

RC8 – HP8 hotplate

Version of 2017-09-22. Get the latest one at cmi.epfl.ch/photo/files/rc8/rc8.hotplate.pdf

1. TL;DR: Quickstick 135

You want the quickstick recipe.

If the display does not show the following:



then you need to read this manual.

Otherwise press (D) [start], then (green) [run], and your wafer is on its way to Quickstick heaven.

2. Introduction

This manual is about how to configure the hotplate part of the RC8 spincoater assembly. Watch in awe as you realize what hardware footprint pre-millennium engineers had to deal with.

3. Buttons and display

There are four buttons A through B in a vertical line, plus a green and red button.



- up (A)
- down (B)
- cancel (C) (G) run
- enter (D) (R) stop

The first line of the display writes what is going on, the second line cycles back & forth (\rightleftharpoons) with an explanation of what A through D accomplish.

Esec. SEMI n.19	\rightleftharpoons	Esec. SEMI n.19
sel with A e B		confirm with D

4. Operation

Machine starts in the “Esec.” screen. Otherwise, press the **red** button to quit the running program, then **(C)** to cancel program execution mode.

If the “Esec” screen does not show “SEMI”, then use the **(A)/(B)** to up/down to the “System” field, where you chose “SEMI-AUTOMATIC” using **(A)/(B)**, confirm with **(D)**.

For Quickstick there is a preset program “n.19”. If the display has a different number, use **(A)/(B)** to up/down to the “Recall memory” field, where you use **(A)/(B)** to up/down to “n.19”, confirm with **(D)**.

If you want to verify the program, use **(A)/(B)** to up/down to the “Programming” field.

A general note on the positions: This hotplate is part of a spincoater. With the lift pins in pos3, the handling arm moved the wafer above the pins, the pins move up to pos4, lifting the wafer off the arm, which then was removed. The wafer sitting on the pins was then lowered to pos2, for preheat or proximity bake, or to pos1 for a contact bake.

For the quickstick program, the wafer is put in contact with the hotplate, therefore the pos2 set to zero or skipped to lower the wafer immediately.

Note: System: MANUAL: (green) [start] lower pins to pos1, heater is switched on, vacuum is switched on, timer counts up, (red) [stop] heater switched off, vacuum off, timer stops. AUTOMATIC: pins at pos3, waiting for robot arm feedback.

Quickstick program: use SEMI-AUTOMATIC mode, which starts in pos4. Lower to pos1, skipping pos2 is done by defining it at 0% of travel, time spent at pos2 can be 0, as only pos1 should count, dtpos1 set to 600 is 60sec. dt vacuum on/off are times vacuum switching before arriving pos1 and before leaving pos1. Speed 100% induces vibrations, set to 60%.

