



We, at Rinac, begin with seamless solutions for cold chain and modular construction. Soon, a relationship develops, empowered by our domain expertise, service excellence, and customising capabilities. As the bond deepens, you will discover that we invest in curiosity, innovation, and ingenuity. We constantly question perfection and leverage our resources to nurture each relationship into a win-win proposition. What's more - warm, pro-active support is always just a call away through RinaCare, our dedicated relationship service group.

For more than two and a half decades, Rinac has been the chosen partner for industry leaders, providing an unrivalled range of solutions and superior value. But that's just the tip of the iceberg.

A RINAC Product  
**Chill Kart**  
GREEN • ENERGY EFFICIENT



**REFRIGERATED TRUCKS.  
INSULATED TRUCK CONTAINERS.  
ECOVAN.**

## Chillkart [ Body ] Technical Specifications

Chillkart, Insulated Truck Body from RINAC India Ltd, is designed to play a key link role in the seamless cold chain cycle. Chillkart Body possesses very stable and strong construction features, is lighter in weight and thus reduces fuel consumption. It lasts longer with exceptional durability and superior temperature holding capability which enables enhanced product life and energy efficiency.

Chillkart Insulated Truck Body is made of sandwich panels, with polyurethane foam insulation core and laminated by skins of glass fiber reinforced plastics. This provides high strength-to-weight ratios and good damping capacity. GRP polyurethane foam sandwich panels have been fabricated through Patented Formo-bonding technology under controlled conditions and the foaming process is free of CFC, hence it can be considered as an eco-friendly material.

### Product Applications

- Fresh: Floral/nursery, produce
  - Seafood, dairy products
  - Frozen fruits & vegetables, Fresh Vegetable Produce \*
  - Frozen Ice cream, Frozen Meat & Poultry, Frozen food products \*
- \*Frozen foods may require a refrigeration system.

### Standard features

- Rigid Polyurethane Foam used as insulation for body. RPUF ensures good thermal insulation properties with conductivity as low as 0.021 W/m.K
- GRP Sheets bonded to insulation. GRP sheets ensure lowered weight, hence higher payload capacity and effective area for merchandising.

### Optional Features

- Strip curtains
- Produce chutes, Side door options
- Lighting options
- Shelving and rack systems
- Refrigeration system
- Multi-temperature applications



## Standard Specification

Body Length	:	2200 to 7100 mm
Body Width	:	Upto 2400 mm
Body Height	:	Upto 2400 mm
Side Walls	:	GRP sheet lamination with standard polyurethane foam thickness of 100mm Panel
Front-end Walls	:	GRP sheet lamination with standard polyurethane foam thickness of 100mm Panel
Floor	:	Slip-resistant GRP sheet lamination with standard polyurethane foam thickness of 100mm Panel with provision for water drainage
Roof	:	GRP sheet lamination with standard polyurethane foam thickness of 100mm Panel
Door	:	Two-panel, full opening type
Sub-frame	:	Suitable beams with cross members are provided for direct fixing onto chassis
Lights	:	LED lights with fully-sealed, plugged-together wiring

### Chillkart Truck Body Standards

Sl. No.	Container Dimensions (mm)	Payload (kgs)	Suitable for Truck Model / Chassis / Wheel Base
1	2200 x 1650 x 1650	350	Suitable for Ace HT - 2100
2	2650 x 1650 x 1650	500	Suitable for Super Ace - 2380
3	2900 x 2000 x 2100	2350	Suitable for SFC 407 EX2 - 3100
4	4000 x 2100 x 2100	2200	Suitable for LPT 407 EX2 - 3400
5	4300 x 2100 x 2100	3100	Suitable for LPT 709 EX2 - 3400
6	4300 x 2100 x 2100	4200	Suitable for LPT 809 EX2 - 3400
7	5100 x 2100 x 2100	5000	Suitable for LPT 909 EX2 - 3800
8	5800 x 2100 x 2100	6500	Suitable for LPT 1109 EX2 - 4200
9	6200 x 2400 x 2400	9500	Suitable for LPT 1613/1618 - 4855
10	6700 x 2400 x 2400	16000	Suitable for LPT 2515/2518 - 4885
11	7100 x 2400 x 2400	21000	Suitable for LPT 3118 - 5505

Note : Model given above are of TATA make and equivalent models of other make can be considered.







## Chill Kart

At Rinac, we create an environment that is conducive for innovative thinking. This culture of innovation has helped foster advancements in refrigerated transport technology leading to the development of Rinac's latest product, the Chill Kart. Chill Kart is Rinac's line of eutectic trucks that offer transport of goods requiring temperature maintenance between -15 deg. C & -25 deg. C. Eutectic trucks are a green and economical alternative to reefer trucks, especially in the secondary transport sector (last mile delivery). It does not require fuel or energy to refrigerate and instead, stores 'cold' in eutectic plates placed within the insulated body. RPUF insulation is provided for effective resistance to heat transfer and the GRP sheets vacuum-bonded to it ensure lowered weight. This increases net payload capacity and ensures effective merchandising area for your product. Non-existence of moving parts during operation ensures quiet, green and cost-effective transport that adds to your carbon credit.

