

## Notice Inviting Tender

Ref No: SFURTI/ ANGUL/MACHINERY-1/2024-25

Date: 08.05.2024

**PEOPLES INTEGRATION AND UNION FOR SOCIETY** At/PO-MAHIDHARPUR, VIA- HINDOL, DIST- ANGUL, ODISHA, PIN 759022, invites tender in a sealed cover under two bid system i.e. Technical bid & Financial Bid from Manufacturers and Authorized distributors for supply of Machineries for establishment of Common Facility Centre for **MAHIDHARPUR DESHI COW MILK A2 PROCESSING CLUSTER** on behalf of **GOMATA MILK VIKASH TRUST (SPV)** AT/PO- MAHIDHARPUR, VIA- HINDOL, DIST- ANGUL, ODISHA, PIN- 759022.

Date of Commencement of tender	Last date and time of submission of tender	Date & Time for opening of Technical Bid	Cost of tender paper
<b>08.05.2024</b>	<b>28.05.2024 at 05:00pm</b>	<b>29.05.2024 at 11:00 am</b>	<b>FREE</b>

A complete set of the Bid documents containing the details of the terms and conditions may be downloaded from the website of PEOPLES INTEGRATION AND UNION FOR SOCIETY ([www.pius.org.in](http://www.pius.org.in)) or CENTRAL TOOL ROOM AND TRAINING CENTRE ([www.cttc.gov.in](http://www.cttc.gov.in)). Any corrigendum/ addendum/ information related to this NIT will only be uploaded in PEOPLES INTEGRATION AND UNION FOR SOCIETY website ([www.pius.org.in](http://www.pius.org.in)) which will not be published in Newspapers. The authority reserves the right to accept / reject any part or all the bids without assigning any reason thereof. The authority has the right to increase/ decrease / cancel the quantity without assigning any reason thereof.

**SECRETARY**  
**PEOPLES INTEGRATION AND UNION FOR SOCIETY**

**PEOPLES INTEGRATION AND UNION FOR SOCIETY**  
**At/Po- Mahidharpur, Via- Hindol, Dist- Angul,**  
**Odisha, Pin Code-759022**  
**Website- [www.pius.org.in](http://www.pius.org.in)**

**NOTICE INVITING TENDER**

**NIT: SFURTI/ ANGUL/MACHINERY-1/2024-25**

**Name the work:** To Establish: Common Facility Centre (CFC) Of Mahidharpur Deshi Cow Milk A2 Processing Cluster & Gomata Milk Vikash Trust (Spv) At/Po- Mahidharpur, Via- Hindol, Dist- Angul, Odisha.

**Earnest money** :Rs. 5,12,000/-

**Last date and time of  
Submission of Bid** : 28.05.2024 at 05:00pm

## TENDER NOTICE

**(Supply, Installation and Trial Running of the Machineries and Equipment's for Mahidharpur Deshi Cow Milk A2 Processing Cluster, At/Po- Mahidharpur, Via- Hindol, Dist- Angul, Odisha, Pin-759022.)**

Sealed tenders are invited from manufacturer and authorized distributors for supply of machineries and equipment for establishment Common Facility Centre At/Po: Mahidharpur, Angul, Odisha, being facilitated by **Peoples Integration and Union for Society, At/Po- Mahidharpur, Angul, Odisha, Pin-759022**. Tender should be submitted in double bid system **(Technical and financial bid separately)** along with **earnest money of Rs.5,12,000/- (Rupees Five Lakhs Twelve Thousand only)** needs to be deposited in shape of DD (Demand Draft).

ITEM	Amount (in Rs)	EMD (3% of package value) (in Rs)
PACKAGE 1- Milk Processing Edible section	1,70,66,042/-	5,12,000

The complete tender papers in all respect should be submitted at the following address: Gate no 1, Central Tool Room Training Centre, B-36, Chandaka Industrial Area, Bhubaneswar- 751024 up to 05.00 pm of **Dt. 28/05/2024**. Tender received will be opened in the presence of working committee of the proposed cluster on **Dt.29/05/2024** at 11.00 am.

Tender form can be downloaded from the website of PEOPLES INTEGRATION AND UNION FOR SOCIETY ([www.pius.org.in](http://www.pius.org.in)) or CENTRAL TOOL ROOM AND TRAINING CENTRE ([www.cttc.gov.in](http://www.cttc.gov.in)) on any day between **Dt.08/05/2024** to **Dt. 28/05/2024** up to 05.00 pm. The detail of works and terms & conditions are available in the tender form. Secretary **Peoples Integration and Union for Society** reserves the right to cancel any or all the tenders without assigning any reason.

**SECRETARY**

**PEOPLES INTEGRATION AND UNION FOR SOCIETY**

**TENDER FORM**

**(Supply, Installation and Trial running of the Machineries and Equipment's for Mahidharpur Deshi Cow Milk A2 Processing Cluster, At/Po- Mahidharpur, Via- Hindol, Dist- Angul, Odisha)**

**Terms and Conditions:**

- 1- The minimum turnover of last 3 years (ending on 31.03.2024) of the Tendering firm should be equal to or more than **Rs. 3.00 Crore.**
- 2- The Tendering firm should have minimum three-years of experience in supplying **MACHINERY OF INDUSTRIAL, MILK PROCESSIONING** items experience should be supported with necessary evidences in the form of Purchase Orders for the tendered Machine/ items (minimum three Purchase orders need to be furnished). Out of three Purchase orders, one P.O value should be equal to or more than Rs. 50, 00,000/-(Fifty Lakhs Only).
- 3- Tenderers must have Manufacturing Trade License in case of Manufacturer and tender specific Dealership Certificate from the manufacturer in case of Authorized Dealer and same to be submitted along with offer. **The MSME registered bidders will be exempted from submission of EMD and proof of Annual Turnover and experience as per the Government rules.** The tender should be submitted in the prescribed tender format only for claiming of Exemption, bidder has to submit Valid MSME Registration whose validity should be as on opening date of tender.
- 4- Tenderers must submit Pan Card, Audited ITR return and Balance sheet of last three years ending on 31/03/2024, GST Registration Certificate and last month's Challan of Professional Tax Return.
- 5- Tender form can be downloaded from the website of PEOPLES INTEGRATION AND UNION FOR SOCIETY ([www.pius.org.in](http://www.pius.org.in)) or CENTRAL TOOL ROOM AND TRAINING CENTRE ([www.cttc.gov.in](http://www.cttc.gov.in)) on any day between **Dt. 08.05.2024 to Dt.28.05.2024** up to 05:00 PM.
- 6- Tender form should be deposited in separate envelopes containing **Technical Bid, EMD, printed catalogs for the quoted Machines with technical Details and other documents as per point no 1 to 5 (envelope No 1) , Financial Bid consisting of all- inclusive price bid (Envelope No 2)** at following address: **GATE NO-1, CENTRAL TOOL ROOM AND TRAINING CENTRE, B-36, CHANDAKA INDUSTRIAL AREA, BHUBANESWAR-751024** on or before **05.00PM of Dt.28.05.2024.** The received tenders will be opened in presence of the Working Committee on **Dt. 29.05.2024 at 11.00am.**

