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Industrial Flake Ice Machine

Be engaged in general equipment applications in low temperature technology and developing of exhaust heat utilization technology in refrigeration system.





Ssafood everywhere are similar, everywhere seafood taste different.





Flake Ice

Thin, dry and loose white ice, irregular shape.

Flake Ice Size

Thickness of 1.0 mm - 2.5 mm, diameter of about 12 - 45 mm.

Features

Flake ice is dry and soft without sharp edges and corners. It will not stab the frozen objects.

During the cold packaging process, its flat appearance will minimize the damage to the cold goods. It can protect the packaging of food. Flake ice has a large contact area, rapid cooling, storage and transportation convenient, mixed thoroughly, reduce heat exchange, keep the ice temperature, and a good moisturizing effect and so on.

Flake Ice Application

Ports, the terminal of the ice factory, food processing, aquatic products preservation, cooling, aquatic products, food preservation, special areas of cooling and cooling use.



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History Background of Flake Ice Machine

1977

Traditional Industrial Flake ice machine

In 1977 the United States North Star refrigeration developed. Relatively early birth of a traditional industrial ice machine, initially small production, mainly for fisheries, seafood preservation and food processing, after the application in the pharmaceutical industry, logistics and distribution industry, the concrete industry.

International Industrial Ice Machine Brand

Abroad earlier brands are Germany Focusun, the United States SCOTSMAN, Germany MAJA, VOGT, Italy Brema, Netherlands RECOM, etc.

2004

Guangzhou Icesource CO., LTD

Small Capacity Edible Flake Ice Machine

Guangzhou Icesource CO., LTD lasted two years of research and development, to give are-positioning of the flake ice machine from the industrial flake ice to the edible flake ice, from a specific industrial use to a wide range of edible sites, for small and medium-sized investment in supermarkets, restaurants, cold drinks, home, convenience stores Is very ideal for small edible ice machines.

2017

International

In 2004, Guangzhou Icesource CO., LTD set up Vista refrigeration research room, began the concept of energy saving and environmental protection refrigeration.

2022

Flake ice automatic ice storage system

In 2022, Guangzhou Bingquan's domestic large-scale chemical flake ice automatic storage ice projects will be put into operation smoothly



Guangzhou Icesource CO.,LTD flake ice machine production from 0.3 tons - 60 tons. Compared to the traditional type of ice block and snow ice, flake ice have obvious advantages, with dry, not easy to agglomerate, good mobility, good health. Ice production cost economy, the 16 °C water into 1 ton of ice only about 85 degrees; a ton of ice surface area of the minimum value of about 1579 square meters, high cooling efficiency. Less than 3 tons flake ice machine is equipped with storage ice bucket and ice car, small shovel; 3 tons - 60 tons most of the matching ice storage cold storage, and some customers made of container style, made by two containers, the top container installation equipment, the bottom Containers do ice storage.



Flake ice machine design structure diagram

Industrial Flake Ice Machine

Advantage:

- . Spiral skateboard design, no damage to the ice blade.
- . Continuous butt welding, to ensure that the evaporator is not easy to deformation. Reduce the mechanical resistance of the ice machine when it is running.
- . Smooth flow, low resistance, improve the cooling effect, reduce energy consumption.
- . Ice thickness uniformity, covering a large area, dry and non-stick.



3D Flake ice machine ice making diagram

3 tons -10 tons flake ice machine is generally used as shown in the installation method, the ice machine installed in the upper part of the cold storage, the use of channel support, but this storage has a drawback, because the ice will be stacked into Cone, storage of low utilization of storage, so a large system will use rake ice system.

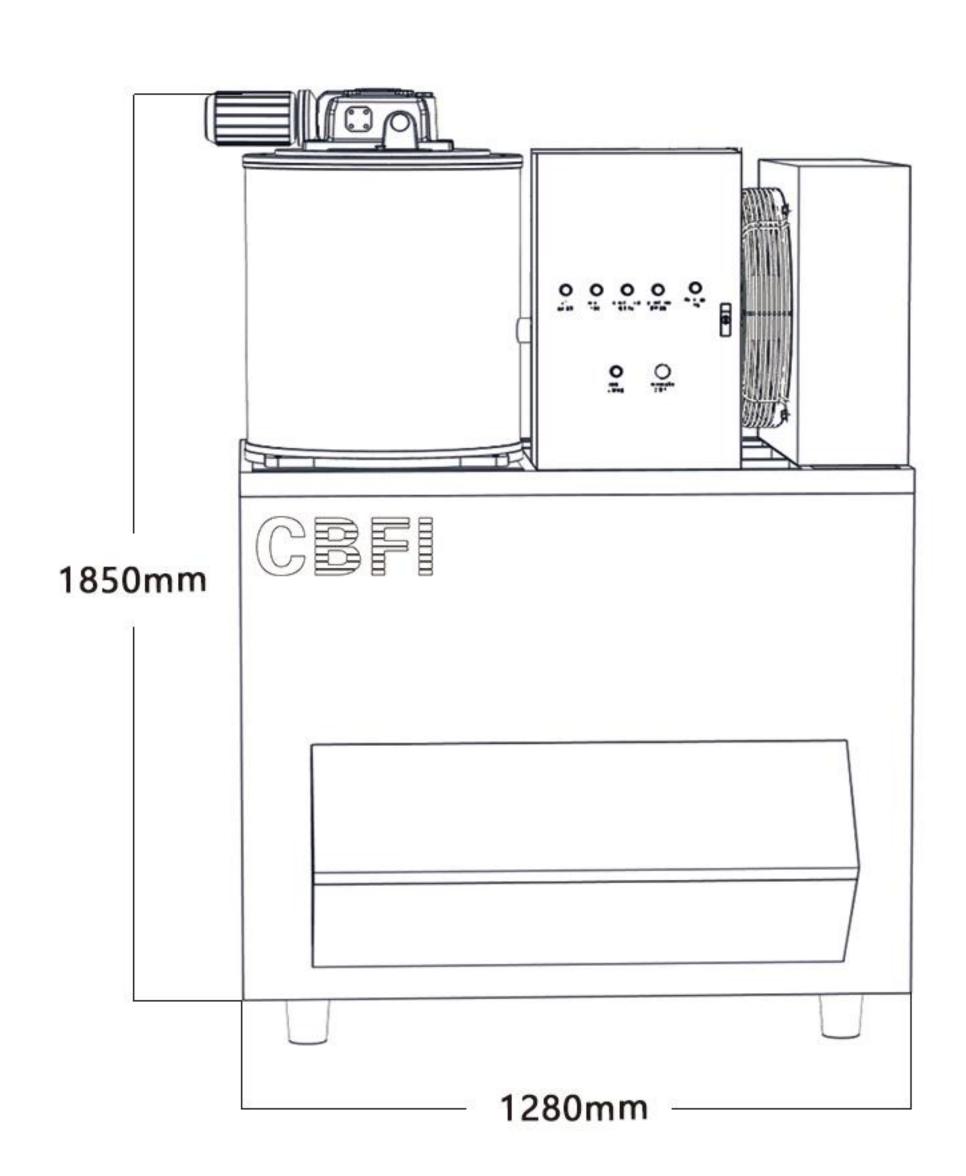




Flake ice machine

Industrial flake ice machine 0.3 tons, 0.5 tons, 1 ton, 2 tons, 3 tons, 5 tons, 8 tons, 10 tons, 15 tons, 20 tons, 25 tonslf.....

the customer has special requirements can benon-standard custom.

