



Refrigeration using Simultaneous Voltage Application Technology

To preserve taste of fresh food

FRESH GOOD FROZEN



Special Antioxidation Freezer



Special Antioxidation Freezer «NICE-01» makes it possible to refrigerate foods that was previously impossible.

World's
First

Prevent oxidation and cell disruption to preserve freshness by freezing foods using special high voltage.

*1 [Japanese patent No. 4932255]

«NICE-01» is a brand-new technology that freezes foods applying special high voltage (simultaneous voltage application) and letting weak current flow into them to prevent oxidation and cell disruption so that the foods remain as fresh as they originally were when they are thawed.

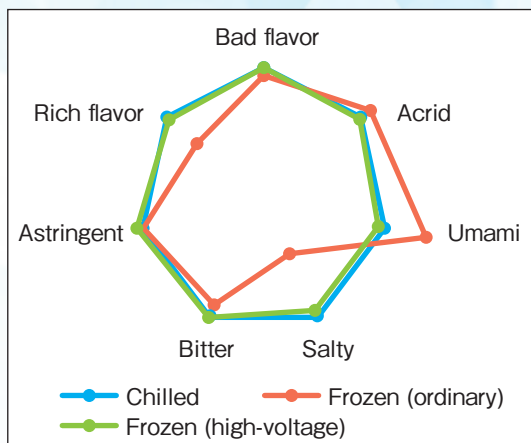
Enables Long Term Freshness Preservation

In the long term preservation tests of meat at a restaurant (for 5 years) and of fish fillet at a caterer (for 4 years) using «NICE-01», it gained their affirmation that the color, taste, and texture of the foods did not deteriorate.

Prevents Cell Disruption

*2 From a study by Kochi University

It is an innovative refrigeration system to freeze food without dripping by refining water through molecular spin forced by voltage application.



⟨Ratings of taste of kamaboko (fish cake)⟩

(From a study by Oisisa-no-Kagaku Laboratory)



*The photo above shows actual sample dishes.

*Details on *1 and *2 are provided on the last page.

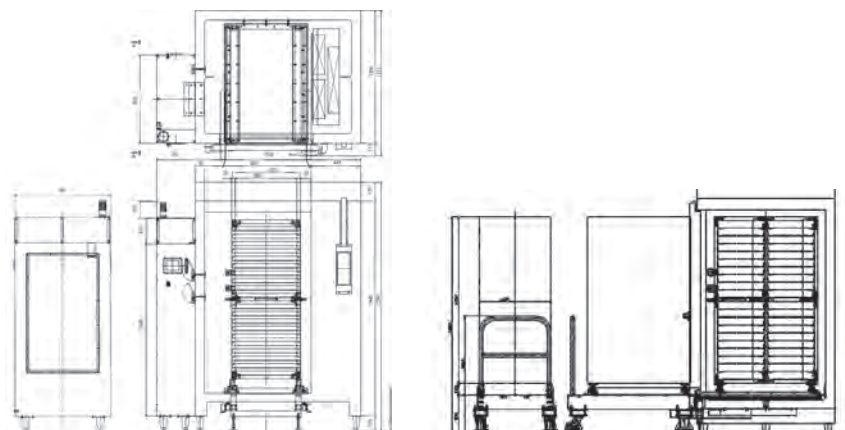
*The number of voltage-applied racks is variable as you wish

