

The Mitutoyo logo is displayed in a bold, orange, sans-serif font. The letter 'M' is stylized with two diagonal slashes. The background of the entire cover is a dark grey with a complex, white, wireframe-like pattern of intersecting lines that create a sense of depth and movement.

EN 2009

**MEASURING
INSTRUMENTS
CATALOG**

2026 - 2027



Competence and customer proximity on one spot

Throughout Europe, the name Mitutoyo represents innovational power as well as outstanding quality in the field of sophisticated dimensional measuring solutions. In order to strengthen and synchronise the concerted pan-European activities, Mitutoyo established the European headquarters named Mitutoyo Europe GmbH in Neuss near Düsseldorf/Germany in January 2010.

The headquarters oversees all the activities of Mitutoyo's sales, service and production facilities throughout Europe and adjacent markets, e.g. of Turkey. It also plans and implements the medium and long term business strategies of such European operations. A Mitutoyo Europe GmbH key objective is to promote coordination amongst its European group companies in order to optimise its sales and technical support services in the best interests of customer satisfaction.

More than 260 highly skilled members of staff work for the benefit of our customers in development, service, sales and administration. They are supported by the specialists of Mitutoyo CTL Germany GmbH in Oberndorf on the River Neckar, which focuses solely on developing ground-breakingly powerful and easy to use software for three-coordinate measurement technology. The peripheral fields of coordinate measuring machines, jiggling and loading systems and thermal cabins are covered by KOMEG company based in Saarland.

The range of products offered by Mitutoyo in Europe is divided into eight groups:

Coordinate Measuring Machines

Vision Measuring Systems

Form Measurement

Optical Measuring

Sensor Systems

Test Equipment and Seismometers

Digital Scale and DRO Systems

Small Tool Instruments and Data Management

In addition to top-level measuring and testing equipment, the range of products also includes a wide selection of accessories and – as a further area of focus – sophisticated, high-performance software for coordinate measuring machines and vision measuring systems as well as surface roughness, hardness and form measurement.

The Mitutoyo Information Center of Metrology (MIM) has been demonstrating the manufacturer's commitment to advanced training in all fields of dimensional measurement technology since 1999. The MIM is open to anyone working in the fields of manufacturing, service, science and research. Mitutoyo Europe GmbH is, moreover, a corporate member of "Ausbildung Koordinatenmesstechnik e. V. (AUKOM)". This association is dedicated to providing training schemes for coordinate measuring technology with the aim of ensuring a neutral, comprehensive and state of the art training concept.

Germany has also been home to the Mitutoyo M³ Solutions Europe division since 2004. The abbreviation M³ stands for Mitutoyo Measurement Metrology and, as such, for the concept of special measuring solutions developed by Mitutoyo to meet the particular requirements of its customers across the whole breadth of length, form and surface measurement technology. The Mitutoyo Europe GmbH in Neuss offers sample configurations in the 400 m² M³ Solution Center Europe to demonstrate the numerous possibilities. The center also presents the smooth and seamless integration of peripheral systems, such as jigs or feed and climate control systems from KOMEG alongside the measuring equipment.

PRECISION IS IN OUR DNA :

Mitutoyo

Highlights

Special Purpose Items



Absolute Digimatic Indicator ID-F



QuantuMike



Linear Height LH-600F/FG



MF Microscope



SurfTest SJ-220



Formtracer Avant FTA-H3000



Roundtracer Extreme RTX



HR-620B



SmartMeasure-AL



MACH Ko-ga-me Series



STRATO-Active Series



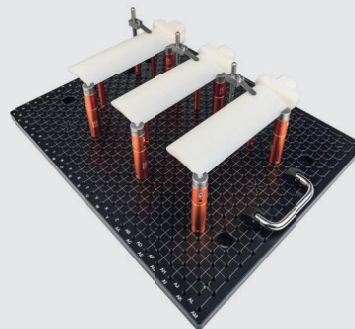
QM-Fit



CNC Vision



Fixtures



Styli



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Data Management

Quality Management Software
Digimatic Mini Processor
Signal Cables
Wireless Data Transmission
etc.



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Height Gauge
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Micrometers

Digimatic Micrometers and Mechanical
Micrometers
Micrometers Accessories
Micrometer Heads
Micrometer Head Accessories



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Indicators

ABSOLUTE Digimatic Indicator
Dial Indicator
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Inside Micrometer
Bore Gauges
Inside Measuring Instruments Accessories



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Depth Measuring Instruments



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CERA Individual Gauge Blocks
etc.



