



# SOUTH POLE REFRIGERATION

BUILT ON TRUST PRODUCT



All our Products are Built on Trust Product for Performance, Reliability and Durability, even in the toughest and most difficult conditions.



## KNOW US

South Pole Refrigeration Is a strong player in the refrigeration sector having registered office at Chennai & Corporate office at Trichy. South Pole Refrigeration Provides the Industrial & Commercial Refrigeration Solution for every customer with individual needs since 2021.

Our wide range of products like Cold Storage, Walk-in Freezer & Chiller, Blast Freezer & Chiller, Ripening Chambers, Climatic Chambers are with highly efficient refrigeration systems & strong solution.

South Pole Refrigeration has the infrastructural capability to produce the high durable thermal insulated puf panels with thickness range 40 mm to 200 mm. These products are designed to reduce the deterioration of storage foods during the freezing point. Our Cold rooms are used for maintaining food quality including Flavor, Texture, Color, Aroma & Nutrients for various industries such as Dairy, Food Processing, Horticulture / Floriculture, Fruit Ripening, Hotels – Restaurant, rental outlet for Dairy-Ice Cream, Pharmaceuticals, Logistic, Plastic & Chemical Processing Industry and Biological research industries.

## WHY CHOOSE US

**Government Schemes for Cold Storage Project** is available with us. Moreover, We will do the Turnkey Projects of Cold Rooms that includes Civil Works, **Stabilizers** (Both Single Phase & Three Phase), **Rackings** for Cold Rooms (Both Stainless Steel & GI) which will be the big stress relief for customers. Customers can obtain Single Point Solution with South Pole Refrigeration.

## VISION

The South Pole Refrigeration is focused on excellence, the highest quality in products and being a leader in the cold chain industry.

## MISSION

Let us redefine quality day after day continuously assimilating new skills to provide world class products and services setting higher and higher standards for a performance that keeps the customer oriented towards us, the team South Pole Refrigeration with an exuberant morale.

## OUR TEAM

Our Team is most efficient in work & high experience in Cold Storage Segment. South Pole Refrigeration is committed to complete the work on time & we ensure service as customer friendly always.

# COLD ROOM

South Pole refrigeration Walk-In Cold Rooms are designed to store the Food Products in a long-term duration at various temperatures. Based on the customer applications Cold rooms are divided in to two divisions as Walk-In-Chiller & Walk-In-Freezer.



# WALK-IN CHILLER

- **Operating Temperature** : +2 Deg C to +25 Deg C.
- **Puf Panels Thickness** : 60 or 80 mm

## APPLICATION

Fruits & Vegetables, Dry Fruits, Onion & Potato Cold Room. Dairy Products like Milk, Curd, Yoghurt, Paneer, Butter, Cheese, etc., Banana, Papaya & Mango Ripening. Pulses, Millets & Spices, Bakery Products. Pharmaceutical items like Vaccines, etc., Some Industrial Items like Circuit Boards & Batteries, In R&D Labs. Horticulture/Sericulture, Flowers Cold Room, Catering & Restaurants.



# WALK-IN FREEZER

- **Operating Temperature** : -15 Deg C To -25 Deg C.
- **Puf Panels Thickness** : 100 or 120 mm

## APPLICATION

Dairy Foods like Ice Cream, Butter, Poultry, Sea Foods, Beef/Pork, Mutton Storage, all Frozen Foods like French Fries, Momos, Green Peas, Frozen Samosa & Parotta etc.,



# SALIENT FEATURES

1. Easy to Assemble and Dismantle.
2. Flush Type & Face Mounted Puf Doors with Double Gasket, Kick Plates.
3. Homogeneous Puf density, High Ambient Refrigeration Design.
4. Perfect Puf Insulation to Withstand Cooling Efficiency, Fully Customized as per Customer Needs.
5. Durability products & Life time service, Customer Friendly.

# PRE-COOLING CHAMBER

- **Operating Temperature** : 10 Deg C To 15 Deg C.
- **Puf Panels Thickness** : 60 mm, 80 mm

## APPLICATION

Agricultural industries  
Food Processing companies like Fruits & Vegetable, Meat & Seafood.  
Horticultural field



## SALIENT FEATURES

1. A Specially Designed Airflow Path for Uniform Cooling.
2. High Humidity Type Evaporators.
3. High Ambient Condensers.
4. Powder-coated galvanized iron (PCGI) laminated walls and ceilings.
5. Compact, Customize & Robust Structure.

