

TENDER NOTICE

Sealed Tender offers are invited for design, supply, installation & commissioning of 15 MT/day capacity of curd plant, at our Vashi packing station, Navi Mumbai. Tender details along with scope of work, technical specifications , Terms & conditions are available on web site www.gokulmilk.coop and also at our Gokul Shirgaon office at B-1, M.I.D.C., Gokul Shirgaon, Kolhapur. Sealed Tender offer duly marked as "TENDER FOR 15 MT CURD PLANT "is to be submitted at our Gokul Shirgaon, Kolhapur office on or before **22.10.2024**. Right to accept or reject any or all Tenders is reserved.

Managing Director Chairman
Kolhapur Zilla Sahakari Dudh Utpadak Sangh Ltd.,
B-1, M.I.D.C., Gokul Shirgaon, Kolhapur - 416 234

KOLHAPUR ZILLA SAHAKARI DUDH UTPADAK SANGH LTD., KOLHAPUR
GENERAL TERMS & CONDITIONS OF TENDER

1. The Bidder should have design back up to carry out such jobs on Turn Key basis and must have executed in the last five years at least 3 contracts of similar nature & capacity.
2. The job should be treated as 'TURN KEY' excluding civil work. Details as regards scope of work, technical details of required equipment are given in the Annexure – I given herewith.
3. The annual turnover should be at least 10 Crore in any two years for last five years.
4. The Bidder should submit the offer in a prescribed format on their letterhead. Commercial bid (price details) and Technical bid (Technical details,) are to be given in separate envelopes & both envelopes are to be submitted in a sealed envelope marked as "TENDER FOR 15MT CURD PLANT AT VASHI".
5. The offer should be valid at least for 90 days from the date of submission.
6. The bid must be accompanied by Earnest Money Deposit of Rs. 5,00,000/- in the form of demand draft/RTGS issued in favor of Kolhapur Zilla Sahakari Dudh Utpadak Sangh Ltd. Bids not accompanied with EMD will be summarily rejected . EMD amount may be forfeited if bidder withdraws it's bid during period of bid validity or if successful bidder fails to sign & execute the contract. Our RTGS details given below

Name of Project Authority	Kolhapur Zilla Sahakari Dudh Utpadak Sangh Ltd., Kolhapur
Address of Project Authority	B-1, MIDC, Gokul Shirgaon, Tal Karvir, Dist. Kolhapur, State Maharashtra Pin Code 416 234
Name of Bank	Bank of Maharashtra
Bank A/c No.	60182028384
IFSC Code	MAHB0001575
Branch Name & Address	B-1, MIDC, Gokul Shirgaon, Tal Karvir, Dist. Kolhapur, State Maharashtra Pin Code 416 234

7. No escalation in the price will be given once the order is finalized
8. Work is to be carried out without hampering routine work of our milk packing station.
9. Payment Terms-
 - a) 30% advance of total contract value (Excluding GST) will be given as an advance after getting order acceptance and on submission of Bank Guarantee of equivalent amount of nationalized bank.
 - b) 40% payment of supply items of Invoice value along with 100% GST will be released on safe receipt of equipment / material at site.
 - c) 60% payment of Invoice value of Installation & Commissioning alongwith GST. will be released after satisfactory installation, commissioning and one month successful trial of ordered Curd Plant
 - c) Next 20% payment of supply items will be released after satisfactory installation, commissioning and one month successful trial of ordered Curd Plant
 - d) Final 10% amount of total contract value (excluding GST) will be released after satisfactory completion of job on submission of Performance Bank Guarantee for equivalent amount valid for a period of 1 year

10. Sealed Tender offer should reach our office at B-1, MIDC, Gokul Shirgaon, Kolhapur on or before **22.10.2024**.
11. We reserve the right to accept or reject any bid and rejection of all bids at any time prior to award of contract
12. We reserve right to accept or rejects any bid, postpone bidding process and reject all bids at any time prior to award of contract
13. All the Tender documents should be signed as acceptance of Bidder.
14. The bidder has to submit the following documents
Valid GST registration certificate.
Proof regarding payment of E.M.D.
Experience Certificate
15. The right to ignore any tender which fails to comply with the above instructions is reserved with the Managing Director, Kolhapur Zilla Sahakari Dudh Utpadak Sangh Ltd..
16. The bidder or his authorized representative must be present at the time of opening the tender.
17. The Managing Director, Kolhapur Zilla Sahakari Dudh Utpadak Sangh Ltd., reserves the right to accept or reject any or all the tenders without assigning any reason thereof.
 - a) The price quoted for the items should be F.O.R. at Vashi, Navi Mumbai unit inclusive of all charges for packing, forwarding, transportation, loading, unloading, shifting to location, transit insurance, assembling, erection, installation, commissioning, trial run, training etc. complete on TURN KEY BASIS. No price escalation will be allowed.
 - b) Warranty - One year comprehensive after successful commissioning.
18. The offer should be inclusive of all the taxes, duties, levies & GST as applicable.
19. The successful bidder EMD amount may be used for adjusting the penalty (if any), recovery of cost damages etc. besides any other amount to recover damages/extra cost resulting from failure/irregularity of the contractor, as the Managing Director, Kolhapur Zilla Sahakari Dudh Utpadak Sangh Ltd., may deem fit. In this regard, the decision of the Managing Director, Kolhapur Zilla Sahakari Dudh Utpadak Sangh Ltd., will be final. Exemption from the payment of Security Deposit will not be granted. EMD will be refund after satisfactory installation, commissioning and one month successful trial of ordered Curd Plant
20. The party should furnish necessary details about Income tax clearance (for the last three financial years), along with details of turnover. The party should furnish client's list where such type of works are completed satisfactorily along with certificates. The party should furnish client's report regarding satisfactory performance of the machines. The party should also furnish necessary details about R & D facilities, Quality Control facilities, number of persons employed, after sales service network etc.
21. Kolhapur Zilla Sahakari Dudh Utpadak Sangh Ltd. reserves the right to reject the item either in full or in part, if at the time of delivery, the items supplied do not confirm to the quality and technical specification as stipulated in the tender.
22. The conditional, incomplete, defective or ambiguous tenders, as decided by the Managing Director, Kolhapur Zilla Sahakari Dudh Utpadak Sangh Ltd., shall be rejected.

