

MEASURING TOOLS

HEIGHT GAGES

DIGIMATIC HEIGHT GAGES

Digimatic Height Gage (Multi-function Type with SPC Data Output)	E-002-003
ABSOLUTE Digimatic Height Gage with Ergonomic Base	E-004
ABSOLUTE Digimatic Height Gage Standard Model	E-005

HEIGHT GAGES

Vernier Height Gage	E-006
Dial Height Gage with Digital Counter	E-007
CERA Caliper Checker	E-008
Option Accessories for Height Gages	E-009

HIGH PRECISION HEIGHT GAGES

Linear Gage	E-010-011
QM-Height	E-012-014

GAP GAGES

Height Gauge (Level Gauge)-Manual	E-015
Height Gauge (Level Gauge)-Digital	E-015
Digital Gap Caliper (Four Points Base)	E-016
Digital Gap Caliper (Three Ball Points Base)	E-016
Digital Gap Caliper (Two Ball Points Base)	E-016
Digital Gap Caliper (Flat Base)	E-017
Digital Gap Caliper (Resin Base / Nylon Probe Type)	E-017
Digital Gap Caliper (Joint Arm Type)	E-017
Gap Caliper (Four Points Base)	E-018
Gap Caliper (Three Ball Points Base)	E-018
Gap Caliper (Two Ball Points Base)	E-018
Gap Caliper (Flat Base)	E-019
Gap Caliper (Resin Base / Nylon Probe Type)	E-019
Parts for Gap Caliper	E-020

SMALL TOOLS

เครื่องมือวัดละเอียด

Mitutoyo

ไฮเกจ

Digimatic Height Gage

SERIES 192 - Multi-function Type with SPC Data Output

MeasurLink® ENABLED
Data Management Software by Mitutoyo

HEIGHT GAGES
เกจวัดความสูง

Micrometer

ไมโครมิเตอร์

Inside

Measurement

เครื่องมือวัดภายใน

Calipers

คาร์ลิเปอร์

Height Gages

เกจวัดความสูง

Linear Height

เครื่องมือวัดความสูง

Depth Gages

เกจวัดความลึก

Gauge Blocks

เกจบล็อก

Reference Gages

เครื่องมืออ้างอิง

Indicators

อินดิเคเตอร์

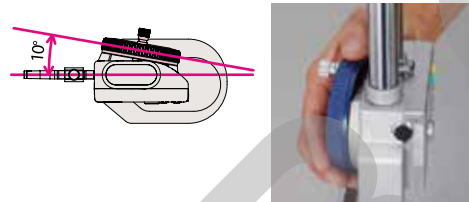
Stands

ขาตั้ง



FEATURE

- 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-002.
- 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 H-098.



Metric

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

* Excluding quantizing error of ±1 count

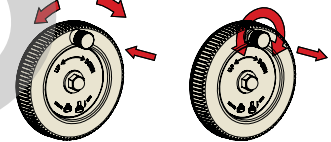
Inch / Metric

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

* Excluding quantizing error of ±1 count

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-002.)
Fine and coarse height adjustment through knob and wheel combination.
Slider height adjustment wheel allows fine and coarse height adjustment.



Coarse adjustment

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

Fine adjustment

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

Low-voltage alert:

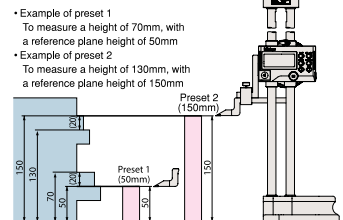
When battery voltage becomes low, a warning appears in the display.

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.



Power ON/OFF button

Height-adjustment wheel

Zero set/ABS button

Hold/data button

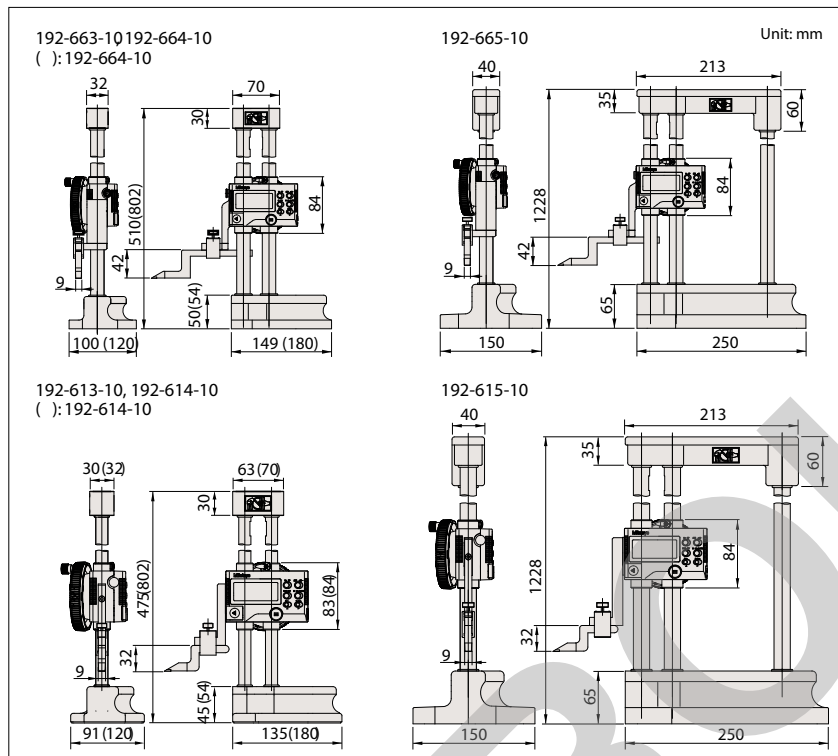
Button used when presetting and compensating probe tip diameter



Preset/probe-tip-diameter compensation mode button

* Probe-tip-diameter compensation mode is a function provided for Order No. 192-663-10/192-664-10/192-665-10/192-670-10/192-671-10/192-672-10/192-673-10.

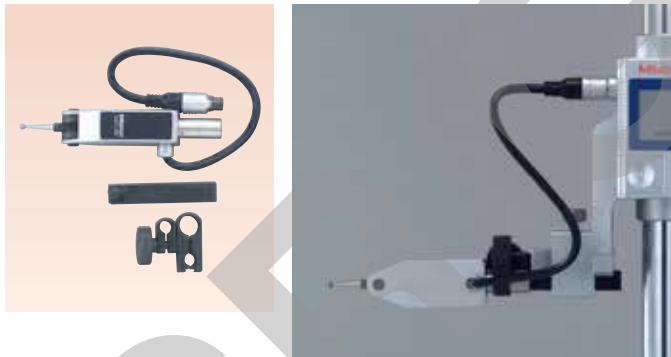
DIMENSIONS



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.



Metric

Order No.	Measuring direction	Relay contact type	Probe Overtravel	Probe size	Repeatability	Measuring force	Standard accessories
192-007	Bidirectional	Normally Open	1.5mm	Ø3mm	$\sigma : 2 \mu\text{m}$	0.4N	Holder arm, Clamp

For details of the connecting cable, refer to page A-022, and for the holder arm and clamp, refer to page I-100.

Connecting cables for IT/DP/MUX

905338: SPC cable (1m)

905409: SPC cable (2m)



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.

SMALL TOOLS

เครื่องมือวัดละเอียด

Mitutoyo

ไฮเกจ

ABSOLUTE Digimatic Height Gage SERIES 570 - with Ergonomic Base

MeasurLink® ENABLED
Data Management Software by Mitutoyo

ABSOLUTE™

Functions

Origin-setting:

Any convenient reference surface, such as a surface plate, etc., can be stored as the absolute origin point.

Absolute measurement:

After power is turned ON, measurement can be started without zero-setting if origin-setting was previously performed. Absolute origin position can be changed by ORIGIN button.

Incremental measurement: Allows origin setting at any arbitrary position. In this case, the origin point is not stored after turning off the power.

Data hold

Display value can be held.

Data output:

Allows integration into statistical process control and measurement systems. (Refer to page A-002.)

Low-voltage alert:

Low-voltage alert: If the battery voltage becomes low, a "B" appears in the display to alert the user before measurement is no longer possible so that the battery can be changed in good time.