# CONTAINER COLD ROOM

- **Cold storage container size** : 20 feet, 40 feet.
- **Operating Temperature**
  1. Container Walk-In Chiller : +2 Deg C to +8 Deg C.
  2. Container Walk-In Freezer : -15 Deg C to -25 Deg C.
  3. Container Blast Freezer : -35 Deg C to -40 Deg C.

## APPLICATION

Fresh Fruits & Vegetables, Dairy, Meat, Sea Foods,  
Ice Cream, Frozen Foods, Vaccine & Chemical Product,  
Catering & Restaurants etc.



## SALIENT FEATURES

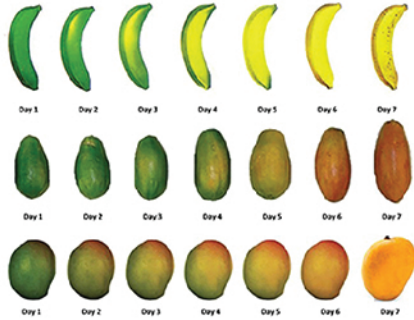
1. Container Cold Room allows easy transportation to another place.
2. Having good flexibility of just relocating in case of changing location of your premises.
3. Refrigerated containers are also preferred due to practical and ease of use.
4. Cost effective, durable materials.
5. Ready to use Containers can be supplied to End User place. Only few minor works will be done at site.

# RIPENING CHAMBERS

- Operating Temperature : 16 Deg C to 28 Deg C.
- Puf Panels Thickness : 60 mm, 80 mm

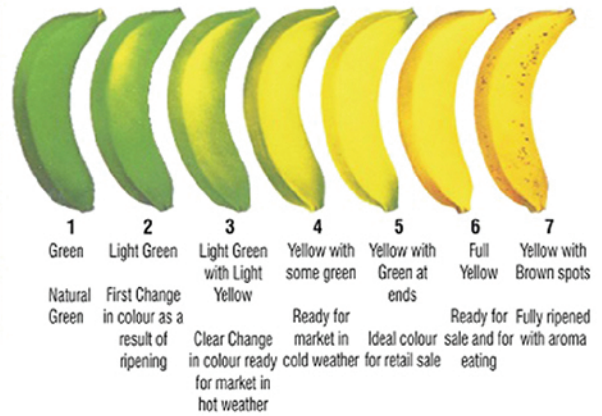
## APPLICATION

- Banana
- Papaya
- Mango



Daily Ripening Chart

8 Days	14.5°	14.5°	14.5°	14.5°	14.5°	14.5°	14.5°	14.5°
7 Days	15.5°	15.5°	15.5°	15.5°	14.5°	14.5°	14.5°	14.5°
6 Days	16.5°	16.5°	15.5°	15.5°	14.5°	14.5°	14.5°	
5 Days	16.5°	16.5°	16.5°	16.5°	15.5°	14.5°		
4 Days	18.0°	18.0°	16.5°	15.5°	14.5°			
	Days 1	Days 2	Days 3	Days 4	Days 5	Days 6	Days 7	Days 8



## Ethylene Exposure:

Sr.no	Product Details	Ethylene Concentration (PPM)	Ethylene Exposure Time (Hours)	Ripening Temperature (°C)	Storage Temperature after ripening (°C)
1	Banana	100-150	24-48	15-18	13-14
2	Mango	100	24	20-22	10-13
3	Papaya	100	24-48	20-25	About at 7

## SALIENT FEATURES

1. Air tight insulated room with good air flow.
2. Gas based ethylene injection.
3. A CFC free refrigeration system in auto operation.
4. Co2 evacuating system with automatic controls.
5. High humidity coil evaporator with the built in pre cooling capability.
6. Safe – No crisis of explosion as long as the instruction given are followed.

## BLAST ROOM

Safe food preservation ensures that food wastage is reduced, bacterial growth is eliminated as well as the flavor, texture, integrity, and quality are retained for a longer shelf-life. This is where blast chillers and freezers play a critical role in solving the refrigeration needs of commercial as well as industrial needs. Blast Freezer / Chiller are the essential system to extend the shelf- Life of food by instant Freezing / Chilling.



## BLAST FREEZER

- **Operating Temperature** : -30 Deg C to -40 Deg C.
- **Product Temperature** : -15 Deg C to -20 Deg C
- **Puf Panels Thickness** : 150 mm.

### APPLICATION

Meat products like Poultry, Beef, Pork, etc., Sea Foods like Fish, Prawn, Crab, etc., Dairy products like Ice Cream, Butter, Frozen Foods (Ready to Cook) like Chappathi, Parotta, Samosa's, similar products.



