

Compact Vision Measuring Machine SMART VISION SYSTEM QM-Fit



Sensible Measurement for Everyone

Measuring reimagined.

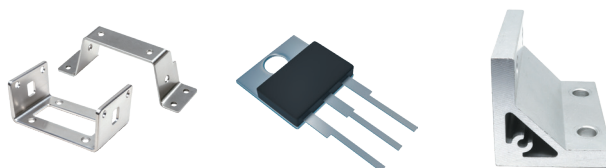


Improved efficiency in measuring small objects

Advanced element recognition provides intelligent and efficient dimensional measurement.

The intuitive touch panel makes accurate and reliable measurements easy for anyone to perform.

Developed with our end users' requests in mind, this vision measuring system perfectly meets the needs of demanding industrial environments.



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

1 SMART

2 INSTINCTIVE

QM-Fit

SMART VISION SYSTEM - Compact Vision Measuring Machine



3 COMPACT

1 SMART

Designed for intuitive operation.
Advanced software design.



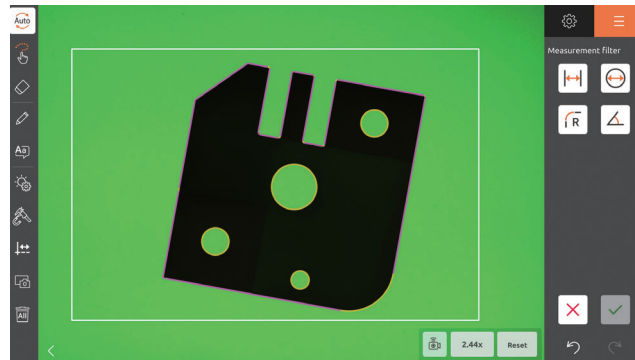
Immediately Measure by Placing Workpieces

The measurement 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.

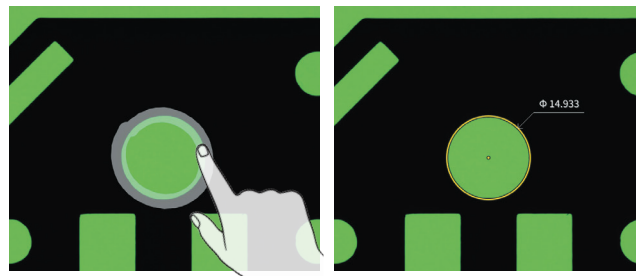


Detected elements have their outline color changed.

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 elements in a short time.



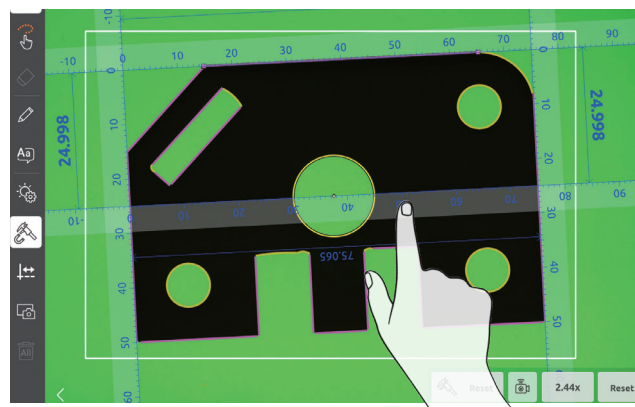
Trace the area you want to measure with your finger.

The element is detected.

Caliper Snap

Quick measurement with virtual rulers.

The rulers automatically snap to edges or circles when placed close to them. Unlike typical instruments, there is no need to align crosshairs, reducing time and effort.

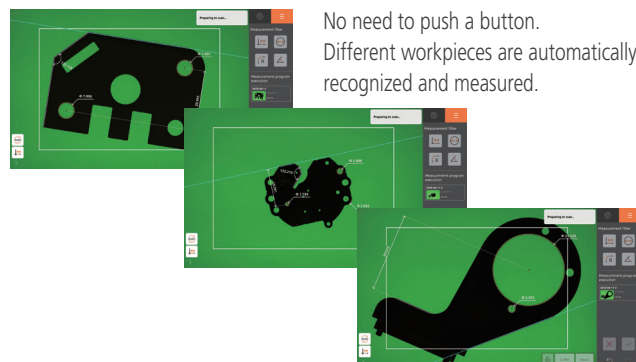


You can move the rulers with your fingers.

