

**PUN/CS/3439/22-23/R3**

1<sup>st</sup> Feb 2023

To,

**Samul Farmers Producer Company Ltd**  
GAT no 832/2, At Aran, Tal Mhada, Dist Solapur  
Maharashtra

**Kind Attention: Mr Balaji Gadekar**

Dear Sir,

**Sub: Offer for Supply of Blast, Precooling, Freezer Storage, Ante room Refrigeration with Panels and Doors, with others areas PUF Panels**

We thank you for the valuable input provided. We have great pleasure in proposing our Techno commercial offer for your new project, as enumerated below for your kind perusal.

For your easy evaluation we have segregated the proposal as below:

- |                                     |                     |
|-------------------------------------|---------------------|
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- case of any clarifications, please feel free to get in touch with us.

Thanking and assuring you of our best attention and service at all times.

**Yours Faithfully**  
**For RINAC INDIA LIMITED**

**Amar Wadikar**  
Sr. Manager, Pune  
Mob: +91 99236 00184 Email: [amarwadikar@rinac.com](mailto:amarwadikar@rinac.com)



## COMPANY PROFILE

RINAC the leading cold chain OEM was formed 25 years back has **manufacturing units** at Bangalore & Mumbai with 12 **Branches** (for end to end support) in India & International operations from Sri Lanka, Nepal, Bangladesh, Bhutan, Qatar, UAE, Kenya, Uganda, Tanzania, Congo & Nigeria.

Rinac has rich experience in design, manufacture, install and commission turnkey farm to plate projects for Agri, Dairy, Food Processing, Marine, Ready to Eat and Cold Chain projects. Have in house design, manufacture, installation and after sales team to support such activities. Has over 300 employees and is proud to have over 6000 corporate **customers** in various segments.

Rinac offers customization in Cold Solutions & Construction solutions product lines covering the needs of “**cold chain**” and “**clean & energy efficient**” lightweight construction.

In the **cold solutions** vertical, the company offers products right from **farm to plate** in cooling solutions; viz harvest level pre coolers, ripening chambers, CA chambers, pack house, process refrigeration, cold ware houses, distribution & cold dispensing at retail for the following user segments; Agro, Hospitality, Pharma, Dairy, Food processing, Food service, Food & Retail.

Rinac provides technical support in designing **Solar Energy Harvesting** for the projects and the roof panel can be strengthened to hold the solar PV panels.

In the **construction solutions** vertical, the company offers products right from **concept to commissioning** for the following user segments; Pharma, Food Processing, Automobile, Textile, Telecom, Engineering & Retail.

The products in the verticals can be broadly categorized as below

### Cold Solutions



- Modular cold rooms
- Chilled & Frozen store warehouses
- Pre-cooler for agro products
- Fruit Ripening chamber
- Process cooling & chilling systems
- Individual Quick Freezers
- Blast Freezers, Blast Chillers, Plate freezers
- Ice flake, Tube Ice & Block Ice Mc
- Controlled Atmosphere & MA Chambers
- Ammonia based liquid overfeed cooling systems
- Reefer container

### Construction Solutions



- Clean room panels, doors
- Food zone clean envelopes
- Walk on ceilings
- Sandwich panel roofing & walling
- Rack Assisted Storage
- Mezzanine Assisted Storage
- ASRS & Mobile Racking
- Pre engineered buildings
- Light weight Structure
- Kiosks, tele shelters

### Chill Kart - ECOVAN



Ecovan is world's first, fastest and freshest green goods delivery van. An eco-friendly and revolutionary concept aimed at making farm to table concept a reality. Ecovan not just transports green, it runs on solar power too. Rinac has been awarded patents for Ecovan. (Patent number: 307635 & 307636). Ecovan was declared winner in CII Cold Chain Awards 2019 in Innovation category.

**Maintenance and Service:** A dedicated team called “TEAM RINAC” led by qualified, experienced service personnel is RINAC’s distinctive strength. Several prominent companies from diverse industries vouch for RINAC’s quality standards and service excellence.