Standard accessories

For **570-322, 324**

07GZA000 Scriber

05GZA033 Scriber clamp

For **570-312** and **570-313, 570-314**

900258 Scriber

901385 Scriber clamp



Optional accessories

Connecting cables for IT/DP/MUX

905338: SPC cable with data button (1 m)

905409: SPC cable with data button (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 with data button (160 mm)

02AZE140F: SPC cable for footswitch



Slider height adjustment wheel



Large clamp lever



Base that fits the hand comfortably

FEATURE

- Allows smooth elevation by the slider adjustment wheel, which is the same as the well-established double-column structure height gage.
- Large slider-clamp lever ensures positive and accurate clamping action.
- High durability and high accuracy are ensured by an improved column design (35x15mm).

Dimensions of column cross section

570-322 570-324

35/1.38" 15/0.59"

35/1.38" 12/0.47"

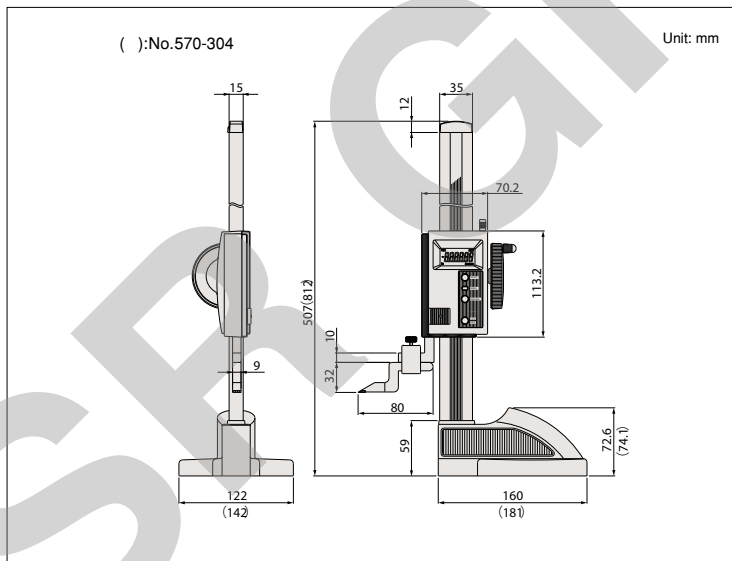
Conventional model (measuring range: 600mm)

28/1.10" 9/0.35"

Conventional model (measuring range: 300mm)

- Character height of the LCD display is 10mm.
- Ergonomic and stylish base fits comfortably in the hand.
- Due to the built-in ABSOLUTE scale function, origin setting is not required each time power is turned ON.
- Allows integration into statistical process control and measurement systems. Refer to page A-002.
- Battery: **SR44** (1 pc), **938882**. For initial operational checks (standard accessory)
- Battery life is 20,000 hours under normal use.
- For precision Black Granite Surface Plates, refer to page H-098.

DIMENSIONS



Metric

Order No.	Range	Resolution	Accuracy*	Repeatability	Max.response speed	Mass
570-322	0 - 300mm	0.01mm	±0.03mm	0.01mm	Unlimited	4.6kg
570-324	0 - 600mm	0.01mm	±0.05mm	0.01mm	Unlimited	6.4kg

* Excluding quantizing error of ±1 count

Inch / Metric

Order No.	Range	Resolution	Accuracy*	Repeatability	Max.response speed	Mass
570-312	0 - 12"	.0005" /	±.0015"	0.01mm	Unlimited	4.6kg
570-313	0 - 18"	0.01mm	±.002"	0.01mm	Unlimited	5.9kg
570-314	0 - 24"	0.01mm	±.002"	0.01mm	Unlimited	6.4kg

* Excluding quantizing error of ±1 count

Micrometer

ไมโครมิเตอร์

Inside

Measurement

เครื่องมือวัดภายใน

Calipers

คาร์ลิสเปอร์

Height Gages

เกจวัดความสูง

Linear Height

เครื่องมือวัดความสูง

Depth Gages

เกจวัดความลึก

Gauge Blocks

เกจบล็อก

Reference Gages

เครื่องมืออ้างอิง

Indicators

อินดิเคเตอร์

Stands

ขาตั้ง

ไฮเกจ

ABSOLUTE Digimatic Height Gage
SERIES 570 - Standard model

ABSOLUTE™

Functions

Zero-setting
+/- directional measurement
Data hold
Data output
Presetting
inch/mm reading (inch/mm models)
Preset value memory
Origin restoration
Low battery voltage alert
Counting value composition error alert

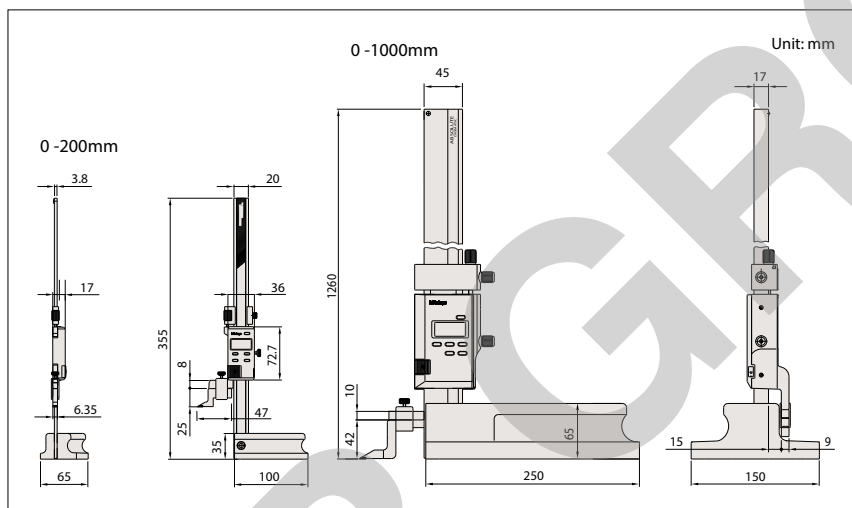
Optional accessories

Connecting cables for IT/DP/MUX
905338: SPC cable with data button (1 m)
905409: SPC cable with data button (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 with data button (160 mm)
02AZE140F: SPC cable for footswitch

FEATURE

- ABS and INC measurement modes allow efficient operation.
- Rigid structure makes instrument suitable for use in severe work environments.
- The +/- measurement function widens the application range.
- Allows integration into statistical process control and measurement systems. Refer to page A-002.
- Battery: **SR44** (1 pc), **938882**. For initial operational checks (standard accessory)
- Battery life is 5,000 hours under normal use.
- Carbide-tipped scriber (No. **900173** for Nos. **570-227** and **244**, and No. **905200** for Nos. **570-230** and **248**) is provided as a standard accessory. (Standard accessory: scriber clamp No. **901338** for No. **570-227** and **244**, and No. **05GZA033** for Nos. **570-230** and **248**)
- When a dial indicator or test indicator is used with **570-227**, the dedicated holding bar (**953639**, overall length 50mm) is recommended for use. However, instrumental error may be larger because the measurement point is further from the beam.
- For precision Black Granite Surface Plates, refer to page H-098.

DIMENSIONS



Metric

Order No.	Range	Resolution	Fine feed	Accuracy*	Repeatability	Height	Mass
570-227	0 - 200mm	0.01mm	4mm	±0.03mm	0.01mm	355mm	1.4kg
570-230	0 - 1000mm	0.01mm	6mm	±0.07mm	0.01mm	1260mm	16.8kg

* Excluding quantizing error of ±1 count

Inch/Metric

Order No.	Range	Resolution	Fine feed	Accuracy*	Repeatability	Height	Mass
570-244	0 - 8"	.0005"/	.16"	±.002"	0.01mm	355mm	1.4kg
570-248	0 - 40"	0.01mm	.24"	±.003"	0.01mm	1260mm	16.8kg

* Excluding quantizing error of ±1 count

SMALL TOOLS

เครื่องมือวัดละเอียด

Mitutoyo

ไฮเกจ

Vernier Height Gauge

SERIES 514, 506 - Standard Height Gauge with Adjustable Main Scale

HEIGHT GAGES

เกจวัดความสูง

Micrometer

ไมโครมิเตอร์

Inside

Measurement

เครื่องมือวัดภายใน

Calipers

คาร์ลิเปอร์

Height Gages

เกจวัดความสูง

Linear Height

เครื่องมือวัดความสูง

Depth Gages

เกจวัดความลึก

Gauge Blocks

เกจบล็อก

Reference Gages

เครื่องมืออ้างอิง

Indicators

อินดิเคเตอร์

Stands

ขาตั้ง



FEATURE

- Fits comfortably in the hand and moves easily on the surface plate.
- The main scale slides and clamps within the column for quick and convenient zero-setting.
- Large locking knobs are used both for the slider and fine adjustment clamps to make clamping easy and secure.
- Operability of slider has been improved.
- Large mainscale engraving for fatigue-free working.

