

ThermoJinn

ICE MACHINE

THERMOJINN

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ABOUT THERMOJINN

Founded by a group of passionate HVAC/R veterans, ThermoJinn strive to build up an integrated platform for overseas buyers and Chinese factories. We are professional to provide customers right ice making and HVAC/R solutions with right price, with deep understanding of global markets and comprehensive expertise of Chinese HVAC/R supply chains, ThermoJinn could proudly provide the best quality products, services, one-stop project solutions with affordable prices.

ThermoJinn provides a wide variety of high efficiency systems in residential and commercial applications, as well as parts, tools and other supplies (Including OEM & ODM services) for any industrial or commercial projects. We have an unrelenting focus on quality, delivery and value, ThermoJinn is always your reliable partner for HVAC/R supplies.

So far ThermoJinn has become partners with world famous suppliers like: AMG valves, XM compressors, Easycold Spain, also creates brand “ThermoJinn” in the field of: Evaporative condenser; Ice machine, A/C chillers and etc.

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DIRECT COOLING BLOCK ICE MACHINE

Block ice is a kind of rectangular ice, weight can be customized 1kg ~ 200kg. Large dimension but small contact area means block ice does not melt easily. Among the common ice types in tropical countries, block ice has its own unique advantages. Block ice are convenient for storage, handling and transportation, and are very important for small-scale fisheries and relatively remote areas. Thermojinn direct cooling block ice machines are stable and energy efficient, simple to use and cost-effective to maintain.

Block Ice Applications:

Fishing industry, fresh keeping, food processing cooling, chemical industry and other fields. The transparent ice more used for ice sculpture, ice show etc.

Direct Cooling Block Ice Machine

Modular design is adopted. The large capacity direct cooling block ice machine is divided into refrigeration unit modular, evaporator modular and cooling tower modular. The evaporator modular is divided into many sets according to size of ice machine.

Refrigeration unit modular: Include compressor, liquid reservoir, water-cooling condenser, cooling pipe, valve, electric control panel and so on.

Evaporator modular: Include evaporator, ice platform, ice platform left-right translation module and some supporting equipment.

- ◆ Block ice size: Weight and dimension can be customized, Thermojinn standard block ice weight and dimension are listed below for your reference:

Weight (kg/block)	Dimension (LxWxH mm)	Ice making time (hour)	Batch (times)
5	120x100x600	4.5	4
10	230x100x600	4.5	4
15	330x100x600	4.5	4
20	300x125x800	6.5	3
25	300x125x800	6.5	3
30	280x170x800	9.5	2
40	350x170x800	9.5	2
50	450x170x800	9.5	2
100	550x220x100	14	1.5

* A-Air cooled condenser , W- Water cooled condenser with cooling tower. Have Evaporative condenser for optional.

- ◆ Thermojinn direct cooling block ice machine is different from other brands of ice machines. When calculating the ice making production batch, it not only considers the ice making time, but also reserves the time for users to deicing, move ice and add water.



Direct Cooling Block Ice Machine Features

- Adopts latest technology, no need of brine tank;
- Aerospace aluminum alloy 6063-T5, high heat transfer coefficient, high strength and robust evaporator by enhanced welding technology;
- Direct heat exchange between the water and refrigerant in aluminum evaporator brings higher ice making efficiency, thus ice forms 1.5 times faster than ordinary ice machine which uses brine water;
- Easy-to-operate screw rod lifting mechanism gets feedback from the distance sensor which can realize more precise and safe control;
- Passive reservoir control method applied to specify precise liquid supply, which increases ice making efficiency and system reliability;
- Automatic water adding function by back type liquid level control technology;
- Silicone foam seal avoids evaporator dripping problem;
- Unique refrigeration system, using hot gas defrost technology makes easier and automatic ice harvest;
- Integrated modular design facilitates installation and maintenance on the spot;
- Food grade manufacturing process, totally complies with food standard.



No brine tank!

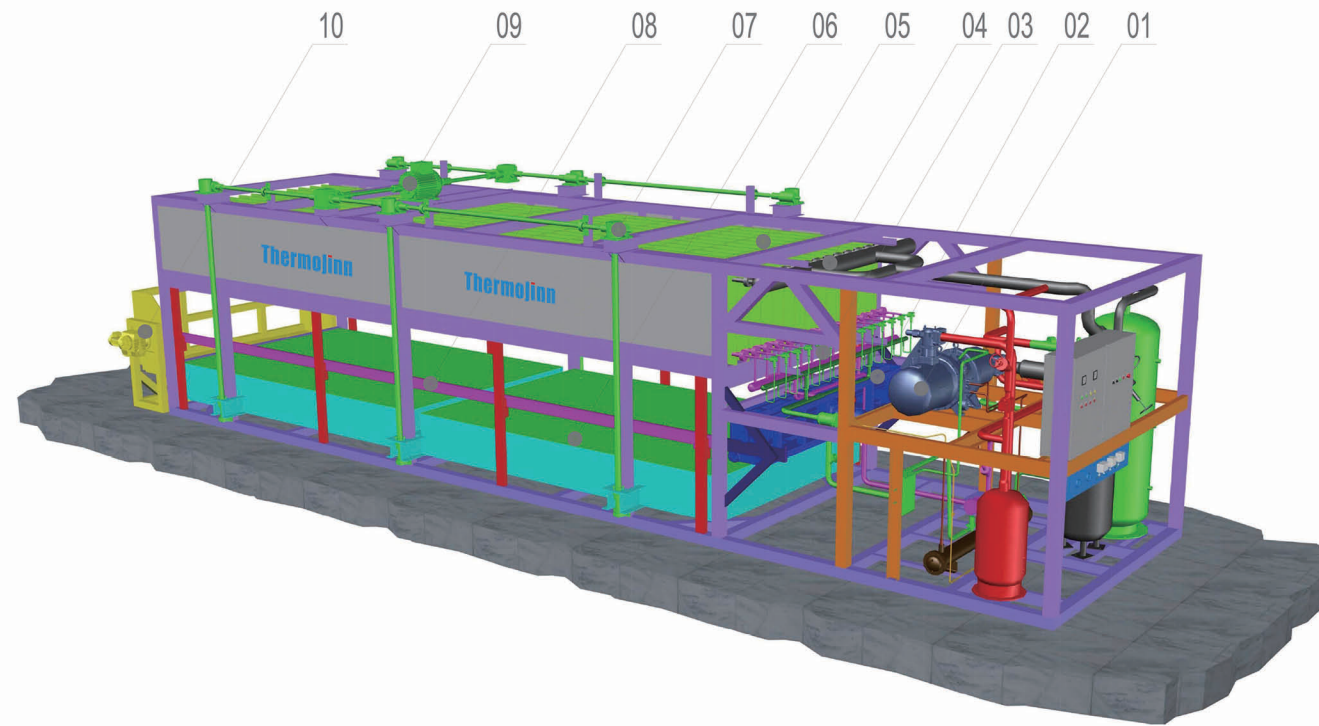
No hoist!

No ice thawing tank!

Space-saving!

Labor-saving!

THE DIAGRAM OF DIRECT COOLING BLOCK ICE MACHINE WORKING PRINCIPLE



01 Compressor	02 Ice push system	03 Refrigerant liquid inlet	04 Refrigerant suction	05 Aluminum evaporator
06 Ice platform	07 Screw lift	08 Rail of the ice push system	09 Lifting motor	10 Ice dump system

Ice making model: Lifting motor (09) drives screw lift (07) running at corotation model, the ice platform (06) going up to the high-point and seal the bottom of the aluminum evaporator (05) with the silica strip. After that, full the water in the mould of the aluminum evaporator (05). The compressor and refrigeration system running at ice making model, refrigerant liquid into the refrigerant liquid inlet (03) and direct heat exchange with the water in the mould of the aluminum evaporator (05), until the water cooling and all turns to the ice, refrigeration system stop automatic.

Ice doffing model: Refrigeration system running at ice doffing model. The refrigerant hot gas into refrigerant suction (4) and heat exchange with the ice in the mould of the aluminum evaporator (05). The ice thawing and remove from the mold of the aluminum evaporator (05). And then lifting motor (09) drives screw lift (07) running at reverse the mode, ice platform (06) and all of the ice going down to the ground, refrigeration system stop automatic.

Ice push system (Optional): Ice push system (02) push all the ice on the ice platform (06) out to the left side.

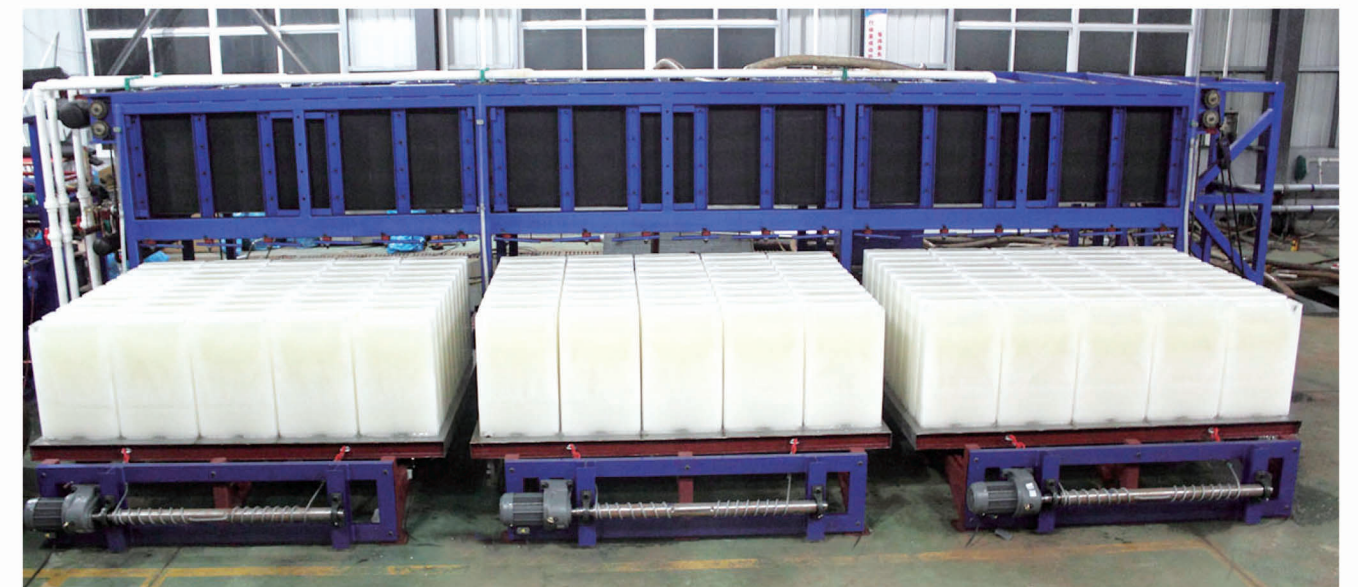
Ice dump system (Optional): Ice dump system (10) running together with the ice push system (02), it oversets the ice one row by one row and ice is easy to move to the ice storage.

THE SPECIFICATION OF THERMOJINN DIRECT COOLING BLOCK ICE MACHINE

Model	Capacity	Ice weight	Operating Power	Install Power	Operating weight		Dimension LxWxH(mm)
TJB-50DW	5Ton/24hr	50kg	23kw	30kw	Ice Machine	3800kg	4800x1800x2200
					Cooling Tower	100kg	Ø 1430x2290
TJB-100DW	10Ton/24hr	50kg	38kw	50kw	Ice Machine	4950kg	7000x2200x2550
					Cooling Tower	190kg	Ø 1620x2360
TJB-150DW	15Ton/24hr	50kg	55kw	75kw	Ice Machine	7250kg	10000x2200x2550
					Cooling Tower	250kg	Ø 2000x2595
TJB-200DW	20Ton/24hr	50kg	73kw	100kw	Ice Machine	8670 kg	11800x2200x2550
					Cooling Tower	400kg	Ø 2180x2690
TJB-250DW	25Ton/24hr	50kg	85kw	120kw	Ice Machine	11500 kg	11850x2912x2550
					Cooling Tower	600kg	Ø 2180x2790
TJB-300DW	30Ton/24hr	50kg	103kw	150kw	Compressor unit	150kg	2700x2000x2550
					Evaporator	11000kg	11800x3102x2550
					Cooling Tower	800kg	Ø 2750x2850mm

* A-Air cooled condenser , W- Water cooled condenser with cooling tower. Have Evaporative condenser for optional.

◆ Standard condition: Ambient temperature is 35°C and inlet water temperature is 25°C .



PROJECT CASES



DIRECT COOLING BLOCK ICE MACHINE MAIN ACCESSORIES



Aviation aluminum alloy ice cans

The ice making evaporator mold of the direct cooling block ice machine is made of aviation grade aluminum alloy 6063-T5, which has the characteristics of high strength and no deformation. The refrigerant flow channel thickness of the evaporator reaches 4mm, the service life is more than 20 years.



Silk rod lifting system

The rod lift system is composed of motor, gear steering, rod lift and drive shaft. The rod lift system can maintain the horizontal of the ice plate going down and up, and ensure that the ice making evaporator mold not leaking, with automatic limit device to ensure the reliable operation of the system.



Ice push system

The ice push system can push all the block ice out of the block machine in one time for easy to move the block ice out of the block ice machine, or you can customize the ice push track directly put into the ice storage.



