Mitutoyo

Mitutoyo Quality

Vision Measuring Systems

Compact Vision Measuring Machine
SMART VISION SYSTEM QM-Fit

Catalog No. E14032

Mitutoyo

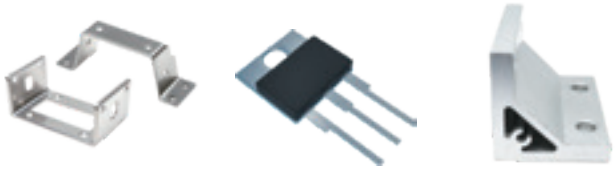
Simply place workpieces on the measuring stage for instant measurement.

Measuring becomes even easier.

Watch the video here

Improved efficiency in measuring thin and small objects

Superior element recognition capabilities provide smart dimension measurement.
With a touch panel, this system allows anyone to perform easy and reliable measurement.
This is a vision measuring system developed from the expertise of numerous customers to make it ideal for the worksite.



Thin and small workpieces can be measured instantly, simply by placing them on the measuring stage.

1 SMART 2 ACCESSIBLE 3

QM-Fit

SMART VISION SYSTEM - Compact Vision Measuring Machine

Extract elements.
Measurement filter
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QM-Fit

COMPACT

1 SMART

Designed for intuitive operation.
Advanced software design.

Immediate Measurement by Placing Workpieces

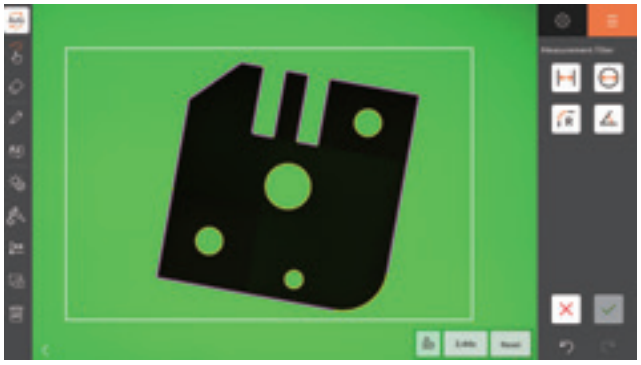
A digital system means speed.

The procedure is automatically determined based on the type of workpiece. To start measuring a workpiece, simply place it on the measuring stage.

Automatic Element Detection

Detects multiple elements at once.

Automatically recognizes and detects circles, lines, and more with just one tap. Measurements can be performed quickly without the need to specify elements one by one in advance.



Check out the video

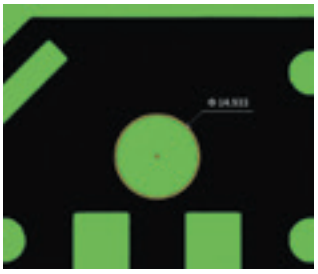
Detected elements have their outline color changed.

Marker Function

Simply trace the area you want to measure.

Generate elements just by roughly tracing outlines or filling them in. Effective for measuring specific points in a short time.

Trace the area you want to measure with your finger.



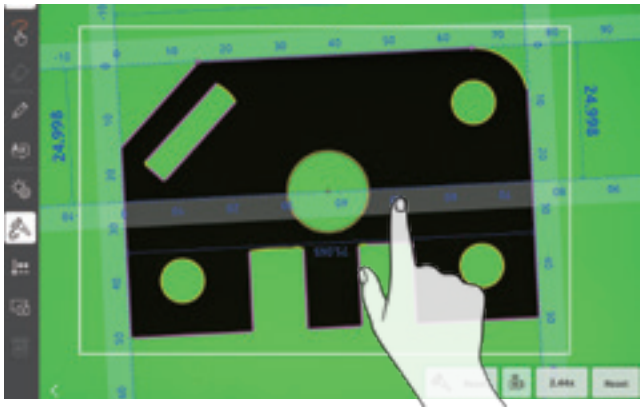
The element is detected.

Check out the video

Caliper Snap

Quick measurement with adhering rulers.

The rulers automatically adhere to edges or circles when brought close to them. Unlike previous models, there is no need to align crosshairs, reducing time and effort.



