

BSET OVEN MANUAL

SRO-700

OPERATING PROCEDURES

7.1 System Startup

Follow these steps to start up the machine:

- 1) Turn on the computer and open the **WinATV** program
- 2) Place a part into the process chamber and close the chamber.
- 3) Make sure pump is turned on (Press power button if necessary).
- 4) Turn on the BSET oven by pressing the green power button.

7.2 Creating the Recipe

Follow these steps to set the processes that the BSET will perform:

- 1) Go to File and press New in the **WinATV** program to start a new recipe
- 2) On the screen, select any bar(s) you want to run during the current step to enable that process. Select a bar again to disable it during that step.
 - a. $MVR_1 N_2$ and $MVR_2 N_2$ turn on the nitrogen, $MVR_3 HCOOH/N_2$ turns on the etching chemical, *Vacuum* turns on the vacuum, and *Max Cooling* cools the chamber
- 3) Drag the line marking the end of a step in the graph to adjust the length of time that the step is run for as well as the ending temperature of that step.
- 4) Click into another column of the graph to create or adjust that step of the process
- 5) **Note:** Make sure to allow cooling of the chamber during the last step to allow safe removal of the part afterwards

7.3 The Process




Follow these steps to start and finish the process:

- 1) Go to the Device tab in the WinATV program and press Start to send the recipe to the machine.

Use the arrow keys on the machine to navigate to the desired recipe

- 2) Press the  play button to start the selected process

- 3) During the process:

- a. Press the  pause button, followed by the enter button to pause the process.
- b. Press the  stop button, followed by the enter button to abort the process
- c. Press the  skip button, followed by the enter button to skip the rest of the current step and move to the next step

- 4) Once the chamber is safe (Cooled to a reasonable temperature and purged of dangerous chemicals using the nitrogen gas), remove the part from it.

7.4 Analysis

Follow these steps to analyze the graph data created by the machine:

- 1) You can analyze the performance of the machine through any of the following methods:
 - a. Activate the Main Temperature graph to see how the temperature (in degrees Celsius) changes over time
 - b. Activate the Setpoint Temperature graph to see how the temperature (in degrees Celsius) is set to change over time
 - c. Activate the Monitor TC Temperature graph to see how the temperature (in degrees Celsius) of the monitor temperature controls change over time
 - d. Activate the Safety TC Temperature graph to observe how the temperature (in degrees Celsius) of the safety temperature controls change over time.
 - e. Activate the Rough Vacuum Pressure graph to see how the pressure (in mbar) changes over time
 - f. Activate the Deviation Other graph to observe how much the actual temperature (in Kelvin) deviated from the set temperature (Also in Kelvin) over time
 - g. Activate the Heater Zone 1 Power Zones graph to observe how the zone 1 heater lights respond over time

- h. Activate the Heater Zone 2 Power Zones graph to see how the zone 2 heater lights respond over time

7.5 The Shutdown

Follow these steps to shutdown the machine:

- 1) Turn off the pump (Press power button)
- 2) Press the red power button on the BSET to turn it off
- 3) Close the **WinATV** program