23. If the bidder fails to complete the supply/complete the work within the period prescribed, the Managing Director, Kolhapur Zilla Sahakari Dudh Utpadak Sangh Ltd., shall be entitled, at his option, to recover from the bidder, as penalty a sum equivalent to half percent of the total cost for delay of each week or part thereof during which supply/installation is delayed, subject to the maximum of 3% of the tendered cost of the contract.
24. REJECTION OF DEFECTIVE MATERIAL :The supply of material, as well as their installation and commissioning shall have to be carried out by the bidder to the entire satisfaction of Kolhapur Zilla Sahakari Dudh Utpadak Sangh Ltd.. If the plant, machinery and equipment is found to be defective or found to have failed to fulfill the requirements of the contract or develop defects after commissioning within a period of 12 months from the date of satisfactory trials, the Managing Director, Kolhapur Zilla Sahakari Dudh Utpadak Sangh Ltd., shall be entitled to give a notice to the bidder indicating details of such defects or failure and the bidder shall forthwith make the defective plant good or alter the same to make it comply with the requirements of the contract at his own cost. Further, if in the opinion of the Managing Director, Kolhapur Zilla Sahakari Dudh Utpadak Sangh Ltd., the defects of such nature, cannot be made good or repaired without impairing the efficiency of workability of the plant, the bidder shall replace the same with the plant, machinery and equipment- conforming to the stipulated specifications in all respects at the cost and risk of the contractor. Should the contractor fail to do so, within a reasonable time, the Managing Director, Kolhapur Zilla Sahakari Dudh Utpadak Sangh Ltd., may reject and replace it at the cost and risk of the bidder.
25. FINAL TEST AND TRIAL RUN: Each machine/equipment shall first be tried out and satisfactorily commissioned by the bidder. After satisfactory commissioning, a joint trial shall be conducted by the bidder and the representative of Kolhapur Zilla Sahakari Dudh Utpadak Sangh Ltd., for a period of consecutive 30 days without interruption.
26. During the erection, commissioning and trial runs, the bidder shall train the staff of the Kolhapur Zilla Sahakari Dudh Utpadak Sangh Ltd., for operation and maintenance of the machinery and equipment.
27. The bidder shall supply:-
- Three sets of hard copy of service and maintenance manual for each machine / equipments.
 - Three sets of hard copy of operating instructions for each machine/equipment.
 - Any other technical literature/drawing (Electrical, P & ID, equipment drawings) required by Kolhapur Zilla Sahakari Dudh Utpadak Sangh Ltd. in three sets of hard copies.
 - Soft copy of all above.
28. Bidder should submit the working drawing & layout to Kolhapur Zilla Sahakari Dudh Utpadak Sangh Ltd. before executing the work..
29. The bidder shall arrange for insurance etc. of his people employed for erection and installation work as per ESIS ACT, WORKMEN COMPENSATION ACT, and any other provision to meet statutory requirements of various Labour Acts/Rules. In case of accident to any of his person in his employment or agents during the period of installation & commissioning, the office of the Kolhapur Zilla Sahakari Dudh Utpadak Sangh Ltd. shall not bear any liability whatsoever. The entire responsibility primary and final in this respect will be that of bidder. No any type of accommodation, food & travel expenses will be provided by us to your employees or workers. The safety equipments should be used at the time of work by your employees & workers.

30. Necessary safety guards, SS platforms, safe approach SS ladders etc. for the operation of machinery and equipment required under the Factories Act & convenience of operation shall be provided by the bidder and included in the offer.
31. The minor modifications in layout to suit the site requirements / conditions shall be undertaken by the party within the cost of the tender.
32. RESPONSIBILITY FOR COMPLETING THE CONTRACT :
The responsibility for completing the contract and commissioning the plant, machinery and equipment rests with the bidder. Any items which may not be specifically mentioned in the tender specifications, but which are necessary to be provided to complete the installation, commissioning work, the bidders should bring out such items in the tender separately and their charges/value should be included in the tender offer by giving specific details.
It shall be the responsibility of the successful bidder to have comprehensively insured the goods against any risk i.e. against the damages that may be caused during the stage of transition, execution, trials, fire, theft etc. till final handing over of the entire equipment to Kolhapur Zilla Sahakari Dudh Utpadak Sangh Ltd. after satisfactory trials.
The bidder should furnish details of relevant past experience, along with the list of clients and with details of orders for similar jobs executed.
33. Contacting the purchaser (Kolhapur Zilla Sahakari Dudh Utpadak Sangh Ltd.): -
From the time of tender opening to the time of contract award, if any bidder wishes to contact Kolhapur Zilla Sahakari Dudh Utpadak Sangh Ltd. on any matter related to the tender, it should do so in writing. Any effort by a bidder to influence the Kolhapur Zilla Sahakari Dudh Utpadak Sangh Ltd. in its decision on evaluation, tender comparison or contract award may result in the rejection of the tender.
34. Clarifications: -
During evaluation, Kolhapur Zilla Sahakari Dudh Utpadak Sangh Ltd. may, at its discretion, ask the bidder for the clarification of its tender. The request for clarification and the response shall be in writing and no change in the prices or the substance of the tender shall be sought, offered or permitted.
35. The new plant and machinery/equipments arrangement, etc. shall be accommodated in the existing space/area available. The interested parties may visit Gokul Dairy Unit – Vashi, Navi Mumbai at Process and Packing Section in office hours on **08/10/2024** from **10.00 to 16.00** hours and discuss the technical details, space availability etc. The parties should prepare the layout of the plant and machinery/equipments/refrigeration arrangements etc. which will be supplied and accommodated in the area available. The parties can have the detailed discussions for the clarifications, if any, at Gokul Dairy, Kolhapur Zilla Sahakari Dudh Utpadak Sangh Ltd.), Kolhapur. **This visit is mandatory for the bidder before submission of the tender.**
36. For disputes, if any, the decision of the Chairman, Kolhapur Zilla Sahakari Dudh Utpadak Sangh Ltd., shall be final.
37. The total charges mentioned in the Tender are inclusive of all the Taxes and Duties, any change in the same after submitting the offer shall be a responsibility of the bidder.
38. The successful bidder has to enter into the 'Contract Agreement', if required, for completion of the job, performance guarantee, etc., before disbursement of any payment.

39. The successful bidder shall maintain a register to maintain record of daily progress of the project/work and shall take the signature of the concerned person in that register, on the same day. This register shall be produced before the project authority, as and when asked, during the progress of the project / work and shall be submitted after the completion of the project / work.
40. The Contractor shall not sublet the contract without our written permission.
41. For any Commercial doubts contact - Mr. Kailas Molak - 9422775977
any Technical doubts contact - Mr.A.S. Swami 9689496363
- Mr. P.A. Padwal - 9881402721
42. Legal disputes, if any, are subject to Kolhapur Jurisdiction.

Managing Director

KOLHAPUR ZILLA SAHAKARI DUDH UTAPADAK SANGH LTD., KOLAHAPUR

GENERAL:

Preamble:

We propose state of the art energy efficient, safe, sustainable, and easy to operate /maintain design, supply, and installation & commissioning of 15 MT capacity of curd plant, at our Vashi packing station, Navi Mumbai.

We have the pleasure to approach you for submission of offer for the Design, Supply, Installation, Testing and Commissioning of the curd plant as per following Specifications.

Prices: The Price quoted shall be all inclusive till site basis covering below:

- I. GST: To be quoted separately
- II. Transit and Site Insurance: To be included in Price
- III. Packing and Forwarding: To be included in Price.
- IV. Freight: To be included in price.
- V. Completion Period: Total Five months for installation & Commissioning from date of LOI / PO.

Technical Specifications of Curd making plant – 15 MT / day

1. CURD MILK STORAGE & PROCESSING SECTION

1.1 Curd Milk Storage Tanks: Quantity- 2 nos

EQUIPMENT NAME		Vertical Milk Storage Tank
EQUIPMENT CAPACITY		10KL
CONSTRUCTION	VERTICAL	VERTICAL
INNER SHELL	MOC	SS 304
	THICKNESS (mm)	3.0 mm
INNER TOP DISH	CONICAL	Yes
	FLAT	NA
	TORRISPHERICAL	NA
	THICKNESS (mm)	3.0 mm
INNER BOTTOM DISH	CONICAL	Yes
	FLAT	NA
	TORRISPHERICAL	NA
	THICKNESS (mm)	3.0 mm
MOUNTING	LEG (PIPE/CONICAL/TRAPEZOID	PIPE
INSULATION	THICKNESS (mm)	15 mm + 50 mm + 50 mm +0.07
	DENSITY (Kg/m ³)	(30-35) + (16-20) +(16-20)
	HOT	NA
	COLD	Yes
	MATERIAL (PUF/EPS/GLASS WL/MNRL WL)	PUF + EPS +EPS + ALU. FOIL
INSULATION CLADDING (OUTER)	MOC	SS 304
	CLADDING SHELL THICKNESS (mm)	2.0 mm
	CLADDING TOP/FRONT THICKNESS (mm)	3.0 mm
	CLADDING BOTTOM/REAR THICKNESS (mm)	3.0 mm
	WELDED CLADDING	Yes
AGITATOR	TOP MOUNTED	Yes
	MOTOR EFFICIENCY (IE1/IE2/IE3)	IE3
ADDITIONAL REQUIREMENTS	SPRAY BALL (STATIONARY/ROTARY)	STATIONARY
	OUTLET VALVE	Yes

1.2 Curd Milk Recirculation Pump for Powder Mixing

Quantity	: 1
Capacity	: 5 KLPH
Type	: Sanitary design, Centrifugal with quick opening fittings, Monoblock, free standing with adjustable ball feet
Function	: This pump shall be used for transfer of milk for recirculation through turbo blender.

