TRUFROST & BUTLER

USER MANUAL

Gas Deck Oven with Digital Controls & Steam Boiler and Stone
Breadwinner 1-2G
Breadwinner 2-4G
Breadwinner 3-6G

(Please read this manual carefully before using the product)

Breadwinner series Premium Deck Ovens - with boiler

- **Thank you for purchasing our products**
- **Please pay attention to the instructions on safe operation before using this product**
- **Please keep this manual properly after reading for future reference**
- **Due to the continuous improvement of our products, they are subject to change without prior notice**

Dear customers,

Thank you for choosing and using our products!

For your safe and convenient use and reasonable maintenance, please read the operation manual carefully before use and keep it properly for future reference.

Warm Tips:

This manual is not applicable to people (including children) with physical, sensory or intellectual deficiency or lack of experience and knowledge.

- Do not use gas appliances when it is unattended to prevent liquefied gas leakage and explosion caused by flameout. After each use, the cylinder and gas appliance switch shall be turned off; Before each use, it must be confirmed that the gas appliance switch is in the OFF state before gas supply and ignition. Before using liquefied gas, be sure to master the use method skillfully, and be able to ignite, adjust the damper and handle all emergencies.
- If this product has a pungent smell or a strong gas smell during work, it means that it is not completely burned. Please adjust the damper to a suitable place, otherwise it will cause harm to human body. Anyone who fails to follow the prompts will be at his own risk. Thank you!
- This manual is subject to change without notice!

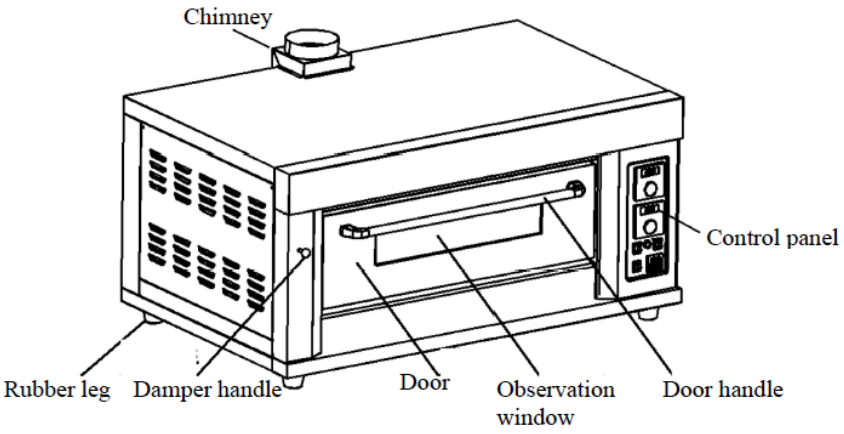
1. Introduction of Product Functions

Gas oven series is developed by the Company and designed by absorbing the advantages of similar products at home and abroad. This equipment uses gas for heating, adopts constant temperature control system and is equipped with flameout protection safety device, so that the baked food will not appear partially uncooked and partially overcooked, and the temperature will rise rapidly, with uniform heating and good heat preservation performance. This product has the advantages of novel style, reasonable structure, durability, convenient operation and easy maintenance, and it is the ideal equipment for pedestrian street, commercial street, restaurant, canteen and food industry.

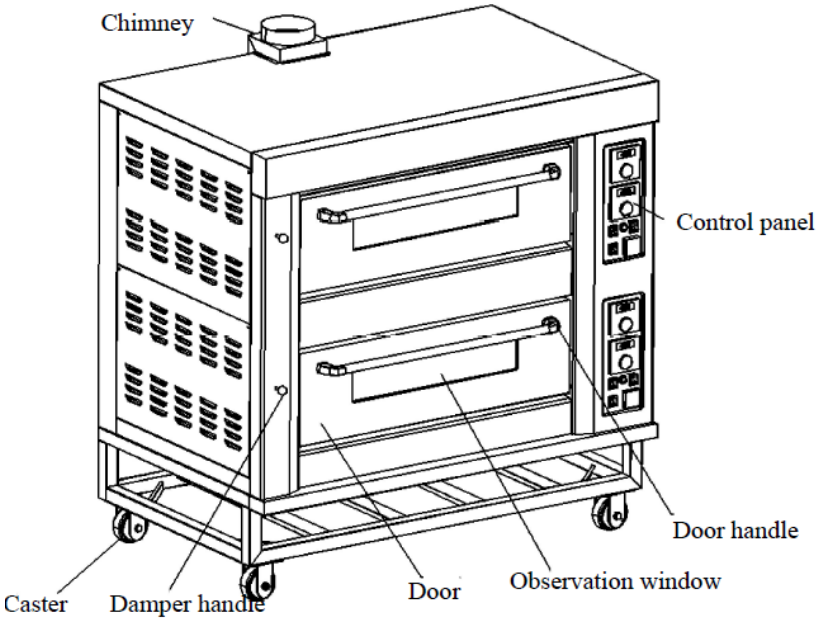
2. Structural Schematic Diagram

2.1 Structural Schematic Diagram (the product is subject to the physical object, and the pictures are for reference only)

