

Instructions for using the Disco DAD 320 dicing saw

First samples must be properly mounted using the photosensitive tape and ring mount provided (one large orange ring and a smaller blue ring). Each ring has an arrow on one surface to indicate directionality of the edge bevel. Cut a large piece of tape and remove the protective sheet, exposing the sticky surface. Place tape under orange ring with ring's arrow up facing up. Then place the blue ring underneath both the orange ring and the tape with its arrow also facing up. Apply pressure join rings together. Cut away excess tape outside of the ring and place sample in the center of the mount. The sample is now ready for dicing.

To operate the dicing saw

1. Turn on the compressed air.
2. Plug in the chiller and turn it on. Press start.
3. Turn the DI water on (valve behind the AFM desk).
4. Turn dicer on.
5. Set dice recipe.
6. Press "system init".
7. Press "Set up".
8. Place sample centered on the circular stage. Engage built-in vacuum pump.
9. Perform alignment.
10. Start cut.
11. Finish cut.
12. Close DI water valve.
13. Dry sample with N2.
14. Turn vacuum off.
15. Dry stage and enclosure with N2.
16. Turn spindle off.
17. Turn cut water off.
18. Clear the pressure in cut water lines.
19. N2 off.
20. Machine off.
21. Air off.
22. Chiller off.
23. Unplug chiller.

If an emergency stop is required press "Z EM"

Note: the dicing saw has two blades. One is for dicing semiconductors and the other is for everything else. Check with the cleanroom manager to ensure the proper blade is loaded for your job if you are unsure.

More information about the dicing saw parameters can be found in the accompanying user manual.

Miscellaneous Notes:

AS allows for more cut parameters. Most notably nonuniform cut spacing!

In the dice recipe set cut shape to SQUARE and add a safety factor (~ 1.02) to the substrate size to ensure the saw does not crash into a slightly misaligned sample.

CH1 - x

CH2 - y