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Sensor Systems and Laser Scan Micrometers

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LITEMATIC
Laser Scan Micrometer



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Coordinate Measuring Machines

CMM Software
Mobile 3D Systems & Manual CMMs
Small- and Medium Size CMMs
Large Size CMMs
Styli & Modular Fixture Products



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Scale Units and Linear Scales

Scale Units
Linear Scale
NC-Scales



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Vision Measuring Machines

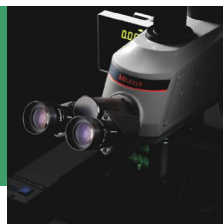
Vision Measuring Machines
Manual 2D VMM Quick Image
Manual 2.5D VMM Quick Scope
CNC VMM Quick Vision, MiSCAN
Modular Fixtures



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Optical Measuring

Optical Measuring
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Measuring Microscopes
Objectives
Measuring Projectors



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For better communication with our customers

Mitutoyo's Domestic Network
Mitutoyo's Overseas Network
M³ Solution Centers



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Form Measurement

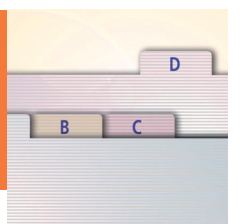
Surface Roughness -,
Contour-,
Form Measuring Instruments



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Hardness Testing

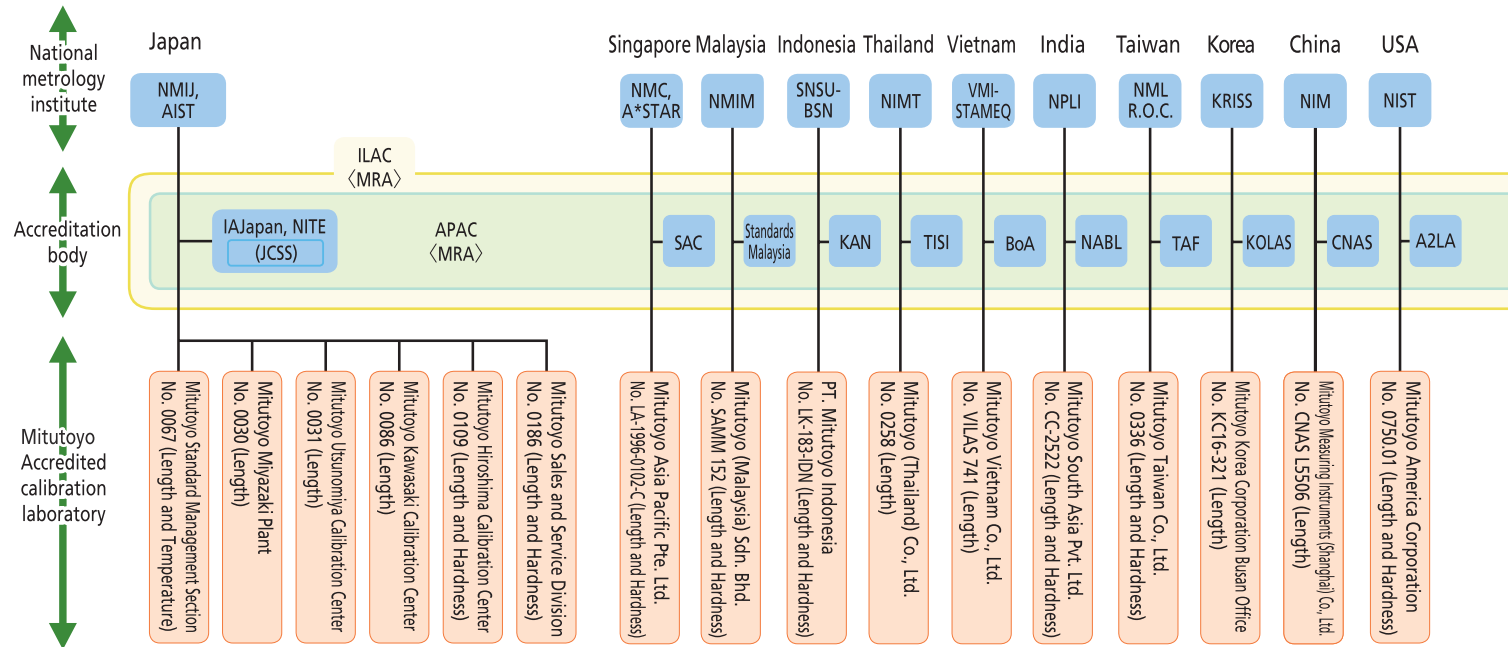
Hardness Testing Machines



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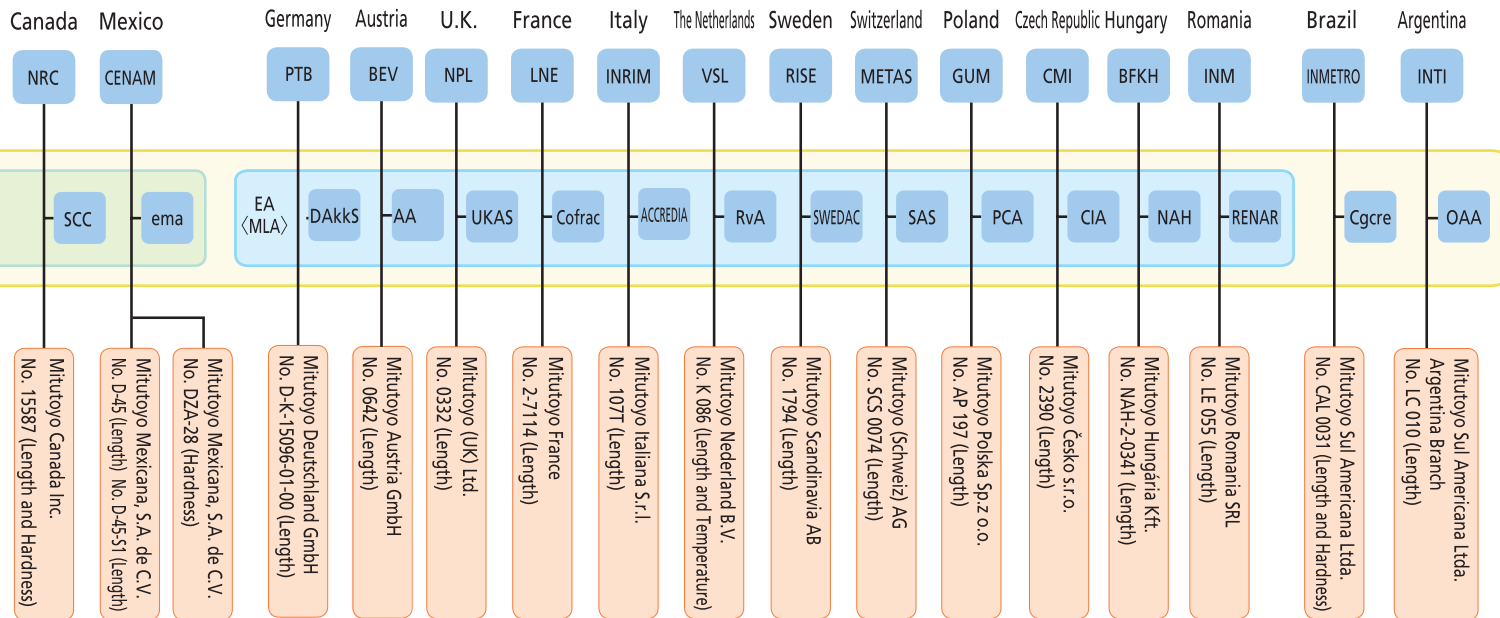
Offering Reliable Traceability Worldwide

Mitutoyo has built a network for comprehensive calibration support of precision measuring products in the global market. To provide calibration services on a global scale, Mitutoyo has gained ISO/IEC 17025 certification from the accreditation body in each country, and has issued calibration certificates carrying the mark of each accreditation body. In addition, the calibration certificates issued by each calibration laboratory are mutually recognized in the countries and commercial areas signed in the MRA (Mutual Recognition Arrangement) of ILAC (International Laboratory Accreditation Cooperation) and APAC (Asia Pacific Accreditation Cooperation), or the MLA (Multilateral Agreement) of EA (European co-operation for Accreditation).



- Japan
 - AIST : National Institute of Advanced Industrial Science and Technology
 - NMIJ : National Metrology Institute of Japan
