The Headway Spinners can be found at 2 bench locations in the cleanroom; the Photolithography bay and the Thermal bay along with hotplates.

Procedure:

1. Check to see that all of the spinners have their power on before you start. You will find a loss of vacuum at your energized spinner if any of the other spinners are off at your bench.

2. Check to see that all of the spinners have their VACUUM set to "AU" on the LCD display. You will find a loss of vacuum at your spinner if any of the spinners are set to "ON" without a substrate on the chuck to seal the vacuum. If any of these read "ON", you need to change it to "AU" by pressing the "Vacuum ON/AUTO" button at the control console.

3. Programming or verifying a programmed spin:

   a. We have tried to leave preset spin programs in labeled at each spinner, but anyone can change them so you need to at least go through and REVIEW the STEPS meet your spin parameters.

   b. Press "RECIPE" and type in the desired recipe number 0-9. If you know that this recipe is correct, you can move on to loading your sample and spinning. If you are not sure, you can verify or change your recipe by modifying the individual steps in the recipe.

   c. You can see the number of STEPs in a recipe by looking at the LCD on the control console.  
      Example: A "-3" means this recipe has 3 steps programmed.
4. To review or change a Program, press the "STEP" button and press "1" to see the first step of the program. The LCD will read "1-3" for the first step of a 3 step program.

   a. Press the "SPEED/RAMP" button to toggle between the respective SPEED and RAMP parameters. If you need to change a parameter, type in the new value you want and press "ENTER".

      Example: with SPEED showing type "500", press "ENTER". Keep all RAMP parameters below 2000 rpm/sec.

   b. Press the "STEP TERMINATE" button to view the time the spin parameter will be held. Again, if you need to change a parameter, type in the new value and press "ENTER".

      Example: 2 sec, press "ENTER"

   c. Press the "STEP" button and the next STEP NUMBER to complete your review or programming of the Spinner program.

      NOTE: Please remember to end your program with the last step at SPEED=0 RPM and a RAMP rate (Example: 2000 rpm/sec) and with time=0.0 s on the "STEP TERMINATE".

      Close your review or programming by Pressing "STEP", "0", and "ENTER".

5. Load your Substrate

Make sure your substrate will stick to the chuck with Vacuum. Center your wafer on the chuck and press the "Vacuum ON/AUTO" button at the control console so that it reads VACUUM "ON" at the LCD. Try to adjust your substrate on the chuck, if it seems to stick well you can move on to a test spin.

6. Spinning:

   a. Make sure your substrate is loaded, centered and that the vacuum holds substrate.

   b. Make sure the lid is down so you don’t get hurt if the substrate flies off.

   c. Get Ready for a TEST SPIN! This is where you spin the substrate with no material applied, just to make sure you really have vacuum.

Press the "GREEN" foot peddle button to start the program. You can press it again to skip to the next "STEP", if you would want to. The "RED" is an EMERGENCY STOP; it will stop your wafer fast!

6. Remove your substrate:

   a. Make sure your vacuum setting is showing "AU" or change it from "ON" to "AU" by pressing the "VACUUM" button on the control console.

   b. Remove your substrate from the chuck and move on to your hotplate.
7. Changing chucks

There are a number of chucks at the bench depending on your substrate. We have chucks for 4” and 2” wafers, along with a "glass" chuck with a single hole drilled in it for very small die. Just place this glass chuck on top of the 2" wafer chuck and use it as an interface for your die and small pieces.

8. Common reasons for vacuum failure:

   a. Your substrate is dirty or the chuck is dirty.
   b. One of the spinner controllers is off at your bench.
   c. Someone left the VACUUM "ON" at one of the spinners.
   d. During a chuck change someone lost an O-ring that goes inside the chuck.