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**FUJIAN SNOWMAN GROUP CO., LTD.**

Address: Dongjiang West Road, Minjiangkou Industrial District Fujian, China.

Tel: +86 (591) 2870 1111

Fax: +86 (591) 2870 9222

E-mail: info@snowkey.com

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The technical parameters shall be subject to order contract or technical appendix of the contract.

**Snowkey**

## Ice Machines

**Professional System  
Intelligent Control**

Specialized refrigeration system, smooth operation. Low failure rate, excellent ice quality. Covering usage scenarios such as supermarkets. Fully automatic control to achieve unattended work.

Global Service Hotline  
**400-109-6660**



# 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 market.
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 Burj Khalifah Tower in Dubai (The world's tallest building).
2006	•	Awarded the honor of National Torch Plan Project & Fujian high-tech enterprise.
2007	•	Unique supplier of concrete cooling products for national nuclear power projects.
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.
2010	•	Launched the vertical marine seawater flow ice machine and participated in the construction project of the new port in Doha, Qatar.
2011	•	SNOWKEY rated as China Famous Trademark and public listed on the Shenzhen Stock Exchange in December.
2012	•	Won the bid for the Hong Kong-Zhuhai-Macao Bridge concrete cooling equipment project, and participated in the construction projects of Riyadh University City and Jeddah Airport in Saudi Arabia.
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 making systems ranked top in the global sales.
2015	•	The new compressors assembly line was put into use, and the CO <sub>2</sub> , propane flake ice machines were launched.
2021	•	To be continue.....



**Snowkey**



Application

01



Fully Automatic Ice Making System Diagram

02



Flake Ice Machine

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Tube Ice Machine

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Automatic Ice Storage and Conveying System

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Project

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



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

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



Mine cooling  
(flake ice, chilled water)

Edible ice  
(plate ice, tube ice)



Ski resort  
(flake ice)

Agricultural processing  
(flake ice, chilled water)



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

Medical engineering  
(flake ice, tube ice)

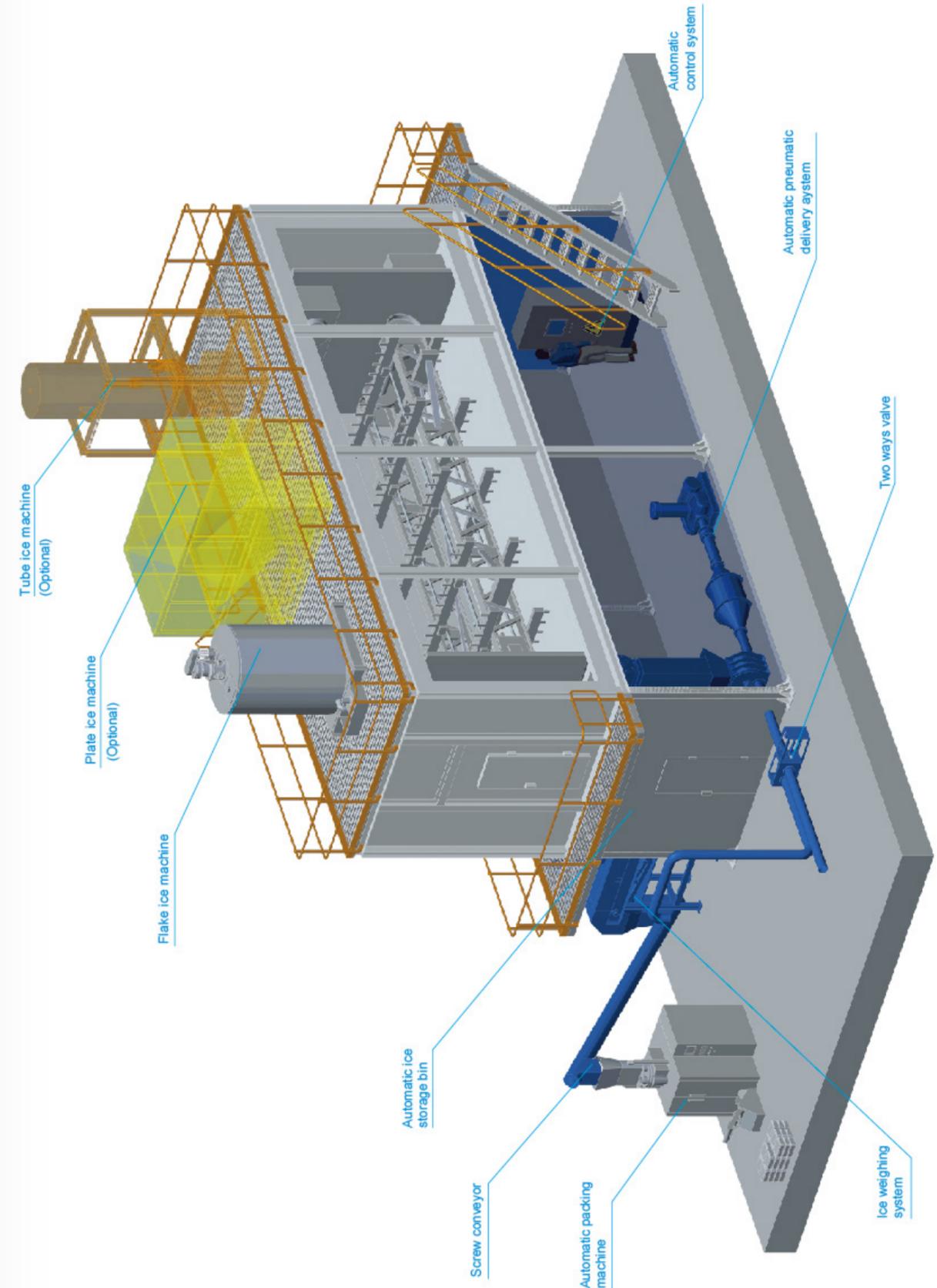


Cold storage project  
(plate ice, slurry ice)

Bakery  
(flake ice)



Meat processing  
(flake ice, chilled water)

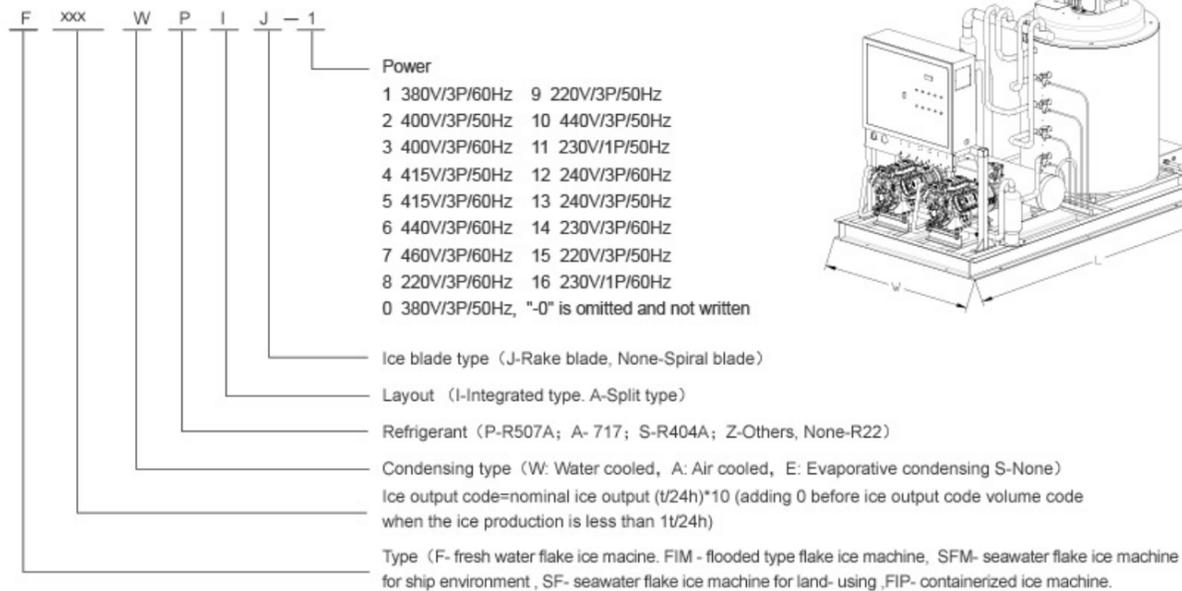


### Flake Ice Machine

- 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 requirement.
- 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.
- Beautiful appearance, reasonable overall layout, comprehensive details, keep improving to the best.



