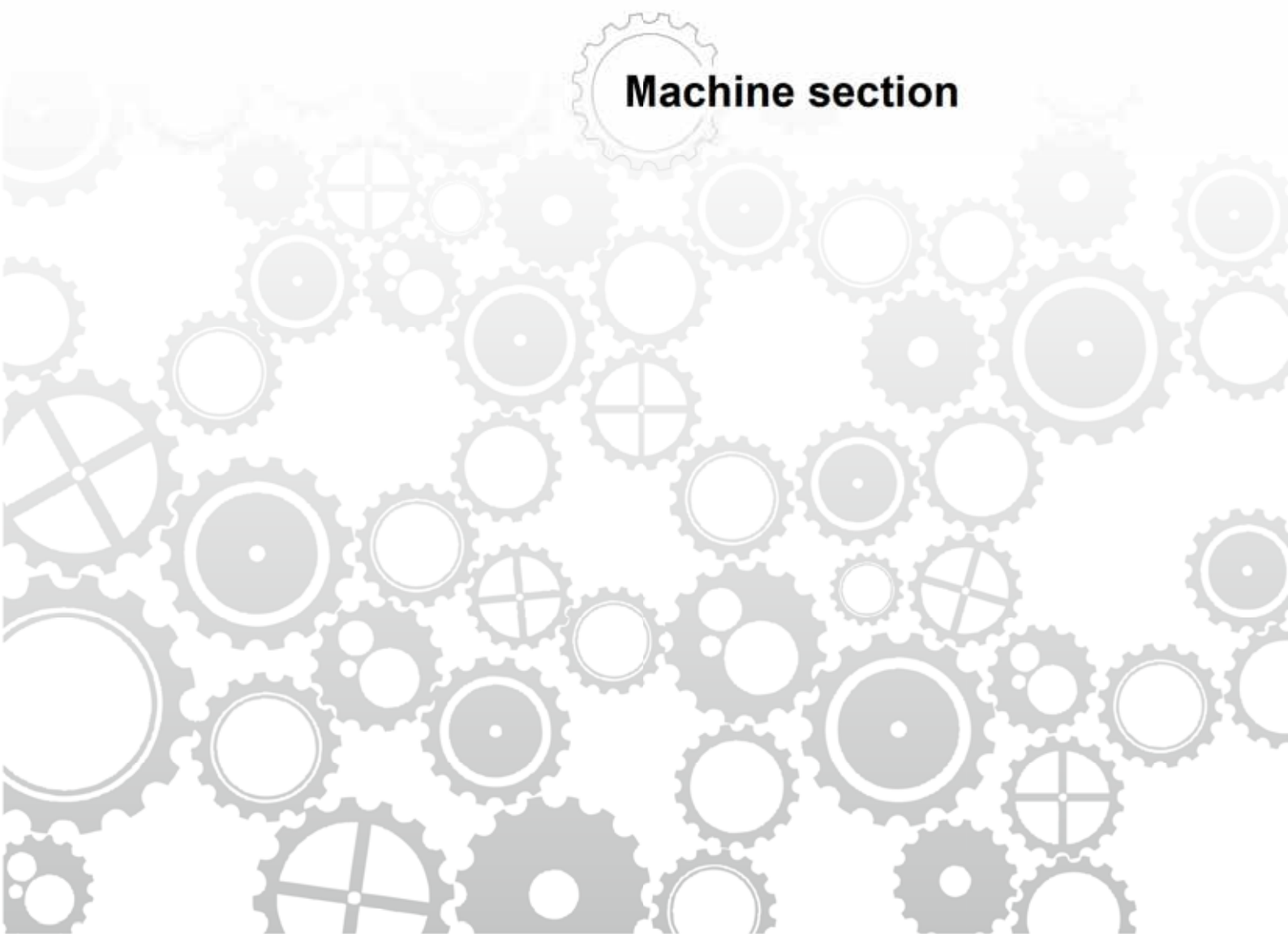




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Machine section





**Quick Freezer
with CAS function**

By retrofitting CAS machine to quick freezer,

Merit

- Accelerate freezing speed
- Protect against drying
- Decrease Electricity power
- Realize maximum productivity based on energy saving
- Enable to provide raw foodstuff as much as possible



■ CAS (Cells Alive System) machine + Quick freezer (Batch type)

〈 Representative Type 〉



■ CAS (Cells Alive System) machine + Quick freezer (Rack type)



■ CAS (Cells Alive System) machine + Quick freezer (Tunnel type)



■ CAS (Cells Alive System) machine + Quick freezer (Spiral type)



■ CAS (Cells Alive System) machine + Quick freezer (Rack and connection type)

**Harmonic
system**



**Freezing
stocker**



**By retrofitting
Harmonic oscillating system
to freezing stocker**

Merit

Preserve moisture

Protect freezing burn

Low electricity charge

Keep stable temperature in stocker

withhold oxydation

〈 Representative Type 〉



■ Harmonic Oscillating System
+ freezing stocker (Multi tray insert type)



