



# AMULFED DAIRY

A UNIT OF GUJARAT CO-OPERATIVE MILK MARKETING FEDERATION LIMITED  
PURCHASE INQUIRY

**Inquiry No** : **AFD/PUR/PKS/ENQ/PET/2, Dated: Sep 25, 2018**  
**Description** : **Purchase Inquiry for Supply of 2 KL Tank for Fermented Section**  
**Qty** : **1 Nos.**  
**Due Date** : **4<sup>th</sup> Oct, 2018**

Dear Sir,

You are requested to give your most competitive rates for supply of 2 KL Tank at AFD, as per the attached specification/ requirement at AFD, Gandhinagar, mentioned in the attached annexure.

1. The offer should reach, AmulFed Dairy (A Unit Of Gujarat Co - Operative Milk Marketing Federation Limited.) Plot No. - 35, Near Indira Bridge, Ahmedabad - Gandhinagar Highway, Village: Bhat, Dist.: Gandhinagar. Pin No.382 428.
2. The offer should be sent in sealed cover super scribing on the top left hand corner offer for inquiry No. **AFD/PUR/PKS/ENQ/PET/2** dtd. 25/09/2018. Offer received after due date for whatsoever reason may be rejected.
3. Your offer should be sent through Post/Courier/mail or by Fax or personally.
4. Offer should be valid for acceptance, for 45 days from due date of submission of offer.
5. The price should be quoted on F.O.R basis inclusive of packing and forwarding, taxes, excise duties, freight etc. However if it is separate, it should be clearly mentioned in the quotation.
6. It should cover a warranty of at least one-year against manufacturing defect.
7. Realistic earliest delivery period should be indicated.
8. It is not binding on us to accept lowest offer.
9. Right to reject any or all the offers without assigning any reason is reserved by us.
10. Offer which are incomplete or not meeting the conditions or only for part items, are liable for rejections.
11. No queries regarding the status of the offer will be entertained at any time.
12. The final supplier will be the combined decision of our technical team and management and no reason of final selection will be conveyed to any bidder.
13. Payment terms with 30 days credit shall be preferred.
14. We are an ISO 14001 certified unit. We follow Eco- friendly processes in our factory & also expect same to be followed in your company.
15. For any query, you may contact Mr. Palak Shah, Purchase Department( 07359001666),or mail: [palak.shah@amul.coop](mailto:palak.shah@amul.coop)

Encl: Annexure-I-Technical Specification with recommended makes

**Amul SAGAR**

Plot No. 35, Nr. India Bridge, Ahmedabad – Gandhinagar Highway, Village: Bhat, Dist.: Gandhinagar, PIN 382 428  
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**TECHNICAL SPECIFICATIONS**

## 2 KL TANK SPECIFICATIONS

### Inoculation Tank:-

### Cap.2000Ltrs

### FUNCTIONAL REQUIREMENTS:-

The Vertical Milk Storage Tank would be used to store milk at 42deg.c and. The Culture will be added in this tank.

The Curd will be set in the tank.

**The product temp in tank can vary from 4°C to 90 °C .**

## 2. DESIGN REQUIREMENTS

### 2.1 Capacity: 2000 Litres

The volume of the tank shall be such that after filling it up to the rated capacity, the level would be 100 mm below the no foam inlet pipe line mounted perpendicular to vertical axis

**2.2 Constructional Features:** Double walled, insulated and welded construction of sanitary design.

**2.3 Slope:** The bottom of the Tank will be conical bottom for free and complete drainage of liquid.

**2.4 Metal Contact:** The only metal-to-metal contact between the inner and outer shells shall be at the places where fittings for the tank are provided. At the places where mild steel spray galvanized stiffeners are provided, insulated padding shall be fixed between the inner stainless steel shell and stiffeners.

**2.5 Finish:** All welding joints are to be ground smooth. All stainless steel surfaces are to be polished to 150 grits. Excessive grinding to be avoided which will weaken the section

**2.6 Joint Curvatures:** The radii of all welded and permanent attachment joints shall be at least 6 mm. Where the conical top and flat bottom join the cylindrical shall not be less than 25 mm.

**2.7 Installation:** It shall be suitable for Indoor installation. The accessories mounted on top should be weather proof.

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## 3. SCOPE OF SUPPLY

**3.1 Inner Cylindrical body:** The inner conical top shall be fabricated from **2.0 mm** thick sheet AISI 304 and the Conical bottom from **2.0 mm** thick stainless steel sheets conforming to AISI 304. and inner shell shall be **2.0 mm**, all shall are AISI 304.

### 3.2 Outer Cylindrical Body:

Outer Shell Top Cone – 2.0mm thick AISI 304.

Outer Cylindrical Shell – 2.0mm thick SS 304.