### Model Code



### Technical Parameters for Fresh Water Ice Machine

Unit		Nominal Condition			Performance Parameters						
Model	Condensing Type	Ambient Temperature (°C)	Water Supply Temperature (°C)	Condensing Temperature (°C)	Nominal Production (t/24h)	Power (kW)	Ice Outlet Dimension (mm)	L (mm)	W (mm)	H (mm)	Net Weight (kg)
F050API	Air cooled	30	16	40	0.5	2.9	Ø375	1200	735	684	210
F075API					0.75	3.2	Ø375	1200	735	684	230
F10API					1	4.7	Ø375	1200	735	825	250
F12API					1.2	5.6	Ø375	1200	735	825	260
F16API					1.6	6.6	Ø510	1490	1180	935	370
F20API					2	7.4	Ø510	1490	1180	1009	450
F25API					2.5	9.1	Ø510	1490	1180	1069	480
F30API					3	11.8	554×554	1890	1560	1186	800
F40API					4	19.2	554×554	2165	1650	1180	1100
F50API					5	21.6	870×870	2700	1675	1605	1600
F60API	Water cooled	33	20	43	6	27.5	870×870	2700	1675	1605	1800
F80API					8	34.9	1034×1034	3135	1840	1746	2100
F100API					10	42.1	1034×1034	3683	1950	2006	2700
F40WPI					4	15.1	554×554	2100	1100	1550	1100
F50WPI					5	21.7	870×870	2700	1100	1602	1300
F60WPI					6	25.4	870×870	2685	1100	1602	1400
F80WPI					8	33.5	1034×1034	3135	1160	1746	1900
F100WPI					10	40.2	1034×1034	3566	1600	2006	2700
F150WPI					15	57.5	1322×1322	3942	1850	2281	4200
F200WPI					20	97.5	1450×1450	4255	1950	2954	5000
F250WPI	25	100.1	1854×1854	5116	2050	3137	7000				
F300WPI	30	122.6	1854×1854	5150	2050	3277	7500				
F150EPA	Evaporative cooled	33	20	40	15	58.5	1322×1322	4100	1850	2200	4200
F200EPA					20	96.5	1450×1450	4255	1950	2944	5000
F250EPA					25	96.6	1854×1894	5116	2050	3137	6600
F300EPA					30	159.8	2129×2129	5150	2050	3277	7000
F400EPA					40	190.5	2116×2116	6325	2280	3453	10000
F500EPA					50	192.5	2125×2125	①3300	2000	2280	5000
								②3433	2275	3373	6500
F600EPA					60	305	2125×2125	①3300	2000	2280	5000
								②3433	2275	3373	6500

Note: The flake ice evaporator can be sold separately.  
 Flake ice evaporator for CO<sub>2</sub> available.  
 Due to technology innovation, there might be no real-time notice if the data gets changed.  
 Standard Power: 380V/3P/50Hz  
 Application condition: ambient temp.: 5°C~40°C(When the air- cooled condenser is placed indoors, the ambient temperature ≤35°C), water temp.: 5°C~35°C.  
 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°C~32°C.  
 Special conditions: please contact Snowman for detail.  
 Ice thickness: 1.5~2.2mm, special thickness can be customized.  
 Refrigerant: R717, R404A, R507A, R407F, R449.

### Seawater (Salt water) Flake Ice Machine

The seawater flake ice machine is divided into two types: on board and on shore.

The user draws seawater to make ice and circulate water for condenser directly from the sea.

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 seawater flake ice machine on board had considered the corrosion of sea water, the sway of the ship, the long running life and the harsh climate etc.

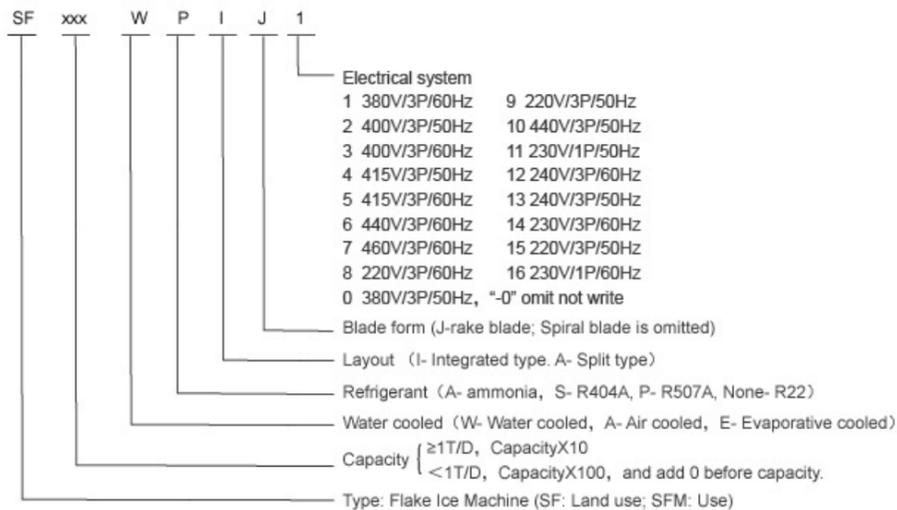


### Seawater (salt water) Flake Ice Machine Characteristics

- The flake ice thickness is up to 2.5mm and dry. Ice temperature is -10°C.
- The evaporator is made of stainless steel and anti-corrosion aluminum alloy, using life is up to 18 years.
- The special internal scraping method and ice blade enable the fishing boat to make ice normally even when the swing degree is 35 degrees in harsh environment .
- Compact design. The refrigeration system is simple and efficient.
- Unattended operation. One key control, automatic monitoring without regular maintenance.



### Model code



### Technical Parameters for Seawater Flake Ice Machine

Unit		Nominal Condition			Performance Parameters						
Model	Condensing Type	Ambient Temperature (°C)	Water Supply Temperature (°C)	Condensing Temperature (°C)	Nominal Production (t/24h)	Power (kW)	Ice Outlet Dimension (mm)	L (mm)	W (mm)	H (mm)	Net Weight (kg)
SFM075WPI	Water cooled	33	20	38	0.75	3.6	400×400	1400	950	1081	700
SFM10WPI					1	4.9	400×400	1400	950	1081	800
SFM16WPI					1.6	7.0	550×550	1500	1200	1293	900
SFM20WPI					2	9.8	550×550	1500	1200	1368	1000
SFM30WPI					3	14.2	550×550	1500	1200	1436	1300
SFM50WPI					5	23.4	800×800	1900	1520	1841	1800
SFM60WPI					6	30.9	800×800	2750	1350	2101	2200

### Flake Ice Machine For Ocean and Land Application Parameters

Unit		Nominal Condition			Performance Parameters						
Model	Condensing Type	Ambient Temperature (°C)	Water Supply Temperature (°C)	Condensing Temperature (°C)	Nominal Production (t/24h)	Power (kW)	Ice Outlet Dimension (mm)	L (mm)	W (mm)	H (mm)	Net Weight (kg)
SF80WPI	Water cooled	33	20	38	8	32.3	1030×1030	3569	1600	1746	2600
SF100WPI					10	46.5	1030×1030	3569	1600	2226	3300
SF150WPI					15	91.7	1322×1322	4100	150	2515	5500
SF200WPI					20	92	1450×1450	4255	1950	3084	5500
SF250WPI					25	114.9	1854×1894	5113	2050	3277	8000

Note:

The seawater flake ice evaporator can be sold separately.

