

MASTRO[®]

Service



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Floor-type Electric Fryer

□ Computer Version □

8420A

8421A

□PC board□

User's Manual

Dear Client & User,

Firstly, thanks for purchasing and using our product. All the information and guidelines of this user's manual comply with certain applicable regulations, which come out from our long-term accumulated knowledge and experience as well as current project development situations.

Limited to some special structures, additional specified items or new technology changes, the actual usage situation might be some different from what stated in this user's manual. Should you have any question, please do not hesitate to contact the manufacturer via the method shown in back cover page of this manual.

For safety purpose and efficient operation, please make this document available to users for reference. Do have them to read this manual carefully before carrying out any action on this device, especially when starting.

The manufacturer declines any responsibility in the event users do not follow the instructions or guidelines stated here.

The user's manual should be placed close to the device, in convenience of users' reading before operation. We have the full authority to reserve the further technical changes of the device, in the scope of further performance improvement characteristic development.



Warning

- ◆ Any self-modification, wrong installation, adjustment or maintenance can lead to property loss or casualty. Please contact the manufacturer for any adjustment or maintenance, and have the work done by a trained & qualified person.
- ◆ For your safety sake, please keep the machine away from any liquid, gas or other object, which is flammable or explosive.
- ◆ This appliance should not be operated by those who have physiological, perceptual or mental disabilities or those who have insufficient experience or knowledge (including children). Only in conditions of being given sufficient supervise & guarantee of personal safety, as well as proper instructions & guidance, those who were mentioned above can make some particular operation of this device.
- ◆ Keep children away from the device.
- ◆ Preserve this manual safely. When passing on/selling the device to a third party, the manuals must be handed over along with the device. All users must operate the device complying with the user's manual and related safety guidelines.
- ◆ Keep the machine away from any liquid, gas or other object, which is flammable or explosive.
- ◆ If the appliance is placed near walls, partitions or kitchen furniture and the like, it is advisable to make these facilities with non-combustible material, otherwise cover them with non-combustible heat-resistant material, and pay attention to fire prevention regulations.

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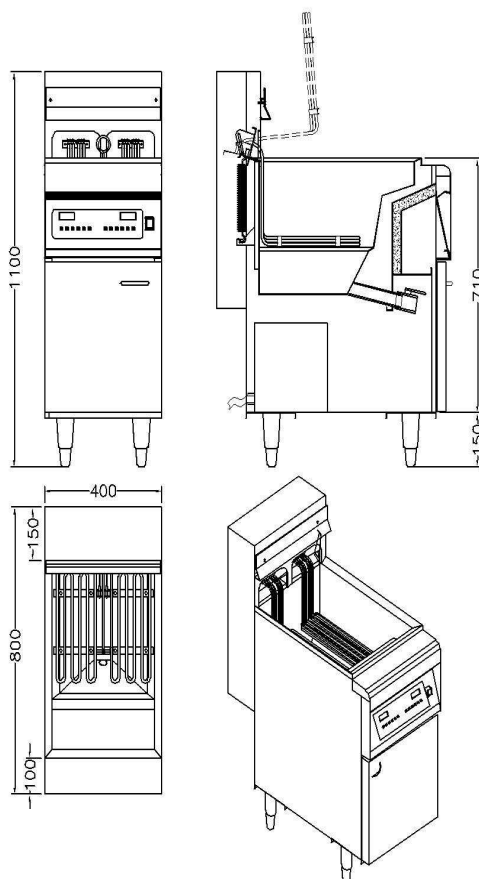
1. Functional Introduction

This product is manufactured by our company, which is combined with advantages from home and abroad. It is novel in design, reasonable in structure, easy in operation, durable in use and convenient in maintenance. The powerful Power design makes the cold oil reach the working condition and recovery fast. It is efficient and high-yield. The deeper oil cooling zone makes the food debris not easy to carbonize which can not only extend the oil service life but ensure the fried food in a colorful color and luster. This appliance is controlled by computer, which is easy to operate and superior in performance. It can program according to actual requirement. Therefore, it is the ideal equipment for hotel, supermarket, western restaurant, fast-food restaurant and food industry.

