

Thank you for choosing JINGLING Brand ice cream machines. JINGLING Brand ice cream machines have applied the international advanced refrigeration industry, the famous brand compressors and good quality refrigeration components. With good looking and reliable performance, our products measure up the national safety standard of food processing machinery and electric appliance, and can be used in bars, fast food shops, hotels, schools and cold drink stores. We have achieved the certificate for ISO 9001:2000(International Standard for Quality Management System 9001:2000). Some ice cream machines have got CB, CE approval.

Please read the operation manual carefully and follow the instructions strictly then install, adjust and operate the machines.

1. Major Technical Data

Figures Model Item		Main Power	Rating kW	Refr	Capacity Kg/h	Cups per hour	Net Weight kg	Measurement mm
BQ116Y1	BQJ-10BY	220V/50Hz	1.7	R22 (R404A)	10-14kg (14-20L)	167-233	105	518×745×756
BQ816Y1	BQJ-11/2AY1	220V/50Hz	1.7	R22 (R404A)	12~18 kg (17~28L)	200~300	116	518×745×756
BQ620Y1	BQJ-10/2CY1	220V/50Hz	1.7	R22 (R404A)	12~18 kg (17~28L)	200~300	143	518×760×1420
BQ620PY1	BQJ-10/2CPY1	220V/50Hz	1.7	R22 (R404A)	12~18 kg (17~28L)	200~300	153	518×760×1420
BQ633Y1	BQJ-20/2BY1	220V/50Hz	2.6	R22 (R404A)	20~25 kg (28~36L)	333~417	158	518×760×1420
BQ633PY1	BQJ-20/2BPY1	220V/50Hz	2.6	R22 (R404A)	20~25 kg (28~36L)	333~417	168	518×760×1420
BQ820Y1	BQJ - 10/2BY1	220V/50Hz	1.7	R22 (R404A)	12~18 kg (17~28L)	200~300	145	518×745×1420
BQ820PY1	BQJ-10/2BPY1	220V/50Hz	1.7	R22 (R404A)	12~18 kg (17~28L)	200~300	155	518×745×1420
BQ833Y1	BQJ - 20/2AY1	220V/50Hz	2.6	R22 (R404A)	20~25 kg (28~36L)	333~417	160	518×745×1420
BQ833PY1	BQJ-20/2APY1	220V/50Hz	2.6	R22 (R404A)	20~25 kg (28~36L)	333~417	170	518×745×1420
BQ836Y1	BQJ - 22/2AY	220V/50Hz	2x1.6	R22 (R404A)	22~28 kg (32~40L)	367~467	194	540×775×1414
BQ818PY	BQJ-12/2PY	220V/50Hz	1.8	R404A (R134A)	12~18 kg (17~28L)	200~300	135	518×860×880
BQ368PY	BQJ-32/2PY	380V/50Hz	3.6	R22	28~35 kg (40~55L)	467~583	210	645×900×1400

Note: 1) The capacity is measured when the environment temperature is 25 degrees centigrade, and the ingredient temperature 7 degrees centigrade.
 2) Cups per hour is measured at 60g to 70g per cup.

2. Schematic Diagram For the Basic Structure: (Fig.1)

- | | | |
|-----------------------------|-------------------------------|-------------------------------------|
| 1) Main Body | 2) Feed Hopper Lid | 3) Top Cover |
| 4) Bulk Inner Tube | 5) Bulk Outer Tube | 6) Automatic Controlling Assembly |
| 7) Plug of the Throat Block | 8) Handle | 9) O-ring Gasket of the Plug |
| 10) Bridge Gasket | 11) Horizontal Bar | 12) Bolt of the Throat Block |
| 13) Socket Wrench | 14) Discharge Throat Block | 15) Star Screw of the O-ring Gasket |
| 16) Gasket | 17) Star Shape Screw | 18) Star Screw Wrench |
| 19) Square Gasket | 20) Ingredient Leakage Holder | 21) Stirrer Shaft |
| 22) Ground Terminal | | |

Note: *in the cross note, it would be different from each model.

