# Angle Plate and Table Precision Angle Plate

# **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.

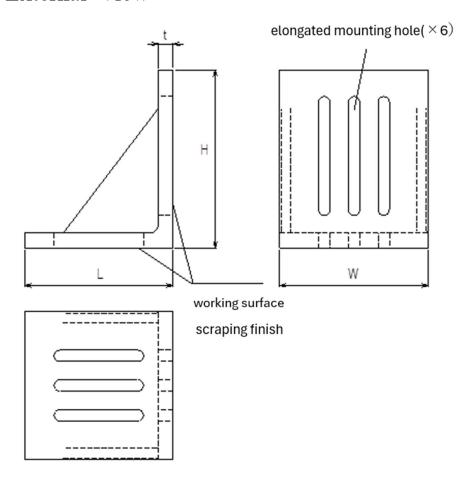
A Danger		This indicates situations where incorrect handling could result in imminent			
		risk of death or serious injury.			
⚠ Warning		This indicates situations where incorrect handling could potentially result in			
		death or serious injury.			
1 Caution		This indicates situations where incorrect handling may result in injury to			
		persons or only property damage.			
Examples of symbols	<u> </u>	The $\triangle$ 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.)			
	0	The o symbol indicates prohibited actions, with specific precaution described within or below the figure.  (The figure on the left is used for general prohibition notices without specifying particular actions.)			
	0	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.)			

## Precision Angle Plate Instruction Manual

## 1. Product Features

- The accuracy of the base surface and the vertical surfaces is ensured.
- · Both surfaces are finished by scraping, enabling high-accuracy machining.
- Long holes for workpiece mounting are provided on the base surface and the vertical surfaces, allowing the product to be mounted on a machine and used as a jig.
- Products of 200 mm or more are provided with internal supports for reinforcement. \*\*Production with special dimensions is also available.

## 2. External View



# 3. Specifications

Code No.	Nominal	$\begin{array}{c} \text{Size} \\ (\text{H} \times \text{W} \times \text{L} \times \text{t mm}) \end{array}$	The number of Slotted Holes	Squareness (μ m)	Mass (kg)
RA101	100	$100 \times 75 \times 75 \times 16$	2	7	1. 2
RA102	125	$125\times100\times100\times16$	3	8	2. 1
RA103	150	$150 \times 125 \times 125 \times 18$		9	3. 6
RA104	175	$175 \times 150 \times 150 \times 19$		10	5. 6
RA105	200	$200\times175\times175\times20$			9. 2
RA106	250	$250\times200\times200\times22$			17. 0
RA107	300	$300\times250\times250\times25$			24. 0
RA108	350	$350\times300\times300\times25$	4		38. 0
RA109	400	$400\times350\times350\times35$			70. 0
RA110	450	$450\times400\times400\times37$	5	15	87. 0
RA111	500	$500\times400\times400\times45$			107. 0
RA112	600	$600\times450\times450\times45$		20	160. 0

## 4. Instructions for Use

### Method of Mounting on a Flat Surface

- ① Fix the angle plate securely to the machine bed by using the elongated holes on the base together with locating pins and mounting bolts.
- ② Fix the workpiece either by placing it in close contact with the working surface or by using the elongated holes provided in the working surface.
- ③ After fixing, perform machining or measuring operations.
- ④ When mounting, check that the angle plate and the contact surfaces are free from dust and damage before operation.
  - \* Fig. 2 shows an example of how to use the angle plate.

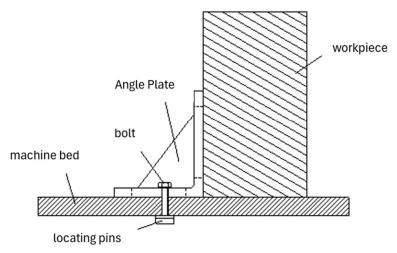


Figure2

#### Mounting on a Vertical Surface

- ① Temporarily fasten the angle plate to the mounting surface using the elongated holes and mounting bolts.
- ② Lightly place the contact point of the dial gauge stand, set on the reference surface, against the top surface of the angle plate.
- 3 Move the stand left and right on the reference surface and adjust so that the dial gauge readings match on both sides.
- ④ After confirming that the readings match, fully tighten the bolts and secure the angle plate firmly.
  - Be sure to check that the dial gauge readings match on both sides.
- (5) When mounting, check that the angle plate and the contact surfaces are free from dust and damage before operation.
  - Fig. 3 shows an example of how to use the angle plate.

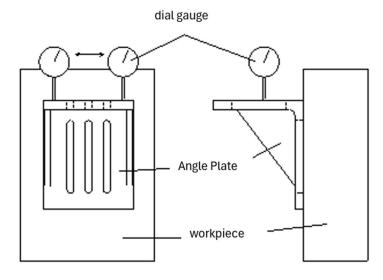
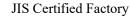


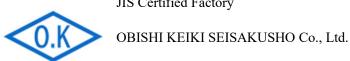
Figure3

#### 5. Precautions for Use

- ① Before use, please clean the measuring face and the measurement surface of the workpiece.
- ② When using or storing this instrument, handle it carefully 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 After use, always apply rust prevention treatment and store the instrument in its storage case.
  - ⑥ In the following cases, please check for any abnormalities in the instrument before use.
    - When the instrument has been dropped.
    - When an object has been dropped onto the instrument.
  - (7) If there are any scratches or damage, repair and inspection are recommended. Minor scratches on the measuring surface should be locally removed using an Arkansas stone or similar before use.
  - 8 Check the accuracy regularly and use the product.
- △ ⑨ For heavy products, ensure that two or more people handle placement and other operations, taking care to avoid injury.
  - ① Use cloth or nylon sleeves for lifting. Using hard materials such as metal chains or wires may cause scratches or cracks on the product and pose a risk of injury to the operator.
- △ ① If the product has sharp parts, please handle it carefully to avoid injuring your fingers or other parts of your body.
- △ ② Wear protective gloves and safety glasses as necessary to prevent injury while working.
- $\triangle$  13 Do not use this product if it is damaged or deteriorated, as it may cause injury or accidents.
- $\triangle$  If an injury occurs, provide first aid immediately and consult a physician if necessary.

## **Contact Information**





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#### ISO9001 Certified (JQA-QMA11294)

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).