

S.No	Equipment Description	QUANTITY/UNIT REQUIRED	BID RATES OF EQUIPMENT PER UNIT(Rs.)	APPLICABLE RELEVANT TAXES PER UNIT(Rs.)	TOTAL COST OF EQUIPMENT PER UNIT(Rs.)
1	<p><b>DAIRY PLANT(ONLY FOR LAB PURPOSE)SKID MOUNTED PROCESS MODULE</b></p> <p>Skid Mounted Process Module consist of the following</p> <p><b>Milk Pasteurisation Plant:</b>Milk Pasteurizer : 20 Litres/hour Temp. of Milk at inlet : 35/6 deg.C Pasteurization temp. : 80 deg.C Temp. of Milk at Outlet : 4 deg.C Material of Gasket : NBR Food Grade Sections : Heating/Reg.1/Reg.2/Cooling Holding Time : 16 seconds Plate Material : SS 316 (Gee Make) Structure : MS Cladded <b>Utilities required</b> Hot Water : 100 Ltr @85 °c. Chilled Water : 1:3 at 1.5 °c. Compressed Air : 7.5 bar</p> <p><b>The pasteurizer shall comprise of following:-</b></p> <p><b>1.1 Dump Tank : 50 Litres:</b>The tank will be complete with SS float valve, inlet &amp; outlet connections.</p> <p><b>1.2 Feed Pump : 1 HP:</b>it will be sanitary design monobloc pump in SS 304 construction. The pump shall be complete with reputed make electric motor with SS shroud.</p> <p><b>1.3 Duplex Filter :</b> (Disc)Particles in milk flowing through the filter are caught by the wire mesh provided in the filter. This filter is in duplex arrangement to facilitate the cleaning operation of one filter while the other one is operation.</p> <p><b>1.4 Flow Controller :</b>Manual Flow controlling Valve would be supplied.</p> <p><b>1.5 Flow diversion valve (Auto):</b>Manual flow Diversion of product in case Product outgoing temperature falls below set point. The valve would be pneumatically operated.</p> <p><b>1.6 Plate Heat Exchanger :</b>it will be Plate heat exchanger shall consist of regeneration, heating, holding and cooling sections. It will consist of heat transfer plates of corrugated in design to have more heat transfer area and better heat transfer co-efficient. The plates will be provided with nitrile rubber gasket to prevent inters mixing of product and heating/cooling media. The plates will be compressed between frame and pressure plate made of MS cladded with SS 304 sheet.</p> <p><b>1.7 S.S. Control Panel</b> SS enclosure Control Panel for housing panel mounting instruments, Temperature Indicator Controller for Pasteurisation Temperature Temperature Indicator For the Product Outlet Push buttons indicating lamps Hooter (alarm) Other Auto Controls</p> <p><b>1.8 Other Accessories:</b>Solenoid Valve, On-Off Push Buttons.</p> <p><b>1.9 Interconnecting Pipes and Fitting:</b>interconnecting Pipes and fitting from Feed Module to Pasteurisation system and inlet and outlet for connecting to Homogeniser will be provided.</p> <p><b>2 High Pressure Homogeniser:</b>High Pressure Homogeniser with manually operated two stage homogenizing head having discharge capacity with Electric Motor alongwith standard accessories. All contact parts are made of SS 304 and Homogenising Valve and Valve Seats are made of Stellite. The Homogeniser is supplied with standard accessories like Pressure Gauge and tool kit etc.</p>	1			





