

Industrial Refrigeration



Allbest Creative Development Ltd. (ALLBEST)

Technology Portfolio

I. Industrial Refrigeration

We provide a complete series of products and total solutions for industrial refrigeration fields. The products have been widely used in petrochemical, power, pharmacy, food storage and other industries.

Freezing and Cold Storage

- Food Instant Freezing
- Farm Products Fine Processing
- Beer Cooling Process
- Food Dry Freeze
- Ship-used Cold Storage
- Ice Making
- Others

Cold Storage Project

- Prefab Cold Storage
- CA storage
- Civil Storage
- Seed Storage
- Cryogenics Freezing Storage
- Others

Industrial Freezing

- Ammonia Transportation
- PVC
- Natural Gas Transportation
- Ammonia Synthesizing
- Paraffin Molding
- Chlorine Fluidifying
- Others

Refrigeration Cycle of Single-mixed Double-stage Compressor

Freeze and Deepfreeze for Food

Complete ice making

Refrigeration Technology for Liquid Milk

Vacuum freeze dried system

Skating rink & indoor skee playground

Refrigeration for fishery industry

II. Central Air Conditioning

We can supply equipment from chiller units, air handlers to cooling towers. And also, we design and install central air-conditioning project on turnkey basis.

Central Air-conditioning Products

Chiller Units

- Electric-drive Units
- Centrifugal Units
- Reciprocating Units
- Semi-Reciprocating Units
- Open-Screw Units
- Semi-Open-Screw Units
- Others

VRV

- Commercial Splits
- ECO MULTI Series
- Others

Absorption Units

- Steam-drive two stage
- Gas-drive
- Cool & heat water simultaneous
- Heat water –drive
- Modular type
- Cooling tower combined
- Others

•Vacuum Boiler

•Cooling Tower

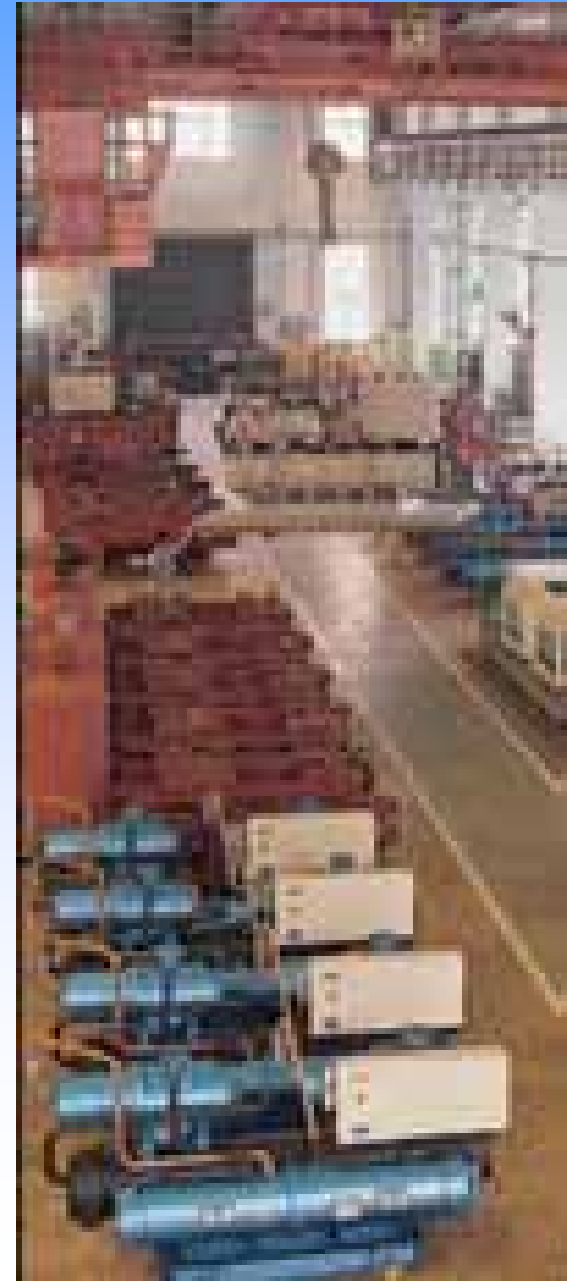
•Air Handling Units

- Regular Air Handling Units
- Glycol-Air Handling Units

Main Application Fields:

- Commercial building
- Office building
- Hotel building
- Hospital building
- Gymnasium & Theatre
- Low-temperature system
- Ice-storage AC
- Purge system
- Others

III. Cold Chain Products



Industrial Refrigeration

RECIPROCATING COMPRESSOR

Five series classified by the diameter of compressor cylinder : 100, 100c, 125, 170, 250 series.

Refrigeration capacity from 26kw to 1221kw

Refrigerating compressor unit, condensing unit, marine compressor unit , water chiller, etc.



SCREW COMPRESSOR

Six series classified by the diameter of compressor rotor : 125,160,250,315,500mm series

Refrigeration capacity : from 37.2kw to 5010kw

Screw compressor unit, condensing unit, water chiller, bring water chiller, glycol unit, etc



Compressor condensing units

Freon Condenser Unit

Ammonia condenser Units



Open-screw Brine Units



the units can be used where $-10\sim-30^{\circ}\text{C}$ brine is needed

Evaporating Condenser

Open-screw Glycol-water Units



The units can provide under 0°C glycol-water

Ship-used refrigeration compressor unit and accessories

Under the condensing temperature of less than 40 and the evaporative temperature of +5~-30 for single stage and 25~-45 for double stage, the series ship-used refrigeration compressor unit can be applied in the food low-temperature processing of ship, transportation refrigeration and the ship air conditioning, what's more, it can also be applied in the other civil and industry economy sectors where manpower refrigeration is necessary.



AIR COOLER

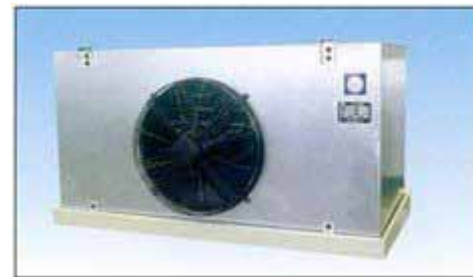
CHARACTERISTICS:

FOR STEEL TUBE & STEEL FIN : LIGHT WEIGHT, LONG DURABILITY AND HIGH EFFICIENCY

LIGHT WEIGHT——STEEL & ALUMINIUM FIN, THICKNESS=0.25mm STEEL TUBE, 20 X 1.2mm
STEEL CASING, PLATE THICKNESS=1.5mm
IMPORTED OUTER ROTOR AXIAL FAN
(WEIGHT: 11、13、22、31KG)

LONG DURABILITY——COIL UNIT IS HOT-DIP GALVANIZED AND CASING USE GALVANIZED STEEL SHEET PAINTED WITH OIL PAINT

HIGH EFFICIENCY——DRIP TRAY SPRAYED PLASTIC SPECIFIC WHOLLY RIPPLED STEEL FIN ADOPT WHOLLY HOT-DIP GALVANIZED PROCESS HIGH PERFORMANCE IMPORTED OUTER ROTOR AXIAL FAN