Parameters based on: 3P/380V/50Hz power supply, water supply pressure 1.5bar

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

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

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°C~32°C

Special conditions: please contact Snowman for detail

Ice thickness: 1.5~2.5mm, especial thickness can be customized

Brine concentration: at least 2.9%

Refrigerant: R404A, R507A, R407F, R449.

### Tube Ice Machine

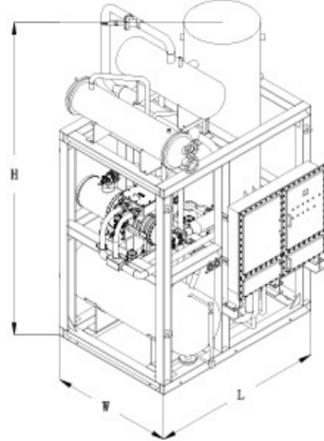
- Special water system design ensures better ice quality, even thickness, transparency and purity of ice.
- The ice maker designed and manufactured according to the pressure vessel standard, it's solid, safe and reliable.
- Adopts heat transfer tube, optimizes the design of refrigeration system, stable operation, low failure rate.
- Dual loop hot gas ice peeling, fast ice harvest, less 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) and ASME certified, high quality level.
- Stainless steel buffer screw conveyor, automatic storage and packaging.
- Ice packing production line, for your option.
- Beautiful appearance, reasonable overall layout, comprehensive details, keep improving to the best.



### Model Description

T xxx W P I 29 - 1

- Power
  - 1 380V/3P/60Hz 6 440V/3P/60Hz
  - 2 400V/3P/50Hz 7 460V/3P/60Hz
  - 3 400V/3P/60Hz 8 220V/3P/60Hz
  - 4 415V/3P/50Hz 9 200V/3P/50Hz
  - 5 415V/3P/60Hz 10 440V/3P/50Hz
  - 380V/3P/50Hz omit not write
- Tube diameter (22, 29, 35, 38, 41) mm
- Layout (I-Integrated type; A-split)
- Refrigerant (S-R404A; P-R507A; A-R717; M-134a; N-R407C; C-R744; R-R290; other-Z; H-R22 (omit and do not write))
- Condensing type (A-air cooled; W-water cooled; E-evaporative cooled)
- Ice production code = nominal ice production (t/24h) \* 10 (nominal ice production is less than 1 ton/day nominal ice production multiplied by 100, and 0 is added in front of the ice production code)
- Type (T-Tube Ice Machine)



### Technical Parameters for Tube Ice Machine

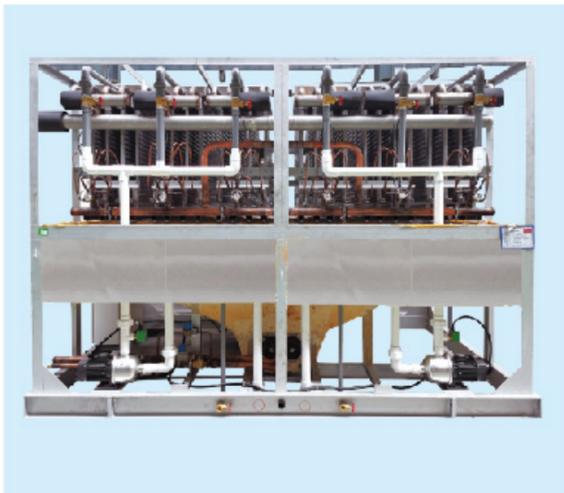
Unit		Nominal Condition			Performance Parameters								
Model	Condensing Type	Ambient Temperature (°C)	Water Supply Temperature (°C)	Condensing Temperature (°C)	Nominal Production (t/24h)	Power (kW)	L (mm)	W (mm)	H (mm)	Net Weight (kg)			
T10API	Air cooled	30	16	40	1	5.6	1310	1017	1911	1000			
T30API					3	13.7	1600	1670	2447	2000			
T50APA					5	24	1731	1261	2655	3000			
T100APA					10	45.5	2110	1550	3200	4000			
T30WPI	Water cooled	33	20	40	3	13.6	1689	1250	2345	2100			
T50WPI					5	22.4	1731	1280	2776	3100			
T100WPI					10	42.9	2373	1566	3186	4150			
T150WPI					15	60.4	2334	2222	4100	6000			
T200WPI					20	83.8	2500	2188	4335	6500			
T250WPI					25	93.7	2500	2086	4613	7500			
T300WPI					30	119.7	2500	2210	5080	8500			
T400WPA					40	166.2	2500	2210	5080	①3085	1900	2500	6000
										②2175	2100	5800	5000
T500WPA					50	195.2	2500	2210	6540	①3100	2000	2550	7000
	②2200	2100	6540	6000									
T150EPA	Evaporative cooled	33	20	42	15	59.2	2234	2213	4100	6000			
T200EPA					20	82.8	2500	2188	4319	6500			
T250EPA					25	93.4	2850	2260	4680	7500			
T300EPA					30	115.5	2500	2270	6075	8500			
T400EPA					40	163.6	2500	2270	6075	①1982	2300	2276	5500
										②2333	2100	5800	5000
T500EPA					50	192.6	2500	2270	6075	①2177	2400	2176	6500
										②2365	2150	6751	6000
T700EPA	70	246.1	2500	2270	7335	①2149	3500	2279	7500				
						②3019	2320	7335	16000				

**Note:**

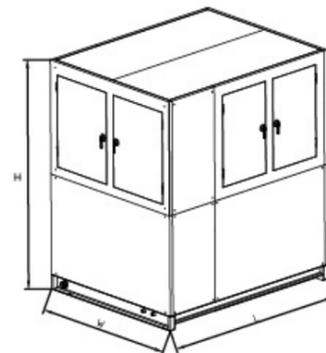
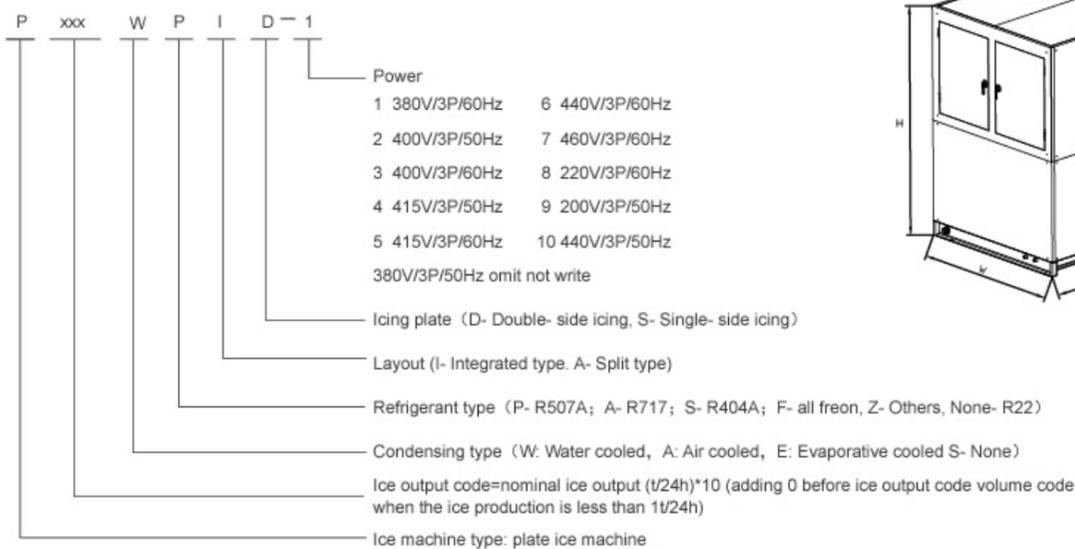
The tube ice evaporator can be sold separately.  
 In the table, 40ton, 50ton and 70ton ice machine are split type.  
 ①: compressor package size; ②: liquid receiver size; ③: ice making evaporator size.  
 The parameters in the above table are based on: ambient temperature 33°C, wet- bulb temperature: 25°C, water supply temperature 20°C, water supply pressure 1.5 bar.  
 Power: standard 380V/3P/50Hz.  
 Applicable conditions: ambient temperature 5°C~40°C (air-cooled condenser indoors when the ambient temperature ≤ 35°C), water temperature should be 5°C~35°C  
 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°C~32°C  
 Special conditions: please contact Snowman for detail  
 Refrigerant: R717, R404A, R507A, R407F, R449.

