

Height Gage

A standard measuring tool of industry

Linear Height

SERIES 518 — High Performance 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 Gage incorporating a wide range of measurement functions.
- To achieve best-in-class accuracy, a high-accuracy reflective-type linear encoder and high-accuracy 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.
- The TFT LCD provides excellent visibility and operability.
- Pneumatic full/semi-floating 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.
- For precision Black Granite Surface Plates, refer to page E-51.
- Backup/Restore of data and measurement part programs can be implemented using USB storage devices (FAT16/32 format compatible).



With power grip
518-352A-21



SPECIFICATIONS

Inch/Metric Model without power grip

Order No.	Remarks
518-351A-21	Model for North America, English manual
518-351A-22	Model for South America, Spanish manual
518-351D-21	Model for EU, English manual
518-351E-21	Model for the UK, English manual
518-351DC	Model for China, Chinese manual
518-351K	Model for Korea, Korean manual

Inch/Metric Model with power grip

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518-352DC	Model for China, Chinese manual
518-352K	Model for Korea, Korean manual

* Power grip pre-installed models



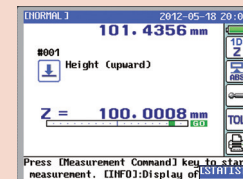
An inspection certificate is supplied as standard.
Refer to page X for details.

Technical Data

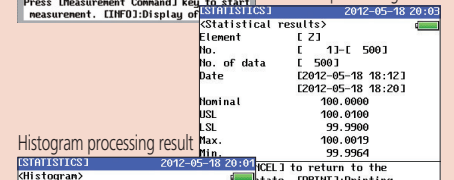
Measuring range: 0 - 977mm
 Slider stroke: 600mm
 Resolution: 0.0001" / 0.001" / 0.01" / 0.1mm or (switchable) .000001" / .00001" / .0001" / .001"
 Accuracy at 20°C *1: $(1.1+0.6L/600)\mu\text{m}$
 L = Measuring length (mm)
 Repeatability (2σ) *1: Plane: 0.4μm, Bore: 0.9μm
 Perpendicularity *2: 5μm (after compensation)
 Straightness *2: 4μm (mechanical straightness)
 Drive method: Manual / motor (5 - 40mm/s, 7 steps)
 Measuring force: 1N
 Balancing method: Counter balance
 Floating method: Full / semi-floating with built-in air compressor
 Display: 5.7-inch color TFT LCD
 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 floating & slider elevation: 25% duty cycle)
 *1 Guaranteed when using the standard eccentric ø5 probe
 *2 Guaranteed when using the Lever Head (MLH-521) or Mu-checker (M-511)

Screenshot examples

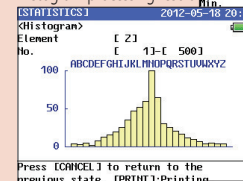
Measurement screen



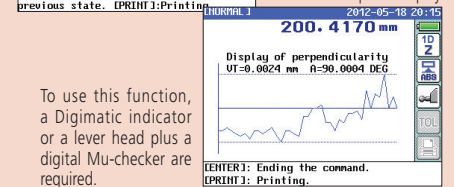
Statistical processing result



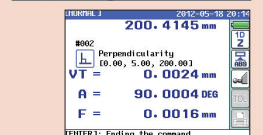
Histogram processing result



Squareness measurement result:
Graphical display



To use this function, a Digimatic indicator or a lever head plus a digital Mu-checker are required.



Squareness measurement result:
Numeric display

Standard accessories

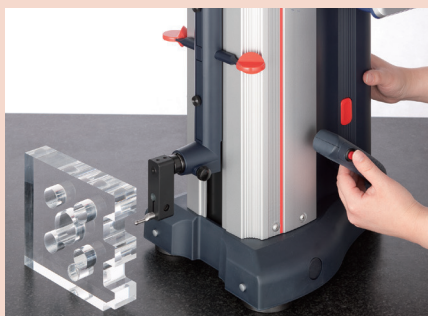
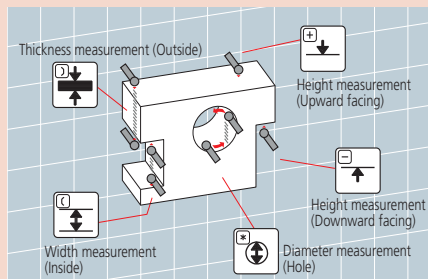
12AAF634 5-stepped probe

12AAA715 Ball-diameter corrected block

*When the correction is performed by using the taper type contact point, the ball-diameter corrected block No. 12AAA787 (for taper type contact point) is required.

12AAF674 Auxiliary weight (2pcs.)

