

VAISHAL PATLIPUTRA DUGDH UTPADAK SAHKARI SANGH LTD

## PATNA DAIRY PROJECT

Feeder Balancing Dairy Complex, Phulwarisharif, Patna – 801505

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Dated : 07.09.2024

Dear sir,

We are interested for making rate contract for **Supply of DPMCU** as per demand of our DCS. Details specification of DPMCU is enclosed herewith. Bid will be in two bid system Technical bid & Financial bid. Financial bid of only successful bidder be opened for which intimate will be given expected annual requirement may be approx 100 set.

Interested original manufacture may submit the offer latest by **21.09.2024** in sealed envelope with following document.

- i) Performance certificate of 2 years as previously supplied to any co-operative dairy organisation.
- ii) DD of Rs. 1(one) Lakh in favour of " Vaishal Patliputra Dugdh Utpadak Sahkari Sangh Ltd", Payable at Patna as EMD, which will be returned to successful bidder for completion of ARC period. EMD of unsuccessful bidder will be returned within 30 days of finalisation of ARC.

Bidder must submit rate F.O.R. our Dairy/BMC/DCS with Warranty period of 3 years. On Payment term 90% against delivery and 10% on performance of Bank Guarantee of three years.

**Technical Specification (DPMCU) Enclosed**

Thanking you



Manager (MM)

## TECHNICAL SPECIFICATION (DPMCU)

DPMCU shall be the combination of following:

1. Battery 100 Ah Tubular: Make – Exide, Luminous, Okaya, Amaron or equivalent
2. DC Controller / Charger of suitable capacity
3. Data Processor Unit with Thermal Printer
4. Electronic Weighing Scale
5. Ultrasonic Milk Analyzer with Stirrer
6. Remote Display Unit

### ***DATA PROCESSING UNIT (DPU)***

DPU shall be Micro-processor / Micro controller based and should have capability to operate on GSM / Wi-Fi connectivity. Storage capacity should be minimum 8 GB having minimum 3 nos. RS232 interface, 1 no. USB Port & minimum 1 no. parallel port for connecting external printer. Tablets shall not be considered as DPU. It should have capable to operate by 12 V batteries. The DPU shall have one in-built thermal printer for printing milk collection slip & report of farmers.

The DPU shall have software capable of storing, analyzing & providing output of the following:

- (i) Code & Name of Milk Pourer, DCS Code & DCS Name
- (ii) Milk quantity, FAT % & SNF%
- (iii) The DPU shall be able to attach remote display unit and work in synchronization with other equipments.
- (iv) DPU shall be able to hold a SIM (4G/5G compatible) which shall receive and send data in appropriate format to central server, if required.
- (v) The DPU shall be able to hold minimum 2 nos. of price charts with applicable dates.
- (vi) The price chart shall updated by the central server & the transmission shall be in both ways (i.e from DPU to server and from server to DPU), if required.

The DPU shall be able to generate following reports:

#### ***a) Related with Milk collection:***

- Farmers' weight and value slip.
- Shift wise (morning - evening) milk collection report
- It should report Kg & litre for measurement.
- Milk Dispatch Report
- Payment register
- Periodic Milk Collection, Dispatch Report
- Truck Sheet, if used on BMC

**b) Related with Deductions :**

- Cattle Feed.
- Ghee.
- Other deductions.

**c) Masters :**

DPU should allow following masters to be configured:

- Society Master
- User Master
- Member Master
- Rate Chart
- Deduction Master

**d) Entry and storage of DCS members at DPU level can be done.**

### **ELECTRONIC WEIGHING SCALE**

Electronic Weighing Scale should be ISI approved.

**Capacity:** 200 kgs.

**Specification shall be as below:**

**Functional requirement** :- To Electronically weigh & digitally display of milk quantity in litre / kg.

**Least Count:** 20 grams

**Weight Accuracy:** 20 gms. (As per accuracy Class III)

Over load & shock load protection with audio (beep) visual indication 150% of full load

**Platform Size:** 600 x 600 mm

**Platform Material:** AISI SS 304, 1.2 mm thick top plate

**Platform leveling arrangement:** 4 Shock absorbing rubber feet.

**Indication in display unit:** 7 Segment RED LED, 6 digits, minimum 13 mm height, display for mode of operation - zero tare / kg / liter

**Display Unit:** Table top type without pole, MS body powder coated / special molded plastic, IP 55, Tactile switch keys with feedback response, auto calibrations & auto span with drift correction, RS 232 serial port with protocol to meet requirement of attached processing unit.

