

Zeph-C-20CTR



Container Refrigerator

Freshness Redefined

Innovative Cooling Tech from Japan

*keeping high humid condition as you like,
best suited for your products*



Mobile; 20ft Refined Reefer Container

Zeph-C (氷潤) can be a game changing tech.

Why don't you seek your new business model?

e.g.,

- *Reducing yield losses;*
- *Higher valued products:*
 - *by accessing long-distance larger markets;*
 - *by supplying off-season products;*
 - *by shifting the peak demand;*
 - *by supplying better quality products.*
(ripe fruits, saccharified crops, meat/fish aging)
- *Workload leveling by keeping the products fresh;*
- *Clean air storage; ...*



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0°C 99%

Technical Features and Advantages



- High Humidity Setting w/ near freezing temperature
- Stability and uniformity of conditions
- Simple packing of products
- No need for defrosting / Energy saving
- Clean air without dust/fungi/bacteria/viruses
- Real-time monitoring of conditions

Freshness Redefined

First-of-this-kind in the world

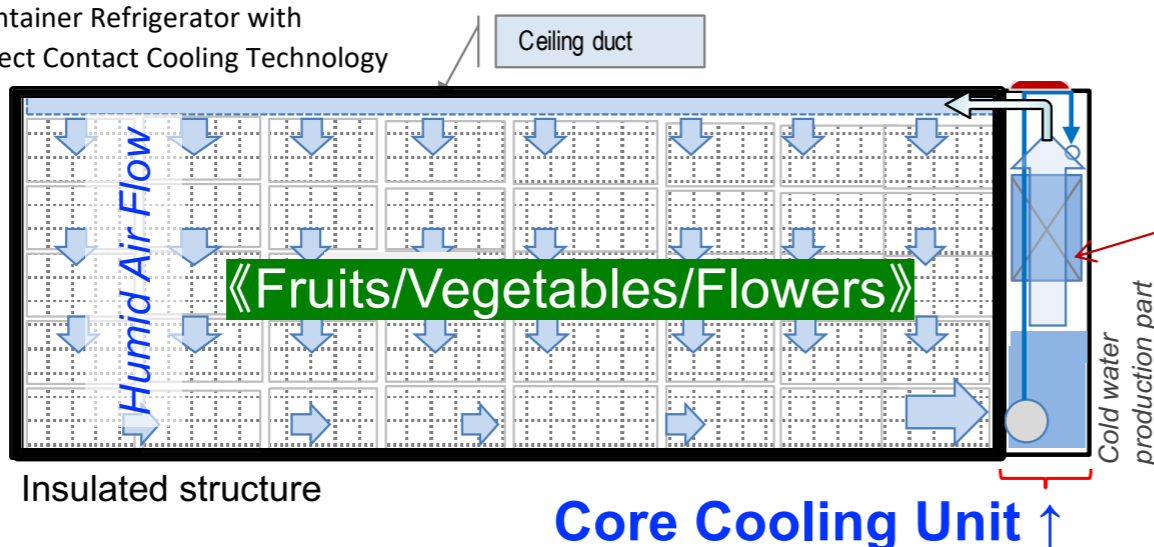
Innovative Cooling Tech and Container Refrigerator

Core cooling technology

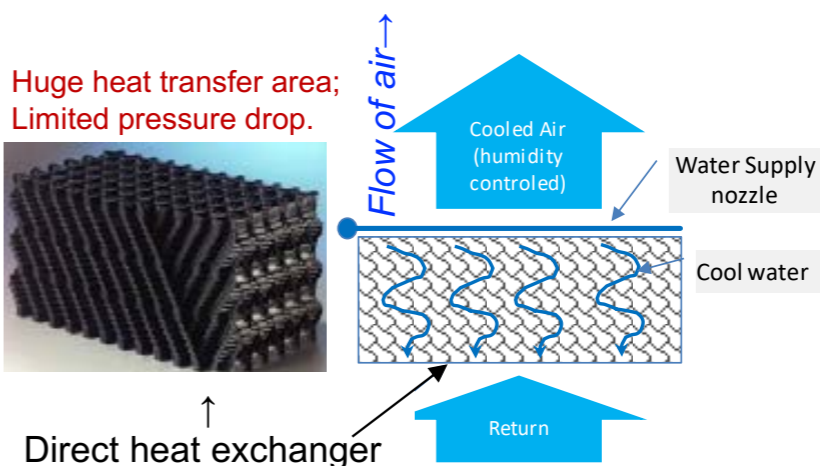
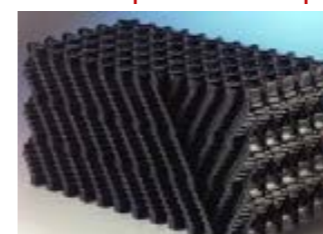
Container refrigerator with installed core unit

Direct heat exchange of air with cold water

Container Refrigerator with Direct Contact Cooling Technology



Huge heat transfer area; Limited pressure drop.

