

SHAPER ORIGIN

Handheld CNC Router

6.6 kg

Ø 3 mm, Ø 6 mm and engraving

10'000-26'000 min⁻¹

Z-Travel: 43mm

Workpiece size: Unlimited



SAFETY RULES

- Make sure your workpiece is secured
- Do not change tools when spindle is moving
- Never touch moving spindle
- Always keep your hands away from the moving spindle
- No towels near moving parts
- No measuring or marking when machine is running
- Only clean the machine when turned off
- Never change the safety systems



- Safety goggles
- No baggy clothing
- No open hair
- No jewellery (Including watches and rings)
- No gloves



TERMS



TOOLS



4mm T Handle
Hex Wrench



19mm Wrench



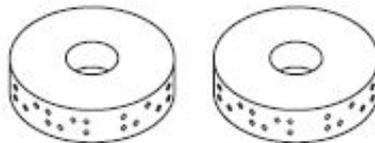
3mm Upcut
Router Bit



6mm Upcut
Router Bit



Engraving
Bit



ShaperTape™

WORKPIECE HOLDING

Shaper workstation

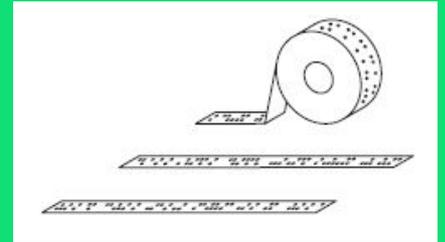


Fixed Plate

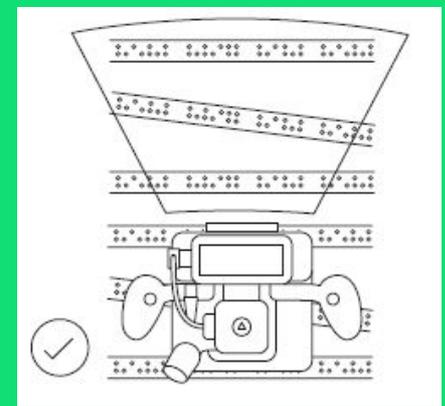


PREPARING THE WORKSPACE

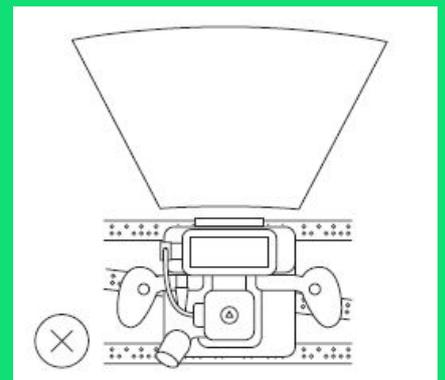
- Lay down shapertape on the work piece; The strips don't need to be parallel.
- Distance between strips should not exceed 8 cm.
- Only apply shapertape on the same plane as your cut surface!



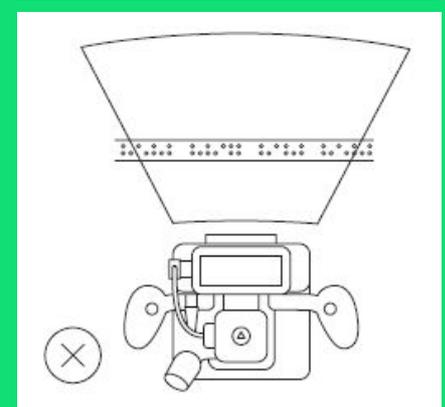
- Origin will operate correctly, as long as enough shapertape is in the field of view of the camera.
- It doesn't matter if there is shapertape beneath the spindle itself.



- Origin will not operate correctly if there is **no** shapertape on the camera field.



- Origin will not operate correctly if there is **not enough** shapertape on the camera field.