1.3 Turbo Blender

Quantity	:1
Capacity	: 0.5 TPH
Accessories	: SS funnel with a manual plug valve, pump & motor with shrouding. This Turbo blender shall

	be comprises of hopper, manual valve and necessary manual control valves and fittings
MOC	: SS304
Motor	: 415 V AC, 3Φ, 50 Hz. IE3, squirrel cage induction motor, TEFC, IP 55 enclosure with SS 304 shroud

1.4 Inline Duplex strainer:

Quantity	:1
Capacity	: 5 KLPH
Accessories	: Perforated screen type: PIP type duplex strainer.
MOC	: SS304
Function	: This Strainer shall be used for filtering the milk during powder mixing

1.5 Curd Milk Transfer Pump to Curd Pasteurizer:

Quantity	:1
Capacity	: 5 KLPH
Type	: Sanitary design, Centrifugal with quick opening fittings, Monoblock, free standing with adjustable ball feet.
Function	: This pump shall be used for transfer of milk from Curd milk storage Tank to Curd Milk Pasteurizer.

1.6 Curd Milk Pasteurizer (4 Deg C/43Deg C)

Quantity	:1
Capacity	: 5 KLPH
Function	: This shall be used for pasteurization of curd milk and subsequently chilling it.
Design Parameters:	
Temp. Program	: 6-90-4/43
Media	Hot Water @100° C
Holding time	: 10 min
Chilled water flow rate	: 2 times
Chilled water feed temp.	: +1.5/2 °C

Basis of operation:

Milk shall be pasteurized at a temperature of up to 90° C with a holding time of 10 minutes. Finally, pasteurized milk at 4 deg C shall be stored or 43° C for further use. Pasteurizer outlet should go to storage tank as well as inoculation tank.

Technical specifications and scope of supply:

Plate Heat Exchanger - Milk Pasteurizer (HTST) with SS 316 plates & automated system(PLC,HMI)

Plates: The plates shall be made from stainless steel (SS 316) in sanitary design. All the product contact and exterior surfaces shall be easily accessible or readily removable for

cleaning and inspection.

Gaskets: The sealing gaskets must ensure complete sealing and pre-vent any cross - leakage between product and service liquids. The gasket material shall be food grade, non-toxic, and fat resistant, non-absorbent and shall have smooth surface. The material shall withstand a water sterilization temperature of 120 ° C and 2% caustic solution at 80 ° C. The gaskets material shall be Nitrile.

Supporting Frame: The supporting frame for the plate pack shall be of a self-supporting design made of stainless steel (AISI 304) clad mild steel with a manually operated stainless steel (AISI 304) tightening device. The tightening device shall be able to exert uniform pressure on all the parts of heat transfer plates to prevent any leakages from Pasteurizer. The frame and tightening device shall prevent the plates from deflecting under pressure differential of minimum 4 kg/sq.cm.

Accessories:

Inlets/Outlet: The inlets and outlets in each section of the heat exchanger for products as well as services shall be provided with complete stainless steel (AISI 304) unions.

Thermo-wells: Suitable nos. of SS (AISI 304) pockets for mounting of thermometer is provided on required ports for Product and service inlet and outlet connections.

Ball Feet: The frame shall be provided with adjustable SS ball feet with provision for height adjustment of 50 mm.

Holding Section: It shall be designed for continuous holding of 10 min for the product at pasteurization temperature in holding tube. Arrangement for bypass of holding tube is to be provided.

Balance Tank: The Balance Tank of suitable capacity shall be fabricated from 2 mm thick SS sheet conforming to AISI 304. The tank shall be provided with cover, sanitary type Product inlet, cup type outlet, and return Product inlet, inlet for water, overflow and adjustable SS ball feet.

Feed Pump & Booster Pump: The Pasteurizer stainless steel feed pump & booster Pump shall be of sanitary design and shall be with SS shroud with louvers for air- cooling and suitable design as per dairy standard.

Flow Controller: Stainless steel flow control device shall be provided to maintain the required flow rate under varying pressure conditions. The flow controller shall be of a sanitary design.

Filter: SS Duplex type In-line strainer shall be used for pre-filtration of Milk. The filter shall be of sanitary design. The filter shall be supplied with set of three way plug valves.

Heating Device:

Hot water system shall be PHE based and shall have an expansion tank and other safety devices to take care of the volume of expansion and increased pressure ensuring the complete operational safety. It will be designed as per duty parameters required for pasteurization. It shall consist of PHE (with SS 316 plates and MS painted frame with SS 304 cladding). The system shall be supplied with hot water control valve - assembly, expansion chamber, safety valve, water make up valve

Hot water pump: One Hot water pump will be supplied which will be used for hot water circulation for heating of milk.

PHE for hot water generation :-

Quantity	: 1
Capacity	: suitable
Function	: For heating of water at @ 100 °C to be circulated in heating section of pasteurizer. Media - Hot water from hot water generator @ 120 ° C
Type	: Plate Heat Exchanger with PID based

	temperature control system.
MOC	: SS 316 plates of 0.6 mm Thick.
Frame	: Free standing SS-304 clad carbon steel frame on SS- 304 adjustable ball feet
Gasket	: Snap/clip ON type nitrile rubber/NBR food grade.
Ports	: Necessary ports/connections for temperature sensing to be provided.

One no. of PID Temperature control arrangement for control of pasteurization temperature together with hot water Regulating and control valve is included.

Instrumentation:

Automatic controls shall be provided to ensure pasteurization temperature of milk. If the required temperature of milk is not reached, the flow of milk shall be automatically diverted to the float balance tank with an audible alarm.

The Module shall be skid mounted.

SCADA system comprising of PLC, one engineering station & one operator station can be used as a centralized monitoring & control system with control room for accommodating total automation system. This system will be excluding standalone systems. This system can be used for monitoring & controlling of all the parameters like pressure, temperature, flow, level etc; inputs/outputs & PID control of plant. Pasteurizer parameters monitoring & controlling, Communication with homogenizer PLC, tanks level & temperature monitoring & controlling (if any) can be connected to this SCADA system/PLC

1.7 Curd Milk Homogenizer 2 Stage:

Quantity	: 1
Capacity	: 5 KLPH
Type	: 2 stage
Working Pressure	: 180 Bar & 50 Bar for first stage and second stage, respectively.
Function	: To homogenize milk at around 65-70 deg. C. for uniform distribution of fat globules to be added online just before the homogenizer. Size of fat globules should be below 2 microns.
Material	: SS 316 contact parts
Lubrication	: The Homogenizer shall be provided with a water cooling/ lubrication system
Homogenizer efficiency and all other details	: As per OEM

1.8 Self Priming CIP Return Pump for Curd Milk Storage Tanks:

Quantity	: 1
Capacity	: Suitable
Type	: Self priming
Head	: Suitable
Mounting	: Free standing with adjustable ball feet.
Shaft seal	: Mechanical
Gasket	: EPDM
Shroud	: AISI 304
Motor	: 415 V AC, 3 phase, 50 Hz, squirrel cage induction motor with TEFC / IP 55 enclosure.

