Tender No.UHF/DR/VIII-51/2021/- 2977
Dated: 02.08.2025

Re-tender document

Re-tender for
Processing Lines including primary, secondary and tertiary processing, raw material/finished product storage, packing.

Tender Last Date: 18.08.2025

Directorate of Research
Dr YS Parmar University of Horticulture and Forestry
Nauni-Solan (HP) 173230

PREFACE

Sealed e-tender are re-invited by the Director of Research, Dr YS Parmar University of Horticulture and Forestry, Nauni-Solan under Two Bid System i.e. Technical Bid and Financial Bid from reputed, experienced and financially sound Companies/Firms/Agencies for **Component Wise Specifications of Processing Lines including primary, secondary and tertiary processing, raw material/finished product storage, packing**.

- **NAME AND ADDRESS OF THE AUTHORITY**

The Director of Research
Dr YS Parmar University of Horticulture and Forestry
Nauni-Solan (HP) 173230

- **ADDRESS FOR DOWNLOADING TENDER DOCUMENT:**

https://hptenders.gov.in

- **CONTACT PERSON FOR ANY QUERIES RELATED TO TENDER**

Dr Rakesh Sharma, Professor & Head, Deptt. of Food Science & Tech., UHF Nauni, Solan.
Mobile No. 9418061369.

- **BRIEF DETAIL OF THE e-TENDER**

Date of online publication :	**04.08.2025(05.00 PM)**
Document download start and End date :	**04.08.2025(05.30 PM) upto 18.08.2025(10.00 AM)**
Bid submission start and end date :	**04.08.2025(05.30 PM) upto 18.08.2025(10.00 AM)**
Physical submission of EMD and cost of tender document (Cover 1):	**18.08.2025(11.00AM)**
Date of Technical bid opening, evaluation of technical bid followed by opening of financial bid :	**18.08.2025(11.30AM)**

The cost of tender document is **Rs.4,000/- (Rupees Four Thousand)** only payable by **Demand Draft in favour of "The Comptroller, Dr YS Parmar University of Horticulture & Forestry, Nauni-Solan", Earnest Money (EMD) of Rs. 50,000/- duly pledged in name of the Comptroller, UHF Nauni, Solan** which should be submitted in sealed envelope with letter head of company by 11.00 AM on 18.08.2025. The cost of tender document is **NON-REFUNDABLE**. **The tender submitted without tender cost will be** rejected straight way.

A) **General Instructions**

a. E-tenders in Two Bids (Technical/Techno Commercial & Financial/Price bid) basis are invited by the Director of Research from interested and eligible Manufacturer/Fabricator or their authorized distributors/dealers, for supply, installation, testing and commissioning of Food Processing Unit. The tentative estimated cost of the entire project is between Rs.1.5 to 2.00 crore.

b. Both techno-commercial and financial bid must be submitted online at Tenders Himachal Pradesh site https://www.hptenders.gov.in. on or before 18.08.2025. In addition, physical copy of the technocommercial bid duly signed & stamped along with EMD &tender fee etc. must be submitted in physical form in the office of the undersigned on or before 18.08.2025, 1100 hrs. The same must be submitted in properly sealed manner & superscribed as "Tender for Food Processing Unit for the Deptt. of Food Science and Technology, Dr YSP UHF Nauni, Solan". It must be addressed to the Director of Research and must contain the particular of the bidder in bottom left hand of the cover. Any tender received after valid period shall not be considered. Tenders without EMD &tender fee and techno-commercial bid in physical form shall be rejected straightway.

   NB:- Financial bid is to be submitted only in online mode. No physical copy of the same is to be submitted.

c. The complete bidding process is online. Bidders should have possession of valid digital Signature Certificate (DSC) for online submission of bids. Prior to bidding DSC needs to be registered on the website mentioned above.

d. Tenderer/ Bidders are advised to follow the instructions provided in the 'Instructions to the Tenderer/Bidders for the e-submission of the bids online through the Tenders Himachal Pradesh Portal at https://www.hptenders.gov.in.

e. Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.

f. The tender shall be submitted online in two part, viz., technical bid and financial bid. All the pages of bid being submitted must be signed and sequentially numbered by the bidder irrespective of nature of content of the documents before uploading.The offers submitted by Telegram/Fax/email shall not be considered. No correspondence will be entertained in this matter.

g. Any future clarification and/or corrigendum(s) shall be communicated through the Public Procurement Portal for e Procurement at https://www.hptenders.gov.in. The bidders are required to regularly check the website to know about any/all such corrigendum(s) as only those bids, taking care of such corrigendum(s) shall be considered for finalization of the tender.

h. Bidder should necessarily enclose a covering letter mentioning index of documents submitted with proper numbering.

i. All the duly filled/completed pages of the tender should be given serial/page number on each page and signed by the owner of the firm or his Authorized signatory. In case the tenders are signed by the Authorized signatory, a copy of the power of attorney/authorization may be enclosed along with tender. A copy of the terms & conditions shall be signed on each page and submitted with the technical bid as token of acceptance of terms & conditions. Tender with unsigned pages/incomplete/partial/part of tender if submitted will be rejected out rightly.