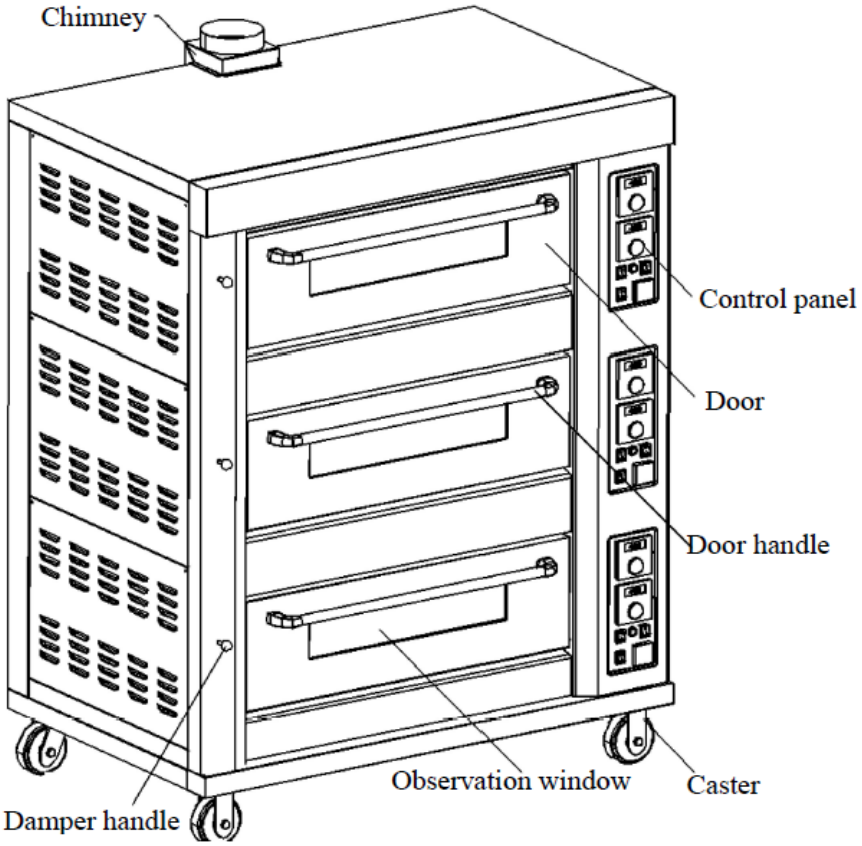
Schematic Diagram of Single-layer Structure



Schematic Diagram of Two-layer Structure:



Schematic Diagram of Three-layer Structure: Chimney



2.2 Structural performance characteristics:

1. The gas oven is equipped with a variety of layered oven styles according to the customer requirements.
2. It adopts liquefied petroleum gas as the heating source for combustion, and mixes the gas and air in the best proportion by blast combustion, and force them into the combustion tube in the furnace for full combustion and uniform heating.
3. With precise temperature control display device, the combustion temperature can be set arbitrarily in the range of room temperature -400 degrees, and the temperature is automatically controlled. After the set temperature is reached, the system will automatically stop working, and after the temperature drops, the system will automatically ignite and burn again; Simple and easy to understand.
4. The oven door is equipped with glass windows and special lighting equipment, which is convenient for observing the baking status of food in the oven.
5. The top and bottom fire temperatures of each layer can be controlled separately.
6. Independent combustion tube, made of heat-resistant tube and specially treated, making the baked food with higher quality.
7. Equipped with flameout protection device, when power failure, gas exhaustion or other fault causing sudden flameout, "ZC" flame detection system will immediately monitor the flame state, automatically cut off the power supply and close the gas

pipeline, and give an alarm as a reminder, which is safe and reliable.

8. Independent ventilation and air supply device, which can dilute the gas in the residual oven until it can't burn, and forcibly blow it out, to effectively achieve safety protection.

