**User Manual - Oxford Cobra**

⚠️ Restrictions and Precautions ⚠️

THIS EQUIPMENT IS MICROELECTRONIC COMPATIBLE
Pyrex, float glass or any “fancy” metal (Cu, Cr, Au, Fe, Ag…) require CMi staff agreement BEFOREHAND

1. Activate tool on access control system

   a) Logon on the access control system in zone2.
   b) On the tool, the control software is PTIQ. It should be open. But the interface is locked (auto logout after 30min when inactive). On the drop-down list, select EPFL user and enter the password “1”.

2. Loading and starting an etch process

   a) On Automatic tab, Batch View, click on Loadlock Vent. When the loadlock is at atmospheric pressure, place the wafer on the arm, main flat facing towards the chamber and parallel to the wall.
   b) Top right of screen, select Actions, “Process” for Type. Pick the recipe you want to run from the drop-down list.
   c) A Batch ID is required to be able to Run the recipe

   Time edition is done “on the fly”, only after the wafer is in the chamber and the process has started. See next step 3.e
Note: If etching with CF₄ or SF₆ chemistry, tick the “Clean chamber” box for the last wafer of your batch, and select the recipe called “Chamber Clean O2 no wafer”

3. Etching

a) In the Manual tab, Transport, wafer position status can be confirmed. Actions for safe Pump, Vent, Load, Unload are available.
b) Move to Manual tab, Cobra300 #1, in order to confirm tool status on top of screen
c) Top right of screen, select Recipe
d) When on phase *Delay for laser adjustment*, and if applicable, move the laser on your spot of interest with the joystick. When done, click the *Skip phase* button to go next step.

e) Wait for the tool to reach the etch phase that is *after Stabilisation*. It is when you need to *CHANGE Step time* and *Apply* in order to edit process time “on the fly”.

![Effective remaining time is only visible on central tool status and is marked with an asterisk * to confirm new timer is engaged.](image)

f) EPD curves, if not visible on screen, can be activated ON/OFF by changing the view of bottom part of the chamber with the icon:

![EPD curves icon](image)

g) Etch can be stopped anytime by clicking the *Skip phase* button.
4. Leaving the tool

a) On Automatic tab, Batch View, click on Loadlock Pump.
b) Logout EPFL user from PTIQ software.
c) Log out on the access control system in zone2.

5. Optional Plasma Cleaning

If needed, chamber cleaning can be performed before/after the etching session:

a. load a clean silicon wafer.

b. From Automatic tab, Batch View, top right of screen, select Actions, “Batch” for Type and run the recipe called “2 steps clean SF6 then O2”