

General information

- ◆ OPA61 is a newly developed pasteurizer designed by Shenzhen Oceanpower Industrail Co., Ltd. It applies the technology from several patents provided by our company, such as our unique evaporation cooling technique and digital control system of the machine. Our pasteurizer has the characteristics of impressive shape, high cooling efficiency and stable operation. Besides, it has a unique function that differs greatly with traditional pasteurizer----the protection of cylinder freezing.
- ◆ Materials that can be processed by OPA61 include all kinds of ice cream whose main ingredient is milk or water. This machine is used to sterilize the materials in high temperature and age it in lower one, which will keep the mix more hygiene and delicious.
- ◆ This machine applies the exclusive patent evaporation technology and Hermetic Compressor. It heats the ice cream mix first, and then cools it. During this process, the mix are stirred and cooled to semi liquid with right temperature (about 5℃). Then the mix can be put into the ice cream machine.
- ◆ Truckle is installed in the machine. The front one is universal truckle with mechanical breaks. So it can move in flat ground.
- ◆ Advanced digital control technology is applied to enable the machine work automatically. Users just need to press one button to start the process.



Note : This equipment is mainly used for food production and is recommended to be stationary in a room. The equipment will radiate a large quantity of heat during operation and produce noise that may cause interference in some degree. It may also cause interference to transmitters or other wireless equipment when start-up, so the operator must take necessary safeguard preparation for this phenomenon.



Notice: Please alert to the instructions of operation and maintenance in the accompanying book.



Warning: Fail this operation may cause harm to people and the machine. Forbid children get close to the machine or operate it.

Safety warning---For personal protection

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

◆Protection from electric shock

· Install the grounded equipment according to the standards of family use and industrial applications.

· Operator should use power-supply circuitry according to present safety standards, including the means of connection and electric appliance.

· Make sure the equipment of power-supply circuitry is short and the protection of equipment at creep age.

· Do not touch switch or plug without safety precaution or when wearing wet clothes.

◆Mechanical damage

· Do not touch moving drive of the machine during operation.(Chart 1)

· When removing machine, be sure in the correct way and keep the safety distance.

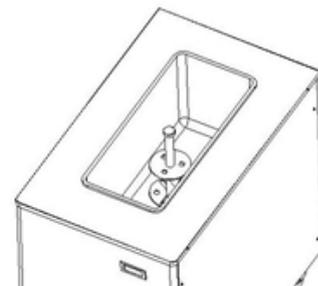


Chart 1

◆Cleaning and sanitizing

· If the machine is not sanitized correctly, it can cause food pollution, which may results in disease or serious health affects, even lethal. This may result in claim for compensation or lawsuit.

· Keep regular cleaning and sanitizing, dispose surplus to prevent the machine from becoming corrupted.

· Always clean the machine according to a fixed schedule and sanitize strictly

according to the operator manual.

◆ **Fire**

·As one of the high-power electrical appliances, the power-supply circuitries must meet the requirement of the maximum current that can reach. And it also should have proper margin. If the wire is made for the current carrying capacity, it may result in over-heat, short-circuit and self-ignition. This may result in possible fire damage. So be attentive to this danger always!

◆ **Operation**

·For safety, the machine must be operated by trained person. The operator should have sufficient knowledge regarding electronic, mechanic and also fully understand the special operation conditions of this machine.

·The product of the machine is related to food production, so the operator must fully understand the special requirements for food sanitation, should have a up-to date certificate issued by sanitation management department of local government and a health certificate according to the law provision.

·The operation process must follow the request of food sanitation, this includes the tools used for assistance and whose sanitation is identified as eligible. And used in sanitizing work, such as mantle for head, respirator, gloves and etc.



Note : Please do not touch the hopper and the first-discharged water as it is heating, or else people will be scalded.

Safety warning —may cause damage to the machine !**Cautious transportation**

- As a kind of refrigeration equipment, The machine should be keep in upright position all the time. It is forbidden to place the machine with big angle gradient or to expose it for violent impact or acute shake during the transportation.

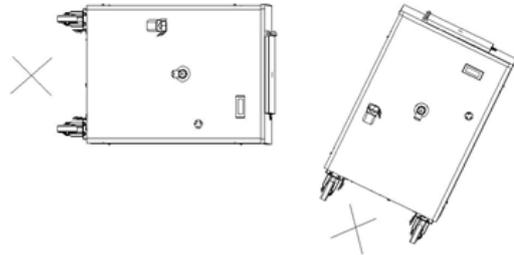


Chart 2

Most important, do not place it up side down or in leaning position! Otherwise the machine can be damaged! (Chart 2)

Proper installation

- Please install the machine strictly according to the installation guidance and terms prescribed by this manual. Take possible measurement against over high or low power, intense heat radiation, being drenched or foundered, caustic gas exposure, not exhausting and inputting gas or fairly high dust-contain since all these conditions will damage the machine and shorten the life cycle.

Use accurately

- The machine is applied for single-phase 220–240V/50Hz; the voltage wave range between 198V to 242V, during operation. For best performance then the operating temperature should be between 10°C-38°C, the relative humidity should be under 90 percent and the height above sea level should be bellow 2,000m. If one or several of these dates is exceeded then the performance of the machine will be reduce or its components may be damaged!
- Do not use the machine for other purposes! The design of the machine is only made for pasteurizing. This does not include the making of ice, cool drinks or to lower air temperature in a room. Improper use will result in fault and severe damage to the machine.

