

## Section 6 Operation

**Caution** Do not use in the presence of flammable or combustible materials or explosive gases. Do not use in the presence of pressurized or sealed containers - fire or explosion may result, causing death or severe injury. ▲

**Caution** Do not heat any substance above a temperature which will cause it to emit toxic fumes - death or severe injury may result. ▲

### Temperature Control

If it is necessary to set temperature before loading oven, push the power switch ON and note that the power switch light is lit. Rotate the thermostat knob to approximate the desired setting. The heater status lamp will be steadily lit until the chamber temperature approaches the thermostat setting. Wait several heat cycles until the temperature has stabilized.

Check the thermometer - dial or LED display - and rotate the thermostat knob clockwise to raise the set point or counterclockwise to lower it. After oven temperature has stabilized, check the temperature again and make further thermostat adjustments until the thermometer consistently shows the desired operating temperature. Push the power-switch OFF and allow the oven to cool down, or, if a batch is ready, the oven can be loaded immediately.

### Loading the Oven

For units which utilize a dial thermometer, the thermometer can be removed and put back after loading if that is more convenient. Note that the thermometer sensing element must be in direct contact with a shelf for an accurate reading.

For best results, distribute the load evenly in the chamber, at least 1-inch away from chamber walls and resting directly on the shelves. **DO NOT PLACE FLAMMABLE SOLVENTS OR VAPORS** in the oven and avoid spilling acids. Be careful not to heat substances above their autoignition temperatures.

While the oven door is open, apply high temperature vacuum grease to the door gasket. Close the door and push the power switch ON. If oven temperature was not previously set, review above at “TEMPERATURE CONTROL” to set the desired operating temperature.

## Maintaining Proper Vacuum Level

The vacuum level will decrease slightly over a period of time. To bring it back up, rotate the vacuum/vent valve to "EVACUATE" and start the vacuum pump.

When the vacuum gauge again shows the desired level, rotate the vacuum/vent valve to the setting marked "CLOSED" and shut off the vacuum pump.

**Caution** Do not pressurize the chamber above atmospheric pressure - the oven will not withstand a positive internal pressure. When the vacuum gauge reads zero, shut the gas off. ▲

## Releasing the Vacuum

If the vacuum is to be replaced by ambient air, disconnect any tubing attached to the hose connector marked "VENT" and rotate the vacuum/vent valve to its "VENT" setting.

## Purging the Chamber with Inert Gas

Use only a non-combustible, nonflammable, non-corrosive gas - such as nitrogen or carbon dioxide - if application requires replacing the vacuum with an inert gas.

Connect 1/4-inch ID tubing to the hose connector marked "VENT" and connect the other end of the tubing to the regulator at the inert gas source.

Start the gas flowing at no more than 5 psi. Rotate the vacuum/vent valve to the "VENT" position and shut off the regulator when the vacuum gauge reads zero (normal atmospheric pressure).

The oven does not require very much gas to fill the chamber:

3608 Series: Interior volume is 0.75 cubic feet.

3618 Series: Interior volume is 2.30 cubic feet.

## Unloading the Oven

When the bake is completed and the vacuum has been released or replaced as described earlier, turn the power switch to OFF. Open the oven door and remove the dial thermometer. Take the contents from the chamber and reinsert the thermometer with the sensing element in direct contact with the center shelf.