 - NITE : National Institute of Technology and Evaluation
 - IAJapan : International Accreditation Japan
 - JCSS : Japan Calibration Service System
- Singapore
 - NMC, A*STAR : National Metrology Centre/Agency for Science, Technology and Research
 - SAC : Singapore Accreditation Council
- Malaysia
 - NMIM : National Metrology Institute of Malaysia
 - Standards Malaysia : Standards Malaysia
- Indonesia
 - SNSU-BSN : National Standardization Agency of Indonesia
 - KAN : Komite Akreditasi Nasional
- Thailand
 - NIMT : National Institute of Metrology (Thailand)
 - TISI : Thai Industrial Standard Institute
- Vietnam
 - VMI-STAMEQ : Vietnam Metrology Institute, Directorate for Standards and Quality
 - BoA : BUREAU OF ACCREDITATION
- India
 - NPLI : National Physical Laboratory of India
 - NABL : National Accreditation Board for Testing and Calibration Laboratories
- Taiwan
 - NML R.O.C. : National Measurement Laboratory R.O.C.
 - TAF : Taiwan Accreditation Foundation
- Korea
 - KRISS : Korea Research Institute of Standards and Science
 - KOLAS : Korea Laboratory Accreditation Scheme
- China
 - NIM : National Institute of Metrology
 - CNAS : China National Accreditation Service for Conformity Assessment
- U.S.A.
 - NIST : National Institute of Standards and Technology
 - A2LA : American Association for Laboratory Accreditation
- Canada
 - NRC : National Research Council Canada/Institute for National Measurement Standards
 - SCC : Calibration Laboratory Assessment Service/Standards Council of Canada
- Mexico
 - CENAM : Centro Nacional de Metrología
 - ema : Entidad Mexicana de Acreditación, a.c.
- Germany
 - PTB : Physikalisch-Technische Bundesanstalt
 - DAkkS : Deutsche Akkreditierungsstelle GmbH
- Austria
 - BEV : Bundesamt für Eich- und Vermessungswesen
 - AA : Akkreditierung Austria
- U.K.
 - NPL : National Physical Laboratory
 - UKAS : United Kingdom Accreditation Service
- France
 - LNE : Laboratoire national de métrologie et d'essais
 - Cofrac : Comité français d'accréditation

Note: The above are domestic and international locations where Mitutoyo provides ISO/IEC 17025 accredited calibration services.
(As of July, 2025)



- Italy
INRIM : Istituto Nazionale di Ricerca Metrologica
ACCREDIA : L'ENTE ITALIANO DI ACCREDITAMENTO
- The Netherlands
VSL : Van Swinden Laboratorium
RvA : Raad voor Accreditatie
- Sweden
RISE : RISE Research Institutes of Sweden AB
SWEDAC : Swedish Board for Accreditation and Conformity Assessment

