

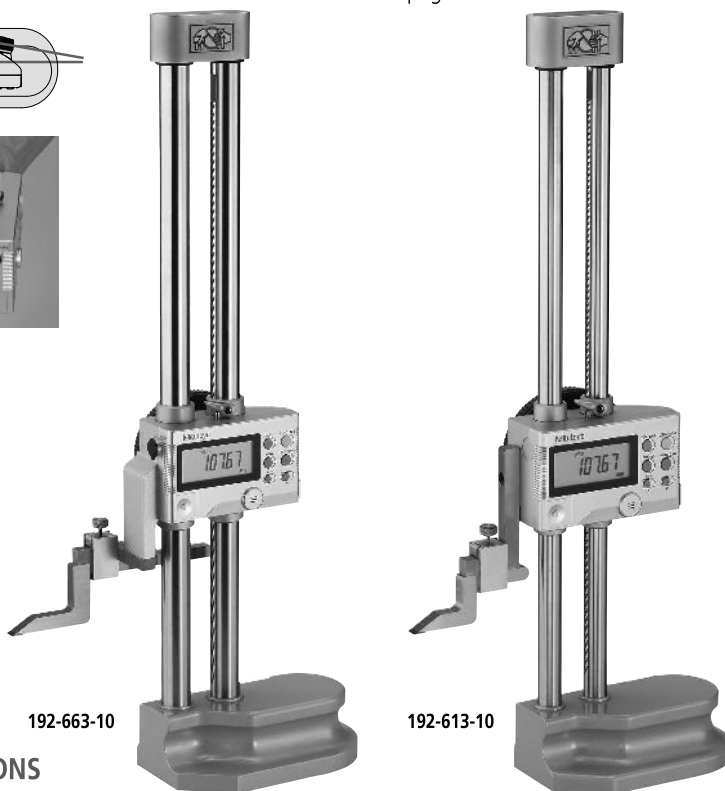
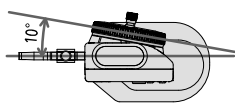
Height Gage

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.
- The drive handle is inclined to improve slider operability.
- Allows integration into statistical process control and measurement systems for models with measurement data output connector. (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.
- **192-663-10, 192-664-10** and **192-665-10** are provided with a long scribe (overall length of 150 mm).
- For precision Black Granite Surface Plates, refer to page E-49.



192-663-10

192-613-10

SPECIFICATIONS

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

* Maximum permissible error, E_{MPE} is the term (notation) used in JIS B 7517: 2018, revised based on ISO/TR 14253-6: 2012.

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

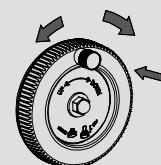
* Maximum permissible error, E_{MPE} is the term (notation) used in JIS B 7517: 2018, revised based on ISO/TR 14253-6: 2012.

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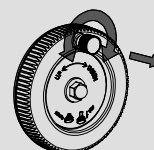
Products equipped with the measurement data output function can be connected to the measurement data network system, MeasurLink[®] (refer to page A-25 for details).

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.

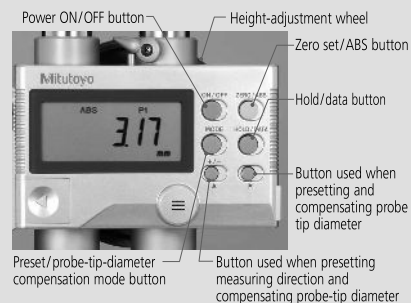
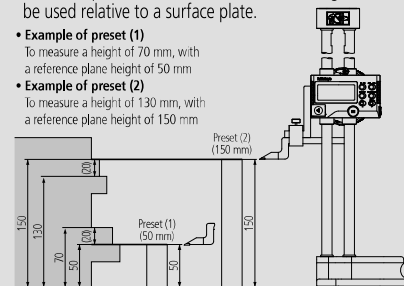
Pull the fine-adjustment knob out to engage gearing and then turn this knob, which then slowly turns the wheel.