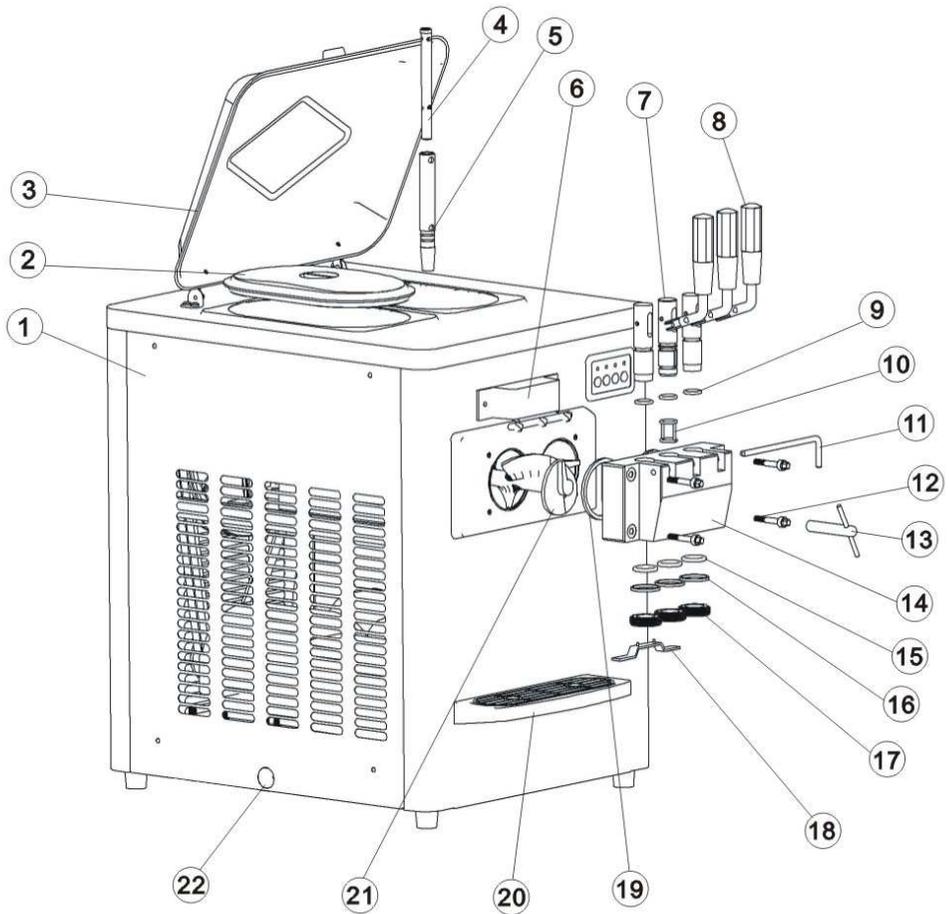
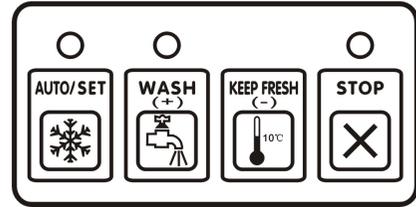


Fig.1

3. Control Panel(Fig.2)



Five Keys Control Panel
Fig.2



Four Keys Control Panel

Attachment :
Indicator



4. Notice

Checking before Use

- Please DO install the ground wire according to the national electric safety standard. The section area of the ground wire can not be smaller than 1mm².
- Use the connection of power supply which is measured up the safety standard, including the acceptable wire connection and electric equipment.
- Make sure the power supply of the machine has the short-circuit and electricity leakage-protector.
- The machine should be placed to a dry and solid ground. Make sure there is no heat source that the temperature is above 70 degree centigrade in the area of 500mm around the machine. And the machine should not located at the wet and direct sunlight position.
- The distance between the machine and the wall or between the machine and the other things should be at least 500mm (Fig. 3.) The below hole should keep smooth, no inhaled thing around the machine. For the hot air outlet of the condenser, the gap should be as big as possible so that the hot air can drain smoothly.
- Leave at least 500mm space round the machine.
- After the machine is put to a proper position, apply the break to fix the machine location.
- For 380V machines: Observe the turning direction of the stirrer shaft. The shaft should run in clockwise direction. If the shaft runs in wrong direction, just alternate any two of the power phases.