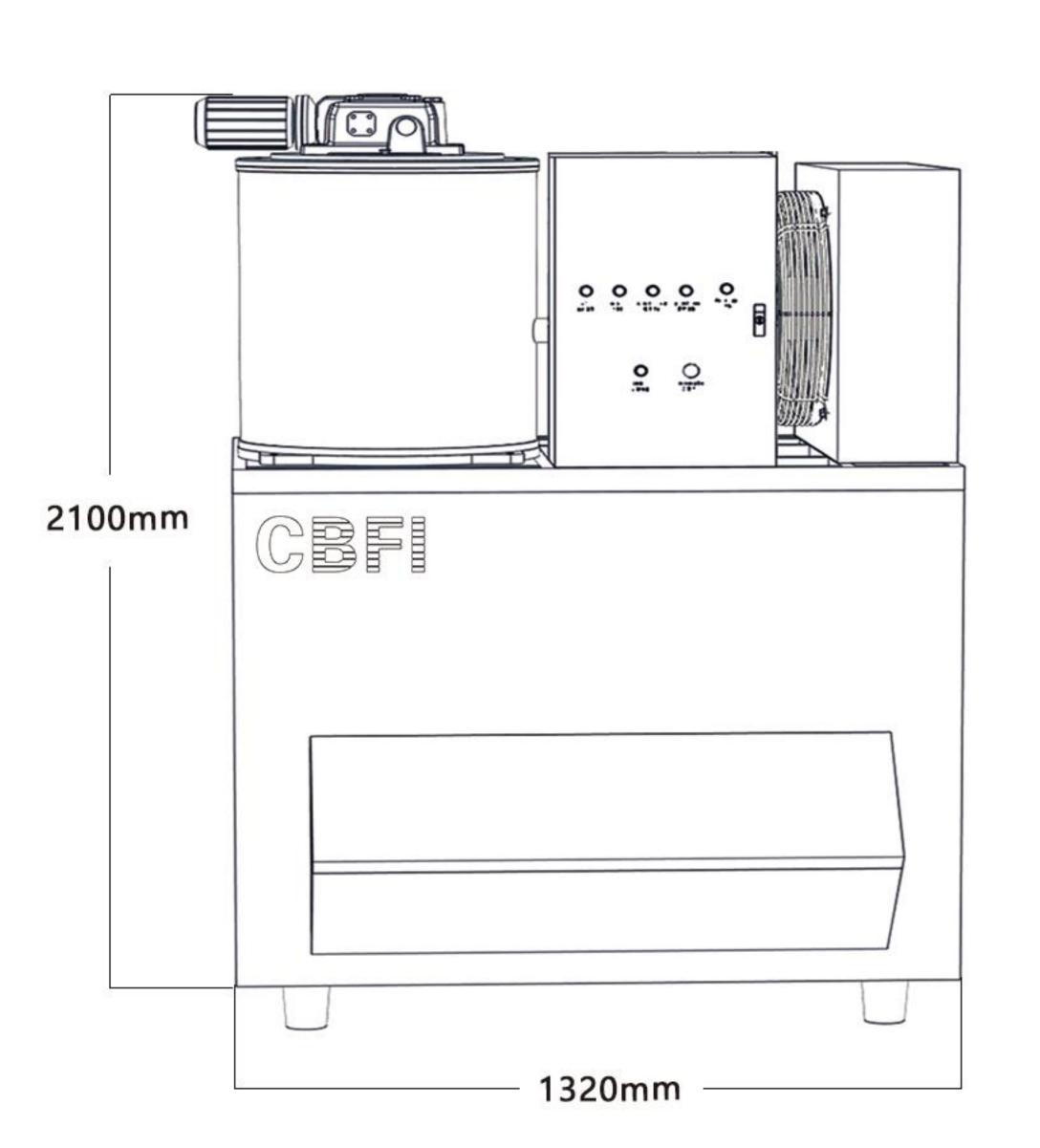




BF500 0.5 ton Flake Ice Machine

Ice making capacity: 0.5Ton/24h
Refrigeration capacity: 3.75KW
Ice machine size: 1280x1080x1850 (mm)

