### II. Operating instruction of the ice machine

Operation procedure of ice machine

- 1. Plugs in the plug, open panel without indications, switch the power to "ON" position.
- 2. Power and DICE on, machine turns to run, without about 30 seconds of Power and DICE on, machine turns to ice making cycle condition.
- 3. Panel instructions

ER1	DICE	ICE	POWER
$\otimes$	$\otimes$	$\otimes$	$\otimes$

- ① POWER indicates power and full of ice
- A. POWER indicates machine is connected to power.
- B. Full of ice indicates ice storage barrel is full of ice, and machine turns to standby condition, when the ice was reducing, it will start up automatically to make ice.
  - ② ICE indicates machine is making ice.
  - 3 DICE indicates machine is standby for falling ice.
  - 4 Er1 errors as follows:
  - S Normal display

# Error display

Indication	ER1	DICE	ICE	POWER
Full of ice	Off	Off	Off	On
High voltage protection	Fast blink twice	Off	Off	On
Falling ice overtime	On	Off	Off	On
Ice making overtime	Slow blink	Off	Off	On
No ice making water	Fast blink	Off	Off	On

# Normal operation display

Indication	ER1	DICE	ICE	POWER
Falling ice	Off	On	Off	On
Ice making	Off	Off	On	On
Full of ice	Off	Off	Off	On

### Part III

### Protective device and condenser

### I. Safety protection function

- Continuous cycle ice making test 3 times without ice falling, this series machine turn to stop automatically.
- When ambient temperature is higher than described degree, this series machine will stop automatically (water cooling machine excluded).
- When water cooling machine runs out of water, it will stop in about 1 minute automatically.

Note: Once this series machine stop, if machine is needed to re-operate, power switch shall be switched on or plug shall be re-plugged in.

### II. Condenseofr maintenance

Condenser shall be cleaned regularly to prevent decline of ice making amount and errors

• Filter shall be cleaned with neutral soap or detergent to free from dirt jam, and cleaning shall be made at every 1-2 month according to the ambient condition.

- Cooling fin of condenser shall be cleaned by soft brush from top to bottom, horizontal cleaning shall be forbidden to avoid cooling fin damage.
- If there is oil stain on the cooling fin of condenser, cleaning may be made with professional detergent according to certain proportion.

Note: Condenser maintenance shall be made at least at every 6 months, avoid damaging cooling fin when cleaning, and curved cooling fin shall be re-flatted, avoid being cut by sharp cooling fin. As shown by picture:



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### Part IV

# Troubleshooting instructions of flowing-water ice maker

If problems have been made during the operation of machine, please refer to following troubleshooting table before connecting service department:

Problem	Possible reason	Potential damaged components	
Ice machine fails to start	No power connected	1. Fuse 2. Power switch 3. Transformer 4. PC plate 5. Power line	
Machine stops at every 3 minutes after running automatically	High voltage protection	Overheated ambient temperature         2. Dirt on filter of condenser         3. Fan engine 4. High voltage switch	
Every running of machine does ice making only once	Full of ice	1. Free rotation of manger 2. Falling of full of ice switch	
Machine fails to fall	Dirty ice machine	Cleaning of machine	
ice during falling ice procedure	Unbalanced ice machine	Rebalancing	
processi	Ambient temperature is too cold	Ambient temperature shall be greater than 5 °C at least	
Machine fails to fall ice	Dirty ice thickness probe	Cleaning of machine ice thickness probe	
	Improper condition of ice thickness probe	Proper line connection	
	Improper condition of ice thickness probe	Refer to "ice thickness regulation"	
	Improper condition of ice thickness probe	Adjust ice thickness probe	
	Tank level is too low	Check for water level or leakage	
Ice is too thin or incomplete	Inlet electromagnetic valve is not work	Check for water inlet electromagnetic valve	
	Insufficient water pressure	Water pressure shall be in range of 0.13-0.55 MPa	
	Waterway is impassable	Check for pipe and connector dirt	
Ice making is too slow	The condenser is dirty	Cleaning condenser	
	Ambient temperature is too high	Ambient temperature shall not be greater than 40 °C	
	Jam of ventilation	Remove jam	

### Part II

## **Operating Instruction**

# I. Operations sequence check of the ice machine

- 1. Switch power of ice machine to "I" position.
- 2. Initial running or re-operation after stop, falling ice will come first, compressor runs after 20 seconds.
- 3. Inlet electromagnetic valve allows inlet, redundant water after inlet will be discharged by outlet, turns to ice making cycle after 30 seconds.

