

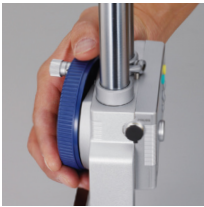
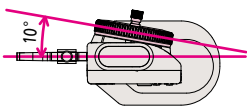
Height Gage

A standard measuring tool of industry

Digimatic Height Gage SERIES 192 — Multi-function Type with SPC Data Output

MeasurLink[®] ENABLED
Data Management Software by Mitutoyo

- Double-column structure ensures high measuring accuracy.
- Ergonomic base fits comfortably in the hand.
- A bidirectional touch-trigger probe is available as an optional accessory for **192-663-10, 192-664-10, 192-665-10, 192-670-10, 192-671-10, 192-672-10** and **192-673-10**.
- Better readability is provided thanks to display of measurement result with a large character height (11 mm) and high-contrast LCD.
- Inclined handle improves slider ergonomics.
- Allows integration into statistical process control and measurement systems. Refer to page A-3.
- Battery: **SR44** (1 pc), **938882**. For initial operational checks (standard accessory)
- Battery life is 3,500 hours in continuous use.
- Carbide-tipped long scribe (**905200** with overall length of 150 mm) is provided as a standard accessory for **192-663-10, 192-664-10** and **192-665-10**.
- For precision Black Granite Surface Plates, refer to page E-49.



SPECIFICATIONS

Metric							
Order No.	Range	Resolution	Accuracy*	Repeatability	Max. response speed	Height	Mass
192-663-10	0 - 300 mm	0.01 mm (0.005 mm)	±0.02 mm	0.01 mm	500 mm/s	510 mm	5.7 kg
192-664-10	0 - 600 mm		±0.04 mm			802 mm	8.3 kg
192-665-10	0 - 1000 mm		±0.06 mm			1228 mm	15.7 kg
192-613-10	0 - 300 mm		±0.02 mm			475 mm	4.7 kg
192-614-10	0 - 600 mm		±0.05 mm			802 mm	8.3 kg
192-615-10	0 - 1000 mm		±0.07 mm			1228 mm	15.7 kg

* Excluding quantizing error of ±1 count

Inch/Metric							
Order No.	Range	Resolution	Accuracy*	Repeatability	Max. response speed	Height	Mass
192-670-10	0 - 12 in	0.0005 in / 0.01 mm (0.0002 in / 0.005 mm)	±0.001 in	0.01 mm	500 mm/s	510 mm	5.7 kg
192-671-10	0 - 18 in		±0.0015 in			649 mm	7.5 kg
192-672-10	0 - 24 in		±0.0015 in			802 mm	8.3 kg
192-673-10	0 - 40 in		±0.0025 in			1228 mm	15.7 kg
192-630-10	0 - 12 in		±0.001 in			475 mm	4.7 kg
192-631-10	0 - 18 in		±0.002 in			649 mm	7.5 kg
192-632-10	0 - 24 in		±0.002 in			802 mm	8.3 kg
192-633-10	0 - 40 in		±0.003 in			1228 mm	15.7 kg

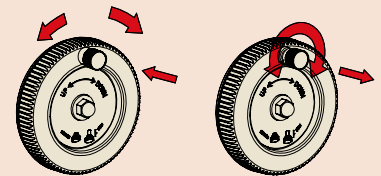
* Excluding quantizing error of ±1 count

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Products equipped with the measurement data output function can be connected to the measurement data network system MeasurLink (refer to page A-5 for details).

Functions

- Origin-setting (ABS measurement mode):** Any arbitrary value can be stored as the origin point.
- Zero-setting (INC measurement mode):** Displayed value can be set to zero at any arbitrary position of the slider.
- Origin restoration:** Previously set origin is restored when switching back to ABS mode.
- Presetting (ABS INC measurement mode):** Displayed value can be set to any arbitrary value, including negative values.
- Measuring direction:** Measuring direction can be switched at the press of a button.
- Data hold:** Display value can be held. Reverts to ABS or INC mode when cancelled.
- Alarm:** Error message is displayed when overflow or overspeed of displayed value arises and measurement is stopped.
- Data output:** Allows integration into statistical process control and measurement systems. (Refer to page A-3.)
- Fine and coarse height adjustment through knob and wheel combination:** Slider height adjustment wheel allows fine and coarse height adjustment.



Coarse adjustment

Fine adjustment

Push the small fine-adjustment knob in to disengage gearing and then turn the large wheel.

Pull the fine-adjustment knob out to engage gearing and then turn this knob, which then slowly turns the wheel.

Low-voltage alert:

When battery voltage becomes low, a warning appears in the display.

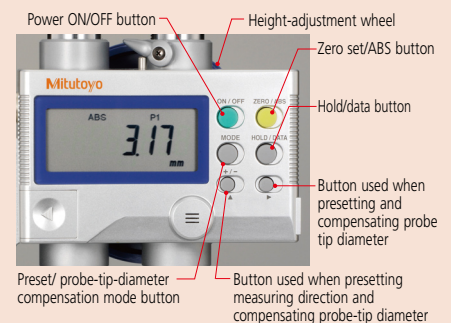
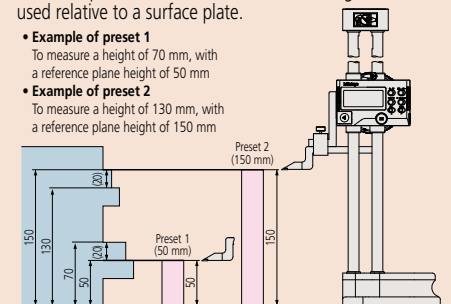
Probe-tip diameter compensation:

An adjustment is applied to the raw measurement data to compensate for the effect of the size of the spherical contact point used by the bidirectional touch-trigger probe.

