

Snowkey

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Snowkey

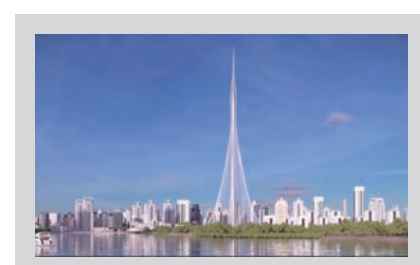
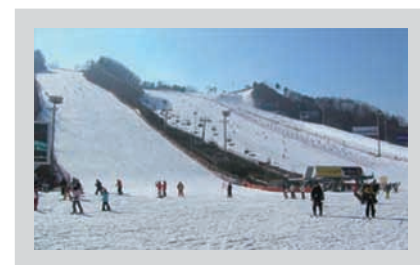
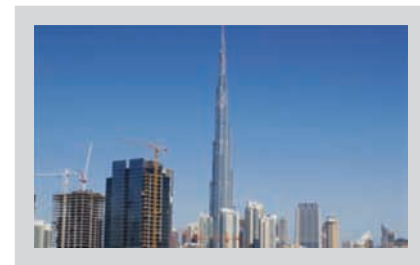
Take Snowkey, Take Better Ice!



SNOWMAN CO., LTD.

ICE-1701-02

CONTENT



- 2000 • SNOWKEY founded, 1st commercial flake ice machine launched.
- 2001 • 1st industrial flake ice machine 35 T/day launched.
- 2002 • 1st factory in Binhai Industrial District put into use, 1st fully automatic ice storage and delivery system launched.
- 2003 • Enter chemical, food, mining and hydraulic industry.
- 2004 • Modular concrete cooling system launched and enter Middle East market.
- 2005 • Became China largest commercial and industrial ice maker manufacturer, and participated in the construction of Buri Khalifah Tower in Dubai (The world's tallest building).
- 2006 • Awarded National Torch Plan Project & Fujian high-tech enterprise.
- 2007 • Unique supplier of concrete cooling product for national nuclear power project.
- 2008 • Awarded as the organizing and compiling team for national ice maker standard
- 2009 • Restructuring into joint stock enterprise, became one of the largest suppliers for concrete cooling system in Mid-east
- 2011 • SNOWKEY rated as China Famous Trademark and public listed on the Shenzhen Stock Exchange in December.
- 2013 • Factory in Liren Industrial District put into use, Postdoctoral Scientific Research Workstation founded and got ASME certification.
- 2014 • Flake ice machine and tube ice machine got PED certification. Ice sales turnover comes out in front.
- 2017 • CO₂ ice-making system launched into the market, air-cooled aggregate-cooling system put into mass production.
- 2018 • To be continue... .. **Snowkey**



Application

01



Full Automatic Ice Making System Diagram

02



Flake Ice Machine

03



Tube Ice Machine

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Plate Ice Machine

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Block Ice Machine

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Slurry Ice Machine

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Containerized Ice-Making System

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Automatic Ice Storage and Conveying System

17



Project

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Supermarket,
fruit & vegetable
preservation
(Flake ice, slurry ice)



Concrete cooling
(flake ice, tube ice,
chilled water)



Edible ice
(plate ice, tube ice)



Agricultural processing
(flake ice, chilled water)



Medical engineering
(flake ice, tube ice)



Bakery
(flake ice)



Dye & pigment chemical
engineering
(flake ice, tube ice,
plate ice, chilled water)



Mine cooling
(flake ice, chilled water)



Ski resort
(flake ice)



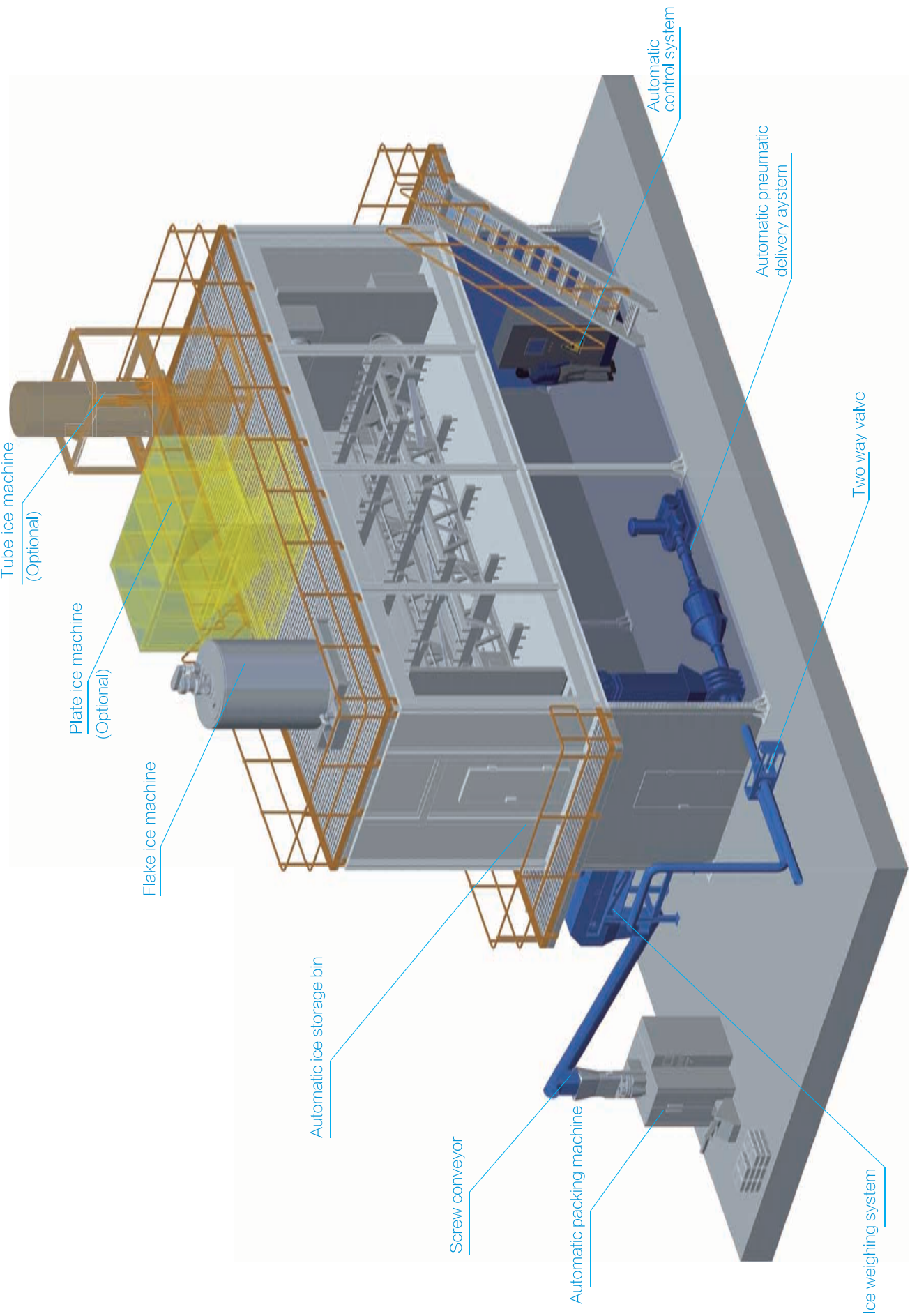
Environmental engineering,
Pipe cleaning
(flake ice, slurry ice)



Cold storage project
(plate ice, slurry ice)



Meat processing
(flake ice, chilled water)



Flake Ice Machine

- Designed and manufactured under the pressure vessel standard, thus making this product durable, safe and reliable.
- Produce flake ice continuously at low temperature. Low temperature ice and high efficiency.
- Optimized system design ensures the machine work stably with a low failure rate.
- Environment friendly refrigerant achieves environment protection and energy efficiency.
- Complete product series to meet different application.
- High supercooling, dry ice, even thickness and ultra- high output.
- Unattended operation.
- CE(PED)\ ASME certified, high quality level.
- Containerized design for extreme working conditions and stable operation.
- Optimized layout to make perfect.



Model code

F

xxx

W

P

I

J-1

Power

1 380V/3P/60Hz

2 400V/3P/50Hz

3 400V/3P/60Hz

4 415V/3P/50Hz

5 415V/3P/60Hz

6 440V/3P/60Hz

7 460V/3P/60Hz

8 220V/3P/60Hz

9 200V/3P/50Hz

10 440V/3P/50Hz

380V/3P/50Hz

Ice blade type (J-Rake blade, None-Spiral blade)

Layout (I-Integrated type, A-Split type)

Refrigerant (P-R507A; A-R717; S-R404A; Z-Others, None-R22)

Condensing type (W: Water cooling, A: Air cooling, E: Evaporative cooling S-None)

Ice output code=nominal ice output (t/24h)*10 (adding 0 before ice output code volume code when the ice production is less than 1t/24h)

Type (F-fresh water flake ice macine, FIM -flooded type flake ice machine, SFM-seawater flake ice machine for ship environment , SF-seawater flake ice machine for land-using ,FIP-containerized ice machine.

