

Nanonex Imprint machine

The aim of this document is to remind the user
the way the machine works.

It **DOES NOT** replace any of the manufacturer's
instructions / user manual.



1. Do not attempt to open the door during the process. If one wants to stop the process and/or remove the sample, please click “skip imprint” and/or “abort” to stop the process, and wait for the process to finish.
2. At the end of the process, please wait to see the message “to begin a new process, load your sample...” first, then you may open the door.

Pre-operation

Operation

Parameters

Alignment

Turn off

A - Membranes

B - Process

C - An example of imprint process

1. Pre-operation

1. Insert the key and turn it to ON position.



2. Open the N₂ cylinder and adjust it to 550 PSI.
The cylinder located in the chase right behind the machine.



Open the valve.

Do not touch this one!

Make sure the pressure gauge is on 550PSI.



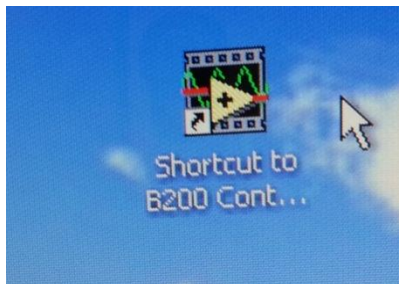
House nitrogen supply is stable (for low pressure N₂), pressure at 90 PSI.

3. Turn the vacuum pump on. The switch is here -

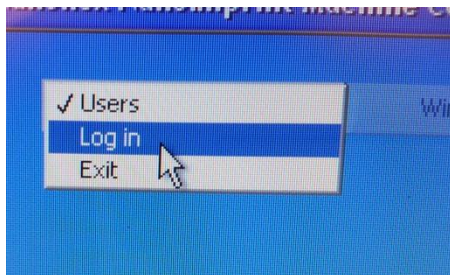


2. Operation

1. Click here



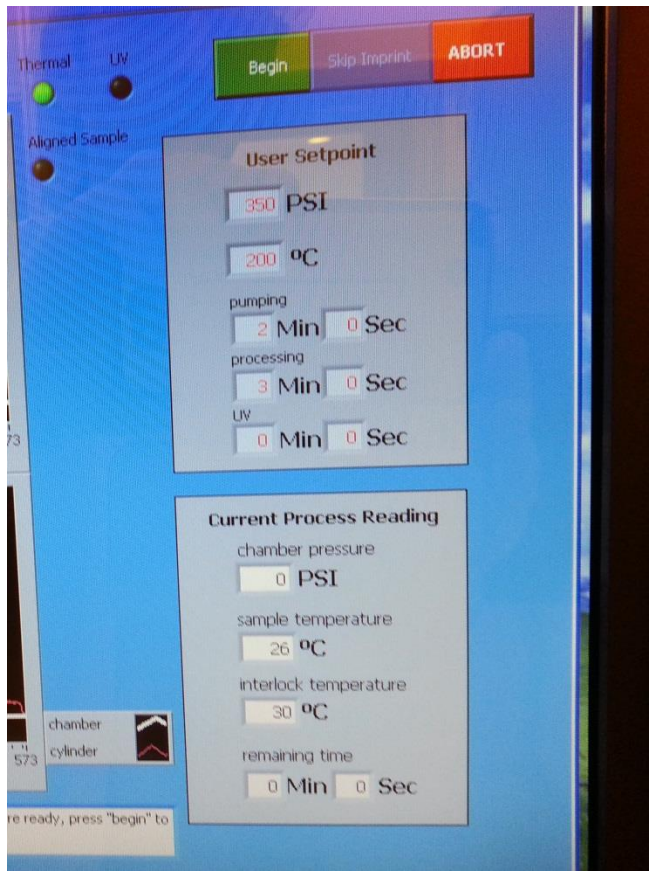
2. Log in:



Username and password: test

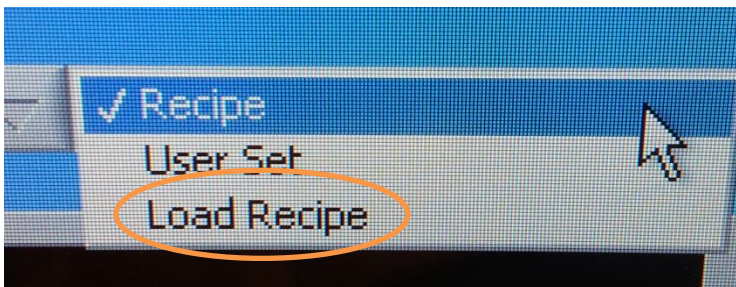
You can now place the mold and substrate inside (Refer to section 4: "Alignment") or adjust the parameters.

