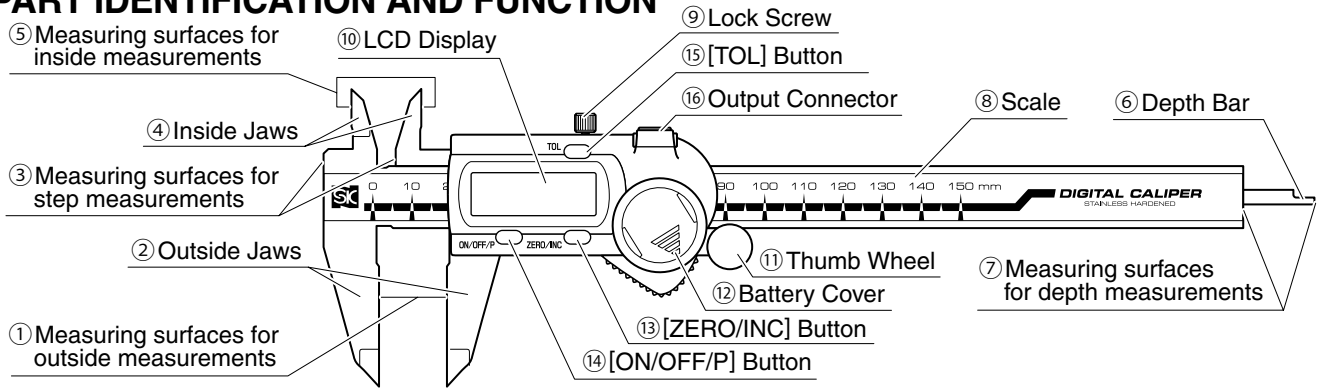# SK Niigata Seiki

PRECISION MEASURING TOOLS

DIGITAL CALIPERS with TOLERANCE SETTING

Thank you for purchasing Niigata Seiki Digital Calipers.
This is a precision measuring tool for making Inside, Outside, Step Height, and Depth 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

① Measuring Surfaces for outside measurements ··· Object to be measured is positioned between these surfaces.
② Outside Jaws ·· For measuring outside dimensions.
③ Measuring surfaces for step measurements ······ Measures height of steps.
④ Inside Jaws ·· For measuring inside dimensions.
⑤ Measuring surfaces for inside measurements ······ Position surfaces inside object to be measured.
⑥ Depth Bar ·· For measuring depth.
⑦ Measuring surfaces for depth measurements ······ Depth is measured between these two surfaces.
⑧ Scale ·· Supports LCD Display Unit.
⑨ Lock Screw ·· Tighten to Prevent the Display Slide from moving.
⑩ LCD Display ··· Displays digital measurement.
⑪ Thumb Wheel ··· For adjusting position of Display Slide.
⑫ Battery Cover ··· Cover for CR2032 Lithium battery.
⑬ [ZERO/INC] Button ······································ When pressed, Display will read "0.00".
⑭ [ON/OFF/P] Button ······································ Power ON/OFF, and setting preset values.
⑮ [TOL] Button ·· Setting tolerance values.
⑯ 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.

🚫 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 calipers, 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 calipers 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.
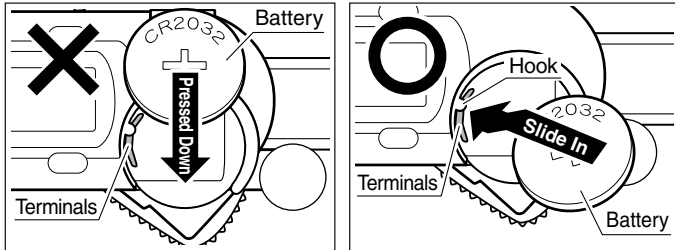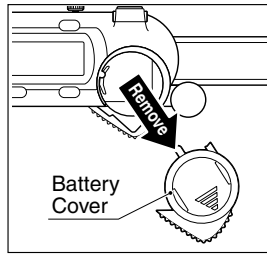
INSERTING・REPLACING BATTERY

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 correct value is not displayed.
　A. High humidity may cause dampness. Please dry off the instrument and use only in dry location.

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 Jaws slightly open.**
If Jaws are closed, 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.**

PRODUCT SPECIFICATIONS

Model No.	Measuring Range	Accuracy※	Weight
GDCT–100	0 – 100mm		155g
GDCT–150	0 – 150mm	±0.03mm	175g
GDCT–200	0 – 200mm		200g
GDCT–300	0 – 300mm	±0.04mm	260g

※Not including quantization error (±1 count)

• Resolution : 0.01mm
• Display : 6 Digit LCD
• Auto Off : approx. 20 min.
• Maximum response speed : Slide to Right ..... 1.5 m/s
　　　　　　　　　　　　　　Slide to Left .... 0.75 m/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)

HOW TO USE

■Power ON/OFF
① To turn on, press the [ON/OFF/P] Button.
② To turn off, press and hold the [ON/OFF/P] Button for 2 seconds.

■Absolute Measurement Mode
① Loosen the lock screw, and turn on power.
② With jaws closed, press the [ZERO/INC] Button.
③ When "INC" and "0.00mm" are displayed on LCD, Caliper is ready to start measurement.
④ To enter Preset Mode, press and hold the [ZERO/INC] Button until the "INC" icon on the LCD Display is turned off.

■Comparisons Measure Mode
① Loosen the lock screw, and turn on power.
② With jaws open to desired reference position (any point is OK,) press [ZERO/INC] Button.
③ When "INC" and "0.00mm" are displayed on LCD, Calipers is ready to start measurement.
④ To enter Preset Mode, press and hold the [ZERO/INC] Button until the "INC" icon on the LCD Display is turned off.

■Preset Function
Measurement displayed will be offset by a preset value entered into the Gauge.
① Loosen the lock screw, and turn on power.
② Press and release the [ON/OFF/P] Button, and "P" icon will begin to flash on the Display.
③ With the "P" icon displayed, press and hold the [ON/OFF/P] Button to change the position of the blinking character.
④ When the desired character is blinking, a short press of the [ON/OFF/P] Button changes the number at that position.
⑤ Repeat steps ③, ④ until the desired value is entered on the Display.
⑥ Move the blinking position back to the "P" icon and press the [ON/OFF/P] Button again briefly. The entered value is now preset into the Caliper.

■Tolerance Function
Tolerance Mode can be used to verify that a measured value is within a specified tolerance range.
① When the [TOL] Button is pressed, "▶" will begin to blink on the LCD and the maximum tolerance value can be entered.
② Press and hold the [TOL] Button to change the position of the blinking character.
③ When the desired character is blinking, a short press of the [TOL] Button changes the number at that position.
④ Repeat steps ②,③ to enter the desired value, move the active position to the "▶" icon and press the [TOL] Button.
⑤ With the "◀" icon displayed, repeat steps ②,③ to enter the minimum value.
⑥ Move the active position to the "◀" icon and press the [TOL] Button. The tolerance range is now set.
⑦ Gauge is ready for measurements when the "TOL" icon is shown on the display.
• If the measurement is within the tolerance range, "GO" is displayed on the LCD.
• If the measurement is above the tolerance range, "▶" is displayed on the LCD.
• If the measurement is below the tolerance range, "◀" is displayed on the LCD.
⑧ Press the [TOL] Button to cancel Tolerance Mode.

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

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.

S⃝K⃝ 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

I354-K　1803