-50°C type

■ Harmonic Oscillating System + large freezing stocker

**Supercool
freshness
maintain
system**



**Cold
storage
chamber**



**By retrofitting
Supercool freshness maintain system
to cold storage chamber**

Merit

Vegetable

Fruits

Fish

Meat

Maintain high
freshness
in infinitely
edible raw

〈 Representative Type 〉



■ Supercool freshness maintain system
+ cold storage chamber (Multi tray insert type)



-25°C type

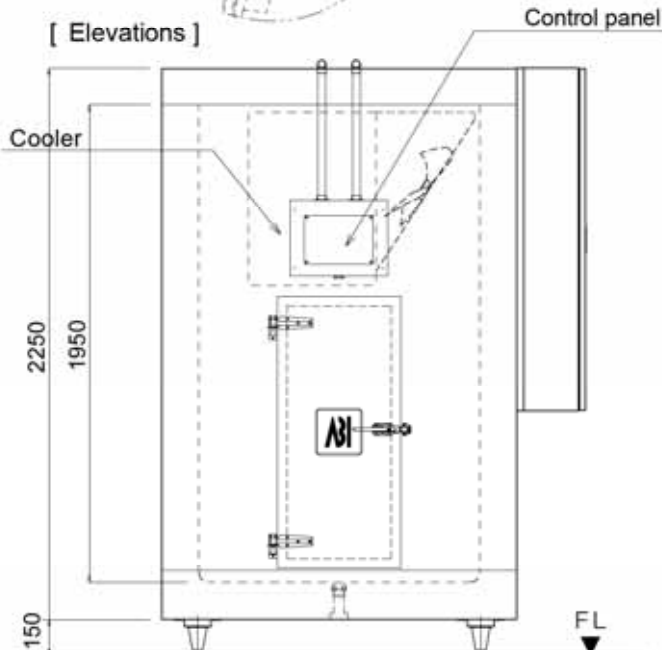
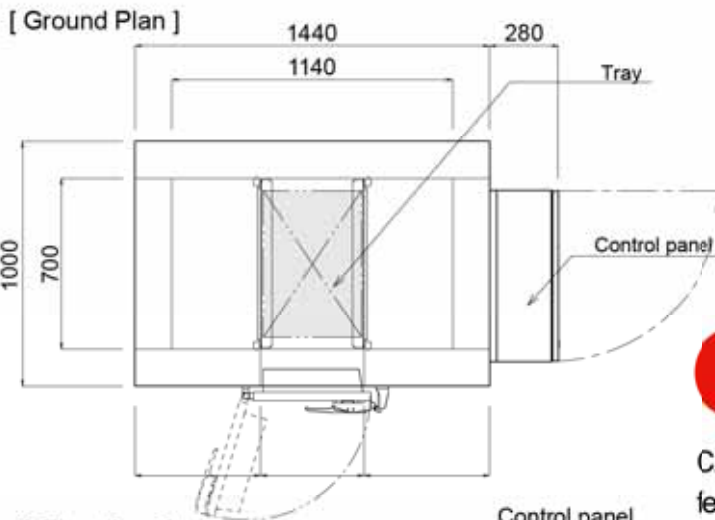
Quick Freezer with CAS function (10 Tray type)

SPECIFICATIONS		
Insulation of face material	Inside	Stainless plate SUS304
	Outside	Stainless plate SUS304
Insulation Material	Rigid polyurethane foam	
Insulation thickness	t = 150(mm)	
Dimensions	Outer dimension	W1440 x D1000 x H2250
	Inner dimensions	W1140 x D700 x H1950
Single swing Door (insulated)	Opening	W420 x H1030(mm) 1 places
		With Heater
Tray Size	W600 x D400 x H20	10 pcs.
Ventilator	1 place	
Drainage	Chamber Inside	1 place
Cooler	Fun 3 phase 200V	
Compressor	3 phase 200V	
Defrost	Electric Heater Manual (1 phase 200V)	
Chamber Temperature	-50℃	

●Specification shall be changed without notice



●Above photo is image only and may be different from actual model or specifications



What dose CAS mean

CAS function is to perform minute ice crystals by creating feeble CAS energy at the freezer inside and protects cell walls and cell membranes from broken down. The foods and foodstuff frozen by CAS revive original freshness and tastiness after thawing and following effects are expected.