Technical parameters for fresh water ice machine

Unit		Nominal condition				Performance parameters							
Model	Condensing type	Ambient temperature (℃)	Water supply temperature (℃)	Condensing temperature (℃)	Evaporating temperature (℃)	Nominal production (t/24h)	Necessary refrigeration (kcal/h)	Power (kW)	Ice outlet dimension (mm)	L (mm)	W (mm)	H (mm)	Net Weight (kg)
F050A	air cooling	25	16	40	-20	0.5	2374	2.1	375	1200	735	639	210
F075A					-20	0.75	3560	2.5	375	1200	735	684	230
F10A					-20	1	4747	4	375	1200	735	825	250
F12A					-20	1.2	5697	4.5	375	1410	935	825	260
F16A					-20	1.6	7596	7.9	510	1490	1180	935	350
F20A					-20	2	9494	9.1	510	1490	1180	1009	450
F25A					-20	2.5	11868	10.2	510	1490	1180	1069	480
F30A	air cooling	33	20	43	-22	3	14241	10.5	510	1840	1530	1165	800
F40A					-22	4	18988	18.5	510	2100	1700	1382	1100
F50A					-22	5	23735	23.5	710	2685	1750	1471	1600
F60A					-22	6	28482	26.5	710	2685	1750	1471	1800
F80A					-22	8	37976	35	920	3015	1760	1746	2400
F100A					-22	10	47470	46	920	3682	1950	2006	3000
F150A					-22	15	75952	65	1277	3840	1850	2260	4500
F30W	water cooling	33	20	38	-20	3	14241	11.5	510	2000	1000	1184	1100
F40W					-20	4	18988	18.5	510	2100	1100	1184	1200
F50W					-20	5	23735	23.5	710	2685	1100	1471	1500
F60W					-20	6	28482	28.5	710	2685	1100	1471	1600
F80W					-20	8	37976	36	920	3135	1160	1746	2200
F100W					-20	10	47470	46	920	3216	1160	2006	3000
F150W					-20	15	75952	70.5	1277	3840	1750	2260	4500
F200W					-22	20	94940	64	1420	4255	1950	2954	5500
F250W					-22	25	118675	86.5	1790	5116	2050	3137	7500
F300W					-22	30	142410	102	1790	5116	2050	3277	8000
F350W					-22	35	166145	125	2150	5830	2360	3331	10000
F400W					-22	40	189880	172	2150	6200	2360	3661	11000
F500W					-22	50	237350	228	2150	7055	2360	4327	13000
F600W					-22	60	284820	255	2150	7055	2360	4327	14000

Note: The flake ice evaporator can be sold separately.

Model and specification is subject to change without notice

Power: standard 380V/3P/50Hz

Application condition: ambient temp.5℃~40℃(When the air-cooled condenser is placed indoors, the ambient temperature ≤35℃), water temp 0℃~35℃

Refrigeration oil: must provided or approved by Snowman

Cooling water conditions: the quality of cooling water must meet the requirements of GB50050 Industrial Recycling Cooling Water Treatment Regulation.

Cooling water inlet temperature: 15℃~32℃

Special conditions: please contact Snowman for detail

Ice thickness: 1.5~2.2mm, special thickness can be customized

Refrigerant: R717、R22 、R404A 、R507A、R407F

Seawater (brine) flake ice machine

The seawater flake ice machine is divided into two types: shipping vessel use and land use.

The user extracts seawater directly from the sea to make ice and pumps condenser.

The icing surface is made of stainless steel and equipped with plate blade and scraping blade, to ensure high efficient ice harvesting.

The design and manufacture of brine ice flake machines have taken the corrosion of seawater, the swaying of ships, long cruising duration, and adverse weather conditions into consideration.

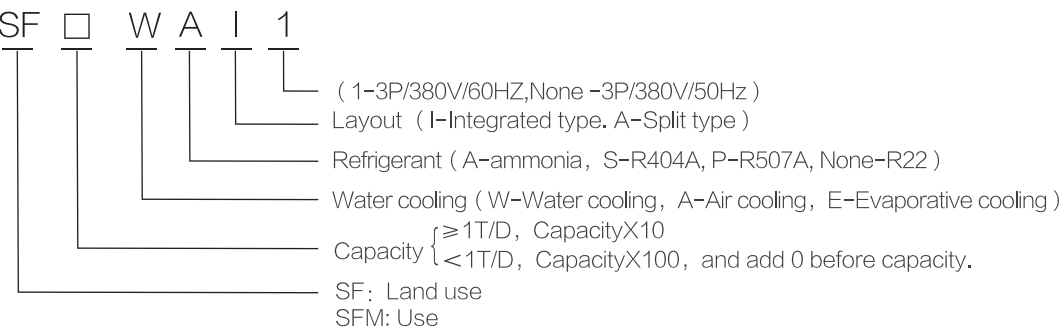


Features of brine ice flake machine

- The ice flakes thickness up to 2.5mm, dry and ice temperature -10℃.
- The material of evaporator is stainless steel and anti-corrosion aluminum alloy, using life up to 18 years.
- Special ice scraping and patented ice blade allow to make ice normally even max.35℃ swaying.
- Compact design, efficient refrigeration system is simple.
- Unattended operation. One key control, automatic monitoring without regular maintenance.



Model code



Technical parameters for seawater shipping vessel use flake ice machine

Unit		Nominal condition				Performance parameters							
Model	Condensing type	Ambient temperature (℃)	Water supply temperature (℃)	Condensing temperature (℃)	Evaporating temperature (℃)	Nominal production (t/24h)	Necessary refrigeration (kcal/h)	Power (kW)	Ice outlet dimension (mm)	L (mm)	W (mm)	H (mm)	Net Weight (kg)
SFM075W	water cooling	33	20	38	-28	0.75	3560	3.3	385	1250	950	1007	600
SFM10W					-28	1	4747	4.8	385	1250	950	1007	800
SFM16W					-28	1.6	7596	6.5	460	1420	1150	1305	900
SFM20W					-28	2	9494	9.5	460	1420	1150	1368	1000
SFM30W					-28	3	14241	17	460	1500	1200	1430	1200
SFM50W					-28	5	23735	23.2	780	1900	1420	1820	1800
SFM60W					-28	6	28482	31.1	780	2690	1420	1875	2200

Technical parameters for seawater land use flake ice machine

Unit		Nominal condition				Performance parameters							
Model	Condensing type	Ambient temperature (℃)	Water supply temperature (℃)	Condensing temperature (℃)	Evaporating temperature (℃)	Nominal production (t/24h)	Necessary refrigeration (kcal/h)	Power (kW)	Ice outlet dimension (mm)	L (mm)	W (mm)	H (mm)	Net Weight (kg)
SF075W	water cooling	33	20	38	-28	0.75	3560	3.3	375	1250	950	1007	600
SF10W					-28	1	4747	4.8	375	1250	950	1007	750
SF16W					-28	1.6	7596	6.5	510	1420	1150	1150	850
SF20W					-28	2	9494	9.5	510	1420	1150	1150	950
SF30W					-28	3	14241	17	510	1500	1200	1220	1150
SF40W					-28	4	18988	19.2	510	1500	1430	1220	1250
SF50W					-28	5	23735	23	710	1900	1420	1450	1800
SF60W					-28	6	28482	30.6	710	1900	1420	1450	2200
SF80W					-28	8	37976	38.5	920	3216	1600	1812	3000
SF100W					-28	10	47470	46	920	3300	1600	2006	3200
SF150W					-28	15	75952	61	1277	3650	1750	2260	4500
SF200W					-28	20	94940	87.5	1420	4255	1950	2954	5500
SF250W					-28	25	118675	99	1790	5116	2050	3137	7500

Note: The seawater flake ice evaporator can be sold separately.