- 7- The tenderers should submit their Bid in Two Covers (1) **Technical Bid** and (2) **Financial Bid**. Envelope containing Technical Bid should be super-scribed as **TECHNICAL BID** and Envelope containing Financial Bid should be super-scribed as **FINANCIAL BID**. Both the Bids should be sealed in one envelope super-scribed as Tender for “**Supply, Installation and trial running of the machinery and equipment for Mahidharpur Deshi Cow Milk A2 Processing Cluster, At / Po- Mahidharpur, Via- Hindol, Dist- Angul, Odisha**” & should be deposited at following address: **GATE NO -1, CENTRAL TOOL ROOM AND TRAINING CENTRE, B-36, CHANDAKA INDUSTRIAL AREA, BHUBANESWAR-751024** on or before **05: 00 PM of Dt. 28.05.2024**.
- 8- The Technical Bid will be opened first. If the Technical Bid is accepted in all respects and found suitable as per tender requirement, then the Financial Bid of technically eligible tenderers will only be opened.
- 9- The tendered firm should submit tender for the whole or package of items mentioned as per the annexure. However, preference will be given for the firms who quoted for all the mentioned items. The purchaser reserves the right to evaluate package wise, items wise or in total.
- 10- The Prices quoted must be on FOR basis. The tender should include GST, insurance, freight, unloading and keeping in site, installation and commissioning of equipment at destination site but should be shown separately.
- 11- If the items supplied by the successful bidder/supplier are not found as per specifications or satisfactory, the payment of whole or equivalent amount can be withheld.
- 12- Affidavit of not being black listed by Govt. Of India/ Public Sector/ for which they have executed their works to be submitted along with offer.
- 13- The accepted lowest evaluated party has to enter in to an agreement with **PEOPLES INTEGRATION AND UNION FOR SOCIETY (IA OF MAHIDHARPUR DESHI COW MILK A2 PROCESSING CLUSTER)** on a Non-judicial Stamp Paper of Rs. 100/-as per the prescribed Performa.

**14- Scope of Work**

- (a) The “Supplier” Should undertake Supply, Erection and commissioning of machineries equipment’s and accessories for the Common Facility Center of **Mahidharpur Deshi Cow Milk A2 Processing Cluster** on turnkey basis. The tender comprises 01 package and the details are given in the tender documents. The Specifications given in the tender document should be strictly followed.
- (b) The “Supplier” should complete the supply Erection and commissioning of machineries, equipment’s and its accessories for the Common Facility Center of **Mahidharpur Deshi Cow Milk A2 Processing Cluster** on turnkey basis within 90 days from the date of receipt of Purchase Order.
- (c) The machinery equipment and its accessories should be delivered and installed At /Po- Mahidharpur, Via- Hindol, Dist- Angul, Odisha, Pin- 759022.

#### **15- Purchase Order Execution**

- (a) The Supply, Erection and Commissioning of machineries and equipment and its accessories for the Common Facility Center of **Mahidharpur Deshi Cow Milk A2 Processing Cluster** on turnkey basis shall be completed within 90 days from the date of issue of Purchase Order. Delay beyond this period will attract Late Delivery Charges.
- (b) The Supply, Erection and Commissioning of machineries and equipment and its accessories for the Common Facility Center of **Mahidharpur Deshi Cow Milk A2 Processing Cluster** shall be carried out at Common Facility Center At / Po- Mahidharpur, Via- Hindol, Dist- Angul, Odisha, Pin code- 759022.
- (c) If the contract is not completed within the stipulated time. M/s **Peoples Integration and Union for Society** will hold full authority to cancel the tender or take any such action that will be deemed fit to the occasion at the risk and cost of the Supplier. Such cancellation will entail forfeiture of EMD and Security Deposit.
- (d) In the event of non-performance of the contractual provisions within the stipulated time and it is found that the Supplier has not fulfilled the contractual obligations with M/s Peoples Integration and Union For Society in any manner, M/s Peoples Integration and Union For Society reserves the right to disqualify such supplier to participate in future tenders or black list the tenderer up to a maximum period of 5 years.

#### **16- Training of Artisans**

- (a) The successful tenderer should provide training to artisans on operation and maintenance of the machineries, equipment's and its accessories after completion of the performance test.
- (b) The successful tenderer should provide 2 hard copies and soft copies of brochures & operation manuals for the machineries, equipment's and its accessories to Implementing Agency.

#### **17- Payment Terms**

- (a) **20 % of contract value** will be paid as advance on execution of agreement against Bank Guarantee. For equivalent amount the tenderer should produce **Bank Guarantee** for the equal amount, which should be valid for a minimum period of 3 months. If necessary, the bank guarantee should be extended for the required period as requested by IA.
- (b) **60% of the contract value** will be paid, against bills, on receipt of the complete set of machinery ,equipment's and its accessories as per the order in full and good condition, at the CFC site, after acceptance by the working committee and submission of CRC (consign Receipt certificate) duly signed.  
**(OR)** Alternatively, the bidder may opt for **80% of contract value** on supply of the complete set of machinery, equipment and its accessories as per the order in full and good condition, at the CFC site, after acceptance by the working committee, instead of claiming first installment of 20% as advance payment against bank guarantee.
- (c) **15% of the contract value** will be paid on successful completion of performance test and training of artisans.

- (d) **The Balance 5% and SD** shall be converted as SD for Performance Guarantee and will be released after successful completion of warranty period / Performance test.
- (e) IA also reserves the right to recover any dues from the tenderer, which is found on later date, during audit /excess payment, after final settlement is made to them. The successful tenderer is liable to pay such dues to the IA immediately on demand, without raising any dispute / protest.

**18- Late Delivery Charge**

- (a) Failure to execute the entire contract within 90 days or agreed delivery period from the date of issue of Purchase Order will attract LD charge of ½ % of order value for delay of every 15 days or part thereof to a maximum of 5% of contract value. After reaching the maximum, purchaser reserves the right to cancel the purchase order without any liability on part of the purchaser.
- (b) The response time for attending the complaint raised by IA has to be complied within 48 hours and resolution time for the same has to be within the next 48 hours. Failure to comply with the above timeline will attract a penalty of Rs.10000/- per day.

