

English

Snowkey

Ice

Tube Ice Machine

Snowkey

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Tube Ice Machine Application Fields

- Edible ice factory
- Port ice plant
- Coffee shop, bar, and hotel, etc
- Supermarket, convenience shop and restaurant, etc
- Aquatic products and food fresh preservation
- Logistic fresh preservation
- Chemical and concrete projects

- ①. Ice plant
- ②. Bar
- ③. Packaged ice
- ④. Chemical industry

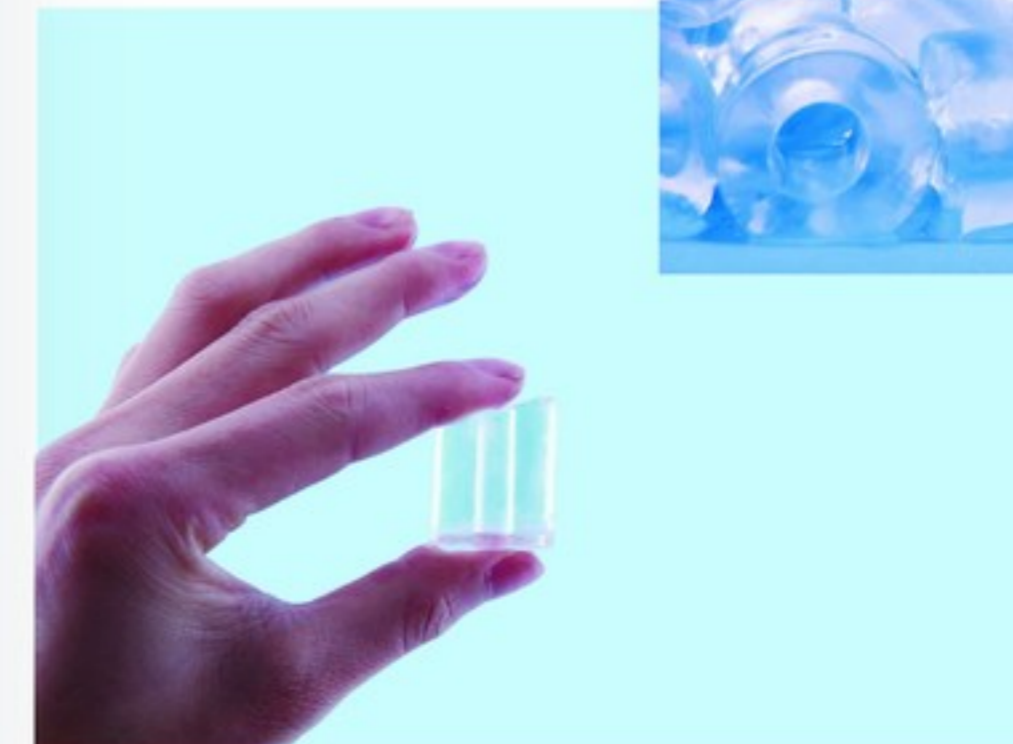


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Tube Ice Features

- Special ice making method to remove water impurity. The ice is hard and powderless
- The tube ice, in hollow tube shape, is transparent, sanitary and environment friendly
- Several dimensions for your option. Outer diameter: $\Phi 22$, $\Phi 29$, $\Phi 38$, $\Phi 41$ mm and custom to your requirement.



- Compared with flake ice, tube ice has longer melting time.
- Suitable for storing and transporting, and applicable for several fields.

Tube Ice Evaporator

- Direct evaporation with high efficiency
- Special water line design to guarantee ice quality (even thickness, beautiful tint, clean and sanitary) and water saving
- Special refrigeration loop design to improve refrigeration and ice doffing efficiency
- The only moving part is durable ice cutting system to keep run performance
- Efficient heat conducting pipe to ensure meet the sanitary requirement of the whole refrigeration process and greatly improve the system refrigeration efficiency



Tube Ice Machine

① High reliability, low failure

80% components are world famous brand. Through decades of research and practice, SNOWKEY products can run continuously without fault and keep good run and stable ice output even in ambient temp 5°C-40°C. Special designed machine can even allow normal run in most atrocious conditions(-5°C--+56°C).

② Scientific design and advanced processing technique

SNOWKEY designs and makes the best system according to customer's actual demand, with world leading technology and equipments. Each part is strictly tested before using.

③ Sanitary

Quality and sanitary tube ice maker is the aim of SNOWKEY. All parts contacting with water are made of stainless steel SUS304 or SUS316L and PE material. Tube ice produced is sanitary, meeting HACCP and PDA certificate requirement.



④ compressor condensing unit

④ Efficient and environment friendly

With stable continuous running, SNOWKEY tube ice maker realizes running without energy wasting. Compared with other ice making equipments, SNOWKEY boasts advantages of compact structure, small area, low production cost, high refrigeration effect and low energy consumption, etc.

