

Yamato DKN400 Convection Oven

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Tool Type: Oven

Location: Microfluidics Lab

Description: Convection oven

Manufacturer: Yamato

Last updated 1/5/23 Haley

About

Mechanical convection ovens utilize a motorized fan to create a consistent distribution of flowing air that allows for quick and uniform heating.

Safety Concerns

- High Voltage
- High Temperature
- No combustibles or hazardous materials
- Thermally insulating gloves must be worn when working with hot items. They can usually be found on the bench next to the ovens.
- No food may be placed in laboratory ovens.
- Never heat a sealed container.
- Do not operate the oven if it is damaged, or is not working properly. Please place a note on the oven to alert other users, and notify laboratory staff of the problem.
- **Double containment is required for heating containers of liquid to prevent leaked material from contaminating the oven. This is especially true when heating PDMS molds.**

Operating Procedures

1. Enter the set point temperature (see instructions for the different controllers below)
2. Place your items in the oven. Remember to place liquid materials on a baking sheet or other secondary container.
3. Set the countdown timer for the length of your run. If the timer reads zero time remaining another user who needs to use the oven may remove your items.
4. Remove your items from the oven and close the door.
5. The oven is left powered on.

Changing the oven set point

1. Press FIXED TEMP
2. Use the ↑ ↓ to adjust the temperature
3. Press the SET/ENT button

Setting the countdown timers

1. Press 1
 2. Enter the run time (HMS buttons)
 3. Press 1 to start the countdown
 4. Press and hold 1 to reset
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Detailed Specifications

- Temperature range: 5C-260C
 - Ambient temperature: 23C
 - Warming time: room temperature to 260C in approx. 60 minutes
 - Cooling time: 260C to 50C in approx. 150 minutes
 - Heater: 1.2kw SUS pipe heater
 - Internal dimensions: 450mm x 400mm x 400mm
 - Capacity: 2.5 cu. ft.
 - 2 shelves
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Reference Documentation

[DKN400 Operation Manual](#)

[Laboratory Oven SOP](#)

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