TENDER DOCUMENT

FOR

SUPPLY, INSTALLATION, TESTING, COMMISSIONING AND TRIAL RUNOF (1)- BULK MILK COOLERS (2KI) / (2)- D.G. SETS (15 KVA) / (3)- SERVO VOLTAGE STABILISER (Oil Cooled)

FOR

The Bolangir- Kalahandi- Nuapada Regional Co-Operative Milk Producer's Union Ltd.

Inside Veterinary Hospital Campus.
Hatisalapada, Bolangir
Dist.- Bolangir-767001,Odisha
Bolangir-767001,Odisha.
Tel:06652 230334

E-mail :omfedbknmul@yahoo.com. Website:- www.bknmilknion.com

DATE OF COMMENCEMENT OF SALE OF TENDER DOCUMENT	:	04-06-2022
LAST DATE FOR SALE OF TENDER DOCUMENT	:	27-06-2022 at 1.P.M
LAST DATE AND TIME FOR RECEIPT OF TENDERS	:	27-06-2022 at 1 P.M
TIME AND DATE OF OPENING OF TENDERS	:	27-06-2022 at 3.0 pm (Technical Bid) 28-06-2022 at 3.0 pm (price Bid)
PLACE OF OPENING OF TENDERS	:	Head Office BKN Milk Union. Bolangir
ADDRESS FOR COMMUNICATION	:	General Manager, Balangir Kalahandi Nuapada Regional Milk Producer's Union Ltd, Bolangir

Cost of Tender paper Rs. 1120/- (GST Included

3/06/2022

GENERAL MANAGER
BALANGIR-KALAHANDI-NUAPADA
REGIONAL CO-OP. MILK PROD. UNION LTD.
BALANGIR

THE BOLANGIR-KALAHANDI-NUAPADA REGIONAL CO-OPERATIVE MILK PRODUCERS' UNION LTD.
INSIDE VETERINARY HOSPITAL CAMPUS,HATISALPADA, BOLANGIR
DIST.-BOLANGIR -767001 (ODISHA)Tel:06652-230334
Email-omfedbknmul@yahoo.com .Website: www.bknmilkunion.com

TENDER NOTICE FOR PURCHASE OF BULK MILK COOLER ,DG SET& STABILISER UNDER WODC FUND

Sealed Tenders in separate envelopes i.e. Technical & Financial are invited from the Manufacturers/Authorised Distributors for supply ofBulk milk cooler 2KL (3 Phase), DG set 15KVA (3 Phase) and Servo Stabiliser 15 KVA oil cooled (3 Phase) for the period of 12 month from the date of finalization of tender. The tender documents shall be downloaded at BKN Co-op. Milk Union Office website mentioned below on payment of Rs. 1120.00(Rupees One Thousand +GST 12%) only inform of DD in favour of Bolangir-Kalahandi-Nuapada Regional co-operative Milk Producers Union ltd payable at Bolangir from 04.06.2022 to 27.06.2022. In such cases, the cost of tender paper Rs. 1120/-i.e. (Rs. 1000+12% GST)in shape of Demand Draft must be accompanied with Technical Bid of the tender which shall be received up to 1 P.M. on dtd.27.06.2022 and shall be opened on the same day i.e. 27.06.2022 at 3 P.M. (Tech. Bid) and 28.06.2022at 3pm(Price bid) at BKN Milk Union Head Office in presence of Bidders. Any addendum, corrigendum or update shall be posted only on BKN website.

BKN reserves the right to cancel any or all the offers without assigning any reason thereof. For details please visit our website www.bknmilkunion.com.

31/05/2022

General Manager

GENERAL MANAGER
BALANGIR-KALAHANDI-NUAPADA
REGIONAL CO-OP. MILK PROD. UNION LTD,
BALANGIR

The Bolangir- Kalahandi- Nuapada Regional Co-Operative Milk Producer's Union Ltd.

(3)

Inside Veterinary Hospital Campus.

Hatisalapada, Bolangir

Sealed Tender in single cover system are invited from reputed Manufacturer/authorized distributor in separate envelopes i.e. technical & financial for Supply, installation and commissioning of **1-Bulk Milk coolers 2Kl (3Phase)**

2.DG set 15 KVA(3phase)

3.Servo stabilizer 15 KVA, Oil Cooled (3Phase)

Installation, testing Commissioning and trail run of the Saintala,Deogaon & Tushura veterinary dispenciary Campus, for the period of 12 months from the date of finalization of tender.The tender documents shall be downloaded from website www.bknmilkunion.com from 04.06.2022 to 27.06.2022 at 1 P.M during office hour on payment of Rs.-1120.00(Rupees One thousand one hundred twenty) only in shape of DD drawn from any Nationalised bank in favour of Balangir-kalahandi-nuapada regional co-operative milk producer union ltd payable at Balangir from 04-06-2022 to 27-06-2022 at 1 P.M The DD must be accompanied with technical bid of the tender which shall be received up to 1 p.m. on dtd.27.06.2022 and shall be opened on the same day i.e. 27-06-2022 at 3 p.m. at O/o-General manager BKN milk union.Bolangir inside veterinary Hospital Campus ,Hatisala pada, Bolangir.

in presence of concerned bidders or their authorised representatives. Any addendum, corrigendumor update shall be posted only on district website.The authority reserves the right to cancel any or all the offers without assigning any reason thereof.For details please visit our website www.bknmilkunion.com

A.for Participation in the tender

I. The tenderer should be a MANUFACTURER or Authorised Distributor having validGST registration.

2. The Bulk Milk cooler (2Kl) / DG SET (15 KVA) /Stabiliser (15 KVA) shall be supplied by the firm within the stipulated time as will be intimated in the purchase order ensuring specification as per the tender. Failing which the EMD by the approved firm will be forfeited and performance ofthe firm shall be considered unsatisfactory and the tender of the firm will not be entertained in future.

3. The documents attached to the tender shall be verified by the Technical Committee of BKN Milk union Balangir along with the original documents who will report in details on the eligibility of the tenderer on the day of opening of Technical Bid.

4. The tenderers are required to provide literature of the product along with Tender paper and attach copy of recent test certificate from authorised Test Centres of GOI as well as details of quality assurance systems as proof thereof.

5-The participant of the tender must have not been blacklisted by any Govt. office /Govt.Undertakings/ organizations. In case it is detected later on that the participant firm is a blacklisted one, the tender submitted by such tenderer would be rejected forthwith the earnest money and or security deposit will be forfeited. In addition to this, legal action asdeemed proper may be initiated against such tenderer.

6-The annual business turnover preferably not below Rs.1 cr. in last financial year 2021-22.

7-Manufacturer Should Have Valid ISO Certification.

B. For submission of Tender (Technical Bid)

There shall be two bids system to be submitted in separate envelops. One is technicalbid and another is price bid. Both envelops shall be put in a single large envelop for submission.

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2. The tenderer should mention clearly the details of the manufacturing address of each item separately to satisfy the requirement of exact location ofthe manufacturer for further correspondence by the Authority. Where ever required.
3. The tenderer should mention the status of the manufacturer such as ISO Certificate.
4. The annual business turnover preferably not below Rs.1 cr. in last financial year 2021-22 for the satisfaction of committee constituted for the purpose.
5. All the supporting documents as required in the terms and conditions of this tender shall be enclosed with the technical bid by the Tenderer.
6. The EMD of BULK MILK COOLER (2Kl) /D.G. SETS (15KVA) & SERVO VOLTAGE STABILISER (15KVA) – Rs-25,000.00 in shape of Bank DemandDraft (D.D.) from any Nationalised Bank is to be payable in favour of "Balangir-kalahandi-nuapada Regional co-operative milk producer union ltd", payable at Balangir along with technical bid.
7. It is for the information of all concerned, that EMD is binding for all bidder, except valid NSIC & MSME certificate holder.
8. The manufacturer should have valid latest ISO certification.