#### **Certifications / Credentials**

RINAC is certified:

- **ISO 9001:2015** - Certificate Number : 0075697-00 dt 18 May 2018
- **ISO 14001:2015** - Certificate Number : 0075697-00 dt 18 May 2018
- **OHSAS 18001:2007** - Certificate Number : 0075697-00 dt 18 May 2018
- **UNFCC green manufacturing** certification dated 3 Feb 2011

RINAC cold rooms are TUV Quality Certified Cold room for Energy Optimization and Efficiency.



#### **Our Motto**

*Cooling with warm touch  
Building without bricks*

### BRIEF OF THE PROJECT

In this proposal, we have considered Design, Supply, Installation, testing and commissioning of ammonia based refrigeration system for the below rooms/equipments:-

SINo	Item Description	Length(M)	Width(M)	Height(M)	Room Temperature - Deg C
1	Blast freezer (2 MT) X 1 Nos (Refrigeration & PUF Panels)	6	5	4.1	(-)35
2	Pre Cooler (10MT) X 2 Nos (Refrigeration and PUF Panels)	11	5	4.1	0
3	Freezer Room 1,2 (Refrigeration and PUF Panels)	13.6	13.5	3	(-) 18
4	Freezer Room 3,4 (Refrigeration and PUF Panels)	13.3	10.5	3	(-) 18
5	Internal Packhouse & Processing area with PUF Panels and Cooling System	21.2	15	3	(+) 18

All civil works including finished floor, secondary wall cladding, etc. shall be in the scope of customer / other agencies.

### **BASIS OF DESIGN**

Based on the input provided for your requirement and with certain assumptions, we propose our solutions as hereunder

SI No	Parameter	2 MT Blast
1	Ambient Temperature [in °C]	45
2	Designed Room Temperature [ $\pm 2$ °C]	(-)35 Deg C
3	Product to be stored	Cut Fruits & Vegetables
4	Product Incoming Temperature [°C]	(+) 5 Deg C
5	Qty of Product Loaded per Batch	2000 KG per batch
6	Pull Down Time	5 hrs
7	Specific heat [Cp] Below Freezing [kJ/kg K]	3.71
8	Latent Heat of Freezing [kJ/kg]	273
9	Specific Heat Below Freezing [kJ/kg K]	2.01
10	Freezing Point of Product	-1
11	Room Size	6.8 x 5 x 3.4 m
12	Material of Insulation	RPUF
13	Thickness of Insulation [mm]	150 mm for wall & ceiling

14	Wall Lamination In/Out	PCGI/PCGI
15	Ceiling Lamination [In/Out]	PCGI/PCGI
16	Serration on panel	Yes
17	Type of floor insulation	RPUF with polythene sheet as vapor barrier
18	Flooring Finish	150 mm
19	Type of refrigeration system	RCC in Client / Other agencies Scope
20	Capacity of Refrigeration system [KW]	52 Kw
22	Type of refrigeration system	Ammonia Pumped
23	Type of Refrigerant	404a
24	Type of Compressor	Semi Hermetic
25	Type of evaporator units	
27	No of Evaporator Units per room	1
29	MOC for evaporator units	GI
30	Power Supply	415 V, 50 Hz, 3 ph

#### BASIS OF DESIGN

Based on the input provided for your requirement and with certain assumptions, we propose our solutions as hereunder

