## SOFT ICE CREAM MACHINES USER MANUAL

Please read this manual carefully before using.
no. 18 - 105, huagang garden, Zhongshan avenue, guangzhou, china
T: 86-20-38768241 |F: 86-20-38769376 | WWW.TWOTHOUSANDCO.COM

## CONTENTS

## - GENERAL INFORMATION

1. Announcement ..... Page. 03
2. Information to the user ..... Page. 03
3. General data ..... Page. 03
4. Machine Assembly Identification ..... Page. 04
5. Control Panel Demonstration ..... Page. 08
6. Operation Condition ..... Page. 10
7. Noise ..... Page. 10

- INSTALLATION

1. Room Conditions ..... Page. 10
2. Electricity Connection ..... Page. 10
3. Accessories Installation ..... Page. 11

- OPERATION INSTRUCTION

1. Processes before the First Operation ..... Page. 13
2. Trial Running ..... Page. 13
3. Ice Cream Production ..... Page. 14

- CLEANING \& SANITIZING

1. Cleaning ..... Page. 16
2. Daily cleaning ..... Page. 17
3. Sanitize and clean the beater assembly ..... Page. 18
4. Clean the machine shell ..... Page. 18
5. Clean the drip tray and drip pan ..... Page. 18

- OPTIONAL FUNCTIONS

1. Keep-fresh System (Pre-cooling System) ..... Page. 18
2. Air Pump System ..... Page. 20
3. Counter ..... Page. 20
4. Mixture alert instruction ..... Page. 21
5. Rainbow ..... Page. 21
6. Temperature display ..... Page. 22

TWOTHOUSAND

## - TROUBLESHOOTING

1. Analysis table (1) ..... Page. 23
2. Analysis table (2) ..... Page. 24

- CIRCUIT DIAGRAM ..... Page. 25
- ACCESSORIES PACKAGE ..... Page. 28
GENERAL INFORMATION


## 1. Announcement

Our company carries out a continuing research, toward further development and improvement. Therefore, the information found in the manual is subject to change without further notice. All technical data, pictures and drawings contained in this manual are not binding on the manufacturer, nor can the manufacturer be held liable for any modifications to the machine in whole or in part.

## 2. Information to the user

For any explanation and information regarding the machine, its spare-parts or how to operate it, the manufacturer of the machine will be available if any questions should arise.

If any problem should occur, please contact our local distributor or the manufacturer if no distributor is available.

## 3. General data

All series of soft ice cream machines can be used for production and distribution for two or a mixed flavored soft ice cream.

The equipment applies the technology from several patents that gained, such as the unique evaporation cooling technique and the digital control system of the machine. The machine is fitted with an electronic control temperature and consistency adjustment system by which the hardness level of the ice cream can directly be chosen as per person favor. The operative condition can also be seen in a real-time display for a clear indication from the indication lights that the machine is working properly.

It is recommended that high quality ice cream mixes should always be used. Always make sure that the mixes is made by high quality raw materials or ingredients from reliable or trustworthy suppliers, so that the over-run rate and taste taken on from this machine can be farthest approved.

NO.18-105, HUAGANG GARDEN, ZHONGSHAN AVENUE, GUANGZHOU, CHINA T: 86-20-38768241 | F: 86-20-38769376 | WWW.TWOTHOUSANDCO.COM

Note:

- Always follow the instruction given by the supplier.
- When using the ready-to-use ice cream mixes which goes with stipulated proportion mixing water, do not try to add more water or sugar, since this may lower the quality of the product or disturb the operating condition of the machine.
- Always remember to sanitize the machine after it has been used, and always keep a strict hygiene.
- For best customer satisfaction, always taste the product before serving so you are always sure that you will provide the customer with a first class product


## 4. Machine Assembly Identification

## Caption A

A1. Strap Wheel
A3. Seal Cover
A5. Gearbox Cover
A7. Big Gear
A9. Main Shaft
A11. \#303 Bearing
A13. $\varphi 35 \times 20 \times 10$ Seal
A15. Y - Ring
A17. O-Ring

A2. $445 \times 30 \times 10$ Seal
A4.\#106 Bearing
A6 . \#105 Bearing
A8. Square Shaft
A10. Small Gear
A12. \#205 Bearing
A14. Main Gearbox
A16. Seal Nut