3. Basic Product Parameters

3.1 Parameter Table of Gas Box-type Oven (Computer-controlled Series is as follows):

Product Name	Model	Size and specification (mm)	Voltage	Power	Gas category	Gas pressure Kpa	Gas consumption Kg/h	Weight Kg	Temperature control range
Gas Deck Oven (two layers with two trays)	Bread Winner 1-2G	1060×675×1150	220V	200W	Liquefied petroleum gas	2.8	0.36	120	0～400°C
Gas Deck Oven (two layers with four trays)	Bread Winner 2-4E	1330×840×1355	220V	200W	Liquefied petroleum gas	2.8	0.58	170	0～400°C

Note: The steam drum is provided separately, and the steam function is behind the operation instructions. Please read it carefully before operation.

3.2 List of parts:

Part name	Quantity
Low pressure valve	1 set
Manual	1 copy

4. Precautions

4.1 Transportation and storage

During transportation, the machine shall be handled with care, and it shall not be inverted to prevent damage to the product shell and the inside. The packaged machine shall not be stored in the open air for a long time, and shall be placed in a warehouse with good ventilation and no corrosive gas. When temporary storage is required, rainproof measures shall be taken.

4.2 Installation and precautions

1. During handling and installation, protective measures must be taken by relevant personnel.
2. If the packaging box is found damaged during unpacking, please immediately check whether the equipment in the packaging box is damaged or the parts are missing. If the equipment is damaged, please call the shipper immediately.
3. Please check equipment size to see if it can pass through the portal or passage smoothly before handling the equipment.
4. When loading, unloading and transporting, strictly follow the packaging and transportation requirements, and it is absolutely not allowed to pull or bind any electrical components.
5. When loading, unloading and transporting, the equipment shall not be placed upside down, horizontally or stacked. If it is necessary to place it obliquely, the angle between

the shell and the ground shall not be greater than 45°. Pay attention to prevent the shelf and door in the shell from moving during handling.

6. The equipment shell must be placed horizontally. Please fix the casters to prevent the shell from moving, and pad the casters according to the ground conditions to keep the shell horizontal.
7. When installing, the left and right sides of the equipment shall be more than 30cm away from combustible materials, and the back shall be more than 50cm away from combustible materials (such as brick walls and windows). It shall not be installed on flammable floors or materials.
8. The installation location shall be in a well-ventilated place, and exhaust facilities shall be installed to ensure steam discharge.
9. After installation, the equipment must be kept stable and placed horizontally, and shall not tilt.
10. The power supply voltage must be consistent with the use voltage of this equipment.
11. Before installation, check whether the wiring is loose, whether the voltage is normal, and whether the safe grounding is reliable.
12. Flammable and explosive articles shall not be stored near the installation location.
13. The equipment shall not be stored and used in the open air, nor shall it be used in places that are particularly wet or with water dripping.
14. This oven shall be installed by professional technicians. The installation of the machine and the conversion of gas types must be carried out by professional personnel according to regulations.
15. The equipment must be connected in accordance with the requirements of gas safety, installation and use.
16. Do not use other gases that do not meet the equipment requirements as fuel or use high-pressure valves. (This equipment is only applicable to low-pressure regulating valves)
17. Before installing the equipment, a quick cut-off valve must be installed, which must be placed in the upstream position near the equipment and easy to access.
18. It shall be ensured that the gas used by the equipment is high-quality liquefied petroleum gas, since inferior gas source is easy to block the nozzle.

4.3 Special precautions

1. Users shall operate in strict accordance with the provisions of the product specifications and take precautions according to the special warning sign on the gas oven.
2. The type of power supply (rated voltage and frequency) and applicable gas source (gas type and rated gas pressure) used by the equipment must be consistent with the nameplate of the machine.
3. When replacing accessories and repairing equipment faults, the power supply and air supply must be completely turned off.
4. The power cord of this machine must be connected to the power socket with leakage and overload protection device, and must be connected with the protective ground wire. If there is no protective ground wire on the power socket, the oven shell shall be firmly connected with the self-made ground wire that meets the standard with a wire

of more than 2.5m².