Procedure Recording

Simply place the workpiece for automatic inspection.

Even if workpieces are randomly 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.



No need to push a button. Different workpieces are automatically recognized and measured.

2 INSTINCTIVE

No expertise required.

Anyone can measure with confidence.

Touch Panel

Intuitive operation

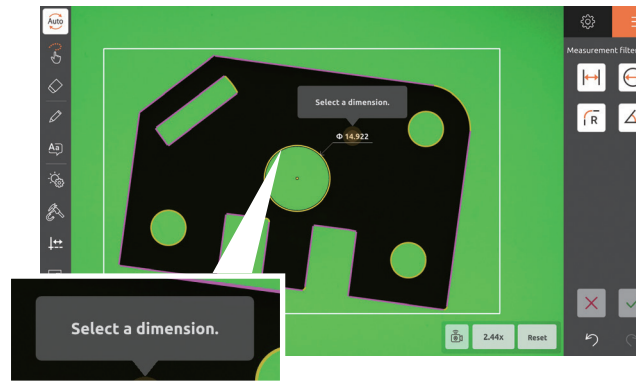
The touch panel allows intuitive operation, so anyone can use it immediately without need for special skills or training.



Guidance Display

Clear procedures.

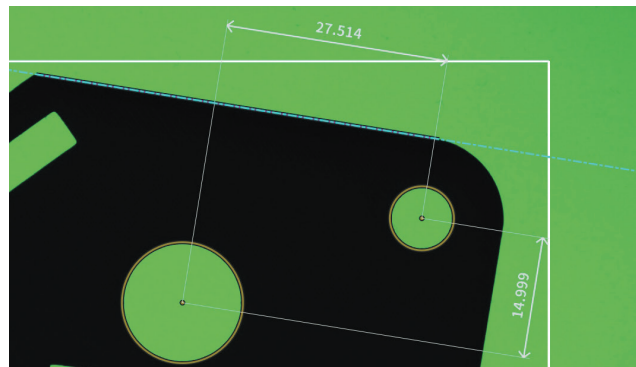
The guidance display tells you what to do next, from start to finish. It provides easy instructions that beginners can handle with confidence.



Setting Reference Axis

No need to square the workpiece.

Accurate 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.

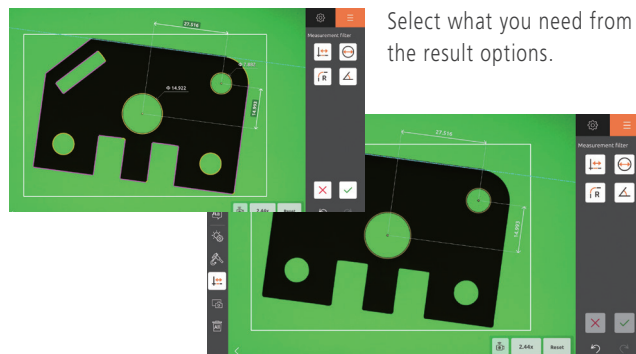


Displays the difference between the X and Y coordinates with a light blue line as the reference axis.

Automatic Display of Measurement Result

Tap to select the result you want to check.

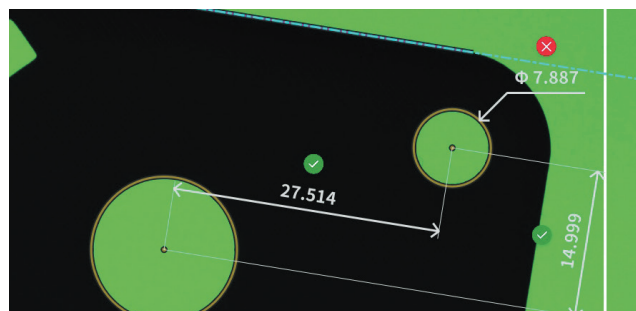
The system automatically displays results based on detected elements. All you have to do is tap the results you need, which significantly improves work efficiency compared to conventional measuring devices.