**19- Performance Test**

- (a) The successful tenderer shall demonstrate the performance of the machineries equipment and accessories in complete conformity with the relevant technical specifications and performance parameters as specified in the purchase order.
- (b) The performance tests should be completed within 30 days from the date of delivery of machinery equipment's and all accessories.

**20- Performance Guarantee**

- (a) The Machineries, equipment's and its accessories are to be guaranteed for a period of 12 months from the date of completion of performance test against manufacturing defect, bad workman ship or proper performance.
- (b) During performance Guarantee period of 12 months the successful tenderer should attend any call from IA immediately, in case of any problems, related to operation or malfunctioning of the machinery, equipment's and accessories without any delay for regular operation of the machinery. The above service will be done at free of cost.
- (c) After completion of one year performance guarantee period successfully, the balance 5% and SD will be released to the supplier, after recovery of dues if any.

21- **SECRETARY, PEOPLES INTEGRATION AND UNION FOR SOCIETY** reserves the right to accept the bid partially/ in full or may reject any or all the bids without assigning any reason and also does not bound itself to accept the L1 Bid.

22- Timeline or Action plan for supply and setting up of machine at the CFC should be provided by the tenderer.

23- All disputes arising in connection with the contract shall be settled within the jurisdiction of the Angul Court only.

24- Security deposit of 3% of the contract value to be deposited in shape of DD or BG valid for 14 months (60 days beyond the warranty period) or transferred through RTGS within 7 days of award of contract. Same shall be returned after successful completion of Warranty period.

25- Warranty period of 1 (one) year with spares of machinery shall be provided along with three months operational support.

**Declaration:**

I do hereby agree to a bid by all the terms and conditions mentioned above.

(Signature of the authorized person/ Proprietor NameDesignation:

Name of firm:

Phone/ Mob No:

Seal of the firm



## TENDER FORM

(Supply of machinery and equipment for MAHIDHARPUR DESHI COW MILK A2 PROCESSING CLUSTER,  
At/Po- Mahidharpur, Via- Hindol, Dist- Angul, Odisha, Pin- 759022)

## Technical Bid: Part–1 Description of Work

## Check List to be submitted

Sl. No	Particulars	Annexure	Page No
01	Tender Document	I	
02	Money Receipt / Demand Draft for tender Document	II	
03.	Manufacturing Trade License in case of Manufacturer	III	
04	Dealership Certificate in case of Authorized Dealer	IV	
05	Registration Certificate of GST	V	
06	Last Month Challan of GST	VI	
07	Pan Card	VII	
08	Affidavit (Not Black listed)	VIII	
09	Turn Over (Certified by Chartered Accountant)	IX	
10	Balance Sheet for last 3 Financial years	X	
11	Copies of Income Tax Returns (AY 2021-22, AY 2022-23 and AY 2023-24)	XI	
12	Minimum Three Years Past Experience in supply of machinery and equipment items and necessary evidence in the form of Invoice/ Purchase Order need to be furnished	XII	
13	Timeline or Action plan for supply of machinery and equipment	XIII	

Signature of Tenderer

**MAHIDHARPUR DESHI COW MILK A2 PROCESSING CLUSTER**

**MAHIDHARPUR, ANGUL**

<b>Sl No</b>	<b>Description</b>	<b>Capacity</b>	<b>Qty</b>
<b>A</b>	<b>MILK RECEPTION SECTION:-</b>		
1	Roller conveyor	5 Mtr	1 No
2	Dump Tank (With Cover)	500 Liter	1 No
3	Weighing Scale	600 Liter	1 No
4	Weigh Bowl (S.S.)	500 Liter	1 No
5	Can Scrubber SS		1 No
6	Milk Chiller (35-4 Deg C)	1000 LPH	1 No
7	Milk Pump	1 HP	2 No
8	Inline Filter	25MM	1 Nos
9	Raw Milk Storage Tank (DC) & BMC with Milk Can (2500 Liter x 4 No)	10000 Liters	1 Set
<b>B</b>	<b>MILK PROCESSING SECTION:-</b>		
1	Skid Mounted Multi-purpose Milk Pasteurizer Plant Cap.1, 000 LPH, for Milk, Curd & Paneer process. <b>Pasteurization Unit (4/30-45/50-70/72-80/90-90/42/4deg.C) with 20 sec &amp; 6 min Holding for Milk &amp; Curd application, Storage tank 2.5K Ltr</b>	1000 LPH	1 Set
2	Milk Homogenizer (Imported Stellite Valve & Digital Pressure Gauge	1000 LPH	1 Nos
3	Cream Separator ( Offline)	500 LPH	1 Nos
<b>C</b>	<b>STORAGE &amp; PACKING SECTION:-</b>		
1	S.S. Horizontal Milk Storage Tank for Pasteurized Milk Cap.2,500L PUF insulated, Double Compartment (S.S. Outer)	5000 Liters	1Nos
2	Milk Transfer Pump	2 HP	2Nos
3	Supply of Double Head Milk Pouch Packing Machine Cap 5000pouch/hr. Qty : 200ml to 1000ml, Accuracy: +/- 3ml Packing Style : Centre Sealed Pillow Pouch Output : Up to 5000 Pouches Per hour Machine operation by PLC & HMI Machine equipped with Photos Scanner Assembly	2500 PPH	1Nos
4	SS Overhead Tank with structure	500 Liters	1Nos
<b>D</b>	<b>UTILITIES SECTION:-</b>		
1	Refrigeration System (Instant Chilling System) 20TR Plant Double Circuit Freon Base Water Cooled With Cooling Tower and Pump	20 TR	1 Set

