GOVERNMENT OF ANDHRA PRADESH

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TENDER DOCUMENT S FOR SUPPLY, INSTALLATION, TESTING, COMMISSIONING AND TRAIL RUN OF MACHINERY AND EQUIPMENT ON TURN KEY BASIS

FOR

Sunrise Nature Food Foundation, (SPV)
Flat No: 206/A, Kranthi Pride Apartment, Muchavanipeta, 17 Ward, Fhazul Bag Peta, Srikakulam, Andhra Pradesh - 532001

To Establish

COMMON FACILITY CENTRE (CFC) FOR FOOD PROCESSING CLUSTER AT
Sy. Nos. 195, 200,203,244, Santhavuriti village, G Sigadam Mandal, Srikakulam District, Andhra Pradesh - 532168

Tender Notice No.APMSMEDC/INC/64/52/24, Dated: 16.02.2025

Tender Inviting Authority:
ANDHRA PRADESH MSME DEVELOPMENT CORPORATION
(AN ENTERPRISE OF GOVT. OF A.P.)
2nd Floor, PVS Towers, Mangalagiri,
Mangalagiri - 522503
Phone: 0866-2411459 E-mail: ceo--apmsmedc@ap.gov.in

INDEX

S. No.	DESCRIPTION	
	Introduction	
1	Chapter – 1	Instruction to Bidders
2	Chapter – 2	Conditions of Contract
3	Chapter – 3	Schedule of Requirements
4	Chapter – 4	Specifications and allied Technical Details

5	Chapter – 5	Price Schedule (to be utilized by the bidders for quoting their prices)
6	Chapter – 6	Contract Form
7	Chapter – 7	Other Standard Forms, if any, to be utilized by the Purchaser and bidders

Bid Dates

Time schedule of various tender related events:

Description	Date & Time
Bid Calling Date	17.02.2026
Pre-Bid Meeting (Hybrid mode)	20.02.2026 @ 3:00 PM
Issue of Pre-Bid Clarification	24.02.2026 @ 5:00 PM
Bid Closing Date & Time	02.03.2026 @ 3:00 pm
Technical Bid Opening Date & Time	04.03.2026 @ 4:00 pm
Financial Bid Opening Date & Time	To be intimated later

Chapter – 1

Introduction to Bidders

1.1. The Andhra Pradesh MSME Development Corporation – APMSMEDC (Tender Inviting Authority) is a fully owned by Government of Andhra Pradesh for providing services to the MSMEs in Andhra Pradesh. The corporation has also been appointed as Implementing Agency for the implementing of existing and new CFCs in Andhra Pradesh.

1.2. In this tender, the lowest price is the sole criteria for selecting the item/supplier. The two-bid system, which is followed, has been designed to eliminate those items which do not match the technical specifications, or not having the proven technology and to eliminate firms that do not have the financial or technical capability to supply, install and maintain the items. i.e., to provide after sales support for a period of minimum 5 years from the date of installation. Procurement will be subject to Public Procurement (Preference to Make in India) Order 2017 – Revised vide GoI, Min. of Commerce and Industry, DPIIT Ref No. P-45021/2/2017- PP (BE-II) dated 16-09-2020.

1.3. Every paisa spend by the corporation is public money and hence accountable. Therefore, after sales service and up-time guarantee on the performance of the item purchased by the Corporation have to be given paramount importance. Corporation will be dealing with defaulters in these fronts with a firm hand, which may lead to black listing and recovery of damages. We request our valuable suppliers to avoid such unpleasant situations.

1.4. It is also essential while dealing with public money that utmost transparency has to be maintained in the procurements of the corporation. All decisions will be published from time to time on e-procurement website https://eprocure.gov.in/eprocure/app

1.5. The purpose of this bid to establish a Common Facility Centre (CFC) in food processing sector at Sy. Nos. 195, 200, 203, 244, Santhavuriti village, G Sigadam Mandal, Srikakulam District, Andhra Pradesh - 532168 under MSE-CDP guidelines. A Special Purpose Vehicle is constituted for the purpose, i.e., Sunrise Nature Food Foundation, (SPV), Flat No: 206/A, Kranthi Pride Apartment, Muchavanipeta, 17 Ward, Fhazul Bag Peta, Srikakulam, Andhra Pradesh – 532001, PAN No- ABJCS6646R. All the supplies, services etc., as per the Tender Document to be executed against the SPV.

1.6. The funds are made available by the Central Government, State Government of Andhra Pradesh and SPV to the CEO, APMSMEDC under MSE-CDP Scheme towards the procurement process under this tender notification.

1.7. Amendment of bidding documents: At any time prior to the deadline for submission of bids, APMSMEDC, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, may modify the bidding documents by amendment. All the bidders at their own interest to verify by logging on to website for updating with corrigendum(s) issued in the contract. The APMSMEDC, at its discretion, may extend the deadline for the submission of bids.

1.8. The CEO APMSMEDC has right to cancel the tender at any time in the interest of Public Money and bidders have no right to challenge the decision.

1.9. Court Jurisdiction: In case of any dispute to approach the local court in Amaravathi jurisdiction.

1.10. Abbreviations:

APMSMEDC	Andhra Pradesh MSME Development Corporation
BG	Bank Guarantee
CEO	Chief Executive Officer
CFC	Common Facility Centre
CPPP	Central Public Procurement Portal
EMD	Earnest Money Deposit
GFR	General Financial Rules 2017
LD	Liquidated Damages
MAF	Manufacturers Authorization Form
MSE-CDP	Micro Small Enterprises – Cluster Development Program
MSME	Micro, Small and Medium Enterprises
PS/SD	Performance Security/Security Deposit
SPV	Special Purpose Vehicle
TIA	Tender Inviting Authority
Technical Specifications	Machinery Technical specifications as required by the end User

1.11. Contacting APMSMEDC: Bidder shall not approach APMSMEDC officers beyond office hours and/or outside APMSMEDC office premises, from the time of the tender call notice to the time the contract is awarded. Any effort by bidder to influence APMSMEDC officers in the decisions on bid evaluation, bid comparison or contract award may result in rejection of the bidder's offer and bidder may also be marked as ineligible for future bids. If the bidder wishes to bring additional information to the notice of the APMSMEDC, it should be in writing.

1.12. APMSMEDC reserves the right at the time of award to increase or decrease the quantity, as indicated in tender document. During the validity of the contract period thereof, the bidder should be ready to supply any No. of equipment as requested.

1.13. APMSMEDC reserves the right to modify/extend/cancel the tender at any point of time without giving any prior notice/any reasoning.

1.14. Contract Signing: Successful bidder/bidders will be intimated in writing that their bid has been accepted. On submission of Performance Bank Guarantee, the contract form will be signed. APMSMEDC reserves the right to alter, add or delete the contract conditions on the interest of public money.

1.15. APMSMEDC reserves its right to negotiate with the bidder with lowest quote including technical specifications.

1.16. Manuals and Drawings: Bidders to upload the OEM standard brochures along with technical specifications of the machinery in case of purchase of machinery. Upon award of contract, the successful bidders shall supply operation and maintenance manuals in English or Telugu (together with drawings of the goods and services where applicable).

1.17. User License and Patent rights: The successful bidder shall provide licenses for all software products, whether developed by it or acquired from others. The bidder shall indemnify the purchases against all third-party claims of infringement of patent, trademarks or industrial design rights arising from use of the goods, software package or any part thereof.

1.18. Sub Contract: Sub-contracting is not allowed in Works contract, supply of Machinery, installation, test run, commissioning, etc.

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Table

of Contents

Sl No	Description
2.1	Bid Process and Bid Dates
2.2	Details of TIA, End User
2.3	Statement of important limits/values related to bid
2.4	Payment Terms
2.5	Bidders Qualifications
2.6	Bid Submission Procedure
2.7	Special Conditions

2.1 Bid Process and Bid Dates

2.1.1 E Procurement: The details of bidding conditions and other terms can be downloaded from the electronic procurement platform of Government of India i.e., https://eprocure.gov.in/eprocure/app. Two bid system (simultaneous receipt of separate technical and financial bids) through online. Bidders would be required to register on the e-Procurement market and submit their bids online. On registration with the e-Procurement market place they will be provided with a user id and password by the system through which they can submit their bids online.

2.1.2 **Technical Bid**: Interested bidders to download the contract documents and corrigendum issued if any. Bidders should read, understand the contents and bid details with technical details. Clarification if any may be sought in writing prior to on or before pre-bid meeting. Bidders to submit the technical compliance statement as per Form T-1. Non Submission of Form T-1, indicates that bidder agrees to the specifications as mentioned in the contract form. The Bidders on completion of contract documents, the same is to be signed in ink by the Authorised Signatory in each page and affix the company stamps. The scanned copies of the contract documents are to be uploaded in the e-portal and in no case submission of physical documents will be encouraged. Authorised signatory should have appropriate authority and same is also to be uploaded. Any short fall of documents leads to rejection in Technical Evaluation. After technical evaluation, the qualified bidders will be notified automatically by the system software and the opening of financial bid date will be intimated to them by APMSMEDC through e-mail.

2.1.3 **Financial Bid:** Financial bid is also to be submitted along with Technical bid in the e-portal. The bidders also upload the cost sheet breakdown along with Financial bid indicating the total values of the tender schedule including all Costs, services, Warranty, AMC, Taxes etc., and upload the Cost sheet Form F 1 as provided in Chapter 5 at the time of financial bid submission. **If the price bid/Cost sheet is attached along with Technical bid documents, their bid will be disqualified**. The financial bid of technically qualified bidders will only be opened and in no case the financial bid of not qualified bidders will be opened through e procurement site.

2.1.4 **Bid Dates**

Time schedule of various tender related events:

Description	Date & Time
Bid Calling Date	17.02.2026
Pre-Bid Meeting (Hybrid mode)	20.02.2026 @ 3:00 PM
Issue of Pre-Bid Clarification	24.02.2026 @ 5:00 PM
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Financial Bid Opening Date & Time	To be intimated later

2.2 Details of Tender Inviting Authority, End User, E Procurement Help Desk

2.2.1	Tender Inviting Authority	The CEO Andhra Pradesh MSME Development Corporation 2nd Floor, PVS Land Mark, Mangalagiri, Guntur District, 522503 Phone No: 0866 – 2411459 E-mail: ceo-apmsmedc@ap.gov.in
2.2.2	End User	The Director Sunrise Nature Food Foundation, (SPV) Registered Office: Flat No: 206/A, Kranthi Pride Apartment, Muchavanipeta, 17 Ward, Fhazul Bag Peta, Srikakulam, Andhra Pradesh - 532001 Director Contact No: 8498070122 e-mail: sunrisefoods.sklm@gmail.com Technical Consultant: 9966169901 envisionconsultum@gmail.com
2.2.3	E Procurement Help Desk	For any technical related queries please call at 24x7 Help Desk Number: 0120-4711508, 0120-4001002, 0120-4001005 & 0120-6277 787 Email Support: For any issues or classification's relating to the published tenders, bidders are requested to contact the respective Tender Inviting Authority. Technical – support-eproc@nic.in Policy Related – cppp-doe@nic.in

