

Bransen Plasma Asher Procedures

Revised 7/25/06

- Oxygen is the only gas used in this machine and it is used on Process Configuration 1. **Never use any other process configurations.**

Initializing

1. Verify that you have LOGGED IN and Booked this machine.
2. RF power should be off. Vacuum pump should already be on.
3. Turn on RF power and wait 5 minutes to warm up. RF 'Ready' light will shine when it is warmed.
4. Turn on controller and press Reset immediately to cease the alarm.
5. Switch the Purge button to Auto. Wait a few minutes for the chamber to pressurize to atmospheric conditions, which will be evident when the door releases.

General Use

1. Place Silicon wafer(s) in the quartz holder and gently place them inside the plasma chamber. **Do not touch the thermal probe, which is located inside the chamber.** If your substrate is not a standard Silicon wafer, then gently lay your substrate on the quartz grid inside the chamber. Close the chamber door and lock it.
2. **Make sure the 'Process 1' knob (located under the power meter) is rotated completely to the left.** If the knob is not in this proper position when plasma is lit, then the RF generator will be damaged.
3. Make sure **all** the Auto/Manual switches are set to 'Auto'.
4. Make sure **all** the other process configurations are set to Bypass.
5. Using the Program 1 settings: Choose the time or temperature switch. Set the value needed to limit the plasma etching.
6. Press the start button. The system will automatically pump down. After pump down, listen for a click. This indicates the chamber is prepared for applied power.
7. Slowly ramp the 'Process 1' dial to maximum of 600 W in the gage. **It should take 20 seconds to ramp to 600 W. Do not exceed 600 W.**
8. A timer will sound when the process is complete (when the set time or temperature has been exceeded). Press the Reset button and **return the Process 1 dial completely to the left.** Lift lock on the chamber door. The chamber will automatically vent.
9. After the door is released from vacuum, change the Purge switch from Auto to Manual.
10. Turn off the controller
11. **Turn off the RF Generator**
12. LOG OFF