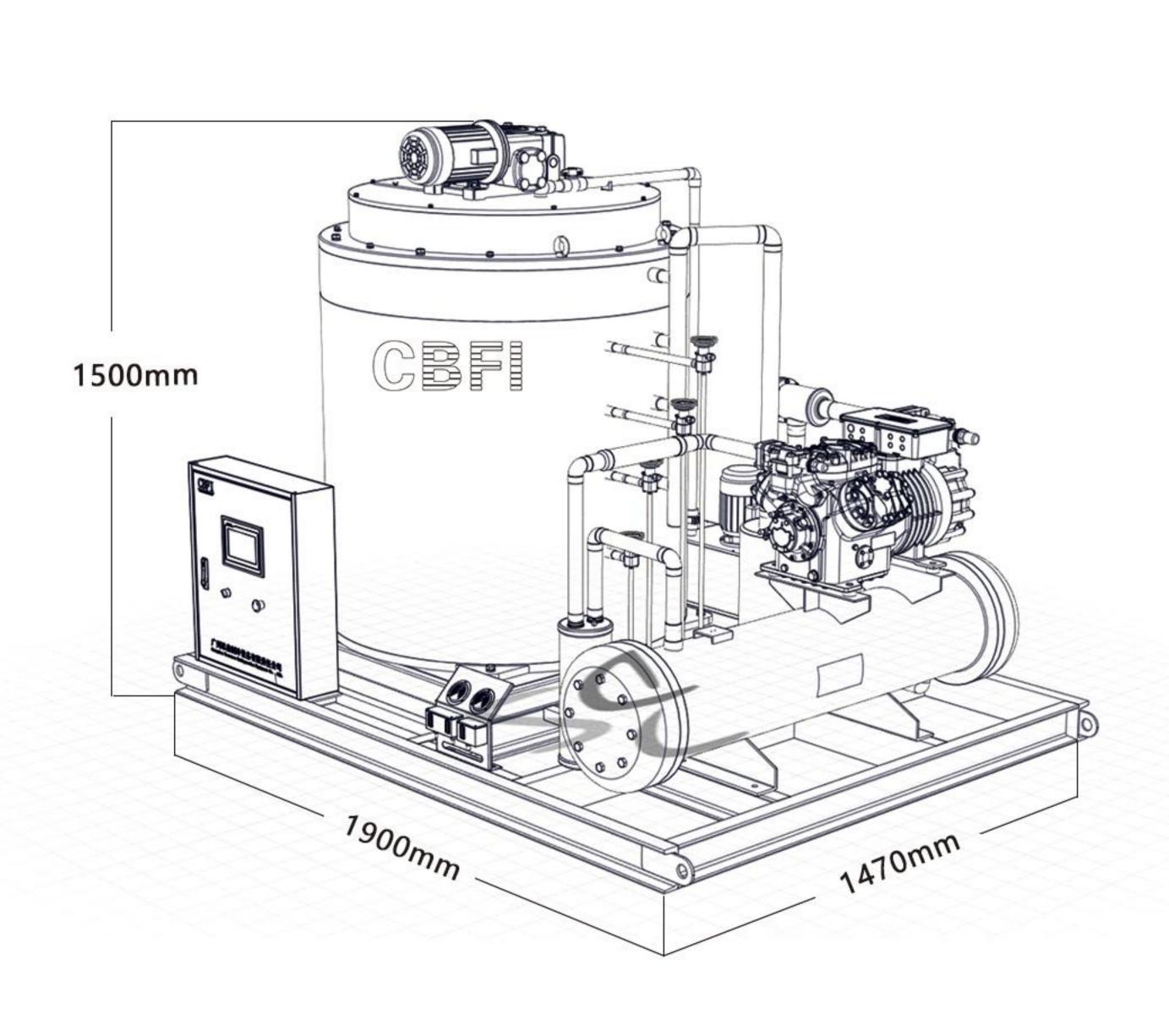
Weight: 160KG

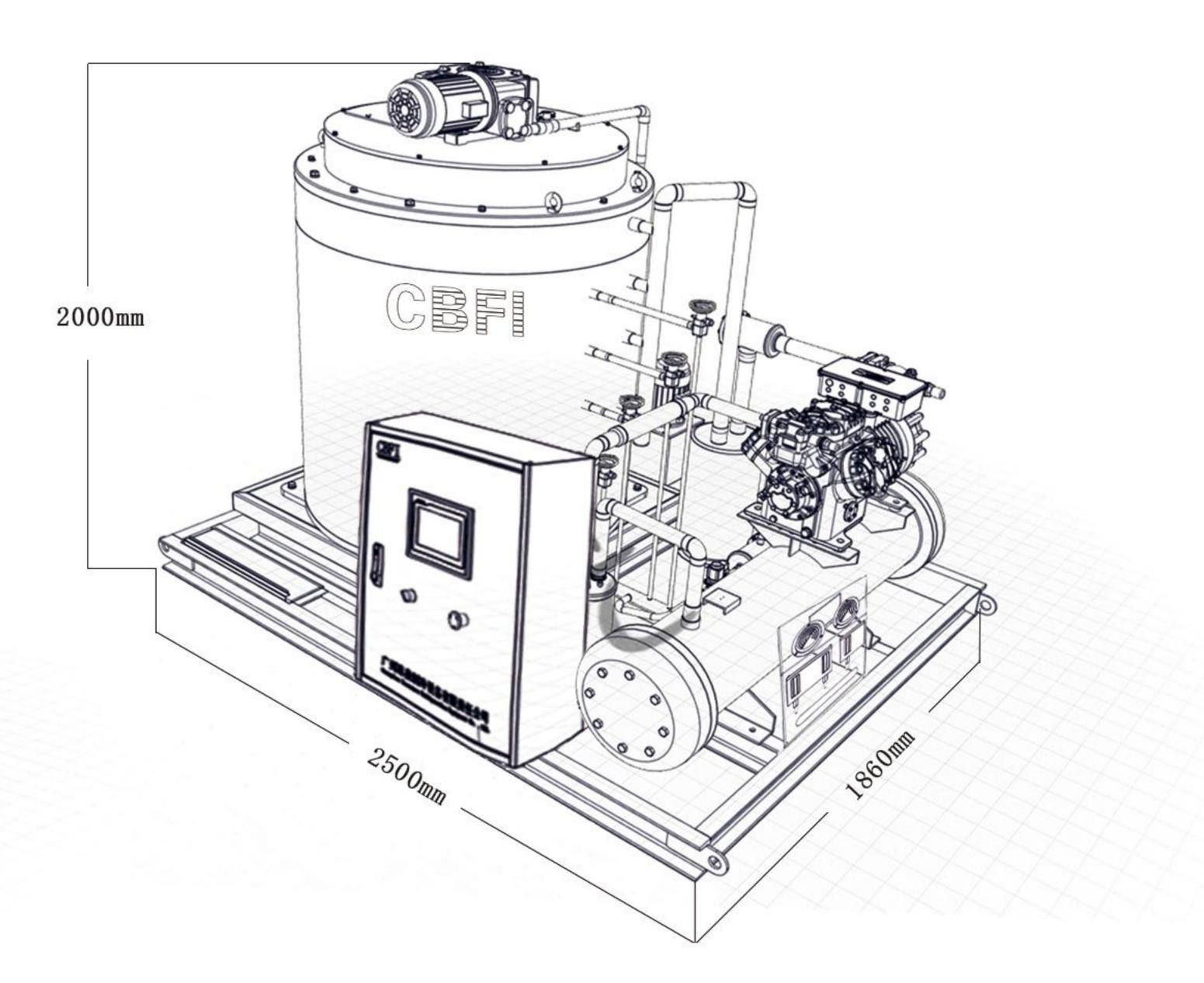




Ice making capacity: 1Ton/24h
Refrigeration capacity: 8.85KW
Ice machine size: 1320x1180x2100 (mm)

Weight: 210KG









Ice making capacity: 5 Ton/24h
Refrigeration capacity: 35.1KW
Ice machine size: 1900x1500x1470 (mm)

Weight: 1100KG



BF10000 10 ton Flake Ice Machine

Ice making capacity: 10 Ton/24h
Refrigeration capacity: 76.1KW
Ice machine size: 2500x2000x1860 (mm)

Weight: 1500KG



Flake ice machine

BF15000 15 ton Flake Ice Machine

lce making capacity: 15 Ton/24h Refrigeration capacity: 110.9KW Ice machine size: 3150x2200x2140 (mm) Weight: 3200KG

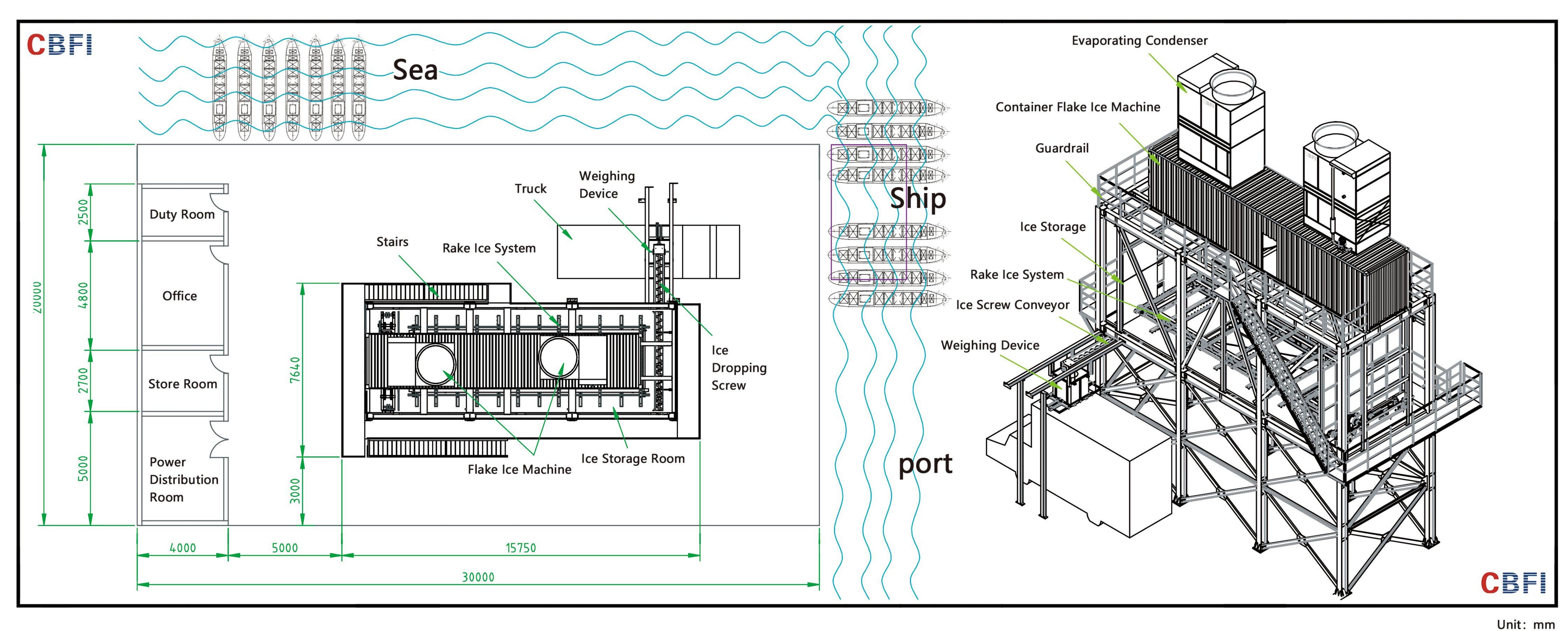
lce making capacity: 20 Ton/24h Refrigeration capacity: 151KW Ice machine size: 3350x2200x2430 (mm) Weight: 4200KG

