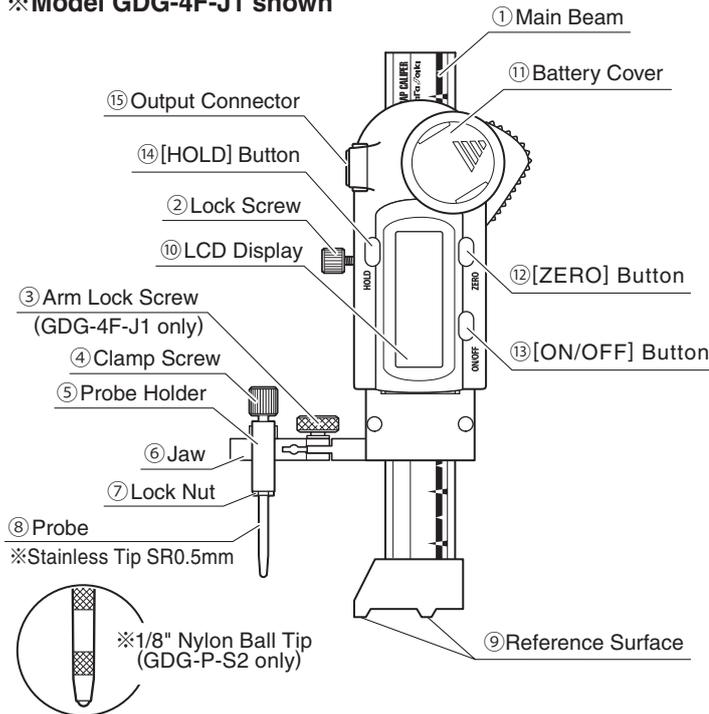


Thank you for purchasing the Niigata Seiki Digital Gap Caliper.
This is a precision measuring tool for step height measurements.

- For safe and proper use, please read this instruction manual before use and follow the procedures described. Please keep manual where it is accessible to user for future reference.
- Keep this manual with the instrument if transferred or leased to a third party.
- For inquiries about this product, please contact dealer or Niigata Seiki at the address listed on the following page.

■ PART IDENTIFICATION AND FUNCTION

※ Model GDG-4F-J1 shown



- ① Main Beam Supports LCD Display Unit.
- ② Lock Screw Tighten to Prevent the Slide and Display from moving.
- ③ Arm Lock Screw Fixes the joint between the Arm and Jaw. (GDG-4F-J1 only)
- ④ Clamp Screw Secure the sliding Probe Holder in place.
- ⑤ Probe Holder Holds the Probe.
- ⑥ Jaw Supports the sliding Probe Holder. Standard straight arm, jointed version for (GDG-4F-J1 only).
- ⑦ Lock Nut Tighten to secure the Probe in place.
- ⑧ Probe Tip is applied to workpiece for measurement. Tip available in stainless steel, or plastic (GDG-P-S2 only).
- ⑨ Reference Surface Measurement is difference between Tip position, and this surface.
4 point (flat bottom) (GDG-4F-S1 • GDG-4F-J1)
3 point (round) (GDG-3R-S1)
Flat (GDG-F-S1)
Plastic version available (GDG-P-S2)
- ⑩ LCD Display Displays digital measurement.
- ⑪ Battery Cover Cover for CR2032 Lithium battery.
- ⑫ [ZERO] Button When pressed, Display will read "0.00"
- ⑬ [ON/OFF] Button For turning power ON / OFF.
- ⑭ [HOLD] Button When pressed, "HOLD" icon appears on Display and measurement will be fixed.
- ⑮ Output Connector Measurement value can be outputted to the PC by connecting BluetoothBOX of the option.

SAFETY PRECAUTIONS

Please Observe

To prevent harm to yourself or others, and to prevent damage to property, always follow the procedures marked by the following symbols.



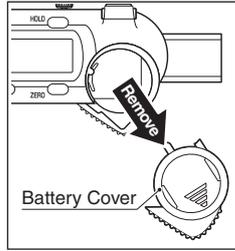
⚠ WARNING

Indicates risk of **personal injury** or property damage if not followed.

- **Read the manual and follow the directions.**
 - Use of product other than as described in this manual may cause accident.
- **Use only for measuring.**
 - Use for any purpose other than measuring may damage or wear the instrument. Improper use may also cause accident.
- **Handle with Care.**
 - Do not drop or subject instrument to excessive shock. Do not place under heavy objects. Improper handling may cause damage or poor accuracy.
 - Do not scratch or mark the body of the gauge.
- **Avoid using in high electric fields, such as near fluorescent lights or switching power supplies.**
 - Incorrect value may be displayed on LCD.
- **Probe Tip is Sharp-Handle With Care.**
 - Tip can cause injury.
- **Remove any dirt or rustproofing from the measuring surfaces and moving parts before use. Make sure the hardware is tight and secure.**
 - Improper preparation may cause measurement errors.
- **Use and store only in environment meeting the following conditions:**
 - Dry location protected from rain, water, and oils.
 - Location that is not excessively hot.
 - Location protected from use by children and unauthorized people.
 - Use in places contrary to the above may cause damage to the product resulting in accident or injury.
- **Do not disassemble or modify.**
 - Disassembly may damage product or cause accident. For repair, please contact distributor or place of purchase.
- **Do not write on instrument with electric engraver.**
 - Do not engrave instrument body or jaw arm, such as an ID number with engraver or electric pen.

