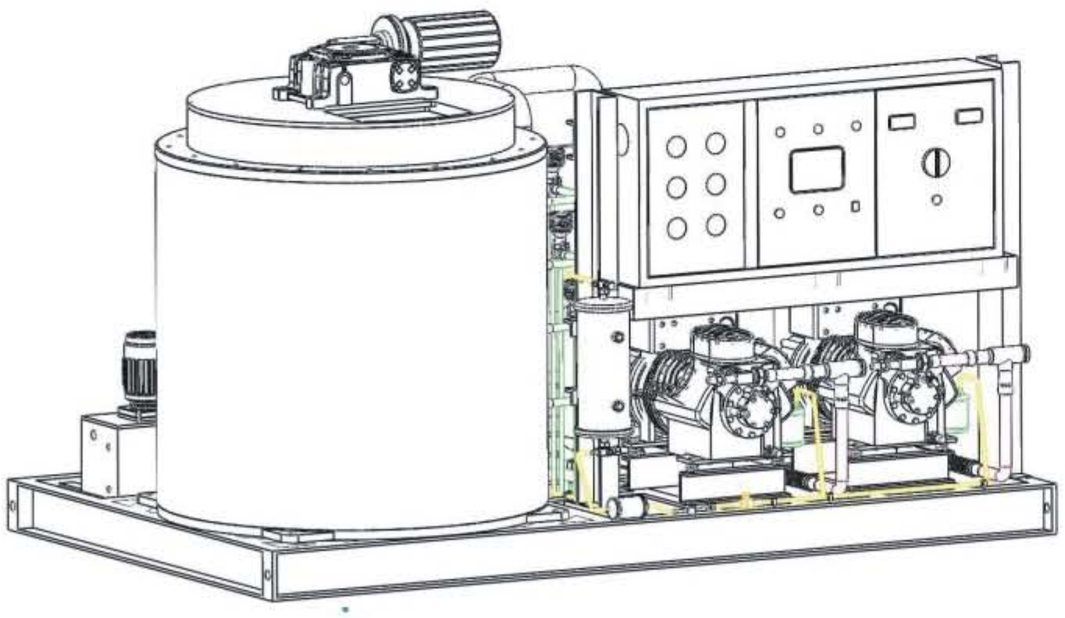
BINGSHAN

PROFESSIONAL / REFRIGERATION

Flake ice machine

Directives of Installation, Operation & Maintenance



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Summarization

Please read carefully this manual before installing, commissioning and operating the ice machine.

This manual introduces the working conditions, performance parameters, installation and commissioning, and operation procedures of IF series flake ice machines. This series of flake ice machines goes with their ice storage bins. Ice making system is that of an inner ice scraping. The ice machine is equipped with a PLC control, which monitors all procedures of it, protects it and gives failure information on a screen for trouble shooting purposes. With a touch screen, the failures can be easily diagnosed and eradicated.
In the meantime, the PLC can communicate with a Personal Computer for instant messaging, which helps start or stop or monitor the ice machine remotely. That realizes automation in an office.

When operating and maintaining the machine, the following identifying signs should be given special notice to avoid personal injuries or equipment damage.

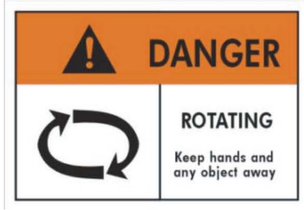
A) High Temperature Sign, which is normally found near a compressor or compressor's discharge pipe. When the machine is in operation, touching on these pipes are strictly prohibited to avoid skin scalds:

A) Earthing Sign, is located in a lower position inside a control box. An Grounding cable should be properly connected for control box wiring:

Summarization

C) Electric Shock Sign, is located on the bottom corner of the control box door, which reminds of careful operation side the control box.

D) Rotation Sign, located in the revolving parts of a motor and fan, reminding of danger of clamping a figure.



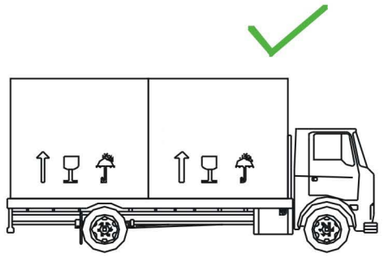
Model No Naming

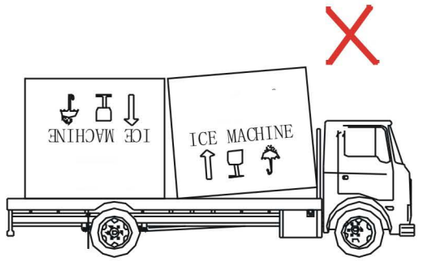
Name plate of each piece of equipment is located on bottom of an evaporator. A typical name plate is shown as follows, including the following information of the equipment.

Equipment's name and model info
Equipment's serial number and daily capacity
Equipment's power consumption and weight
Equipment power requirement
Correct type of refrigerant and amount of this refrigerant
Manufacturer's information
Model Number this number is important for identifying features in cases of purchasing replacement or maintenance.
Serial Number this number provides a unique identity for every single piece of equipment manufactured by This number should always be presented to for telephone maintenance service and component identification.