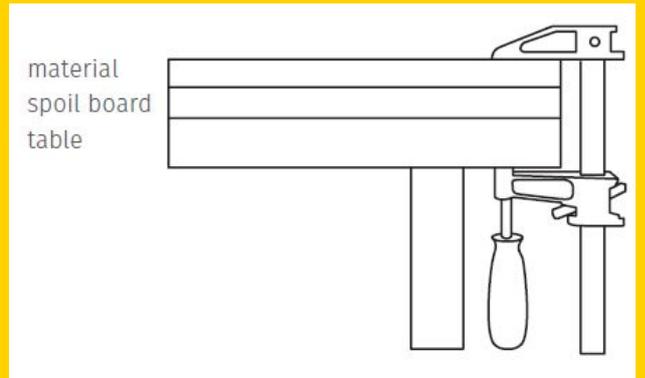


PREPARING THE WORKPIECE

- Make sure to fix your workpiece securely to the table
- Use a **minimum of TWO clamps**
- Make sure the clamps will not get in your way while cutting

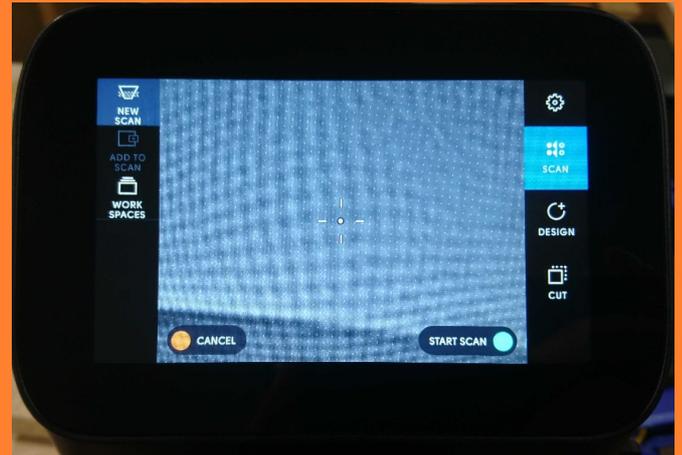


- If you want to do a through-cut, place a spoil board beneath your workpiece



SCANNING THE WORKSPACE

- Press [SCAN] on the right of the screen.
- Press [NEW SCAN] on the left and then [START SCAN].
- Move the router over your workpiece, do not tilt or lift it.
- Try to capture as much of the shapertape as possible as well as your work piece.
- Press FINISH when you are done.

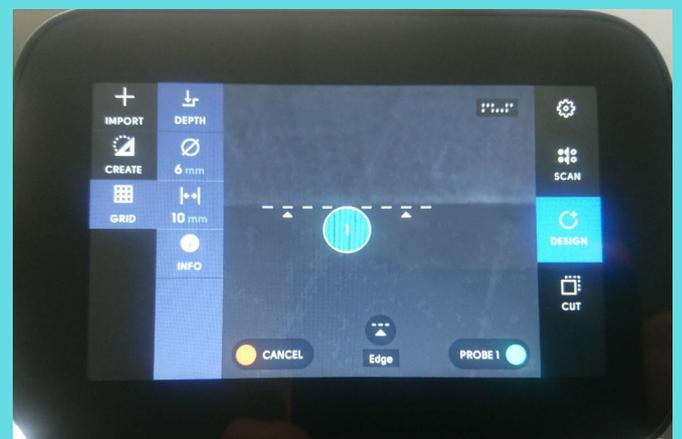
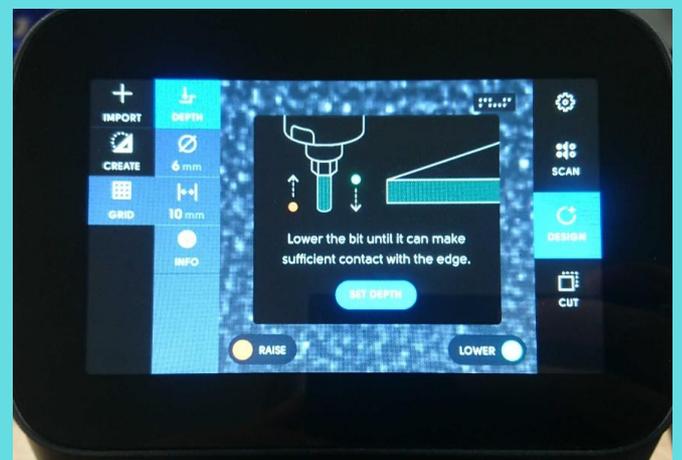


