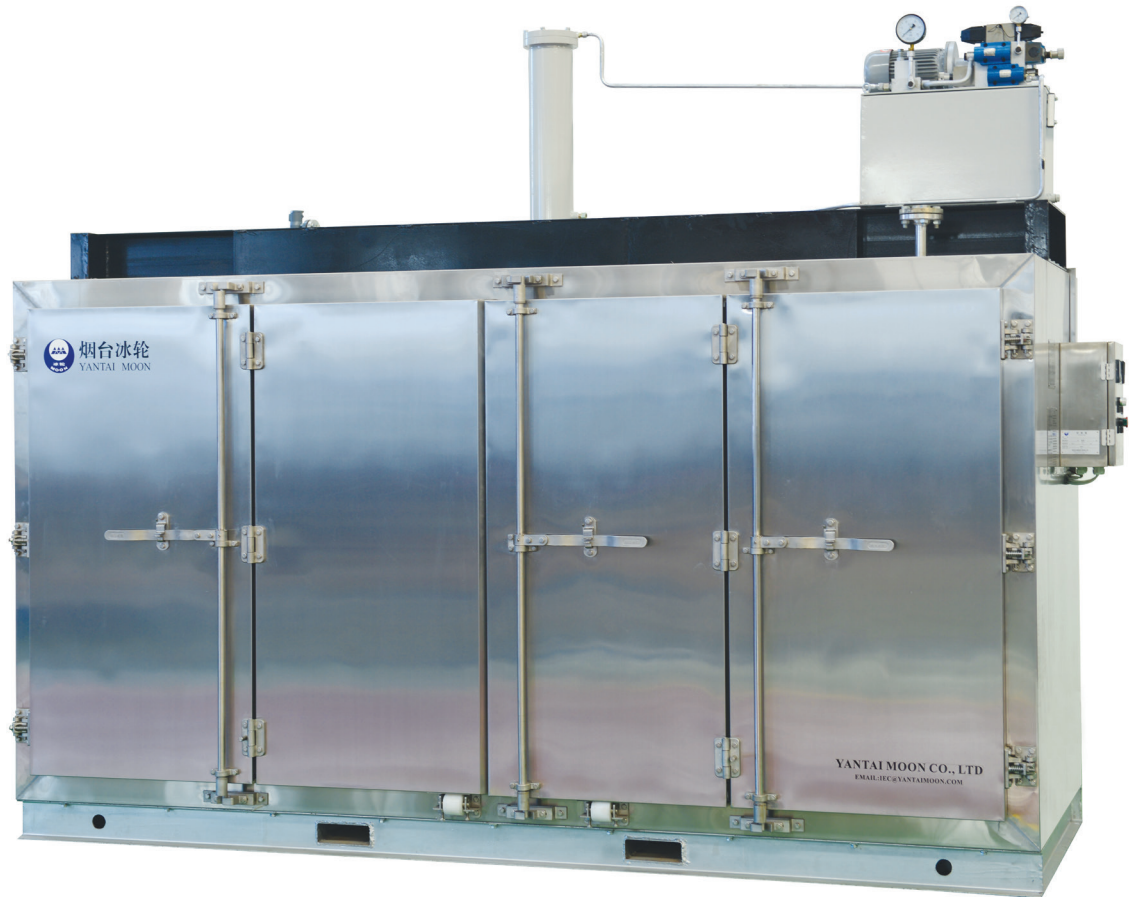




冰轮环境
MOON-TECH



CONTACT FREEZER

MOON ENVIRONMENT TECHNOLOGY CO., LTD.

CORPORATE BUSINESS

COMPANY INTRODUCTION

Committed to artificial environment control technology innovation
Committed to the comprehensive use of energy technology innovation

1956

Since 1956

000811

Stock Code

5000+

Employees

120+

Clients from Countries/Regions



GLOBAL VISION

9 Industrial Parks

120+ Countries /Regions



Headquarters



Vietnam Industrial Park



American Industrial Park



British Industrial Park



Malaysia Industrial Park



Baoding Industrial Park



Laishan Industrial Park



Jinan Center



Guxian Industrial Park

TECHNICAL AWARDS

Only Chinese company wins UN award for exemplary project to protect ozone layer.

22

National & provincial technological innovation platforms

72

National and industrial standards

256

National, Provincial and Ministerial Scientific and Technological Achievement Awards