Drawing A: Gearbox Interior View

TWOTHOUSAND
NO.18-105, HUAGANG GARDEN, ZHONGSHAN AVENUE, GUANGZHOU, CHINA T: 86-20-38768241 | F: 86-20-38769376 | WWW.TWOTHOUSANDCO.COM


Drawing B: Floor-standing Models Interior View

## Caption B

| B1. Top Cover | B2.Hopper Small Cover |
| :--- | :--- |
| B3. Expanded Outer Tube | B4.Expanded Inner Tube |
| B5. $\varphi 16$ O-Ring | B6. Hopper Panel |
| B7. Right Side Panel | B8.Handle |
| B9. Middle Plunger | B10.Side Plunger |
| B11. $\varphi$ 26 O-Ring | B12.Bridge Seal |
| B13. Decorative Plate | B14.Throat Block |
| B15. Cover Nut | B16.Manual Screw (Long) |
| B17. Manual Screw (Short) | B18.Horizontal Bar |
| B19. Star Outlet | B20.Front Panel |
| B21. Cylinder | B 22.Beater Shaft |
| B23. Circuit Box | B24.Compressor Starter |
| B25. Dryer | B26.Expansive Valve |
| B27. Condenser | B28.Fan |
| B29. Compressor | B30.Frame |
| B31. Casters | B32.Motor |
| B33. Filter (Air/Liquid Segregator) | B34. Left Side Panel |
| B35. Motor Strap Wheel | B36.Strap |
| B37. Gearbox Strap Wheel | B38.Gearbox |
| B39. Gearbox O-ring | B40.Gearbox Y-ring |
| B41. Seal Nut | B42.Rear Panel |

NO.18-105, HUAGANG GARDEN, ZHONGSHAN AVENUE, GUANGZHOU, CHINA T: 86-20-38768241 | F: 86-20-38769376 | WWW.TWOTHOUSANDCO.COM


Drawing C: Table Top Models Interior View

## Caption C

C1. Top Cover
C3. Expanded Outer Tube
C5. $\varphi 160$-Ring
C7. Cylinder
C9. Decorative Plate
C11. Throat Block
C13. Handle
C15. Bridge Seal
C17. Horizontal Bar
C19. Star Outlet

C2.Hopper Small Cover
C4. Expanded Inner Tube
C6. Hopper Panel
C8.Beater Shaft
C10. $\varphi 88$ O-Ring
C12.Plunger
C14. $\varphi 26$ O-Ring
C16.Cover Nut
C18. Manual Screw
C20. Drip Tray

## Caption D

D1. Top Cover
D3. Expanded Outer Tube
D5. $\varphi 16$ O-Ring
D7. Right Side Panel

D2.Hopper Small Cover
D4.Expanded Inner Tube
D6. Hopper Panel
D8.Handle

D9. Middle Plunger
D11. 426 O-Ring
D13. Decorative Plate
D15. Cover Nut
D17. Manual Screw (Short)
D19. Star Outlet
D21. Cylinder
D23. Circuit Box
D25. Small Fan
D27. Compressor Starter
D29. Expansive Valve
D31. Fan
D33.Frame
D35.Motor
D37. Left Side Panel
D39.Strap
D41. Gearbox
D43. Gearbox Y-ring
D45. Rear Panel

D10.Side Plunger
D12.Bridge Seal
D14.Throat Block
D16.Manual Screw (Long)
D18.Horizontal Bar
D20.Front Panel
D 22.Beater Shaft
D24.Small Condenser
D26.Small Compressor
D28.Dryer
D30.Condenser
D32.Compressor
D34.Foot
D36. Filter (Air/Liquid Segregator)
D38.Motor Strap Wheel
D40.Gearbox Strap Wheel
D42.Gearbox O-ring
D44.Seal Nut


Drawing D: Pre-cooling (keep-fresh) System Interior View

N0.18-105, HUAGANG GARDEN, ZHONGSHAN AVENUE, GUANGZHOU, CHINA
T: 86-20-38768241 | F: 86-20-38769376 | WWW.TWOTHOUSANDCO.COM

## 5. Control Panel Demonstration

(1) Electronic Easy IT pad Controller

-Indicator Light $\quad$ Shows hardness level as well as production process
-On/Off Switch $\quad$ Stop command for washing/production, Production Switch On
-Wash $\quad-$ Washing (motor running only)
-Reset $\quad-$ Validate the restart before the automatic move
-Setting $\quad-\quad$ For hardness level regulation