j. The competent authority of the University reserves all rights to accept or reject any/ all tender(s) without assigning any reason and also reserves the right to reject any bid which in his opinion is non-responsive or violating any of the conditions/specifications without any liability to any loss whatsoever it may cause to the bidder in the process.
k. The bidder has to pay non-refundable **tender fee of Rs 4000/-** (Rs Four Thousand) in shape of DD payable to Comptroller, UHF, Nauni drawn at SBI Nauni/UCO Nauni.
l. The bidder shall pay the respective amount of Earnest Money deposit (EMD) of complete assembly for which the bid is submitted by way of FDR in favor of "Rs 50,000 (Rs Fifty Thousand)" drawn on any Nationalized Bank/ Scheduled Bank and payable at Nauni, Solan.
m. Bids received without tender fees and Earnest Money deposit (EMD) shall stand rejected and thus shall not be considered for evaluation etc. at any stage. The Earnest Money Deposit of the successful Bidder may, at the discretion of Tender Inviting Authority be adjusted towards the Security Deposit payable by the Bidder.

B) **Eligibility Criteria**

The bidders must fulfil the following eligibility criteria: -

i. The bidder should be an established Manufacturer/fabricator of Food Processing Equipment or Authorized Supplier/ Dealer, Turnkey Solution Provider or EPC (engineering, procurement and commissioning) contractor for food processing lines.
ii. The bidder's firm must be registered with the appropriate authority and shall be engaged in manufacturing and/ or supply of similar machines or turnkey execution of for the last three (3) years. The bidder has to enclose Registration Certificate or any other documentary proof.
iii. The average annual financial turnover during the last 3 financial years ending on 31st March of the previous financial year (2024-25) should be at least Rs. 1 crore/year. Copies of audited balance sheet of 2022-23, 2023-24 and 2024-25 to be attached as documentary proof.
iv. The bidder also required to enclose at least 03 successful satisfactory supply/ work order and installation Certificate/Completion Certificate/Performance Certificate for work in of Food Processing Lines of Rs.50.00 lakhs or more for last 03years ending 2024-25.
v. The bidder should have PAN, GST Registration, UdhyogAadhar/ Udyam registration and Import License, as applicable in their case and should submit a copy of each of these documents along with acknowledgement copies of the IT Returns for the last 3 financial years.
vi. Supplier or Authorized Dealer/distributor of a reputed foreign or Indian manufacturing company. The bidder has to enclosed appropriate registration and dealership letter/certificate.
vii. The tender will be awarded to a single bidder; therefore, the firm must be capable of supplying the complete set of equipment listed under Section A – Processing Lines (including primary, secondary, and tertiary processing equipment, raw material/finished product storage, and packaging) as well as Section B – Boilers, RO Plants, and other auxiliary equipment and Section C- Food Testing laboratory.

C) **Techno-Commercial Bid**

1. The tender should be submitted online.
2. The technical bid of the tender will be opened on 18.08.2025 at 1130 hrs. The financial bid will be opened after the evaluation of the technical bid.
3. The material should be supplied and installed at Dr. Yashwant Singh Parmar University of Horticulture and Forestry, Nauni, Solan-173230.
4. Rates quoted should be F.O.R. site at Dr. Yashwant Singh Parmar University of Horticulture and Forestry, Nauni, Solan-173230. The rate/cost of the quoted item must be inclusive of all kind of delivery charges including unloading at the work site.
5. The project is to be completed on a turnkey basis, including unloading at the site, installation, and full-capacity trial run by the supplier. Any minor item required for the operation of the unit but missed in the specifications shall also be under the supplier's scope.
6. Rates should be quoted in figures as well as in words.
7. Rates should be quoted inclusive of GST and all applicable taxes and levies.
8. No interest shall be payable on the earnest money deposit (EMD).
9. Items of the tender will be evaluated as a single lot, and the order will be placed accordingly.
10. The successful bidder must supply the material within 90 days from the date of the Purchase Order (P.O.), failing which the materials shall not be accepted and the order will be cancelled and Earnest Money deposit will stand forfeited.
11. The rates quoted should be valid for 90 days.
12. Non-compliance with the terms and conditions of supply shall lead to forfeiture of the security deposit and/or blacklisting of the supplier.
13. The University reserves the right to accept or reject any or all tenders without assigning any reason.
14. The bidder must have supplied equipment and machinery to Government departments/corporations/universities/industries during the last 3 financial years (a list of similar work must be provided).
15. The bidder should not have been debarred/restrained/blacklisted by any Central/State Government agency, autonomous body, PSU, university, or institute in the past for similar works (Self Certificate to be provided).
16. The bidder should submit a specification compliance sheet as per the bid.
17. A warranty of at least 2 years is required for equipment and machinery items against manufacturing defects, starting from the date of the successful trial run.
18. If any bidder fails to meet the required criteria or does not submit the requested documents online, the tender bid will be rejected without further correspondence.
19. All disputes shall be subject to Solan jurisdiction.
20. The supplier shall be responsible for the proper functioning of the items after supply. If any item is found unsatisfactory, it must be lifted by the supplier at their own expense, and appropriate action will be taken.
21. If the L-1 bidder is unable to supply the required quantity within the stipulated period, Dr. YSP UHF, Nauni, may approach the L-2, L-3, and subsequent bidders to supply the remaining quantity at the same rates, terms, and conditions as offered by the L-1 bidder.
22. The bidder shall pay the respective amount of Bid Security (EMD) of the respective Machinery and equipment for which the bid is submitted by way of FDR in favour of "The Comptroller, Dr YS Parmar University of Horticulture and Forestry" drawn on any

Nationalized Bank/ Scheduled Bank and payable at Nauni / Solan. Bids received without tender fees and Earnest Money deposit (EMD) shall stand rejected and thus shall not be considered for evaluation etc. at any stage. The Earnest Money Deposit of the successful Bidder may, at the discretion of Tender Inviting Authority be adjusted towards the Security Deposit payable by the Bidder.