## BLAST CHILLER

- **Operating Temperature** : -10 Deg C to +10 Deg C.
- **Product Temperature** : -0 Deg C to 20 Deg C.
- **Puf Panels Thickness** : 80 mm, 100mm.

### APPLICATION

Dairy products like Curd, Butter, Paneer, Food products like Batter, Gravies, etc.,



## SALIENT FEATURES:

1. Reduce food wastage by increasing the shelf life of food product.
2. Less operational & maintenance costs.
3. Maintain food quality including Flavor, Texture, Color, Aroma & Nutrients.
4. Precision temperature controls with auto defrost cycle.
5. Optimum Refrigeration design to achieve the required temperature rapidly based on the heat load.
6. High Density Puf Insulation to withstand the temperature.

# MULTI COMMODITY COLD STORAGE

- **Chiller Operating Temperature** : +2 Deg C to +8 Deg C.
- **Freezer Operating Temperature** : -15 Deg C to -25 Deg C.
- **Puf Panels Thickness** : 60mm, 80mm (Chiller)
- **Puf Panels Thickness** : 100mm, 120mm(Freezer).



## APPLICATION

Fruits & Vegetables, Potatoes, Grains, Dry Fruits, Milk Products like Cheese, Paneer, Vaccines, etc., can be stored in a same temperature range between +2 to +8 Deg C. Spices, Pulses, Millets, Tamarinds, etc., can be stored in a same temperature range between +8 to +12 Deg C. Chappathi, Parotta, French Fries, Frozen Peas, Nuggets, Meat products like Poultry, Sea Foods, Dairy products like Frozen Desserts, Ice Cream, Butter, etc., can be stored & maintained in similar temperature range between -15 to -25 Deg

## CA COLD STORAGE

- **Operating Temperature** : -1 Deg C to 0 Deg C.
- **Puf Panels thickness** : 100 mm.
- **Relative Humidity** of 90 to 95%.
- **Recommended conditions for Apple CA Storage are** :
  1. Co<sub>2</sub> (Carbon Dioxide) level in the room up to 0.3%.
  2. O<sub>2</sub> (Oxygen) level in the room up to 21%.
  3. N (Nitrogen) level in the room up to 78%.
- **Precautions for Apple CA Storage** :
  1. Storing only good quality Apples
  2. Loading & cooling the storage room quickly.
  3. Periodical maintenance of Refrigeration Units & CA accessories.



## APPLICATION

Apple, Orange, Sweet Lemon, Grains, Dry Fruit, Chilly, Onions, Potato, Seed Storage, etc.,

## SALIENT FEATURES:

1. Multiple Storage options from 500 MT to 5000 MT.
2. Effective refrigeration units either as "One to One" or with Multi-Racking refrigeration systems (Using Semi-Hermetic or Screw Compressors) based on the storage capacity & refrigeration load.
3. Effective Racking or Mezzanine systems for product storage.
4. Customized Lighting Conditions, Environmental Free Refrigerants.
5. Fan Speed regulations based on the respective conditions.

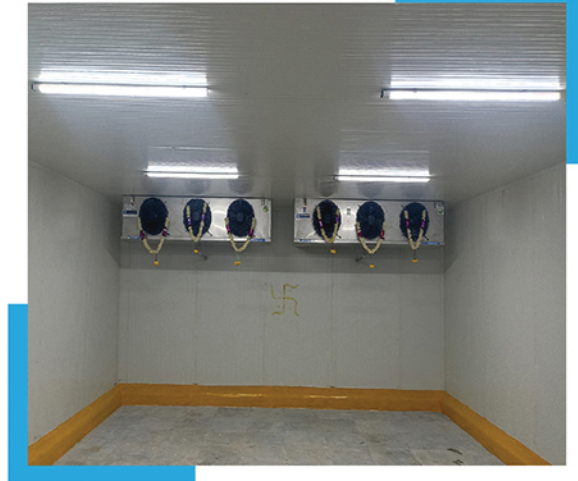
# CLIMATIC CHAMBER

- **Operating Temperature**

1. Low Temperature Climatic Chamber : -40 To -60 Deg C.
2. High Temperature Climatic Chamber : +45 Deg C.

- **Humidity** : 40% to 95% (As per Customer needs)

- **Puf Panel Thickness** : 80 mm, 120 mm, 150mm, 200 mm



## APPLICATION

Constant temperature and humidity test chamber applied to control the product quality such as Electronic, Plastic Products, Electrical Appliances, Instruments, Vehicles, Metals, Chemicals, Building Materials, Aerospace, Medical Care, Wind Energy Products like Wind Turbine Gearbox, etc.,

# INCUBATION CHAMBER

- **Operating Temperature** : +42 Deg C.