## Warning:

The suggested hardness level to be adjusted as per normal surroundings $28^{\circ} \mathrm{C}$, should be the fourth or the fifth.
Adjust the ice cream to be harder only if the ambient temperature becomes higher.
Adjust the hardness to be too high lastly would cause damage to the scrape or even the motor.
(2) Simplified 4 buttons Controller

-On/Off Switch - Stop command for washing/production, Production Switch On
Wash - Washing (motor running only)
-Reset - Validate the restart before the automatic move
Setting $\quad-\quad$ For hardness level regulation

## Note:

-The Simplified 4 button electronic controller comes without the hardness digital regulator and production process indicator, comparing to this above controller.
(3) Consistency/Hardness Regulation for the simplified 4 button electronic controller.

(4) Number Display Electronic Controller

-On/Off Switch — Stop command for washing/production, Production Switch On
-Wash - Washing (motor running only)
-Reset - Validate the restart before the automatic move
-Setting - For hardness level regulation
-Number Display - Shows hardness level as well as production process

## 6. Operation Condition

The operation requirement for the equipment is as bellows:

- Voltage 220 V ( $190 \mathrm{~V} \sim 245 \mathrm{~V})$
- Operating air temperature
$5^{\circ} \mathrm{C}-48^{\circ} \mathrm{C}$
- Max relative air humidity
$90 \%$
- Max height above sea level

2000 m

- Normal atmospheric condition


## 7. Noise

The noise level is normally bellow 55 dB which varies from model to model.

## INSTALLATION

## 1. Room Conditions

The room used for the operation of the soft ice cream machine must be able to provide air that can circulate freely, to prevent over-heating. Therefore the distance from the machine to the wall must be at least 200 mm to the closest wall. It is better to leave no less than 500 mm for the ventilation side.

The space where the machine is located should be kept clean, in order to prevent dust or other particles to be sucked into the machine by its fan.

The place where the machine stands should be firm and dry and there should not be any heat sources within 500 mm to the machine.

NOTE: If the minimum room condition is not followed, it may affect the operation of the machine and its output capacity.


## Picture for Instruction of Machines Placement

## 2. Electricity Connection

It is of great importance that the power supply to the machine is within the permitted range $190 \mathrm{~V} \sim 245 \mathrm{~V}$, with a current capacity above 16 A , also that the machine can be properly grounded. If the voltage should be outside the permitted range, then the machine safety protection will prevent the machine to start and the machine need to be restarted. The cross-section area of the cable that is connecting the machine with its power source should be over $2.5 \mathrm{~mm}^{2}$ and the length shorter than 6 m .

Warning: if the power cable should of any reason be damaged, a skilled technician with sufficient knowledge and skill should immediately replace it.


Warning: Always ensure that socket of the power source is properly grounded before connecting the machine.

## 3. Accessories Installation

IMPORTANT:
Remember to clean the soft ice cream machine and its parts before using the first time you start to use the machine
(1) Beater shaft and throat block Installation
(a) Manually loosen off the plastic/stainless steel screws to take down the throat block. Disassembly all the parts including horizontal bar, bolts, and the gaskets.

Prepare a container (pan) of sanitary water. Put the assembly into the water and clean it one by one to get rid of any dust or dirt as well as the lubricating oil.
(b) Take out the stell beater shaft from the cylinder by pulling \& slight rotating. After washing the shafts, insert the beater shaft assembly back into the chilling cylinder.

Make sure there is clear without any dirt or stuff.

After installing the beater shaft, turn on the machine without the throat block; inspect to make sure that the rotating direction is always clock-wise.


N0.18-105, HUAGANG GARDEN, ZHONGSHAN AVENUE, GUANGZHOU, CHINA T: 86-20-38768241 | F: 86-20-38769376 | WWW.TWOTHOUSANDCO.COM
(c) Assemble the throat block:
-Insert the plunger and make sure it is properly Installed because the middle plunger is different from the other two.
-Make sure the plunger with square
 sealing always in the middle.
-Insert the horizontal bar to make the plunger place and finally put the $O$-ring on its place.
-Check to see if the O-ring sealing is in good condition because any inaccurate location would cause unexpected liquid leak.

Put a thin layer of lubricant oil on the plunger and the O-rings which is for sealing the throat block with the machine.

To attach the throat block to the machine, use its body to
 press up the three springy touch plunger.
Finally aim so that the four holes on the throat block body fit into the four screws on the machine.

