

Technics Asher Operating Instructions:

Note: No Magnetic materials allowed.

1. Enable in Badger
2. Turn the red "Power" button on (Figure 1)
3. Make sure the "Manual" mode is selected in the control panel (Figure 2).
4. Turn the pump (SOL'N) switch off (flip the switch to the bottom - "closed" position), and then the open the vent valve (toggle the vent switch to the top)

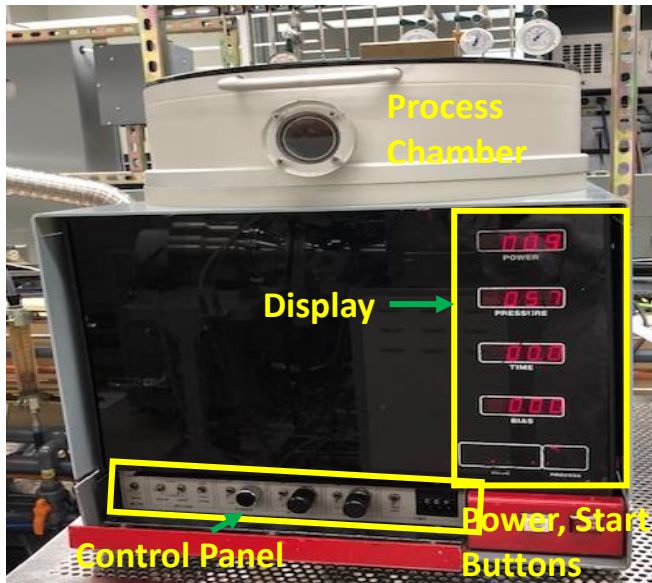


Figure 1: Technics Asher



Figure 2: Control Panel

5. Once the chamber is vented, the lid will pop open.
6. Load sample, close the vent valve and open pump while holding the lid closed.
7. Make sure that the wafer is loaded in the center. 5" quartz ring is provided to keep the wafer from moving around. Center the quartz ring in the chamber and place the wafer inside the quartz ring.
8. Check the MFC unit for flow control – Select Channel 5 and Manual Mode (Figure 3).
9. Set the flow to 37-38 sccm by moving eh knob to "set" position.
10. Adjust the flow using the knob labelled 5 to get to the set point.
11. Switch the readout to the "Flow" mode under "manual"

Thanks to Maha Yusuf for writing up the operating procedure.

12. Now you are ready to monitor the flow of O₂ (Gas 2 in the tool). The display will change once the gas starts flowing through the tool.



Figure 3 – MFC Unit



Figure 4 – Control Panel (Gas 2 for O₂)

13. Once the pressure reaches below 100mT, flip gas2 switch (at the left of the knob, Figure 4) to “On” position. The gas2 knob is left fully open and the the flow is controlled by the MFC unit.
14. The pressure will increase and then drop. With ~37 sccm flow, the pressure will stabilize at ~300mT.
15. Make sure the knob next to the power switch is turned all the way down (counter clockwise direction). Flip the power switch on and turn the knob to ~50W.
16. Start the stop watch to monitor time.
17. Note that the timer in the control panel or the start switch does not work in the manual mode. So, a stop watch is needed to keep track of process time.
18. At the end of the process, turn the “power” switch off and turn the power knob to zero.
19. Turn gas 2 off (control panel).
20. Turn pump off.
21. Turn vent on
22. Open chamber when vented and remove sample.
23. Turn vent off and pump on.
24. Once the chamber is pumped down, turn main power off and disable in badger.
25. Descum recipe: RF Power = 50W; Pressure = 300mT; Gas 2 Flow = 37.5sccm – Resist etch rate (1um 3612 resist baked for 2 min at 115C) = 336A/min; Unif = 1.5% (Nano measurement – 5 points)

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