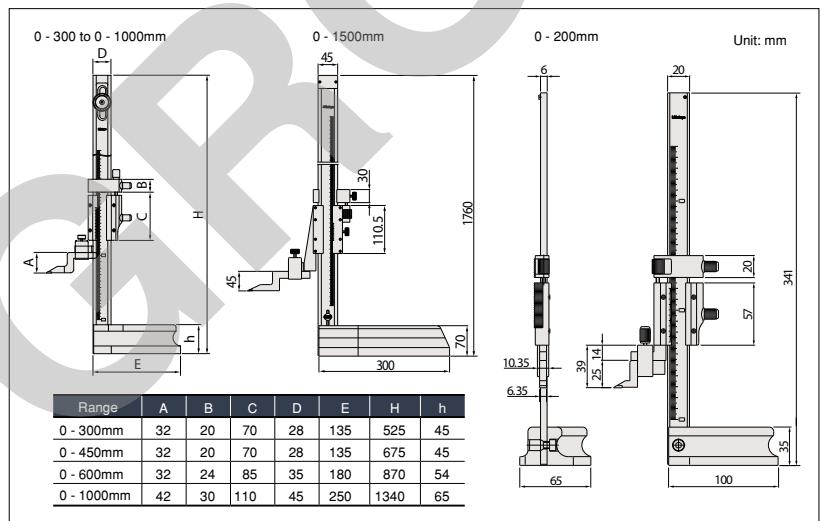


- Carbide-tipped scriber (No. **07GZA000** for **514-102/104/106/103/105/107**, No. **905200** for **514-108** and **109**, and No. **900390**



- for **514-170**) is provided as a standard accessory. (Scriber clamp No. **05GZA033** for **514-102/104/106/108/103/105/107/109**, and **905008** for **514-170**)
- For precision Black Granite Surface Plates, refer to page H-098.

DIMENSIONS



Metric

Order No.	Range	Graduation	Accuracy	Scale adjustment	Fine feed	Height	Mass	Remarks
506-207	0 - 200mm		±0.03mm	-		341mm	1.4kg	-
514-102	0 - 300mm		±0.04mm		4mm	525mm	3.1kg	-
514-104	0 - 450mm	0.02mm		15mm		675mm	3.4kg	-
514-106	0 - 600mm		±0.05mm		7mm	870mm	7.4kg	-
514-108	0 - 1000mm		±0.07mm		6mm	1340mm	20kg	-
514-170	0 - 1500mm	0.05mm	±0.18mm	25mm	20mm	1760mm	26kg	with magnifier

Inch / Metric

Order No.	Range	Graduation	Accuracy	Scale adjustment	Fine feed	Height	Mass	Remarks
506-208	0 - 8"		±.001"	-		341mm	1.4kg	-
514-103	0 - 12"				.16"	525mm	3.1kg	-
514-105	0 - 18"	.001" / 0.02mm	±.002"	.6"		675mm	3.4kg	-
514-107	0 - 24"				.27"	870mm	7.4kg	-
514-109	0 - 40"		±.003"	1"	.24"	1340mm	20.0kg	-

ไฮเกจ

**Dial Height Gage
SERIES 192 - With digital counter****Optional accessories****07GZA000:** Scriber**953638:** Holding bar for test indicator (length: 50mm)**900209:** Holding bar for test indicator (length: 100mm)**953639:** Holding bar for test indicator (length: 2")**900306:** Holding bar for test indicator (length: 4")**900321:** Swivel clamp used with holding bar (metric)**900322:** Swivel clamp used with holding bar (inch)**902053:** Clamp (with dovetail groove, $\phi 6$ and $\phi 8$ holes)

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

FEATURE

- Easy and error-free reading with both up and down digital counters as well as a dial.



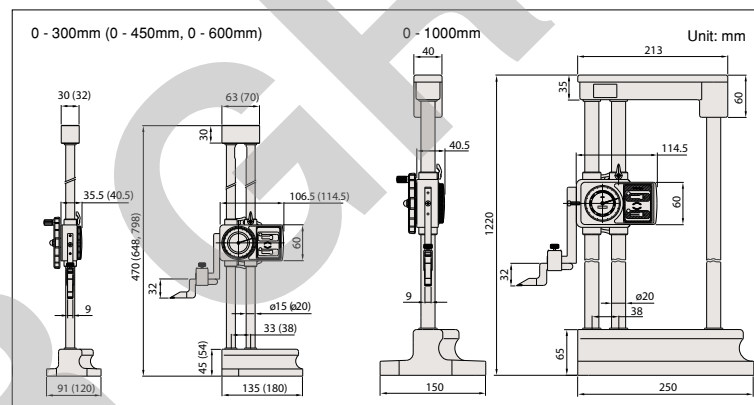
- Can be zero-set at any arbitrary position.
- Provided with a large adjustment wheel for easy height adjustment.
- Clamp can be operated easily and securely.



- Fits comfortably in the hand and moves easily on the surface plate.



- Carbide tipped scriber (No. 07GZA000) is attached as standard. (Standard accessory: Scriber clamp No. 05GZA033)
- For precision Black Granite Surface Plates, refer to page H-098.

**192-130****DIMENSIONS****Metric**

Order No.	Range	Accuracy	Graduation	Height	Mass
192-130	0 - 300mm	±0.03mm	0.01mm	470mm	4.2kg
192-131	0 - 450mm	±0.05mm		648mm	9.2kg
192-132	0 - 600mm			798mm	9.8kg
192-133	0 - 1000mm			±0.07mm	1220mm

Micrometer

ไมโครมิเตอร์

Inside

Measurement

เครื่องมือวัดภายใน

Calipers

คาร์ลิเปอร์

Height Gages

เกจวัดความสูง

Linear Height

เครื่องมือวัดความสูง

Depth Gages

เกจวัดความลึก

Gauge Blocks

เกจบล็อก

Reference Gages

เครื่องมืออ้างอิง

Indicators

อินดิเคเตอร์

Stands

ขาตั้ง

SMALL TOOLS

เครื่องมือวัดละเอียด

Mitutoyo

เครื่องมือตรวจสอบ

CERA Caliper Checker SERIES 515



515-555



Micrometer

ไมโครมิเตอร์

Inside

Measurement

เครื่องมือวัดภายใน

Calipers

คาร์ลิเปอร์

Height Gages

เกจวัดความสูง

Linear Height

เครื่องมือวัดความสูง

Depth Gages

เกจวัดความลึก

Gauge Blocks

เกจบล็อก

Reference Gages

เครื่องมืออ้างอิง

Indicators

อินดิเคเตอร์

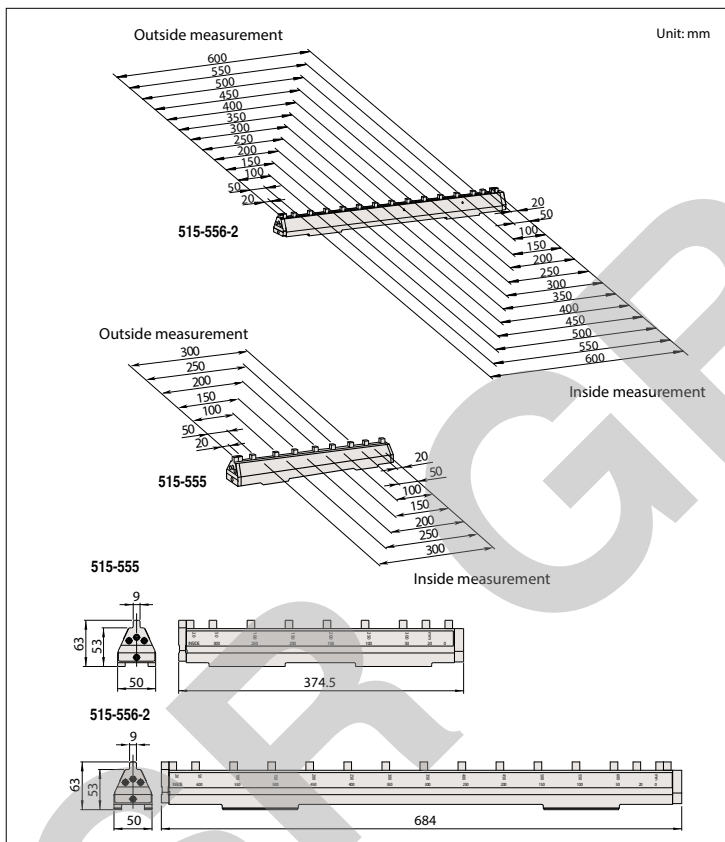
Stands

ขาตั้ง

FEATURE

- Enables efficient setting and inspection of calipers and height gages.