Make sure the O-ring gasket is located well completely without any shift. Also the cylinder peak must touch well with the O ring sealing otherwise the gasket may be torn down or finally causes leakage.

Carefully insert the middle plunger into the hole. The gasket is different from the other two, please turn the plunger sideway before the insert. This is to protect the gasket from pressing to tear because the silicon material is weak.
(2) Expanded Tube Installation


## Instructions of using the expanded tube:

-Sleeve upper tube into the lower tube to make the holes connective with each other.
-Press it to make it inserting into the hole of hopper.
-Control the feeding by adjusting the air outlet. It is recommended that it is good for high over-run to feed only $1 / 3$ of the chilling cylinder and leave the outlet $1 / 3$ open so that not only enough space for expansion can be guaranteed, but also the cylinder can be well re-supplied.


After pouring enough the ice cream material and adjusting well the air outlet, cover the hopper so as to keep the material clean from dust as well as preserving the cold temperature.

## OPERATION INSTRUCTION

## 1. Processes Before The First Operation

(1) Clean the throat block
(2) Clean up the hopper
(3) Clean up the cylinder and beater shaft

## 2. Trial Running

After properly installing all the accessories, a trial running before ice cream production must be carries out to ensure everything is in good condition.
(1) Press CLEAN button, the motor starts and the beater rotates via transmission. Press STOP button, the motor stops and the beater halt accordingly.
(2) Press PRODUCTION button, the machine enters into
refrigeration mode. The beater motor starting running first while within 10 seconds, the fan, compressor, condenser starts respectively. Hot air is discharged from the ventilation holes on the side panel. The

N0.18-105, HUAGANG GARDEN, ZHONGSHAN AVENUE, GUANGZHOU, CHINA T: 86-20-38768241 | F: 86-20-38769376 | WWW.TWOTHOUSANDCO.COM
temperature of the chilling cylinder drops down shortly and gradually which turns out to be frosty in no more than one minutes. Please STOP button,. The whole unit stops.

## Caution:

Remove the beater shaft from the chilling cylinder without any ice cream material and the trial running is not allowed for more than 3 minutes because in that case the refrigeration takes too long and the chilling cylinder would be too frosty that might cause damage to the shaft.

## 3. Ice Cream Production

(1) Pour the ready ice cream mix into the two hoppers.

Turn the air outlet open to make the feeding into action till the chilling cylinder is filled.
(2) Let the ice cream mix free to flow deeply for 2 minutes
and then press the ON/OFF button. The motor starts first and within 10 seconds other electrical components follows up and the whole machine will go into production mode. The ice cream can be finished in 3 to 8 minutes which varies from models. (For the first batch, the production time is normally around 6 to 12 minutes)
(3) Draw down the handles on the throat block to
make dispense. Every time when drawing the handle, the motor and beater will start to pull the ice cream out by the forces of helicity. The left and right discharge outlets at the bottom of the spigot are related respectively to the left and right chilling cylinder from where you can dispense your optional flavor of ice cream. The middle outlet is applicable to both of the chilling cylinder and thus it dispenses a mixed flavor of ice cream.

## Caution:

Keep close attention to the material capacity in the hopper. Make sure the material will never be empty otherwise consecutive production would cause noise and even damage to the beater. Check the material capacity through the visual inner cover from time to time and re-supply accordingly if necessary.

N0.18-105, HUAGANG GARDEN, ZHONGSHAN AVENUE, GUANGZHOU, CHINA T: 86-20-38768241 | F: 86-20-38769376 | WWW.TWOTHOUSANDCO.COM
(4) As soon as the ice cream reaches to the stipulated
hardness, the OVERLOAD indicator will be switching on and the production will stop automatically. The production restart in 7 minutes. During this period, if it is required to continue producing ice cream without waiting, press the RESET button to for immediate restart.

## Caution:

If it is not necessary for dispensing ice cream even if the hardness is achieved, do not push the RESET button frequently otherwise the ice cream inside may possible becomes too hard to serve, and also it is a waste of electricity consumption.
(5) Consistency (Hardness) Adjustment

The general principle of hardness control is based on the fact that the motor current increase as the loading grows. When the current reaches up to the stipulated rate, the control circuit reacts and stops the production.

Normally a proper rate of hardness is pre-set up in factory before delivery. If an optional rate of hardness is required, please adjust the rate on the control panel or the knob.

For electronic controller which includes IT pad for hardness adjustment, press - to soften the ice cream and respectively press + for hardening.