Standard model number naming codes and their meaning:

IF	S	(E)	5T	——	R4	A
IF: Product Series Code	S: Stainless Steel Evaporator	E: Evaporator	5T= Capacity		R4=Gas Identification R4=R404A R2=R22 R7=R717 R5=R507	A= Cooling Type A= Air W=Water AW= Evaporative Condenser



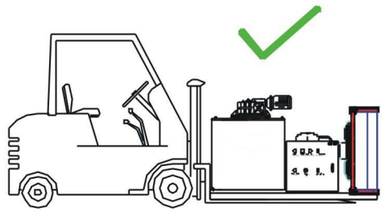


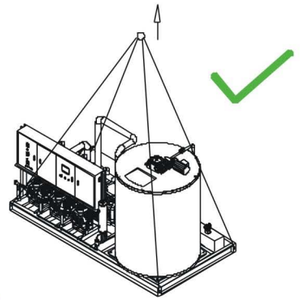
Transportation

Check if there is any transportation damage to the external packing before unloading.
Each ice machine is a hermetic and complete package prior to shipment. All connections are done properly. The machine is tested in the factory. A split style ice machine or a water cooling part of a water cooled type machine is shipped in different parts. All valves are closed during transportation to avoid refrigerant leakage during transportation and handling.
The enclosed shipping list indicates the amount, model number of the shipped goods. Check thoroughly if there is any damage or shortage. And check:
1.pressure meters and its readings for confirmation of compactness and tightness of the equipment;
2.and find the accessory box that goes with the shipment;
3.the oil level mirror and confirm there is refrigeration oil in the system. When oil level is not visible in your system, contact the local distributor of or the company's headquarter immediately.

Unloading

Unloading and craning of the subject equipment must be done with the assistance of a forklift or crane.
For an ice machine of daily capacity 15T (including), a crane must be present for unloading and installing.





Installation Requirements and User's Responsibilities

List of jobs and responsibilities is shown below (Subject to a specific contract)
Starting ice machine must be done by servicing staff or technical staff of a contracted company approved

Requirement	Provides Installs	Provides Onsite Installation	Customer Provides Onsite Installation
Foundation			Meets the required foundation
Unloading & Craning			Forklift or Crane
Power Supply	1. Circuit Breaker Included. 2. 3 meters of power cable supplied for machine lower than 8T 3. 20 meters of power cable supplied for cooling tower and cooling pump.	Power cable connection is done on site.	1. Main Power circuit breaker or fusible switch (Recommended by 2. Connecting of cables to the control Box 3. Wire Terminal connection 4. Earthing Cable Connection
Water Piping	Water pipe supplying for ice maker: 1.5 meter Cooling Tower: 20 meters	Connecting water pipe on site	1. Thermometer (upon request) 2. Filter (upon request) 3. Interface reserved for Ice machine & cooling tower water supply, distance no farther than 1.5 meter.
Safety Auxiliary Devices			Ventilation conduit
Insulation material	For Split type machine	For Split type machine	For Split type machine
Water Pipe Connectors	Differs Depending on Different Models		Onsite commissioning
Other Materials			Refrigerant (Upon Request) Nitrogen (Upon request) Contractual items

Placing the machine before installation

Requests for placing an ice machine before installation:
1.Solid Foundation
2.No vibration
3.Dry environment
4.Temp range: –40 to 70 degrees
5.Keeping the plastic cover as it is
6.No refrigerant filling
7.Storing the refrigerant as instructed by the manufacturer.
8.Conducting pressure and leakage check after a non–use period of 1 year.

Working Environment

To ensure the normal performance of electrical components of the ice machine, please do not place it in a dusty/muddy/corroding gas/overheated/over humid environment.

	MIN	MAX
Ambient Temp	5℃	45℃
Water Temp	5℃	35℃
Water Feed Pressure	0.15MPa	0.5MPa
Rated Power Error	–10%	+10%

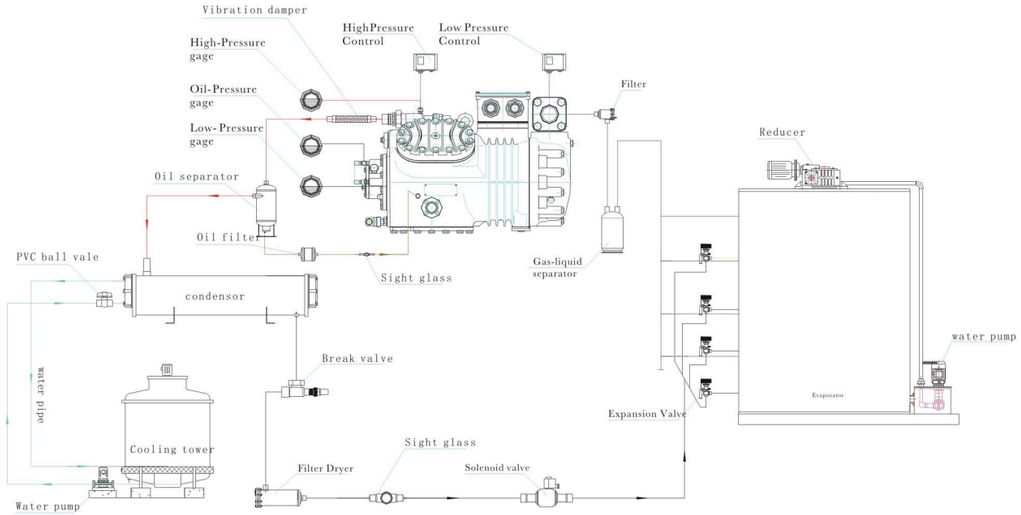
Attention:

Potential equipment damage!
When the ice machine is running in an environment of ambient temp higher than 45 degrees, the compressor is working at its upper limit. That may add to the possibility of refrigeration system failure and component damage.If the control box is not well ventilated, the components inside may be damaged. Ventilation conditions in the control room are essential for ice machine performance.

Foundation Requirement

To ensure good performance of I ice machine, a level calibration should be done after the machine is put on the foundation. The deviation should be kept within 2mm.
The weight figure for each ice machine in this manual is an approximate. Please refer to the file that is submitted for foundation requirement for an actual weight of the subject ice machine. is not to be held responsible for any damage caused by improper foundation.