Presetting (2 positions)

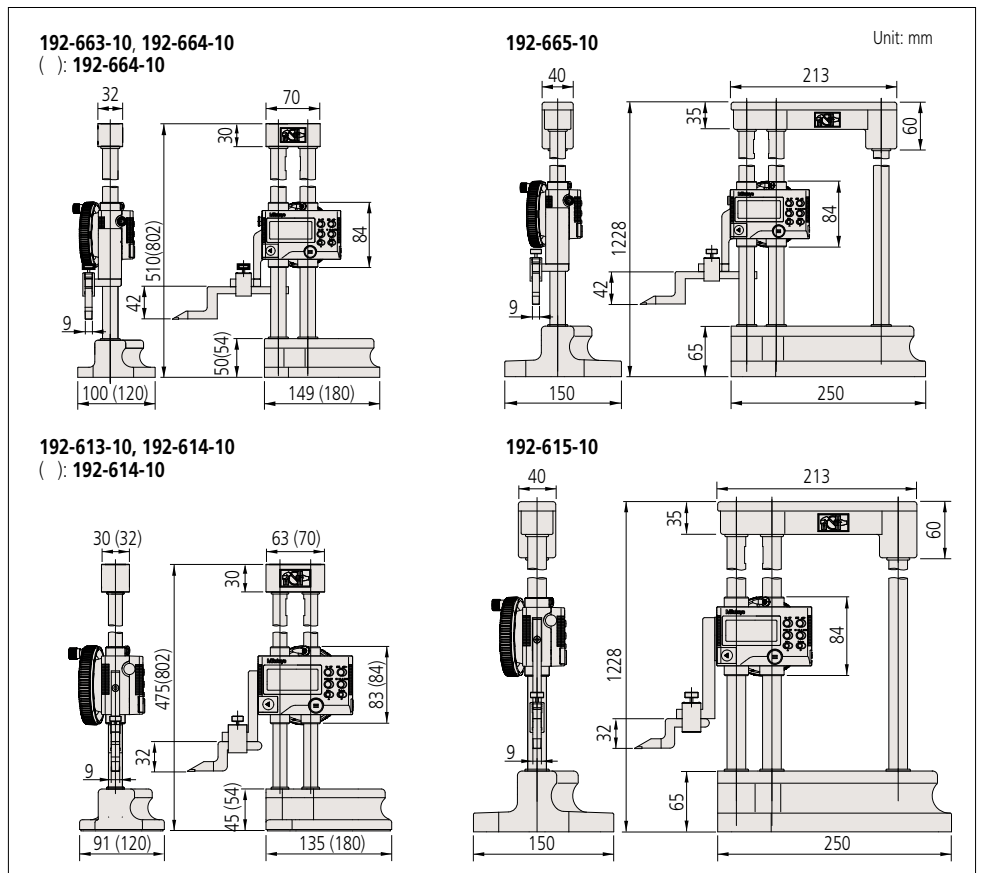
With two preset functions, two reference heights can be used relative to a surface plate.

- **Example of preset 1**
To measure a height of 70 mm, with a reference plane height of 50 mm
- **Example of preset 2**
To measure a height of 130 mm, with a reference plane height of 150 mm



* Probe-tip-diameter compensation mode is a function provided for **192-663-10/192-664-10/192-665-10/192-670-10/192-671-10/192-672-10/192-673-10**.

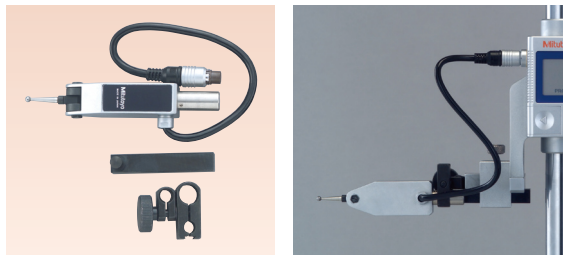
DIMENSIONS



Optional Accessory

Bidirectional touch-trigger probe

Improves accuracy in step, internal thickness, and outside width measurement by minimizing reproducibility error. A bidirectional touch-trigger probe is available as an optional accessory for **192-663-10, 192-664-10, 192-665-10, 192-670-10, 192-671-10, 192-672-10** and **192-673-10**.



SPECIFICATIONS

Metric							
Order No.	Measuring direction	Relay contact type	Probe overtravel	Probe size	Repeatability	Measuring force	Standard accessories
192-007	Bidirectional	Normally Open	1.5 mm	ø3 mm	σ : 2 μ m	0.4 N	Holder arm, Clamp
Inch							
Order No.	Measuring direction	Relay contact type	Probe overtravel	Probe size	Repeatability	Measuring force	Standard accessories
192-008	Bidirectional	Normally Open	1.5 mm	ø3 mm	σ : 2 μ m	0.4 N	Holder arm, Clamp

For details of the connecting cable, refer to page A-25, and for the holder arm and clamp, refer to page F-69.

Connecting cables for IT/DP/MUX

905338: SPC cable (1 m)
905409: SPC cable (2 m)



USB Input Tool Direct

06AFM380F: SPC cable for USB-ITN-F (2 m)

Connecting cables for U-WAVE-T

02AZD790F: SPC cable for U-WAVE (160 mm)

02AZE140F: SPC cable for footswitch

953638: Holding bar*

902053: Swivel clamp*

*A test indicator can be mounted on a height gage using a holding bar and clamp.