**Tamper free calibration protection:** Protected by dip switch & password, no other special sealing.

**Load Cell Cable:** Load cell cable from platform to display unit with reinforced heavy duty PVC conduit.

**Power Supply:** Weigh Scale should be in built Battery with charging facility of 6 Volts DC  $\pm$  8%

**Environment:** 5 to 50 Deg C, 85% RH Max (non Condensing), Dusty.

**Make:** Essae Teraoka/ Avery India OR Equivalent (If, entire unit is quoted by manufacturer).

**Model Approval Certificate :** Manufacturer will have to provide model approval certificate of Govt. of India (Weight & Measure Dept.)

**Stamping:** Supplier shall arrange initial stamping of each scale with co-operation of concern dairy authority from local Weights & Measures Dept. before installation.

## **ULTRASONIC MILK ANALYZER**

Technical Specification shall be as below:

**Functional Requirement:** To test & display Fat, SNF & added water in milk electronically.

**Measuring Parameters :**

**Fat** - From 1.5% to 12 % with accuracy  $\pm 0.1\%$

**SNF** - from 6% to 12% with accuracy  $\pm 0.2\%$

**Added Water** - Accuracy  $\pm 5\%$ .

**Measuring Cycle** - Maximum 45 Sec per sample.

**Average Speed** - Minimum 70 Samples /hr.

**Display** - 2 line, 16 Character, Big LCD Display with minimum 06 mm Character height.

**Operation facilities:** Single channel testing & single calibration curve for all milk calibration. It shall have capable of secured calibration protection through any external device (Not Password). It shall have in-built storage to store history, error list, calibration & cleaning data, and the same data shall be exported. Milk Analyzer shall not operate without cleaning and shall request for cleaning if it is not been operated for a period of time (i.e. 15 mins or 30 mins) in order to safeguard the sensor and PCB.

**Operating Voltage:** 12 Volts DC  $\pm 8\%$

**Interface:** RS232

**Environmental Conditions:-**

- Ambient air temp - 8 to 35 degree C.
- Relative Humidity : 30 to 80% .
- Milk temperature : 5 to 35 degree C.

**Loose Accessories:**

- RS232 Serial cable - 01 no.
- Measuring Mug : 2 Nos.
- Operating Manual (English/ Hindi version ) – 01 no.
- Cleaning Solutions – 1 no. of each type (Monthly / Weekly / Daily)

## **ULTRASONIC STIRRER**

**Functional requirement:** Shall be used to remove air bubbles from milk before testing.

**Type:** Table top type

**Operating Voltage:** 12 Volt DC + /-8%

**Type & MOC of stirrer:** Ball type of Food Grade materials.

**Timer:** 1 - 99 sec Selectable

**Environment:** Suitable for dusty /humid village environment operating temp. 5 to 70 degree C

**Connecting cables:** minimum 1.5 power cable with plug top

**Power Consumption:** Max 80 Watts

## **REMOTE DISPLAY UNIT**

**Functional Requirement:** To display Milk testing result away from DPMCU.

**Type:** Wall Mounted.

**Display Parameters:** 6 Nos. (Members code – 04 digits, Milk weight - 5 digits fat% - 4 digits, SNF% 4 digits, Rate - 5 digits, Amount - 6 digits.

**Interface:** RS232.

**Display type:** 7 Bright segments, red led - 13 mm or above.

**Labels for display:** Screen printed / Labels of good quality.

**Operating Voltage:** 12 Volt DC  $\pm$  8%.

**Power Consumption:** Approx 10 watts.

**Environment:** Dusty, Humid, preferably housing shall be with IP 55 protection, rust proof powder coated metallic/ molded plastic body.

**Connecting Cable:** Minimum 3 mtr. data cable suitable for connecting remote display unit with date processing unit.

The entire unit shall be under warranty for 3 years. The units supplied under this bid shall remain in working condition till completion of warranty period.

**Note:** Priority will be given to Original Equipment Manufacturers (OEM).