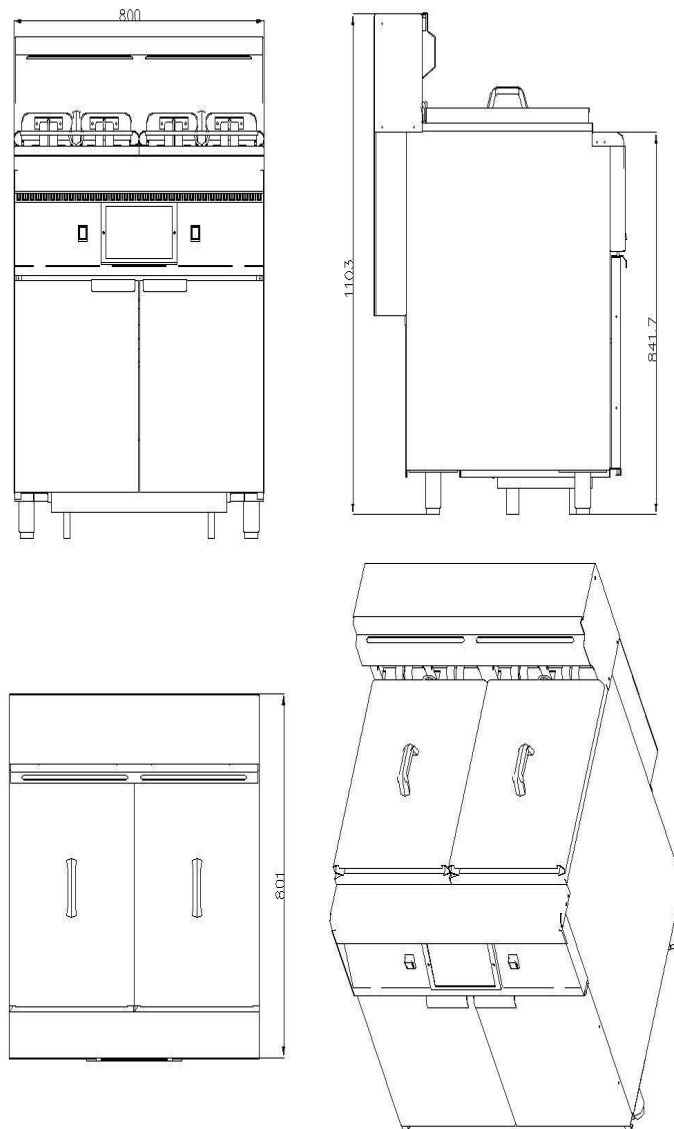
2. Structure Schematic Diagram and Working Principle