④ T500 tube ice evaporator

⑤ Module design and simple maintenance

SNOWKEY tube ice maker has module design for simple maintenance on site. Tube ice maker can be installed inside a standard container, very suitable for frequent moving occasion.

⑥ Automatic control

PLC & HMI are adopted for SNOWKEY tube ice maker to realize one-key operation. Several sets of large system in parallel connection can be centrally controlled with remote control interface.



control cabinet



T200 tube ice machine

Tube Ice Machine Specifications

Model	T10	T30	T50	T100	T150	T200	T250	T300	T400	T500	T700
Nominal Ice Output - φ22(Tons/day)	1.04	3.12	5.2	10.4	15.6	20.8	26	31.2	41.6	52	72.8
Nominal Ice Output - φ29(Tons/day)	1	3	5	10	15	20	25	30	40	50	70
Nominal Ice Output - φ38(Tons/day)	0.9	2.7	4.5	9	13.5	18	22.5	27	36	45	68
Ambient Temp (°C)	33										
Water Supply Temp (°C)	20 (Water quality should be pure. Water filter and water softening is suggested for places with hard water quality)										
Necessary Refrigeration Capacity(kW)	6	18	30	60	90	120	150	180	240	300	420
Evaporator and Compressor Unit Connection Type	integrated				Integrated/ separate				separate		
Compressor Brand	Refcomp									Refcomp	
Compressor Nominal Horsepower	6	15	25	50	70	100	120	150	200	250	350
Condenser Type	air Cooling	air cooling or water cooling				water cooling or evaporative cooling					
Install Power (kW)	6.5	15	25	46	65	85	105	125	165	200	260
Running Power (kW)	4	9	16	32	45	64	80	96	125	150	210
Water Consumption (Tons/hr)	0.046	0.138	0.230	0.460	0.690	0.920	1.150	1.380	1.840	2.300	3.220
Water Cooling or Evaporative Cooling Condenser Water Recharge (Tons/hr)	-	0.2	0.3	0.6	1	1	1.3	1.6	2	2.5	3.5
Main Shaft Power (kW)	0.25	0.37	0.55	0.75	1.1	2.2	2.2	2.2	3	4	5.5
Water Pump Power (kW)	0.25	0.55	0.75	1.5	2.2	2.2	2.2	2.2	3	4	5.5
Running Weight (kg)	1240	2000	3500	4500	7000	10000	11500	13000	15000	17000	20000
Water Cooling Compressor Unit Dimension (mm)	-	1600x1250x2405 (ice maker included)	1680x1280x2565 (ice maker included)	2400x1550x3105 (ice maker included)	2320x1480x3040	2960x2100x2880	3380x2250x2880	3960x2250x3074	4810x2250x3074	3945x2000x2650 (liquid receiver excluded)	
Air Cooling Compressor Unit Dimension (mm)	1320x84x2093 (ice maker included)	1600x1250x2405 (ice maker included)	1680x1280x2565 (ice maker included)	2400x1550x3105 (ice maker included)	2320x1480x2200	-	-	-	-	-	
Evaporative Cooling Compressor Unit Dimension (mm)	-				-	2960x2100x2100	3380x2250x2343	3960x2250x2343	4810x2250x2343	3945x2000x2650 (liquid receiver excluded)	
Tube Ice Specification	φ 22、φ 29、φ 38 standard tube ice outer diameter, inner diameter 3mm-15mm. Besides, φ 35 and φ 41 could be accepted for non-standard design.										
Power Supply	Full electric system complying with the general international standard										
Limit Work Conditions (variable work conditions)	Ambient temp.: 5°C ~ 40°C, water supply: 0.5°C ~ 30°C										
Refrigerant	R22、R404A、R507A、R717										
Machine Structure Description	Except TIM10F, all air cooling condenser units are placed outside; the water cooling tower of water cooling system and the evaporative cooling unit of evaporative cooling system are placed outside. All machines larger than TIM100, for convenient transportation, is designed into separate types.										
Series and Model Description	T means tube ice maker, the number behind is the tonnage × 10, condensing type (A for air cooling, W for water cooling, and E for evaporative cooling), refrigerant (F for freon, A for ammonia)										