Ice dump system

The ice dump system is equipped with a speed reducer and running with the ice push system together. it can dump the ice one row by one row and easy to move the block ice.

BLOCK ICE MACHINE APPLICATION FIELD



Cool down in the heat

Seafood preservation



Vegetable preservation

Long-distance transport



Port terminal

Long voyage fishing



Ice sculpture

Selling ice



BRINE COOLING BLOCK ICE MACHINE

Brine system block ice machine is a method with widely used and a long history of making block ice. The dimension of brine block ice can be customized according to the demands of customers. The block ice can be customized into variety of colors.

Options for customization

Power supply: 220V/380V/440V, 50Hz/60Hz, 3P
 Material of ice cans: Stainless steel 304 or Galvanized steel
 Condenser: Air-cooling, Water cooling or Evaporative cooling
 Refrigerant: R22 or R404a
 Supporting equipment: Cold room / Block ice crusher / Water chiller / Containerized unit

Brine cooling block ice making process

Put the ice cans with full water into the brine tank. Through heat exchange, the water in the ice cans all become ice. The crane will hoist a row of cans down into the ice thar tank full of running warm water. So the ice surface thaws and gets separate from ice cans.

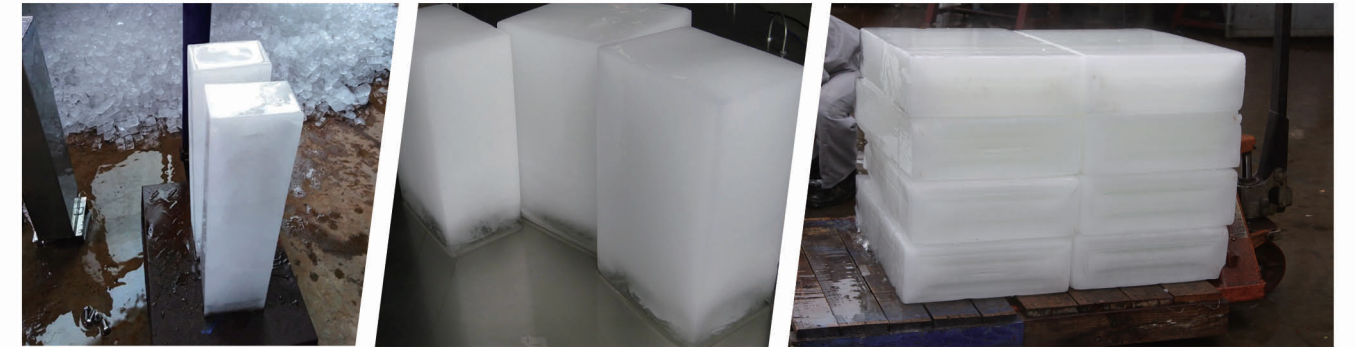


◆ Block ice size: Weight and dimension can be customized, Thermojinn standard block ice weight and dimension are listed below for your reference:

Weight (kg/block)	Top size (LxW mm)	Bottom size (LxW mm)	Height (mm)	Ice making time (hour)	Batch (times)
5	125x100	105x80	600	5.5	4
10	250x100	230x80	600	5.5	4
15	260x125	240x105	600	7.5	3
20	260x125	240x105	800	7.5	3
25	320x125	300x105	800	7.5	3
30	320x125	300x105	1000	7.5	3
50	380x170	360x150	1000	11.5	2
75	450x170	430x150	1200	11.5	2
100	460x220	440x200	1200	23	1

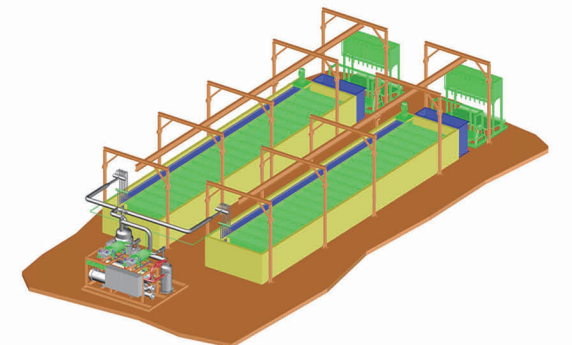
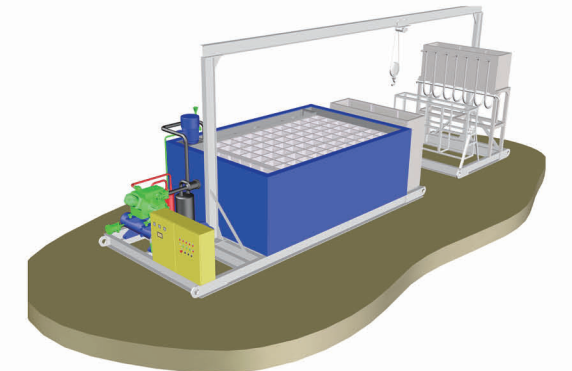
* A-Air cooled condenser , W-Water cooled condenser with cooling tower. Have Evaporative condenser for optional.

◆ Remark: For the convenience of pouring ice, the ice can is usually made into large size at the top and small size at the bottom.

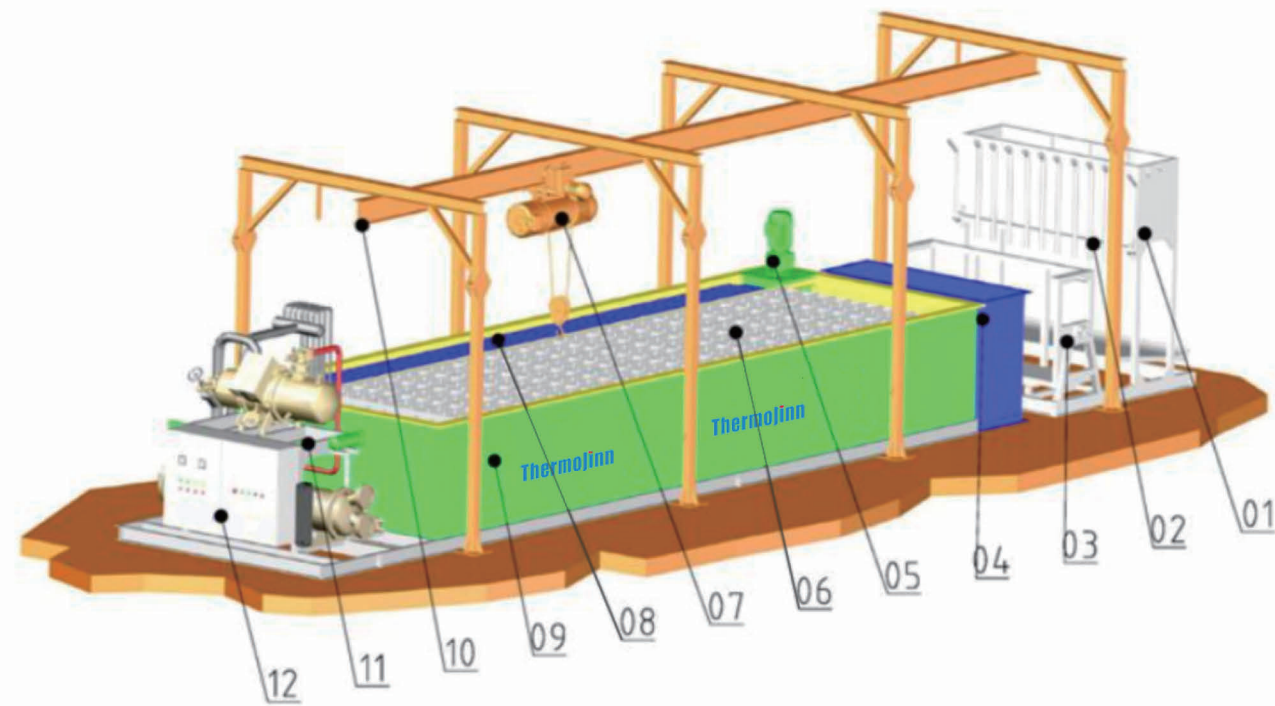


Brine Cooling Block Ice Machine Features

- Large evaporation area coil evaporator increases heat transfer efficiency, ensures long service time and corrosion resistance;
- Well insulated brine tank with high resistant epoxide coating;
- Heavy-duty overhead crane with 2 speeds for moving, lifting and tipping the ice cans;
- Ice thawing tank utilizes the exhaust heat from compressor, more energy saving;
- Modular design simplified equipment transportation and on-site installation process;
- Rivet and reinforced ice cans construction to extend its service life;
- Unique propeller blade processing technology to improve the efficiency of the agitator, increase the flow of salt water, accelerate ice making speed;
- Options of stainless steel ice cans and galvanized steel ice cans;
- Touch screen, reserve function, 3G network remote fault alarm, 4G network remote video monitoring are available on request.



THE DIAGRAM OF BRINE COOLING BLOCK ICE MACHINE WORKING PRINCIPLE



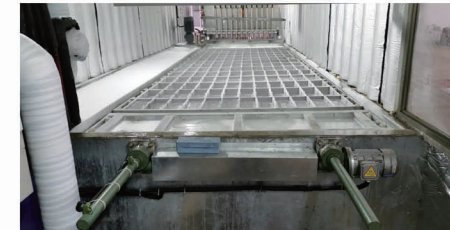
01	Water feeder	02	Water feeding gadget	03	Can dump	04	Thaw tank	05	Agitator	06	Ice can
07	Crane	08	Coil evaporator	09	Brine tank	10	Guiding rail	11	Compressor unit	12	Electric control box

As shown, when compressor unit (11) starts to run, refrigerant enters into coil evaporator (08) and begins evaporating. Brine water in brine tank (09) is circulated by agitator (05), then flow through coil evaporator (08). After water temperature decreases, it contacts with the outer surface of ice cans (06) and absorbs the heat of water in ice cans. Thus, all the water in the ice cans will be freeze until freezing point. The water after exchanged heat will be delivered by agitator to coil evaporator to be cooled down again, which forms a brine water circulation. In certain time, all the water in the ice cans will turn into block ice.

The crane (07) will move on guiding rail (10) and hoist a row of ice cans (06) down into the ice thaw tank (04). Normal temperature water in thaw tank will melt the outside surface of ice can, so the ice surface thaws and gets separate from ice cans.

The compressor unit (11) can control brine tank temperature by electric control box (12). When the temperature increases, the compressor unit starts to work; when it reaches to the set temperature, the compressor unit stops to work.

BRINE COOLING BLOCK ICE MACHINE MAIN ACCESSORIES



Brine tank

The stainless steel part between the brine water and the brine tank highly resists rust and it works well in a cold condition. Concrete brine tank is also suggestible for some projects.



Ice can

Stainless steel 304 and galvanized steel are available. The latter is chosen for cost-saving.



Evaporator

Copper tubes are used as evaporative coil to improve the heat transfer effect, and its stainlessness, anti-corrosion can guarantee the long service time.



Agitator

The stainless steel part between the brine water and the brine tank highly resists rust and it works well in a cold condition. Concrete brine tank is also suggestible for some projects.



Can dump

Excellent design guarantees the ice-thawing efficiency.



Thaw tank

Heated by hot gas discharged from the compressor so that it is more energy saving and suitable for low water temperature area.

THE SPECIFICATION OF THERMOJINN BRINE COOLING BLOCK ICE MACHINE

Model	Capacity	Refrigerant	Operating Power	Install Power	Operating weight		Dimension LxWxH(mm)
TJB-10B	1Ton/24hr	R22/R404A	4.2kw	5kw	1560kg		4020x1437x2871
TJB-20B	2Ton/24hr	R22/R404A	9.2kw	12kw	2015kg		4698x1437x2871
TJB-30B	3Ton/24hr	R22/R404A	13.5kw	16kw	2788kg		5419x1437x2871
TJB-50B	5Ton/24hr	R22/R404A	20.15kw	24kw	Ice Machine	3750kg	8756x2242x290
					Cooling Tower	460kg	∅ 1380x2170
TJB-100B	10 Ton/24hr	R22/R404A	37.6kw	48kw	Ice Machine	6340kg	12374x2242x2900
					Cooling Tower	670kg	∅ 2000x2410
TJB-150B	15 Ton/24hr	R22/R404A	57.85kw	72kw	Compressor Unit	2080kg	10000x2200x2550
					Brine Tank	5500kg	∅ 2000x2595
					Cooling Tower	1120kg	∅ 2175x2565
TJB-200B	20 Ton/24hr	R22/R404A	86.5kw	100kw	Compressor Unit	2400kg	2500x1950x1660
					#1 Brine Tank	4300kg	7716x2242x1070
					#2 Brine Tank	4300kg	7716x2242x1070
					Cooling Tower	1300kg	∅ 2650x2645
TJB-250B	25 Ton/24hr	R22/R404A	96.84kw	118kw	Compressor Unit	3200kg	2700x2200x2191
					#1 Brine Tank	5000kg	9270x2242x1070
					#2 Brine Tank	5000kg	9270x2242x1070
					Cooling Tower	1630kg	∅ 3050x2780
TJB-300B	30 Ton/24hr	R22/R404A	118kw	150kw	Compressor Unit	3500kg	2700x2200x2191
					#1 Brine Tank	5500kg	10824x2242x1070
					#2 Brine Tank	5500kg	10824x2242x1070
					Cooling Tower	2730kg	∅ 3300x2785

* A-Air cooled condenser , W- Water cooled condenser with cooling tower. Have Evaporative condenser for optional.