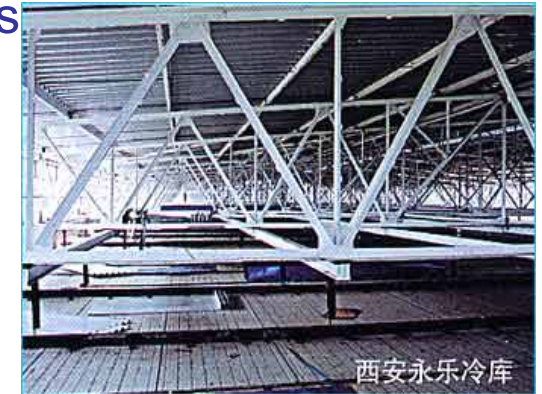


COLD STORAGE



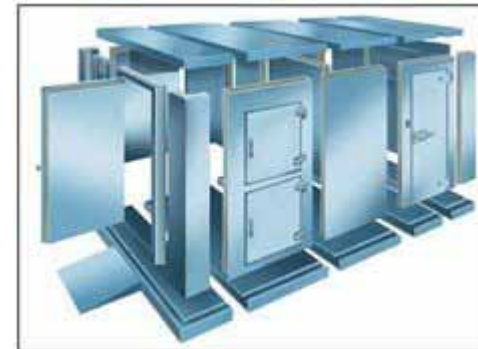
Cold Storage Project

- ✓ Prefab Cold Storage
- ✓ CA (Controlled Atmosphere) storage
- ✓ Civil Storage
- ✓ Seed Storage
- ✓ Cryogenics Freezing Storage
- ✓ Others



Prefab cold store

Polyurethane or polystyrene with low thermal conductivity and high strength is utilized, achieving good insulation performance.



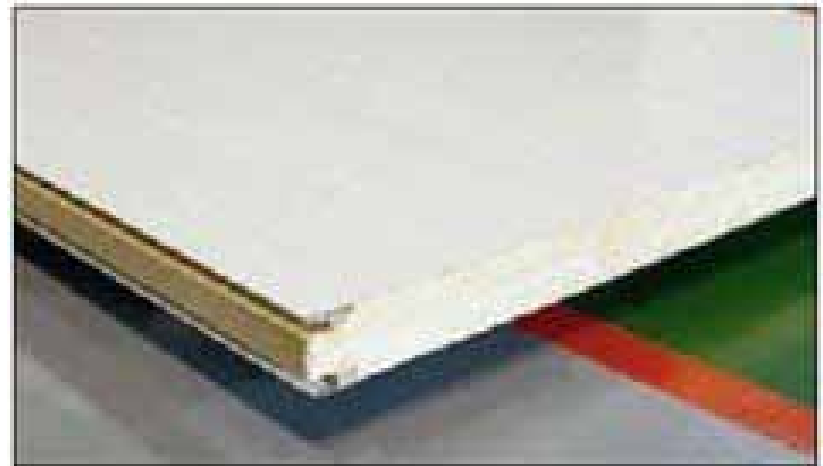
Walk-in prefab cold store

The polyurethane insulation panels that are manufactured by means of updated polyurethane panel production line introduced from abroad are up to advanced international level in the technical performance.



SANDWICH PANEL

Here are two kinds of insulation panel used in prefab cold storage: polyurethane and polystyrene panel. The thickness of panel ranges from 50 to 250 mm and the length of panel is up to 12 m



ICE MAKING PLANT

Our standard ice making plant has 10 kinds of capacity to be selected: 3t,5t,10t,15t,20t,30t,60t,120t,180t,240t per day. Both transparent ice and white ice are available and the weight of ice block is 25kg, 50kg,135kg.



Big-block Ice-making Line

SHELL ICE MACHINE

Ls series shell ice machine is more Efficient than other ice making machine. Compared with crashed ice, the shell ice Has better cooling effect. In addition, Shell ice can be stored at a little Higher temperature and need smaller Store space for its large density. Furthermore, it is very convenient and Economical that the capacity of shell Ice machine can be enlarged according to The ice demand increasing



Tube Ice Making

Sheet Ice Making



SKATING RINK & INDOOR SKEE PLAYGROUND



Refrigeration Equipment for Fishery Industry

Ship-used contact freezer

This new product is ship-used contact freezer, its freezing time is 90-120min. The capacity can be designed according to customers' requirement. It has a stainless steel shell and a double-face roller shutter.