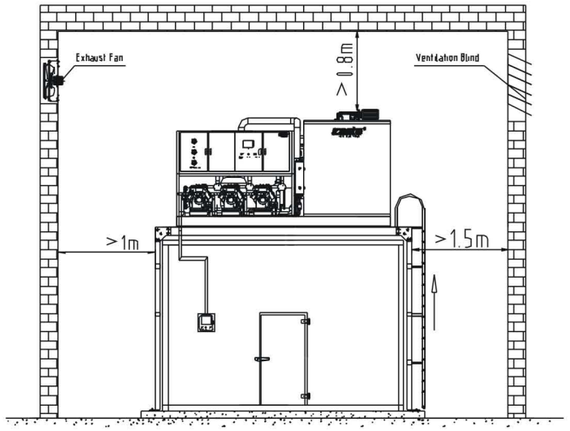
Major Components of ICESTA Ice Machine (Typical Ice Making Cycle)



Installation

Machine Maintenance Space

Proper maintenance space should be kept around and above the ice machine for servicing and maintenance operation.



Craning

A crane of forklift is supposed to be present for handling of the ice machine. Please refer to crane chapter for the details.

Warning!

Steel ropes (steel chains or slings) must be chosen in accordance with manufacturer's advice. Each and every of steel rope (steel chains or slings) should bear the subject ice machine weight. Proper adjustment of the rope length should be done to assure a smooth and level craning action. Improper craning other than what is suggested may cause death or severe personal injuries.

Improper craning of the ice machine!

Attempt to lift the ice machine up by 50 cm from the ground to check of the correct gravity center. And adjust the gravity center if necessary. Improper craning of ice machine may cause death or severe personal injuries or cause severe damage to the ice machine or other properties.

※ Note:Proceed cautiously to avoid any damage to the wiring inside the control box during craning and reassembly activity.

Installation

Water Pipe Connection

More than just one water pipe should be connected to the ice machine.

Note: a reasonable layout and supporting of water pipe is necessary to offset unnecessary pressure to the system. A distance of 1 meter should be kept between water piping and ice machine. This will help with a correct arrangement for the installation job on site.

Connect the water inlet to the main water supply on site;

Connect the water pipes between the condenser and the cooling tower.

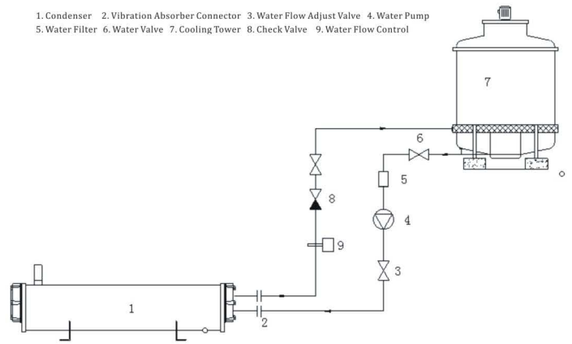
Water Treatment

The water that is used for the condenser should be properly treated to avoid scaling, corrosion, alga or silt accumulation. User is suggested to filter the water used for the condenser. Damages caused to the equipment by water untreated or not properly treated are not to be taken care

Filter

Filtering water of ice making can be decided by user depending on their specific requirements. Installing filter between the main water supply and the ice machine water inlet is highly suggested.

1. Condenser 2. Vibration Absorber Connector 3. Water Flow Adjust Valve 4. Water Pump
5. Water Filter 6. Water Valve 7. Cooling Tower 8. Check Valve 9. Water Flow Control



※ Note:When the ice machine is not to work for a long time, you are suggested to drain the water inside the cooling tower and condenser and clean the heat exchanger of the condenser before starting the machine next time. Customer will take care of the damage servicing charge if it is caused by bad water quality.

Power Supply Connection

Note: Electric cables on the installation site should be in compliant with national electrical regulations and directives or any national or local regulations applicable. Please make sure that earthing is properly done.
All cable connections on site should be done in accordance with correct terminals. A through check should be done on the possibility of short–circuit and improper grounding.

Heeding: Refer to the electric diagram that goes with the ice machine for details of wire connections.

The subject ice machine is supposed to work on a power supply of 3–phase (5–core cable). There must be three live wires, one neutral wire and one grounding wire. The external power supply cable should comply with the electric feature of the ice machine. The power supply stability should be guaranteed and the error rate should stay within a range of ± 10%.

$$\text{Current Error Rate} = \frac{\text{Max Current - Average of all 3 phases}}{\text{Average of all 3 phases}} * 100\%$$

$$\text{Voltage Error Rate} = \frac{\text{Max Voltage - Average of all 3 phases}}{\text{Average of all 3 phases}} * 100\%$$

Current Error Rate: ± 3%; Voltage Error Rate: ± 2.25%
The subject ice machine is supposed to work on a power supply of 3–phase (5–core cable). For the regions where the power supply is not sable, a voltage stabilizer is supposed to be installed for protecting the safe operation of the compressor.
A designated power supply control box is supposed to be in place for the ice machine.

※ Note:Damages caused by imbalanced voltage power supply are deemed as improper operation and not covered in our warranty policy.

All electric wires supplied for the ice machine electrical box must be copper cores which will help avoid corrosion and overheat on the wire connection terminals.
Control cables should be laid out in a protection cable tube and be separated from the electrical cables to avoid interference caused by electrical cables.
NOTE: Control cable of 24V should not be laid out in the same cable tube with that of a higher voltage. Electrical cables for main power supply should be selected according to the spec of Max current indicated on the circuit breaker inside the control box. And the main power supply is supposed to be 1.3 times higher than the

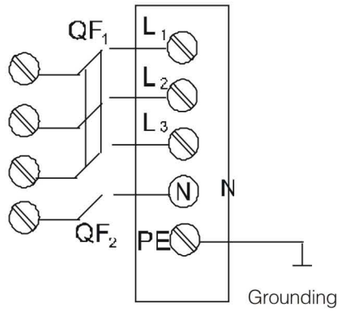
equipment. Electrical cables should be capable of carrying electricity slightly higher than the max running current of the equipment, with proper consideration of the working environment.