1. Food is almost intact from cells broken by Ice crystal
2. To maintain water holding capability
3. To maintain deliciousness
4. To withhold protein denaturalization
5. To maintain flavor and fragrance
6. To withhold oxidation
7. To hold Color of food and foodstuff

Quick Freezer with CAS function (20 Tray type)

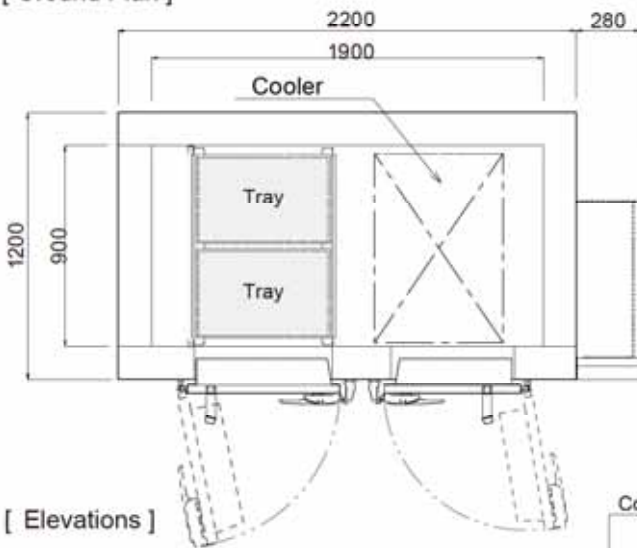
SPECIFICATIONS		
Insulation of face material	Inside	Stainless plate SUS304
	Outside	Stainless plate SUS304
Insulation Material	Rigid polyurethane foam	
Insulation thickness	t = 150(mm)	
Dimensions	Outer dimension	W2330 x D1200 x H2225
	Inner dimensions	W1900 x D900 x H1625
Single swing Door (insulated)	Opening	W650 x H1200(mm) 1 places
		With Heater
Inspection Door (insulated)	Opening	W450 x H1200(mm) 1 places
		With Heater
Tray Size	W600 x D400 x H20	20 pcs.
Ventilator	1 place	
Drainage	Chamber Inside	1 place
Cooler	Fun 3 phase 200V	
Compressor	3 phase 200V	
Defrost	Electric Heater Manual (1 phase 200V)	
Chamber Temperature	-50℃	

●Specification shall be changed without notice

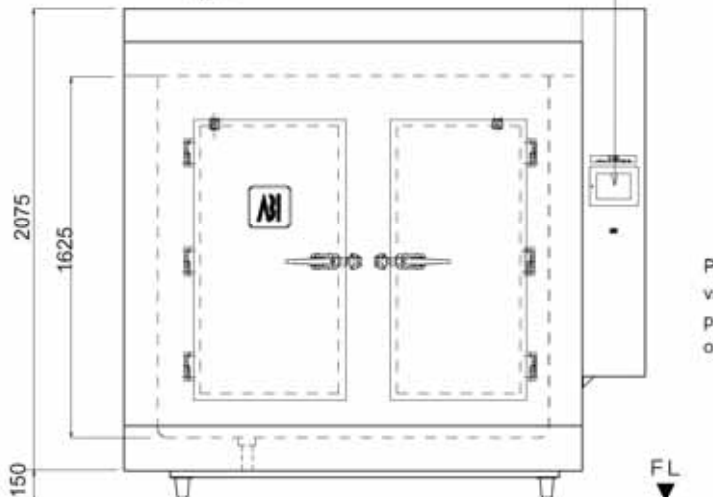


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[Ground Plan]



[Elevations]



What dose CAS mean

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7. To hold Color of food and foodstuff

● Image of inside of chamber ● Staff working with the system



Pitches of trays are varable, so you can put trays depending on the products.



Quick Freezer with CAS function

(1 Rack type 30-sheet tray)

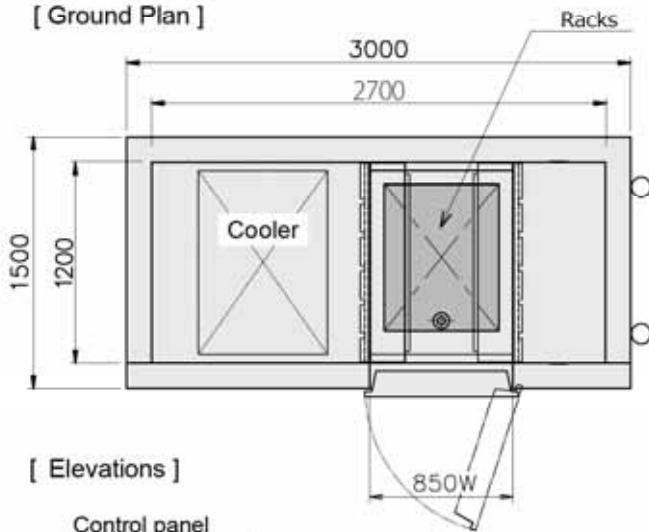
SPECIFICATIONS		
Insulation of face material	Inside	Stainless plate SUS304
	Outside	Stainless plate SUS304
Insulation Material	Solid poly urethane form	
Insulation thickness	t = 150(mm)	
Dimensions	Outer dimension	W3000 x D1500 x H2380
	Inner dimensions	W2700 x D1100 x H2300
Single swing Door (insulated)	Opening	W850 x H1800(mm) 1 places
		With Heater
Rack Size	W680 x D880 x H1700	1 set
Tray Size	W600 x D400 x H20	30 pcs.
Ventilator	2 place	
Drainage	Chamber Inside	1 place
Cooler	Fun 3 phase 200V	
Compressor	3 phase 200V	
Defrost	Electric Heater Manual (1 phase 200V)	
Chamber Temperature	-50°C	