Function	: CIP Return Pump shall be used for returning the cleaning solution to respective CIP solution tanks
Design	: The pump shall be of self-priming design and shall be similar in design and construction of sanitary pumps

2. Pasteurized Curd Milk Storage Section

2.1 Pasteurized Curd Milk Storage Tanks:

EQUIPMENT NAME		Vertical Milk Storage Tank
EQUIPMENT CAPACITY		10 KL
CONSTRUCTION	VERTICAL	VERTICAL
INNER SHELL	MOC	SS 304
	THICKNESS (mm)	3.0 mm
INNER TOP DISH	CONICAL	Yes
	FLAT	NA
	TORRISPHERICAL	NA
	THICKNESS (mm)	3.0 mm
INNER BOTTOM DISH	CONICAL	Yes
	FLAT	NA
	TORRISPHERICAL	NA
	THICKNESS (mm)	3.0 mm
MOUNTING	LEG (PIPE/CONICAL/TRAPEZOID	PIPE
INSULATION	THICKNESS (mm)	15 mm + 50 mm + 50 mm +0.07
	DENSITY (Kg/m ³)	(30-35) + (16-20) +(16-20)
	HOT	NA
	COLD	Yes
	MATERIAL (PUF/EPS/GLASS WL/MNRL WL)	PUF + EPS +EPS + ALU. FOIL
INSULATION CLADDING (OUTER)	MOC	SS 304
	CLADDING SHELL THICKNESS (mm)	2.0 mm
	CLADDING TOP/FRONT THICKNESS (mm)	3.0 mm
	CLADDING BOTTOM/REAR THICKNESS (mm)	3.0 mm
	WELDED CLADDING	Yes
AGITATOR	TOP MOUNTED	Yes
	MOTOR EFFICIENCY (IE1/IE2/IE3)	IE3
ADDITIONAL REQUIREMENTS	SPRAY BALL (STATIONARY/ROTARY)	STATIONARY
	OUTLET VALVE	Yes

Other technical details shall be as per standard.

2.2 Transfer Pump from Past. Curd Milk Storage to Inoculation Tank/Butter Milk Tank .

Quantity	1
Capacity	5 KLPH
Type	Sanitary design, Centrifugal with quick opening fittings, Monoblock, free standing with adjustable ball feet.
Function	This pump shall be used for transfer of milk from Pasteurized Curd milk storage Tank to Inoculation Tank/Butter Milk

	Tank.
--	-------

2.3 Pump for recirculation of milk from inoculation tank for heating

Quantity	: 1
Capacity	: 3 KLPH
Type	: Sanitary design, Centrifugal with quick opening fittings, Monoblock, free standing with adjustable ball feet.
Function	: This pump shall be used for recirculation of milk from inoculation tank for heating .

2.3 Curd Milk Heater (4 - 43 ° C):

Quantity	: 1
Capacity	: 5 KLPH
Function	: For heating of milk for inoculation for making of curd. Heating of milk from milk inlet temperature of 4°C to 43°C.
Type	: Plate Heat Exchanger with PID based temperature control system.
MOC	: SS 316 plates of 0.6 mm Thick.
Frame	: Free standing SS-304 clad carbon steel frame on SS- 304 adjustable ball feet
Gasket	: Snap/clip ON type nitrile rubber/NBR food grade.
Ports	: Necessary ports/connections for temperature sensing to be provided.

PHE for hot water generation to be used in curd milk heater:-

Quantity	: 1
Capacity	: suitable
Function	: For heating of water at suitable temperature(To achieve temperature of curd milk for inoculation at @43 deg C) to be circulated in PHE. Media - Hot water from hot water generator @ 120 ° C
Type	: Plate Heat Exchanger with PID based temperature control system.
MOC	: SS 316 plates of 0.6 mm Thick.
Frame	: Free standing SS-304 clad carbon steel frame on SS- 304 adjustable ball feet
Gasket	: Snap/clip ON type nitrile rubber/NBR food grade.
Ports	: Necessary ports/connections for temperature sensing to be provided.

2.4 CIP Return Pump for Past. Curd Milk Storage Tank

Quantity	1
Capacity	: Suitable
Function	: CIP Return Pump shall be used for

	returning the cleaning solution to respective CIP solution tanks
Design	: The pump shall be of self-priming design and shall be similar in design and construction of sanitary pumps.

3.0 Inoculation Section

3.1 Inoculation Tanks

Quantity	: 4
Capacity	: 2 KL
Type	: Cylindrical, vertical, insulated with agitator and geared motor Material: Inner shell SS 304, 3mm thickness, SS-304 cladding.
Finish	: 150 grit
Accessories	: Inlet/outlet, breather, Rotary spray ball, Light glass, Sight glass, Top man way, common staircase, and railing.
Instruments	High-Level & Low-Level switches, Level transmitter, Temp. Transmitter etc.
Insulation	A layer of 15 mm thick PUF insulation followed by EPS in two layers of 50 mm each including vapor barrier.

Other details shall be as per standard.

3.2 Curd settling tank for Butter Milk

Quantity	1
Capacity	: 2 KL
Type	: Cylindrical, vertical, insulated with agitator and geared motor
Material	: Inner shell SS 304, 3mm thickness, SS-304 cladding
Finish	: 150 grit
Accessories	: Inlet/outlet, breather, Rotary spray ball, Light glass, Sight glass, Top man way, common staircase, and railing.
Instruments	: High-Level & Low-Level switches, Level transmitter, Temp. transmitter etc.
Insulation	A layer of 15 mm thick PUF insulation followed by EPS in two layers of 50 mm each including vapor barrier.

Other details shall be as per standard.

3.3 Pasteurized Water Tank

Quantity	1
Capacity	: 2 KL
Type	: Cylindrical, vertical & insulated.
Material	: Inner shell SS 304, 3mm thickness, SS-304 cladding
Finish	: 150 grit
Accessories	: Inlet/outlet, breather, Rotary spray ball, Light glass, Sight glass, Top man way, common staircase, and railing.

Instruments	: High-Level & Low-Level switches, Level transmitter, Temp. transmitter etc.
Insulation	: A layer of 15 mm thick PUF insulation followed by EPS in two layers of 50 mm each including vapor barrier.

Other details shall be as per standard.

3.4 Butter Milk Recirculation Pump (Shear Pump):

Quantity	1
Capacity	: 5 KL
Type	: Shear
Seal	: Mechanical Seal
MOC	: SS 316 working parts, gasket of food grade nitrile rubber
Motor	: 415 V AC, 3Φ, 50 Hz, IE3 efficiency, squirrel cage induction motor, TEFC, IP 55 enclosure with SS 304 shroud

3.5 Butter Milk Chiller:

Quantity	1
Capacity	: 5 KLPH
Type	: Plate Heat Exchanger
Function	: To chill butter milk during recirculation from 35°C to 4°C Chilled Water feed temperature: 1.5 to 2° C
Maximum permissible chilled Water flow rate	2.0 times the Product flow rate.
MOC	316 plates and 0.6mm thick
Frame	Free standing SS-304 clad carbon steel frame on SS- 304 adjustable ball feet
Gasket	Nitrile rubber/NBR food grade
Finish	All welding joints shall be ground smoothly. All stainless-steel surfaces shall be polished to 150 grits.

Scope of Supply:

Plate Pack: The plates shall be made from stainless steel conforming AISI 316 and shall be of sanitary design. All milk contact and exterior, surfaces shall be easily accessible or readily removable for cleaning and inspection.

Gaskets: The sealing gaskets shall ensure complete sealing and prevent any cross leakage between product and service liquids. Gaskets shall be of sanitary type. It shall be continuously bonded to the heat transfer surface.

Gasket material shall be non-toxic, fat resistant, non-absorbent and shall have smooth surface. The MOC of gasket shall be food grade.

Supporting frame: The supporting frame for the plate pack shall be of a self-supporting design made of MS clad with AISI 304 SS sheet with a manually operated tightening device. The tie rods shall be of SS 304 with pipe sleeve of AISI-304 to protect the rod.

Inlets/Outlets: The inlets and outlets for chilled water and product shall be provided with complete stainless steel (AISI 304) SMS unions.