- 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

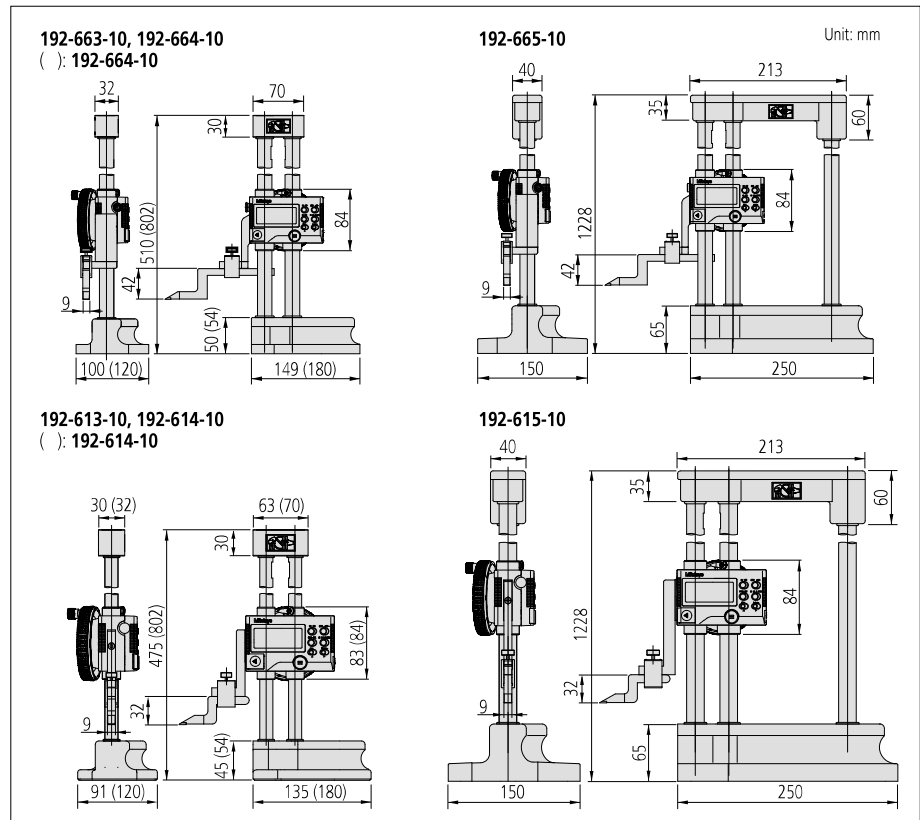


Note: Probe-tip-diameter compensation mode is a function provided for **192-663-10/192-664-10/192-665-10/192-670-10/192-671-10/192-672-10/192-673-10**.

Standard Accessories

- Scriber
192-663-10, 192-664-10,
192-665-10: 905200
192-613-10, 192-614-10,
192-615-10: 07GZA000
- Scriber clamp
05GZA033

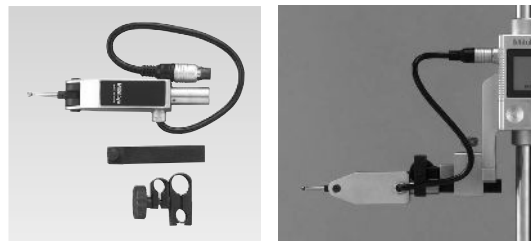
DIMENSIONS



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 (mm)	Probe size (mm)	Repeatability (μm)	Measuring force (N)	Standard accessories
192-007	Bidirectional	Normally Open	1.5	ø3	σ: 2	0.4	Holder arm, Clamp

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

For details of the connecting cable, refer to page A-21, and for the holder arm and clamp, refer to page F-75.

• 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 (160 mm)
- 02AZE140F:** SPC cable for foot switch

- **953638:** Holding bar*
- **902053:** Swivel clamp*

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