Price Bid

The tenderer should quote the price of each item in the prescribed format as annexed writing the serial number of the item and its name. If the tenderer does not qualify himself in the technical bid, the price bid offered will not beentertained. In case of unsuccessful bidders for the technical bid, price bid will be returned as received in the sealed cover without being opened. The tenderer should submit the price bid in Annexure II.

Deposit of Earnest Money

1-The tender shall not be entitled to any interest on the earnest money.
2-The earnest money deposited by unsuccessful tenderers will be refunded without bank interest as early as possible after the tenders are finalized.
3- Earnest money deposited by the successful tenders shall be retained & will be returned after expiry of the approved list or completion of supply.
4-The EMD will be forfeited if the tenderer withdraws the tender or does not accept the Approvedlist Or does not supply the items within the stipulated time as per the terms &conditions of tender or the product supplied is proved to be of substandard quality.
5. Copy of EMD exemption in case of MSME Certificate/NSIC/Co-Operative as per rule.

Delivery Time.

The items shall be supplied within 30 days from the date of acceptance of the order.

Warranty

The product should be covering a warranty of three year from the date of delivery.

Payment Terms

90 % payment against supply and balance 10% paid after installation and successful trial run of the supplied quantity.

RIGHT OF ACCEPTANCE/REJECTION OF TENDER

The following documents shall be submitted by the renderer as a MUST along withTender papers.
1-Original tender paper with proper sign and stamp and numbering of the pages with date in each page.
2-Tender Paper Cost in Shape of DD in respect of purchase of tender papers.
3- EMD (earnest money deposit) except MSME/NSIC/Co-operative.
4 Self Attested Photocopy of the up-to-date manufacturing license of the manufacturer.
5- Self Attested photo copy of up to date Income Tax return of the year (2020-21).
6-Self attested copy of PAN card.
7- Attested Photocopy of latest Sale tax /GST return.
8- Attested photocopy of GST Registration Certificate.
9- Detail name, Address, telephone no., Fax, E-mail of the firm& of the Director / Managing Partner / Proprietor of the firm.
10- Photocopy of original authorization certificate from the manufacturer for supply ofitems to authorized distributor.

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11- Annual Turnoverof Rs.1cr. in last financial year 2021-22 disclosed in Balance Sheet of the audited Account of the Firm.

12- Declaration regarding not blacklisted by any Govt. Offices/ Govt undertakings/Organisations / UNO agencies/ PSUs etc.

12. Documentary evidencein support of supply experience.to Government/semi Governmentorganizations/ UNO agencies / PSUs etc.

13. Copy of ISO certificate of manufacturer.

14. Undertaking of after sale service warranty in letter head.

15-**Annexure • I, IV** duly filled in and check list in Annexure "III" No tender shall beaccepted if the same is not supported with the above documents mentioned at Sl.No 1 to 14.

16- The right of acceptance of tender and/ or award of contract rests with the Authority who does not bind himself to accept the lowest tender and also reserves himself the right to reject any or all the tender(s) received without assigning any reason whatsoever. Any dispute arises in future will be finalized-by General Manager BKN milk uion , Balangir, The legal dispute is subject to Balangir jurisdiction only.

VALIDITY OF TENDERS

The rate so approved will remain valid till Twelve month (12) months from the date ofapproval or as decided by the competent authority.

Tenderer's understanding the tender documents

The tenderers shall carefully go through the tender documents and fully inform himself to all the terms and conditions contained therein before submission of the tender. If the tenderer find discrepancies or omission or should be in doubt as to their meaning relating to tender documents, he should at once inform the General Manager BKN Milk union, Balangir and obtain clarification in writing prior to submission of the tender. Verbal clarification or information given by General Manager BKN Milk union, Balangir or the authorized representative working under shall not be binding in any way.

TERM AND CONDITIONS FOR SUBMISSION OF TENDER

A. Instructions to tenderer towards purchasing

Each set of tender papers shall be downloaded from website.

The tenderer who downloaded tender documents from website should furnish the BankDD towards cost of tender paper along with tender.

B. Instructions to tenderer while submitted the tender paper

1. All papers submitted with the tender and the tender itself should be self attested and bear the dated signature & si number of the pages of the tenderer in every page.
2. Capital letters should be used in filling up of the tender form and should be neatly typed computerized.
3. Rates should be quoted on the prescribed tender form (Annexure •II Price Bid). The rates offered should be written both in figures and in words and no erasing or over writing shall be entertained and **price should be mentioned separately i.e it should be mentioned items wise in price bid**.
4. All information in these tender documents shall be in English only.
5. The Tenderer may quote the rates for all the items contained in the Tender or a part thereof. The rate to be quoted should be FOR destination i.e. Saintala,Deogaon & Tushura Vetrnary Dispencary Campus inclusive of packing, and forwarding charges. The rate should be quoted in Indiancurrency only. It is necessary that specific brand make etc. should be clearly mentioned on the tender paper for each item furnished to compare the specification and the rate against multiple offers.
6. The tenderer must quote the rates of the items for which they have been specifically asked for as per tender. Tenderer quoting the rates or units different from those mentioned in the tender liable to be rejected.
7. Tender containing clerical error/typographical error/ arithmetical mistake(s) may be liable to be rejected

.8. One rate shall be offered for one item. In case there are really different specification or brands to be offered against one item and all of them confirming to the standard and specification of the

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required item more than one rate can be offered for consideration. But the tenderer in all such cases shall clearly mention the make, brand, specification and shall furnish literature/ sample for each item

9. The tenderer is required to submit product detail brochures & leaflets in respect of the items BMC(2Kl), DG SET (15KVA) &Voltage Stabiliser (15 KVA) as offered in the Tender along with the technical bid for scrutiny by the technical committee Whenever it is required and further consideration by the committee to analyse the pricebid, failing which the items so offered will not be considered.

10. Submission of more than one Tender by a particular tenderer under different names is strictly prohibited. In case it is found later on that this condition has been violated, all the tenders submitted by such tenderer will be rejected or cancelled and earnest money shall be forfeited. In addition to such, legal action may be initiated as deemed proper against such tenderer.

11. EACH PAGE OF TENDER PAPERS BESIDES THE PLACES SPECIFIED SHALL BE SIGNED BY THE TENDERER WITH HIS SEAL AND SIGNATURE & sl numbering of the pages.

12. All offers shall be addressed to THE Bolangir-Kalahandi-Nuapada Regional Co-operative milk producer union Ltd , Balangir in double sealed cover clearly marked outside "Tender for supply of BULK MILK COOLERS / D.G. SETS / SERVOVOLTAGE STABILISER"aswell as their name should be super scribed by the tenderer on the envelope containing the Tender paper. If the due date so mentioned above is declared as holiday, the last date and time for submission and opening of tenders shall respectively be the time asaforesaid on next working day.

13.Tenders sealed and super scribed will be received only sent throughSpeed Post ,Registered Post/CourierService Delivery addressed to the above authority so as to reach by the due date and time. The tenders delivered or sent otherwise as stated above will be at the risk of theTenderer. The tender which is received after the time and date specified above will not be entertained and is liable to be rejected.

14. The rate so approved will remain valid for Twelve (12) Months from the date of Publication or as decided-by the competent authority.