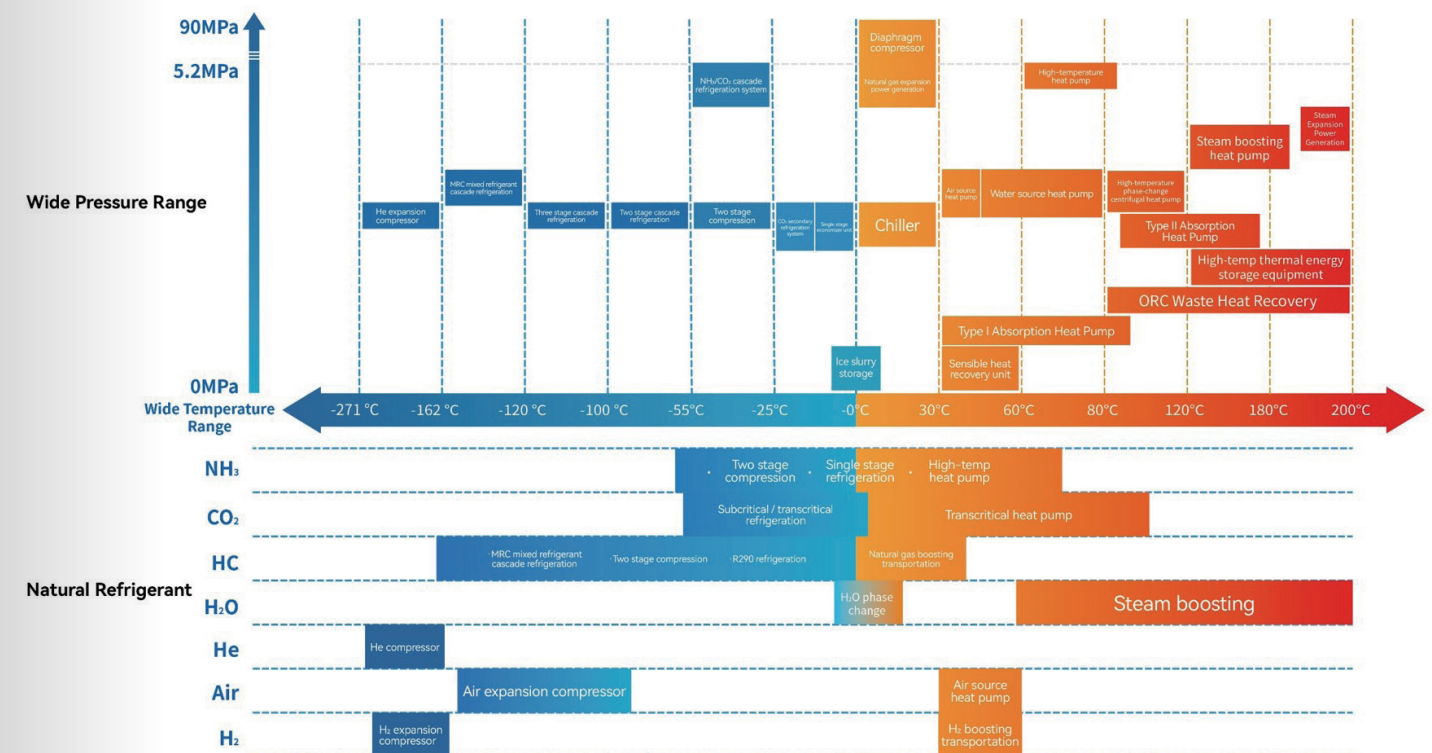
Engineering A Better Future



OUR TECHNOLOGY

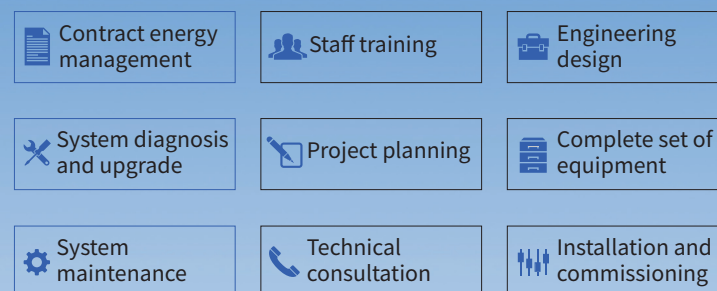
Complete production line helps to provide optimal temperature and pressure conditions for all types of users around the world in a more low-carbon way.

PROMOTE COMPLEMENTARY UTILIZATION OF ENERGY BY USING ARTIFICIAL ENVIRONMENT CONTROL TECHNOLOGY



FULL LIFE CYCLE SERVICE

MOON-TECH is committed to becoming an “intelligent cooling and heating system integration expert” in the field of artificial environment and comprehensive energy utilization technology, using a more environmentally friendly way to provide users in various industries around the world with the best “temperature” and “pressure” conditions, professional and value-added services, so as to build an interconnected world of refrigeration and heating.



Contact Freezer

01

MPF-(F)Z series contact freezers

02

MPF series contact freezers

03

MSP series contact freezers

FREEZING PRINCIPLE

The freezing mode of contact freezers is quick contact freezing. The principle of quick contact freezing: depending upon the characteristic that the heat conductivity of metal is dozens of times larger than the heat transfer coefficient of air surface, food is horizontally or vertically placed at one side of plate evaporator (the metallic freezing plate) and cold quantity is quickly transferred to food via the metallic plate, thus realizing quick freezing of food.

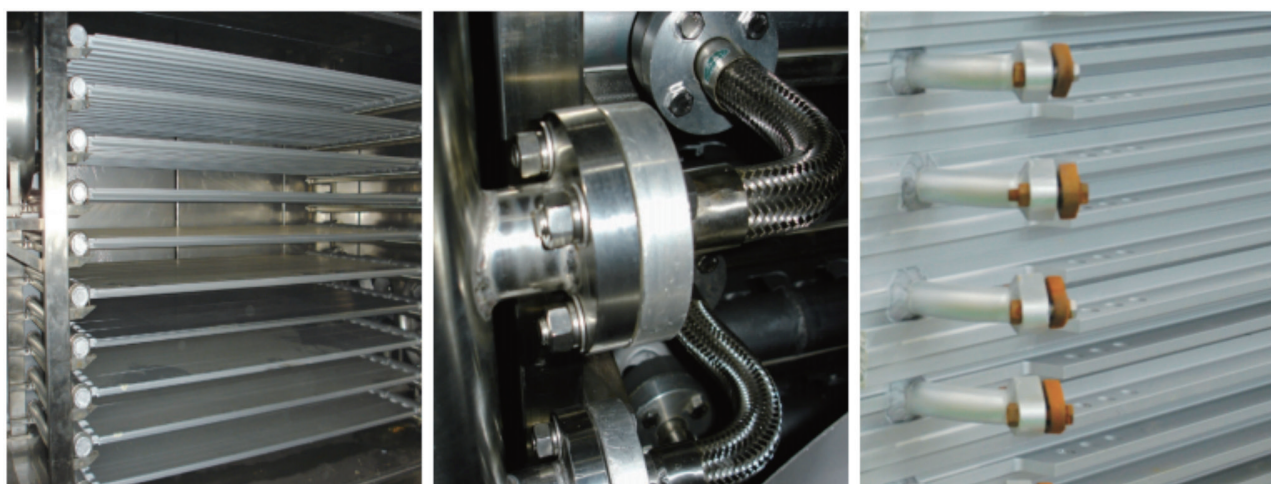
- High heat transfer efficiency, high freezing speed, short freezing time, high freezing quality, and low weight loss;
- Low energy consumption because of no need for fans in the equipment;
- Small equipment volume and small floor area;
- Equipment delivery as a whole so as to save the customer's construction cost.



PRODUCT FEATURES

High Efficiency

- The freezing plate is a professionally designed plate evaporator, ensuring uniform and smooth flowing of refrigerant, making the surface temperature of the plate uniform and consistent and realizing high heat transfer efficiency.
- The freezing plate is an aluminum alloy plate, which is manufactured using the welding technology and equipment of American MILLER Company to ensure welding quality, plate leveling and small deformation. The integral plate is treated for anodic oxidation and a layer of uniform and compact oxide film is formed on the plate surface, so that the plate is resistant to corrosion, transfers heat uniformly and has a good freezing effect.
- The liquid feed and air return flow uses a single plate for liquid feed and air return, thereby realizing short flow and small resistance.
- The liquid feed and air return manifolds use stainless steel materials to ensure that the requirements of food safety and sanitation are satisfied.



Reliable

- Both the framework and the yoke are made of hot-dip galvanized materials or stainless steel sections and thus have strong corrosion resistance.
- The liquid feed and air return pipes connected with the freezing plate all use stainless steel corrugated pipes, which fluctuate freely in low temperature environment, can be used frequently for long and have high reliability.
- The professionally designed hydraulic system has multiple protective devices and thus can ensure long-term stable operation of the equipment. The oil pump is a high precision vane pump, which is characterized by compact structure, stable operation, low noise, small pressure flow pulsation and long service life. The cylinder is a stainless steel cylinder and oil seal is imported to ensure reliable operation of the hydraulic system.