◆ Standard condition: Ambient temperature is 35°C and inlet water temperature is 25°C .

WE SELECT THE BEST ACCESSORIES

Thermojinn is committed to provide the most reliable, energy sufficient and human-oriented ice machine. Only being the leading brand of industry can be the supplier of parts and components of Thermojinn product, which is also the premise to ensure the high quality of our products. In the past years, we have been always adopting following excellent suppliers as our partner:

GEA Bock Compressors (GERMANY)



Bitzer Compressors (Germany)



Danfoss (Denmark)



Siemens electric (Germany)



Schneider electric (France)



WE OWN THE MOST ADVANCED PROCESSING EQUIPMENT

Thermojinn components are processed by laser cutting machine, laser welding machine, CNC lathes, CNC punch press, vertical lathes, CNC shearing machine, CNC bending machine, NC rocker diling, fully automatic tube bending machine and other advanced technology processing equipment, so you will find Thermojinn is not only superior in material but also excellent in workmanship and appearance. Thermojinn heavy-duty, durable to use ice machine products can make our customer free of maintenance trouble and exceeding in peers.



CONTAINERIZED BLOCK ICE MACHINE

- Convenient transportation and installation, no need to build a room for the machine
- The pipelines and circuits of the condensing unit have been fully connected before export, convenient operation
- New ISO container equipped with lighting and drainage system
- Corrugated aluminum floors, skid and wearing resistant
- Cost-saving, simple maintenance, long service life
- It easily realizes the function of selling ice by mobile ice plant because it is very convenient for the client to install and move the plant
- The whole container is specially treated and reinforced. It's also a perfect protection from physical impact to the machine and keeps the dust outside



Both direct cooling system block ice machine and brine cooling block ice machine can be installed in the 20 feet or 40 feet container conforming to international marine transportation standards.



TECHNICAL PARAMETER FOR CONTAINERIZED DIRECT COOLING BLOCK ICE MACHINE

Model	Model	Daily capacity	Refrigerant	Operating power	Operating weight	Dimension LxWxH (mm)
20ft container	TJB-10DC	1Ton/24hr	R22/R404A	6kw	1000kg	6058x2438x2591mm
	TJB-30DC	3Ton/24hr	R22/R404A	11.8kw	4480kg	6058x2438x2591mm
	TJB-50DC	5Ton/24hr	R22/R404A	18.9kw	5210kg	6058x2438x2591mm
40ft container	TJB-100DC	10Ton/24hr	R22/R404A	34.8kw	7520kg	12192x2438x2896mm
	TJB-150DC	15Ton/24hr	R22/R404A	57.8kw	8600kg	12192x2438x2896mm
	TJB-200DC	20Ton/24hr	R22/R404A	72kw	9660kg	12192x2438x2896mm

* A-Air cooled condenser , W- Water cooled condenser with cooling tower. Have Evaporative condenser for optional.

◆ Standard condition: Ambient temperature is 35°C and inlet water temperature is 25°C .



Thermojinn containerized block ice machine can be used water cooling, air cooling and evaporative cooling system. We have the most advanced technique for the ice doff system, ice doffing time is less than 20 minutes



TECHNICAL PARAMETER FOR CONTAINERIZED BRINE COOLING BLOCK ICE MACHINE

Model	Capacity (t/24hr)	Ice Block weight (kg)	Refrigeration capacity (kw)	Install power (kw)	Power consumption (kw)	Dimension (mm)	Operating weight (kg)
TJB-50BW	5	25	35	28	20.2	12192x2438x2896	7500
TJB-100BW	10	25	70	52	37.6	12192x2438x2896	8680

* A-Air cooled condenser , W- Water cooled condenser with cooling tower. Have Evaporative condenser for optional.

◆ Standard condition: Ambient temperature is 35°C and inlet water temperature is 25°C .



TUBE ICE MACHINE

Tube ice is a kind of regular hollow cylindrical transparent ice, compared with other kinds of ice, tube ice has the highest density which is pure, which has good air permeability and long storage life.

Tube ice standard size:

- Option 1: External Ø 35mm
Internal Ø 5-10mm
Length 35-50mm
- Option 2: External Ø 29mm
Internal Ø 5-10mm
Length 30-45mm
- Option 3: External Ø 22mm
Internal Ø 5-10mm
Length 25-35mm



Application:

Mainly used for human daily life, such as drinks freezing, wines mixing, food preservation, cold compress, and also used for food & aquatic products processing, poultry slaughtering, meat processing and other industries.

TUBE ICE MACHINE FEATURES

- Tube ice machine, operates on an intermittent cycle, for example 22 minutes ice making and 3 minutes ice harvesting per cycle based on external diameter of 35mm specification ice tube;
- The internal diameter of tube ice can be adjusted according to ice making time;
- The evaporator employs SUS304 material and the heat exchange tube is designed at the most optimized thickness, combined with specialized heat treatment processing technology, which makes the best use of heat conductivity;
- Stainless steel cutters driven by gear motors are uniquely designed to produce cylindrical ice;
- High quality stainless steel for all water and ice contacting surfaces which are corrosion resistant and easy to clean;
- Tube ice machine is furnished with sub cooler, which ensures the energy efficiency of the system and gets the higher C.O.P;
- Rapid harvest and quick recovery due to hot gas defrost;
- Highly efficient Bitzer piston compressor;
- Self-diagnostic indicator light and electronic temperature controls.

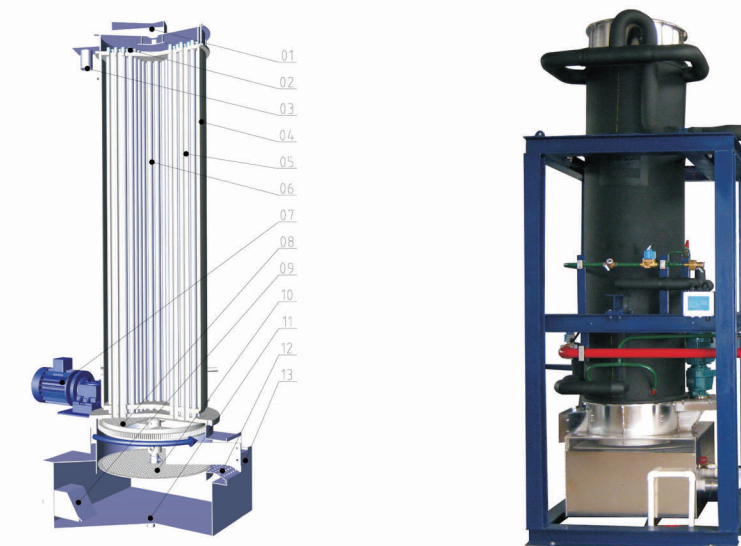


WARRANTY PERIOD

Complete Package	Compressor	Evaporator	Condenser	Cooling Tower
12~15 months	3 years	3 years	3 years	15 months

* A-Air cooled condenser , W- Water cooled condenser with cooling tower. Have Evaporative condenser for optional.

THE DIAGRAM OF TUBE ICE MACHINE WORKING PRINCIPLE



01 Upper water tank	02 Water distributor	03 Water inlet of upper water tank	04 Shell	05 Inside of heat exchanger	06 Heat exchanger	07 Reducer
08 Ice cutter	09 Water outlet of lower water tank	10 Ice water separation pan	11 Ice outlet	12 Ice outlet	13 Lower water tank	

Ice making process:

As shown, when refrigeration system starts to operate normally, low temperature refrigerant liquid enters into shell (04) through refrigerant inlet, and it exchanges heat with water inside heat exchanger (06). After heat is absorbed and evaporated, it runs back to compressor through refrigerant outlet. Water in the lower water tank (13) is pump out of water outlet (09) and delivered up to the water inlet of upper water tank (03). After water goes across the water distributor (02), it downwardly flows along the wall of heat exchanger (06) and forms water film. The water then begins to exchange heat with the refrigerant outside the heat exchanger. When temperature lowers down, water freezes and ice formed inside of heat exchanger (05).

Ice doffing process:

As ice reaches a certain thickness, water route system stops circulation. Reducer (07) begin to run, and outside heat exchanger is replaced by hot refrigerant gas which then melts the surface of ice. The ice harvests from heat exchanger because of gravitational force and falls into ice cutter (08). Ice column finally is cut into 30-50mm length pieces of tube ice. Tube ice drops down and threw to ice outlet (12). After ice doff finished, repeat the above steps to make ice continuously.

SMALL CAPACITY TUBE ICE MACHINE SPECIFICATIONS

Small capacity tube ice machine adopts an integral design. A complete unit with all equipment assembled in a steel frame except its cooling tower for water-cooling or air fan for air-cooling. It's suitable for container shipment, easy to ship, move and install. Right after connecting to an electric and water source, the machine can be put into use.



Model	Capacity	Refrigerant	Operating power	Install power	Operating weight	Dimension (LxWxH mm)
TJT-10A	1Ton/24hr	R22/R404a	4.5KW	6KW	650KG	1320x850x1800
TJT-20A	2Ton/24hr	R22/R404a	8KW	12KW	750KG	1600x1450x2250
TJT-30A	3Ton/24hr	R22/R404a	9.2KW	15KW	950KG	2250x1600x2250
TJT-30W	3Ton/24hr	R22/R404a	9KW	15KW	900KG	1550x925x2180
TJT-50A	5Ton/24hr	R22/R404a	14.5KW	20KW	1650KG	3000x1600x2450
TJT-50W	5Ton/24hr	R22/R404a	14KW	20KW	1560KG	1600x1200x2180

* A-Air cooled condenser , W- Water cooled condenser with cooling tower. Have Evaporative condenser for optional.

◆ Standard condition: Ambient temperature is 35°C and inlet water temperature is 25°C .



LARGE CAPACITY TUBE ICE MACHINE SPECIFICATIONS

Large capacity tube ice machine adopted modular design, the whole unit consists of 3 parts:

- Evaporator module: Including evaporator, evaporator accessories, pipeline control valves, etc. The evaporator is high, so when transporting, place the evaporator horizontally and stand it upright when installing, which meets the requirements of container transportation.
- Compressor module: Include compressor, condenser, reservoir, liquid receiver, oil separator, and electric control box are installed on a steel frame to form the whole set.
- Cooling tower module: Include cooling tower and cooling pump. Is a device that uses water as circulating coolant to absorb heat from the system and discharge it to the atmosphere to reduce the water temperature.



Model	Daily capacity	Refrigerant	Operating power	Install power	Operating weight	Dimension (LxWxH mm)
TJT-100W	10Ton/24hr	R22/R404a	32KW	40KW	(unit): 1450kg	1800x1400x1740
					(evaporator): 1890kg	1200x1200x3500
					(cooling tower): 540kg	Ø1580x2205
TJT-150W	15Ton/24hr	R22/R404a	50KW	65KW	(unit): 1960kg	2700x2000x2250
					(evaporator): 2150kg	1500x1200x4365
					(cooling tower): 670kg	Ø2000x2410
TJT-200W	20Ton/24hr	R22/R404a	65KW	80KW	(unit): 2350kg	2800x2200x2970
					(evaporator): 2450kg	1500x1200x4657
					(cooling tower): 1120kg	Ø2175x2565
TJT-250W	25Ton/24hr	R22/R404a	75KW	100KW	(unit): 2690kg	3000x2200x2500
					(evaporator): 2750kg	2000x1800x5575
					(cooling tower): 1120kg	Ø2175x2565
TJT-300W	30Ton/24hr	R22/R404a	95KW	125KW	(unit): 2720kg	3000x2200x2500
					(evaporator): 2968kg	2000x1800x6075
					(cooling tower): 1300kg	Ø2650x2645

* A-Air cooled condenser , W- Water cooled condenser with cooling tower. Have Evaporative condenser for optional.

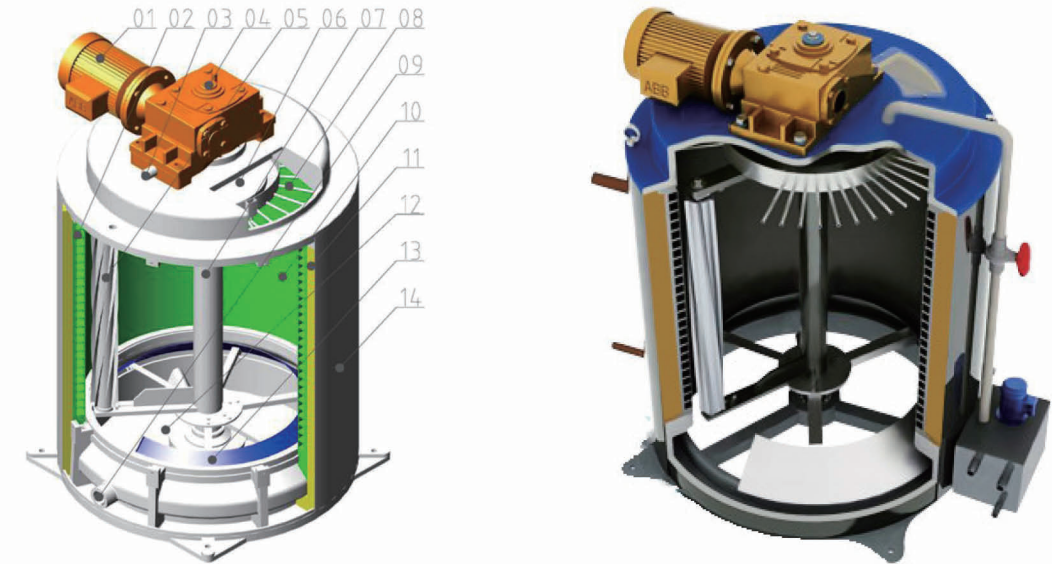
◆ Standard condition: Ambient temperature is 35°C and inlet water temperature is 25°C .