	Compressor Emersion		
2	Steam Boiler- 400 KG/HR Wood Fired	400Kg/Hr	1 Nos
3	COLDROOM:-Prefabricated Size:3x3x3m With 80mm PUF Panel & Complete with all accessories Fitted. 1No- Main Hinge Door 1No- Hatch Door 2Set Air Cooled Unit (1Running + 1 Standby) 2 No – Condensing Unit 1No - Electrical Control Panel	3x3x3M	1 Set
4	MCC Panel CRCA	CRCA	1Nos
5	Air Compressor with accessories 5hp, 3phase Air:4CFM,with Air Receiver Tank	5HP	1Nos
6	Water RO plant (15K LPD) for milk processing	15K LPD	1 no
7	ETP with accessories (15 K LPD) for water treatment	15K LPD	1 no
8	CIP Tank, Rectangular insulated an Electrical Heater, Two Compartments, and Cap. 500 Liter. Trolley mounted, with Pump, S.S. Electrical Control Panel	500 Liter	1 no
<b>E</b>	<b>DAHI / LASSI SECTION:-</b>		
1	Inoculation Tank for Curd in stirrer/ Lassi (Jacketed with VFD 1000 Liters (500 x 2 Nos)	1000 Liters	1Set
2	Buffer Tank (Insulated with Agitator)	500 Liters	1Nos
3	TransferPump:1hp	1HP	1Nos
4	Dahi & Lassi Incubation Room	2x2x3 Mtr	1Nos
5	Curd / Lassi pouch packing Machine	1200 PPH	1Nos
<b>F</b>	<b>KHOA / SHRIKHAND/PANEER SECTION:-</b>		
1	Khoa making machine, Vacuum packing machine, Press Machine & Moulds.	220 Ltr	1 Set
<b>G</b>	<b>GHEE SECTION</b>		
1	Ghee Boiler (S.S. Outer) Wood Fired	300 Kgs	1 Set
2	Ghee Pump	1 HP	1 No
3	Ghee Balance Tank	200 Kg	1 No
4	Ghee Strainer	Suitable	1 No
5	Ghee Clarifier		1 No
6	Ghee Setting cum Storage Tank	500 Liter	1 No
7	Control Panel	SS	1 No
<b>G</b>	<b>MISC. ITEMS</b>		
1	M.S. Pipes & Fittings, Structure, Supports (Chilled & Hot Water Piping)		1 Nos
2	S.S. Pipes & Fittings with supports		1 Nos
3	Cables, Cable Tray and Conduits		1 Nos

4	Insulation & Supports Material		1 Nos
<b>H</b>	<b>ADDITIONAL ITEMS</b>		
1	Road Milk Tanker	2000 Ltr	1 No
2	Milk Testing Lab Equipment's	1 Set	1 Set
3	Milk Collection Testing Equipment's (Gerber) ( Per set Equipment list as per below)		50 Set

**NOTES:**

**Milk Collection Testing Equipment's (1Set Equipment details)**

1. Centrifuge Machine (Electrical Operated)
2. Glass Wares (Pipet, Tilt measure, Glass Bottles, Lactometer, Thermometer, Butyrometer, Lock stopper key , Lock Stoppers & Shaking stands.
3. Chemicals- Acid, Alcohol with dropping bottles.
4. Can 40 Liters = 2Nosx40Ltr
5. Can 20 Liters= 2Nosx20Ltr

**TECHNICAL SPECIFICATION**

Sl No	Description
<b>A</b>	<b>MILK RECEPTION SECTION</b>
1	<b>Roller conveyor</b>  <b>Minimum Dimension: 1500 x 500 x 1000 mm</b> <b>Minimum Capacity: 5 mtr.</b> The roller shall be provided with ball bearings at either ends to take the load of milkcans. The conveyor shall be complete with frame made of SS duly painted resting onlegs with adjustable mild steel ball feet.
2	<b>Dump Tank (With Cover)</b>  <b>Minimum Dimension : 2500x2500x1800 mm</b> <b>Minimum Capacity : minimum 500 Ltrs</b> The tank fabricated out of SS 304 of 2 mtr to receive milk will be standing on SS ball feetlegs. The tank will be rectangular, horizontal shape and will be in sanitary construction
3	<b>Weighing Scale (Suspended )</b>  Minimum Dimension : Suspended type. The system would be powered with 230 V. 1Ø, 50Hz, AC, measurement will be displayed in 7 segment LED of 25 mm height, auto zeroing. The unit will have a Load cell which will be covered by SS outer cover. (Stamping of weighing machine is within the scope of the supplier.
4	<b>Weigh Bowl (S.S.)</b>  S.S. Weigh Bowl will be fabricated from stainless steel sheets of 2 mm thick of AISI 304 quality. All the inner corners will be well radiused & all SS surface will be polished to sanitary finish. The weigh bowl will have 3 way slopes towards discharge valve for freeand complete drainage of liquid.

5	<p><b>Can scrubber :SS</b></p> <p><b>Thickness : 3-5 MM</b>  <b>Minimum Capacity : 1000 cans/hr</b></p> <p>This will be used to clean the cans inside and outside. This is a “U” shaped vessel with two rows of nylon brushes running at a slow rpm. The cans to clean will be inserted inside this brush. One brush will clean the inside and the other brush will clean the outside. To clean the bottom of the can outside one no small brush is being provided. The trough is filled with warm water at 45 to 50 deg c. and 150 to 200 gram of washing soda is mixed with this water as detergent. The scrubber will take 1 minute to clean the can. The main body is made from AISI 304sheet. The unit will have 4 nos. of legs with ball feet for floor adjustment.</p>
6	<p><b>Milk Chiller : Minimum capacity 1000 LPH</b></p> <p><b>Minimum Dimension : L-1680mm W-1130mm H-825 mm</b></p> <p>The single section plate heat exchanger will be used for chilling milk</p> <p>Inlet Temp. 35°C  Outlet Temp. 4°C  Gaskets CLIP ON  Plate material SS 316  GC 10</p> <p>Temperature Indicating Thermometer at the outlet of the milk &amp; Chilled Water inlet. The supporting structure of the chiller will be of multi-bolt tightening type design to be operated manually with SS ball feet arrangement</p>
7	<p><b>Milk Pump</b></p> <p><b>Minimum Size : 12 to 100 mm</b>  <b>Minimum Capacity : 5000 LPH</b></p> <p>It will be sanitary design Monoblock pump in SS 304 construction. The pump will be complete with reputed make electric motor with SS shroud. It will be fitted with flow control valve for easy operation.</p>
8	<p><b>Inline Filter</b></p> <p><b>Minimum Dimension : 25cmX15cmX10cm</b></p> <p>This will have filter mesh to remove the foreign particles from the milk. The mesh will be fitted into two half disc which can be quickly opened by the special clamp. The milk inlet and outlet will have union for pipe line connection. All part is made from SS304.</p>
9	<p><b>Raw Milk Storage Tank, Minimum 10000 Liter capacity (2500 Liter x 4)</b></p> <p><b>FINISH:</b> The tank will be duly insulated. The tank will be in <b>HORIZONTAL</b> will be standing on 4 legs. Mounted on adjustable ball fit.</p> <p>The inner shell of the tank will be fabricated out of SS 304 material &amp; the outer shell will be of S.S.304. The tank shall have two removable top cover. The tank will be fabricated as per Dairy std. The tank will have following accessories.</p> <p>The Tanks Are insulated with 50 mm injected PUF insulation. It Enables to Maintain Temperature of milk at 4 °C. Also Tanks are fitted with oil free motors for agitator to maintain hygienic standards.</p> <p>The tank shall comprise of 01 (one) compartment having independent in/out let valves and CIP spray system for handling of separate variant of milk</p> <ul style="list-style-type: none"> <li>• Air vents Assembly.</li> <li>• Dial thermo meter -2Nos</li> <li>• Agitator with 1 hp motor- 1No</li> </ul> <p>Reputed free maintenance Level Transmitter with digital Display</p>
<b>B</b>	<b>MILK PROCESSING SECTION</b>