Fast Refrigeration Equipment for Tuna at Low Temperature at Tunny Extension Rope Fishing-ship



Refrigeration Technology for Liquid Milk

- Able to prepare the ice water +1~+2 centigrade degrees above medium freezing point
- Capable of exchanging heats for cooling medium through wide temperature drops, approximately up to 30 centigrade degrees
- Able to transmit heats through narrow temperature drops, approximately up to 2 centigrade degrees, efficient in energy-saving
- Able to achieve dynamic computer simulations, automatic controlling and recording
- Able to supply ice water through frequency conversion controls
- Able to use stainless evaporators, up to the food requirements under HACCP
- Simple and compact in structure, and occupying less work area
- Efficient in heat exchanges, stable and safe in operation, and easier to maintain
- Exact in precision controls (up to $\pm 0.5^{\circ}\text{C}$), and able to control out-flowing water at approximate 0 centigrade degree
- Achievable for automatic controls, environmental protection and energy-saving
- Economical in investment and operating cost



1. Modularized ice water equipment
2. Screw compressor for cooling liquid ammonia
3. BAC evaporative condenser
4. Guardian automatic controls
5. Frequency conversion system for ice water supplies

Refrigeration Cycle of Single-mixed Double-stage Compressor

Single-mix double-stage refrigeration cycle (middle cooling with loads often employed with the development of computer control technology recently. Especially, medium or larger ammonia screw compressor with automatic controller, can accurately define energy ratio of high pressure compressor to low pressure compressor, demand system technical temperature between -40°C and -10°C , stabilize evaporating temperature, and reach design goal. The example is taken as follows:
Technology requirements: (the enclosed is function parameter ratios) Evaporating temperature: -40°C Condensation temperature: -38°C Refrigeration capacity: 2500Kw Middle cooling load: 700Kw)

Evaporating Temp.: -40°C

Condensing Temp.: -38°C

Capacity: 2500Kw

Middle Cool with load: 700Kw

Application Scope

1. $-30^{\circ}\text{C} \sim -45^{\circ}\text{C}$ brine for industrial refrigeration $-35^{\circ}\text{C} \sim -45^{\circ}\text{C}$ direction cooling system of reaction kettle for industrial refrigeration
2. larger packinghouse (pig、cattle、sheep、chicken、and duck, etc)
3. deep-processing manufactory for agricultural products
4. ice cream production lines, etc

Food Freeze-Drying Equipment

The equipment is used for freeze-drying of meat, vegetable, fruit, marine products, soymilk, beverage, soup, health products and other kinds of food processing, so enable the food processed as being nature, nutritious and convenient.

The series freeze-drying equipments are developed and manufactured by international leading technology on the basis of experiences accumulated from our technology on the combination of heat transfer, vacuum, freezing, pressure container making and automatic control technology. It adopts advanced technologies such as built-in alternatively working water - vapor trap, full liquid circulating refrigerate system, heating and water vapor trapping system designed according to acceleration sublimation theory and ice defrosting by vapor under vacuum conditions, etc. The Performance indexes of the equipments have reached international level.



Features of Freeze-Drying Food:

- Keep food original color, perfume, taste, shape, proteins and vitamin
- Being natural, no preservative, having excellent preservation ability
- Having fairly long shelf life under good packing conditions
- As preserved under normal temperatures, instead of complicated refrigeration chain
- Most part of the moisture weight of the food is removed, so easy to transport with light weight
- Quick reconstitution, convenient to eat



Vacuum freeze dried system

Miniature Freeze-Drying Testing Machine

This test machine is compatible with freeze-drying equipment for production, used for researching of process parameter control curve for various materials frozen and dried to seek optimum process scheme.



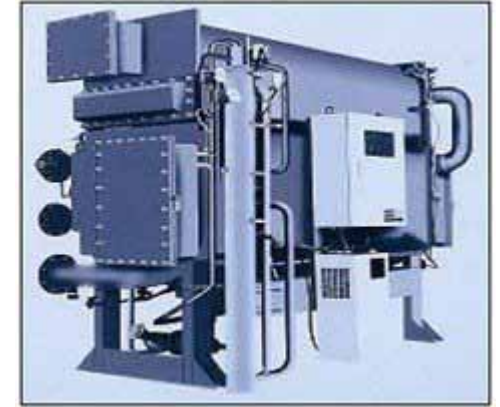
Food Quick Freezing and Processing Lines
Pre-quick freezing processing product line
Fruit & Vegetable Processing Pretreatment Production Line
Vegetable and Fruit Vacuum Cooling Equipment
Fruit & Vegetable Vacuum Frying Equipment