23. The EMD of the successful bidder will be retained until the supply is completed.
24. The supplier shall provide onsite training to the staff at Dr. YSP UHF, Nauni for minimum of 07 days from his own resources and the University shall not bear any cost for the same.
25. The supplier shall arrange replacement of any part damaged during operation on a cost basis for a period of 5 years after warranty.
26. During installation and training period, the supplier shall make their own arrangements for boarding and lodging. The machineries shall be installed successfully within one month after supply of machines.
27. Bidders may visit the site at Dr. YSP UHF, Nauni, on any working day before submitting the bid.
28. The bidder will be responsible for damage or loss in transit and replace goods broken or lost within 30 days from the date of notice thereof.
29. All the bidders are required to submit the literature/catalogue of equipment with the tender.
30. The bidders must also provide a layout of the machinery corresponding to the four processing lines mentioned above, to be installed in the processing hall/area with approximate dimensions of 22 × 7 meters.

Evaluation of technical bid

i) The technical bid will be evaluated by the Technical Evaluation Committee (TEC) as per pre-decided and approved parameters.

ii) If required, the Technical Evaluation Committee (TEC)/ Host Institute Authority may seek specific clarifications from any or all Bidder (s) at this stage. The Authority shall determine the Bidder that qualifies for the next phase after reviewing the clarifications provided by the Bidder(s). The bidder may be asked to make a presentation before the Purchase Committee.

iii) The Authority reserves the right to modify the evaluation process at any time during the process, without assigning any reason, whatsoever, and without any requirement of intimating the Bidder of any such change. At any time during the process of evaluation the Authority may seek specific clarifications from any or all Bidder (s).

Evaluation of Financial Bids

i) In this phase, the Financial Bids of the Bidder, who are technically qualified in the Technical Bid, shall only be considered/opened.

ii) The bid of agency quoting lowest for the overall turnkey execution as per the scope of work in their financial bid will be accepted as the successful bidder.

Award of Work/ Supplies

i) The bid of agency quoting lowest financial bid i.e. L-1 bidder will be awarded the work/ supply order. The tender shall be treated as a single document and the financial bid will be finalized on the basis of lowest financial bid quoted by a firm for complete tender.

ii) Acceptance of tender will be intimated to the successful bidder signed by the authorized signatory of the institution.

iii) In the event of tender being accepted the quotations will be converted into contract/agreement.

iv) In case the bidder recommended for award of contract is not ready to accept the offer/found inappropriate, the proposal shall be made to subsequent bidder.

v) Any civil work necessary for the proper installation and functioning of the equipment—including electrification for the main load and individual units, as well as modifications to flooring and drainage in accordance with the positioning and operational requirements of the machinery in the processing hall—shall be undertaken by the bidder.

vi) Terms of Payment:

- 50% on receipt of machines/material (Ist installment)
- 20% on installation of unit (2nd installment)
- 30 % on successful trial run of unit and submission of Performance security by Supplier.

vii) Performance Security shall be obtained from the successful bidder on satisfactory trial run of unit at a rate of 10 percent of the value of the contract in shape of duly pledged Fixed Deposit in favour of Comptroller, UHF Nauni or Bank Guarantee from a commercial bank. Performance Security shall remain valid for a period of 90 days from the date of completion of contract including warranty and guarantee period to the best of satisfaction of Procuring Department.

Check List of Document to be uploaded by the bidder / firm/ agency duly signed by the firm :-

1. Tender fee of Rs.4,000/- in shape of Demand Draft.
2. EMD of Rs.50,000/- in shape of FDR.
3. A covering letter mentioning index of documents submitted with proper numbering.
4. A copy of power of attorney / authorization.
5. Manufacturer / Fabricator of Food Processing Equipments / Authorised dealer.
6. Bidder shall be engaged in manufacturing / fabrication / supply of similar machines or turnkey execution in last three (3) years.
7. Annual Financial Turnover during the last 3 financial years.
8. Submit at least 02 successful satisfactory supply/work order and installation certificate / completion certificate.
9. PAN, GST, Registration and other important license.
10. IT Returns for the last 3 financial years.
11. Warranty of two years for equipment and machinery items against manufacturing defects, starting from the date of the successful trial run.

SPECIFICATIONS

Common incubation centre for processing of mushroom, vegetables, fruits, spices and herbs Dr Y S Parmar University of Horticulture & Forestry, Nauni, Solan (HP) 173230 (India) invite tenders (technical and financial separately) from eligible bidders for Supply, Installation, Commissioning of Food Processing Machinery and Equipment for Establishment of Common incubation centre for processing of mushroom, vegetables, fruits and spices under PMFME Project.