2.3 Statement of important limits/values related to bid:
Bid currency in Indian Rupee (INR) only.

Sl No	Details	Payee details/Payment Options

2.3.1	Cost of Tender Form (Non-Refundable)	Cost of Tender Form is Rs. 5,000/- (Non-Refundable) Payment is to be made through NEFT to APMSMEDC A/c No 39677901097 IFSC Code No: SBIN0016857 Note: NEFT details to be uploaded along with tender documents Note 1: Micro and Small Enterprises (MSEs) in relevant Manufacturing, as defined in MSE Procurement Policy issued by Department of Micro, Small and Medium Enterprises, GOI or are registered with the Central Purchase Organizations or the concerned Ministry or Department are exempted from Tender form/ Bid Security/EMD deposits on submission of relevant documents. Note 2: The bidders who have purchased tender form in the 1st,2nd & 3rd call are exempted from the payment subject to submission of payment proofs, i.e., NEFT/RTGS details, etc., **Note 3: The bidders having in-house manufacturing facilities for the machinery specified in this tender shall be eligible to claim exemption from payment of the Tender Form cost. Bidders not possessing such facilities shall not be entitled to this exemption and must remit the prescribed Tender Form cost; failure to furnish proof of such payment shall result in disqualification at the Technical Evaluation stage.**
2.3.2	Bid Security/ EMD	All Bidders to submit Bid Security/EMD having validity of 45 days from the bid closing date as per the following: Turn key project Bid Security/EMD is Rs.50 Lakh Bid Security/EMD to be submitted in the form of Bank Guarantee/DD favoring: **The CEO, APMSMEDC, Mangalagiri** **Soft copy of the Bank Guarantee/DD to be uploaded and original to be submitted by hand or post to reach within 48 hours from the Bid closing date to the office of the CEO, APMSMEDC**.
		Note 1: Non-receipt of original Bid Security/EMD leads to tender disqualification. Note 2: Micro and Small Enterprises (MSEs) in relevant Manufacturing, as defined in MSE Procurement Policy issued by Department of Micro, Small and Medium Enterprises or are registered with the Central Purchase Organization or the concerned Ministry or Department are exempted from Bid Security/EMD deposits on submission of relevant documents **Note 3: The bidders having in-house manufacturing facilities**

		for the machinery specified in the respective schedules shall be eligible to claim exemption from submission of the Earnest Money Deposit (EMD). Bidders not possessing such facilities shall not be eligible for EMD exemption, and failure to submit the prescribed EMD shall result in disqualification at the Technical Evaluation stage. Note 4: Bid Security/EMD of unsuccessful bidders will be released within 30 days of the Award of Contract subject to the fulfilling of Contract conditions. (BG Proforma is given as Appendix I)
2.3.3	Performance Security	The Successful Bidder/Bidders to submit Performance Security/Security deposit in the form of Bank guarantee @5% on the contract awarded value and should remain valid for a period of Sixty days beyond the date of completion of all contractual obligations of the supplier including warranty obligations. Bank Guarantee to be submitted within 15 days of award of contract, favoring: **Sunrise Nature Food Foundation, Srikakulam** Note 1: Bidders were advised to submit the Performance Security in multiple parts: i. Performance Security for the supply of Machinery and associated costs as mentioned in the Cost sheet and should remain valid for a period sixty days beyond the Machinery installation. ii. Performance Security for the Warranty, AMC etc., as mentioned in the cost sheet and should remain valid for a period of sixty days beyond the completion of Warranty & AMC period. Note 2: Non-receipt of Performance security in stipulated period leads to forfeiture of Bid Security/EMD and other statutory actions as per the Government Regulations in force. (BG Proforma is given as Appendix II)
2.3.4	Contract Award value	The bidders to note that, financial bid is inclusive of, Supply, Delivery, Installation, Trial Run, Commissioning, Training of staff, Warranty Period for One year or Manufacturing company specifications, whichever is higher and additional Annual Maintenance Contract for two years. This value is all inclusive of Machinery cost, services, Taxes, Transportation etc., Note: The Successful contractor will be paid depending upon the funds availability of Govt. of India. The successful contractor to submit the detailed plan of project execution with timelines for approval by the SPV management. The supply and installation process will be initiated so as to quantify the progress in phase wise with an aim to obtain allocation of GoI funds without any

		hassle.
2.3.5	Bid Validity Period	180 days from the date of opening of bids
2.3.6	Variation in Qty	The decision of the CEO, APMSMEDC is final on quantity variations.
2.3.7	Period of Signing Contract	Within 15 days from the Award of contract to successful bidders on submission of PBG.
2.3.8	Contract Execution Period	**The Successful bidders to complete the Machine Installation and other contractual obligations within 60 days from the contract agreement date.** **The CEO, APMSMEDC to be intimated regarding the delivery schedule time to time to ascertain the progress.**
2.3.9	LD for late deliveries/ installations	**Liquidate Damages for late deliveries/ Installations:** 1% of the late delivered or deemed late delivered goods for One week or part thereof, 1.5% for Two weeks or part thereof, 2% for Three weeks or part thereof, 2.5% for 4 weeks or part thereof and so on subject maximum penalty up to 5%. **Note**: Late deliveries/Installations beyond the permissible period attract LD recoveries, encashment of PBG and other statutory actions as per the Government Regulations in force. However, delay from SPV side if any towards handing over of shed for installation of machinery will not attributable to the bidder.

2.4 Payment Terms:

Sl No	Details	Payment Value & Conditions
2.4.1	On signing of Contract	30% of the contractual value
2.4.2	On intimation of Machine readiness	30% of Machinery cost on confirmation from the OEM that machine is ready to dispatch and after demonstration of its working condition to end users or their authorized representative. In case of Imported machinery, payment will be released through conditional Letter of Credit (LC) on shipment from the OEM country of origin.
2.4.3	On Installation of Machinery	30% of the Contractual value on confirmation and submission of requisite documents from End User.
2.4.4	On completion of contract	Balance 10% of the contractual value released on fulfilling of terms & conditions of contract on confirmation and submission of requisite documents by the End User.

2.5 Bidders Qualifications:

2.5.1 The Bidder should be a manufacturer/authorized representative of a manufacturer/whole sale dealer/Distributor and should be in business of manufacture

and or supply and maintenance of the related equipment for a minimum period of three (3) years in India as on bid calling date. The preference may be given to bidders who are registered in India and especially in the state of Andhra Pradesh. The details to be mentioned in Form-P1.

2.5.2 The Bidder to submit the certificate that, they have read and understood the entire tender documents and corrigendum issued (if any). Also, certifying that, upon successful award of the contract, the successful bidder will abide and adhere to the tender instructions. The details to be mentioned in Form-P2.

2.5.3 The Bidder should submit the Manufacturer's Authorization Form (MAF) for all the offered products / items, as per Schedule-I specific to this tender issued by Original Equipment Manufacturer (OEM) authorizing the bidder to submit the bid for tendering which is deemed as an agreement in between the bidder and OEM for the support and spares till the warranty & AMC period. The details to be mentioned in Form-P3.

2.5.4 The Bidder / OEM may have a Registered Service Centre / Franchise Service Centre in the state of Andhra Pradesh as on bid submission date. Preference may be given to the bidders who have the office in Andhra Pradesh, but not a mandatory clause. The details are to be provided in Form P-4.

2.5.5 The Bidders, either Manufacturer or Distributor should have positive net worth and disclose their annual turnover for the last three financial years, i.e., 2022-23, 2023-24 and 2024-25 in Form P-5. The minimum eligibility turnover for Manufacturer or distributor in any one FY is as follows:

	Manufacturers/OEM	Dealers/ Distributors/ Authd .Sales & Service
Turnkey Project	Rs. 27.00 Crores	Rs. 13.50 Crores

2.5.6 The Bidder/OEM should have the cumulative sales of related machinery of at least 5 Nos. in the last three financial years. The Bidder/OEM should furnish the information on major past supplies under the relevant product/services. The details to be mentioned in Form-P6.

2.5.7 The bidder should submit/give declaration stating that they are not debarred/blacklisted by any State Government, Central Government, Central & State Govt. Undertakings/ enterprises/ Organizations and by any other Quasi Government bodies/ Organizations in India for non-satisfactory performance, corrupt & Fraudulent or any other unethical business practices. If the bidder is debarred/ blacklisted as mentioned above, such bidder becomes ineligible to participate in the bidding process. In case of any concealing of information relating to blacklisting or pending of cases as mentioned above or submission of fake

information/fake documents, APMSMEDC reserves the right to cancel the work order/contract allotted, apart from forfeiting of EMD/PBG. APMSMEDC reserves the right further to take penal action on the bidder. The details to be mentioned in Form-P7.

2.5.8 Bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority as per G.O. Ms. No. 9, Dt. 25-02-2021 issued by Industries & Commerce Department, Go AP. (DPIIT registration certificate copy to be submitted. Bidder shall have to submit the Undertaking as per Form-P8.

2.5.9 Technical Deviation: Bidders to submit the declaration regarding the technical specifications compliance clearly indicating that the supplies are of Higher, Complied or lower to the tendered specifications in Form T1. Proper justification with OEM specifications should be provided in case of lower condition. Non-submission Form T1, will be accounted as vendor agreed for the supply of machinery equal and compatible to the tender specifications.

2.6 Bid Submission Procedure:

Sl No	Item	Description
2.6.1	Procedure for Bid Submission	Bids shall be submitted online on https://eprocure.gov.in/ 1. The participating bidders in the tender should register themselves free of cost on e-procurement platform in the above website. 2. Bidders can log-in to e-procurement platform in secure mode only by signing with the requisite Digital certificates. 3. The bidders who are desirous of participating in e-procurement shall submit their technical bids, price bids as per the website specifications. 4. The bidders should scan and upload the respective documents in Pre-Qualification and Technical bid documentation as detailed at Chapter 4 and 7 including EMD. The bidders shall sign on all the statements, documents certificates uploaded by them, owning responsibility for their correctness/authenticity. 5. The rates should be quoted in INR and online only
2.6.2	Other conditions	1. **After uploading the documents, in respect of Bid Security**

		are to be submitted by the bidder to the O/o the CEO, APMSMEDC, Mangalagiri. If any of the certificates, documents, etc., furnished by the Bidder are found to be false / fabricated / bogus, the bidder will be disqualified, blacklisted and action will be initiated as deemed fit and the Bid Security will be forfeited. 2. **APMSMEDC** will not hold any risk and responsibility regulating non-visibility of the scanned and uploaded documents. 3. The Documents that are uploaded online and clarifications taken by **APMSMEDC** will only be considered for Bid Evaluation.

2.7 Special Conditions

The Bidder is wholly responsible for supply, installation and other services as per the contractual agreement. The successful bidder delivers a fully functional, tested, and commissioned facility. The Bidder to consider all the factors while quoting the financial bid. Few such aspects are listed below:

2.7.1 **Site Inspection**: The bidders are advised to visit the site and are permitted to calculate the requirements to arrive the actual quantities needed for installation of Machineries and their accessories. As the specialized machinery requires proper ergonomics, the successful bidder should give their designs in advance for approval.

2.7.2 Issue of Purchase Order: The successful bidder has to submit the execution plan in such a way that, product wise completion such as establishing the Racking System – Cold Storage, Supply of Plastic Roto Pallets, Mango preprocessing line etc., so as to quantify the work completion. On approval of Execution plan, the successful bidder to follow the installation accordingly with an aim to early initiation of the production with the completed line process.

2.7.3 **Installation precautions**: The Successful bidder is wholly responsible for the machinery installation as per the OEM guidelines. Proper due care to be taken to avoid any mishap. The Bidder is responsible for proper site preparation, Proper Packing of Machinery, Planned Transportation, Suitable Insurance, Proper electrification & earthing, Manpower training, etc., which will helps in smooth installations.

2.7.4 **Machinery User Manuals, Drawings, Flow Charts etc.,** The machinery drawings, flow charts, user manuals, Periodic Maintenance schedules, list of spare parts, any other documents for the smooth functioning of equipment to be uploaded by the bidder along with bid documents. The medium of language is English for this purpose.

2.7.5 **Obsolete Machinery:** The bidder should quote for the latest

machinery or the machinery having suitable life as per the tender specifications and not for any obsolete Machinery.

2.7.6 **Technology Upgradation**: The bidder is under obligation to upgrade the technological developments that happened during the Warranty & AMC Period. As the food processing technology uses latest software, latest updates to be incorporated by default.

2.7.7 **Force Majeure**: In the event of unforeseeable circumstances that prevent the successful bidder from fulfilling the awarded contract, the same is to be communicated immediately to the CEO MSMED, SPV Management for initiating the remedial actions.

2.7.8 **Liquidated Damages:** Bidders to note that, upon giving the contract, if the Supplier fails to fulfil the contractual obligations, a fine of 1% per week till the completion/termination of contract will be imposed subject to a maximum of 5% of the total contract value. Besides the supplier may be blacklisted as per the existing rules & regulations.

2.7.9 **Termination Insolvency**: If the bidder becomes bankrupt or otherwise insolvent prior or during the tender or during the period of contract, the CEO APMSMEDC may terminate the contract as per the existing law and suitable provisions may be initiated in their discretion.

2.7.10**Resolution of Disputes**: In the event of any unfortunate dispute, after the award of contract; the Purchaser and the Supplier shall make every effort to resolve amicably by direct formal negotiations. If the dispute is not resolved in a month's duration, either party may seek remedy as per the Arbitration & Reconciliation Act 1996 and Arbitration & Reconciliation (Amendment) Act 2021.

Chapter – 3

Schedule of Requirements

3.1 The successful bidders to supply the following machinery on turnkey basis to M/S Sunrise Nature Food Foundation (SPV), Sy. No. 203-8, 203-12, 203-12, 195-1, 195-2, 195-5,195-6, Santhavuruti Village, G Sigadam Mandal, Srikakulam District. The successful bidder delivers a fully functional, tested, and commissioned facility on turnkey basis. The bidders are required to certify that; they have visited the project site and understood the project requirements in consultation with SPV management during working hours.

3.2 The successful bidders to establish a food processing industry on turnkey basis by supply, Installation, Testing, Commissioning, Trial Run of Machinery & Equipment, and providing training of staff. The Bidders are advised to go through the Machinery specifications and assess their actual requirements prior to submission of the bids.