●Specification shall be changed without notice

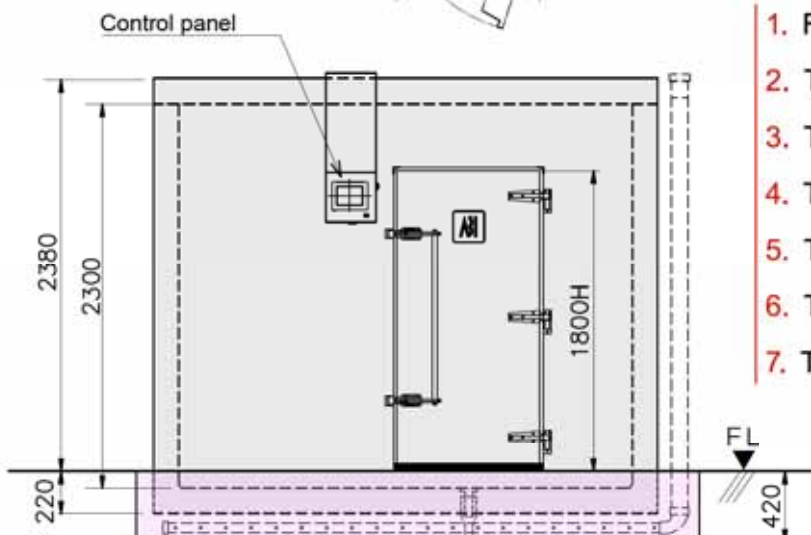


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[Ground Plan]



[Elevations]



What dose CAS mean

- In/Out operation can be done by 1 person.
- Open/Close door takes short time keeping inside temperature constant, which eliminates pre-cooling time and increase production efficiency.
- Production process becomes smoother by preparation during waiting time and eliminating useless time.

1. Food is almost intact from cells broken by Ice crystal
2. To maintain water holding capability
3. To maintain deliciousness
4. To withhold protein denaturalization
5. To maintain flavor and fragrance
6. To withhold oxidation
7. To hold Color of food and foodstuff

Quick Freezer with CAS function

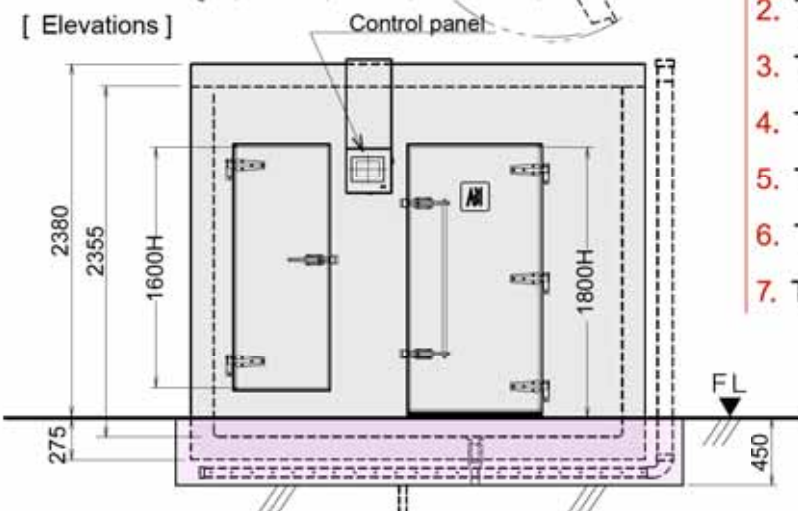
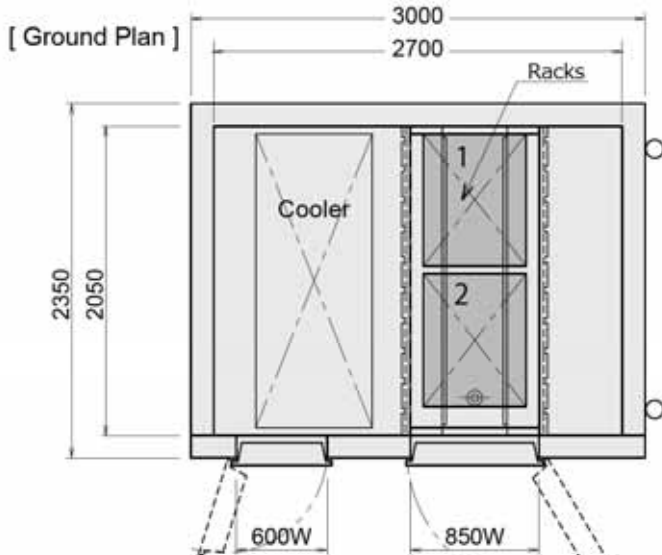
(2 Rack type 60-sheet tray)