Thermo-well: Stainless steel (AISI 304) pockets shall be provided for measuring temperature at all the inlets and outlets.

Ball feet: The frame shall be provided with adjustable stainless-steel ball feet with provision for height adjustment of 50 mm.

3.6 Past. Water Transfer Pump:

Quantity	1
Capacity	: 5 KLPH
Type	: Sanitary design, centrifugal with quick opening fittings, monoblock, free standing with adjustable ball feet.
Function	: This pump shall be used for transfer of Pasteurized Water from Past. water Tank to Curd Settling Tank for Butter Milk Manufacturing.

3.7 CIP Return Pump for Butter Milk and Inoculation Tank:

Quantity	1
Capacity	: Suitable
Function	: CIP Return Pump shall be used for returning the cleaning solution to respective CIP solution tanks.
Design	: The pump shall be of self-priming design and shall be similar in design and construction of sanitary pumps.

3.8 High Speed FFS Machine for Pouch Packing

QTY	1 No
Make	Samarpan
-	
PRODUCT	Milk for curd
FEEDING SYSTEM	Gravity Filler
DOSAGE	200 ml, 500 ml and 1000 ml.
ACCURACY	+/- 0.5%
SPEED	10000 PPH
PACKING MATERIAL	Virgin Film: Any Impulse sealing material like co-ex LDPE 1) Film Width - 325 mm +/- 2 mm 2) Thickness: 62 +/- 2 micron 3) Maximum weight of film rolls 20 Kgs. 4) Film Roll dia - 400 mm. Core dia 76 mm

TYPE OF SEAL	Vertical – Overlap Horizontal – Seal & Cut Impulse Type.
DESCRIPTION OF THE MACHINE BODY	The components, which form, fill seal the pouches/sachets are enclosed in a stainless-steel cabinet. All major items are of stainless steel or treated with Aluminum protected by a weatherproof paint. All parts in contact with the product are of AISI-304 stainless steel with smooth finish.
SPOOL	
BEARER ASSEMBLY	The Roll of heat sealable films is mounted in a compartment at the rear bottom of the machine. They are supported on the idler rollers in sliding drawers with bottom opening machine cabinet doors, which enables to charge the rolls quickly. The Film layers passes in each head via different idler rollers, film loosening takes place through positive film unwinding AC drive mechanism and moves in front of the ultraviolet sterilization tube before it is engaged in the forming device. The specially designed former converts this layer into a tube.
VERTICAL SEAL	The film is overlapped and sealed into a tube on each head by impulse heated elements known as vertical electrodes. The sealing jaws are water- cooled and are mechanically operated by link mechanism through the drive shaft. The formed film tube surrounds the injection or filling tube through which the products to be filled flows in the film tube.
INJECTION SYSTEM	The filling system is as follows: <ul style="list-style-type: none"> ▪ A constant level tanks are mounted on top of the machine <ul style="list-style-type: none"> ▪ A filling tube leading down from the tank and inside tube of film ▪ A liquid injection electromagnetic coil is mounted on top of the injection tube ▪ A gate at the lower end of the injection tube opens when injection switch is turned ON. This allows the liquid to be packed in the surrounding formed film tube. The gate opens by electromagnetic coil actuation system of the piston in the injection cylinder assembly when injection switch is made ON.
FILM FEED	Rubber nip rollers below each vertical sealer control downward movement of the film tube. Vertical overlapped sealed film tube is pulled down by nip rollers directly coupled with drive shaft. The length of the film tube pulled down is controlled by PLC.
HORIZONTAL SEALING	AND

CUTTING

The sealed tube then arrives at the bag making point. Here when the horizontal presses close on the film tube, the horizontal assembly mounted on one of the presses seals and cuts the horizontal portion of the film tube. The flow of the liquid in the film tube is continuous and adjustable. The horizontal jaw simultaneously seals the upper horizontal sealed band of the lower filled pouch and the lower horizontal sealed band of the upper film tube. The other horizontal press on which there is only silicon back up rubber and a Teflon magazine is called a counter electrode.

COOLING

Both horizontal and vertical electrode holders are water-cooled.

DRIVE

The drive of each head is through a SERVO MOTOR coupled with horizontal sealing assembly, vertical sealing assembly and film pulling assemblies. The Home position of the cycle of operation is communicated to PLC through proximity switches aligned with the drive mechanism.

ELECTRICAL CONTROL PANEL

TOUCH SCREEN IN CENTRE OF THE MACHINE IS OPERATED THROUGH PLC, electrical Switches, control relays, solid state variac, pouch counters are mounted on this panel. The electric control panel is located on center of the machine.

SALIENT FEATURES

Compressed Air is not required for its operational
Better Accuracy: $\pm 0.5\%$
Better Speed- Speed virtually double compared to

Salient Features of Machine

conventional machines available in the market.

- Individual Head Operation: The machine head can run independently with different dosage of the liquid.
 - End of film Indication: Audiovisual alarm gets operated when the film roll gets exhausted.
 - Less noise and vibration compared to conventional machine.
- The machine does not require AIR for any of its operation.
 - In case of film exhaust auto operation of the machine will stop with Audio-visual alarm.
 - Machine body is in SS 304 construction.
 - All contact parts are of SS 304.
 - Machine motion is controlled through separate SERVO Motors for each head
 - Machine Operations are electronically controlled with PLC.
 - Machine has an integral settable Batch Counter to produce SET number of bags per batch.
 - Digital Setting Control for all Setting Timings.
 - Individual Head operation possible.
 - Positive unwinding for each Head.
 - Nip rollers are controlled by SERVO DRIVE/MOTORS.
 - Roof top in SS maintaining Hygiene.
 - 3 preset programs to run different bag size.
 - Separate control for sealing voltage & timer for handling different film.
 - Jaw movement through servo motors directly coupled to horizontal & vertical sealing assemblies.
 - Jaw Jog switch available
 - Adjustable cooling time.
 - Minimum number of mechanical parts resulting into less wear and tear and thereby reducing the maintenance drastically.
 - Isolated electrical Fitments from mechanical components.
 - Electrical control circuit in 24V thereby ensuring safety.

- Bank of UV tube for Sterilization of film
- SS Nozzle for CIP system
- Door glass will be toughened type
- Emergency switch to stop the machine will be provided at the front side of the machine.
- In case of short circuit of electrodes, particular head will stop with indication of alarm.
- Necessary interlocks will be provided in the machine.

- The manual weight adjustment knob will be provided on near to approachable height.
 - No film no fill provision will make to stop the machine with indication of alarm.
 - Three position selector switches will be provided.
- 1) Product Request (from filling machine)
 - 2) CIP request (From filling machine)
 - 3) Off (No signal)
- Two indicating lamps will be provided – Production (Signal from PLC), CIP (Signal from PLC)
 - Two signals each from one filling machine – for (Pouch Quantity)
 - Filling valve will be electromagnetic operation.
 - You will provide IFM make Proximity switches on the machine.
 - The balance tank is suitable to sustain the liquid pressure up to 3 kg / cm² during CIP Provision will be made for protection ring with CIP nozzle.

Self Priming CIP Return Pump for Pouch Packing Machines- 1 No

Make	: Fristam
Capacity	: Suitable
Function	: CIP Return Pump shall be used for returning the cleaning solution to respective CIP solution tanks
Design	: The pump shall be of self-priming design and shall be similar in design and construction of sanitary pumps.

Jaw Cooling Water Tank – 1No

Capacity	: 300 Ltrs
Type	: Vertical, Single walled, Leg mounted
MOC	: Product contact part SS 304
Construction -	vertical
Thickness	2 mm
Inner top/ front dish -	
Thk. -	2mm/5mm Inner
bottom/rear dish- Thk.	3 mm
Mounting :-	Pipe
Insulation :-	Thk.15mm P+50 mm EPS +50mm EPS
	Density – PUF -30 to 35 kg/cu.mtr & EPS – 16 to 20 kg/cu.mtr
	Insulation cladding outer - MOC – SS304, Cladding shellThk-2 mm,cladding bottam – 2mm, welded cladding.
Slope	: 1:15 towards the outlet

Finish : All the welding joints shall be ground smooth. All stainless-steel surfaces shall be polished to 150 grits.