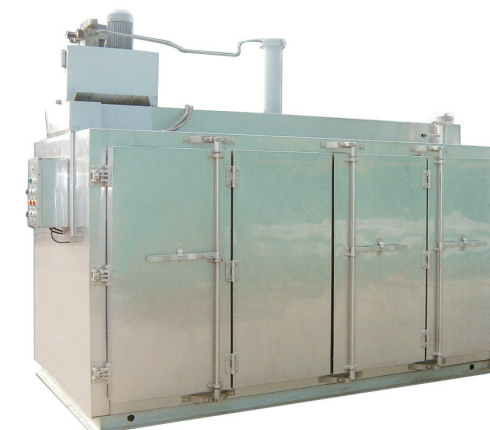


Compatible

- The refrigerants used in the standard design of the freezing plate include R717 and R22; R404A and R744 or other coolants can be used according to the customer's actual requirements.
- The width design of the freezing plate considers convenient loading and unloading by operating personnel all the more.

MPF SERIES CONTACT FREEZERS

The freezing mode of MPF series contact freezer is double-sided contact freezing with intermittent loading and unloading; food is placed between multiple layers of freezing plates; driven by the hydraulic device, freezing plates move; when freezing plates are pulled apart, food is loaded and unloaded; when freezing plates are held down, food is frozen.



Product Features

- Low energy consumption because of no need for fans in the equipment;
- The equipment is self-provided with an insulating casing and delivered as a whole, so the site construction cost is zero.

Table Of Performance Parameters Of MPF Series Contact Freezers

The continuous freezing products of the ice wheel environment include four major series of products: tunnel series quick-freezing devices, spiral series quick-freezing devices, fluidized quick-freezing devices, and intelligent tunnel quick-freezing devices. They share the following significant common features.

Model	MPF960		MPF1200	
Outline dimensionL*W*H(mm)	3350*1680*2700	3150*1680*2700	3350*1680*3050	3150*1680*3050
Freezing plate size(mm)	1660*1261			
Effective layers of freezing plates	8		10	
Effective spacing of layers(mm)	55~105			
Inlet & outlet cargo core temperatures (°C)	+20/-18			
Refrigerant	R717	R22	R717	R22
Refrigerant working conditions(°C)	±35			
Liquid feed interface(mm)	Φ38	11/8in	Φ45	11/8in
Air return interface(mm)	Φ76	Φ76	Φ89	Φ76
Cooling consumption (kw)	26		33	
Nominal freezing capacity(kg/shift)	960		1200	
Installed power(kW)	1.5			
Weight (t)	3.1	3.0	3.4	3.2

Table Of Performance Parameters Of MPF Series Contact Freezers

Model	MPF1500		MPF1800	
Outline dimensionL*W*H(mm)	3750*1680*3050	3550*1680*3050	3750*1680*3300	3550*1680*3300
Freezing plate size(mm)	2060*1261			
Effective layers of freezing plates	10		12	
Effective spacing of layers(mm)	55~105			
Inlet & outlet cargo core temperatures (°C)	+20/-18			
Refrigerant	R717	R22	R717	R22
Refrigerant working conditions(°C)	±35			
Liquid feed interface(mm)	Φ45	13/8in	Φ45	15/8in
Air return interface(mm)	Φ89	Φ76	Φ89	Φ89
Cooling consumption (kw)	41		49	
Nominal freezing capacity(kg/shift)	1500		1800	
Installed power(kW)	1.5			
Weight (t)	3.7	3.6	4.0	3.8

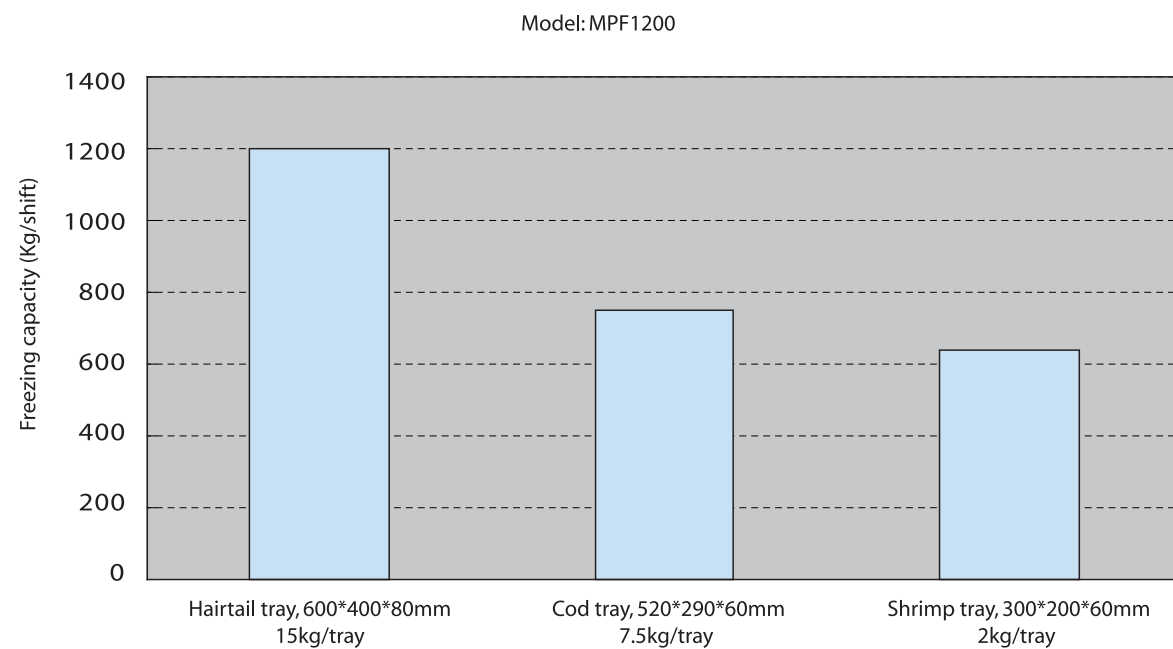
Note: Freezing capacity is based on the tray of hairtail fish, with dimensions of 600*400*80mm, 15kg per tray.

