

Automatic measuring device MD Automatic Unit

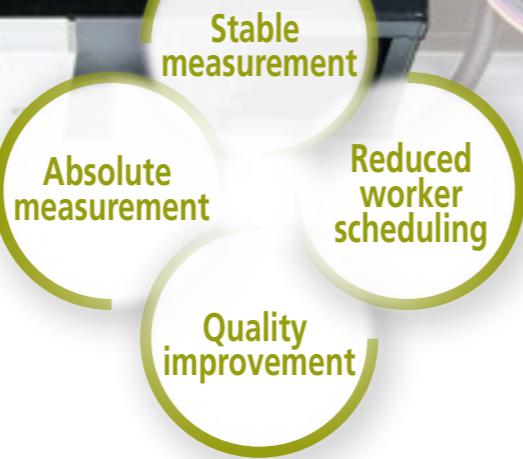


Stable measurement through automation

A new way to use micrometers that allows anyone to achieve the measurement accuracy of a skilled technician



We have created a measuring unit that automatically controls a digital micrometer. It eliminates human error that tends to occur with manual operation, enabling measurements to be made with accuracy close to that of a skilled technician. At manufacturing sites dealing with labor shortages and how to pass on skills, this allows anyone to obtain stable measurement results. Reliable measurement accuracy is made easier and more certain. This is an automatic measuring device that greatly contributes to improving measurement quality and work efficiency.



POINT

Stable measurement

We have quantified the measurement actions and feeling of the skilled technicians at our Shiwa Plant.*1 Motor-controlled rotation eliminates human error and ensures stable measurement.

*1: Our factory that develops and produces micrometers

Elimination of human error
Results of measurement using standard gauge repeated 50 times

	Mean (mm)	Max. (μm)
Measurer (Veteran)	9.9997	0.3
Automatic measuring device	9.9993	0.2
Difference	0.0004	0.1

Reproduces the measurement operations of a skilled technician.*2



*2: Patented (Japan, the US, and China)

Absolute measurement

A standard digital micrometer*3 is used for the measuring part. The measured values become the workpiece dimensions in absolute values, which reduces occurrence of variation in results.

*3: For compatible models, refer to the MD Auto Unit-compatible micrometer specifications on page 3.

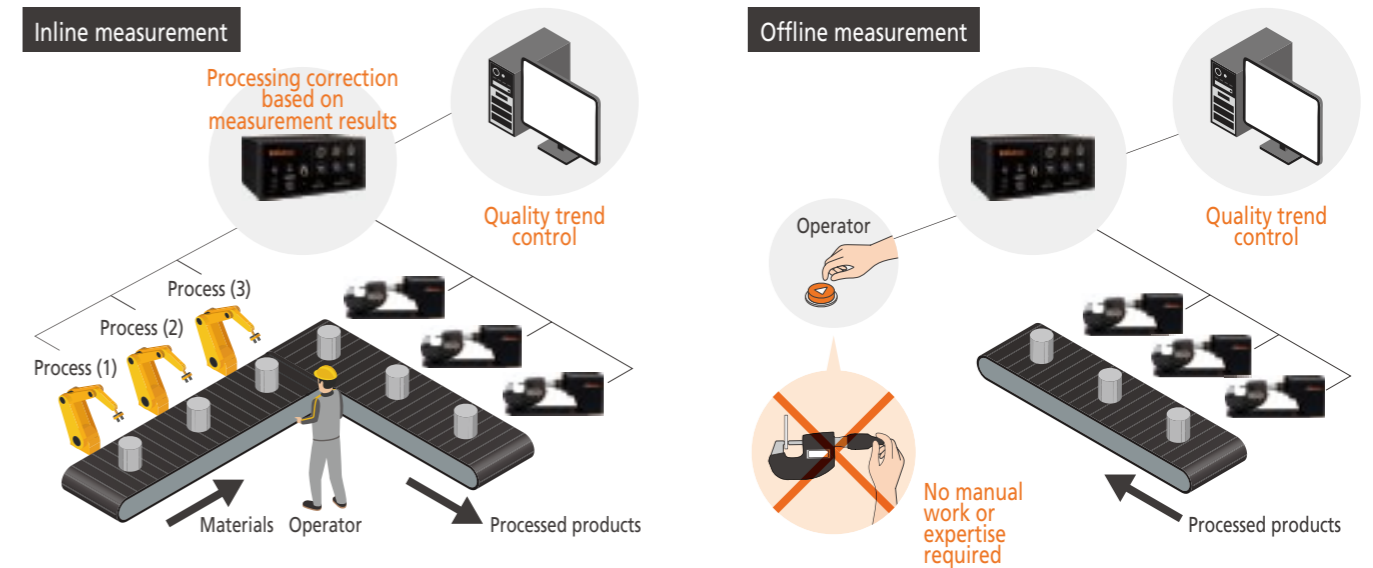
Reduced worker scheduling

The device can also be linked to a conveyance system (robots, etc.). Having support for external control and equipment integration, it enables in-line measurement and helps improve production efficiency.

Quality improvement

With stable measurement results, the device also enables feedback to quality trend control and to processing. This can be utilized to further improve quality.

Installation example



MD Automatic Unit-compatible micrometer specifications

Order No	Model No.	Measuring range (mm)	Resolution (mm)	Spindle displacement*4 (mm)	Notes
293-100-20	MDH-25MC	0 to 25	0.0001	0.5	Ultra-high precision type
293-140-40	MD-E25	0 to 25	0.001	2	High speed and high accuracy Dust- and water-protected (IP65) (QuantuMike)
293-141-40	MD-E50	25 to 50			
293-142-40	MD-E75	50 to 75			
293-143-40	MD-E100	75 to 100			
293-234-30	MDC-25MXT	0 to 25	0.001	0.5	Dust- and water-protected (IP65)
293-235-30	MDC-50MXT	25 to 50			
293-236-30	MDC-75MXT	50 to 75			
293-237-30	MDC-100MXT	75 to 100			
-	MHN2-25MX*5	0 to 25			Dust- and water-protected (IP65) (Micrometer head)

*4: Per thimble rotation

*5: Compatible by custom specifications for MD Automatic Unit

Configuration



*6: Must be furnished by the customer.



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 catalog

<https://www.mitutoyo.co.jp/global.html>

Mitutoyo

Mitutoyo Corporation

20-1, Sakado 1-Chome,
Takatsu-ku, Kawasaki-shi,
Kanagawa 213-8533, Japan
<https://www.mitutoyo.co.jp>

Notes on Export Regulations:

Do not commit an act, which could directly or indirectly, violate any law or regulation of Japan, your country or any other international treaty, relating to the export or re-export of any commodities.

Mitutoyo products are designed, manufactured and sold as industrial products that are intended for use at manufacturing sites. Mitutoyo reserves the right to change any or all aspects of any product specification, including prices, designs and service content, without notice.

Our product names, service names and logomarks used on this brochure are trademarks of Mitutoyo Corporation in Japan and other countries. Other product names and service names etc. may be trademarks or registered trademarks of their respective companies.

All product information contained in this brochure is current as of September 2025.