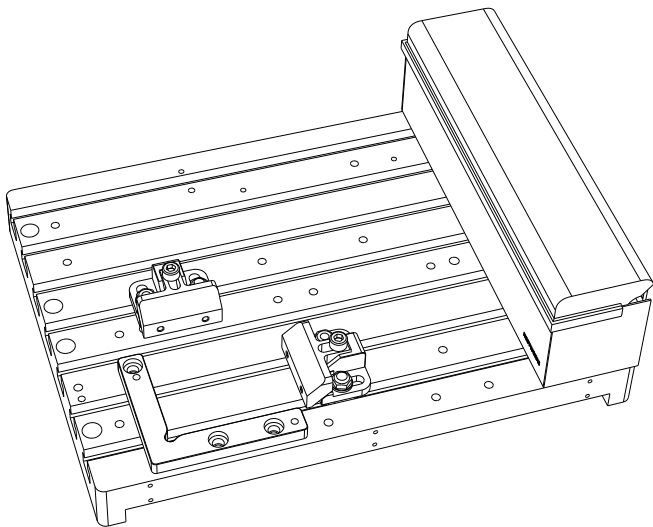


# **NestWorks**

## **Fixture Kit User Guide**

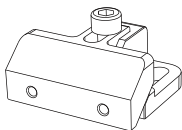




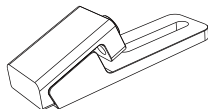
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## ■ Accessory List



OK Clamp



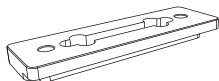
Side Clamp



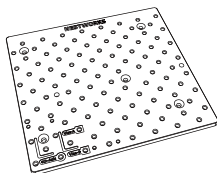
L-Shaped Locating Fixture 1



L-Shaped Locating Fixture 2



Flat Panel Clamp



Sacrificial Board - X-Axis

## Accessory List



Locating Pin



Flange Nut



Countersunk Screw



Hex Socket Wrench



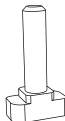
M6 x 12  
Hex Socket Screw

For OK Clamps,  
Side Clamps, and  
L-Shaped Locating Fixture 1



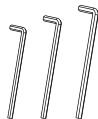
M6 x 20  
Hex Socket Screw

For L-Shaped Locating  
Fixture 2 Only



M6 x 20  
T-Slot Bolt

For OK Clamps  
and Side Clamps



3mm 4mm 5mm  
Hex Keys

**For flat panel clamps only, combine as required for sheet materials of different thicknesses**



M6 x 16  
Hex Socket Screw



M6 x 25  
Hex Socket Screw

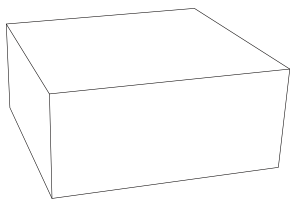


M6 x 25  
T-Slot Bolt

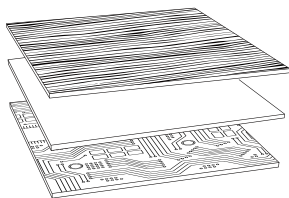


M6 x 35  
T-Slot Bolt

## ■ Materials



(A)



(B)

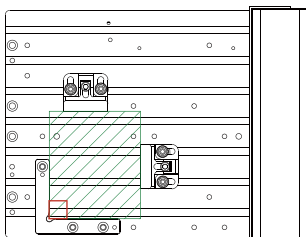
This fixture kit is primarily used to secure and clamp thin, lightweight workpieces, such as small sheets or hardware components, ensuring that they do not loosen or shift during engraving

A) Oversized square stock that is difficult to clamp in a vise

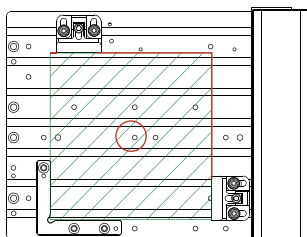
B) Thin sheet materials, such as PCBs, metal sheets, and wood panels

## ■ Centering

— Centering Probing Area



(A)