### Plate Ice Machine

- Stainless steel dual ice making surface plate, sufficient ice output.
- The ice thickness is adjustable from 3~20mm to meet different application occasions.
- Special flow channel design, compared with similar products with higher ice making efficiency and more energy-saving.
- Hot gas ice peeling, faster ice harvest, no secondary pollution.
- Open design of evaporator, the ice board, water tray, water tank easy to clean
- 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.
- Fully automatic control to achieve unattended operation.



### Model code



### Technical Parameters for Plate Ice Machine

Unit		Nominal Condition			Performance Parameters						
Model	Condensing Type	Ambient Temperature (°C)	Water Supply Temperature (°C)	Condensing Temperature (°C)	Nominal Production (t/24h)	Power (kW)	Ice Outlet Dimension (mm)	L (mm)	W (mm)	H (mm)	Net Weight (kg)
P10API	Air cooled	33	20	43	1	5.5	1056×100	1600	1160	1845	1100
P20API					2	11.5	1069×116	1700	1400	1975	1400
P30API					3	18	1400×132	2000	2000	2420	2100
P50API					5	33	1400×132	2200	1800	2450	2500
P80API					8	43	1400×132	3010	2200	2500	3100
P100API					10	53	1400×132	3170	2200	2500	3300
P150API					15	85	1400×132	4250	2200	2500	5000
P200API					20	105	1400×132	①2500	1900	1750	1800
					②3260	2200	2500	3800			
P30WPI					Water cooled	30	20	40	3	18	1400×132
P50WPI	5	30	1400×132	2200					1800	2450	2500
P80WPI	8	46	1400×132	3010					2200	2500	3500
P100WPI	10	53	1400×132	3170					2200	2500	3700
P150WPI	15	75	1400×132	4250					2200	2500	5300
P200WPI	20	95	1400×132	①2500					1900	1750	2200
	②3260	2200	2500	3800							
P250WPI	25	117	1400×132	①2500					2100	1850	2500
				②3500					2200	2500	4300
P300WPI	30	135	1400×132	①2700					2100	2000	3000
				②4720	2200	2500	5500				
P150EPA	Evaporative cooled	33	20	40	15	80	1400×132	①4250	2200	2500	5000
②3230								1700	2270	1540	
P200EPA					20	92	1400×132	①2500	1900	1750	1800
								②3260	2200	2500	3800
								③3380	1700	2270	1770
P250EPA					25	117	1400×132	①2500	2100	1850	2200
								②3500	2200	2500	4300
								③3950	1700	2470	2175
P300EPA					30	136	1400×132	①2700	2100	2000	2500
								②4720	2200	2500	5500
								③3750	2200	2470	2480

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°C~40°C(air-cooled condenser indoors when the ambient temperature ≤ 35°C), water temperature should be 5°C~35°C.  
 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°C~32°C.  
 Special conditions: please contact Snowman for detail.  
 Refrigerant: R717, R404A, R507A, R407F, R449.

### Containerized Brine Block Ice Machine

- ISO standard 20 feet or 40 feet container, easy for transportation.
- No need plant construction, and smaller footprint.
- Plug-in and ready to start.
- Super compact structure owing to Integrated design of refrigeration and control system.
- Special evaporator coil structure with 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 running life.
- Thick epoxy paint at the bottom of the working face, waterproof and corrosion resistant.
- Large-size ice machine can be customized.



### Containerized Brine Block Ice Machine Parameters

Unit		Nominal Condition			Performance Parameters					
Model	Condensing Type	Ambient Temperature (°C)	Water Supply Temperature (°C)	Condensing Temperature (°C)	Nominal Production (t/24h)	Power (kW)	L (mm)	W (mm)	H (mm)	Net Weight (kg)
B50WPB	Water cooled	33	20	38~43	5	29	12192	2438	2896	7500
B75WPB	Air cooled				7.5	37.7	12192	2438	2896	8500
B100WPB	Evaporative cooled				10	54.4	12192	2438	2896	9000

Note:  
 Block ice plant > 15 ton/day can be customized.  
 Power: standard 380V/3P/50Hz.  
 Applicable conditions: ambient temperature: 5°C~40°C(When the air-cooled condenser is placed indoors, the ambient temperature ≤ 35°C),  
 Water temperature should be 5°C~35°C.  
 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°C~32°C.  
 Special conditions: please contact Snowman for detail.  
 Refrigerant: R404A, R507A, R407F, R449.

### Direct-cooling Block Ice Machine

- Stable and energy-saving system design, simple operation and low failure rate.
- PLC control, automatic water supply, automatic ice removal and automatic ice production.
- High output, fast freezing time, high density, hard, and not easy to dissolve.
- Modular design, smaller footprint, less on-site installation working.
- No use of brine, no strong corrosive problems such as salt water.
- Clean and edible block ice.
- Can be equipped with automatic ice storage, ice delivery, crushed ice and ice packaging system to save manpower and improve efficiency.



### Containerized Direct-cooling Block Ice Machine

- ISO standard 20 feet or 40 feet container, easy for transportation.
- No need plant construction, smaller footprint.
- Modular type, contact structure, and plug-in ready.
- Hygienic aluminum plate evaporators make the block ice clean and hygienic.
- Optimize the design of the refrigeration system, stable operation and less failure rate.
- Hot gas defrosting, efficient and fast, less system impact, and excellent safety.
- Unattended operation.
- 40 feet containerized direct-cooling block ice machine maximum daily production is 20T/day.



### Technical Parameters for Direct-cooling Block Ice Machine

Unit		Nominal Condition			Performance Parameters					
Model	Condensing Type	Ambient Temperature (°C)	Water Supply Temperature (°C)	Condensing Temperature (°C)	Nominal Production (t/24h)	Power (kW)	L (mm)	W (mm)	H (mm)	Net Weight (kg)
BD50EA25	Evaporative cooling	33	20	38	5	33.7	5390	1610	2482	5300
BD100EA25					10	54.3	7760	1880	2494	10000
BD150EA25					15	99.6	8978	2230	2551	15000
BD200EA25					20	136.2	9428	2655	2757	20000
BD300EA25					30	192.6	12360	2655	2792	30000

