

# Flash Freeze

SAMPLE SPECIFICATIONS AND DATA

# Biggest Benefits of 3D Freezers

## Decrease in Drip Loss

Reduce the drip loss in your product to store products longer!

## Reduction of Running Cost

Reduce running and operational costs and make your business more efficient!

## Increase in Frozen Product Quality

Maintain high product quality despite long storage times!

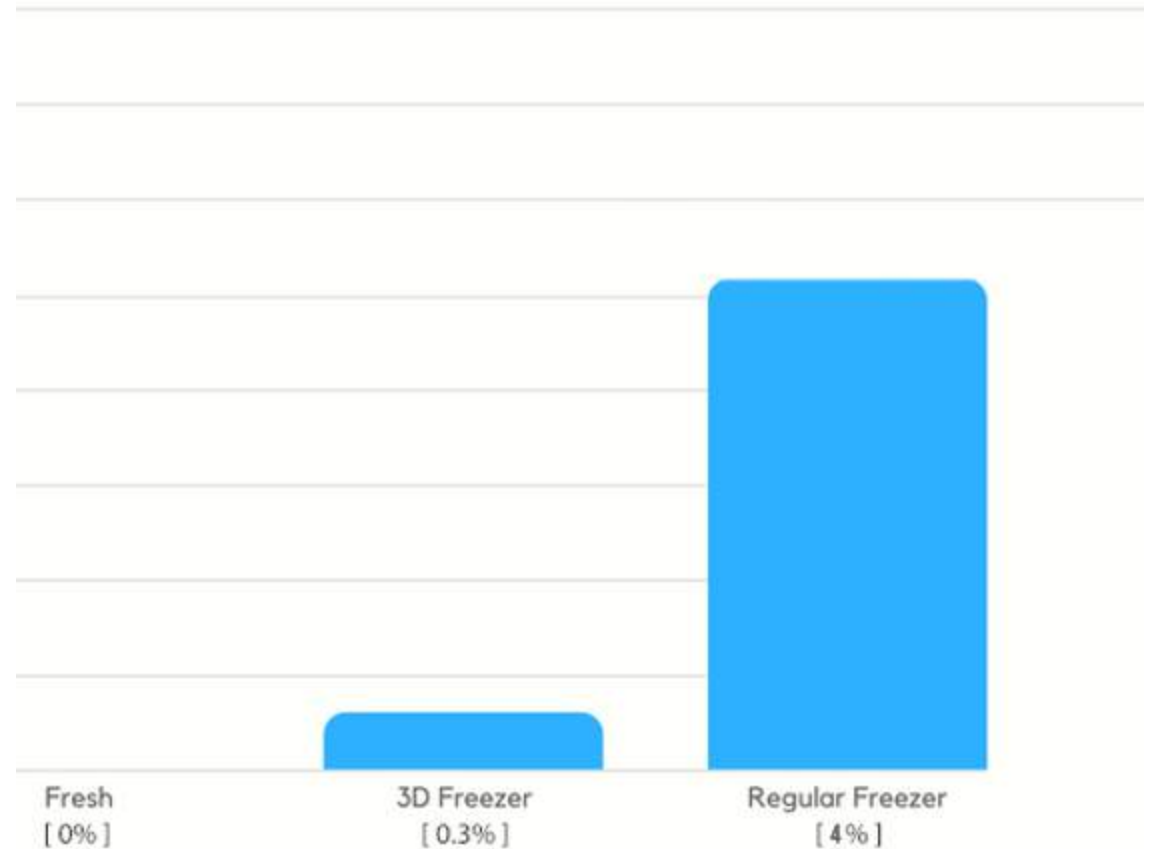
# Drip Loss Percentage

- ▶ Includes drip loss percentages of food when compared to:
  - ▶ Fresh Unprocessed State
  - ▶ After using a 3D Freezer
  - ▶ Using a Regular Freezer