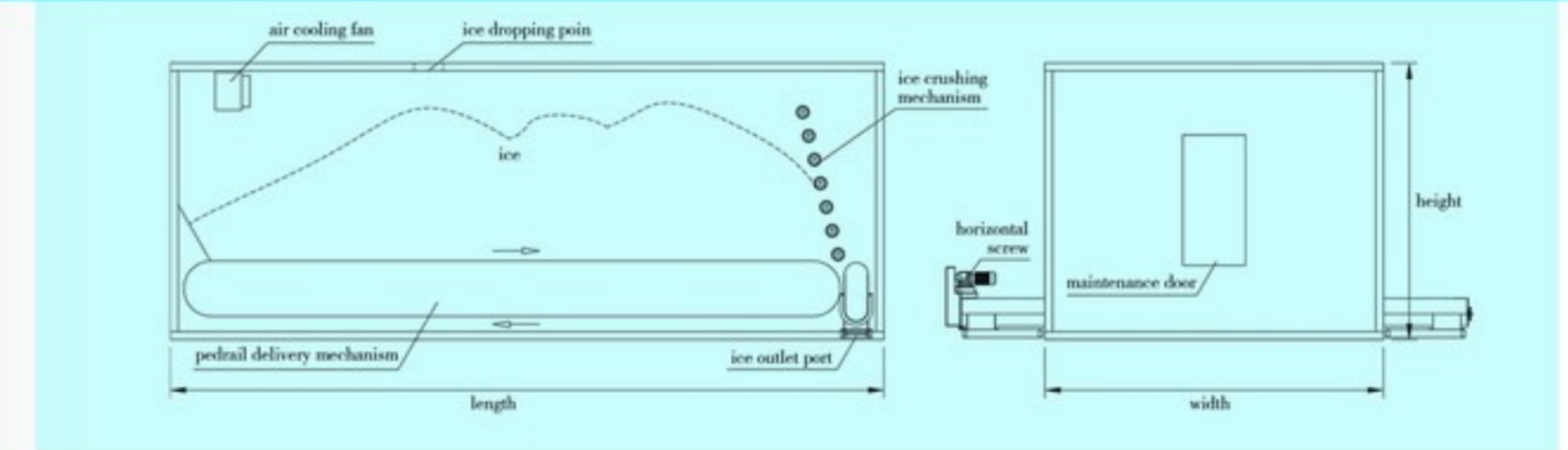
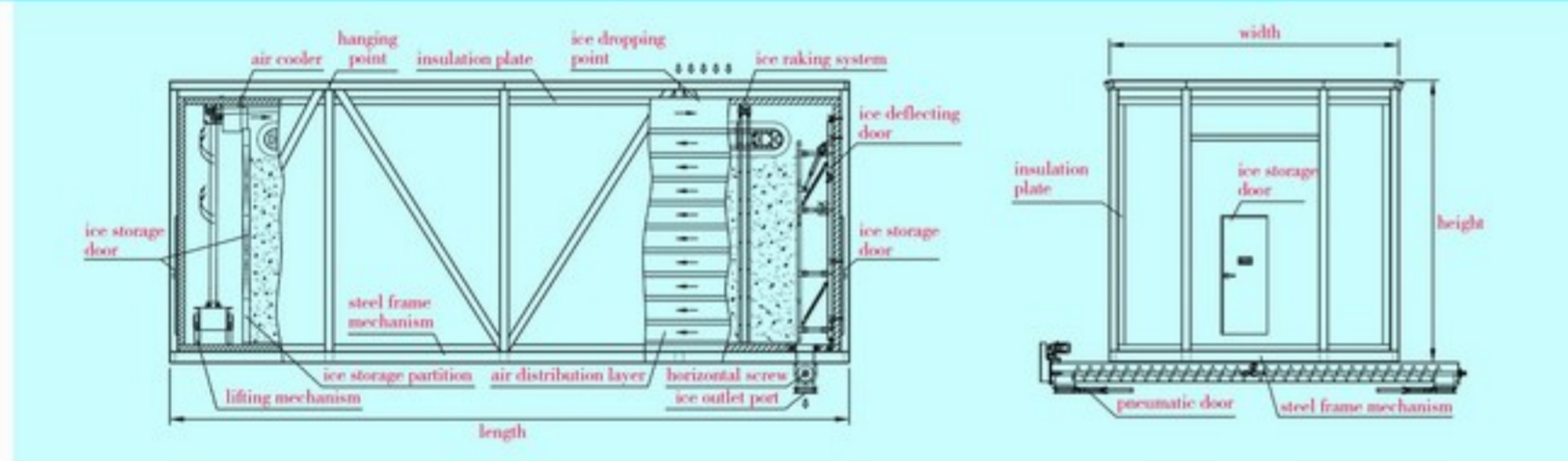
① Rake Method Automatic Ice Storage Bin

- The ice storage bin is specially designed with double-layer insulated layer. There is an air circulation layer around ice. Even when ice storage bin is full of ice, there is a cooling device equipped to keep the ice storage temperature at $-5^{\circ}\text{C}\sim-8^{\circ}\text{C}$, which keep the ice dry and soft.
- SNOWKEY automatic ice storage bin adopts heavy industrial components, which are all seriously selected, to ensure continuous run.
- Patented chain wheel design, and special material and technology to ensure continuous running, under strong working conditions.
- Ice raker has compact structure adopt high strength material.
- The hoister can adjust the height of the ice raker automatically to ensure the ice raker is always above the ice surface.
- Bottom adopts silica gel to keep from dripping during running.
- The control panel adopts PLC and touch screen, including short circuit protect, variable-speed drive for the ice raker elevation, humanized operation interface and alarm system.
- All electronic devices inside have more than IP55 protect class, to ensure long term continuous running in low temp.



