

# Height Gage

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

ABSOLUTE<sup>™</sup>



## QM-Height SERIES 518 — High-performance Height Gage

- This highly precise height gage is useful not only in height measurements but also in a wide range of applications such as measurement of steps, inside and outside diameters, and runouts.
- Easy-to-view, simple control panel enables most measurements to be made with a single keystroke. SPC (Digimatic) and RS-232C data output allow easy data management with a PC. (Requires special communication driver.)
- Pneumatic floating models, which feature an air-suspension mechanism, can move smoothly on a surface plate (accuracy cannot be guaranteed for measurement while the unit is air-suspended).
- Features a long continuous operating time of approximately 1,200 hours with four AA alkaline batteries. (Four commercially available NiMH/HR6 rechargeable batteries can also be used.)



518-256

518-254

### SPECIFICATIONS

Code No.	Metric	518-250	518-252	518-254	518-256
	Inch/Metric	518-251	518-253	518-255	518-257
Measuring range (stroke)		0 to 465 mm (350 mm/14 in)	0 to 715 mm (600 mm/24 in)	0 to 465 mm (350 mm/14 in)	0 to 715 mm (600 mm/24 in)
Resolution	Metric	0.001 mm/0.005 mm (Selectable)			
	Inch/Metric	0.001/0.005 mm 0.00005/0.0001/0.0002 in (Selectable)			
Accuracy	Indication accuracy*1	± (2.4 + 2.1L/600) μm			
	Repeatability*1	2 σ ≤ 1.8 μm			
Perpendicularity*2		7 μm	12 μm	7 μm	12 μm
Guiding method		Roller bearing			
Drive method		Manual (wheel)			
Measurement principle		Electromagnetic induction absolute encoder			
Measuring force		1.5±0.5 N			
Data output ports		Digimatic/USB*3			
Air-floating system		Not included		Included (for positioning only)*4	
Power source		Alkaline AA/LR6 batteries×4 (standard accessories)/AC adapter (optional accessory)*5 / Supports NiMH (HR6) rechargeable batteries×4			
Battery life guidelines*6		Approx. 1,200 hours (without using the air-floating system)			
		Approx. 90 hours (when using the air-floating system)			
Mass		25 kg	29 kg	26 kg	30 kg
Dimensions (W×D×H)		Stroke 350 mm type: 280×273×784 mm Stroke 600 mm type: 280×273×1016 mm			
Operating temperature (recommended)		0 to 40 °C (10 to 30 °C)			
Operating humidity		20 to 80% RH (non-condensing)			
Storage temperature		-10 to 50 °C			
Storage humidity		5 to 90% RH (non-condensing)			

• Standard Accessories: **05HZA148** ø5 mm stepped probe, **12AAA715** Probe diameter calibration block, Alkaline batteries×4 (AA/LR6) (For operational checks)

\*1 Indication accuracy and repeatability represent the values obtained when the standard ø5 stepped probe is used. It should be used in an environment as close to 20 °C as possible, with minimal temperature changes. In the case of diameter, minimum (maximum) value, circle pitch or difference measurement, measuring errors may be larger than the accuracy ratings listed in the table due to variations in measuring force during a scanning measurement, which differs from height measurement.

\*2 Indicates the value obtained from the measurement of a straight surface placed perpendicular to the the base reference surface using the Lever Head (**519-521**) and Mu-checker (**519-551**).

\*3 Requires special communication driver. Consult your local Mitutoyo Sales Office for details.

These can be downloaded from the Mitutoyo web site. <https://www.mitutoyo.co.jp/eng/contact/products/usb/index.html>

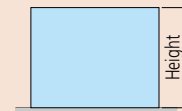
\*4 When using a model with the air-floating system, it is advisable to use a JIS 1 class, or higher, surface plate. Using on surfaces with scratches or unevenness may prevent the system operating to the specified performance.

\*5 The AC adapter cannot be used to recharge rechargeable batteries.

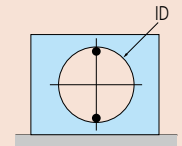
\*6 Battery life depends on the operating conditions. In particular, it is more economical to use the optional AC adapter to power the instrument if the application requires prolonged use of the air-floating system.

### Measurement example

- Height measurement



- ID measurement



- Runout measurement

