Squareness Tester

Squareness Measuring Instrument

Instruction Manual

To ensure correct use, please read this instruction manual carefully before use. After reading, keep it in a safe place where the user can always refer to it.

OBISHI KEIKI SEISAKUSHO Co., Ltd.

Safety Precautions

※Before use, please read this instruction manual carefully and use the product correctly.

※The precautions shown here are intended to ensure the safe and proper use of the product and to prevent any potential hazards to the user.

※The precautions are categorized into three levels — **Danger, Warning, and Caution** — to clearly indicate the severity and urgency of potential harm or damage that may occur if the product is mishandled.

<table>
<tr><th colspan="3">For Safe and Proper Use</th></tr>
<tr><td colspan="3">This instruction manual includes various symbols and pictograms throughout the text to ensure correct use of the product and to prevent harm or damage to the user.

The symbols and their meanings are as follows.

● Please read the text after fully understanding the symbols and their meanings.
● After reading, be sure to keep this manual in a place where anyone using the product can easily refer to it at any time.
● All of these are safety-related instructions, so please be sure to follow them.</td></tr>
<tr><td colspan="2">⚠ Danger</td><td>This indicates situations where incorrect handling could result in imminent risk of death or serious injury.</td></tr>
<tr><td colspan="2">⚠ Warning</td><td>This indicates situations where incorrect handling could potentially result in death or serious injury.</td></tr>
<tr><td colspan="2">⚠ Caution</td><td>This indicates situations where incorrect handling may result in injury to persons or only property damage.</td></tr>
<tr><td rowspan="3">Examples of symbols</td><td>  </td><td>The △ symbol indicates the presence of danger, warning, or caution messages, with specific precautions described within the figure.
(The left figure is used to indicate general danger, warning, or caution without specifying details.)</td></tr>
<tr><td>  </td><td>The ○ symbol indicates prohibited actions, with specific precautions described within or below the figure.
(The figure on the left is used for general prohibition notices without specifying particular actions.)</td></tr>
<tr><td>  </td><td>The ● symbol indicates mandatory actions, with specific instructions detailed within the figure.
(The figure on the left is used for general mandatory actions or instructions without specifying details.)</td></tr>
</table>

Squareness Measuring Instrument Instruction Manual

1. Product Features

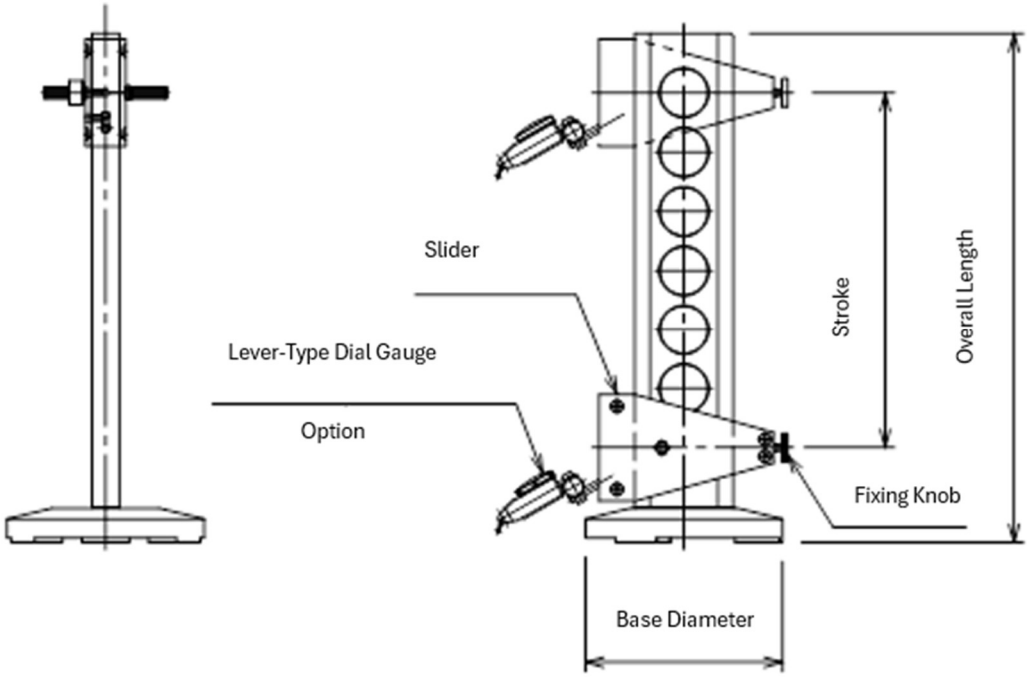
・Straightness and squareness of the measuring surface can be measured easily.

