



COLD CHAIN & COLD STORAGE SOLUTIONS





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ABOUT US

Elements Techno Fab is engaged in manufacturing of best in class of Cold Rooms, Walk- in Coolers & Freezers that are specially designed for chilling or freezing applications. The CFC-free refrigeration systems facilitate efficient cooling, freezing of the chamber integrated with user-friendly structure and design. Available in various capacities, these Cold Room are provided with pre-fabricated panels for easy assembly, cam lock in tongue and groove assembly. These Cold Room find wide application in Food Processing, Dairy Products, Fisheries, Hotels-Restaurant, and Research laboratories, Chemical and Pharmaceuticals, Ware House Storages, Agriculture, Horticulture-Floriculture etc.

- ➔ Cold Storages
- ➔ Ripening Chambers
- ➔ Pre-Cooling Chambers
- ➔ Curd Incubation Rooms
- ➔ Quick Chiller Rooms
- ➔ Blast Freezers
- ➔ Fruits & Vegetables Pack Houses
- ➔ Frozen Cold Storages
- ➔ Turnkey Projects in Cold Storages



Total Cooling
Solution



Customised
Solutions



Quality



Reliable
Performance



Energy Efficient
& Eco-friendly
Products



Wide Range
of Products

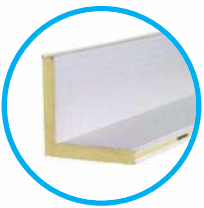
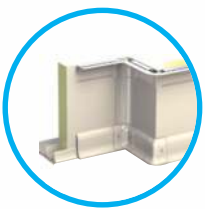


After-Sales
Service

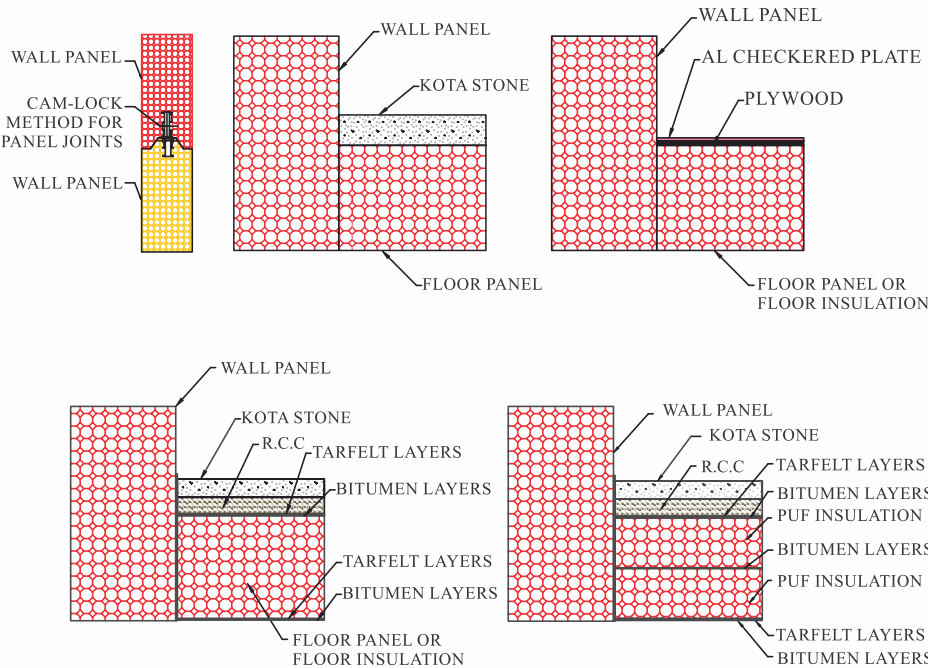


Building trust

COMPLETE SOLUTION UNDER ONE ROOF



PANEL CONSTRUCTION STRUCTURE



3D VIEW OF COLD ROOM



RIPENING CHAMBERS FOR BANANA & MANGOES

PRINCIPLE OF RIPENING AND WORKING CYCLE

- The plant is generally operated on 4-6 days ripening cycle. This 4-6 days ripening cycle comprises of; Operation: 14° to 23° C and >90% RH. Pull down time (16-20hrs) to 16° to 18° C
- Ethylene injection, after 24 hrs at constant room temperature of 18° or 19° C and >90% RH
- Holding period 16-12 hrs (total 24 hours from start of ethylene injection) temperature held at 18° or 19° C and 90% RH
- CO₂ level not to exceed 5000ppm during ripening process.



