

Squareness Tester

Squareness Tester(Motor Drive System)

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.

For Safe and Proper Use		
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.		
	Danger	This indicates situations where incorrect handling could result in imminent risk of death or serious injury.
	Warning	This indicates situations where incorrect handling could potentially result in death or serious injury.
	Caution	This indicates situations where incorrect handling may result in injury to persons or only property damage.
Examples of symbols		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.)
		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.)
		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.)

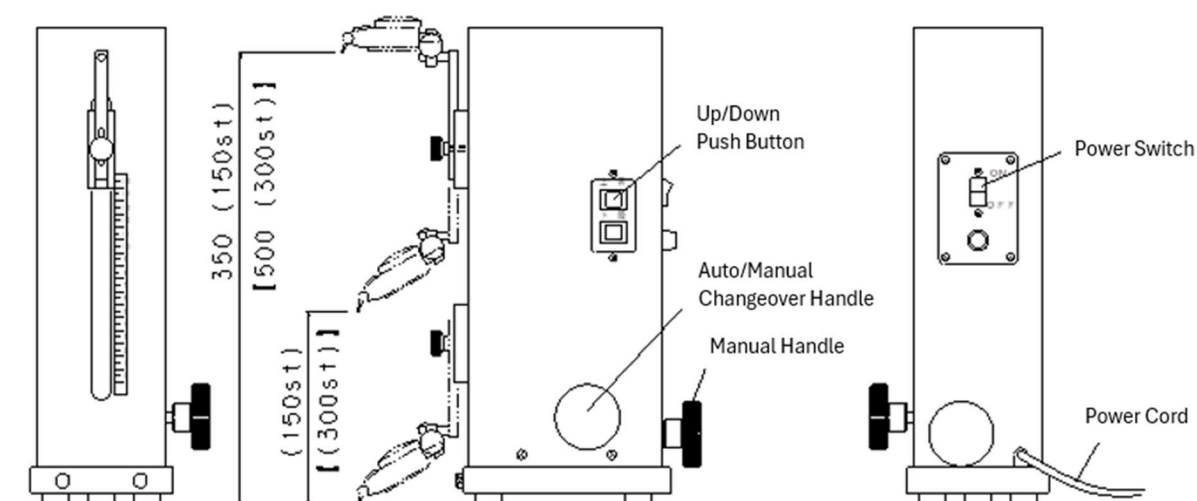
Squareness Tester(Motor Drive System) Instruction Manual

1. Product Features

- Vertical movement is motorized, with switching between automatic and manual operation.
- Smooth and safe raising and lowering are possible using the side operation switch.
- The body maintains high accuracy in squareness and straightness, making it ideal for various measurement and inspection tasks.

Note: The dial gauge is not included with this product. Please prepare one separately if necessary.

2. Names of Parts and External View



The values in brackets indicate the dimensions of the HA-2 type.

3. Specifications

Code No.	Model	Measurement Range(mm)	Stroke (mm)	Squareness (μ m)	Mass (kg)	Power (V)
HA101	HA-1	350	150	2.5	12	AC100
HA102	HA-2	500	300	3.0	17	

4. Instructions for Use

【Measurement Procedure in Automatic Mode】

① Cleaning the Bottom Surface

Wipe the precision surface on the bottom of the tester clean and place it stably on the measuring table.

② Attaching the Dial Gauge

Securely attach the lever-type dial gauge to the holder.

③ Power Connection

Plug the tester's power cable into an outlet.

④ Mode Check

Check that the auto/manual changeover handle is set to the "Automatic" position.

Turn the handle slightly to the left; if it does not rotate further, the tester is in automatic mode.

⑤ Power ON

Switch the power ON and check that the switch lights up.

⑥ Operation Test

Press the up/down switches and check that the vertical motion operates normally.

(The switches operate only while being pressed.)

⑦ Contacting the Stylus

Lightly bring the stylus of the dial gauge into contact with the workpiece.

⑧ Measurement

Move the dial gauge up and down and measure the difference between the minimum and maximum values.

Determine the squareness of the workpiece by considering this difference together with the squareness accuracy of the tester.

⑨ Holder Position Adjustment

Move the stylus of the dial gauge away from the workpiece and stop with the holder positioned below the center.

⑩ Power OFF

Turn the power switch OFF.

⑪ Removal of Equipment

Remove the dial gauge and unplug the power cord.

⑫ Cleaning and Storage

Clean the bottom (precision surface) of the tester with anti-rust oil or equivalent, and store it properly.

【Measurement Procedure in Manual Mode】

① Placing the Tester

Wipe the precision surface on the bottom of the tester clean and place it stably on the measuring table.

② Attaching the Dial Gauge

Securely attach the lever-type dial gauge to the holder.

③ Manual Mode Check

Check that the auto/manual changeover handle is set to “Manual.”

Turn the handle slightly to the right; if it does not rotate further, the tester is in manual mode.

Note: In manual mode, turning the handle to the right raises the tester, and turning it to the left lowers it.

④ Contacting the Stylus

Lightly bring the stylus of the dial gauge into contact with the workpiece.

⑤ Measurement

Operate the manual handle to move the dial gauge up and down, and measure the difference between the minimum and maximum values.

Calculate the squareness of the workpiece by taking into account the squareness accuracy of the tester.

⑥ Holder Position Adjustment

Move the stylus of the dial gauge away from the workpiece and stop with the holder positioned below the center.

⑦ Removal of Equipment

Remove the dial gauge.

⑧ Cleaning and Storage

Clean the bottom (precision surface) of the tester with anti-rust oil or equivalent, and store it properly.

5. Precautions for Use

- ① Clean the Precision Surface and the measurement surface of the workpiece before use.
- 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 Be careful not to apply excessive load or impact.
- ⑥ Do not rotate the manual handle by force.
- ⑦ Turn the auto/manual changeover handle until it stops.
If it is stopped midway, neither automatic nor manual mode may operate.
- ⑧ Do not step on the power cable or place heavy objects on it. This may cause disconnection or short-circuiting.
- ⑨ Always unplug the power cable after use.
- ⑩ Do not place this instrument in locations subject to vibration or other similar conditions.
- ⑪ After use, always apply rust prevention treatment and store the instrument in its storage case.
- ⑫ 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.
- ⑬ Check the accuracy regularly before using the product.
- △ ⑭ If the product has sharp edges, handle it carefully to avoid injuring your fingers or other parts of your body.
- △ ⑮ Wear protective gloves and safety glasses as necessary to prevent injury while working.
- △ ⑯ Do not use this product if it is damaged or deteriorated, as it may cause injury or accidents.
- △ ⑰ If an injury occurs, give first aid immediately and seek medical attention if necessary.

Contact Information

JIS Certified Factory



OBISHI KEIKI SEISAKUSHO Co., Ltd.

Head Office: 1-1216-1 Nanyo, Nagaoka City, Niigata 940-1164

TEL: (0258)22-1100 FAX: (0258)22-0014

Tokyo Office: 3-5, Kanda Surugadai, Chiyoda-ku, Tokyo 101-0062

TEL: (03)3293-8881 FAX: (03)3293-8884

Nagoya Office: 2F Nichiju Bldg., 3-15 Oimachi, Naka-ku, Nagoya City, Aichi 460-0015

TEL: (052)322-4031 FAX: (052)322-5647



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Head Office and Factory

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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).