QBP system

Similar competitor's products information and technical description

[Information of similar competitor's products]

The product line which is often mistaken

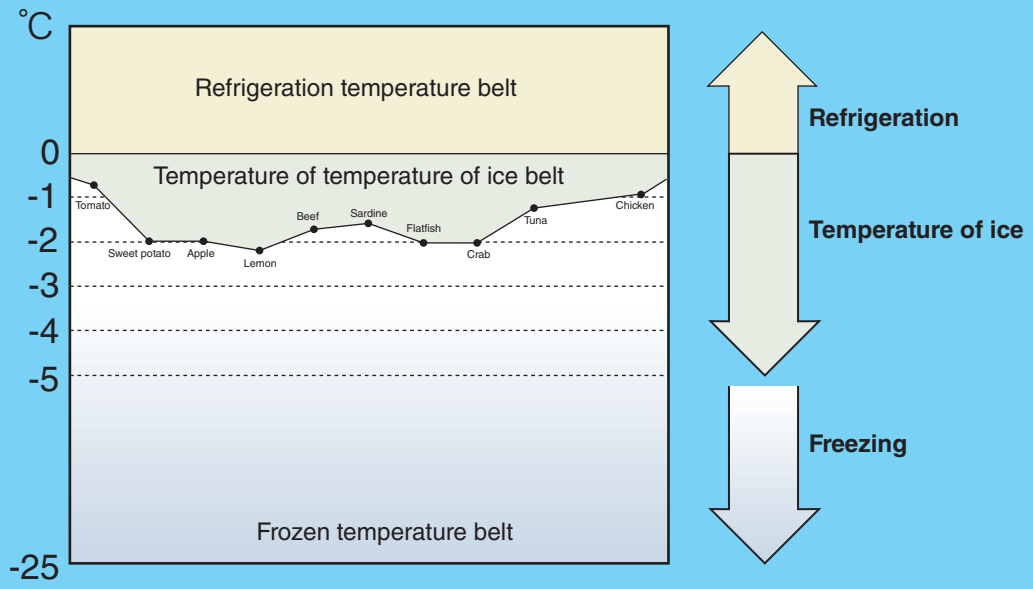
{A system}

The temperature which the ingredients begins to freeze is called freezing point. Most ingredients don't freeze even 0 degree C. It's different depending on the ingredients, but a freezing point of the ingredients is from 0 degree C to 1.5 degree C. The temperature area from a freezing point to 0degree C is the ice temperature. It's the ice storage, that it's commercialized to store a food in this temperature area.

Even if the ingredients are preserved by less than 0 degree C, there is an own action in order to make sure that a cell can't be frozen in the ingredient of sugar and an amino acid of each food. When the ingredients are preserved in the subzero area, a flavor ingredient will grow by this action. This product has full of useful functions such as keep the freshness last long and draw out gusto of the ingredients by preserving at the reach from 0 degree C to –1.5 degree C which is the freezing temperature of the ingredients.

Disadvantage of the ice storage

1) The ingredients can't be stored for long periods below the freezing temperature.
2) The power consumption will be big for temperature control, and cost becomes more expensive than a standard refrigerator.



[Information of similar competitor's products]

The product line which is often mistaken

{B system}

The product line which most of the industrial refrigerator manufacturer lined up as "high freshness refrigerator" The inside temperature difference is intense and the humidity isn't managed in a standard refrigerator. This product can preserve the ingredients in the good environment relatively because temperature change inside the refrigerator to the preset temperature is flat and can keep the humidity in more than 90%.

The appearance of the standard refrigerator and the homeothermal humid unit is almost same as each manufacture. The functional difference inscribed below.

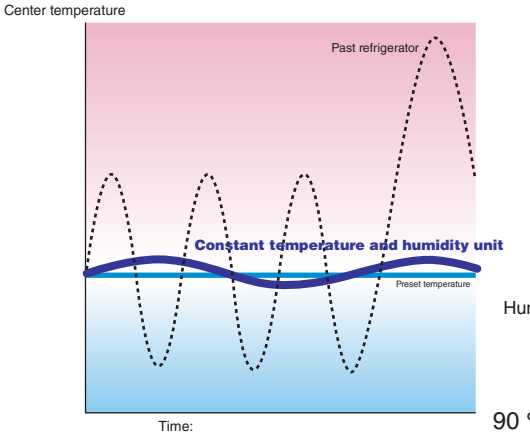
Standard industrial refrigerator:

Inside temperature difference: ±6 degree C to the preset temperature.
For example, when setting it as -3 degree C, if it goes up to 0 degree C, it's cooled to -6 degree C and this movement is repeated.