② Pedrail-type Automatic Ice Storage Bin

- Pedrail-type ice storage bin designed in accord with rules of "first in and first out", that means priority of ice made out will be sent into ice storage in advance, the ice sent into ice storage at first will be sent out from the ice storage firstly during the period of usage, in case the ice freezing at bottom of the storage after the storage is working for long time.
- Inside the ice storage, the floor is pedrail-type conveying belt, moving ice continuously to the ice crushing system. Less contact with motion mechanism meets sanitary ice requirement.
- Adopts specially designed thermal insulation layer, equipped with independent cooling system, to keep temp in $1\sim 4^{\circ}\text{C}$. Long-term storage of tube ice, plate ice, can keep the temp in $-7\sim 15^{\circ}\text{C}$.
- It adopts heavy industrial components, which are all seriously selected, to ensure continuous run and low maintenance cost.
- The bottom adopts silica gel sealing, can keep long time running.
- The control system is equipped with PLC and touch screen. Reliable electric parts and safety design.
- The designed capacity of pedrail-type ice storage bin is 40~100ton.



Rake Method Automatic Ice Storage Bin Specifications

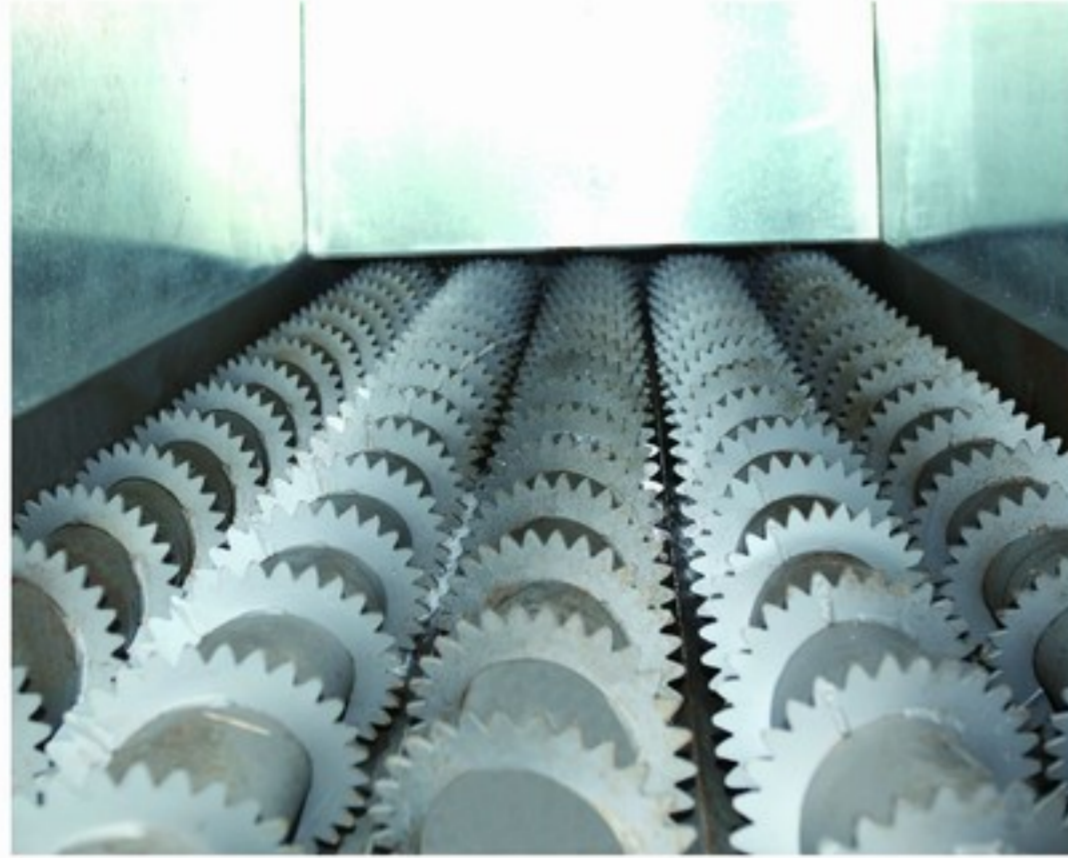
Model	Ice Storage Bin Capacity (Tons)	Type	Length (mm)	Width (mm)	Height (mm)	Net Weight (Tons)
AIS8	7	Containerized	6058	2438	2896	7.5
AIS18	15	Containerized	12192	2438	2591	12.3
AIS23	18	Containerized	12192	2438	2896	13.6
AIS35	35	Combined type	12192	3530	3715	20.4
AIS40	40	Combined type	12192	4130	3715	22.4
AIS50	50	Combined type	12192	4130	4195	23.3
AIS50S	50	Combined type	12192	5191	3565	25.3
AIS60	60	Combined type	12192	5191	3965	26.1
AIS65	65	Combined type	12192	5191	4195	26.6
AIS80	80	Combined type	12192	5191	4865	28.3
AIS70	70	Combined type	15000	5191	4195	38.1
AIS100	100	Combined type	15000	5191	4965	41.5
AIS120	120	Combined type	15100	5291	6005	53.5
AIS150	150	Combined type	15100	5291	6965	56.7