SPECIFICATIONS		
Insulation of face material	Inside	Stainless plate SUS304
	Outside	Stainless plate SUS304
Insulation Material	Solid poly urethane form	
Insulation thickness	t = 150(mm)	
Dimensions	Outer dimension	W3000 x D2350 x H2380
	Inner dimensions	W2700 x D2050 x H2355
Single swing Door (insulated)	Opening	W850 x H1800(mm) 1 places
		With Heater
Inspection Door (insulated)	Opening	W600 x H1600(mm) 1 places
		With Heater
Rack Size	W680 x D880 x H1700	2 set
Tray Size	W600 x D400 x H20	60 pcs.
Ventilator	3 place	
Drainage	Chamber Inside	1 place
Cooler	Fun 3 phase 200V	
Compressor	3 phase 200V	
Defrost	Electric Heater Manual (1 phase 200V)	
Chamber Temperature	-50°C	

●Specification shall be changed without notice



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What dose CAS mean

- In/Out operation can be done by 1 person.
 - Open/Close door takes short time keeping inside temperature constant, which eliminates pre-cooling time and increase production efficiency.
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1. Food is almost intact from cells broken by Ice crystal
 2. To maintain water holding capability
 3. To maintain deliciousness
 4. To withhold protein denaturalization
 5. To maintain flavor and fragrance
 6. To withhold oxidation
 7. To hold Color of food and foodstuff

Quick Freezer with CAS function (4 Rack type 120-sheet tray)

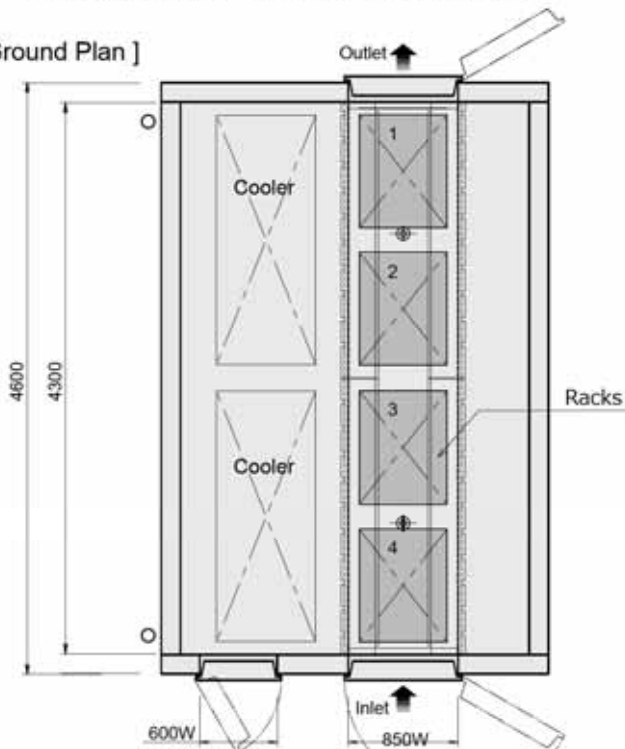
SPECIFICATIONS		
Insulation of face material	Inside	Stainless plate SUS304
	Outside	Stainless plate SUS304
Insulation Material	Solid poly urethane form	
Insulation thickness	t = 150(mm)	
Dimensions	Outer dimension	W3000 x D4600 x H2350
	Inner dimensions	W2700 x D4300 x H2300
Single swing Door (insulated)	Opening	W850 x H1800(mm) 2 places
		With Heater
Inspection Door (insulated)	Opening	W600 x H1600(mm) 1 places
		With Heater
Rack Size	W680 x D880 x H1700 4 set	
Tray Size	W600 x D400 x H20 120 pcs.	
Ventilator	3 place	
Drainage	Chamber Inside	2 place
Cooler	Fun 3 phase 200V	
Compressor	3 phase 200V	
Defrost	Electric Heater Manual (1 phase 200V)	
Chamber Temperature	-50°C	

●Specification shall be changed without notice

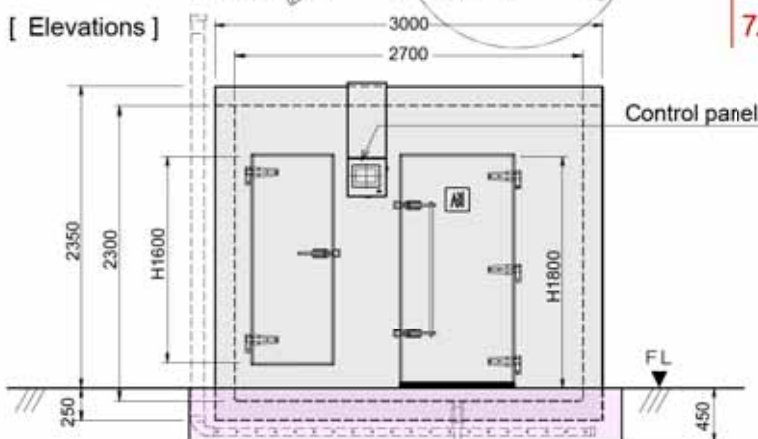


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[Ground Plan]



