

Mitutoyo

Mitutoyo  Quality

High-speed and High-accuracy Digimatic Micrometer QuantuMike

SMALL TOOL INSTRUMENTS
AND DATA MANAGEMENT

NEW
Products



DIGIMATIC S1



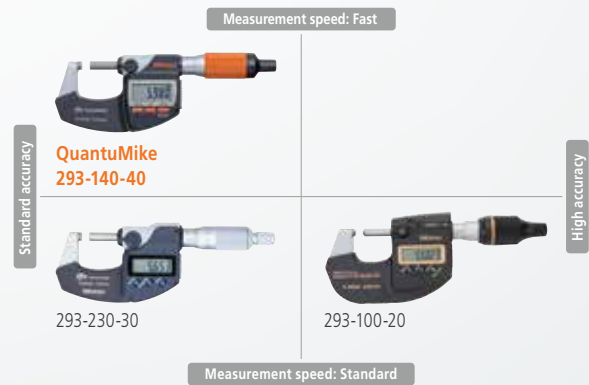
COOLANT PROOF™ IP65

High precision, further progress

Significantly reduces time for workpiece approach and release

Utilizes a 2.0 mm high-lead screw, reducing 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

Achieves spindle movement 4 times faster than standard micrometers. Enables more efficient measurement work through speedy movement and excellent accuracy with a maximum permissible error (J_{MPE}) of just $\pm 1 \mu\text{m}$.

2

Reliable

Detects collision with workpiece due to excessive speed. 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

Equipped with various features to meet the needs of measuring workers, such as a large display and bidirectional communication. 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 = dramatic



Dust- and Water-Protected
www.toyo.com
ID: 111284792





See video from here



TECHNOLOGY

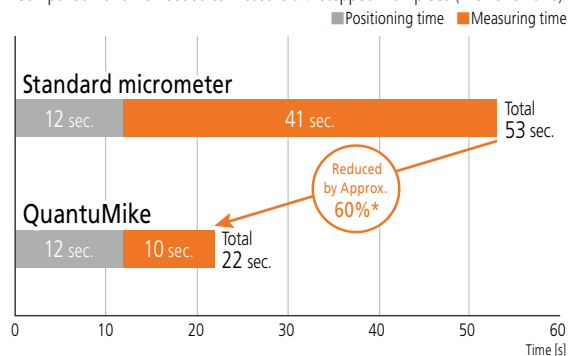
1 High speed & High accuracy



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 2.0 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)



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

With a maximum permissible error (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.



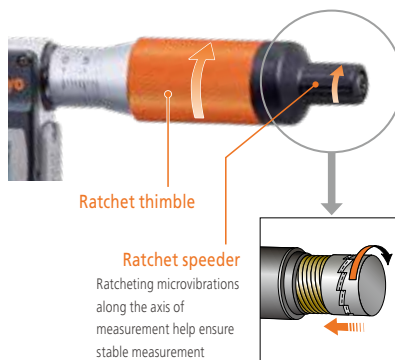
COOLANT PROOF™ IP65



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

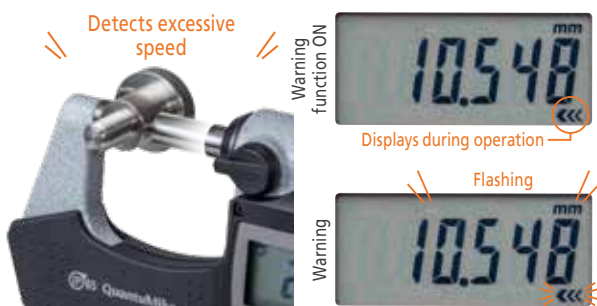


ACCESSIBILITY

2 Reliable

Approach speed warning function

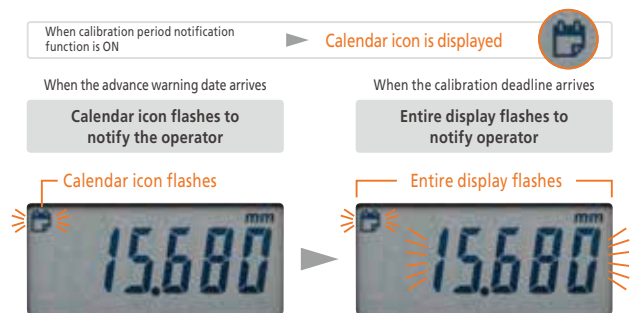
NEW



The approach speed warning function detects collisions with workpieces due to excessive speed. 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 gage.