1	<p><b>Pasteurization Unit (4-45/50-70/72-80/90-4/45 deg. C) with 20 sec/6 min</b></p> <p><b>Minimum Dimension : 2600X2000X1900 mm</b></p> <p>Milk Pasteurizer : 1000 LPH</p> <p>Temp. of Milk at inlet : 4 □ C</p> <p>Pasteurization temp. : 80 □ C</p> <p>Temp. of Milk at Outlet : 4 □ C</p> <p>Material of Gasket : Food</p> <p>Grade</p> <p>Sections : Heating/Reg.1/Reg.2/Cooling</p> <p>Holding Time : 20 seconds/6 min</p> <p>The pasteurizer shall comprise of following: -</p>
1.1	<p><b>Float Balance Tank:</b> The tank will be used to feed constant milk to Pasteurizer. The Float Balance Tank will be fabricated from 2 mm thick S.S sheet conforming to AISI 304. The tank will be provided with cover, float, outlet and adjustable stainless steel ball feet. CIP Spray ball</p>
1.2	<p><b>Milk Transfer Pump:</b></p> <p>Stainless Steel Centrifugal Monoblock Pump of sanitary design for transferring the product</p> <p>Capacity- 1000 LPH</p> <p>Impeller- SS 304</p> <p>Head- 30 mwc</p> <p>Suction Size- 50 mm</p> <p>Delivery Size- 40 mm</p> <p>Seal Face &amp; Type- Carbon Face v/s TC Single Mechanical Seal</p> <p>Base Plate- M.S. powder coated with SS ball feet arrangement</p>
1.3	<p><b>Flow Controller (Mechanical)</b></p> <p>This would be used for controlling the flow of milk into the PHE. It would be of sanitary design, two-way type with SMS union.</p> <p>The valve would be of micro type valve and the flow could be controlled manually for feed into the PHE.</p>
1.4	<p><b>Plate Heat Exchanger (PHE) -(4-45/50-70/72-80/90-4/42Deg.C)</b></p> <p>It will be Plate heat exchanger shall consist of Heating, regeneration 1, Regeneration 2, and cooling sections. It will consist of heat transfer plates SS316 of corrugated in design to have more heat transfer area and better heat transfer co-efficient. The plates will be provided with nitrile rubber gaskets to prevent intermixing of product and heating/cooling media.</p>
1.5	<p><b>SS Duplex Filter :</b></p> <p>This filter body is made of AISI304 vertical cylindrical with topside having flanged and top disc cover also having flanged. The inside of the body will have SS wire gauge and filter cloth fixed with this gauge to prevent the cloth bag getting stringed during operation.</p>
1.6	<p><b>Auto Flow Diversion Valve:</b></p> <p>Whenever the hot milk temperature goes beyond the set temperature, a solenoid valve supplying air to Flow Diversion Valve actuates and the flow of milk is diverted back into the float balance tank.</p>
1.7	<p><b>Holding Section : 20 Sec/6min(In Tubes )</b></p> <p>Continuous holding is provided in tubes (for 20 Sec.) which easy for cleaning, replacement and maintenance. The holding would be provided in pipes of suitable diameter.</p>
1.8	<p><b>Drain Funnel With Valve:</b></p> <p>A drain funnel will be provided for draining the flush of milk and CIP to avoid messy operation. The funnel will be fabricated from 2 mm thick Stainless Steel sheet conforming to AISI 304.</p>
1.9	<p><b>Product S.S. Interconnecting Pipes and fitting:</b></p> <p>Necessary S.S. pipes &amp; fittings for interconnection of float Balance tank, milk Pump, Flow Regulating Valve, Plate Pack, connection to and from filter, holding tube, finished pasteurized</p>