«NICE-01» Pharaoh3 B R Series

Combined units of «NICE-01» and blast freezer

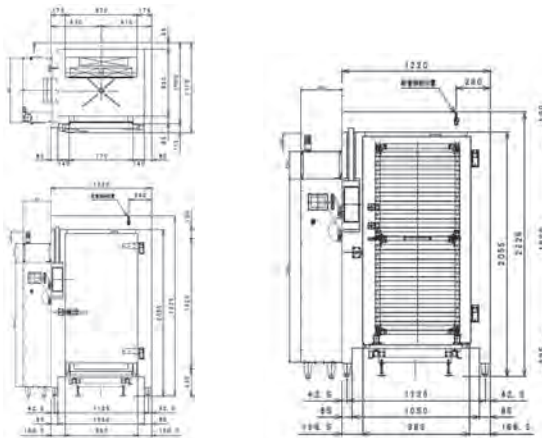
«NICE-01» Pharaoh3-040TBR

At the maximum of 60 voltage-applied racks are available*



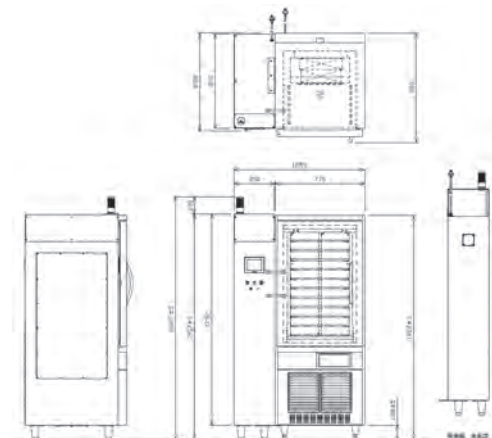
«NICE-01» Pharaoh3-020TBR

At the maximum of 30 voltage-applied racks are available*



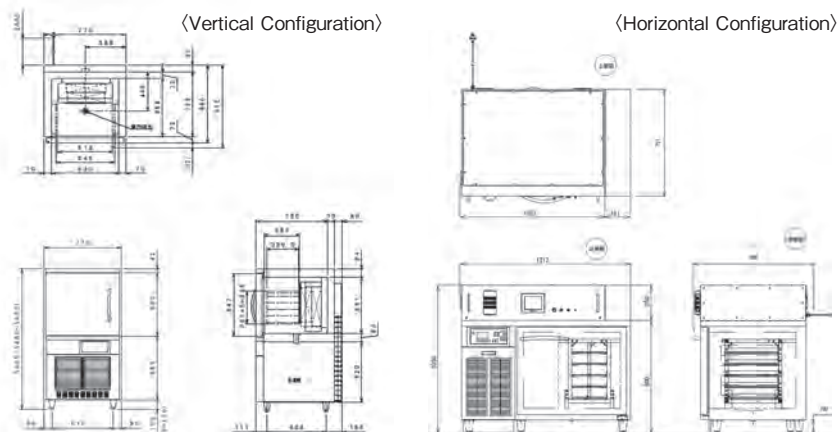
«NICE-01» Pharaoh3-012TBR

At the maximum of 20 voltage-applied racks are available*



«NICE-01» Pharaoh3-006TBR (Vertical/Horizontal)

At the maximum of 5 voltage-applied racks are available*



Why BR Series Win Popularity?

Blast freezing is a method to quickly chill and freeze piping hot dishes.

It improves efficiency by quickly refrigerating food to the wide range of target temperature from -40 °C to +10 °C.

The combined units of «NICE-01» and blast freezer, Pharaoh3 BR Series, have 54 *1 programs available for setting.

All items in the target food list for our freezers *2 can currently be frozen with BR Series.

*1 The standard number of program settings is 8. Additional programs are optionally available.

*2 Please contact your agent for target food listing.

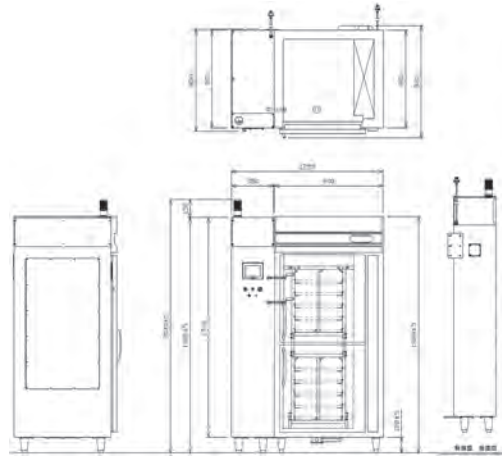
*The number of voltage-applied racks is variable as you wish.

*All models have open price tags.