Parameters based on: 3P/380V/50Hz power supply, R22 system, water supply pressure 1.5bar
Power: standard 380V/3P/50Hz.
Application condition: ambient temp.5℃~40℃(When the air-cooled condenser is placed indoors, the ambient temperature≤ 35℃), water temp.0℃~35℃.
Refrigeration oil: must provided or approved by Snowman
Cooling water conditions: the quality of cooling water must meet the requirements of GB50050 Industrial Recycling Cooling Water Treatment Regulation.
Cooling water inlet temperature: 15℃~32℃
Special conditions: please contact Snowman for detail
Ice thickness:1.5~2.2mm, especial thickness can be customized
brine concentration: at least 2.9%
Refrigerant: R717、R22、R404A、R507A、R407

Tube ice machine

- Special water system design ensures better ice quality, even thickness, transparency and purity.
- The ice maker designed and manufactured according to the pressure vessel standard, solid, safe and reliable.
- Efficient heat transfer tubes are adopted to optimize the design of the refrigeration system ,contributing to stable operation and few failures.
- Dual loop hot gas ice peeling, fast ice harvest,weak system impact, higher efficiency and safety.
- All components contact with ice are made of high-quality stainless steel to meet safety and hygiene standards.
- Unattended operation.
- Several options for different application.
- CE(PED)\ ASME certified, high quality level.
- Stainless steel buffer screw conveyor, automatic storage and packaging.
- Ice packing production line, for your option.



Model code

T

xxx

W

P

I

22-1

Power

1 380V/3P/60Hz 2 400V/3P/50Hz 3 400V/3P/60Hz 4 415V/3P/50Hz 5 415V/3P/60Hz 6 440V/3P/60Hz 7 460V/3P/60Hz 8 220V/3P/60Hz 9 200V/3P/50Hz 10 440V/3P/50Hz 380V/3P/50Hz

Tube diameter (22, 29, 35, 38, 41) mm

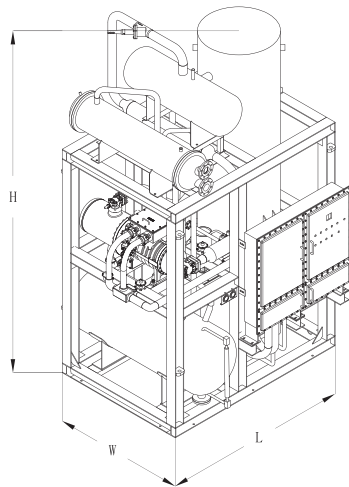
Layout (I-Integrated type, A-Split type)

Refrigerant (P-R507A; A-R717; S-R404A; Z-Others , None-R22)

Condensing type(A-Air cooling, W-Water cooling, E-Evaporative cooling, S-None)

Ice output code=nominal ice output (t/24h)*10 (adding 0 before ice output code volume code

Ice machine type: tube ice machine



Technical parameters for tube ice machine

Unit		Nominal condition		Performance parameters						
Model	Condensing type	Condensing temperature (℃)	Evaporating temperature (℃)	Nominal production (t/24h)	Necessary refrigeration (kcal/h)	Power (kW)	L (mm)	W (mm)	H (mm)	Net Weight (kg)
T10A	Air cooling	43	-15	1	5160	5.7	1300	1020	1910	1000
T30A				3	15480	14.0	1600	1660	2445	2000
T50A				5	25800	22.7	1711	1280	2565	3000
T100A				10	51600	42.5	2110	1345	3155	4000
T30W	Water cooling	38	-15	3	15480	13.6	1600	1250	2445	2100
T50W				5	25800	22.6	1711	1280	2565	3100
T100W				10	51600	40.4	2288	1550	3155	4150
T150W				15	77400	60.9	2335	2015	4080	6000
T200W				20	103200	78.1	2620	2450	4290	6500
T250W				25	129000	94.9	2850	2440	4610	7500
T300W				30	154800	119.4	2850	2485	4900	8500
T400W				40	206400	151.6	2300	2100	2545	6000
							2175	2100	5800	5000
T500W				50	258000	179.4	3100	2105	2565	7000
	2200	2100	6550				6000			
T150E	Evaporative cooling	40	-15	15	77400	60.7	2335	2015	4080	6000
T200E				20	103200	86.8	2620	2450	4290	6500
T250E				25	129000	95.4	2850	2440	4610	7500
T300E				30	154800	117.9	2850	2485	4900	8500
T400E				40	206400	167.1	①2300	2000	2050	5500
							③2175	2100	5800	5000
T500E				50	258000	200.9	①2300	2105	2150	6500
							③2200	2100	6550	6000
T700E				70	361200	305	①3170	1480	2265	4000
							②2250	2150	7000	15000
	③5700	1450	2800				9000			

Note: The tube ice evaporator can be sold separately.

In the table, 40ton, 50ton and 70ton ice machine are split type.

①: compressor package size; ②: liquid receiver size; ③ice making evaporator size.

The parameters in the above table are based on: R22 as refrigerant, ambient temperature 33℃, wet-bulb temperature: 25℃, water supply temperature 20℃, water supply pressure 1.5 bar.

Power: standard 380V/3P/50Hz.

Applicable conditions: ambient temperature 5℃~40℃ (air-cooled condenser indoors when the ambient temperature ≤ 35℃), water temperature should be 0℃~35℃

Refrigeration oil: must provided or approved by Snowman

Cooling water conditions: the quality of cooling water must meet the requirements of GB50050 Industrial Recycling Cooling Water Treatment Regulation

Cooling water inlet temperature: 15℃~32℃

Special conditions: please contact Snowman for detail

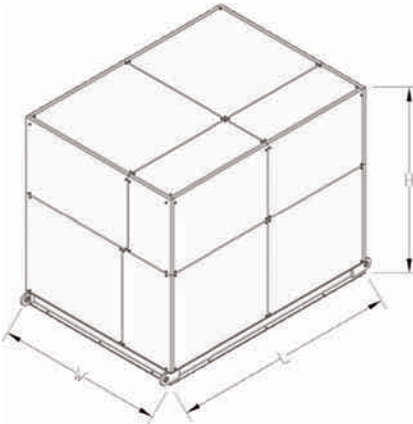
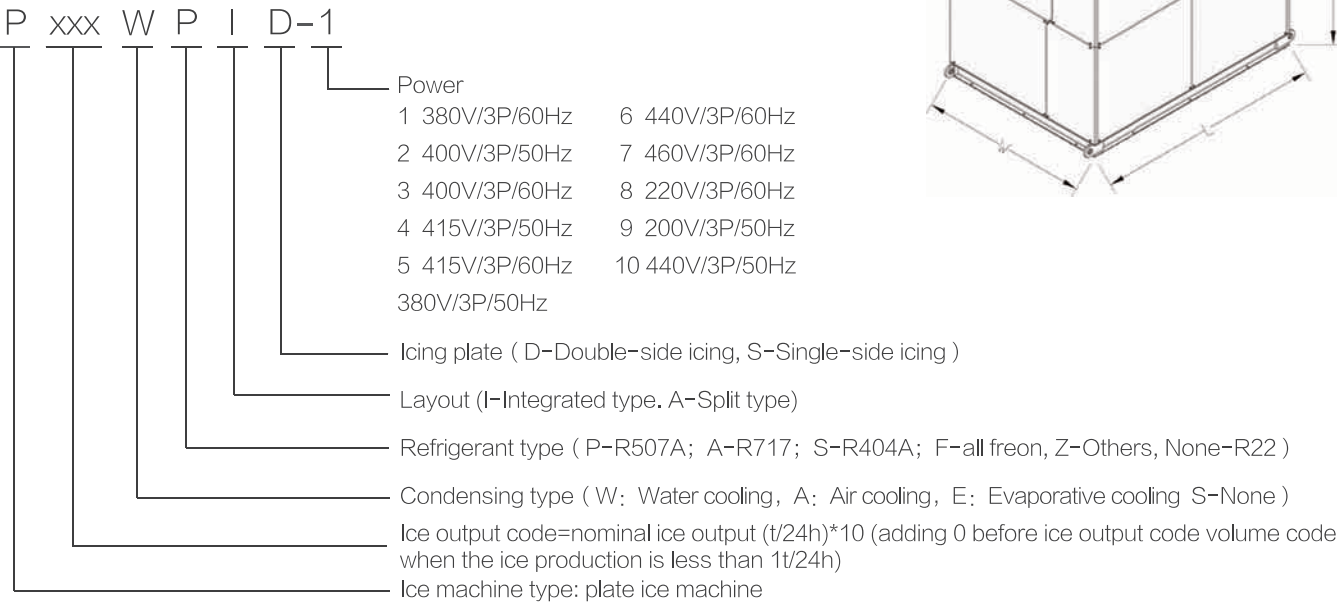
Refrigerant:R22 、 R404A 、 R507A、 R717

Plate ice machine

- Stainless steel dual ice making surface plate, sufficient ice output .
- The ice thickness is adjustable from3~20mm to meet different application occasions.
- Special flow channel design, compared with similar products,higher ice making efficiency,more energy-saving.
- Hot gas ice peeling, faster ice harvest,no secondary pollution.
- Openable evaporator design, ice making plate.
- The materials in contact with the ice are made of stainless steel, complied with HACCP requirements.
- Unique refrigeration system design ensures stable operation under different working conditions.
- Simplified structure, less moving parts and convenient maintenance.
- The framework is made of steel welded hot dip galvanized structure, resistant to corrosion and long service life.
- Unattended operation.