SI No	Parameter	Freezer Room 1,2 ,3 & 4	Precooling 1 & 2
1	Ambient Temperature [in °C]	45 deg C	45 deg C
2	Designed Room Temperature [± 2 °C]	(-) 20 deg C	0 deg C
3	Product to be stored	Fruits & Vegetables	Fresh Fruits & Vegetables
4	Product Incoming Temperature [°C]	(-) 12 Deg C	(+) 25 Deg C
5	Qty of Product Loaded per Day	8000Kg per day per room	10000 Kg per batch
6	Pull Down Time	24 hrs .	6 to 7 hrs .
7	Specific heat [Cp] Below Freezing [kJ/kg K]	3.71	3.71
8	Latent Heat of Freezing [kJ/kg]	273	273
9	Specific Heat Below Freezing [kJ/kg K]	2.01	2.01
10	Freezing Point of Product	(-) 1	(-) 1
11	Room Size	13.7x13.5x3.5	11x 5 x 4.1m
12	Material of Insulation	RPUF	RPUF
13	Thickness of Insulation [mm]	120 mm for wall, 120 mm for ceiling	100 mm for wall, 100 mm for ceiling
14	Wall Lamination In/Out	PCGI/PCGI	PCGI/PCGI

15	Ceiling Lamination [In/Out]	PCGI/PCGI	PCGI/PCGI
16	Serration on panel	Yes	Yes
17	Type of floor insulation	RPUF with polythene sheet as vapor barrier	RPUF with polythene sheet as vapor barrier
18	Flooring Finish	120mm	80mm
19	Type of refrigeration system	RCC in Client / Other agencies Scope	RCC in Client / Other agencies Scope
20	Capacity of Refrigeration system [Kw]	16Kw	54 Kw
22	Type of refrigeration system	Air Cooled- Freon	Air Cooled-Freon
23	Type of Refrigerant	404a	404a
24	Type of Compressor	Semi Hermetic	Hermetic
25	Type of evaporator units	Ceiling Suspended	Ceiling Suspended
27	No of Evaporator Units per room	8Kw x 2 No per room	54 x 1 No.
29	MOC for evaporator units	GI casing	GI casing
30	Power Supply	415 V, 50 Hz, 3 ph	415 V, 50 Hz, 3 ph

SI No	Parameter	Anteroom – 1 and 2	Processing area air conditioning
1	Ambient Temperature [in °C]	45 deg C	45 deg C
2	Designed Room Temperature [± 2 °C]	NA	18 deg C
6	Pull down time [Hrs]	NA	24 hrs .
11	Room Size,L X B X H, m	40x5x3 and 21.2 x5x3	21.3x 15 x 3.2m
12	Material of Insulation	RPUF	RPUF
13	Thickness of Insulation [mm]	50 mm for wall,50 mm for ceiling	50 mm for wall, 50mm for ceiling
14	Wall Lamination In/Out	PCGI/PCGI	PCGI/PCGI
15	Ceiling[In/Out]	PCGI/PCGI	PCGI/PCGI
16	Serration on panel	Yes	Yes
17	Type of floor insulation	NA	RPUF with polythene sheet as vapor barrier
18	Thickness of Floor insulation [mm]	Nil	Nil
19	Floor Finish	RCC in Client / Other agencies Scope	RCC in Client / Other agencies Scope
20	Type of refrigeration system	NA	Split Type
22	Capacity of Refrigeration system [ Kw ]	NA	45 Kw
23	Type of Refrigerant	NA	404a
24	Type of Compressor	Nil	Single Stage Reciprocating
25	Type of evaporator units	Nil	Ceiling Suspended
29	No of Evaporator Units per room	Nil	15Kw x 3 Nos
30	MOC for evaporator units	Nil	GI casing
31	Temperature / humidity indicator-cum-controller	Nil	Micro-Processor based

33	Power Supply	Nil	415 V, 50 Hz, 3 ph
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**BILL OF QUANTITY & PRICE SCHEDULE**