### • Ice full function

1. When storage barrel is full of ice, manger blocked will lead to stop of machine.



2. After removal of ice and replacement of manger, machine will be started after 3 minutes.

### • Ice thickness adjustment

- 1. Interval between ice grill surface and adjustment probe shall be within 4-7mm.
- 2. Ice thickness adjustment: turn the adjustment screw on the probe, clockwise to increase ice thickness, counter-clockwise to decline ice thickness, every 1/3 circle increases thickness 1.5mm. As shown by picture: 1 SK-XT



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# Installation, Operation and Application Guide



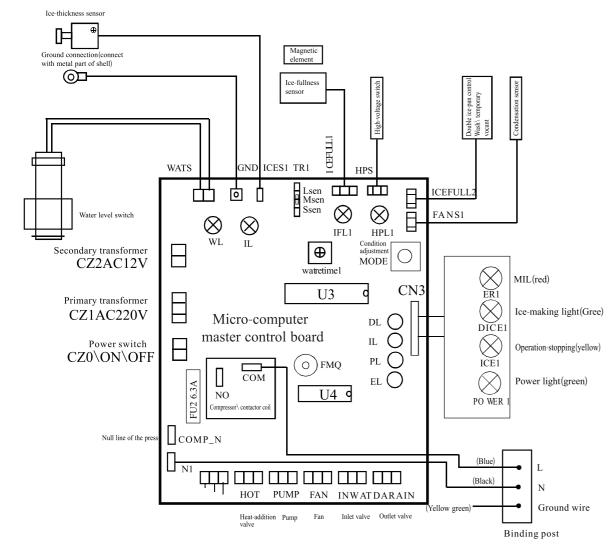
# **Contents**

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# Chapter 5 Electrical diagrams of flowing-water ice machine SK-XT



#### **Instructions:**

- 1. The colors in bracket of the diagram are those of the matching wires; for reference only.
- 2. Watertime is the set water control time, 0~20min,-10min, the time will be longer when you setup through clockwise.
- 3. Ground wire terminal should be connected with metal part of shell tightly, and the shell should be connected with metal part of evaporimeter or the water in slot tightly.
- 4. IL:ice-thickness sensor light, the light will turn on when water touches the sheet metal of sensor.

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- 5. WL:water status light, it turns on when water flows in
- 6. IF L1: skating board(baffle board) light, it is normal when the light turns on.
- 7. N1 is power zero line in figure, at the Com end in the relay is power line.

### **Section I**

### Installation instructions

### I. Settlement of ice machine

- After opening the package, check the machine whether it is damaged during delivery carefully, then take out of accessory, and use clean stupe to wipe out the ice bucket.
- The series machine shall be kept at clean and airy place, which are not suitable to be kept in the open air, or suffer direct sunshine and rain, or be kept near the heat source.
- The surrounding ambient temperature of this series machine shall be more than 3°C and less than 40°C, keep appropriate separation distance with the surroundings to improve the ice efficiency farthest.

Part	Separation distance
Side	15
Back	20
Front	50

Note: Water chiller can be without appropriate separation distance.

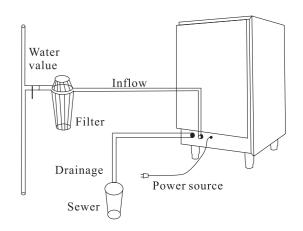
- Please check the level in front, back, right and left directions when install ice machine, and adjust with foundation bolt under the bottom of the machine.
- The series machine cannot make ice in freezing temperature, or will come up serious stoppage.

### II. Installation of water system

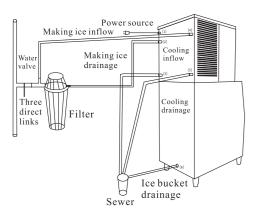
- Water supplied for ice machine must meet the standard of local drinking water.
- Water supplied for ice machine may be handled, or installs water filtration device.
- Water supply and drainage series must meet the following conditions:

Water temperature (°C)	Water pressure (Mpa)	Water inlet	Drain pipe (minimum)
The minimum temperatu re is 0.6	0.13	The minimum inner diameter is 9.5mm (3/8")	15.8mm(5/8")
The maximum temperature is 32	0.55		Each meter shall have 3cm of flowing fall

- Installation diagram
- (1) Installation of all-in-one machine



### (2) Installation of submachine



Note: Air-cooled ice machine has no cooling inflow and other installation methods are same with all-in-one machine.

### III Installation of current source

• Power source supplied shall be same as duty plate of the machine(220v, 50Hz or 380v, 50Hz).

- Battery socket shall directly plug in the power socket with earthing cable, which cannot plug in the temporary wiring board. All circuits must meet national or regional standard.
- Voltage fluctuation shall not exceed ±10% of rated voltage, or need to install voltage stabilizer.
- Earth connection of the series machine must meet electrical standard.

### IV Checking before start

- Ice machine is level.
- Plug in plugs well, and pipe connects correctly.
- Power source supplied is in accordance with the duty plate of machine.
- Environmental temperature and water temperature of ice machine are within the scope specified.

### II. 50P-2000P

Fault phenomenon	Possible cause
Full ice indicated but without ice	1. Full ice switch 2. Control panel
Super pressure ER second quick blink-dark	Nhether have cooling water or fan whether to move     Pressure switch     Whether condenser is too dirty
Falling ice is overtime, ER shines	Full ice switch
Making ice is overtime, ER shines slowly	<ol> <li>Whether have refrigerant</li> <li>Whether compressor works</li> <li>Whether condenser is too dirty</li> </ol>
Making ice without water is overtime, shine quickly	<ol> <li>Flood valve of ice water</li> <li>Drainage valve</li> <li>Pump motor</li> <li>Ice thickness detector</li> </ol>

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