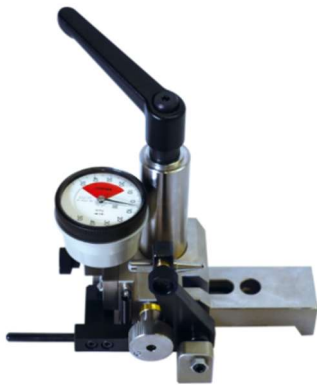


Deflection Tester

Attachment for Gear Deflection

Instruction Manual

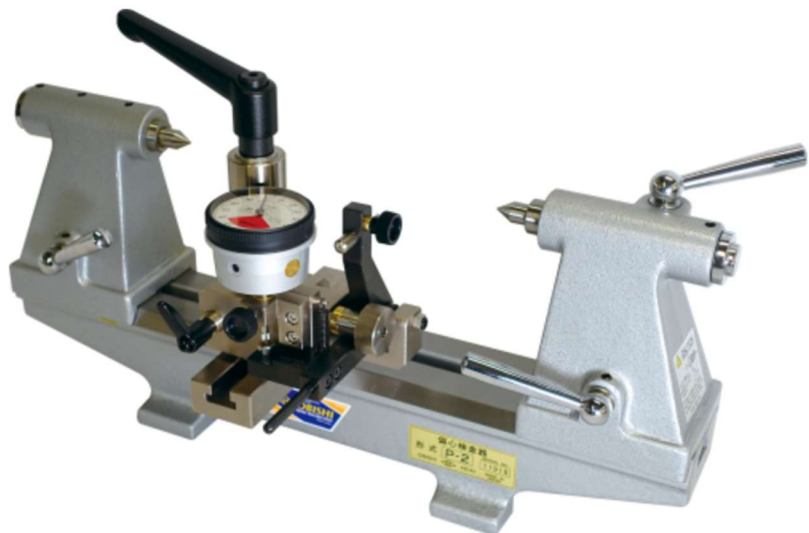
To ensure correct use, please read this instruction manual carefully before use. After reading, keep it in a safe place where the user can always refer to it.



【SHH-0 Type】



【SHH-1, 2 Type】



【Example of combining the Deflection Tester P-1 with SHH-0.】

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.)

Attachment for Gear Deflection Instruction Manual

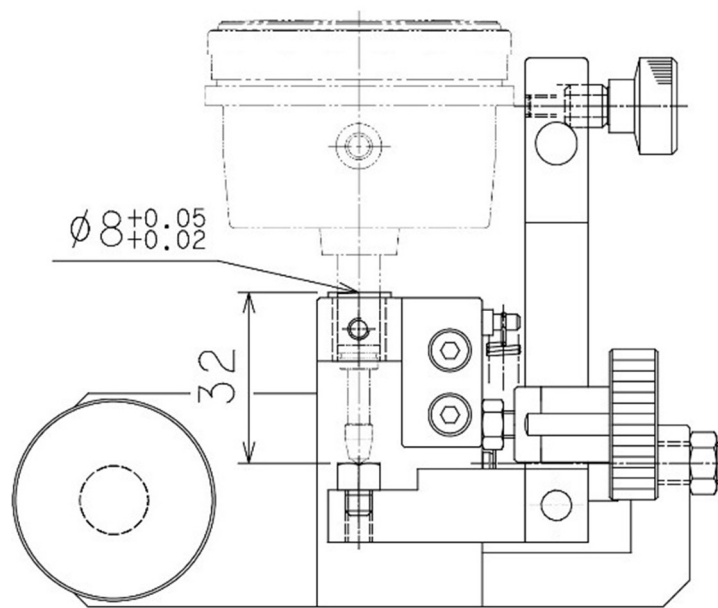
1. Product Features

- This is an attachment for measuring circular pitch runout (eccentricity) of gears.
- Attach it to the standard type tester for use.
- Seven measuring styli are supplied as standard (for modules 1 to 4 in 0.5 increments).

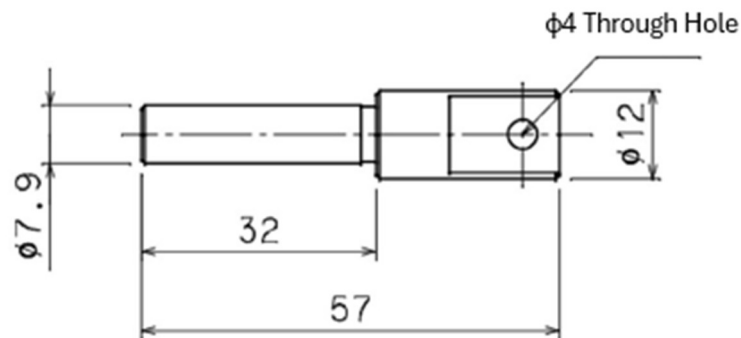
Note: The dial gauge and eccentricity tester are not included.

Note: Special-dimension measuring styli can be manufactured upon request.