A	**Component Wise Specifications of Processing Lines including primary, secondary and tertiary processing, raw material/finished product storage, packing**	
S. No.	**Line**	**Technical Specifications**
1.	**Primary Processing of fruits, vegetables, mushroom and spices section**	**1. Sorting Conveyor with suitable platform on both sides (1 No):** ➢ A sorting conveyor should have conveyor belt size of 6x2 feet, with adjustable speed. ➢ The capacity should be 100kg per load ➢ The material must be made of MS frame with PVC conveyor belt. ➢ The platforms shall be equipped with platforms on both sides for sorting, made of sturdy, non-slip material. **2. Industrial Fruit and Vegetable Washing Machine with all the accessories (1 No):** ➢ Suitable for washing different types of fruits and vegetables like apple, apricot, plum, mangoes, litchi, tomato, carrot etc. Provided with air agitators, Roller Type conveyor, water circulation facility and drain valve at bottom for cleaning. All contact parts should be made up of SS 304. ➢ Capacity: 500 Kg/Hour. Gear box with 2 HP provided for belt and air blower 1 HP with spray heads. ➢ Fresh water sprinkling system with nozzle and Water recirculation system with 1.5 HP pump ➢ The washing mechanism must have brush rollers and water spray nozzles for effective dirt and pesticide removal. ➢ There must be PLC based control panel. ➢ Should be provided with required MS pipelines & fittings, SS pipelines & fittings, installation and commissioning **3. Vegetable Curing Facility (1 No):** ➢ A vegetable curing facility should have capacity of 500 kg and material of construction should be SS304. ➢ It should have adjustable temperature range (20-80°C). ➢ It should maintain humidity control system to maintain required moisture levels for uniform curing around 50-95%. ➢ It should have ventilation by means of fans and air circulation. **4. Hydro cooling facility (1 No):**

		➢ It should have capacity of 250 kg/hr. ➢ The cooling method must be using chilled water or ice for rapid cooling, lowering product temperature to 1 to 5°C. ➢ The material of construction should be made of SS304. ➢ It must be equipped with water spray nozzles, cooling tanks, and pumps ➢ It must have insulated panels and high-efficiency water pumps. ➢ Should be provided with required MS pipelines & fittings, SS pipelines & fittings, installation and commissioning **5. Size grader (1 No):** ➢ It must be capable of grading 250 kg of fruits or vegetables/hr based on size. ➢ The grading mechanism must use conveyor system with adjustable screens or rollers. ➢ It must feature adjustable grading settings to accommodate varied sized of fruits and vegetables, ranging from small to large. ➢ It should be designed for high efficiency with minimal damage to delicate produce. **6. Refrigeration unit for cold room (1 No):** ➢ It should have capacity of 1000 kg of perishable goods, and the temperature range should be 0°C to 10°C. ➢ It should have energy-efficient refrigeration units with evaporators and condensers for rapid cooling with air infusion technology and temperature stability along with automatic humidity control system. ➢ There should be an air circulation system to ensure even temperature distribution and adjustable shelving or pallet racks. ➢ It must be equipped with temperature and humidity alarms, emergency lighting, and backup power. ➢ There should be digital control panel for monitoring and adjusting temperature, humidity, and cycle times, with remote monitoring options available. **7. Multifunctional Vegetable Cutter Slicer (1 No):** ➢ It should have capacity of cutting 500 kg of vegetables /hr, made from SS 304 with minimum 1 HP high power motor. ➢ There must be variable speed control for adjusting cutting speed based on product type and desired texture with interchangeable blades for slicing, dicing, and shredding. ➢ Easy disassembly for thorough cleaning, with removable blades and washable parts. **8. SS Working Tables (3 No):** ➢ The working tables should made of SS304 of high quality with dimension of 8x4x4 feet

2.	**Juice and Beverage Processing**	**1. Double Jacketed Kettle (1 No):** ➢ The kettle should be made of SS304 with capacity of 250 kg. ➢ It must include automatic temperature control system with adjustable settings for precise heating up to 121°C or higher.

	Section	➢ There must be internal agitator for even mixing of ingredients, preventing burning or sticking. ➢ It should be easy to tilt and have drain valve at the bottom. ➢ It must have pressure relief valves, temperature gauges, and emergency stop. ➢ Should be provided with required MS pipelines & fittings, SS pipelines & fittings, installation and commissioning **2. Fruit Mill (1 No):** ➢ It should process up to 250 kg of fruits /hr with high-power motor of minimum 2 HP. ➢ The material shall be constructed with SS304. ➢ It must features variable speed control. **3. Hellicolloidal juice extractor (1 No):** ➢ Suitable for continuous extraction of juices from fruits like apple, pear, kiwi, pineapple, lemon, orange etc. Maximum recovery of juice without crushing seeds and without making the juice bitter. All contact parts should made up of SS 304. ➢ The juice extractor must be capable of extracting juice from up to 250 kg/hr with motor power 5 kW. ➢ Should be provided with required MS pipelines & fittings, SS pipelines & fittings, installation and commissioning **4. Rack and Cloth Juice Extractor (1 No):** ➢ It should have capacity of 250 kg/hr. ➢ It should be made of high quality SS 304. ➢ It should have hydraulic pressure system with minimum motor power as 3 HP. **5. Raw Juice Collection Tank with suitable transfer pump (1 No):** ➢ Should be made of SS 304 with storage capacity of 500 litres and should be vertical in shape. ➢ It should have insulated system and split half cover. ➢ It should have inlet and outlet valve. ➢ It should have pump made of SS 304 with motor power of 0.5 kW. ➢ Should be provided with required MS pipelines & fittings, SS pipelines & fittings, installation and commissioning **6. Blending Tank with suitable transfer pump and agitator (1 No):** ➢ It should be made of SS304 with capacity of 500 litres and vertical and conical in shape. ➢ It should have inlet/outlet valve and agitator with adjustable speed. ➢ It should have transfer pump with variable flow control. ➢ The tank walls must be insulated with CIP system and level indicator. ➢ Should be provided with required MS pipelines & fittings, SS pipelines & fittings, installation and commissioning **7. Homogenizer (1 No):** ➢ Hydropneumatic homogenizer with capacity 250 liters/hr and made up of SS304. ➢ The motor power should be 1.5 kW with pressure range (200-250 bar). ➢ It should have PLC based control system with pressure relief valves,