FLAKE ICE MACHINE

- Flake ice is an irregular ice type with a thickness of 1.5mm~2.5mm
- Flake ice temperature approx. -8°C , with great cooling efficiency, fit for perishable product immediate cooling
- Flake ice completely dry, it not easy rapidly freezing together, so easier for storage and distribution
- Flake ice has no acute edges and corners so it will not damage the surface of the cooled object
- Flake ice have large contact area, good mobility, which means large heat exchange surface area, faster and better cooling effect than other types of ice
- Flake ice is easy to crush and has strong plasticity
- Fast ice making speed, can produce ice within 3 minutes after starting machine, don't need extra person to take off and get the ice
- Flake ice can be made from fresh water or seawater



THE DIAGRAM OF FLAKE ICE MACHINE WORKING PRINCIPLE



01	Motor	02	Refrigerant runner	03	Water inlet	04	Speed reducer	05	Ice skate	06	Water distribution pan	07	Principle axis
08	Water sprinkler	09	Water return pipe	10	Ice freezing surface	11	Insulation layer	12	Ice outlet	13	Drain pan	14	Stainless steel wrapper sheet

As shown, motor (01) drives speed reducer (04) running. Ice skate (05), Water distribution pan (06), principle axis (07), water sprinkler (08) and drain pan (13) are driven by reducer and run continuously. From water inlet (03), water flows into water distributor pan (06) then sprinkles water on Ice freezing surface (10) evenly, herein a film of water is formed.

While the ice machine is running, refrigerant evaporate in refrigerant runner (02). The temperature of water decreases quickly till a layer of thin ice is formed on ice freezing surface. Under the extrusion of ice skate (05), the thin ice layer turns into ice flake and then falls from ice outlet (12) below evaporator. And the partial unfreezing water returns to the cold water tank through drain pan from water return pipe (09).



FLAKE ICE APPLICATION



Aquatic applications

Fishing fresh: Ice is used in supermarket fresh stable and in restaurant for fresh of fish and other food.
 Fishery production and processing: In fishing and fish processing factory, lots of ice is needed as a cold storage and preservation of aquatic products.



Meat application

Cooling slaughtered industry: In production of poultry slaughter, ice is for cooling poultry.
 Food processing: In the cooked food production, ice water is for cooked chopped mix processing.



Chemical applications

Printing and dyeing chemical industry: In the paint, dye production, diazotization, coupling and condensation are the necessary synthesis process. Lots of heat is cool down with ice cooling. Pharmaceutical and chemical.
 Pharmaceutical and chemical: In the synthetic production process of biopharmaceutical, chemical and pharmaceutical industry, much ice is used to control temperature and maintain biological activity.



Other food

Dairy processing: Much crushed ice particles is used in ice cream processing.
 Bread processing: In the beating of bread flour, ice water can improve the processing temperature.



Fruit, vegetable distribution and preservation

Fruit and vegetable fresh: Flake ice can quickly cool the original temperature of fruits and vegetables to storage temperature and maintain that temperature in order to ensure product quality.



Concrete mixing cooling application

Railway hydropower projects: In the casting process of concrete elements in mass projects, the big temperature change in hydration can cause cracks. Every 10kg ice can reduce 1.2°C -1.4°C for one cubic concrete.

SMALL COMMERCIAL FLAKE ICE MACHINE



- ThermoJinn small commercial flake ice machines are widely applied in supermarket chains, hotels, seafood market, food processing and vegetable preservation industries, etc.
- The whole system is controlled by automatic microcomputer. The ice machine can start and stop automatically to make the evaporator mechanical operation system and water supplying circulation system coordination matched and work safely & efficiently under the function of PLC programmable controller. The whole system is protected by the alarm if water shortage, ice full, high and low pressure abnormal, power phase inverse and compressor overload etc. with the computer intelligence control. When there is a failure, the PLC will stop the unit automatically and the corresponding alarming indicator lights up. And when settled, PLC controller will soon start the machine after receiving the information, thus fully automatic control realized.



Model	Daily capacity	Ice bin capacity	Power supply	Power	Unit dimension(mm)	Ice bin dimension(mm)	Unit weight
TF-05A	500kg/24hr	300kg	220V/50Hz/1P	2.37KW	1100×820×740	1100×960×1070	215kg
TF-10A	1000kg/24hr	300kg	380V/50Hz/3P	4.11KW	1100×820×840	1100×960×1070	240kg
TF-15A	1500kg/24hr	400kg	380V/50Hz/3P	7.29KW	1310×970×1005	1310×1260×1050	360kg
TF-20A	2000kg/24hr	500kg	380V/50Hz/3P	8.31KW	1500×1095×1050	1500×1350×1150	440kg
TF-25A	2500kg/24hr	500kg	380V/50Hz/3P	9.22KW	1500×1095×1200	1500×1350×1150	510kg

* A-Air cooled condenser , W- Water cooled condenser with cooling tower. Have Evaporative condenser for optional.

Remarks:

- 1.The standard cooling mode of the above models is air cooling, can be designed to be water cooling according to customer requirements.
- 2.Standard condition: Ambient temperature 25°C , water inlet temperature is 15°C , evaporating temperature -22°C , condensing temperature 40°C .

MEDIUM-SIZE INDUSTRIAL FLAKE ICE MACHINE



- Thermojinn medium-size industrial flake ice machines are professionally applied into poultry slaughter, aquatic processing, chemical printing, biopharmaceutical and scientific experiments, etc.
- It uses spiral efficient evaporator & high-power configuration and has the characteristic of high refrigeration efficiency & less cool losing. The perfect fault protection device equipped on the ice machine, such as high & low pressure, water lever, ice full, overload and power phase, enhance the machine safety & stable performance and allow the users to stop the ice making process at any time when ice is not required.
- Flake ice machine operate reliably and are easily maintained with the simple inner structure of evaporator and high general parts.



Model	Daily capacity	Power supply	Power	Ref. Capacity	Refrigerant	Unit dimension(mm)	Unit weight
TF-30A	3000kg/24hr	380V/50Hz/3P	11.6KW	11.6KW	R22/R404A	1750×1190×1410	560kg
TF-40A	4Ton/24hr	380V/50Hz/3P	18.5KW	20640	R22/R404A	1720×1650×1470	780kg
TF-50A	5Ton/24hr	380V/50Hz/3P	23.2KW	25800	R22/R404A	1720×1650×1610	950kg
TF-60A	6Ton/24hr	380V/50Hz/3P	27.3KW	30960	R22/R404A	1720×1650×1610	1060kg
TF-80A	8Ton/24hr	380V/50Hz/3P	35.2KW	41280	R22/R404A	2300×1900×1720	1650kg
TF-100A	10Ton/24hr	380V/50Hz/3P	41.8KW	51600	R22/R404A	2800×1900×1880	1980kg
TF-150A	15Ton/24hr	380V/50Hz/3P	53.4KW	83850	R22/R404A	3500×2150×1920	320kg

* A-Air cooled condenser , W- Water cooled condenser with cooling tower. Have Evaporative condenser for optional.

- Remarks:
- 1.The standard cooling mode of the above models is water cooling, can be designed to be air cooling according to customer requirements.
 - 2.Standard condition: Ambient temperature 25°C , water inlet temperature is 15°C , evaporating temperature -22°C , condensing temperature 40°C .

LARGE-SCALE INDUSTRIES FLAKE ICE MACHINE



- Thermojinn large-scale flake ice machines are professionally applied into poultry slaughtering, chemical printing & dyeing, nuclear power construction, water conservancy & hydropower construction and traffic construction industries, etc.
- High-pressure ratio screw compressor of large-scale industry flake ice machines make sure the sufficient ice output meanwhile improving the EER, saving more power for the customers.
- Thermojinn flake ice machines are highly accepted and warmly welcomed in the world with the advantages of excellent performance, reasonable price, satisfied after-sale service and the best applicability, etc.



Model	Daily capacity	Power supply	Power	Ref. Capacity	Refrigerant	Unit dimension(mm)	Unit weight
TF-200W	20Ton/24hr	380V/50Hz/3P	66.3KW	111800	R22/R404A	3500×2150×2240	4310kg
TF-250W	25Ton/24hr	380V/50Hz/3P	84.6KW	139750	R22/R404A	3500×2150×2490	4850kg
TF-300W	30Ton/24hr	380V/50Hz/3P	112.3KW	167700	R22/R404A	5000×2140×2555	5200kg
TF-400W	40Ton/24hr	380V/50Hz/3P	134.5KW	240800	R22/R404A	6300×2200×2240	6860kg

* A-Air cooled condenser , W- Water cooled condenser with cooling tower. Have Evaporative condenser for optional.

- Remarks:
- 1.The standard cooling mode of the above models is water cooling, can be designed to be air cooling according to customer requirements.
 - 2.Standard condition: Ambient temperature 25°C , water inlet temperature is 15°C , evaporating temperature -22°C , condensing temperature 40°C .
 - 3.Thermojinn can offer non-standard design according to customer special request (for example: material, cooling mode, refrigerant, power supply, machine unit & ice storage room dimension and installation type, etc.). Thermojinn can provide you with all-round ice solutions.

LAND SEAWATER FLAKE ICE MACHINE

- Use seawater as inlet water, which is mainly suitable for coastal areas.
- It adopts seawater condenser that meets seawater cooling and high corrosion resistance copper nickel alloy high-efficiency heat exchange pipe, with large heat exchange area, small volume and large waterway flow section, which can effectively reduce dirt; Good refrigerant circuit to ensure smooth oil return.
- A number of different daily capacities models are available.



Model	Daily capacity	Power supply	Power	Refrigerant	Unit dimension(mm)	Unit weight
TF-10S	1Ton/24hr	380V/50Hz/3P	6.5KW	R404A	1250x890x1005	256kg
TF-20S	2Ton/24hr	380V/50Hz/3P	11.5KW	R404A	1350x1240x1150	455kg
TF-30S	3Ton/24hr	380V/50Hz/3P	15.3KW	R404A	1350x1240x1300	550kg
TF-40S	4Ton/24hr	380V/50Hz/3P	21.8KW	R404A	1700x1550x1570	715kg
TF-50S	5Ton/24hr	380V/50Hz/3P	23.9KW	R404A	1700x1550x1710	780kg
TF-80S	8Ton/24hr	380V/50Hz/3P	32.2KW	R404A	2300x1900x1720	1100kg
TF-100S	10Ton/24hr	380V/50Hz/3P	52.6KW	R404A	2800x1900x1880	1680kg
TF-150S	15Ton/24hr	380V/50Hz/3P	68.8KW	R404A	3500x2150x1920	2080kg
TF-200S	20Ton/24hr	380V/50Hz/3P	81.5KW	R404A	3500x2150x2240	3160kg

* A-Air cooled condenser , W- Water cooled condenser with cooling tower. Have Evaporative condenser for optional.

- ◆ Standard condition: Ambient temperature 28°C , water inlet temperature is 20°C , evaporating temperature -25°C , condensing temperature 40°C .



MARINE SEAWATER FLAKE ICE MACHINE

- The material of flake ice machine is stainless steel and antiseptic aluminum alloy to get over seawater and sea wind erosion.
- Adopt piston compressor with deepened oil tank and marine seawater condenser guarantee normal running even vessels shake at 30° . And low noise, high quality impact resistant steel valve plate, high efficiency, anti-liquid hammer and long service life.
- Module design adopted with all parts welded, more space-saving.



