

Precision Measuring Tools

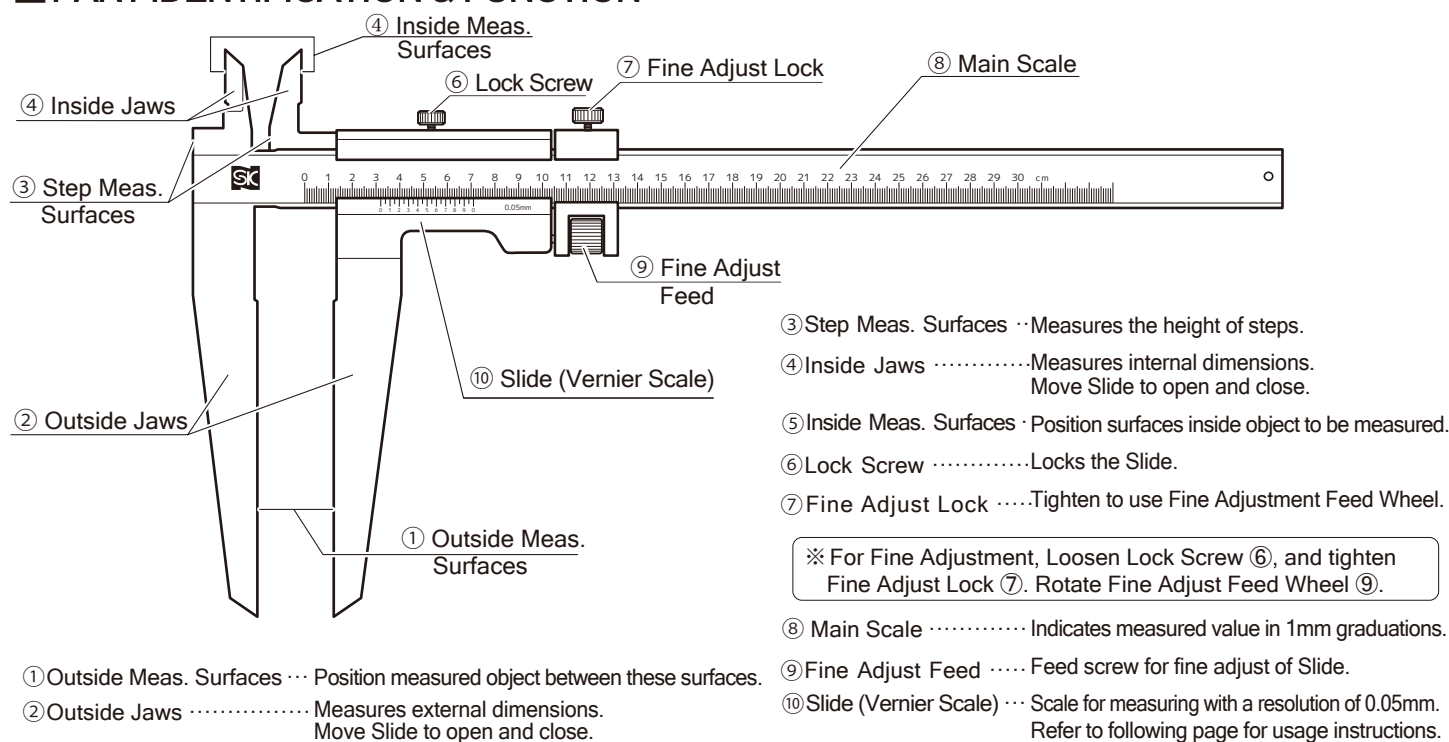
LONG JAW CALIPER

Thank you for purchasing the Niigata Seiki Long Jaw Caliper.

This product is a precision measurement tool with a main scale and a vernier scale to indicate the measured value.

- For safe and correct use of this product, 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 & FUNCTION



SAFETY PRECAUTIONS

Please Observe

To prevent injury to yourself and others, and to prevent damage to property, always follow the procedures marked with 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 the 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.



Use only in suitable environment.

- Do not use in locations that are very humid, wet, very hot, cold, or in direct sunlight.
- Due to large size and weight, please use care and be aware of your surroundings during use.



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.



Jaw Tips Are Sharp – Handle With Care.

- Careless handling may cause injury.