## Drip Loss Percentage

PERCENTAGE ANALYSIS RATIO

3



Money Lost (Driploss)		
Price of Skipjack Tuna (Yen/Kg)		
1,400		
Capacity (Kg/hour)	Capacity (Kg/day)	Running time
500	5,000	10 hours
3D Freezer Driploss	Regular Freezer Driploss	Difference
0.30%	4.00%	3.70%
Difference in Driploss (Kg/day)	Difference in Driploss (Kg/month)	Difference in Driploss (Kg/year)
185	5,735	67,525
<b>Money Lost Per Year (Yen)</b>	Losses based on using a Regular Freezer	
94,535,000		

# Losses Based on Driploss [Example]

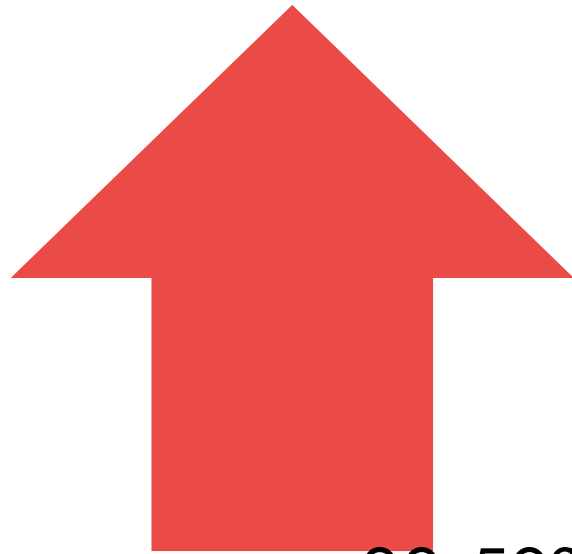
# Example of Driploss Reduction



## Profit Increase

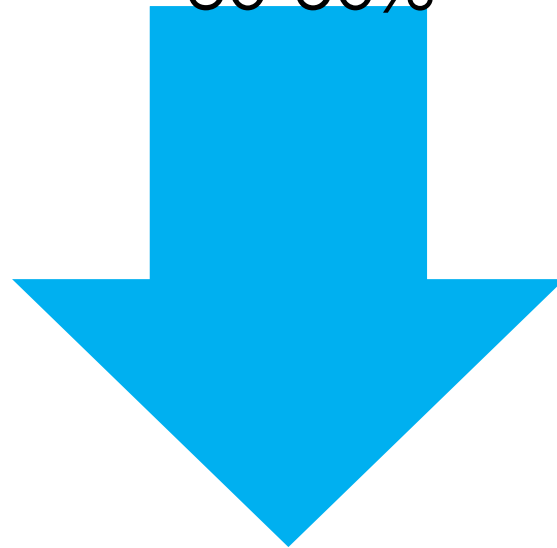
ADDING OUR CUSTOM 3D TUNNEL AND SPIRAL FREEZER TO YOUR BUSINESS WILL HELP YOU DRASTICALLY INCREASE YOUR PROFIT MARGIN AND IMPROVE PRODUCT MAINTENANCE, PRESERVABILITY AND INVENTORY MAINTENANCE

- ▶ By implementing our 3D Freezers, you will be able to boost your profits in **two ways**:
  1. **Lower Drip Loss**
- ▶ Lowering Drip loss will result in products lasting longer, making it easier to have stock all year round and minimize inventory waste
- 2. **Lower Power Consumption:**
- ▶ Our 3D Tunnel Freezers boast having about half of the electrical costs of a typical freezer of this scale



Regular Blast Freezers have Higher Electrical Operational Expenses VS our 3D Freezer.