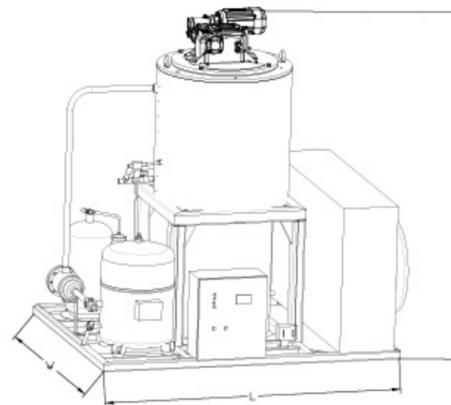
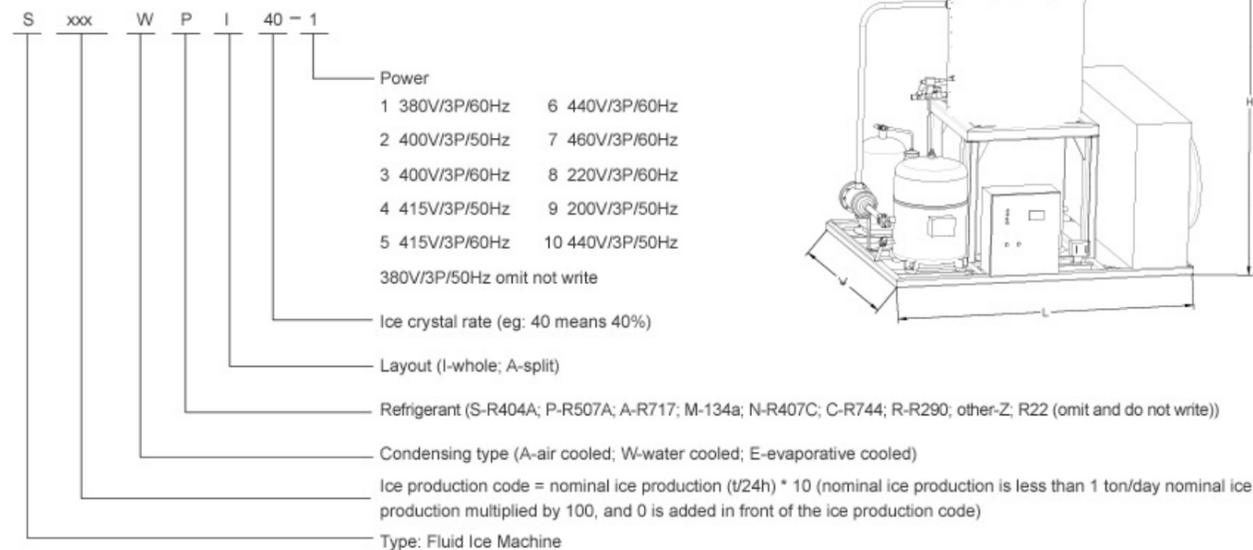
Note:  
 The size of the ice maker will be varied, depends on the size of ice tube.  
 Standard power : 380V/3P/50Hz, non-standard can be customized.  
 Standard working condition: ambient temperature is 33°C. The wet bulb temperature is 25°C, and the inlet water temperature is 20°C.  
 The refrigerant can be R404A, R507A.  
 Special working conditions: please consult Snowman for details.  
 Due to technological innovation, the above data are subject to change without prior notice.

### Slurry Ice Machine

- Semi-hermetic ice maker with good visibility, easy to adjust, clean and maintenance to the machine.
- The ice maker designed and manufactured according to the pressure vessel standard, safe and reliable.
- Compared with similar products of other companies, Cargo evaporation surface.
- Applicable to almost all sea areas, from sea water or brine minimum 2.9% concentration, to realize sufficient output.
- Compared with similar products of other companies, the evaporation temperature is higher, better efficiency with better energy-saving.
- 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 Ice Crystal Rate	Performance Parameters					
Model	Condensing Type	Ice-making Media		Nominal Production (t/24h)	Power (kW)	L (mm)	W (mm)	H (mm)	Running Weight (kg)
S50W40	Water cooled	Seawater or 2.9% brine	40%	5	9	1420	1200	1520	800
S100W40				10	18.2	1600	1300	1757	1100
S150W40				15	29.6	2640	1200	2971	1800
S200W40				20	32.8	2750	1600	3086	3500
S250W40				25	41.6	2750	1600	3086	3500
S350W40				35	59.5	3640	1900	4058	3500

Note:  
 Based on: 3P/380V/50Hz power supply, R22 system, water supply pressure of sea water source is 1.5bar.  
 Optional refrigerant types: R404A, R507A, R407F.  
 Based on: ambient temperature 33°C, wet bulb temperature 25°C, water supply temperature 16°C.  
 Based on water-cooled and integral series units, non-standard design and manufacture can be made into air-cooled and split units.  
 Based on the land application, with the hull ice storage bin, it can be designed and manufactured into a marine form by non-standard design.  
 All data are theoretical average data, and the actual value fluctuates by ±5%.

### Slurry Ice Storage Bucket

- It is much easier to store and deliver the ice by using the bucket and slurry ice machine together.
- With being stirred thoroughly inside the ice storage bucket, the slurry ice is evenly dispersed and not easy to freeze into chunks.
- It applies modular design, which means simple installation and easy operation.
- With Inner surface of PP plate material and reinforced external carbon steel frame, it is rust-proof and corrosion-proof.
- Fully automatic control and automatic shutdown of full ice make the operation unattended.



Model	SIT1	SIT2	SIT4	SIT7
Nominal Storage	1m³	2m³	4m³	7m³
Dimension (mm)	Φ1200×1350	Φ1200×2000	Φ1500×2500	Φ1500×4000
Water(ice) Inlet Dimension	DN25	DN40	DN50	DN50
Ice Outlet Dimension	DN25	DN40	DN40	DN40
Insulation	Rubber in insulation		Polyurethane foam in insulation	
Ice Pump Power	0.4kW	0.75kW	0.75kW	0.75kW
Mixer's Motor Power	0.55kW	0.75kW	1.1kW	1.5kW
Power Specification	380V/50Hz/3P			

Notes: The above is the standard ice storage bucket configuration. The whole unit includes the ice pump and mixing device.  
 The ice storage bucket could be supplied with the slurry ice machine according to the requirement of the user. Please call for service if the non-standard requirements are required.

### Falling Film Chiller

- No risk of freezing with ice water of 0.5°C.
- The equipment is easy to clean, repair and maintain.
- No seals enclosed design prevents product contamination.
- Water contact parts are made of stainless steel and materials that meet drinking water specifications and can be used in food processing.
- Special falling film chiller versions possible.

**Application scenario:**

- Cooling mussels/shrimps.
- Blanching vegetables.
- Cooling water for spin chillers (for example in the poultry industry).
- Cooling water for milk cooling and cheese production.
- Fresh products.
- Bakery production.
- Meat processing industry.
- Fish processing industry.



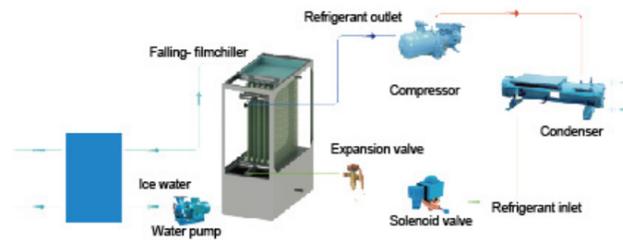
**Standard configuration:**

- Modular models can be customized according to the actual situation and demand on site.
- Evaporator is suitable for freon system and ammonia system.
- Refrigeration compressor, using semi-closed screw compressor or piston compressor.
- Evaporative condenser, fan for two-speed control.
- Perfect refrigeration system control and protection components.
- Internal waterway system with low level sensing protection device.
- Electrical control components and distribution box with fully automated control system for water temperature display monitoring.