Fault

- When you have some difficulty in installing and operating, please follow the instruction according to the label located on the machine or in the operator's manual.
- If you do not completely understand how to solve the problem after studying the manual, do not hesitate to contact your supplier or our company service center, asking help from our specialist.



Note:

Even during the guarantee period, the manufacturer's free repair service will not be offered if the damage is caused by the methods and terms prescribed in the operator manual regarding the transportation, usage or operation has been ignored.

Tips for transportation

◆ Wooden base and packing

The machine should be fixed above special base. Forklift is recommended for move. (Chart 3)

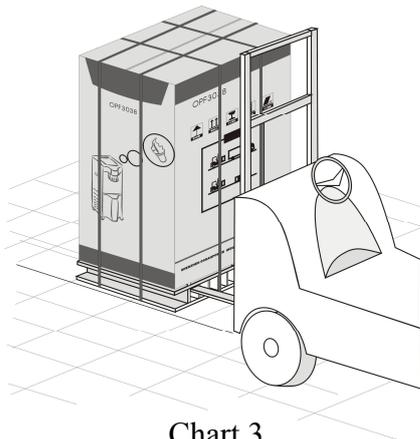


Chart 3

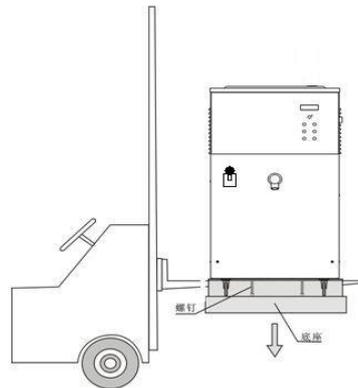


Chart 4

◆ Transportation

Transporting is available with base and packing box. Acute strike and shake is forbidden. The minimum gradient is 45°. No lay upside down or lie down is allowed.

Machines without packing material cannot move by mechanism or for a long distance.

◆ Unpacking

Cut off the wrap belt, and remove the box. No sharp tools should be used, in case to scrape the surface.

The objects inside the package are machine, accessories and operation manual. Packing materials include box, filling stuff, protection film and so on.

◆ Base removal

Remove the bolt connecting the base and machine. Lift up the machine and take the base away, then land machines lightly. (Chart 4)

Shipping and moving

·Only soft qualitative condole belt can use to lift and move the machine without packing.(Chart 5).

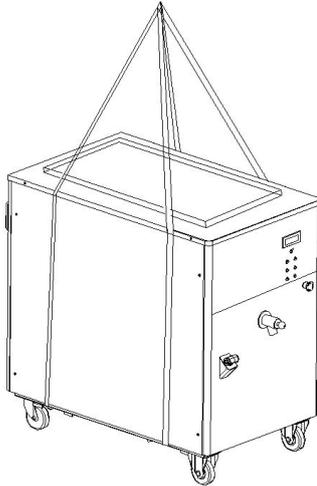


Chart 5

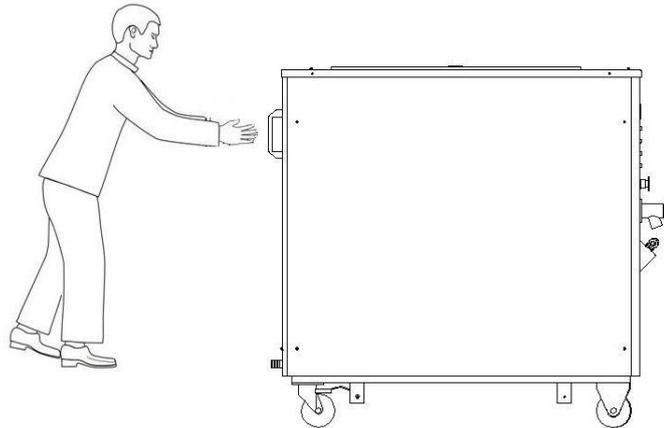


Chart 6

·Machine can move on the flat floor. When moving, release the front brake. The front wheel is caster-swivel, and the back wheel is fixed. Allowed biggest downhill slope is 15 degrees. (Chart 6).

·When machine fixed over, trample the front wheel brake pedal to fix machine. (Chart 7)

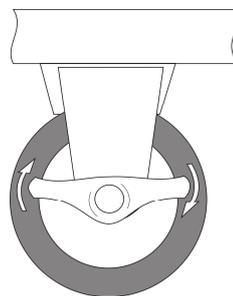
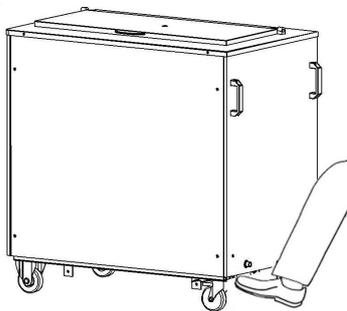


Chart 8

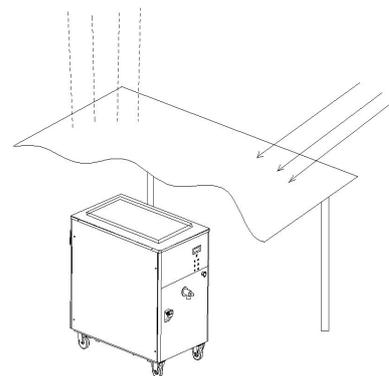


Chart 9

·Keep machine on dry and solid floor, and make sure among 500mm there is no heating supply exceeding 40 degrees. Machine cannot place directly under the sun or water rained. The best temperature is 30—60 degrees.