Pass/Fail Judgment

Pass/fail checks at a glance.

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



3 COMPACT

Measuring small and thin objects is easy and quick.
Efficient design that reflects the needs of industry.

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 almost anywhere.



Measuring Range: 115 x 75 mm

Wide field of vision for stress-free viewing.

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

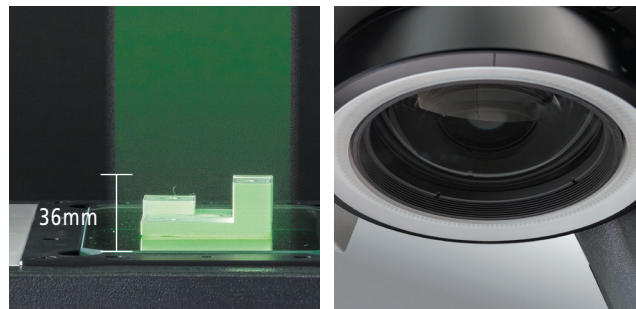


Measuring range optimized for small parts.

Long Focal Depth Lens

Always in focus, even on tall surfaces.

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



Uses a telecentric lens.

Color Camera

Color display provides actual part appearance.

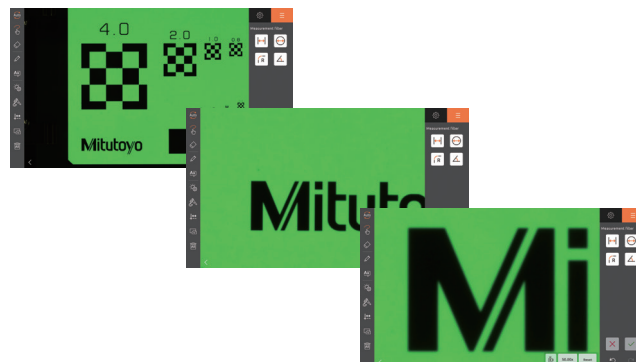
You can check for scratches and dirt with the vivid color display. You can also save screenshots with one tap for easy comparison or review.



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 view changes.