Table of specifications (order code) of MPF series contact freezers

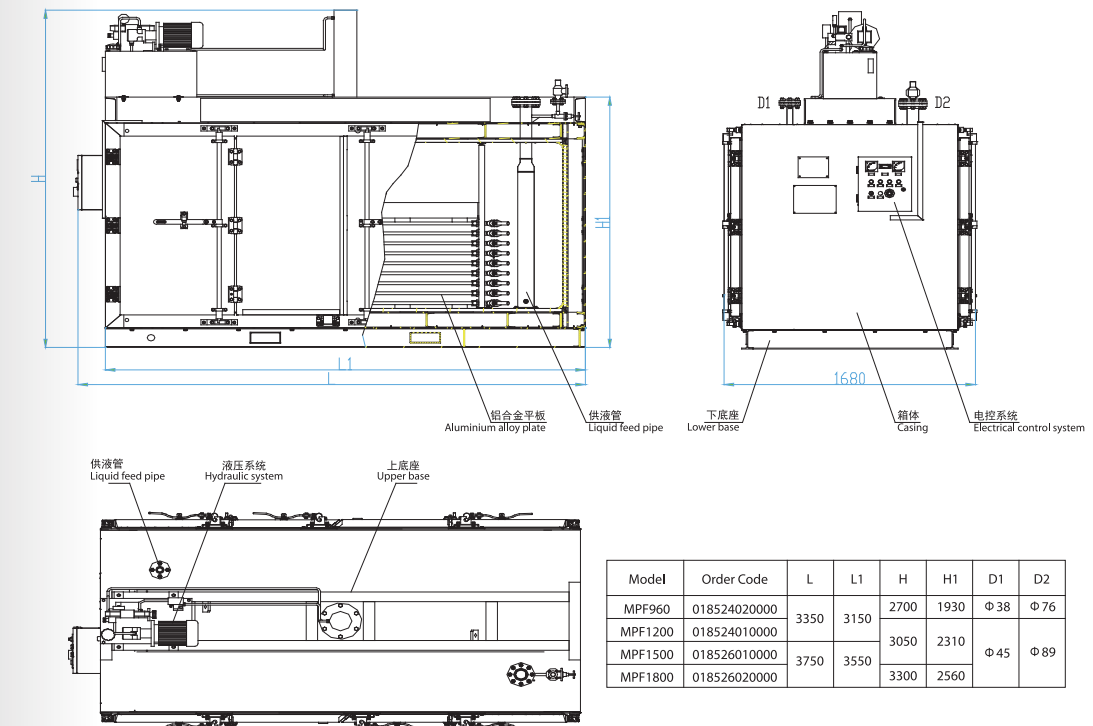
Model	MPF960		MPF1200		MPF1500		MPF1800	
Refrigerant	R717	R22	R717	R22	R717	R22	R717	R22
Complete machine	018521020000	018524020000	018521010000	018524010000	018522010000	018526010000	018522020000	018526020000
Casing	0206090000	020609010000	0206090002	0206090004	0206090005	0206090003	0206090006	0206090007
Lower base	070705020002				070705020005			
Control cabinet	017308010000							
Freezing plate	070707010000	070707020000	070707010000	070707020000	070707010001	070707020003	070707010001	070707020003

Note: In order to promptly treat your order, please be sure to provide the "order code" of your ordered equipment.

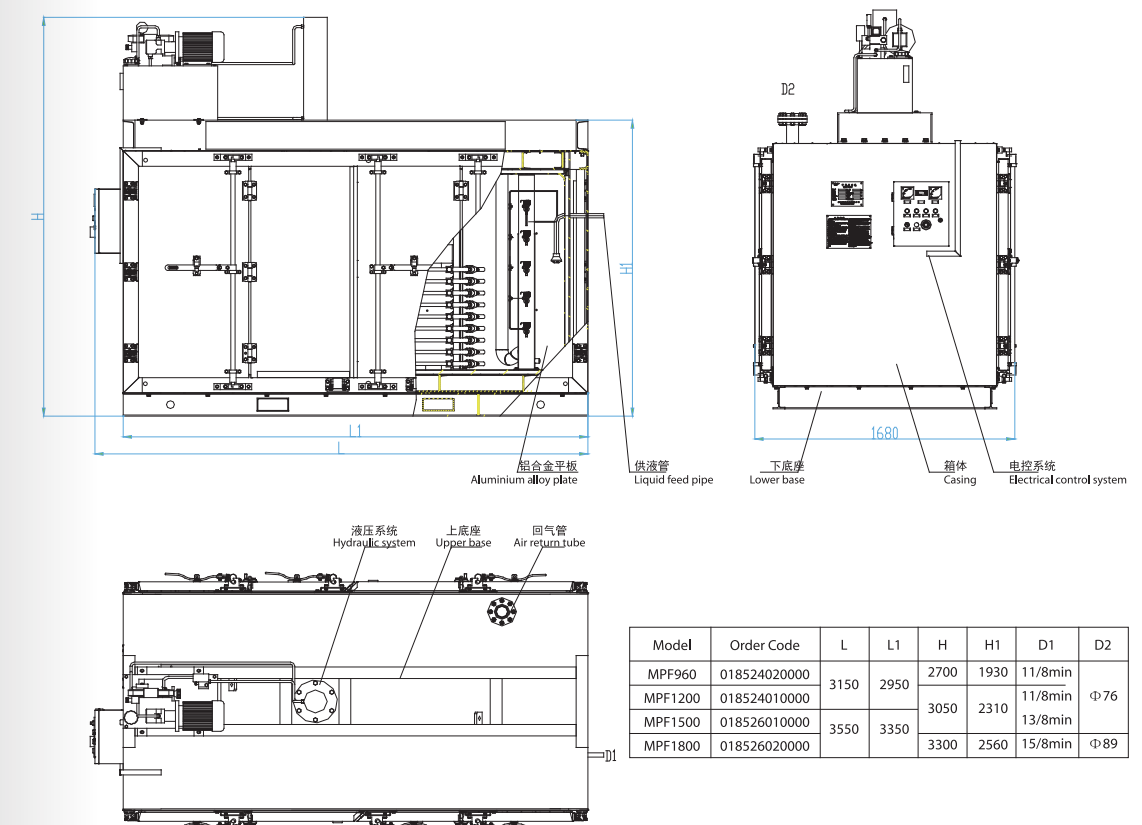
Note: The freezing capacity of the same model products for different foods is different. Taking MPF1200 as an example, its freezing capacity can be shown in the following figure:



Outline drawing of MPF(R717) series contact freezers



Outline drawing of MPF(R22) series contact freezers



MPF-(F)Z SERIES CONTACT FREEZERS

MPF-(F)Z series contact freezer consists of MPF series contact freezer and its matching refrigerating compressor condensing unit, all of which are installed collectively on the public base and form an integral instant freezing system self-provided with refrigeration sources.

According to different condenser forms, there are two sorts of contact freezers such as air-cooled contact freezers and water-cooled contact freezers.

Product Features

- Integrated design of the complete machine, compact structure, convenient and quick installation and operation.
- The air-cooled contact freezer can be put into use after being connected with power source only; the water-cooled contact freezer can be put into use after being connected with power source and water source only.