(Chart 9)

Installation condition

The distance between the machine and other objects should be longer than 200mm. The machine airway should be flowing.(Chart 10)

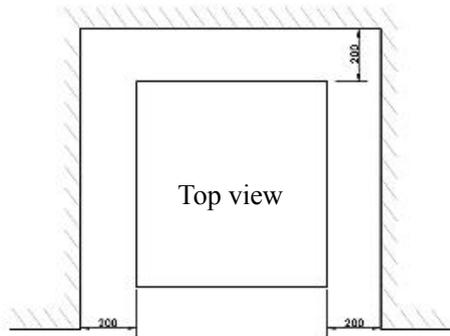


Chart 10

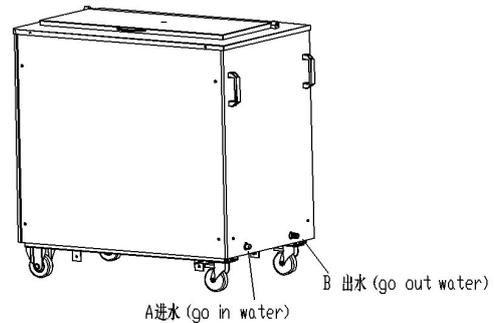


Chart 11

The runoff, more than 1000 M³/h of the exhaust fan should be installed in a room where the space is small. Do not use the machine in an inflammable and explosive place.

A circulation system has been installed inside the machine. As for the water-cooling machine, it only can run after switch on the cooling water.

Drainpipe installation

First, you should put the seal tape around the nozzle A, tighten with the stainless steel tube, the other end of the connection tube should connect to the inlet valve. Take out of the transparency steal pipes from the accessory, connect it to the nozzle B and tighten it with clamps. (Chart 11)

The water pipe should be flowing. Water gap A should be 40cm higher than the machine bottom. Water gap B should be lower than the machine bottom as more as possible. It was suggested to install the matched transparency steal pipes. (Chart 11)

Water press requirements: runoff should between 100ml/s-200ml/s.

Power wire installation



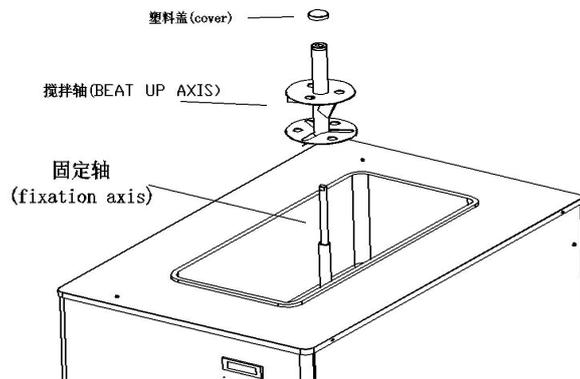
The using wires requirements: (2+1) copper conductor cable 4.0mm square in diameter. The power supply should be 220V-240V/50 single-phase source. The machine can run between 198v-238v in food factory, restaurant and other places. Because the machine is high power equipment, the forward line should be attached 45A non-fuse switch. The sectional area of the copper core plastic-sheated cord should be 4 square millimeters. The breaker inside the equipment should use the chosen fuse wire with more than 32A.

As the water-cooling device will become wet easily, please take care of the around condition. And it will be much better to prepare a leakage protector.

Annex installation

◆ tank beater and discharge door body installation

·Tank beater installation: the equipment should be power-off during the installation. Put the tank beater on the fixed axes in the mix hopper to match the square ness shape hole and the fixed axes in the mix hopper. After the installation of the tank beater, revolve it with your hand slowly. The existed resistance indicates that the match is correct. Finally tighten the plastic cover. (Chart 12)



·Discharge door body installation: during the installation, with the discharge door body hole pointing to the forward discharge columniation taking hold of the installed discharge door body to push in slowly move counterclockwise until it can not be pull out. (Chart 13)