2.1 Structure Schematic Diagram □

Cod. 8421A



Cod. 8420A

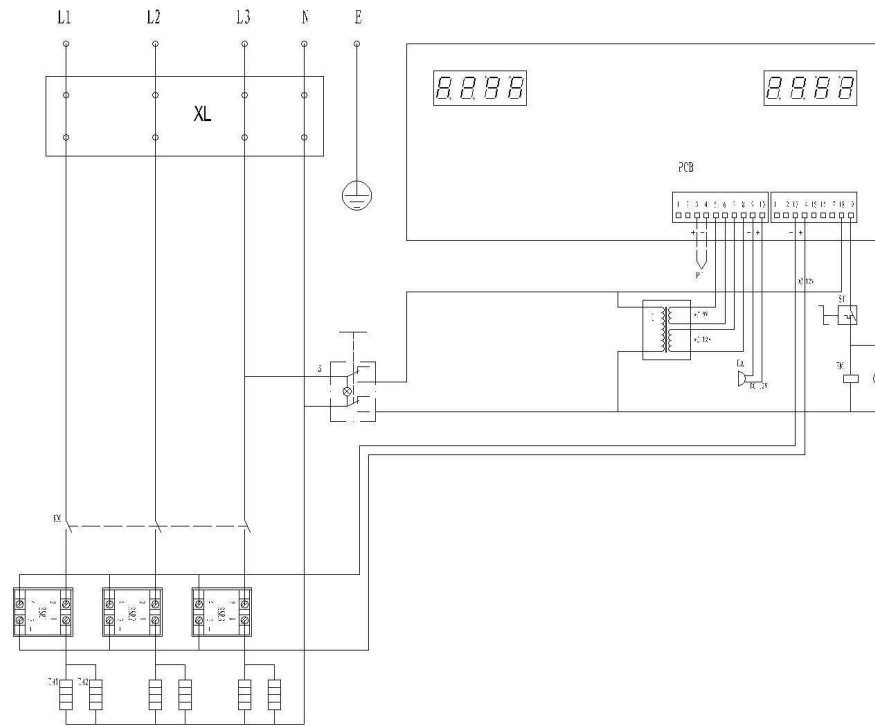


2.2 Structural & Functional Features

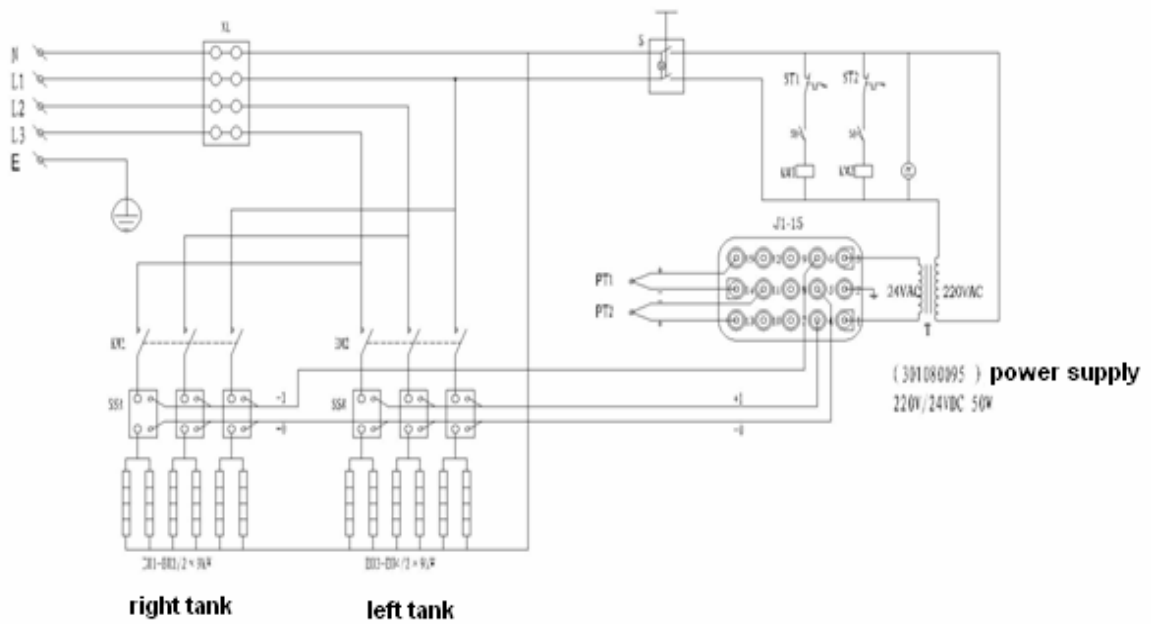
1. All stainless steel body, elegant appearance.
2. High efficiency heating elements, oil relief valve.
3. Over temperature protection safety device.
4. Upturned heating element, easy to clean.
5. Computer-controlled temperature and time.
6. Equipped with oil filter (Cod. 8420A).

2.3 Electrical Diagram:

DZL-28



DZL-28-2



3. Basic Features & Parameters

Model	Dimension□mm□	Capacity□ L□	Power□k W□	Voltage	NW□kg□
8421A	400x800x1100	28	18	3N-380V	60
8420A	800x800x1100	28x2	36	3N-380V	109

4. Precautions & Recommendations

4.1 Transportation and Storage

During transportation, the machine should be carefully handled and do not put it upside down to prevent from damaging to the shell and inside. The packaged machine should be stored in a ventilated warehouse without corrosive gas. If it needs to be stored in open air temperately, measurement against raining is needed.

4.2 Notice for Installment

Accessories:

No.	Name	QTY		Unit
		8421A	8420A	
1	basket	2	4	PCS
2	oil-drain tube	1	2	PCS
3	lid	1	2	PCS
4	basket bracket	1	2	PCS
5	oil filter	—	1	Set
6	power line of oil filter	—	1	PCS

Electric installation:

1. The power supply should be 380V/50HZ and a reliable grounding wire is needed.
2. The air switch that connecting to the power line should be above 40A.
3. Connect the phase line and zero line according to the power line standard.
4. Connect the oil outlet on the right side of the oil filter to oil tube, screw tightly and seal it. The left side, use the power line to connect the receptacle.