		overload protection, and auto shutoff. ➢ It should be fitted with all accessories, pipelines & fittings, SS pipelines &fittings, installation and commissioning **8. Filter Press Machine (1 No):** ➢ It should have capacity of 250 liters/hr, made of SS304 and filter type should be membrane. ➢ The operating pressure must be of 5-10 bar with automated hydraulic press system. **9. Processed Juice/Beverage Collection Tank with agitator(Double Walled) and suitable transfer pump (1 No):** ➢ It should be made of SS304 and have capacity of 500 litresalong with agitator of variable speed control. ➢ It should have transfer pump of required flow rate. ➢ It should have an insulation for outer layer. ➢ Should be provided with required MS pipelines & fittings, SS pipelines & fittings, installation and commissioning **10. Tubular Heat Exchanger(Pasteurizer) with all accessories (1 No):** ➢ It should have capacity of 250 litres/hr, made of SS304 and adjustable pasteurization temperatures of 70°C to 100°C. ➢ Liquid should flow through tubes and steam should be circulated in the outer jacket (counterflow design) with separate heating and cooling zones. ➢ There must be PLC based control system with pressure relief valves, temperature sensors, alarm systems, balance tank, pasteurization feed pump, control valves, gauges and safety valve etc. ➢ The equipment should be skid mounted with holding tubes, and cooling section. ➢ Should be provided with required SS pipelines & fittings, installation and commissioning **11. PET Bottles forming Machine (1 No):** ➢ It should be 02 head with capacity upto20 PET bottles/ min, ➢ It should have infrared heaters with high-quality steel molds (automatic stretch-blow molding). ➢ The bottle size range must be 100 ml to 1litres. **12. Bottle Washing and rinsing machine (1 No):** ➢ It should have capacity upto20 bottles/min with multiple rinse stages, made up of SS304, with suitable nozzles, splash guards etc ➢ Should be provided with required SS pipelines & fittings, installation and commissioning **13. Product filling tank (Double Walled) with suitable transfer pump and agitator (1 No):** ➢ It should be overhead type made of SS304 with insulation and have capacity of 500 litres. ➢ It should have agitator with variable speed control and transfer pump. ➢ Should be provided with required MS pipelines & fittings, SS pipelines & fittings, installation and commissioning

		14. Juice/Beverage filling, capping machine/line with conveyor and motors and other accessories (1 No): ➢ It should have automatic linear piston filler (4heads) with capacity upto20 bottles per minute. (PET capacity: 200 and 500 mL) ➢ It should have sensor-based piston filling along with automatic capping system. ➢ It should have conveyor system made of SS with adjustable speed, integrated with the filling and capping machines. ➢ It should have PLC control system. ➢ The complete line should be provided with required SS pipelines & fittings, installation and commissioning **15. Cooling Tunnel (1 No):** ➢ It should have capacity upto 1000bottles per hr with forced air-cooling system to be attached with juice line. ➢ It should have conveyor belt of SS with adjustable speed and multiple cooling zones with adjustable air circulation and temperature control. ➢ It must have high-efficiency blowers and air ducts. **16. Sticker Labelling Machine with suitable conveyor (1 No):** ➢ It should have capacity upto20 bottles per minute and with self-adhesive sticker labelling. ➢ It should be adjustable to accommodate a range of label sizes and shapes with SS conveyor belt with adjustable speed. ➢ There must be PLC control system. **17. Bottle Pack Shrink Wrapping Machine (1 No):** ➢ It should shrink pack minimum of 5 packs per minute, suitable for Glass/PET/Jar after the filling and with impulse sealing system. ➢ It must be compatible with PVC, POF, or PE shrink films. ➢ It should have slat chain conveyor with shrink tunnel for application of labels on bottles/jars from 200-1000 ml. ➢ Should be provided with required MS pipelines & fittings, SS pipelines & fittings, installation and commissioning **18. Syrup Preparation Tank(Double Walled) with suitable transfer pump and agitator (1 No):** ➢ The tank must be made of SS304 with temperature control with capacity of 500 litres and have agitator of variable speed control along with transfer pump. ➢ Should be provided with required MS pipelines & fittings, SS pipelines & fittings, installation and commissioning **19. Syrup Storage Tank with suitable transfer pump (1 No):** ➢ It must be made of SS304 with capacity of 500 litres and must have transfer pump. ➢ There must a smooth interior surface for complete product drainage. ➢ Should be provided with required SS pipelines & fittings, installation and commissioning **20. Label Printing Machine:** ➢ It must label 50 labels per minute. The printing type should be inkjet

		printing. ➢ The printing resolution must be high (up to 300 dpi) for sharp text and graphics. ➢ The label size can be adjusted for various bottle sizes and label dimensions. ➢ The machine control system must be PLC based. ➢ It must have automatic label alignment, date and batch code printing, and easy-to-clean design for efficient operation. **21. Connecting SS Pipe Lines, Water Pipe Lines, Electrical Fitting Panels and indicators:** ➢ All the pipelines to be commissioned of SS along with water pipeline and the required electrical panel and indicators with all the equipment.