Model code



Technical parameters for plate ice machine

Unit		Nominal condition				Performance parameters								
Model	Condensing type	Ambient temperature (℃)	Water supply temperature (℃)	Condensing temperature (℃)	Evaporating temperature (℃)	Nominal production (t/24h)	Nexessary refrigeration (kcal/h)	Power (kW)	Ice outlet dimension(LxW) (mm)		L (mm)	W (mm)	H (mm)	Net Weight (kg)
P10A	Air cooling	33	20	45	-18	1	5590	5.5	1113	97	1590	980	1775	1200
P20A						2	11180	12			1680	1680	2000	1400
P30A						3	16770	21	1410	131	2150	2000	2240	2100
P50A						5	27950	34			2850	2200	2450	2500
P80A						8	44720	50			3000	2200	2450	3000
P100A						10	55900	57			3240	2200	2480	3300
P150A						15	83850	77			①2050	1550	1730	1900
						②2400	2200	2480			2000			
P200A						①2200	1900	1880	2100					
	②3260	2200	2500	2600										
P30W	Water cooling	33	20	38	-18	3	16770	20	1410	131	1600	1800	2240	1600
P50W						5	27950	33			1800	2200	2450	2800
P80W						8	44720	51			3000	2200	2450	3200
P100W						10	55900	53			3240	2200	2480	3800
P150W						15	83850	72			①2050	1550	1730	2300
						②2400	2200	2480			2000			
P200W						①2200	1900	1880			2500			
						②3260	2200	2500			2600			
P250W						①2500	2200	1880			3000			
P300W	②3500	2200	2500	3300										
	①2700	2200	2000	3500										
						30	167700	135			②4720	2200	2500	4200
P150E	Evaporative cooling	33	20	40	-18	15	83850	77	1410	131	①2050	1550	1730	1900
P200E						20	111800	102			②2400	2200	2480	2000
											①2200	1900	1880	2100
											②3260	2200	2500	2600
P250E						25	139750	117	①2500	2200	1880	2400		
									②3500	2200	2500	3300		
P300E	30	167700	136	③1410	131	①2700	2200	2000	2800					
						②4720	2200	2500	4200					

Note: The plate ice evaporator can be sold separately.

The parameters in the above table are based on: R507A/R404A system, plate ice thickness 10~12mm, water supply pressure 1.5bar

①compressor condensing unit size.②plate ice evaporator size.③P300 plate ice machine ice outlet size 1410*131, 2pcs.

Power: standard 380V/3P/50Hz.

Applicable conditions: ambient temperature 5℃~40℃ (air-cooled condenser indoors when the ambient temperature ≤ 35℃), water temperature should be 0℃~35℃.

Refrigeration oil: must be provided or approved by Snowman.

Cooling water conditions: the quality of cooling water must meet the requirements of GB50050 Industrial Recycling Cooling Water Treatment Regulation.

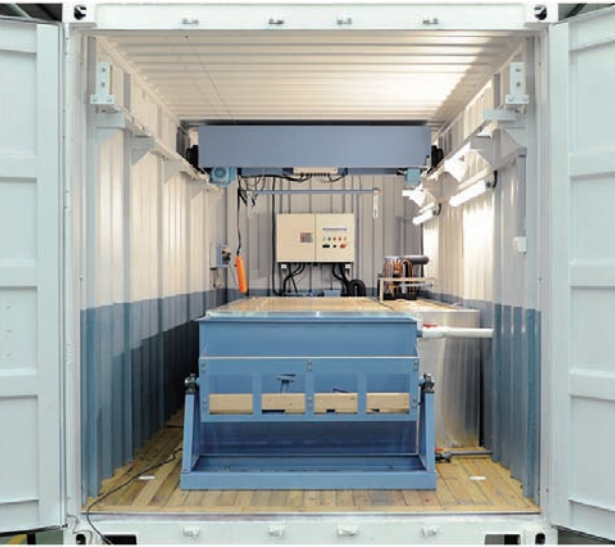
Cooling water inlet temperature: 15℃~32℃.

Special conditions: please contact Snowman for detail.

Refrigerant: R22、R404A、R507A、R717

Containerized brine block ice machine

- ISO standard 20’ or 40’ container, easy to move.
- No need plant construction, small footprint.
- Plug-ready.
- Super compact structure owing to Integrated refrigeration and control system.
- Special evaporator coil structure, efficient heat exchange.
- Two-track ice-carrying crane with large load capacity is more stable and reliable.
- The ice-making brine tank is made of imported special galvanized plate, resistant to corrosion, long life.
- Thick epoxy paint at the bottom of the working face, waterproof and corrosion resistant.
- Large-size ice machine can be customized.



Technical parameters for brine block ice machine

Unit		Nominal condition		Performance parameters						
Model	Condensing type	Condensing temperature (°C)	Evaporating temperature (°C)	Nominal production (t/24h)	Necessary refrigeration (kcal/h)	Power (kW)	L (mm)	W (mm)	H (mm)	Net Weight (kg)
B50*B	Air cooling	38~43	-15	5	30100	28	12192	2438	2896	7500
B75*B	Water cooling			7.5	45150	36	12192	2438	2896	8500
B100*B	Evaporative cooling			10	60200	52	12192	2438	2896	9000

Note: Block ice plant > 15 ton/day be customized.
Power: standard 380V/3P/50Hz.
Applicable conditions: ambient temperature 5℃~40℃(When the air-cooled condenser is placed indoors, the ambient temperature ≤ 35℃), water temperature should be 0℃~35℃.
Refrigeration oil: must provided or approved by Snowman.
Cooling water conditions: the quality of cooling water must meet the requirements of GB50050 Industrial Recycling Cooling Water Treatment Regulation.
Cooling water inlet temperature: 15℃~32℃.
Special conditions: please contact Snowman for detail.
Refrigerant: R22 、 R404A 、 R507A、 R407F

Direct-cooling block ice machine

- Modular type, contact constructure, plug ready.
- Hygienic aluminum plate evaporators to make the block ice clean and hygienic.
- Optimize the design of the refrigeration system, stable operation and less failure.
- Hot gas defrosting, efficient and fast, weak system impact, excellent safety.
- Unattended operation.



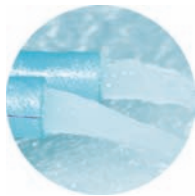
Technical parameters for direct-cooling block ice machine

Unit		Nominal condition		Performance parameters						
Model	Condensing type	Condensing temperature (°C)	Evaporating temperature (°C)	Nominal production (t/24h)	Necessary refrigeration (kcal/h)	Power (kW)	L (mm)	W (mm)	H (mm)	Net Weight (kg)
BD10A	Air cooling	43	-15	1	5590	4.8	3200	1650	1350	4000
BD25A				2.5	13975	13	4300	2050	1450	9000

