Standart Operating Procedures for DISCO DAD 320 AUTOMATIC SAW

1. PLEASE CHECK IF APPROPRIATE BLADE IS WORN. If not, contact cleanroom specialists.

2. Open the water line as seen in the Picture. Please do not open the lines fully. Water pressure might be too much for the lines and cause water leakage.

3. Open the pressured air line by rotating the knob counter clockwise until you see a green dot where the red dot is.
4. If emergency button is pushed, rotate it clockwise to release. Then rotate the key clockwise to start the system.
5. When the system is ON press “SysInit” key to initialize the system.

6. When initialization is completed select your recipe by entering the number on blanks “CUTTING [Device no. _____]” and then press “F1” to continue. If you do not have a recipe you can press “F3” and create a new “device” as called in system or recipe or you can use device no “111” for general usage.

7. Now change the parameters for the required dicing process.

   **Cut mode**: In this mode the cutting starts from left to right There are different modes which are B, AS, BS, B ZKEEP, A UP, AS UP and BS ZKEEP

   **Cut Shape**: There are two options which are Square and Round. If the cutting is rectangle, use square option. Round is not possible in this machine

   **Spindle Rev**: The speed of the blade

   **Rnd Work Size**: The maximum work size is 150mm

   **Square Work Size**: The dimensions of the cutting area. The defined parameters are set for the blade cutting line. For example, if you want to cut 10 cm line on a silicon wafer, CH1 and CH2 should be higher than 10 cm for a complete cut

   **Work Thickness**: The thickness of the sample.

   **Tape Thickness**: Thickness of the dicing tape. This thickness is constant. **Do not change**.

   **Blade Height**: This parameter is critical which affects the depth of the cut through the wafer. Blade height is the height of the blade tip from the sample stage. For example, if
the blade height is 1 mm, it means that there is a 1 mm air gap between sample stage and the blade. Do not enter Blade Height below 0.11 mm, this is the minimum value which you can use.

**Feed Speed:** The speed of the stage during the cutting. If you type high value, the cutting process will finish shortly but blade life will decrease and you may ruin your wafer. The average value is 2 to 4 mm/sec. If you want to change, please contact the cleanroom specialist.

**Y index:** CH1 and CH2: it is the distance between the cutting lines

8. After all the parameters are defined, stick your sample as center of the holder as possible with the dicing tape. Cut the excessive parts of tape around the holder and make sure there is no bubble behind the sample. If there are some bubbles, it might break the sample and the blade.

9. Place the holder onto the chuck where the sample is also at the center of the chuck.

10. Press “C/T VAC” to vacuum the holder.

11. Press “F7” to continue.

12. Align the first line you want to cut by using “X” “Y” and “Θ” buttons to the dashed lines on the screen. Also you can use F4 button to align the rotation quickly. Dashed lines shows approximately the width of blade. It means after dicing dashed lined area will be gone. Make the alignment for this situation.
13. When the alignment is done enter the number of lines you want to cut and select the direction of repetition by pressing F5 or F10.


15. When dicing is finished press “C/T VAC” to get your sample.

16. Press “SPNDL” to stop blade rotating.

17. Press “EXIT” until the main menu.

18. Turn the system off by rotating the key counter clockwise.

19. Close pressured air and water lines.

20. Fill the logbook.