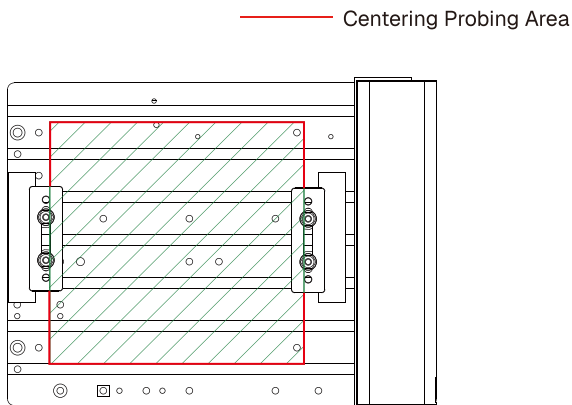
(B)

Centering is an important step that allows the machine to determine the dimensions of the stock. When selecting and clamping the material, make sure to leave enough space for the probe to take measurements

When Using the L-Shaped Locating Fixture

- A) If the lower-left corner is set as the workpiece origin, only the Z-axis height needs to be measured
- B) If the center of the workpiece is set as the origin, the X-, Y-, and Z-axis positions must be measured

## ■ Centering



(C)

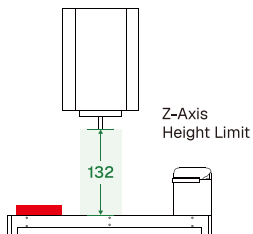
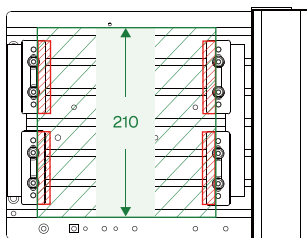
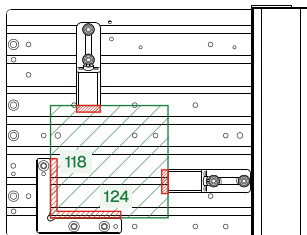
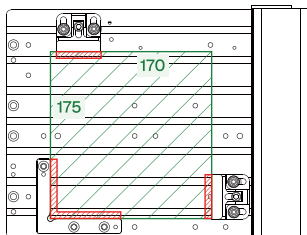
When Using the Flat Panel Clamps

C) Using the clamping setup shown below as an example

All four sides of the material must be probed

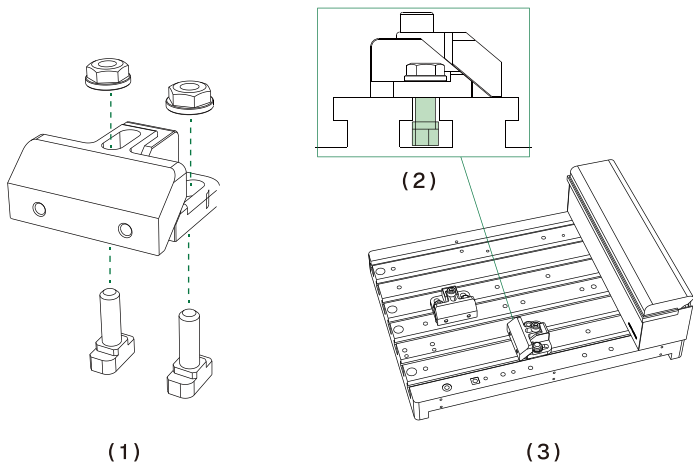
Measure the Z-axis height at any point

## X-Axis and Y-Axis Size Limits



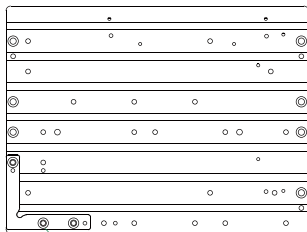
-  Maximum Machinable Area
-  Potentially Affected Machining Area

## ■ OK Clamp Installation

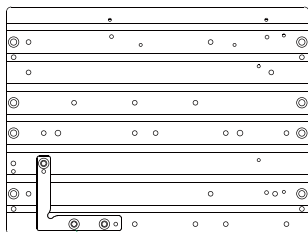


- 1) Pre-install the T-slot bolts and flange nuts on the OK clamp
- 2) Adjust the orientation of the T-slot bolts so that they can slide into the T-slot
- 3) Place the OK clamp in the T-slot and slide it into the appropriate position

## ■ L-Shaped Locating Fixture Positions and Restrictions



(A)



(B)