Model	Daily capacity	Power supply	Power	Refrigerant	Unit dimension(mm)	Unit weight
TF-05M	0.5Ton/24hr	380V/50Hz/3P	2.5KW	R404A	1100×700×630	530kg
TF-08M	0.8Ton/24hr	380V/50Hz/3P	3.6KW	R404A	1200×740×650	560kg
TF-10M	1Ton/24hr	380V/50Hz/3P	4.3KW	R404A	1200×740×800	620kg
TF-20M	2Ton/24hr	380V/50Hz/3P	7.1KW	R404A	1560×1200×960	680kg
TF-30M	3Ton/24hr	380V/50Hz/3P	11.3KW	R404A	1700×900×1200	720kg
TF-40M	4Ton/24hr	380V/50Hz/3P	14.9KW	R404A	1700×900×1200	780kg
TF-50M	5Ton/24hr	380V/50Hz/3P	17.2KW	R404A	2200×1050×1550	860kg
TF-60M	6Ton/24hr	380V/50Hz/3P	21.2KW	R404A	2200×1050×1600	950kg

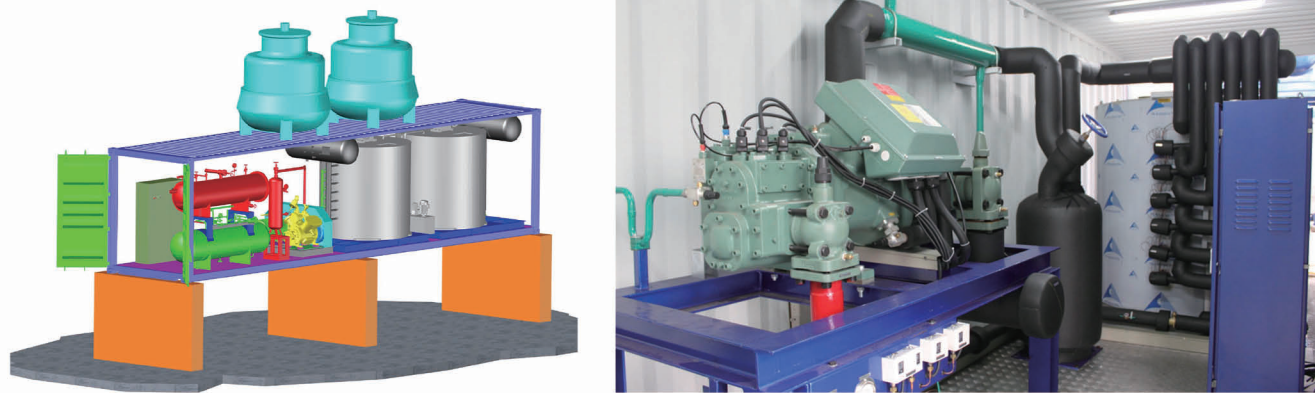
* A-Air cooled condenser , W- Water cooled condenser with cooling tower. Have Evaporative condenser for optional.

- ◆ Standard condition: Ambient temperature 28°C , water inlet temperature is 20°C , evaporating temperature -25°C , condensing temperature 40°C .



CONTAINERIZED FLAKE ICE MACHINE

Thermojinn containerized flake ice machine is divided into two types: 20 feet model and 40 feet model. Equipped with other equipment such as automatic ice storage room and ice delivering system into a container in order to simplify transportation and installment.



Features

- Container integrated structure enables easiness on installation, transportation and production.
- Installed in the ISO container, reaches a high quality.
- Economically saving on operation and convenient maintenance.

Model	Daily capacity	Power supply	Power	Refrigerant	Unit dimension(mm)	Operating weight	
20ft container	TF-50C	5Ton/24hr	380V/50Hz/3P	23.2KW	R404A	6058×2438×2591	3600kg
	TF-100C	10Ton/24hr	380V/50Hz/3P	41.8KW	R404A	6058×2438×2591	4700kg
	TF-150C	15Ton/24hr	380V/50Hz/3P	53.4KW	R404A	6058×2438×2591	5500kg
	TF-200C	20Ton/24hr	380V/50Hz/3P	66.3KW	R404A	6058×2438×2591	6100kg
40ft container	TF-250C	25Ton/24hr	380V/50Hz/3P	84.6KW	R404A	12192×2438×2896	6500kg
	TF-300C	30Ton/24hr	380V/50Hz/3P	112.3KW	R404A	12192×2438×2896	6800kg
	TF-400C	40Ton/24hr	380V/50Hz/3P	134.5KW	R404A	12192×2438×2896	8000kg
	TF-500C	50Ton/24hr	380V/50Hz/3P	169.2KW	R404A	12192×2438×2896	8500kg
	TF-600C	60Ton/24hr	380V/50Hz/3P	202.8KW	R404A	12192×2438×2896	9000kg

* A-Air cooled condenser , W- Water cooled condenser with cooling tower. Have Evaporative condenser for optional.

- ◆ Standard condition: Ambient temperature 25°C , water inlet temperature is 15°C , evaporating temperature -22°C , condensing temperature 40°C .

CUBE ICE MACHINE

Thermojinn cube ice machine produces transparent, pure and good in taste cube ice. In order to meet different requirements of customers all around the world, we make two different sizes of cube ice: 22mm×22mm×22mm and 29mm×29mm×22mm.

Cube ice for its moderate particle size and crystal-clear ice are widely applied in bar, drinks mix/decoration, milk tea store, banquet hall, western restaurant, fast-food restaurant, convenience stores, hotels, supermarkets and cold drink shops, etc.

Cube Ice Machine Features

- Beautiful shape, compact structure and saving space
- All the materials contacting the water and ice are food grade stainless steel material
- Bee trough ice mold, faster ice making speed
- Using hot freon to make ice fall off fast by warm water and the whole process takes only 150 -180 seconds



COMMERCIAL TYPE CUBE ICE MACHINE

Thermojinn commercial type cube ice machine is a fully automatic edible cube ice machine with advanced technologies such as automatic water supply, icing and deicing, which adopts touch-screen microcomputer to adjust the ice thickness, automatic shutdown when the ice is full, regular automatic cleaning, self-control and adjustment of operating pressure.

It completely solves the problems of uneven thickness of ice caused by environmental temperature change and water pressure gap, difficult deicing and manual shutdown when the ice is full.



Model	Daily capacity	Ice bin capacity	Power supply	Power	Dimension(mm)
TJC-40	40kg/24hr	15kg	220V/50Hz/1P	300W	500×450×800
TJC-50	50kg/24hr	20kg	220V/50Hz/1P	360W	500×590×850
TJC-70	70kg/24hr	35kg	220V/50Hz/1P	460W	660×685×920
TJC-100	100kg/24hr	35kg	220V/50Hz/1P	580W	660×685×920
TJC-120	120kg/24hr	35kg	220V/50Hz/1P	850W	660×685×920
TJC-150	150kg/24hr	105kg	220V/50Hz/1P	1000W	560×830×1720
TJC-200	200kg/24hr	105kg	220V/50Hz/1P	1100W	560×830×1720
TJC-230	230kg/24hr	125kg	220V/50Hz/1P	1240W	760×830×1720
TJC-300	300kg/24hr	125kg	220V/50Hz/1P	1420W	760×830×1720
TJC-450	450kg/24hr	125kg	220V/50Hz/1P	2300W	760×830×1900
TJC-550	550kg/24hr	200kg	220V/50Hz/1P	2600W	760×850×1900
TJC-680	680kg/24hr	315kg	220V/50Hz/1P	2860W	1220×970×1930
TJC-900	900kg/24hr	315kg	380V/50Hz/3P	3800W	1220×970×2060
TJC-1000	1000kg/24hr	315kg	380V/50Hz/3P	4000W	1220×970×2060

* A-Air cooled condenser , W- Water cooled condenser with cooling tower. Have Evaporative condenser for optional.

◆ Standard condition: Ambient temperature is 21°C and inlet water temperature is 10°C .



INDUSTRIAL TYPE CUBE ICE MACHINE

Large Capacity: Different capacity from 1Ton/24hr to 20Ton/24hr. Its production is stable and can reach 90%~95% even in hot summer. When the ambient temperature is lower than 20°C , input water temperature is lower than 25°C , its production can reach 100%~130%.

Automatic Operation: It adopts PLC program centralized control, self-adjustable for ice thickness, self-adaptation for ambient temperature, automatic water supplying, ice freezing and ice falling. And the PLC program has the functions of regular cleaning and automatic shutdown when the ice storage is full, which greatly facilitates customers, reduces labor costs and improves production efficiency.



Simple & Economical Packaging System: The machine is equipped with semi-automatic packaging system. There is an ice storage bin with a screw conveyor on the bottom, while you step on the foot switch, the ice will come out by screw conveyor, then jump into plastic bags directly. Customers only need to be equipped with platform scale and sealing machine to realize packaging process.

Less energy consumption & High efficiency: The two technologies of group deicing condensation and refrigerant staggered evaporation are comprehensively used to make the refrigeration system operate efficiently, greatly reduce the energy consumption of ice machines and improve the ice making efficiency.



Model	Daily capacity	Evaporator	Power supply	Cooling way	Dimension(mm)	Weight
TJC-10S	1Ton/24hr	4 pieces	380V/50Hz/3P	Water/Air	1700x1230x1970	900kg
TJC-20S	1Ton/24hr	8 pieces	380V/50Hz/3P	Water/Air	1730x1520x2030	1100kg
TJC-30S	3Ton/24hr	12 pieces	380V/50Hz/3P	Water/Air	2100x1940x2050	1300kg
TJC-40S	4Ton/24hr	15 pieces	380V/50Hz/3P	Water/Air	2600x1940x2050	1700kg
TJC-50S	5Ton/24hr	18 pieces	380V/50Hz/3P	Water	3100x1940x2050	1900kg
TJC-60S	6Ton/24hr	24 pieces	380V/50Hz/3P	Water	4000x1940x2190	2300kg
TJC-80S	8Ton/24hr	30 pieces	380V/50Hz/3P	Water	5070x1980x2300	3000kg
TJC-100S	10Ton/24hr	36 pieces	380V/50Hz/3P	Water	5830x1980x2320	3500kg
TJC-150S	15Ton/24hr	54 pieces	380V/50Hz/3P	Water	6000x1980x2350	4900kg
TJC-200S	20Ton/24hr	72 pieces	380V/50Hz/3P	Water	6250x2310x2470	5500kg

* A-Air cooled condenser , W- Water cooled condenser with cooling tower. Have Evaporative condenser for optional.

◆ Standard condition: Ambient temperature is 35°C and inlet water temperature is 25°C .

PLATE ICE MACHINE

Plate ice is a type of irregular sheet ice with about 40mmx40mm~80mmx80mm in size, and 10mm~15mm in thickness. The thickness can be adjusted according to ice-making time, maximum thickness is 30mm. It is a kind of thick and transparent ice which has good air permeability and long shelf life.

Cube Ice Machine Features

Plate ice is generally applicable to ice storage system, concrete mixing plants, chemical plants, mine cooling, vegetable preservation, fishing boat aquatic product insulation, etc.



After the secondary crushing, plate ice is around 25mm×25mm, widely used in restaurant, supermarket and cafe, ect.



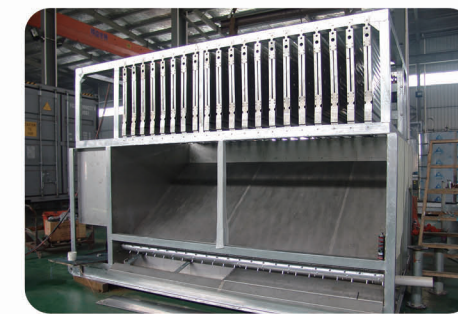
As shown, cold water in tank (06) is delivered by pump (09) to the cold water distribution pipes (02) which are on top of plate evaporator (05). Evenly flow on evaporators (05), cold water forms water film and through drain pan (03) back to cold water tank (06), this process will be recycled.

When reach to the set thickness, the cold water pump stop to work and refrigeration system switches to ice defrost mode. Hot gas flows from refrigerant inlet (04) into plate evaporators (05) and generates heat. Meanwhile, warm water pump (12) starts to run and delivers water to warm water distribution pipes (01). The warm water will be sprinkled between two evaporator plates. Hot gas plus the heat generated by warm water both make ice quickly fall off evaporator and drop into ice crusher (11).

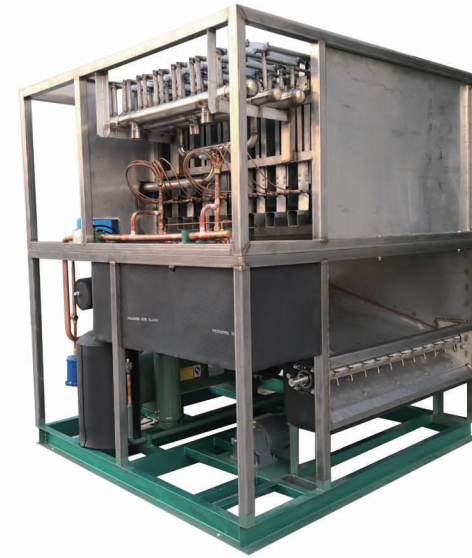
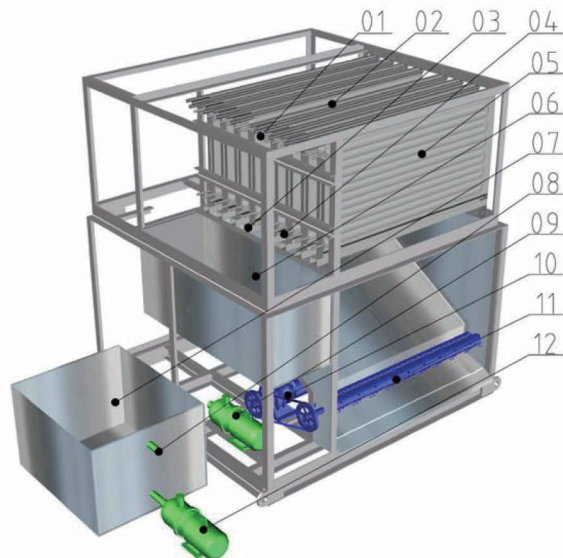
Water in drain pan after gradually cooled will flow into cold water tank (06) and then be reused for the next ice making cycle.