5. One end of the special hose for liquefied petroleum gas is connected to the relief valve of the liquefied petroleum gas cylinder, and the other end (of the special relief valve of the Company) is connected to the air inlet interface in front of the oven. The interface must be firmly fixed with steel hoops, and there shall be no gas leakage.
6. The accessories such as liquefied petroleum gas cylinders, hoses and relief valves used must comply with the provisions of national safety standards. Qualified liquefied gas cylinders, relief valves and rubber hoses must be used, and the outside of the rubber hose must be protected with iron hoses to prevent gas leakage caused by rat biting or bumping. The liquefied gas cylinders must be placed in a safe zone 2m away from the oven, and no sundries can be piled around.
7. Air circulation shall be ensured in the workshop where the equipment is used, and smoke exhaust pipes must be installed at the smoke outlet of the oven to ensure that the combustion waste gas can be effectively discharged outdoors; One side of the electrical box of the equipment must be open and vacant, so as to ensure sufficient air supply in the burner of the oven for combustion.
8. After the installation is completed, open the angle valve of the gas cylinder to make the gas fill the pipeline of the oven, and apply soap foam with water to the interfaces between the gas cylinder and the input pipeline for inspection. Only after confirming that there is no leakage can the equipment be put into operation.
9. For the first use, if the ignition time is long, because there is air in the newly installed pipeline, if it fails to ignite for three consecutive times in the cold box, the ignition shall be suspended, to fine the reason immediately or wait for a moment (more than 5 minutes) to ensure that the accumulated gas dissipates naturally before re-ignition; At this point, open the equipment electrical box cover (box side plate), adjust the fan damper properly, and then ignite.
10. When the user uses the equipment, if a strong gas smell is sensed, he shall immediately turn off the gas cylinder angle valve and cut off the power supply. At this time, be sure not to move any electrical switch, open the window to evacuate the leaked gas; If it needs to be reported to the related departments, call them away from the scene; After the fresh air is circulated, inform professional personnel to check and eliminate the source of leakage before the equipment can be resumed.
11. After the burner is ignited, the air volume of the fan shall not be too small, otherwise it will cause incomplete combustion due to lack of oxygen, which will lead to exhaust gas entering the workshop with the opening of the equipment box door, causing accidents. Please fix the casters to prevent the oven from moving, and pad the casters according to the ground conditions to keep the oven horizontal.
12. When the equipment is not used or the operator is not available, the equipment must be turned off to avoid danger.
13. Do not disassemble or modify the equipment.
14. Do not pat the product or place heavy objects on it.
15. High temperature will cause burns. Do not touch the machine directly with your hands during, before and after use.
16. Do not use water jet for cleaning. Properly clean the stainless steel surface

regularly to prevent surface oxidation and chemical action from damaging the equipment.

17. After use, turn off gas valve immediately.
18. If gas leakage is found, the gas valve shall be closed immediately, and the door should be opened to strengthen ventilation, and it shall be used after it is repaired.

5. Operation Instructions

1. Connect the gas source that matches the nameplate and signs of the equipment, among which pure liquefied gas has the best effect. Check whether the upper and lower steel pipes, liquefied gas cylinders, low-pressure relief valves and hoses are with any leakage and in good condition, and use them only after no defect is found.
2. Check whether all valves of the equipment are closed, and ensure that all valves that are not screwed off fully are closed.
3. Be sure to connect the power cord with AC220V leakage protection switch, and ensure the ground wire is firmly grounded.
4. Open the gas regulating valve, check whether there is gas leakage, and make sure there is no gas leakage.
5. Switch on the power supply, first turn on the power switch, and the digital temperature controller displays properly; Turn on the lighting switch, the lighting lamp lights up; Turn on the timer switch, and the timer displays properly. Then check whether all electrical appliances work properly.
6. Then open the gas valve, rotate the digital temperature control switch to adjust to the temperature suitable for baking, and observe whether the pulse igniter ignites properly to ensure proper ignition.
7. This equipment includes top temperature and bottom temperature, which can be controlled separately. First, set the temperature of "upper fire" or "top fire". Rotate the digital temperature controller clockwise, align the required temperature value with the scale position, adjust the top digital temperature controller by "top fire heating" and the bottom digital temperature controller by "bottom fire heating", and select the appropriate temperature according to different foods.
8. Adjust the digital temperature control switch to the required temperature, and the pulse igniter will ignite. Note: Each ignition shall last about 8-10 seconds. If it is not ignited within such time, the solenoid valve will automatically close, the igniter will give an alarm sound and the alarm light will be on. At this time, turn off the ignition switch and turn on the ignition switch again for the second ignition. If the ignition is unsuccessful for two consecutive times, turn off the temperature control switch, open the door, ventilate for 15 minutes and then re-ignite.