・Its compact and lightweight design makes handling easy.

・Supports a maximum stroke length of up to 500 mm.

※Note: The dial gauge and the master angle are not included.

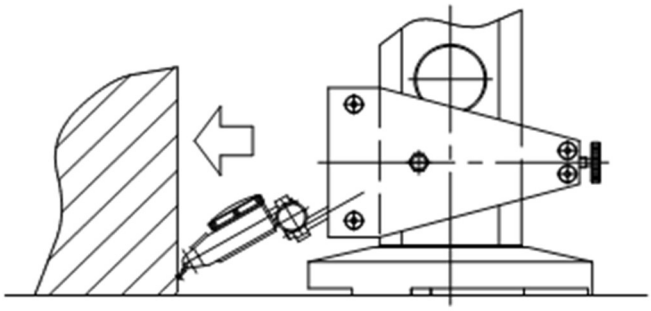
2. Names of Parts and External View



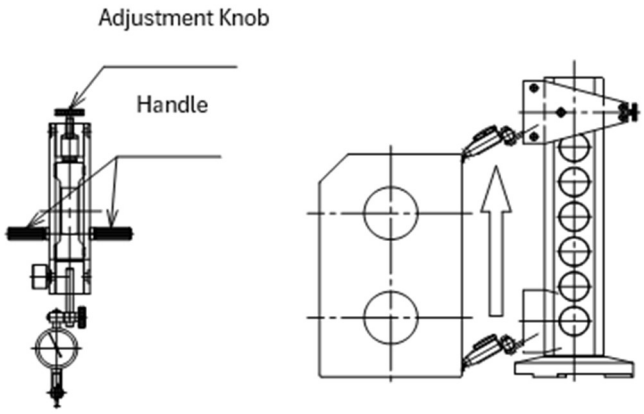
3.Specifications

Code No.	Model	Length (㎜)	Base Size (㎜)	Measurement Range(stroke) (㎜)	Straightness (μm)	Squareness (μm)	Mass (kg)
HC1061	HC106-1	330	166	200	2	±3	8
HC1062	HC106-2	430	166	300	2	±3	9
HC1063	HC106-3	530	166	400	3	±4	10
HC1064	HC106-4	630	200	500	4	±5	12

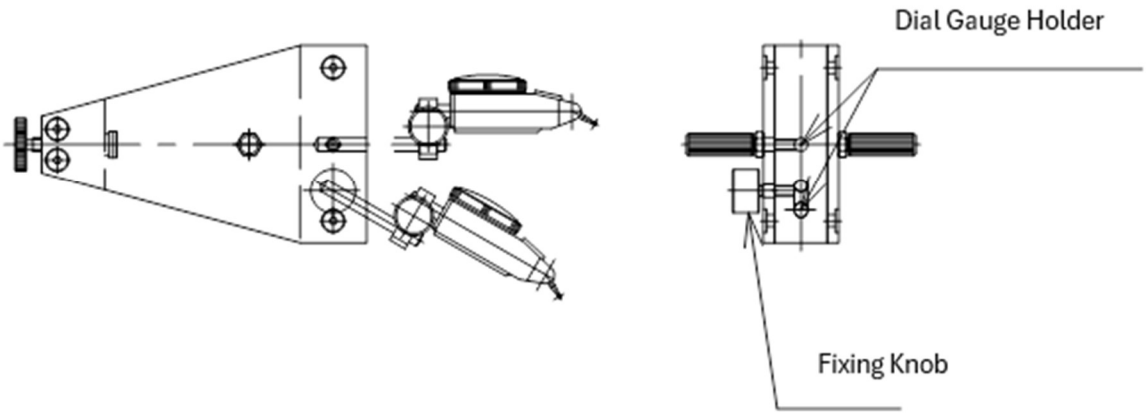
4. Instructions for Use



① Lightly place the dial gauge against the measuring surface and set the scale to zero.



② Hold the handle and scan the measuring surface. Adjust the movement resistance with the adjustment knob. Operate so that the scanning direction is from bottom to top.
The dial gauge reading after scanning indicates the amount of tilt of the measuring surface.