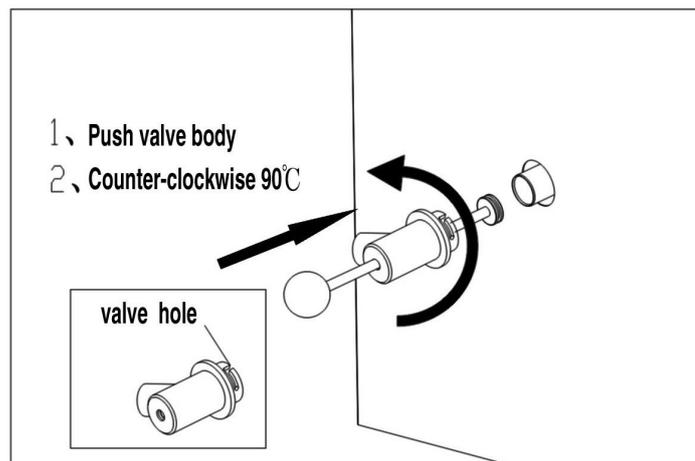


Chart 13

Schematic picture of discharge door assembly

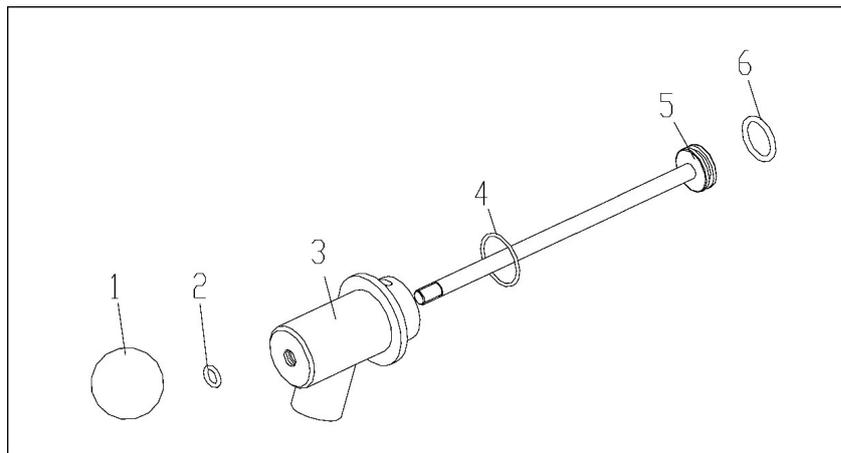


Chart 14

1—handle-ball 2--sealed ring① 3--discharge valve 4--sealed ring ②
5--draw bar 6--sealed ring ③



Warning: Remember to install the machine following the instruction after cleaning.

·Putting food machinery lubricants

Clean and sanitize the parts. Before making ice cream, put food machinery lubricants on the following parts as required.

First, put food machinery lubricants on the sealed rings of discharge valve randomly. Then, install it on the machine. (Chart 15)

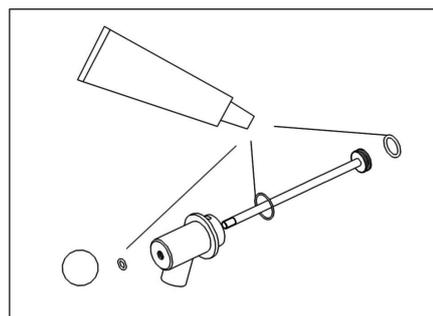


Chart 15



Requirement of hydraulic pressure: The flux needs to be between 100ml/s ~200ml/s. The hydraulic pressure should be less than 0.6Mpa. Close the valve as the machine is in the non-work state.

	Correct Disposal of this product
	<p>This marking indicates that is product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device. Please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling.</p>

Product parameters

Model	OPA61		OPA61		OPA61	
Electrical power	220V-240V/50Hz		220V-240V/60Hz		380V/50Hz	
Rated input current (A)	24.5		24.5		24.5	
Rated input power (W)	6000		6000		6000	
Compressor freezing ability (W)	3136		2290		3136	
Compressor input power (W)	2900		2010		2900	
Motor input power (W)	750		750		750	
Way of cooling	Water		Water		Water	
Type of refrigerants	R404A		R404A		R404A	
Refrigerant Tank Capacity (kg)	1.5		1.5		1.5	
Tank capacity (L)	61		61		1.5	
Operating air temperature	15°C-32°C		15°C-32°C		15°C-32°C	
Mix production in weight (kg/次)	Min	Max	Min	Max	Min	Max
	15	61	15	61	15	61
Rated production (L/2h)	60L/2.5h		60L/2.5h		60L/2.5h	
Net weight (kg)	226.5		226.5		226.5	
Dimensions (mm)	Width*Depth*Heigh (1225x730x1087)		Width*Depth*Heigh (1225x730x1087)		Width*Depth*Heigh (1225x730x1087)	

Note: Rating quantity dates were measured under the air temperature of 25°C, slurry material of 23°C, current flux 150ml/sec. Final temperature is easily affected by temperature of environment, slurry material and current flux.

Product parts

◆ sketch map of parts in common use

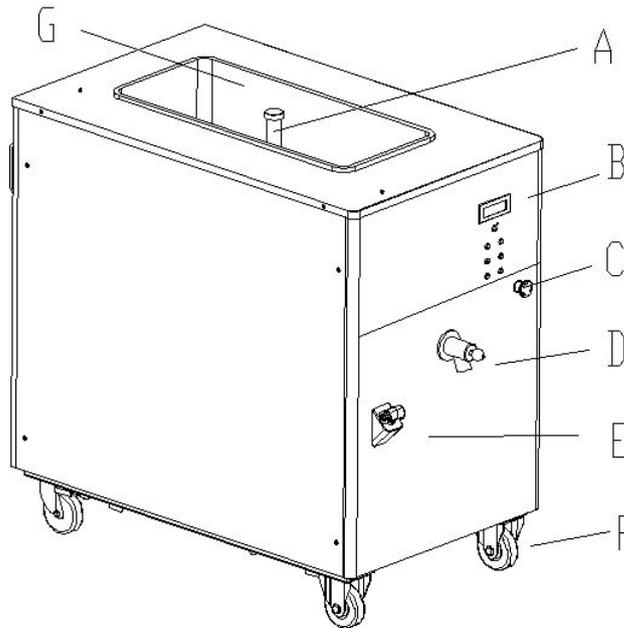


Chart 16

A-tank beater B-control panel C-emergency switch D-outlet valve
 E- spray gun F-caster-swivel G- tank