15. THE TENDER COMMITTEE/ TENDERING AUTHORITY/UNDER SIGNED RESERVESTHE RIGHT

a. To reject any/ or all the Tenders at any stage without assigning any reason thereof To purchase BULK MILK COOLERS / D.G. SETS / SERVOVOLTAGE STABILISER"at the approved rate of the catalogue from any outsider during the Tender/ Contract Period in case of emergency, ifthe Tenderers fail to supply such items on short notice observing financial formalities.

b. To withdraw any item from the tender at any stage. In such contingency the selection of such item already made in favour of any Tenderer shall be treated as cancelled.

c. To make additions to or deletion from the list of consuming units/ delivery points to anytime during the period of validity of the tender or of the contract in pursuance of theTender.

16. The period of firmness of the approved rates is 12 months. However, if at any time during the period of contract, the price of any tendered item is reduced or brought down by any law or act of the Central or State Government or the tenderer, the tenderer shallbe morally and statutorily bound to in form General Manager BKN Milk union, Balangir immediately about such reduction in the contract price. The General Manager BKN Milk union, Balangir is empowered to unilaterally effect such reduction as is necessary in rate, in case thetenderer fails to notify or fails to agree for such reduction or rate.

17. No payment will be made before completion of supply. Payment will not be madeagainst shipping. Payment should be completed only after the receiving officer has taken delivery of Store and found them to be satisfactory in every respect.

18. If the performance of the approved firm is found to be not satisfactory for irregular supply of approved items against indents placed during the validity period of the tender,the earnest deposited by the approved firm will not be released and will be forfeited.The tender of the firm will not be entertained in future.

19. The Earnest money deposit furnished by the Tenderer will be liable to be forfeited, if theTenderer Withdraws his tender as a whole or for any particular item at any stage afterthe submission of the tender of fails / refuses to enter into written agreement for any/or all other items of his accepted tender within the time specified when requested to doso. The earnest money deposit furnished by a tenderer and even the tenderer is liableforfeiture and cancellation without prejudice to any other action in the event of failure /refusal to supply order and or according to contract specification and/ or quantity.

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20. PACKAGING: All the packaging should be primary (New). The supplier shall provide such packaging of the goods as is required to prevent their damage or deterioration during transit to their final destination. The packaging shall be sufficient to withstand without limitation rough handling during transit & open storage. The manufacturing date, batch no, etc. must be disclosed in the body of the packages.

21. All the supplies should invariably display the particulars on its label and / or cartoon in a distinct manner.

22. Abnormally low price of an item quoted by the tenderer in the Tender with some malafide intention will not be accepted, if detected and his offer will be rejected.

23. TENDERS ARE TO BE ACCOMPANIED WITH THE FOLLOWING DOCUMENTS and also should furnish a certificate at Annexure-III of the tender paper, list the documents submitted should be self attested and bear with initial/ signature with their seal and the tenderer shall furnish the details of firm with the status in Annexure - I.

a) Covering letter in the letter head pad of the Tenderer.

b) The Original money receipt obtained towards purchase of tender papers should be carefully preserved and should be enclosed in original at the time of submission of tender papers. The tenderer who downloaded tender documents from website should furnish the Bank DD towards cost of tender paper along with tender.

c) Complete tender papers with initial / signature of the tenderer with rubber seal in each page and in the enclosing documents.

d) Copy of Income Tax Return for the Assessment year-2020-21.

e) Copy of latest Sales Tax Return for the Assessment year-2021-22

f) E.M.D. as prescribed in the Tender Notice.

g) Literature of information Brochures indicating detailed specification.

h) Documentary evidence in support of minimum annual turnover not below Rs. 1cr.of year 21-22.

i) Rates should be quoted in model format enclosed along with tender paper (Annexure. II(Price Bid).

j) List of enclosures to be furnished as per Annexure-III enclosed.

k) Details of the requirement for technical bid as mentioned in Para B under "Submission of tender in Annexure- IV.

L) Tender form neatly typed in a separate paper as format attached and submitted with stamp and sign with date.

m) Copy of MSME /NSIC/CO-OPERATIVE Certificate.

N) Bidder should giving a undertaking for product warranty in letter head with technical bid.(Format attached)

O) Bidder should submit a Technical specification of their product separately with tender documents.

24. After testing of BMC (2KL),15KVA DG SET & Stabiliser (15 KVA) in any adverse report on any item is received, the supplier/ Tenderer will have to refund the entire cost of BMC (2KL),15KVA DG SET & Stabiliser (15 KVA) supplied along with forfeiture of EMD.In case where payment is not required to be released the same shall be forfeited.Besides the above, action will be initiated for black listing Firm/ Supplier/ Tenderer onthe report of the competent authority.

25. Any dispute arises out of the contract shall be settled amicably. However the decision of the General Manager BKN milk union , Balangir in this regard shall be treated as final.

26. Any legal dispute is subject to Balangir jurisdiction only.

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GENERAL MANAGER
BALANGIR-KALAHANDI-NUAPADA
REGIONAL CO-OP. MILK PROD. UNION LTD.
BALANGIR

DIRECT EXPANSION TYPE BULK MILK COOLERSCAPACITY: 2000 LPD
TECHNICAL SPECIFICATIONS

General Description

Design, supply, installation, testing and commissioning of Direct Expansion type bulk milk cooling systems including all accessories & items given in the detailed scope of supply, on turnkey basis. Two milking system has been configured such that volume of each milking is as under:

i) Milking in the morning (up to 10 AM) - 50%

ii) Milking in the evening - 50%

1. Functional Requirement

These systems would be installed in village Dairy Co-operative Society (DCS), which collects milk everyday in the morning & evening from milk producers. The milk so collected shall be stored in the bulk milk cooler and cooled from ambient temperature to 4 degree centigrade. The stored milk shall be despatched to dairy plant through insulated road milk tanker once in a day.

2. Design Requirement

2.1. Capacity

The net capacity of the bulk milk cooler shall be as mentioned above and as per the requirement given in the enquiry/ tender document. However, the gross capacity in all the sizes shall be at least 10% higher than the rated capacity to avoid spillage of milk due to agitation.

3.0 Applicable manufacturing/ design code

3.1 Bulk Milk Cooler (BMC)

The tank shall meet the requirements of ISO 5708 Type 2A II (Latest version) for milk collection cycle of two times in a day with not more than 3 hours cooling time from 35^0 C to 4^0 C for entire milk and not more than 1 & 1/2 hour for second milking i.e. from 10^0 C to 4^0 C.

- Direct expansion type, stainless steel, Bulk Milk Cooler with vertical open/ closed type tank.
- The Bulk Cooler should be designed to cool milk within three & half hours or less from 35° C to 4° C and should work at an ambient temperature of 50°c.
- The system shall be designed for automatic operation.
- The system shall be provided with SS balance tank with covers in line with the capacity of Bulk Milk Cooler and SS 304 SS pipes of required
- Size from balance tank via milk transfer pump up to BMC. The outlet of BMC will be connected through milk transfer pump to flexible hose pipe.

3.2 **Tank**

The tank shall be of an established and proven design, in regular production and use, and not a prototype unit.

(Note: All milking means quantity of milk received in either morning shift or evening shift. When a Tank for two milking is either empty or contains 50% of its' rated volume of milk at 4^0 C, and 50% of the rated volume of milk at 35^0 C is added in one batch, all of the milk shall be cooled to 4^0 C in not more than the specified cooling time.

If a volume of milk corresponding to the second milking is added to the tank, the total volume of the milk shall be cooled to 4^0C in not more than specified cooling time.)