Example of measurements

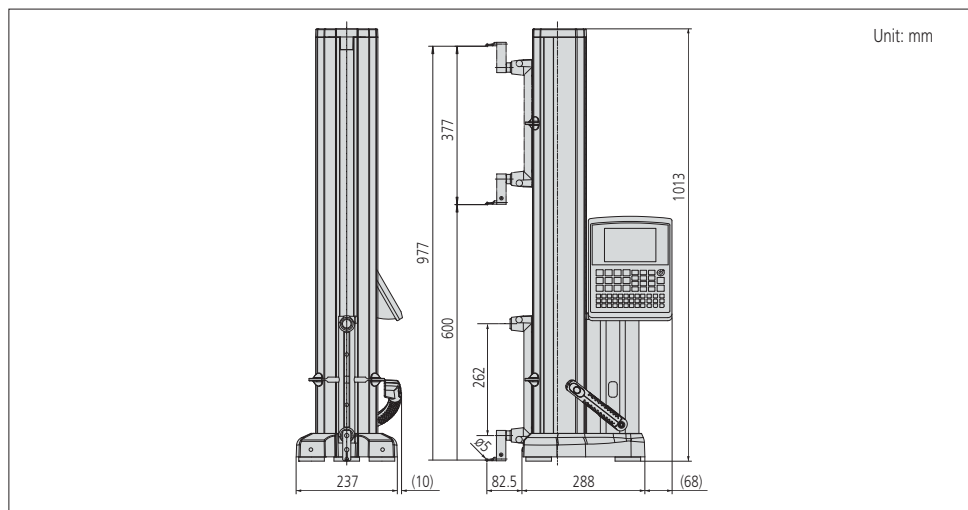


The power grip makes it easy to approach the workpiece.



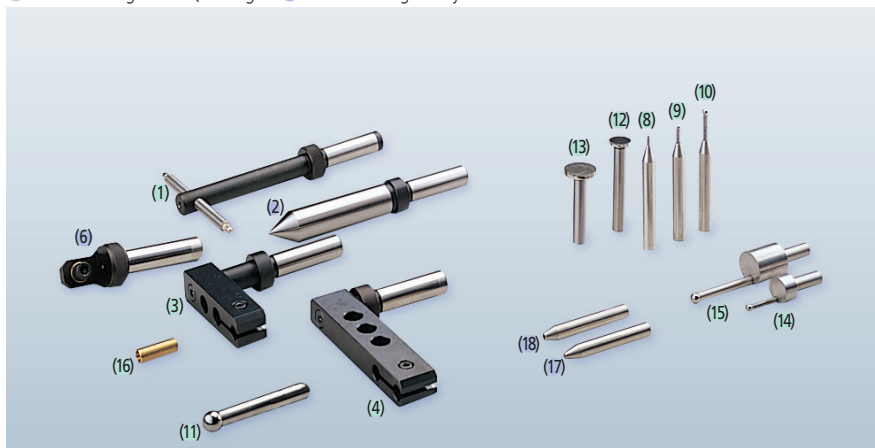
The sample workpiece shown in the above photo is an optional accessory (12AAA879).

DIMENSIONS



Optional accessories

● For Linear Height and QM-Height ● For Linear Height only



- (1) 12AAC072: Depth probe
- (2) 12AAC073: $\varnothing 20$ mm taper probe
- (3) 12AAA792: Dial indicator ($\varnothing 8$ mm stem) holder
- (4) 12AAA793: Probe extension holder (85mm/3.3")
- 12AAB136: $\varnothing 10$ mm cylindrical probe
- (6) 932361: Mu-checker lever head holder*
*Additional auxiliary weights are required (total 4 pcs).
- 12AAF666: $\varnothing 1$ mm ball probe (coaxial type)
- 12AAF667: $\varnothing 2$ mm ruby ball probe (coaxial type)
- (8) 957261: $\varnothing 2$ mm ball probe (coaxial type)
- (9) 957262: $\varnothing 3$ mm ball probe (coaxial type)
- (10) 957263: $\varnothing 4$ mm ball probe (coaxial type)
- (11) 12AAB552: $\varnothing 10$ mm ball probe, L = 55mm (coaxial type)
- 12AAF668: $\varnothing 10$ mm ball probe, L = 82mm (coaxial type)
- 12AAF669: $\varnothing 10$ mm ball probe, L = 120mm (coaxial type)
- 12AAF670: $\varnothing 5$ mm disk probe
- 12AAF671: $\varnothing 10$ mm disk probe
- (12) 957264: $\varnothing 14$ mm disk probe
- (13) 957265: $\varnothing 20$ mm disk probe
- 12AAF672: $\varnothing 1$ mm ball offset probe
- (14) 12AAA788: $\varnothing 4$ mm ball offset probe
- $\varnothing 5$ mm ball offset probe 05HAA394
- (15) 12AAA789: $\varnothing 6$ mm ball offset probe
- (16) 226116: Test indicator ($\varnothing 6$ mm stem) adapter
- Sample workpiece 12AAA879
- (17) 226117: M2 CMM stylus adapter*¹
- (18) 226118: M3 CMM stylus adapter*¹
- CMM ball and disk hard probes are available.
 $\varnothing 2$ 932377A, $\varnothing 3$ 932378A
 $\varnothing 5$ 932379A, $\varnothing 6$ 932380A
 $\varnothing 10$ 532328
Disc probe
 $\varnothing 20$ 532345, $\varnothing 30$ 930803
- 12AAF712: Battery pack

Various peripheral devices

- 12AAN048*² Receipt printer (for Japan)
- 12AAN049*² Receipt printer (for North America)
- 12AAN050*² Receipt printer (for EU; excluded U.K.)
- 12AAN051*² Receipt printer (for U.K.)
- 12AAN052: Receipt paper (10-roll set)
- 12AAA804: Cable for page printer (2m)
- 12AAA807: RS-232C cable (2m/80")
- 12AAG920: RS-232C cable (3m/118")
- Digimatic cable No.936937 (1m)
- No.965014 (2m)

*¹ For enabling CMM styli to be used.

*² Attachment for fixing the connecting cable is provided as standard.