Flake ice machine refrigeration principle

Ice water from the ice machine evaporator inlet into the water tray, through the water pipe, the water evenly sprinkled on the inner wall of the evaporator, the formation of water film, skate, spindle, sprinkler, water tray in the reducer drive The water film and the evaporator flow in the refrigerant heat exchange, the temperature quickly reduced in the evaporator wall to form a layer of thin ice, squeezed in the ice knife, broken into pieces of ice, from the water Mouth into the ice library. Part of the ice is not formed through the water tray from the return water back to the cold water tank, through the cold water pump

into the next cycle. BF30000 30 ton Flake Ice Machine Ice making capacity: 30 Ton/24h Refrigeration capacity: 230KW 2340mm Ice machine size: 4600x2250x2240 (mm) Weight: 6000KG

Morocco rake ice system



With the development of society, the demand for ice on the market is growing. Industrial ice is widely used in supermarket food preservation, fishery fishing, hospitals, schools, laboratories, research sites, medical applications, chemical and food processing industries, a wide range of applications. For the extensive market of industrial ice, Guangzhou Icesource Co., Ltd. combined with years of experience in industrial ice making equipment and research feedback on the market, according to the different needs of customers to provide a complete ice plant design solution, from Design, construction to delivery integration, reduce customer investment.

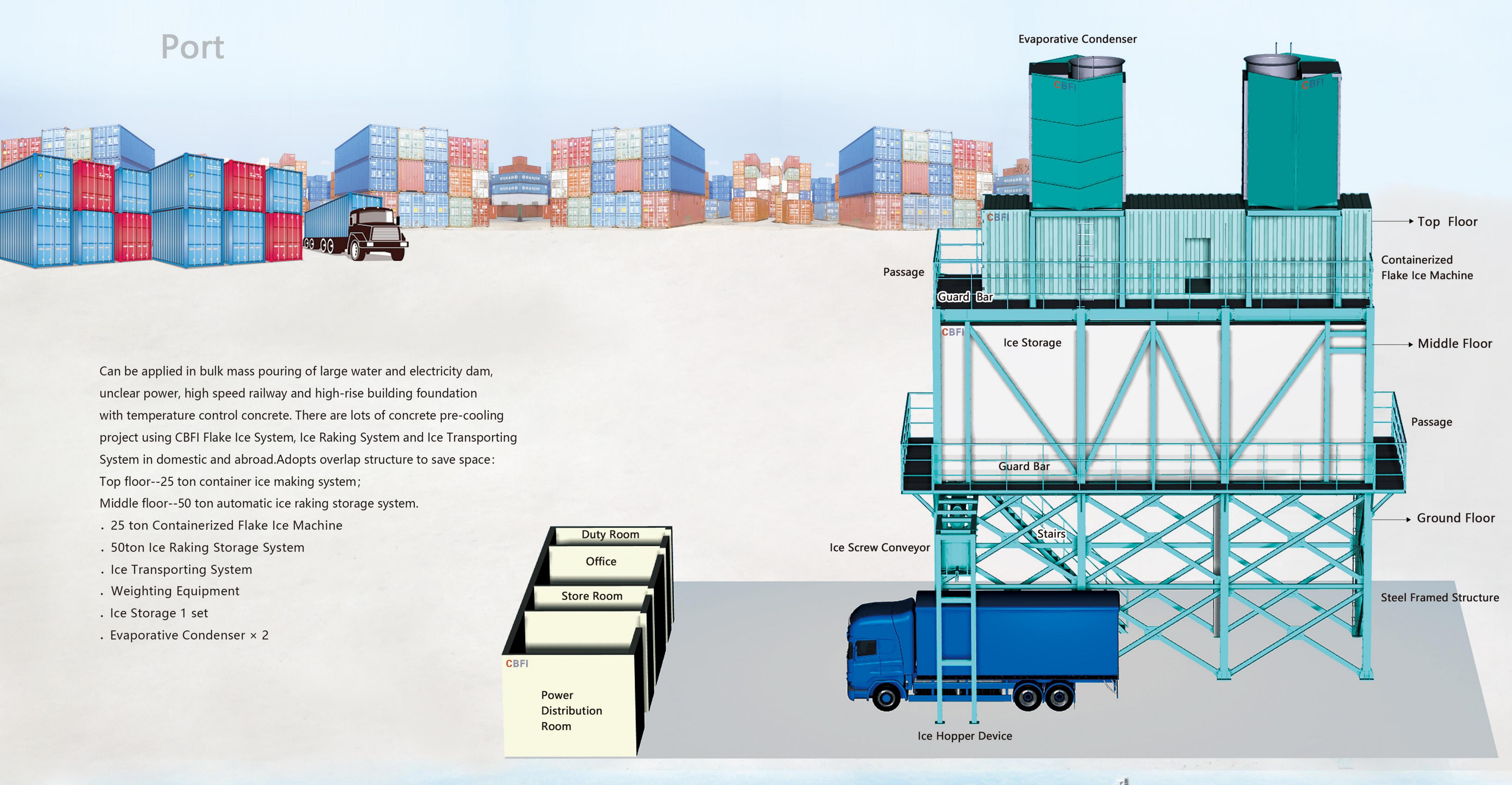
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Morocco rake ice system ice plant solution

A company in Morocco is the local industrial ice production and supply giant. To meet the growing market demand, began looking for refrigeration equipment manufacturers. Guangzhou Icesource Co.,LTD build a new industrial ice plant to provide a full set of solutions for the Moroccan company. Standard equipment: container flake ice machine; rake ice system; ice screw; weighing device; cold storage 1 set; Other supporting facilities, it needs to be equipped with duty room, storage room, power distribution room. To improve production efficiency, the flake ice machine adopts evaporating condenser.

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Refrigeration Unit

All parts of refrigeration unit are originally imported that assure machine working efficient without failure.