DIMENSIONS



Applications



Checking accuracy of caliper (outside measurement)



Checking accuracy of caliper (inside measurement)



Checking accuracy of height gage

Optional accessories

- 602162:** Wooden case for 300 mm, 12 inch model
- 602164:** Wooden case for 600 mm model

Alternative solution using a Square Gauge Block Accessories Set

If such an accessories set is available, then an instrument equivalent to the CERA Calibration Checker may be assembled, as shown below, if additional elements are obtained (particularly plain jaws, **619072**). For details, refer to pages E-019/020. Note that such an assembly will not have the corrosion resistance of the CERA Calibration Checker and, therefore, more care will be required in use and storage.

Metric

Order No.	Range	Block pitch accuracy*		Parallelism of blocks*		Mass
		20 - 300mm	350 - 600mm	20 - 300mm	350 - 600mm	
515-555	0 - 300mm		-		-	4kg
515-556-2	0 - 600mm	± 5.0µm	± 7.0µm	2.0µm	4.0µm	8.5kg

* The block accuracy and the parallelism of blocks are based on the following:
Outside caliper and height gage: lower end reference plane
Inside caliper: inside reference plane

SMALL TOOLS

เครื่องมือวัดละเอียด

Mitutoyo

เกจวัดความสูง

Linear Height

SERIES 518 — High Performance 2D Measurement System

Micrometer

ไมโครมิเตอร์

Inside

Measurement

เครื่องมือวัดภายใน

Calipers

คาร์ลิเปอร์

Height Gages

เกจวัดความสูง

Linear Height

เครื่องมือวัดความสูง

Depth Gages

เกจวัดความลึก

Gauge Blocks

เกจบล็อก

Reference Gages

เครื่องมืออ้างอิง

Indicators

อินดิเคเตอร์

Stands

ขาตั้ง



518-351A-21

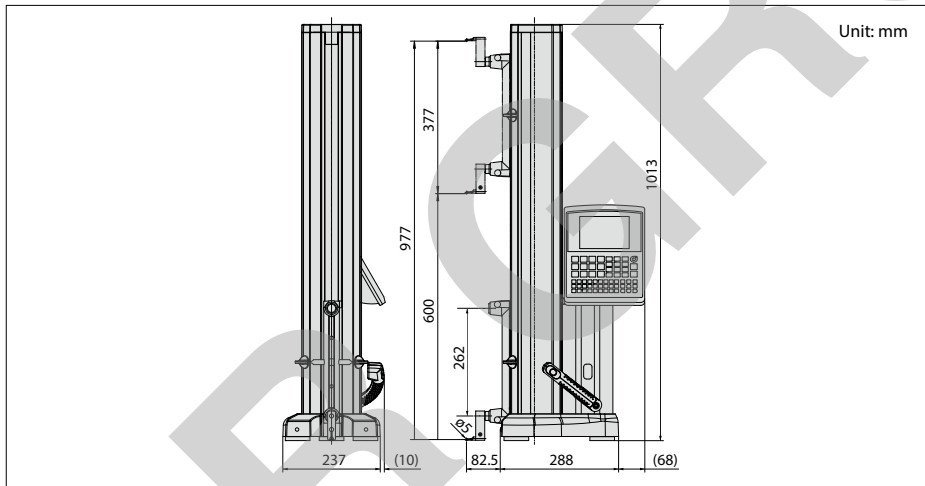
**With power grip
518-352A-21**



FEATURE

- 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 highaccuracy reflective-type linear encoder and high-accuracy guide are used.
- Measurement can be implemented by iconbased commands that also support easy onekey 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 H-098.
- Backup/Restore of data and measurement part programs can be implemented using USB storage devices (FAT16/32 format compatible).

DIMENSIONS



Inch / Metric Model without power grip

Order No.	Mass
518-351E-21	Model for the UK, English manual

Inch / Metric Model with power grip

Order No.	Mass
518-352E-21	Model for the UK, English manual



Technical Data

Measuring range:	0 - 977mm
Slider stroke:	600mm
Resolution:	0.0001 / 0.001 / 0.01 / 0.1mm or (switchable)
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 0.5 probe

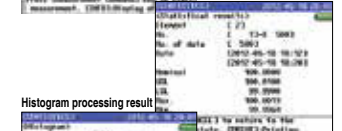
*2 Guaranteed when using the Lever Head (MLH-521) or Mu-checker (M-511)

Screenshot examples

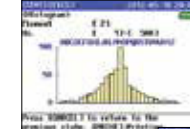
Measurement screen



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

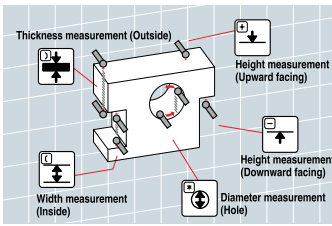
12AAF634 5-stepped probe

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

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**).

Optional accessories

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



- | | | |
|--|--|---|
| (1) 12AAC072 : Depth probe | ● 12AAF668 : ø10mm ball probe, L = 82mm (coaxial type) | ● CMM ball and disk hard probes are available |
| (2) 12AAC073 : ø20mm taper probe | ● 12AAF669 : ø10mm ball probe, L = 120mm (coaxial type) | ø2 932377A , ø3 932378A |
| (3) 12AAA792 : Dial indicator (ø8mm stem) holder | ● 12AAF670 : ø5mm disk probe | ø5 932379A , ø6 932380A |
| (4) 12AAA793 : Probe extension holder (85mm/3.3") | ● 12AAF671 : ø10mm disk probe | ø10 532328 |
| ● 12AAB136 : ø10mm cylindrical probe | (12) 957264 : ø14mm disk probe | Disc probe |
| (6) 932361 : Mu-checker lever head holder*
*Additional auxiliary weights are required (total 4 pcs). | (13) 957265 : ø20mm disk probe | ø20 532345 , ø30 930803 |
| ● 12AAF666 : ø1mm ball probe (coaxial type) | ● 12AAF672 : ø1mm ball offset probe | ● 12AAF712 : Battery pack |
| ● 12AAF667 : ø2mm ruby ball probe (coaxial type) | (14) 12AAA788 : ø4mm ball offset probe | |
| (8) 957261 : ø2mm ball probe (coaxial type) | ● ø5mm ball offset probe 05HAA394 | |
| (9) 957262 : ø3mm ball probe (coaxial type) | (15) 12AAA789 : ø6mm ball offset probe | |
| (10) 957263 : ø4mm ball probe (coaxial type) | (16) 226116 : Test indicator (ø6mm stem) adapter | |
| (11) 12AAB552 : ø10mm ball probe, L = 55mm (coaxial type) | ● Sample workpiece 12AAA879 | |
| | (17) 226117 : M2 CMM stylus adapter* ¹ | |
| | (18) 226118 : M3 CMM stylus adapter* ¹ | |

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.