Outer Conical Bottom -2.0 mm thick Cladding AISI 304

## 4. Insulation:

The entire inner shell, conical top and flat bottom shall be insulated in following layers as follows.  
First Layer – Aluminium foil of 42 SWG (0.1 mm thick) to be applied with CPRX compound on the outer surface of inner shell

Second layer: 15 mm thick PUF of density 30-35 Kg/cu.m applied with Bitumen

Third layer-50 mm thick EPS of density 16-18 Kg/cu.m applied longitudinally with bitumen

Fourth Layer - 50 mm thick EPS of density 16-18 Kg/cu.m applied longitudinally with bitumen

Fifth Layer – Aluminium foil of 42 SWG (0.1 mm thick) to be applied with CPRX compound on the outer surface of inner shell

The insulation shall ensure temperature rise does not exceed 1 deg c in 24 hours time in all seasons when it is filled to capacity.

## 5. Accessories

**5.1 Outlet:** Cup type outlet of 51 mm with SS 304 two way Plug valve with one side flange end and other side complete stainless steel union.

Make-IDMC

**5.2 Inlet from top-** No foam Inlet size 51mm with SMS Union to be provided.

.1 Nos.

**5.3 Air Vent:** SS (AISI 304) Ø 300 mm air vent to prevent formation of partial vacuum during CIP and pressure during filling. Should be free from dust and germ proof –1No.

**5.4 Man-way: Top Manhole Round Shape of 450mm dia** with leak proof hinged stainless steel (AISI 304) door with tightening and locking device. The man-way door shall open Outward . The gasket shall be of neoprene or Aqua Nitrite butadiene co polymer rubber [of food grade quality] -

1 no

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**5.5 Light Glass:** Stainless steel (AISI 304) light glass assembly shall be provided with toughened glass and stainless steel lamp-shade for mounting 24 V 100 watt bulbs. -1no

**5.6 Sight Glass:** To be provided near the light glass assembly with toughened glass & SS hinges. It should be provided in such a way that one could read easily from the lowest level up to the highest level marks. -1 No.

**5.7 Agitator:** On top (motor at 90°) with geared motor and motor cover to prevent any flash entry of water and with air ventilation and circulation 1HP/32RPM.  
Agitator will Frame type so as to Break the Curd during Butter Milk Preparation

Motor should be with IP 55 Protection and class 'F' insulation and for continuous duty  
Motor should start with VFD (1kW) (danfoss or relevant)  
(Vertical Geared Motor with agitator)

**5.9 Spray Ball:** Removable stainless steel (AISI 304) cleaning device rotary type located at the apex of the conical top to provide flooding of liquid over the complete interior surface during CIP. It shall have stainless steel union at the outer end connection – 1 no. The spray ball must be perforated from all side.

**5.10 Sampling Cock:** The sampling cock shall be provided at the bottom of tank. -1no.

**5.11 Thermo well:** 350 mm long stainless steel (AISI 304) inclined pocket suitable for mounting stem type digital thermometer shall be suitably located in the alcove. It shall have suitable BSP male threads 1 no.

**5.12 Drain Hole:** The outer shell shall be provided with one or more drain holes at the lowest point. Any aperture in the shell shall be designed is as to prevent ingress of moisture.

**5.13 Lifting Lugs:** Stainless steel (AISI 304) lifting lugs shall be provided at top – 4 Nos.

**5.14 Anchor Points:** Anchor points, pipes and sockets shall be provided on the top of the tank safety railing and platform could be welded to them after insulation

**5.15 Ladder :** Vertical Ladder Fabricated from 38mm and 25mm pipes SS 304 of 450mm width -1 no

**5.16 Platforms:** SS 304 Platform shall be made out of 2mm thick dimpled plates with proper structural supports as required. The platform shall be made in a manner as to provide easy access to all the accessories on top of the silo, for inspection & maintenance  
Railing support required at top side of the tank

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**5.17 Spray galvanizing:** All the mild steel stiffeners and the bottom structure used in the construction of the tank would be spray galvanized after through de-rusting. Aluminium Oxide painting can be considered instead of spray galvanizing  
SS conical legs at the bottom will be provided with ball feet will have provision for height adjustment of 50mm made of SS304 -- 4nos.

**5.18 Painting :** All the mild steel stiffeners and the bottom structure used in the construction of the silo painted Aluminium Oxide painting can also be considered instead of spray galvanizing, with one coat of anti rust preventive coat of PRIMER

**5.19 Sanitizer stand:** We required one stand at the top side where we can keep sanitizer to sanitize the hand before culturing

**5.20** High level and low level port

**5.21** Level transmitter provision

## 6. TESTS

**The following tests shall be conducted by the manufacture at it's works**

6.1 Dye penetration test for weld joints.

6.2 Water fill-up test of inner vessel for water tightness before insulation.

6.3 When man-way is closed and cover tightened without gasket, the gap

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