«NICE-01» Pharaoh3 Q Series Combined units of «NICE-01» and quick freezer for multiple targets

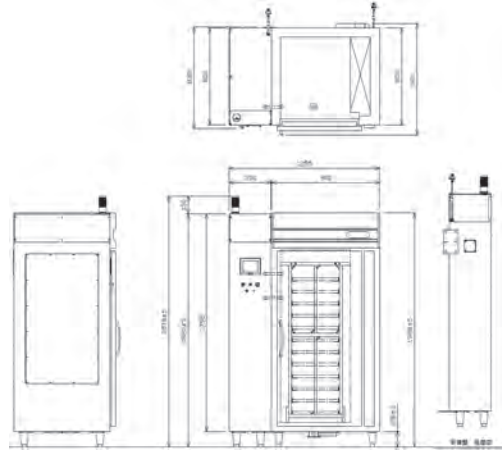
«NICE-01» Pharaoh3-Q-5-5-2TFS

A model with upper 5 voltage-applied racks and the lower 5 frozen-storage racks with 2 doors



«NICE-01» Pharaoh3-Q-12-1TFS

A model with 12 voltage-applied racks with 1 door



Dairy fresh cream containing 47% fat can be frozen and thawed. *The photo is an image.



*The photo is an image.



*The photo shows actual thawed food.

Food Processing with Q Series

Q Series are the combined units of «NICE-01» and quick freezer. As with BR Series, they have 54 *1 programs available for setting. You can set the target temperature ranging from -40 °C to -20 °C, but cannot freeze piping hot food since they don't include blast freezing function.

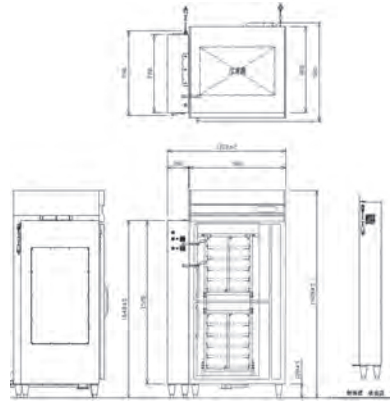
- * 1 The standard number of program settings is 3. Additional programs are optionally available.
- *Please contact your agent for target food listing.
- *All models have open price tags.

«NICE-01» Pharaoh3 R Series

Combined units of «NICE-01» and quick freezer for single target

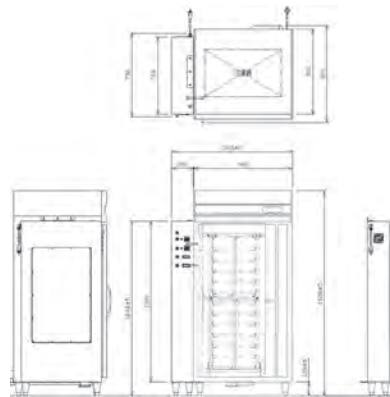
«NICE-01» Pharaoh3-R-5-5-2FS

A model with upper 5 voltage-applied racks and the lower 5 frozen-storage racks with 2 doors



«NICE-01» Pharaoh3-R-12-1FS

A model with 12 voltage-applied racks with 1 door



Easy Freezing with R Series

R Series are the combined units of «NICE-01» and quick freezer. The main feature of R Series is that they are dedicated for single target food *1 with single program setting. As with Q Series, the target temperature ranging from -40 °C to -20 °C can be set, but freezing function for piping hot food is not available.

- *Dedicated for sweets, for meat, for fish, and so on.
- *Please contact your agent for target food listing.
- *All models have open price tags.



(Photo by courtesy of a farm in Taiwan) (Photo by courtesy of a farm in Kochi)



*The photo is an image.

«NICE-01» Pharaoh3 W200L

Controlling System of Water Molecular Aggregate








Water Generation System that Foods can Efficiently Absorb

W200L generates water ideal for specified food by simultaneously refining water molecular aggregate and controlling water acidity (pH) via the special electric balance. It can be used for any food that needs water.






This product is currently used at kamaboko (fish cake) making and eel-raising industries (as of 2015).