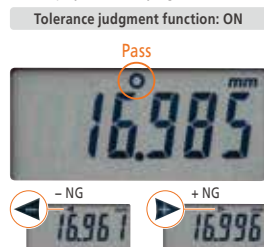
Supports measuring workers with tolerance judgment and calculation functions

NEW

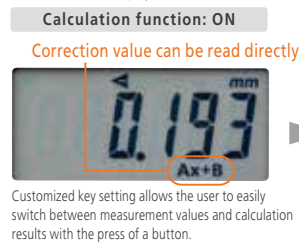
Measurement with QuantuMike



Displays tolerance judgment mark



Calculates and displays correction value



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. Also, using the calculation function, it is 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



Key operation lock

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.

Supports bidirectional serial communication*

Dramatically improve work efficiency by connecting with a PC or mobile device.

Refer to Catalog No.E12051 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 gages.

*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 gage itself and collecting individual information of Digimatic gages 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 bespoke measuring solutions and even, if deemed cost-effective, take your critical measurement challenges in-house on a sub-contract basis.

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www.mitutoyo.com.vn | www.mitutoyo.com.ph



Mitutoyo Asia Pacific Pte. Ltd.
 Company Reg No. 197800892N
24 Kallang Avenue, Mitutoyo Building, Singapore 339415
Tel: (65) 6294 2211 Fax: (65) 6299 6666
E-mail: mapsg@mitutoyo.com.sg

Small Tools Authorized Distributor
REGION SUPPLIERS PTE LTD
 UEN No: 197600011W
 Blk 16 Kallang Place #01-02
 Kallang Basin Industrial Estate
 Singapore 339156
 Tel: (65) 6295 2288 Fax: (65) 6291 4764

Mitutoyo (Malaysia) Sdn. Bhd.
 Mah Sing Integrated Industrial Park,
 4, Jalan Utarid US/14, Section U5,
 40150 Shah Alam, Selangor, Malaysia
 Tel: (60) 3-7845 9318
 Fax: (60) 3-7845 9346
 E-mail: mmsb@mitutoyo.com.my
Penang Branch
 Tel: (60) 4-641 1998
 Fax: (60) 4-641 2998
Johor Branch
 Tel: (60) 7-352 1626
 Fax: (60) 7-352 1628

Mitutoyo (Thailand) Co., Ltd.
 2327, Onnut Road, Kwaeng Onnut,
 Khet Suanluang,
 Bangkok 10250, Thailand
 Tel: (66) 2080 3500
 Fax: (66) 2521 6136
 E-mail: office@mitutoyo.co.th
Chonburi Branch
 Tel: (66) 2080 3563
 Fax: (66) 3834 5788
ACC Branch
 Tel: (66) 2080 3565

PT. Mitutoyo Indonesia
 Jalan Sriwijaya No.26
 Desa cibatu
 Kec. Cikarang Selatan
 Kab. Bekasi 17530, Indonesia
 Tel: (62) 21-2962 8600
 Fax: (62) 21-2962 8604
 E-mail: ptmi@mitutoyo.co.id
Batam Branch
 Tel: (62) 778 488 8000

Mitutoyo Vietnam Co., Ltd.
 1st & 2nd Floor, MHD1 Building,
 No. 60 Hoang Quoc Viet Road,
 Nghia Do Ward, Cau Giay District,
 Hanoi, Vietnam
 Tel: (84) 24-3768 8963
 Fax: (84) 24-3768 8960
 E-mail: mvc@mitutoyo.com.vn
Ho Chi Minh City Branch
 Tel: (84) 28-3840 3489
Hai Phong Branch
 Tel: (84)22-5398 9909

Mitutoyo Philippines, Inc.
 Unit 1B & 2B LTI,
 Administration Building 1,
 Annex 1, North Main Avenue,
 Laguna Technopark, Biñan,
 Laguna 4024, Philippines
 Tel: (63) 49-544 0272
 Fax: (63) 49-544 0272
 E-mail: mpi@mitutoyo.com.ph