

# Height Gauges

## SERIES 518 – Linear Height Digimatic 2D Measurement System

- Excellent accuracy of  $(1.1+0.6L/600)$   $\mu\text{m}$  with  $0.1 \mu\text{m}/0.4 \mu\text{m}$  resolution/repeatability.
- High-accuracy Height Gauge incorporating a wide range of measurement functions.
- To achieve best-in-class accuracy, a high-accuracy reflective-type linear encoder and an exceptionally straight guide are used.
- Measurement can be implemented by icon-based commands that also support easy one-key operation. Perpendicularity (frontal) of  $5 \mu\text{m}$  and straightness of  $4 \mu\text{m}$  are guaranteed.
- A best-in-class large colour LCD with excellent visibility is used.
- Pneumatic full/semi-floating suspension system allows adjustment of air-cushion height.
- Basic statistical functions are provided and, additionally, RS-232C data output provides the option of evaluating measurement data externally with SPC software on a PC.

**MeasurLink<sup>®</sup> ENABLED**  
Data Management Software by Mitutoyo



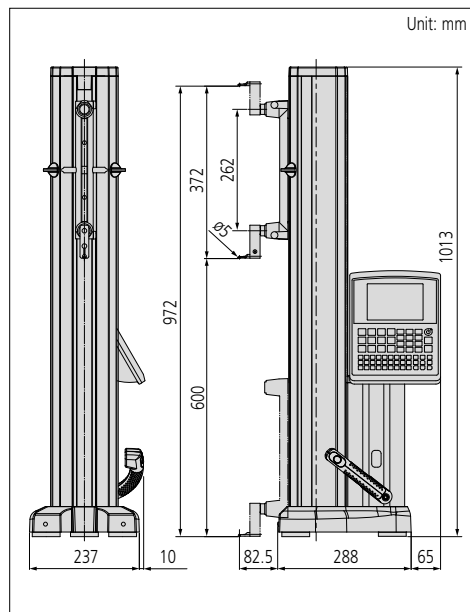
Running the pneumatic suspension allows frictionless movement on a surface plate.



The power grip makes it easy to approach the workpiece.



### Dimensions



### Specifications

Inch/Metric	
Code No.	Remarks
518-351E-21	—
518-352E-21	Power grip pre-installed

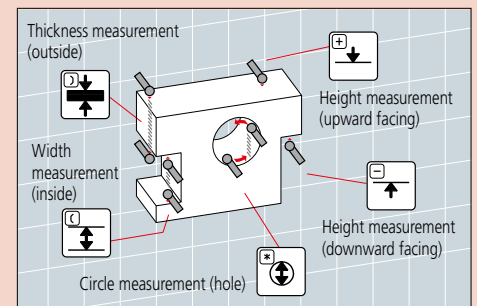
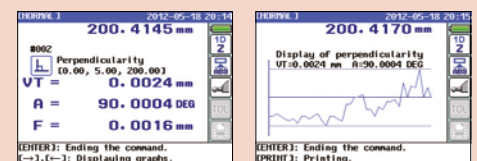
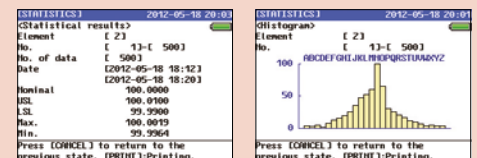
### Technical Data

- Measuring range: 0-972 mm  
 Slider stroke: 600 mm  
 Resolution (switchable): 0.0001/0.001/0.01/0.1 mm or .000001/.00001/.0001/.001"  
 Accuracy at 20°C\*1:  $(1.1+0.6L/600) \mu\text{m}$ ,  
 L = measuring length in mm
- Repeatability ( $2\sigma$ )\*1  
 Plane: 0.4  $\mu\text{m}$   
 Bore: 0.9  $\mu\text{m}$
- Perpendicularity\*2: 5  $\mu\text{m}$  (after compensation)  
 Straightness\*2: 4  $\mu\text{m}$  (mechanical straightness)  
 Drive method: Manual/motor (5-40 mm/s, 7 steps)  
 Measuring force: 1 N  
 Balancing method: Counter balance  
 Suspension method: Full/semi-floating with built-in air compressor
- Display: Colour TFT LCD (320 x 240 dot, with LED backlight)  
 Language for display: Japanese, English, German, French, Italian, Spanish, Dutch, Portuguese, Swedish, Czech, Hungarian, Slovene, Polish, Traditional Chinese, Korean, and Simplified Chinese
- No. of stored programs: 50 (max.)  
 No. of stored data: 60,000 (max.)  
 Power supply: AC adapter/battery (Ni-MH)  
 Battery operation time: Approx. 5 hours (air suspension and slider elevation: 25% duty cycle)

\*1 Guaranteed when using the standard eccentric  $\phi 5$  probe  
 \*2 Guaranteed when using the Lever Head (MLH-321) or Mu-checker (M-411)

### Standard Accessories

- 12AAF634:** 5-stepped probe  
**12AAA715:** Ball-diameter correction block  
 Note: When the correction is performed by using the taper type contact point, the ball-diameter correction block 12AAA787 (for taper type contact point) is required.  
**12AAF674:** Auxiliary weight (2 pcs.)