INSERTING • REPLACING BATTERY

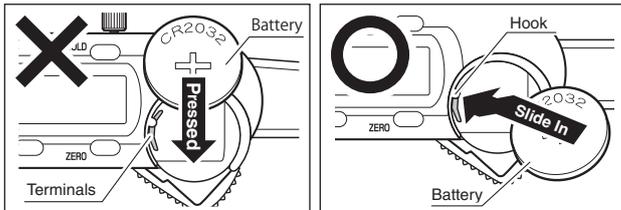
- ① Slide cover in direction of arrow.
- ② Insert battery with (+) side outward.
- ③ Replace battery cover.



Notice Use only CR2032 type battery.

Use care to avoid damaging terminals when inserting battery.

- Terminals may be broken if battery is pressed straight down.
- Insert battery at angle, underneath the small hook, as shown.



TROUBLESHOOTING

Q. Nothing is displayed on LCD

A. The battery may be running low, please replace battery with a new one.

Q. With power on, the number on the LCD does not change as Display Unit is moved.

A. Please reset by removing battery for about 30sec., and then replacing.

Q. Nothing happens when buttons are pressed.

A. Make sure battery is properly inserted.

Q. The characters "MIN", "MAX", or "Δ" are displayed on LCD.

A. Cycle power, or apply several long presses to [HOLD] Button. Use as normal once character is off.

Q. The correct value is not displayed.

A. High humidity may cause dampness. Please dry off the instrument and use only in dry location.

SERVICE

● If Instrument is not working properly, or if you have any questions, please contact distributor or place of purchase.

● Please note, manufacturer is unable to respond to inquires or provide service directly. Please contact distributor or place of purchase.

SPECIFICATIONS

- Resolution 0.01mm
- Instrument Error ±0.03mm
※ Not including quantization error (±1count)
- Measurement Range -13 to +16mm
- Display 4 Digit LCD
- Auto Off approx. 20 min.
- Maximum response speed Upward... 1.5m/s
 Downward ... 0.75 m/s
※ Direction as shown in diagram at top of manual.
- Operating Temperature Range ... 0°C~40°C
- Storage Temperature Rang -10°C~60°C
- Power (1x)CR 2032 Lithium Battery
- Battery Life approx. 2.5 years in normal use
- Accessory CR 2032 Lithium Battery (for test)

HOW TO USE

- [ON/OFF] Button turns power ON / OFF.
- [ZERO] Button sets the display to read "0.00" when pressed.
- [HOLD] Button will fix the display value when pressed.

Absolute Measurement Mode

- ① Turn on the Gauge, and loosen the Lock Screw.
- ② Position the probe tip for the desired measurement, and tighten the Clamp Screw (Model GDG-4F-J1). (Figure 1.)
- ③ Place the gauge on a flat reference surface, and slide the tip down for good contact. Press the [Zero] Button. (Figure 2.)
 Gauge is ready for measurement when the display reads "0.00 mm"
- ④ Slide the gauge head up and down to make contact with the surface you want to measure. (Figure 3.)

※ Do not change the position of the Probe Holder as set in step ②, or the measurement will not be correct.

Comparisons Measure Mode

- ① Turn on the Gauge, and loosen the Lock Screw.
- ② Position the Gauge to measure the Reference surface, and press the [Zero] Button.
- ③ Next, position the Gauge to measure the surface for comparison, and the difference in height with the reference will be displayed.

Measurement Precaution

- To prevent error, make sure the Base is not tilted when making measurements. (Figure 4.)

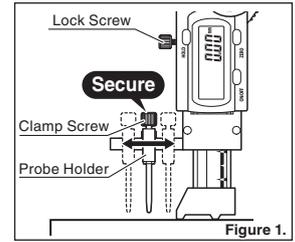


Figure 1.

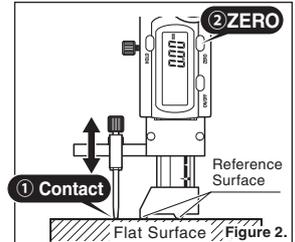


Figure 2.

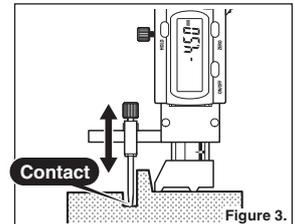


Figure 3.

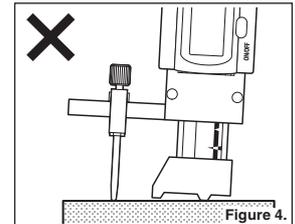


Figure 4.

AFTER USE CARE • STORAGE

- After use, wipe off any dirt or oil from measuring surfaces, sliding surfaces, and exterior using a dry cloth and perform rust prevention treatment.
 For rust prevention, lightly apply anti-rust oil, or place in rust preventive bag.
- Store with Lock Screw slightly loose
 If Lock Screw is tightened, expansion due to temperature changes may cause excessive force which will cause inaccuracy.
- Store in a cool, dry, and dark location in the provided case.
 Keep out of direct sunlight and moisture, and please keep secure from unauthorized personnel.
- Remove battery if Gauge will not be used for a long period of time.

Model	GDG-4F-S1	GDG-3R-S1	GDG-F-S1	GDG-P-S2	GDG-4F-J1
Base	4-Point (Flat)	3-Point (Round)	Flat	Plastic	4-Point (Flat)
Arm	Straight				Jointed
Probe	Stainless Tip SR 0.5mm			1/8" Nylon Ball Tip	Stainless Tip SR 0.5mm
Weight(g)	150	155	150	145	150

SK Niigata seiki Co., Ltd.

6-15-22, Tsukanome, Sanjo, Niigata, Japan, 955-0055
 Tel. : +81-256-31-5670 Fax. : +81-256-39-7730
 MAIL intl.sales@niigataseiki.co.jp
 URL http://www.niigataseiki.co.jp