3.3. Refrigeration System

The refrigeration system shall be designed to meet performance ratings of positive displacement of condensing units specified in ARI Standard 520-2004. & ISO 5708 Type 2A II.

3.4 Accessories

BMC control panel, temperature sensor, electrical switch gears, control valves & fittings etc. shall be approved make only and shall meet the requirement of latest relevant Indian Electricity Rules. ISO/BIS standards.

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4.0 Scope of the bidder

4.1 Scope

The bidder's scope starts from SS 304 tray, having an outlet connection, for receiving the milk. The milk shall flow through SS 304 pipe by gravity into bulk milk cooler. Wherever gravity flow is not possible, the milk from the tray shall be collected in a balance tank and from the balance tank it shall be pumped to bulk milk cooler. The balance tank shall be of AISI 304 construction, for bulk milk cooler (BMC) upto 2000 litres capacity the minimum capacity of tank shall be 100 litres and for BMC of more than 2000 litres capacity the tank shall have minimum capacity of 200 litres. From BMC, the milk shall be transferred to Road Milk Tanker (RMT) through flexible hose 10 and milk transfer pump either installed on the RMT or through the pump supplied along with BMC. Bidders should furnish separate prices for gravity fed system as well as for pumped system.

4.2 Supply

The bulk milk cooler shall be a complete unit with the refrigeration system, agitator(s), lockable inlet & outlet valve with strainer. Also includes supply of tank with SS 304 filter for pumped system, SS piping & milk hose, unions and milk transfer pump of 5000 LPH, SS 304 pipes & fittings , food grade quality flexible hose of adequate length, erection materials, pipe supports, floor interconnecting cables, cable conduits shall also be supplied, earth pit CI covers & earthling as required by local electrical regulation. The indicative distances between SS collection tray to balance tank - 2 m, between balance tank to bulk milk cooler - 5 m, BMC to Mains power point & DG set – 20 m may be considered for calculating cable & SS piping requirement supports etc. However the exact distances shall be as per site conditions and the complete piping & cabling necessary for installation shall be supplied.

4.3 Installation & Commissioning

The total job is on turnkey basis and includes supply, installation, testing, commissioning and training of the field personnel. Minor civil works, providing & grouting supports are included in the scope. Giving satisfactory training to the staff of the collection centre and trial runs for the complete unit. Moreover, supplier has to demonstrate performance trial runs after commissioning of the unit to the Federation.

4.4 Tank Evaporator

Laser welded with Operating pressure of 30 bars and crash test pressure of 60 bars. In case of rectangular/circular type bulk milk cooler, the evaporator shall be fixed at the bottom plate of the inner tank.

4.5 Tank Fittings & Accessories

Top cover with locking arrangement, top cover lifting handle, outlet valve and blank union with locking arrangement, inspection window, agitator. All SS fittings shall be of SMS standard. "No-foam" type inlet (For Close Type).Tank with gravity feeding system shall be provided with one AISI 304 funnel with SS fine wire mesh. The preferred shape of the tank shall be circular circular/horizontal rectangular with an open-able top cover up to 2000 litre capacity The shape of the BMC tank shall conform to international sanitary design. For closed type Tanks, proper SS Ladder to be provided for approaching top manhole.

4.6 Ball Feet

An AISI 304 adjustable ball feet tamper proof & lockable with 50mm heightadjustment.

5. Constructional Features

5.1 Bulk Milk Cooling Tank

5.1.1 Material of construction(MOC)

Tank inner, outer, intermediate dimpled jacket & top open able cover shall be fabricated from Stainless Steel AISI 304 material. All piping, fittings, filter, lockable cover, agitator shaft & blade adjustable ball feet made out of AISI 304 for 50 mm height adjustment. Also Dip stick, outlet & inlet valves & blank flanges ,ladder, manhole of about 45 cm diameter for closed type milk cooling tank etc shall also be made out of AISI 304. The filter screen shall be from AISI 304 fine wire mesh. All the gaskets shall be of food grade nitrile or neoprene rubber material. The skid on which tank & refrigeration unit is mounted shall be of galvanized steel. The bottom evaporation surface in Con

tact with milk shall be passivity by standard treatment to impart corrosion resistance.

The skid made out of heavy MS box section & shall be hot dip galvanized on which tank & refrigeration unit is mounted.

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5.1.2 Shape & Orientation

The preferred shape of the tank shall be vertical cylindrical / horizontal rectangular or U-shape for capacity up to 2000 L with an openable top cover.

5.1.3 Milk Cooler Tank & Evaporator

The AISI 304 tank for the BMC should be either in rectangular, circular or elliptical orientation, which imparts smooth distribution of the fat in Milk when agitators is set into operation. The tank shall be so designed that all surfaces in contact with Milk are readily accessible either in their position or after dismantling to permit thorough cleaning.

5.1.4 Inner Vessel:-

All joints shall be welded, any filler rod being suitable for the parent metal .All weds shall be ground smooth and free from crevices, porosity and brittleness. All Milk contact metallic surfaces for the inner vase and its attachment should have finish not less than 150 grit finish.

Any permanent attachment to the inner vessel shall be welded with fillet radii not less than 6 mm. All parts of the inner vessel shall drain directly to the outlet. Internal corner from round the bottom of the inner vessel and outlet shall be of not less than 25mm in radius. In case of rectangular type of BMC, the evaporator shall be dimpled jackets fixed as the bottom plates of the inner tank. The Evaporator plate should be imported laser welded. Whereas in cylindrical/elliptical tank the jackets shall be at least upto 1/3 height of the tank. In case of double compressor total evaporator shall be divide and Separated into two sections. Each section shall have separate suction and discharge connecting to each compressor . the evaporator surface in contact with the Milk should be passivity by standard treatment to impart corrosion resistance.

5.1.5 Tank Fittings & accessories

- Out let 51 mm butter fly valve
- Tank cleaning Brushes (One tank cleaning brush and one pipe cleaning brush. The total no. of supply shall be 73 means each BMC unit shall have one no. SS hooks to be provided
- The tank shall be provided with SS inlet with special " no foam" design, outlet 38 mm butter fly valve & blank union with locking arrangement, inspection window/manhole with locking arrangement for closed tanks, agitator and top cover with locking arrangement.
- At the bottom of the outlet cup on the outer surface, a temperature sensor shall be permanently fixed. It shall sense the temperature of the surface at the outlet and transmit the signal to the digital indicator. The digital type temperature indicator shall be provided in the control panel.
- The tank shall be provided with SS calibrated dipstick to measure the volume of milk inside the tank. The dip stick shall be graduated from 10% or less to not less than 100% of the rated volume. Each division on dip stick shall represent a volume not greater than 0.5% of the rated volume. The tank shall be equipped with agitator(s) capable of producing a uniform distribution of fat in the milk. All fittings shall be of SMS standard.
- The BMC shall be provided with AISI 304 filter with SS fine wire mesh suitable to filter extraneous matter such as dust particles, hay, flies, cow dung pieces/ particles etc. . It should be placed on the balance tank. The filter shall be designed & installed in such a way that it can frequently and easily cleaned.
- Top cover lifting handle and approach ladder for manhole cover shall be in an in built feature of the unit. The tank shall be provided with AISI 304 adjustable feet tamper proof type having provision of 50 mm height adjustment. Number of feet shall be minimums 4 for all capacities.
- Tank cleaning Brushes (One tank cleaning brush and one pipe cleaning brush. 4no. SS pipe hooks to be provided for 2kl BMC for keeping SS pipe and milk hose pipe.