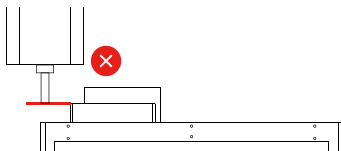
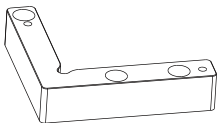
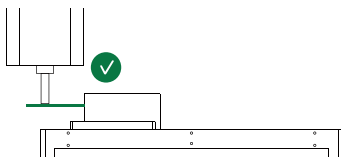
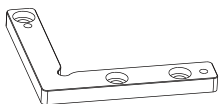
The L-shaped locating fixture has two installation positions, one for laser engraving and the other for CNC machining

All the following examples use the CNC machining setup

A) Laser Engraving 4th-Axis

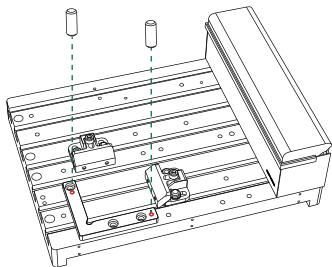
B) CNC Vise-B

## ■ L-Shaped Locating Fixture Positions and Restrictions

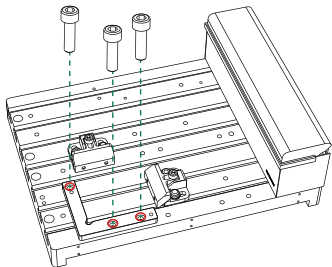


The following two sizes are available, users can select one for installation based on the **clearance required for the workpiece**

## ■ Fixture and Clamp Positioning



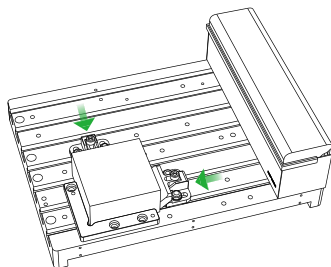
(1)



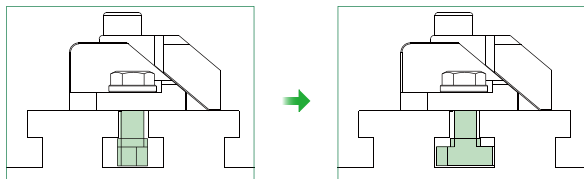
(2)

- 1) Install the locating pins for the L-shaped locating fixture
- 2) Install the hex socket screw for the L-shaped locating fixture

## ■ Fixture and Clamp Positioning



(3)

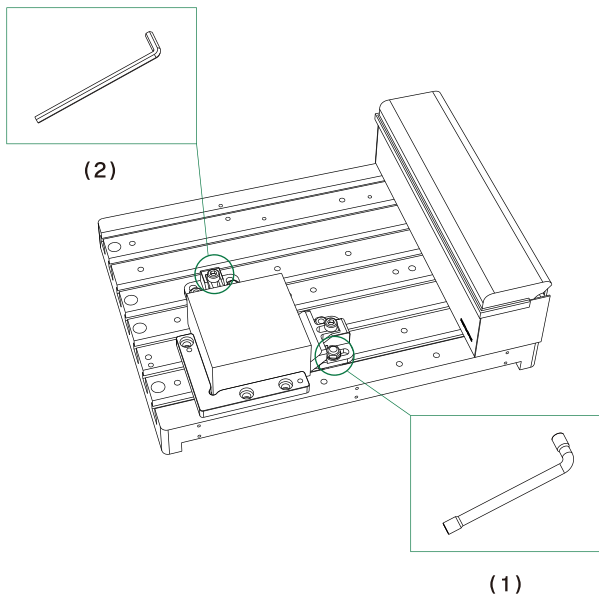


(4)

3) Place the workpiece blank on the worktable, make sure that two sides of the workpiece blank are flush against the inner faces of the L-shaped locating fixture, and position the clamp sliders as close to the workpiece surface as possible