Technical Parameter of Pedrail-type Automatic Ice Storage Bin

Model	Ice storage capacity (Tons)	Type	Length (mm)	Width (mm)	Height (mm)	Net weight (Tons)
BIS40	40	Combined type	12470	4700	4540	19
BIS50	50	Combined type	12470	4700	5090	21
BIS60	60	Combined type	12470	4700	5640	24
BIS80	80	Combined type	12470	4700	6740	26
BIS100	100	Combined type	12470	4700	7840	39

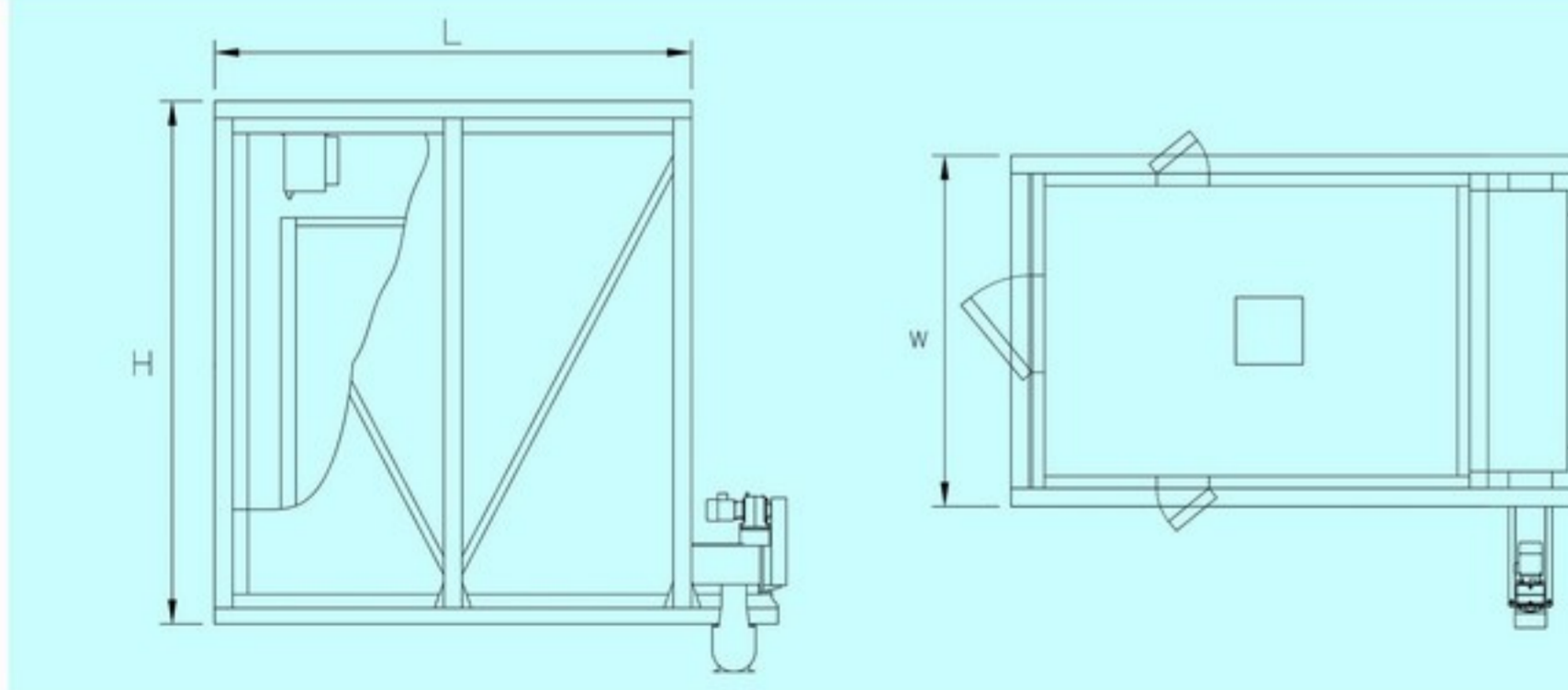
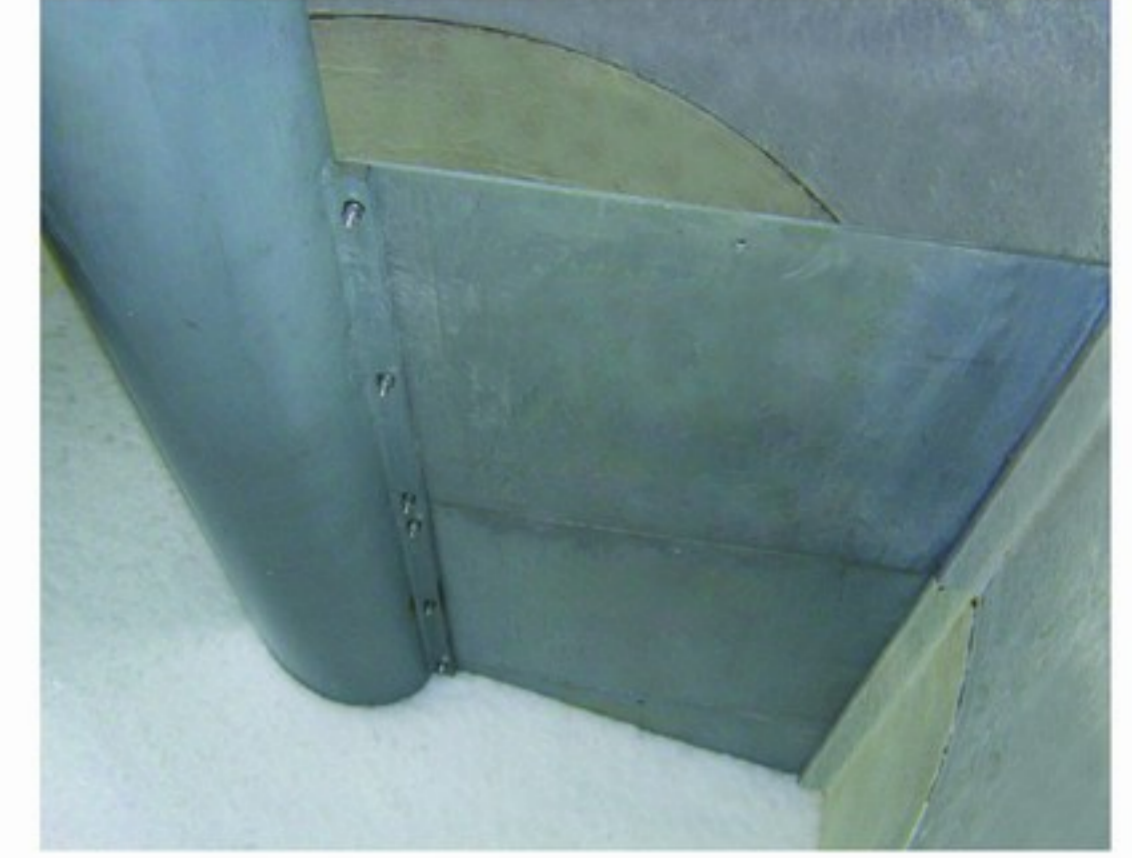
③ Screw Automatic Ice Storage Bin