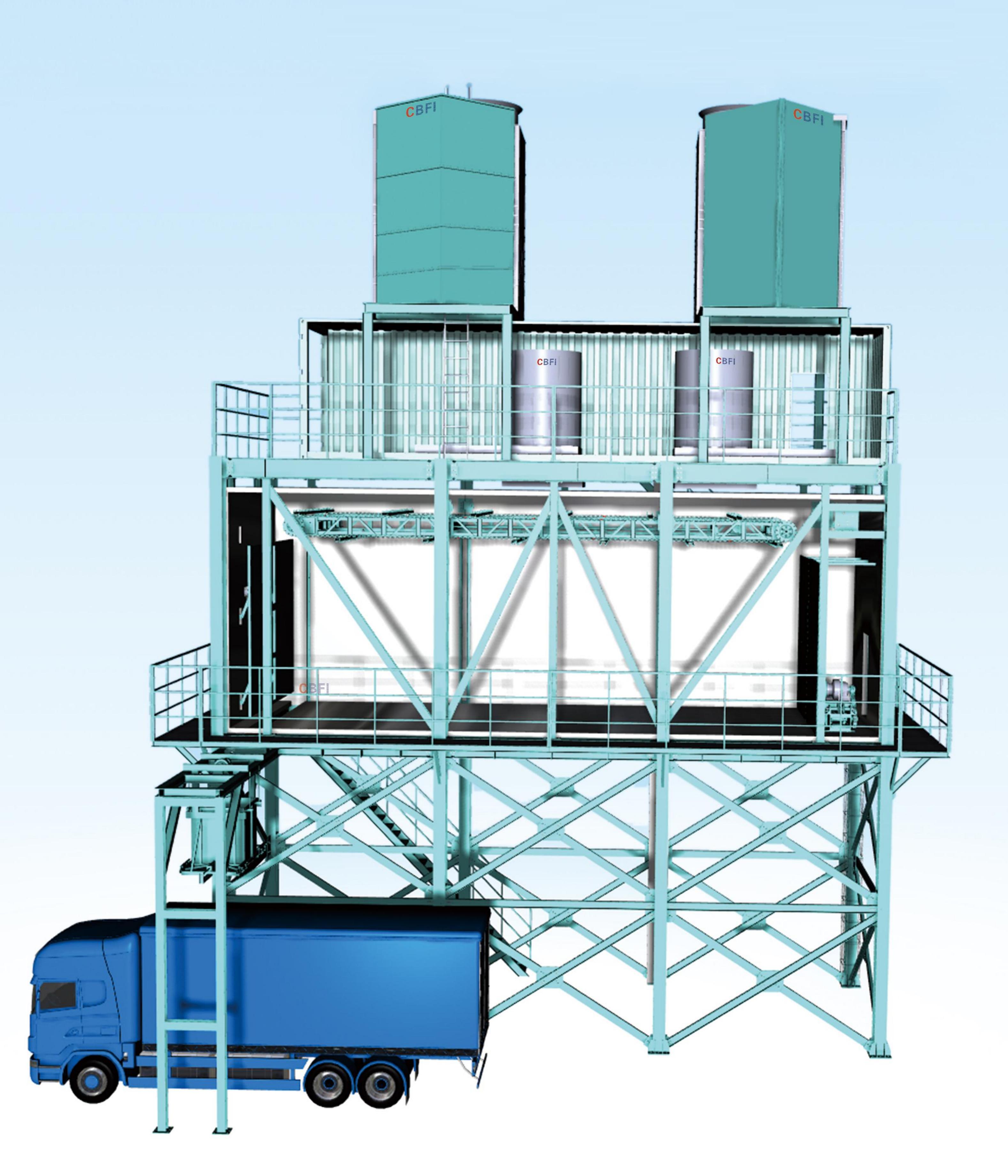
Inside Scraping Making Ice

Automatic Flake Ice Machine adopts new standing inside screwing ice cutting evaporator. This design can reduce abrasion with high quality in sealing. During ice making period, water would be sprinkled on the internal side of evaporator and quickly frozen into ice, then ice would be cut down by screw scrape cutter. Taking full advantageof the surface of evaporator, this design increases the efficiency of Flake Ice Machine.



Anneal relieves of internal stress (showing red color) to prevent from warping

Large welding cause internal stress inside the bucket which easily deform without relieving. The reason why the evaporator deform in many other factories is that they do not have the process of anneal, in order to save process cost and transportation cost on outsource processing work. CBFI is experienced in anneal to make sure the good quality.





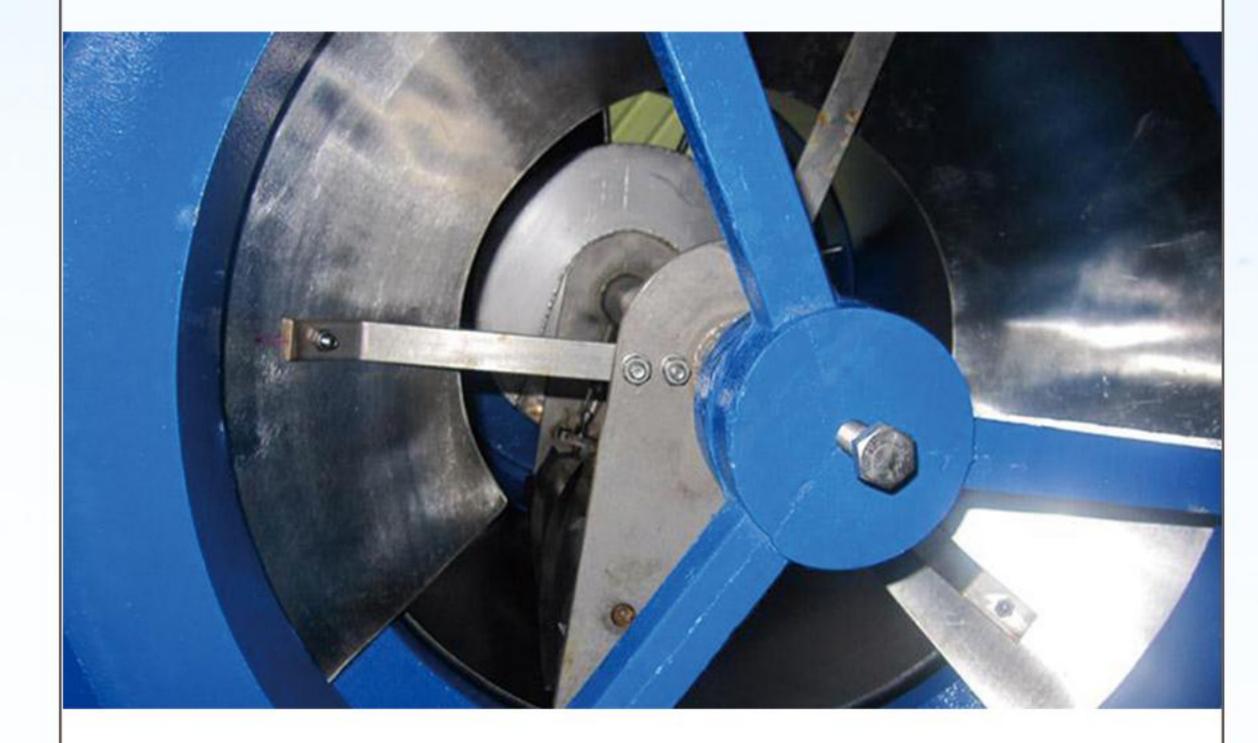
Polishing After Electroplating

Polishing after electroplating makes the surface more smooth to ensure better ice dropping and higher ice output. At the same time, it would prolong the span life of ice cutter.



Circularity Detection (Accuracy 0.01mm)

Before and after each process, a micrometer is needed to examine whether it's oval or a perfect circle, the accuracy of diameter is 0.01mm.



Ice cutter

SUS304 Stainless steel screw-type ice cutter, low resistance, less wear or tear, low noise, evenly ice making.