◆ Control panel

-  Power (Switch)
-  Reset / Save
-  Stop/Page
-  Aging
-  Pasteurize
-  Set / Up
-  Set / Down

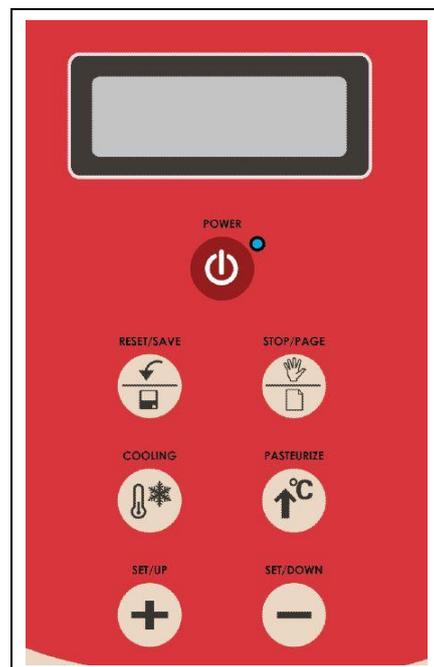


Chart 17

Keystroke function description to Control Panel



Power (Switch on/off) -- when switch on, the power light turns bright.



Reset/Save --- to save data reset. When machine is with any faults, it will stop automatically. When faults are solved, you can choose reset/save to make machine working.

Note: when machine is with problems, please figure out it before operating.



Stop/Page--- machine can stop when choose this function. When reset data, see next page.



Aging --- If material needs not high—temperature sterilization, it only need refrigerate, please choose ‘Aging’ function. After refrigerating work, if without any instructions, machine can be under aging preservation work mode.

Note: Before aging, make sure cooling water links. If empty pot or material is less then the specified amount, the machine cannot work, and even will lead to badly damage. (Specified Amount: 15L)



Pasteurize--- it’s for pasteurizing and aging: heating to 80 degrees for pasteurizing and then cooling the water, after this. Machine can go into refrigerating status. If machine Cannot work well under this state, without stop instruction, machine can go into preservation state. Switching from one state into another, there is a warning. ‘Stop’ or ‘emergency’ button can make machine stop work immediately



Set / Up 1--- it’s for setting date under working state or data setting state. This button is to add ‘1’ to the target value.



Set / Down 2---it’s for setting date under working state or data setting state. This button is to add ‘2’ to the target value.

Machine operation test

* After all spare-parts installation, then the operator need to test machines to make sure each function is under normal state.

* Items and equipments for testing:

- 1) Clean cloth--- for cleaning machines surface and interior;
- 2) Past container--- stainless steel or plastic containers for keep past and water.

At the beginning it's better to choose water commissioning.

* Operation test



Before operating, make sure the power and water supply can reach the requirement. If water is with pollutants or something easily to condense scale it's better to install a filter on the water inlet.

- 1) Power on, if light on the front panel is not working, please rotating emergency button on the side (Chart 16) on, the red plastic button, and then press "**Power**" on the front panel, the power indicator on. Machine start working.
- 2) Add 5L—10L water into cylinder, press button "**Pasteurize**". Wait for 10 minutes, temperature indicator number goes up, and then press button "**Stop/Page**" to stop heating, and then stirring shaft stops working. Use thermometer to test the temperature, if it goes up, it suggests the heating function is working well.
- 3) Make sure the heating temperature is not higher than 40 degrees, and press "**Aging**" button to cooling, and then the machine can release water automatically, when state bar shows 100%, the buzzer alarms, compressor begins to work. 5 minutes later, condensate on the antibody, it suggests the heating function is well. And press "**Stop/Page**" button to terminate the test.

Notes:



When heating or cooling, make sure there is water in the cylinder. When short of water, it's forbidden to heat or cool, otherwise electric heat pipe may burn out and the compressor.

Sanitizing

- Sanitizer
 - 1) Choose a clean container with 5L water, put one bag of sanitizer (15g) into the water, stirring the disinfection and water for 2 minutes. (Chart 18)

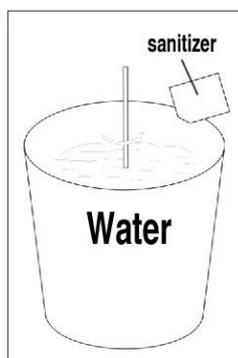


Chart 18

- 2) The main component of the special sanitizer with machines is: $C_3N_3O_3CL_2Na$, SDC for short. It's special for food. Don't replace it without our permission, or it's dangerous.
- The use of disinfection (clean machine before and after machine using)
 - * Sterilize spare-parts by soaking for 10 minutes.
 - * Soaking the spare-parts: stirring shaft, sealing ring. (Chart 14)After sanitization, put pure water into the hopper for another washing
Wipe the bead inside the vat with a clean tower

Mix making

Example: Using gelato ice cream powder to prepare ice cream mix

1. figure out how much mix should be made.

Mix proportion is ice cream powder to water:
1:2.5. add water into a container first, then add powder little by little with continuous stirring till all the powder added. For example: 60 kg of ice cream mix needed, 42 liter of water and 18 kg powder is needed. Pour the mix into the vat of the pasteurization machine. (chart 19)

2. There is supposed to be at least 25 liter of min in the vat, but with the maximum of 61 liter.
Note: please prepare ice cream mix according to ice cream powder mixing requirement.