PLATE ICE MACHINE FEATURES



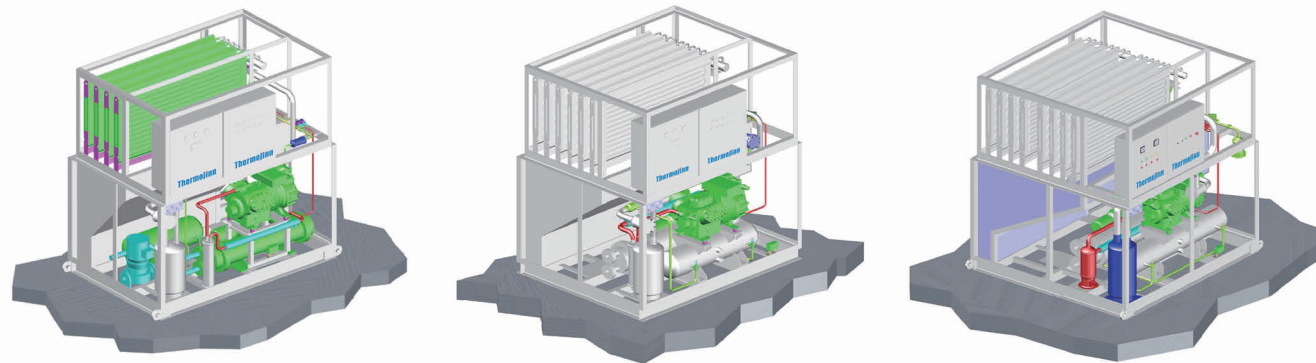
THE DIAGRAM OF PLATE ICE MACHINE WORKING PRINCIPLE



01 Refrigerant outlet	02 Water distribution pipe	03 Water return inlet	04 Refrigerant inlet	05 Plate evaporator	06 Cold water tank
07 Warm water tank	08 Water inlet	09 Cold water pump	10 Speed reducer	11 Ice crusher	12 Warm water pump

- 1 Evaporator with special processing technology**
 ThermoJinn plate ice evaporator adopts double-sided stainless steel 304 material and international advanced welding technology, which is firm and not easy to deform, durable and nice-looking, and conforms with the sanitary requirements as well.
- 2 Efficient ice doffing mode**
 It's unnecessary to introduce additional heat energy since the reversal hot Freon gas produces by plate ice machine itself is fed into the evaporator, thus it just take less than 120 seconds for the whole ice doffing process.
- 3 Excellent water circulation system**
 Some water is transported from the water tank to sprinkler, and the rest returns to the water tank and waits for the next water cycle.
- 4 Easy operation**
 Stable capacity, PLC program control, only need to select the capacity, other procedures will be automatically finished under PLC program control, no need special human to monitor.
- 5 Energy saving and high efficiency**
 ThermoJinn plate ice machine has only 60KWH per ton for power consumption, compared with 110KWH power consumption per ton by mechanical ice dropping in the current market, ThermoJinn energy-saving rate reach more than 30% and own great economic value.

THE SPECIFICATION OF THERMOJINN INTEGRAL TYPE PLATE ICE MACHINE



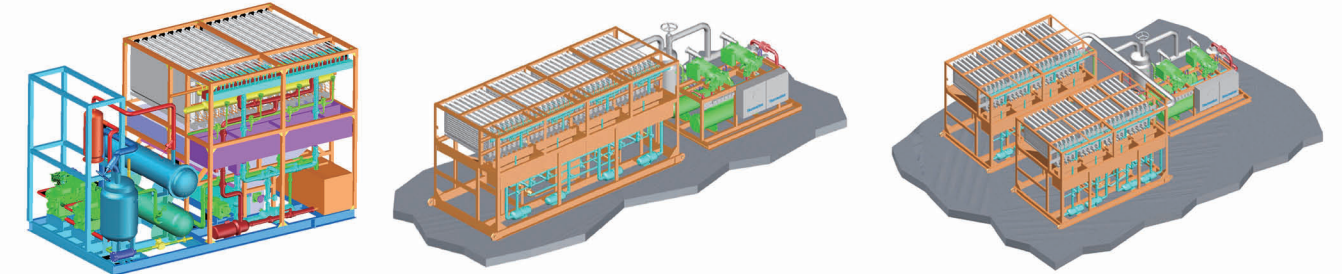
Model	Daily capacity	Power supply	Refrigerant	Operating power	Install power	Operating weight	Dimension (mm)
TJP-30A	3Ton/24hr	380V/50Hz/3P	R22/R404A	13.5KW	16KW	1200kg	2121x1440x1950
TJP-40A	4Ton/24hr	380V/50Hz/3P	R22/R404A	17.3KW	20KW	1525kg	2143x1290x2186
TJP-50A	5Ton/24hr	380V/50Hz/3P	R22/R404A	20.6KW	26KW	1700kg	2143x1450x2186
TJP-60A	6Ton/24hr	380V/50Hz/3P	R22/R404A	23.2KW	30KW	1850kg	2213x1570x2186
TJP-80A	8Ton/24hr	380V/50Hz/3P	R22/R404A	29.2KW	34KW	2050kg	2213x1930x2250

* A-Air cooled condenser , W- Water cooled condenser with cooling tower. Have Evaporative condenser for optional.

- ◆ Standard condition: Ambient temperature 35°C , water inlet temperature is 25°C .
- ◆ Power supply: standard is 380V/3P/50Hz, we can customize different power supply (440V/60Hz/3P, 220V/60Hz/3P)
- ◆ Configuration: Bitzer compressor, Danfoss valves, Siemens PLC, Schneider Electrical etc world famous brand components.



THE SPECIFICATION OF THERMOJINN SEPARATE TYPE PLATE ICE MACHINE



Model	Daily capacity	Power supply	Refrigerant	Operating power	Install power	Operating weight	Dimension (mm)
TJP-100W	10Ton/24hr	380V/50Hz/3P	R22/R404A	36.5KW	46KW	(Ice machine): 2570kg (Cooling tower):670kg	3430x2060x2426 Φ2000x2410
TJP-120W	12Ton/24hr	380V/50Hz/3P	R22/R404A	42.5KW	53KW	(Ice machine): 2980kg (Cooling tower):670kg	3710x2060x2426 Φ2000x2410
TJP-150W	15Ton/24hr	380V/50Hz/3P	R22/R404A	50KW	65KW	(Unit): 1400kg (Evaporator):1750kg (Cooling tower):1120kg	2000x1400x1700 3123x2150x2350 Φ2175x2565
TJP-200W	20Ton/24hr	380V/50Hz/3P	R22/R404A	80KW	98KW	(Unit): 2100kg (Evaporator):2650kg (Cooling tower):1300kg	2500x1950x1723 3843x2150x2450 Φ2650x2645
TJP-240W	24Ton/24hr	380V/50Hz/3P	R22/R404A	108KW	125KW	(Unit): 2560kg (Evaporator):3450kg (Cooling tower):1300kg	2700x2200x2191 4403x2150x2450 Φ2650x2565
TJP-300W	30Ton/24hr	380V/50Hz/3P	R22/R404A	119KW	145KW	(Unit): 2560kg (Evaporator):3860kg (Cooling tower):1630kg	2700x2200x2191 5562x2150x2490 Φ3050x2780
TJP-400W	40Ton/24hr	380V/50Hz/3P	R22/R404A	181.3KW	208KW	(Unit): 1400kg #1(Evaporator):1750kg #2(Evaporator):1750kg (Cooling tower):1120kg	3300x2200x2200 3843x2150x2450 3843x2150x2450 Φ3300x2785

* A-Air cooled condenser , W- Water cooled condenser with cooling tower. Have Evaporative condenser for optional.

- ◆ Standard condition: Ambient temperature 35°C , water inlet temperature is 25°C .
- ◆ Power supply: standard is 380V/3P/50Hz, we can customize different power supply (440V/60Hz/3P, 220V/60Hz/3P)
- ◆ Configuration: Bitzer compressor, Danfoss valves, Siemens PLC, Schneider Electrical etc world famous brand components.



WATER FILM TYPE COLD CHILLER

Water film type cold chiller uses the stainless-steel plate evaporator, the evaporator made of 2 pcs same size stainless steel plate welded by laser and expansion by high pressure gas, the refrigerant flows in expanded space of the stainless-steel plate evaporator, the water flows at both outside of the stainless-steel plate evaporator form a water film. In this cooling way completely solved the evaporator frost crack and broken, so the minimum water outlet temperature of the water film type cold chiller is 0.5°C .



Water film type cold chiller applications

Water film type cold chiller compliance with food hygiene requirements. It is mainly used in places requiring freshwater cooling, such as slaughterhouse, chicken, pork and fish, cooling of the flour ingredients, foods raw materials and hot pot raw materials.

WATER FILM TYPE COLD CHILLER FEATURES



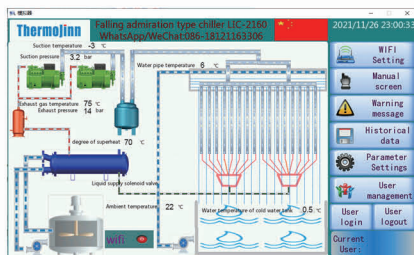
Fully eliminate the risk of evaporator freezing and cracking

The refrigerant flows in expanded space of the stainless-steel plate evaporator, the water flows at both outside of the stainless-steel plate evaporator form a water film.



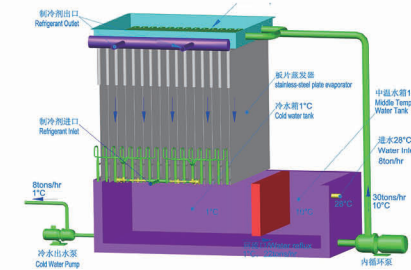
Compliance with food hygiene requirements

All water contact parts are made of SUS304 stainless steel.



Fresh water effluent temperature is as low as 0.5°C

The evaporator does not freeze cracked, so the evaporation temperature can be controlled at -3°C , achieving 0.5°C water effluent.



Achieve large temperature difference water cooling

3-6 times internal recycle water following, through a mixture of water in the middle temperature water tank, it can be direct cooling the water from 28°C to 1°C .

We can customize the admiration drop water cooler you need according to your request !

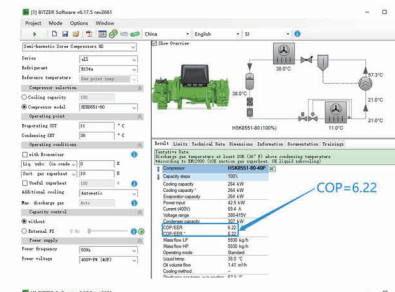
FULL RANGE SOLUTION FOR WATER CHILLER

Even the highest water temperature in nature, we still have the perfect water chiller-making solution that reduces the water temperature from + 45°C to 1°C



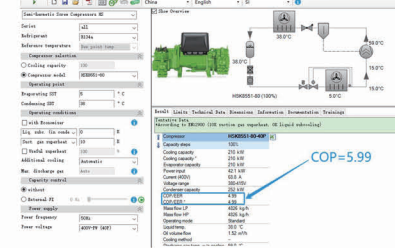
1st stage cooling system

In areas with high water temperature, we use an evaporative condenser to partially evaporate the water itself to cool down the temperature to the wet ball temperature, which can reduce the water temperature above +45°C directly to + 33°C .



2nd stage cooling system

Cooling the water temperature from +33°C to +16°C by dry evaporator or plate heat changer. The evaporating temperature is +11°C , so the compressor running at the highest COP and more power saving.



3rd stage cooling system

Cooling the water temperature from +16°C to +7°C by dry evaporator or plate heat changer. The evaporating temperature is +5°C , the evaporator no frozen and crack and high COP for the compressor.



4th stage cooling system

Cooling the water temperature from 7°C to 0.5°C using the plate evaporator of the water film type cold chiller.

ICE STORAGE BIN

Standard ice storage bin

- Standard thickness of insulation is 100mm
- Ice storage period: 1~3 days
- Small or short-term ice storage, suitable for ice storage below 1.5Ton



Cold storage board ice storage room

- Standard thickness of insulation is 100mm
- Without refrigeration system, ice storage period: 1~3 days
- The size can be customized according to the needs of customer ice storage capacity



Ice storage room with refrigeration system

- Standard thickness of insulation is 100mm
- Ice storage period: 20 days
- Ice storage room with refrigeration system, can reduce and maintain the temperature at -8°C



Semi-automatic ice storage room

Semi-auto ice storage combines automatic loading and manual discharge of ice. Compare to fully automatic ice storage, the initial investment of a semi-auto one is more cost effective to consider; whereas compare with ice bin which needs total labor operation, semi-automatic one could substantially reduce the labor cost. A piece of screw installed at the bottom or below of ice storage, a large portion of ice could be automatically delivered by screw to the ice outlet. Sometimes, labor is needed to shovel ice in necessary. The semi-automatic ice storage is usually designed of small size and act as an ice buffer. Most of time it is to use with tube, cube ice machine and at the final end connects with our semi-automatic packing machine.



AUTOMATIC ICE STORAGE SYSTEM

To improve the use ratio of the storage and to avoid ice freezing in the bottom, Thermojinn provides automatic ice storage system which make the cold air in it cycle even though it is filled with ice, so as to maintain the temperature at -8°C .