2. External View



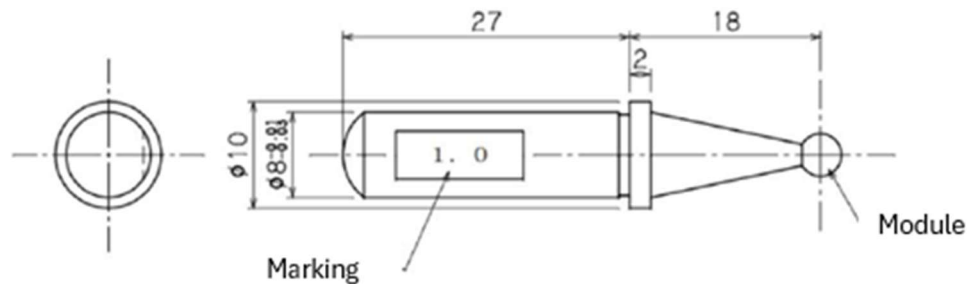
【Dial Gauge Holder】



【Arm Position Adjustment】

3. Specifications

Code No.	Model	Applicable Bench Centers	Maximum diameter (mm)	Effective Measuring Range(mm)	Measuring Force (Weak Spring / Strong Spring ± 1 N)	Mass (kg)
SHH100	SHH-0	P-1, 2, 3 Type	6~130	± 0.05	3/10	4.0
SHH101	SHH-1	No. 1	6~220		3/9	5.0
SHH102	SHH-2	No. 2	6~380			10.0



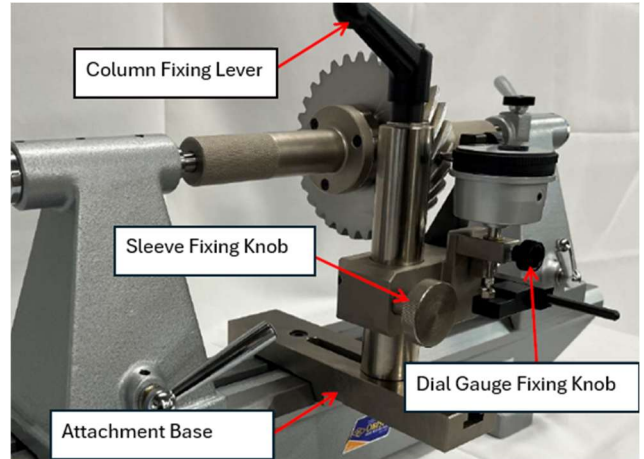
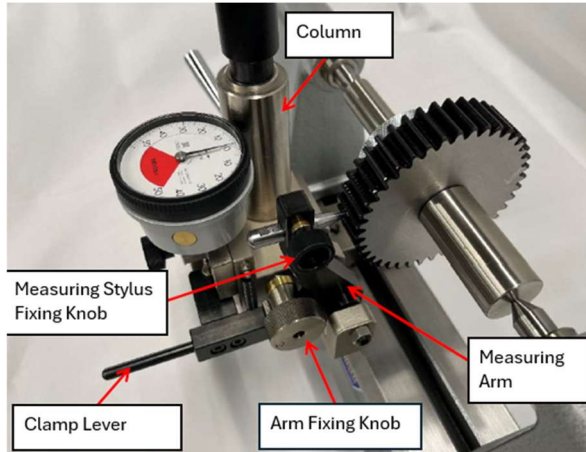
	Module	Reference Diameter
1	m=1.0	$\phi 1.57 \pm 0.05$
2	m=1.5	$\phi 2.36 \pm 0.05$
3	m=2.0	$\phi 3.14 \pm 0.05$
4	m=2.5	$\phi 3.93 \pm 0.05$
5	m=3.0	$\phi 4.71 \pm 0.05$
6	m=3.5	$\phi 5.50 \pm 0.05$
7	m=4.0	$\phi 6.28 \pm 0.05$

【Accessories】

- Weak Spring
- Strong Spring
- 7 Measuring Styli (for modules 1.0 to 4.0, in 0.5 increments)
- 1 Collar
- 1 Hexagon Socket Head Bolt (M8 × L25)
- 1 Hexagon Wrench, L-shape (Width Across Flats 6 mm)
- 1 Arm Position Adjustment Jig

4. Instructions for Use

[Names of Parts]



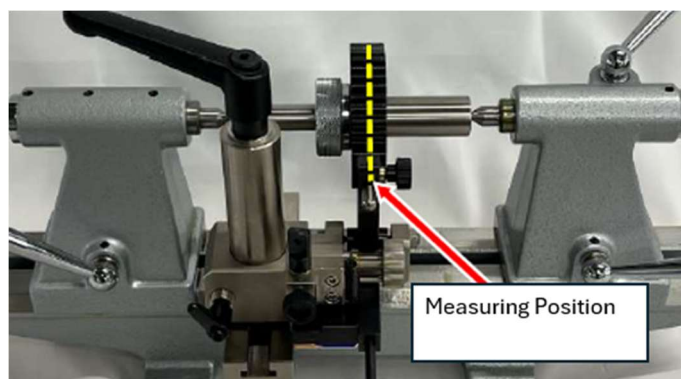
- (1) Select a measuring stylus and attach it to the measuring arm.