CENTRAL AIR CONDITIONING

Electric-drive Chiller Units

- Centrifugal Units
- Reciprocating Units
- Semi-Reciprocating Units
- Open-Screw Units
- Semi-Open-Screw Units
- Others

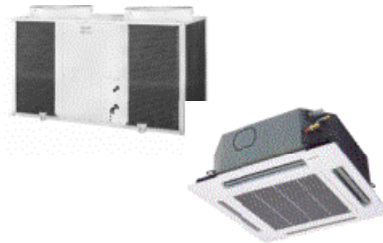


Absorption Units

- Steam-drive two stage
- Gas-drive
- Cool & heat water simultaneous
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- Modular type
- Cooling tower combined
- Others



Vacuum Boiler



VRV



COOLING TOWER



Regular Air Handling Units



Glycol-Air Handling Units

Chilled Water Unit

Chilled Water Unit can supply low temp. air-conditioning water for all kinds of building. The unit can be widely used in comfortable air-conditioning project such as Theatre, Hotel, Hospital, Super market etc. or in craftwork air-conditioning project such as equipment cooling ,textile printing, etc.



Chilled water unit

Chilled water unit using new style semi-hermetic screw compressor is a high quality energy saving and high efficiency series of products. which can be widely used in comfortable and producing line air-conditioning projects



Heat pump

heat pump using new style semi-hermetic screw compressor is a high quality energy saving and high efficient series of products. which can be widely used in comfortable and producing line air-conditioning projects

Water source heating pump

This unit uses water (ground water 、 lake、 river) as heat source .it can hot or chilling water for all kinds of air-conditioning system



Grain Chiller

Generally grains are stored through natural ventilation; renew storage, and medicine suffocating. During this storage, as much as 1-3% of loss to grains may be caused by water content reduction, insect pest, and mildew accidents, etc, for which a grain depot with billions Jin (1 Jin equals to 0.5 Kilogram) of storage capacity will lose millions of yuan in value. Thus, this waste can be avoided by the adoption of deepfreeze technology. Grains chillers can consecutively furnish chilling air required specifically at temperature and humidity with granary to deepfreeze such grains as corns, paddy, wheat, and seeds. The deepfreeze technology substantially improves economic and social benefits by reducing losses and decreasing freshness of grains stored as well.

Those products are made under the introduced the most advanced grains chiller technology from Sulzer Company (Switzerland) who enjoys 36-year experience in producing and applying deepfreeze technology for grains in the world, has cooperatively manufactured the grains chillers specifically suitable for grains stored in China which features the highest reliability and exactness of controlling, and has significantly contributed to China's technological revolution of grains storage from "traditional storage to that of deepfreeze".

GL-Grains Chiller Features: Wide adjustment for temperature and humidity, attainable controls and guarantees for grains quality. Adjustable temperature range: 4-18°C; Adjustable humidity range: 60-95%

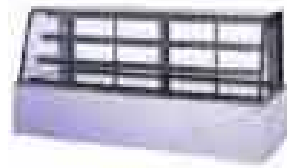


Cold Chain Products





Beverage Show Case



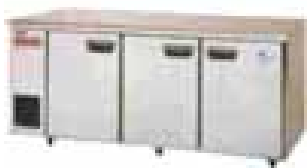
Cake Show Case



PC-S Air-cooling Showcase



PC Vertical Cold Storage



NC Cold Storage



CPW SUPER SHOWCASE



SCR Super Showcase



SAR Super Showcase



Ice Maker



VENDING MACHINE

Services

- Advanced and reliable technology & engineering
- Procurement, manufacture, and delivery of the goods
- Project management
- Construction, installation, and commissioning
- Technical service
- Training program
- Service after completion of the project
- Other services and functions upon request

CREATE THE FUTURE



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