

# Laurell & Präzitherm Coater Line User Manual

Version of 2016-12-12. Get the latest one at <http://cmi.epfl.ch/photo/files/Laurell/Laurell.std.manual.pdf>

## 1. Introduction

This user manual explains how to operate the Laurell & Präzitherm coater line for the coating and drying/curing of non-photosensitive thin films.

## 2. Login

- Login on "Z13 Laurell Manual Coater for non-photosensitive Films" with CAE on zone 13 accounting computer.

Z13 Laurell Manual Coater for non-photosensitive Films

## 3. Präzitherm Hotplate Settings

- Two hotplates are available for baking/curing of the films. One is equipped with a cover and can be baked under N2 flow/atmosphere.
- Make sure the Präzitherm hotplate controllers are turned on. If not, turn them on.



- The Präzitherm hotplates can operate in two modes:
  - Fixed temperature mode = "Regler"
  - Ramped temperature mode = "Rampenreg. Programmer"

**WARNING: Maximum hotplate temperature is 350°C.**

- Select the preferred operating mode using the appropriate switch.



### 1) "Regler" mode:

To adjust the temperature in this mode, maintain the "blue" button pressed and adjust the temperature set-point with the "up" and "down" arrows. Wait until the temperature is stable.

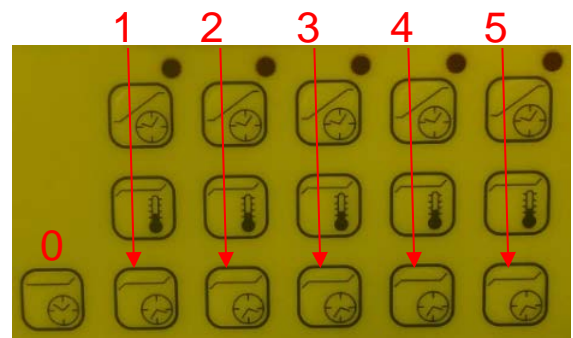


### 2) "Programmer" mode:

- In "Programmer" mode, users can edit three programs. Press "P1", "P2" or "P3" to select these programs.




- Each program can hold a maximum of 5 steps (ramp time + wait time each). Edit each steps of the program by maintaining the corresponding buttons and adjusting with the arrows. Temperature ramps will be linear up to the temperature set-point.



Ramp time [hr.min] = 

Temperature set-point [°C] = 

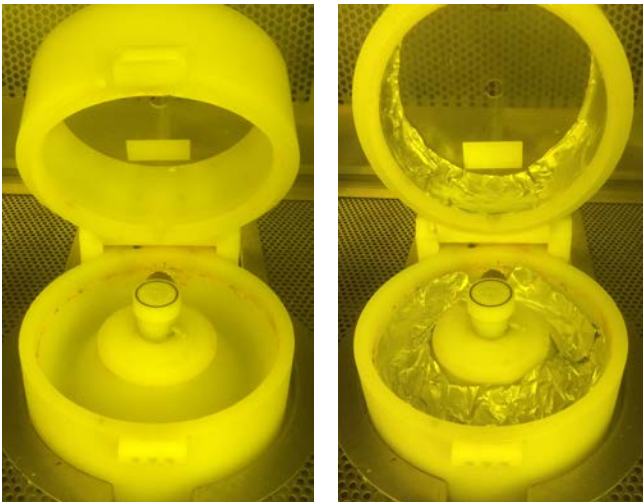
Wait time [hr.min] = 

- To start the selected temperature program, press "START".

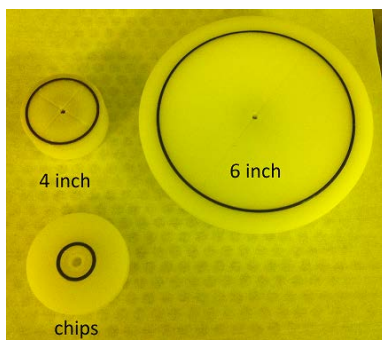


#### 4. Laurell Coater Preparation

- To keep the equipment in a good state and to make sure no cross-contamination occurs between individual processes, users are responsible to install aluminum foils in the bowl and to remove them at the end of the coating process. **Make sure to wear a second pair of nitrile gloves during preparation or cleaning of the coater unit!**



- Verify that the proper chuck is installed. Two chucks are available on the system: 1) 4inch wafer chuck (default), 2) 6inch wafer chuck. A small adaptor ring is available to handle small chips.



#### 5. Coating Operation

- On the Laurell coater controller, press on the "SELECT PROCESS" key. Each process is identified by the RPM of the main coating step.



- Select the process using the "up" and "down" arrow key.



- Press the "RUN MODE" key.



- Put the wafer on the chuck. **Make sure it is correctly centered!** Activate the vacuum suction with the "VACUUM" key.



- Dispense the material to be spinned at the center of the wafer using the disposable pipettes or manually. 2-3 ml are sufficient for a 4inch wafer.
- Close the coater lid.



- Press the "START" key to execute the coating process.



- Repeat for each wafer.

**Warning: Recipes are edited by the CMI Staff. Do not edit them!!**

## 6. Laurell Coater Cleaning

- When finished with the coating, remove all aluminum foils from the coating bowl and put them in the dedicated waste bin. **Make sure to wear a second pair of nitrile gloves during preparation or cleaning of the coater unit!**
- Clean the working place properly.
- When done, logout with CAE on zone 13 accounting computer.