Make sure that the flange of the measuring stylus is in contact with the measuring arm, and tighten the knob securely.

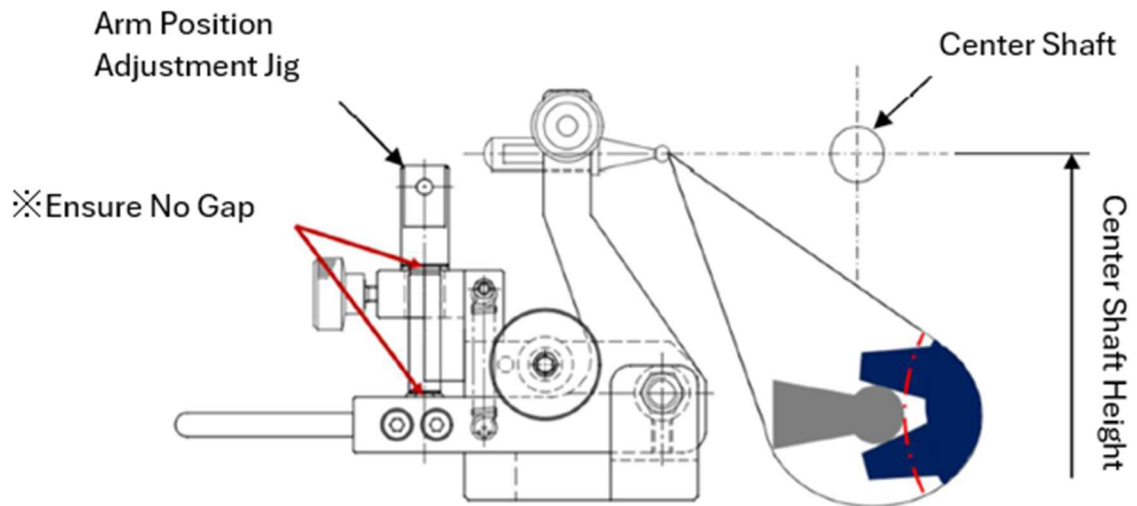


- (2) Attach the arm position adjustment jig to the dial gauge holder, and mount the workpiece on the deflection tester.

Move the attachment base so that the measuring stylus is aligned in a straight line with the measuring position.

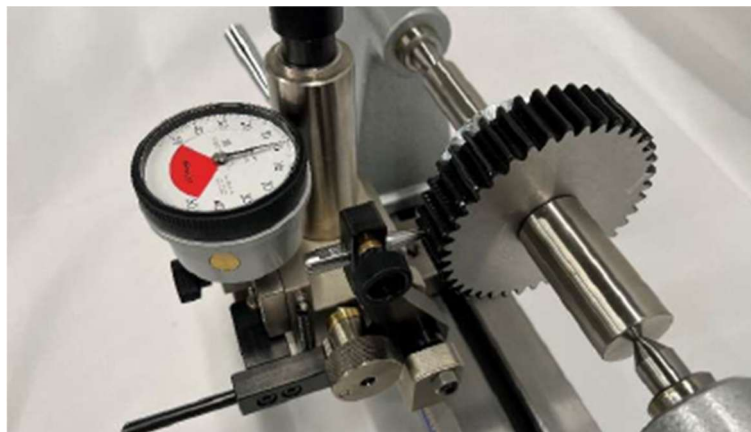


- (3) With the arm position adjustment jig attached, bring the measuring stylus into contact with the workpiece and make sure that the measuring arm does not move.



Note: By fixing the arm position adjustment jig, the center shaft height and the measuring stylus height are aligned.

- (4) Remove the arm position adjustment jig and insert the dial gauge.
Adjust the dial so that it indicates zero at the starting point, and then start the measurement.



5. Precautions for Use

- ① Before use, clean the attachment base thoroughly.
- 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 Make sure that the base of the deflection tester is free from scratches or rust.
- ⑥ Always secure the handles and knobs.
 - ⑦ Fix the column in alignment with the groove of the base.

The column fixing lever can be repositioned after tightening. Lift it upward to rotate.
- ⑧ Secure the measuring stylus firmly.
- ⑨ Do not place this instrument in locations subject to vibration or other similar conditions.
- ⑩ After use, always apply rust prevention treatment and store the instrument in its storage case.
- ⑪ 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.
- ⑫ Use the instrument only after regularly checking for any abnormalities.
- △ ⑬ If the product has sharp edges, handle it carefully to avoid injuring your fingers or other parts of your body.
- △ ⑭ Wear protective gloves and safety glasses as necessary to prevent injury while working.
- △ ⑮ Do not use this product if it is damaged or deteriorated, as it may cause injury or accidents.
- △ ⑯ If an injury occurs, give first aid immediately and seek medical attention if necessary.

Contact Information

JIS Certified Factory



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ISO9001 Certified (JQA-QMA11294)

Head Office and Factory

ISO9001
JQA-QMA11294

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).