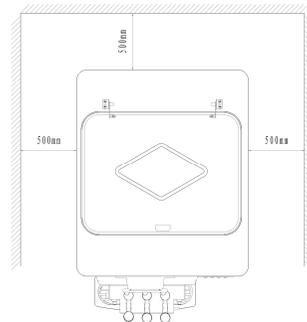


Fig 3

Power

- Single phase electricity is 220V/50HZ, Voltage range is 198V-242V.
- Three phase electricity is 380V/50HZ.
- Three phase four wires electricity is 380V/50Hz and one wire is neutral wire.
- The section area of the power cable should be big enough to ensure the ability for overcurrent. The total capacity of the power supply should meet the demands of the machine for load power, since the machine starts at higher current.

Machine testing

After all the accessory installed, please test the function of the machine to ensure the machine effects well before starting the machine.

- Switch the WASH BUTTON, the stirrer motor works, and the driving device will bring along the stirrer shaft, thus the stirrer shaft works. Switch STOP BUTTON, the stirrer motor stops.
- Switch the AUTO BUTTON, the machine will enter refrigeration mode, the stirrer motor works first, after 30 seconds the compressor and condenser fan works. There is hot air from the condenser outlet, the temperature in the stirrer drum decrease quickly, there will be frost in it after 1 minute. Switch the STOP BUTTON, the machine will stop working.

Caution:

The time for testing should not more than 3 minutes, take out the stirrer shaft when there is no ingredients. Because long time self-driving will cause the refrigerating tank ice up, also damage the machine.

Safety

Note

- It is unavoidable that the machines will get vibrated during transportation. Please leave the machine unused for above 24 hours before operation.
- The temperature of the ingredient should be around 5-40 degrees centigrade, if above this temperature will cause damage to the machine.
- Clean the dust on the condenser at a regular period, otherwise will make some influence on the refrigeration effect.

Warning

- To ensure safety, machine must be operated by trained staffs, who possess enough safety common sense on the electric appliance also understand this operation manual enough.
- To avoid danger, when the machine in abnormal condition, please contact the maintenance department of the manufacture or the maintenance staff.
- Please pull out the plug if the machine is lain idle for a long time.
- Pay attention when open and close the top cover to avoid hands hurt.
- Keep the machine clean at any time, clean the alterative waste ingredients to avoid accessory rust.
- Wash and disinfect the machine follow the instruction book strictly.

Danger

- Don't touch the plug and open/close switch when skin exposed, skin wet, when you wearing wet glove, wet clothes.
- Don't touch the stirring part of the machine in any ways.
- To move the machine in a correct way, keep your body away at a safety distance.
- The machine is powerful rating equipment, the capacity of electric wire must satisfied with the largest electrical current and some proper redundancy. The capacity lacking wire would lead to burning due to overheated, even lead to fire destroy. So please DO pay attention to this point.

Transportation and storage

- Don't hit the machine during transportation, 45 degree dumping and serious hit is not allowed.
- Machine should be stored avoid the sunlight and rain, humidity less than 85%.

