

Height Gage

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.
 - 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).
 - It 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.)



SPECIFICATIONS

Code No.	Metric	518-240	518-242	518-244	518-246
	Inch / Metric	518-241	518-243	518-245	518-247
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 batteriesx4 (standard accessories) / AC adapter (optional accessory)* ⁵ / Supports NiMH (HR6) rechargeable batteriesx4			
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 (WxDxH)		Stroke 350 mm type: 280x273x784 mm Stroke 600 mm type: 280x273x1016 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** ϕ 5 mm stepped probe, **12AAA715** Probe diameter calibration block, Alkaline batteries x4 (AA/LR6) (For operational checks)

*1 Indication accuracy and repeatability represent the values obtained when the standard ϕ 5 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.

*4 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.

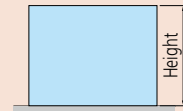
*6 Battery life depends on the operating conditions. In particular, it is more economical to use the optional AC adapter to power the instrument if the application requires prolonged use of the air-floating system.

MeasurLink[®] ENABLED
Data Management Software by Mitutoyo

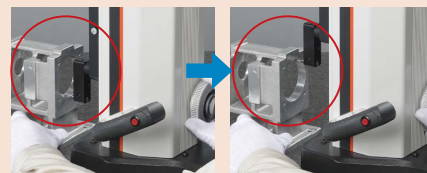
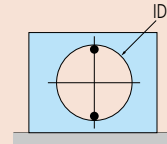


Measurement example

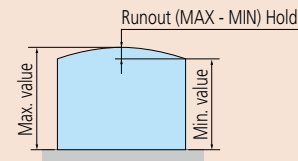
- Height measurement



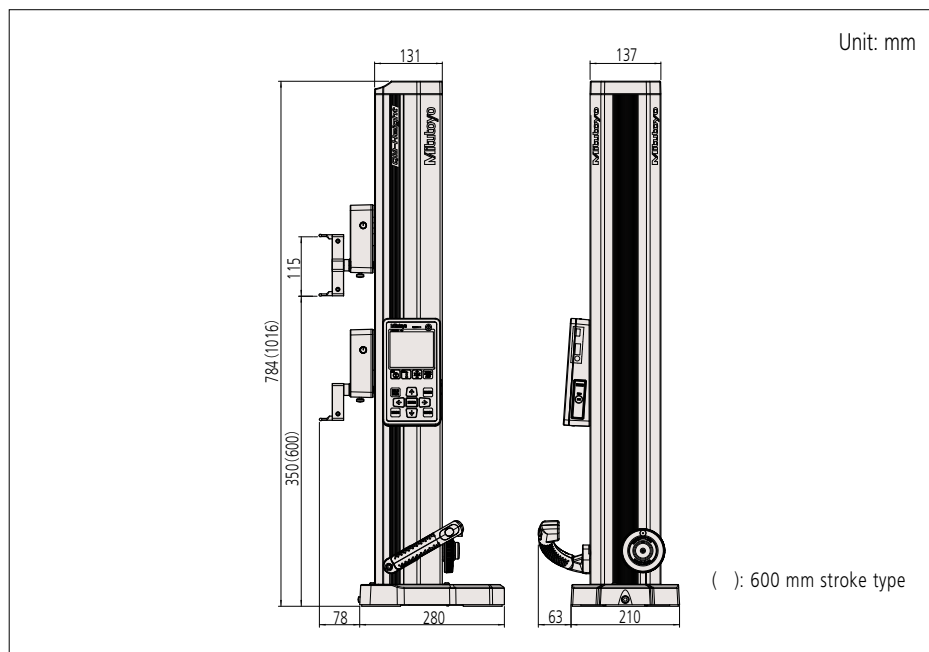
- ID measurement



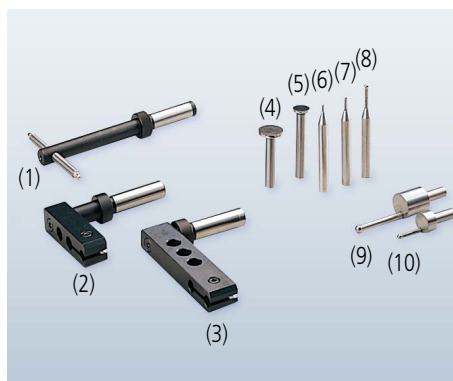
- Runout measurement



DIMENSIONS



Optional Accessories



Optional accessories that enable centralized data management

Code No.	Item name
Small printer equipped with Data Logger	
264-505	DP-1VA LOGGER
936937	Digimatic connection cable (1 m)
965014	Digimatic connection cable (2 m)
06AFZ050	USB cable (A-microB)
Measurement Data Input Unit	
06AFM380D	USB Input Tool Direct USB-ITN-D
Measurement data wireless communication system	
02AZD730G	U-WAVE-T (Transmission unit) (IP67 type)
02AZD880G	U-WAVE-T (Transmission unit) (Buzzer type)
02AZD790D	U-WAVE-T dedicated cable (Standard use)
02AZE140D	U-WAVE-T dedicated cable (For foot switch)
02AZD810D	U-WAVE-R
02AZE990	U-WAVE mounting bracket
Measurement data collection software for Excel USB-IT PAK V2.1/V3.0	
Measurement data network system MeasurLink®	

Contact points for a wide range of measurements

Item	Code No.	Description
Depth probe		
(1)	12AAC072	Depth probe
Special holder		
(2)	12AAA792	Holder for dial indicator
(3)	12AAA793	Holder (Long)
Interchangeable contact points for ø5 mm stepped probe		
(4)	957265	ø20 mm disk
(5)	957264	ø14 mm disk
(6)	957261	ø2 mm ball (coaxial type)
(7)	957262	ø3 mm ball (coaxial type)
(8)	957263	ø4 mm ball (coaxial type)
(9)	12AAA789	ø6 mm ball (eccentric type)
(10)	12AAA788	ø4 mm ball (eccentric type)
AC Adapter		
	06AGZ369JA	AD620JA for Japan/U.S.
	06AGZ369D	AD620D for the EU
	06AGZ369E	AD620E for the UK
	06AGZ369K	AD620K for Korea
	06AGZ369DC	AD620DC for China
Other		
	05HZA173	Scriber*

* Used for measurements, cannot be used for scribing.
Note: A gauge block may be required for zero-setting depending on the probe or contact point to be used.