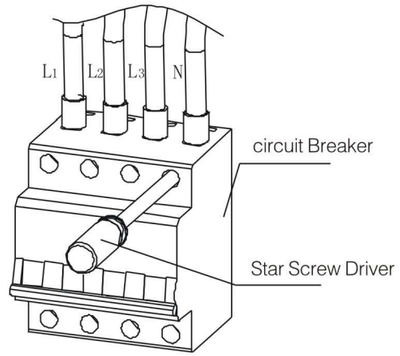
Power Supply Connection

Fusibility and circuit trip are indispensable elements in any electric cycle (Refrigeration and water cooling systems included).
5–core cable of 3 phases (neutral and grounding cables included) is the basic requirement for an electric cable.
Modification by cutting to the electric control box for the purpose of electric connecting is not advised. When this is just required for wire connection, proceed with great caution and prevent metal scraps from falling inside the electric components. Metal scraps may cause electric short circuit or severe damage to electric components and personnel.

※ Note:During the installation, commissioning, maintenance and trouble shooting process, there might be cases of control box being connected to live electricity. This kind of job should be done by an qualified electrician or qualified staff with an electric training background. Operations in this situation should be proceeded on with great caution and in strict accordance with electric safety precautious procedures to avoid death or severe personal injuries.

※ Warning:: Identify Neutral Wire and Live Wires (L1/L2/L3) while doing the wire connecting. Wrong wiring may cause severe damages to the electric components.



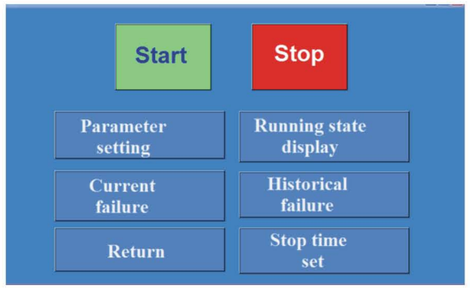


Running the Ice Machine

Power supply

When the installation is properly done, and electrical power is properly connected, switch on the main circuit breaker inside the control box and the breakers of control system and neutral wire.
The green power indicator on the control box is on. Put the power switch on the control box to ON position. Release the Emergency Stop switch. The touch screen shows as follows:

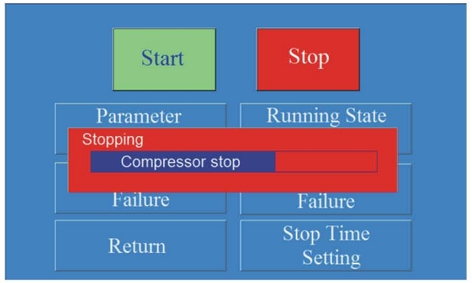
Press **ENTER** to access the main menu



Running the Ice Machine

Starting the Machine

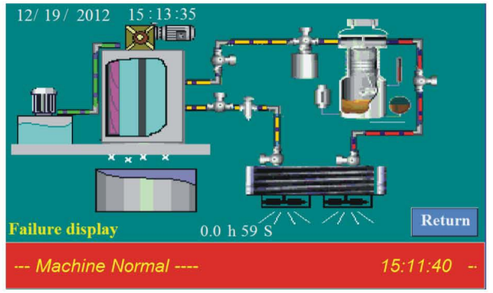
Press **Start** to start the ice machine



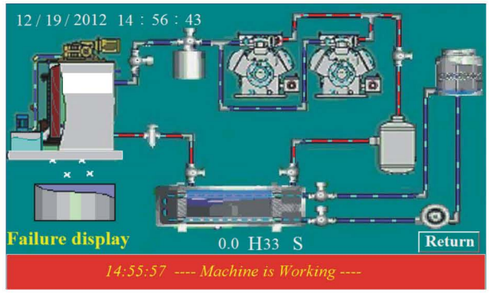
Starting sequence

Starting the recycling pump of water condenser, the cooling tower fan motor (If for air cooled, the condenser fans), the evaporator water pump, the reducer;
·····Starting the Solenoid Valve
·····.Starting the Compressor
Screw Compressors starts at a gradual rate of capacity loading. And reciprocating compressors start one compressor by another with an calculated interval in between.
·····.Start–up complete

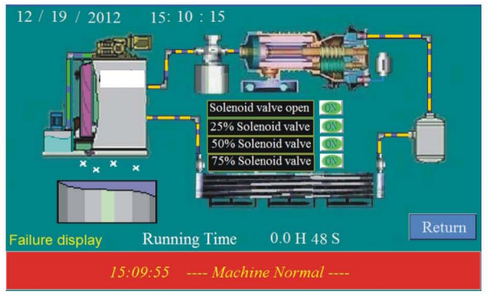
Start up menu of different types of ice machine



Start up menu for Single Compressor Ice Machine



Start up menu for Parallel Compressors Ice Machine (Water cooling)



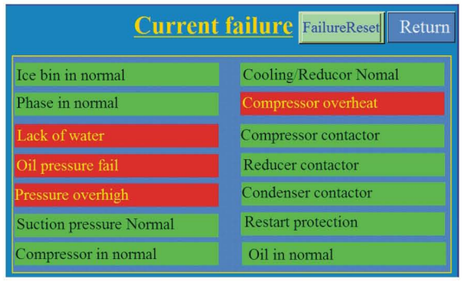
Start up menu for Screw Compressor Ice Machine (Air cooling)

Feature Menu

Start	Ice Machine Start Button.
Stop	Ice Machine Stop Button.
Parameter Setting	This button is for parameter setting. Parameters have been set at the time of leaving factory. Modifications to these parameters should be done exactly according to instructions.
Running State Display	This Button is for entering the Running Status. Press this button to enter the dynamic flow of running status.
Current Failure	This button is for entering Current Failure Display.
Historical Failure	This button is for displaying a Failure History.
Return	This button is for Returning to the Home Page.
Stop Time Setting	This button is for time setting of turning off the ice machine automatically. User can set this time as they like.