Joint Curvature : All inside corners shall have minimum radii of 25 mm. Shall be used for storing of cooling water for Jaw cooling.

PHE for Jaw Cooling Water Chiller – 1No

Capacity : 3 KLPH

MOC : SS316 of 0.6 mm thick.

Type : PHE

Frame : Free standing SS-304 clad carbon steel frame on SS-304 adjustable ball feet

Gasket : Snap/clip ON type nitrile rubber/NBR food grade Duty : PHE shall be used for Jaw cooling.

Auto temperature control system should be provided to maintain cooling water temperature at @ 25 to 27 °C

Cooling water Recirculation Pump – 1No

Capacity : 3 KLPH

Type : Sanitary design, Centrifugal with quick opening fittings, Monoblock, free standing with adjustable ball feet

Function : This pump shall be used for circulation of coolingwater

Simplex Strainer for Jaw Cooling System- 1 No

Capacity : 3 KLPH

MOC : SS304

Type : Pipe in pipe type inline strainer

Duty : Simplex Strainer Shall be used for straining out the particle from Cooling water if any

3.10 Installation of existing pouch packing machine, linear cup filling machine and installation and commissioning of new high speed pouch packing machine is in the bidder's scope.

Required SS pipelines from inoculation tank to packing machines as well as return line for CIP of packing machines and CIP of pipelines is in the bidder's scope.

4.0 Incubation room for curd (Temperature to be maintained at @44 °C)

Capacity: 14 Ton (7 Ton x 2 Nos)

Suitable Curd Incubation Room with electrical heating system shall be provided.

Star Cooler make Heater (minimum six heaters for each Incubation Room).

Capacity: Suitable

Room Size: Approx. 9m x 4.5m each. Bidder should check the actual dimensions during site visit.

Hot air's flow should be such that uniform room temperature is to be maintained throughout the room. Required duct for each heater should be designed accordingly.

5.0 Blast room for Curd:

Suitable Blast Room shall be provided for rapid cooling of Finished Product. Product temperature should be pulled down from 45 °C to 10 °C in 5 to 6 Hours.

Star Cooler / Alfa Laval make Freon based (R-404A) Direct expansion type Forced Draft coolers for Curd Blast Room (New Building) cross-draft type with suitable evaporating temperature . The casing shall be of GI Powder coated, with Copper tubes and with aluminum fins and SS insulated Drain tray.

Suitable auto defrosting system should be provided.

Room Size: Approx. 9.5m x 4.5m each. Bidder should check the actual dimensions during site visit.

Capacity	18 Ton (9T x 2 Nos.)
Evap. Temp	Suitable
Refrigerant	R-404A

Frascold / Bitzer / Emerson / Danfoss make Air Cooled condensing units mounted on base frame, condenser with copper tubes and aluminum fins, fan shroud, condenser fan motor, discharge line with flexible pipe loop, liquid receiver with one shut-off valve, HP/LP switch mounted and crankcase heater for Curd Blast Room.

Refrigeration Capacity	Suitable
Evap. Temp	Suitable
Condensation Temp	Suitable
Condensing type	Air cooled
Refrigerant	R-404A

Suitable no. of electrical LED moisture proof fixtures (Philips / Wipro) having Lux level 350 Lux should be provided in incubation room , blast room and passages .

6.0 CIP system for cultured milk handling equipment:

6.1 Lye solution tank:

Quantity	1
Type	Vertical, Insulated, cylindrical free standing on SS ball feet legs.
Capacity	1 KL
Material	SS316, 2mm thick
Insulation	Resin bonded fiberglass crown
Cladding	SS304
Instruments & controls	Provision & supply for conductivity, level & temperature sensors with transmitter .

6.2 Acid solution tank

Quantity	1
Type	Vertical, Insulated, cylindrical free standing on SS ball feet legs.
Capacity	1 KL
Material	SS316, 2mm thick
Insulation	Resin bonded fiberglass crown
Cladding	SS304
Instruments & controls	Provision & supply for conductivity, level & temperature sensors with transmitter.

6.3 Hot water tank:

Quantity	1
Type	Vertical, Insulated, cylindrical free standing on SS ball feet legs.
Capacity	1 KL
Material	SS316, 2mm thick
Insulation	Resin bonded fiberglass crown
Cladding	SS304
Instruments & controls	Provision & supply for level & temperature sensors with transmitter.

6.4 Recuperation tank:

Quantity	1
Type	Vertical, single walled, cylindrical free standing on SS ball feet legs.
Capacity	1 KL
Material	SS304, 2mm thick

6.5 CIP Supply pump:

Quantity	1
Type	Sanitary design, Centrifugal with quick opening fittings, Monoblock, free standing with adjustable ball fee

Capacity	10 KLPH
Function	This pump shall be used to supply of CIP chemical to equipment/ transfer line which CIP is to be carried out.

6.6 CIP PHE:

Quantity	1
Capacity	10 KLPH
Application	To maintain temperature of CIP solutions/ Water at the required levels.
MOC	SS 316
Temperature	Delta T of 20 Deg, C
Type	Plate heat exchanger
Heating Medium	Hot water
Finish	All welding joints shall be ground smoothly. All stainless steel surfaces shall be polished to 150 grits.

6.7 Duplex strainer:

Quantity	1 no
Capacity	10 KLPH
MOC	SS-304
Accessories	Perforated screen type
Type	Duplex Type PIP Strainer with manual change over.
Function	For filtering the cleaning liquid

7. Spare pumps: One extra spare pump of each model is to be supplied.

8. SS Pipes, Valves, and Fittings 1 Lot (as required)

8. SS Manual valves & Fittings 1 Lot (as required)

9. SS Pneumatic valves 1 Lot (As required)

10. SS/MS/GI Structural Materials (as required)

Suitable structural platform shall be provided in SS and structure with SS cladding wherever required. Ladders to be provided wherever required.

Successful bidder should submit the drawings of tanks etc for approval.

11. Electricals, Instrumentations & Panels:

11.1 Electrical Instruments:

Bidder's scope starts from outgoing feeder of existing PCC. Further cabling from existing PCC to new MCC, Supply of new MCC and onward distribution shall be in Bidder's scope. We have considered the plant is purely operating manually from RCP (Remote-control push-

button station). All the controlling and indicating parameter shall be installed at the panel only. CIP shall be considered on Standalone semi- automatic type operating facility locally. Earthing and other accessories for considered in Bidder's scope for new expansion only.

Bidder should provide two separate GI earthing (pipe in pipe) and should provide double earthing to each machine, panels and motors.

Bidder should provide two separate copper earthing for PLC and Instruments.

11.2 Control Panel/Scheme:

Standalone Semi-Automation Panel for Fermented CIP kitchen:

We propose to build the control system using standalone system for single circuit fermented CIP kitchen. The Proposed system would be built on M/S Rockwell as per the process requirement. Rest of the process shall be manual basis RCP based.

SYSTEM CONFIGURATION_ RCP

RCP consist of PLC and HMI with redundancy for curd pasteurizer and CIP, and other RCP consist of PID or On/Off controller, Temperature Indicator, Flow Totalizer, Pressure Indicator, MCB, Toggle switch, Relay 24 V DC, Relay 230 V Ac, NO/NC block, Aux contact and Hooter etc. This all shall be considered based on the process requirements.

We have considered RCP panels for all the manual sections in new curd section.