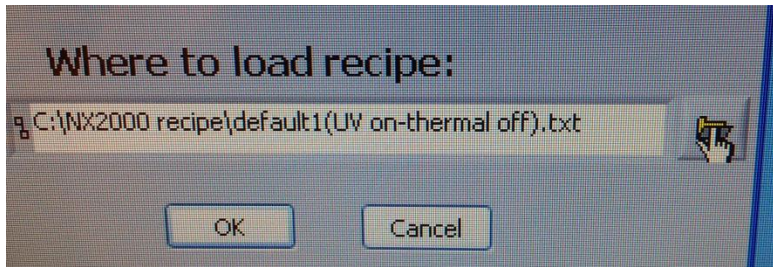
3. Adjust pumping time, temp., pressure and UV (if needed).



The pre-imprint is not so important but imprint dose!

Saved recipes can be loaded by "Load Recipe":





3. Parameters

It's better to work with high pressure. The N2 cylinder provides up to 550 PSI, adjust the machine up to 500 PSI.

Adjust the pump to 2-3 min.

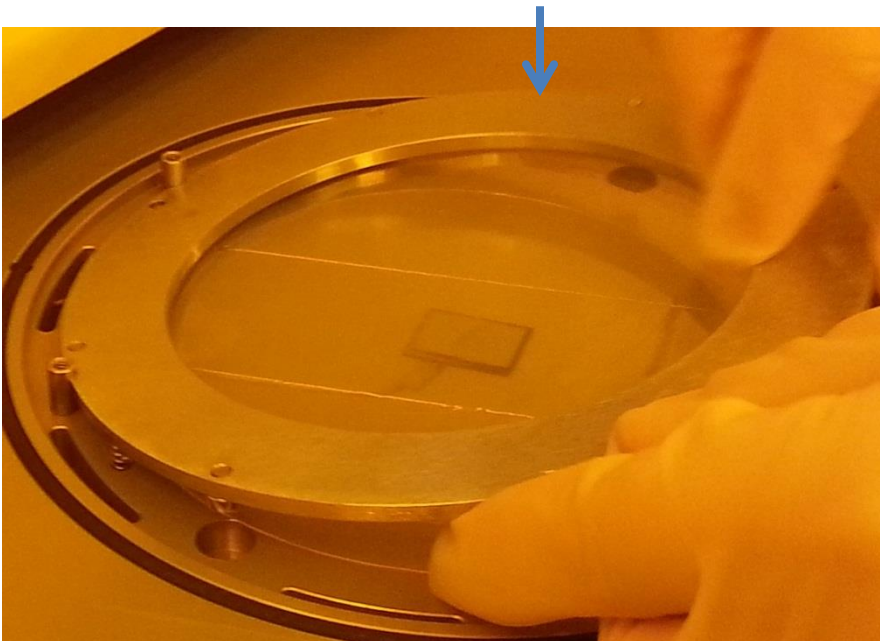
4. Alignment

The machine doesn't have an alignment mode.

Place the mold on (or under) the substrate.

According to Nanonex technician, the mold should be smaller than the substrate.

Open the drawer and take the ring out.