- Designed specially for small capacity ice storage bin, high reliability.
- Unique screw ice crushing system to ensure not liable to ice block.
- Uniform ice storage, dynamic display for application and actual surplus amount of ice.
- Inside ice storage bin, material is all made of stainless steel to keep it from mechanical wear and contamination. Service life is long.
- Modular structure with factory prefabrication, can install and debug easily on site.
- Low fault rate and simple maintenance.
- Suitable for food, aquaculture and medical fields.



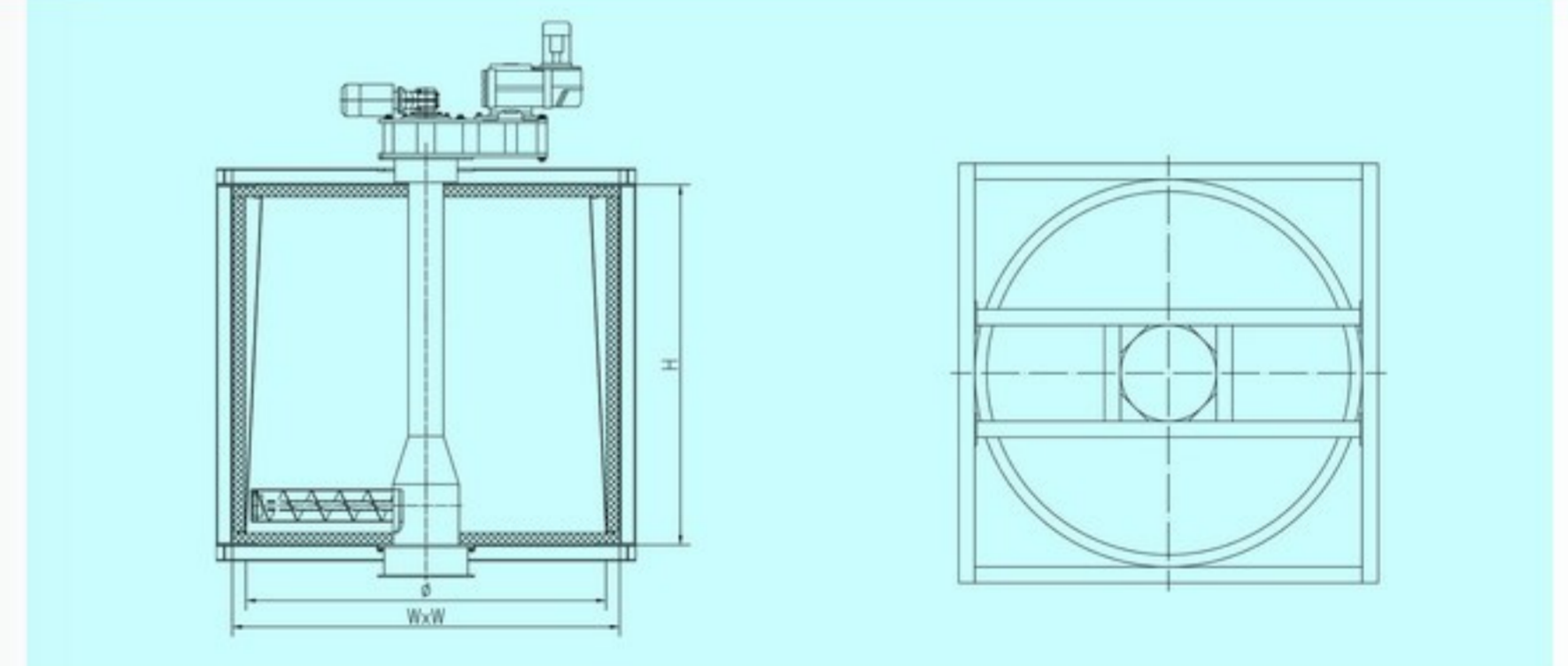
④ Orbital Automatic Ice Storage Bin

- The rotary style mechanical structure, ensure that there is no chance for ice jam.
- Cylindrical in shape, ensure the best insulation performance, and plate ice not easy to melt.
- No cooling system required and ice storing time can continuously last 5 days.
- Small footprint, ice storage rate can reach 95%, save space.
- Optimization design for ice outlet mechanism, with low fault rate and simple maintenance.
- Easy installation, can be put into use without special change for the ground.
- Suitable for food, aquaculture and medical fields.



Technical Parameter of Screw Automatic Ice Storage Bin

Model	Capacity (Tons)	Length (mm)	Width (mm)	Height (mm)
CIS2	2	3925	2085	2535
CIS3	3	3925	2085	3130
CIS5	5	3925	2085	4020
CIS10	10	3925	2895	4320



Technical Parameter of Orbital Automatic Ice Storage Bin

Model	Capacity (Tons)	Diameter (mm)	Height (mm)	W x W (mm)
DIS2	2	2247	1500	1900 X 1900
DIS3.5	3.5	2247	2100	2420 X 2420
DIS5	5	3100	1600	3100 X 3100
DIS10	10	3100	3000	3428 X 3428

Screw Delivery System

SNOWKEY screw ice delivery system boats advantages in short distance delivery of tube ice.

- Can supply hotgalvanized and stainless steel SUS304 open or tubetype screw machines.