Do not disassemble or modify.

- Do not remove the vernier slide, Please do not attempt to disassemble or modify as it may cause damage or poor accuracy.

CALIBRATION

- To maintain instrument accuracy, periodic calibration is recommended.

Wear of measuring surfaces from repeated use may affect accuracy and periodic accuracy checks should be performed.

Outside Japan,

Please inquire contact distributor or place of purchase to inquire about calibration services.

PREPARATION FOR USE

Before using the caliper, follow the steps below:

- **Do not apply excessive force to Slide.**

Moving the Slide with excessive force may cause damage and measurement error.

- **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.

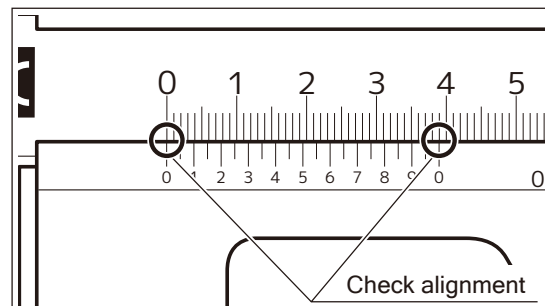
- **Performing an accuracy check.**

- ① **Jaw Alignment**

In closed position, make sure the measuring surfaces on the outside jaws align properly and there is no gap (no light should leak past.)

- ② **Confirm "0" points on scale (see diagram at right)**

With jaws closed as in step ① above, make sure the reading is zero and the vernier scale graduations align at the "0" and "39" positions as shown.



READING THE SCALE

The measured value is determined by reading the main scale, and then adding the Vernier Scale reading determined by the position where the vernier and main scale graduations align.

$$\text{Measured Value} = \text{Main Scale} + \text{Vernier Scale Reading}$$

- **EXAMPLE 1 Value: 77.00mm**



- **EXAMPLE 2 Value: 77.30mm**



- **EXAMPLE 3 Value: 77.35mm**



AFTER USE CARE · STORAGE NOTES

- **Wipe slide, measuring surfaces, and exterior with a dry cloth to remove any dirt or oil.**

When not in use, apply anti-corrosive treatment or protect with anti-corrosive paper

- **When not in use, keep jaws slightly open.**

If stored with jaws closed, thermal expansion may create excessive forces and affect accuracy.

- **Store in supplied case in a cool, dry location.**

Store away from moisture or direct sunlight, and out of reach of unauthorized personnel.

PREVENTING ERRORS

In order to prevent measurement error, please note the following.

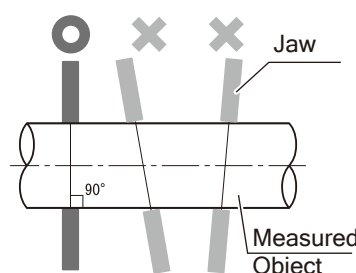
POSITIONING CALIPER

<Flat surfaces >

Position the caliper perpendicular to the surfaces to be measured.

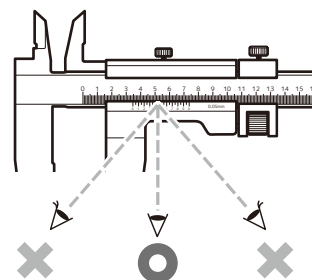
<Cylindrical surfaces >

Position the caliper perpendicular to the axis of the cylinder.



VIEWING THE SCALE

Scale should be read from directly above the calipers. Due to change in height of vernier scale relative to main scale, if viewing direction is not directly above the reading may have parallax error.



PREVENTING DEFLECTION

Due to the large size and weight of the instrument, if not well supported during use the body may deflect and introduce measurement error.

We recommend use by more than one person during measurement for proper support.

SPECIFICATIONS

- **Material: Stainless Steel**

Model	JLVC-30	JLVC-60
Max Meas. Length	300mm	600mm
Resolution	0.05mm	
Accuracy	±0.08mm	±0.10mm

SC Niigata Seiki Co., Ltd.

5-3-14, Tsukanome, Sanjo, Niigata, Japan, 955-0055

☎ +81-256-33-5522 FAX : +81-256-33-5518

MAIL: intl.sales@niigataseiki.co.jp

URL: <http://www.niigataseiki.co.jp>

I398-K 1909