	<p>milk outlet and diversion system back to float balance tank. All Interconnecting pipes with necessary fittings for product side will be supplied of SMS Standard.</p>																																						
1.10	<p><b>Heating Device:</b> Final stage of heating will be done with steam heated water. The hot water generation system will be PHE based and will have an expansion chamber 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 will consist of PHE (with SS 316; 0.5 mm thick plates and MS painted frame with SS 304 cladding). The system will be supplied with steam control valve and Y-type strainer, expansion chamber, safety valve, water make up valve and a suitable steamtrap.</p> <p><b>Safety Device:</b> A safety device will be provided in the hot water side of heating section to avoid damage to the heat exchanger caused by excessive pressure. It will be of sanitary design.</p> <p><b>Hot water Pump:</b> One number hot water pump will be supplied which will be used for hot water circulation for heating of milk up to 90° C. One no of PID temperature control arrangement for control of pasteurization temperature together with steam regulating and control valve is included.</p>																																						
1.11	<p><b>Instrumentation &amp; Control Panel (AUTO):</b> The control panel will be made of SS, dust &amp; vermin proof. The panel will be of skid mounted design and it will be easy to operate for the plant operators. The panel consists of :-</p> <ul style="list-style-type: none"> <li>➤ Data logger with digital display of temperatures of pasteurized milk and outlet Milk</li> <li>➤ Digital temperature Indicator ( Make : Reputed)</li> <li>➤ Alarm with hooter and acknowledge and respect setting.</li> <li>➤ Auto Manual selection switches and forced forward flow provision.</li> <li>➤ Incoming on/off switch for control supply</li> <li>➤ 'ON' and 'OFF' push buttons with indicating lamps suitable inscription will be provide for operation of motors of various modules. (Make : Reputed)</li> <li>➤ Indication lamps for showing the position of flow diversion valve Solenoid Valve for flow diversion Valve.</li> </ul>																																						
2	<p><b>Milk Homogenizer:</b></p> <p><b>Minimum Dimension : 745X911X1700 mm</b></p> <table> <tr> <td>Flow rate</td> <td>1000 LPH</td> </tr> <tr> <td>Product</td> <td>Standardized Milk</td> </tr> <tr> <td>Product Temperature</td> <td>75°C</td> </tr> <tr> <td>Pressure Maximum</td> <td>200 Bar</td> </tr> <tr> <td>Homogenizing Head</td> <td>Two stage, manually</td> </tr> <tr> <td>operated Homogenizing Valve &amp; Valve Seat</td> <td>Imported Stellite-material</td> </tr> <tr> <td>Suction Discharge Valve &amp; Valve Seat</td> <td>Imported Stellite-material (Removable type)</td> </tr> <tr> <td>Lubrication</td> <td>Splash</td> </tr> <tr> <td>Plungers</td> <td>Three, specially Alloy Steel</td> </tr> <tr> <td>Contact Parts</td> <td>SS 316</td> </tr> <tr> <td>Mounting</td> <td>M.S. Frame with SS Enclosures</td> </tr> <tr> <td>Body</td> <td>Cast Iron</td> </tr> <tr> <td>Drive Arrangement</td> <td>Pulley drive</td> </tr> <tr> <td>Inlet / Outlet Connection</td> <td>38 mm</td> </tr> <tr> <td>Installed Power</td> <td>5 HP, Electric motor of</td> </tr> <tr> <td>reputed</td> <td>make</td> </tr> <tr> <td>Rating Power</td> <td>Electric Motor, 415 V, 3 Ph, 50 c/s</td> </tr> <tr> <td>Suction Pressure</td> <td>1 to 1.5 Bar</td> </tr> </table> <p><b>Accessories</b></p> <table> <tr> <td>Pressure Gauge</td> <td>Digital Type, 0-600 Bar, 1 no.</td> </tr> </table>	Flow rate	1000 LPH	Product	Standardized Milk	Product Temperature	75°C	Pressure Maximum	200 Bar	Homogenizing Head	Two stage, manually	operated Homogenizing Valve & Valve Seat	Imported Stellite-material	Suction Discharge Valve & Valve Seat	Imported Stellite-material (Removable type)	Lubrication	Splash	Plungers	Three, specially Alloy Steel	Contact Parts	SS 316	Mounting	M.S. Frame with SS Enclosures	Body	Cast Iron	Drive Arrangement	Pulley drive	Inlet / Outlet Connection	38 mm	Installed Power	5 HP, Electric motor of	reputed	make	Rating Power	Electric Motor, 415 V, 3 Ph, 50 c/s	Suction Pressure	1 to 1.5 Bar	Pressure Gauge	Digital Type, 0-600 Bar, 1 no.
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3	<p><b>Cream Separator (offline) 500LPH</b></p> <p><b>Minimum Dia -765X848 mm</b>  This is a centrifuge rotating at very high speed to separate the fat and SNF. Both fat and SNF will be coming out separately. All milk contact parts will be of AISI 304 and the body is made of Cast Iron. The unit will be supplied with necessary tools and tackles for opening the bowl.</p>
C	<b>STORAGE &amp; PACKING SECTION</b>
1	<p><b>Processed Milk Storage Tank (S.S. D/C) 5000 liters capacity (2500 Liters x 2Nos)</b></p> <p><b>Minimum Dimension - 4956X2308X2000 mm</b>  <b>FINISH:</b> The tank will be duly insulated. The tank will be in <b>HORIZONTAL</b> will be standing on 4legs. Mounted on adjustable ball fit. The inner shell of the tank will be fabricated out of SS 304 material &amp; the outer shell will be of S.S.304. The tank shall have two removable top cover. The tank will be fabricated as per Dairy std. The tank will have following accessories. The Tanks Are insulated with 50 mm injected PUF insulation. It Enables to Maintain Temperature of milk at 4 °C. Also Tanks are fitted with oil free motors for agitator to maintain hygienic standards.  The tank shall comprise of 01 (one) compartment having independent in/out let valves and CIP spray system for handling of separate variant of milk</p> <ul style="list-style-type: none"> <li>• Air vents Assembly.</li> <li>• Dial thermo meter -2Nos</li> <li>• Agitator with 1 hp motor- 1No</li> </ul> <p>Reputed free maintenance Level Transmitter with digital Display</p>
2	<p><b>Milk Pump</b></p> <p>It will be sanitary design Monoblock pump in SS 304 construction. The pump shall be complete with reputed make electric motor with SS shroud.</p>
3	<p><b>Milk Pouch Packing Machine 2500 PPH</b></p> <p>Double Head Mechanical Pouch Filling Machine  Product : Free flowing liquid milk  Packing material : Virgin LDPE Polythene film (Co-extruded)  Fill Quantity options: 200ml/500ml /1000ml  Speed/ Output : 2500 bags/hr for 200/500ml  4000 bags/hr for 1000 ml However above output will depends on product characteristics, use of packing material having recommended thickness, quantities to be packed, consistent product feeding and other operational parameters of the machine  Packing material : Virgin Low density panel printed Polythene Film (Co- extruded)</p> <p>Technical Features:  Mechanical filling system for better filling consistency  Cam operated mechanism for vertical and horizontal seal drive Bag length control by slider crank mechanism  Solid state Thyristorized heat control system  Product contact parts from Stainless Steel Grade AISI- 304 Electrical and electronic system housed in the cabinet Less floor space requirement for machine installation as no side opening required substantially reduced height of the machine. Date/MRP should stamped on the poly film by laser printer.</p>
4	<p><b>Over Head tank with Structure 500 Liters</b></p> <p><b>Minimum Capacity : 500 Ltrs , Diameter : 1105mm, Length : 1240mm Diameter of manhole : 407mm</b></p>



	This tank will be used to keep some buffer quantity of milk to feed the pouch fill machine by gravity. This tank will be placed at an elevated height at least 1.5 mts above the reserve tank of pouch fill machine.
<b>D</b>	<b>UTILITY SECTION</b>
<b>1</b>	<b>Refrigeration System (Instant chilling system)</b>
	<p><b>Minimum Dimension – 2500X1300X1800 mm</b></p> <ul style="list-style-type: none"> <li>• Capacity Minimum 20 TR</li> <li>• Refrigeration System: – Instant type</li> <li>• Type of Condenser Water Cooled</li> <li>• Refrigerant Freon R 22/ R404a</li> <li>• Make Reputed</li> <li>• Refrigerant Condensing Temperature 40 °C</li> <li>• Glycol Solution MEG 15% By WT, Sp Gr 1.025</li> <li>• Glycol Temperature at the Outlet of Chiller 0° C.</li> <li>• Glycol Temperature at the Inlet of Chiller 5 ° C</li> <li>• Pressure at the Outlet of Chiller 1 Bar.</li> <li>• Drive Motor Inbuilt</li> <li>• Condenser Water Pump</li> <li>• Electrical Power Req 415 V / 3 Ph / 50 Hz 59kW</li> <li>• The Chiller shall be manufacture &amp; supply in Packaged Form, with all equipment's mounted on Heavy Single base frame. The Electrical &amp; Control Panel shall be mounted on front side of the Package Chiller for ease of operation.</li> </ul>
<b>2</b>	<b>Steam Boiler – Wood / Diesel/LPG/BIOGAS fired with all Accessories</b>
	<p><b>Minimum Dimension – 1736X1278X1800 mm</b></p> <p>This steam boiler will generate steam subject to mechanical efficiency of 80% and from and at 100*c feed water temperature. The unit will have ON/OFF burner to operate based on steam pressure/ temperature. The unit will automatically cut off the burner in case of the attaining the set temperature. The unit will have water circulating pump, blower, damper adjustment, sequence controller. The operating pressure of steam should not be less than 7bar. PRS from 7bar to 4.0bar is within the scope of supplier. The unit will be supplied with following accessories. Independent burners suitable for Wood/ Diesel/ LPG/ BIOGAS should be supplied along with the boiler. All Mountings and Accessories is within scope of the supplier.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Feed water tank capacity 1000 Ltr</li> <li><input type="checkbox"/> Fuel tank of Inline capacity</li> <li><input type="checkbox"/> Chimney – 6 mt</li> <li><input type="checkbox"/> Connecting duct – 2.5 mt</li> <li><input type="checkbox"/> Water softening Capacity 1 m3/hr</li> <li><input type="checkbox"/> Water softening pump capacity 1 m3/hr</li> </ul> <p>Blow down pit and statutory inspection is within the scope of the supplier.</p>
<b>3</b>	<b>Cold Room – Prefabricated</b>
	<p><b>Minimum Dimension – 3X3X3 M</b></p> <p>Cold store to store milk packed in poly packs kept in crates. The cold store cabinet will be insulated with 90mm PUF Panel. The cold storeroom will be supplied with suitable capacity air cooling unit and accessories to maintain the product temperature 3 □ C. There should be 02 ceiling mounted cooling unit (one stand by and one running)</p> <p>Air curtain should be provided at the entry/exit door. The system should have auto temperature controller and all required safety control system as per statutory requirement.</p>