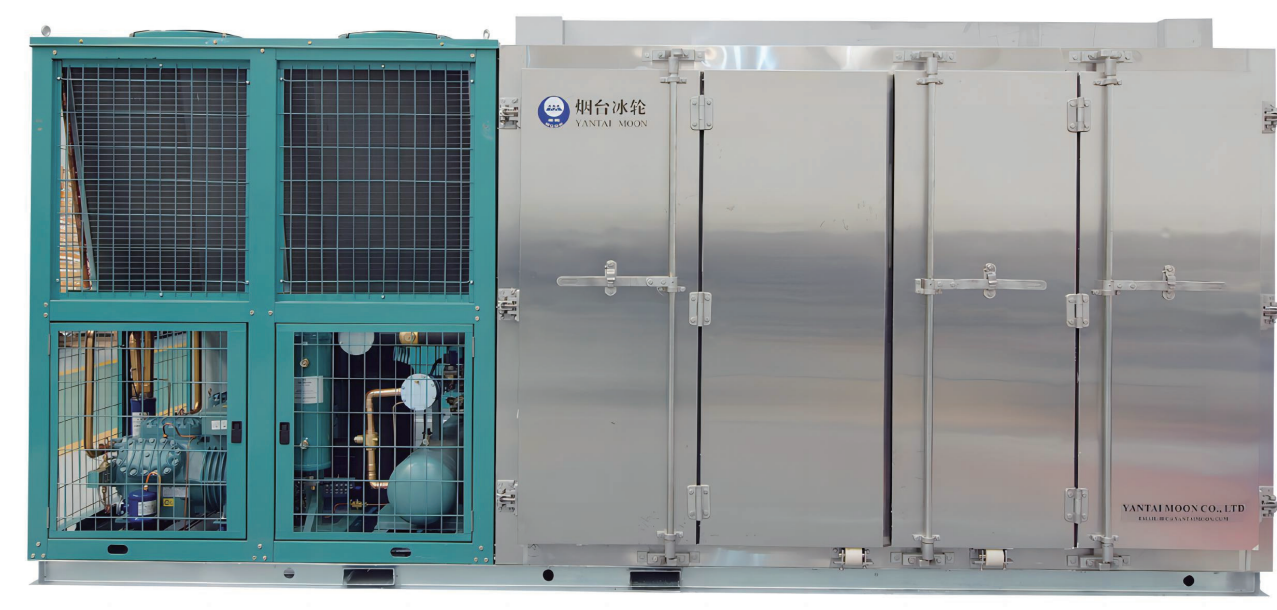


Table Of Performance Parameters Of MPF-Z Series Contact Freezers

Model	MPF1210Z		MPF1430Z		MPF1694Z
Outline dimensionL*W*H(mm)	4350*1940*3050	4350*1940*3050	4350*1940*3300	4350*1940*3300	4600*2160*3050
Freezing plate size(mm)	1418*1770				1732*1970
Effective layers of freezing plates	11		13		11
Effective spacing of layers(mm)	55~105				
Inlet & outlet cargo core temperatures (°C)	+20/-18				
Refrigerant	R22	R404A	R22	R404A	R22
Refrigerant working conditions(°C)	±35				
Condenser form	Water cooling				
Cooling water flow rate m3/h	17.5		21		31
Diameter of water inlet and outlet pipe(mm)	DN50				DN65
Nominal freezing capacity(kg/shift)	1210		1430		1694
Installed power(kW)	50	66	65	80	95
Weight (t)	4.1	4.1	4.5	4.5	5.2

Note: The freezing capacity is designed as per the specification of the salmon tray, i.e.800*250*60mm, 1 1kg/tray.

Table Of Performance Parameters Of MPF-Z Series Contact Freezers

Model	MPF1210Z		MPF1430Z		MPF1694Z
Refrigerant	R22	R404A	R22	R404A	R22
Complete machine	018554010000	018554010001	018554020000	018554020001	018555010000
Plate component	020610010004	020610010008	020610010002	020610010006	020610010009
Lower base	020605020001				020605020003
Condensing unit	014523040000	014523040001	014523050000	014523050001	014523060000
Freezing plate	070707020001				070707020002

Note: In order to promptly treat your order, please be sure to provide the "order code" of your ordered equipment.

Outline drawing of MPF-Z series contact freezers

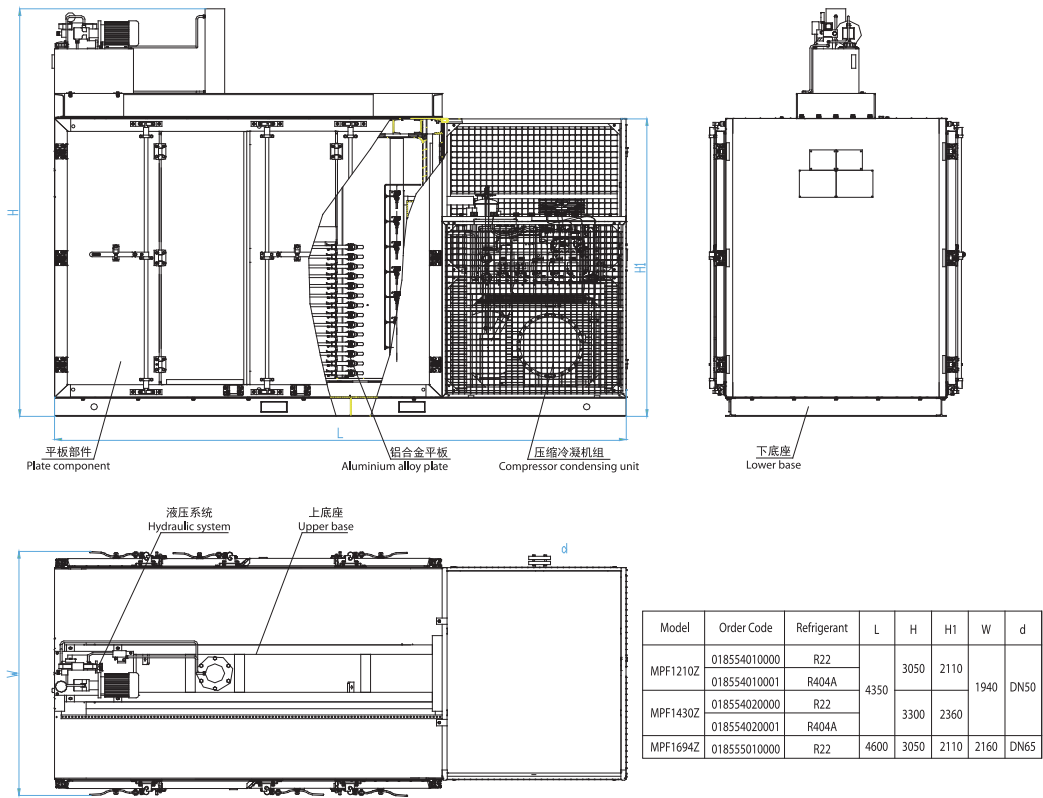


Table Of Performance Parameters Of MPF-FZ Series Contact Freezers

Model	MPF1210FZ		MPF1430FZ	
Outline dimensionL*W*H(mm)	4630*1940*3050	5320*1940*3050	4750*1940*3300	5320*1940*3300
Freezing plate size(mm)	1418*1770			
Effective layers of freezing plates	11		13	
Effective spacing of layers(mm)	55~105			
Inlet & outlet cargo core temperatures （℃）	+20/-18			
Refrigerant	R22	R404A	R22	R404A
Refrigerant working conditions(℃)	±35			
Condenser form	Air-cooled			
Nominal freezing capacity(kg/shift)	1210		1430	
Installed power(kW)	50	68	70	82
Weight (t)	3.9	3.9	4.5	4.5

Note: The freezing capacity is designed as per the specification of the salmon tray,i.e.800*250*60mm, 11kg/tray.



