

PFE-500 Electric Pressure Fryer(with pump)

Electric Pressure Fryer

# **INSTRUCTION MANUAL**

Read this manual carefully prior to use.

Technology is subject to change without notice.

## Character and usage

The series of PFE-500 American style pressure fryer that my plant produced absorb the advanced technique from abroad and learn the production process of western chicken frying and traditional Chinese style chicken frying. . It has the characteristics of stainless steel material, use the electronics to adjust time, control temperature and expel the air automatically; it is used to fry chicken, fish, sparerib, mutton, and all kinds of meat and vegetable. This machine is applicable for hotel, guest houses, restaurants, factories, dining room. It has the advantage of low energy consume, free from pollution, convenient usage and high efficiency. It is indeed the newest food machinery equipment in domestic. The machine the oil filter can filter the dirty of the oil efficiently; it is useful to improve the quality of the fried food.

### I. Main Technical Parameters

1. Rated Voltage: 3N~400V
2. Rated Frequency: 50/60Hz
3. Rated Input Power: 13.5Kw
4. Rated Working Pressure: 0.085MPa
5. Output:  $\approx$ 25kg/h
6. Range of Temperature Control: 50-300°C(adjustable, the highest temperature you set can be 200°C)
7. Electronic Timing: 0-90min (adjustable)
8. Electricity consumption: $\approx$ 3kw/h(Constant Temperature Time is included)
9. Oil Capacity of the Fry: 25L
10. Gross Weight:155kg
11. Overall Dimensions: 968×486×1219mm

### II. Installation and Debugging

1. The machine shall be placed at a dry clean and ventilated place. At operation, cushion the movable castor horizontally, make it balanced, and fasten it. The relative humidity of indoor environment shouldn't be too high, otherwise it will decrease the electricity insulation. When necessary, there should be an exhaust device to be installed.

This machine adopts 3N~400V power supply. When connection, please connect the neutral conductor (N) carefully, otherwise the machine will be damaged. There shall be a special purpose cutoff installed on the input line front end, and its accessional facilities shall conform to the requirements of the electricity capacity of the machine and ask the eligible technician to install.

2. The grounding terminal of the machine shall be grounded reliably, its section  $\geq 2.5$  mm<sup>2</sup>. If many machine is working at the same time, a equipotential device should be equipped between each set.
3. During the conveyance of the machine, the vibration will cause the loose or removal of the spare parts, so when installation and debugging, please tighten each loosening parts.
4. Pour oil before heating, and its oil level can't be lower or higher than the oil level line. It is forbidden to heat if there is no oil in the boiler, otherwise the electro thermal pipe will be burned out.
5. The temperature is set between 150°C and 180°C, the user can set it depending on the production, timing set, cold oil to heat for 20 to 30 min, hot oil to fry 10 to 15 min, before frying the food, the oil temperature must be over 150°C.
6. When cold oil heating, you'd better not lid the cover. Mix up manually the oil continuously to heat it fast and well-proportioned.
7. When its delivery, the pressure of the automatic overflow valve is usually set at 0.07Mpa to 0.08MPa, if the indication of the pressure gauge exceeds 0.09MPa and continues to increase, discharge the air manually, and unbolt moderately the air-release valve to discharge the air, making the air pressure keep at 0.08Mpa to 0.09Mpa.

### III. Operation Principle and Process

#### 1. Preparation before starting the machine and the process for frying

Before you turn on the ON switch, you must open the fryer lid to pour at least 25L oil into the pot. (When you pouring the oil, looking at the oil line==, to make sure it is suitable to be higher 10mm than the heaters). Be careful, before you pouring the oil into the pot, you should open the door at the bottom side to check the oil drain valve and oil filter valve to make sure that it is in be closed. After checking this, close the door at the bottom to connect the power to start the machine.

Turn the power switch on to the Heating Position(Power), and set the temperature controller. Turn on the timer, set the time, and turn off the drain valve at the same time. Now the machine starts heating and the oil inside heating now. When the temperature is not reach to the working temperature, please do

not close the lid. You can use the basket handle to mix the oil inside to make sure the temperature is even. After preheating, (means up to the setting temperature), turn off the machine, now you can put the prepared food into the basket( the machine is equipped with one basket), using the handle of the basket to lift the basket to the fry pot, then take the handle of the basket away and closed the fryer lid, make the pothook ok, then tighten the threaded rod. Then press the ON key, the machine starts frying now. The temperature is arising and the timer begin to timing now. As the temperature is up to the setting temperature, the heater in the pot stops heating. When the temperature is lower than the setting temperature, the heater will automatically heat again. As the time going to “0”, the Exhaust valve will be automatically open to exhaust. The process of frying is ok. As the steam in the pot is exhausting ok, means the pressure gauge shows”0”, you can loosen the threaded rod. The press the beam, using the handle of the basket to lift the basket, waiting for few minutes you can take the basket away from the fry pot.

## 2. Fastening method of opening and closing the cover:

Lay down the lid, trying our best to press the down plank to make sure the lid is closed well. Open the hook lock to ensure that it is fasten well with the frontage of the pot. Spinning the spindle in the clockwise direction, press hardly to make sure the make sure that the red or the black ball is in the same direction with the hook lock. Loosen the spindle in the counterclockwise direction when you open the lid, press the (A) and try to open the hooklock..