Failure Check before Starting the Machine

Press Current Failure button, and the screen shows below:

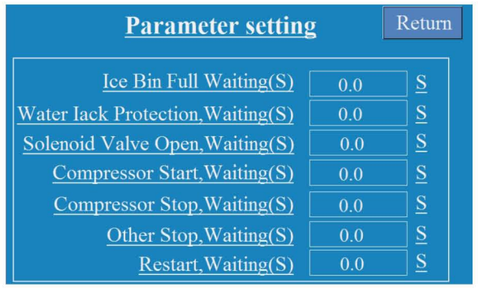


When there is a failure, the relevant green bar turns to red, showing the failure information.

Press the FailureReset button at the bottom of the screen to check if this failure will be reset automatically. For those failures that are resettable themselves, pressing this button will turn the red failure information bar to green (for example: when the water tank is lack of water, pumping water into the water tank will reset this failure. And pressing this button turn the red failure information bar to green). Otherwise, you will need press the red information bar for the trouble shooting guidance.

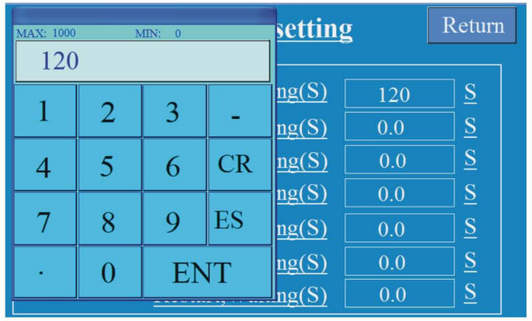
Parameter Setting

Parameter is set in factory. And user can press Parameter Setting button to access parameter setting page as shown below:



Press the relevant figures for modifications to the parameter. All parameters are defined in second.

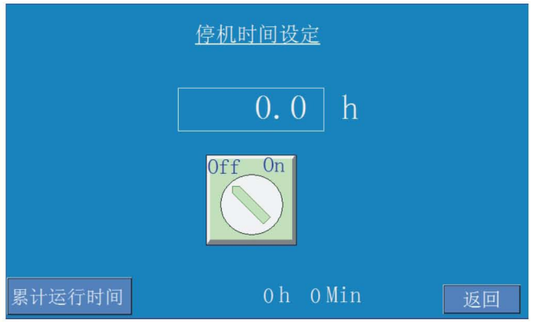
When the figure is input, press “Enter” to confirm; press “CR” to clear the input figure; press “ES” to escape the input mode.



※ Note: the parameter setting is done in factory. And modifications to the setting above should be done after consultation

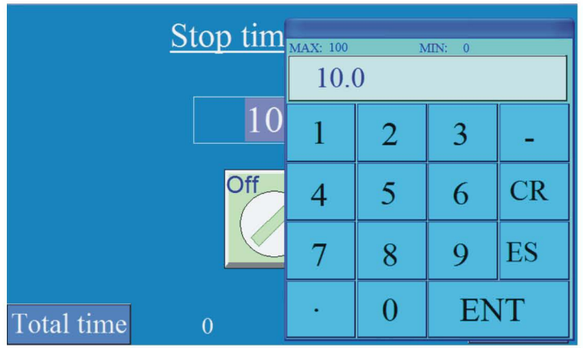
Automatic Turn-off time setting

Press Stop Time Setting button to access time setting page for automatic turning off ice machine as shown below:



To set the time, press 0.0 h to pop up a window as show below:

Input the figure of the requested time span (take 10 hours as an example) and press ENT to confirm. The screen shows as below. Press  button to change to  That will mean the machine will stop automatically after 10 hours in operation.



※ Important Note: If this function is not needed for the next operation of the machine, put the button  to OFF position.

What is shown in the screen?

In order to alleviate the impact on the main power supply when the compressor starts, a screw compressor starts in a mode of Y–△ which helps load the compressor in three stages: 20% load, 50% load, 75% load and then full load. The load information shows in the screen simultaneously.

Inspection after Starting the Machine

Check if the reducer turns in the right direction (Anti–clockwise direction is the right one).

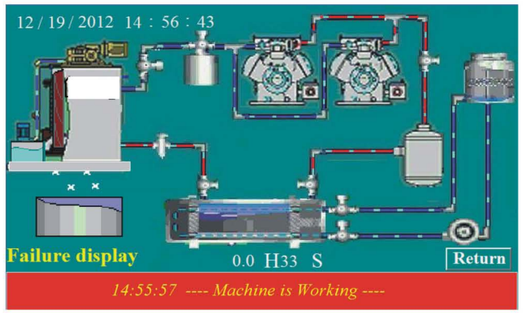
Check through the view window on the top side of the evaporator that there is water in the water pan or the incoming water is in small quantity. (Make sure that the water valve is open and evaporator water pump is correctly wired.)

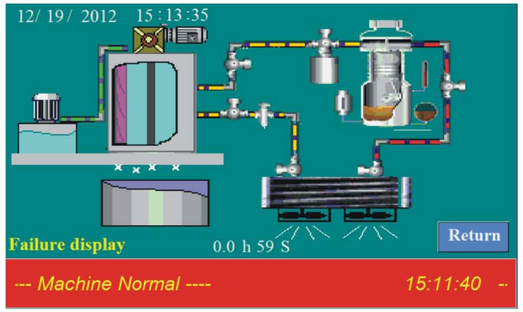
Check the condenser pump is correctly wired. And check the cooling tower fan motor is correctly wired.