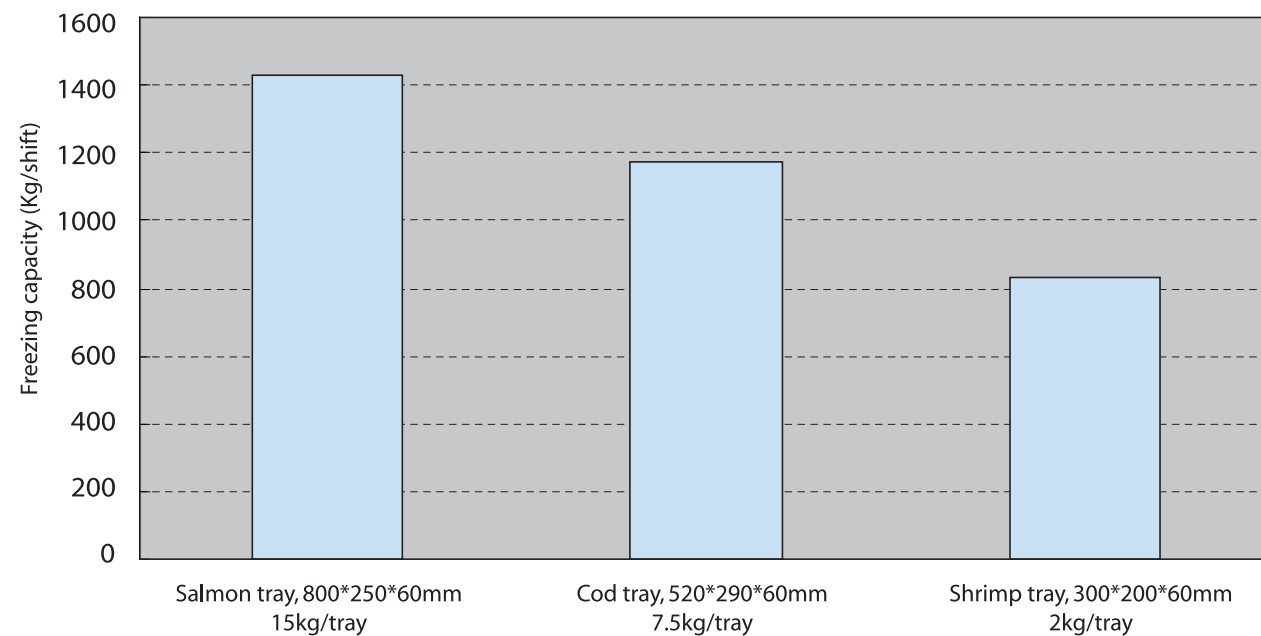
Table of specifications (order code) of MPF-FZ series contact freezers

Model	MPF1210Z		MPF1430Z	
Refrigerant	R22	R404A	R22	R404A
Complete machine	018551010000	018551010001	018551020001	018551020002
Plate component	020610010003	020610010007	020610010000	020610010005
Lower base	020605020002		020605020000	
Condensing unit	014523010000	014523010001	014523020000	014523020001
Freezing plate	070707020001			

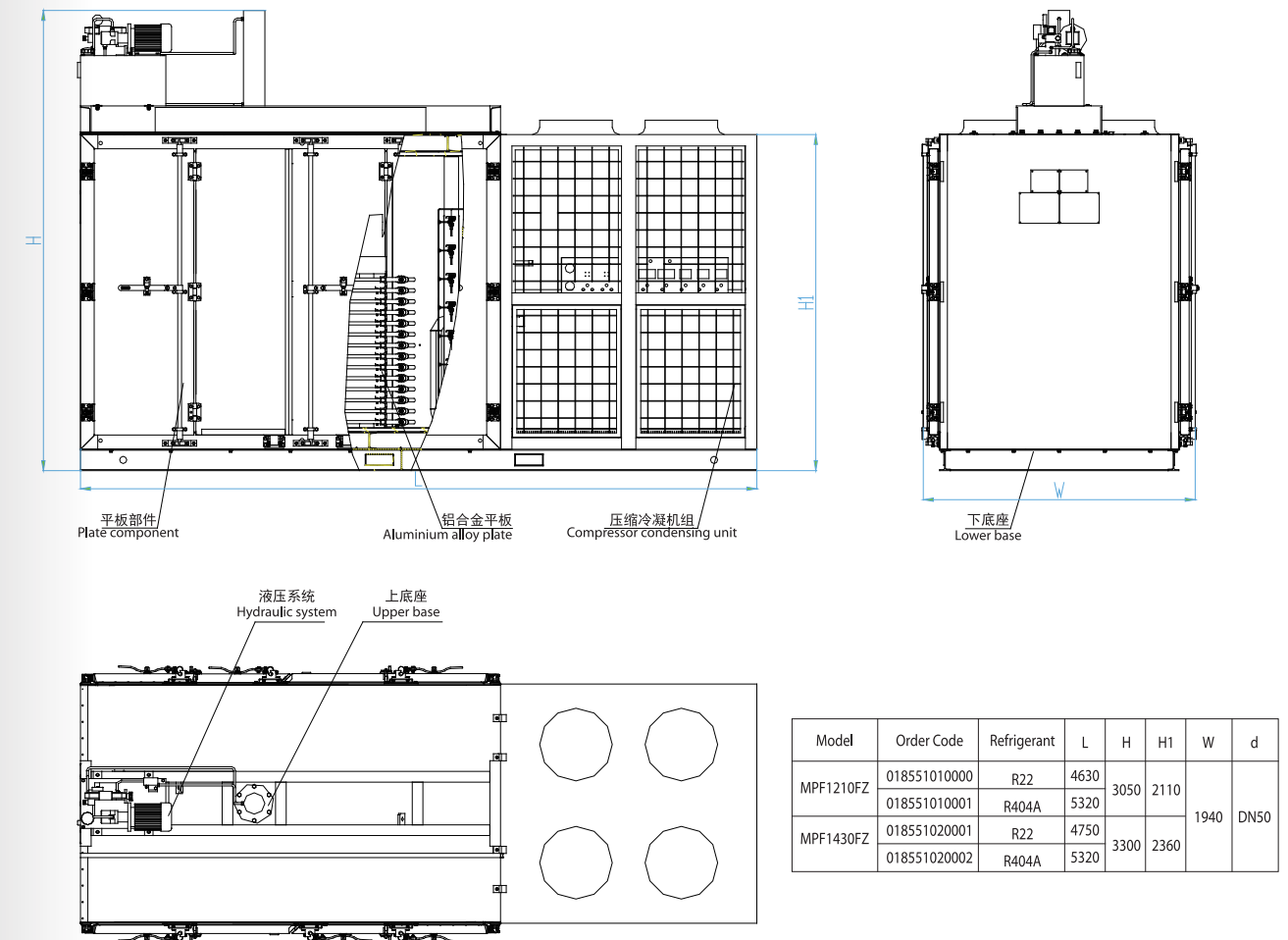
Note: In order to promptly treat your order, please be sure to provide the "order code" of your ordered equipment.