Sl	Machinery Details	Qty

No		
01	Racking System- Cold Storage	01
02	Plastic Roto Pallets Loading bearing capacity static 4MT, Dynamic-1 MT, Racking- 1 MT	1782
03	Plate type Evaporate Condenser	02
04	Falling Film Chiller	01
05	Insulated Water Base Tank	01
06	Recirculation Water Pump	01
07	Ripening Equipment	05
08	Automatic Gas Dosing with Piping & Electric cables	05
09	Refrigeration System for IQF & 2 Blast Freezers	01
10	Refrigeration system for Cold Rooms & Anti Rooms	01
11	IQF line	01
12	PUF Wall, Ceiling & Partition Panels, Floor Insulation, Insulated Doors, Flashings & Accessories	LS
13	Corn-Pre Processing Line	01
14	Mango Pre-Processing Line	01
15	Retort	01
16	Canning	01
17	Pulping Line	01
18	Electrical Lines & Systems	LS
19	Boiler	01
20	Water Treatment Plant	01
21	Effluent Treatment Plant	01
22	Pallets & Crates	01
23	Dicer	01
24	Compressors	01
25	Ammonia Pumps	01

Chapter – 4

Specifications and allied Technical Details & Quality Assurance

The bidder is responsible for erecting the Common Facility center in Food Processing Cluster Srikakulam for providing the following facilities:

The following product lines are proposed at the CFC:

i. Sweet Corn Retort (cobs)
ii. Frozen Sweet Corn Kernels Manufacturing
iii. Frozen Mango Dices Manufacture
iv. Pineapple Canning Process
v. Frozen Jack Fruit product Manufacture
vi. Custard Apple Pulp Manufacturing Process
vii. Cold Storage Facility

The following facilities are proposed at the CFC:

Sl No	Facility	Purpose/Product Usage	Capacity (MT/pa)
1	IQF	Sweet Corn, Mango, Jack Fruit, Pineapple	9600
2	Blast Freezing	Custard Apple Pulp	1440
3	Retort	Sweet Corn Cobs	4800
4	Pulping	Custard Apple	1440
5	Canning	Pineapple	480
6	Ripening	All Products	40
7	Cold Storage	All Products	1782

The machinery along with specifications and allied Technical details are given below for the plant requirement. The successful contractor to inspect the designated site and building, prepare the process flow diagram and upon approval from SPV Management, the supply, erection and commissioning needed to be initiated within the agreed time lines on turnkey basis.

Sl No	Description	Qty
1	**Racking System – Cold Storage 1782 Pallets each @ 1 MT Capacity**	**1**

1. General Project Overview

- **Purpose:** Provide a complete racking solution for a cold storage facility designed to store 1782 pallets (1 MT each) in a controlled, low-temperature environment.
- **Environment:** The system must reliably perform in ambient temperatures typically ranging from –25°C up to +5°C.

2. Load and Capacity Requirements

- **Pallet Load:**
  - Nominal payload of 1 MT per pallet location.
  - Design load should include a safety factor (typically 1.5 to 2 times the nominal load) to ensure structural integrity under dynamic conditions.
- **Total Capacity:**
  - The system must provide 1782 secure pallet positions, arranged in an optimized layout for space and operational efficiency.

3. Design and Structural Components

- **Materials:**
  - **Structural Steel:** Use cold-rolled steel (e.g., S275 or S355) with anti-corrosion and low-temperature protective coatings.
  - **Fasteners and Connectors:** All connectors (bolted and welded) must be

rated for low-temperature applications.

- **Frame and Rack Design:**
  - **Columns & Beams:** Designed to support the designated loads with the necessary safety margin.
  - **Bracing:** Incorporate lateral and vertical bracing to prevent sway and ensure stability.
  - **Connections:** Utilize robust, cold-weather-rated jointing methods to secure beams to columns.

4. Layout and Dimensional Considerations

- **Pallet Dimensions:**
  - Assume standard pallet dimensions (e.g., approximately 1200 mm x 1000 mm) unless otherwise specified.
- **Aisle and Bay Dimensions:**
  - **Aisle Width:** Minimum of 3 meters to accommodate forklift maneuverability in cold storage conditions.
  - **Bay Depth:** Approximately 1.2 to 1.5 meters plus clearance for safe insertion and removal of pallets.
  - **Rack Height and Levels:**
    - Determine the number of pallet levels based on the facility's overall height and operational needs.
    - Ensure that vertical spacing allows for safe handling and efficient thermal circulation.

5. Environmental and Safety Requirements

- **Temperature and Insulation:**
  - All components must maintain performance in low temperatures.
  - Design to minimize thermal bridging to maintain energy efficiency and consistent internal temperatures.
- **Regulatory Compliance and Standards:**
  - Comply with local and international standards (e.g., Eurocode, OSHA, or relevant regional guidelines).
  - Ensure the design accounts for applicable seismic and wind loads if required.
- **Fire Safety:**
  - Incorporate fire-resistant materials where applicable.
  - Allow for integration with the facility's fire suppression and detection systems.
- **Safety Features:**
  - Incorporate safety barriers, column guards, and anti-collision measures.

- Design the system for ergonomic access and safe forklift operation in cold conditions.

6. Installation, Inspection, and Documentation

- **Installation Guidelines:**
  - Installation should be carried out by professionals experienced in cold storage systems.
  - Ensure proper alignment, anchoring, and adherence to design specifications.
- **Inspection & Maintenance:**
  - Establish a schedule for periodic inspections to assess structural integrity and operational performance.
  - Provide maintenance manuals and training for facility personnel.
- **Documentation:**
  - Submit complete design drawings, load calculation reports, and testing certifications prior to installation.
  - Maintain records of installation and any subsequent inspections for quality assurance.

7. Additional Considerations

- **Modularity and Scalability:**
  - Consider a modular design to allow for future expansion or reconfiguration as storage needs evolve.
- **Operational Efficiency:**
  - Design the layout for optimal workflow, ensuring that pallet retrieval and storage are efficient.
  - Consider energy-efficient features in the overall design to help manage operating costs in a cold storage environment

Sl No	Description	Qty
2	**Plastic Roto Pallets** **Loading bearing capacity static 4MT, Dynamic-1 MT, Racking- 1 MT**	**1782**

- **Static Load Capacity:** 4 MT
- **Dynamic Load Capacity:** 1 MT
- **Racking Load Capacity:** 1 MT

1. General Description

- **Type:** Plastic Roto Pallet

- **Purpose:** Designed for material handling in environments where rotation capability enhances operational efficiency (e.g., automated or manual handling systems).
- **Application:** Suitable for industries such as food processing, pharmaceuticals, and general warehousing where durability, hygiene, and ease of handling are critical.

2. Load Capacity Definitions

- **Static Load (4 MT):**
  The pallet must withstand a gradually applied, stationary load of up to 4 metric tons without experiencing permanent deformation or failure.
- **Dynamic Load (1 MT):**
  Under conditions of sudden impact or dynamic loading (such as when pallets are dropped or during shock loading), the pallet should safely support up to 1 metric ton.
- **Racking Load (1 MT):**
  When stored on racks, the pallet should bear up to 1 metric ton, accounting for concentrated loads in a racking system without compromising structural integrity.

3. Material and Construction

- **Material:**
  - High-Density Polyethylene (HDPE) or equivalent high-performance, durable plastic.
  - Formulated for resistance to impact, chemicals, and UV degradation (if used outdoors).
- **Construction:**
  - Reinforced ribbing or internal support structure to distribute loads evenly.
  - Integrated rotation mechanism (or design geometry) that allows the pallet to turn smoothly under mechanical handling equipment.
  - Rounded or chamfered edges to facilitate rotation and reduce damage during handling.
- **Finish:**
  - Smooth, hygienic surface suitable for washdown environments.
  - Color coding or markings to denote load capacities and for identification purposes.

4. Dimensional and Design Considerations

- **Standard Dimensions:**
  - Typically designed to standard pallet sizes (e.g., 1200 mm x 1000 mm), unless otherwise specified.
  - Adequate deck area to support the full load with proper clearance and

alignment features.

- **Rotation Feature:**
  - Engineered with a balanced design to ensure smooth, controlled rotation.
  - The rotational design should minimize friction and wear during repeated use.
- **Tolerances and Quality:**
  - Manufactured to tight tolerances to ensure uniform performance.
  - Each pallet must conform to ISO standards or equivalent quality assurance guidelines for plastic pallets.

5. Environmental and Operational Considerations

- **Temperature Range:**
  - Capable of operating across a wide temperature range; verify compatibility for refrigerated or ambient environments as required.
- **Chemical and UV Resistance:**
  - Formulated for resistance against chemicals, oils, and UV exposure to extend the service life in various operational settings.
- **Maintenance:**
  - Easy to clean and maintain in high-hygiene environments.
  - Designed for long service life with minimal maintenance requirements.

6. Testing and Certification

- **Load Testing:**
  - Each pallet must undergo rigorous testing to verify that static, dynamic, and racking load capacities meet or exceed 4 MT, 1 MT, and 1 MT, respectively.
  - Testing should simulate real-world conditions including gradual load application, impact, and racking scenarios.
- **Certification:**
  - Provide certification documentation from recognized testing laboratories.
  - Compliance with industry standards such as ISO for plastic pallets.

7. Marking and Identification

- **Load Ratings:**
  - Clearly print or emboss load capacity ratings (static, dynamic, racking) on the pallet.
- **Identification Features:**
  - Options for incorporating barcodes, RFID tags, or other tracking mechanisms to facilitate inventory management and traceability.

Sl	Description	Qty

No		
3	**Plate type Evaporate Condenser** **Heat Rejection: 1000KW, 40^0 C Cond. Temp. & 28^0 C WBT, Refrigerant: Ammonia. MOC: SS 304 (Plates, Basin & Casing)**	**2**

Technical Specifications for Plate Type Evaporative Condenser

(As per Indian Standards for Industrial Refrigeration and Heat Exchangers)

1. General Description:

The **Plate Type Evaporative Condenser** is designed for industrial-scale ammonia refrigeration applications, ensuring efficient heat rejection of **1000 kW** through evaporative cooling. It is constructed with **Stainless Steel 304 (SS 304) for Plates, Basin, and Casing** to ensure **corrosion resistance, durability, and compliance with Indian standards.**

2. Performance Specifications:

- **Heat Rejection Capacity: 1000 kW**
- **Condensing Temperature: 40°C**
- **Wet Bulb Temperature (WBT): 28°C**
- **Refrigerant Used: Ammonia (NH_3)**
- **Cooling Mechanism:** Evaporative Cooling with Water Spray & Forced/Induced Air Circulation
- **Water Flow Rate: As per system requirements (~1.5 - 2.0 m^3/min)**
- **Air Flow Capacity: Optimized for maximum evaporation efficiency**
- **Approach Temperature: Typically 5-7°C above WBT**
- **Operating Pressure Range: Up to 25 bar** (based on ammonia refrigeration system design)

3. Material of Construction (MOC) – As per Indian Standards

Component	Material	Standard Compliance
Heat Exchange Plates	SS 304	IS 6911:2017 (Austenitic Stainless Steel)
Basin	SS 304 with Anti-Corrosion Coating	IS 6911:2017
Casing/Structural Frame	SS 304	IS 6911:2017
Fans & Blades	Aluminum Alloy / SS 304	IS 2062:2011 (Structural Steel)
Pump Impeller & Shaft	SS 304	IS 9283:1995 (Motors)
Spray Nozzles	SS 304 / Corrosion-resistant Plastic	IS 2825:1969 (Code for Unfired Pressure Vessels)
Drift Eliminators	PVC / SS 304	IS 11329:1985 (Cooling Tower Standard)

4. Design Features – As per Indian Standards

- **Plate Heat Exchanger:**
  - Compact design ensuring **efficient heat transfer**.
  - Optimized **plate geometry** for high **thermal performance** and **low refrigerant charge requirements**.
  - Constructed from **SS 304 for corrosion resistance and durability**.
- **Evaporative Cooling System:**
  - **High-efficiency water spray system** for enhanced heat rejection.
  - **Uniform water distribution** over the plates to prevent dry spots and scaling.
  - **Water Consumption: ~5-10 liters/kWh heat rejection** depending on humidity conditions.
- **Air Circulation System (As per IS 11329:1985 Cooling Tower Standard):**
  - **Induced/Forced Draft Design** for effective moisture evaporation.
  - **Low-noise axial fans** made of **Aluminum/SS 304** for **high efficiency**.
  - **Variable Speed Fan (Optional)** to optimize energy consumption.
- **Water Recirculation System:**
  - **Stainless Steel (SS 304) Basin** for long life and **anti-corrosion coating**.
  - **High-Efficiency Centrifugal Pump (SS 304)** for **continuous water circulation**.
  - **Easy access design** for maintenance and cleaning.
- **Drift Eliminators:**
  - High-efficiency **PVC** / **SS drift eliminators** for minimizing water loss.
  - Ensures **low drift rate (≤ 0.002% of recirculating water flow)** as per industry standards.