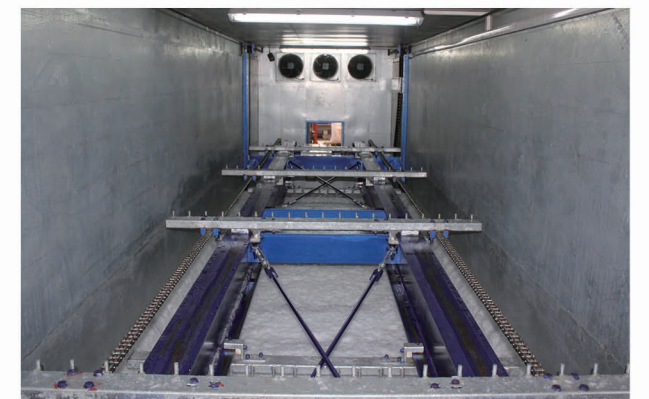
Screw ice storage

Screw ice storage room is designed with special mechanical ice crushing structure, with the advantage of suiting for food processing industry, fishery, medicine industry and more.



Rake ice storage

The automatic sensor and lifting gear of rake ice storage make the ice rake device risk and fall according to the actual ice level detected. The stainless steel and galvanized steel are available for storage plate covering. Axle lubricant can contact the food directly.



Crawler ice storage

The entire floor of the storage facility is in the form of a tracked conveyor which moves the stored ice to the front, where it passes through the crusher and then gets discharged via the screw conveyor at the bottom outlet.



SCREW ICE CONVEYING SYSTEM

The screw conveying system is suitable for short distance ice transport and also economical on cost. It can work simultaneously with maximum of two operation points. Thermojinn provides hot dipped galvanized or stainless steel screw conveyors in open-through and in tube execution. The maximum length of each screw conveyor can reach 25m. Thermojinn can offer the ice conveyor unit with different delivery distance and capacity by combination of several screw conveyors.



Screw ice conveying system features

- Completely sealed, no pollution to ice
- The surface is polished inside and outside, the ice is not easy to bond
- Process layout is simple and economic so as to improve productivity
- The maximum obliquity of newly-developed ice conveying device reach 60°, widely applied into various industries.

Model	Delivery capacity	Max delivery distance	Max obliquity	Delivery method
TJS-10	10 MT/Hr.	15m	60°	Screw conveyor
TJS-15	15 MT/Hr.	15m	50°	Screw conveyor
TJS-20	20 MT/Hr.	12m	45°	Screw conveyor

* A-Air cooled condenser , W- Water cooled condenser with cooling tower. Have Evaporative condenser for optional.

ICE CRUSHER

With rich industry experience and excellent design concept, we have been regarded as one of the most reliable suppliers of high-quality ice crusher in the industry. Our products are using best quality material with appropriate sizes and international quality standards. Moreover, they are widely demanded in various industries to break ice block and ice tube into small pieces. These ice pieces are ideal for attaining better results in chemical and goods preservation processing and more. Right now, Thermojinn provides block ice crusher, tube/cube ice crusher and ice crusher blower.

Block Ice Crusher

Thermojinn block ice crusher can crush ice blocks into a range of 3x3x3 mm to 40x40x40 mm irregular particles. The particle sizes can be customized according to customer's requirement.

- (1) Small capacity block ice crusher: people put ice blocks into crusher by hand, manually;
- (2) Large capacity block ice crusher: combine to use with ice delivery system and ice slide to realize automatic crushing function, usually ideal for pier, harbor or ice station.



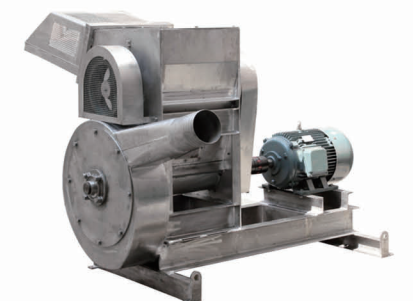
Tube/cube ice crusher

- Crush tube/cube ice
- Fast crushing speed, 50kgs per minute
- Stainless steel 304
- Top open mouth, easy to feed ice
- Easy replacement of rusher teeth
- Adjustable angle of crusher jaw



Ice crusher blower

- High quality ice crusher meets different ice crushing requirements
- The combination of ice crushing and ice blowing expands the application of crushed ice
- Modular design makes it easy and safe to operate
- Made by SUS304, the machine meets the international food standard requirements



ICE PACKING MACHINE

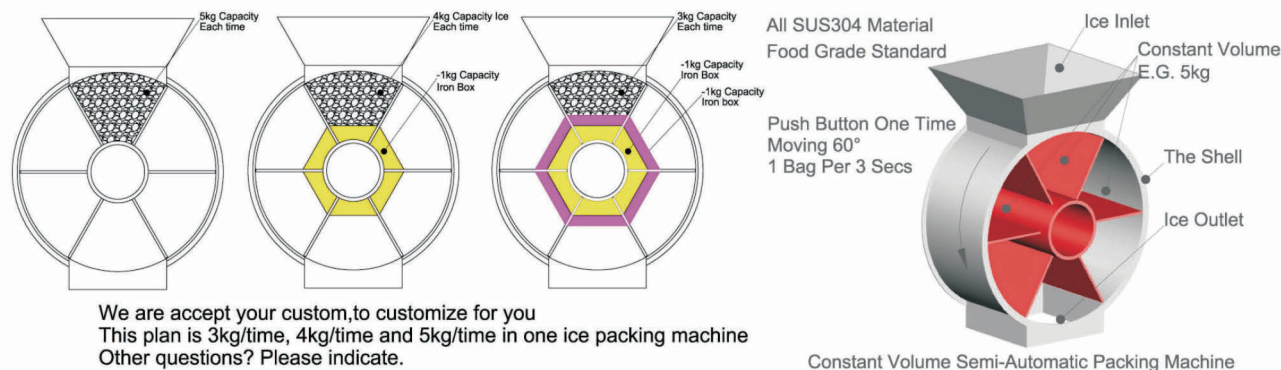
Semi-automatic Weighing Ice Packing Machine

- Simple structure
 - Easy operation
 - Durable and reliable
 - Convenient transportation
 - Suitable for small scale ice business
- Main configuration:
- Power control: Schneider (French)
 - Main alternator: Siemens (Germany)
 - Compressor: AIRTAC (Taiwan)
 - Sensor: Siemens (Germany)
 - Switch board: Schneider (French)



Semi-Auto Constant Volume Ice Packing Machine

- Simple structure
- Easy operation
- Durable and reliable
- Mobility
- Speedy ice packing with weight deviation less than 5%
- Suitable for small scale ice business
- Stainless steel structure optional



We accept your custom, to customize for you
This plan is 3kg/time, 4kg/time and 5kg/time in one ice packing machine
Other questions? Please indicate.

Fully-automatic Ice Packing Machine

Thermojinn Automatic Ice Packing Machine Units is composed of electric weighing machine, packaging machine, platform finished products belt conveyor. This unit can realize all the functions of feeding, weighing, packing filling, sealing, printing, punching (optional), counting etc and its server motor used for auto deviation correction. PLC control components uses international brands to ensure reliable performance and confirm to export standard. Pneumatic sealing (horizontal or vertical) makes machine running stable. Advanced high-tech design makes quite convenient to adjust, operate and maintain.

Fully-automatic Ice Packing Machine Features

- Full functions include ice weighing, packing, sealing and conveying
- Precision packaging
- Solid and reliable
- Stainless steel structure optional
- Suitable for large scale ice packing task, it is the best choice for medium and large ice plant



COLD ROOM

Application fields

Thermojinn cold room is widely applied in the business of biology, industry, military, food, aquatic products, florist, farming, medicine, logistics, hotels, restaurants, food processing and other industries.



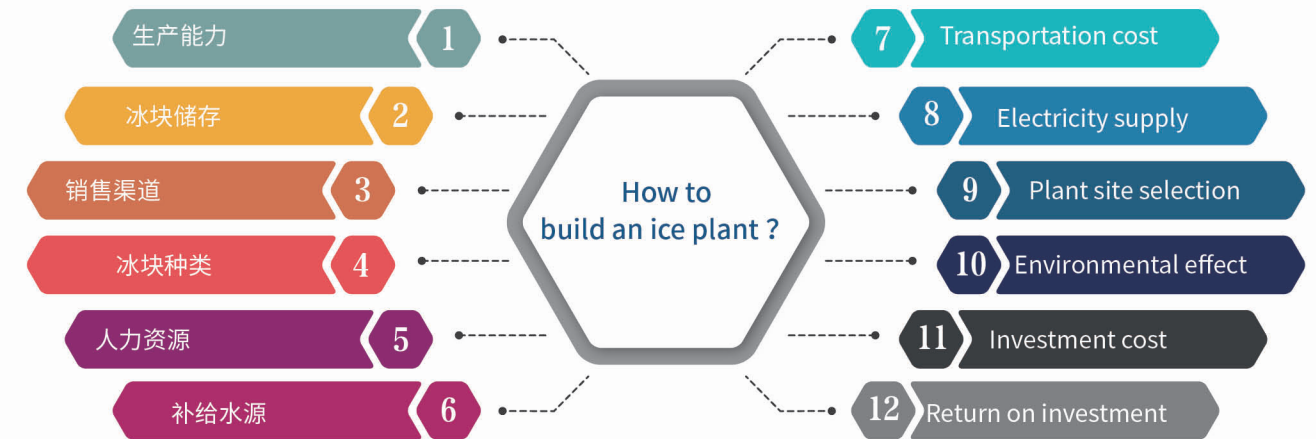
Cold room features

- 1.Imported European compressor, good performance, low noise and high reliability
- 2.World renowned brand refrigeration accessories guarantee longer service time
- 3.The automatic high-precision digital controller is easy to operate with high efficiency
- 4.Adjustable indoor temperature saves up to 30% electricity



Cold room type

- 1.Cold room panels type: 75mm, 100mm, 120mm, 150mm, 200mm;
- 2.Cold room panels material: Color steel or stainless steel 304;
- 3.Cold room door type: Hinged type door or sliding type door;
- 4.Temperature design type:
 - (1) Keep fresh with temperature: 5°C ~-5°C
 - (2) Keep chiller with temperature: -5°C ~-15°C
 - (3) Keep freezer with temperature: -15°C ~-25°C
 - (4) Blast freezer with temperature: -30°C ~-40°C



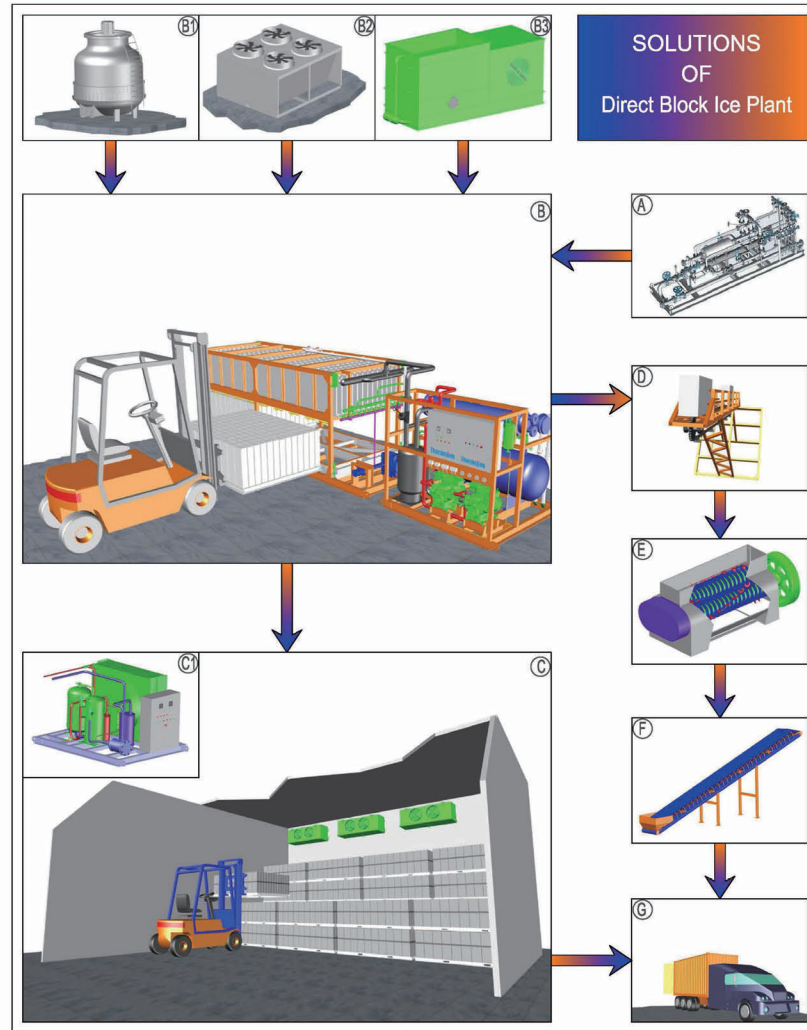
To assist the customer or refrigeration contractor in selection and design, the buyer should make available as much information as possible regarding local costs and site conditions, etc. The following lists the more important considerations:

01. Production capacity (how many tons of ice is required in 24 hours)
02. Ice storage place and capacity (where ice is stored)
03. Purpose for which ice is to be used and sales channels
04. Preferred type of ice, and in the case of block ice, the block size and weight have to be considered
05. Cost and availability of local labour including skilled
06. Cost of make-up water (if ice is not used for edible, river water and groundwater can be considered)
07. Cost of modified van with refrigeration system
08. Information on electricity supply: voltage, cycles, phase, maximum installed power, maximum starting current allowable. Cost of electricity/unit and details of any reduced rate for off-peak use
09. Details of any physical or planning restrictions of the intended site
10. Location try not to approach residential area because compressor, cooling tower and ice hoisting device could probably cause noise pollution
11. Cost of capital (interest)
12. Return on investment rate

From all the required information, Thermojinn provides you the best solution with lowest costs.