Check and confirm there is no abnormal noise coming from the compressor (for scroll compressors, there could be a wrong wiring. And check the pressure gauges if there is high pressure gauge needle going down and low pressure gauge needle going up. If so, stop the machine immediately and change the wire sequence and start the machine again.)

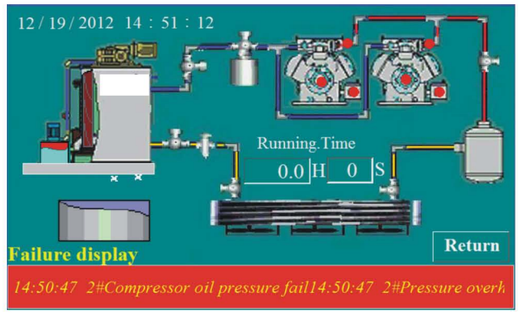
Running Status

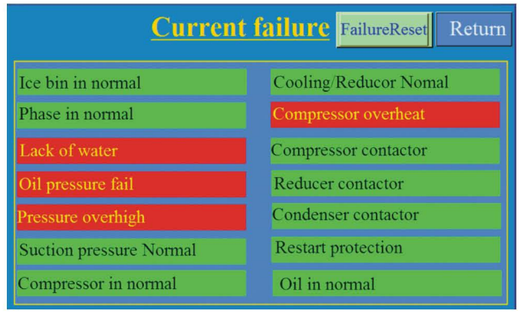
The screen will change to the dynamic flow chart image as follows after 5 seconds of successful start–up as shown below:





When there is a failure occurring during the running of ice machine, there will be a message shown in the red information bar and a red flashing signal will show indicating the location where the failure occurs. Pressing the red information bar will access the failure list page for trouble shooting guidance.





What is shown in the screen?

In order to alleviate the impact on the main power supply when the compressor starts, a screw compressor starts in a mode of Y–△ which helps load the compressor in three stages: 20% load, 50% load, 75% load and then full load. The load information shows in the screen simultaneously.

History Failure

Failure occurrences will be recorded automatically during the operation of the ice machine for future reference.

Pressing Historical Failure button can access the failure history page shown in Figure 1 below. Each English letter symbolizes a failure and each numeric indicates an occasion of the subject failure (as illustrated in the Figure 2 below). A red dot shows for each occasion of failure. Pressing on the numeric will show the exact time of the failure occurrence. A total record of 20 failures can be memorized, and a 21st failure will overlap

Pressing Failure Reset can clear all failure records. Figure 1

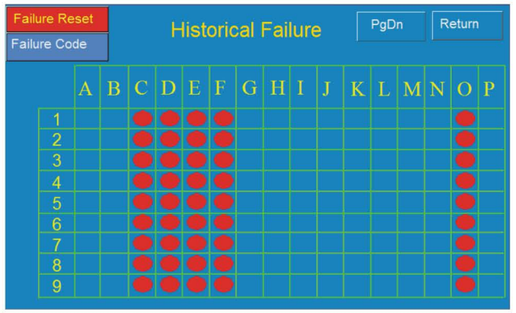
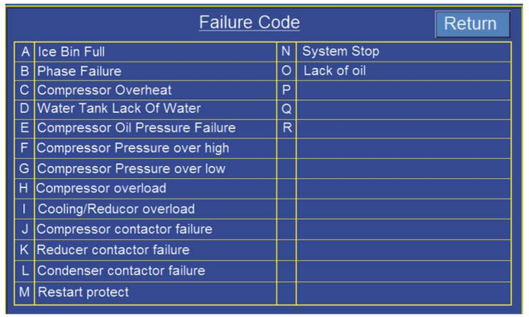


Figure 2



Stopping the Machine

Pressing Stop button can stop the ice machine.

Stopping sequence

Solenoid valve is the first to stop;

Lower pressure control works and in the same time, compressor stops;

Condenser pump stops, then cooling tower fan motor or air condenser fan motor stops, then evaporator pump stops, finally the reducer motor stops;

Screw compressors stops at a gradual rate of capacity unloading, and reciprocating

Running the Ice Machine

compressors stop at the same time;

Machine Stops completely.

5 seconds later, the screen changes and shows the main menu.

Do not shut off the main power circuit breaker if it is just a temperature turn–off of the machine.

Stopping a screw compressor takes a gradual procedure: first 50% load of capacity is undone, and after 30–60 seconds, another 25% load of capacity is undone, and after another 30–60 seconds, the compressor stops completely. The unloading interval can be set in the Parameter setting page.

The Emergency Stop button is for cutting off power supply in an emergency.

Precautions of a Non-use Period

Turn off the water valve near the ice machine;

Shut the suction and discharge valves of compressor;

Drain the water inside the ice machine. To prevent the water conduit of the machine from getting corroded, use nitrogen gas to drive air out. Tighten all the valves;

Keep the ice machine room dry/clean/well ventilated. Do a regular maintenance job on the machine and system;

Unauthorized access to the ice machine during a non–use period may cause damage to the machine;

Drain all water inside the ice machine system if it is a long non use period in winter.

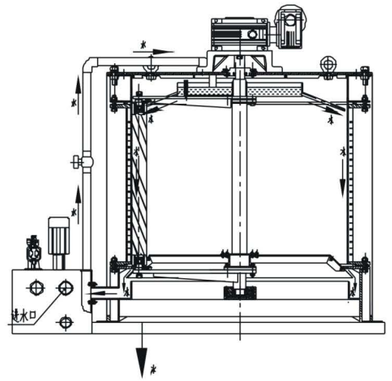
※ Note：

Power PLC and touch screen for a period of 1–2 hours to keep the memory of history failure when the machine is stored for a long non use period (more than 15 days).