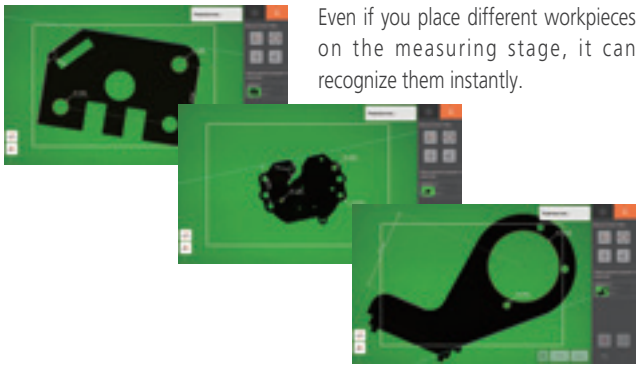
Check out the video

You can move the rulers with your fingers.

Procedure Recording

Simply place the workpiece for automatic repetition of measurement procedures.

Even if workpieces are roughly placed on the measuring stage, it can quickly recognize their shape, identify the workpiece, and immediately begin measurement. Creating procedures is as easy as measuring a single workpiece.



Even if you place different workpieces on the measuring stage, it can recognize them instantly.

Check out the video

2 ACCESSIBLE

No expertise required.
Anyone can measure with confidence.

Touch Panel

Intuitive operation

The touch panel allows intuitive operation, so anyone can use it immediately without need for skills or instruction.

Check out the video

Guide Display

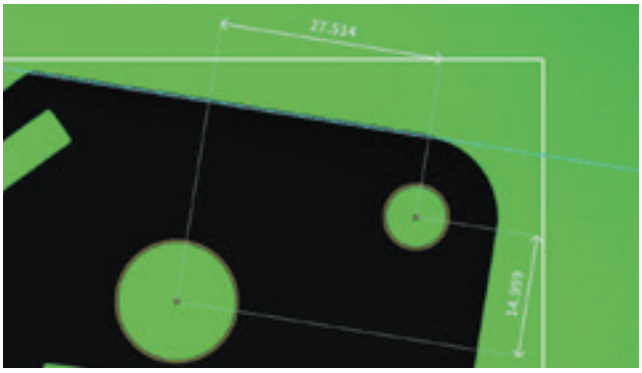
No confusion from operating procedures.

The guide display function tells you what to do next, from start to finish. It provides easy operation that beginners can handle with confidence.

Reference Axis Setting and Coordinate Difference Measurement

No need to perform paralleling on the workpiece.

Accurate parallel alignment with projectors and other equipment, which requires some practice, is now digitally automated. Measurement preparation is completed simply by selecting the element you want to use as the reference.

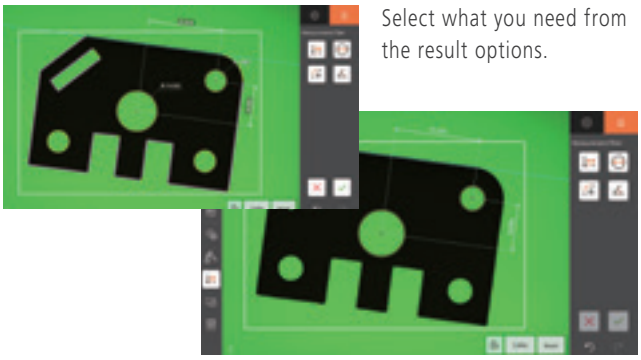


Displays the difference between the X and Y coordinates with a light blue line as the reference axis.

Automatic Display of Measurement Result Options

Tap to select the result you want to check.

The system automatically displays result options based on detected elements. All you have to do is tap the results you need, which significantly improves work efficiency compared to conventional measuring devices.

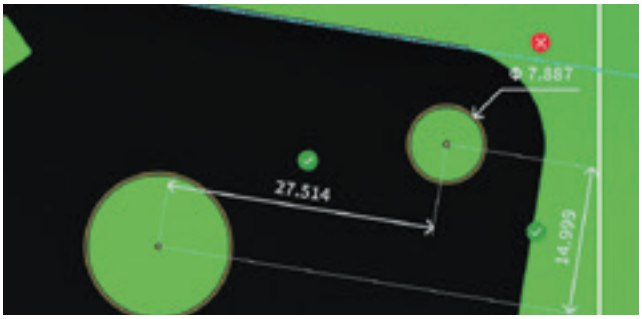


Select what you need from the result options.

Pass/Fail Judgment

Make pass/fail checks at a glance.

By entering design values and tolerances, the measurement results are displayed as ✓ (pass) or ✕ (fail), allowing quick judgment at a glance.



3 COMPACT

Measuring thin and small objects is easy and quick.
Thoughtful design that reflects the needs of the worksite.

Compact, Lightweight and Space-Saving

A compact design that can be placed anywhere.