3.	**Pickle, IMF and other viscous products section**	**1. Fruit Pulper (1 No):** ➢ It must have capacity of 250 kg of fruit/hr and made of SS304. ➢ It should be brush type and the motor power should be 2 kW. ➢ It must have adjustable mesh or sieve sizes. **2. Raw Pulp/honey storage tank with suitable transfer pump (1 No):** ➢ It must have capacity of 500 litres and made up of SS304. ➢ There must be transfer pump with minimum 1 HP motor and must have proper drainage system. ➢ Should be provided with required SS pipelines & fittings, installation and commissioning **3. Double Jacketed Kettle with suitable transfer pump:** ➢ The kettle should be made of SS304 with capacity of 250 kg. ➢ It must include automatic temperature control system with adjustable settings for precise heating up to 121°C or higher. ➢ There must be internal agitator for even mixing of ingredients, preventing burning or sticking. ➢ It should be easy to tilt and have drain valve at the bottom. ➢ It must have pressure relief valves, temperature gauges, and emergency stop. ➢ Should be provided with required MS pipelines & fittings, SS pipelines & fittings, installation and commissioning **4. Product Filling Tank(Double Walled) with suitable transfer pump and agitator (1 No):** ➢ The capacity of tank should be 500 litres made of SS304 with insulation system, agitator with variable speed and transfer pump (minimum 1 HP motor). ➢ The complete line should be provided with required SS pipelines & fittings, installation and commissioning. **5. Viscous Product Filling Machine (1 No):** ➢ It should have capacity of 250 kg/hour designed for filling thick, viscous products (like honey) with piston system for precise and controlled filling. ➢ The material of construction should be of SS304. ➢ It should have Push button control system.

		➢ The complete line should be provided with required SS pipelines & fittings, installation and commissioning. **6. Wide Mouth Bottle/Jars Capping Machine (1 No):** ➢ The wide mouth bottle/jars (500 grams) capping machine should have the capacity of 250 Jar/bottle per hr and made up of SS304. ➢ The capping type must be automatic screw capping system (screw-on, twist-off). ➢ The speed control must be push button control system with adjustable conveyor speed and capping settings for precise operation. **7. Pickle Mixing Tank (1 No):** ➢ It should have capacity of 250 kg and made up of SS304 with agitator having adjustable speed. ➢ Should be provided with required pipelines & fittings, installation and commissioning **8. Connecting SS Pipe Lines, Water Pipe Lines, Electrical Fitting Panels and indicators:** ➢ All the pipelines to be commissioned of SS along with water pipeline and the required electrical panel and indicators required.

4.	**Dried Products Section**	**1. Peeling and slicing machine (1 No):** ➢ It should have capacity of 250 kg/hr with abrasive peeling and should be made of SS304. ➢ The slicing system must be adjustable to produce uniform slices of varying thickness. ➢ The motor power should be 2 kW. **2. Ginger/Turmeric Washing and Peeling Machine (1 No):** ➢ It should have capacity of 250 kg/hour with tumbling drum washing mechanism. ➢ The peeling mechanism should be abrasive peeling system. ➢ The material of construction is SS304. ➢ The motor power is 3 kW. ➢ There must be adjustable speed, water recycling system, easy-to-remove parts for cleaning, safety guards, and automatic waste disposal for smooth and hygienic operation. **3. Garlic Clove Separator:** ➢ The garlic clove separator can process 200 kg of garlic per hour, designed for high-volume peeling and clove separation. ➢ The separation mechanism is rotary drum for efficiently separating garlic cloves from the bulbs without damaging them. ➢ The material of construction is SS304 for durability, corrosion resistance, and easy cleaning. ➢ The motor power is 2 kW for efficient separation and high throughput. ➢ There must be automatic waste discharge system for easy removal of garlic skins and debris, ensuring a clean working environment. **4. Garlic Peeler (1 No):**

