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VAISHAL PATLIPUTRA DUGDH UTPADAK SAHKARI SANGH LTD

PATNA DAIRY PROJECT  
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PDP: PUR: 5781

dt. 15.11.2024

Dear sir,

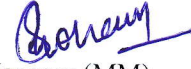
We are interested in purchasing of the following items. In case you can supply the same, you may send your quotation in sealed cover addressed to the Managing Director address given above superscribing on the top of the envelope quotation for items **Flavour Mix Tank of Capacity 500 ltr .** so as to reach us on or before **30.11.2024**

All rates must be F.O.R FBD on door delivery basis.

S.No.	Item	Specification	Qty reqd
1.	<b>Flavour Mix Tank of Capacity 500 ltr</b> (Technical specification attached as per Annexure – 01)		01 nos

Thanking you,

Yours faithfully,

  
Manager (MM)

### Annexure-01

## **FLAVOUR MIX TANK of capacity 500 L with all accessories Technical specification & scope of supply of FLAVOUR MIX TANK**

**Quantity Required-01 set**

**Make: IDMC / NVS / MAHESHWARI**

#### **1.0 SCOPE OF SUPPLY**

Supply of 500L flavor mixing tank.

#### **2.0 FUNCTIONAL REQUIREMENTS:**

Product shall be stored in this tank at a temperature of 4-6 deg. Cent.

#### **3.0 DESIGN REQUIREMENT:**

Capacity: 500 Ltrs.

The volume of the tank shall be such that after filling it up to the rated capacity, the level shall be 100 mm below the line where cylindrical shell joints the top.

#### **4.0 CONSTRUCTIONAL FEATURES:**

Triple walled, having Pillow Plate jacketed, top mounted agitator, insulated, welded construction of sanitary design and half Openable cover.

##### ➤ **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.

##### ➤ **Finish:**

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

##### ➤ **Joint Curvatures:**

The radii of all welded and permanent attachment joints shall be at least 6mm. Where the conical bottom joins the cylindrical shell, the radii shall not be less than 25mm.

#### **5.0 MATERIAL OF CONSTRUCTION & THICKNESS:**

<b>Inner cylindrical Shell</b>	<b>3.0 mm, AISI 304</b>
<b>Inner conical Bottom</b>	<b>2.5 mm, AISI 304</b>
<b>Outer cylindrical Shell</b>	<b>2.0 mm, AISI 304</b>
<b>Outer conical Bottom</b>	<b>2.0 mm, AISI 304</b>
<b>Top Cover with Girder</b>	<b>2.0/4.0 mm, AISI 304</b>
<b>Pillow Plate jacket outer</b>	<b>1.0 mm, AISI 304</b>
<b>ID/OD</b>	<b>850/ 1105 mm</b>

##### ➤ **Pillow Plate Jacket Body:**

The pillow plate jacket on inner shell and bottom cone shall be fabricated from 3 mm thick and pillow plate outer shell shall be 1mm thick from stainless steel sheet conforming to AISI 304

➤ **Insulation:**

- The entire intermediate shell and conical bottom shall be insulated in layers as follows:

•	Layer 1	15 mm thick Polyurethane having density of 30-35 kg/m <sup>3</sup> .
•	Layer 2	50 mm thick polystyrene foam applied with bitumen having density 16-20 kg/m <sup>3</sup>
•	Layer 3	50 mm thick polystyrene foam applied with bitumen having density 16-20 kg/m <sup>3</sup>
•	Layer 4	Finally Aluminum foil 0.07 mm thick shall be applied over shell side insulation

- Outside of inner shell and inside outer shell, shall be applied two coats of black bitumen's paints.

➤ **Inner shell stiffeners:**

All stiffeners used between inner shell and outer shell shall be of MS.

6.0 **ACCESSORIES:**

- **Girder:**  
Stainless steel 4mm thick Girder shall be provided for mounting of agitator & top cover having MOC SS 304- 1 No.
- **Outlet:**  
Outlet with stainless steel (AISI-304) pipe with the 51mm butterfly valve.
- **Inlet:**  
38 mm/51mm (AISI 304) inlet pipe shall be provided with SMS union at top with inlet for recirculation having size 51 mm.
- **Air Vent:**  
Stainless steel air vent of suitable size shall be provided to prevent formation of partial vacuum during CIP and pressure during filling-1No.
- **Agitator:**  
The complete top mounted sweeping type of agitator assembly fabricated from stainless steel of (AISI 304, 0.5 hp, 22 RPM) shall be provided. Geared Motor (MS, IE3 motor) to able uniformly mixing and agitation of the product. The agitator shaft shall be made of SS rod.
- **Spray ball:**  
Removable stainless steel (AISI 304) Rotary spray ball located on conical top at either side of the agitator drive to provide flooding of liquid over the complete interior surface and agitator during CIP. It shall have stainless steel union at the outer end connection.
- **Sampling cock:**  
Stainless steel (AISI 304) sampling cock shall be provided at outlet pipe.
- **Jacket Connection:**  
Jacket inlet & outlet connection made from SS 304 38 mm pipe.
- **Thermowell:**  
Stainless steel (AISI 304) inclined pocket suitable for mounting stem type digital thermometer. It shall have 25 mm pipe with 3/8" BSP Boss.

- **Legs:**  
Cylindrical pipe legs with Ball feet shall be provided. Legs shall be fabricated from stainless steel (AISI 304) of suitable size Schedule 10 pipe. The stainless-steel ball feet shall have provision of height adjustment of 50mm. – 4 No.

- **Painting:**  
All the mild steel stiffeners used in the construction of the tank shall be painted with two coats of epoxy primer after thorough de-rusting.

- **LIST OF ACCESSORIES WITH TANK:**

Sr. No.	Description	Qty.	Make
1	Manual operated two-way butterfly valve - MOC: SS304, Size: 38 / 51 mm with one end flange & other end SMS weldable union end connection.	1	IDMC / Alfa Laval / SPX /Tetra Pak
2	Sampling valve - MOC: SS 304, Size: 32mm socketend conn.	1	IDMC / Alfa Laval / SPX /Tetra Pak
3	Rotary type spray ball, MOC: SS 304, Coverage -360 deg.	1	IDMC / Alfa Laval / SPX /Tetra Pak
4	Top mounted agitator	1	IDMC / Alfa Laval / LENKA / SPX

- **TESTS:**

- The following test shall be conducted by at supplier works.
- Dye penetration test for welding joints.
- Water fill-up test for water tightness for the inner.
- Final inspection prior to dispatch including agitator trial.

  
 12.11.2019  
 Manager (Engg.)