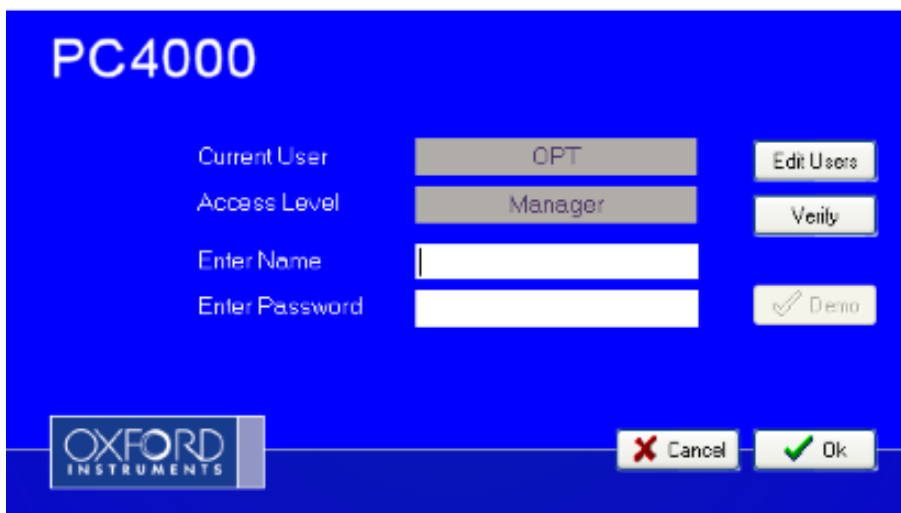


Oxford RIE NGP80

Logging On and Off:

1. Type your account user name in the Enter Name field.
2. Type your account password into the Enter Password field. Passwords are case-sensitive.




3. Ensure that the Demo button is NOT selected
4. Click Verify.
5. If the information entered is correct, the login status is displayed in the Current User and Access Level fields.
6. Click OK. The PC4000 application now loads and displays the Pump Control page or the Production page, depending on your access level.
7. If the login information is not verified correctly, re-enter your name and password and click Verify.

Opening the Process Chamber:

Warning: Toxic Gases – After a processing run, the process chamber must be subjected to at least two vent cycles. Wear personal protective equipment as necessary.

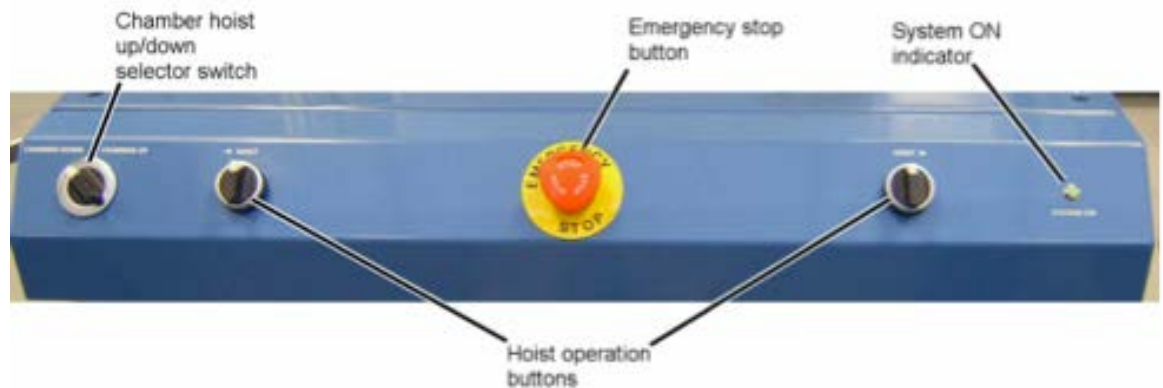
1. If toxic, corrosive, or flammable gases have been used in the chamber, perform at least two pump/vent cycles. Leave the system pumping for an adequate time (about 20 minutes) before proceeding.

2. Click the “circular” Home Icon 
3. Select the Pumping menu option – pumping page opens

4. Click Stop in the Chamber Panel



5. Click Vent. The system automatically operates the appropriate valves to vent the chamber.
6. Wait until the Vent Time left field in the Chamber panel displays zero time, indicating that the vent sequence has completed.
7. Check that the Process Interlock field on the page displays the Fault, which indicates that the chamber vacuum switch has changed status.
8. Set the <Chamber Hoist Up/Down Selector> switch on the console panel to <Chamber Up> Position.



9. Turn both hoist buttons simultaneously. The chamber lid will raise and rotate. If compressed air has just been applied to the system, turn the buttons briefly and release them, as the hoist may move rapidly when the buttons are operated.
10. When the chamber lid has completed its travel, release both hoist buttons. It is permissible to halt the hoist travel part way and then to resume travel, or reverse its direction. If the substrate table is heated, avoid touching it.
11. Load Wafers.