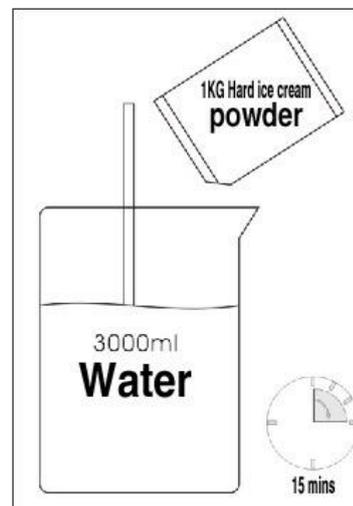


Chart 19



Warning: the mix which goes bad or run out of date or be mixed uneven can not be processed in this machine.

Notice and precautionary measures

◆ Surroundings

1. the machine should be used in a comparatively dry atmosphere, with humidity lower than 90% and altitude less than 2000 meter.
2. It should be used in normal temperature, between 15°C and 32°C. high temperature should be avoided.
3. It should not be used in the sun or rain. Leakage into the machine should be avoided
4. It should not be used in the surroundings with much dirt or corrosive gas.
5. Heat will be generated when working, so good ventilation should be acquired
6. Rats and pests should be avoided around the machine, and precautionary protection should be performed.

◆ Safety

1) keep working in rated power

This machine should be used in normal power supply ranging from 198V to 242V. the machine will shut down to perform self-protection when power supply fluctuates heavily or run out of normal range. So, operator should be aware of this and relative measures should be taken to make sure the power supply is stable. If the voltage isn't steady we suggest you to use a alternating manostat with over 12KVA.

2) use the right wire

This machine is with a big rated power, with ampere value up to 30A. the wire should not be thin and long, or else, the machine won't start well or even get damaged, and to the worse, fire might be generated. The requirement of wire: (2+1) copper cable, 4.0 mm² of the diameter. power supply: 220-240V~50Hz, single phase. Power supply range: 198V ~ 242V. it can be used in hotels, restaurants and many occasions.

3) grounding

The grounding wire is well connected with the shell. It should be grounded in every condition, in order to avoid damage from power.

Operation

One: process

1 if sterilization, homogenate and aging are all needed, take following steps:

> press “**Pasteurize**” : heat-> refrigeration-> ageing/fresh

2 if only homogenate and aging are needed, take following steps:

> press “**Aging**” : refrigeration -> aging/fresh

Two: operation

screen

From xx°C to 80°C
High speed /low speed
(pause)

Steriling
Time Remain x min

From xx°C to 5°C
High speed /low speed

Finish
Temperature: xx °C

Standby Mode
Select button operation

operation

1. Starting screen, connect to the power, the light of “**POWER**” is lighting, it means the machine is energized. Press “**POWER**” to change the speed of the beater. Press “**Pasteurize**”, the whole machine will work automatically, press “**Pasteurize**” again, it will stop heating. It is helpful for customer to add other food. Now the screen shows “Pause”
2. When the system reach the target temperature, the machine will stop for one minute to keep the ice cream mix adequate sterilization, then it will go to cooling down.
3. Press “**Cooling**”, the machine will cooling down automatically, press “**Cooling**” again, the machine will stop, now the screen shows “Pause”.
4. After finishing the whole process of pasteurizing and cooling down, the screen shows the cooling target temperature.
5. Press “**Stop**” to stop working, and shows the menu. You can press “**Stop**” to stop the machine when it is pasteurizing and cooling.

Set-up mode

Parameters of this machine can be adjusted according to the uses' manual. But, the default values are should not be changed at will

Set-up mode

in standby mode, press “**Set/up**” and “**Set/down**” together to enter the set-up mode

Item 01. Parameter setting

Notice: the heating target temperature should be about 80°C, ranging from 50°C to 90°C

For example: target temperature 82°C. Enter set-up mode first, press

“**Stop/page**” to come to Item 01, then press “**Set/up**” or

“**Set/down**” to change the value into 82°C. And then press

“**Reset/save**” to save the value.

Item 02. Parameter setting

Notice: cooling target temperature should be about 5°C, ranging from 5°C to 20°C.

For example: target temperature 5°C. Enter set-up mode first, press

“**Stop/page**” to come to Item 02, press “**Set/up**” or “**Set/down**”

to change the value into 5°C, and then press “**Reset/save**” to save the value.



Saving (OK)

Notice: After press the save button, screen will show the saving rate.

To revise the above parameters, please press “**Set/up**” or press “**Set/down**”. Press “**Stop/page**” to enter the next item. After setting please remember pressing the save button to save your previous setting, otherwise you can't quit the parameter setting mode.