DIRECT COOLING BLOCK ICE PLANT SOLUTION

- A: RO system
- B: Direct cooling block ice plant
- B1: Cooling tower
- B2: Air-cooled condenser
- B3: Evaporative-cooled condenser
- C: Ice storage
- C1: Refrigeration unit for ice storage
- D: Block ice lifting conveyor
- E: Block ice crusher
- F: Crawler conveyor
- G: Cold chain van



Direct cooling block ice plant (B) can adopt three cooling methods, respectively are cooling tower system (B1), air-cooled condenser (B2), evaporative-cooled condenser (B3).

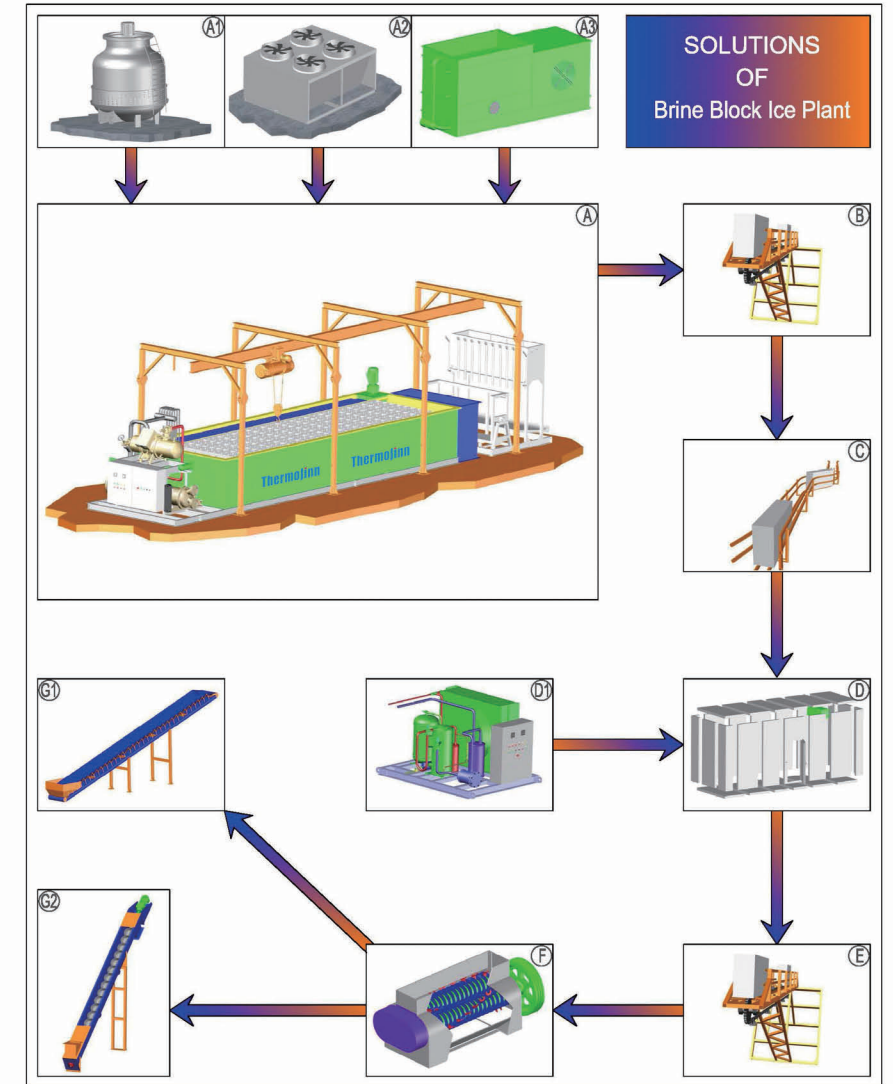
After ice block forms, the filling ice plate will be lowered down to the ground. Forklift can take the ice on the filling ice plate to the ice storage (C) very quickly and by replacing another filling plate to continue making ice.

When forklift moves ice, buckle rubber strip around the ice on the filling plate so that ice will not fall from it. Ice in the ice storage also could be taken away promptly by forklift to the cold chain van (G).

Direct cooling ice block also can be lifted via lifting conveyor (D) to the ice crusher (E), and then the crushed ice will be sent to the packing machine conveyed by crawler conveyor (F). After packaging, ice can be loaded into the cold chain van (G) for distribution.

BRINE COOLING BLOCK ICE PLANT SOLUTION

- A: Brine system block ice machine
- A1: Cooling tower
- A2: Air-cooled condenser
- A3: Evaporative condenser
- B: Block ice lifting conveyor
- C: Block ice sliding chute
- D: Ice storage
- D1: Refrigeration unit of ice storage
- E: Block ice lifting conveyor
- F: Block ice crusher
- G1: Crawler conveyor
- G2: Screw conveyor



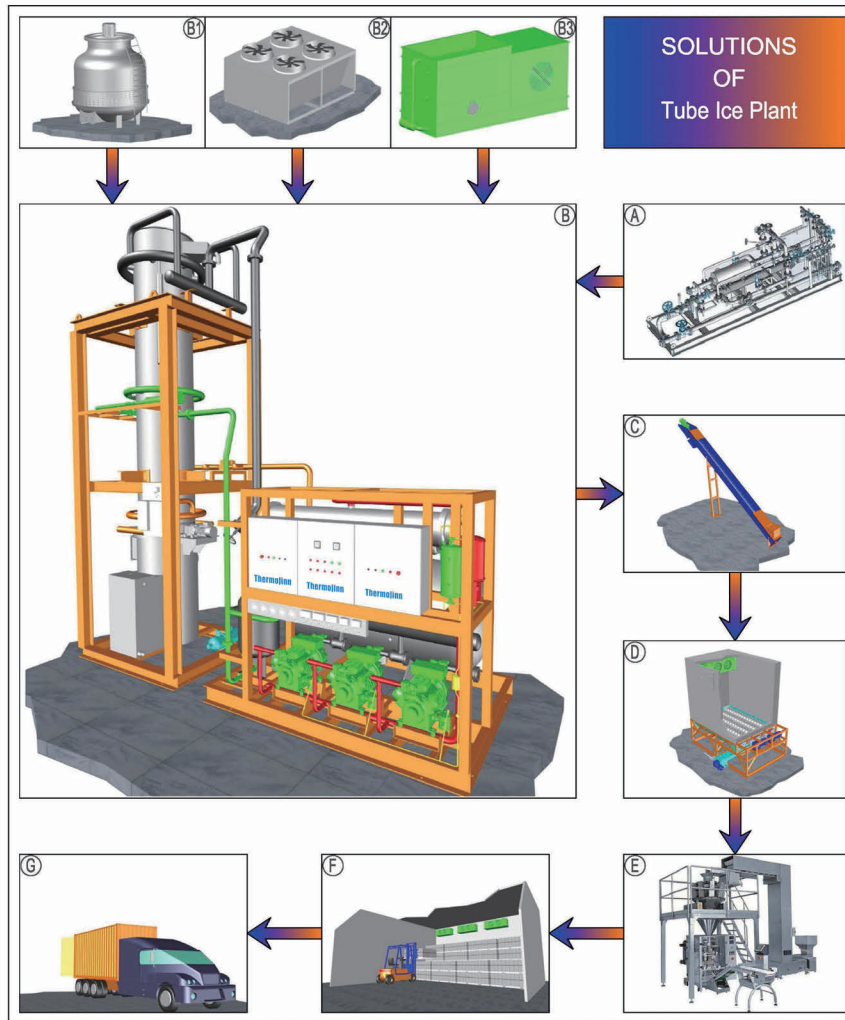
Brine system block ice machine (A) can adopt three cooling methods, respectively are cooling tower system (A1), air-cooled condenser (A2), evaporative-cooled condenser (A3).

Ice blocks forms and then will be lifted by block ice lifting conveyor (B) to a certain height. Ice could slide from block ice sliding chute (C) to the inside of ice storage (D), the refrigeration unit (D1) keeps cold room temperature at around -8°C , so the ice will not melt. When need to use ice block, customer can rely on another block ice lifting conveyor (E) to deliver ice to the truck.

When crushed ice block is in need, customer can start ice crusher (F), the crushed ice will be transported through crawler conveyor (G1) or screw conveyor (G2) to the truck.

TUBE ICE PLANT SOLUTION

- A: RO system
- B: Tube ice machine
- B1: Cooling tower
- B2: Air-cooled condenser
- B3: Evaporative-cooled condenser
- C: Screw ice conveying system
- D: Screw type automatic ice storage
- E: Multi-hoppers weighing and packing machine
- F: Ice storage
- G: Cold chain van



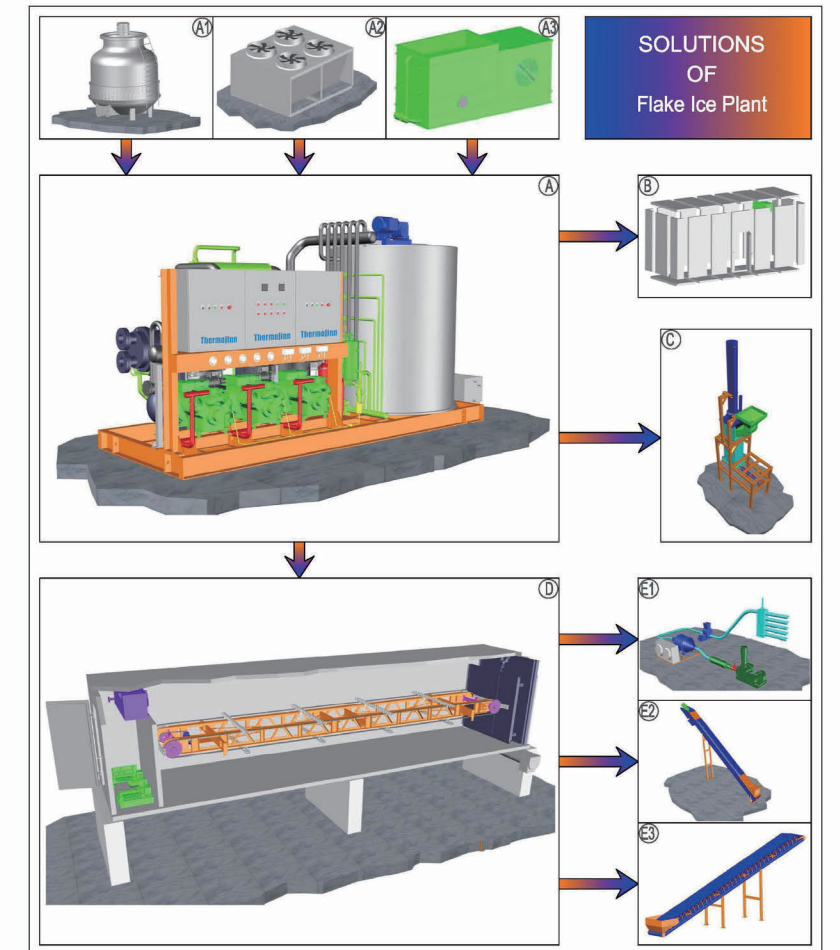
Ice could be directly eaten only after water be filtered and sterilized by RO system (A).
 Tube ice machine (B) has three cooling methods, respectively are cooling tower water-cooled system (B1), air-cooled system (B2), evaporative-cooled system (B3).

After produced by tube ice machine, ice tube will be transported by screw ice conveying system (C) to screw type automatic ice storage (D).

Screw type automatic ice storage works only as tube ice buffer storage and could store 1/2 of daily capacity ice production, thus ice could be packed every 12 hrs. It can also automatically deliver ice to the multi-hoppers weighing and packing machine (E) for precise packaging then ice packs can be stacked on the pallets. Forklift takes the pallets to the ice storage (F), when ice is in need pallet can be transferred directly to the cold chain van (G).

FLAKE ICE PLANT SOLUTION

- A: Flake ice machine
- A1: Cooling tower
- A2: Air-cooled condenser
- A3: Evaporative condenser
- B: Common ice storage
- C: Ice compactor
- D: Rake type automatic ice storage
- E1: Blowing ice conveyor
- E2: Screw ice conveyor
- E3: Crawler ice conveyor



Flake ice machine (A) can adopt three cooling methods, respectively are cooling tower system (A1), air-cooled condenser (A2), evaporative-cooled condenser (A3).

Common ice storage (B) is usually installed under flake ice machine. The ice flake produced by ice machine falls off into ice storage from the bottom of flake ice machine evaporator. This plan fit for small capacity flake ice plant.

Rake type automatic ice storage (D) is installed under flake ice machine. The ice flake produced by ice machine falls off into ice storage from the bottom of flake ice machine evaporator. The ice layer can be automatically paved smoothly by the rake meanwhile the height of rake will be adjusted automatically according to the actual ice level, finally automatically conveys ice to the ice outlet etc. The outlet to the rake type automatic ice storage could connect to blowing ice conveyor (E1), screw ice conveyor (E2), or crawler ice conveyor (E3) and send ice to needed place.

Flake ice can be directly put into ice compactor (C) to compress into various sizes of ice block.