- The router will switch to the Design tab.
- To zoom out, tap the screen twice.



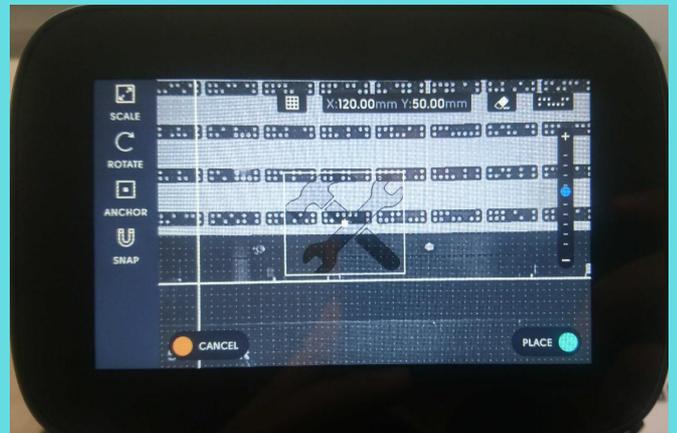
PLACING A GRID (OPTIONAL)

- The grid makes it easier to place objects.
- Press [GRID] on the left, then [NEW].
- The router will ask you to set the depth of the bit, check that the **size of your bit matches the size shown on the left**.
- Move the router to a place where the bit has clearance beneath it.
- Use the red and green buttons to raise and lower the bit until it can make sufficient contact with the edge
- Move the bit to the edge and touch it. **No force is needed!** Just touch the edge ever so slightly.
- Press the green button to confirm your first probe
- Repeat for the 2nd and 3rd probe, be careful **not to bump the bit while moving!**



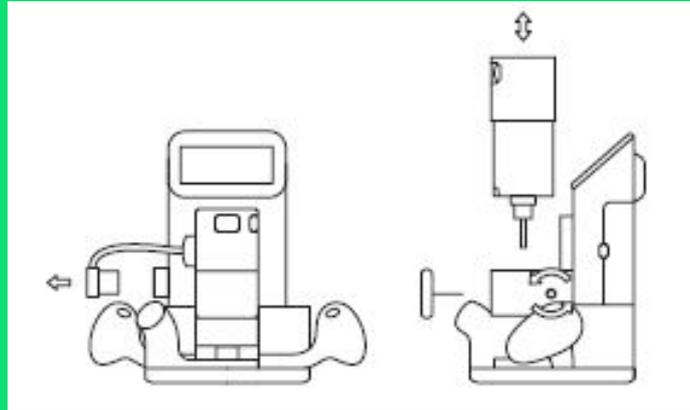
PLACING THE DESIGN

- Use the buttons on the left to either insert an object or draw a basic shape.
- Double tapping the screen will change the zoom.
- If you import an object you can scale and rotate it.
- To place it press the green button.