Micrometer
ไมโครมิเตอร์

Inside
Measurement
เครื่องมือวัดภายใน

Calipers
คาร์ลิเปอร์

Height Gages
เกจวัดความสูง

Linear Height
เครื่องมือวัดความสูง

Depth Gages
เกจวัดความลึก

Gauge Blocks
เกจบล็อก

Reference Gages
เครื่องมืออ้างอิง

Indicators
อินดิเคเตอร์

Stands
ขาตั้ง

SMALL TOOLS

เครื่องมือวัดละเอียด

Mitutoyo

เกจวัดความสูง

QM-Height

SERIES 518 — High Precision ABSOLUTE Digital Height Gage

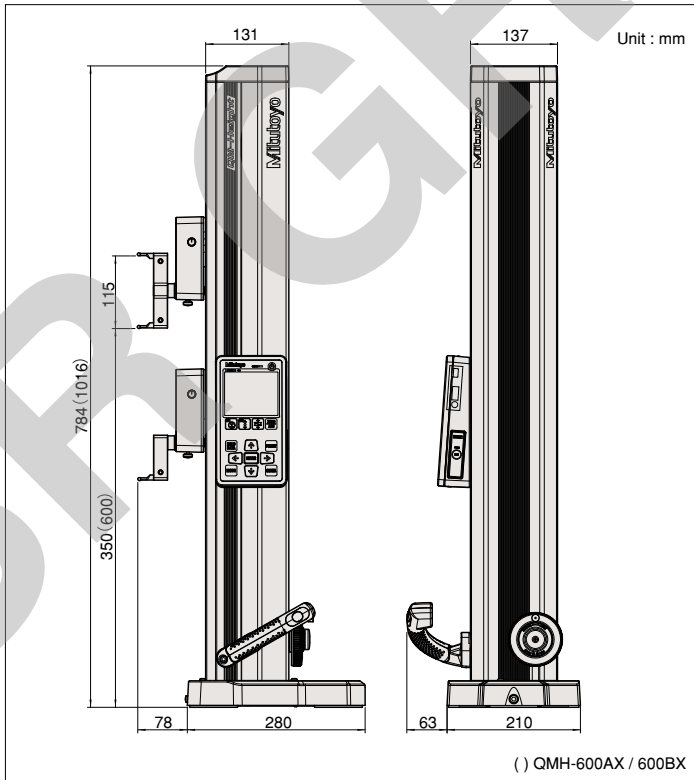
FEATURE

- Best-in-class accuracy $\pm(2.4+2.1L/600)\mu\text{m}$
- Newly developed high accuracy and high resolution ABSOLUTE linear encoder for position detection. Once origin is set, origin setting is not required each time you turn the power ON (except in the case of a large environmental temperature change).
- GO/±NG judgment is performed by setting upper and lower tolerances. If a judgment result is out of tolerance, the display backlighting changes from green to red, so tolerance judgment can be made at a glance



- Frequent-use measurement such as inside/ outside diameter and pitch calculation can be implemented by icon-based commands that also support easy one-key operation.
- Possible to measure inside/outside diameters via a unique method (detect the circle apex and process by tracing measurement*).
- * Tracing measurement stroke is approx. 1 mm upwards and downwards from the measurement start point.
- Built-in air-suspension feature mechanism using an internal pump enables smooth movement over a surface plate. However, measurement in the floating state is not available due to possibility of error occurrence. (Lower-cost version without air suspension also available.)
- With SPC and RS-232C output.
- Continuous battery life of 300 hours*5 using four alkaline batteries.
- (Also works with four NiMH AA/HR6 rechargeable batteries.)

DIMENSIONS



() QMH-600AX / 600BX

MeasurLink® ENABLED
Data Management Software by Mitutoyo

ABSOLUTE™



Standard accessories

- 05HZA148** ø5-stepped probe
- 12AAA715** Ball-diameter corrected block Auxiliary grip
- AA alkaline batteries (4 pieces)

Optional accessories

- 12AAC072** Depth probe
- 12AAA792** Dial indicator (ø8mm stem) holder
- 12AAA793** Probe extension holder (85mm/3.3")
- 12AAF667** ø2mm ruby ball probe (coaxial type)
- 957261** ø2mm ball probe (coaxial type)
- 957262** ø3mm ball probe (coaxial type)
- 957263** ø4mm ball probe (coaxial type)
- 957264** ø14mm disk probe
- 957265** ø20mm disk probe
- 12AAA788** ø4mm ball offset probe
- 12AAA789** ø6mm ball offset probe
- 226116** Test indicator (ø6mm stem) adapter
- Sample workpiece **12AAA879**
- Scriber **05HZA173**
- Digital connecting cable
- 936937** (1m)
- 965014** (2m)
- AC Adapter **06AEG180JA/D/E/K/DC**
- 05HZA143** 9x9 adapter
- (clamp 901385 is required)
- 05GZA033** Clamp (for 9x9 adapter)
- 05HZA144** 6.35x12.7 adapter
- (clamp assy. 901385 is required)
- 901385** Clamp assy. (for 6.35x12.7 adapter)
- 02AZE990** U-WAVE mounting plate

Inside diameter measurement



Height measurement



HEIGHT GAGES
เกจวัดความสูง

Micrometer

ไมโครมิเตอร์

Inside

Measurement

เครื่องมือวัดภายใน

Calipers

คาร์ลิเปอร์

Height Gages

เกจวัดความสูง

Linear Height

เครื่องมือวัดความสูง

Depth Gages

เกจวัดความลึก

Gauge Blocks

เกจบล็อก

Reference Gages

เครื่องมืออ้างอิง

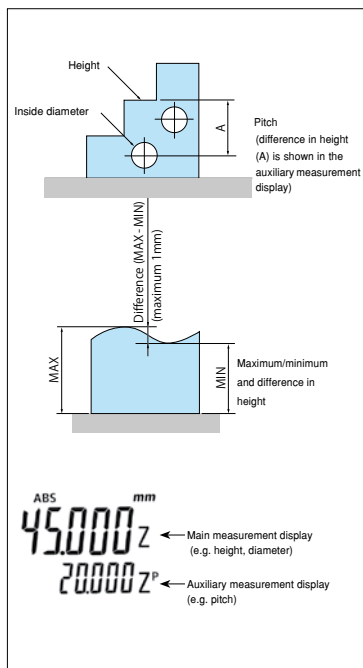
Indicators

อินดิเคเตอร์

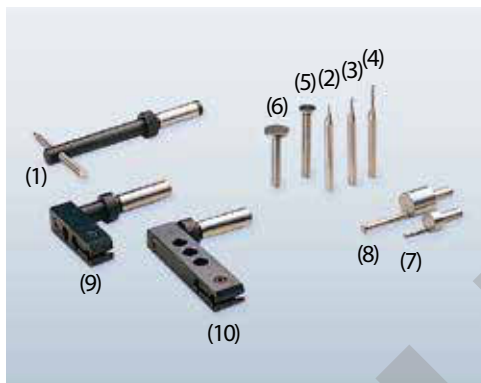
Stands

ขาตั้ง

Measurement example



Optional accessories



No.	Order No.	Detail
		Depth probe
(1)	12AAC072	Depth probe
		Interchangeable probes for ø5 stepped probe
(2)	957261	ø2 mm ball probe (coaxial type)
(3)	957262	ø3 mm ball probe (coaxial type)
(4)	957263	ø4 mm ball probe (coaxial type)
(5)	957264	ø14 mm disk probe
(6)	957265	ø20 mm disk probe
(7)	12AAA788	ø4 mm ball offset probe
(8)	12AAA789	ø6 mm ball offset probe
		Special holder and probes
(9)	12AAA792	Dial indicator (ø8 mm stem) holder
(10)	12AAA793	Probe extension holder (85 mm/3.3 in)
		AC adapter
	06AEG180JA/D/E/K/DC	
		Compact logger with data logger function
	264-505	DP-1VA LOGGER
	936937	Digimatic cable (1 m)
	965014	Digimatic cable (2 m)
	06AFZ050	USB cable (A-micro B)
		Measurement data input unit
	06AFM380D	USB Input tool direct (USB-ITN-D)
		Measurement data wireless communication system
	02AZD730G	U-WAVE-T (IP67)
	02AZD880G	U-WAVE-T (buzzer)
	02AZD790D	Connecting cable for U-WAVE-T
	02AZE140D	U-WAVE-T (for footswitch)
	02AZD810D	U-WAVE-R
	02AZE990	U-WAVE mounting plate
		Measurement Data Collection Software USB-ITPAK V2.1
		Measurement Data Network System MeasurLink
		Others
	05HZA143	9x9 adapter (clamp assy. 901385 is required)
	05GZA033	Clamp (for 9x9 adapter)
	05HZA144	6.35x12.7 adapter (clamp assy. 901385 is required)
	901385	Clamp assy. (for 6.35x12.7 adapter)
	05HZA173	Scriber*

A gauge block may be required for zero-set depending on the probe or contact point to be used.
* It is for measurement, and cannot be used for scribing.