4	<b>MCC Panel</b> <b>Minimum Dimension – 1916X738X1800 mm</b> This will house all the starters and relays for all the drive motors in the entire skid. This will be made of CRCA sheet with different compartments & house the starters. The panel will have separate aluminum bus bar chamber. The panel will have main trip switch with suitable capacity to take the overall load of the complete plant. In case if the load exceeds this switch will trip the whole panel to safeguard the panel as well the equipment. The panel will have voltmeter, ammeter, power factor meter, selector switch phase indicator etc. Floor mounting system provided. The panel will be completely prewired as per I.E. rules earthing connection arrangement provided.
5	<b>Air Compressor with accessories 5HP, 3 Phase Air: 4CFM, with Air receiver Tank</b> <b>Minimum Dimension – 1785X600X1900 mm</b> This will be reciprocating type compressor to compressor the air to 7 kg/cm <sup>2</sup> . The compressor will have after cooler and auto moisture drain system.
6	<b>WATER RO PLANT (15K LPD) for milk processing</b> Water RO Plant 15K LPD for milk processing as per requirement.
7	<b>ETP WITH ACCESSORIES (15K LPD) for water treatment</b>
8	<b>CIP TANK</b> CIP Tank, Rectangular insulated an Electrical Heater, Two compartments and Cap. 500 Ltr. Trolley mounted, with Pump, S.S. Electrical Control Panel.
E	<b>DAHI/LASSI SECTION</b> <b>Inoculation Tank( Jacketed with Agitator &amp; VFD) for Curd/ Lassi (500 Ltr x 2Nos)</b> <b>Minimum Dimension – 2000X2000X3000 mm</b> All stainless steel welding joints will be ground smooth all stainless steel surfaces will be polished to 120 grit. <b>Inner Shell:</b> The inner shell with cylindrical body, conical bottom will be fabricated from SS sheet of 2.5 mm thickness of AISI 316 quality. <b>Intermediate shell:</b> The intermediate shell with cylindrical body conical bottom will be fabricated from 1.6 mm thickness. <b>Outer Shell:</b> The outer shell with cylindrical body conical bottom will be fabricated from 2 mm thickness of AISI 304 quality <b>Insulation:</b> 75mm thick Crown 150 resin bonded fiber glass wool applied with chickenwire netting will be provided in between the outer & intermediates shell. <b>Accessories:</b> <b>Agitator:</b> SS AISI 304 agitator with vertical gearbox and motor complete with oil seal, supporting arrangement. Support on the shell bottom etc. The agitator shaft will be a solid rod. Agitator will be driven by Geared motor 2.0Hp, 30 Rpm. <b>SS Legs:</b> SS legs fitted with stainless steel ball feet provided at bottom of the tank. The SS ball feet will have provision for height adjustment of 50 mm. <b>Water Inlet:</b> The water inlet connection will end outside in a flange.
2	<b>Buffer Tank( Jacketed and insulated with Agitator) 500 Liters</b> <b>Minimum Dimension : 5X4X4 mm</b> <b>Fan diameter : 400 mm to 900 mm</b> The Tank will be jacketed and insulated, Vertical, cylindrical with conical legs of adjustment height Inner shell: 2.0 mm thick SS304 Outer Shell: 2.0 mm thick SS304

	<p>Agitator: Paddle type agitator of welded construction with motor Legs: Conical legs in SS 304 with height adjustable ball feet complete Support Structure: MS support structure including pad plates for legs, supporting channel ring and angle supports on the inner &amp; outer shell Level Transmitter, Temperature Indicator with display Insulation: PUF Nozzles:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Manhole on the front dish of std size with food grade gasket – 1 no</li> <li><input type="checkbox"/> No foam inlet with bend &amp; union – 1 set</li> <li><input type="checkbox"/> Sample valve std. size- 1 no</li> <li><input type="checkbox"/> Thermo well with provision for temperature sensor &amp; indicator – 1 no</li> <li><input type="checkbox"/> CIP spray ball stationery type – 1 no</li> <li><input type="checkbox"/> Air vent dia 100 mm – 1 nos</li> <li><input type="checkbox"/> Agitator assembly with rubber oil seal arrangement – 1 no</li> </ul> <p>Outlet Nozzle with SMS connection with Butterfly valve – 1 no</p>
<b>3</b>	<b>Transfer pump</b>
	<p><b>Minimum Dimension -1145X1045X1900 mm</b> It will be sanitary design Monoblock pump in SS 304 construction. The pump shall be complete with reputed make electric motor with SS shroud.</p>
<b>4</b>	<b>Dahi &amp; Lassi Incubation Room</b>
	<p>It would be for incubation of the Curd. It would be prefabricated cabinet with insulation to maintain the temperature for setting of Curd. It would be suitable to hold Curd cup. It will be equipped with suitable heaters and control panel for easy operation. Standard size for incubation room is 3 mtr x 3 mtr x 3mtr. The system should be provided with auto temperature controller.</p>
<b>5</b>	<b>Blast cabinet</b>
	<p><b>Pre-fabricated sandwich PUF panel cabinet</b> Air Cooling Unit: Air Cooling Unit suitable capacities to maintain the Cold Room temperature consisting coil with suitable Fins per inch two Nos. of fans motor on each evaporator. Air-Cooling is operated on +4°C. Room temperature. Air-cooling is mounted on roof should be hanging type and having defrosting system water draining arrangements. Refrigeration Control System: Refrigeration System: Freon Based to maintain desired temperature inside the room. Supply of accessories like Copper piping, air curtains to doors for avoid heat losses, Expansion valve, refrigerated gas, Insulation, Drain Pipe, Heater, Cables, etc.</p>
<b>6</b>	<b>Control Panel</b>
	<p>This panel is being made from SS304 with leg at the bottom for holding on Wall. The panel will be pre wired with ON / Off switches for the above equipment</p>
<b>7</b>	<b>Dahi &amp; Lassi Packing Machine</b>
	<p>Cup &amp; pouch packing machine for Dahi &amp; Lassi @ 1200 PPH</p>
<b>F</b>	<b>KHOA &amp; SHRIKHAND SECTION</b>
	<p>Khoa making machine, Vacuum Packaging machine, Press Machine &amp; Moulds</p>
<b>G</b>	<b>GHEE SECTION</b>
<b>1</b>	Ghee Boiler (S.S. Outer) Wood Fired 300KG/HR
<b>2</b>	Ghee Pump – 1HP
<b>3</b>	Ghee Balance Tank – 300 Ltr
<b>4</b>	Ghee Strainer- Suitable
<b>5</b>	Ghee Clarifier
<b>6</b>	Ghee Setting cum Storage Tank- 500 Liter
<b>7</b>	Control Panel- SS
<b>H</b>	<b>MISC ITEMS</b>

