This oven is for baking polyimide-coated substrates at the end of the spin coating process.

This oven is not to be used for any other purpose, nor is it to be used as a storage cabinet.

**This oven has a maximum baking temperature of 250 C.**

0. Open the oven to make sure nothing is inside. If there is, remove/discard. Remove the tray(s) and wipe down with IPA to clean, then place back into the oven.

1. If the oven is empty, turn on power at the front, left.

2. The oven will display two numbers. The lower number is the set point.

3. The top number is the current temperature of the oven. When the oven is turned on, it will automatically begin heating to reach the set point that is displayed.

4. Please do not remove the trays from the oven other than to load/unload substrates or to clean them.

5. Place substrates flat, inside the oven, on the tray(s), and then close the door and initiate the desired program.

6. To run a program*:
   a. Press Hold/Run button. LED flashes
   b. “File” : Use up and down arrows to select file 1,2,3 or 4
   c. “Mode” : “step” flashes. Use up and down arrows to select program number (1,2,3,or 4)
d. Press Hold/Run again to run the profile.

7. When the desired program is concluded, wait for the oven to cool down to under 100 C, then remove substrates from the oven, stop/reset the timer. Please do not remove the baking oven timer from this work station.

8. When you are done, turn the oven off.

For any questions or issues, please contact Bentley Wall 330-221-7048

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*The standard polyimide bake processes used in this room are:

<table>
<thead>
<tr>
<th>#</th>
<th>PI</th>
<th>Use</th>
<th>Type</th>
<th>Bake T</th>
<th>Bake time</th>
<th>pretilt</th>
<th>solvent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SE 2170</td>
<td>TN</td>
<td>Planar</td>
<td>200 C</td>
<td>30 min</td>
<td>2</td>
<td>21 (NMP, BC)</td>
</tr>
<tr>
<td>2</td>
<td>SE 1211</td>
<td>VA</td>
<td>Homeotropic</td>
<td>180 C</td>
<td>30 min</td>
<td>90</td>
<td>26 (NMP, BC)</td>
</tr>
<tr>
<td>3</td>
<td>SE 610</td>
<td>STN</td>
<td>Planar</td>
<td>230 C</td>
<td>30 min</td>
<td>4-5</td>
<td>21,23 (NMP, BC)</td>
</tr>
<tr>
<td>4</td>
<td>PI 2555</td>
<td>TN</td>
<td>Planar</td>
<td>275 C*</td>
<td>60 min</td>
<td>2-3</td>
<td>T9039 (MP, NMP)</td>
</tr>
</tbody>
</table>

* PI 2555 cannot be baked in this oven at the recommended temperature.

NMP = N-methyl-2-pyrrolidone  
BC = Butyl cellosolve  
MP = 1-Methoxy-2-propanol

There is a significant lag between temperature reading on oven controller and actual internal oven temperature, sometimes as much as 40C, for as long as an hour, before the oven reaches the temperature being reported by the controller. In order to guarantee that the polymides are baked according to desired schedule, it is sometimes more prudent to run the oven manually and not run the pre programmed files. To do this, preheat the oven to 90C. Flash off substrates on the hotplate as usual. Remove substrates from the hotplate and place into the oven on trays. When the last substrate has been placed in the oven, change the set point to the desired curing temperature, maybe even hotter by 10-20 C is you will be monitoring. Once the temperature is close to the set point, (change the set point to desired if it was programmed in hotter than desired), start a manual timer. Once the desired baking time has elapsed, change the set point to 20 C and crack the door slightly to increase cooling rate. Remove substrates below 100 C. Then turn off the oven.