## The Specific process is as below:

(a) Press SETTING button for three seconds, the HARDNESS indicator flashes to show its current hardness rate.
(b) If the ice cream is too hard from the preferable taste, press - consecutively till it reaches to the favorite softer rate and then press SETTING again to save.
(c) If the ice cream is too soft from the preferable taste, press +consecutively till it reaches to the favorite harder rate.
(6). After confirming that the proper hardness rate, press

SETTING button to save the rate.

TWOTHOUSAND
NO.18-105, HUAGANG GARDEN, ZHONGSHAN AVENUE, GUANGZHOU, CHINA T: 86-20-38768241 | F: 86-20-38769376 | WWW.TWOTHOUSANDCO.COM

Wait for approximately one minute for each step mentioned above before implementing the next step, otherwise it may not completely go through the expected effect.

For the simplified electronic controller or the traditional controller, please rotates the knobs as the right image to select your preferable hardness.


If the ice cream reaches up to the required hardness but the production is still working, please adjust the hardness to SOFT tag to stop the production.

If the production stops without reaching up to the required hardness, it is caused by OVERLOAD. Please adjust the hardness to HARD tag to restart the production. The production automatically stops again when ice cream being harder so that the machine will not happens to be "FROZEN CYLINDER" which harms the beater and compressor.

## CLEANING \& SANITIZING

## 1. Cleaning

Notice
In order to ensure that the machine is clean, before it is used the first time its parts needs to be sanitized and washed. The cleaning process is also necessary as a daily routine after soft ice cream production has been done or if the machine has not been used for a long time.


## WARNING:

Before disassembling any parts, always remember to stop and unplug the machine.

## IMPORTANT:

Because this is a food-producing machine, always remember to keep good hygiene and to wash and sanitize all parts that have been in contact with the product after the machine has been used.

NO.18-105, HUAGANG GARDEN, ZHONGSHAN AVENUE, GUANGZHOU, CHINA T: 86-20-38768241 | F: 86-20-38769376 | WWW.TWOTHOUSANDCO.COM

After the cleaning process is done then the parts should be rinsed with bacteria- free drinking water and thereafter dried.

The temperature of the water used during cleaning, should never exceed $40^{\circ} \mathrm{C}$ since it may cause damage to the plastic parts and seal in the machine.

INFORMATION
To prepare sanitizing solution you need to:

1. Fill a 5 L container with water.
2. Pour one bag of sanitizer into the water.
3. Mix the solution for 2 minutes or until all the sanitizer is dissolved.
4. The sanitizing solution is ready to be used.


Always remember to be careful while handling the sanitizing powder or solution, since it may cause personal injury or irritation if inhaled or if it get in contact with sensitive parts of the body (like the eyes).

## 2. Daily cleaning

Mildew and bacteria can thrive and multiply rapidly in fat mixture contents, therefore cleaning and sterilizing must be carried out as above mentioned with utmost care.

All stainless steel materials used for parts in contacts with mixture and ice cream are easy to clean but do not prevent the proliferation of mildew if not cleaned sufficiently.
(1) Sanitize and clean the hoppers and the cooling cylinders
(2) Sanitize and clean the throat block
a. Disassembly the throat block with the metal key accompanying with the machine package.
b. Put the block into detergent liquid or water. Rise and drop several times and especially to clean up the gaskets, plunger and sealing.

## Caution:

Too hot water could damage the special materials of the machine suck as the silicon gasket.

## 3. Sanitize and clean the beater assembly

(1) Pour water into the hopper while the throat block is fixed on, be sure the water is enough for cleaning.
(2) Press the WASH button, the beater runs strongly for self-cleaning. After a few minutes, press the WASH button to turn off the beater and then take out the throat block slowly to pour out the miry water.

## 4. Clean the machine shell with a cloth drenched <br> in a sanitizer.

## 5. Clean the drip tray with water and sanitizer.

## OPTIONAL FUNCTIONS

The below functions are selective. They are available only in unit models with key letters "H" / "P" / "C" / "M" / "R" | "T".

## 1. Keep-fresh System (Pre-cooling System)

For regular machine, the ice cream has to be cleaned up when the machines stop dispensing ice cream in night-time, otherwise the ice cream remainder inside the hopper and cylinder will melt or even get rot by the next morning.

This device is designed for convenience and feasibility of keeping ice cream over-night inside the machine without any cleaning.