5.1.6 Stainless Steel Sanitary Milk Pump

pump feed system shall be supplied for 2KL BMC. The BMC isnot possible due to insufficient level difference, a suitable capacity milk pump shall be supplied for pumping of milk from balance tank to BMC. Pump impeller & casing shall be made out of SS AISI 304 material. All milk contact surface shall be finished to min. 150 grit. The pump should be of sanitary design. Inlet & outlet of the pump shall ends with SMS union.

The pump shall be provided with approved make motor having 'E'/'F class insulation and IP 55 protection. The flanged end motor shall have stainless steel shaft having hygienic mechanical sealing arrangement to prevent leakage from pump casing to rotor side of the motor. Pump shall be covered with SS shroud having air ventilation grill. The pump shall have SS adjustable ball feet.

5.1.7 Insulation

The insulation of the tank shall be done by injection, in situ, of high density (minimum 40 kg/m3, CFC free and environmental friendly) polyurethane foamwithout having any imperfection and hygroscopic. 50 mm thickness in the walls &90mm below the evaporator. The efficiency of insulation should be such that at max50 degree C. ambient temperature, the rate of rise of the mean temperature of the milk, initially at about 4 Deg. C shall not exceed by one Deg. C in four hours whenthe rated volume is allowed to stand undisturbed as per the requirement of ISO 57082A II (latest version) when the refrigeration unit is not working. Efficiency of Insulation 0.019 w.m/k.

5.1.8 Cleaning In Place (CIP)

For closed type configuration, facilities for Cleaning- In- Place shall be providedwhich shall include CIP spray ball (s) or deflector plate and piping from milkreception/balance tank through milk transfer pump to bulk milk cooler.

5.1.9 Welding & Finishing

Inner, outer, intermediate dimpled jacket and nozzle connections shall be weldedwith TIG process only. The inner shell and all other product contact surface shall bepolished up to minimum 150 grit finish. The outer surface to be polished with 150 gritdull finish or a circle finish.

6. Refrigeration System

The refrigeration system shall be designed to meet performance ratings ofpositive displacement of condensing units specified in ARI Standard 520-2004 andwith not more than 3.0 hours cooling time from 35 to 4 Deg C for all milking and notmore than 1.5 hours for second milking i.e. from 10 to 4 Deg.C.The refrigeration system shall be of direct extension type, with Freon-22 (R-22) or CFC free environment friendly as refrigerant to cool the raw frame described above.

The evaporator(s) of the refrigeration system shall be form a part of the milk tankbody as dimpled jacket in the bottom plate in case of rectangular tank or at least up to 1/3 height of the cylindrical/elliptical tank. It would be better in case the system iscompatible for the refrigerant R 407C. The refrigeration system shall be directexpansion type to perform cooling function in an ambient temperature of 46 Deg. C.with air cooled condenser.

6.1 Compressor

The refrigeration 3 phase for 2KL BMC unit shall be adequate enough to ensure that milk is cooled to 4 Deg. C in theprescribed time limit and suitable to operate at 0 Deg C suction temperature and 60Deg. C condensing temperature (air-cooled condenser) assuming 46 Deg. C ambienttemperature ,should also comply ISO 5708 Type 2AII(latest version).The compressor (s) shall be scroll / reciprocating hermetically sealed type essentiallysuitable for refrigeration application in hot & humid Indian climatic conditions. Themotor of the compressor should have a thermostat temperature sensor embedded inwindings for protection from excessive heating due to overloading or short circuiting.Similarly, a protection against off cycle migration of refrigerant to the compressor isnecessary in the refrigeration unit, preferably a self regulating PTC crank caseheater.

The compressor selected should be energy efficient and consume least power tomeet the cooling load requirements.The bulk milk cooler with two compressors system shall be preferred.In case for a particular capacity, single as well as double compressor systems areavailable, bidder should quote for both. Similarly, in the offer bidder shall clearlymention whether the offered system shall work on single phase or three phase mains supply..

6.2 Condenser

The condenser shall be air cooled finned tube type having sufficient heat transferarea when the unit is operating at extremely high temperature. For each compressorseparate condenser and air cooling fan shall be considered. The air circulation pumpshall preferably be induced draft type throwing not air out. The condensingtemperature should not be less than 60 deg C operating ambient temperature of 46deg C.

6.3 Receiver

A suitable size liquid receiver of minimum capacity of 6 ltr. to assist system duringpump down cycle as well as to store refrigerant incase of maintenance should beprovided duly mounted on the skid near compressor(s), as per requirement for BMC.

6.4 Thermostatic Expansion Valve

Suitable size and capacity Thermostatic valve should be provided in the refrigerationcircuit of the bulk milk cooler. The TX valve should be Maximum Operating Pressuretype of reputed make and of adequate capacity to feed optimum quantity ofrefrigerant to the evaporator.

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6.5 Refrigerant pipe, fittings & controls

All pipes, valves, fittings & controls shall comply with the latest relevant codeapplicable. Isolation valves at suction & discharge sides of the compressors shouldbe provided for compressor isolation, during maintenance of the system. The makeof each item shall be approved by the client. Copper/ SS tubing shall be routed insuch a way that if any leakage occurred during operation can easily be detected andthe defective portion can be repaired/ replaced without dismantling the whole system.

7.0 Electrical Control Panel

7.1 Control Panel

Three control panels shall be provided, one for the main power supply tapping,second for the refrigeration unit and the third for the milk tank. Each panel shall beprovided with MCB's of suitable ratings for switching and protection as per thesystem requirement. The incoming and outgoing power supply terminals shall becovered and secured with a lead seal to prevent tampering. The door of the panelsshould be provided with lockable handles.

8.0 Refrigeration Control Panel

The refrigeration unit shall be provided with a control panel made out of StainlessSteel suitable for wall mounting near the unit. The panel shall be provided withmotor starters, ON/OFF push buttons & necessary MCBs, control wiring, linevoltage controller to guard the compressor against the supply voltage fluctuations.Wall / Tank mounted To be specified by bidder MOC of Panel & Thickness AISI 304 / 1.6mmIn case more than one compressor is provided in the refrigeration system, thecontrol panel shall be provided with a sequence controller & timer to start onecompressor at a time to avoid surge on power supply. The panel shall also havefacility to operate refrigeration unit on auto/ manual mode. In the auto mode, assoon as the milk temperature reaches to pre-set value, the compressor should beswitched off to avoid freezing of .Milk Tank.

8.1 Control Panel

The milk tank shall be provided with a control panel with inbuilt-timer to control theintermittent operation of the agitator & a digital temperature indicator to indicate the milktemperature to one decimal place with least count of 0.1o C on continuous basis. Incase of power failure alternate arrangement should be available to know thetemperature (stem thermometer). The agitator (s) shall have interlocking arrangementwith top cover opening limit switch. The limit switch shall put off the agitator as soon asthe top cover opens up.

Temperature Display LCD 0 to 100 Deg. C with one decimal accuracy; Management &control of cooling and agitation ; provision for cut-off/ restart, intermittent operation ofagitator, auto & manual facility required ; RS232 port for temperature data backup ofminimum last 90 days & main cooler faults analysis; in case of open type coolers,agitator should switch off when the lid is opened for safety purpose.All the pipes shall be clamped properly with fixed support. In case of double compressorsystem, pipe, fitting & control should be designed in such a way that both thecompressors can run independently. The tubing shall be insulated wherever necessary.

9. Cables & Electrical Switch gears

All electrical switch gears and controls required for the complete system shall be ofreputed make and of suitable rating.All permanent wiring installed on the tank or associated unit shall be carried out usingPVC cable in heavy gauge, screwed galvanized steel conduit or plastic conduit, or in mineral- insulated copper- sheathed cable. Flexible connections shall be made.