5. Indian Standards Compliance & Certification

The evaporative condenser must comply with the following applicable Indian standards:

Standard	Description
IS 2825:1969	Code for Unfired Pressure Vessels (Applicable for ammonia refrigerant system)
IS 11329:1985	Cooling Tower Standard (Applies to evaporative condensers)
IS 6911:2017	Austenitic Stainless Steel Specification (For SS 304 plates, basin & casing)
IS 2062:2011	Structural Steel for Industrial Applications (For framework & fan components)
IS 9283:1995	Motors for Centrifugal Pumps (For recirculation system)
IS 10773:1983	Heat Exchanger Tubes (Reference for heat exchange plate design)
ASHRAE 15 & ISHRAE Guidelines	Ammonia R24efrigeration System Safety Compliance

6. Electrical & Control System

- **Power Supply:** 415V, 3-Phase, 50Hz
- **Fan Motor Rating:** ~10-20 kW per fan (based on airflow requirement)
- **Pump Motor Rating:** ~5-10 kW (depending on water flow demand)
- **Control System:**
  - **PLC-based automation** with temperature and pressure monitoring.
  - **Variable Frequency Drives (VFDs) for fan speed optimization** (optional).
  - **Remote monitoring capability** with IoT integration (optional).

7. Optional Features

- **Automatic Water Level Control System:** To optimize water consumption.
- **Anti-Fouling System:** Chemical dosing or UV treatment for **scaling & microbial growth prevention**.
- **Winterization Package:** For operation in extreme cold conditions.
- **Energy-Efficient Design:** Heat recovery options to improve system performance.

8. Installation & Maintenance Considerations

- **Foundation:** Concrete base with anti-vibration mounts for noise & vibration reduction.
- **Piping Connections:** Stainless Steel **flanged** connections for easy integration with ammonia refrigeration lines.
- **Safety & Maintenance: Bidder to provide training to the end users and provide documentation for periodical inspection**
  - **Access doors & removable panels** for easy inspection.
  - **Safety railings & ladders** as per IS 11329:1985.
  - **Regular maintenance schedule (every 3-6 months)** recommended.

Sl No	Description	Qty
4	Falling Film Chiller Cooling capacity 110 KW System Refrigerant : R717 (Ammonia, Pump Feed) or higher	**1**

Key Specifications:

- **Cooling Capacity:** Customizable, with units capable of providing cooling capacities up to 2,500 kW per unit.
- **Refrigerant Compatibility:** Designed for use with various refrigerants, including

R717 (ammonia), CO_2, propylene glycol, ethylene glycol, R22, R134A, and R404A.
- **Construction Material:** Typically constructed from stainless steel grades such as 304, 316L, SMO-254, and Duplex 2205, ensuring durability and compliance with sanitary standards.
- **Water Flow Rates:** Depending on the design, required water flow rates per plate can vary. For instance, with a high-flow distribution pan, the flow rate ranges from 14.7 to 29.0 gallons per minute (gpm) per plate.
- **Dimensions and Weight:** Dimensions and weight vary based on the number of plates and specific design configurations. For example, a 3x5 model with 2–8 plates measures approximately 70 inches in length, 40.75 inches in width, and 46.75 inches in height, with a weight around 436 pounds.

Desired Advantages:

- **Efficient Cooling:** Capable of cooling fluids to within 0.5°C of their freezing point without the risk of freezing, ensuring consistent and reliable cooling performance.
- **Customizable Design:** Units are custom-made to meet specific cooling requirements, allowing for flexibility in capacity and configuration.
- **Easy Maintenance:** The open construction design facilitates easy access for cleaning and maintenance, reducing downtime and operational costs.
- **Versatility:** Suitable for cooling slightly polluted water (particles smaller than 8 mm) and applicable in various industries, including vegetable blanching, seafood processing and dairy production.

Sl No	Description	Qty
5	Insulated Water Base Tank (Made with SS 304)	**1**

Material and Construction:

- **Interior:** Crafted from **304 stainless steel**, known for its excellent corrosion resistance and suitability for food-grade applications.
- **Exterior:** Also made of **304 stainless steel**, ensuring durability and ease of cleaning.
- **Insulation:** Utilizes **polyurethane foam (PUF)**, with a minimum thickness of 2 inches, to maintain desired temperatures and enhance energy efficiency.

Design Features:

- **Capacity:** To accommodate different processing needs of the Plant. The Bidder is advised to arrive the capacity and quote accordingly.
- **Shape and Orientation:** Typically **vertical cylindrical** design with options for flat, dished, or conical bottoms, depending on specific requirements.
- **Surface Finish:** Interiors have a **#4 finish**, providing a smooth, easy-to-clean surface that meets sanitary standards.
- **Manways:** Equipped with side-entering manways for convenient access during

cleaning and maintenance.
- **Inlet/Outlet Ports:** Fitted with **sanitary clamp connections** to ensure hygienic fluid transfer and prevent contamination.
- **Agitation:** Incorporates vertical or horizontal agitators with 3-blade designs, powered by motors compatible with 230/460 volts, 3-phase electrical systems, to maintain uniform temperature and prevent sedimentation.

Support Structure:

- **Base:** Designed with a **silo-type base** or mounted on **threaded adjustable legs**, allowing for stability and ease of installation on various surfaces.

Additional Features:

- **Heat Transfer Surface (Optional):** Incorporation of side and bottom **stainless steel dimple plates** rated for specific pressures, facilitating efficient heating or cooling as required by the process.
- **Clean-In-Place (CIP) Systems:** Equipped with CIP devices to enable automated and thorough cleaning, ensuring compliance with stringent hygiene standards

Sl No	Machinery Description	Qty
6	Recirculation Water Pump (LS)	1

Key Standards and Specifications:

1. **IS 5659:1970 – Pumps for Process Water:**
   - **Scope:** This standard specifies technical requirements for roto dynamic pumps, including centrifugal, axial flow, mixed flow, and turbo pumps, designed for handling process water in various industries, such as chemical, textile, sugar, paper, power plants, and steel manufacturing.
   - **Water Characteristics:** Process water may exhibit turbidity up to 10,000 ppm, suspended solids between 10 to 20 percent by weight, solid particle sizes up to 3 mm, pH values ranging from 6 to 8, and temperatures between 4°C to 145°C.
   - **Material of Construction:** Depending on the water's characteristics, materials like bronze-fitted components or all-iron construction are recommended to ensure durability and resistance to corrosion.
   - **Design Features:** The standard outlines requirements for pump performance, including considerations for viscosity, specific gravity, and other factors affecting pump efficiency.

2. **IS 5120:1977 – Technical Requirements for Rotodynamic Special Purpose Pumps:**
   - **Scope:** This standard provides detailed technical specifications for rotodynamic pumps used in specialized applications, ensuring they meet performance and safety criteria relevant to their intended use.
   - **Design Considerations:** It includes guidelines on definitions, units, classes

and types of pumps, effects of viscosity and specific gravity on performance, material selection, design features, testing procedures, tolerances, and guarantees.

3. **IS 8188:1999 – Treatment of Water for Cooling Towers – Code of Practice:**
    - **Scope:** This standard addresses the treatment of water used in cooling towers, which is pertinent to recirculation systems in food processing facilities.
    - **Water Quality Parameters:** It emphasizes maintaining specific water quality to prevent issues like corrosion, scaling, and biological fouling, which can affect pump performance and longevity.

General Specifications for Recirculation Water Pumps in Food Processing:

- **Pump Type:** Centrifugal pumps are commonly used due to their efficiency in handling varying flow rates and ease of maintenance. Head => 20 MWC. Motor – 0.75 KW/1HP; SUC/DIS – 38x38
- **Materials:** Stainless steel (SS 304 or SS 316) is preferred for components in contact with water, ensuring compliance with food safety and hygiene standards.

- **Design Features:**
    - **Sealing Mechanism:** Mechanical seals made of materials like silicon carbide (SiC) are recommended for their durability and resistance to wear.
    - **Impeller Design:** Optimized for minimal shear and gentle handling of fluids to preserve the quality of food products.
    - **Surface Finish:** Smooth, polished surfaces (with appropriate Ra values) to prevent microbial growth and facilitate easy cleaning.
- **Performance Parameters:**
    - **Flow Rate and Head:** Selected based on the specific requirements of the process, ensuring efficient circulation without causing turbulence or damage to the product.
    - **Efficiency:** High-efficiency motors and pump designs to reduce energy consumption and operational costs.

Compliance and Testing:

- **Standards Adherence:** Ensure that the selected pumps comply with relevant IS standards, including IS 5659 and IS 5120, to meet national quality and safety benchmarks.
- **Testing and Certification:** Pumps should undergo rigorous testing for performance, material integrity, and hygiene compliance. Certification from recognized bodies can provide assurance of quality and suitability for food processing applications

Sl No	Machinery Description	Qty

7	Ripening Equipment (40MT * 5 Chambers)	5

1. Structural Design and Dimensions:

- **Volume Calculation:** For ripening chambers with a capacity of 10 MT or larger, an average of **11 cubic meters (m^3)** per metric ton of fruit is recommended. Therefore, a 40 MT chamber should have a total volume of approximately **440 m^3**.
- **Room Dimensions:** The specific dimensions can vary based on design preferences and space availability. However, ensuring adequate space for air circulation and stacking is crucial. The internal height of the chamber is typically **3 meters (m)**.

2. Construction Materials:

- **Insulation Panels:** Utilize **Polyurethane Foam (PUF)** panels with a thickness of **80 mm** and a density between **38 to 40 kg/m^3** for walls and ceilings. For flooring, **50 mm** thick PUF slabs are recommended, topped with **100 mm** thick civil/Kota stone flooring.
- **Vapor Barrier:** Incorporate a vapor barrier, such as a **1 mm thick tar felt (asphaltic roofing roll)**, on both the top and bottom of the PUF slabs to prevent moisture ingress.

3. Doors and Access:

- **Door Specifications:** Equip the chamber with doors having clear openings of **1 x 2 meters (m)** for swing doors or **1.3 x 2.1 meters (m)** for sliding doors, depending on operational requirements.

4. Air Circulation and Ventilation:

- **Airflow Requirements:** Maintain a minimum airflow of **2000 cubic meters per hour (m^3/hr)** per metric ton of product to ensure uniform ripening. For a 40 MT chamber, this equates to **80,000 m^3/hr**.
- **Air Distribution:** Design the airflow system to penetrate all boxes of fruit evenly, ensuring uniform ripening throughout the chamber. A plenum chamber is recommended to equalize pressure and distribute air uniformly.

5. Temperature and Humidity Control:

- **Temperature Range:** Equip the chamber with a refrigeration system capable of maintaining temperatures between **15°C to 18°C**, depending on the specific fruit's ripening requirements.
- **Humidity Levels:** Install a humidification system to maintain relative humidity (RH) levels between **85% to 95%**, preventing dehydration and ensuring optimal ripening conditions.

6. Ethylene Application System:

- **Ethylene Concentration:** Incorporate an ethylene generator or gas injection system capable of introducing ethylene at concentrations of **100 to 150 parts per million (ppm)** to initiate the ripening process.
- **Safety Measures:** Ensure the system includes safety features to prevent ethylene

concentrations from exceeding safe limits, as concentrations above **27,000 ppm** can be hazardous.

7. Loading and Stacking:

- **Pallets and Crates:** Utilize plastic perforated pallets, typically sized **1 x 1.2 meters (m)**, and perforated plastic crates with dimensions such as **510 x 330 x 310 mm**, **540 x 360 x 275 mm**, or **600 x 400 x 250 mm**. Each crate can hold approximately **16 to 21 kg** of fruit.
- **Stacking Configuration:** Maintain a general stacking height of **7 to 8 crates**, ensuring a minimum gap of **100 mm** between pallets for proper air circulation.

8. Compliance and Safety Standards:

- **Regulatory Adherence:** Ensure the ripening chamber complies with the guidelines set by the **National Horticulture Board (NHB)** and the **Food Safety and Standards Authority of India (FSSAI)**. Adhere to relevant **Bureau of Indian Standards (BIS)** codes for construction and operation.
- **Safety Protocols:** Implement safety features such as gas leak alarms, emergency ventilation systems, and ensure all electrical installations meet national safety standards.

Sl No	Machinery Description	Qty
8	Automatic Gas Dosing with Piping & Electric cables (Ethylene Gas Dosing Systems)	1

1. Ethylene Gas Dosing Equipment:

- **Ethylene Concentration:** Maintain ethylene concentrations between **10 to 200 parts per million (ppm)** within the ripening chamber, depending on the specific fruit requirements.
- **Dosing Methods:** Ethylene can be introduced using:
  - **Independent Ethylene Generators:** Devices that produce ethylene gas on-site.
  - **Ethylene Cartridges:** Pre-packaged sources releasing controlled amounts of ethylene.
  - **Ethylene-Nitrogen Mixtures:** Cylinders containing a mixture, typically **5% ethylene and 95% nitrogen**.
- **Automation and Control:** Implement systems capable of automatic ethylene dosing with sensors to monitor and maintain desired concentrations, ensuring uniform ripening.