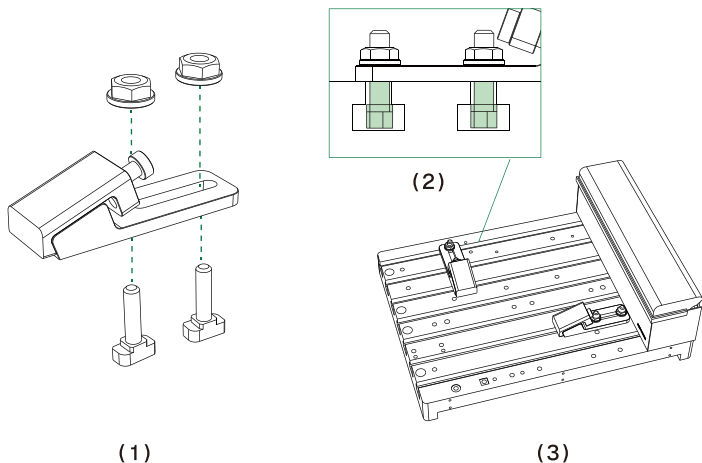
4) Rotate the T-slot bolts 90°

## ■ Final Tightening



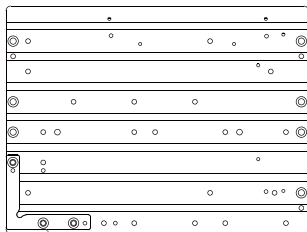
- 1) Use a hex socket wrench to tighten the flange nuts on the OK clamp
- 2) Use a hex key to tighten the locking screws on the OK clamp

## ■ Side Clamp Installation

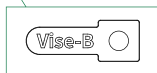
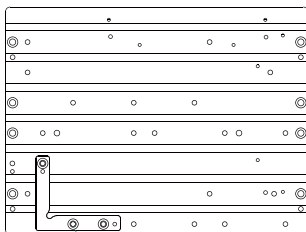


- 1) Pre-install the T-slot bolts and flange nuts on the side clamp
- 2) Adjust the orientation of the T-slot bolts so that they can slide into the T-slot
- 3) Place the side clamp in the T-slot and slide it into the appropriate position

## ■ L-Shaped Locating Fixture Positions and Restrictions



(A)



(B)

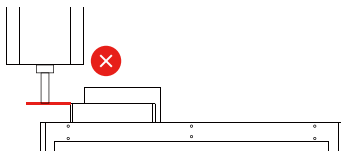
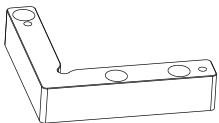
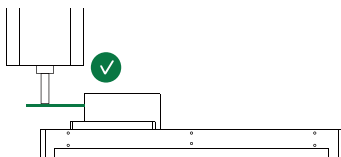
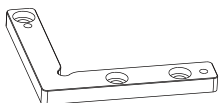
The L-shaped locating fixture can be installed in either of two positions, depending on whether laser engraving or CNC machining is performed

All the following examples use the CNC machining setup

A) Laser Engraving 4th-Axis

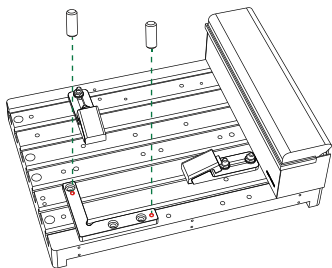
B) CNC Vise-B

## ■ L-Shaped Locating Fixture Positions and Restrictions

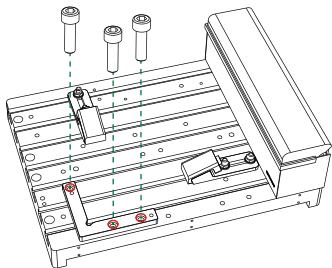


The following two sizes are available, and users can select one for installation based on the **clearance required for the workpiece**

## ■ Fixture and Clamp Positioning



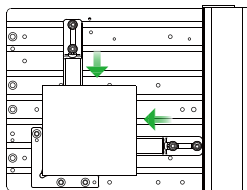
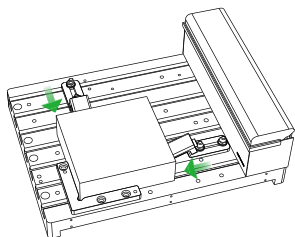
(1)



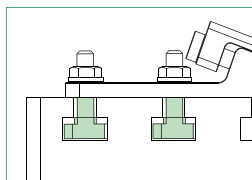
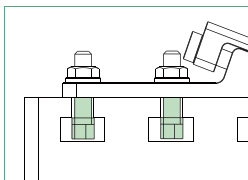
(2)

- 1) Install the locating pins for the L-shaped locating fixture
- 2) Install the hex socket screw for the L-shaped locating fixture

## ■ Fixture and Clamp Positioning



(3)