- **Puf Panels Thickness** : 60 mm, 80mm.

## APPLICATION

Curd



# SOLAR COLD ROOM

- **Operating Temperature** : -25 Deg C to +25 Deg C.

- **Puf Panels Thickness** : 60 mm to 150 mm.

- **Solar Panel Capacity** : Based on the Refrigeration & existing power load at site.

- **Product storage capacity** : 5 MT and above.

- **Government Schemes for Solar Cold Room Project** upto 35% subsidy is available with us. That will be a very big stress relief for customers now a days.



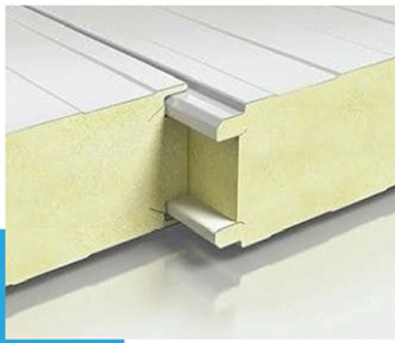
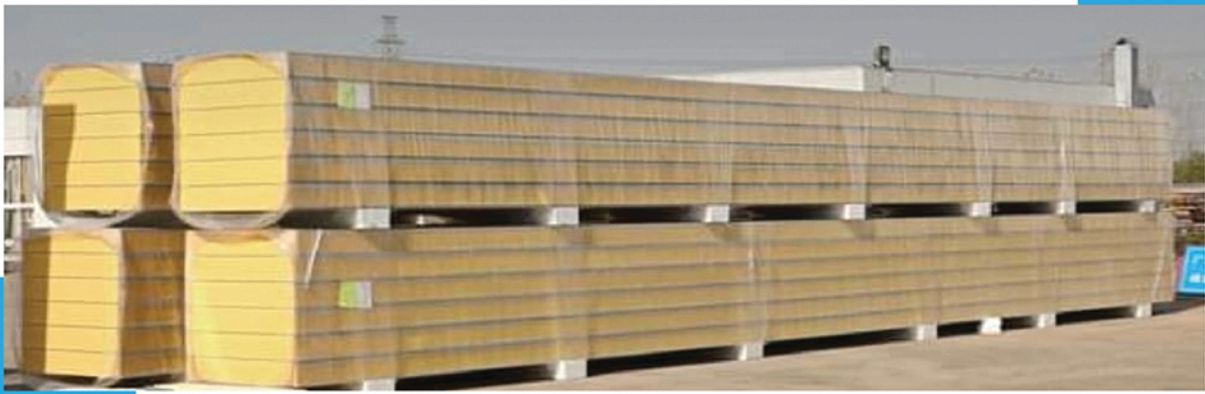
## SALIENT FEATURES

1. Solar powered stand alone.
2. Grid and DG Set Hybrid.
3. Low Maintenance.
4. Portable Type, Less Running Cost.

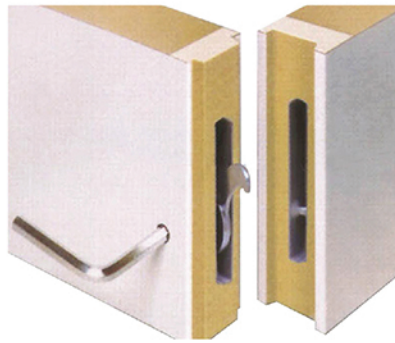
# SANDWICH PUF PANEL

South Pole Refrigeration pre-fabricated panels are international quality and manufacturing using advanced technology. We have both Continuous Puf Panels (Tongue & Groove Joints) & Semi-Continuous Puf Panels (Cam Lock Joints). Our Puf panels are basically modular in nature and can be designed to meet any specifications. The light weight panels are easy to install. They are manufactured using galvanized sheets or stainless-steel sheets. The flooring insulation is initially done with marine plywood and then covered with Aluminum or GI checkered sheet for easy maintenance and to be able to handle heavy loads. Insulation can be provided over concrete in flooring.

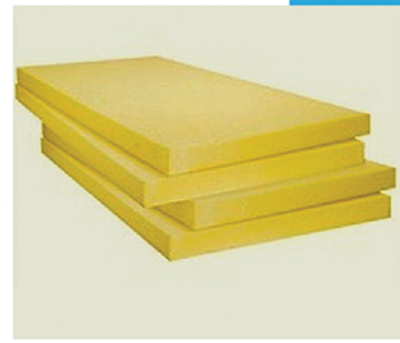
- **Puf Panel Thickness** : 40 mm, 50 mm, 60 mm, 80 mm, 100 mm, 120 mm, 150 mm, 165 mm, 200 mm.
- **Puf Density** of 40 +/- 2 Kg/m<sup>3</sup>.