2. Piping Specifications:

- **Material Selection:** Use piping materials compatible with ethylene gas to prevent reactions or degradation.
- **Installation Standards:** Follow best practices for gas piping installations, ensuring leak-proof joints and appropriate pressure ratings.

3. Electrical Cables and Wiring:

- **Cable Specifications:** Utilize cables conforming to relevant Indian Standards, ensuring suitability for the operational environment.
- **Installation Practices:** Adhere to the **Code of Practice for Electrical Wiring Installations**, ensuring safety and compliance with national regulations.

4. Safety and Compliance:

- **Regulatory Adherence:** Ensure all equipment and processes comply with guidelines set by the **Food Safety and Standards Authority of India (FSSAI)** and other relevant bodies.
- **Safety Measures:** Implement safety features such as gas leak detectors, proper ventilation, and emergency shut-off systems to mitigate risks associated with ethylene gas usage.

Sl No	Machinery Description	Qty
9	Refrigeration System for IQF & 2 Blast Freezers	1

Individual Quick Freezing (IQF) unit and **blast freezers** in India necessitates adherence to specific standards to ensure food safety, quality, and operational efficiency. Below are the key specifications and considerations based on Indian food processing standards:

1. Temperature Requirements:

- **IQF Systems:**
  - **Freezing Temperature:** Maintain temperatures at or below **-18°C** to ensure rapid freezing of individual food items, preserving their quality and nutritional value.
  - **Freezing Time:** The system should be capable of reducing the core temperature of products to **-18°C** within a short duration, typically between **10 to 12 minutes**, depending on the product type and size.
- **Blast Freezers:**
  - **Freezing Capacity:** Blast freezers should be designed to handle specific capacities, for instance, freezing **36 kg** of food from **+90°C to -20°C** core temperature within **4 to 4.5 hours**.
  - **Temperature Range:** Operate at temperatures between **-35°C to -40°C** to facilitate rapid freezing, which helps in preserving the texture and quality of food products.

2. Construction and Materials:

- **Material Standards:** All processing equipment, including refrigeration units, should be constructed using **stainless steel of AISI 304 or 316 grade** to ensure durability and compliance with food safety standards.
- **Insulation:** Utilize high-quality insulation materials, such as **Polyurethane Foam**

(PUF) panels, to maintain consistent internal temperatures and enhance energy efficiency.

3. Airflow and Circulation:

- **Uniform Air Distribution:** Design the system to ensure even airflow across all products, which is crucial for uniform freezing. This can be achieved through the strategic placement of fans and air ducts.
- **Air Velocity:** Maintain appropriate air velocities to facilitate rapid heat removal without causing product dehydration or quality degradation.

4. Hygiene and Safety Standards:

- **Sanitation:** Ensure that all components of the refrigeration system are easy to clean and sanitize, preventing microbial contamination.
- **Safety Measures:** Implement safety features such as alarms for temperature deviations, emergency shut-off systems, and ensure all electrical installations comply with national safety standards.

5. Compliance and Regulatory Adherence:

- **FSSAI Guidelines:** Adhere to the standards and protocols set by the **Food Safety and Standards Authority of India (FSSAI)**, which govern the processing, handling, and storage of frozen foods.
- **Regular Audits:** Conduct periodic inspections and maintenance of the refrigeration system to ensure continuous compliance with food safety standards and operational efficiency.

6. Key specifications:

- **IQF Line:** Capacity is 2 Ton per hour. As this is a turnkey project, the bidder to analyse the requirement and provide the line accordingly.
- **Drawings:** The drawings to be prepared and got it approved from SPV management prior to the commence of work.

Sl No	Machinery Description	Qty
10	Refrigeration system for Cold Rooms & Anti Rooms	1

1. **Room Specifications (As per IS 17711 & MoFPI Guidelines)**

Parameter	Cold Room	Ante Room
Temp. Range	-18°C to -25°C	+2°C to +10°C
RH	85% max	85% max
Panel Type	PUF Insulated Panels	PUF Insulated Panels

Panel Thickness	120 mm (Cold Room)	60–80 mm (Ante Room)
Thermal Conductivity (PUF)	≤ 0.022 W/m•K	≤ 0.022 W/m•K
Fire Retardant Rating	Class 1 (as per IS 12436)	Class 1 (as per IS 12436)
Doors	Insulated Swing/Sliding with heater (cold room), gasketed (ante room)	
Cold Storage Shed	1183 Sq Mtrs	322 Sq Mtr

2. **Refrigeration System Type (As per IS 17572: Part 1 & 2)**

    - Type: Vapour Compression Refrigeration System
    - Compressor: Semi-Hermetic / Hermetic Scroll / Reciprocating
    - Refrigerant:
        - Preferred: R-404A, R-134a, R-407C (common in India)
        - Low-GWP Alternatives: R-448A, R-449A (eco-friendly options)
    - Cooling Medium: Air-cooled condenser (preferred), water-cooled optional
    - System Configuration: Split system or centralized rack system (for larger facilities)

3. **Condensing Unit**

    - Ambient Design Temp: 45°C (as per Indian climate conditions)
    - Condenser: Finned-tube, copper tubes with aluminum fins
    - Fan: Axial type with tropical-rated motors
    - Casing: Powder-coated GI or SS (anti-corrosive)
    - Safety Controls: HP/LP switch, phase failure relay, overload protection
    - Mounted on vibration isolators
    - Suggested Make: Kirloskar / Emerson / Voltas / Danfoss / Bluestar or equivalent

4. **Evaporator Unit (Ceiling Mounted)**

    - Design Conditions:

        - TD (Temp. Difference): 6–10°C for Cold Rooms
        - RH Control: Optional humidifiers for high-sensitivity goods
    - Material: Copper tube, aluminum fins with hydrophilic coating
    - Defrost:
        - Cold Room: Electric defrost with drain heater
        - Ante Room: Natural air defrost
    - Fan Motor: EC/PSC motors, IP55 protection
    - Air Throw: Engineered for uniform coverage

5. **Refrigerant Piping**

    -
        - Material: Copper as per IS 10773
        - Insulation: Nitrile Rubber (Class 'O'), thickness:
            - 19 mm for Suction Line
            - 13 mm for Liquid Line
        - Supports: Anti-vibration clamps, 1.5 m spacing
        - Accessories:
            - Solenoid Valve, Expansion Valve (TXV)
            - Sight Glass, Filter Drier
            - Vibration Eliminator, Suction Accumulator (for -18°C & below)

6. **Electrical System (IS 732, IS 8623)**

    -
        - Power Supply: 3-phase, 415 V ±10%, 50 Hz
        - Control Panel: Powder-coated MS enclosure with MCB, contactors, relays
        - Temperature Controller: Digital, microprocessor-based
        - BMS/SCADA Compatible (optional)
        - Phase protection and motor starter panel (DOL/Star-Delta)
        - Earthing: As per IS 3043

7. **Control & Safety Systems**

    -
        - High/Low Pressure Switches
        - Oil Pressure Cutout (for semi-hermetic)
        - Door Contact Switch (for fan cutoff)

- Audio-Visual Alarm for:
  - Overtemperature
  - Power Failure
  - Door Open
- Remote Monitoring (IoT/BMS ready – optional)
- Energy Metering (for energy audits – MoFPI compliant)

8. Compliance with Indian Standards

Standard No.	Title
IS 17711	Cold Storage — General Requirements
IS 17572 (Part 1/2)	Vapour Compression Refrigeration Systems
IS 12436	Thermal Insulation for Buildings
IS 732	Electrical Wiring Installations
IS 3043	Code of Practice for Earthing
IS 10773	Copper tubes for Refrigeration
ISHRAE Cold Chain Standards	Good practices for cold storage system design

9. Other Features & Recommendations

-
  - Lighting: LED with IP65 enclosure
  - Drain Lines: Proper slope, trap with insulation
  - Air Curtains: For Ante Room
  - Humidity Control: For pharma/agro use cases
  - Flooring: Insulated RCC floor with vapour barrier (as per MoFPI)
  - Back-up System: DG-set/UPS as per criticality

Sl No	Machinery Description	Qty
11	IQF line	01

Standards: IS 17711, IS 17572, ISHRAE Guidelines, MoFPI Norms

1. **Room Details: The detailed drawings to be submitted and get it approved prior to initiation of the work.**

Area	Temp. Range	RH	Insulation (PUF)	Floor
IQF Tunnel	-35°C to -	≤ 90%	150 mm	RCC + vapor barrier

	40°C			
Cold Room	-18°C to -25°C	≤ 85%	120 mm	Anti-skid + insulated
Ante Room	+2°C to +10°C	≤ 85%	60–80 mm	Epoxy-coated

Fire-retardant PUF panels, 40 kg/m³ density, ≤ 0.022 W/m•K

2. System Configuration

-
  - Type: Vapour Compression System
  - Compressor:
    - IQF: Screw, ~100–120 TR (Bitzer/Kirloskar/Mycom)
    - Cold Room: Scroll/Screw, ~30–35 TR
    - Ante Room: Scroll, ~10–15 TR
  - Refrigerant:
    - NH_3 (R-717) for IQF, R-404A / R-134a for Cold & Ante Rooms
  - Condenser:
    - IQF: Evaporative (NH_3)
    - Cold/Ante Room: Air-cooled (Freon-based)

3. Evaporators & Defrosting

-
  - Copper tubes with aluminum fins
  - TD: 6–10°C
  - IQF: Hot gas or electric defrost
  - Cold Room: Electric defrost + drain heater
  - Ante Room: Natural or electric defrost

4. Evaporators & Defrosting

-
  - Copper tubes with aluminum fins
  - TD: 6–10°C
  - IQF: Hot gas or electric defrost
  - Cold Room: Electric defrost + drain heater
  - Ante Room: Natural or electric defrost

5. **Piping & Electrical**

-
  - Copper (Freon) / MS welded (NH_3)
  - Insulation: Nitrile rubber (19–25 mm)
  - Power: 3-Ph, 415 V, 50 Hz
  - LED lights (IP65), IP55-rated panels

6. **Piping & Electrical**

-
  - Copper (Freon) / MS welded (NH_3)
  - Insulation: Nitrile rubber (19–25 mm)
  - Power: 3-Ph, 415 V, 50 Hz
  - LED lights (IP65), IP55-rated panels

Sl No	Machinery Description	Qty
12	PUF Wall, Ceiling & Partition Panels, Floor Insulation, Insulated Doors, Flashings & Accessories	1

As per: IS 12436, IS 661, ISHRAE, MoFPI, FSSAI standards

1. **PUF Panels – Wall, Ceiling & Partition**

Parameter	Specification
Panel Type	Prefabricated PUF Sandwich Panels
Core Material	Poly Urethane Foam (PUF)
Density	40 ±2 kg/m³
Thermal Conductivity	≤ 0.022 W/m•K
Panel Thickness	60 mm (Ante), 80 mm (Cold), 100–150 mm (Freezer/IQF)
Facings	Pre-painted galvanized iron (PPGI) / SS304 (food zones)
Coating	Polyester, RMP or PVDF (20–25 microns)
Jointing System	Cam-lock or tongue & groove with gasket
Fire Resistance	Class 1 (self-extinguishing) as per IS 12436
Panel Width (Std.)	1000 mm ± tolerance
Panel Length	As per room height (max ~6 m transportable)

2. **Floor Insulation System**

Layer	Specification
Base Preparation	PCC base or Kota Flooring
Vapour Barrier	500-micron LDPE sheet or 1 mm bitumen membrane
Insulation Layer	Rigid PUF Slabs – 100 mm to 150 mm thickness
PUF Slab Density	40–45 kg/m³
Load Bearing	≥ 2.5 kg/cm² compressive strength
Top Layer (Finish)	PCC + IPS / Epoxy / Chequered Tiles / Antiskid
Slope	Min 1:100 toward drain

3. **Insulated Doors (Swing/Sliding)**

Parameter	Specification
Type	Manual or Motorized Sliding / Swing Doors with Industry standard size => 34”x 78” (W X H)
Application	Cold Room, Freezer, Ante Room
Leaf Core	PUF (40–45 kg/m³), 80–120 mm thick
Leaf Skin	PPGI / SS304 (inside food zones)
Gasket	Food-grade EPDM, magnetic or compression
Door Heater	Required for sub-zero rooms (anti-condensation)
Hardware	SS hinges, lock with emergency release, door closer
Vision Panel (Optional)	Double-glazed, heated (for cold/freezer rooms)
Threshold (Optional)	Aluminum threshold with break profile
Kick Plate	Chequered Plate on both side of Door bottom to prevent the door panel from damage
Safety release knob	Safety release knob placed at the inner side of the door for safety precautions

4. **Flashings & Accessories**

Item	Specification
Flashings	PPGI / SS corner, joint, edge profiles
Covings	Internal/external rounded covings (food grade)
Sealant	Food-grade, anti-fungal silicone (white/transparent)
Fasteners	Self-drilling screws with EPDM washers
Trims & Closures	Color-matched U, C, L trims
Drain Traps	SS 304, with water seal and removable cover
Gaskets	EPDM, Santoprene, magnetic (for doors)