An environment of high humidity is highly unadvisable for a non use period. That may cause condensing water on the circuit of touch screen and PLC which may burn components affected when the machine starts again.

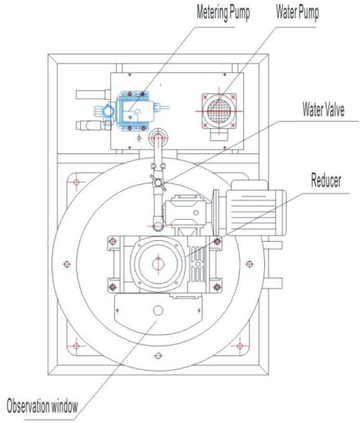
Observation of Running Status and Precautions

The working theory of ice making cycle



The water comes through water supplying pipe to the water tank located at the bottom of the ice making unit (evaporator), and then is pumped through the evaporator pump to the water distributing pan, which sprays water on the freezing surface of the evaporator. With the work of evaporating refrigerant inside the evaporator, water turns into ice, which is scraped and drops down by a revolving ice blade. The surplus goes along the freezing surface back to the water tank for the next ice making.

Direction of revolving ice blade

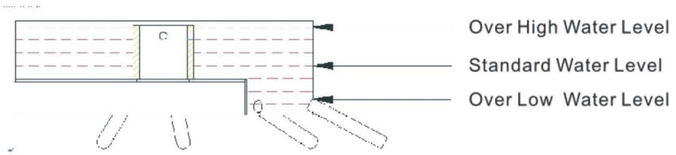


A phase protecting control is installed inside the control box, which will give failure information if the phase sequence is not correct. And user should observe when ice machine starts for the first time the direction of the revolving blade. When the blade is revolving anti clockwise along the freezing surface of the evaporator, that means the blade is working properly. Otherwise, stop the machine and consult with local distributor after sales service staff immediately.

Observation of Running Status and Precautions

Water supplying status

Check through the observation window for the water supplying status inside the distribution pan. Correct water supplying status is shown below:

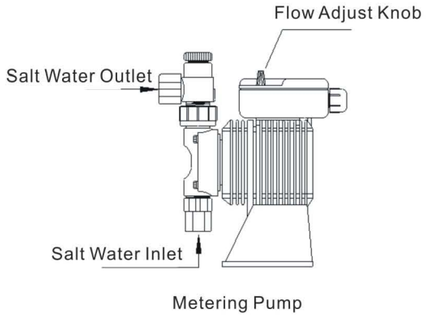


When the water level is not near the standard line, adjust the water valve near the reducer for proper water flow volume.

Salt water dosing:

A proper dosage of salt inside the water used for ice making will help increase the ice flake quality and make the ice forming and ice cutting easier. And the noise of ice blade cutting can be thus reduced. The working lifetime will be dramatically lengthened. The metering pump can feed salt water in a properly calculated quantity inside the water tank. The ratio of salt to water should be properly done and observation should be conducted regularly for timely replacement and adding. Goes with the machine is a salt water plastic bucket of a 30L capacity. Normally, 80 grams of salt is good enough for 1000kg of ice.

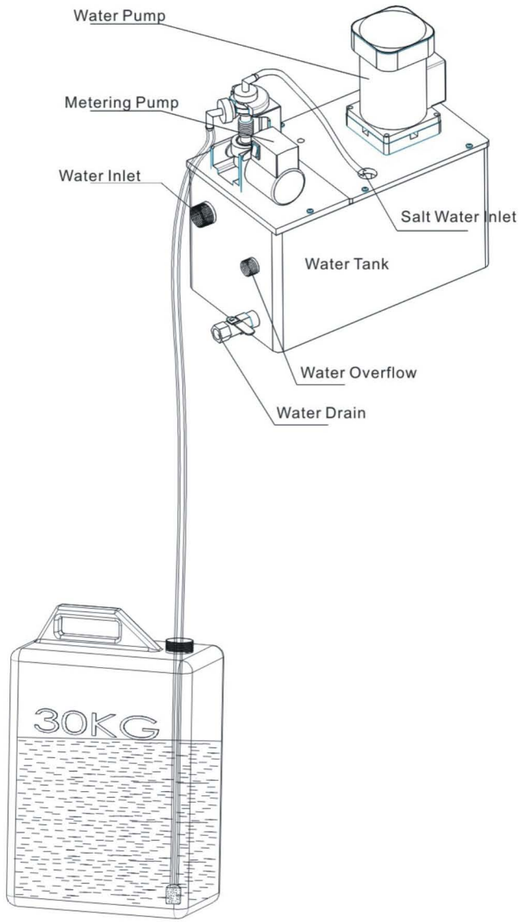
Adjustment of the metering pump:



When salt water is prepared, just turn the Flow Adjust Knob to a numeric lower than 10.

Observation of Running Status and Precautions

Illustration of how to connect the metering pump:



Note: the height difference between metering pump and salt water plastic bucket should be less than 2 meters.

Observation of Running Status and Precautions

Operation Managing

Follow strictly the instructions of this manual for correct start–up and stop of the machine.

Make a good and visible record of the working status during the operation of the ice machine. Constant and regular check of the operation status is quite necessary for normal running of the machine. The items that should be checked on a regular basis include water quality/water temperature/water pressure/refrigerant/refrigeration oil/pumps/cooling tower fan motors. Make a proper trouble shooting once an abnormality is located.

When a failure occurrence causes an abnormal stop of the ice machine, a qualified staff is supposed to be called in for a thorough check, and when the failure is not reset, contact the headquarter for a solution.