Notice □

1. The supply voltage should correspond with the working voltage of the appliance.
2. There is an earth stud at the back of the furnace body. A copper wire that no less than 1.5 mm² should be connected to the earth wire complying with the safe regulation reliably.
3. Check the connection, voltage and safety grounding after installation.
4. The appliance should be placed in a smooth place and kept a minimum clearance of 10cm away from the incombustible object on both sides and 20cm at the back(such as walls, windows and so on).
5. The fixed arrangement of wire should be equipped with a all-poles shut-off switch whose poles have a contact separation at a minimum clearance of 3mm. grounding leakage protection switch is recommended. Do not put any sundries in front of the switch for convenient operation sake.
6. The mounting position should keep away from the flammable and explosive objects. The ambient temperature should be below 45□ and the relative humidity should be below 85%.
7. Installation should be operated by professional technician.

4.3 Special Notice

1. The appliance is not applicable for home use.
2. This appliance is a commercial machine, which needs to be operated by trained cook.
3. All operators should follow close to the line of electric safety guidelines. Make sure that the voltage corresponds to the service voltage on the nameplate and grounding is safe.
4. All operation should be done in safe condition. If any failure occurs, please inform the professional technician to check and repair.
5. The appliance should be installed correctly and debugged before using. Only when the appliance was tested and made sure error free can the appliance be used.
6. Do not sway and tilt when using.
7. No self-modification! Self-modification may cause casualty.

8. Turn the power off when dismantling. Dismantlement should be operated after the appliance cools down.
9. Do not open the casing of the machine.
10. The product contains high-voltage circuit inside, dismantlement may cause electric shock.
11. Unplug and turn the power off before cleaning.
12. Do not spray water directly to the product when cleaning. It may cause electric shock.
13. Do not pat the product or put any object onto it.
14. Abnormal operation may cause damage and danger.
15. High temperature may cause scald.
16. Do not touch the appliance with hands directly due to high temperature during or after the operation.
17. To prevent from damages, turn the electric switch off as soon as possible when near the thunder zone.
18. Do not destroy the control panel with hard or sharp objects.
19. Turn the electric switch off when finish working.
20. Circuit maintenance and appliance installation should be operated by professional and qualified personnel.
21. If the power cord is damaged, replace with an oil resistant sheath flexible cable YZW□57 of GB/T 5013.1□IEC 60245□IDT□□ or the professional components that bought from other manufacturer or maintenance department. Replacement should be operated by professional person.

5. 8421A Working Instructions

5.1 Control Panel:



5.2 Programming Instruction: (1-tank)

Before programming, please do have the following instruction read:

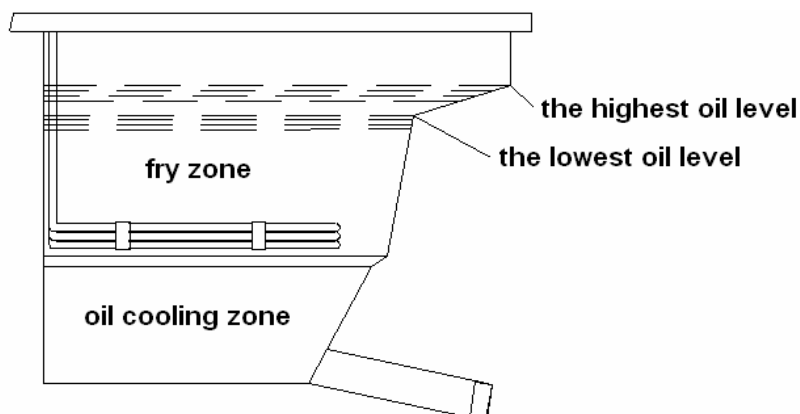
1. Turn on the power switch and press one of the \square keys to start up the computer.
2. Press $\sqrt{\quad}$ to enter programming mode. The left display shows CODE. If you press this key by mistake, press $\sqrt{\quad}$ again to exit programming.
3. Input the password 1,6,5,0 to enter programming mode.
4. The left display shows SP-r (to set the oil tank temperature). If the right display shows temperature setting, input the new temperature (Notice: If you need 170 degrees, please press 1-7-0), press $\sqrt{\quad}$ to store the set temperature. If you don't want to change the default value, press $\sqrt{\quad}$.
5. The left display shows SELP (to select product). All the product indicators are flashing, press the desired programming product key (Notice: If you need to program the third key, press the third key.).
6. If the left display shows COOC (fry time), the right one shows the fry time. If the time is correct, press $\sqrt{\quad}$. If you want to change the time, input the desired time (e.g. 1min 30sec, please press 1-3-0 to set the third key time as 1min 30sec), press $\sqrt{\quad}$ to lock the time value.
7. The left display shows SENS (sensitivity). The pre-set sensitivity value will be shown on the right display. Input the new value (Range from 1-9sec. If you input 0, there will be no sensitivity. A better initial value may be 4 or 5.), press $\sqrt{\quad}$ to lock the value.
Notice: Sensitivity refers to the feature that adjusting the computer version fry time to compensate the dropping oil temperature during frying. This sensitivity device compensates the temperature changes by cutting or adding fry time according to food character, food quantity and initial temperature. The right sensitivity value can ensure high-quality fried food. E.g. program for 4 ounce chips, you can get a good quality as 2 1/2 pounds. A better initial value may be 4 or 5. To get a better quality, test within 1-9.
8. If the left display shows SH- (shaking time), the right one shows the shaking time. If the food needs shaking during frying, input the shaking time and press $\sqrt{\quad}$ to store the time. If no shaking is needed, press "0" and then $\sqrt{\quad}$. E.g. The total fry time is 3min, start shaking after 45sec. Then input 45sec. During frying, when the shaking time is reached, the buzzer will ring and the indicator of corresponding product key will flash for 3sec to remind shaking.
9. The left display shows SELP. If you want to program for more product key, return to step 5. If no more programming, press $\sqrt{\quad}$ to store the procedure.

5.3 Operating Instruction:

Starting up the computer by pressing \square :

1. The following information will be shown:
 - CYCL indicates that the heater is working by melting oil. The fryer will keep in a melt way till the oil temperature reaches 180°C (82°F).
 - H1 indicates that the oil temperature inside is 21°C (15°C) or more higher than the pre-set temperature.
 - LO indicates that the oil temperature inside is 21°C (15°C) or more lower than the pre-set temperature.
 - ---- indicates that the appliance temperature is within the set temperature, you can start frying food.
 - $\square\square\square\square$ indicates that the temperature probe breaks down.
2. During oil melting cycle, the display CYCL will change into LO which indicates that the melting process is over and it is heating fast.
3. If the LO changes into ----, it indicates that the oil temperature closes to the pre-set temperature and you can start fry program in 2min.
4. Put the food into the oil, press the corresponding product key and start the fry cycle.
5. The display shows the pre-set fry time and starts countdown (Notice: If multiple products are fried together, it shows the minimum time.).
6. If the shaking time is input, the alarm will ring for 3sec after X seconds (X=the set time value) frying and the display shows SH- to remind you of shaking. (Notice: The fry cycle won't show SH- if there is no shaking time.)
7. When the fry cycle is over, the alarm will ring, the display will show COOC and the corresponding product key will flash. To cancel the alarm, press the product key that corresponds with the flashing indicator.
8. Temperature checking: press \square to check the actual temperature and double-click \square to show the set temperature.

Notice: Before using, make sure that the oil tank and heating element are clean and dry; put the basket away and check the oil valve; then inject the edible oil into the tank, the oil level as indicated in the following picture, the oil should not be higher than the highest oil level or lower than the lowest oil level.



6. 8420A Working Instructions

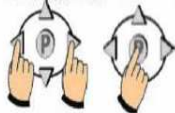
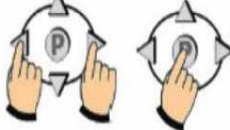

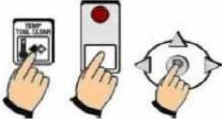
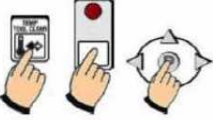
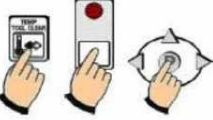
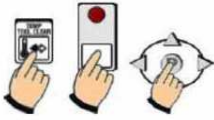