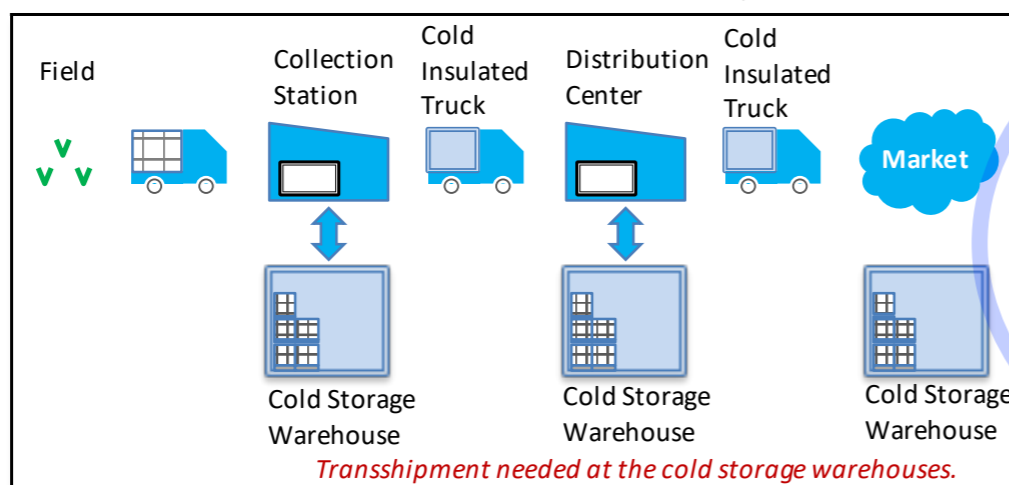


Comparison of Cold Chain Systems

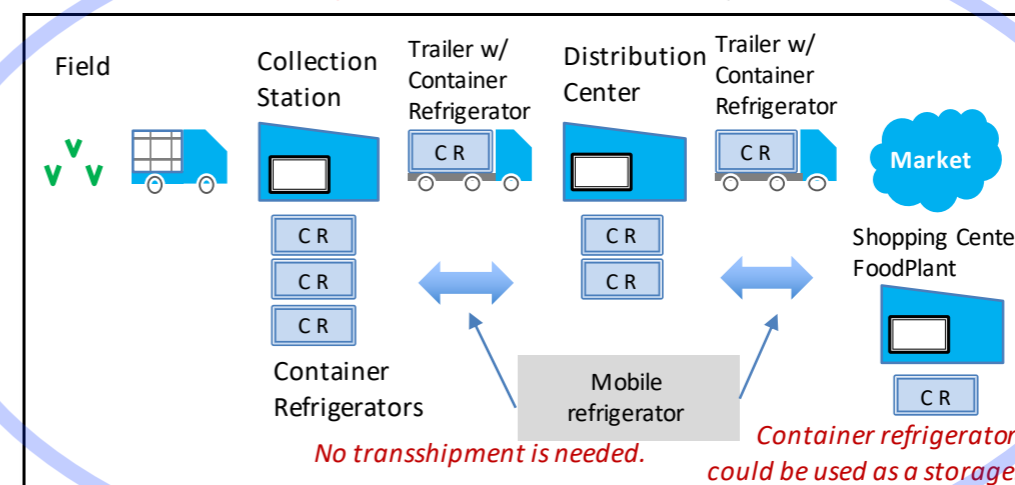
Other similar solution

Proposed solution

'Conventional' Cold Chain System



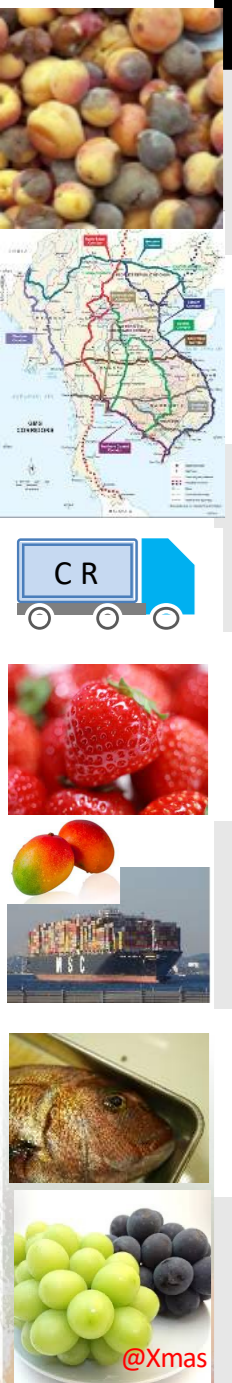
'Proposed' Cold Chain System



Energy efficiency is more than 5 times better.