The ice machine room should be taken care of by a designated staff. Unauthorized staff is prohibited from entering this room for operation of the machine.

The ice machine room should be equipped with relevant safety devices and maintenance tools like pipe pressure gauge and thermometers. Tools should be placed in a designated position.

The ice machine room should be kept dry, clean and well ventilated.

Maintenance

To lengthen the lifetime of an ice machine and increase the efficiency for energy–saving purpose, a regular check on the ice machine is quite necessary. User is suggested to make a monthly/quarterly/yearly record of maintenance and servicing and a very detailed log of the damage servicing so that servicing personnel can properly trace the failure history during trouble shooting process.

Daily Maintenance

Start and Stop the machine as instructed in this manual;

Make a regular record of the parameters in operation daily;

Regular check on the Dryer Filter is necessary. If frost is found on the outlet of the Filter, that may mean jamming inside the Filter. This symptom is normally accompanied by low evaporating pressure and higher condensing water temperature.

Check if the refrigeration oil is normal. If there is lack of refrigeration oil, add more. And if the oil is dirty and goes bad, change it and clean the oil filter and change to a new filter core.

When there is lack of refrigerant, to prevent frequent turn–off of the machine, the capacity status should be set to a partial load. After refrigerant is filled, set the capacity status to full load.

Any failure occurrence should not go unnoticed. A thorough analysis should be done for the cause of failure. Make a thorough analysis of the failure may help with finding a solution to the problem. And notice the after–sale service department of the analysis that is done.

Managing and Maintaining

Regular Maintenance

Regular maintenance includes maintenance on a weekly/monthly/quarterly/yearly basis. User can refer to the following scientific maintenance scheme and carry it out in a strict manner. That may help with prevention of failures in a substantially crucial way.

Weekly maintenance

Check and make an analysis of the parameters of ice machine in operation.

Monthly maintenance

Check and make an analysis of the record of parameters of ice machine in operation;

Check the bolts fastening the power wires are always tight;

Check and confirm there is no noise on all moving parts of the ice machine, and there is no abnormality in operation;

Check the water system is working properly;

Check the Compressor's oil heater is working properly;

Check the High & Low Pressure is normal;

Check the operation current of compressors and motors is normal; check the resistance is normal. If the resistance is lower than 5 MΩ, stop the machine immediately.

Quarterly maintenance

Check and make an analysis of parameters record;

Check the Oil level of the compressor;

Clean the water tank, Evaporator, ice storing bin, water pan. Clean with a piece of sponge immersed with stainless steel cleaning agent and then use clean water to wash off the agent bubbles. Motors (like water pump/reducer motor/fan motor) should be cleaned with dry and soft cloth.

Clean the fins of the air cooling condenser of dust;

Check the fastening bolts and screws inside the control box.

Check if the distance between ice blade and evaporator freezing surface is correct. Use a feeler to get the right distance (0.5–3T: 0.1–0.2mm; 5–8T ice machine: 0.1–0.25mm; 8–30T: 0.1–0.3mm)

※ Warning:

In order to prevent personal injuries caused by moving parts or live parts, servicing work should be done after the main power supply is cut. And there should be a "NO TURNING ON" sign on the main power supply electric control box!

Common Trouble Shooting

Symptom	Possible cause	Suggested rectification
Ice production reduces	Temperature changes (Production can be different in winter from Summer); Water level of Distributing Water Pan is Low; Refrigerant Level Low; There is water in the refrigeration system or the Expansion Valve is Jammed	It is Normal; Adjust the Evaporator Water valve; Check if there is any leakage; if so seal it and fill more in the system Re-vacuumize the system, change the dryer filter and the filter core and change the vapor filter
Machine is working while there is no ice	No water sprayed onto the freezing surface; Reducer Motor is stuck; Refrigeration System is Dirty and suction pipe is jammed, which causes system low pressure and cooling capacity reduction.	Check if the water tube is stuck; Check and replace the motor Check if the suction pipe is dirty, get rid of the impurities and if necessary, change the filter core.
Water over floating	Water level in the water tank is high Water level in the water distributing pan is high	Adjust the water floating valve to lower the water level; Adjust the evaporator water valve
Reducer is noisy	Lubricant oil is not sufficient; Bearings of the gear box or the teeth are worn out; Salt water is not added or Metering pump is not turned on	Check and add more; Check and replace the worn-outs Add salt water and turn on the metering pump

※ Note:
commonly found failure trouble shootings can be found is preprogrammed in the touch screen. User can contact local agent or headquarter for a solution when failures cannot be reset.

Common Trouble Shooting

Model	Size (mm)	Power	Requested Cables	Breaker	Pipes	Weight (KG)
IF10T-R4A	3200*2000*1750	3P/380V/50Hz	3×25+2×10	100A	2*3/4"	1680
IF10T-R4W	3200*1750*1750	3P/380V/50Hz	3×25+2×10	100A	2*3/4"	2020
IF15T-R4A	3400*2100*2040	3P/380V/50Hz	3×25+2×10	125A	2*3/4"	3560
IF15T-R4W	3200*1750*1900					2260
IF20T-R4A	4000*2100*2200	3P/380V/50Hz	3×50+2×16	150A	2*3/4"	4160
IF20T-R4W	4000*2100*2040					3820
IF25T-R4A	4000*2100*2500	3P/380V/50Hz	3×70+2×16	200A	2*3/4"	5030
IF25T-R4W	4000*2100*2500					4960
IF30T-R4W	4000*2100*2550	3P/380V/50Hz	3×95+2×25	250A	2*3/4"	5380
IF40T-R4W	4000*2100*2700	3P/380V/50Hz	3×95+2×25	250A	2*3/4"	6200