9. When the temperature in the oven reaches the set working temperature, the pulse igniter will stop working, the burner will stop burning, and the machine will enter a constant temperature working state; When the temperature is lower than the set temperature, the pulse igniter will continue to ignite, the burner will automatically ignite and burn, and the oven will start to heat up again.
10. Flame state: The flame can be observed through tempered glass, which shall be strong and stable, and relatively short, which is the normal combustion state. For the adjustable oven, if the flame is light yellow, it indicates insufficient air volume, and the corresponding fan damper shall be opened a little; However, when the flame is intermittent or blue-white, or even flameout, it indicates fluttering and unstable flame due to excessive wind, and the damper shall be turned down a little.
11. Check the liquefied steel cylinder, relief valve, hose and connection port for damage and air leakage at any time during work, and pay attention to the indoor air condition.
12. After use, first close the master gas valve, and then close the individual valves to ensure that the gas source is closed.
13. Warning: Do not use spray water to rinse the oven directly to avoid failure.
14. When using the oven for the first time, there will be odor in the oven. It is suggested to bake a plate of onions in the oven first, and then bake other foods after the odor is gone.
15. Please pay more attention to observing the new machine a few days before use, on one hand, to be familiar with the performance of the equipment for baking, and on the other hand, to communicate in time when problems are found. Because the vibration in transportation may cause looseness of the equipment screws, be sure to inspect when installing the new machine.
16. Before use, first adjust the oven to the required temperature, and then put the food into the oven after the temperature is reached, so as to avoid frequent opening and closing of the door. After baking, be sure to take out the baking tray and food with protective gloves to avoid burns.
17. Try to avoid installing an exhaust fan above or in front of the oven door.
18. In case of uneven heating during use, it can be solved by adjusting the tray (commonly known as tray adjustment).
19. During use, pay attention to the high temperature of the machine surface to prevent burns.
20. After use, the machine shall be powered off for maintenance, and the baking tray shall be cleaned regularly, usually once a day.

    Note: In order to avoid the danger caused by the wrong reset of the thermal circuit breaker, the appliance shall not be powered on through an external switching device, such as a timer, or be connected to a circuit that is regularly turned on and off by a common component.

Important reminder of steam function: The oven is added with steam spraying function according to user's needs, and its working principle is as follows:

The steam drum is heated by electric heating tube, and the heat is stored in the exchanger. When the heat stored in the exchanger reaches the set temperature, the steam indicator (green) on the oven is lit. At this time, the steam switch is turned on, and the solenoid valve is turned on to spray water on the surface of the heat storage exchanger in the steam drum. The heat storage exchanger heats water droplets to generate steam, and the steam is introduced into the box through the air duct, thus realizing the steam spraying function.

Operation instructions for steam spraying function of the oven:

1. Start steam: After the oven is powered on, turn on the steam switch of the equipment, and the AC contactor controls the electric heating tube to start working. After about 20 minutes, after the steam indicator is lit, you can press the steam switch to spray steam (when the steam function is not needed, you don't need to turn on the steam switch. At this time, the whole steam system will not work to save energy).
2. Spray steam: There is a steam switch on the equipment. When the steam indicator (green) is on, you can press this switch, and the steam generated in the steam drum will enter the oven. When the switch is off, the steam spray will stop. The continuous steam spray time of the equipment is preferably set within 3 seconds, and the second spray can only be carried out after an interval of 5 minutes (the longer the interval, the greater the steam quantity).

Safety precautions for steam function:

1. It is forbidden to open the door during steam spray, otherwise it may cause scalding.
2. Pay attention to the water, which shall not be insufficient, otherwise there will be no steam output.
3. The temperature of steam pipeline is high during operation, so it is best to close it temporarily during the equipment repair.
4. When using the equipment, please call our after-sales engineer for any problems.

6. Precautions

As this product adjusts the ratio of gas to air by adjusting the air volume of the fan to make it burn fully, it is sensitive to the user's local voltage, so it is suggested that users should be equipped with a voltage regulator for better use effect when the local voltage is unstable. In order to ensure the use effect of the product, please use the gas low-pressure safety relief valve configured by the Company.