		➢ The garlic peeler can peel minimum of 50 kg of garlic per hour, suitable for small to medium-scale processing. ➢ The peeling mechanism is abrasive peeling that efficiently removes garlic skin without damaging the cloves. ➢ The material of construction is SS304 for hygiene, durability, and ease of cleaning. ➢ The motor power is 1 kW for consistent and efficient peeling operation. ➢ The safety features are safety guards and emergency stop function to ensure safe operation. **5. Blancher (SS Rectangular tank with drainage facility) (1 No):** ➢ The blancher has the capacity of blanching vegetable or fruits upto150 kg. ➢ The material of construction is SS304 for durability, corrosion resistance, and hygiene. ➢ The tank must rectangular in shape with smooth interior surfaces for even heat distribution and easy cleaning. ➢ The heating system must be electric for precise temperature control, with adjustable heating power to maintain consistent blanching. ➢ There must be drain valve or drainage pipe at the bottom for easy removal of water or liquid after blanching, ensuring hygienic operation. ➢ Should be provided with required MS pipelines & fittings, SS pipelines & fittings, installation and commissioning. **6. Dried Pulverizer(1 No):** ➢ The dried pulverizer can process upto250 kg per hour of dried products such as spices, herbs, grains, or other dry materials. ➢ The grinding mechanism is impact pulverizer system for efficient, fine grinding of dried products into powders. ➢ The material of construction is SS304 for durability, hygiene, and corrosion resistance. ➢ The motor power is 10 kW designed for high-efficiency grinding of tough and dried materials. ➢ There must be adjustable mesh or screen sizes for controlling particle size and achieving desired powder consistency. **7. Wet Pulverizer(1 No):** ➢ The wet pulverizer can process upto250 kg per hour of wet materials such as pastes, wet spices, grains, or fruit pulp. ➢ The grinding mechanism is wet grinding using stone mills, disc or rotor-stator systems for fine, consistent grinding of wet materials. ➢ The material of construction is SS304 to ensure durability, hygiene, and resistance to corrosion. ➢ The motor power is 7 kW motor for powerful and efficient grinding of wet materials at high throughput. **8. Dehydrator with trays (1 No):** ➢ The dehydrator should be of capacity 80 trays ideal (minimum tray load: 2Kg/tray) for drying large volumes of fruits, vegetables, herbs, or other food products. ➢ The material of construction should be of SS304 for durability, corrosion

		resistance, and hygiene. ➢ The heating system should be electric with adjustable temperature control to ensure consistent and efficient dehydration. ➢ There must be forced air circulation for even drying, with adjustable fan speed for optimal airflow across all trays. ➢ The trays are designed for easy loading and unloading, typically stainless steel mesh or food-safe plastic to allow uniform airflow around the product. **9. Pouch Form Fill and Sealing Machine:** ➢ The capacity of pouch form fill and sealing machine should be: packing range:50-500g, packing Size: pouch length-250 to 1000 mm,film width: 200 To 700 mm speed:20–40 pouch/minute (Depending upon weight to be packed) ➢ The filling system is auger type filling for accurate and consistent filling of various powders. ➢ The contact parts are of SS304 with outer body MS. ➢ There must be heat sealing system with precise temperature control to ensure strong and reliable seals. ➢ There must be automatic feeding system with PLC Control System, easy to clean design and safety features such as emergency stop. **10. Pouch Sealing Machine:** ➢ The pouch sealing machine must be designed for high speed sealing of pouches of powder with capacity to 10 to 25 pouches/ minute(Depending upon weight to be packed) ➢ There must be heat sealing system for strong and reliable seals, adjustable for various pouch materials (e.g., plastic, laminated films). ➢ The contact parts are made of SS304 and outer body of MS. ➢ The sealing width is adjustable to accommodate different pouch sizes and types. **11. Printing Machine:** ➢ The printing machine should have the capacity to print 50-100 pouches per minute which must be designed for high-speed printing on pouches, sachets, or packaging. ➢ The printing type must be thermal transfer printing for high-quality, durable prints on various materials such as plastic, films, and foil. ➢ The printing resolution must be Up to 300 dpi for clear text and graphics, ideal for branding, barcodes, batch numbers, and logos. ➢ The printing machine must be capable of printing on a wide range of flexible packaging materials, including polyethylene, polypropylene, and laminated films. ➢ It must be PLC based control system with interface for easy operation, speed adjustment, and monitoring.

B.	**Boilers, RO Plants etc, Auxiliary Equipment**
Technical Specifications	

1. **Steam Boiler with all accessories (1 No):**
   - It must be IBR-certified (Indian Boiler Regulations compliant)
   - It should have capacity of 500 kg/hour with rated pressure of 8-10 bar.
   - It should be diesel operated with working efficiency of 80-90% and corrosion resistant.
   - It should have pressure gauge, pressure relief valve, water level indicator, low-water cut-off, automatic feed water system, fusible plug, manhole, mudbox and safety interlocks.
2. **Steam Line and its fittings (1 No):**
   - Steam lines made of MS and pressure rating from 10 bar to 40 bar, with some components rated for up to 70 bar.
   - The steam line must be able to withstand temperature between 120°C to 250°C.
   - The fittings must include valves, steam traps, flanges, and expansion joints for proper steam flow and pressure regulation. There must be mineral wool insulation with aluminum cladding.
3. **Effluent Treatment Plant (1 No):**
   - It must be designed to treat minimum of 500 litres/day with treatment stages including primary treatment (sedimentation), secondary treatment (biological filtration), and tertiary treatment (activated carbon filtration).
   - There must be an automatic control system and chemical dosing system for coagulation and pH adjustment.
   - It must ensure that the discharge quality of treated water meets regulatory discharge standards with a high removal efficiency for BOD, COD, and TSS.
   - It must have high-tech LASER sensor for level, distance, and volume measurements, designed with a non-intrusive approach using the ToF (Time of Flight) system.
4. **Hydraulic Pellet Truck (1 No):**
   - The hydraulic pellet truck must be designed to carry 1 ton with a hydraulic lift and powered by manual hydraulic pump.
   - It must be equipped with heavy-duty, industrial wheels (typically solid rubber or polyurethane).
   - It must include automatic safety locks, non-slip platforms, and overload protection.
5. **Platform Balance (1 No):**
   - The platform balance should be digital and weigh up to 1000 kg.
   - It should be made of SS steel frame.
6. **Steel structures, stairs and walkways (1 No):**
   - These must be made from MS with Aluminumchequered steps and design standards must comply with AISC standards.
   - It must designed to support live loads of up to 5 kN/m² for walkways and 7-10 kN for stairs.
   - It must be modular stair systems with anti-slip treads, handrails, and landing platforms.
   - The surface finish must be galvanised for corrosion resistance.
   - It must be equipped with safety barriers, guardrails, and anti-slip coatings on all walkways and stairs.
7. **Water softening plant (1 No):**
   - The water softening plant must be designed for flow rates ranging from minimum 1 m³/hr with ion exchange process with cation exchange resin.
   - There must be automatic regeneration system using salt/brine solution and include sediment filtration and carbon filtration as pre-treatment.
   - The hardness levels should be reduced to below 1 ppm.
   - Should be provided with required MS pipelines & fittings, SS pipelines & fittings, installation and commissioning