6.1 Manager/Chef Program Card

Manager/Chef Program-Password 6647

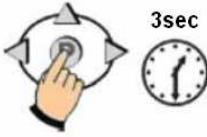

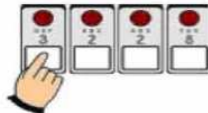





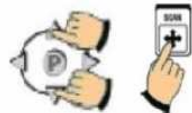






Basic Menu	Content		Select	Confirmation	
Product Counts					
Programming	Enter Code		6647	P	
Exit					
Main Menu	Content		Select	Confirmation	
SYSTEM	APPLIANC	ELEC PROPANE GAS	L/R arrow	P	
RECIPE	TONE VOL	NONE , 1, 2, 3, 4	L/R arrow	P	
PRODLIBR	TEMPUNIT	F/C	L/R arrow	P	
Exit	SBTIME-L	:00	Num Key	P	
	SBTEMP-L	121C	Num Key	P	
	SBTIME-R	:00	Num Key	P	
	SBTEMP-R	121C	Num Key	P	
	COOKUNIT	MM:SS/HH:MM	L/R arrow	P	
	Product Select Key				P
	ALL	NAME	Select the name of the product	U/D arrow	P
	NAME	TIME	Set the desired time	Num Key	P
	TIME	TEMP	Set the desired TEMP	Num Key	P
	TEMP	TIMING	STRAIGHT	L/R arrow	P
TIMING	FLEX				
ALRMTIME	ALRMTIME (1, 2, 3)	Set the alarm time	Num Key	P	
ALRMCNCL	ALRMCNCL	AUTOMATIC	L/R arrow	P	
FILTRCNT	FILTRCNT	MANUAL			
EXIT	FILTRCNT	Set the times of filtering (NONE,	L/R arrow	P	
Use SCAN, enter letter by Letter Key, Right arrow to move backward, Left arrow to move forward.				P	
ADD	Save the new name		L/R arrow	P	
MODIFY	Modify or cancel the existing name				
CANCEL	Cancel the saving or modification of the current name				
Notice:		1. Before name modification, please select the name that needs modifying.			
		2. Before cancelling a name, please select the name that needs cancelling, then use a space to replace the left and right letters.			

Notice: The following operations can be carried out by the authorization of password 6647: system setting, product setting and product name library compilation.

System Setting---6647

<p>APPLIANC</p> <p>GAS</p> <p>ELEC</p> <p>APPLIANCE MODE Setting.</p> <p>Select Gas or Electric by L/R arrow key. Press P.</p> 	<p>TONEVOL</p> <p>TONEVOLUME Setting.</p> <p>Select 1,2,3,4 or NONE by L/R arrow key. Press P.</p> 	<p>TEMPUNIT</p> <p>F</p> <p>C</p> <p>TEMPERATURE SCALE Setting.</p> <p>Select "F" or "C" by L/R arrow key. Press P.</p> 	<p>SBTIME-L</p> <p>XX.XX</p> <p>SET BACK TIME Programming (Auto energy saving time-L)</p> <p>It shows the actual set time. If it needs changing, press toggle clear to change the time to 0. Enter a new time by corresponding product key. Press P.</p> 
<p>SBTEMP-L</p> <p>XXXXF</p> <p>SET BACK TEMPERATURE Programming (Auto energy saving TEMP-L)</p> <p>It shows the actual set TEMP. If it needs changing, press toggle clear to change it into 0. Enter a new TEMP by corresponding product key. Press P.</p> 	<p>SBTIME-R</p> <p>XX.XX</p> <p>SET BACK TIME Programming (Auto energy saving time-R)</p> <p>It shows the actual set time. If it needs changing, press toggle clear to change it to 0. Enter a new time by corresponding product key. Press P.</p> 	<p>SBTEMP-R</p> <p>XXXXF</p> <p>SET BACK TEMPERATURE Programming (Auto energy saving TEMP-R)</p> <p>It shows the actual set TEMP. If it needs changing, press toggle clear to change it into 0. Enter a new TEMP by corresponding product key. Press P.</p> 	<p>COOKUNIT</p> <p>MM:SS</p> <p>HH:MM</p> <p>COOK TIME UNIT Setting.</p> <p>Select "MM/SS" or "HH/MM" by L/R arrow key. Press P.</p> 
<p>SYSTEM</p> <p>SYSTEM Programming Exit.</p> <p>Press Up arrow key.</p> 	<p>EXIT</p> <p>Press P.</p> 	<p>READY</p> <p>You have exited "SYSTEM Programming Mode". The controlled can be operated.</p>	