Micrometer

ไมโครมิเตอร์

Inside

Measurement

เครื่องมือวัดภายใน

Calipers

คาร์ลิเปอร์

Height Gages

เกจวัดความสูง

Linear Height

เครื่องมือวัดความสูง

Depth Gages

เกจวัดความลึก

Gauge Blocks

เกจบล็อก

Reference Gages

เครื่องมืออ้างอิง

Indicators

อินดิเคเตอร์

Stands

ขาตั้ง

SMALL TOOLS

เครื่องมือวัดละเอียด

Mitutoyo

HEIGHT GAGES

เกจวัดความสูง

Metric

Order No. (New)		518-240	518-242	518-244	518-246
Order No. (Old)		518-230	518-232	518-234	518-236
Model		QMH-350AX	QMH-600AX	QMH-350BX	QMH-600BX
Measuring rang (stroke)		0 - 465mm (350mm)	0 - 715mm (600mm)	0 - 465mm (350mm)	0 - 715mm (600mm)
Resolution (selectable)		0.001mm / 0.005mm			
Accuracy at	Measurement**1	± (2.4+2.1L/600) μm			
20°C	Repeatability*1	2σ≤1.8μm			
Perpendicularity*2 (20°C)		7μm	12μm	7μm	12μm
Guiding method		Roller bearing			
Drive method		Manual (wheel)			
Measurement principle		Electromagnetic induction absolute encoder			
Measuring force		1.5±0.5N			
Data output ports		Digimatic / USB*3			
Air-suspension feature		Not included		Included (for positioning only)*4	
Power supply		Alkaline AA/LR6 batteries x 4 (standard accessories) / AC adapter (optional accessory) / Supports NiMH (HR6) rechargeable batteries x 4*5			
Battery life guidelines*6		Approx. 1,200 hours (continuous use) LED: Other than full-time illumination			
		Approx. 90 hours when the air-suspension feature is used			
Mass		25kg	29kg	25kg	29kg
Size (mm)		Stroke 350mm type: 280(W)x273(D)x784(H)mm Stroke 600mm type: 280(W)x273(D)x1016(H)mm			
Operating temperature range (recommended)		0 - 40°C (10 - 30°C)			
Operating temperature range		20 - 80%RH (Must be free from condensation)			
Storage temperature range		-10°C - 50°C			
Storage humidity range		5 - 90% RH (Must be free from condensation)			

Inch / Metric

Order No. (New)		518-241	518-243	-	-
Order No. (Old)		518-231	518-233	518-235	518-237
Measuring rang (stroke)		0-465mm (0 - 350mm/0-14")	0-715mm (0 - 600mm/0-24")	0-465mm (0 - 350mm/0-14")	0-715mm (0 - 600mm/0-24")
Resolution (selectable)		0.001mm/0.005mm/ .00005"/.0001"/.0002"	0.001mm/0.005mm/ .00005"/.0001"/.0002"	0.001mm/0.005mm/ .00005"/.0001"/.0002"	0.001mm/0.005mm/ .00005"/.0001"/.0002"
Accuracy at	Measurement* ¹	± (2.4+2.1L/600) μm			
20°C	Repeatability* ¹	2σ≤1.8μm			
Perpendicularity* ² (20°C)		7μm	12μm	7μm	12μm
Guiding method		Roller bearing			
Drive method		Manual (wheel)			
Measurement principle		Electromagnetic induction absolute encoder			
Measuring force		1.5±0.5N			
Data output ports		Digimatic / USB* ³			
Air-suspension feature		Not included		Included (for positioning only)* ⁴	
Power supply		Alkaline AA/LR6 batteries x 4 (standard accessories) / AC adapter (optional accessory) / Supports NiMH (HR6) rechargeable batteries x 4			
Battery life guidelines* ⁵		Approx. 1,200 hours (continuous use) LED: Other than full-time illumination			
		Approx. 90 hours when the air-suspension feature is used			
Mass		25kg	29kg	25kg	29kg
Size (mm)		Stroke 350mm type: 280(W)x273(D)x784(H)mm Stroke 600mm type: 280(W)x273(D)x1016(H)mm			
Operating temperature range (recommended)		0 - 40°C (10 - 30°C)			
Operating temperature range		20 - 80%RH (Must be free from condensation)			
Storage temperature range		-10°C - 50°C			
Storage humidity range		5 - 90% RH (Must be free from condensation)			

*1 The indication accuracy and repeatability represent the values obtained from the height measurement of a flat surface using the standard holder with ø5 ball contact point. 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 (MLH-521) and Mu-checker (M-511).

*3 Requires special communication driver and software. Consult your local Mitutoyo Sales Office for details. These can be downloaded from the Mitutoyo web site. <http://www.mitutoyo.co.jp/contact/products/usd/index.html>

*4 When using a model with the air-suspension feature, 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 Even if you use the AC adapter, you can not charge the rechargeable battery.

*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-suspension feature



เกจวัดความสูง

HEIGHT GAUGE (Level Gauge) - Manual

4 Different Bottom Bases

Flat



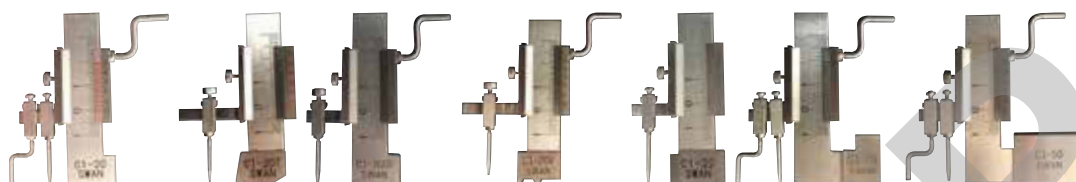
2 Ball Points



3 Ball Points



2 Flat Points



Order No.	Range	Base Structure	Graduation	Accuracy
C1-20	±10mm	Flat	0.05mm	0.05mm
C1-20T	±10mm	3 Ball Points	0.05mm	0.05mm
C1-2010	±10mm	2 Ball Points	0.05mm	0.05mm
C1-20V	±10mm	2 Flat Points	0.05mm	0.05mm
C1-22	±10mm	Flat	0.05mm	0.05mm
C1-35	±10mm	Flat	0.05mm	0.05mm
C1-50	±10mm	Flat	0.05mm	0.05mm

**ปลายสัมผัสมีขายแยกเป็นอะไหล่

Type F

Order No.	Range	Base Structure	Graduation	Accuracy
Type F	±10mm	Flat	0.05mm	0.05mm

Micrometer

ไมโครมิเตอร์

Inside

Measurement

เครื่องมือวัดภายใน

Calipers

คาร์ลิเปอร์

Height Gages

เกจวัดความสูง

Linear Height

เครื่องมือวัดความสูง

Depth Gages

เกจวัดความลึก

Gauge Blocks

เกจบล็อก

Reference Gages

เครื่องมืออ้างอิง

Indicators

อินดิเคเตอร์

Stands

ขาตั้ง

เกจวัดความสูง

HEIGHT GAUGE (Level Gauge) - Digital

4 Different Bottom Bases

Flat



2 Ball Points



3 Ball Points



2 Flat Points



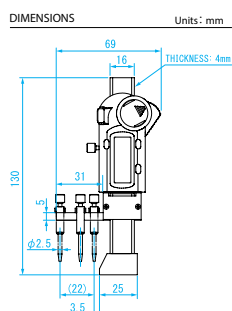
Order No.	Range	Base Structure	Graduation	Accuracy
C1-20D	±10mm	Flat	0.01mm	0.02mm
C1-20TD	±10mm	3 Ball Points	0.01mm	0.02mm
C1-2010D	±10mm	2 Ball Points	0.01mm	0.02mm
C1-20VD	±10mm	2 Flat Points	0.01mm	0.02mm
C1-35D	±10mm	Flat	0.01mm	0.02mm
C1-50D	±10mm	Flat	0.01mm	0.02mm

เกจวัดความสูง

DIGITAL GAP CALIPER (FLAT BASE)

Stable measurement by flat base.