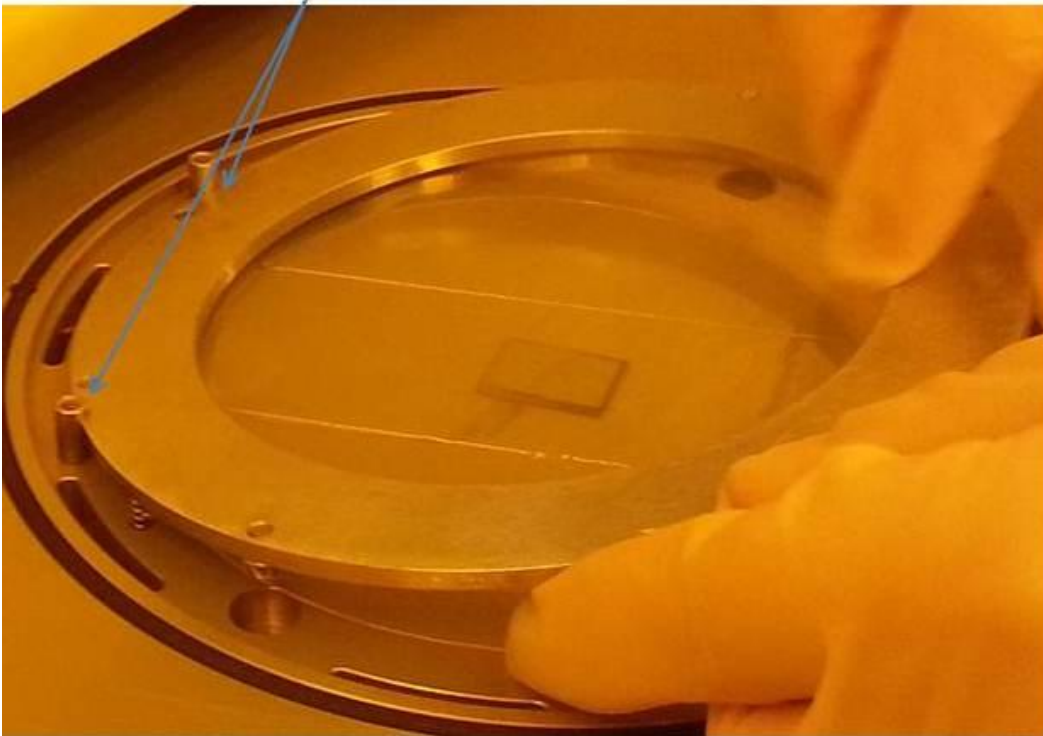
Make sure the membrane is tight and located at the center.

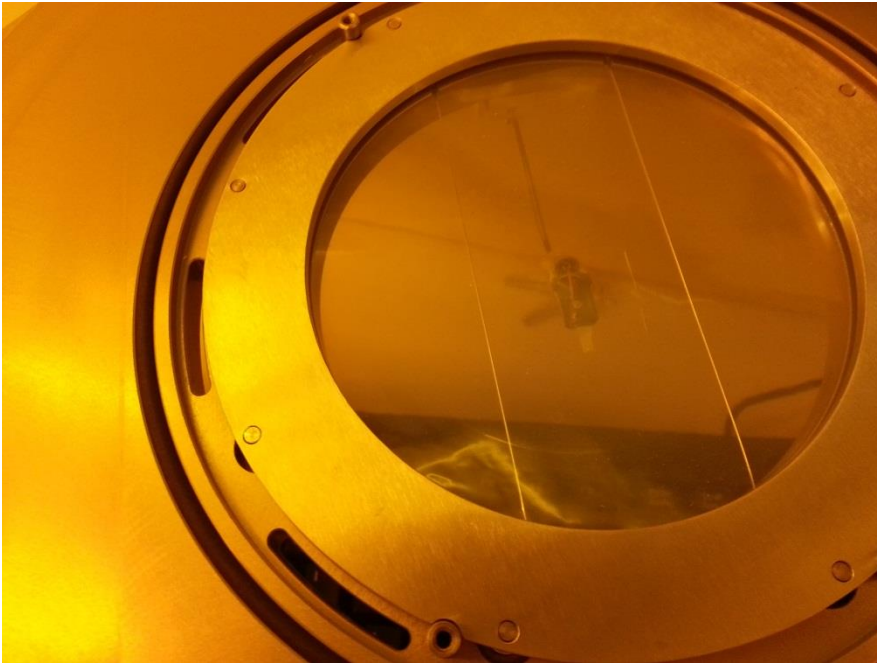
Place the mold and substrate such that the center of the mold / substrate is accurately positioned above the thermocouple.