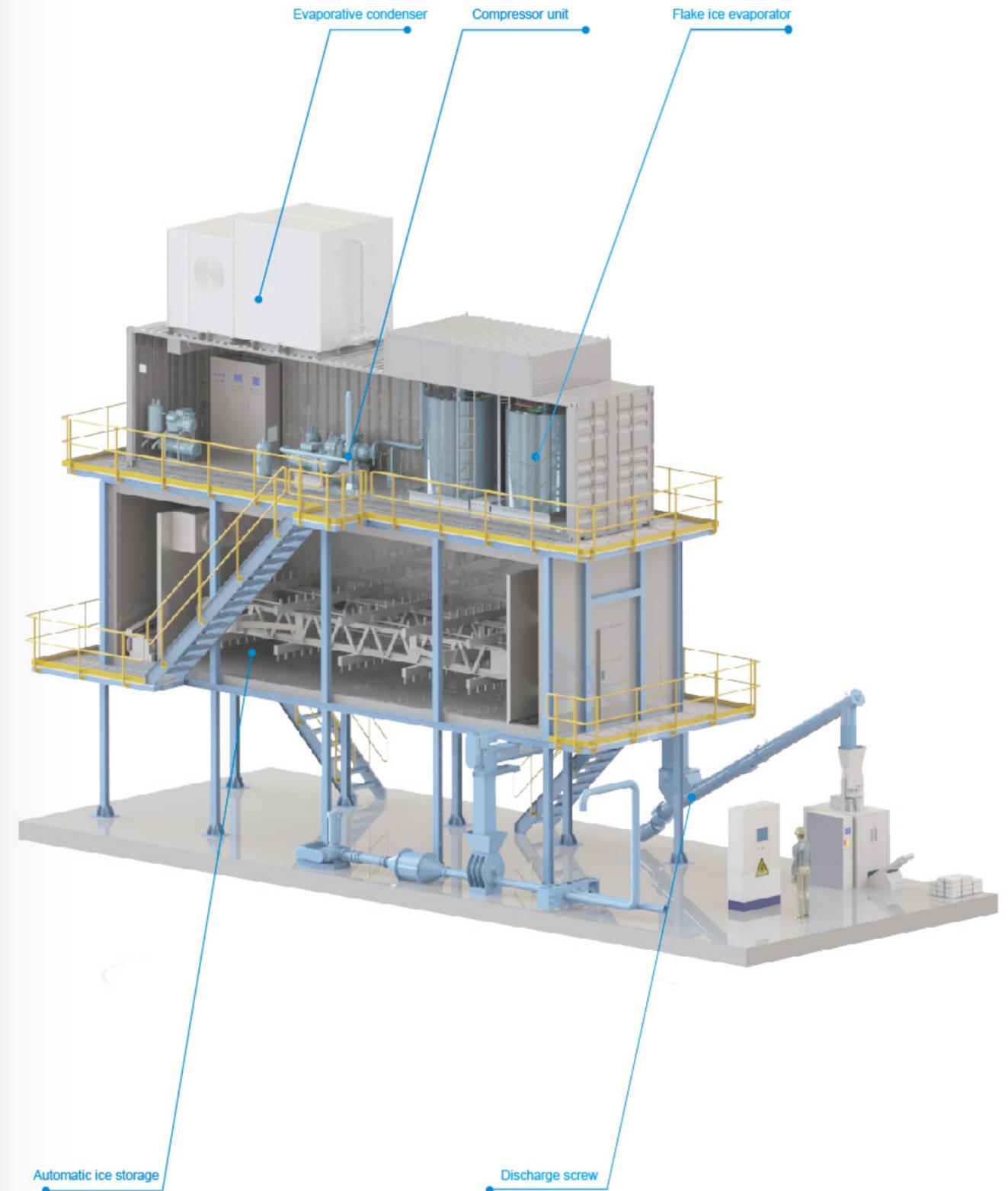
**Working principle:**

In the upper cabinet, there is a water distribution pan with multiple holes on the bottom that the water will exit the pan through and flow over our double embossed Plates hanging underneath. A thin layer of water falls over the plate and is cooled to the desired temperature. The water can be cooled to 0.5°C with a Falling Film Chiller.

This cooled water falls off the plates into an optional tank and from there can be pumped and distributed to the next process whether that be another heat exchanger, process tank, or food product. The used water can be collected in a reservoir and pumped back to the top of the Falling Film Chiller for the process to start over again.



	Model	Refrigeration capacity (kW)	Cooled water volume (t/h)	Water in temp. (°C)	Water out temp. (°C)	L (mm)	W (mm)	H (mm)
Direct-expansion	CF48-14S2	14	2	8	2	1800	1280	2365
	CF120-35S2	35	5	8	2	1800	1280	2365
	CF240-70S2	70	10	8	2	1800	1460	2365
	CF384-112S2	112	16	8	2	1800	1640	2365
	CF480-140S2	140	20	8	2	1800	1870	2365
	CF576-168S2	168	24	8	2	1800	2050	2365
	CF768-224S2	224	32	8	2	1800	2570	2365
	CF960-280S2	280	40	8	2	1800	2930	2365
Flooded	CF1200-350S2	350	50	8	2	1800	3290	2365
	CF672-229S1	229	28	8	1	3100	1040	3150
	CF840-286S1	286	35	8	1	3100	1220	3150
	CF1008-344S1	344	42	8	1	3100	1310	3150
	CF1200-408S1	408	50	8	1	3100	1790	3150
	CF1440-490S1	490	60	8	1	3100	2150	3150



### 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°C~40°C. Specially designed models even can operate normally in the harshest conditions (-30°C~60°C).
- 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°C
- wet-bulb temperature: 29°C
- Water inlet temperature: 5°C
- Ice outlet temperature: -7°C
- Voltage: 400V
- Phase: 3
- Frequency: 50Hz
- Equipment running time: 24hrs
- Refriqerant: R717, R404A, R507A, R407F, R449.

### Standard Configuration of CF

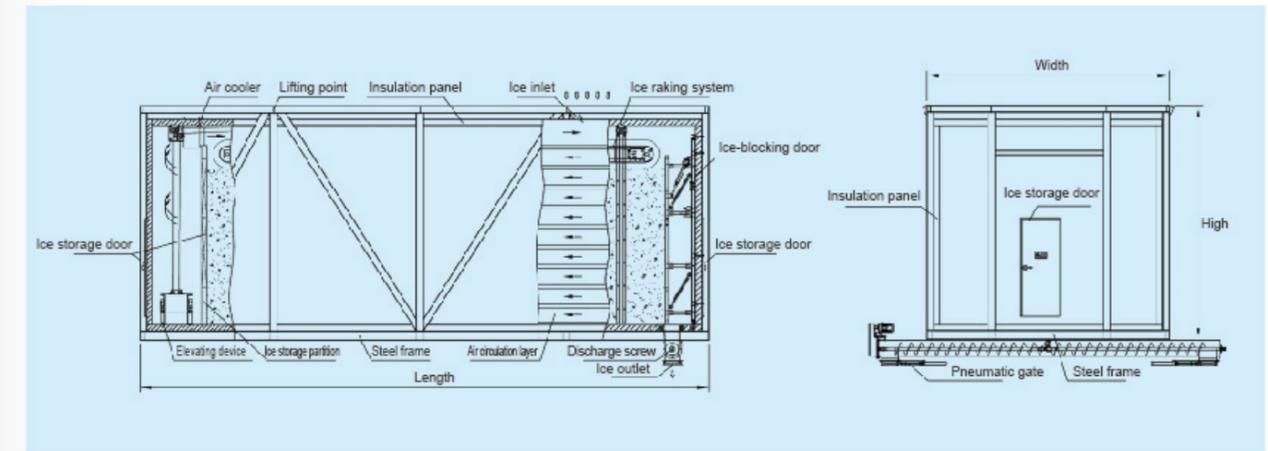
1. Standard 20/40' new container, white paint outside, inside is decorated with air conditioner, illumination and aluminum alloy floor.
2. Refrigeration compressor unit is semi-hermetic screw or piston compressor.
3. Evaporative condenser with double speed fan.
4. Flake ice evaporator with water tank 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 (CF) Specifications

Model	CF10E	CF15E	CF20E	CF25E	CF30E	CF35E	CF40E	CF40DE	CF50DE	CF60DE	CF70DE	CF80DE	CF90DE	CF100DE
Production (t/24h)	10	15	20	25	30	35	40	40	50	60	70	80	90	100
Water Supply (t/hr)	0.42	0.63	0.84	1.05	1.25	1.46	1.67	1.67	2.09	2.5	2.92	3.34	3.75	4.17
Necessary Refrigeration Capacity(kW)	55.2	82.8	110.4	138	165.6	193.2	220.8	220.8	276	331.2	386.4	441.6	496.8	552
Installed Power(kW)	44	68	72	93	123	142	164	136	179	239	276	321	401	443
Water Consumption (L/h)	417	625	834	1042	1250	1459	1667	1667	2084	2500	2917	3334	3750	4167
Running Weight(t)	12	13	14	16	18	20	22	25	28	31	33	36	38	42

### 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 °C~ -8°C, 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 running.
- The hoister can adjust the 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.