5. **Compliance**

- - Fire Safety: IS 12436
    - Thermal: ISHRAE Cold Chain Manual
    - Hygiene: FSSAI, MoFPI norms (washable surfaces, easy-to-clean joints)
    - Environmental: CFC/HCFC-free foam, low GWP refrigerants
    - Panel Test Certificates: Thermal conductivity, fire resistance, density

Sl. No	Machinery Description	Qty
13	Corn-Pre Processing Line	01

The corn-preprocessing line should be supplied on turnkey basis with an estimated capacity of 2000Kg/Hour

Pre-processing Area and Processing Hall – 3860.3 Sq Mtrs

1. **Main Components**

- - Feed Elevator – Lifts raw corn
    - Washing Tank – Removes dirt/impurities
    - Dehusker/Desilk Machine – Removes husk and silk
    - Inspection Conveyor – Manual quality check
    - Cob Cutter (Optional) – Cuts cobs
    - Kernel Remover – Separates kernels
    - Blancher – Hot water/steam blanching
    - Cooling Tank – Cools blanched kernels
    - Dewatering Conveyor – Removes water
    - IQF Feeder (if applicable)

2. **Construction**

- - Contact parts: SS 304
    - Structure: SS 304/202
    - Conveyors: Food-grade PVC/modular belts
    - Pipes/Fittings: SS 304 (tri-clover)

3. **Utilities**

- Power: 3 Phase, 415V, 50 Hz
- Water: Potable, clean water
- Drainage: SS drainage with slope
- Air: Compressed air for actuators (if needed)

4. **Controls & Safety**

- Electrical panel with motor starters, temp controls
- Optional PLC-based automation
- Emergency stops
- Anti-slip floors & rounded edges for hygiene
- CIP provision (optional)

5. **Compliance**

- Hygiene: FSSAI, ISO 22000
- Materials: Food-grade SS, non-toxic components
- Cleanability: Smooth, washable surfaces

Note: The successful bidder to prepare the pre-processing line diagram with specifications and on approval from the SPV Management, the work needed to be commenced.

Sl. No	Machinery Description	Qty
14	Mango Pre-Processing Line	01

1. Main Components

- Feed Conveyor/Elevator – Transfers raw mangoes to washer
- Washing Unit – Removes dirt, latex, and pesticide residues
- Inspection Conveyor – Manual sorting and grading
- Destoner/Peeler – Removes seeds and optionally peels
- Slicer/Dicer (Optional) – Cuts mangoes as needed
- Hot Water Blancher – For microbial reduction (if freezing)
- Cooling Section – Chilled water dip or spray
- Dewatering Conveyor – Removes surface moisture
- Collection Conveyor – Feeds processed mango to next stage (pulping/IQF)

2. Construction

- MOC: SS 304 (contact areas), SS 202 (non-contact optional)
- Conveyors: Food-grade PVC/modular belts
- Fittings/Piping: SS 304, tri-clover type
- Tanks: SS with sloped bottoms and drain valves

3. Utilities

- Power: 3 Phase, 415V, 50 Hz
- Water: Clean potable water for washing/cooling
- Drainage: Hygienic SS drainage with gradient
- Compressed Air: For pneumatic valves (if used)

4. Controls & Hygiene

- Control Panel: Starters, temp controllers, optional PLC
- Safety: Emergency stops, side guards
- Sanitary Design: Sloped surfaces, food-grade sealants
- Optional: UV disinfection or chlorinated wash for food safety

5. Compliance

- FSSAI, ISO 22000 (HACCP), MoFPI norms
- Easy-to-clean design with smooth surfaces
- Non-toxic, corrosion-resistant materials

Sl. No	Machinery Description	Qty
15	Retort	01

1. Type of Retort (Select as per product)

- Static Retort – For cans, glass bottles
- Rotary Retort – For viscous foods requiring agitation
- Water Spray / Water Cascade / Steam-Air Retort – Based on packaging
- Batch or Continuous Type – Depending on throughput

2. Technical Details

Parameter	Specification
Chamber Size	As per capacity (e.g., 1000–1500 mm dia, 2–4 m long)
Design Pressure	Up to 2.5 bar (typical: 1.5 bar)
Design Temp.	Up to 135°C
Material	SS 304 (inner), SS 202/304 (outer jacket)

Insulation	Mineral wool or ceramic with SS cladding
Door	Pneumatic/hydraulic with safety interlock
Trays/Baskets	SS 304, custom per product size

3. Control & Monitoring

- PLC-based Control Panel with HMI
- Temperature & Pressure Sensors (PT-100, digital display)
- F_0 value and process time recording
- Safety alarms: Overpressure, over-temperature
- Data logging and batch traceability (optional)

4. Utilities Required

Utility	Specification
Steam	3–5 bar, dry saturated
Water	Clean process and cooling water
Compressed Air	6–8 bar (for valve actuation)
Power	3 Phase, 415V, 50 Hz
Drainage	For condensate discharge

5. Compliance & Safety

- Conforms to BIS IS 4684 (Food Canning Retorts)
- FSSAI and MoFPI guidelines
- GMP & HACCP compliant
- Overpressure protection valve
- Interlocking doors for operator safety

Sl. No	Machinery Description	Qty
16	Canning	01

1. **Main Components**

Equipment	Function
Can Rinsing Station	Cleans empty cans with hot water/steam
Filling Machine	Volumetric or piston type – fills product
Seamer Machine	Double seam sealer for tin cans
Exhaust Box	Removes trapped air via steam
Retort Integration	For thermal sterilization (if required)

Cooling Tunnel	Rapid cooling post-retort
Labeling & Coding	Prints MRP, batch, expiry on cans
Packing Station	Final QC and secondary packaging

2. Machine Specifications

Parameter	Specification
Speed	10–60 cans/min (adjustable)
Can Sizes	Compatible with 100g to 1 kg (custom tooling)
MOC	SS 304 for product contact areas
Filling Accuracy	±1–2% (depending on viscosity)
Seaming Head	Single/Double head – changeable dies
Steam Exhaust Temp	80–90°C in exhaust box

3. Utilities Required

Utility	Specification
Steam	3–5 bar (for exhaust & CIP)
Water	For rinsing & cooling
Power	3 Phase, 415V, 50 Hz
Compressed Air	6–8 bar (for pneumatic valves)

4. Controls & Safety

- Control Panel: MCBs, contactors, overload relays
- Emergency stop switches
- Interlock system for seamer & filler
- Auto shut-off on can misalignment or jam

5. Compliance

- FSSAI & MoFPI compliant
- BIS standards for pressure vessels & canning equipment
- GMP/HACCP friendly design
- Easy-to-clean, crevice-free surfaces

Sl. No	Machinery Description	Qty
17	Pulping Line	01

Standards: FSSAI, MoFPI, BIS (IS 3501), ISO 22000 (HACCP)

1. **Main Components**

Equipment	Function
Fruit Elevator	Transfers raw fruit to washer
Washer/Sorter	Removes dirt, stones; manual sorting platform
Fruit Crusher/De-stoner	Crushes and removes seeds (as applicable)
Pulper/Finisher	Extracts pulp, removes peels/fibers
Screw Pump or Transfer Pump	Moves pulp to collection/storage tanks
Storage Tank	SS tank for holding pulp before next process
CIP System	For clean-in-place of all contact equipment

2. **Construction & Capacity**

Parameter	Specification
Capacity	Typically 0.5–2 TPH (customizable)
MOC	SS 304 (contact parts), SS 202 (optional non-contact)
Finish	Food-grade, 150–240 grit internal polish
Pulper Type	Single-stage or twin-stage (with finisher)
Yield	~85–90% (depends on fruit type & ripeness)

3. **Utilities Required**

Utility	Specification
Power	3 Phase, 415V, 50 Hz
Water	Potable water for washing & CIP
Compressed Air	Optional for valves/sensors
Drainage	SS drains with floor gradient

4. **Automation & Control**

- Electrical Control Panel with motor starters
- Optional PLC with HMI
- Safety interlocks & emergency stop switches
- Variable frequency drives (VFDs) for motors (optional)

5. **Compliance & Hygiene**

- Complies with FSSAI, MoFPI, ISO 22000 (HACCP)
- All contact parts are non-toxic, food-grade
- Smooth, crevice-free construction for easy cleaning
- Optional: CIP nozzles, SS piping with tri-clover joints

Sl. No	Machinery Description	Qty
18	Electrical Lines & Systems (Lump sum)	1

Standards: IS 732, IS 3043, IS 8623, CEA Regs, FSSAI Compliance

1. Power Distribution System

- Incoming Supply: 3 Phase, 415V ±10%, 50 Hz
- Main LT Panel: As per the requisite capacity.
- Form 2/3 construction
- Aluminium busbar (IP: 65kA or above)
- ACB/ MCCB incomer with E/F, O/L, S/C protection
- Sub Distribution Boards (DBs):
  - MCCBs/MCBs with labeled circuits
  - Modular, dust- and vermin-proof (IP54 min.)
  - Separate DBs for lighting, power, and HVAC loads

2. Cabling

- Type: 1100V grade, FRLS XLPE armoured cables (IS 7098)
- Laying: Underground with sand cushioning or cable trays (SS/MS GI)
- Cable Termination: Glands, lugs (tinned copper), proper ferruling
- Earthing: As per IS 3043
- 2–4 earth pits per panel
- GI/ Cu strip connections
- Separate body and neutral earthing

3. Lighting System

- Fittings: LED IP65-rated (especially in process & wash areas)
- Mounting: Ceiling-mounted with SS supports
- Emergency Lighting: Battery backup lights in critical zones
- Lux Levels:
- General Area: 150–200 lux
- Inspection Area: 300–500 lux

4. Control Panels & Wiring

- Motor control panels with DOL, Star-Delta, or VFD starters
- Temperature, pressure, and level sensor integration
- Use of proper conduit (FRLS/HDPE/SS) in wet areas
- Junction boxes: SS, IP66-rated for wash-down areas
- Panel finish: Powder-coated / SS for food zones

5. Safety & Protection

- ELCBs/RCCBs on critical equipment
- Lightning Arrestor with down conductor
- Overload/Short Circuit Protection on all feeders
- Cable identification tags, single-line diagram displayed
- Fire-resistant wiring in escape routes and DBs

6. Optional Smart Features

- PLC with HMI for process control
- Energy meters (kWh) for individual machinery
- Remote monitoring (IoT/SCADA ready)
- Solar or UPS integration (optional)

Sl. No	Machinery Description	Qty
19	Boiler	01

1. Boiler Type (Choose based on scale & fuel)

Type	Description
IBR Steam Boiler	Coil/Smoke Tube/Water Tube type
Fuel Type	Diesel, LPG, PNG, Biomass, or Electric
Firing	Manual or Automatic with pressure control
Mounting	Horizontal (standard) or vertical (compact)

2. Technical Parameters

Parameter	Specification
Capacity	300 – 1000 kg/hr (typical for food units)
Working Pressure	7–10.5 kg/cm² (150 psi)
Steam Output	Dry saturated steam
Efficiency	≥ 85% (oil/gas), ≥ 78% (solid fuel)
MOC	Boiler shell: IS 2062; Tubes: BS 3059
Certification	IBR-approved, Form III/III-C provided

3. Boiler Accessories

- Feed Water Pump (SS impeller, monoblock/vertical multistage)
- Chimney: MS or SS with rain cap and guy wires

- Safety Valve, Pressure Gauge, Steam Trap, Water Level Indicator
- Auto Pressure Cut-off & Blowdown Valve
- Optional: Economizer, Softener, RO Plant, Condensate Recovery System

4. Utilities Required

Utility	Specification
Water	Soft/RO water – as per IS 8753
Power	3 Phase, 415V, 50 Hz
Fuel Supply	HSD/LPG/PNG/Biomass
Drain	Proper steam condensate return line

5. Safety & Compliance

- IBR-compliant with periodic inspection provision
- Safety interlocks: low water level, overpressure
- Automatic startup/shutdown system (optional)
- Complies with FSSAI (hygiene in food steam use)
- Chimney height as per Pollution Control Board norms

Sl. No	Machinery Description	Qty
20	Water Treatment Plant	01

1. Plant Configuration (Typical)

Stage	Function
Raw Water Tank	Storage for incoming untreated water
Pressure Sand Filter (PSF)	Removes turbidity, suspended solids
Activated Carbon Filter (ACF)	Removes odor, chlorine, organics
Softener or RO Unit	Reduces hardness or TDS
Micron Cartridge Filter	Final particulate removal (1–5 micron)
UV Sterilizer/Ozonator	Microbial disinfection (optional)
Treated Water Tank	Storage of processed water
Pumps	Multistage centrifugal or monoblock