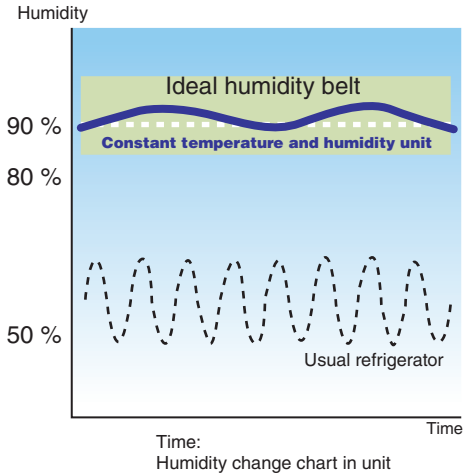
Cooling system: The system which cools inside by a fan of the direct-injection type of -35 degree C of chill.

The humidity of inside: Depending on the states inside (Average : 50% - 60%)

Feature:
1) It's unusable for high freshness preservation by the direct-injection by fan and slow freezing of temperature inside.
2) Low price



Center temperature change chart in unit



Time:
Humidity change chart in unit

Industrial Constant temperature and humidity unit:

Inside temperature difference: ±2 degree to the preset temperature.

Always maintained around preset temperature.
Cooling system: The system which cools inside by 4 sides or 5 sides refrigerant. Windless.

The humidity of inside: Maintain 90% humidity of inside.
Feature:

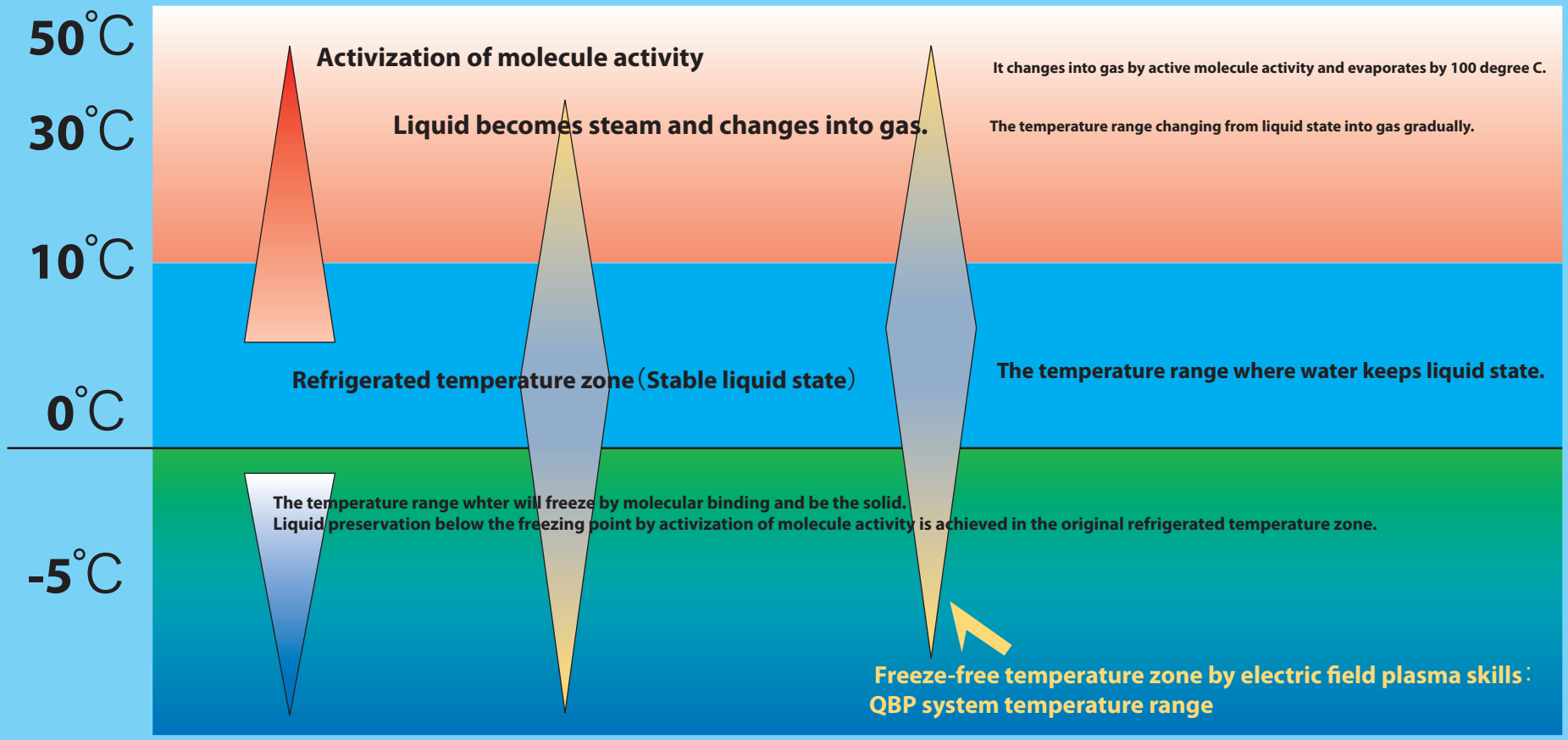
1) Windless refrigerant and high humidity.
2) High price

QBP system remodels and commercializes these refrigerators.