The tentative list of RCP sections is as below:

RCP Details	Qty (Nos)
RCP for CIP section	1
RCP for curd section	1
RCP for curd milk pasteurizer	1
RCP for inoculation tank	1

Total selection and number of RCP shall be final during detailed design engineering. Above list shall be indicative purpose only and may vary during detailed engineering.

Electrical Section:

Highlight Key Points for Electrical:

Conventional Motor Control Center (MCCs)

The MCC shall be suitable for indoor installation in the compartmental construction for compact configuration with provision for expansion. The motor control center shall be completely dust & vermin proof conforming to IP 42 standard. The MCC shall be fabricated, as per the technical specifications mentioned under details of items.

Cooling Fan & filter assembly, lighting of panels, heater:

Each section of the panel shall be provided with a set of cooling fan, filter assembly and 2' long T5 tube light fitting operating through a SP MCB and door limit switch.

Each section of the panel shall also be provided with heating plate and a suitable thermostat.

Bus bar Sizing Connection and Supports:

Minimum size of power (phase) bus bars shall not be less than 200 Amps rating. Maximum current density permissible for Aluminum Bus Bars shall be 0.8 Amps/mm². A suitable

section aluminum earthing bus bar shall be provided in the panel at bottom throughout the length of the panel. **Bus bar for all the MCC Panel shall be aluminium conductor having current density of 0.8 A / Sqmm.**

Auxiliary wiring and terminals

Wiring for all controls, protection, metering, signaling etc. inside the switchboard shall be done with 1100 volts' grey color PVC insulated stranded copper conductors. Minimum size of these conductors shall be 1.5 Sq.mm. CT circuit wiring shall be done with 2.5 Sq.mm. Control wiring to components fixed on doors shall be flexible type.

The complete panel would be sub-divided into different sections if required by purchaser. Each cubical shall have its own control circuit with MCB and indication. Terminal block (Minimum 3-ways) for control wiring shall be provided for each outgoing Motor feeder in its cubical near cable alley. 10% spare (minimum one)

All control wiring shall be provided with necessary cable sockets/lugs at both ends.

Conductors shall be terminated using compression type lugs. Each termination shall be identified at both the ends by PVC ferrules. The identification termination numbers should match with those on drawings.

Cable Trays:

GI Perforated cable trays shall be provided for outside the packing area. SS wire mesh cable trays shall be provided inside the packing area. Supply & installation of GI cable tray covers are in bidder's scope.

Switchgears and Power/Control Cable:

Molded Case Circuit Breakers (MCCB):

MCCBs shall always be provided with separate rotary operating handle mechanism with door interlocking. The MCCBs shall be of three / four pole construction (as required in the feeder details) arranged for simultaneous three / four pole manual closing or opening and automatic instantaneous tripping on short circuits.

MCCBs shall be provided with adjustable type tripping device with inverse time characteristics for overload protection. Closing mechanism shall be quick make, quick break & trip free type.

Operating handle shall give a clear 'ON', 'OFF' & 'TRIP' indications. Control voltage for MCCB shall be 240 volts. The MCCBs shall be rated for continuous maximum duty as specified. The rating of the MCCBs shall be as per the feeder details.

Power, control and instrument cables:

All Cables from existing PCC O/G side to new MCC shall be aluminum armored. All power cables from new MCC O/G to motors or consumption points, control cable shall be flexible copper steel braided/copper armored. Bidder should consider min. size of instrument cable as 0.75 sq.mm.

Process Instrumentation:

Field instruments shall be on hardwired basis (4-20 mA).

Hot Water Distribution Piping & Fittings

Tapping of Hot Water Pipeline shall be carried out from Existing nearest Hot Water Header. Further distribution up to the consumption points in new building shall be in bidder's scope.

All Hot Water Pipeline drops from headers for distribution shall be of MS.

Chilled Water Distribution Piping & Fittings

Tapping of Chilled Water (Supply & return) from Existing Chilled water (Supply & return) Header shall be carried out. Further distribution up to the consumption points in new building shall be in bidder's scope.

All chilled water line drops from headers for distribution shall be of GI with manual isolation valves.

Compressed Air Distribution Piping & Fittings:

Tapping of Compressed Air from Existing Compressed Air Header shall be carried out. Further distribution up to the consumption points in new building shall be in bidder's scope. The MOC of main header of compressed air is of MS C class and all Compressed Air drops MOC shall be SS 304.

Raw/Soft Water Distribution Piping & Fittings:

Tapping of Soft water from Existing nearest Soft Water Header shall be carried out. Further distribution up to the consumption points in new building shall be in bidder's scope. The MOC of main header of raw/soft water is of GI and all raw/Soft Water line drops from headers for distribution shall be of SS-304 with manual isolation valves.

1 Lot Refrigerant Copper Pipes, Valves and Controls.

1 Lot. TATA / Jindal / equiv. make GI B class pipes for Water Drain Line.

1 Lot Intervolve / L&T / Audco make water line valves and controls.

1 Lot Armaflex / Nitrite Foam Insulation of appropriate thickness for Copper and Water Pipes.

1 Lot. MS painted Structural material for condensing unit and pipe support.

Beardsell / Jindal / Rinac /Icemake/ Lloyd make PUF slabs of 80 mm Thk. (2 Layers each layer having 40 mm Thk.), Density 40 kg/m³ for Floor of Incubation room.

Beardsell / Jindal / Rinac /Icemake/ Lloyd make Insulated sandwich type PUF panels 80 mm Thk. with 0.50 mm both side PCGI Sheet, density 40+/- 2 kg/m³ for Ceiling & wall of Incubation room.

Beardsell / Jindal / Rinac /Icemake/ Lloyd make PUF slabs of 100 mm Thk. (2 Layers Each layer having 50 mm Thk.), Density 40 kg/m³ for Floor of Curd Blast Room.

Beardsell / Jindal / Rinac /Icemake/ Lloyd make Insulated sandwich type PUF panels 100 mm Thk. with 0.50 mm both side PCGI sheet, density 40 +/- 2 kg/m³ for Ceiling & wall of Curd Blast Room.

Metalex make Manual Sliding Door- 2 numbers, size: 1.5 Mtr. X 2.1 Mtr(measurement should be taken actual). Single Leaf clad with 0.5 mm Thk. PCGI Sheet, 80mm Thk. having PUF Density 40 +/- 2 kg/ m³ for incubation room.

Metalex make Manual Sliding Door- 2 nos, size: 1.5 Mtr. X 2.1 Mtr. (measurements should be taken at actual) Single Leaf clad with 0.5 mm Thk. PCGI Sheet, 100mm Thk. having PUF Density 40 +/- 2 kg/ m³ for blast room.

Metalex make Manual Sliding Door- 1 nos, size: 1.5 Mtr. X 1.85 Mtr. (measurements should be taken at actual) Single Leaf clad with 0.5 mm Thk. PCGI Sheet, 100mm Thk. having PUF Density 40 +/- 2 kg/ m³ for existing milk cold room.

Russell make S S Air curtain with Limit Switch (3- Phase) for each Sliding Door of Incubation room and Blast room and existing milk cold room having size: 1500 MM.