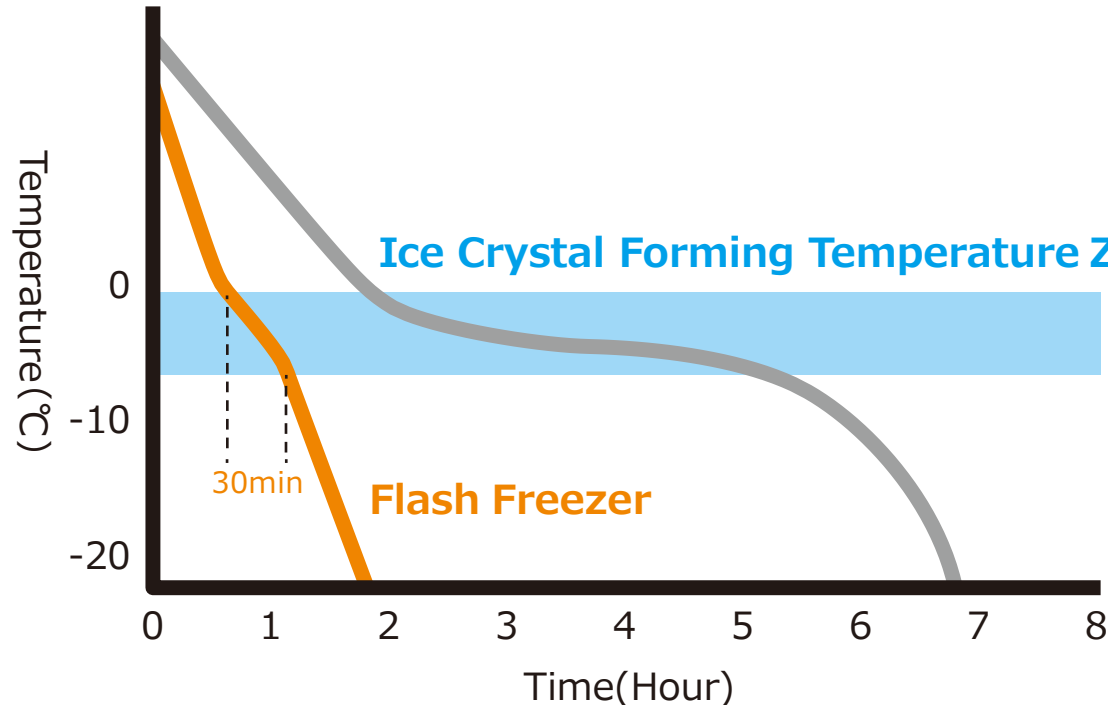
30-50%



Our 3D Tunnel and Spiral Freezers Lower Electrical Costs and Operational Expenses by almost 30-50%

# High Speed Efficiency While Ensuring Quality

- ▶ By letting food pass through the ice crystal forming temperature zone (Between  $-1$  and  $-5^{\circ}\text{C}$ ) within 30 min, ice crystals do not damage the food cells, and it prevents food from losing its taste and flavor



The longer it takes before the food passes through this temperature zone, the more damaged food gets.



# Cellular Structure and Wall Preservation

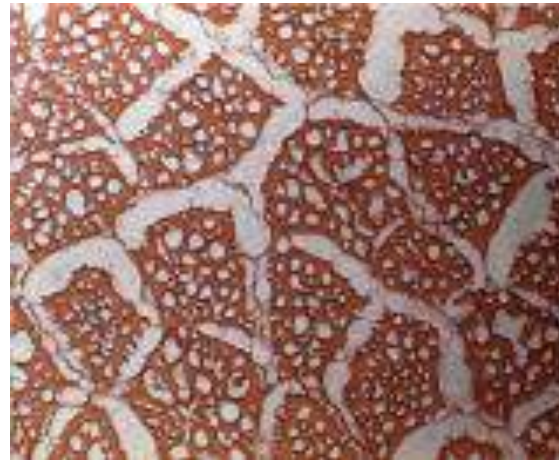
Food cells before Freezing



Food cells look untouched and healthy



Food cells after Fast Freezing



Small ice crystals were formed and they hardly damaged the cellular structure

Food cells after Regular Freezing



Huge ice crystals were formed and they damaged the cellular structure

# No Internal Frost Production

By generating steam inside the freezer, we observed the amount of frost in both. You can see that frost in a conventional freezer is clogging. In contrast to that, in a 3D freezer there is no clogging.



