

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

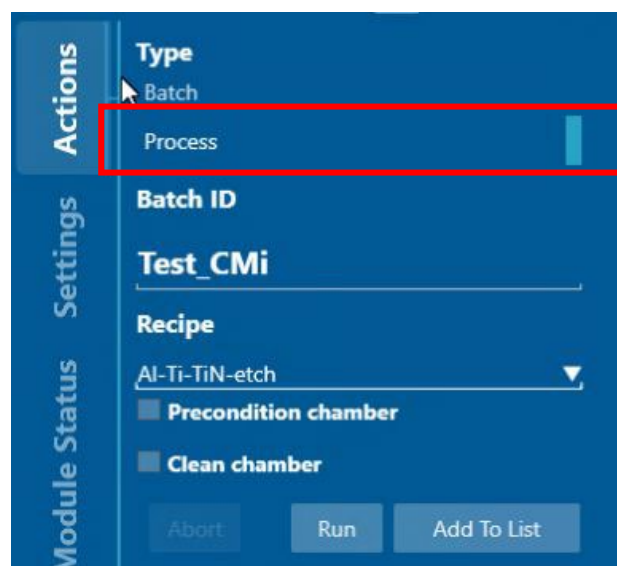
- Logon on the access control system in zone2.
- On the tool, the control software is PTIQ. It should be open. But the interface is locked (auto logout after 30min when inactive). On the drop-down list, select **EPFL user** and enter the password “1”.

2. Loading and starting an etch process

- 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.
- Top right of screen, select **Actions**, “**Process**” for **Type**. Pick the recipe you want to run from the drop-down list.

- 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**

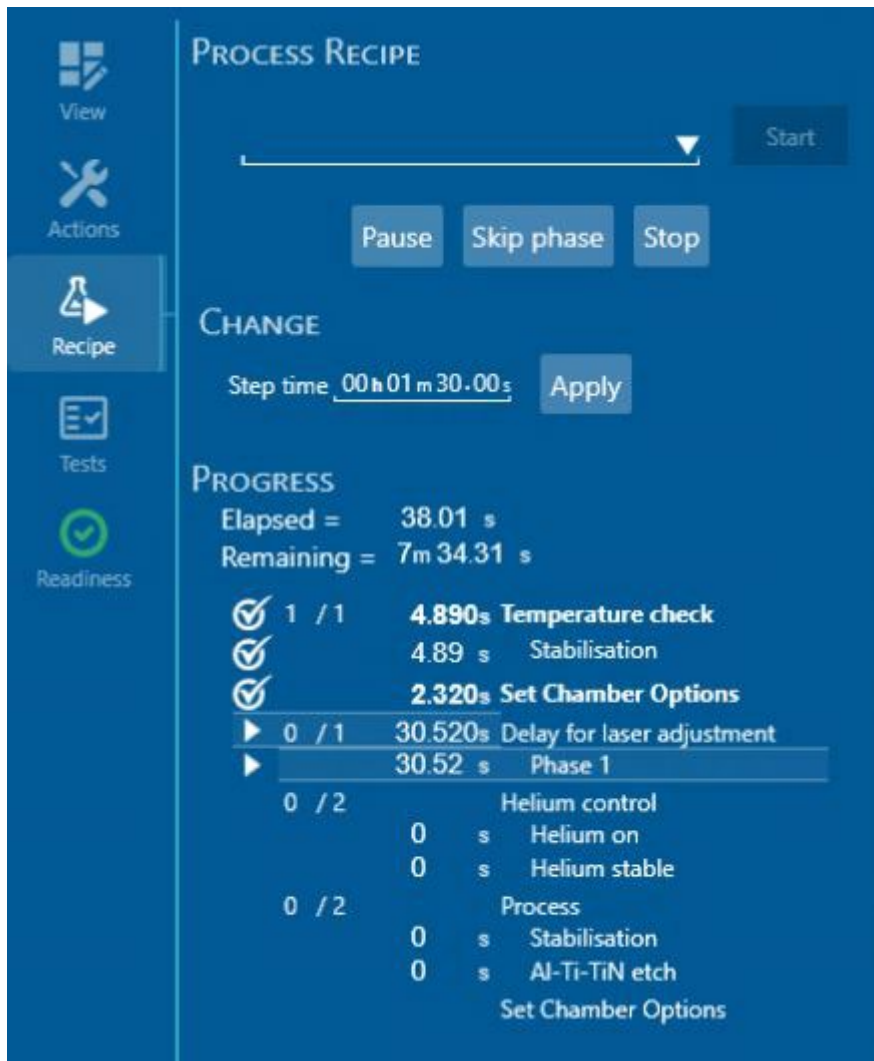


Note: If etching with CF₄ or SF₆ chemistry, tick the **“Clean chamber”** box for the last wafer of your batch, and select the recipe called **“Chamber Clean O2 no wafer”**