Bluetooth BOX (separately sold) can be attached.

**USE**

- Step depth measurement

MATERIAL

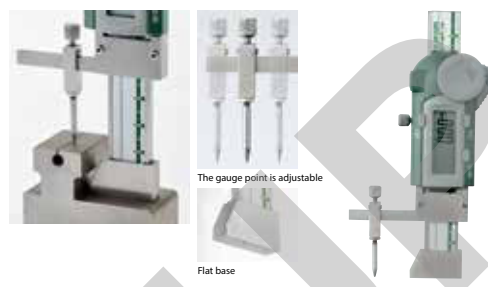
- Stainless steel

FEATURES

- Bluetooth BOX (separately sold) can be attached. Measured value can be transmitted to PC wireless.
- Display hold function
- Auto power off function (after approx. 20 min.)

POWER

- One CR2032 (lithium) battery included for testing



※ Quantization Error (± 1 digit) not included

Order No.	Model No.	Measuring Range (mm)	Resolution (mm)	Accuracy * (mm)	Probe Operation Range (mm)	Base Shape	Probe	Arm	Weight
GDG-F-S1	152303	-13~+16	0.01	± 0.03	22	Flat	Stainless steel Tip SR0.5mm	Straight	150g

Micrometer

ไมโครมิเตอร์

Inside

Measurement

เครื่องมือวัดภายใน

Calipers

คาร์ลิลเปอร์

Height Gages

เกจวัดความสูง

Linear Height

เครื่องมือวัดความสูง

Depth Gages

เกจวัดความลึก

Gauge Blocks

เกจบล็อก

Reference Gages

เครื่องมืออ้างอิง

Indicators

อินดิเคเตอร์

Stands

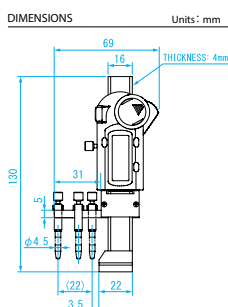
ขาตั้ง

เกจวัดความสูง

DIGITAL GAP CALIPER (RESIN BASE / NYLON PROBE TYPE)

Suitable for sensitive object by resin base and nylon probe.

Bluetooth BOX (separately sold) can be attached.

**USE**

- Step depth measurement

MATERIAL

- Main Body: Stainless steel

- Base: Resin

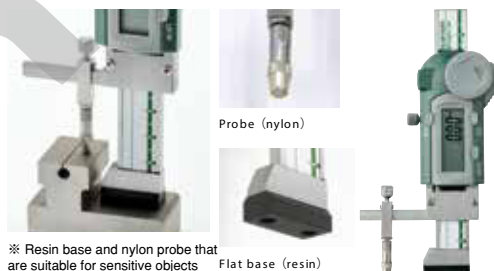
- Tip of probe: Nylon

FEATURES

- Suitable for measuring sensitive object by resin base and nylon probe
- Bluetooth BOX (separately sold) can be attached. Measured value can be transmitted to PC wireless.
- Display hold function
- Auto power off function (after approx. 20 min.)

POWER

- One CR2032 (lithium) battery included for testing



※ Resin base and nylon probe that are suitable for sensitive objects

Flat base (resin)

※ Quantization Error (± 1 digit) not included

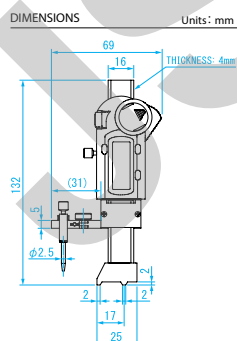
Order No.	Model No.	Measuring Range (mm)	Resolution (mm)	Accuracy * (mm)	Probe Operation Range (mm)	Base Shape	Probe	Arm	Weight
GDG-P-S2	152304	-13~+16	0.01	± 0.03	22	Flat (resin)	Nylon Tip 1/8 inch ball	Straight	145g

เกจวัดความสูง

DIGITAL GAP CALIPER (JOINT ARM TYPE)

Sets probe at aimed point freely by joint arm.

Bluetooth BOX (separately sold) can be attached.

**USE**

- Step depth measurement

MATERIAL

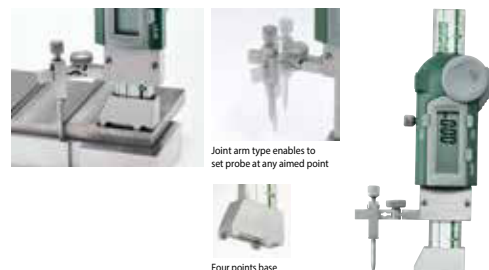
- Stainless steel

FEATURES

- Joint arm type enables to move the position of probe in wide area
- Bluetooth BOX (separately sold) can be attached. Measured value can be transmitted to PC wireless.
- Bottom base in cavity structure
- Display hold function
- Auto power off function (after approx. 20 min.)

POWER

- One CR2032 (lithium) battery included for testing



Four points base

※ Quantization Error (± 1 digit) not included

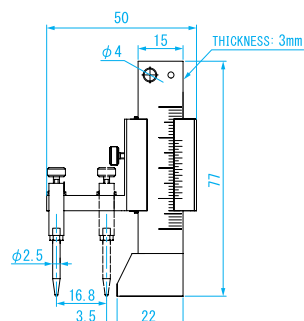
Order No.	Model No.	Measuring Range (mm)	Resolution (mm)	Accuracy * (mm)	Probe Operation Range (mm)	Base Shape	Probe	Arm	Weight
GDG-4F-J1	152305	-13~+16	0.01	± 0.03	22	Four point (flat)	Stainless steel Tip SR0.5mm	Joint	150g

เกจวัดความสูง

GAP CALIPER (FLAT BASE)

Stable measurement by flat base

DIMENSIONS Units: mm

**USE**

- Step depth measurement

MATERIAL

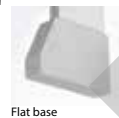
- Stainless steel

FEATURES

- Ball chain attached



The gauge point is adjustable



Flat base

**Micrometer**

ไมโครมิเตอร์

Inside**Measurement**

เครื่องมือวัดภายใน

Calipers

คาร์ลิสเปอร์

Height Gages

เกจวัดความสูง

Linear Height

เครื่องมือวัดความสูง

Depth Gages

เกจวัดความลึก

Gauge Blocks

เกจบล็อก

Reference Gages

เครื่องมืออ้างอิง

Indicators

อินดิเคเตอร์

Stands

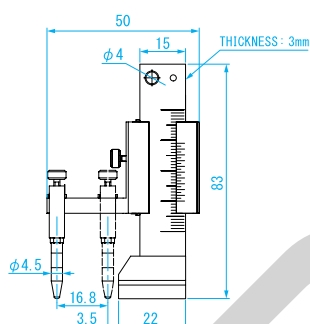
ขาตั้ง

เกจวัดความสูง

GAP CALIPER (RESIN BASE / NYLON PROBE TYPE)

Suitable for measuring sensitive object by resin base and nylon probe

DIMENSIONS Units: mm

**USE**

- Step depth measurement

MATERIAL

- Body: Stainless steel

FEATURES

- Suitable for measuring sensitive object by resin base and nylon probe
- Ball chain attached



※ Resin base and nylon probe that are suitable for sensitive objects



Probe (nylon)



Flat Base (resin)



Order No.	Model No.	Measuring Range (mm)	Resolution (mm)	Accuracy (mm)	Probe Operation Range (mm)	Base Shape	Probe	Arm	Weight
GVG-P-S2	152334	± 10mm	0.05	± 0.05	16.8	Flat (resin)	Nylon Tip 1/8 inch ball	Straight	70g

SMALL TOOLS

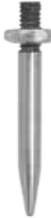
เครื่องมือวัดละเอียด



อุปกรณ์เสริมเกจวัดความสูง

PARTS FOR GAP CALIPER

■ Applicable products table

Parts Applicable product			Order No.	GP-1	GVP-1H	GDP-1H	GG-12-8
			Products	PROBE FOR GAP CALIPER	PROBE HOLDER FOR GAP CALIPER	PROBE HOLDER FOR DIGITAL GAP CALIPER	GRIP FOR GAP CALIPER
			Model No.	152335	152336	152337	152338
							