Many Usage Scenes

Which do you want to try?



	Application (stored period)	Mobile Use
(a)	Post Harvest Loss Reduction (a few days to weeks)	✓
(b)	Access to the Big Markets (a few days to weeks)	✓
(c)	Innovative Cold Chain (a few days to weeks)	✓
(d)	Ripe Fruits Harvesting (a few days to weeks)	✓
(e)	Int'l Trade of High Valued Fruits/ Flowers (a few days to weeks)	✓
(f)	Simple Fish Transport w/o Ice/Water (a few days to weeks)	✓
(g)	Off-Season Delivery of High Valued Fruits (a few weeks to months)	✓

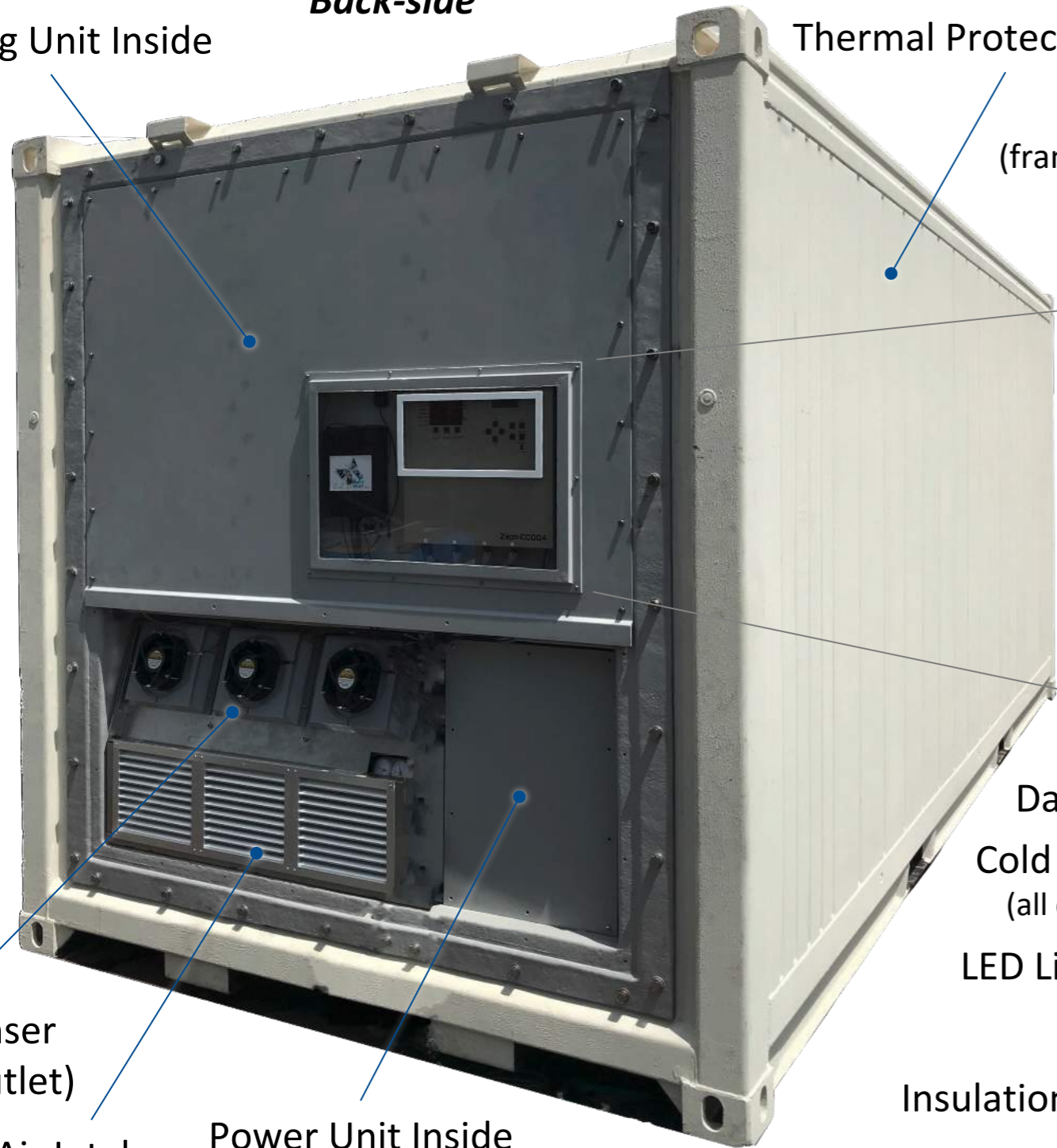
(h)	Stability of Business Unaffected by Market (a few weeks to months)	✓ 
(i)	Leveling Out Peak-Period Workload (a few weeks to months)	
(j)	Better Quality Crops by Saccharifi- cation (a few weeks to months)	
(k)	Better Quality Meat/Fish by Aging (a few weeks to months)	
(l)	Longer Lifespan for Processed Food (one day to a week)	
(m)	Loss Reduction of Fresh Flowers (one day to a week)	
(n)	Dripless Thawing (several hours)	
(o)	Clean Air Condition	

