

Specially designed for Middle East and Africa

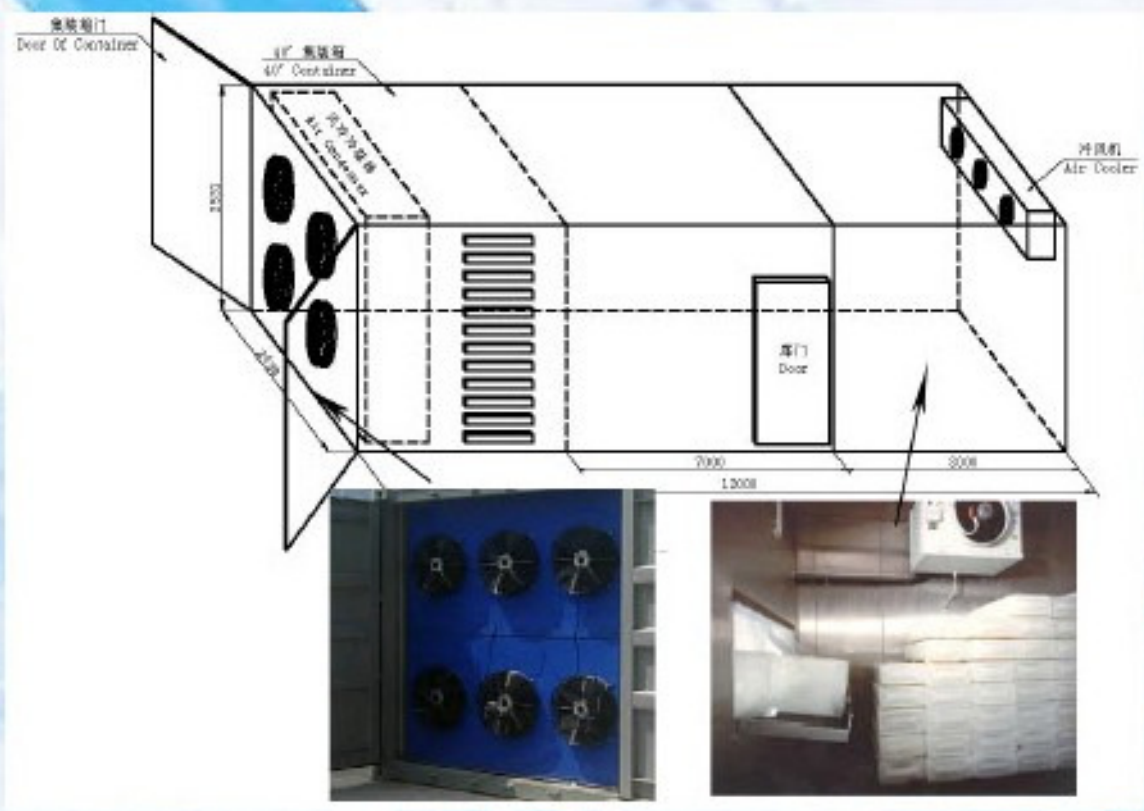
Block ice machine

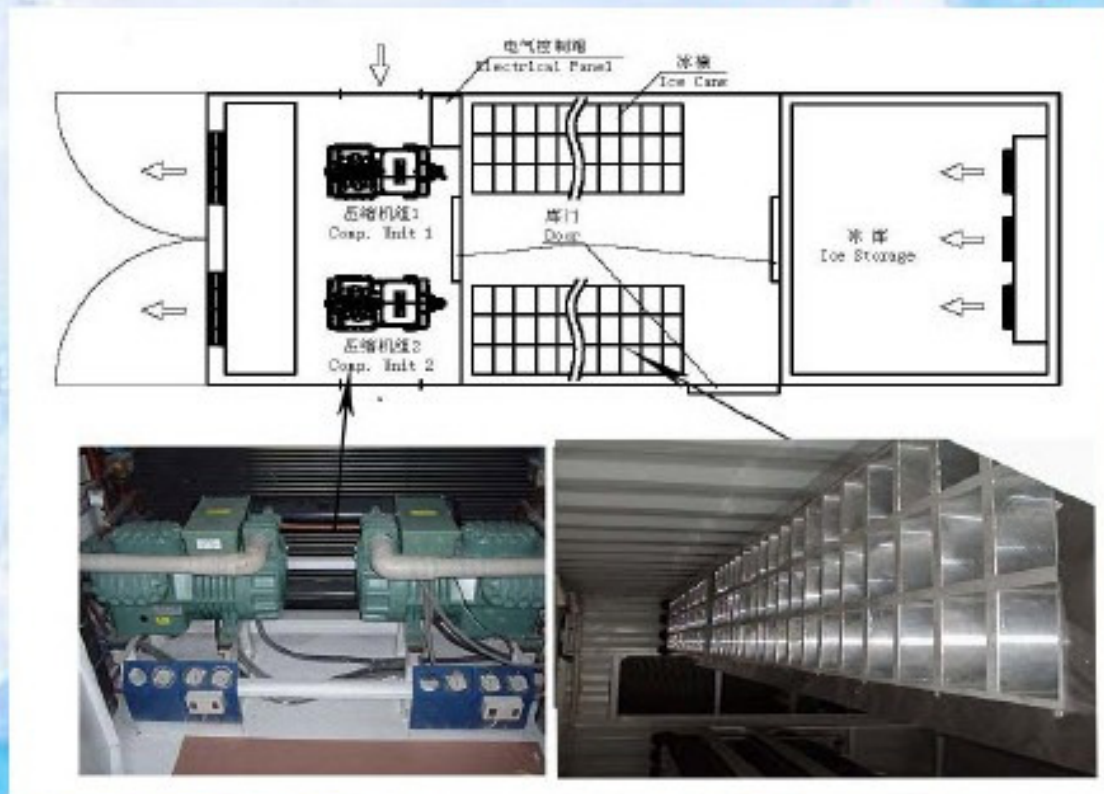
As conventional way to produce block ice is mainly from brine system, first you have to freeze the brine water, then put the ice can into the brine tank, then take out the ice can for harvesting block ice after 20 hours or more. This system is complicate and you have to do a lot of civil work.