5. About Operation

- CLEANING

1. Cleaning before Making Ice-Cream

- a. Loosen 4 fixing bolts with a socket spanner in an anticlockwise direction and remove the throat block.
- b. Clean the feed hopper, refrigeration tank, stirrer shaft, bulk tube and hopper lid with cleanser essence water.
- c. Put the throat block in cleanser essence water, push and pull the handles 2 to 3 times. Pull out the horizontal bar and plugs. Clean the throat block and plugs. Then put the throat block and plugs into the disinfector for 3-5 minutes and clean them with clean water. Lubricate the circle around the plug gasket with edible oil. Install the throat block and plugs as before. (See Fig 4, 5)

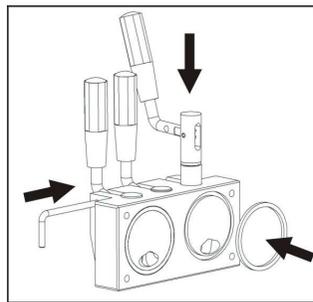


Fig 4

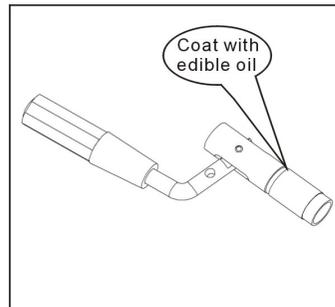


Fig 5

Note: Do not clean the machine with hot water which is above 40 degrees centigrade lest destroying the sealing accessories inside the machine.

2. Cleaning after Production

- a. Fill the feed hopper with clean water. Push the CLEANING button, then the CLEANING LIGHT is on; make the stirrer shaft run for about 3 minutes. When the rest of ice cream in the refrigeration tank has melted, pull the handle at the throat

block and drain the water. Then repeat the above several times. When the cleaning is finished, push STOP BUTTON, then the machine stops production.

- b. Clean the discharge throat block.
Repeat the above CLEANNING BEFORE MAKING ICE CREAM a),

- Ice Cream Material

Buy packaged ice cream powder directly and prepare it with water according to the manual

Note: 1. When making the ice cream slurry, do stir it well. Do not leave any deposit. Otherwise the hole at the bulk tube may be blocked, causing the material to fail in going down quickly, making the refrigeration tank frosted and damaging the stirrer shaft.
2. When there is a blockage for material flow, remove the bulk tube for the moment to ensure a smooth material flow.

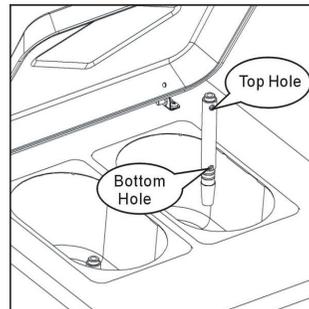
Special Advice:

It would be better if Jingling Brand ice cream powder is used. (There are tens of flavor to meet your choice, such as milk, chocolate, vanilla, mango, etc.)

- Making Ice Cream

1. Production

- a. Connect the electric power, then the indicator shows the temperature of the hoppers and the refrigeration tanks(The first two numbers on the left side are for hoppers while the two on the right side are for the refrigeration tanks). For example, if the indicator shows 12-2, it means the hopper temperature is 12°C, and the refrigeration tank temperature is -2°C.
- b. Insert two bulk tubes into the discharge hole of the hoppers respectively.
- c. Pour the prepared ice cream slurry into two hoppers. The liquid surface should not be higher than the top hole of the outer tube. Screw the outer tube making the top holes for the inner tube and outer tube coaxial. Then the bottom holes are completely free. The ice cream slurry can go to the refrigeration tank through the bottom holes. (Fig. 6)
- d. When the ice cream slurry flows in to the tank, after about 3 minutes, push the RUN button and start the stirrer motor. After about 30 seconds, the compressor start and the machine get in RUN mode. At this time, the indicator shows the rate of progress of ice cream by percentage. When the indicator shows FInE(FINE), then the ice cream is ready. Pull the handle then appetizing ice cream can be discharged.
- e. Push the STOP button when production needs to be stopped. And then the indicating lights are off. Then the machine will stop production.
- f. Adjust the inner tube of the bulk tube and control the free state of bottom holes according to the speed of the discharging of ice cream. Then the air and the slurry go into the refrigeration tank together. And an excellent bulky and soft effect can be achieved.



