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Meaning of Symbols

PG02



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IP65



IP66

Quality Control

Quality control (QC)

A system for economically producing products or services of a quality that meets customer requirements.

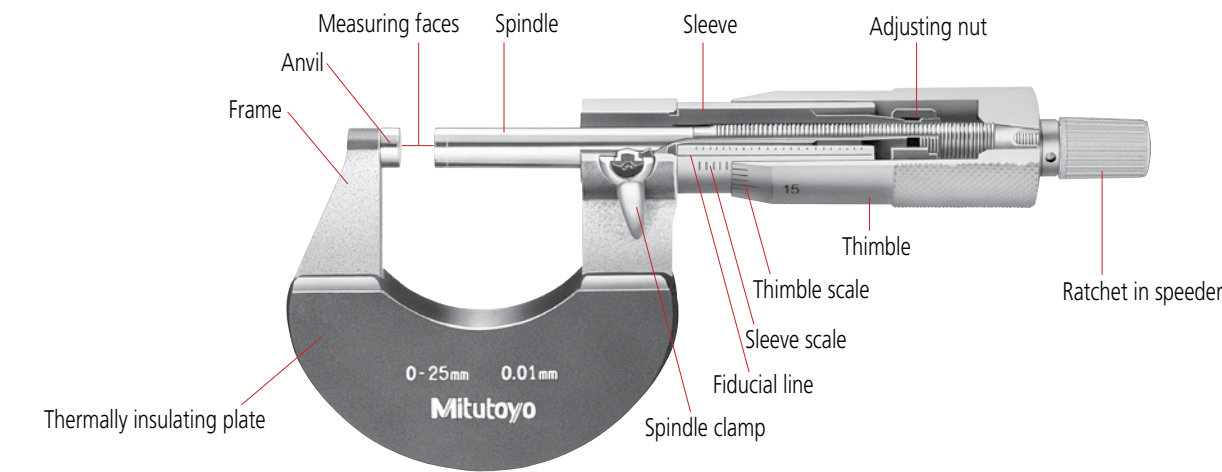
Process quality control

Activities to reduce variation in product output by a process and keep this variation low. Process improvement and standardization as well as technology accumulation are promoted through these activities.

Micrometers

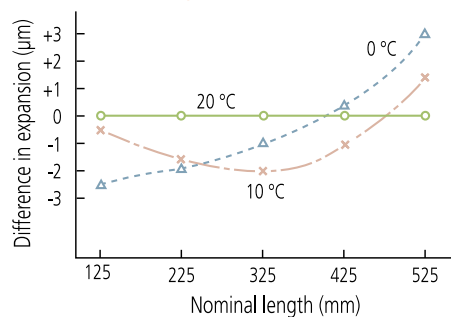
Nomenclature

Standard Analog Outside Micrometer



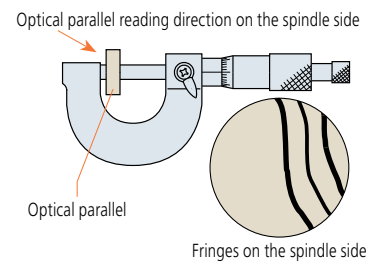
Micrometers

Difference in Thermal Expansion between Micrometer and Length Standard



Micrometers

Testing Parallelism of Micrometer Measuring Faces

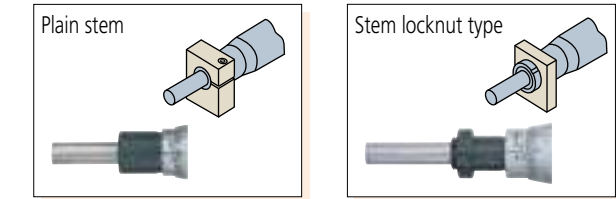


Micrometer Heads

Key Factors in Selection

Key factors in selecting a micrometer head are the measuring range, spindle face, stem, graduations, thimble diameter, etc.

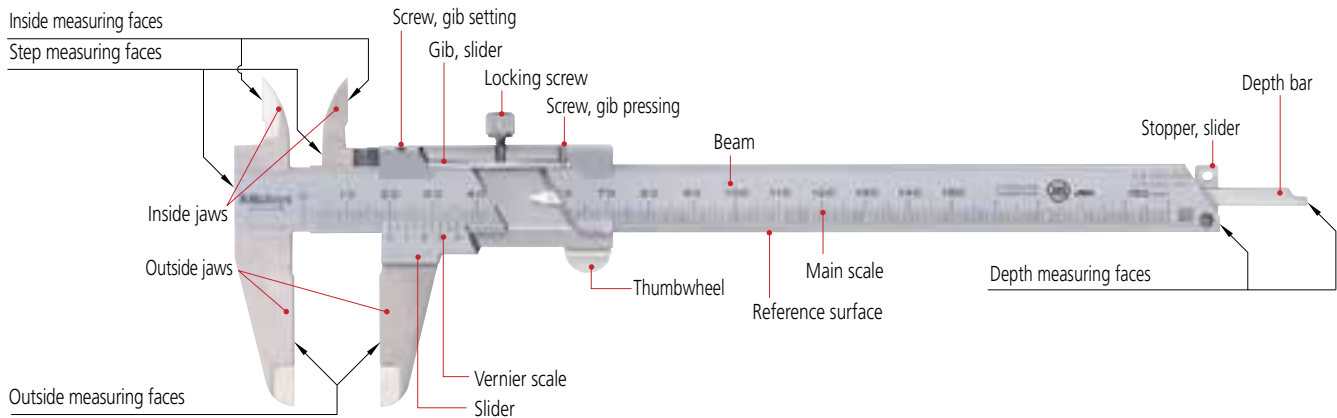
Stem



Calipers

Nomenclature

Vernier Caliper



Performance evaluation method for the caliper

JIS B 7507 was revised and issued in 2016 as the Japanese Industrial Standards of the caliper, and the “Instrumental error” indicating the indication error of the caliper has been changed to “Maximum Permissible Error (MPE) of indication”.

