

Precision
Measuring Tools

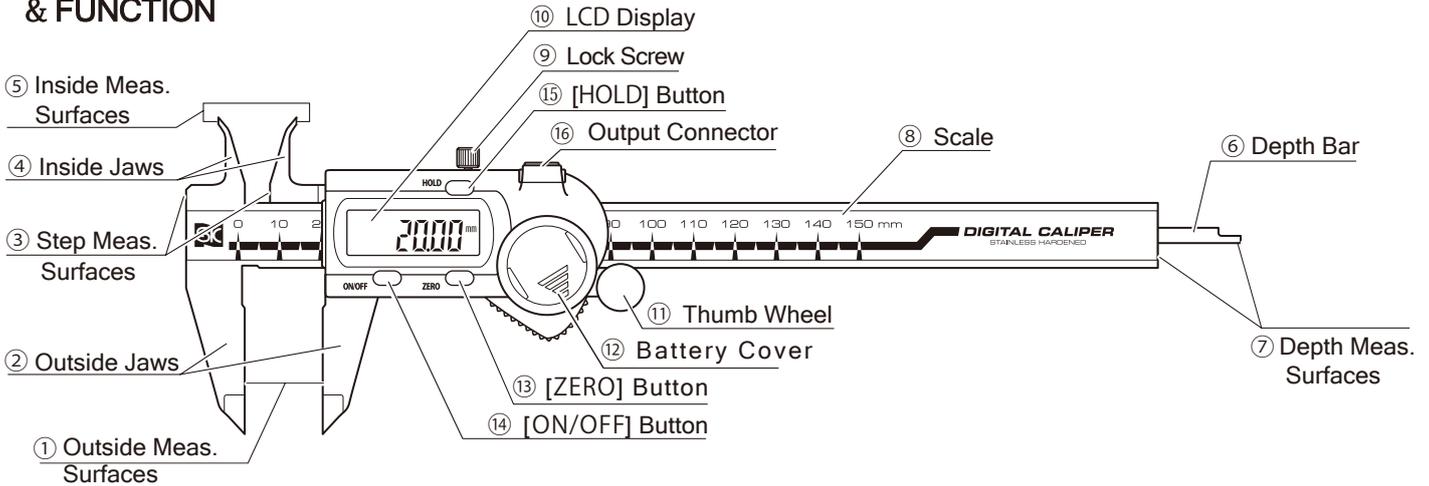
DIGITAL INSIDE GROOVE CALIPER

Thank you for purchasing Niigata Seiki Digital Inside Groove Caliper.

This is a precision measuring tool for measuring inside, outside, step, and depth dimensions. The Inside Jaw is designed for measuring inside of narrow grooves.

- 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.

■ PARTS IDENTIFICATION & FUNCTION



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|--|---|
| ① Outside Meas. Surfaces .. Position object to be measured between these surfaces. | ⑩ LCD Display Displays digital measurement. |
| ② Outside Jaws For measuring outside dimensions. | ⑪ Thumb Wheel For adjusting position of Display Slide. |
| ③ Step Meas. Surfaces Measures height of steps. | ⑫ Battery Cover Cover for CR2032 Lithium battery. |
| ④ Inside Jaws For measuring inside dimensions. | ⑬ [ZERO] Button When pressed, Display will read "0.00" |
| ⑤ Inside Meas. Surfaces Position surfaces inside object to be measured. | ⑭ [ON/OFF] Button For turning power ON / OFF. |
| ⑥ Depth Bar For measuring depth. | ⑮ [HOLD] Button When pressed, "HOLD" Icon appears on Display and measurement will be fixed. |
| ⑦ Depth Meas. Surfaces Depth is measured between these two surfaces. | ⑯ Output Connector Connect to optional Bluetooth Box to send measurements to PC. |
| ⑧ Scale Supports LCD Display Unit. | |
| ⑨ Lock Screw Tighten to prevent the slide and display from moving. | |

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.

Denotes a prohibition - You **MUST NOT** do

Denotes a requirement - You **MUST** do

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 instrument, for example by writing ID number.
- Avoid using in high electric fields, such as near fluorescent lights or switching power supplies.**
 - Incorrect value may be displayed on LCD.

- 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.
- Jaw Tips Are Sharp—Handle With Care.**
 - Careless handling may cause 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, such as an ID number with engraver or electric pen.

PREPARATION FOR USE

Before using the caliper, please follow the steps below:

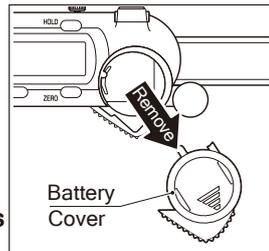
- **Wipe off rust proofing and dirt from measuring surfaces and slide.** Contamination of surfaces may cause measurement error.
- **Allow the caliper and object to be measured time to reach the same temperature.** A temperature difference between the object to be measured and the caliper may cause measurement error. Allow enough time for the temperatures to equilibrate.

INSERTING · REPLACING BATTERY

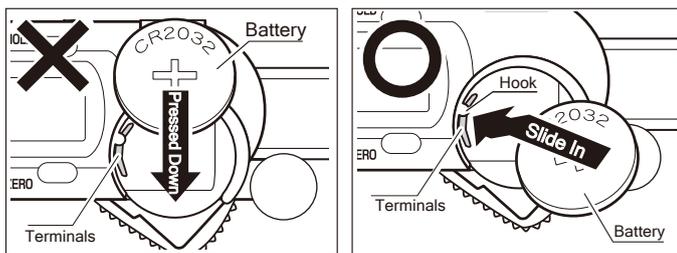
- ① Slide cover in direction of arrow.
- ② Insert battery with (+) side outward.
- ③ Replace battery cover.

⚠ 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 "△" 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.

HOW TO USE

■ Power ON/OFF

- ① To turn on, press the [ON/OFF] Button.
- ② To turn off, press the [ON/OFF] Button.
- ③ With power on, press the [HOLD] Button to fix the value on the display.

■ Absolute Measurement Mode

- ① Loosen the Lock Screw and turn power ON.
- ② With jaws closed, press the [ZERO] Button.
- ③ When "0.00mm" is displayed on LCD, Caliper is ready to start measurement.

■ Comparison Measure Mode

- ① Loosen the Lock Screw and turn power ON.
- ② With jaws open to desired reference position (any point is OK,) press [ZERO] Button.
- ③ When "0.00mm" is displayed on LCD, Caliper is ready to start measurement.

⚠ Please Note If Jaws are opened beyond maximum position, Thumb Wheel may come loose. Please use care.

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 loosened.** If stored with Lock Screw tight, 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 Caliper will not be used for a long period of time.**

SPECIFICATIONS

- Measurement Range: 0-150mm
- Instrument Error: ±0.03mm
※Not including quantization error (±1 count)
- Resolution: 0.01mm
- Display: 5 Digit LCD
- Auto Off: approx. 20 min.
- Maximum Respon Speed: Slide to right. . . 1.5m/s
Slide to left. . . 0.75m/s
※ Left/Right as shown in diagram at top of manual.
- Operating Temperature Range: . . . 0°C · 40°C
- Storage Temperature Range: . . . -10°C · 60°C
- Power: (1x) CR2032 Lithium Battery
- Battery Life: approx. 2.5 years in normal use.
- Accessory: CR2032 Lithium Battery (for test)

SC 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>