## About How To Use This Function:

(1)Use this function during the daytime when the machine is running for business, it can be capable of promoting the output capacity as the material mix becomes cooler and then it shortens the production time.
(2)Use this function during the nighttime when the machine is not running for business, it can be capable of refrigerating the hopper \& cylinder intermittently.

NO.18-105, HUAGANG GARDEN, ZHONGSHAN AVENUE, GUANGZHOU, CHINA
T: 86-20-38768241 | F: 86-20-38769376 | WWW.TWOTHOUSANDCO.COM
(3) If lower temperature is required, please take down the side panel and find the pre-cooling device box.

Rotate the knob to regulate the preferable temperature.
NOTE: This function always use key letter " H ".


## Location Of The Function Switch



On/Off Switch
(underneath the right control panel)

The button lights on (green or red), if the device is switched on.

## Location Of The Function Switch

This function is not running always. Therefore it is not necessary to worry about high power consumption.
This function runs only when the hopper temperature is detected to be higher than the expected rate. As soon as the hopper is cold enough, the function automatically runs down.

TWOTHOUSAND

## 2. Air Pump

This device is designed to pump air intermittently into the cylinder when the production is effected. It makes the taste of ice cream much better, saves the cost because of less mixture consumption. It works automatically when the unit is in PRODUCTION mode.

This function is not running always. To prevent the air injection from stopping the ice cream feed, the air pump generator runs intermittently (always 20 seconds running and 20 seconds halt).

## NOTE: This function always use key letter " P ".

## 3. Counter

This device is designed to count ice cream quantity for daily sale. It displays the numbers of ice cream serving and counts the number up while each time the handle is being pulled down. With a lock, this device is convenient for shop management \& accounting

## 1) About How To Use This Function:

This device works when the unit is in PRODUCTION mode. It automatically counts the number up when the $\mathrm{s} / \mathrm{s}$ handle is pulled down.

To reset the number, take off the lock and press the button.
To lock the counter, simply hang the lock up from the small hole of the RESET button.


NOTE: This function always use key letter " C ".

## 4. Mixture Alert



This device reminds user of the time to re-support ice cream mixture so as to avoid 'empty cylinder' and to guarantee consecutive feeding for consecutive ice cream serving. Once the ice cream mixture inside the hopper falls to the low limited level the stipulated indicator shines on.

## NOTE: This function always use key letter " M ".

## 5. Rainbow

## -Clean before production

Before production please wash and disinfect the components, pipes, containers which contact with food components, pipes, containers.

## -How to production

Connect to the power supply, press the rocker switch up (-), left light turns on, lift up the front up-down board of the ice cream machine, listen to the left rainbow pump whether it is working properly.

Then press rocker switch down (= ), the right light turns on, listen to the right rainbow pump whether it is working correctly.

Then put down the front up-down board, press the rocker switch on middle position (0) to pending next step.

## -Filter the jam

Filter the jam into smooth in order to avoid the jam block to plug into the hole. Also insure the jam with enough sugar percentage to prevent the ice jam blocks the ring groove and hole.

## -Pump the jam

Put the filtered jam into two containers, placed in cabinets, and put the two suction tubes into the containers.

Press the rocker switch up (-), lift up the up-down board of the ice cream machine.
When the left rainbow pump pumps the jam into the discharge block, then press the rocker switch down ( = ). When the right rainbow pump pumps the jam into the discharge block, then put down the up-down board to stop pumps working.

When ice cream come out it would be with rainbow.

## - Clean after production

Unplug the input tube which connects with discharge block, and lift up the suction tubes at the same time.
Put the suction tube into the container with clean water of about $40{ }^{\circ} \mathrm{C}$.
Open the appropriate switch, lift up the front up-down board so that the pump works, until the pipeline can be out of all clean water.

## Remarks:



NOTE: This function always use key letter " $R$ ".

## 6. Temperature Display



Shows the temperature of the cylinder
NOTE: This function always use key letter " T ".