- Switzerland
METAS : The Federal Institute of Metrology
SAS : Swiss Accreditation Service
- Poland
GUM : Główny Urząd Miar - the National Metrology Institute in Poland
PCA : Polskie Centrum Akredytacji
- Czech Republic
CMI : Český Metrologický Institut
CIA : Český Institut pro Akreditaci

- Hungary
BFKH : Government Office of the Capital City Budapest
NAH : Nemzeti Akkreditáló Hatóság
- Romania
INM : Institutul National de Metrologie
RENAR : Asociația de Acordare din România

ILAC : International Laboratory Accreditation Cooperation
 APAC : Asia Pacific Accreditation Cooperation
 MRA : Mutual Recognition Arrangement
 EA : European co-operation for Accreditation
 MLA : Multilateral Agreement

- Brazil
INMETRO : Instituto Nacional de Metrologia Qualidade e Tecnologia
Cgcre : Coordenação Geral de Acreditação do INMETRO
- Argentina
INTI : Instituto Nacional de Tecnología Industrial
OAA : Organismo Argentino de Acreditación



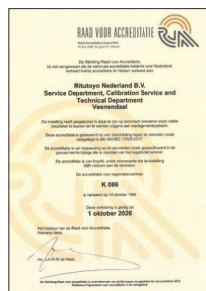
Certificate of DAkkS accredited laboratory (Mitutoyo Deutschland in Germany)



Certificate of SAC accredited laboratory (Mitutoyo Asia Pacific in Singapore)



Certificate of A2LA accredited laboratory (Mitutoyo America in U.S.A.)



Certificate of RvA accredited laboratory (Mitutoyo Nederland in the Netherlands)



Certificate of CNAS accredited laboratory (Mitutoyo Measuring Instruments (Shanghai) in China)



Certificate of Cgcre accredited laboratory (Mitutoyo Sul Americana in Brazil)

Name of each National metrology institute and Accreditation body are based on our survey.

Offering High-level Calibration Services Worldwide

Based on highest measurement capabilities of the same level as national standards

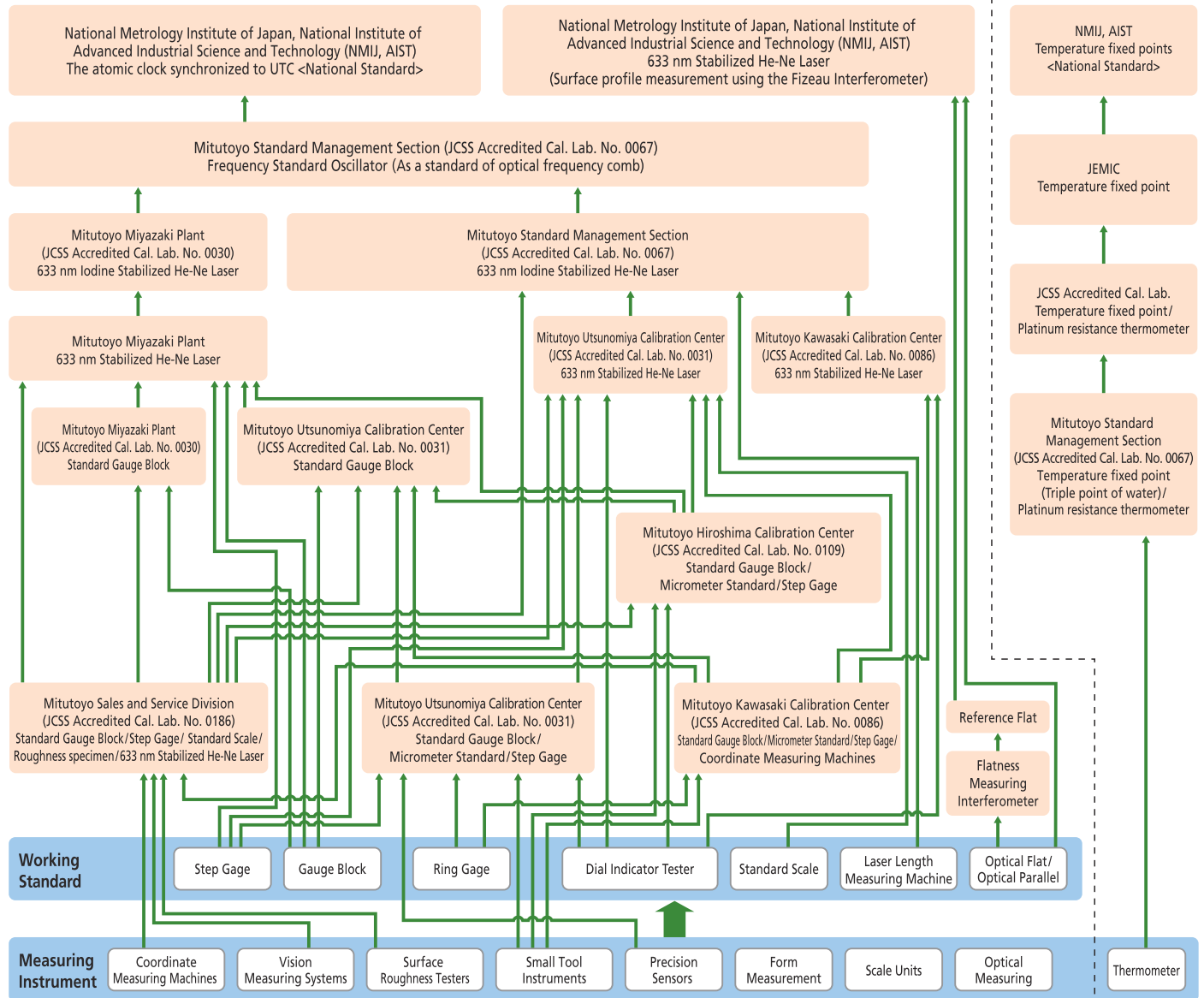
Mitutoyo ensures and maintains traceability of various types of precision measuring instruments by holding standards of length and other physical quantities that are directly traceable to the national standards for use in calibrating the working standards used for the calibration of measuring instrument products supplied to industry. Furthermore, Mitutoyo offers a temperature calibration service which is indispensable for high-accuracy length measurement.