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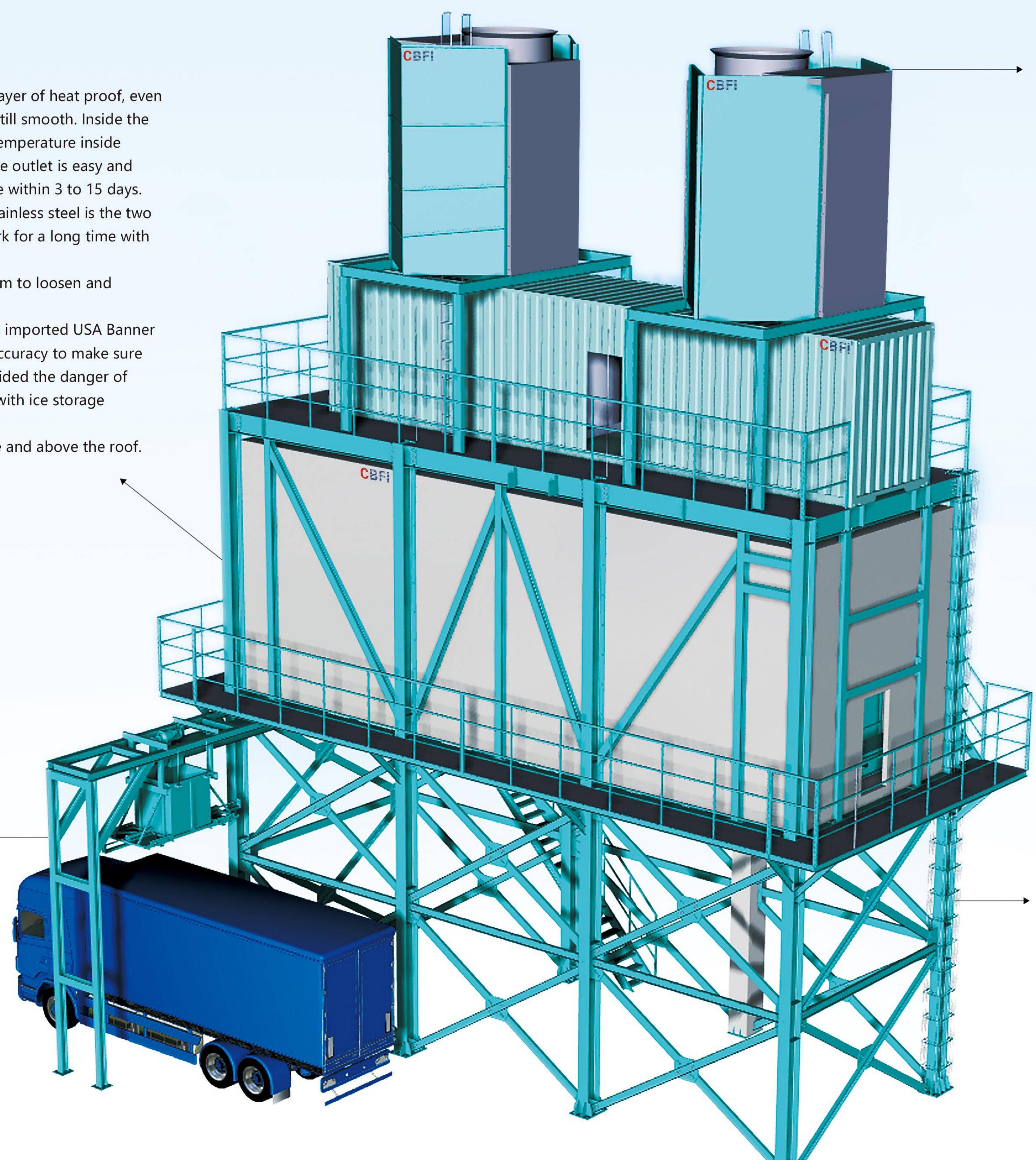


Ice Storage

- · Ice storage is particularly designed double layer of heat proof, even the ice storage is full, cold air circulation is still smooth. Inside the ice storage there is air coolers to keep the temperature inside around -8 °C, ice will be dry and fragile so ice outlet is easy and smooth. Ice storage are suitable for store ice within 3 to 15 days.
- Inside the ice storage, galvanized steel or stainless steel is the two
 option for you to choose, they both can work for a long time with
 no corrosion or rust.
- Inside the ice storage, there is ice rake system to loosen and pull the ice to the outlet.
- Ice rake sensor is installed inside, we adopts imported USA Banner ultrasonic sensor with high sensitivity and accuracy to make sure ice rake is accurately positioned. So we avoided the danger of sensor error may lead to ice rake to collide with ice storage surfaces inside or being embedded by ice.
- . Steel frame is installed inside the ice storage and above the roof.

Weighing System

Continuous weighing devices:
Continuous measuring,
Accurate measurement,
Reliable, quick,
Weighing from 200kg to multiple tons.



Condenser of the large ice rake outlet system: Evaporative condenser

Feature: Compact structure, small occupation area, water saving, energy saving, modular design, low investment, long service life, independent operation, stable and reliable.

Energy Saving:

Comparing to air cooling condenser, evaporative condenser has a lower condensing temperature while energy consumption per unit cooling capacity increase 3~3.5% with the condensing temperature go 1°C higher. So evaporative condenser can significantly reduces the total energy consumption to save energy.

Water Saving:

Evaporative condenser makes full use of water's latent heat of vaporization to save water. Low resistance high efficiency water collector is adopted to avoid water spray loss. Evaporation loss and pollution discharge during the water circulation is 3~5%.

Integrated design with low investment

- Open air design, concise outlook;
- Fine with hot/ freezing/ rainy/ windy situations.;
- Unattended and safe operation.

Long service life

Adopts high-quality galvanized steel, stable using and long service life.

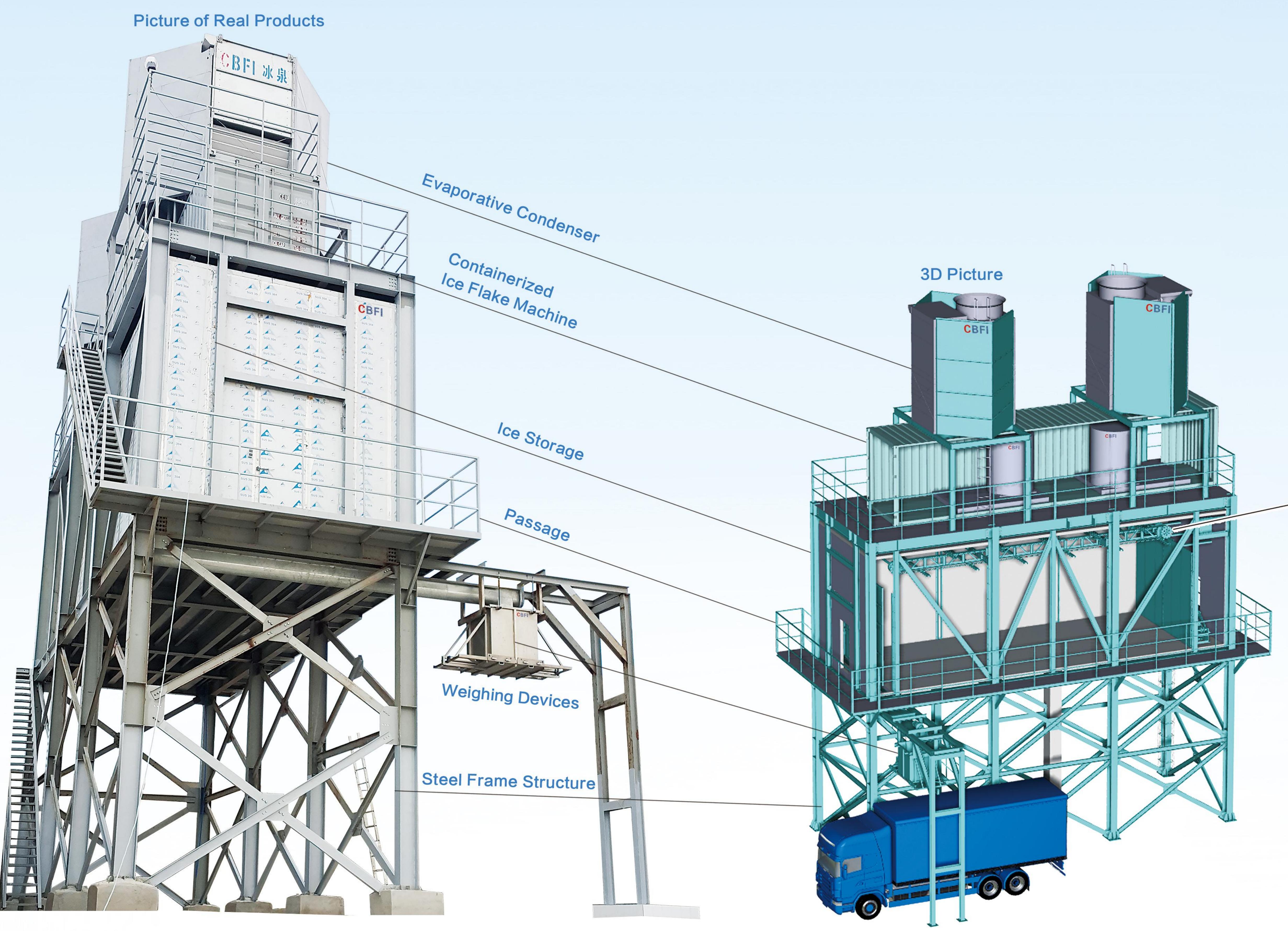
→ Steel structures' advantages (comparing other types):

