High Performance 2D Measurement System

LINEAR HEIGHT

Catalog No. E12012(4)

Best-in-class accuracy 2D measurement system
Best-in-class Accuracy High Performance 2D Measurement System*
Linear Height Series LH-600E/EG

**Feature 1 World-class accuracy**
- Achieved accuracy: \((1.1 + 0.6L/600) \mu\text{m}\)
  - Best-in-class accuracy has been achieved by using a high-accuracy scale unit and high-accuracy guiding mechanism manufactured in our dedicated scale plant.
  - Displacement accuracy when measuring a height of 600 mm: 1.7 \(\mu\text{m}\)

**Feature 2 Superior ease of operation**
- Easy operation with a single touch of a key
  - Each frequently-used measurement type is initiated by one dedicated icon-type command key. Even a novice can immediately start measurement without instruction.
- Color TFT LCD
  - This has improved legibility and operability.
- Unlimited USB memory
  - Compatible models support more than 2 GB of USB memory.

**Feature 3 Numerous functions and options**
- Powerful measurement/calculation functions
  - See page 4 for details.
  - Numerous types of measurement such as displacement/straightness/squareness are possible in addition to basic measurement functions including height and circle measurement.
  - This gage is also equipped with the 2D measurement function, tolerance judgment function, and others.
- Standardization of measuring procedures
  - Teaching the gage a series of measuring operations for a workpiece is possible (Repeat function). This function is very effective when measuring large batches of workpieces. Upon execution of the Repeat function, the probe automatically moves to the next measurement position (height). If an operation procedure manual is available, measurement can be standardized.
- Supporting quality control with statistical processing functions
  - GO/NG judgment is performed real-time on measured data. Up to 60,000 pieces of data can be stored in the database, on which can be performed various statistical calculations such as average, standard deviation and process capability. Quality control is also supported by graphic display of histograms.
- Highly capable data processing unit
  - The high-performance CPU supports future software upgrading. Measurement results are output in CSV format, thus allowing users to reuse those results with their own software.
- Versatile external interfaces
  - A printer interface is provided, which is installed in the main unit to connect a thermal printer or A4 size printer. The USB interface allows a USB memory to back up and restore stored programs and measured data that have been stored. Moreover, the RS-232C interface can output measurement results to an external device such as a PLC (Power Line Communications).
- Numerous optional probes
  - This gage is provided with various types of probes and interchangeable styli flexibly compatible with complicated workpiece profiles and various measurement features. Mitutoyo’s lineup of options offers various interchangeable styli for ø5 ball probes, depth probes, dial indicator holders, etc. The optional probes extend their flexibility with an M2/M3 threaded shank that allows various CMM styli to be attached.

**World-class accuracy feature 1**
Superior ease of operation feature 2
Numerous functions and options feature 3

Diverse interfaces
- Printer
- USB
- RS-232C
- Digimatic input

Reflective-type linear encoder & guide achieve best-in-class accuracy

Numerous accessories compatible with many types of workpiece and measurement features provided in addition to standard ø5 mm stepped probes

High-accuracy air bearing that can be operated in semi-floating mode while making highly accurate measurements and fully floating mode for frictionless travel over a surface plate

A complete cordless system with a built-in compressor and battery, allowing frictionless movement on a surface plate.
The touch of a single key automatically runs the instrument until the last result is displayed. This eliminates the need to execute key operations at each step in the measurement process, allowing you to concentrate 100% on workpiece inspection.

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**Functions**

The measurement operation is supported with graphics on the large LCD.

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**Screen display examples**

Squareness measurement result:
- Numeric display*
- Graphical display*

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- Numeric display*
- Graphical display*

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A thermal printer that can be attached to the Linear Height main unit is available as an optional accessory. Result data can also be output to a commercial A4 size printer.

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**Printer output examples**

A thermal printer that can be attached to the Linear Height main unit is available as an optional accessory. Result data can also be output to a commercial A4 size printer.

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**Other functions**

- 2D measurement
- Tolerance judgment function
- Statistical processing functions
- Part-program functions
- Accuracy-compensation functions

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**Single-touch Basic functions**

- Measures the diameter and center of a hole.
- Measures the diameter and center of a shaft.
- Measures the minimum height of a downwards or upward-facing surface.
- Performs calculation, including angle.
- Sets the probe type, measures the probe diameter, inputs the probe diameter, saves the probe, loads the probe and shifts the probe position.

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- 2D measurement
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*To use this function, a Digimatic indicator or a lever head plus a digital Micrometer are required.
The power grip makes it easy to approach the workpiece.

Many kinds of optional probes enable many types of measurement.

A choice of peripherals expand functionality.

Optional Accessories

Frequently used measurements

- Thickness measurement (Outside)
- Height measurement (upward facing)
- Height measurement (downward facing)
- Diameter measurement (Hole)
- Width measurement (Inside)

Measurement data are transmitted to external device (e.g. PLC)

Thermal printer

Printer paper for thermal printer (10 rolls pack)
## Specifications

<table>
<thead>
<tr>
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<tr>
<td>518-352-10</td>
<td>Model for Japan, Japanese manual</td>
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<td>518-352A-21</td>
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**Model with power grip (Power grip pre-installed model)**

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* It is recommended to use the Linear Height on a surface plate of high flatness accuracy.

### Dimensions

**Standard accessories**

- ø5 mm stepped probe
- Ball-diameter corrected block
- Auxiliary weight (2 pcs.)
- Battery pack
- AC adapter
- Power cable for AC adapter
- Clear cover
- Carrying handle
- Cap
- Hex wrench
- Manual set
- Inspection certificate

Our products are classified as regulated items under Japanese Foreign Exchange and Foreign Trade Law. Please consult us in advance if you wish to export our products to any other country. If the purchased product is exported, even though it is a non-regulated item (Catch-All controls item), the customer service available for that product may be affected. If you have any questions, please consult your local Mitutoyo sales office.

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### 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

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**Mitutoyo Corporation**

20-1, Sakado 1-Chome, Takatsu-ku, Kawasaki-shi, Kanagawa 213-8533, Japan

T +81 (0) 44 813-8230
F +81 (0) 44 813-8231

https://www.mitutoyo.co.jp

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