Product Name Library---6647

<p>Press P for 3sec.</p> 	<p>PROGRAM</p> <p>It will show PROGRAM. Press P.</p> 	<p>CODE</p> <p>Enter 6647 by product key. Press P.</p> 	<p>SYSTEM</p> <p>Press Down arrow key to select PRODLIBR.</p> 
<p>PRODLIBR</p> <p>Press P to select PRODLIBR.</p> 	<p>It will show a flashing dash. Press SCAN and then use this product key to enter a new word. Press Right arrow key to move onto another character.</p> 	<p>AB</p> <p>Continue to spell the word. If finish, press P.</p> 	<p>ADD</p> <p>Press P again to store the word. It goes to Exit Library Programming.</p>  <p>To cancel or modify, please see the next step.</p>
<p>To cancel the product name in the library: Please follow the steps (1-5) above. And Then.....</p>	<p>NAME XXXXXXXX</p> <p>Select the product name. Scroll through the library by U/D arrow key. Select the name needs cancelling, press SCAN.</p> 	<p>AB</p> <p>Modify or Cancel name. Move to the character needs modifying by Right arrow key. Modify by this product key. If cancel, press toggle clear and then P.</p> 	<p>ADD CANCEL MODIFY</p> <p>Cancel or Modify word. Select CANCEL or MODIFY by L/R arrow key.</p> 
<p>If you select CANCEL: CANCEL Press P to exit and cancel the word.</p>  <p>-----</p> <p>If you select MODIFY: MODIFY Press SCAN to return, then modify the word.</p> 	<p>PRODLIBR</p> <p>Exit Library Programming. Press U/D arrow key till the display shows Exit.</p> 	<p>READY</p> <p>You have exited "Library Programming Mode". The controller can be operated.</p> <p>EXIT</p> <p>Press P.</p> 	

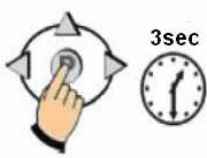

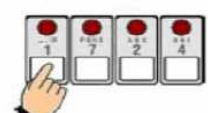

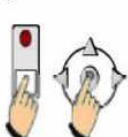


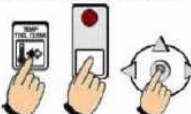
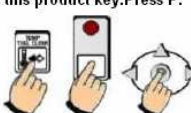

6.2 Product Setting Program Card

Product Setting Program-Password 1724

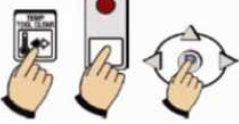
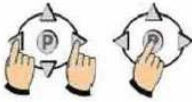



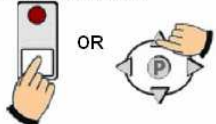



Basic Menu		Program Content		Select	Confirmation
PROGRAM		Enter Code		1724	P
Main Menu		Program Content		Select	Confirmation
RECIPE		Product Select Key			P
EXIT	ALL	NAME	Select the product name.	U/D arrow	P
	NAME	TIME	Set the desired time.	Num Key	P
	TIME	TEMP	Set the desired TEMP.	Num Key	P
	TEMP	TIMING	STRAIGHT	L/R arrow	P
	TIMING		FLEX		
	ALRMTIME	ALRMTIME (1, 2, 3)	Set the alarm time.	Num Key	P
	ALRMCNCL	ALRMCNCL	AUTOMATIC	L/R arrow	P
	FILTRCNT		MANUAL		
		FILTRCNT	Set the filtering times. (NONE, 0, 1 ~ 99)	L/R arrow	P
	EXIT				

Notice: Password 1724 can carry out product setting operation.