Considered the weight of machine under working condition, we choose steel according to the total weight of whole project under working condition.

- 1. Removable, easy to transport and install;
- 2. Short installation time, saving manpower and material resources;
- 3. Good plasticity, can endure a sudden overload; good tenacity, the adaptability of dynamic load is strong

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Adopts hot-dip galvanizing procedure to prevent corrosion:

Avoid the risk of ice rake corrosion under the environment which has much contact with ice for a long time.

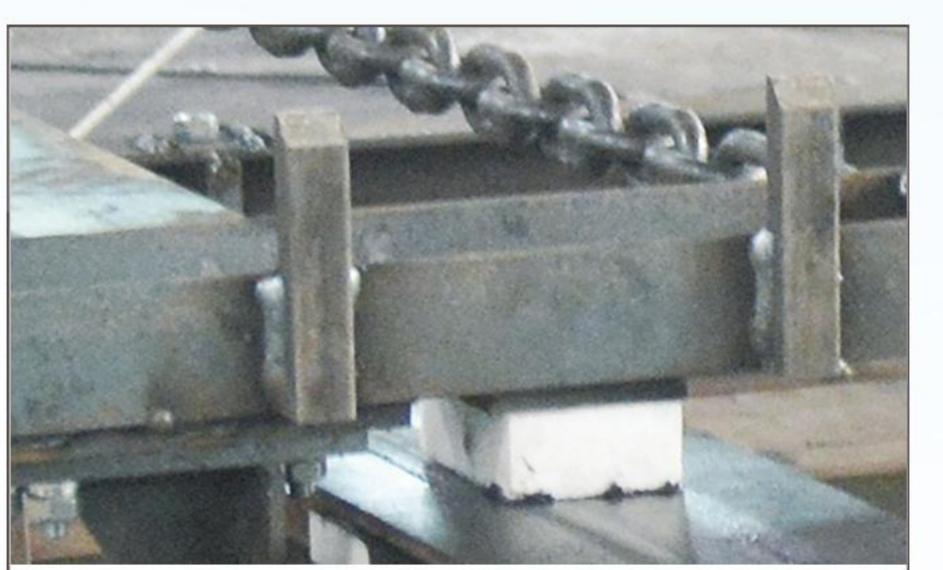
Hot-dip galvanizing:

Immerse steel members into 600°C hot melted zinc liquid, the steel members' molecules merged with zinc molecules for anti-corrosion purpose (comparing to anti-corrosion paint on surface, hot-dip galvanizing infiltrated into steel members to provide a much better effect).

Ice rake structure:

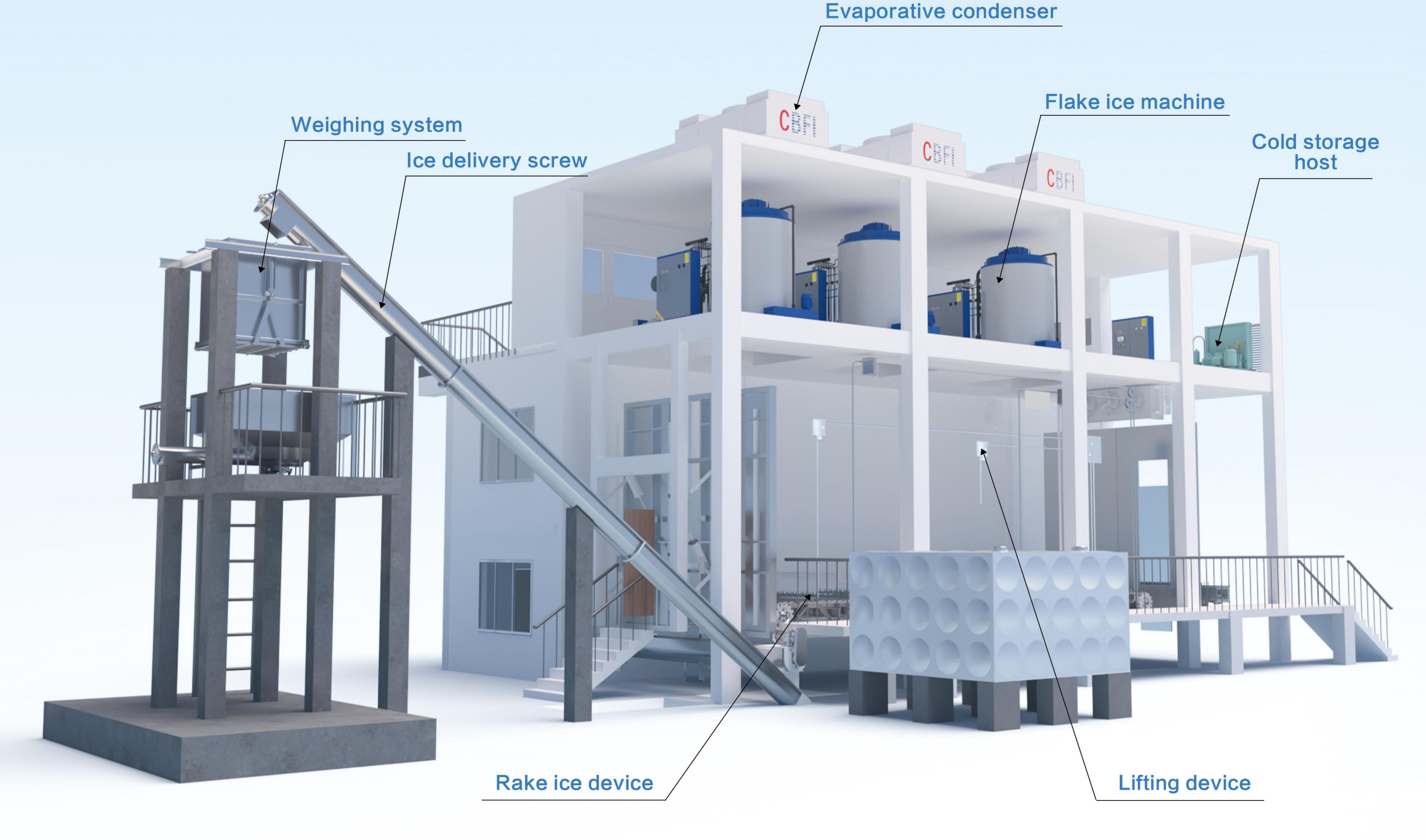
To even the ice surface





Slider of Rake Structure

CBFI adopts tetrafluoroethylene polymer, known as the "king of plastic", to make rake slider.