Conventional Freezer

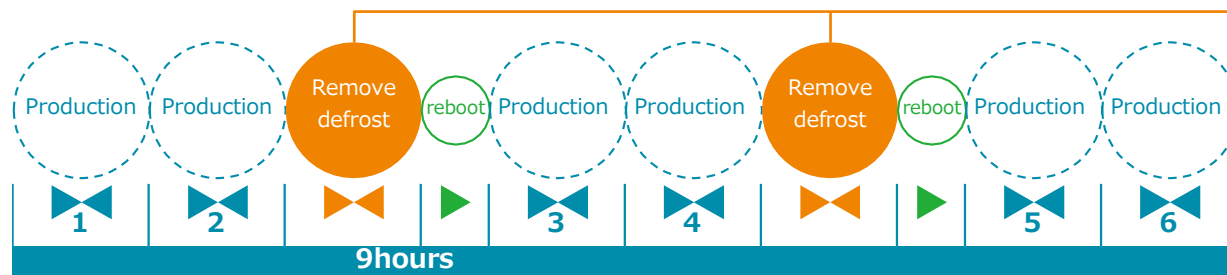
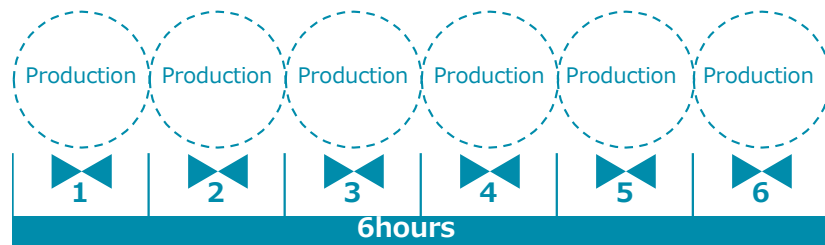


3D Freezer



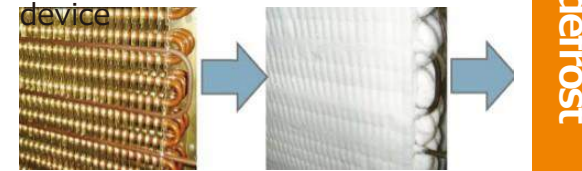
# Production Rate

## 3D Freezer



## Normal Freezer

Fin Coil  
device



Frost causes the internal temperature to increase. This puts additional load upon the compressor.

The 3D Freezer does not experience this issue.

# Running Cost And Production

	Power consumption (when working)	Power consumption (when removing frost)	Removing frost	Hours of operation	Production number (per hour)	Production number (per day)	Power consumption (per day)	Electrical fee (per day)
<b>3D freezer</b>	<b>22.8kw/h</b>	<b>7.2kw/h</b>	<b>0</b>	<b>15 hour</b>	<b>1,600</b>	<b>24,000</b>	<b>342.0kw/h</b>	<b>0.29yen</b>
Conventional Air Blast Freezer	24.2kw/h	19.9kw/h	4	11 hour	1,600	17,600	19.9kw/h	0.39yen

## Weight of product (food)

	Grilled rice ball		
	Before freezing	After freezing	After defrosting
<b>3D freezer</b>	<b>100g</b>	<b>96g</b>	<b>99g</b>
Conventional Air Blast Freezer	100g	92g	95g

Productivity  
increased  
36%

Reduce  
0.1yen(26%)  
per product!

Yield rate  
raised 4%!

Since 3D freezers prevent food from drying, the yield rate got higher!

# Freezing Test Results

A LOOK AT PRODUCTS FROZEN USING THE 3D FREEZER

# Frozen To Defrost : Sushi





# Fresh Vs Frozen : Shrimp



# Frozen To Defrost : Sushi





# Frozen To Defrost : Salmon



# Frozen to Defrost : Pineapple



# Frozen to Defrost : Mango





# Frozen to Defrost : Cake



# Exceptional Quality After Defrosting

WITH THE 3D FREEZER'S  
ADVANCED ACVCS  
TECHNOLOGY, OVERALL  
PRODUCT QUALITY REMAINS  
UNCHANGED AND  
PRODUCTS RETAIN THEIR  
TEXTURE AND FLAVOR

# Final Words and Quality Assurance

We at [flash-freeze.net](https://flash-freeze.net) believe in bringing the best service and satisfaction to our valued customers.

Given the scale of our operations, there are lots of factors to keep in mind when making a purchase. But we will be sure to help you every step of the way!

And you can be sure of one thing, when it comes to **quality**, we do not compromise.

Thank you for your patronage.

# Flash-Freeze.net

The Pinnacle of Flash Freezing Technology

Contact:

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