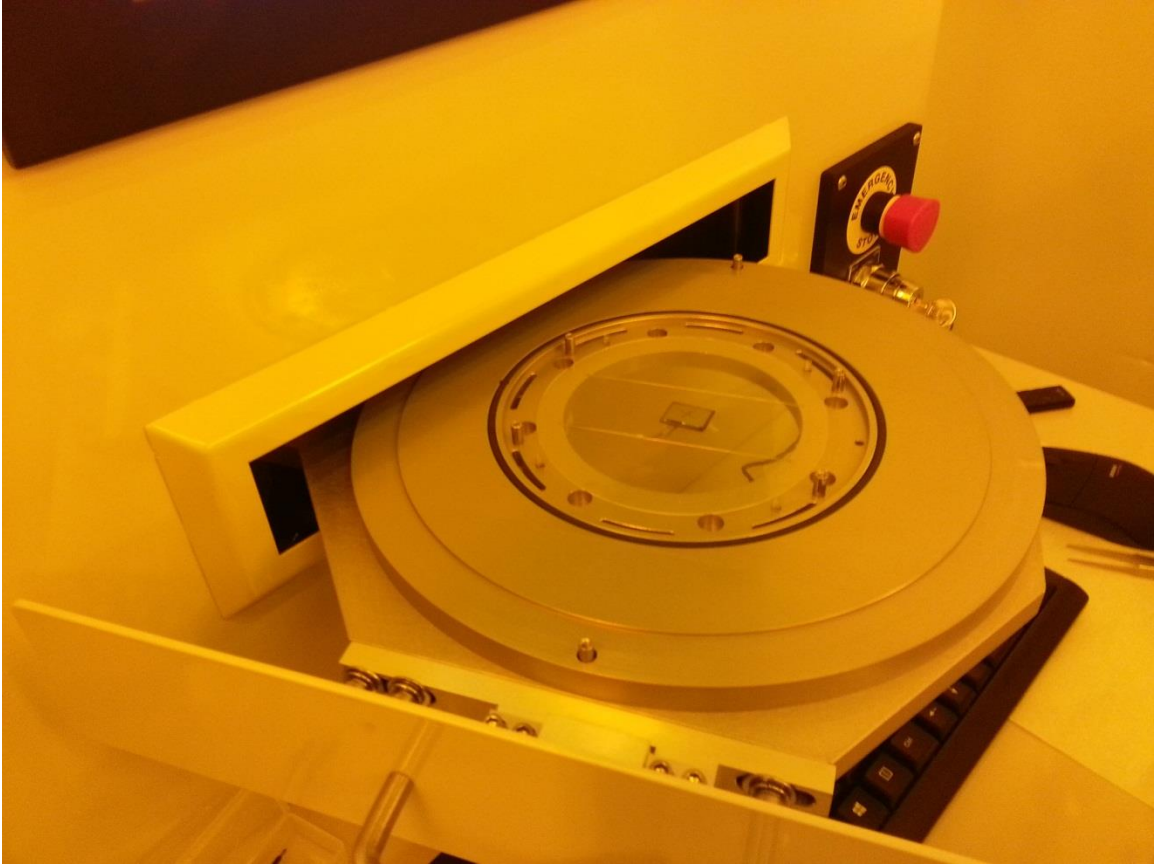
Place the ring on top:

Place the niches of the
ring to the pins

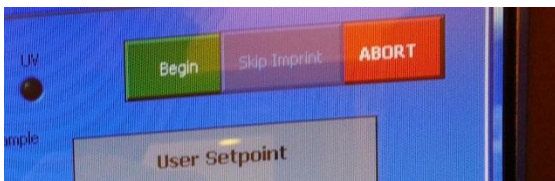




Close JENTLY the drawer so the mold and substrate won't move from the center of the thermocouple.



Press "BEGIN"



End of process

Open the drawer (no need for any delay time).

Taking the substrate and mold out of the membranes:

This action should be made very carefully in order not to tear the membranes.

1. Wait one or two minutes to let the substrate&mold released.
2. Use a flat tweezers (not sharp ones) to release the substrate&mold.
3. If it still hard to do, use the air spray (on the machine).

5. Turn off

- Close the program
 - Turn the pump off
 - Turn the key to “OFF” position
 - Close the N₂ cylinder valve.
-
- **For any inquire call Alex 0544 783 177**

A

Membranes

There are spare membranes sets on the machine (use the correct one when replacing).

The membranes are quite expansive... be careful not to harm it.

B

Typical photoresists parameters:

PR type	Substrate	Pressure [PSI]	Temp. [°C]	UV			
PMMA	glass		190	-			

C

An example of imprint process