Air delivery system

Air conveying system, also known as air conveying, uses the energy of air flow to transport granular materials along the direction of air flow in a closed pipeline. It is a specific application of fluidization technology.









Control System

Adopt PLC automatic intelligent control system, centralized control, convenient and fast, labor-saving



SHAN DONG CHEMICAL ENTERPRISE

2 sets of 50 tons flake ice Rake Ice System (Civil Structure)

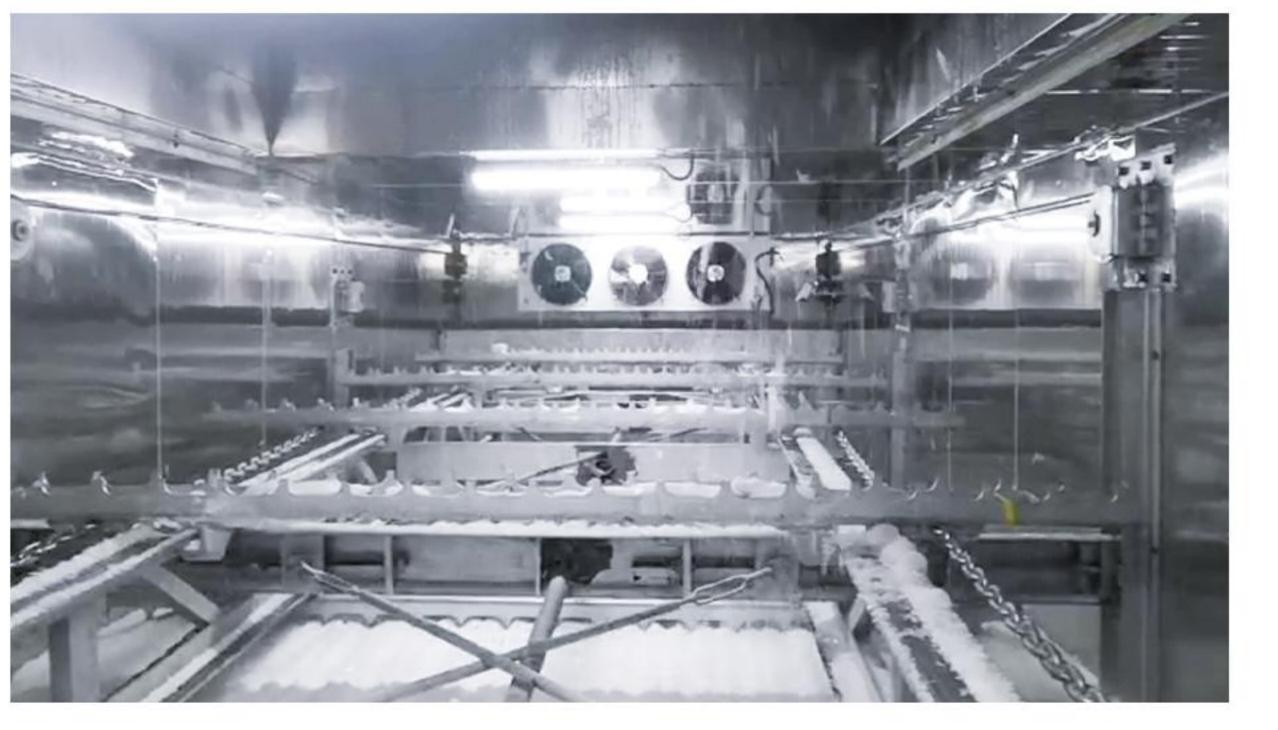






NING XIA CHEMICAL ENTERPRISE

30 tons of flake ice Rake Ice System (Civil Structure)









Ice Flake Customer Cases

CBFI ice flake machine, already exported to many foreign countries and areas, with excellent quality we accumulated many good reviews from our customers both home and abroad.



Malaysia 1 ton Ice Flake Machine



Somalia 3 tons Ice Flake Machine



Maldives 10 tons Ice Flake Machine Zhejiang, China 15 tons Ice Flake Machine

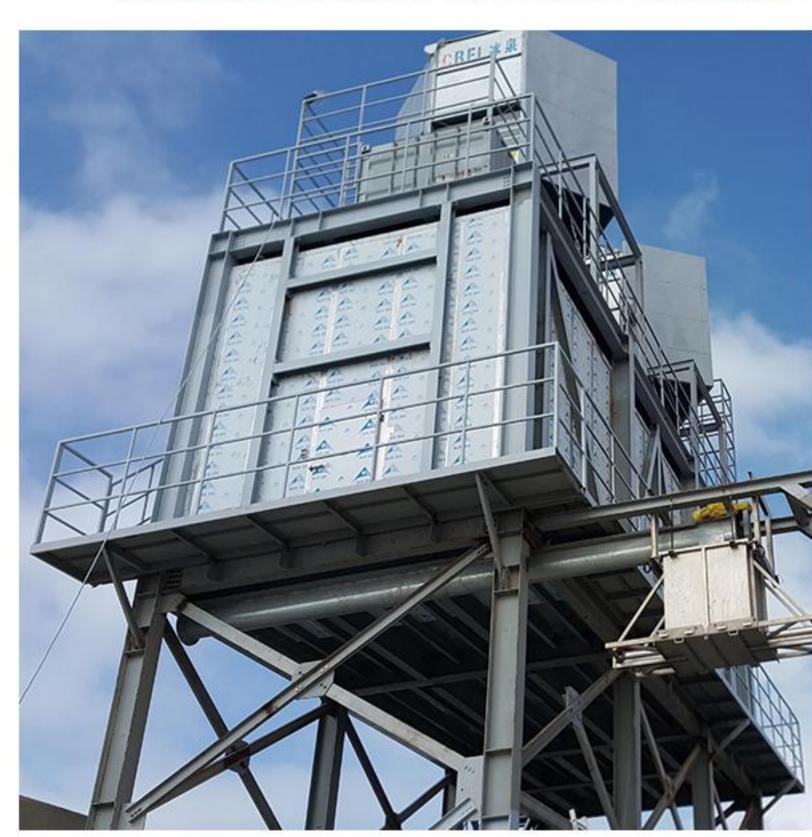


Qatar Rake Ice System 10 tons Mozambique Rake Ice System 20 tons Containerized Ice Flake Machine Containerized Ice Flake Machine





Guinea 20 tons Ice Flake Machine



Morocco Rake Ice System 50 tons Containerized Ice Flake Machine

Ice Flake Usage and Applications

Ice flakes have no sharp edges or corners, do no harm to goods for preservation. Can go into the gap between goods to reduce heat exchange and keep ice temperature. Have good moisture effect Widely used from food and aquatic products processing to manufacturing industries, cement cooling, pharmaceutical industries and poultry processing.



Flake Ice





Seafood preservation



Food processing



Industrial cooling



Chemical dyestuff



Distant fishing



Concrete mixing



Food distribution