Note: The freezing capacity of the same model products for different foods is different. Taking MpF1430FZ as an example, its freezing capacity can be shown in the following figure:

Model: MPF1430FZ



Outline drawing of MPF-FZ series contact freezers



MSP SERIES CONTACT FREEZERS

The freezing mode of MSP series contact freezers is single-sided contact freezing; food directly contacts metal plates, cold quantity is transferred via metal plates to food, and meanwhile, heat convection of other surfaces of food is performed via the cold air generated by fans.



Product Features

- Use both heat exchanging modes, high heat exchange rate, and good heat exchange effect;
- The application mode of the equipment is flexible.The equipment can be used as both a small cold store and a quick freezing equipmentindependently;
- The integral equipment uses antirust materials to ensure the requirements of food safety and sanitation are satisfied.
- The high efficiency fan is characterized by low noise,stable and reliable operation and long service life; the protection level of the motor is IP55, which can ensure long-term stable operation at low temperature.

Table of performance parameters of MSP series contact freezers

Model	MSP1200	MSP1500	MSP2400	MSP3000
Outline dimensionL*W*H(mm)	3450*1650*1920	3450*1650*2280	5450*1650*1920	5450*1650*2280
Freezing plate size(mm)	2060*1236		4060*1236	
Effective layers of freezing plates	8	10	8	10
Floor space(mm)	3900*2100*2210	3900*2100*2570	5900*2100*2210	5900*2100*2570
Inlet & outlet cargo core temperatures (°C)	+20/-18			
Refrigerant	R22/NH3			
Refrigerant working conditions(°C)	± 35			
Liquid feed interface(mm)	Φ 38		Φ 45	
Air return interface(mm)	Φ 76		Φ 89	
Cooling consumption(kW)	33	42	66	83
Nominal freezing capacity(kg/shift)	1200	1500	2400	3000
Installed power(kw)	1.5	2.2	2.2	3
Weight (t)	1	1.2	2	2.4

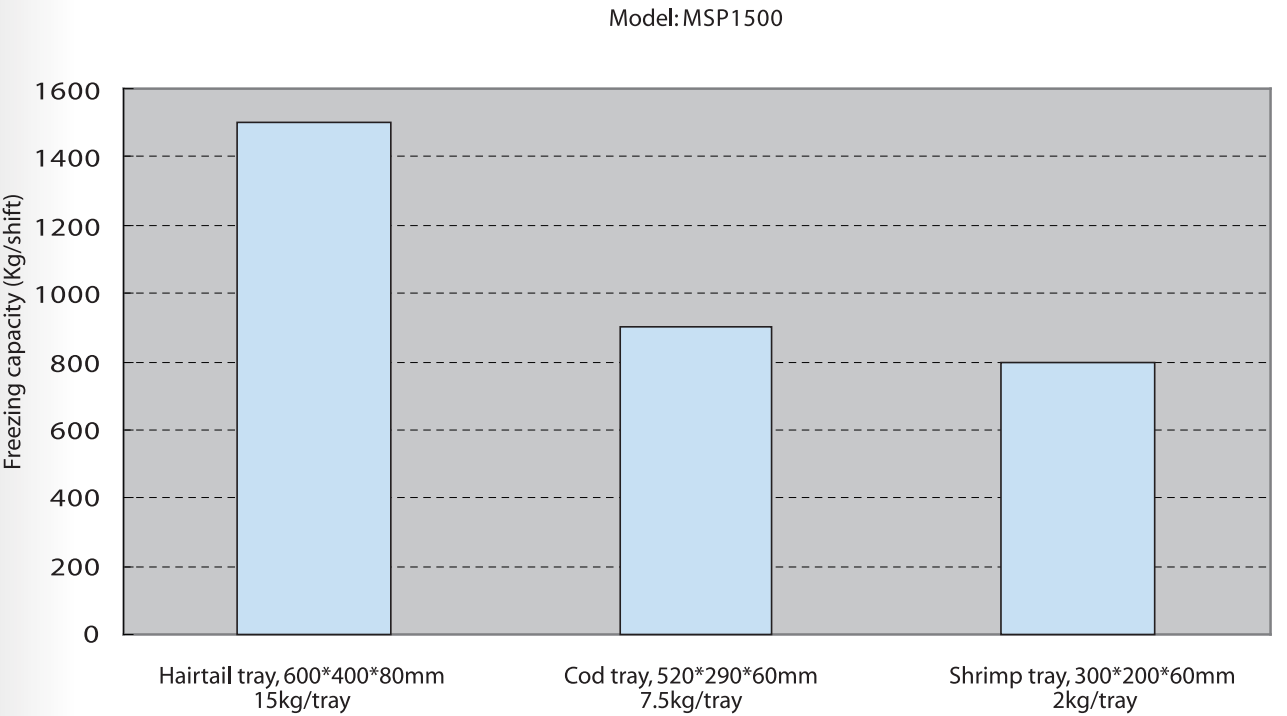
Note: The freezing capacity is calculated based on the cuttlefish plate, with a specification of 600*400*80mm and a weight of 15kg per plate.