The “Instrumental error” of the conventional JIS adopts acceptance criteria that the specification range (precision specification) equals acceptance range, and the OK/NG judgment does not include measurement uncertainty. (Fig. 1)

The “Maximum Permissible Error

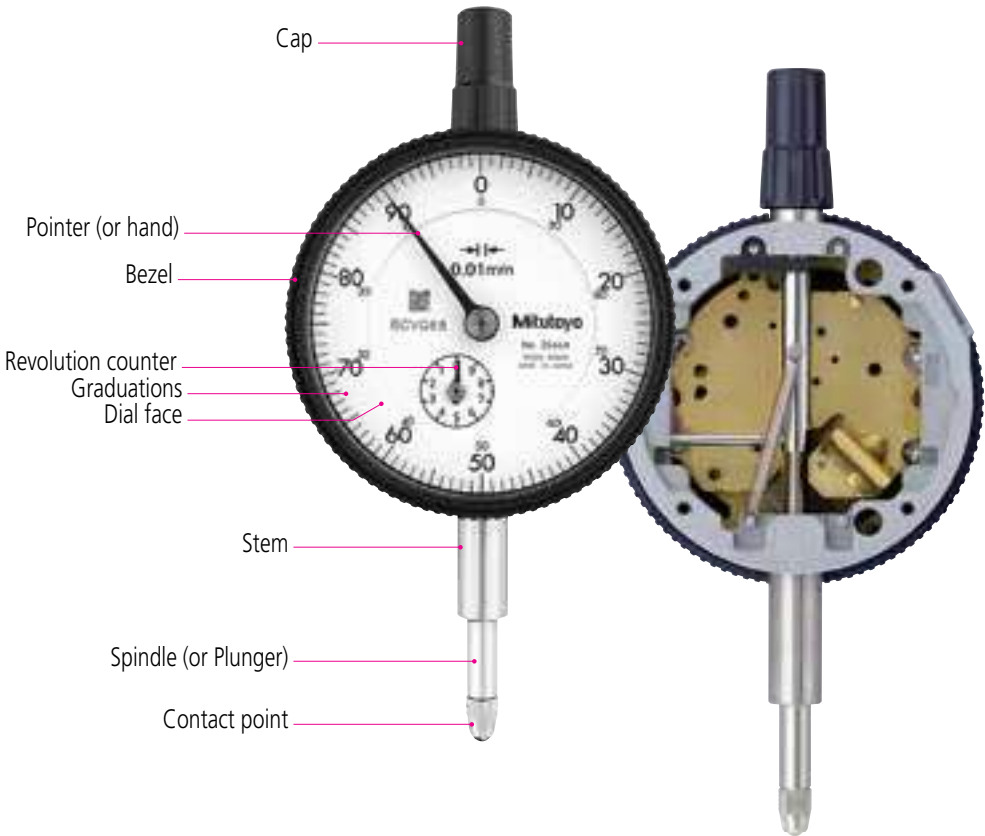
Height Gages

3. Lifting of the base from the reference surface

When setting the scribe height from a gauge block stack, or from a workpiece feature, the base may lift from the surface plate if excessive downwards force is used on the slider, and this results in measurement error. For accurate setting, move the slider slowly downwards while moving the scribe tip to and fro over the gauge block surface (or feature). The correct setting is when the scribe is just felt to lightly touch as it moves over the edge of the surface. It is also necessary to make sure that the surface plate and height

Dial Indicators, Digital Indicators and Test Indicators

Nomenclature



Linear Gages

Tolerance Setting

Tolerance limits can be set in various display units for automatically indicating if a measurement falls within those limits.

Open-collector Output

An external load, such as a relay or a logic circuit, can be driven from the collector output of an internal transistor which is itself controlled by a Tolerance Judgement result, etc.

Digimatic Code

A communication protocol for connecting the output of measuring tools with various Mitutoyo data processing units. This allows output connection to a Digimatic Mini Processor **DP-1VA LOGGER** for performing various statistical calculations and creating histograms, etc.

BCD Output

A system for outputting data in binary-coded decimal notation.

RS-232C Output

A serial communication interface in which data can be transmitted bi-directionally under the EIA Standards. For the transmission procedure, refer to the specifications of each measuring instrument.

RS Link Function Multi-point measurement can be performed by connecting multiple EH counters with RS Link cables.

RS Link for EH Counter

It is possible to connect a maximum of 10 counter units and handle up to 20 channels of multi-point measurement at a time. For this connection use a dedicated RS Link cable **No.02ADD950** (0.5m), **No.936937** (1m) or **No.965014** (2m). (The total length of RS Link cables permitted for the entire system is up to 10

Linear Scales

Glossary

Absolute system

A measurement mode in which every point measurement is made relative to a fixed origin point.

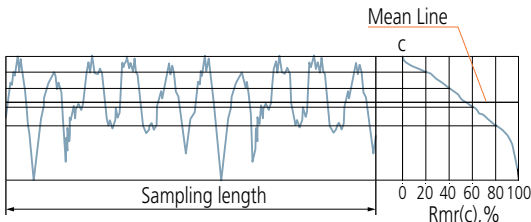
Incremental system

A measurement mode in which every point measurement is made relative to a certain stored

Surftest (Surface Roughness Testers)

Curves, Probability Density Function, and Related Parameters

Material ratio curve of the profile (Abbott-Firestone curve)
Curve representing the material ratio of the profile as a function of section level c



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