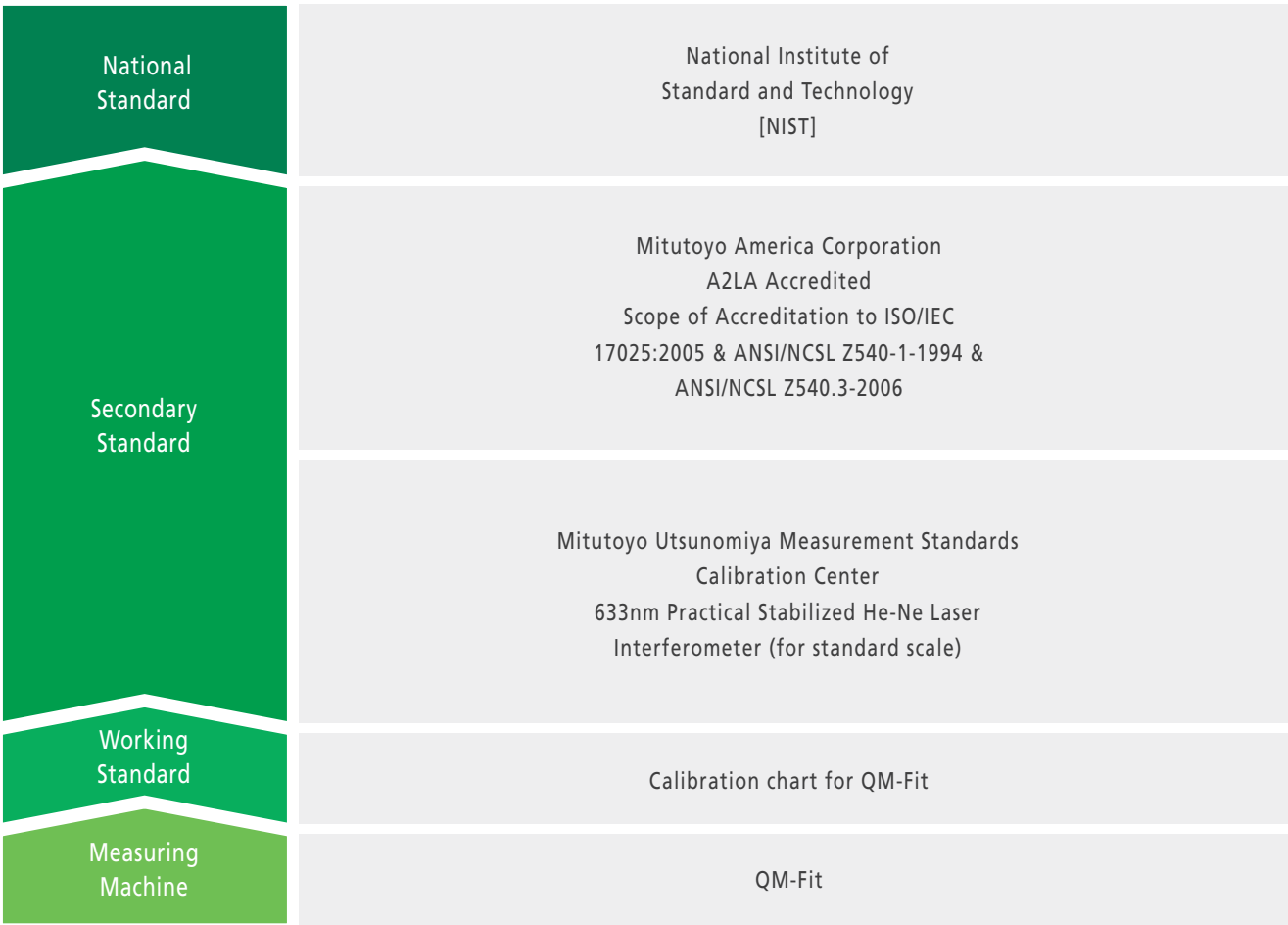


QUALITY

Traceability

This product has an established national standard traceability and quality assurance system. Mitutoyo owns length standards that are directly linked to the NIST 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

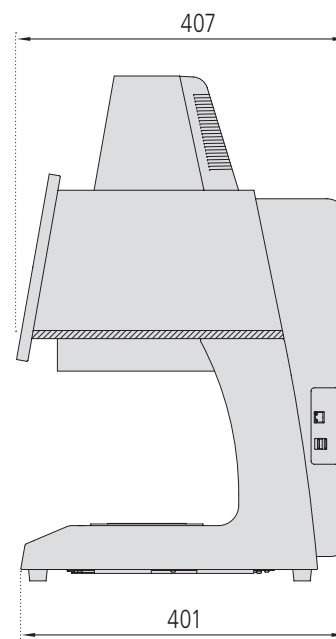
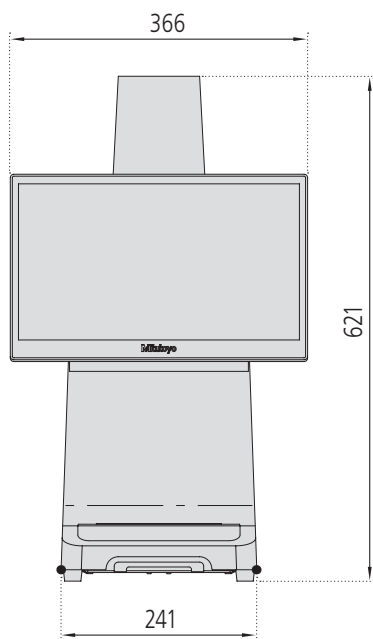
By using the reference chart, it is possible to make highly accurate measurements even at temperatures other than 20° C.