The Mitutoyo traceability system with the optical frequency comb at the top level, ensuring performance equivalent to that of the Japan's national standard, and the calibration technology supporting this system are the basis of highly accurate and reliable products offered to customers.



Certificate of JCSS accredited laboratory (Mitutoyo Standard Management Section)

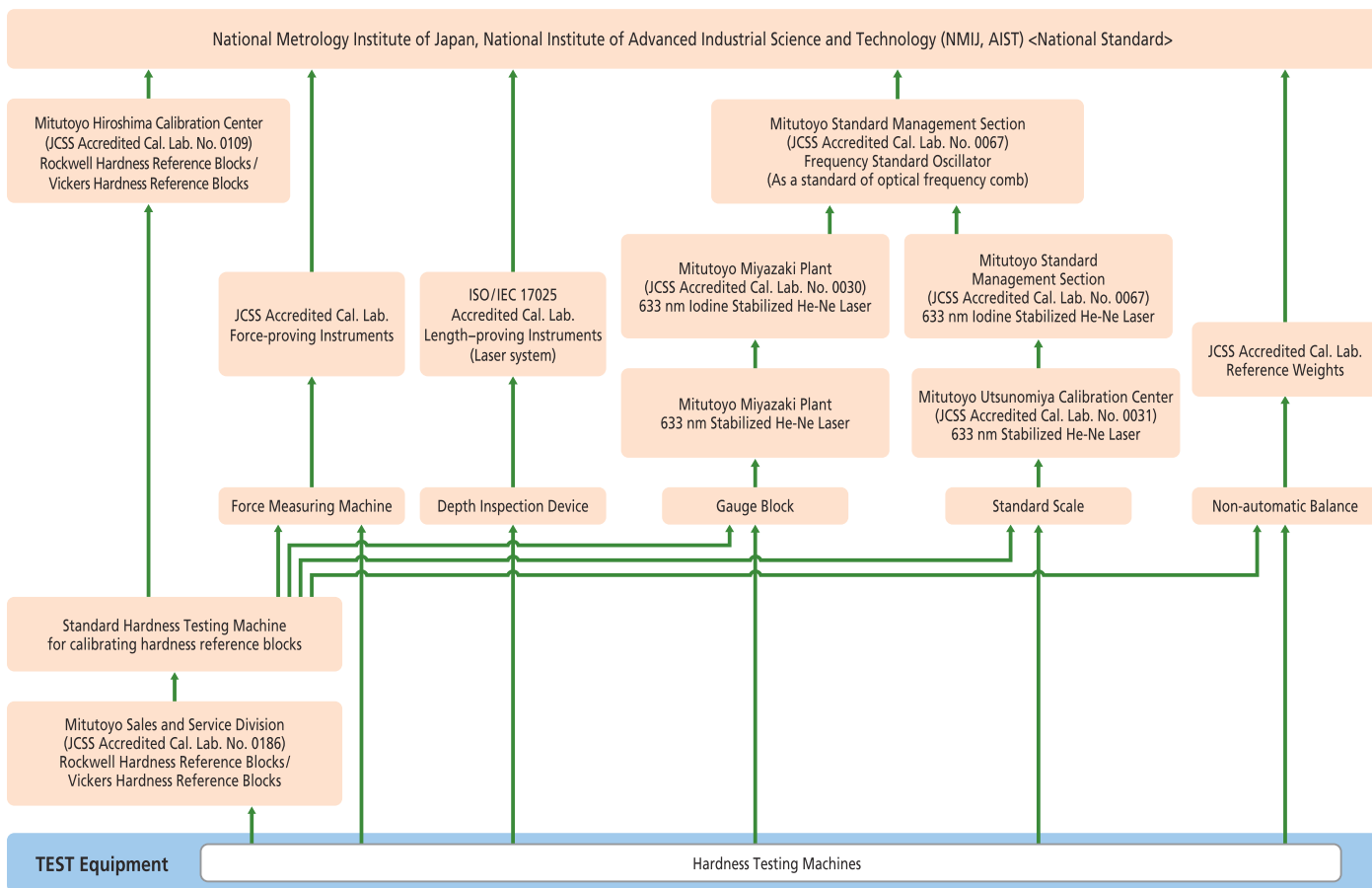
Traceability of Length Field



Note: This chart shows a simplified traceability system of a part of Mitutoyo products. Detailed traceability charts are published for each product. (As of July, 2025)