Back-side

Cooling Unit Inside

Thermal Protection Coating

Controller Panel w/ Monitor
(framed area for status indicators and setup keys)



Data Transmitter

Cold Air Vent Holes
(all over the ceiling)

LED Lights

Insulation Wall

Backside of the Cooling Unit



*Cold and Humid
Air Flow
(3 cm/sec)*

Inside View from Front-Side

Front-side

Door



Power Unit Inside
(to be covered)

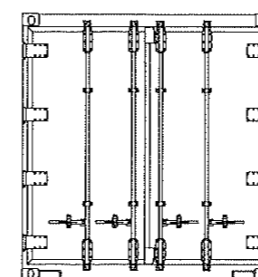
Air Intake

Condenser
Fans (Outlet)

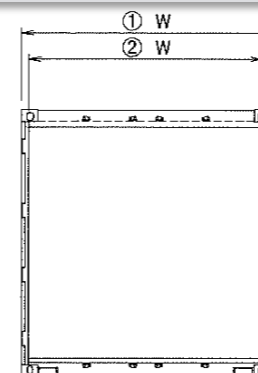
Mobile; 20ft Refined Reefer Container

Container Refrigerator Specifications		
Model Name	Zeph-C-20CTR	
Main Purpose	Long-term preservation of fresh fruits/vegetables/flowers	
Cooling Power	3,200 W (temp.: -10°C)	
Power Source	AC 200V 3-Phases, 2.2 kW	
Inside Temp. Setting	-5°C to +25°C	
Inside Humidity Setting	75% to 99%	
Control	Independent control of temperature and humidity	
Data Transfer	Temperature and Humidity	Temperature: 5 points, Humidity: 1 point; Every 10 minutes
	Location	GPS
	Movie	Triggered by the motion sensor inside
Dimensions [L, W, H; mm]	External	6,060 x 2,440 x 2,590
	Internal	5,785 x 2,290 x 2,310
	Loadable	5,100 x 2,290 x 2,050
Loadable Volume	23.9 m ³	
Color (default)	25-92B	

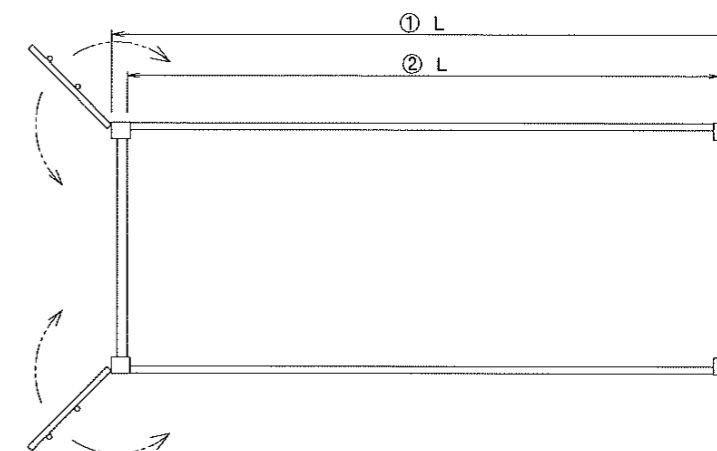
Elevational view



Cross-section view



Plane view



Side cross-section view