Sl No	Part No / Description	Qty	UOM	
<b>Freezer Room</b>				
1	Pressure Relief Valve	4	No	12315964
2	Hooter & Switch	4	Nos	
3	Light Fitting	36	Nos	
4	Air-Cooled Condensing Unit having 8 kW capacity, R404a, with Semi Hermetic Compressor, for minus 20 deg C Room Temperature, suitable for High Ambient Conditions	8	Nos	
5	Evaporator Unit having 8 kW capacity, which is suitable for negative room with GI Casing	8	Nos	
6	Interconnecting Piping & Wiring between Outdoor and Indoor Units for a maximum distance of 15 RMT	8	Lot	
7	COLD ROOM FACE MOUNDED DOOR 120 MM THK 1200X2100mm PPGS/ PPGS (Lamination)	4	Nos.	
	PUF Panels			
8	PUF Wall & CEILING 120 MM THK PPGS/ PPGS (Lamination)	1213	Sq M	
9	PUF SLAB 120MM Bare PUF Slab	672	Sq M	
10	Parts of PUF Panel: Polyshet for PUF Slab with Fevicol and chemical	1344	Sq M	
11	PARTS OF RPUF PANEL – T suspension Support and Wire Rope (up to 5 rmt) suitable for 120mm Panel	84	Rmt	
12	Accessories	1	Lot	
<b>Blast Room</b>				
13	Pressure Relief Valve	1	No	5843863
14	Hooter & Switch	1	Nos	
15	Light Fitting	4	Nos	
16	Plenum Panel and Accessories	1	Lot	
17	Air-Cooled Condensing Unit having 52 kW (26kWx 2) capacity, R404a, with Semi Hermetic Compressor, for minus 35 deg C Room Temperature, suitable for High Ambient Conditions	1	No	
18	Evaporator Unit having 52 kW capacity, which is suitable for negative room with GI Casing	1	No	
19	Interconnecting Piping & Wiring between Outdoor and Indoor Units for a maximum distance of 12 RMT	1	Lot	
20	COLD ROOM FACE MOUNDED DOOR 150 MM THK 1200X2100mm PPGS/ PPGS (Lamination)	1	Nos.	
	Puf Panels & Accessories			
21	PUF Wall & CEILING 150 MM THK PPGS/ PPGS (Lamination)	108	Sq M	
22	PUF SLAB 150MM Bare	36	Sq M	
23	Parts of PUF Panel: Polyshet for PUF Slab with Fevicol and chemical	36	Sqmt	
24	Accessories	1	Lot	
<b>Pre Cooler 1&amp;2</b>				
25	Pressure Relief Valve	2	No	5858182

26	Hooter & Switch	2	Nos	
27	Light Fitting	10	Nos	
28	Air-Cooled Condensing Unit having 54 kW (27kW x 2) capacity, R404a, with hermetic compressor, for 0 deg C room temperature, suitable for high ambient conditions	2	Nos	
29	Evaporator Unit having 54 kW capacity, R404a, suitable for Positive room temperature GI casing high humidity	2	Nos	
30	Inter-Connecting Piping & Cabling between outdoor and indoor units for a maximum distance of 12 RMT	2	Lot	
31	COLD ROOM SLIDING DOOR 100 MM THK 1500X2700mm PPGS/ PPGS (Lamination)	2	Nos.	
	Puf Panels & Accessories			
32	PUF Wall & CEILING 100 MM THK PPGS/ PPGS (Lamination)	401.3	Sq M	
33	PUF SLAB 80MM Bare PUF Slab	168	Sq M	
34	Parts of PUF Panel: Polyshet for PUF Slab with Fevicol and chemical	336	Sq M	
35	PARTS OF RPUF PANEL – DOME Support Suspension upto 5 rmt	28	Nos.	
36	Accessories	1	Lot	
	<b>F&amp;V Pack House</b>			
37	Hooter & Switch	1	Nos	
38	Light Fitting	28	Nos	
39	Air-Cooled Condensing Unit having 15 kW capacity, R407c, with Hermetic Compressor, for plus 15 deg C Room Temperature, suitable for High Ambient Conditions	3	Nos	
40	Evaporator Unit having 15 kW capacity, which is suitable for negative room with GI Casing	3	Nos	
41	Interconnecting Piping & Wiring between Outdoor and Indoor Units for a maximum distance of 20 RMT	3	Lot	
	<b>Processing Area For F&amp;V</b>			
42	Hooter & Switch	1	Nos	
43	Light Fitting	6	Nos	
44	Air-Cooled Condensing Unit having 15 kW capacity, R407c, with Hermetic Compressor, for plus 15 deg C Room Temperature, suitable for High Ambient Conditions	1	Nos	
45	Evaporator Unit having 15 kW capacity, which is suitable for negative room with GI Casing	1	Nos	4521721
46	Interconnecting Piping & Wiring between Outdoor and Indoor Units for a maximum distance of 15 RMT	1	Lot	
47	COLD ROOM FACE MOUNED DOOR 60 MM THK 1200X2100mm PPGS/ PPGS (Lamination)	5	Nos.	
	PUF Panels & Accessories			
48	PUF Wall & CEILING 60 MM THK PPGS/ PPGS (Lamination)	1019	Sq M	
49	PARTS OF RPUF PANEL – T suspension Support and Wire Rope suitable for 50mm Panel	111	Rmt	
60	PARTS OF RPUF PANEL – DOME Support Suspension upto 5 rmt	78	Rmt	
61	Accessories	1	Lot	
	<b>DOORS for DOCK and Receiving area</b>			