CE Marking Directives

Traceability of Hardness Field



Note: This chart shows a simplified traceability system of a part of Mitutoyo products. Detailed traceability charts are published for each product. (As of July, 2025)

Video



Meaning of Symbols



ABSOLUTE Linear Encoder

Mitutoyo's technology has realised the absolute position method (absolute method). With this method, you do not have to reset the system to zero after turning it off and then turning it on. The position information recorded on the scale is read every time. The following three types of absolute encoders are available: electrostatic capacitance model, electromagnetic induction model and model combining the electrostatic capacitance and optical methods. These encoders are widely used in a variety of measuring instruments as the length measuring system that can generate highly reliable measurement data. **Advantages:**

1. No count error occurs even if you move the slider or spindle extremely rapidly.
2. You do not have to reset the system to zero when turning on the system after turning it off*1.
3. As this type of encoder can drive with less power than the incremental encoder, the battery life is prolonged to about 3.5 years (continuous operation of 18,000 hours)*2 under normal use.

*1: Unless the battery is removed

*2: In the case of the ABSOLUTE AOS Digimatic caliper (electromagnetic encoder model)

Measuring Instruments Shipped with Inspection Certificate

Mitutoyo guarantees product quality as a leading precision measuring instrument manufacturer and ships measuring instruments with an inspection certificate that includes inspection data so that customers can use them with confidence. Mitutoyo also calibrates the purchased measuring instrument and issues, for a fee, a calibration certificate that proves traceability to the relevant standard.

* For the meaning of the inspection marks shown at left, refer to the detailed description of each product



Installation of Main Unit Startup System

As a part of the enhancement of our export control system, the CNC measuring machines (all the CNC Coordinate Measuring Machines, Vision Measuring Systems, and Form Measuring Machines) are equipped with a Main Unit Startup System (relocation detecting system). This system is designed to take a machine out of operation upon detecting the mechanical shock that accompanies relocation. If you intend to relocate a measuring machine fitted with this system, please contact us beforehand so that our service engineers can assist you. On the other hand, the system may be triggered in the event of a natural event such as a powerful earthquake. In this case, our service engineers will deal with the situation at the earliest opportunity.

Main Unit
Startup System



First characteristic numeral	Degrees of protection against solid foreign objects	
	Brief description	Definition
0	Unprotected	—
1	Protected against solid foreign objects of $\text{S}\phi 50$ mm and greater	A $\text{S}\phi 50$ mm object probe shall not fully penetrate enclosure*
2	Protected against solid foreign objects of $\text{S}\phi 12.5$ mm and greater	A $\text{S}\phi 12.5$ mm object probe shall not fully penetrate enclosure*
3	Protected against solid foreign objects of $\text{S}\phi 2.5$ mm and greater	A $\text{S}\phi 2.5$ mm object probe shall not fully penetrate enclosure*
4	Protected against solid foreign objects of $\text{S}\phi 1.0$ mm and greater	A $\text{S}\phi 1.0$ mm object probe shall not fully penetrate enclosure*
5	Protected against dust	Ingress of dust is not totally prevented, but dust that does penetrate must not interfere with satisfactory operation of the apparatus or impair safety.
6	Dust-proof	No ingress of dust allowed.

* The full diameter of the object probe shall not pass through an opening of the enclosure.

For details of the test conditions used in evaluating each degree of protection, please refer to IEC 60529 (JIS C 0920).

Second characteristic numeral	Degrees of protection against water	
	Brief description	Definition
0	Unprotected	—
1	Protected against vertical water drops	Vertically falling water drops shall have no harmful effects.
2	Protected against vertical water drops within a tilt angle of 15°	Vertically falling water drops shall have no harmful effects when the enclosure is tilted at any angle up to 15° on either side of the vertical.
3	Protected against spraying water	Water sprayed at an angle up to 60° either side of the vertical shall have no harmful effects.
4	Protected against splashing water	Water splashed against the enclosure from any direction shall have no harmful effects.
5	Protected against water jets	Water projected in jets against the enclosure from any direction shall have no harmful effects.
6	Protected against powerful water jets	Water projected in powerful jets against the enclosure from any direction shall have no harmful effects.
7	Protection against water penetration	Ingress of water in quantities causing harmful effects shall not be possible when the enclosure is temporarily immersed in water under standardized conditions of pressure and time.
8	Protected against the effects of continuous immersion in water	Ingress of water in quantities causing harmful effects shall not be possible when the enclosure is continuously immersed in water under conditions which shall be agreed between manufacturer and user but which are more severe than for IPX7.

Supplementary letter	Degrees of protection against oil	
	Abstract	
F	Oil-resistant	Drops or splashes of oil from any direction cause no harmful effects.
G	Oil-proof	Protection against entry of oil droplets or splashes from all directions.

The protection levels against oil are specified only in the appendix of JIS C 0920.