Table of specifications (order code) of MSP series contact freezers

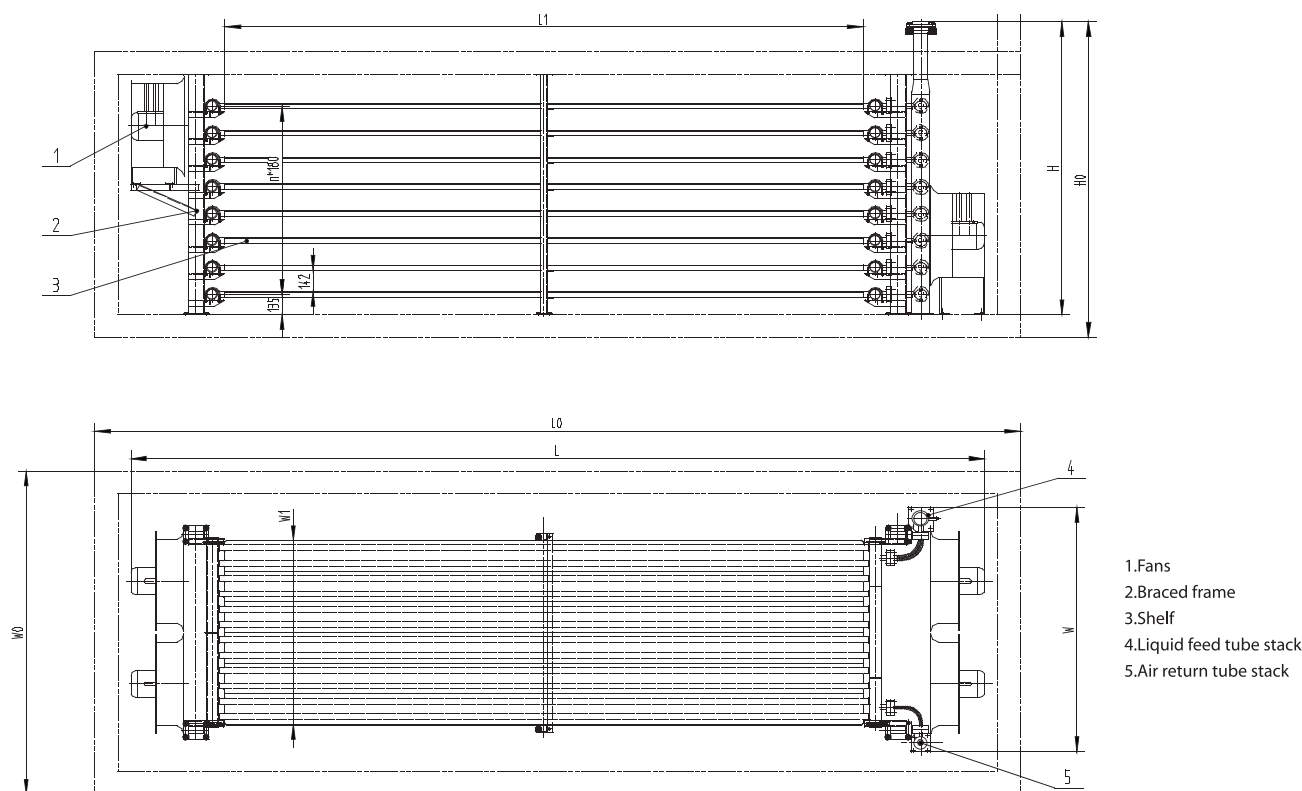
Model	MSP1200		MSP1500		MSP2400		MSP3000	
Refrigerant	R717	R22	R717	R22	R717	R22	R717	R22
Order code	018501010000	018501010001	018501020000	018501020001	018501030000	018501030001	018501000000	018501000001

Note: In order to promptly treat your order, please be sure to provide the "order code"of your ordered equipment.

Note:The freezing capacity of the same model products for diferent foods is different.Taking MsP1500 as an example,its freezing capacity can be shown in the following figure:



Outline drawing of MSP series contact freezers



SPECIAL REMINDING

Freezing capacity

The freezing capacity is related to the shape, size, water content and physical and chemical properties of food.

Refrigerant

The refrigerant can use ammonia, freon or other refrigerants and coolants. There are two sorts of standard products such as ammonia and R22; If there are special requirements, please clearly write them on the order form.

Application environment

The running effect of this series of products is the best when the temperature of the workshop is lower than 20°C .

INSTALLATION REQUIREMENTS

Location

The location shall be defined by the customer, but should meet the following requirements:

1. Sufficient space for equipment installation and maintenance;
2. As close as possible to the packing room and cold store;
3. As close as possible to the refrigeration equipment room. The distance within 50m is suitable. The diameter of the air-return tube should be increased properly if the distance exceeds 50m.

Ground

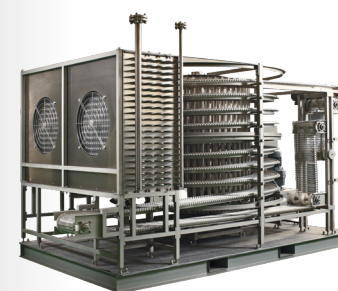
- a) The ground should be neat and solid, with a bearing capacity not less than the operating weight of the equipment;
- b) The ground design should be convenient for discharging the cleaning and defrosting water;
- c) The ground gradient should be in no event bigger than 1:50 otherwise, it will result in difficulty in equipment installation;
- d) When the equipment is installed on floor slabs, the bearing capacity of the floor slab structure must be checked and calculated and can meet the requirements of the equipment's operating weight, and vibration damping measures shall be taken.

CUSTOM-TAILORED NON-STANDARD PRODUCTS

The contact freezers listed in the above-mentioned sheets are the standard products. The non-standard products can be custom-made as defined if there is any special requirement from the customer.

FREEZERS

MOON-TECH freezers include tunnel freezer, spiral freezer, fluidized freezer, plate freezer and shelf plate freezer, 5 categories in total, which are widely adopted in industries for aquatic produce, meat, fruits, vegetables and prepared foods processing.



Spiral Freezer



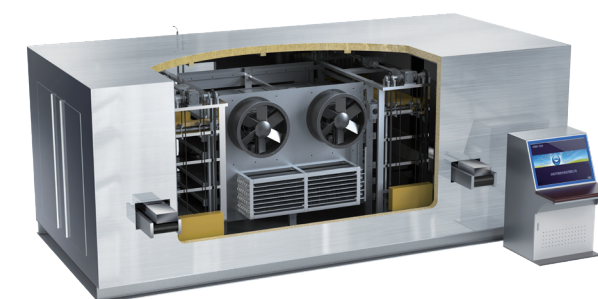
Tunnel freezer



Self-Stacking Spiral Freezer



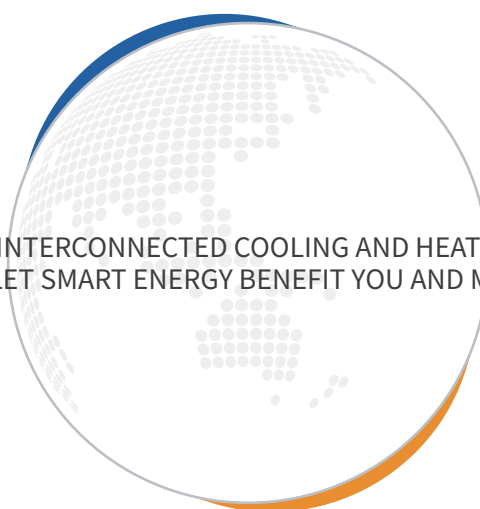
Fluidized Bed Freezer



Carton Freezer



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