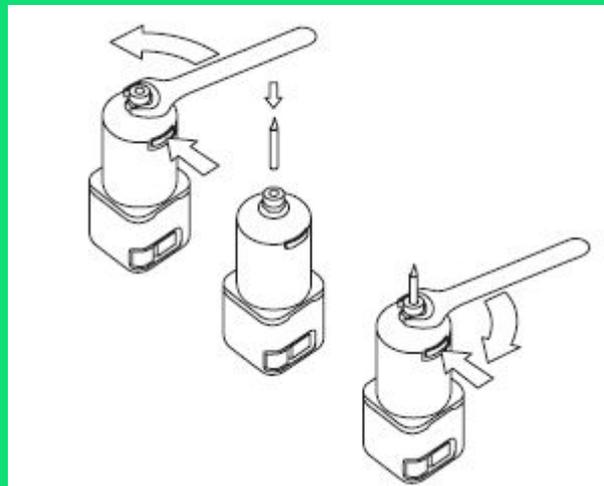
REMOVING THE SPINDLE

- Unplug the spindle
- Loosen the hex screw on the right side of the machine (½ turn should be enough).
- Carefully remove the spindle.



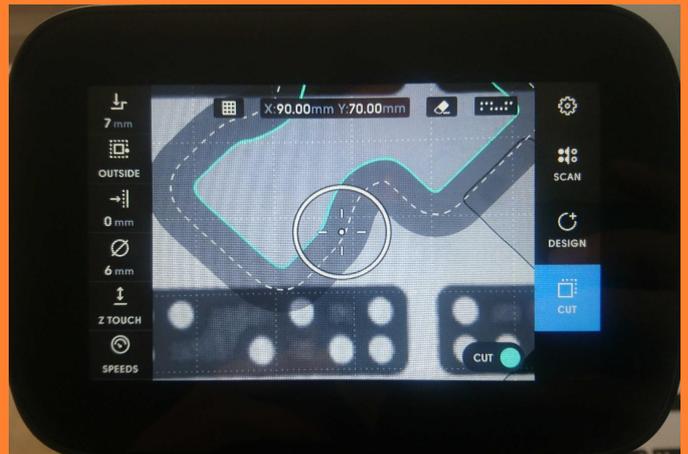
CHANGING ROUTER BITS

- Press to collet lock (a) while loosening (1) or tightening (2) the collect locking nut (b) with the 19 mm wrench.
- **Do not overtighten the collet locking nut.**

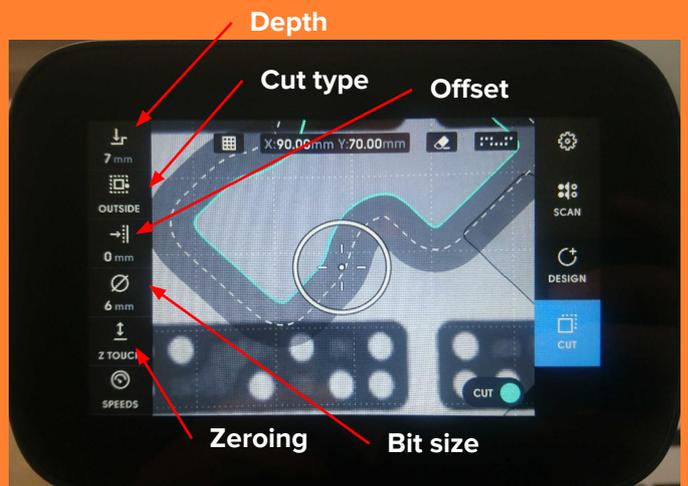


CUTTING

- In the cutting tab your design lines are green.
- The router shows the cutting path in grey.
- The moving dotted line shows the direction of cutting.