Closing Process Chamber:

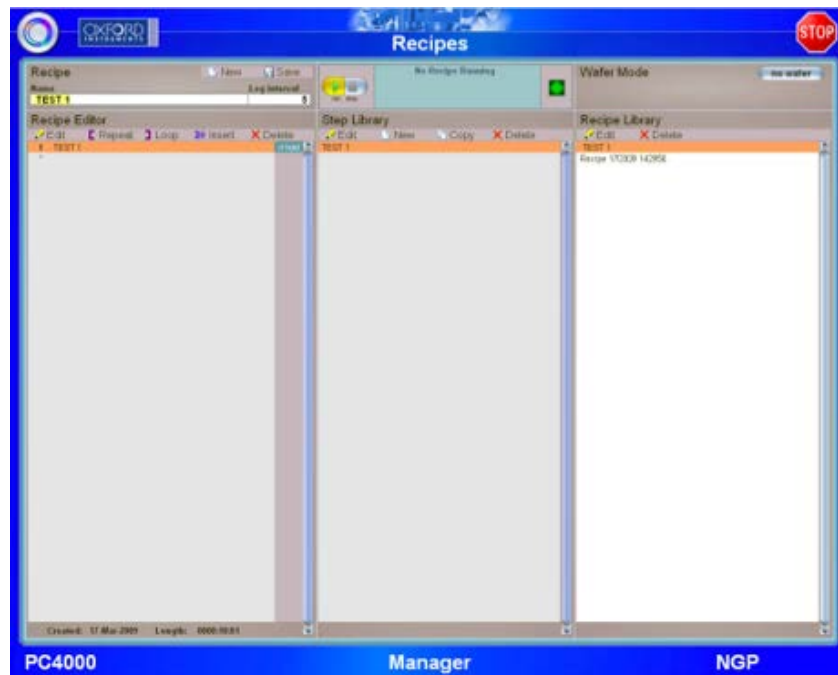
1. Set the <Chamber Hoist Up/Down Selector> switch on the console panel to <Chamber Down> position.
2. Check that nothing can impede the motion of the hoist and that all other personnel are clear of the chamber.

3. Turn both hoist buttons simultaneously. The chamber lid will rotate and close. If compressed air has just been applied to the system, turn the buttons briefly and release them, as the hoist may move rapidly when buttons are pressed.
4. When the chamber lid has completed its travel, release both hoist buttons. It is permissible to halt the hoist travel part way and then to resume travel, or to reverse its direction.

Single Button Automatic Process Run:

This section describes a single button automatic process run, which allows a complete process to run automatically once the wafers have been loaded into the chamber.

1. Check that the following conditions are true:
 - a. The system is started up, with all vacuum pumps running
 - b. The process chamber is vented
2. Open the chamber lid (as described before)
3. Place process wafer on the table
4. Close the process chamber lid (as described before)
5. Evacuate the process chamber
6. Click on the “circular” home button
7. Select Recipes Menu option. The Recipes page opens



8. Find the required recipe from the list in the Recipe Library panel.
9. Drag the recipe into the Recipe Editor panel.

10. Inspect the list of recipe steps in the Recipe Editor panel to confirm that the correct recipe has been loaded.
11. If running a recipe without loading a wafer, click No Wafer. The color of the button changes to yellow to confirm that it has been selected. The No Wafer button might be selected if testing a recipe or running a clean recipe.
12. Click Run, this initiates the following automatic sequence:



- a. The Process Control page is displayed to allow you to monitor the progress of the run.
 - b. The process chamber is evacuated
 - c. When the process chamber reaches its base pressure, the process starts
13. To pause the process at any stage, click pause on the Process Control page. This immediately switches off the plasma RF power and stops the step time at its current value.
 14. To restart the process, click pause again. This switches on the plasma RF power and restarts the step timer from its current value.
 15. To stop the process, click Stop. This causes the process to abort and resets the step timer to zero. The message Process Complete is displayed. It is then possible to run the same process or a different process, if required.
 16. Wait until the process has completed, then click the “circular” Home Icon.
 17. Select the Pumping menu option. The pumping page opens.
 18. Vent the process chamber
 19. Open the process chamber lid and remove the wafer
 20. Repeat the steps in this section to process further wafers
 21. When all wafers have been processed, evacuate the process chamber

Manual Process Run:

Because a manual process run does not use a recipe, the operator should monitor the process parameters during the run.

1. Before running a manual run, check that all conditions are true:
 - a. The system is started up with all vacuum pumps running

- b. The process chamber is vented
2. Open the chamber lid (as described before)
3. Place the process wafer on the table
4. Close the chamber lid (as described before)
5. Evacuate the process chamber and enter the wafer identity, then click the “circular” home icon.
6. Select the Process menu option. The process page opens.
7. Enter the parameters required for the manual process run (ie. Step time, RF generator power, gas flows, chamber pressure, etc.
8. Click Run. This starts the process run.
9. Visually check that the plasma strikes within a few seconds. If the plasma does not strike, find and correct the cause.

Warning

In the absence of plasma: Do not run the system for any length of time with RF power but no plasma, otherwise permanent damage to the equipment may occur.

10. Monitor the progress of the process run from the Process page



11. To pause the process at any stage, click pause on the Process Control page. This immediately switches off the plasma RF power and stops the step time at its current value.
12. To restart the process, click pause again. This switches on the plasma RF power and restarts the step timer from its current value.

13. To stop the process, click Stop. This causes the process to abort and resets the step timer to zero. The message Process Complete is displayed. It is then possible to run the same process or a different process, if required.
14. When the process has completed, the system automatically evacuates the chamber at its base pressure. If required, another manual process can be run.
15. Once all processing has been completed, vent the system. However, if any toxic or hazardous gases have been used in the previous process, the system must be evacuated and purged.