List of Makes:

Particulars	Make
PUF Panels	Icemake / Rinac / Lyoid / Frick
Blast room ACUs	Starcoolers / Blue cold / Alfalaval
Light fittings	Philips / Wipro
Compressor (semi sealed)	Bitzer / Frascold / Emerson
Incubation Unit	Icemake / Frick
Blast and Incubation room doors	Metaflex
Pasteurizer	GEA / Tetrapak / IDMC
Homogenizer	APV / Tetrapak / GEA
S S Pipes & fittings	Alfa Laval / Rensa / IDMC
S S Valves	IDMC / Alfa Laval / SPX
Motor	CG
VMST	Reputed make
PLC with SCADA	Allen Bradly (Rockwell)
HMI	Allen Bradly (Rockwell)
Electrical cables	Polycab
Pump	Fristam
Electrical switchgears	L&T
Level Switch / Level Transmitter	E & H
Conductivity transmitter	JUMO/E &H
Temperature Sensor /Indicators	Radix
Temperature Transmitters	E & H
Earthing	ISI standard for electrical & instrumentation
Turbo blender	Micron/IDMC/Fristam
PHE	Alfa laval/GEA/IDMC

GENERAL TERMS AND CONDITIONS:

1. Bidder will be responsible for technically correct installation and include in his scope as per requirement of automation and system, basis of design. Bidder will not be paid extra cost on any account if he has to add any material or redo the installation if necessary to achieve the requirement
2. Contractor to furnish all equipment foundation drawing consisting of pocket dimensions, static / dynamic load details, inserts bolts etc. at appropriate time during the execution. Any delay in providing these details which will cause delay in project will be attributed to contractor. Contractor has to closely coordinate with civil contractor/ department for the same.
3. Fixing of insert plates, structure for supporting operating equipment, pipe lines etc. to be supplied and installed by the bidder. The structural material to be used should be of TATA or SAIL make only.
4. All pipe lines and structures / platforms, ladders should be provided as per requirement of client and thoroughly cleaned and painted with two coats of anti-corrosive red oxide primer followed by two coats of epoxy paint as per the standard color code and instructions.

5. Joint pressure testing and vacuum testing inspection report to be submitted and test will be witness by our site in charge.
6. All exposed outside pipe supports and platforms should be epoxy painted.
7. Pipe labeling / marking shall be carried out as per standard.
8. All uninsulated pipes must be epoxy painted as specified as per requirement.
9. The Platform with Chquered plates and ladders should be provided to access valve and controls and wherever required from maintenance and operational point of view.
10. Once the contract is awarded, bidders have to co-ordinate other agencies such as electrical, firefighting, civil agency and ensure the committed dates are achieved.
11. All tools & tackles, crane, hoisting equipment etc. to be provided by the bidder.
12. The rigging and placement of the equipment at site, unloading of equipment (imported & Indigenous) at site will be carried out by the bidder.
13. All safety measures such as safety shoes, helmet, and proper safety arrangement to work above certain height; movable scaffolding must be with lockable wheel and appropriate plat form to work. Entire Bidder installation staff should wear required PPE. Any erection crew if found without using PPE will be ask to leave the site. Proper scaffolding, lockable four-wheel ladder must be used for installation work. Otherwise installed work will be stopped till all safety requirements are fulfill. All safety procedure and PPE use to be approved by Gokul before startup of installation work.
14. Lodging, Boarding, Transport etc. of the erection crew would be arranged by the bidder.
15. Transit Insurance of all the supplied materials from supplier's ware house up to Site shall be covered by the bidder. The storage cum erection (all risk) Insurance to be covered by the bidder. The risk covered should be valid up to handing over the plant to us.
16. The prices should be inclusive of local taxes & duties, import duties if applicable, now and as and when made applicable in future.
17. Unloading equipment at site including, lifting shifting positioning of the equipment of the same is included in bidder scope. Bidder to take at most care of these equipment while installation and commissioning. In case of any damage to this equipment while installation & commissioning, the equipment to be repair/replacement by the bidder. Custom clearance of imported equipment and transportation to site is included in bidder scope.
18. Bidder should inspect the site of the work to familiarize themselves with the site conditions before finalization of the order.
19. Bidder should provide first year's consumable spares required for all the machines.
20. Income tax according to Government of India regulations and any other local taxes, as required statutorily will be deducted, and prescribed certificates shall be issued to the bidder. If works contract tax, trade tax is applicable, then it will be to bidders account.
21. Provident Fund, ESIC or any other statutory benefits if applicable now and/or as and when made applicable to the erectors/worker employed by the bidder would be borne by the bidder and copy of the same should be submitted to Gokul.

22. The prices shall remain firm till the satisfactory completion of the entire scope of work. No extra claim will be entertained.
23. Performance trial will be conducted for period of one month in presence of bidder's technical officer as per mutually agreed plan.
24. Since this is running dairy entire, work has to be carried out meticulously, with proper planning and with minimum shutdown.
25. Any civil damages while erection due to mishandling the cost will be recovered from contractor's bill.
26. Suitable no. of electrical LED moisture proof fixtures (Philips / Wipro) should be provided in process area having illumination level minimum 500 lux.
27. Suitable insulation as per standard should be provided for utility and product line as per requirements.
28. Four Numbers of Industrial Fly catchers and ABC type fire extinguishers (seven Nos) to be provided.
29. Cold room door to be considered for cold room no.8

Note:- If any item/equipment/specifications are not included in this tender and if it is the requirement of the process then bidder should consider this in his scope.

ADDITIONAL REQUIREMENTS:

- All milk lines which are in the bidder scope should be cold insulated by suitable material with aluminum cladding.
- Unions should be provided to SS milk lines wherever necessary for easy operation.
- SS lines & fittings should be of IDMC/RINSA make.
- Bidder should tap all utilities from existing pipelines in old dairy building. Insulation of utility pipeline should be in bidders scope.
- Necessary valves for utility lines are in bidder scope.

commissioning. You will have to demonstrate performance trials at site.

Client will provide following:

- All civil work, foundation work, floor water drain arrangement in plant room and on terrace.
- Making holes in walls and repairing of the same. Bidder to provide marking and coordinate with designated person.
- Power & water for erection: Power & water will be provided at one point. You will have to make your own arrangement for further connection of power supply to your machinery. Any other supports required for curd system is in contractor scope.

FORMAT
(Technical offer)

The Managing Director,
Kolhapur Zilla Sah.Dudh Utpadak Sangh Ltd.
B-1, M.I.D.C., Gokul Shirgaon,
Kolhapur - 416 234

Sub - Technical offer for Curd Plant

Dear Sir,

With reference to the Tender Notice published in Daily _____ on _____, I/
we submit the Technical offer as design, supply, installation & commissioning of 15 MT/day
capacity of curd plant, at our Vashi packing station, Navi Mumbai.. We also agree upon
Terms conditions

Yours faithfully

Seal & Signature of Tenderer

Encl -

3. D D towards EMD
4. Company Profile

FORMAT

COMPANY PROFILE

Name of the Tenderers	-	
Address	-	
Tel. Nos.	-	
web site	-	
E - mail	-	
GST Registration No.	-	
Name of Authorised Signatory	-	
Designation of the authorised Signatory	-	

Seal & Signature of Tenderer

FORMAT
(Commercial Offer)

(To be given on Letter head of Tenderer)

To,
The Managing Director
Kolhapur Zilla Sahakari Dudh Utpadak Sangh Ltd.,
B-1, M.I.D.C., Gokul Shirgaon,
Kolhapur - 416 234

Sub - Tender for 15MT Curd Plant at Vashi

Dear Sir,

With reference to the Tender Notice published in _____, I/we submit our Tender offer for design, supply, installation & commissioning of 15 MT/day capacity of curd plant, at our Vashi packing station, Navi Mumbai. We have thoroughly studied specifications of required 15 MT/day capacity of curd plant, & also Terms & Conditions of this Tender.

Total all inclusive price of design, supply, installation & commissioning of 15 MT/day capacity of curd plant Rs. _____ + GST

(In words Rs. _____)

(Price details are given in the price schedule attached herewith)

Required Delivery Period --

Other information if any --

Place --

Date --

Seal & Signature of Tenderer

FORMAT

PRICE SCHEDULE

(To be given on Letter head of Tenderer)

PRICE DETAILS -

1.	Basic Price for design, supply, of 15 MT/day capacity of curd plant	Rs.
2	Installation & commissioning of 15 MT/day capacity of curd plant	
3	GST	Rs.
Total Price is 1 + 3		Rs.

(In words Rs)

Date

Seal & Signature of Tenderer