Features of Mitutoyo Small Tool Instruments



High-accuracy Digimatic Micrometer SERIES 293 with digital step of 0.0001 mm

The High-accuracy Digimatic Micrometer utilizes Mitutoyo's innovative 0,1 μm digital step ABS (ABSOLUTE) rotary sensor and high-accuracy screw machining technology to achieve the E_{MPE} of $\pm 0,5 \mu\text{m}$, delivering 0,1 μm resolution measurements without sacrificing operability.

COOLANT PROOF

COOLANT PROOF is the universal term for Mitutoyo Digimatic Small Tool Instruments that are not only resistant to dust and water ingress (rated to IP65 or better) but also to deterioration of materials due to contact with the cutting oil or coolant fluids in normal use.

Note: Some types of aggressive cutting oil or coolant may degrade the sealing materials over time.



QuantuMike with 2 mm/rev Spindle Feed

Faster measurement is achieved by using a finer thread which feeds the spindle by 2 mm per revolution of the thimble instead of the standard 0,5 mm. This increase of spindle feed has been made possible thanks to new high precision thread-cutting and testing techniques. In addition, the ratchet thimble mechanism helps ensure repeatable results and enables easy operation- even when making measurement one-handed.

Example of Measurement Data Management System Design

A system for recording and analyzing measurement results from various Mitutoyo measuring instruments for quality assurance purposes.

Recording measurement results

No more transcribing



DP-1VA LOGGER

Equipped with the data logger function, it allows batch transfer of stored data to a PC with a USB cable.

Direct data input to a PC

Connection cable-integrated USB-ITN



USB Input Tool Direct

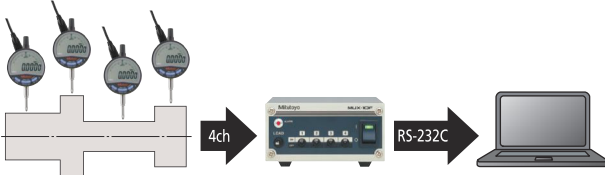
Lineup of two models with different output specifications

IT-020U/IT-007R



Input Tool SERIES

Connect to a RS-232C interface PC with 4 channels and a sequencer



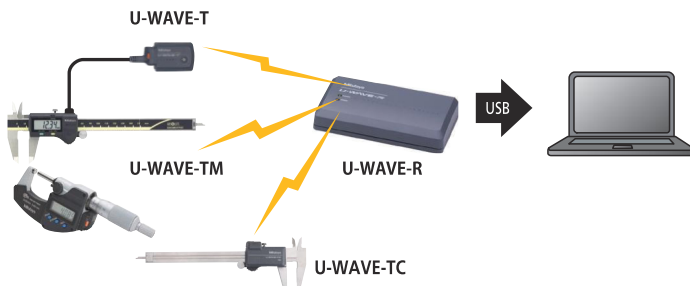
Multiplexer MUX-10F

Wireless



U-WAVE-TMB

U-WAVE-TCB



U-WAVE-T

U-WAVE-TM

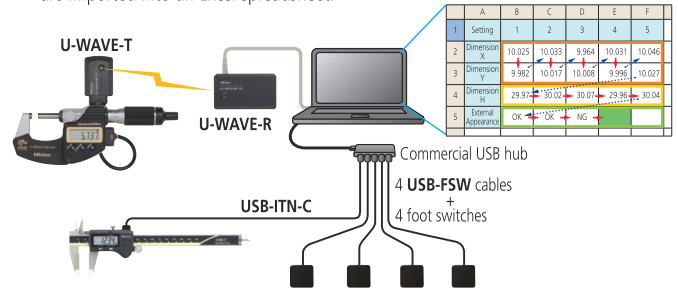
U-WAVE-R

U-WAVE-TC

Software dedicated to inspection and quality control

Inspection certificate creation

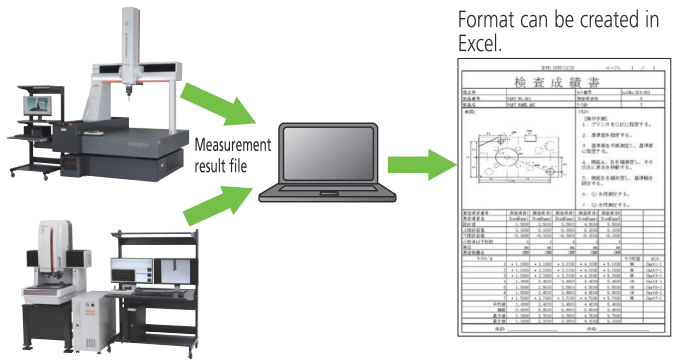
Measurement data from calipers and micrometers are imported into an Excel spreadsheet.



