

Standard Operating Procedure

Drytek RIE

The Drytek rie is a plasma system used for etching. A radio frequency of 13.56MHz breaks down the gaseous molecules into a plasma of reactive ions. Oxygen, Argon and CF4 are the gases plumbed to it now.

Pre-Start

Ensure you have scheduled the machine Make sure the cooling water and compressed air are turned on, located in the chase next to the Drytec.. The bottom right door must be closed before starting. Keep the bottom right door closed during operation. There is an interlock switch on the door that will turn the power off.

Operation

To Vent Chamber

Inside of the bottom left door move the *Vent Switch* down to vent the chamber. Open the upper right door.

Wait for 30 seconds then turn the *Lid Switch* up to lift the top of the chamber. Turn off the vent switch.

Load the wafer. The quartz plate can be removed if needed. The quartz plate may need to be centered over the lower electrode. Clean the "O" ring. Lower the chamber lid.

Select *Process 2*. Make sure the throttle valve controller reads Process 2. Press *Microreset* Press *Start* Wait for the timer to start. One may have to press *Start* again. Dial the needed parameters, power, gas flow, pressure etc.

Slowly dial up the RF power while watching for a plasma. Manually tune the RF cavity using 2 tuning switches located on the bottom right side of the machine. One must turn the RF meter to reflected power to do so.

After the run is finished. Turn off RF power, and gases.

Turn timer to zero to shut off.

When finished vent the chamber and raise the lid to remove your wafer. Leave the system under vacuum for the next user.