<p><b>3 Electrically Operated Hot Water Generator:</b>The above unit complete with top mounted suitable Capacity Electrical heater, Control Panel and Hot Water Pump Motor assembly. The unit painted with two coats of heat resistive, anti-corrosive paints from inside and outside.</p>				
<p><b>4 Packaged type Chilling System:</b>Refrigeration unit to give chilled water at 1.5° C to Pasteuriser. The unit consist of Freon Compressor with motor, necessary controls.</p>				
<p><b>5 Skid for the above</b></p>				
<p><b>6 S.S. Pipes and Fittings:</b>S.S. Pipes and fittings for our equipment will be supplied.</p>				
<p><b>7 MCC Panel &amp; Cables and conduits:</b>Control panel will be made in CRCA sheet floor mounted type comprising of required instruments and for pasteurization plant.</p>				
<p><b>Design Parameters</b></p>	<p>Ice cream</p>	<p>Capacity of plant</p>		
<p>50 Lts/batch</p>				
<p>Heat treatment Temperature Program °C</p>	<p>35-80</p>			
<p>Ice cream aging temp °C</p>	<p>4°C to 6°C</p>			
<p>Type of filling</p>	<p>In cup manually.</p>			
<p>Overrun expected</p>	<p>100%</p>			
<p><b>Utilities requirement</b></p>	<p>Power required</p>		<p>10 Kw / 3 Phase</p>	
<p>Water requirement</p>			<p>1000 Lph Potable type.</p>	
<p>Cooling tower water requirement Lph</p>			<p>2500</p>	
<p>Cooling tower water inlet/outlet temp °C</p>			<p>32/42</p>	
<p>Chilled water flow rate Lph</p>			<p>1500</p>	
<p>Chilled water inlet/outlet temperature °C</p>			<p>1.5 / 11</p>	
<p>Steam requirement kg/hr</p>			<p>120</p>	
<p>Steam Pressure kg/cm<sup>2</sup></p>			<p>3.5</p>	
<p><b>B ICE CREAM PLANT (BATCH TYPE)</b></p>				
<p><b>ICE CREAM MIX PREPERATION &amp; PROCESSING SECTION - 50 LPB</b></p>				
<p><b>1. Batch Pasteuriser, electrical operated 50 Ltr. Batch Pasteuriser (S.S.)</b> :Batch Pasteuriser (S.S.) electric operated, with agitator, electrical panel board and digital temperature indicator.</p>				
<p><b>2 Transfer Pump 1 HP:</b> Transfer Pump: This pump will be used to transfer the milk from Pasteurisation tank to High Pressure Homogeniser. This pump is basically a hygienic version pump with all milk contact parts will be made from SS304 and mechanical seal to avoid the milk coming of rotating part.</p>				
<p><b>3 High Pressure Homogeniser 50-gh Pressure Homogeniser</b> :High Pressure Homogeniser with manually operated two stage Homogenising head having discharge capacity of 50 LPH max. Pressure at 200 bars with 1 HP Electric Motor. Homogenising Valve and valve seats are made of Stellite.</p>				
<p><b>4 Ice Cream Chiller (80-40 -6° C) 50ltr: Ice Cream Chiller</b> :The Double section Plate Heat Exchanger will be used for chilling the milk from 80°C to 40°C by means of cooling tower water at 40° C to 6° C, chilled water at 1.5°C. The frame and pressure plate of the PHE shall be fabricated out of mild steel plates clad with SSsheets. Plates will be made of SS-316.</p>				
<p><b>5 Ageing Vat (S.S Outer )-REF 50-Ageing Vat</b> : Ageing Vat with suitable agitator, S.S. cover, legs with ball feet, and other standard accessories with Refrigeration and controls, inner-1.6mm, outer-1.2mm, RPM-36,</p>				
<p><b>6 Batch Freezer (output) 100 lit:</b> Batch Freezer (output) :indian reputed makes Batch Freezer for Ice cream</p>				
<p><b>7 Skid for the above:</b> The above equipment of the process section would be mounted on SS frame.</p>				
<p><b>8 Interconnecting pipes and fittings 25 mm:</b>Interconnecting Pipes and fittings for above equipments Interconnecting Pipes and Fittings required for the above will be supplied</p>				
<p><b>9 cables &amp; conduits:</b>Cable and conduits for above equipments <b>Cabling Material:</b> Flexible Cable of suitable length and ratings as per the requirement of the equipment shall be supplied. The quantities of cabling material is estimated based on the compact lay out assumed. Any major variation in the same will have to be.</p>				

  
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<p><b>10 MCC Panel:</b> MCC PANEL :Electric Control Panel made of CRC sheets dust and vermin proof, starter, SFU, Voltmeter, pre-wired will be stand / wall mounted.</p>			
<p><b>11 Package type chiller 1.5 TR:</b> Package type chiller: Refrigeration unit to give chilled water at 1.5° C to Pasteurizer. The unit consist of Freon Compressor with motor, necessary controls.</p>			
<p><b>12 Cooling Tower with Pump 10 TR:</b> Cooling Tower with Pump: Cooling Tower will be supplied for providing water to plate chiller for cooling Whipping - cream mix to 40°C.</p>			
<p><b>ANNEXURE - C : BULK MILK COOLER - 200 LPH</b> The tank fabricated out of SS 304 to receive milk will be standing on SS ball feet legs. The tank will be rectangular, horizontal shape and will be in sanitary construction. It will be fitted with refrigeration system to chill the collected milk from ambient to 4/5°C.</p>		1	
<p><b>ANNEXURE - D: CREAM SEPARATOR 25 liter CAPACITY</b> Open type Cream Separator complete with Bowl &amp; Drive assembly suitable for Separating Cream At 45°C temperature.</p>		1	
<p><b>ANNEXURE - E : BUTTER CHURNER OF CAP. 50 LTR.</b> Butter churn will be in AISI 304 metal construction with internal surface sand basted to prevent sticking of butter &amp; external surface polished. The Churn shall be provided with necessary baffles to give churning effect. The churn will be driven by suitable speed variable arrangement with electric motor &amp; bearing arrangement. The unit shall be mounted on a base frame made in M.S. duly painted with dairy grade paint. The accessories for Butter Churn would include door air discharge nipple, drain outlet, Water Spray pipe in SS 304 &amp; protecting guard.</p>		1	

*M.S. Sule*

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FULL SIGNATURE OF BIDDER WITH SEAL