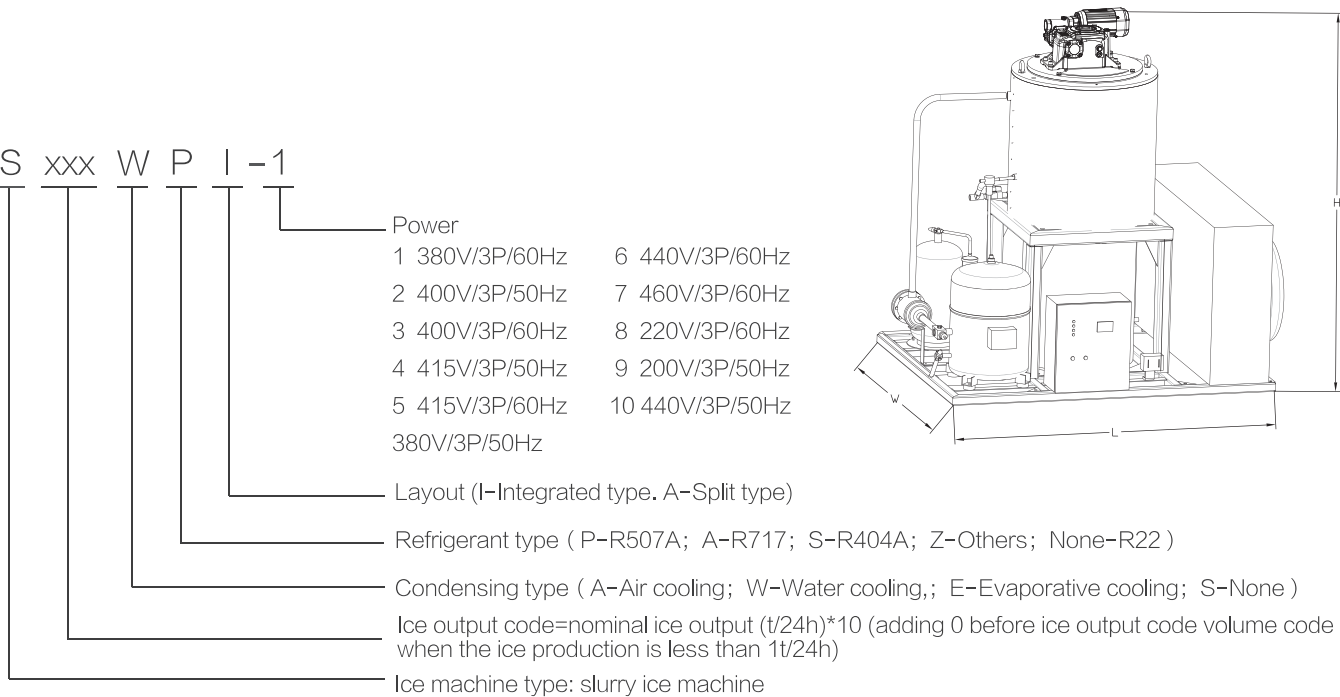
Note: The direct cooling block ice machine with daily output of 5–20 tons can be supplied.
The parameters in the above table are based on: R22 system, ambient temperature 33℃, wet-bulb temperature: 25℃, water supply temperature 20℃, water supply pressure 1.5 bar.
Standard block ice size: 215 × 100 × 280mm, 5kg/block.Please contact us for other non-standard customized sizes.
Power: standard 380V/3P/50Hz.
Applicable conditions: ambient temperature 5℃~40℃(When the air-cooled condenser is placed indoors, the ambient temperature ≤35℃), water temp 0℃~35℃
Refrigeration oil: must provided or approved by Snowman
Cooling water conditions: the quality of cooling water must meet the requirements of GB50050 Industrial Recycling Cooling Water Treatment Regulation
Cooling water inlet temperature: 15℃~32℃
Special conditions: please contact Snowman for detail
Refrigerant: R22 、 R404A 、 R507A、 R407F

Slurry ice machine

- Semi-closed ice maker with good visibility, easy to adjust, clean and maintain.
- The ice maker designed and manufactured according to the pressure vessel standard , safe and reliable.
- Compared with similar products of other companies, Cargor evaporation surface.
- Applicable to almost all sea areas, from sea water or brine min, sufficient output 2.9% concentration.
- Compared with similar products of other companies, the evaporation temperature is higher, the efficiency is higher, and the energy-saving is better.
- The ice maker is not easy to freeze stuck by adopting unique operating technology with high reliability.
- The whole machine is designed with corrosion-resistant components, longer service life.
- Compact structure, ideal for small spaces such as cabins on the ship.
- The control panel is made according to electrical standards, corrosion-resistant and safe.
- We can provide a comprehensive solution according to different occasions.
- Automatic control, unattended operation.



Model code



Technical parameters for slurry ice machine

Unit			Standard rate of ice crystal	Nominal production (t/24h)	Necessary refrigeration (kcal/h)	Power (kW)	L (mm)	W (mm)	H (mm)	Net Weight (kg)
Model	Condensing type	Ice-making media								
S50WI	Water cooling	Seawater or brine at 2.9% concentration	40%	5	7739	5.5	1420	1200	1500	800
S100WI				10	15477	9.8	1600	1200	1650	1100
S150WI				15	23216	19.2	2350	1100	1470	1800
S200WI				20	30955	25	2720	1160	1650	2400
S250WI				25	36893	31.25	2800	1600	2000	2600
S375WI				37.5	54170	42.2	3050	1750	2260	3000

Note: The parameters in the above table are based on: R22 system, ambient temperature 33℃, wet-bulb temperature: 25℃, water supply temperature 16℃, water supply pressure 1.5 bar;

Water-cooled integrated units as standard and it can also be designed into air-cooled or split units according to user need requirement;

Based on the land use model, with the ice storage cabin on the ship, it can be designed and manufactured for non-standard shipping vessel use;

Power: standard 380V/3P/50Hz.

Applicable conditions: ambient temperature 5℃~40℃(When the air-cooled condenser is placed indoors, the ambient temperature ≤ 35℃), water temperature should be 0℃~35℃

Refrigeration oil: must provided or approved by Snowman

Cooling water conditions: the quality of cooling water must meet the requirements of GB50050 Industrial Recycling Cooling Water Treatment Regulation

Cooling water inlet temperature: 15℃~32℃

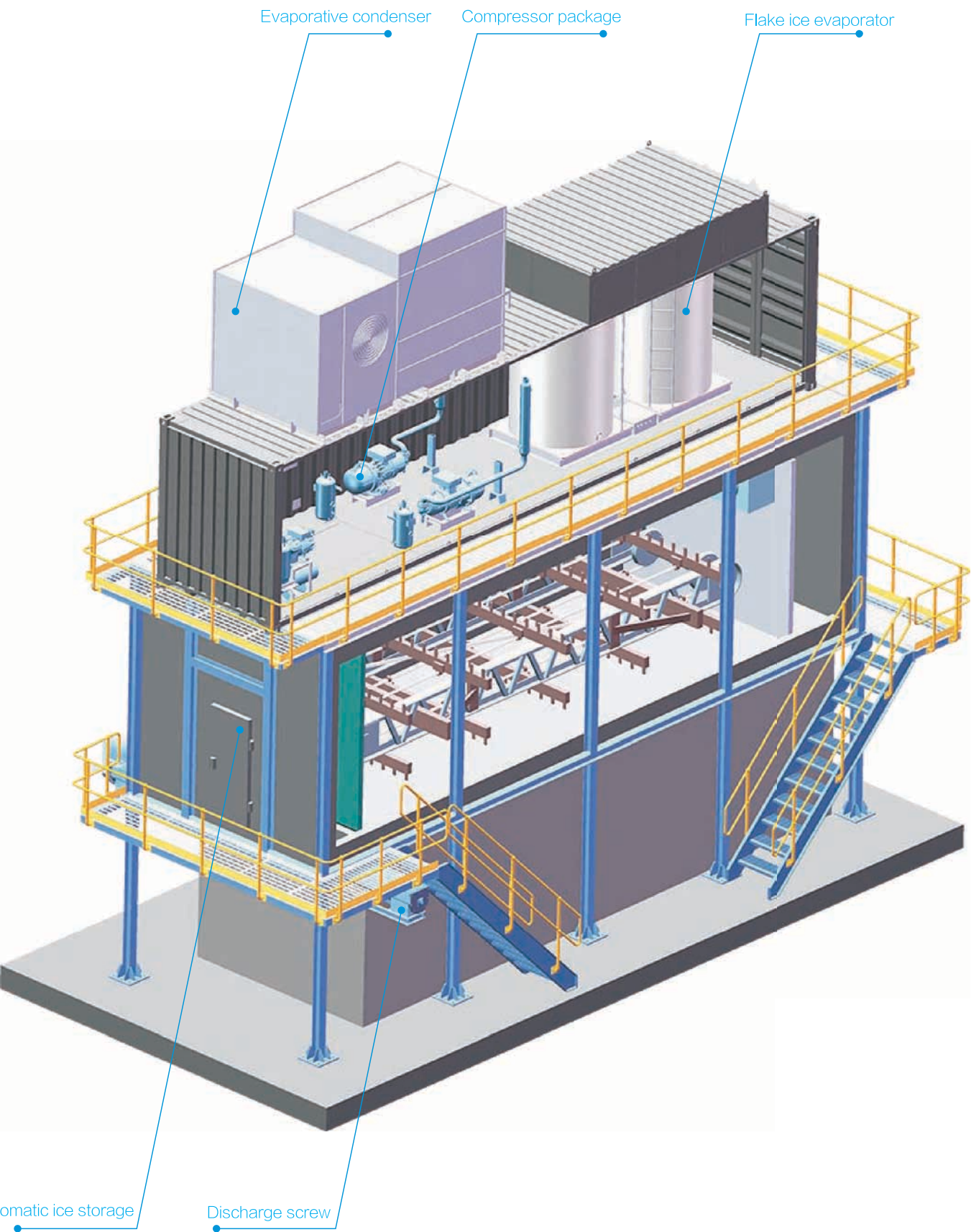
Special conditions: please contact Snowman for detail

Refrigerant: R22 、 R404A 、 R507A、 R407F

Slurry ice storage tank

Model	SIT1	SIT2	SIT4	SIT7
Nominal storage	1m³	2m³	4m³	7m³
Dimension (mm)	Φ 1200 × 1350	Φ 1200 × 2000	Φ 1500 × 2500	Φ 1500 × 4000
Water(ice) inlet dimension	DN50	DN50	DN65	DN65
Ice outlet dimension	DN25	DN40	DN40	DN40
Insulation	Rubber insulation		Polyurethane foam insulation	
Mixer's motor power	0.55kW	0.75kW	1.1kW	1.5kW
Power specification	380V/50HZ/3P			

Note: The above is the standard type ice storage tank, including internal circulation pump, ice output pump and mixing device.