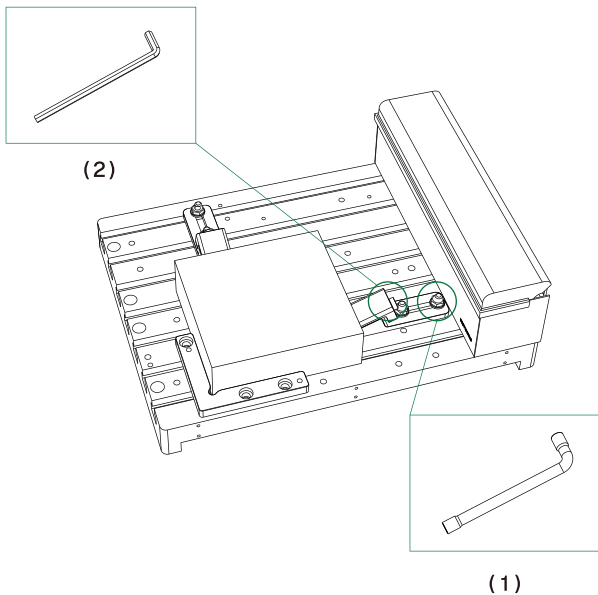


(4)

3) Place the workpiece blank on the worktable, make sure that two sides of the workpiece blank are flush against the inner faces of the L-shaped locating fixture, and position the clamp sliders as close to the workpiece surface as possible

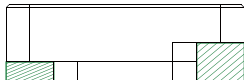
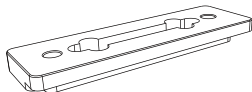
4) Rotate the T-slot bolts 90°

## ■ Final Tightening



- 1) Use a hex socket wrench to tighten the flange nuts on the side clamp
- 2) Use a hex key to tighten the locking screws on the side clamp

## ■ Flat Panel Clamp

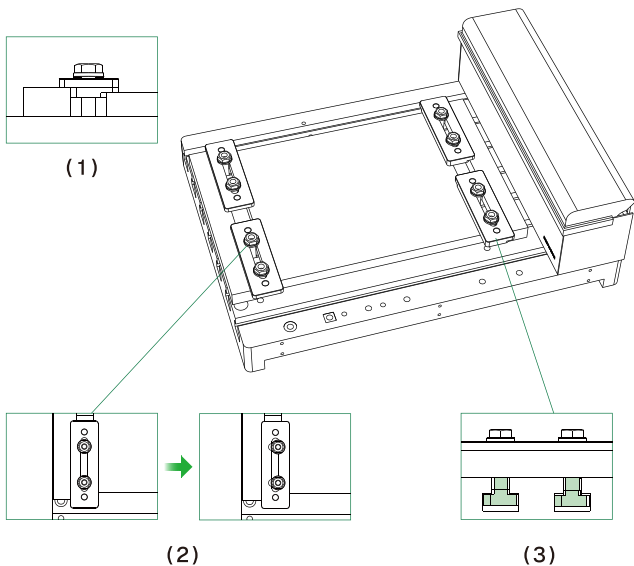


**Flat Panel Clamp** Flat panel clamps are suitable for machining applications involving large workpiece blanks and relatively high machining loads

Flat panel clamps can be used in various configurations, allowing users to select a suitable setup based on the dimensions of the workpiece and workpiece blank

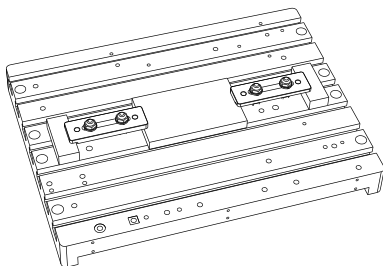
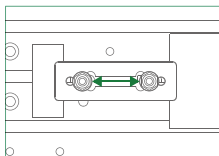
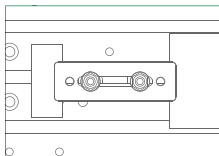
During installation, users must provide auxiliary spacer material based on the workpiece to be machined, the side with more clearance should always correspond to the thicker item, whether that item is the workpiece to be machined or the auxiliary spacer material