2. Design Parameters

Parameter	Specification
Capacity	1–5 m^3/hr (scalable based on demand)
Treated Water TDS	< 500 ppm (RO); < 50 ppm (for boilers)
Hardness	< 5 ppm (for softener systems)
Filtration Rating	5–10 micron (primary), 1 micron (final)
Material of Construction (MOC)	SS 304 (contact parts), FRP/MS for

	tanks
Control	Semi or fully automatic with backwash

3. Utilities Required

Utility	Specification
Power	3 Phase, 415V, 50 Hz
Raw Water	From borewell/municipal tank
Drainage	For backwash/reject water

4. Compliance & Quality

- Water output conforms to IS 10500 for potable use
- Complies with FSSAI, MoFPI for food-grade processing
- Easy access for CIP and maintenance
- Pressure gauges, flow meters, sample valves included
- Optional online TDS/flow monitoring

Sl. No	Machinery Description	Qty
21	Effluent Treatment Plant	01

Area : 447 Sq Mtr

1. ETP Process Flow (Typical)

Stage	Function
Screening Chamber	Removes large solids and food waste
Oil & Grease Trap	Separates oils/fats from wastewater
Equalization Tank	Balances flow and pollutant load
pH Correction Tank	Neutralizes acidic/alkaline effluents
Coagulation & Flocculation Tank	Settles suspended particles
Primary Clarifier	Settles sludge
Aeration Tank (Biological)	Reduces BOD/COD using aerobic bacteria
Secondary Clarifier	Separates biomass from treated water
Pressure Sand Filter (PSF)	Removes fine suspended solids
Activated Carbon Filter (ACF)	Adsorbs color and odor
Treated Water Tank	Collects final treated water
Sludge Drying Beds/Filter Press	Handles separated sludge

2. Design Parameters

Parameter	Specification
Capacity	5–50 KLD (customized as per load)
Influent BOD	300–600 mg/L
Effluent BOD	< 30 mg/L (as per PCB norms)

COD Reduction	≥ 80%
TSS Removal	> 90%
Treated Water Use	Reuse (non-potable) / safe discharge

3. Material of Construction (MOC)

- Tanks: RCC / FRP / MS with epoxy coating
- Piping: HDPE / UPVC / SS 304 (as required)
- Aeration System: Diffusers + blower (roots or centrifugal)
- Filters: MS rubber-lined/SS vessels with valves & gauges
- Pumps: SS/CI monoblock, chemical dosing pumps

4. Automation & Controls

- Control Panel with starters, timers, level sensors
- DO meter, pH meter, and flow meters (as needed)
- Optional PLC-based automation with SCADA
- Alarm for overload/high TDS/low pH

Sl. No	Machinery Description	Qty
22	Pallets & Crates	Set 01

Application: Storage, movement, stacking of raw/processed food items
Standards: FSSAI, IS 15560, ISO 8611 (Pallet Testing), MoFPI Guidelines

1. Plastic Pallets: Qty as per the production capacity

Parameter	Specification
Material	HDPE or PP (Food-grade, UV-stabilized)
Dimensions (L×W)	1200 mm × 1000 mm or 1200 mm × 800 mm
Load Capacity	Static: 3000–5000 kg
Design	4-way entry, single/double deck, anti-slip surface
Color	Blue (standard for food industry)
Hygiene	Smooth, washable, resistant to moisture/chemicals

2. Plastic Crates: Qty as per the production capacity

Parameter	Specification
Material	HDPE / Virgin Food-grade Polypropylene
Sizes (L×W×H)	600×400×250 mm, 650×450×315 mm (common)
Load Capacity	20–30 kg (stackable)
Design	Perforated or solid walls, hand grips

Stackability	Nestable when empty
Color Coding	Optional for process zones (Raw/Processed)

3. Usage Zones

- Raw material receiving
- Washed/peeled storage
- Post-processing staging
- Cold room stacking (pallets should be racking compatible)
- Finished goods handling/shipping

4. Compliance & Safety

- Food contact safe (non-toxic, BPA-free)
- Easy to clean/sanitize (HACCP-friendly)
- Resistant to temperatures from -30°C to +60°C
- No splinters or nails (unlike wood) – safer for food & personnel

Sl. No	Machinery Description	Qty
23	Dicer	01

1. Machine Capabilities

Parameter	Specification
Cut Types	Dices, strips, slices (flat/ crinkle)
Dice Size Range	~3 mm to 25 mm (adjustable via spindle & blades)
Capacity	~1 to 5 tons/hr (product & cut-size dependent)
Product Input Size	Up to 127 mm (5") diameter max
Discharge	Gravity or conveyor-fed to next stage

2. Construction & Design

Component	Material/Feature
MOC	Stainless Steel 304 (all product contact)
Blades	Hardened stainless steel cutting components
Frame & Guards	Stainless steel with safety interlocks
Hopper/Feed Chute	Large, designed for consistent feeding
Motor Power	~3–5 HP (standard), TEFC motor
Cleaning	Tool-less disassembly, washdown-safe design

3. Utilities & Safety

Utility/Safety Item	Specification
Power Supply	3 Phase, 415V, 50 Hz
Controls	Start/Stop, emergency stop, optional VFD
Safety Features	Electrical interlocks, overload protection
Sanitation	Hygienic design (HACCP & FSSAI compliant)

4. Compliance

- Conforms to USDA, CE, ISO, FSSAI standards
- Food-grade construction and hygienic handling
- Suitable for integration in pulping, canning, or freezing lines

Sl. No	Machinery Description	Qty
24	Compressors	01

1. Compressor Type (Select Based on Load & Application)

Type	Application
Semi-Hermetic Reciprocating	Medium load, flexible operation
Screw Compressor	High capacity systems like IQF, cold rooms
Scroll Compressor	Compact, efficient for small setups

2. Technical Parameters

Parameter	Specification
Refrigeration Capacity	~25–150 TR (as per system load)
Refrigerant	R-404A, R-507A, R-134a, R-717 (Ammonia)
Operating Temp	Evaporation: -40°C to +10°C
Power	3 Phase, 415V, 50 Hz
Efficiency	≥ 90% mechanical efficiency
Cooling Type	Air-cooled or water-cooled (for large setups)

3. Construction & Features

- Make: Bitzer / Kirloskar / Emerson / Mycom / Danfoss
- Casing: Cast Iron / Aluminum alloy (fully enclosed)

- Mounting: Skid-mounted with anti-vibration pads
- Lubrication: Oil pump with oil separator & sight glass
- Accessories: HP/LP switch, suction filter, discharge check valve

4. Control & Safety

- Digital controller or PLC interface
- Auto start/stop based on pressure/temperature
- Safety controls:
- High/low pressure cut-outs
- Oil level switch
- Motor overload protection

5. Compliance & Maintenance

- Complies with ASHRAE, ISHRAE, FSSAI (indirect use)
- Easy access panels for service
- Designed for continuous operation in tropical climates
- Supports integration with condenser, evaporator & control panels

Sl. No	Machinery Description	Qty
25	Ammonia Pumps	01

1. **Pump Type**

Type	Description
Centrifugal Pump (Seal less or Gland Type)	Standard for ammonia circulation
Design	Close-coupled or Monoblock, horizontal
Mounting	Base plate/skid-mounted with flexible coupling

2. **Technical Parameters**

Parameter	Specification
Flow Rate	10 to 60 m^3/hr (depending on plant capacity)
Head	15–30 meters TDH (Total Dynamic Head)
Working Pressure	16–25 bar (max)
Temperature Range	-40°C to +5°C
Fluid Handled	Anhydrous Ammonia (R-717), free from moisture
MOC (Wetted Parts)	Carbon Steel or SS 304 with ammonia compatibility
Seal Type	Mechanical seal or seal less canned motor (optional)

3. Motor & Power

- Motor Rating: ~3 to 7.5 HP (depending on flow/head)
- Motor Type: TEFC / Flameproof (optional), IP55, Class F insulation
- Power Supply: 3 Phase, 415V, 50 Hz
- Drive: Direct coupled with baseplate alignment

4. Safety & Accessories

- Suction/discharge isolating valves
- Pressure relief valve
- Non-return valve
- Vibration isolators
- Optional flow switch or pressure transmitter
- Compatible with oil separator, surge drum, or accumulator systems

5. Compliance & Maintenance

- Complies with IS 12235, ASHRAE Ammonia System Design, IIAR standards
- Designed for continuous duty in refrigeration
- Easy to maintain with spare seal kits and bearing sets available
- Should be installed below the ammonia liquid level for gravity feed suction

Chapter – 5

Price Schedule (to be utilized by the bidders for quoting their prices)

Note: In Financial Bid, item wise and schedule wise total bid value to be quoted online only. Corresponding soft copy of Cost sheet to be uploaded in financial bid. Uploading of Cost sheet along with Technical Bid leads to technical disqualification.

(In INR)

Sl No	Machinery Details	Qty	Bid Price			Total Bid Value
01	Racking System- Cold Storage	01				
02	Plastic Roto Pallets	1782				
03	Plate type Evaporate Condenser	02				
04	Falling Film Chiller	01				
05	Insulated Water Base Tank	01				
06	Recirculation Water Pump	01				

07	Ripening Equipment	05				
08	Automatic Gas Dosing with Piping & Electric cables	05				
09	Refrigeration System for IQF & 2 Blast Freezers	01				
10	Refrigeration system for Cold Rooms & Anti Rooms	01				
11	IQF line	01				
12	PUF Wall, Ceiling & Partition Panels, Floor Insulation, Insulated Doors, Flashings & Accessories	LS				
13	Corn-Pre Processing Line	01				
14	Mango Pre-Processing Line	01				
15	Retort	01				
16	Canning	01				
17	Pulping Line	01				
18	Electrical Lines & Systems	LS				
19	Boiler	01				
20	Water Treatment Plant	01				
21	Effluent Treatment Plant	01				
22	Pallets & Crates	LS				
23	Dicer	01				
24	Compressors	01				
25	Ammonia Pumps	01				
	Total Bid Amount					

Note: The bidders to note that, the prices should include of all costs including supply, installation, training, commissioning and Warranty obligations. The bidders to advised to visit the unit and take actual measurements for installation.

Chapter – 6 Contract Form

BID CONTRACT FORM

Bid contract Agreement made on _____day of

_____. Contract Reference No:

BETWEEN

The CEO, Andhra Pradesh MSME Development Corporation, 2nd Floor, PVS Towers, Mangalagiri, Guntur District – 522503, Andhra Pradesh, India (hereinafter called “the Purchaser”) on behalf of Sunrise Nature Food Foundation, (SPV), Flat No: 206/A, Kranthi Pride Apartment, Muchavanipeta, 17 Ward, Fhazul Bag Peta, Srikakulam, Andhra Pradesh – 532001, the end user constituted as Special Purpose Vehicle under Govt. of India, Ministry of MSME, MSE-CDP guidelines (herein after referred as End User)

and

_____ a company/firm incorporated under the laws of India and having its registered office at _____, who is a successful bidder in the contract (hereinafter called “the Supplier”).

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. The Supplier having successful in the Contract, agreed to supply the following machinery as per the tender documents, followed by installation, Testing, Commissioning, Trial Run of Machinery & Equipment, training of staff along with providing Warranty and Maintenance services as per the Contractual obligations to Sunrise Nature Food Foundation, (SPV), Flat No: 206/A, Kranthi Pride Apartment, Muchavanipeta, 17 Ward, Fhazul Bag Peta, Srikakulam, Andhra Pradesh – 532001, PAN NO – ABJCS6646R.

Schedule ___consists of __Machineries

Sl No.	Machinery Details	Qty	Total Price inclusive of all charges as per contractual Agreement in Rupees
01			
02			
03			
04			
05			
	Total Contract Value		‘’

2. **Performance Security**: The Supplier, being the successful bidder is submitted the Performance Security(s) in the form of Bank Guarantee favouring **M/s Sunrise Nature Food Foundation**, (SPV), Flat No: 206/A, Kranthi Pride Apartment, Muchavanipeta, 17 Ward, Fhazul Bag Peta, Srikakulam, Andhra Pradesh – 532001 from the Indian Nationalised Bank having branch in Srikakulam as for the following:

Sl No	Amount of Rs. Performance Security	PBG Details	Validity Period

The End User will release the Performance Security to the Seller on successful completion of the contract. The PBG may be encashed if the seller fails to deliver in time, deficiency in services etc.,

3. **Delivery Schedule**: Supply and commissioning to be completed within 120 days on award of the contract.
4. **WARRANTY**: The applicable OEM warranty not less than one year to be provided to supplied items.

5. **SUPPLIER’S RESPONSIBILITY**:

Supplier is wholly responsible for supply, installation and other services as per the contractual agreement. For smooth execution the following are to be adhered:

5.1 **Site Inspection**: As the specialized machinery requires proper ergonomics, the supplier should give their designs in advance for site preparation. Regular visits and supervision by Supplier are must as entire responsibility lies on them.