Containerized ice-making system

- The container- type ice making system adopts a modular combination design, easy to move and maintain.
- The optimized design guarantees the continuous operation of the SNOWKEY internal scraping flake ice machine without any wasted energy.
- High efficient, low failure rate energy saving. The equipment can withstand more than 26,000 hours of trouble-free continuous operation.
- The equipment has excellent adaptability, keeping good operation and normal ice production at ambient temperature of 5℃~40℃.Specially designed models even can operate normally in the harshest conditions (-30℃~60℃) .
- Flake ice, plate ice and tube ice also can be container-style design, which facilitates the full automation of ice production, storage and delivery.



Design conditions

- Max ambient temperature:60℃
- wet-bulb temperature: 29℃
- Water inlet temperature: 20℃
- Ice outlet temperature: -7℃
- Voltage: 400V
- Phase: 3
- frequency:50Hz
- Equipment running time: 24hrs
- Refrigerant: R22/R404A/R717

Standard Configuration of FIP

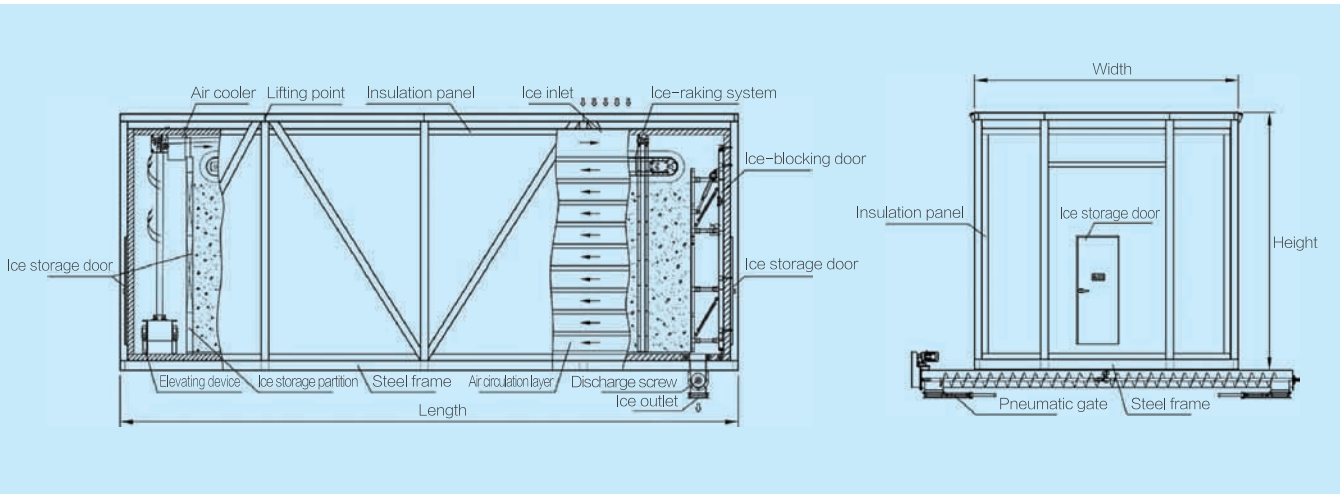
1. Standard 20/40' new container,white paint outside,inside is decorated with air conditioner, illumination and aluminum alloy floor.
2. Refrigeration compressor unit is semi- hermetic screw or piston compressor.
3. Evaporative condenser with double speed fan.
4. Flake ice evaporator with water tank and water pump.
5. Necessary oil cooling system and oil return system.
6. Necessary refrigeration system control protective elements and refrigeration pipeline connection.
7. The interface with the ice storage for operation and alarm signal connection.
8. Electrical control components and electric box with full automatic control.
9. Factory test before delivery.

Containerized Flake Ice Plant System Specifitions

Model	FIP15	FIP20	FIP25	FIP30	FIP35	FIP40	FIP45	FIP43	FIP52	FIP63	FIP73	FIP83	FIP93	FIP103
Daily Capacity (Tons/day)	15	20	25	30	35	40	45	43	53	63	73	83	93	103
Water Supply (Tons/hr)	0.631	0.842	1.052	1.263	1.473	1.683	1.894	1.810	2.230	2.651	3.072	3.493	3.914	4.335
Necessary Refrigeration Capacity(kW)	74	98.6	123.3	148	172.6	197.3	222	212.1	261.4	310.8	360.1	409.4	458.8	508.1
Installed Refrigeration Capacity(kW)	122	150.8	169.8	208.6	227.2	254.7	285.6	278.3	316.3	393.9	431.1	486.1	547.9	678.5
Installed power (kW)	78.54	100.84	118.89	130.14	155.04	185.39	200.39	187.54	216.74	241.24	289.04	347.54	380.54	440.54
Running power (kW)	69.14	88.88	100.15	119.15	129.67	145.85	161.55	163.24	183.2	222.8	242.24	272.84	306.64	414.44
COP(kW/kW)	1.765	1.697	1.695	1.751	1.752	1.746	1.768	1.705	1.726	1.768	1.780	1.782	1.787	1.637
Water Consumption (L/hr)	294	366	413	5504	547	616	690	677	770	953	1039	1177	1324	1702
Container Specification	20'	40' HQ	40' HQ	40' HQ	40' HQ	40' HQ	40' HQ	40' HQ	40' HQ	40' HQ	40' HQ	40' HQ	40' HQ	40' HQ

① Automatic rake-type ice storage

- The ice storage bin is specially designed with double insulated layers. There is an air circulation layer around the ice. Even when ice storage bin is full of ice there is a cooling device equipped to keep the ice storage temperature at -5℃~-8℃, to keep the ice dry and crisp.
- SNOWKEY ice storage bin adopts heavy industrial components, which are all seriously selected, to ensure continuous run, long lifespan and low maintenance cost.
- Patented chain and wheel design, and special material and manufacture technology to ensure continuous fault-free running, under strong working conditions.
- The ice raker of auto ice storage bin, made from high strength special material has compact structure and stable continuous run.
- The hoister can adjust height of ice raker automatically to ensure ice raker is always above the ice surface.
- The bottom is sealed with silica gel no dripping during long term running. It will prolong the service life of the equipment.
- All electronic devices inside the ice storage bin >IP55 protect grade, to ensure long term continuous running in low temperature conditions. Extremely low failure rate, simple operation and maintenance for long time using.