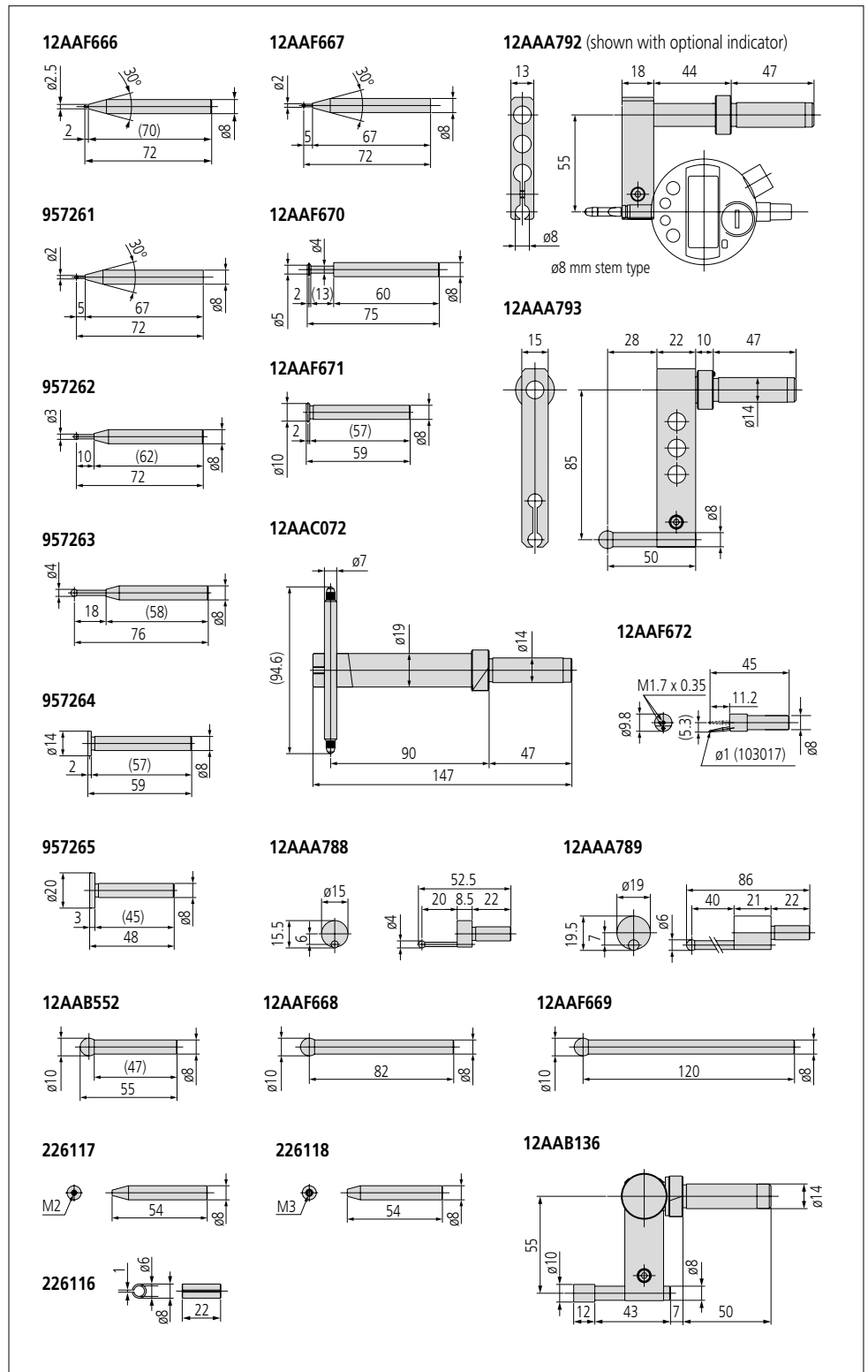
Example of measurements.

## Optional Accessories

Code No.	Description
226116	Test indicator (ø6 mm stem) adapter
226117	M2 CMM stylus adapter* <sup>3</sup>
226118	M3 CMM stylus adapter* <sup>3</sup>
532328	ø10 CMM ball probe
532345	ø20 disc probe
930803	ø30 disc probe
932361	Mu-checker lever head holder - additional auxiliary weights are required (total 4 pcs).
932377A	ø2 CMM ball probe
932378A	ø3 CMM ball probe
932379A	ø5 CMM ball probe
932380A	ø6 CMM ball probe
957261	ø2 mm ball probe (coaxial type)
957262	ø3 mm ball probe (coaxial type)
957263	ø4 mm ball probe (coaxial type)
957264	ø14 mm disc probe
957265	ø20 mm disc probe
05HAA394	ø5 mm ball offset probe
12AAA787	Block for calibrating probe diameter (applicable to taper probe)
12AAA788	ø4 mm ball offset probe
12AAA789	ø6 mm ball offset probe
12AAA792	Dial indicator (ø8 mm stem) holder
12AAA793	Probe extension holder (85 mm / 3.3")
12AAA879	Sample workpiece
12AAB136	ø10 mm cylindrical probe
12AAB552	ø10 mm ball probe, L = 55 mm (coaxial type)
12AAC072	Depth probe
12AAC073	ø20 mm taper probe
12AAF666	ø1 mm ball probe (coaxial type)
12AAF667	ø2 mm ruby ball probe (coaxial type)
12AAF668	ø10 mm ball probe, L = 82 mm (coaxial type)
12AAF669	ø10 mm ball probe, L = 120 mm (coaxial type)
12AAF670	ø5 mm disc probe
12AAF671	ø10 mm disc probe
12AAF672	ø1 mm ball offset probe
12AAF675	Set with cover for large capacity battery
12AAF712	Battery pack
12AAG245	Large-capacity battery
Various peripheral devices	
12AAA802-1	Thermal printer paper
12AAA804	Cable for page printer (2 m)
12AAA807D	RS-232C cable (2 m / 80")
12AAG920	RS-232C cable (3 m / 118")
12AAH035	FDD unit (USB)
12AAN050	Thermal printer
63AAA042	Digimatic interface DMX-3-2

\*<sup>3</sup> Stylus for CMMs can be provided.

## Optional Accessories



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