Dial Gauge Holder

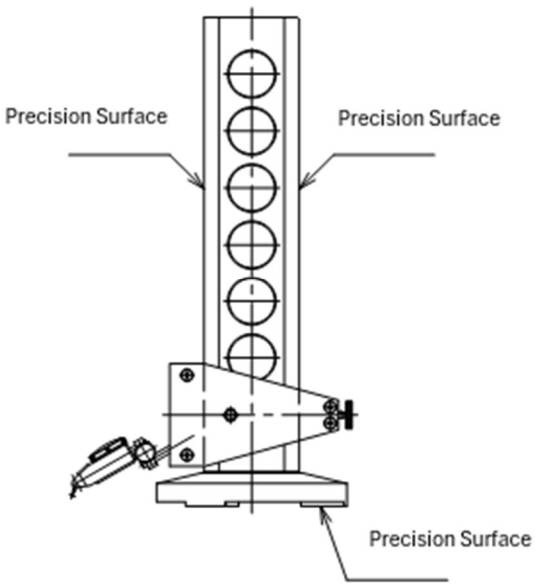
There are two mounting positions for the dial gauge. Attach it at either position as required.

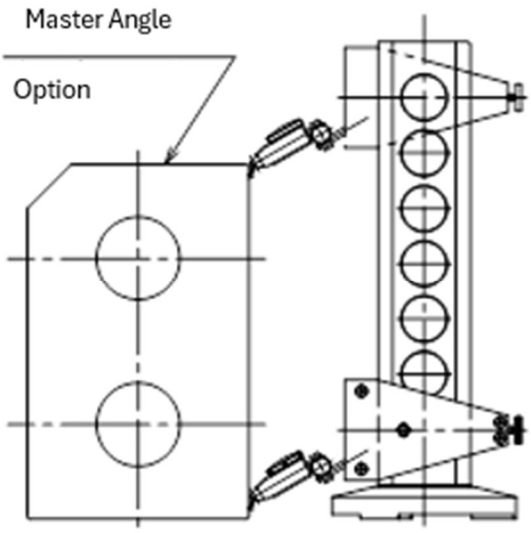
【Daily Inspection and Maintenance】

It is necessary to check whether the instrument has any faults. Pay attention to the following points:

・Before use, wipe the precision surface clean with a cloth lightly moistened with machine oil.

・Periodically check the accuracy using a master angle.





【Troubleshooting】

If you suspect a malfunction, check the following points. If the problem cannot be resolved, please request repair.

To correctly identify each “Symptom” and provide clear “Countermeasures,” pay attention to the following examples:

Q: The slider does not move.

A: The fixing knob may be tightened, or oil/contamination may be causing sticking. Loosen the knob or Clean the precision surface.

Q: The measurement value is unstable.

A: There may be an accuracy problem. Check the accuracy using a master block.

5. Precautions for Use

● ① Before use, wipe the bottom surface of the instrument and the reference guide surface clean.

② Handle the instrument carefully during use and storage to avoid impact or shock.

③ Allow the instrument to acclimate to the ambient temperature before use.

④ Do not use or store the instrument in places with drastic temperature changes.

⑤ When using the instrument in a location subject to temperature variations, frequently check it with a master angle or an equivalent reference.

⑥ Check that the holding force between the slider and the reference guide is sufficient before use.

To confirm, place the stylus of the instrument against the workpiece, take the pointer reading at the specified position, then move the slider up and down and return it to the original position. Verify that the reading is the same.

⑦ Do not place this instrument in locations subject to vibration or other similar conditions.

● ⑧ After use, always apply rust prevention treatment and store the instrument in its storage case.

⑨ If the instrument will not be used for an extended period, clean the precision surface with a cloth lightly moistened with alcohol.

After applying oil, wipe the entire instrument with a dry cloth.

Wrap the precision surface with anti-rust paper and store it sealed in a vinyl bag.

⑩ Check the instrument for abnormalities before use in the following cases:

・When the instrument has been dropped.

・When an object has been dropped onto the instrument.

⑪ Check the accuracy regularly before using the product.

△ ⑫ If the product has sharp edges, handle it carefully to avoid injuring your fingers or other parts of your body.

△ ⑬ Wear protective gloves and safety glasses as necessary to prevent injury while working.

△ ⑭ Do not use this product if it is damaged or deteriorated, as it may cause injury or accidents.

△ ⑮ If an injury occurs, give first aid immediately and seek medical attention if necessary.

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JIS Certified Factory

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Head Office and Factory

Design, development, manufacturing, and calibration services for precision measuring instruments (levels, surface plates, straight edges, reference measuring instruments, square rulers, blocks, dial gauge stands, comparators, angle measuring instruments, bench centers, squareness measuring instruments).