BANANA RIPENING STAGES



Day 1
Natural Green



Day 2
Light Green
with Light Yellow



Day 3
Yellow with
Light Green



Day 4
Yellow with
Green Ends



Day 5
Full Yellow



Day 6
Yellow with
Brown Spots

COLD STORAGE FOR FLOWERS & FRUITS VEGETABLE

Cold storage for fruits and vegetables requires room temperature range from 2° to 12° C depending upon the product and its storage life.

E.g. Flowers CS requires 2° C of room temperature.

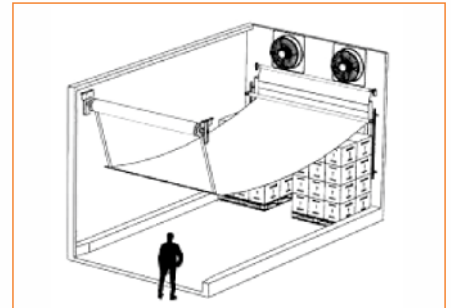
Fruits and vegetable requires 4° to 8° C of room temperature.

RH >90% require.



PRE COOLING CHAMBERS

- Pack House and Pre-cooler Chamber are designed to handle the processing of freshly harvested fruits and vegetables every day. Processing procedures such as washing, brushing, waxing, chemical treatment, grading, packing, cooling, and storage to meet the requirements of the market.
- Facilitate quick pre-cooling of produce immediately after the harvest, for preserving the quality of texture and essence, including the nutritive value, over a prolonged period. Can store 15-days of produce at a time



COLD STORAGE FOR DAIRY PRODUCTS

CURD INCUBATION CUM CHILLER

- Curd incubation rooms are designed to ensure even product temperature of 43°C in 2 hours batch process facilitating setting of curd in a scientific manner
- Blast Chillers ensure pull down product temperature from 43° to 10° C in 2 hours and & further cooling in 2 hours
- Cold room will provide even storage temperature of 2° to 4° C and support the longevity by increasing the shelf life of the product



MILK HOLDING CHAMBER

- Milk & milk pouches are in pre-cooled condition, maintain the temperature of cold Room 2 Deg C for maintaining quality of milk & arrest the bacteria growth.



ICE CREAM HARDENING & HOLDING CHAMBERS

- Maintain freshness, Quality, Test of ice cream & for smoother texture freeze the ice cream up to -20 Deg c Core Temp.
- Ice Cream to be store below -18 Deg C to prevents crystal formation & arrest the bacteria growth.



MEAT BLAST & COLD STORAGE

- Maintain freshness, Quality, Test, product need to freeze up to -20 Deg c Core Temp.
- Product to be store below -20 to -22 Deg C to arrest the bacteria growth.



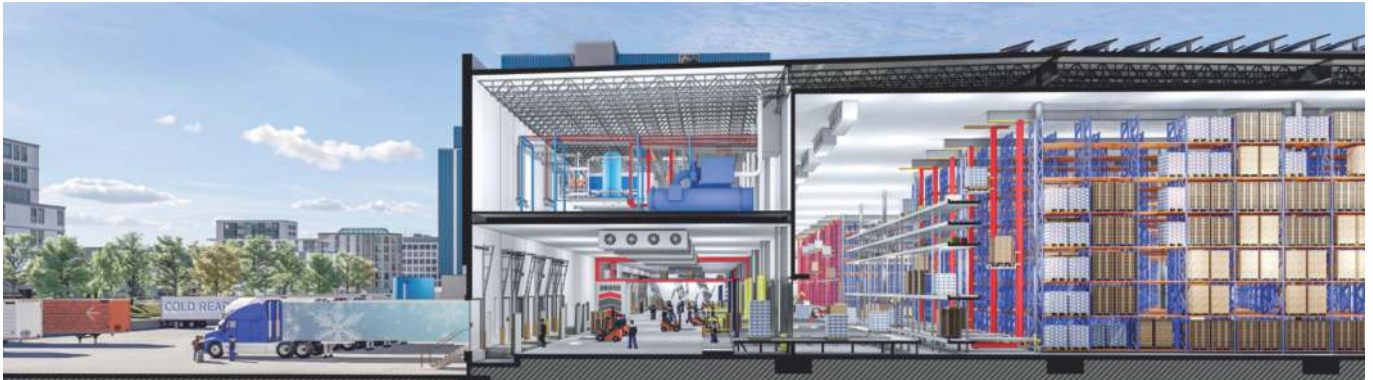
FROZEN PRODUCTS

- Frozen products like green peas, sweet corn are stored at -20 Deg c room temp. after blast freezing process.
- The frozen products likes Samosa, Cutlets & Bakery products to be store below -20 Deg C.