«NICE-01» Pharaoh3 Lineup and Specifications

Series		Special Antioxidation Freezer					
		B R Series					
Models		040TBR	020TBR	012TBR	006TBR (Vertical)	006TBR (Horizontal)	
Appearance							
External dimensions (mm)		W1570 × D1383 × H2237	W1570 × D1113 × H2275	W1120 × D932 × H2072	W770 × D932 × H1765	W1212 × D860 × H1050	
Product weight (kg)		609	554	386	237	212	
Outdoor unit weight (kg)		280	246	—	—	—	
Material	Freezer	Stainless steel plate					
	Controller	Stainless SUS430					
Target Temperature		-40°C ~ +10°C *1					
Power source	Freezer	Three-phase 200V 20A *Hanging type socket					
	Controller	AC100V 3A *Wall socket with earth					
Rated frequency		50/60 H z					
Energy consumption	Freezer	Refrigeration	755W(Freezer) 6000W(Outdoor Unit)	755W(Freezer) 4500W(Outdoor Unit)	1870W	1487W	1073W
		Defrosting	3213W		1249W	636W	636W
	Controller	200W					
Operating temperature/humidity		-5°C ~ 40°C /80% RH or less with no condensation					
System	Freezer	Control panel					
		2 core temperature sensors		1 core temperature sensor			
	Controller	5.7inch color touch-panel					
		Self-check function					
		—	—	—	—	—	
		Automatic turn-off function on door open					
Standard of 8 program settings							
Voltage-applied rack	Dimension	W620 × D898 × H1434	W620 × D898 × H1434	W557 × D300 × H915	W453 × D245 × H475	W304 × D407 × H450	
	Material	Aluminum					
	Weight	124kg	124kg	21kg	7kg	8kg	
	Gross voltage-applied area	9.4㎡	9.4㎡	2.9㎡	0.47㎡	0.47㎡	
	Tray size(mm)	W390 × D600 × H20		W495 × D295 × H14	W391 × D242 × H13		
	Max. number of racks ²	60	30	20	5	5	

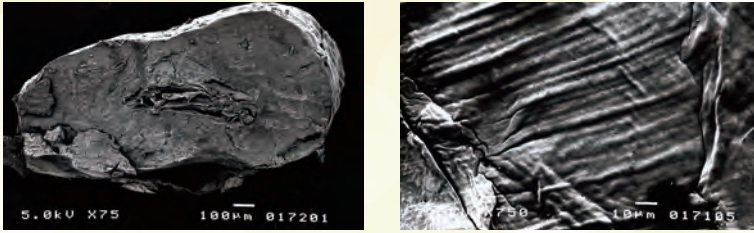
*1 Drain water is approximately 1 liter per week. *2 The number of voltage-applied racks is variable as you wish.

«NICE-01» Pharaoh3

Q Series		R Series		Water
Q-12-TFS	Q-5-5-2TFS	R-12-1FS	R-5-5-2FS	W200L
				
W1250 × D920 × H2072	W1250 × D920 × H2072	W1100 × D920 × H1920	W1100 × D920 × H1920	W1100 × D1100 × H2225
315	305	285	275	160
—	—	—	—	—
Stainless steel plate				—
Stainless SUS430				—
-40°C ~ -20°C		-40°C ~ -20°C		—
Three-phase 200V 20A *Hanging type socket				—
AC100V 3A *Wall socket with earth				—
50/60 H z				—
1770W		1770W		—
1762W		1762W		—
200W				—
-5°C ~ 40°C /80% RH or less with no condensation				—
—	—	—	—	—
—	—	—	—	—
5.7 inch color touch-panel		—	—	5.7 inch color touch-panel
Self-check function				—
—	—	Timer switch		—
Automatic turn-off function on door open				—
Standard of 3 program settings		Standard of 1 program setting		—
W447 × D550 × H1280		W447 × D550 × H1280		—
Aluminum				Polyvinyl chloride
25kg	25kg	25kg	25kg	—
2.6m ³	1.1m ³	2.6m ³	1.1m ³	200ℓ (12 hours)
W385 × D565 × H22		W385 × D565 × H22		—
12	5 racks×2 (Upper 5 voltage-applied)	12	5 racks×2 (Upper 5 voltage-applied)	—

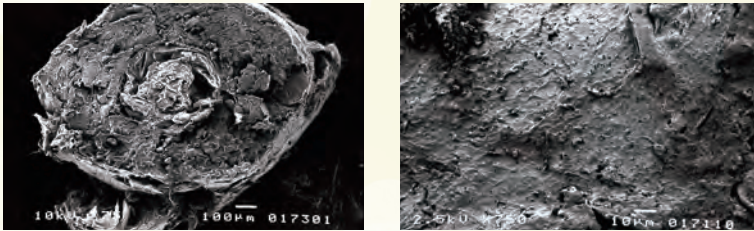
Electron microgram of raw anchovy fry Source: Graduate School of Kuroshio Science, Kochi University

Electron microgram of raw anchovy fry, which was frozen impressing electric field and thawed



Backbone on the center is preserved, muscles are densely packed, and surface skin is not destroyed.