TWOTHOUSAND
NO.18-105, HUAGANG GARDEN, ZHONGSHAN AVENUE, GUANGZHOU, CHINA T: 86-20-38768241 | F: 86-20-38769376 | WWW.TWOTHOUSANDCO.COM

## TROUBLESHOOTING

## 1. Analysis table (1)

| Problems | Reasons | Possible Causes | Solutions Suggested |
| :--- | :--- | :--- | :--- |
|  | A. The starter or <br> Capacitor breaks down. <br> B. The overload <br> protection is defective <br> C. Power voltage is too <br> low or the section area <br> of the electric cable is <br> too narrow that it <br> Causes low voltage. | A.B. Change the new <br> ones <br> C. Contact the local <br> power supply station for <br> more details or match a <br> does not run | Unit of regulator. Change <br> a new cable for a large <br> section if it is caused by <br> The cable. |
| Is |  | Disable | 2.The chilling system <br> is blocked by ice |
|  | Moisture exists | 3. Leakage of |  |
| refrigerant gas | The chilling system is not <br> completely/properly sealed. | Check up the leakage and repair <br> accordingly by vacuuming and refilling <br> refrigerant gas. |  |

TWOTHOUSAND
NO. 18-105, HUAGANG GARDEN, ZHONGSHAN AVENUE, GUANGZHOU, CHINA
T: 86-20-38768241 | F: 86-20-38769376 | WWW.TWOTHOUSANDCO.COM

## 2. Analysis table (2)

| Problems | Reasons | Possible Causes | Solutions Suggested |
| :--- | :--- | :--- | :--- |
|  |  | A. The gaskets on the <br> plunger or the sealing <br> O-ring is not properly <br> installed, or not well in <br> location, or has been <br> arready defective. | Change some new gaskets or sealing. |
| Leakage of the ice <br> cream stuff or water | 1.Leakage from the <br> throat block | B. The fixing screws on throat block <br> are not tight enough or not properly <br> mounted | Mount the screw in proper position <br> and tighten it up. |
|  | 2. Leakage from the |  |  |
| gear box | The Y-ring or O-ring sealing is <br> defective or broken down | Change some new gaskets or sealing. |  |
| The ice cream is too | A. The ice cream material involves <br> too much proportion of sugar <br> h. Improper overload proof | A. Use the ready-to-use material from <br> good supplier or adjust the proportion <br> of recipe |  |
| B. Turn to the professional repair man |  |  |  |
| for the adjustment of the overload |  |  |  |
| adjustment |  |  |  |

N0.18-105, HUAGANG GARDEN, ZHONGSHAN AVENUE, GUANGZHOU, CHINA
T: 86-20-38768241 | F: 86-20-38769376 | WWW.TWOTHOUSANDCO.COM

## CIRCUIT DIAGRAM



Diagram of the 220 V knob controller machines

DZ ——Electronic Circuit board
HK ——Command Switch
K1 — Travel Switch (Limit Switch)
K2 ——Reset Switch
B1 ——Main Transformer
B2 -Current Sensor
XD1 —— Overload Indicator
XD2 ——Production Indicator
D1 - Stirrer Motor
D2 - Compressor
D3 - Fan Motor
C1——Alternating Contactor



Diagram for the 380V simplified controller machines

DZ----Electronic circuit board
K------Travel switch (limit switch)
B1----Main transformer
B2, B3-----Current sensor
C1, C2-----Alternating contactor
D1-----Stirrer motor
D2-----Compressor D3-----Fan motor


Diagram for the 220V simplified controller machines

DZ-----Electronic Circuit Board
K------Travel Switch (Limit Switch)
K1, K2------Direct Current Relay
B1-----main Transformer
B2-----Main Sensor
D1-----Stirrer Motor
D2-----Compressor
D3-----Fan Motor


Diagram of the 220 V computer controller machines

BH ——Computer Controller
K —— Travel Switch (Limit Switch)
K1, K2 —— Direct Current Relay
B1 — Main Transformer
B2 - Main Sensor


D1 - Stirrer Motor
D2 - Compressor
D3 — Fan Motor


## Caution:

The above drawing and information are for reference only. They are subject to change as per production renovation necessity.

For the accurate diagram for any fixing or maintenance, please refer to the sticker on the circuit box cover.

## ACCESSORIES PACKAGE

1. $4 \mathrm{PCS} \mathrm{\varphi} 26 \mathrm{O}$-ring for side plungers
2. 1 PCS 426 O -ring and 1 PCS bridge gasket for middle plunger
3. $2 \mathrm{PCS} \mathrm{\varphi} \varphi 8 \mathrm{O}$-ring for throat block
4. $4 \mathrm{PCS} \varphi 160$-ring for expanded tube
5. 2 SETS of expanded tube
(The above list is for reference only. The actual breakdown may vary as per different customer's request)

Caution: Keep the children away from the machine to avoid any danger to the children.