Specifications

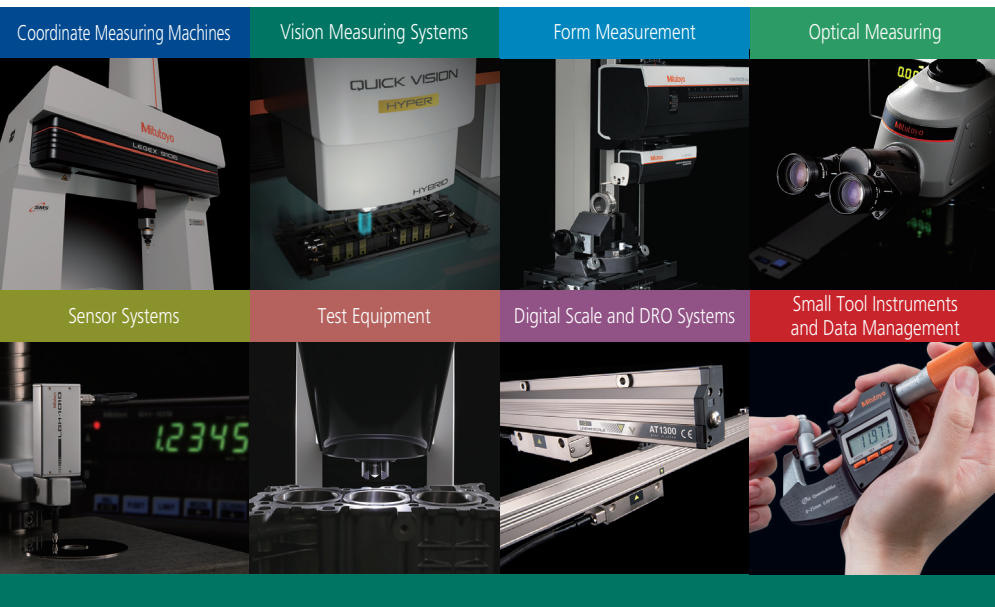
Product Name		QM-Fit
Measuring range	Measurable range	4.5" x 3.0", 115 x 75 mm
	Accuracy guaranteed range	3.5" x 2.4", 90 x 60 mm
	Maximum height	1.4", 36 mm
Unit of displayed values		mm/inch
Resolution		0.0001/0.001/0.01/0.1/1 mm (Selectable)
Accuracy	Measurement accuracy	+/- 0.000394", $\pm 10 \mu\text{m}$ *1
	Repeatability	$2\sigma \leq 4 \mu\text{m}$
Accuracy guaranteed temperature range		20 \pm 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	6.1" x 3.8", 154 x 96 mm
	Maximum load	22 lbs, 10 kg (excluding extremely unbalanced loads and concentrated loads)
Display device		15.6-inch touch panel monitor
External input/output		LAN x1, USB3.2 x2
Power supply	Power supply specifications	AC 100 V to 240 V, 50/60 Hz
	Power consumption	100 W
Main unit	External dimensions	14.4" x 16" x 24.4", 366 x 407 x 621 mm
	Mass	55 lbs, 25 kg

*1: Based on our inspection method

External Dimensions



Unit: mm
1" = 25.4mm



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.

My.Mitutoyo

Mitutoyo End User Portal

Search for products, request a product quote, take online metrology courses, and much more. My.Mitutoyo.com puts everything Mitutoyo directly in front of you.



Find additional product literature and our product catalog

www.mitutoyo.com

Note: All information regarding our products, and in particular the illustrations, drawings, dimensional and performance data contained in this printed matter as well as other technical data are to be regarded as approximate average values. We therefore reserve the right to make changes to the corresponding designs. The stated standards, similar technical regulations, descriptions and illustrations of the products were valid at the time of printing. In addition, the latest applicable version of our General Trading Conditions will apply. Only quotations submitted by ourselves may be regarded as definitive. Specifications are subject to change without notice.

Mitutoyo products are subject to US Export Administration Regulations (EAR). Re-export or relocation of our products may require prior approval by an appropriate governing authority.

Trademarks and Registrations

Designations used by companies to distinguish their products are often claimed as trademarks. In all instances where Mitutoyo America Corporation is aware of a claim, the product names appear in initial capital or all capital letters. The appropriate companies should be contacted for more complete trademark and registration information.

Mitutoyo

Mitutoyo America Corporation

www.mitutoyo.com

One Number to Serve You Better

1-888-MITUTOYO (1-888-648-8869)

M³ Solution Centers:

Aurora, Illinois (Headquarters)

Boston, Massachusetts

Charlotte, North Carolina

Cincinnati, Ohio

Detroit, Michigan

Los Angeles, California

Seattle, Washington

Houston, Texas