10.0 Earthing

As per IS: 3043 - 1987 (reaffirmed 2001) - "Code of practice for earthing". Pipe type earthing - 4 nos. to be used. Suitable G I Strip (minimum 25x3 mm) to be used forconnecting earth pit with nearest equipment earthing point. From this point earthing to other points can be looped by suitable GI Strip or PVC insulated copper conductor cableof green colour (size minimum 1x 4 Sq mm) The chassis, framework and fixed parts ofthe metal casing of the tanks where used shall be provided with two separate earthing terminals, Earthing for Alternator & Panels. These terminals shall be provide over metallic coverings of current carrying cables.

The earthing terminal shall be readily accessible and so placed that the earth connectionof the tank are maintained when the cover or any other movable part is removed. The earthing terminal shall be of adequate size, be protected against corrosion and shallbe metallically clean. Under no circumstance shall a movable part of the enclosure be insulated from the part carrying the earthing terminal when the movable part is in place .The earthing terminal shall be identified by means of the ' ' marked in a legible andindelible manner on or adjacent to the terminals.

10.1 Accessories

Isolation valves at suction & discharge sides of the compressors, All pipes, valves,fittings & controls shall comply with the latest relevant BIS code applicable, Copperpiping between tank and CDU shall be supported/routed by cable tray and cable traysupports.

10.3 Accessories for 2000 LPD BMC

MS Powder coated 1.6mm enclosure, 40 A TPN MCB for incoming, 32 A TPN MCB forfeeding refrigeration panel, 20 A TPN MCB for feeding starter of milk pump, 32 A DPMCB for feeding Domestic power DB, 20 A TPN MCB as spare

10.5 Other Required Accessories

Isolation valves at suction & discharge sides of the compressors, All pipes, valves,fittings & controls shall comply with the latest relevant BIS code applicable, Copperpiping between tank and CDU shall be supported/routed by cable tray and cable traysupports.

10.6 Optional Item –

Heat recovery Unit for 2000 L capacity BMC with necessary piping (Estimated10 meter)

This system shall be for heating water using heat of one condensing unit of BMC & tostore this hot water. It shall consist of evaporator type heat recovery unit. Tank shall beof 200 litre capacity in SS 304, Outlet with 38 MM Butterfly valve with Union. All controlsshall be manual. Installation of all equipment & interconnecting piping ,including minor civil works suchas providing galvanized steel supports, SS base plates, clamps etc. required to securethe equipment & piping to walls and floors is included in the scope. Necessary cabletrays, GI pipes/ conduits, cable gland sockets at both ends, Insulators, junction boxesetc are included in the scope of the contract to lay & connect all electrical and controlcables. Cable trays and supporting steel members such as Galvanized angels/channel/flats, supply of CI covers for the pits etc shall be used and fixed/ installed at appropriateplaces to ensure safe installation. The laying of cables on the floor or under the floorshould is not permitted.

The owner will undertake major civil works. The supplier shall make all tools & tacklesrequired to execute the job available.

11.0 Commissioning

Supplier shall arrange commissioning & performance trial runs of the bulk milkcooling system to the satisfaction of the Authority. The supplier shall supply all theconsumables required during commissioning of the plant. along with the Bulk Milk Cooler & DG Sets and Voltage Stabiliser etc. The bidder shall quote for supply of spares along with prices forthe complete system. A set of essential spares for the total installation as required bythe user shall be worked out and finalize at the time of finalization of contract.The cost of spares should not be included in the main bid.

11.1 Tool Box

A standard tool box is required with necessary tools for normal maintenance. Itshould include Electric Tester, Screw Driver Set, Allen Key 3mm & 6mm, PipeWrench 12" Long, Screw Spanner 6", Fix spanner Set 6-27, Gasket for SSUnions/valves- 3 sets

11.2 Manual

Two sets of operation & maintenance manuals in English containing completedetails of starting up , putting off , critical checks and day to day maintenance of thecomplete system shall be supplied . The manual should also have the requiredelectrical circuit diagrams.

11.3 Training

Supplier shall arrange for training of the team of DCS staff for efficient operation andmaintenance of the complete system.

11.4 After Sales Service, Service Centre and Service Contract(optional) obligation ofBMC package supplier for providing after sales service/warranty claims for BMCpackage components supplied.

11.5 It would be the responsibility of the contractor, for bought-out components ofcritical nature such as DG Set and voltage stabilizer, to identify dealers/ agency locatedin the region where BMC package would be installed. This is to facilitate fulfilling of thewarranty obligations as per the contractor and availing timely services by milk collection centres in view.

11.5 The Authority has a right to inspect all the components of the bulk milk cooling systemduring fabrication / manufacturing stage. Before starting the fabrication work suppliershall submit QAP & QIP for approval from client. The milk cooling tank shall be checkedwith dye penetration test for welding defect, surface roughness check, water tightnesstest / hydraulic test.

12.0 GENERAL SCOPE OF WORK:

10/6/2022

RAW MILK - At max. temp. of 35 deg. C shall be made available at the Dump tank by Cooperative Societies/Union.

ELECTRICAL POWER –Electrical power including earthing shall be made availableat the incoming feeder of Main Control Panel. In case of power failure, Power supplythrough DG set shall be made available through a manual change over switch provided inthe Main Control Panel.

CHILLED MILK – Co-operative societies/Union shall leave the chilled milk at the outlet ofbulk milk cooler at 4 deg. C temperature. DCS/Union will connect the milk pump and hosepipe available on the Road Milk Tanker to the outlet of bulk cooling tank and unload milk.

WATER: Water of suitable quality shall be provided at inlet of Hot water arrangementsystem. Hot water generator shall generate water of 60 to 65 Deg C for CIP of BMC tankand piping.Only first charge of refrigerant and oil for cooling tank is included in Bidder scope. Anyadditional charge of oil and refrigerant if subsequently required shall be provided by Cooperativesocieties/Union.

All types of consumables process water, electrical power; raw milk, etc. shall be arranged by ordering unions / cooperative societies.

APPENDIX-II

Format for technical details: (Details to be furnished by the bidder) TECHNICAL SPECIFICATIONS FOR BULK COOLING TANKS CAP. 2000 L with TWO CONDENSING UNIT (OPEN/CLOSED TYPE).

Sl. No	DESCRIPTION	TECHNICAL REQUIREMENT
A	Milk Tank	
1	Rated Capacity	2000 ltr
2	Make and model.	To be specified by the bidder
3	Material used for construction	AISI 304
4	Type	Closed/Open Type Horizontal/ Rectangular / Cylindrical / Semicylindrical.
5	Overall dimensions and weight.	To be specified by the bidder
6	Thickness of inner and outer shells	1.5 mm for inner 1.2 mm for outer shell
7	Number and RPM of agitator(s).	1 no.25 RPMs (approx).
8	CIP facility: Manual or auto	Manual
9	Insulation type (b) Thickness © Efficiency	By injection in situ of High Density (min.40 kg/m3) CFC free polyurethane foam without any imperfection and hygroscopicity Minimum 50 MM. It should be such that at 50 deg C ambient the rate of rise of mean temp. of Milk Initially at 4 deg. C shall not Exceed 1 dg. C in 4 hour when rated volume is allowed to stand-still as per requirement of ISO 5708 2A(II)
10	Balance Tank with Filter, in line strainer	Minimum 200 liters capacity.
11	SS Milk transfer pump	Minimum 5000 LPH capacity. SS calibrated dip Stick on both sides in the BMC