This is a standalone machine with an integrated computer. It is significantly more compact than conventional measuring machines and can be installed anywhere.

Measuring Range: 115 x 75 mm

Wide field of vision for stress-free viewing.

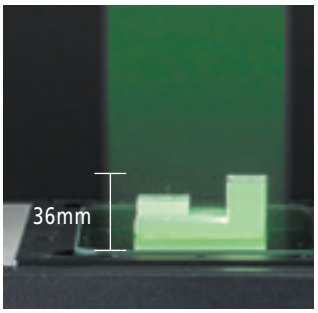
Despite its compact body, it covers a sufficient measuring range for small parts. One-shot measurement makes it easy to identify the measurement location.

Measuring range optimized for small parts.

Long Focal Depth Lens

No blurring, even with high surfaces.

It clearly displays bulky parts with a height up to 36 mm and with deep depressions and rises. The extremely large depth of focus eliminates the need to adjust the focus for individual parts with different heights.



Check out the video

Uses a telecentric lens.

Color Camera

Check appearance with the color display.

You can check for scratches and dirt with the vivid color display. You can also save screenshots with one tap for easy comparison or review.

Digital Magnification

High resolution display with magnification up to 100 times.

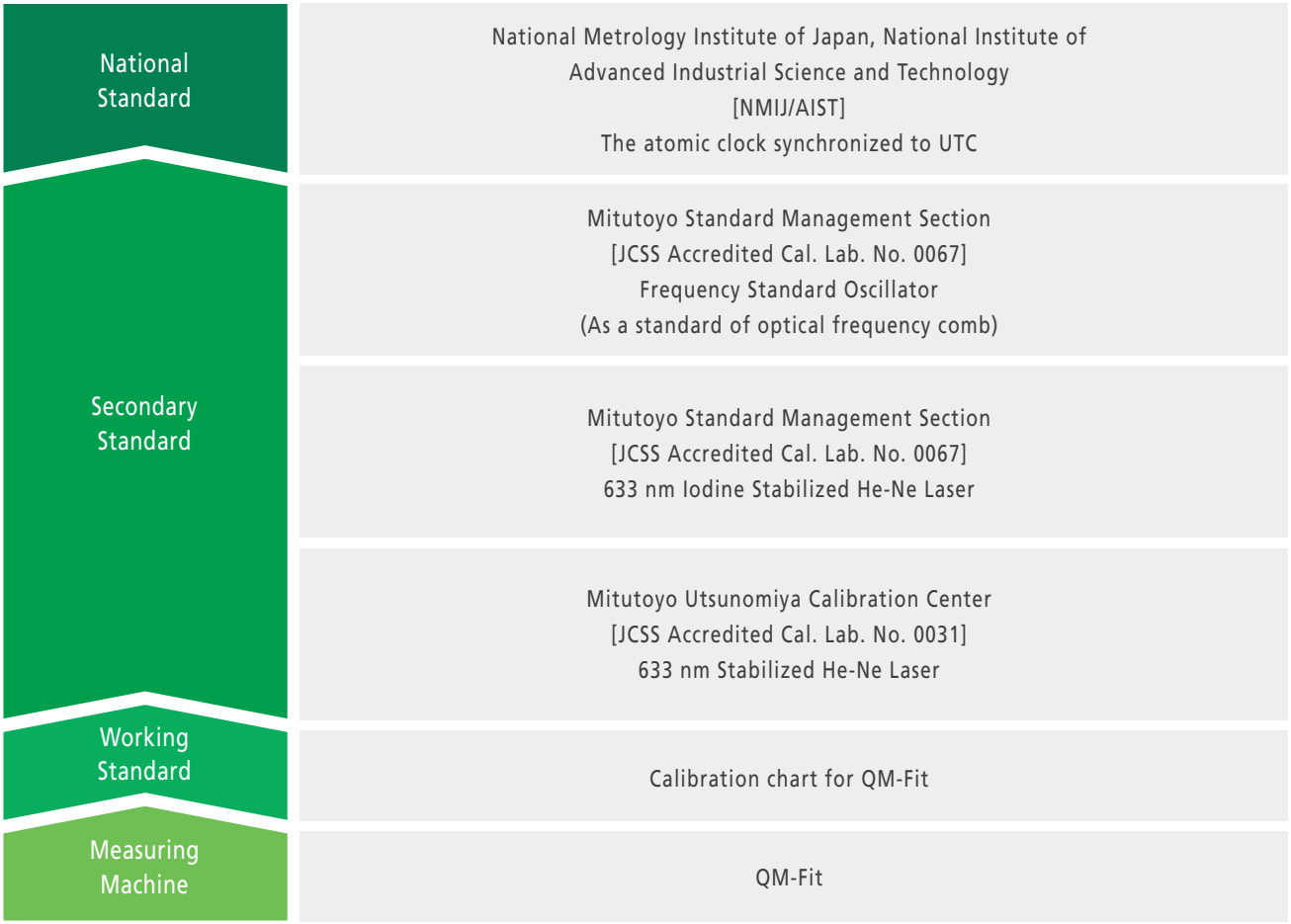
Equipped with an ultra-high resolution 20-megapixel color CMOS camera. Enables magnified observation of minute areas and the digital system provides quick display of dimensions.