After setting up the parameters, the machine's running graph is as below

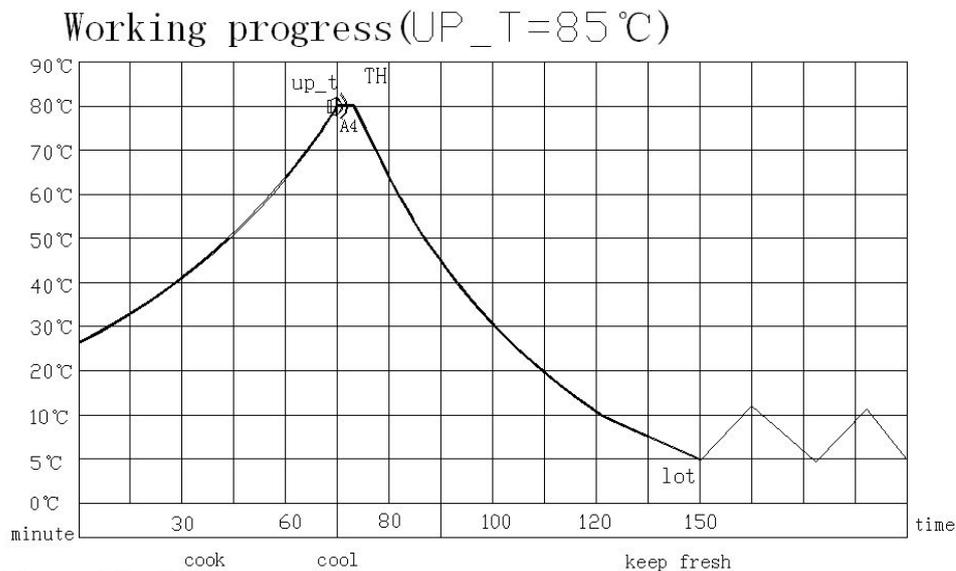


Chart 20

Sterilization machine running graph illustration

2.2.1.1 the target temperature (upper limit temperature) when heating/sterilizing
 Suggestion: Due to all heaters have thermal inertia, the temperature of raw materials will continue to rise about 2°C after cessation of heating. (As types of raw materials differed, heat capacity may be different)

2.2.1.2 LOT

LOT= The objective(minimum) temperature when deal with aging.
 Suggestion: Due to the refrigeration system has thermal inertia either, the temperature of raw materials will continue to decline about 2°C after cessation of cooling. So if you need aging materials to 5°C, we suggest you set the LOT temperature to 7°C.

2.2.1.3 TH

TH=waiting time before the end of bactericidal/heating process.

In this period, machine will be in these conditions:

- 1 keep high temperature and sterilizing
- 2 Eliminate thermal inertia and decrease the heating/cooling impact on machine so as to extend the service life of machine.

2.2.1.4 Factory default parameter

Parameter	Default	Unit	Range
UPT Stop heating	80	Degrees	50-90
LOT Refrigeration Stop Point	5	Degrees	5—20
TH Time for pasteurization	1	minute	1—5

Problems may occurred when using

Phenomena listed here may be related to your use of the raw materials, environmental factors, the electricity supply, methods of operation, please try to improve the environment and methods of operation to avoid such occurrences.

Machine can't startup	
Probable reason	Solutions
The main power switch is turned off	Turn on the switch
Fuse is broken	Replace, check and find the solutions
Failure phenomenon: The compressor stops after running for a few seconds	
Probable reason	Solutions
Cooling water is off	Turn on
Cooling water pipe is staved	Straighten or replace the water pipes
Water pressure is too low (less than 100 ml / sec)	Check and increase the water supply pressure. The user can start cooling procedure after 15 minutes.
Condenser pipes are plugged	Clean the pipes
Failure phenomenon: the process of sterilization temperature is unable to go up	
Probable reason	Solutions
Heater was broken	Replace

Failure phenomenon: the temperature slow down much slower than normal obviously while the aging process

Probable reason	Solutions
Cooling efficiency is poor, refrigerant leak	Identify and Welding leakage part then fill refrigerant
Bad cooling affection (Water cooling) low pressure	Check and make sure to open the valve Ensure the water pressure is normal
Cooling water pipe was crushed	Check and ensure the pipeline is expedite, or replace water pipes
Material is Uneven	Check-beater of cylinder is installed in place

Failure phenomena: short circuit of thermal protection caused machine stop frequently

Probable reason	Solutions
Compressor overload	Check and ensure that no leakage
By adding excess refrigerant	Reduce the amount of refrigerant to be suitable
Expansion valve adjustment is not correct	Readjusted until the correct
Hot insured value of compressor valve was set too low	Restructuring

Failure phenomenon: can not see the phenomenon of mixing when the temperature changes by opening the cover

Probable reason	Solutions
beater is not loaded or in wrong place	Load in right place
Problem of motor	replace

Menu instructions of the related fault alarm	
temperature sensor fault, Please check and maintain	This picture shows a temperature sensor fails, check the sensor cable is damaged or not, the probe signal line and power supply and ground are correct, probe whether the plug socket counter. Replace the probe if it is damaged.
temperature overrun, Please check and maintain	The temperature overrun do not often occur, please check if the thermostat is normal when this screen appears, thermostat knob is set to temperature protection point is correct, the general point of thermostat settings is 100 degrees.
Compressor is unmoral, please check and maintain	Please check whether the waterway system is unobstructed, water pressure is sufficient.



Maintenance

You should periodically clean the surface and interior of the machine, including wipe the internal and surface attachments and dust of the machine, water, brushes and rags can be used with cleaning. You can use detergent and aerosol for cleaning, but can not use alcohol, Gasoline and other flammable flux, and other toxic organic solvents, to prevent poisoning, burning and damage inside and outside surfaces of the machine.



Warning:

All the maintenance, repair work must be completely cut off the power supply, please confirm the power has been cut off before opening chassis

1、 Remove the left and right panels for cleaning while maintaining the machine, cleaning parts including compressors, pipes, backplane, and the water-cooled condenser and so on.

