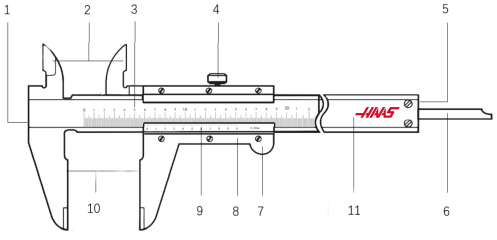
VERNIER/ DIAL CALIPER INSTRUCTION MANUAL

To ensure the proper use of the product, please read this product instructions manual thoroughly.

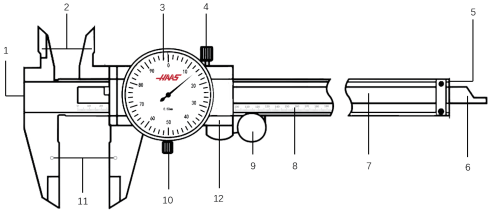
CALIPER COMPONENTS

VERNIER CALIPER



1. Step Measuring Face
2. Internal Jaws
3. Main Scale
4. Locking Screw
5. Depth Measuring Tip
6. Depth Measuring Rod
7. Handwheel
8. Scale Frame
9. Vernier Scale
10. Dial Lock Set Screw
11. Scale Body

DIAL CALIPER

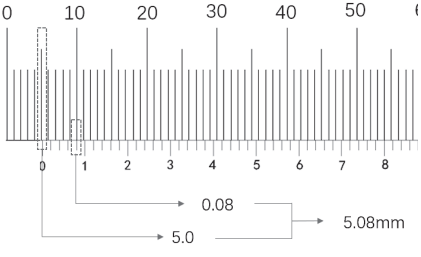


1. Step Measuring Face
2. Internal Jaws
3. Dial
4. Locking Screw
5. Depth Measuring Tip
6. Depth Measuring Rod
7. Scale Body
8. Main Scale
9. Handwheel
10. Dial lock set-screw
11. External Jaws
12. Scale Frame

Note: Hand wheels do not rotate for 4" (100mm) calipers.

READING

EXAMPLE：VERNIER CALIPER

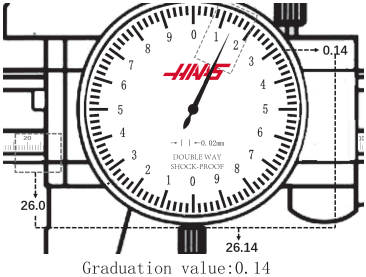


Graduation value:0.08

Main scale value:	5.00mm
Vernier:	0.08mm
Measured value:	5.08mm

Note：(The fourth scale of the vernier corresponds to its main scale, That is 0.02*4，read as 0.08mm）

EXAMPLE：DIAL CALIPER



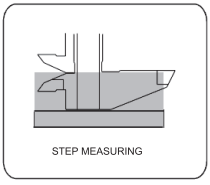
Graduation value:0.14

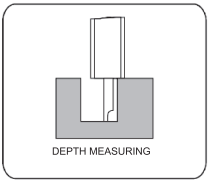
Main scale value:	26.00mm
Dial division degree:	0.14mm
Measured value:	26.14mm

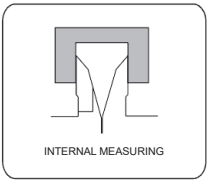
Note：（The dial pointer is 7 lattice，that is 0.02*7，read as 0.14mm）

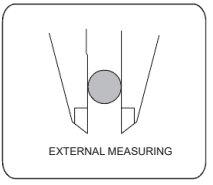
VERNIER/ DIAL CALIPER

COMMON CALIPER USAGE



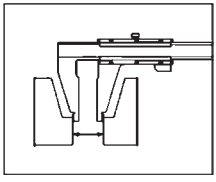




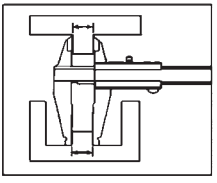


SPECIAL CALIPER USAGE

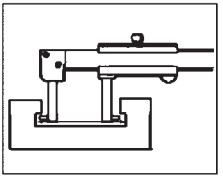
EXTERNAL CIRCULAR CALIPER



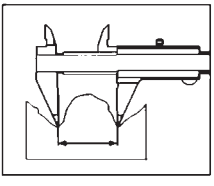
BLADE CALIPER



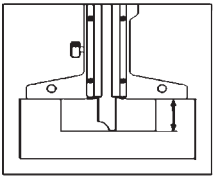
INTERNAL GROOVE TYPE CALIPER



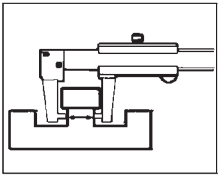
SHARP CLAW CALIPER



DEPTH MEASURING CALIPER



EXTERNAL GROOVE TYPE CALIPER



USAGE

1. For the most accurate measurements, it is recommended to clean the sliding and measuring surfaces with a soft dry cloth before each use. Insert a clean soft cloth between the surfaces of the jaws, lightly clamp the jaws onto the cloth, and pull cloth away to clean the jaws. Once clean, the caliper is ready for use.
2. Apply the appropriate measuring force to accurately measure the workpiece. For best results, place jaws as flat as possible to the surface of the workpiece. Avoid using the tip of the measuring jaw, as this may result in an incorrect measurement.
3. Before measuring an internal feature, insert the measuring jaw to an appropriate depth, then expand the jaws. The maximum value is the measurement of the feature.
4. When reviewing the dial for the measurement value, it is best to view the dial indicator needle directly above it. If the dial indicator needle is viewed at an angle, it will cause a visual error that results in an incorrect value.

CAUTIONS (MAINTENANCE)

1. Avoid the sharp edges and points of the caliper jaws to avoid injury.
2. After use, place the caliper in the protective case to avoid damage.
3. After use, wipe any water or oil from any surface. It is recommended to apply a light layer of rust preventative prior to placing caliper in storage.
4. Avoid storing caliper in direct sunlight, high temperature, low temperature, and high humidity environments. It is recommended to leave a gap of at least 0.5mm between jaws during storage.
5. The caliper is calibrated prior to leaving the factory. It is not recommended to remove or modify any parts to avoid decreasing accuracy and function of the caliper.
6. If the caliper stops working, thoroughly clean the main scale.
7. Do not disassemble the caliper.

COMMON QUESTIONS AND SOLUTION

When measuring a gauge block, the reading is different than what is specified.	The caliper itself has a mechanical issue. Check that the caliper goes to zero (0) when closed. If not, thoroughly clean the caliper and/or align the dial.
The caliper reading changes when measuring workpiece.	If proper pressure is not applied during measurement, this will result in an incorrect reading. Also ensure the jaws are clean and parallel with the measured surface.
After jaws are closed, the caliper reading is not zero.	Check the surface of jaws for any remaining debris that could result in incorrect origin. Loosen the dial lock, adjust the dial until it is zero, then tighten.