12	Facility to Measure volume:	tank with 0.5% calibrating accuracy.
B	Refrigeration unit	
1 2	Type: Compressor: a) Make b) Model	To be specified by the bidder.
13	Condenser: a) Make: b) b) Model	Air Cooled, finned Tube Type To be specified by the bidder. To be specified by the bidder
14	a) No. of compressor b) Capacity of compressor(s). (Kcal/hr)	Two Min. 10333(Kcal/hr)
C	Design Parameters	
15	a. No. of Fans b) Capacity of the condenser	Min. Two Min. 12400 (Kcal/hr)
16	Overall dimensions and weight of the unit	
17	Type of refrigerant : R-22 or CFC free environment friendly refrigerant refrigeration control panel (Wall/Tank mounted)	To be specified by the bidder
D	Power Supply	Three Phase.
1	Ambient temperature considered for design	46 Deg C
2	Maximum cooling time considered a) ALL milking b) SECOND milking.	3 hrs from 35 Deg C To 4 degC 1.5 hrs from 10 deg. C To 4degC
3	Temperature range considered a) ALL Milking. b) SECOND milking	35 Deg C To 4 degC 10 deg. C To 4degC
E	DG set	The specification given below are Minimum. However bidder may give higher capacity D.G set as per their design& considering 10% extra load.
	Make of the alternator Model of the alternator.	To be specified by the bidder.
F	STABILIZER	The specification given below are Minimum. However bidder may give higher capacity Stabiliser set as per their design& considering 10% extra load.
	Make of the alternator Model of the alternator.	To be specified by the bidder.
	Electricals	
	Connected load in Watts & Amperes for : a) Compressor(s) b) Condenser fan(s) c) Agitator(s). d) Milk pump	To be specified the bidder
	Maximum / surge current drawn by the compressor(s)	Not more than 30 Amps.

NOTE :ALL THE INTER CONNECTING SS PIPES & FITTINGS FOR INSTALLATION & COMMISSIONING OF EQUIPMENTS IS IN SCOPE OF SUPPLY OF BIDDERS. SIMILARLY ALL THE ELECTRICAL SWITCH GEAR ITEMS FOR INTER CONNECTION FOR MAIN CONTROL PANEL, REFRIGERATION CONTROL PANEL, MILK TANK PANEL, ETC. AND CABLES ARE IN THE SCOPE OF SUPPLY. THE EARTHING MATERIAL WHEREVER REQUIRED IS ALSO IN THE SCOPE OF BIDDER.

31/06/2022

D G SET

TECH SPEC for 15 kVA DG Set

1. Scope: Supply, installation and commissioning of 15 KVA outdoor DG set, mounted on a common base, complete with Fuel tanks, battery & leads, Residential silencer,AVM pads, acoustic enclosure, AMF panel and Control panel as per technical specification.
2. Diesel Generator specification:
   - i) Duty: Prime
   - ii) Power rating: 15 kVA
   - iii) No of phases: 3
   - iv) Output voltage: 415V
   - v) Power factor: 0.8
   - vi) Rated Frequency and RPM: 50 Hz, 1500 RPM
   - vii) Cooling System: RadiatorLiquid Cooled
   - viii) Sound level: ≤ 75 dB at a distance of 1 meter @ rated load

1. ENGINE specification:
   - i) No of cylinders: Multi
   - ii) Turbocharged Engine
   - iii) Displacement: 1.29Ltrs.
   - iv) G2 Governing Class.
   - v) Starting system: 12V DC electrical
   - vi) Engine power Output: 23Hp @ 1500 rpm under STP condition as per BS:5514
   - vii) Fuel : High Speed Diesel
   - viii) Cooling System Ambient at Rated Load: 50 Deg C
   - ix) Aspiration : Turbo Charged air cooled
   - x) The engine shall be fitted with the following standard accessories:
     - a) A1 class Governor
     - b) Battery charging Alternator
     - c) Engine safety Sensors (LLOP & HWT).
     - d) Air Cleaner.
     - e) Lube Oil Filter
     - f) Fuel Filter
     - g) Electrical starter motor
     - h) 1 x12V DC battery

2. ALTERNATOR Specification:

   15 KVA alternator conforming to IS/IEC 60034 # 1, 3 phase – 4 wire, 415 volts, 0.8 PF, Brushless type, Screen protected, revolving field, self-excited and self–regulated through an AVR.

   i) The alternator shall have the following features:
      - a) Enclosure: IP 23
      - b) Voltage regulation: ±1%
      - c) Class of insulation: H
      - d) Stator winding: Double Layer Lap
      - e) Permissible overload of 10% for one hour in 12 hours of operation.
      - f) Unbalanced Load across phases should less than or equal to 25%

3. CONTROL PANEL
   - i) The control panel shall be manufactured with 16/18 gauge CRCA sheet and powder coated for a weather proof and long lasting finish.

ii) The control panel shall consist of following:
   a) Microprocessor based electronic controller
   b) MCCB of suitable rating
   c) Key switch
   d) Push Button starter
   e) LED indication
   f) current transformer
   g) instrument fuses

iii) Electronic controller shall display the follow parameters:
a)Alternator Metering: L-L voltage, L-N Voltage, Current (Phase and total), KVA (phase and total) & Frequency.
b)Engine Metering: Oil Pressure, Engine Temperature, Starting Battery Voltage, Engine running hours.

iv) Electronic controller shall provide the following safety to the engine:
   a) Engine Protection: Low Lube oil Pressure, High/Low coolant temperature, Battery over/under Weak volts, Fail to crank/start, Sensor failure, Cranking lockout, Low fuel level.
   b) Alternator Protection: Over/Under Voltage, Over/Under Frequency and Loss of AC sensing.

v)Data Logging: Engine hours, Control Hours and upto 5 recent fault codes.

vi) Control panel should be mounted on common platform of DG set.

6. AUTO MAIN FAILURE (AMF PANEL):
   i) 15KVA AMF cum Auto change over panel suitable for above specified DG set powered with suitable controller and power contactors.
   ii) Control panel shall be equipped with automatic changeover with timer circuit. The timer should be provided with time delay in starting, stopping and change over.
   iii) AMF panel shall be mounted on common platform with DG set.

7.FUEL TANK:
Integral fuel tank with drain plug, air vent, inlet & outlet connection, level indicator and provision for cleaning.

8. GENERAL REQUIREMENTS:
   i) DG Set should have suitable anti-vibration mounts.
   ii) Base Rail of adequate size is to be provided along with DG set.
   iii) First fill of all required oils and coolants except diesel oil.

9. INSTALLATION & COMMISSIONING:
   i) The supplier shall carry out installation and commissioning of DG set at site within 30 days after site clearance report.
   ii) Following support will be provided during commissioning:
      a) Placement of packing case of the equipment at the place of installation.
      b) Power supply: 415 +/-5% V, 50 + 3% Hz, 3 phase AC Supply
      c) Civil foundation
      d) Earth pit
      e) Power cable

Note: Details of foundation and earth pits to be forwarded by supplier to buyer within one month of receipt of PO.

   iii) Activities not covered in point no. 9 (ii) and essential for installation and commissioning like unboxing, control cabling with end termination etc. shall be in supplier's scope.

10. TRAINING:
The supplier has to provide training to our engineers on operation and maintenance of DG set at site during commissioning.

11. WARRANTY:
The equipment shall be under warranty for a minimum period of 24 months/5000 hours whichever is earlier from the date of commissioning at site against any manufacturing defects/material of workmanship defects etc.