Continuous Puf Panels  
(Tongue & Groove Joints)



Semi-Continuous Puf Panels  
(Cam Lock Joints)



Puf Slab

## SALIENT FEATURES

1. High Thermal Resistance, Mechanical Resistance.
2. Dimensional Stability, Durable Thermal Insulation.
3. Non-water Absorbent & vapor barrier, with stand all weather conditions.
4. Light weight, aesthetically pleasing Appearance, Cost & Space savings.
5. CFC/HCFC free, long life and very low maintenance cost.
6. Good Energy Savings due to proper density of 40 +/- 2 Kg/m<sup>3</sup>.
7. Flexibility, Better quality as well as Well sustainable.

# PUF DOORS

- **Available Puf Doors Types** : Flush type door, Face mounted door, Hatch door, Sliding door, Industrial door.
- **Thickness of Puf Doors** : 50 mm, 60 mm, 80 mm, 100 mm, 120 mm, 150 mm, 165 mm, 200 mm.
- **Puf Door Density** : 40 +/-2 Kg/m<sup>3</sup>

**FLUSH TYPE DOOR**



**FACE MOUNTED DOOR**



**INDUSTRIAL DOOR**



**HATCH-DOOR**



**SLIDING-DOOR**



# FREON REFRIGERATION UNIT CONDENSING UNIT

- **Types of compressor** : Hermetic, Semi -Hermetic, Semi -Hermetic Double stage, Scroll & Multi-Racking System using Semi - Hermetic, Screw Compressor.
- **Mode of Cooling** : Air-Cooler & Water-Cooled.

**SEMI-HERMETIC  
SINGLE STAGE**



**SEMI-HERMETIC  
DOUBLE STAGE**



**HERMETIC  
CONDENSING UNIT**



**SCROLL  
CONDENSING UNIT**



**MULTI-RACKING  
SYSTEM**



# SALIENT FEATURES

1. High cooling with low power consumption
2. Designed for Indian climatic condition with high ambient conditions upto 55 deg c.
3. Condensing coil with inner grooved copper tube & Aluminium fins.
4. Efficient fans with external motors for single phase and three phase
5. Large size filter drier, moisture indicator, solenoid valve, oil separator, Suction accumulator, Liquid Receiver, Compressor with crank case heater & ester oil, sight glass, HP/LP Switch, Pressure gauge.
6. Base frame on anti-vibration mounts.
7. Medium, low and ultra-low temperature application.

# EVAPORATOR

**THREE FAN EVAPORATOR**



**TWO FAN EVAPORATOR**



**FLOOR MOUNTED  
BLAST FREEZER EVAPORATOR**



**WALL MOUNTED  
BLAST CHILLER EVAPORATOR**



## SALIENT FEATURES

1. Cooling capacity range from 1.2kw to 60kw, Operating Phase – Single / Three.
2. Unit Body – Aluminium powder coated, Stainless Steel 304, GI Powder coated body , Corrosion resistance & nice appearance in nature, Fan – Axial fan (or) Tube axial fan for High air flow, Reliability, Low temperature resistance & Low noise external rotar fan. Fan stramer to increase air flow ( On Demand), Coil – High efficiency heat exchange with in line tube system for minimum loss of air flow between fans and large surface area for better cooling, Smart coil circulating for low pressure drop, Bullet expansion on tubes, Defrost – Auto defrost on both coil & tray, Drain Heater. Defrosting system with electric, water or hat gas for freezer room.
3. Rippled fin edges for creating turbulence in air flow and better heat transfer.
4. Fin spacing from 4mm to 10mm to reduce frost formation.
5. Sine wave fin surface for effective cooling, Double drip tray for low condensation to minimize air leakage, Expansion valve (On Demand), Ceiling mounting clamps for easy installation
6. Maintenance – Compact adjustable & easy openable side panels for easy installation, Service.

## CONTROL PANEL



## APPLICATION

Walk-In Chiller & Walk-In Freezer, Cold Storage & Blast Room

## SALIENT FEATURES

1. Temperature controls, Phase preventing, HP-LP Protection, Over / under current protection.
2. Delay timer, Auto defrost, Door alarm, Quick freezing option.
3. All type of trip alarm & Data Logging, Controlled circuit, Oil differential pressure control, Fully customized in design.

# CLIENTS



# GET IN TOUCH

## HEAD OFFICE:

📍 No.224, MRG Complex, 2nd Floor, Madurai Main Road, Edamalaipattipudur, Trichy-620012.

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