## Features

- No fuel or energy required for refrigeration during transport
- Eutectic plates provide necessary cooling hence nullifying use of fan cooling type evaporator unit
- Temperature maintained for 10-12 hrs
- Use of roll container system and side service doors
- Rigid Polyurethane Foam used as insulation for body
- GRP Sheets bonded to insulation

## Benefits

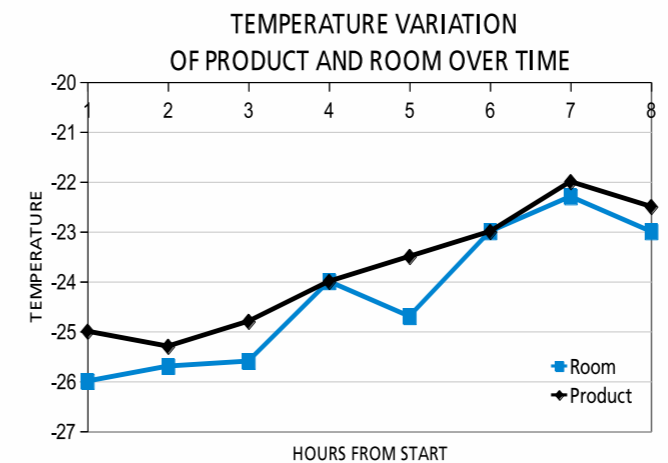
- Economical transport with savings on fuel
- Saves energy and labour
- No moving parts while refrigeration system is in operation
- Easy unloading of products from roll containers through side service doors
- RPUF ensures good thermal insulation properties with conductivity as low as 0.022 W/M-K
- GRP sheets ensure lowered weight hence higher payload capacity and effective area for merchandising

## Advantages

- Reduced operating costs
- Minimal service costs
- Skilled personnel not required for handling system
- Life of system will be as long as the life of the truck
- Excellent product protection in case of breakdown of truck
- Temperature maintained without use of external energy source
- No noise, hence quiet distribution
- No exhaust, hence non-polluting

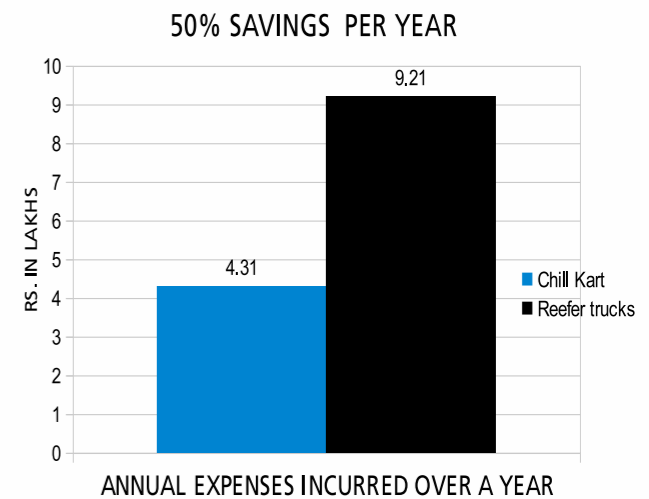
## Operation

- Truck is plugged into a 3-phase power supply and charged for 8 to 10 hrs
- Products are arranged according to delivery priority on roll containers and loaded on to the truck through rear doors
- Truck is charged for one hour after loading of product and start delivery run
- While on delivery, the rear doors remain shut and the products are unloaded through side service doors
- On return to the warehouse, the truck is plugged in, so as to re-freeze the eutectic plates and the cycle continues



Graph shows the performance of the refrigeration system while on an 8-hour long delivery run

EUTECTIC SYSTEM	FORCED COOLING TYPE
No moving parts during operation	Moving parts of evaporator fan and compressor
Low service cost	High service costs
Life is as long as truck	Life of 5 Years
Skilled personnel not required for servicing	Skilled personnel required
Excellent for product safety even if truck breaks down	Breakdown of truck would mean no safety for products
No noise	High levels of noise
No exhaust, hence non-polluting	Polluting



## Comparison Between Eutectic System and Forced Cooling Type

The Chill Kart is a last mile delivery vehicle for which insulated box size of current dimension is provided for variants such as the Ashok Leyland Dost, Tata Super Ace and the Mahindra Maxximo. Chill Kart containers for other chassis will be provided on request.

## Accessories on request

- 1) Roll containers with stoppers—4 nos
- 2) Data logger





...**cool** distribution  
...no fuel ..no power ...

## WORLD'S FIRST ECO-FRIENDLY GREEN GOODS HOME DELIVERY SYSTEM Rinac CHILLKART **ecoVAN**



Patent No.  
307635 and 307636

World's First, Fastest & Freshest Green Goods Home Delivery System. It is a totally Indian innovation designed for markets around the world. It is a world's first from Rinac.

ecoVAN saves freshness of fruits and vegetables that is typically lost in conventional transit before they reach the customer. This home delivery system not only allows customers to get farm-fresh fruits and vegetables but helps vendors deliver perishable green goods to their customers before they lose their original freshness.

Chillkart ecoVAN runs on solar power. Thus it is eco-friendly and cost-effective too.

Ideal for vendors of all sizes and shapes, this innovation is set to smarten the green goods supply chain as never before.

This innovative concept and design is also to support Government of India's vision to double the income of farmers by 2022.

### Features

- Farm fresh produce to consumers
- Extended shelf life
- Solar-powered
- Eco-friendly and cost-effective
- Humidified chilled air circulation
- Ideal for Farm to Consumer, B2C start ups
- Generating employment opportunities
- Conceptualised and designed in support of Indian Government's vision of doubling farmer's income by 2022