1	<b>M.S/G.I. Pipes &amp; Fittings, Structure, Supports (Steam, Soft Water &amp; chilled water Piping)</b>
	The supplier shall provide the P and I diagram / machinery layout drawing to the client after confirmed order. A All M.S/G.I. Pipes & Fittings (Steam, Soft Water & chilled waterline) shall be provided by the supplier as per the drawing and requirement at site. The machinery layout drawing should be approved by the authorities of F&B dept., Govt of Odisha. The Govt. fees to this effect shall be deposited by the client.
2	<b>S.S pipes &amp; fittings with supports</b>
	To inter connect various unit of this system. Necessary stainless steel piping of AISI304 grade with internal acid pickled and outside polished. The piping will have necessary fittings of SMS standard Necessary Pipe and fittings for product connections and to interconnect various skids. (all S.S. pipes, fittings and valves etc. shall be provided by the supplier as per requirement)
3	<b>Cables, Cable Tray &amp; Conduits:</b>
	To interconnect various motors and controls required power cables and control cables along with cable trays earthing materials to do the job as per I.E. rules would be provided. The cables & conduits as per requirement at site shall be provided by the supplier. (Construction, installation of earth pit along with statutory MV inspection is within the scope of the supplier.
4	<b>Insulation &amp; Supports Material</b>
	Insulation for the hot water/steam, chilled water etc. required for the various SS/MS pipelines is within the scope of the supplier.
<b>I</b>	<b>ADDITIONAL ITEMS</b>
1	<b>Road Milk Tanker : Minimum Capacity – 2000 ltrs</b>
	<ol style="list-style-type: none"> <li>1) MOC: SS 304 (2mm) - Inner &amp; Outer Plastic Coated insulated with 100mm thick PUF and clad with SS304.</li> <li>2) The tanker will be in elliptical shape with 02(two) compartment having independent Manhole Door and Milk outlet connection for each compartment. Air-vent and butterfly valve should be provided for each compartment.</li> <li>3) This tanker should be always filled to 75% and more before transportation. Lesser than this level will lead to internal turbulence and increase the temperature of the milk and due to higher air volume above the milk surface will in advent increase the temperature.</li> <li>4) The chassis and the milk tank shall be supplied by the supplier.</li> <li>5) The chassis shall be purchased in the name of owner which shall be informed to the supplier after issuance of PO.</li> </ol>
2	<b>Milk Testing Lab Equipment's</b>
	<p>Standard Milk Testing equipment shall be provided by the supplier for testing of milk.</p> <ol style="list-style-type: none"> <li>1. Electronic Milk Tester Handle less for FAT &amp; SNF %- Accuracy- 0.00001</li> <li>2. Butyric meters ISI mark permanent marking in Milk.</li> <li>3. Butyric meters for cream</li> <li>4. Electric Centrifuge 8 tests</li> <li>5. Lock Stopper Benny Metal Cap</li> <li>6. Butyric meter shaking stand- 12 holes</li> <li>7. Sample Bottle Stand- 12 Holes</li> <li>8. Pipette 10- 75 ml double Tested</li> <li>9. Pipette Stand Vertical</li> <li>10. Lactometer Double Tested Zeal type</li> <li>11. Thermometer – 10 to 110°C Yellow background</li> </ol>

12. Tilt Measures- 1cc to 10cc
13. Brushes for Butyric meter, Pipette & Sample Bottles 12 pcs each
14. Sample Bottles Plastic- Capacity-125ml with cap
15. Beaker- Min Capacity 10ml
16. Beaker- Min Capacity 50ml
17. Beaker- Min Capacity 500 ml
18. Burette With – Min Capacity 50ml
19. Measuring Cylinders- Min Capacity 50 ml
20. Measuring Cylinders- Min Capacity 100 ml
21. Flasks Flat Bottom- Minimum Capacity 100ml
22. Flasks Flat Bottom- Minimum Capacity 200 ml
23. Flasks Conical- Minimum Capacity 100 ml
24. Funnels Plain- 60 Deg. Angle
25. Pipette graduated “A” class- 10ml
26. Bacteriological Pipette- 0.1 to 1ml
27. Test Tubes- 15 x 125 ml without Rim
28. Test Tube Stands- 12 hole- Round

### **LAB TESTING CHEMICALS**

1. Amyl Alcohol (ISO)- 500 ml
2. Methylene Blue Tables- For 50 tablets
3. Phenolphthalein Indicator Solution – 125 ml
4. Sodium Hydroxide Pellets – 500 gm
5. Sodium Hydroxide N/10 – 500 ml
6. Sulfuric Acid- 05 Liter

### **3 Milk Collection Testing Equipment's (Gerber) (50 Sets)**

#### **NOTES:**

#### **Milk Collection Testing Equipment's (1set equipment details)**

1. Centrifuge Machine (Electrical Operated)
2. Glass Wares (Pipet, Tilt measure, Glass Bottles, Lactometer, Thermometer, Butyrometer, Lock stopper key, Lock Stoppers & Shaking stands).
3. Chemicals- Acid, Alcohol with dropping bottles.
4. Can 40 Liters = 2 No x 40 liter
5. Can 20 Liters = 2 No x 20 liter