Product Setting---1724

<p>Press P for 3sec.</p> 	<p>PROGRAM</p> <p>It will show PROGRAM. Press P.</p> 	<p>CODE</p> <p>Enter 1724 by product key. Press P.</p> 	<p>RECIPE</p> <p>Press P. All the LED of product keys will be on.</p> 
<p>PRODUCT</p> <p>Program PRODUCT key. Press the desired PRODUCT key. Press P.</p> 	<p>ALL</p> <p>Press P.</p> 	<p>NAME XXXXXXXX</p> <p>Set the display name. It will show NAME and then display the actual product name. Scroll through the library by U/D arrow key. Press P to lock your choice.</p> 	<p>TIME XX:XX</p> <p>Set the cooking TIME. It will show the actual set time. If it needs changing, press toggle clear to change it into 0. Enter a new time by this product key. Press P.</p> 
<p>TEMP XXXX</p> <p>Set the cooking TEMPERATURE. It will show the actual set TEMP. If it needs changing, press toggle clear to change it into 0. Enter a new TEMP by this product key. Press P.</p> 	<p>TIMING STRAIGHT FLEX</p> <p>Set the TIMING mode. Select Straight or Flex by L/R arrow key. Press P.</p> 		

Product Setting:

<p>ALTIME1 XX:XX</p> <p>Set the ALARM. It will show the actual alarm time 1. If it needs changing, press toggle clear to change it into 0. Enter a new time by the product key. Press P.</p> 	<p>ALACNCL AUTOMATIC MANUAL</p> <p>Set the ALARM CANCEL. Select AUTOMATIC or MANUAL by L/R arrow key. Press P.</p> 	<p>FILTRCNT X NONE</p> <p>Set Filter Count. It will show the actual filter count (1-99 or NONE). Set the new filter count by L/R arrow key. Press P.</p> 	<p>ALL</p> <p>Exit Programming Mode. Press the Up arrow key.</p> 
<p>EXIT</p> <p>Press P.</p> 	<p>PRODUCT</p> <p>You can press other PRODUCT key to program and repeat the programming instruction or press the Up arrow key to exit.</p> 	<p>EXIT</p> <p>Press P.</p> 	<p>RECIPE</p> <p>Press Up arrow key.</p> 
<p>EXIT</p> <p>Press P.</p> 			

6.3 Oil Filter Working Instruction

1. It can only filter one tank each time. Before filtering, please make the heating element stop working.
2. Check the connection of power line and oil outlet pipe.
3. Turn the oil return tee valve to the tank that needs filtering: two arrows, one is upward (oil filter) and the other points to left (left tank) or right (right tank).
4. Open the oil drain valve to let the oil flow into the filter.
5. After oil drainage, close the drain valve and open the power switch of the filter. The filter starts working to pump the oil back to the oil tank.
6. Turn the filter power off timely when all the oil back to the tank.
7. Replace the filter paper regularly.

7. Routine Inspection

It is necessary to check the machine daily.

Check the machine regularly can avoid serious accident happens.

Stop using if user feels that there are some problems in the circuit or machine.

Check the situation of the machine before or after using every day.

Before using: Whether the machine is tilted?

Whether the control panel is damaged?

Whether the power line is aging, cracking or damaged?

During using: Whether there is strange smell or vibration noise?

Whether the temperature is out of control or any electric leakage?

8. Cleaning and Maintenance

a.i.1. In case of accident, please turn the power supply off before cleaning.

a.i.2. Drain and filter the edible oil when finish working. Take the basket net and oil-drain tube out, clean them with non-corrosive detergent and rinse with clear water. Then clean the tank and heating element with non-corrosive detergent and rinse with clear water, wipe up with a dry towel. Last, clean the surface and power outgoing line with a wet towel. Do not spray water directly to the appliance. Water infiltration may damage electric property and cause safety accident.

a.i.3. Put all the accessories away after cleaning and cover the lid.

a.i.4. If not going to use the appliance, please turn the PC board and power switch off.

a.i.5. If not going to use the appliance for a long time, please clean it completely and store it in a well-ventilated warehouse with no corrosive gas.

9. Failure Analysis & Trouble Shooting

Symptoms	Causes	Solutions
Power on and the switch is turned on, but the panel has no reaction.	1. The connection of circuit board loosens or damages.	1. Tighten the connection or replace the circuit board.
Power on, the working temperature keeps rising and out of control during heating.	1. The thermocouple is defective. 2. The temperature limiter breaks down.	1. Replace the thermocouple. 2. Replace the temperature limiter.
It does not heat up and the switch indicator is off.	1. The power supply is abnormal and it is disconnected. 2. The fuse is fused.	1. Check the power supply and connection to make it supply normally. 2. Replace the fuse.

Aforementioned troubles are just for reference. If any failure occurs, please stop using, and inform the professional technicians to check and repair.