- Screw ice delivery unit is the most effective way for vertical and horizontal delivery.
- Screw ice delivery unit can deliver the plate ice to two targets at the same time.
- A single screw delivery can be as long as 25m.



Technical Parameter of Screw Delivery System

Model	Delivery Capacity (Tons/hr)	Pipe Diameter (mm)	Obliquity (°)	A (mm)	B (mm)	Power (kW)
TSL10	10	250	0~+30	16259	15000	7.5
				13259	12000	5.5
				9259	8000	4
TSL15	15	323	0~+30	16259	15000	11
				13259	12000	7.5
				9259	8000	5.5
TSL20	20	323	0~+30	13259	12000	7.5
				9259	8000	5.5
TSL25	25	323	0~+30	13259	12000	7.5
				9259	8000	5.5

Power supply requirement: Full electric system complying with the general international standard.

Automatic Packing Machine

Snowkey automatic packing machine applies to the ice packing production line of flake ice, tube ice, plate ice and crushed ice.

- Accurate weighing, packing and sealing
- Packing speed up to 50 bags minute



Pneumatic Delivery System

- The system can ensure that the ice thus conveyed are dry.
- Comply with Haccp sanitation requirement.
- The transport distance can be freely adjusted and the maximum amount of delivery capacity is 30tons/hour
- The design is not liable to ice jam



Technical Parameter of Pneumatic Delivery System

Model	Delivery Capacity (Tons/hr)	Farthest Delivery Distance (m)	Maximum Vertical Height (m)	Pipe Diameter (mm)
ID6A	6	200	20	100
ID10A	10	200	20	100
ID12A	12	200	20	125
ID15A	15	180	20	150
ID18A	18	160	20	150
ID20A	20	160	20	150
ID25A	25	150	20	150
ID30A	30	150	20	185
ID45A	45	100	20	185

Power supply requirement: Full electric system complying with the general international standard



- Packing process complies to Haccp sanitation requirement
- Ice can be packed in such sizes as 2kg, 5kg, 7.5kg and 10kg..etc
- Can pack ice continuously compose the automatic production line with ice machine and delivery system