5.2 **Installation precautions**: The Supplier is wholly responsible for the machinery installation as per the OEM guidelines. Proper due care to be taken to avoid any mishap. Proper site preparation, Proper Packing, Planned Transportation, Suitable Insurance, Proper electrification & earthing, Manpower training, etc., will helps in smooth installations. The supplier to ensure and written communication with Purchaser and end-user simultaneously will helps in proper coordination.

5.3 **Machinery User Manuals, Drawings, Flow Charts etc.,** The machinery drawings, flow charts, user manuals, Periodic Maintenance schedules, list of spare parts, any other documents for the smooth functioning of equipment to be supplied by the Supplier. The medium of language is English for this purpose.

5.4 **Obsolete Machinery:** The Supplier to supply the latest machinery or machinery having suitable life and not any obsolete Machinery.

5.5 **Technology Upgradation**: The supplier is under obligation to upgrade in technological developments happened during the Warranty Period. As the food processing technology uses latest software, in time software upgradation is must.

5.6 **Registered Office in Andhra Pradesh:** The Supplier may open a registered office in Andhra Pradesh and after sales support to be done through this office. Machinery Tax invoicing is on the name of Sunrise Nature Food Foundation, (SPV), Flat No: 206/A, Kranthi Pride Apartment, Muchavanipeta, 17 Ward, Fhazul Bag Peta, Srikakulam, Andhra Pradesh – 532001, PAN NO – ABJCS6646R.

5.7 **PAYMENT TERMS**: The Supplier to submit the formal request along with necessary documents as per the contract terms for release of payments to the Purchaser. The Purchaser, ie., The CEO, APMSME Development Corporation to initiate the payment process on receipt of completed documents as per the following manner:

Sl No	Details	Payment Value & Conditions
2.4.1	On signing of Contract	30% of the contractual value
2.4.2	On intimation of Machine readiness	30% of Machinery cost on confirmation from the OEM that machine is ready to dispatch and after demonstration of its working condition to end users or their authorized representative. In case of Imported machinery, payment will be released through conditional Letter of Credit (LC) on shipment from the OEM country of origin.
2.4.3	On Installation of	30% of the Contractual value on confirmation and submission of requisite documents from End User.

	Machinery	
2.4.4	On completion of contract	Balance 10% of the contractual value released on fulfilling of terms & conditions of contract on confirmation and submission of requisite documents from End User.

5.8 In Consideration of the payments to be made by the Purchaser to the Supplier as mentioned, the Supplier hereby covenants with the purchaser to provide the goods and services and to remedy defects therein in conformity in all respects with the provisions of the contract.

5.9 The Purchaser hereby covenants to pay the supplier in consideration of the provision of the Goods and Services and the remedying of defects therein, the contract price or such other sum as may become payable under the provisions of the contract at the times and manner prescribed by the contract.

6. Special Conditions: The Supplier to deliver the gods and performance of the services in accordance with time schedule. Any deviation may be dealt in the following manner:

6.1 **Force Majeure**: In the event of unforeseeable circumstances that prevent Supplier from fulfilling the contract, the supplier shall promptly notify the Purchaser for taking remedial actions.

6.2 **Liquidated Damages:** If the Supplier fails to fulfil the contractual obligations, a fine of 1% for week till the completion/termination of contract will be imposed subject to a maximum of 5% of the total contract value. Besides the supplier may be blacklisted as per the existing rules & regulations.

6.3 **Termination Insolvency**: If the Supplier becomes bankrupt or otherwise insolvent prior or during the contract, the Purchaser may terminate the contract as per the law.

7. **Resolution of Disputes**: In the event of any unfortunate dispute, the Purchaser and the Supplier shall make every effort to resolve amicably by direct formal negotiations. If the dispute is not resolved in a month's duration, either party may seek remedy as per the Arbitration & Reconciliation Act 1996 and Arbitration & Reconciliation (Amendment) Act 2021.

IN WITNESS WHERE OF the Purchaser and the Supplier have caused this agreement to be duly executed by their duly authorized representatives the day and year first above written.

For and on behalf of Supplier
M/s
MD or
President/Authorized representative

For and on behalf of Purchaser
The CEO AP MSME
Authorized representative

Firm Seal Office Seal

In the presence of

M/s Sunrise Nature Food Foundation,
President

Firm Seal

Chapter – 7

Other Standard Forms, if any, to be utilized by the Purchaser and bidders Annexure I

APMSMEDC Ref. No.....

Bid Security (EMD) Form

(To be issued by a bank scheduled in India and having at least one branch in Mangalagiri)

Whereas..... (Here in after called "the Bidder") has submitted its bid
Dated ……..... (Date) for the execution of..... (Here in after called "the Bid")
KNOW ALL MEN by these presents that WE ..... of..... having our
registered office at..... (hereinafter called the "Bank") are bound unto the CEO, Andhra Pradesh MSME Development Corporation. (hereinafter called "The APMSMEDC") in the sum of ..... for which payment well and truly to be made to the said APMSMEDC itself, its successors and assignees by these presents.

The conditions of this obligation are:

1. If the bidder withdraws its bid during the period of bid validity or
2. If the bidder, having been notified of the acceptance of its bid by the APMSMEDC during the period of bid validity:
   a. fails or refuses to execute the contract form if required;or
   b. fails or refuses to furnish the performance security, in accordance with the bid requirement;
   c. submits fabricated documents

We undertake to pay the APMSMEDC up to the above amount upon receipt of its first written demand, without the APMSMEDC having to substantiate its demand, provided that in its demand the APMSMEDC will note that the

amount claimed by it is due to it, owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to and including 45 days after the period of the bid validity, and any demand in respect thereof should reach the Bank not later than the above date.

Place: Date:

Signature of the Bank and seal.

Tender Ref. No.....

Annexure II

Performance Security Form

(To be issued by a bank scheduled in India and having at least one branch in

Mangalagiri) To..... (Address of SPV)

WHEREAS..... (Name of Vendor) hereinafter called “the Vendor” has undertaken, in pursuance of Contract No..... Dated ... (Date), to supply..... called
“the Contract”.

AND WHEREAS it has been stipulated by you in the said Contract that the Vendor shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with the Supplier’s performance obligations in accordance with the Contract.

WHEREAS we have agreed to give the Vendor a Guarantee:

THEREFORE WE hereby affirm that we are Guarantors and responsible to you, on behalf of the Vendor, up to a total of Rs. ..... and we undertake to pay you, upon your first written demand declaring the Vendor to be in default under the Contract and without cavil or argument, any sum or sums within the limit of Rs..... (Amount of Guarantee)
as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This guarantee is valid until the ..... day of (Date)

Place:

Date: Signature and seal of guarantors

Form P-1: Bidder Information, Company Registration Certificate (on company's letter head)

1	Name of the organization	
2	Company Registration Certificate No., & Year of Establishment	
3	MSME UDYAM No.	
4	PAN No	
5	GST No	
6	Registered Office Address	Phone/Mobile No e-mail:
7	Manufacturing/Service unit Address	Phone/Mobile No e-mail:
8	Manufacturing/Service Unit's address in Andhra Pradesh (if any)	Phone/Mobile No e-mail: No of Support Engineers in AP:
9	Details of Purchasing of Tender document.	On line transfer details UTR No. and date
10	Details of EMD furnished	
11	Previous experience of supply with Govt of Andhra Pradesh and Govt of India (Attach the Experience certificates)	
12	Additional information if any	

Note: Bidder to attach copies of the certificates mentioned in Form 1.

Place:

Bidder's signature

Date: and seal.

Form P-2: Certificate regarding Read & Understood the Contract Documents, etc,

(on bidder company's letter head)

CERTIFICATE

I/We, M/s _____, certify the following:

i. I/We have read and understood the tender document and corrigendum (if any) published in CPPP portal vide tender id No _____.
ii. Certified that, to arrive with the correct pricing, I/we have visited the site and understood the turnkey project requirements as per the Project requirements on meeting with the SPV management.
iii. On successful award of contract, I/we execute the contract as per the terms and conditions of the contract.

Place: Bidder's signature
Date: and seal.

Form P-3 Manufacturer Authorisation forms

APMSMEDC Tender

ref.no. Manufacturer

Details:

Authorized Dealer/Distributor:

Manufacturer Authorization

The authorization should be in the nature of a letter, memorandum or certificate regularly granted by the manufacturer to its channel partners, authorized solution providers, system integrators, distributors, etc. or a specific letter issued for purposes of this bid. Such communication should include statements / undertakings from the said manufacturer to the following effect:

1. Guarantee and warranty coverage in respect of the goods and services manufactured by the said manufacturer shall be honored by that manufacturer, their channel partners, distributors, authorized service centers as the case may be.
2. The manufacturer updates the bidder and their technical personnel with relevant technical literature, training and skill transfer workshops etc. on a regular basis.
3. The manufacturer provides back-to-back technical support to the said bidder on a continuing basis.
4. The said bidder is authorized to provide service and solutions using hardware, firmware and software as the case may be.

Manufacturer Authorisation given for the following Machinery:

Sl No	Machinery Details	MAF Issued

Note:
The letter of authority should be signed by a person competent and having the power of attorney to bind the manufacturer. OEMs can provide maximum of three MAFs only.

Form P-4: Details of service centers in AP or undertaking

S.No	Full Address of service center	Contact person with phone No.	No. of support engineers
A	B	C	D

Form P-5: Bidder Financial Details
(On company's letter head)

Certified that our firm has having the following financial details:

Sl. No.	Financial Year	Sales Turnover in Rs.	Profit after Tax in Rs.	Net worth in in Rs.

	(1)	(2)	(3)	(4)
1	2022-23			
2	2023-24			
3	2024-25			

Place: Bidder's signature Certified by CA
Date: and seal. and seal.

Form P-6: List of supplies item wise in the last three Financial Years

(Item wise to be furnished along with Technical Tender)

S.No	Customer Full Address	Year of supply	Items supplied to the customer	Qty	PO No
A	B	C	D		

Form P-7: Declaration Regarding Clean Track Record

To,
The CEO
Andhra Pradesh MSME Development
Corporation 2nd Floor, PVS Towers,
Mangalagiri, 522503

Sir,

I have carefully gone through the Terms & Conditions contained in the Tender Document [No._____]. I hereby declare that my Company/Consortium Partners has not been debarred/ black listed as on Bid calling date by any State Government, Central Government, Central & State Govt. Undertakings/enterprises/ Organizations and by any other Quasi Government bodies/Organizations, in India for non-satisfactory past performance, corrupt, fraudulent or any other unethical business practices. I further certify that I am competent officer in my company to make this declaration.

Yours faithfully,

(Signature of the Bidder) Printed Name Designation
Seal Date:
Business Address:

Form P-8: Undertaking in compliance with GFR Rule144(xi)

Ref:
Date:

To,
The CEO
Andhra Pradesh MSME Development
Corporation 2nd Floor, PVS Towers,
Mangalagiri, 522503

Dear Sir,

Sub: Tender for Supply & Installation of food processing and ancillary equipment in Srikakulam

Ref: Tender Reference _____

I/We, < Bidder / OEM Name> have read the clause regarding restrictions on procurement from a Bidder/ OEM of a Country which shares a land border with India.

I/We hereby certify that I/We, <OEM/Bidder Name> is not from any such country or, if from such a Country, has been registered with the following Competent Authority:

1. Details of competent authority:
2. Registration Certificate Ref. No.: (copy to be enclosed)
3. Products for which registered: (registration should be valid for the offered product)

I/We hereby certify that I/We in the event of becoming a successful bidder shall not sub- contract works to any Contractor from a Country which shares a land border with India unless such Contractor is registered with the Competent Authority, as per GFR rule 144(xi).
.
I/We hereby certify that I/We fulfill all requirements in this regard and eligible to be considered
For
<OEM/Bidder> Authorized signatory:
Name of the authorized person:
Designation:
Name of Bidder: Stamp of Bidder:

NOTE:

1. The letter should be submitted on the Letter head of the Bidder / OEM and should be signed by the Authorized signatory.
2. Any deviation would lead to summary rejection of bids.
3. Where Applicable, evidence of valid registration of the Competent Authority shall be attached.

Form T -1

Item-wise technical compliance statement as per technical specifications mentioned in Chapter - 4 of this document (taking into consideration all the amendments issued to this document, if any) is to be submitted in the following format:

Item	Description	Specification of proposed item along with Part Code, Qty. & Description if any (Part code details must be provided if available)	Compliance (Complied /Higher/ Lower)	Reference for proof of compliance (Required docs to be uploaded along with technical bid)
		-		

We shall comply with, abide by, and accept without variation, deviation, or reservation all requirements detailed in Section IV: Schedule of Requirements in the Tender Document, except those mentioned above. If mentioned elsewhere in our bid, contrary terms and conditions shall not be recognized and shall be null and void.

……
……..
(Signature
with date)

……
……..
(Name and designation) &
Office Seal