7. Fault Analysis and Troubleshooting

Fault	Cause	Troubleshooting
Non-ignition	1. Igniter damage 2. Solenoid valve damage 3. Ignition needle is not in the right position. 4. Ignition needle damage 5. Insufficient pressure of liquefied gas cylinder 6. Large air intake 7. High voltage ignition wire damage 8. Temperature controller damage	1. Replace the igniter 2. Replace the solenoid valve 3. Adjust the position of the ignition needle until arcing 4. Replace the ignition needle. 5. Replace the gas cylinders that are flush or heated with hot water 6. Reduce the air intake of the fan 7. Replace the ignition wire 8. Replace the temperature controller
	9. Line fault (burnt out) 10. There are foreign matters at the joint between the ignition needle and the ignition wire 11. Gas valve does not match 12. Fan does not run	9. Check and repair the line 10. Remove the foreign matters around and eliminate the possibility of short circuit 11. Adopt the valves equipped by our factory 12. Replace the fan
Strike arc after it fails to ignite	1. Igniter damage 2. The bottom line of FBT(Fly back Transformer) is not connected properly	1. Replace the igniter 2. Connect the bottom line of FBT(Fly back Transformer)
Sudden flameout at work	1. Air intake is too large or too small 2. Gas cylinder runs out of gas 3. Igniter or solenoid valve damage	1. Reduce the air intake 2. Replace the gas cylinder 3. Replace the igniter or solenoid valve
After ignition, it goes out	1. Induction needle is not in the right position 2. Induction needle damage 3. Igniter damage 4. Excessive wind	1. Adjust the position of the induction needle in the flame so that the flame can contact the induction needle 2. Replace the induction needle 3. Replace the igniter or solenoid valve 4. Turn down the damper
Fail to control the temperature automatically	Temperature control switch damage	Replace the temperature control switch
The shell feels like electric shock	The safety ground wire is not connected properly	Check whether the ground wire is firmly connected
Power indicator is not on	The main power supply is not connected Power switch fault	Check whether the main power supply is connected Replace the power switch
If it is connected, it stops working if the temperature does not reach the set value	Temperature probe damage Temperature controller damage	Cut off the power supply, and replace the temperature probe or temperature controller after the machine cools down
The lighting doesn't work	Light damage or lighting switch damage	Replace the light bulb first and then replace the control switch
Display code "Er01"	Top fire thermocouple failure	The thermocouple is not connected or the wiring is loose, causing open circuit
Display code "Er02"	Bottom fire thermocouple failure	The thermocouple is not connected or the wiring is loose, causing open circuit
Display code "Er03"	Excessively high ambient temperature	Excessively high ambient temperature

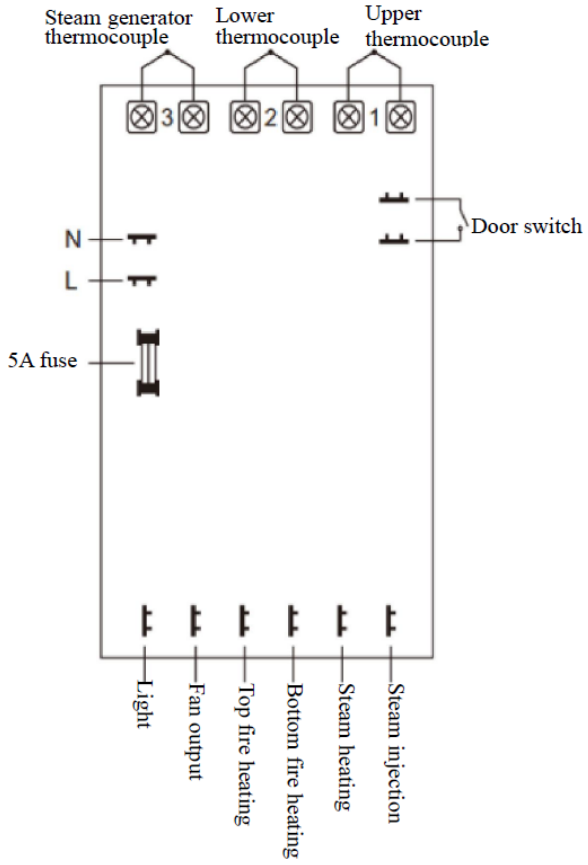
The above-mentioned fault items are for reference only. If a fault occurs, stop using the oven immediately and notify professional technicians for inspection and repair as soon as possible! Safety first! Repair must be carried out when the power supply and gas source are turned off.