Control panel with Servo controlled voltage stabilizer

With Dg Changeover Panel And MCB Panel

Capacity: 15 KVA 3-phase Oil Cooled

- Input Range : 150 to 280 V Ac
- Output : 230-240 v Ac +/- 1 %
- Unbalanced type
- Bypass Switch 40 Amps
- Change over Switch 40 amps
- VSS Switch for Input / Output Selection
- Digital 3-phase voltage, current and frequency meter for input and output supply
- MCB 63TPN For Mains Isolator
- MCB 32TPN For Bulk Cooler
- MCB 16TP FOR
- MCB 10 TP FOR Milk Pump
- Cut-off contactor
- Suitable Terminals For Mains , DG , & Output
- R , Y , B Mains Indicators Lamp
- MS Enclosure Duly Powder Coated of Size
- Brass Cable Gland for Input and Output
- 60 Amp Terminal links for Mains input
- 60 Amp Terminal links for D.g. input
- 60 Amp Terminal links for Bulk cooler output
- 30 Amp Terminal links for Dairy Lgt. output
- 30 Amp Terminal links for Battery charger output
- 30 Amp Terminal links for pump o/p. output
- Pipe structure Ms box duly powder coated
- Auto – manual facility
- Under voltage and over voltage tripping
- With Single phasing preventer & phase reversal protection.

Oil Tank as required.

18/06/2022

GENERAL MANAGER
BALANGIR-KALAHANDI-NUAPADA
REGIONAL CO-OP. MILK PROD. UNION LTD.
BALANGIR

TENDER FORM

From

M/s. .....
.....
.....

To

The General Manager
BKN milk union
Balangir-767001
Odisha.

Sub. : Tender Notice No..... Dated .....

Dear Sir,

In response to your advertisement in the..... Dated..... for supply of Bulk Milk cooler (2Kl) DG SET 15 kva & stabiliser (15 KVA) capacity. I/We, a Company / a Partnership / Firm / an Association / Sole proprietor in the case of a firm, an association of a syndicate (please set out here full name of all partners ormembers).....
..... carrying on business at.....
....Hereby offer tender to supply the items including all accessories and attachments complete in all respects at the firm rates quoted in the schedule attached.

1- I/We agree that this offer shall remain valid for a period of 12 months from the date of issue of the approved list.

2- I/We hereby agree to abide by and fulfil the terms & conditions set out in the INVITATION TO TENDER INSTRUCTIONS TO TENDERERS CONDITIONS OF THE TENDER SCHEDULE AND ANNEXURES HERETO, which shall be deemed to form a part of this tender & I/We return herewith all these documents attested on each page in token of my/our acceptance thereof.

3- I/We hereby further agree to notify the General Manager BKN milk union , Balangir at any time whether before or after acceptance of my/our tender any change in the address and or constitution of my/our firm/association/syndicate either by death or retirement of any partner or by the admission of a new partner of member or otherwise (this clause shall apply where tenderer is a firm/association or syndicate)

4- I/We do hereby certify that, I am/we are real manufacturer/stockist/importers / authorized agents of the overseas suppliers and my/our financial position is quite sound to fulfil the contract.

5- I/We hereby declare that this Tender and your acceptance to be notified by you shall constitute a valid and binding contract between us.

Signature of the Tenderer
Seal of Tenderer

31/06/2022

GENERAL MANAGER
BALANGIR-KALAHANDI-NUAPADA
REGIONAL CO-OP. MILK PROD. UNION LTD

ANNEXURE – I

1. Status of the Firm (proprietorship, partnership, (P) Ltd., limited company)
2. Name of the Tenderer
3. Whether a limited firm or public or private undertaking
4. The name and address of proprietor/ partners/ managing director / manager / principal officer
5. Financial condition of the firm whether solvent or not with details thereof
6. Whether manufacturer or/ distributor or/ sole selling agent (in the case of mixed business, the items for each should be indicated)
7. Varieties of articles dealt with and names of the items
   a) Is it a Registered Firm under the partnership Act ? If so, Regd. No. & date & office of Registration should be given (Please furnish and attested true copy of certificate of registration).
   b) If it is a company incorporated under the companies act, please furnish an attested true copy of certificate of incorporation.
8. Name of the authorized person who can hold discussion on your behalf at the time of necessity.
9. The names of the proprietors / partners or Managing Directors / Principal Officer with address or Addresses as the case may be who is authorized to receive payment in case of endorsed bill on behalf of the firm from the General Manager/Indenting Officer and their specimen signatures in duplicate for each.
10. Are you an income tax assesse? Please furnish the current income tax return / non-assessment certificate.
11. Indicate in detail about the previous experience of supply of items tendered for (attach additional sheets)

CERTIFICATE:

Certified that the information furnished above are true and correct to the best of our / my knowledge and belief. In case any or all the information given above or the tender documents is or are found to be incorrect at any time. I undertake the liability to be proceeded within any manner. Any change or changes in regard to the information furnished will be intimated by us/me as and when such changes occur.

Signature .....

Prop/Partner/Managing Director /Manager/

Principal Officer / Authorised Signatory

(Strike out which ever not applicable)

31/06/2022

GENERAL MANAGER
BALANGIR-KALAHANDI-NUAPADA
REGIONAL CO-OP. MILK PROD. UNION LTD.
BALANGIR

ANNEXURE-II
PRICE QUOTE

To
The General Manager
BKN milk union
Balangir-767001
Odisha.

.
Sub: Supply of
Ref: Tender Notification No: , dated .
Sir,
With reference, I/We herewith submitting my/our Tender "ON F.O.R DESTINATION BASIS, for the items indicated below:

SL. No.	Sl.No. of the tender item as per tender schedule.	Item Description as per tender schedule	Make/Brand	Quoted Price including F.O.R.	PRICE TO WORDS INSTALLETION/COMISSIONING AND TRIEL RUN(INCLUDING ALL ASSOSERIES)	TOTAL PRICE	GST	Total	In words for Quoted price(Including GST)
1	2	3	4	5	6	7	8	9(7+8)	10

The bidder have to quote the prices as per the format mentioned above only.
I/We, hereby once again confirm that, I/ we have thoroughly studied the Tender Document andunderstood the tender conditions, tender specification, details of goods required, I/ we fullyunderstand the nature of item I/We quoted for the quantity and specification of the same. My/Our offer to supply the stocks is strictly in accordancewith these requirements. I / We herebyagree that, the decision of The General Manager BKN milk union Balangir-767001 Odisha. shall be final in any disputesregarding the supply, terms& conditions of this tender.

Date:

Signature of the Tender with seal & date

3/06/2022
GENERAL MANAGER
BALANGIR-KALAHANDI-NUAPADA
REGIONAL CO-OP. MILK PROD. UNION LTD.
BALANGIR

ANNEXURE – III

List of enclosures attached to the Tender Documents:

1-

3/06/2022

GENERAL MANAGER
BALANGIR-KALAHANDI-NUAPADA
REGIONAL CO-OP. MILK PROD. UNION LTD.
BALANGIR

Signature of the Tender
with seal & date

ANNEXURE – IV

Sl. No.	Sl.No. of the Tender Item	Experience in BMC (2KL) / DG 15 KVA / stabiliser 15 KVA (3phase) reputed manufacturers of National and International level		The make and brand be specifically stated for each item/for which the rate is quoted		Specification of each item notified in the tender for which the rate is quoted by the tenderer	State the ISO Certification 9001-2000 for each items notified for which the rate is quoted by the tenderer
		Name of the Items	Name of the Manufacturer	Make	Brand		
1	2	3	4	5	6	7	8

31/06/2022

GENERAL MANAGER
BALANGIR-KALAHANDI-NUAPADA
REGIONAL CO-OP. MILK PROD. UNION LTD.
BALANGIR