3. Etching



- In the **Manual** tab, **Transport**, wafer position status can be confirmed. Actions for safe **Pump, Vent, Load, Unload** are available.
- Move to **Manual** tab, **Cobra300 #1**, in order to confirm tool status on top of screen
- Top right of screen, select **Recipe**



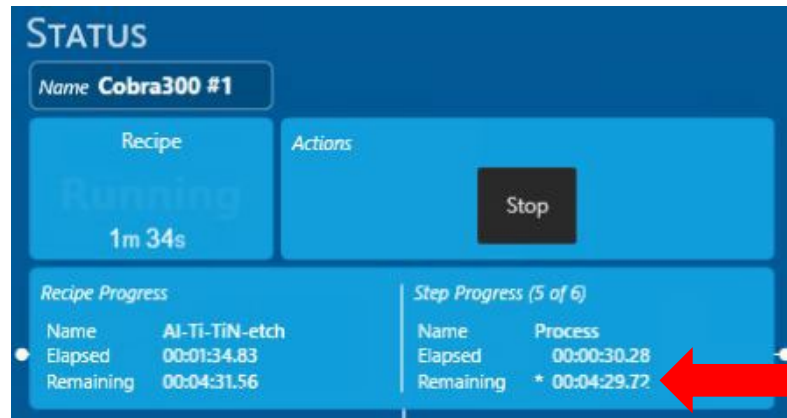
- d) When on phase **Delay for laser adjustment**, and if applicable, move the laser on your spot of interest with the joystick. When done, click the **Skip phase** button to go next step.
- e) Wait for the tool to reach the etch phase that is after **Stabilisation**. It is when you need to **CHANGE Step time** and **Apply** in order to edit process time “on the fly”.




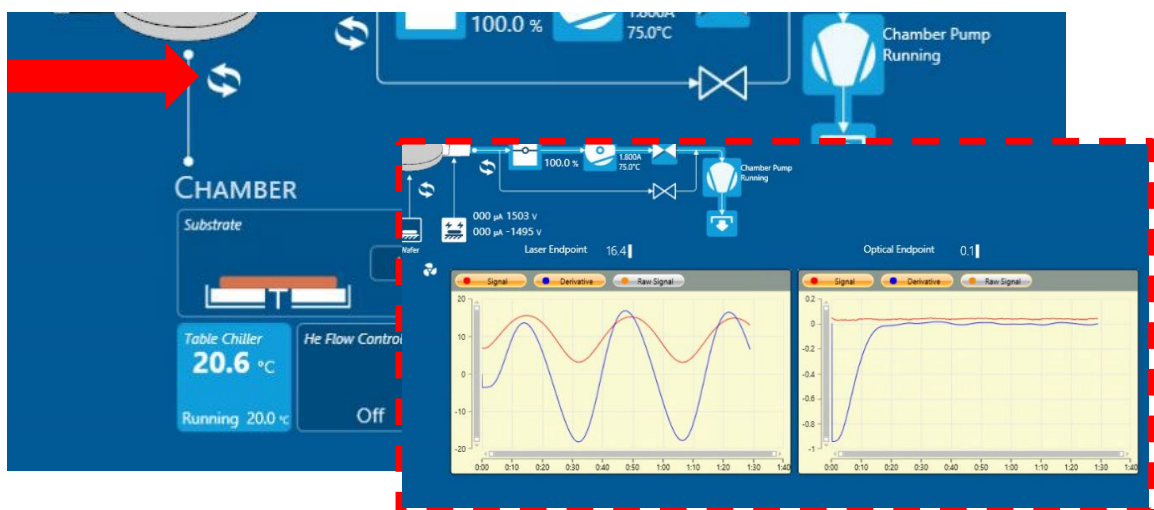
Effective remaining time is only visible on central tool status and is marked



with an asterisk * to confirm new timer is engaged.



- 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:



- 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"**