[Elevations]



What dose CAS mean

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- Open/Close door takes short time keeping inside temperature constant, which eliminates pre-cooling time and increase production efficiency.
- Production process becomes smoother by preparation during waiting time and eliminating useless time.

1. Food is almost intact from cells broken by Ice crystal
2. To maintain water holding capability
3. To maintain deliciousness
4. To withhold protein denaturalization
5. To maintain flavor and fragrance
6. To withhold oxidation
7. To hold Color of food and foodstuff

● Staff working with the system



●Special rack, inserting rack in chamber

QUICK FREEZER WITH CELLS ALIVE FUNCTION (TUNNEL TYPE)

SPECIFICATIONS		
Insulation of face material	Inside	Stainless plate SUS304
	Outside	Stainless plate SUS304
Insulation Material	Solid poly urethane form	
Insulation thickness	t= 150(mm)	
Dimensions	※ W13500 x D2200 x H3260(mm)	
Single swing Door (insulated)	Opening	W650 x H1800(mm) 7 places
		With Heater
Inspection Door (insulated)	Opening	W450 x H1800(mm) 2 places
		With Heater
Belt	1200W	Stainless or Steel
Duct	Stainless	
Foundation	Zinc galvanized	
Cooler	Fun 3 phase 200V	
Compressor	3 phase 200V	
Defrost	Electric Heater Manual (1 phase 200V)	
Chamber Temperature	- 55℃ ~ - 40℃	



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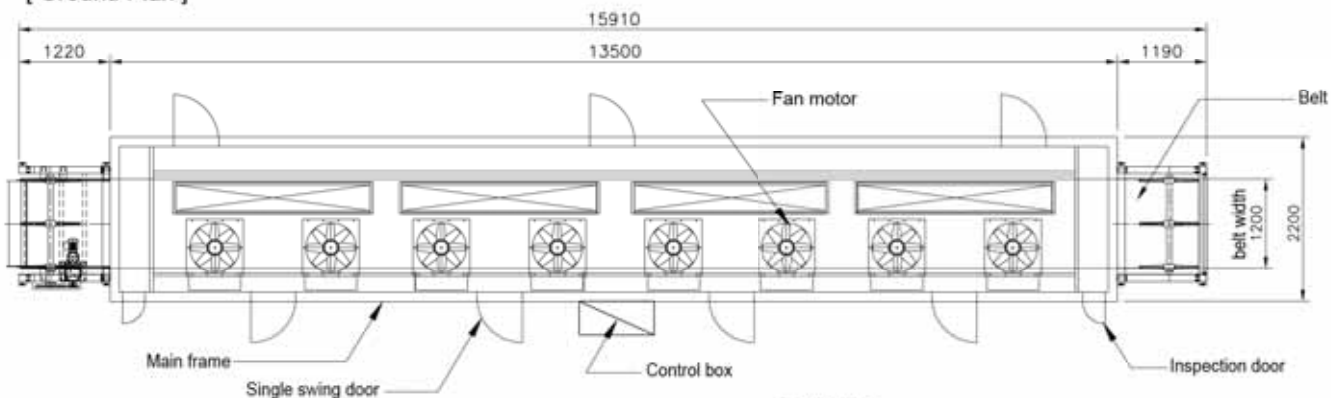
※Specifications are based on standard model. Dimensions and specification may be different by Usage of equipment