USB-ITPAK

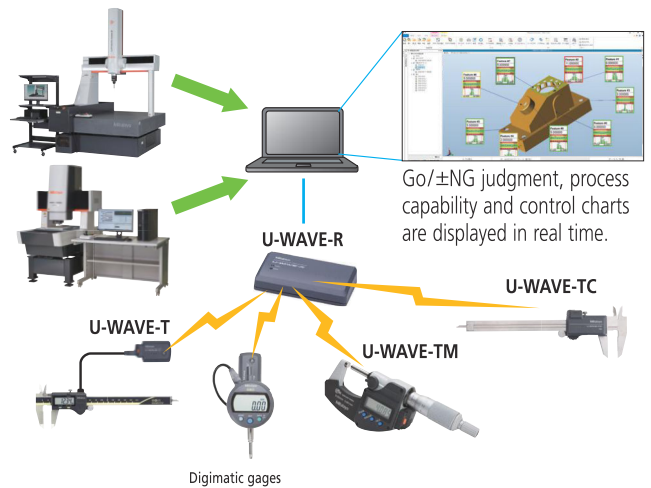
	A	B	C	D	E	F
1	Setting	1	2	3	4	5
2	Dimension X	10.025	10.033	9.964	10.031	10.046
3	Dimension Y	9.982	10.017	10.008	9.992	10.027
4	Dimension Z	29.974	30.021	30.071	29.961	30.041
5	External Appearance	OK	OK	NG		

Format can be created in Excel.



MeasureReport

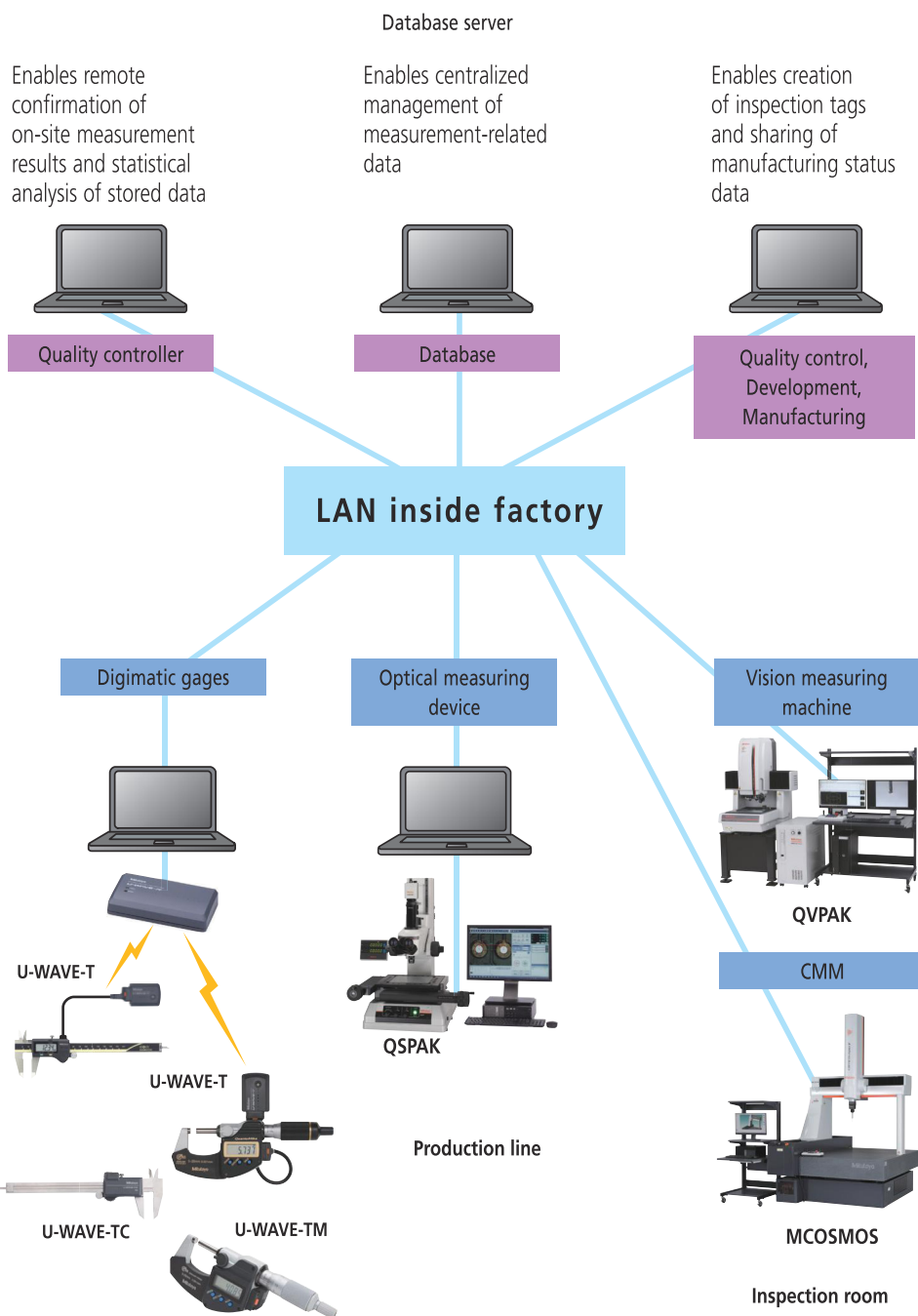
Statistical Process Control



Go/±NG judgment, process capability and control charts are displayed in real time.

Network quality control information throughout the entire factory

Unify and control the measurement results through the network



Other peripheral devices and software

Monitoring Service

Conduct preventive maintenance through CMM status monitoring



Status Monitor

Can remotely monitor measuring machines



Note: For details on the above, contact your local Mitutoyo sales office.