30	Overhead Sectional Door2400X3000mm	2	No's
31	Dock Shelter 3500x3500mm	2	No's
32	Dock Leveller 2000x2500mm	2	No's
	<b>Receiving Area</b>		
33	Overhead Sectional Door2400X3000mm	2	No's
<b>TOTAL</b>			
<b>Supply &amp; Installation Value Basic Ex-Works [INR]</b>			<b>28539730</b>

GST Extra, Any variation in taxes and duties including fresh levies during the execution of the order shall be to the Purchaser's account.

- Safe storage of the panels, equipments & erection material.
- Any civil & structural works, including floor finish inside the rooms, secondary roofing, etc.
- Fresh air and the exhaust air supply is not considered in the processing area.
- Incoming power factor corrected 3 phase power and earthing to our main control panel as per local electrical standards.
- Incoming power factor corrected power to the main electrical panel for to all out door units of freon systems. Earthing with earth pits and lightning arrestor excluded. Single phase 415V, 50 Hz 32 A power supply for installation activities.
- Incoming power factor corrected power to the main electrical panel for to all out door units of freon systems. Earthing with earth pits and lightning arrestor excluded. Single phase 415V, 50 Hz 32 A power supply for installation activity.
- Incoming RO / Treated water to condenser basin.
- All steel work like cable tray supports, heavy pipe support structures, high rise, bridges, machine platforms, mounting structure for unit coolers etc.
- Water defrost piping and accessories.
- Lifting and shifting of materials, if the unloading place is other than the construction site.
- We will terminate the drains outside the cold store along with a U trap in the ground level. Providing a drain pit & recirculation etc is excluded in this offer.
- PLC, PC, along with UPS, any other items in automation like data loggers, remote keypads etc are given as optional price.
- All Civil work i.e., all tanks as mentioned above, foundation, grouting, drain, building for ETP
- Provision of free power, lighting and water for erection and testing procedures.
- Installation of any safety devices like water sprays, ammonia masks, fire alarms, other than mentioned above in the offer as per local regulations.
- Piping beyond the safety valves to remote atmosphere as per the local regulations.
- Runners or any other member for suspending our ceiling panels at a height of maximum 2 M from our ceiling level, if required.
- Provision of Level floor (Zero / Sunken) for the starting of panel erection work.
- Any other items other than specified in our bill of quantities and scope of work.

**Commercial Terms & Conditions**

## **1. Scope**

The price offer made by RINAC is based on the technical specification furnished by the Purchaser subject to the technical offer, bill of quantities and such other technical information furnished by RINAC.

## **2. Drawings**

In the event of an order, RINAC shall submit a detailed drawing for the approval of the Purchaser and the approved drawings thereafter shall form the basis for execution.