●Specification shall be changed without notice

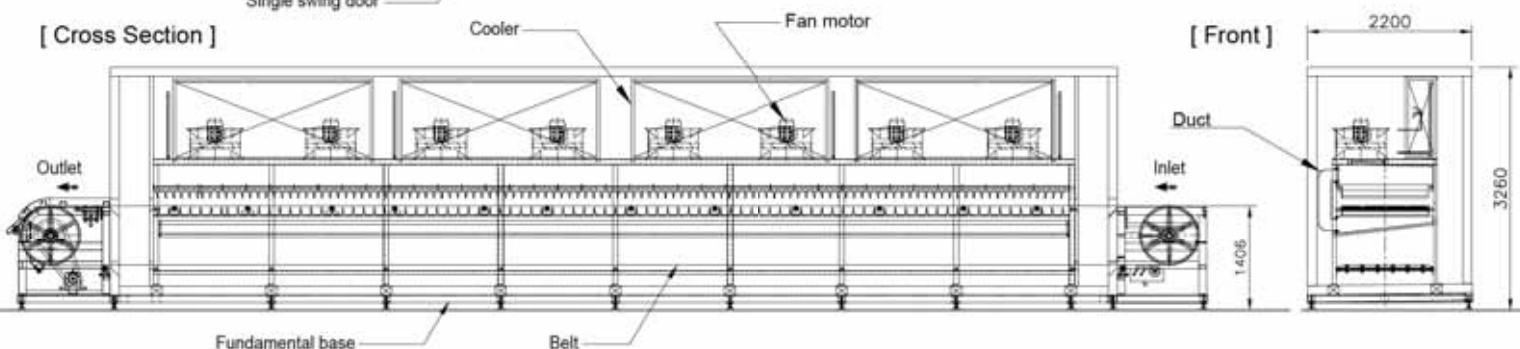
Delicious because of CAS

- It becomes possible by CAS effects to freeze foodstuff keeping freshness without breaking cell textures.
- You can deliver just cooked tastiness to consumers thus you can pursue entire deliciousness.
- CAS is internationally patented and utilized in varicus fields like food industry and medical field.

[Ground Plan]



[Cross Section]



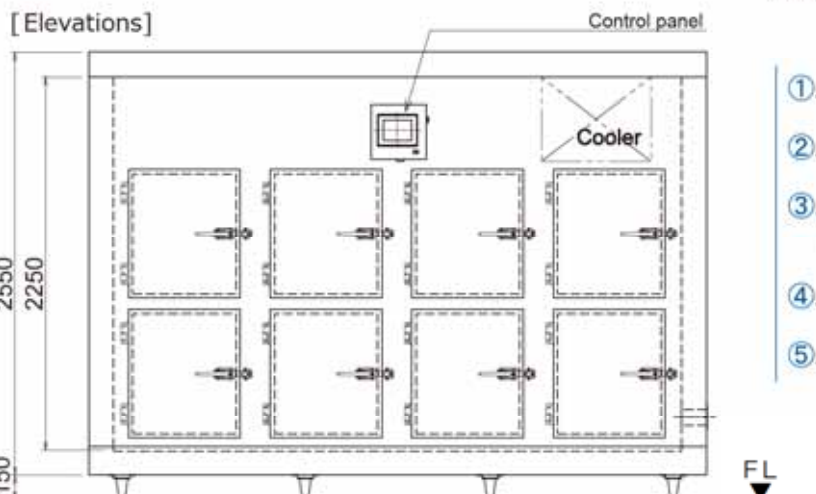
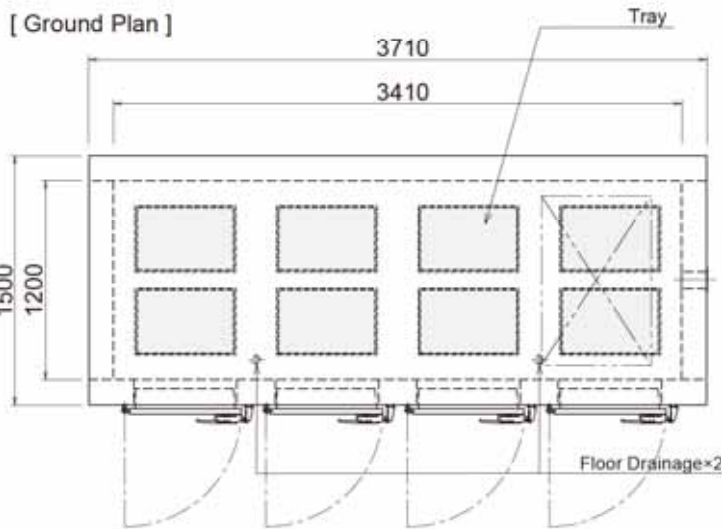
Freezing Stocker with Harmonic Oscillating System (8 Door type)

SPECIFICATIONS		
Face material of insulation Panel	Inside	Stainless plate SUS304
	Outside	Stainless plate SUS304
Insulation core material	Rigid polyurethane foam	
Insulation thickness	t = 150(mm)	
Main body Dimensions	Outer dimension	W3710 x D1500 x H2550
	Inner dimensions	W3410 x D1200 x H2250
Single Swing Door	Opening	W620 x H725(mm) 8 places
		With Electric Heater
Tray	W600 x D400 x H20 112 pcs.	
Ventilator	1 place	
Floor Drainage	2 places	
Cooler	3 phase 200V	
Compressor	3 phase 200V	
Temperature Control	Thermostat ON/OFF	
Defrost	Electric Heater automatic (1 phase 200V)	

●Specification shall be changed without notice



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This function has the following features

The major cause of oxidation and freezing burn are incurred by re-crystallization during storage. After this problem was solved, ABI proposed stock preservation. Even after 1, 3 or 5 years preservation, food can be stored stable, tasty and fresh after thawing.