Electron microgram of raw anchovy fry, which was frozen via traditional refrigeration and thawed



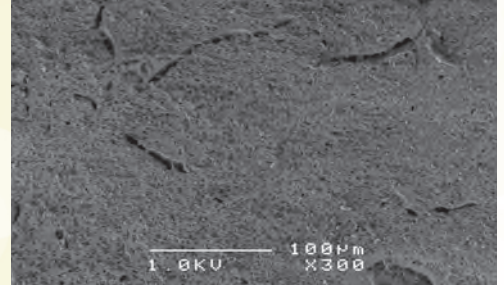
Surface skin is destroyed and lost tension, and cells as well as water has eluted off. Inner tissue is observed to be sponge-like appearance.

Possibilities for new refrigeration technologies

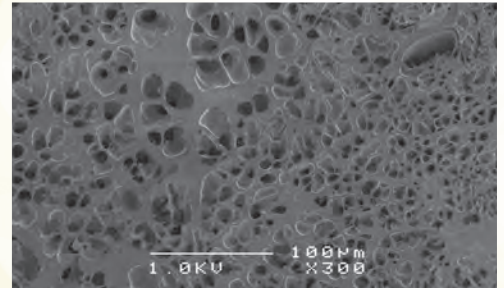


"I'm collaboratively studying the refinement of ice crystals inside physiological tissues via this freezing technology."

Professor Masashi Hojo,
Doctor of Science
Faculty of Science,
Kochi Univ.



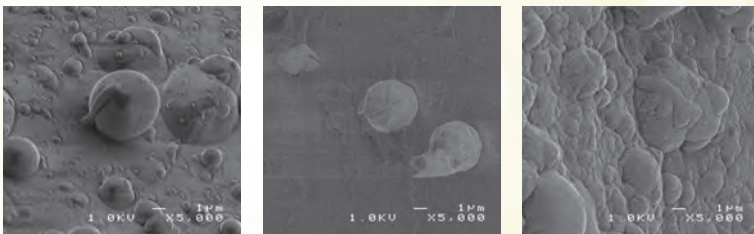
«Electron microgram»
Steamed rice, frozen via high-voltage refrigeration (-x300)



«Electron microgram»
Steamed rice, frozen via traditional refrigeration (-x300)

Electron microgram of fresh cream

Source: JEOL Ltd.



Fresh cream, chilled

Fresh cream frozen via Traditional refrigeration. Fat globule is destroyed.

Fresh cream frozen with NICE-01 voltage applied. Fat globule is not destroyed.

Usage Notes

The use of this product should be limited for food refrigeration. Since the freezer generates high voltage, do not touch the unit unless you are the administrator. This product should be installed in a place where others can not be easily reached. If it locates within close reach of others, it may create electric shock hazard.

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NICE-01

FRESH GOOD FROZEN

Patent numbers

○FOOD

Japan/No. 4932255 "Technology and Machine for Food Preservation"
Overseas/ United States US 8,899,069 B2
Mexico No. 301647
Eurasian 9 countries No. 009630
China ZL 2004 8 0022895. 3

○MEDICAL

Japan/No. 4932255 "Preservation Technology for Biomaterials"
No. 5458446 "Preservation Technology for Biomaterials"
Overseas/ United States US 8,394,320, B2

Applied researches on «NICE-01» for medical purposes, such as preserving blood, are also in progress, with collaboration with medical institutions.

Certificates of Food Patent



Japan

USA

Mexico

Eurasian 9 countries

China

Certificates of Medical Patent



Japan

Joint patent with Kochi Univ

USA

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