Order No.	Products	Model No.	Page referred				
GDG-4F-S1	DIGITAL GAP CALIPER	152301	E-010	○	—	○	—
GDG-3R-S1	DIGITAL GAP CALIPER	152302	E-011	○	—	○	—
GDG-2R-S1	DIGITAL GAP CALIPER	152306	E-012	○	—	○	—
GDG-F-S1	DIGITAL GAP CALIPER	152303	E-013	○	—	○	—
GDG-P-S2	DIGITAL GAP CALIPER	152304	E-014	○※1	—	○	—
GDG-4F-J1	DIGITAL GAP CALIPER	152305	E-015	○	—	○	—
GVG-4F-S1-G	GAP CALIPER	152331	E-010	○	○	—	○
GVG-3R-S1	GAP CALIPER	152332	E-011	○	○	—	○
GVG-2R-S1	GAP CALIPER	152339	E-012	○	○	—	○
GVG-F-S1	GAP CALIPER	152333	E-013	○	○	—	○
GVG-P-S2	GAP CALIPER	152334	E-014	○※1	○	—	○

※ 1: GP-1 is also attachable to GDG-P-S2 and GVG-P-S2 though nylon probe



เกจวัดความสูง

STEP GAUGES

INSPECTION SHEET INCLUDED

Measurement of Step Value for Any Shape

Analog Type

Min Scale : 0.05mm

Instrument Error : $\pm 0.05\text{mm}$

Material : Stainless Steel

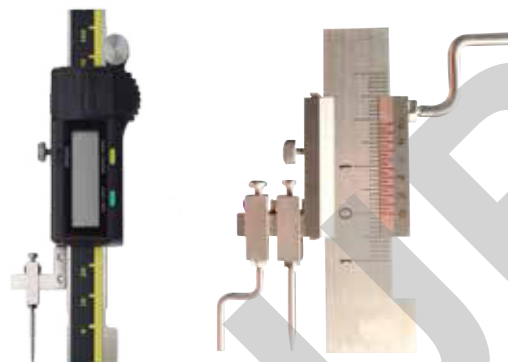
Digital Type (Mitutoyo CD-10AX)

Min Scale : 0.01mm

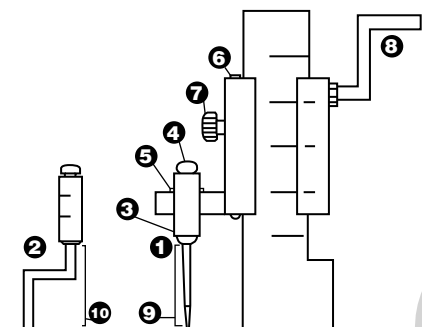
Instrument Error : $\pm 0.01\text{mm}$

Material : Stainless Steel

Battery : SR44



Parts Drawing



1 Contact Point-Straight

a.) STG-2 / STG-2G / STG-3 / STG-5 / STG-F

b.) STG-2B / STG-8B / STG-8BT / STG-10B

2 Contact Point-Crank

STG-2 / STG-3 / STG-5

3 Holder

For All Models

4 Screw For Holder

a.) STG-2 / STG-3 / STG-5

b.) STG-2G / STG-2B / STG-8B / STG-8BT / STG-10B / STG-F

5 Flat Spring-Small

For All models

6 Flat Spring-Big

For All models

7 Screw For Vernier

For All models

8 Handle

For All models

9 Pin - Straight

a.) STG-2 / STG-3 / STG-2G / STG-5 / STG-F

b.) STG-2B / STG-8B / STG-8BT / STG-10B

10 Pin Crank

STG-2 / STG-3 / STG-5

Micrometer

ไมโครมิเตอร์

Inside

Measurement

เครื่องมือวัดภายใน

Calipers

คาร์ลิลเปอร์

Height Gages

เกจวัดความสูง

Linear Height

เครื่องมือวัดความสูง

Depth Gages

เกจวัดความลึก

Gauge Blocks

เกจบล็อก

Reference Gages

เครื่องมืออ้างอิง

Indicators

อินดิเคเตอร์

Stands

ขาตั้ง

SMALL TOOLS

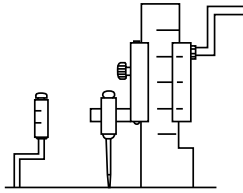
เครื่องมือวัดละเอียด



FUJI TOOL

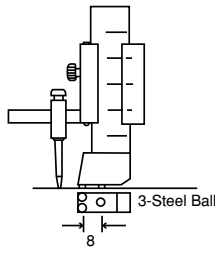
Analog Type

STG-2

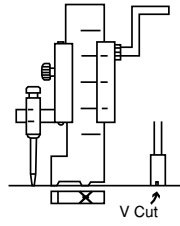


Contact Point (CRANK+STRAIGHT)

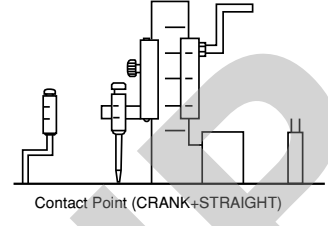
STG-2B



STG-2G

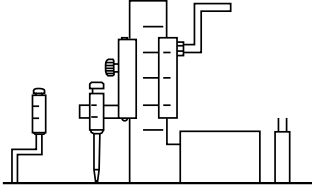


STG-3



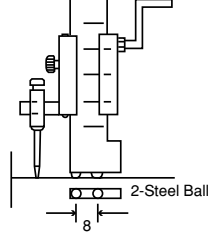
Contact Point (CRANK+STRAIGHT)

STG-5

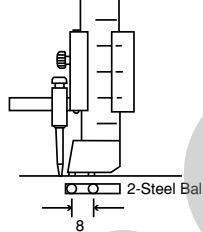


Contact Point (CRANK+STRAIGHT)

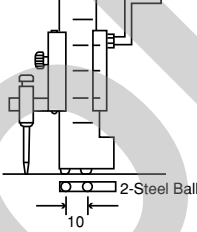
STG-8B



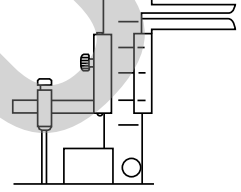
STG-8BT



STG-10B



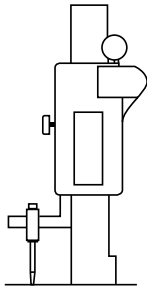
STG-F



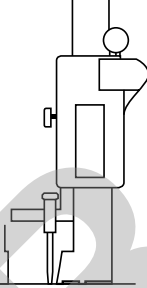
Minimum order : 5PCS.

Digital Type

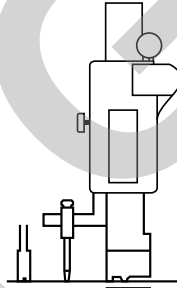
DSTG-2



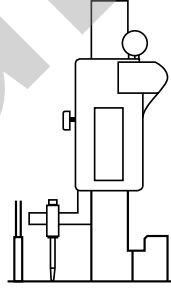
DSTG-2B



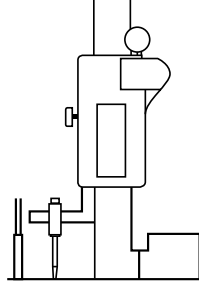
DSTG-2G



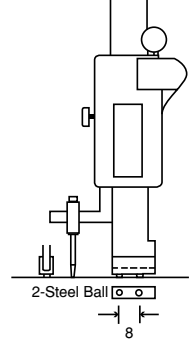
DSTG-3



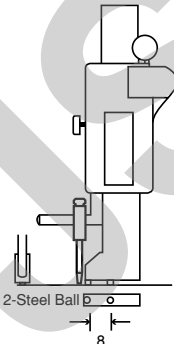
DSTG-5



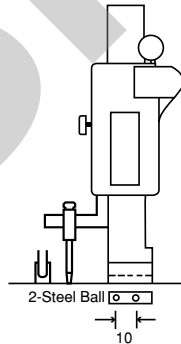
DSTG-8B



DSTG-8BT



DSTG-10B



Minimum order : 5PCS.