8. To Users

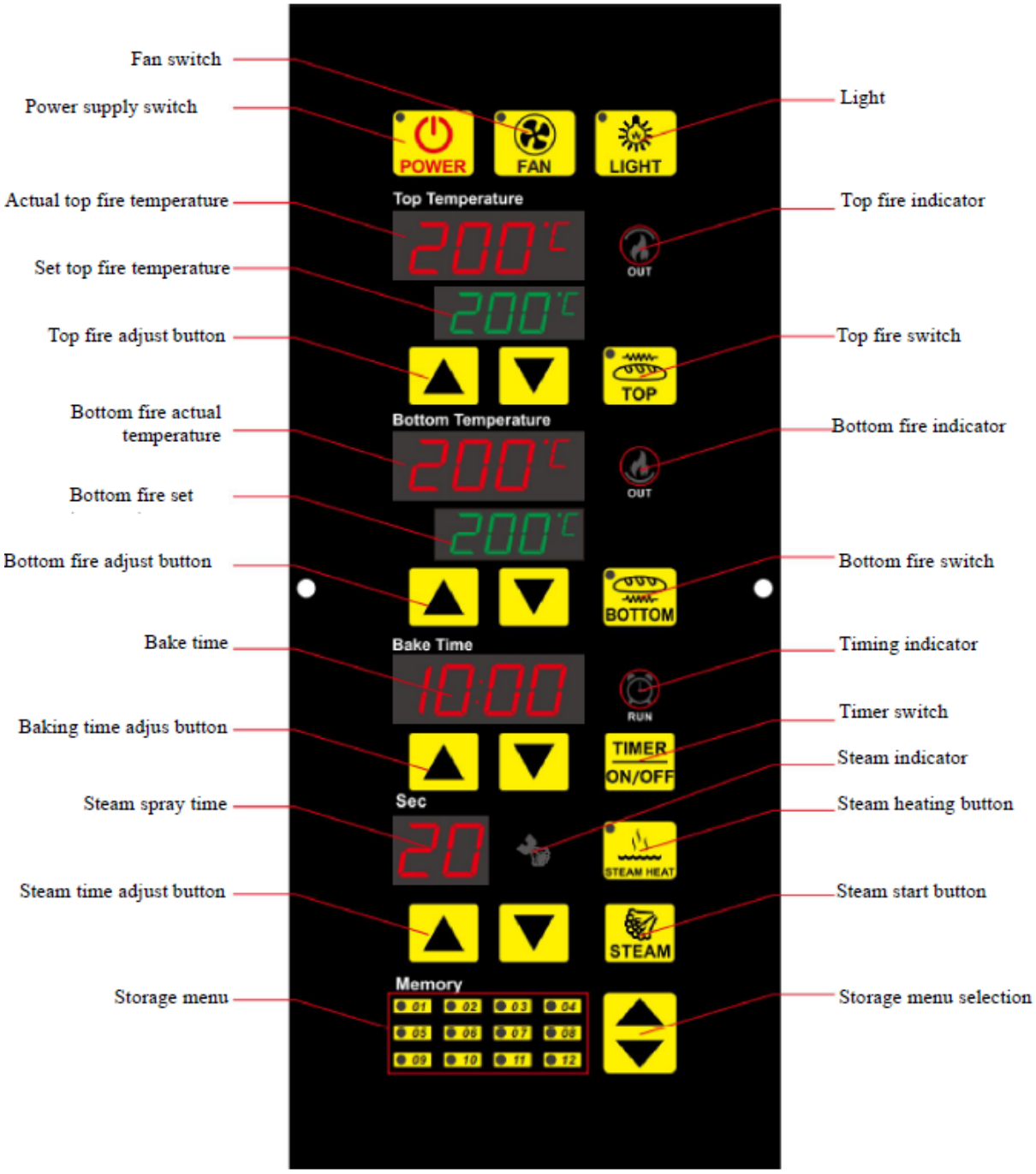
Thank you for purchasing our products. As secondary sales cannot be realized due to the particularity of food equipment, after purchasing, customers are not allowed to return or replace the gas oven for any reason. After opening the packaging, read the product specifications carefully and follow the operation instructions, otherwise the losses caused will be borne by the customers themselves. During use, the safety ground wire must be connected properly, otherwise, any electric leakage caused to the machine will be at the customers' own risk. If you have any other questions, please contact us in time. The right to interpret the products belongs to the manufacturer, and the products are subject to change without prior notice!