Our new system is using aluminum plate as ice can, the refrigerant will be evaporated inside the aluminum plate so the plate can freeze ice making water quickly.



One more thing, we supply compact ICE MACHINE which will be tested well before shipment, it is plug-ready and build for tropical conditions and coastal climate. the buyers can install all system by themselves without any promble.





10tons/day CONTAINERIZED BLOCK ICE PLANT

A: MAIN SPECIFICATIONS FOR 10 TONS/DAY CONTAINERIZED BLOCK ICE PLANT

Cooling Consumption	Electric power	Electric type	Refrigerant
65KW	48KW	380V/3ph/50hz	R22(or R404A)

B: Equipments list

Product Name/unit	Specification	Quantity	Model	Remark
Compressor	2 x 25HP	2	Bitzer	
Electric control device	Star triangle decompression start-up	2		



Cool Support BV

NEW TYPE BLOCK ICE PLANT

Air cooled condenser	200 M2	2		
Expansion valve		2	Danfoss	
Aluminum freezing ice Can	2sets	156blocks		
Sizes of each ice block	15cm x 13cm x 70cm	12.5kg		other sizes of block ice can be considered
Ice storage inside the container	5tons/batch	1		
40FT ISO CONTAINER			1	

C: Spare parts list

Electrical control system	passel	1		
Air motor		2		
Solenoid Valve		1		
Electric fuse		2		
timer		2		

Labor Distribution (Single shift)

Two workers are enough to operate this ice plant, then fill water inside the aluminum ice can, after freezing 4-5 hours, then have stand move the ice blocks to ice storage for storing.

Plant Condition

No.	Item	Detail Specification
1	Ground	12M X 2.8M for 40GP container
2	Electric power	48KW, 380v, 50hz, 3 phase
3	Water source	10tons/day ice making water supply

TECHNICAL SPECIFICATION FOR CONTAINERIZED BLOCK

ICE PLANT WITH CAPACITY OF 10 TONS/24 HOUR

(A) CONTAINERIZED BLOCK ICE PLANT:

Basic design parameters:

* Max. air temperature	50C
* Ambient wet bulb temp.	50C
* Ambient dry bulb temp.	43C
* Water temp. for ice	35C
* Relative humidity	90%
* Block ice plant for tropical use.	
* Aluminum alloy as ice cabinet	
* Block weight	25kg
* Refrigerant to be used	R22

SPECIFICATIONS:

(1) CONTAINER:

Brand new ISO container constructed according to ISO:

- The main frame strength and corner fittings of the container are constructed of welded steel parts, which are protected against corrosion by hot dip galvanized.
- The sides, roof and end walls are made of 50MM PU glass reinforced plastic insulation panel density 45 KG/M³.
- The floor must be of adequate corrosion resistant aluminum chequered plates.

(2) COMPRESSOR:

One stage reciprocating compressor, open or semi hermetic type connected with electric motor. The compressors are equipped with:

- Suction and discharge stop valves,
- Safety valves,
- Suction filter
- Oil level glass,
- Equipment for unloaded start,
- Electric heating rod in crankcase,
- High suction and oil pressure gauges,
- Safety cut out for compressor and discharge temp.
- High low and oil pressure cut out,
- Oil separator with solenoid valve controlled oil return,
- Liquid separator,
- Non return valves.

(3) CONDENSER:

Air cooled condenser provided with copper fins (cu/cu) mounted outside the container. The capacity of the condenser should be based on an ambient dry temp +45C and the condensing temp+45C.

Condenser should be able to use for:

- Low discharge pressure and condensation temp.
- Highly economic way to increase the efficiency and to decrease the power consumption of the plant.

(4) ELECTRICAL PANEL:

Switch and control panel insulated in stainless steel board execution for three phase 380/440 volts . 50 Hz provided with the following accessories:

- Main switches,
- Star-delta starter for compressor motors,
- Volt ampere and frequency meter,
- Contactors, relays,
- Overload protector,
- Hour counter,
- Three phase failer relay
- Circuit breaker,
- Alarm system
- Indicator lamp for operation and faults,
- Emergency stop switch.

(5) ICE MAKING PLANT:

(5-1) Brine tank:

This new system DOES NOT NEED any brine tank and chemical(NACL)water.

(5-2) Evaporators:

This new system is using aluminum freezing plate evaporator, the refrigerant will be evaporated inside the aluminum plate so the plate can freeze ice making water quickly.

(5-3) Ice cans:

Made of Aluminum alloy as ice cabinet for 25KG ice block each.

(5-4) Ice can frame:

NO NEED

(5-5) Crane:

NO NEED

(5-6) Thawing tank:

After freezing water into ice, hot gas from refrigerant unit will be injected inside the ice cabinet for having ice block down from the bottom.