

DZF-6020, DZF-6050 Vacuum Oven

User's Quick Manual

Install and setup the OVEN and Vacuum system

Set the Oven in stable table, (no Shaking, and Magnetic currency environment)
The working station should be Clean, stable, level, no direct sun light and no carrousel gas.

Keep at least 12" of distance to any wall or other things. Do not put close to Fire alarm

All material put inside the chamber make sure it put in the middle of plate and do not torch any surface of chamber.

Connect the Vacuum Pump to the Oven by the KF-25 Clamp and Hose. Make sure the Pump is FAR AWAY from the OVEN and keep the PUMP in good Ventilation, any Vacuum Pump is not recommend working for long time, too long time working will make the Pump over heated and shut down.

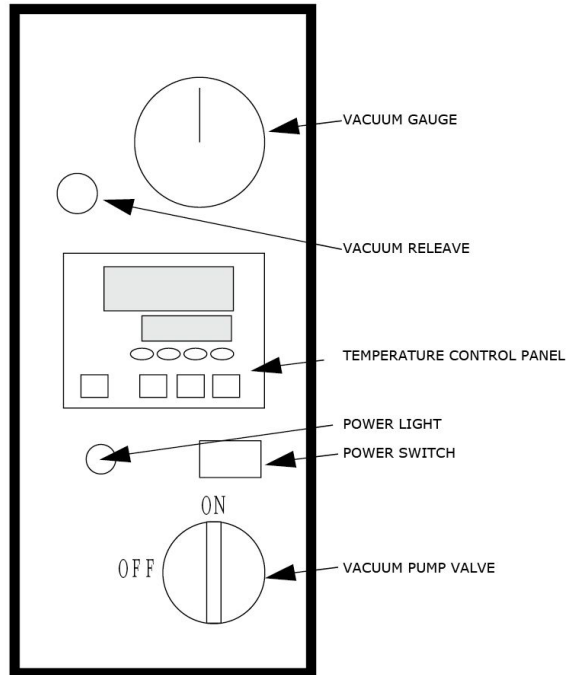
Turn on the Oven

Close the door securely, Turn off the Vacuum Release hole, set the Vacuum valve to Open

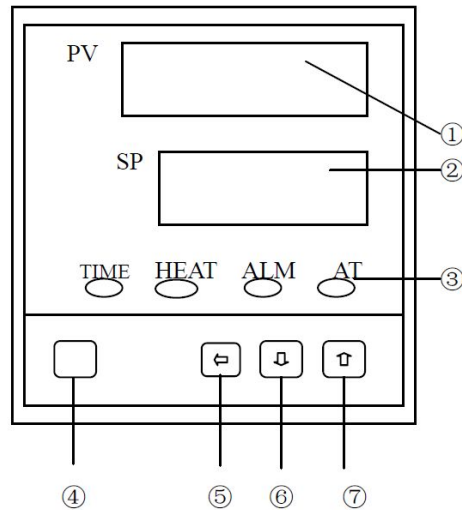
turn on the power switch and wait for 5 seconds,
the PV will display chamber temperature, SV will display the Setup temperature,
If the PV is lower than SV, the "HEAT" light will ON and the Oven will heat up until SV temperature.

**** *** Notice, Please pre-heat the Oven until the target temperature was reached and stablized, then go next step.**

Control Panel Instruction



Function key



1. PV screen (Display temperature in Chamber, or display system Function)
2. SP screen (Display setup temperature, or display system function Parameters)
3. Lights
 - "AT": Green color, ON when timer is setup
 - "HEAT": Green Color, on when the Oven is heating
 - "ALM": Red Color, ON when Chamber Temperature is over SETUP temperature
 - "TIME": ON when timer is setup
4. SET/CONFIRM: Function Key, this key is use to setup Function parameters and confirmation.

5. Number move left, change number position
6. Number move down. Change number
7. Number move up. Change Number

How to set up Temperature and Timer

1. Pressure button "SET", wait the PV Screen show "SP"
2. Change the "SP" by press the "←,↑,↓" button to move and setup the target Temperature.
3. Pressure "SET" Button, then PV Screen show "SP" and SV Screen show "0"
4. Continue use ←,↑,↓button to change the SV screen to setup working time (1-9999 minutes)
5. Pressure "SET" Button again the Oven will back to working with PV Screen with chamber temperature and SV screen with Setup temperature.

How to use timer function

1. Setup Timer according Previous "how to setup temperature"
2. Timer light will be ON only when the timer is setup
3. When PV is arrived SV temperature, Timer will start, Timer light ON
4. Then setup time is over, the SV screen show "END" and timer light blink, Alarm will on, press any button to stop Alarm.
5. Press ↑ for 4 seconds then the timer will back to previous SETUP TIME, and oven will continue work again with that setup time.
6. During the Oven is working, Press ↑, the PV screen will show "how long TIME already worked " and SV screen will show "how long time to end of timer)

HOW to Vacuum oven Chamber

Turn on the Vacuum pump, wait the vacuum inside Chamber extract to Vacuum to "-1 Bar" or any vacuum you need.

Setup the Vacuum valve to "OFF" then turn off the Vacuum Pump,
Repeat the 2. and 3, to extract the chamber

*** Notice, Please pre-heat the Oven until the temperature is stabilized, then put the material and start extraction .

Unlock Oven system

Make sure the OVEN is stop heating first

Any setup in system must unlock the system key first

1. Press "SET" key 4 seconds, then PV screen show "AL" , then repeat press "SET" key until "LK" show up
2. Use ↑ key to change the "LK" into "18", then the system is unlock, press "SET" key again, then PV show "AL" again
3. Repeat and change the LK to 0 to lockup system after change the Parameters

Oven Parameters setup

Make sure the OVEN is stop heating first

Any setup in system must unlock the system key first, then press "SET" to change and setup different Parameters:

1. "AL" : this Parameter is use to control the "HIGH TEMPERATURE ALARM"
Function: When temperature is over the valve of SP+AL, ALM light on, buzzer rings, heating power is cut off.
2. "CL": cooling Parameter, no this function in 6020 and 6050 Oven
3. "P" Only effects on heating side. The larger the P, the smaller the system plus. Reduce P can improve system control precision and cancel offset.
4. "RH": Adjust rH to change the highest temperature of oven: (MAX 480 °F)
5. "CF": change between to °C and °F (call HFS first)
6. "Pb" : low temperature calibration
7. "PK" : High temperature Calibration
8. For all of other Parameters, do not change them call HFS first.

Temperature Calibration

Put one of Thermometer inside the Chamber, make sure the Thermometer attached to the solid pallet inside chamber,

Heat up the oven to the SV temperature and keep the oven working for 1-2 hours, then check the Thermometer and find out how much difference between Thermometer and SV.

- A. If the temperature of OVEN is stable, but thermometer is smaller than SV, then goes into system and change the "Ar" to bigger number by 5-10 each time first, then change "P" to smaller number by 3-5 each time.
- B. If the temperature of OVEN is stable, PV number is Bigger than SV, then goes into system and change the "Ar" to Smaller number by 5-10 each time first, then change "P" to Bigger number by 3-5 each time.
- C. If the Temperature is not accurate below 80C. Then adjust the "Pb" until it is good.
- D. If the temperature difference is more than 3°F, then do the Calibration. Goes into system and find the function "PK". Change the "PK" number to
"PK" = $4000 \times (PV - \text{Thermometer}) / \text{Thermometer}$
for example, the PV ready "150" Thermometer ready 148.
The PK = $4000 \times (150 - 148) / 148$, so input the temperature adjust number accordingly.