Circuit Diagram of Gas Oven:

The circuit diagram of single-layer gas oven (computer board) is as follows:



The schematic diagram of the computer board is as follows:



Computer-controlled operation instructions: How to enter parameter settings

Long press the timing button "TIMER ON/OFF" for a long time in the OFF state until the "Lock" setting window displays "0". Press the timing buttons "▲" and "▼" to adjust to 168, then press the timing button "TIMER ON/OFF" to enter the code display, press the timing buttons "▲" and "▼" to adjust the parameters. Press the timing button "TIMER ON/OFF" to switch codes, press the timing key "TIMER ON/OFF" to exit parameter setting, or automatically exit without pressing any button for 20 seconds, and save data.

Restore to factory setting 1, press the timing button "TIMER ON/OFF" until the setting window displays "

LocK ", press "▲" and "▼" to adjust it to 123, and then press the timing button " " to restore parameters (the heating control mode is restored to PI intelligent control).

Note: For steam spray to be effective, press the steam heating button " " to reach the preheating temperature (code: SrE default temperature is 130°C). When the indicator " " lights up, press " " again, and the steam will start to work (the timer will start to run)

Code: When the SrE parameter is adjusted to 0, the steam is effective for a long time.

Parameter table

S/N	Code	SET range	Factory settings	Function description
00	SPHt	5°°C-450°C	300°C	Maximum top temperature locking
01	SPLt	5*°C-450°C	5°C	Minimum top temperature locking
02	AdJt	-50°C-50°C	0°C	Top temperature calibration
03	HYSt	1°C-50°C	2°C	Control hysteresis of top temperature
04	tPt	1~600	18	Control Kp parameter of top temperature
05	ti t	1~250	12	Control Ki parameter of top temperature
06	SPHb	5°C-450°C	300°C	Maximum bottom temperature locking
07	SPLb	5°C-450°C	5°C	Minimum bottom temperature locking
08	AdJb	-50C-50°C	0°C	Bottom fire temperature calibration
09	HYSb	1°C~50°C	2°C	Control hysteresis of bottom temperature
10	tPb	1~600	15	Control Kp parameter of bottom fire temperature
11	ti b	1~250	10	Control Ki parameter of bottom fire temperature
12	Cont	0-F P P,	P,	When the temperature reaches the "set temperature", stop heating, and reduce the heating to the "set temperature"-"hysteresis temperature" Heating control mode: pure proportional control Heating control mode: proportional control + integral control
13	LAtP	1~120 oFF to9	30	Lighting output is turned off after a delay of (LAtP) seconds Press the button to output the light, and release the button to turn off the light Press the button to out the light, and press the button again to turn off the light
14	PcAt	0°C~50°C	20°C	Temperature convergence display (0 shows the actual temperature, and other convergence temperatures that exceed or fall below 0 also show 0)

15	PuPS	oFF on LASt	oFF	OFF: top motor off ON: top motor on LRSE: top motor remains in the last power-off state
16	tCoF	-50℃~50℃	0	Top temperature deviation correction
17	bCoF	-50℃~50℃	0	Bottom temperature deviation correction
18	PcAb	0℃~50℃	10℃	Convergence below the temperature setpoint
19	StSP	0°℃~600℃	160℃	Control temperature of steam generator
20	StHY	1℃~50℃	10℃	Control temperature control hysteresis of steam generator
21	Srt	1℃~600℃ on	130℃	The steam button is effective only when the steam temperature is higher than this temperature ON: The steam button is always effective
22	StSH	0~99	6	Maximum locking time of steam injection
23	StSL	0~99	1	Minimum locking time of steam injection
24	dSi S	no nc oFF	oFF	no : Door use signal. When the door is closed, the input signal is the disconnection signal nc : Door use signal. When the door is closed, the input signal is the connection signal OFF: No door use signal
25	AUO	FAN AL	FAN	FRN: Fan output RL: Alarm output
26	FndL	1~900	1	Delayed closing of fan (it can be effective only when the fan output is selected)

9. Warranty

Note: This equipment will be repaired free of charge within one year, and the maintenance cost will be charged after one year. This certificate will be invalid if it is altered.

1. According to the national regulations, our company and distribution department implement "three guarantees" for users.
2. The product warranty period is 1 year from the time of purchase.
3. The user must fill in the warranty card at the time of purchase, and keep this card and invoice for future repair.
4. In any of the following circumstances, the "three guarantees" will not be provided, but repair fees can be charged:
   - When it is damaged by the user due to improper use or man-made reasons (damaged during moving or natural disasters);
   - When the product is disassembled by the user or the parts are incomplete;
   - When there is no warranty card;
   - When the warranty card does not match the product model and specification and machine body number.

Marketed globally by:
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