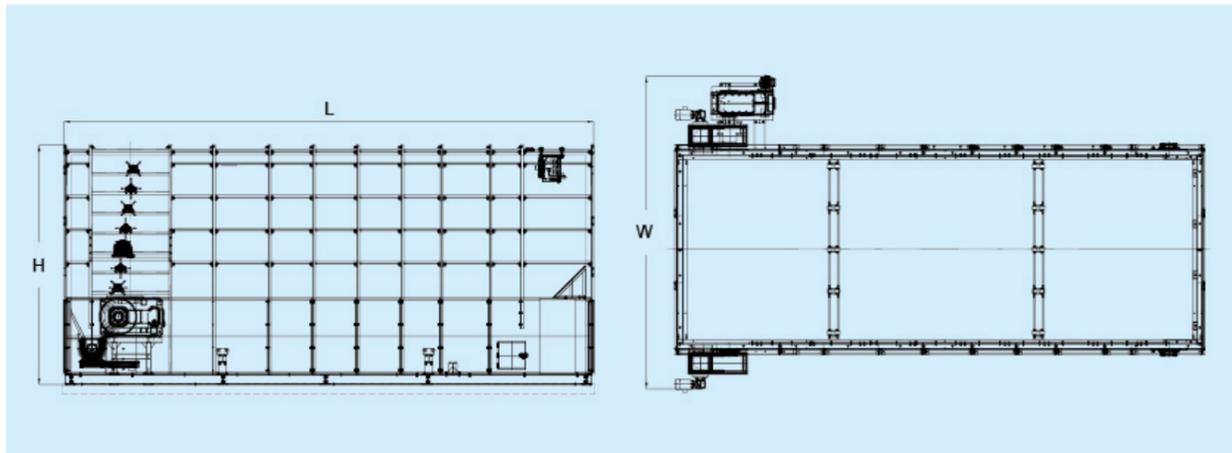
### Automatic Rake-type Ice Storage Parameters

Model	Nominal Ice Storage Volume (m³)	Type	L(mm)	W(mm)	H(mm)	Net weight: Approximate (tons)
AIS8	14	Containerized	6058	2438	2896	7.5
AIS18	29	Containerized	12192	2438	2591	12.3
AIS23	36	Containerized	12192	2438	2896	13.6
AIS35	67	Combined	12192	3530	3715	20.4
AIS40	81	Combined	12192	4130	3715	22.4
AIS50	98	Combined	12192	5191	3565	23.3
AIS50S	98	Combined	12192	4130	4195	25.3
AIS60	117	Combined	12192	5191	3965	26.1
AIS65	128	Combined	12192	5191	4195	26.6
AIS80	159	Combined	12192	5191	4865	28.3
AIS70	155	Combined	15000	5191	4195	38.1
AIS100	200	Combined	15000	5191	4965	41.5

### ② Track type automatic ice storage

Crawler ice storage is a kind of ice storage equipment combining crawler transmission system and low temperature storage technology, which is mainly used for efficient storage and transportation of ice, and is widely used in fine chemical industry, food processing, concrete engineering and other fields.

Design adopts professional design of high strength insulation material PU sandwich insulation layer, equipped with cold air circulation device to keep the ice storage temperature at 0 ~ -8°C, to ensure the internal low temperature environment is stable, through the track conveying system to achieve automatic ice access and circulation management. The horizontal spiral conveying mechanism is equipped with a special ice breaker structure, which can break up the ice at the front of the ice pile, so that it can smoothly fall into the horizontal spiral mechanism and be transported to the outside of the warehouse to prevent the ice jam caused by the compaction of the ice pile. Its access speed is much faster than traditional manual or forklift operations, suitable for high frequency ice scenarios.

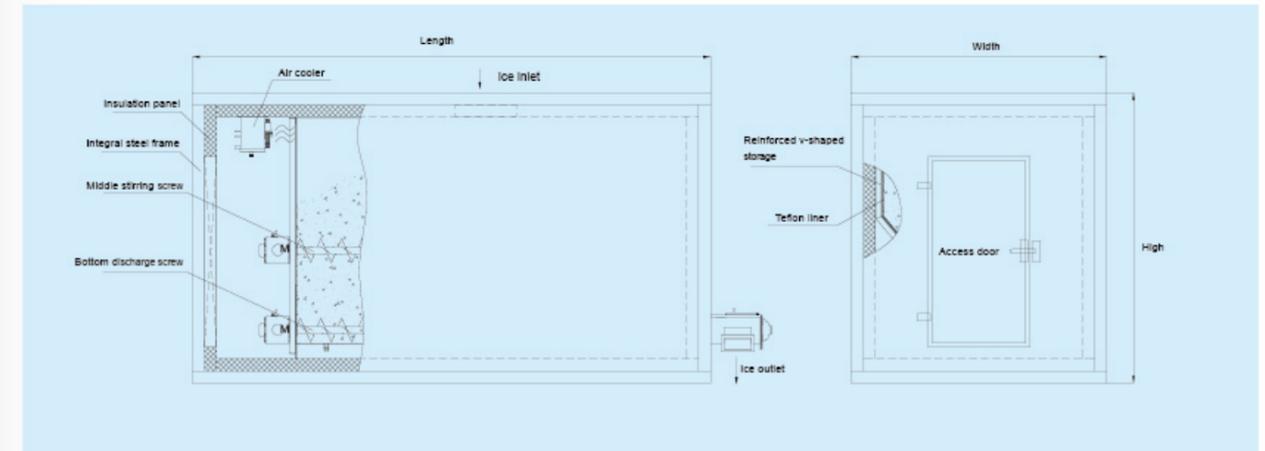


#### Specification Model description:

Model	Nominal Ice Storage Volume(m <sup>3</sup> )	Type	L(mm)	W (mm)	H (mm)
AIS20T	40	Unilateral ice discharge	7848	5965	4700
AIS20T	40	Bilateral ice discharge	7848	6115	4700
AIS30T	60	Unilateral ice discharge	10348	5965	4700
AIS30T	60	Bilateral ice discharge	10348	6115	4700
AIS40T	80	Unilateral ice discharge	11866	6007	4748
AIS40T	80	Bilateral ice discharge	11866	6157	4748
AIS60T	120	Unilateral ice discharge	11866	6007	5348
AIS60T	120	Bilateral ice discharge	11866	6157	5348

### ③ 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°C~8°C, 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.



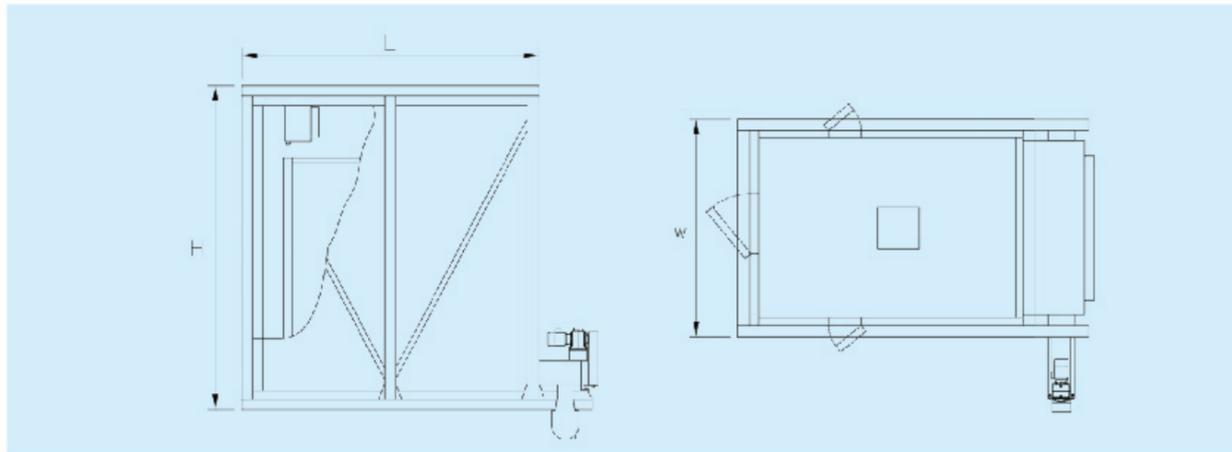
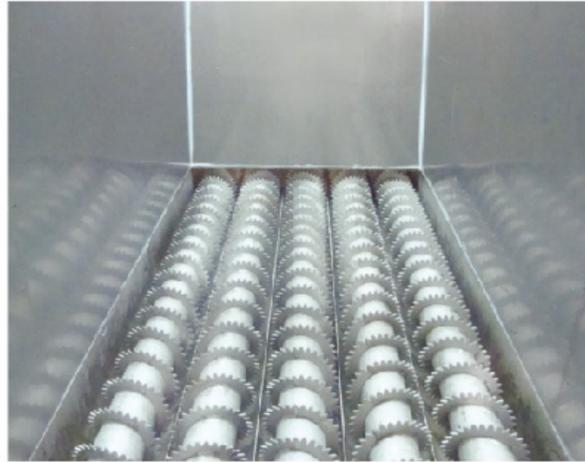
#### Automatic V-shape Ice Storage Parameters