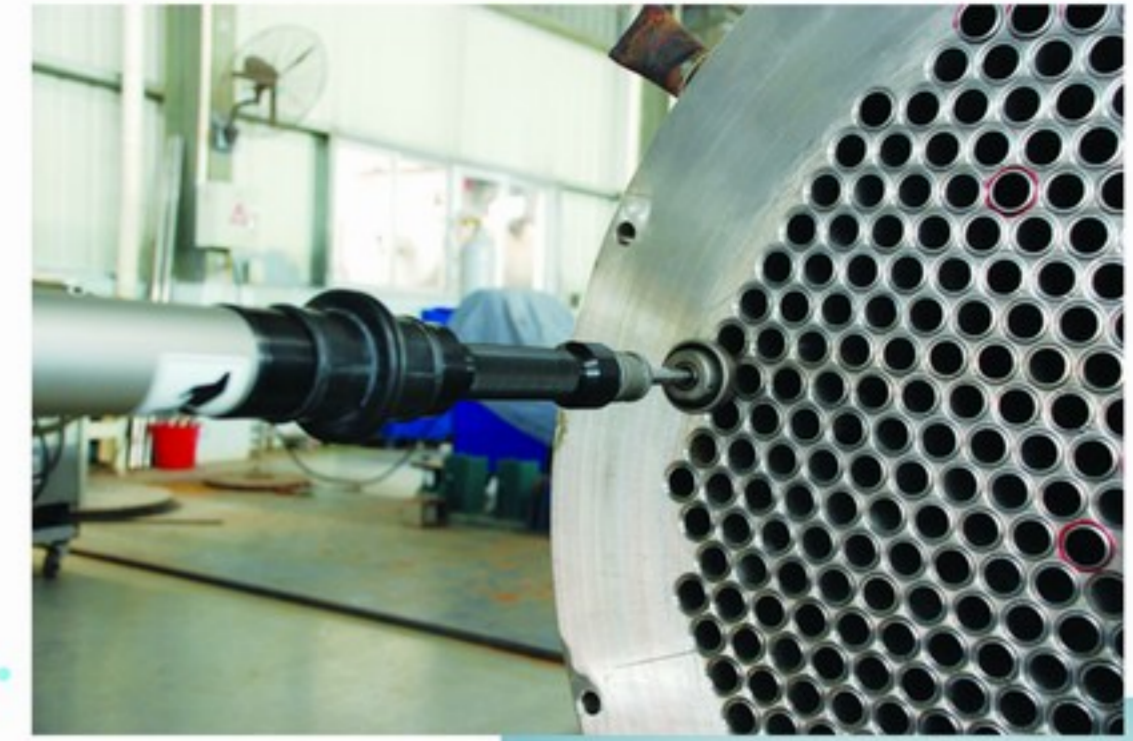
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Tube Ice Evaporator General Production Flow

To produce a qualified evaporator, the following procedures are necessary



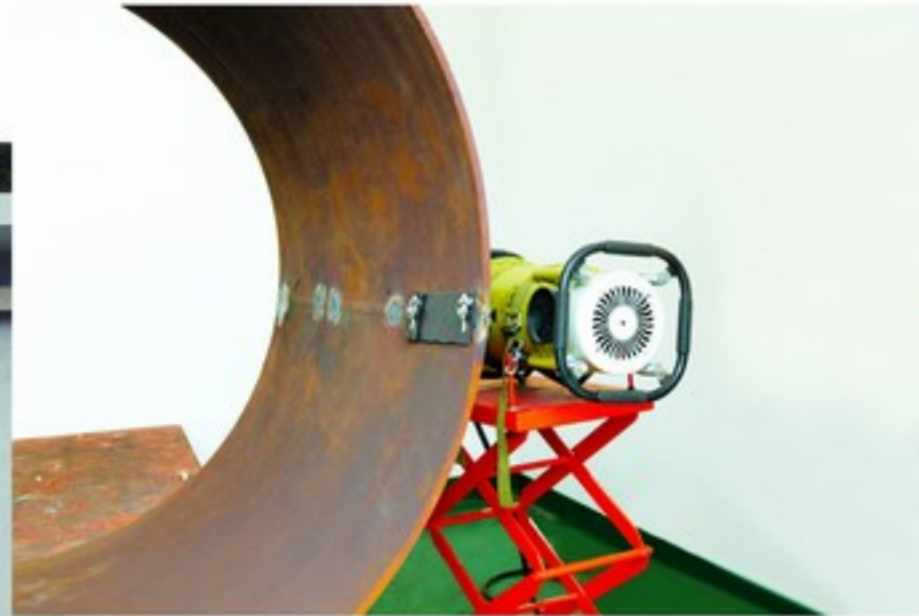
● CNC center



● Expand pipe



● Testing room outside view



● Testing equipment



● Automatic expand pipe device



● Auto submerged arc welder



● Full automatic evaporator head face welder