QUALITY

Traceability

This product has an established national standard traceability and quality assurance system. Mitutoyo owns length standards that are directly linked to the Japanese national standard, and by calibrating the standards used for our measuring instruments, we establish and maintain the traceability of the equipment used by our customers.

QM-Fit Traceability System Diagram



In-Screen Correction

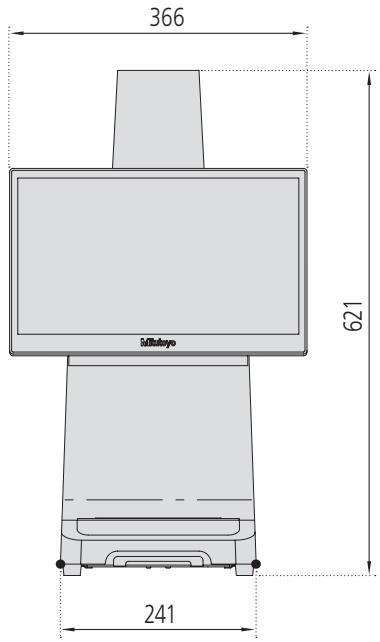
By using the reference chart included, it is possible to make highly accurate measurements even in temperature environments other than 20°C.

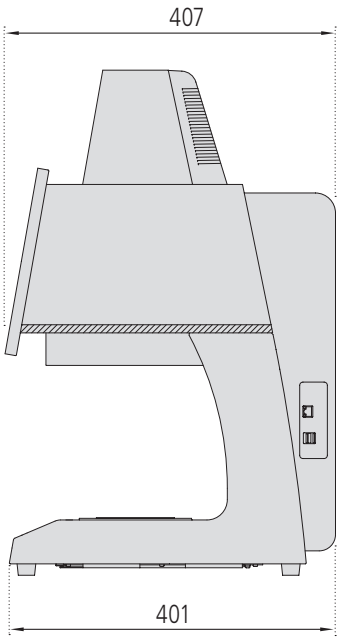
Specifications

Product Name		QM-Fit
Measuring range	Measurable range	115 × 75 mm
	Accuracy guaranteed range	90 × 60 mm
	Maximum height	36 mm
Unit of displayed values		mm/inch
Resolution		0.0001/0.001/0.01/0.1/1 mm (Selectable)
Accuracy	Measurement accuracy	±10 µm *1
	Repeatability	2σ ≤ 4 µm
Accuracy guaranteed temperature range		20±1 °C
Image sensor		20-megapixel color CMOS camera
Digital magnification		1 to 100 times
Lighting system	Transmitted illumination	Green LED
	Ring lighting	8-segment white LED
Measuring table	Stage glass dimensions	154 × 96 mm
	Maximum load	10 kg (excluding extremely unbalanced loads and concentrated loads)
Display device		15.6-inch touch panel monitor
External input/output		LAN ×1, USB3.2 ×2
Power supply*2	Power supply specifications	AC 100 V to 240 V, 50/60 Hz
	Power consumption	100 W
Main unit	External dimensions	366 × 407 × 621 mm
	Mass	25 kg

*1: Based on our inspection method
*2: The power cord is not provided with the product. Please order it separately (02ZAA000 (Japan), 02ZAA010 (USA), 02ZAA020 (EU), 02ZAA030 (UK), 02ZAA040 (China) and 02ZAA050 (Korea)).

External Dimensions





Unit: mm

2507(JP1), Printed in Japan

Coordinate Measuring Machines

Vision Measuring Systems

Form Measurement

Optical Measuring

Sensor Systems

Test Equipment

Digital Scale and DRO Systems

Small Tool Instruments and Data Management

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

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.

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