## 3. Preheating and the treatment of raw oil

The universal vegetable oils (except peanut oil) can't be edible until fried well, otherwise there will be a smell of raw oil, so you should preheat the oil each time you pour new oil and you pour oil (cold) for the first time for frying. The method: temperature 140°C to160°C, time 10-20 min (it depends), making the raw oil in the boiler bubble up. Additionally, for this preheating and the treatment of raw oil, there is no food to fry in the boiler, that is, there is no vapor, no pressure indication for the pressure gauge, so please pay special attention to the heating time and temperature, it is best for you to open the cover..

## 4. Operation process of cooking and frying

After heated as the above methods , reset the working temperature and time, put the prepared food in the frying basket, put the frying basket in the fry pot with a special “handle” fast and balanced, lid the cover quickly, make the cover balanced, fasten the fastening screws, screw them with proper strength, and confirm the air-release valve is closed. At this moment, the pressure indication of the pressure gauge shall increase slowly. When the pressure reaches 0.07Mpa to0.08Mpa, the overflow valve starts to discharge the air automatically, making the air pressure keep invariant. When the temperature reaches the invariant value, the time reaches the set value, it will release the air automatically.. When the air in the boiled is discharged completely and the pressure gauge indicates “0”, loosen the fastening screw, press down the crossbeam with hand, loosen the crossbeam hook, and open the cover, otherwise there

will be a danger. When opening the cover, the operator should stand side face, in case the hot air shall emit to scald his wrist. The operator must have a good knowledge of how to operate the machine to ensure the security. The workers are forbidden to leave the working scene, they should supervise the production process, if any abnormal situation, stop the machine immediately, find out the cause, and operate again after the troubles are got rid of.

#### 5. Method of oil filtering

Before filtering, please prepare the oil tank ok( the filter envelope is ok ) and turn off the power switch. Open the fryer lid, taking the basket out of the pot. Open the Drain Valve, pouring the oil into the oil tank. Then turn off the Drain Valve, and turn on the Pump Valve. And then turn on the power switch into the position of Pump. Now the machine starts pumping the oil. The oil is pulled back to the pot of the machine. After the oil pumping is finished, turn off the power to the position "0". Remove the connector for the oil filtering, cleaning up the oil tank and change the oil filter envelope for next use.

### IV. Safety Points for Attention

1. In order to protect people from hurt, the machine can not be used if a grounding device is not equipped. (use 2.5mm<sup>2</sup> copper wire to contact with the ground bolt)
2. Don't start to heat when there is no oil in frypot or the oil level lower than element, otherwise the elements will be burned. Please don't wash the heating element by cool water until they are cooling, or it will explode
3. Latch the lid before heating. Don't operate the securing hook and draining the oil. Before you open the fryer lid, to make sure there is no pressure in the frypot, that means the pressure gauge shows "0". After 30 seconds, you can open the fryer lid to avoid explosion for the pressure.
4. In order to keep the good sealing between fryer pot and fryer lid, do not use handle or some other hard tools to strike the fryer lid and mouth of fryer.
5. The rubber seal of the fryer lid can not be dismantled of yourself. For it may affect the sealing. While it is not working, you should close the fryer lid, but not too tight to avoid the aging of the seals.
6. You should cut off the power if the machine is not working in order to avoid explosion for the wrong operation.

### V. Maintenance and Upkeep of the Machine

1. Clean the overflow valve twice weekly, screw the screw lid, and clean the gravity block, making it jump freely and open and close flexibly. Check the general electricity and screws of power line, and joints monthly. If any loose, fasten them to make them contact well and control sensitively.
2. Clean the smear away from the electro thermal pipe in the boiler and cabinet after daily work is over

to keep clean and sanitary and enhance the use life span of the machine.

3. After a relatively long time use, the rubber gasket shall be replaced in time if it is found aging and ineffective. Loosen the glue bar fastening screws of four sides on the cover, take out the glue bar from the groove slowly, put new sealing rings into the groove, and fasten the screws.
4. The machine is equipped with overheating protector. If the temperature controller is out of work and the oil temperature is up to 250°C, temperature limiter can cut off the heating power to make sure of the safe. Operator should check the reason for overheat and try to get rid of it. If needed, you should press the reset key in the “temperature limiter” to restart the machine.

## TROUBLESHOOTING

No	problem	Cause
1	Machine not work	Check the electric power on or off, see the fuse whether burn, miss phase or neutral wire not install well. If it is not connect well, reset it.
2	Not Heating	1.Check the contactor and make sure whether is ok, if not, reconnect it. 2.Check the timer, if it is not ok, adjust it or reset it 3.Check the panel and make sure whether it is ok, check the temperature sensor , adjust it or reset it.
3	Heating slowly	1.Check the heating elements, if it is not connected well, adjust it. 2. Check the heating elements by Multi-meter,
4	Not controlling temperature automatically	Check the Temperature sensor, if it is not ok, adjust it , mend it or reset it.
5	Not Timing	Check the timer working or not, if not, adjust or change the time controller
6	Operating pressure too high	Check the Deadweight valve, open it and clean it.
7	Pressure Gauge is not working or pressure is below the specified working pressure	1.Check the pressure gauge, if it is ok good, change a new one. 2. Check the Solenoid valve closed or not closed well, Close it tightly. If it is closed well, you should change a new solenoid valve. 3.Check the deadweight valve, to make sure the screw inside is well, if not, change a new one. 4.If the lid is leakage gas, you should change the seal rubber or adjust it.
8	Over temperature and it can't be restarted.	After trouble clearing, press the rest key of temperature limiter.