2、 Pay attention to pests, rodents clean-up, if necessary, please take measures to control insect and rodent infestation.

3、 Measure the insulation condition of this machine with 500V megger, the main insulation between the external power supply and machine body motor, between motor and compressor power supply line and machine body. The normal insulation resistance should be more than 20MΩ.

4、 Check the drive belt tensioning force, normally; press the middle parts of the two pulleys with two points, its volume should be 15mm bounce around, such as excessive back pressure, then the belt too loose to be appropriate adjustments to the fixed electrical panel screws to tension. Please ensure the adjustment should be that the amount of the same four screws. It should be replaced with new belt, Such as the belt has cracks or serious wear and tear.

5、 Check if the internal connector loose and rusty, re-fastening, process the rusty parts with rust and anti-rust. Please do not make belts and other rubber parts contaminated with oil while processing.

6、 Do not touch electrical components, and other adjustable components, when

cleaning, insulated pipe should be restored after maintenance.

7、 After the internal clean-up is completed, please install the in place, fastening screws, clean the surface, the maintenance work is complete.

8、 Clean time is recommended 2 months.

Purchasing and usage of spare parts

Spare parts instruction:

- Your sterilization machine contains some free accessories, including machine parts and wearing parts, but the number of wearing parts may not be able to meet your long-term use requirements. Recommend you follow the work requirements to purchase the appropriate number of wearing parts.
- When the machine is damaged, it is equally in need of repair parts for the replacement of damaged parts. Within Warranty period, maintenance parts will be provided free of charge by the manufacturer, damaged parts need return. Out of Warranty period, you need to purchase spare parts for maintenance.



When ordering spare parts, please fill out model, serial number, production date and marked prepare Piece name, to simplify the timely delivery of work and ensure that you receive the correct parts.



Notices: Blindly and imprudent overhaul could lead to mechanical failure and expand the failure area to give difficulties to a formal maintenance. Under power on state, the drive mechanism and electrical system contains factors that can lead to dangerous! Imprudent action will lead to personal injury accidents, serious incidents will lead to physical disability or death!!!

Schematic diagram of sterilizing machine

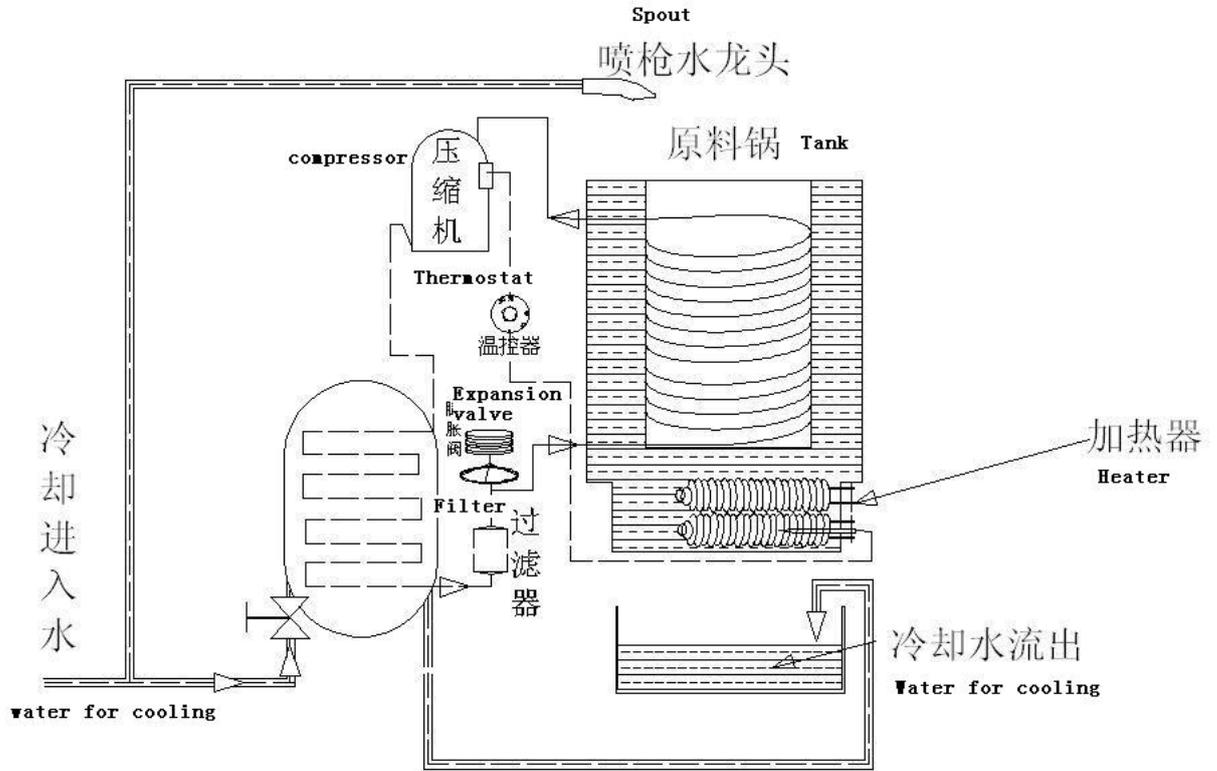


Chart 23