## **3. Inspection**

The price offer of RINAC is based on inspection and final testing at site after installation, unless otherwise specified elsewhere by RINAC. The offer does not include factory testing / inspection, any independent laboratory testing and such other inspection / testing of any kind. The final testing shall however be based on mutually agreed parameters and methods.

## **4. Price basis**

The price quoted by RINAC is based on all the input credits that are applicable as per the laws of the land. All terminal duties, taxes and other Government levies, as applicable shall be paid extra by the Purchaser to RINAC. In the event of any concessional taxes and duties availed by the Purchaser through statutory forms or Government notifications, RINAC shall agree for such deduction subject to applicability and reversal of input credit as may be required.

## **5. Taxes & Duties**

The price quoted by RINAC is based on current level of taxes, duties and other levies as applicable. Should there be any statutory variation of taxes and duties, including fresh levies at the time of execution, the same shall be charged extra and shall become payable by the Purchaser to RINAC.

## **6. Lien on property**

RINAC shall hold the lien on all the materials supplied to the Purchaser until the full payment is made to RINAC as per the terms of the contract.

## **7. Execution period**

The time frame for supply and erection shall be considered from the date of technically and commercially clear order. Further, the commitment on execution period shall be subject to standard force majeure condition.

## **8. Force majeure condition**

The Purchaser shall grant extension of execution period automatically without any damages to RINAC in the event of force majeure condition which shall include but not restricted to natural disasters like earth quakes, floods, hurricanes, riots, wars, war like situation, other major social upheavals, Government restrictions, strikes, lock-outs and other acts of God which does not fall under the normal control of RINAC.

## **9. Terms of payment**

Unless otherwise specifically agreed by RINAC in writing, all the supplies of RINAC shall be covered under the following terms of payment:

- 50% of the contract value as advance along with the order

- 50% of the contract value + 100% of taxes, duties, freight etc. against readiness of material or documents through bank

#### **10. Bonus / Liquidated damages**

Neither party shall be liable for any bonus / liquidated damages for supplies earlier or latter than the contractual period, unless otherwise specifically agreed by RINAC.

**11. RINAC** shall not furnish any guarantees, indemnity bond or such other document unless otherwise specifically agreed in writing.

#### **12. Warranty**

RINAC shall offer a standard warranty of 12 months from the date of commissioning or 15 months from the date of invoice whichever is earlier against manufacturing defects, installation deficiencies and such other reasons attributable to RINAC. This warranty however shall not cover in the event of damage caused by accident, abuse, misuse and used for application different to those to which it is intended. Further, warranty shall remain invalid in the event of the product / system attended by any persons or agencies not authorized by RINAC. Any modification, alterations etc., if made, to the original equipment, shall render the warranty invalid.

#### **13. Validity**

Unless otherwise specifically confirmed in writing by RINAC, the price offer shall remain valid for acceptance by the Purchaser for a period of 10 days from the date of offer beyond which it is subject to confirmation in writing by RINAC.

#### **14. Dispute / resolution**

In the unlikely event of any unresolved dispute, the same shall be settled in accordance with the Indian Arbitration and Conciliation Act 1996 subject to all amendments till date.

#### **15. Power & Water supply**

Unless otherwise agreed by RINAC in writing, the power and water supply connections shall be obtained by the Purchaser for both construction and for final testing.

#### **16. Approval from statutory authorities**

All approval from statutory authorities like Electricity Dept, Water & Sewerage Dept, Pollution Control Board, Forest Dept. etc as may be required shall be obtained by the Purchaser and RINAC shall render all assistance in terms of drawings, technical data etc. which falls under their purview.

#### **17. Variation in quantities**

All variation in quantities, post award of the contract during drawing approval or at later stage shall be suitably price corrected in accordance with the unit rates already available in the contract or in the quotation submitted by RINAC. If there are any items required for execution but not quoted, the same shall be price adjusted through a revised quote to be furnished by RINAC.

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