2. Discharge, Automatic Reset & Continuous Running

- a. At any circumstances, when pulling any one of the handles of the throat block, the

stirrer motor can be started, and then the ice cream in the refrigeration tank will be discharged. The ice cream discharged from left and right of the throat block is in single color and is made from the material in left and right refrigeration tank respectively. The ice cream discharged in the middle is in double color and is made from the mixed material in both tanks.

Note: When part of ice cream is discharged, the material in the refrigeration tank will decrease. If the amount of material is too little, there will be abnormal noise in the refrigeration tank. What's worse, the stirrer shaft will be damaged. In this case, check whether the bottom holes of the bulk tube are blocked or not open adequately.

- b. When the ice cream reaches the preset hardness, the indicator will show FlnE and the machine will stop automatically. In about 5 minutes the machine will restart automatically. During this period, if production needs to be continue, push the RESET button (or pull the throat block handle), the machine will start production at once.

Note: BQJ Model is designed for intermittent production. i.e. After a certain amount of ice cream are discharged from the refrigeration tank, it will take several minutes for refrigeration (The time is depended on the amount of refrigerant in each model.) before the machine is ready to discharge the next batch.

3. The Hardness Setting of Ice Cream

The principle of hardness adjustment is as follows. First, increase the load of stirrer motor. Second, the current is increased and the circuit is controlled. Then the machine stops working. Before delivery, the ice cream hardness has been set according to our recipe. If different recipe is used, reset the hardness again.

Five Keys Control Panel

- a. The hardness setting is divided into 16 points, from point 01 to point 16. The bigger the number is, the harder the ice cream is.
- b. Press SET BUTTON, the indicator shows 1-01. One point will be increased if BUTTON + is pressed. One point will be decreased if BUTTON – is pressed. Press MEMORY BUTTON when the setting is finished, then the indicator shows SAVE and exits. (It can exit automatically if no key is pressed within 10 seconds.)
- c. Please change the point when the machine is running for one minute. Or the effect of hardness adjustment is affected.

Four Keys Control Panel

- a. The hardness setting is divided into 20 points, from point 01 to point 20. The bigger the number is, the harder the ice cream is.
- b. Keep on pressing AUTO BUTTON for 10 seconds, the indicator shows the points at work and flashes, such as 1-01. One point will be increased if BUTTON + is pressed. One point will be decreased if BUTTON – is pressed. When the setting is finished, after 10 seconds the indicator shows SAVE and exits.
- c. Please change the point when the machine is running for one minute. Or the effect of hardness adjustment is affected.

4. Keeping fresh of the ice cream

- a. When the machine is in the state of AUTO, the indicator shows FlnE. Then the production of ice cream is finished, the machine precools the material in the hoppers automatically, making the material at a certain low temperature and fresh.

Note: The precooling of the hoppers is not in effect when the machine is making ice cream. The temperature range of precooling is 0-10 °C.

- b. When the machine is not in production for a short time and there is still some ice cream material not used, press KEEP FRESH BUTTON, then the machine can automatically keep the material in the hoppers and refrigeration tanks fresh.

5. Function of Low Mix Indicator

When the material in the hoppers is not enough, the indicator shows CL--. Meanwhile the buzzer will sound every 20 seconds to remind the user to fill the material. And the production state of the machine is not affected.

6. Ice Cream Calculator&Indicator(Only for Four Keys Control Panel)

- a. When the machine is in the state of AUTO, pull the handle, and then it takes count of one time. (The figure ranges from 000 to 999.)
- b. Keep on pressing AUTO for 10 seconds, then the indicator shows 1-XX and flashes. Again press AUTO for three times, then the indicator shows 4-XXX. XXX shows the quantity of ice cream discharged. (When the indicator reaches 999, the calculator comes to zero. In other words, the calculator starts again.)
- c. If no action takes on the keys for 10 seconds, the indicator shows SAVE and exit. Then the previous state is kept.