8. Water storage tank and fittings (3 No):

- The water storage tank must be made of SS304 with overall capacity to store 1000litres of water and must be insulated.
- The design of tank must be vertical and it must include inlet inlet/outlet valves, overflow pipes, drain valves, and manhole.
- It should have transfer pump with 1 HP motor.
- Should be provided with required SS pipelines & fittings, installation and commissioning

9. Forklift (1 No):

- The forklift must be able to typically load 1 tons.
- It must be capable of lifting loads to heights of 3 to 6 meters.
- It must feature a duplex or triplex mast.
- It should have overload protection, stability system, and emergency stop.

10. Pallets, racks, semi-finished product storage tank/drums, crates, carboys etc.:

- The material of construction of pallet (03 No) should be MS with standard size and should support weights from 500 to 1000 kg.There must be heavy-duty shelving or pallet racks capable of storing products up to 3-5 meters high.
- The storage tanks must be made of food grade carboysof capacity 20 Liters (10 Nos) and 50 Liters (10 Nos).
- The plastic crates for stacking and easy transportation of material as per standard size (12 Nos)

C	**Food Testing laboratory**
S. No.	**Technical Specifications**
1.	**1. Water Activity Meter (1 No):** ➢ The measurement range should be 0.03-1.00 a.w (3-100%rh) in range 0-60 °C. ➢ The repeatability must be +-0.001 aw(0.1% rh) and accuracy must be 0.003 aw (0.3% rh) **2. Viscometer (1 No):** ➢ Dynamic Viscosity range depends on the measuring systems:100 mPa.s to 40MmPa.s ➢ Torque Range (10%-100%): 0.07187 mNm to 0.7187 mNm ➢ Torque solution: ±0.1% of FSR (i.e.0.7187µNm ➢ Accuracy: ±1.0% of FSR (i.e7.187µNm) ➢ Repeatability: ±0.2% ➢ Speed range: 0.01rpm to 250rpm ➢ Number of speeds: Speed list with 18 standard speeds, 1 fixed custom speed C0 (200rpm) and Freely selectable speeds within the speed range ➢ Speed resolution: 0.01 rpm to 9.99rpm:0.01rpm, 10 rpm to 59.9 rpm:0.1rpm and >60rpm:1rpm ➢ Spindle Coupling: Magnetic ➢ Spindle Recognition: Instrument should automatically recognize spindle ➢ MOC of Spindle:SS316 ➢ Measurement Modes: Manual mode stop at time stop at torque /temperature/viscosity/speed/time Scan/all methods with :QC limit Function, User

Instructions

- User Interface: 7”color touchscreen
- Data Storage: Data memory (upto999measurements) Print/Export from data storage
- Data Transfer: PDF Export, CSV Table, LIMS, Page Printer (USB or network)
- Temperature Measurement: Pt-100 Temprobe
- Speed/Spindle Selection Mode: In stand-alone mode, the instrument should automatically run at different speeds to determine ideal speed needed to reach 80% torque.
- No of Ports: There should be minimum three USB ports and One Ethernet port in instrument

3. LabColorimeter (1 No):

- Illuminating/Viewing Geometry: 8/d (8’’ illumination angle/diffuse viewing)
- Measuring Aperture: Φ4mm
- Locating: Illuminating Locating/Cross Locating
- Measurement End Face : Large stable end-face and small concave-convex end-face
- Detector : Silicon photoelectric diode
- Color Space : CIEL*a*b*C*h* CIEL*a*b* CIEXYZ
- Color Difference Formula: △E*ab △L*a*b* △E*C*h*
- Light Source: D65
- Light Source Device : LED blue light excitation
- Errors Between Each Equipment: ≤0.80ΔE*ab
- Storage: 100pcs standards 20000pcs samples
- Power source: Rechargeable lithium-ion battery 3.7 V@3200mAh
- Battery Life: 3 years, more than 1.6 million measurements
- Measuring time before recharge : More than 3000 times after charging
- Operating Temperature : -10-40 degree C
- Humidity Range : Relative Humidity 0-85% with no condensation
- Standard Accessories: Horizontal charger, Li-ion Battery, white calibration board, wristband, cross platform,4 mm measuring aperture, software CD, USB cable,4 mm aperture for small concave-convex surface.

4. Infrared Moisture Meter (1 No):

- High performance magnetic force sensor, up to 1 mg readability with digital display.
- Heating temperature range: 40-150 ℃.
- Moisture measuring range: 0~100%
- Resolution: 0.01%
- There must be provision to set temperature, time, and data output preferences.