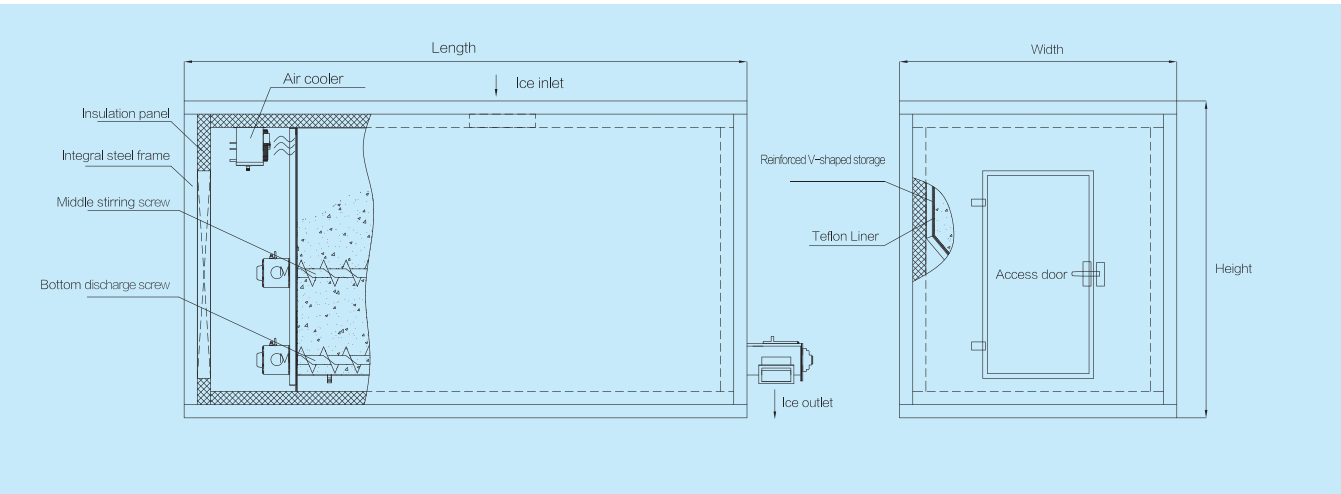
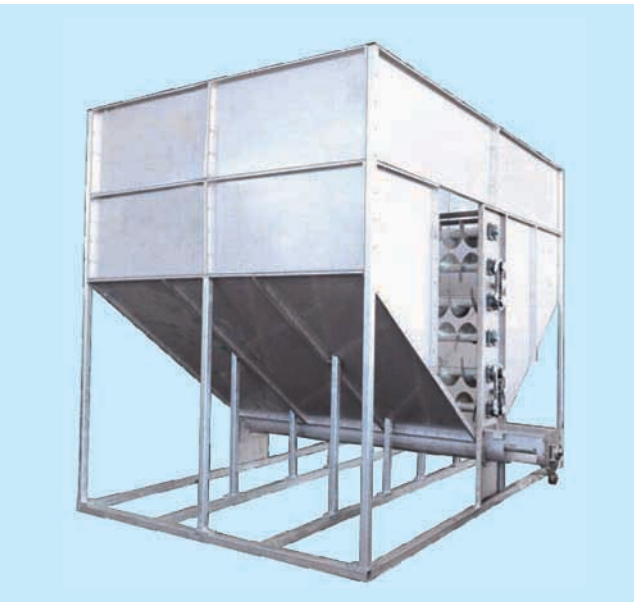


Automatic rake-type ice storage parameters

Model	Nominal ice storage (Tons)	Type	L(mm)	W(mm)	H(mm)	Net weight: Approximate (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	12192	3530	3715	20.4
AIS40	40	Combined	12192	4130	3715	22.4
AIS50	50	Combined	12192	4130	4195	23.3
AIS50S	50	Combined	12192	5191	3565	25.3
AIS60	60	Combined	12192	5191	3965	26.1
AIS65	65	Combined	12192	5191	4195	26.6
AIS80	80	Combined	12192	5191	4865	28.3
AIS70	70	Combined	15000	5191	4195	38.1
AIS100	100	Combined	15000	5191	4965	41.5
AIS120	120	Combined	15100	5291	6005	53.5
AIS150	150	Combined	15100	5291	6965	56.7

② Automatic V-shape ice storage

- Integrated design, compact structure, and convenient transportation. It can be directly transported to the site after the assembly and commissioning in the factory, and the on-site construction period is greatly shortened.
- Insulation panels are used around the ice storage and the air cooler is installed to keep the temperature inside the ice storage at -5℃~-8℃, ensuring dry ice.
- Unique V-shaped design, and the inner surface is lined with Teflon plates, which can ensure that the ice are not easily consolidated on the inner surface of the bin at low temperature.
- The bottom discharge screw and the middle stirring screw are made of stainless steel, meeting the hygiene standards of the food industry and ensures that the ice flakes are clean and hygienic.
- The bottom of the ice storage is sealed with silicagel, no dripping during long term running. Energy saving and environment friendly.
- Automatic control system, including ice-full alarm, screw blocking alarm, etc., to ensure safe and reliable operation of the equipment.



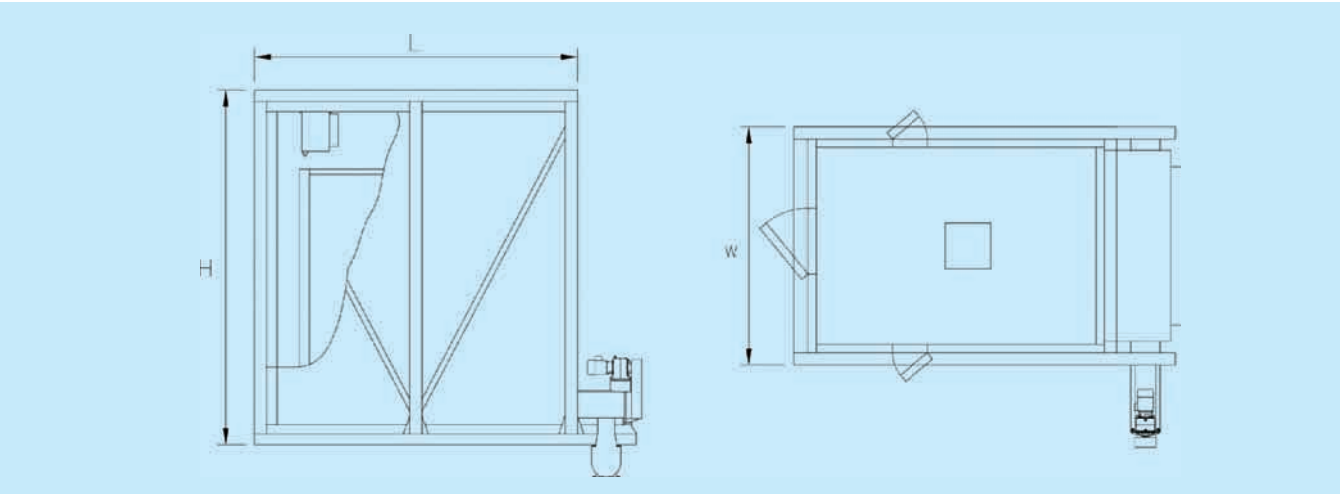
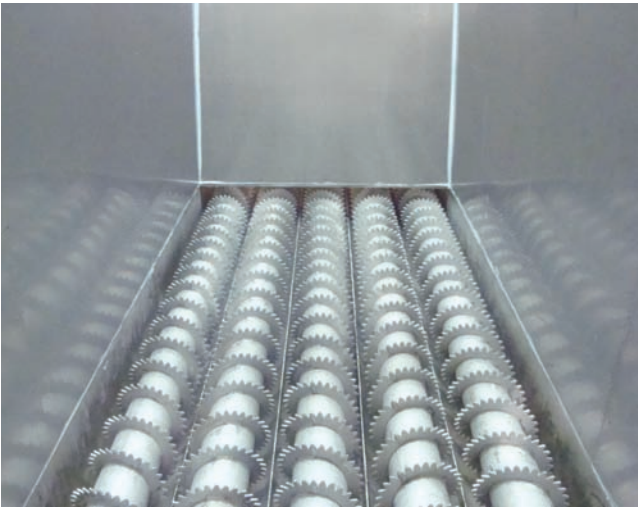
Automatic V-shape ice storage parameters

Model	Nominal storage(Tons)	Type	L(mm)	W(mm)	H(mm)
AIS3V	3	integral	3956	1996	2405
AIS5V	5	Combined	4300	4100	3000
AIS8V	8	Combined	4300	4100	3650

Note: The ice storage can be specially customized for customers with medium and small ice storage requirements.

③ Screw automatidce Storage Bin

- Designed specially for small ice storage capacity, high reliability.
- Unique screw ice crushing system, not liable to ice block.
- Even ice storage, real-time display of used and remained ice amount.
- Inside ice storage bin, all is made of stainless steel, no mechanical wear and contamination. Long service life.
- Modular structure with factory prefabrication,easy to install and test on site.
- Low failure rate and simple maintenance.
- Suitable for food, aquaculture and medical industry.



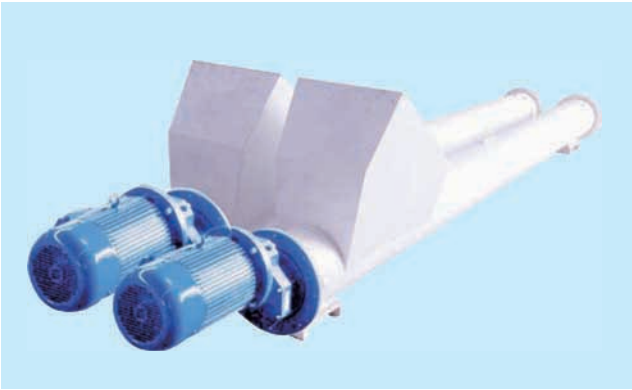
Technical Parameter of Screw Automatic Ice Storage Bin

Model	Nominal storage(Tons)	Type	L(mm)	W(mm)	H(mm)
AIS2L	2	Combined	3925	2085	2535
AIS3L	3	Combined	3925	2085	3130
AIS5L	5	Combined	3925	2085	4020
AIS10L	10	Combined	3925	2895	4320

Note: The ice storage can be customized for medium and small ice storage requirements.