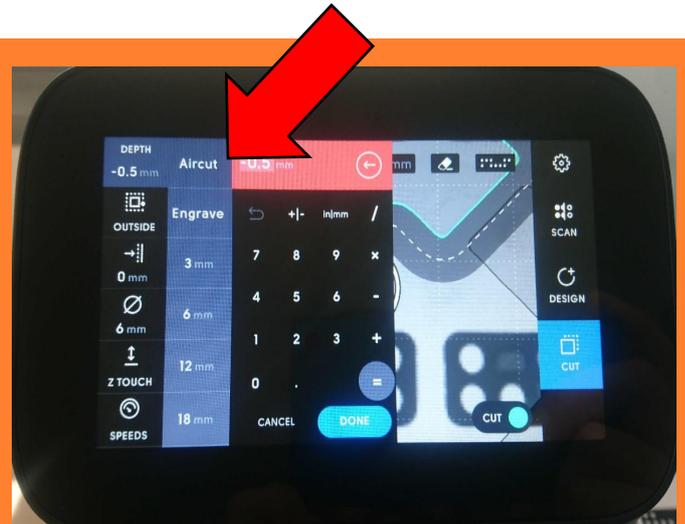


- Set the desired cutting depth; Maximum cutting depth for a single pass is equal to the diameter of the routing bit.
- Choose whether you want to cut inside, outside or on the design line
- Set the desired offset.
- Choose the right bit size
- Press Z TOUCH to zero the Z-Axis.

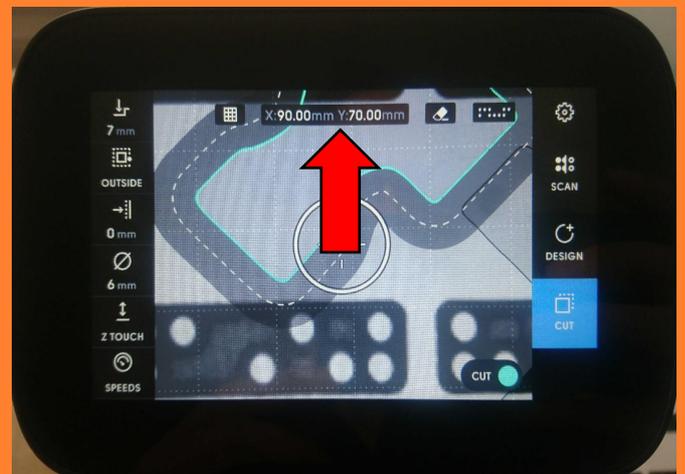


CUTTING

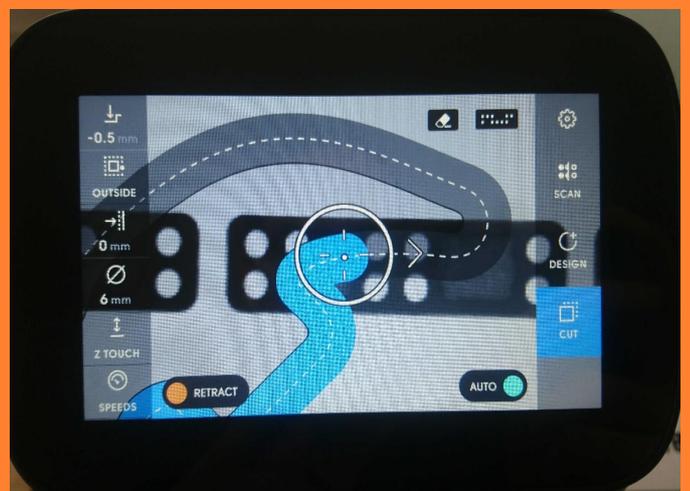
- Always perform a Aircut before the real cut.
- This is done by setting the cutting depth to “Aircut” and taking out the router bit; **DO NOT** turn on the spindle.
- Get used to the router this way.



- Move the cutting circle over the line you want to cut and press the green button.
- Move the router along the dotted line.
- The cutting progress will be shown in a blue overlay.



- Press the orange button after you finished your cut.



CUTTING CHECKLIST

- Right depth?
- Right cutting type?
- Offset?
- Right bit diameter?
- Did you do a Z-Touch after changing the router bit?
- Did you perform a successful aircut?
- Connect the vacuum and turn it on
- Turn on the spindle
- Start cutting

SAFETY RULES

- **Make sure your workpiece is secured**
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- **No measuring or marking when machine is running**
- **Only use the machine on flat planar surfaces**
- **Only clean the machine when turned off**
- **Never change the safety systems**