- ①. Magnetic field is provided in freezing chamber.
- ②. Having efficient thermal storage system.
- ③. Quality deterioration does not occur because the magnetic field uniformly passes through the products.
- ④. Having antioxidant function.
- ⑤. Having antibacterial function.

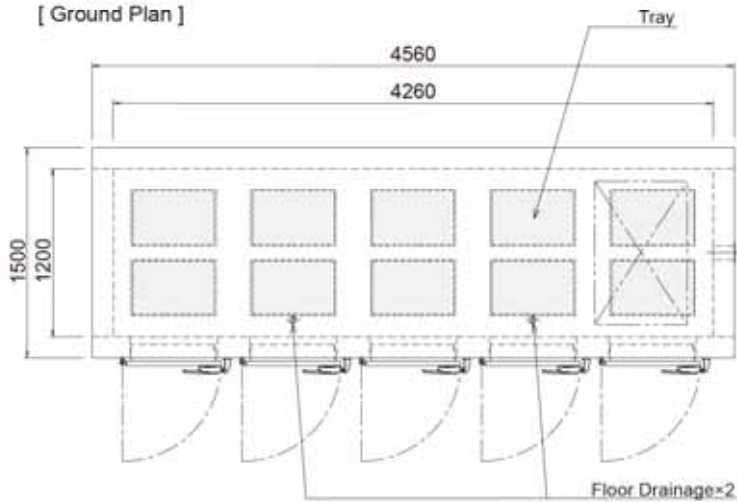
SPECIFICATIONS		
Face material of insulation Panel	Inside	Stainless plate SUS304
	Outside	Stainless plate SUS304
Insulation core material	Rigid polyurethane foam	
Insulation thickness	t= 150(mm)	
Main body Dimensions	Outer dimension	W4560 x D1500 x H2550
	Inner dimensions	W4260 x D1200 x H2250
Single Swing Door	Opening	W620 x H725(mm) 10 places
		With Electric Heater
Tray	W600 x D400 x H20 140 pcs.	
Ventilator	2 place	
Floor Drainage	2 places	
Cooler	3 phase 200V	
Compressor	3 phase 200V	
Temperature Control	Thermostat ON / OFF	
Defrost	Electric Heater automatic (1 phase 200V)	

●Specification shall be changed without notice

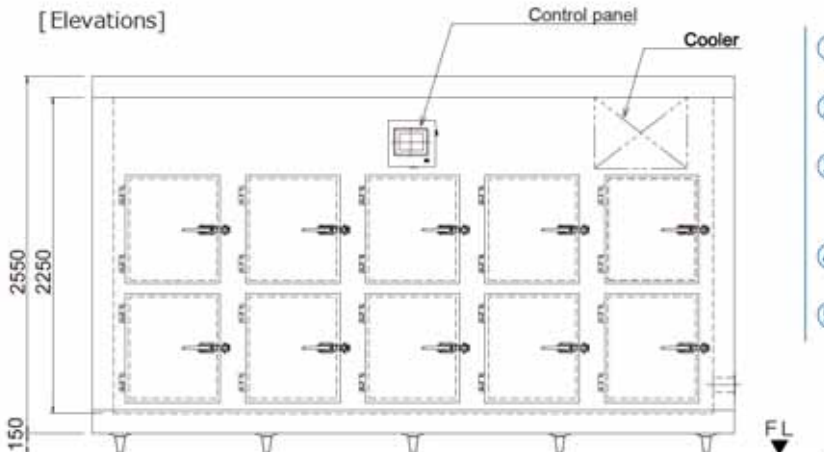


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[Ground Plan]



[Elevations]



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-50°C type



■ Harmonic Oscillating System + large freezing stocker

Long Term Freshness Maintaining Refrigerator

Supercool freshness maintain system

Newly developed and named in accordance with traditional Japanese preservation system. Everybody has been dreamed of but never materialized freshness maintaining refrigerator, not only to keep freshness of perishable foodstuff like vegetables and fruits, but also can store meat, fish and food in fresh conditions.

Everybody agrees it is ideal to be able to maintain foods and foodstuff, 3 days rather than 1 day, half a month rather than 3 days, 3 months rather than half a month.

ABI has developed such function taking over 35 years and attained for important foodstuff without losses, deliciousness being reserved in freshness condition.

FEATURES

- Always inside temperature is kept to set temperature.
- Ethylene gas which vegetable and fruit emitting is resolved and eliminated.
- Airborne bacteria affecting food stuff and food is eliminated.
- Nanotechnology applied moisture generator, 95% ~ 98% mist is constantly kept in the refrigerator.
- Save energy, save electricity design.



● Above photo is image only and may be different from actual model or specifications



■ Supercool freshness maintain system + cold storage chamber (Multi tray insert type)

Supercool freshness maintain system



■ Supercool freshness maintain system
+ cold storage chamber (**Medium Type**)



■ Supercool freshness maintain system
+ cold storage chamber (**Larger Type**)



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