Screw Delivery System

- The basic stucture is channel or round housing with screw blade and reducer. Screw delivery system is more economi- cal for short distance delivery to max 2 destinations.
- The installation angle usually about 30° , special designed ones can reach 45° ~ 90° .
- There are feeding funnel and detection device at the ice inlet, which will avoid ice flake jam in time during delivery. There are galvanized and stainless steel material for your option, with insulation layer outside.



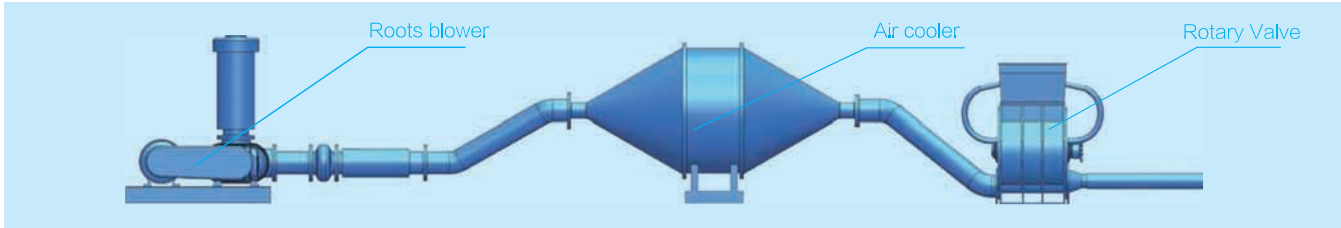
Technical Parameter of Screw Delivery System

Model	Delivery Capacity (Tons/hr)	Diameter (mm)	Speed(r/min)	Length(mm)	ModePower (kW)
TSL16	16	323	91	6	5.5
			91	8	7.5
			91	10	11
			91	12	11

Note: For the needs of different occasions, the delivery screw with capacity of 12-25 tons/hour can be selected.
Power supply requirement: Full electric system complying with the general international standard

Pneumatic Delivery System

- Pneumatic delivery system can be adopted when ice destination is too far. Moreover, it can deliver ice to several ice destinations.
- Pneumatic delivery system consists of high capacity low pressure air blower, air cooling system, rotary valve, pipeline and control system, etc. The longest horizontal delivery distance can reach 200 meters , vertical height up to 20 meters.
- For directly used ice, we can equip the ice-gas separation cyclone according to user requirements.



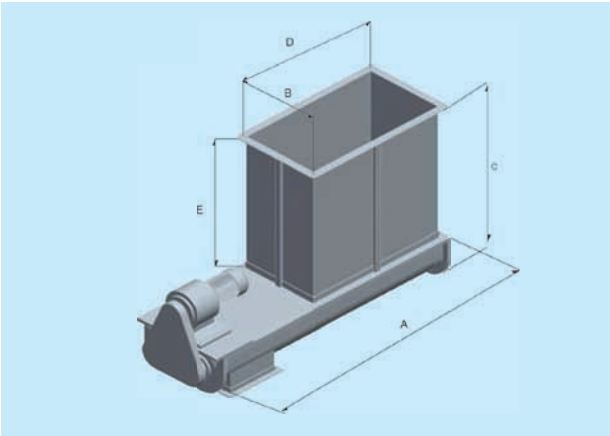
Technical Parameter of Pneumatic Delivery System

Model	Delivery Capacity (Tons/hr)	Max Horizontal(m)	Max 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

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

① Screw Ice Weighing Device

- The screw ice weighing device, specially designed for weighing flake ice, can deliver ice effectively and reliably. It is used for delivering ice to the belt conveyor, adjustable ice out put capacity and pneumatic ice delivery system.
- World famous weighing, control, signal adapter, highly accurate sensor and imported microcomputer control to ensure stable performance and accurate computation.
- Modular structure makes it convenient to operate and maintain.

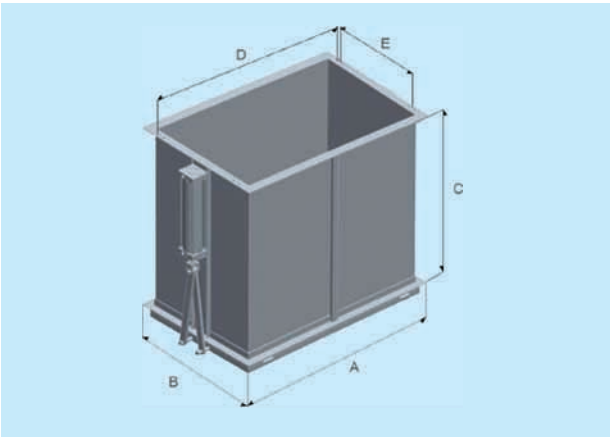


Screw weighing device parameters

Model	Weighing volume (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	Power (kW)
LWT200	200	2230	540	1360	1000	1000	1.5
LWT250	250	2230	540	1460	1100	1100	1.5
LWT300	300	2230	540	1460	1000	1100	1.5
LWT400	400	2479	540	1460	1350	1100	1.5
LWT500	500	2479	540	1700	1350	1350	1.5

② Funnel-type pneumatic ice weighing Device

- It is compact rectangular structure with ice inlet on the top, lock gate on the bottom, sealed tightly and acts reliably.
- The ice out gate is driven by the cylinder. Usually, it is used for deliver ice directly to the batching plant for fully using the ice cooling capacity.
- World famous weighing, control and signal adapter, highly accurate sensor and imported microcomputer control to ensure stable performance and computation.
- Independent weighing control and PC control system for your option.



Funnel-type pneumatic weighing device parameters

Model	Weighing volume (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)
QWT200	200	804	724	1300	754	525
QWT250	250	804	804	1400	754	605
QWT300	300	804	804	1630	754	605
QWT350	350	854	804	1730	804	605
QWT400	400	904	804	1820	854	605
QWT500	500	1004	804	1970	954	605
QWT800	800	1354	804	2180	1454	705
QWT1000	1000	1504	904	2180	1454	705

Automatic packaging system

The ice is packaged into bagged ice in different specifications. It is mainly suitable for bagged ice production lines such as flake ice, tube ice, plate ice, and cube ice.

- The machine is made of stainless steel 304 and the bag OPP, which meets the hygiene standards of the food industry.
- Adopt double servo control system to ensure the accurate measurement.
- Horizontally sealing servo control system, automatically setting parameters such as transverse seal pressure and transverse seal open stroke, 1~5Kg variety of packaging specifications to meet different packaging needs. Packing speed is max. 20 bags/minute.
- Combined with ice making system, flake ice conveying system, etc., can realize a complete set of automatic bagged ice production line.



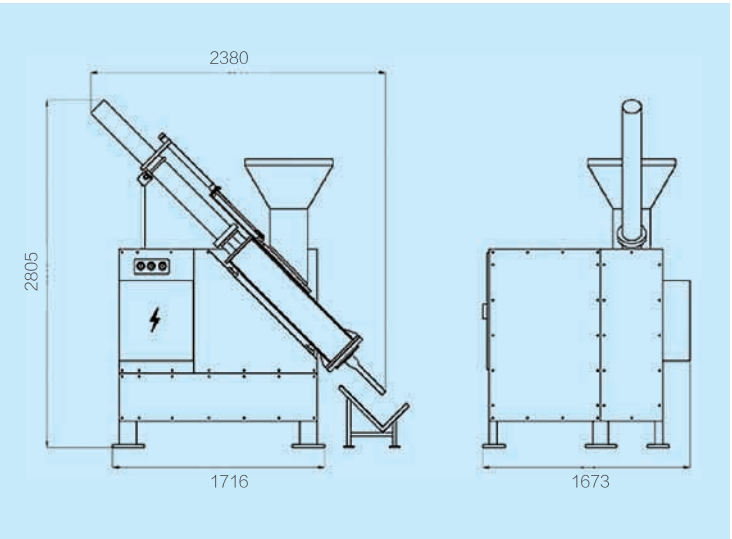
Automatic Ice Compact System

The flake ice can be compacted into block ice through this system, to meet customer various ice demand.

- Block ice specification scope (12.5kg~50kg)

Stand Specification of Block Ice After Compacted

No.	Each Block Ice Weight	Size(mm)
1	12.5	200 × 200 × 376
2	20	246 × 246 × 400
3	25	246 × 246 × 500
4	50	346 × 346 × 500





Fuqing, China



Kuala Lumpur, Malaysia



Warsaw, Poland



Perth, Australia



Daming, Korea



Seoul, Korea



Dubai, United Arab Emirates



Dubai, United Arab Emirates



Scotland, UK



Oman



Jeddah, Saudi



Angola



Laayoune, Morocco



Agadir, Moroccan



Alexander, Egypt



Tanzania