

Correction value can be read directly



Customized key setting allows the user to easily switch between measurement values and calculation results with the press of a button.

Simply enter the calculation result



The micrometer determines whether the measurement value is within the upper and lower limits of tolerance and displays a tolerance judgment mark. The user can judge pass/failure at a glance. Using the calculation function, it is also possible to calculate correction values for a processing machine from the measurement results. This eliminates the potential inconvenience of calculations and prevents human errors such as confusing plus and minus values when entering correction values into a processing machine, thereby contributing to the reduction of processing defects.

Key operation lock to prevent errors



The function settings can be locked to prevent them from being changed.

Auto power ON /OFF

If the micrometer is left idle for approx. 20 minutes, the power will automatically turn off to reduce battery consumption. Turning the spindle or operating the keys causes the power to come on automatically.

USABILITY

3 Easy to use

Large display with excellent visibility



The display portion has been increased without enlarging the body of the unit itself. Measurement values and warning marks are now easier to see from any angle.

Large buttons and key customization



Frequently used functions can be easily recalled for improved work efficiency. Compared with conventional models, the size of the buttons is larger, making them easier to press. Key operation settings can be freely modified.

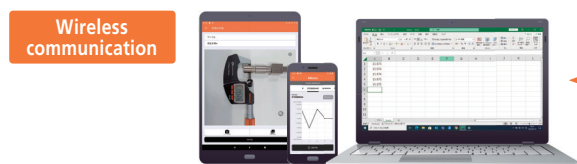
Dramatically improves work efficiency by connecting with a PC or mobile device

Refer to Catalog PRE 1604 for details.
Measurement Data Management System



In addition to digimatic d1/d2 (output), support is also provided for digimatic S1 (input/output) communication. Bidirectional serial communication enables easy setting and management of digimatic gages. Individual management of digimatic gages can be performed from a PC, and settings can also be changed. The same settings can also be applied to multiple digimatic gauges.

*An optional cable and measurement data input unit are required for bidirectional serial communication (see page 7). Please note that this cannot be used with the U-WAVE series. Additionally, USB-ITPAK V3.0 must be installed on the PC being used.



U-WAVE^{fit}

Measurement Data Wireless Communication System

Measurement data from micrometers and calipers with digimatic output can be wirelessly transferred to PCs, smartphones, tablets, and other such devices.

MeasurLink[®] ENABLED

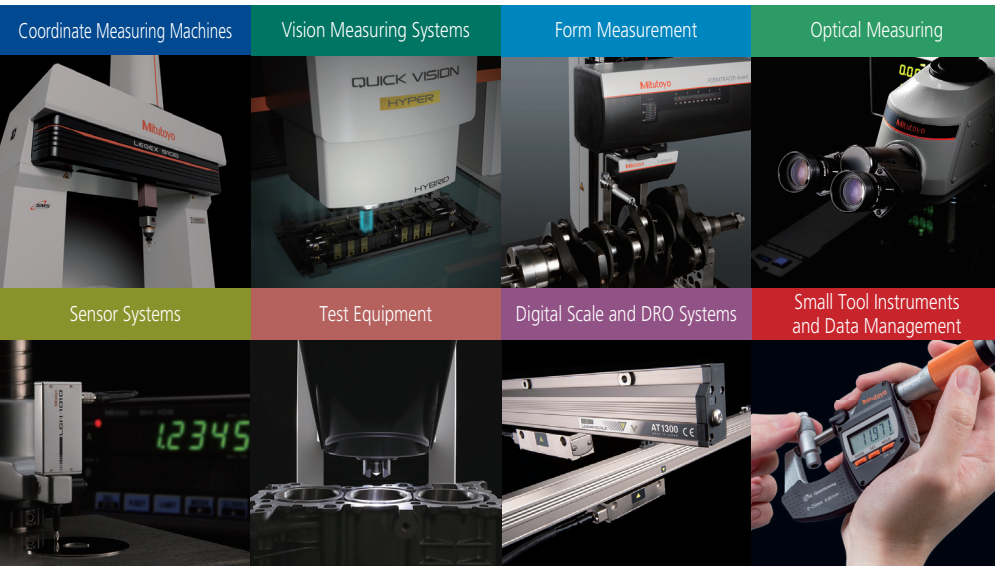
Measurement Data Network System

MeasurLink[®] is a measurement data management system based on databases (SQL Server). You can build a network to manage the measurement results and measuring instruments simply by combining the required functions. MeasurLink[®] is a registered trademark of Mitutoyo Corporation in Japan and Mitutoyo America Corporation in the United States.

DIGIMATIC S1

Digimatic S1

This is Mitutoyo's original bidirectional serial communication system. In addition to outputting measurement data, it is also possible to perform such operations as setting and controlling the digimatic gauge itself and collecting individual information of digimatic gauges from the connected PC.



Whatever your challenges are, Mitutoyo supports you from start to finish.

Mitutoyo is not only a manufacturer of top quality measuring products but one that also offers qualified support for the lifetime of the equipment, backed up by comprehensive services that ensure your staff can make the very best use of the investment.

Apart from the basics of calibration and repair, Mitutoyo offers product and metrology training, as well as IT support for the sophisticated software used in modern measuring technology. We can also design, build, test, and deliver measuring solutions and even, if deemed cost-effective, take your critical measurement challenges in-house on a sub-contract basis.



**Find additional product literature
and our product catalogue**

www.mitutoyo.eu

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All product information contained in this brochure is current as of July 2024.