

Passive Cooling for Active Cold Chain Transportation

Keeping perishable product at its optimal temperature across the global cold chain is expensive, energy intensive and frequently unsuccessful, leading to rejected loads and low industry profit margins.

In addition, truck transport companies are faced with an increasing regulatory burden at the same time that they are trying to meet increasing consumer demand for frozen and chilled product delivery worldwide.

CryoLogistics is developing a passive, economical, climate-friendly temperature-controlled cargo load device for the global cold chain industry that will vastly improve the economics of transport refrigeration worldwide.



SnowShip-LTL™

The SnowShip-LTL™ liquid CO₂ pallet box, has been designed for 3rd party logistics Less-Than-Load (LTL) or mixed-load delivery companies and offers controlled temperature specific loads of high value product throughout the cold chain.

The SnowShip-LTL™ is intended to augment or replace transport refrigeration units, which are highly emitting, complex and expensive mechanical systems (known as 'reefers'), as well as the thermally insulated crates now being used to transport health science products.

SnowShip-LTL™ pallet boxes can be used in conjunction with transport reefers to enable mixed loads requiring a variety of set point temperatures aboard a single conveyance. This will increase capacity, lower fuel and maintenance costs, reduce emissions and total cost of ownership, while improving profit margins.

SnowShip-LTL™ pallet boxes will also allow dry van carriers to transport refrigerated goods. This will position them in direct competition with the refrigerated trucking fleet by reducing the product's transportation costs and ultimately disrupting the entire trucking industry.



*Above image is a product rendering for illustrative purposes only. Actual pallet box may vary in design.



Core Technology

Our proprietary technology is simple, economical, scalable, customizable and offers significant operating efficiencies to improve product value retention and extend shelf life. It has no moving parts, operates silently, emits no particulate matter or noise and is well suited for use in densely populated urban environments.

Our Alpha proof-of-concept prototype is able to sustain -50 degrees Celsius for up to 4 days. Our Beta field-trial prototype is being tested by Victoria-based Cold Star Solutions Inc. Its performance to date has exceeded our expectations. Our production model, which is scheduled for release in Q3 2018, will allow the user to dial-in the required set point temperature knowing that it will not deviate for period up to seven days or more.

Putting Nature to Work

Natural refrigerants like CO₂ fell out of favor following the introduction of synthetic refrigerants like HFCs, HCFCs and CFCs. In 1988, the Montreal Protocol led to a global phase down of synthetic refrigerants in order to save the earth's ozone layer, resulting in a revitalized interest in nature's climate friendly alternatives.

Liquid carbon dioxide is an abundant, naturally occurring, efficient, economical, safe and stable refrigerant that is receiving widespread acceptance in commercial and industrial applications. In 2018, CryoLogistics plans to work towards supply partnerships with global and regional air-gas supply companies to ensure that our customers are able to maintain a stock of Co2 on premises.



Global Cold Chain Industry Problems

(in order of priority, per customer discovery)

1. High cost of ownership

CapEx, OpEx.

2. Temperature integrity

Temperature excursions caused by aging and unreliable equipment.

3. Capacity limitations

Single temperature trucks and trailers limit load capacity.

4. Regulatory compliance

Food safety, emissions and noise.

5. Low optimization

Single purpose vehicles.

CONTACTS

Peter Evans
CEO & Founder
t: (250) 588-7539
e: evans@cryologistics.ca

Jennifer Thompson
Chief Operating Officer
t: (604) 603-6549
e: jthompson@cryologistics.ca