[Technology information of QBP system]

About freezing point

The temperature which liquid or substances including liquid begins to freeze calls freezing point. A freezing point of pure water is 0 degree C.



About supercooling phenomenon

The state that even the temperature lower than a freezing point doesn't freeze is called"supercooling phenomenon"

[Comparative chart with similar competitor's products]

Comparative chart of the performance/function with the similar products sold at present.

Products	Purpose	The effect of preservation of freshness	Thaw effect	Sterilizing effect	Deodorizing effect	Cost
A Unit	Thaw storage by an electrostatic field	○	◎	○	△	High
A Unit	Thaw and preservation of freshness by an electrostatic field	○	◎	○	△	High
A Unit	High freshness refrigerator and thaw storage by an electrostatic field	◎	◎	○	△	High
A Unit	Flash freezer in a below zero high-temperature range by an electromagnetic field	◎	—	△	×	Very High
QBP UNIT	High freshness cold storage and thaw storage by light quantum energy and plasma energy	◎◎	◎	◎	◎	Same as fixed price of refrigerator

[Technology information of QBP system]

Freezing temperature range

1) When a substance begins to freeze in the solid from liquid, elements are combining gradually from the material outside, and water is being a crystal of ice.
2) This crystal destroy a material cell, and molecular disposition will be strangely to the depth by the volume's increasing when freezing, and when defrosting, the freshness falls remarkably, and the taste falls by outflow of a drip by cell destruction.
3) The temperature zone of 0 -10 degree C. is the most troubling temperature zone.
4) But when defrosting rapid freezing and the one frozen at the moment, complicated elements pass this troublesome temperature area again, and while being defrosted, combine in a sharp crystal from a round crystal, and declines of the taste occur by outflow of a drip by cell destruction.
5) The thaw technology to prevent these was being studied up to now.

Thaw and preservation of freshness by supercooling phenomenon in an electrostatic field and an electromagnetic field.

1) A product of Techno Energy and Feeltech21 made them cause molecular motion by an electrostatic field in the above-mentioned troubling temperature zone, and restrained complicated molecular binding, and made a thaw by a non drip achieved.
2) CAS freezer is the technology which achieved instant freezing in the troubling temperature zone a condition's of good molecular disposition making elements suspend under cooling by cooling itself and having impacts by the stage which got cold, and such as making them freeze it at the moment while being freeze-free to the depth of the ingredients by supercooling phenomenon.

There are also keeping of freshness, stillness bacteria and a sterilization action by the light quantum energy for a QBP system. Make a corona discharge in the refrigerator and make plasma occur by a high-performance high-voltage transformer. Therefore freeze-free by supercooling phenomenon and non drip thaw by molecular motion. This is what achieved stillness bacteria and a sterilization action by the plasma energy, preservation of freshness by minus ion generation.

The example of reference of the system QBP system which installed the "QBP unit" in "existing Industrial Constant temperature and humidity unit"

QBP Unit
(Qbit energy and Plasma generation device)

COLD ROOM etc..

Construction such as in cold rooms in the refrigerator is needed for the installation of the QBP unit.
(To use the energy of the QBP unit: The performance of the QBP unit cannot be used only by putting the QBP unit.)

The rough estimate estimate can be made by getting details such as your cold room etc..(drawing and specification).
The purpose is to confirm the size, the size (height, width, and depth) such as cold rooms, and the power supply specifications, etc.
The number of installations of QBP units also changes according to the size.

These images are examples.

QBP Unit

The refrigeration room in a cold room etc. can set it up.

industrial refrigerator etc..

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QBP Unit

The industrial refrigerator can also set it up.

[QBP UNIT]

In order that your company may understand the function of a QBP unit, and high performance, the small QBP system which the QBP unit installed is sold.

I have this system purchased and it is thought by having you use it about one month that you can understand the performance of this system.

After your company understands, it is being wished to the cold room of your company, an industrial refrigerator, and Industrial Constant temperature and humidity unit I would like you to consider installation of a QBP unit.

The subsequent page is a price of a small QBP System.

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e-mail : m.s@e-mallow.jp

Quotation

Description of Goods	*Quantity*	*FOB Japan (Unit price)*
For showroom *Cold table QBP-UC641H*	***Content**: 69L* ***Effective interior volume** 69L* ***Power consumption**:* *At cooling (single phase:100V 116/117 W (50/60Hz))* *Defrost (single phase:100V 146/146 W (50/60Hz))* ***Dimension**: W600×D450×H800 mm* ***Size of shape on inside**: W410×D347×H613 mm*	*USD $ 6,375.00*
Extra charge at change in power supply		*USD $ 488.00*

Shipment : Within 75 days after receipt of L/C or T/T,
Payment: irrevocable L/C or advance payment by T/T,