Model	Nominal Ice Storage Volume(m <sup>3</sup> )	Type	L(mm)	W(mm)	H(mm)
AIS3V	6	Integral	3956	1996	2405
AIS5V	10	combined	4300	4100	3000
AIS8V	16	combined	4300	4100	3650

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

#### ④ Automatic Screw Storage Bin

- Designed specially for small ice storage capacity, with high reliability.
- Unique screw ice crushing system, guarantee no ice jam.
- 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.



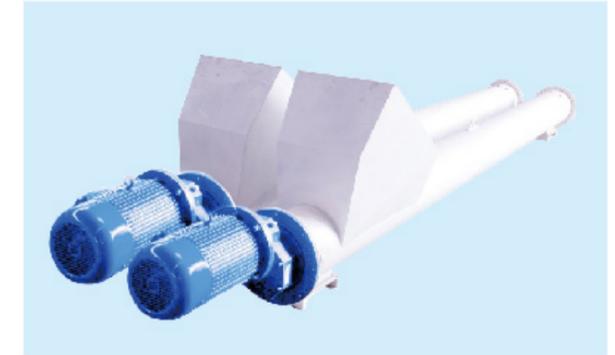
#### Technical Parameter of Screw Automatic Ice Storage Bin

Model	Nominal Ice Storage Volume(m <sup>3</sup> )	Type	L(mm)	W(mm)	H(mm)
AIS2L	4	Combined	3925	2085	2535
AIS3L	6	Combined	3925	2085	3130
AIS5L	10	Combined	3925	2085	4020
AIS10L	20	Combined	3925	2895	4320

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

#### Screw Delivery System

- The basic structure is channel or round housing with screw blade and reducer. Screw delivery system is more economical for short distance delivery to max 2 destinations.
- The installation angle usually about 30°.
- 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.
- SNOWKEY can provide open and tubular screw machines with hot-dip galvanized and stainless steel SUS304.



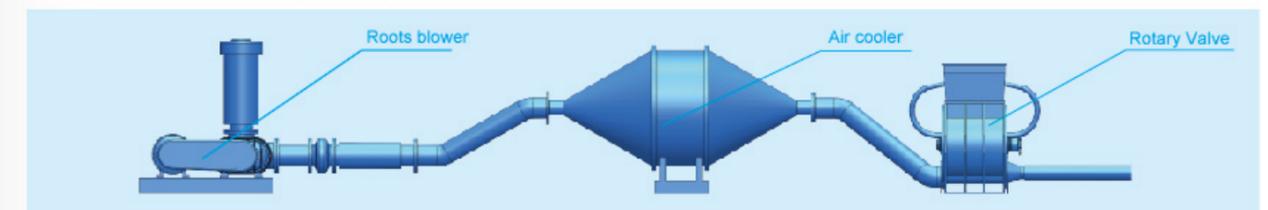
#### Technical Parameter of Screw Delivery System

Model	Delivery Capacity (Tons/hr)	Spiral Diameter(mm)	Helix Length(m)	Power(kW)
TSL16-4	16	323	4	5.5
TSL16-6	16	323	6	5.5
TSL16-8	16	323	8	7.5
TSL16-10	16	323	10	11
TSL16-12	16	323	12	11
TSL16-14	16	323	14	11
TSL16-16	16	323	16	15

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

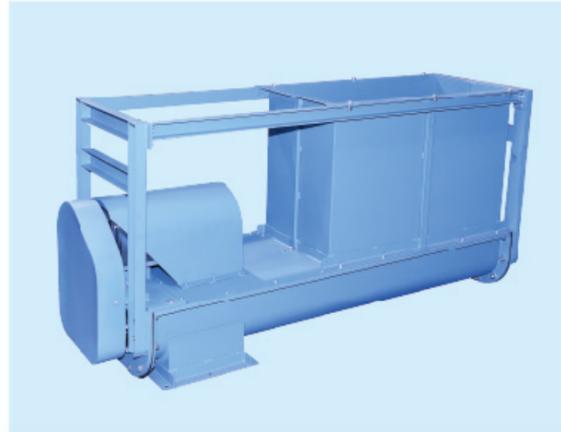
Power supply requirement: Full electric system complying with the general international standard.

### 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 is to ensure stable performance and accurate computation.
- Modular structure makes it convenient to operate and maintain.

#### Parameter table of screw weighing bucket

Model	Maximum capacity(kg)	Power(kW)	Dimensions(mm)
LWT200	200	1.5	2291×640×1435
LWT300	300	1.5	2291×640×1785
LWT400	400	1.5	2541×640×1785
LWT500	500	1.5	2538×716×1795



### 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 delivering 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.

#### Parameter table of pneumatic weighing bucket

Model	Maximum Capacity(kg)	External Dimensio (mm)
QWT150	150	782×782×1300
QWT200	200	828×828×1300
QWT250	250	920×850×1350
QWT300	300	1050×850×1350
QWT350	350	1150×954×1250
QWT400	400	1150×954×1400
QWT450	450	1220×1020×1400
QWT500	500	1220×1020×1500



### Shunt Valve

The shunt valve is one-way inlet and multi- way outlet. By switching inlet position, the inlet corresponds to the specified outlet, to realize conveying ice pipeline switch, and meet user's demand of multiple ice points.



#### Shunt Valve Specifications:

Model	Number	Power (kW)	External dimensio (mm)
SV150-02	2	0.25	1195×501×808
SV150-03	3	0.25	1432×501×959
SV150-04	4	0.25	1662×501×959
SV150-05	5	0.25	1892×501×959
SV150-06	6	0.25	2122×501×959

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



### Buffer Bin

When the length of the screw delivery system is long, the ice sometimes cannot be transported to the specified place in time, and the user can continue to use the ice in a short period of time by equipping the buffer bin at the end.

#### Buffer bin with air cooler parameter:

Model	Nominal Ice Storage	Power(kW)	Dimensions
LHC500	500Kg	7.9	Warehouse body: 3250×1025×1714 Unit: 850×815×605
LHC800	800Kg	7.9	Warehouse body: 3637×1308×1780 Unit: 850×815×605
LHC1000	1000Kg	7.9	Warehouse body: 3637×1308×2060 Unit: 850×815×605

#### Buffer bin without air cooler parameter:

Model	Nominal Ice Storage	Power(kW)	Dimensions
LHC500	500Kg	3.7	3250×1025×1714
LHC800	800Kg	3.7	3637×1308×1780
LHC1000	1000Kg	3.7	3637×1308×2060





Britain



Oman



Sweden



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South Africa



Tanzania



Australia



Malaysia