6. Electrical Drawing

Please refer to the electrical drawing which is stick to the cover of the electrical case

7. Trouble Shooting

Trouble	Reasons	Analysis	Disposal
Refrigeration Failure	A. The compressor does not run.	A. The starter or capacitor malfunctions. B. The compressor is damaged. C. Power voltage is too low or the section area of the power cable is too small, making the voltage drop.	A.B. Change the defective parts. C. Increase the size of cross section area of the cable and increase the capacity of power source.
	B. The cooling system is blocked by ice or foreign material.	Moisture or foreign material enters the system.	Remove moisture or foreign material from the refrigeration system.
	C. Refrigerant Leaking.	The refrigeration system is not properly sealed.	After checking the leaking place do the reparation, vacuumize the system and fill the refrigerant again.
The indicator shows FInE, but ice cream is not hard enough.	A. The current of the motor is larger than the preset.	The outer diameter of the stirrer shaft is too big, or the voltage is too high.	A. Change the outer diameter to a smaller size. B. Adjust the hardness adjustor to a harder graduation.
	B. Improper adjustment of the hardness.	Improper adjustment of hardness or open circuit	Adjust the hardness adjustor to a harder graduation.
Material or Water leakage.	1. Throat block leakage.	A. The plug gasket or the rubber gasket between the stirring drum and throat block is damaged.	A. Change rubber gaskets. B. Install the throat block in proper position and tighten the bolts.

Trouble	Reasons	Analysis	Disposal
		B. The fixing bolts for discharge throat block are not tight or not properly installed.	
	2. Oil leakage in the bearing pedestal or material leakage.	The Y-gasket or O-ring for the bearing pedestal is defective.	Change the defective gaskets.
No ice-cream discharge.	A. Not enough slurry in the refrigeration tank.	A. The bottom hole of the bulk tube is blocked by the ice cream ingredients. B. The amount of ice cream ingredients is too small in the feed hopper.	A. Remove the bulk tube for a while. B. Refill the ice cream ingredients.
	B. Ice-cream is too hard.	A. Too little sugar in the recipe. B. The hardness is not properly adjusted.	A. Increase the proportion of white sugar in the recipe. B. Turn the pointer of hardness adjustor to SOFT position.
	C. The stirrer shaft does not run.	A. The motor or control circuit is damaged. B. The transmission belts are too loose. C. The gear box is defective.	A. Change the damaged components. B. Adjust the position of the motor. C. Repair the gear box.
	D. Discharge throat block is blocked by ice.	The water left by throat block cleaning ices over and blocks the throat block.	Drain the water in the throat block or discharge some ingredients to remove the water.
The machine does not run but whistle.	Machine is at the protection state.	A. Indicator displays 'E1-', protection of over current. B. Indicator displays 'E2--', protection of high voltage. C. Indicator displays 'E3—', protection of power supply. D. Indicator displays 'E4--', hopper temperature sensor malfunctions. E. Indicator displays 'E5--', refrigeration tank temperature sensor malfunctions. F. Indicator displays 'CU—', the electric phase is lacked. G. Indicator displays 'CE—', the order of electric phase is wrong.	First disconnect the power, deal with the troubles according to the indicator, and then connect the power again. A. The stirring motor malfunctions. B. The condenser is blocked or the fan malfunctions. C. The voltage of the power supply is too low or too high. D. E. The temperature sensor is short circuit or open. F.G. Check three phases electric power supply.

7. Easily Worn-out Parts List

N o.	Size	Model Quan	633Y1\633PY1\620Y1\ 620PY1\833Y1\833PY1\ 820Y1\820PY1\816Y1\ 836Y1	818PY	368PY	116Y1
1	O Shape Gasket φ19×3.9	3	3	3	1	
2	O Shape Gasket φ26×5.2	3		3	1	
4	Bridge Gasket	1	1	1		
6	Quadrate Gasket φ91×φ80×4.5	2				
7	Quadrate Gasket φ91.2×φ79.3×6.5		2			
8	Quadrate Gasket φ100×φ92×4			2	1	

Our company maintains the right to improve all the machines. We are subject to modification without prior notification.