COLD STORAGE FOR 1000 TO 5000 MT CAPACITY

Multi store Cold Storage are ranges from 1000 MT to 5000 MT having number of floors & chambers to be provided with the help of structure. It utilize minimum floor area and maximum the storage capacity. The temperature range from 18°C to -22°C. Material handling of such storage done by conveyor system which minimise the manpower.



MEZZANINE FACILITY WOODEN GRATING AND STRUCTURE



CONDENSING UNIT

ETPL Refrigeration and Cold Storage are characterized by high-efficiency heat transfer, Low power consumption and other features include:

- Energy-efficient scroll and reciprocating compressors
- UV and corrosion resistance
- In-built safety and control devices



CONTROL PANEL

Control panel consist of feature like phase preventing, HP/LP, Over/Under Current protection, High/Low Protection Alarm, Quick freeze option all type of trip alarm available for air and water cooled systems.



EVAPORATOR UNITS

ETPL Refrigeration and Cold Storage evaporators are compact and sleek. The evaporator consist of high reliability fans low temperature resistance & low noise fans. High efficiency heat exchange coils with in-line tube system for minimum loss of air flow and large surface area for better cooling. Evaporated body available in aluminum Powder coated, SS 304, corrosion resistance. The units are compact and easily open able side panels for easy installation and maintenance.



Low Temp. Air cooled refrigeration system with R404a Refrigerant

ETPL Condensing Unit		Cooling Capacity @-20 to -22 Deg.c Room Temp.& 40 Deg.c Ambient				
Discription /model		ECUS2LR4	ECUS3LR4	ECUS4LR4	ECUS4LR4	ECUS4LR4
Nominal Capacity	BTUH	6000	12000	13000	18000	24000
Comp.Type		Hermatic Scroll	Hermatic Scroll	Hermatic Scroll	Hermatic Scroll	Hermatic Scroll
Power Supply	V/Ph/Hz	380V/420V-3Ph-50 Hz	380V/420V-3Ph-50 Hz	380V/420V-3Ph-50 Hz	380V/420V-3Ph-50 Hz	380V/420V-3Ph-50 Hz
Overoll Diamention	MM	1029X424X840	1029X424X840	1029X424X840	1029X424X1242	1029X424X1242
ETPL Evaporator Unit		Cooling Capacity @-20 to -22 Deg.c Room Temp.& 40 Deg.c Ambient				
Discription /model		EIDU 6.30.2E LR4	EIDU 6.30.2E LR4	EIDU 6.30.2E LR4	EIDU 6.30.2E LR4	EIDU 6.30.2E LR4
Power Supply	V/Ph/Hz	230-1ph-50 Hz	230-1ph-50 Hz	230-1ph-50 Hz	415v-3Ph-50hz	415v-3Ph-50hz
Overoll Diamention	MM	1190	1650X339X442	1650X339X442	1675X414X542	2355X414X542
Dry Weight	Kgs	35	47	54	62	90

Medium Temp. Air cooled refrigeration system with R404a Refrigerant

ETPL Condensing Unit		Cooling Capacity @+2 to +4 Deg.c Room Temp.& 40 Deg.c Ambient				
Discription /model		ECUS3.5MR4	ECUS3MR4	ECUS4MR4	ECUS4MR4	ECUS4MR4
Nominal Capacity	BTUH	10000	13000	13000	18000	25000
Comp.Type		Hermatic Scroll	Hermatic Scroll	Hermatic Scroll	Hermatic Scroll	Hermatic Scroll
Power Supply	V/Ph/Hz	380V/420V-3Ph-50 Hz	380V/420V-3Ph-50 Hz	380V/420V-3Ph-50 Hz	380V/420V-3Ph-50 Hz	380V/420V-3Ph-50 Hz
Overoll Diamention	MM	908X350X602	908X350X602	1029X424X840	1029X424X1242	1029X424X1242
ETPL Evaporator Unit		Cooling Capacity @+2 to +4 Deg.c Room Temp.& 40 Deg.c Ambient				
Discription /model		EIDU 6.30.2E MR4	EIDU 6.30.2E MR4	EIDU 6.30.2E MR4	EIDU 6.30.2E MR4	EIDU 6.30.2E MR4
Power Supply	V/Ph/Hz	230-1ph-50 Hz	230-1ph-50 Hz	230-1ph-50 Hz	415v-3Ph-50hz	415v-3Ph-50hz
Overoll Diamention	MM	1190X339X442	1190X339X442	1650X339X442	2110X339X442	2355X414X542
Dry Weight	Kgs	34	47	54	79	89

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A DIVISION OF



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