## ■ Flat Panel Clamp



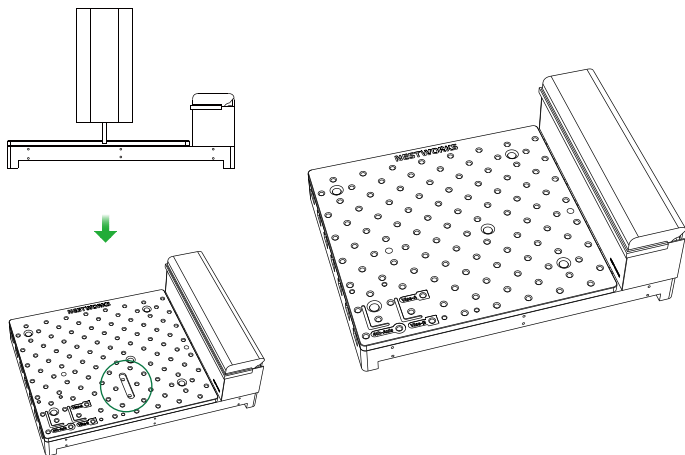
- 1) Ensure as much surface contact as possible between the flat panel clamps, workpiece, and auxiliary spacer material
- 2) Move the clamp plate so that the bolt enters the lateral locating half-hole in the clamp plate slot, with the bolt positioned closer to the workpiece
- 3) After installation, rotate the T-slot bolts 90 degrees, then use a hex socket wrench to tighten all the flange nuts

## ■ Flat Panel Clamp



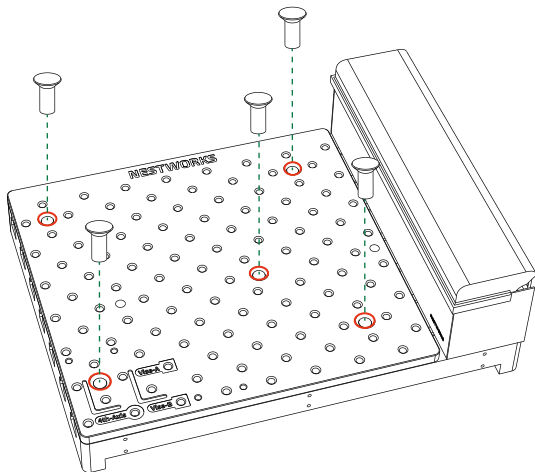
When the flat panel clamps are used horizontally, the T-slot bolts should be positioned near both ends of the flat panel clamps

## ■ Sacrificial Board – X-Axis



If through-cutting is required, users can use the Sacrificial Board – X-Axis supplied with the kit

## ■ Flat Panel Clamp

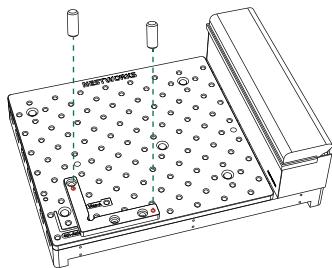


(1)

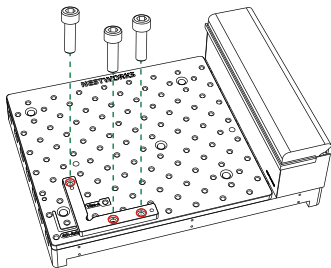
1) Use countersunk screws to install the Sacrificial Board – X-Axis on the worktable

The holes in the fixture plate have M6 threads, allowing the L-shaped locating fixtures, clamps, and flat panel clamps to be installed directly on the Sacrificial Board – X-Axis using M6 hex socket screws

## ■ Flat Panel Clamp



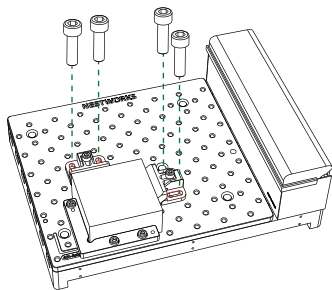
(2)



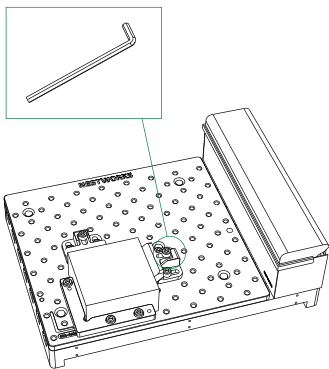
(3)

- 2) Align the holes in the L-shaped locating fixture with the corresponding CNC holes in the Sacrificial Board – X-Axis, then insert the locating pins
- 3) Install the hex socket screw for the L-shaped locating fixture

## ■ Flat Panel Clamp



(4)



(5)

- 4) Install the OK clamps directly in suitable positions on the fixture plate using M6 screws
- 5) Tighten the locking screws on the OK clamps



<https://docs.worksbase.com/en/home>

Visit the official NestWorks Wiki for more detailed  
machine usage tutorials.





