

AmulFed Dairy

A UNIT OF GUJARAT CO-OPERATIVE MILK MARKETING FEDERATION LIMITED

(PREVIOUSLY KNOWN AS MOTHER DAIRY, GANDHINAGAR)



Gujarat Cooperative Milk Marketing Federation Ltd, Anand

AmulFed Dairy (Previously known as Mother Dairy)

Plot No. 35, Nr. Indira Bridge,
Ahmedabad-Gandhinagar Highway
Village: Bhat, Dist: Gandhinagar
Gujarat, India-382428

Inquiry for Design, Supply, Installation testing and
commissioning of Warehouse Management System using
Barcode, QR code and RFID (Provisional) at Ice cream section of
AmulFed dairy, Gandhinagar

AFD: PUR: ENQ: 2025: 184



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We invite best competitive rates for Design, Supply, Installation testing and commissioning of Warehouse Management System using Barcode, QR code and RFID (Provisional) at Ice cream section of AmulFed dairy, Gandhinagar as per the attached Annexure-A.

Inquiry Reference	AFD: PUR: ENQ: 2025 :184
Inquiry Start Date	22.03.2025
Last date for Technical Bid Submission (In Purchase Portal)	05.04.2025
Last date for Technical Bid Review (In Purchase Portal)	08.04.2025
Last date of Commercial bid Submission (In Hard Copy in Sealed Cover - Applicable for Technically approved vendors only)	14.04.2025 @ 16:00 Hr
Commercial Bid Opening at our office (Applicable for Technically approved and whom commercial bid is submitted)	14.04.2025 @ 16:30 Hr

1. Submission & Opening of Bids

1.1 Technical Bid

- 1.1.1 Technical Bid will be accepted through purchase portal only
- 1.1.2 Technical Bid submitted through email or hard copy will be not accepted.

1.2 Commercial Bid

- 1.2.1 The bid shall be submitted through hardcopy only before above due date is acceptable.
- 1.2.2 The Price Break up sheet (in separate sealed Envelope and send through hardcopy) shall be submitted at the office address mentioned below.
- 1.2.2.1 **Sealed Envelope must be marked on top with Inquiry Number and "Commercial Bid Inside" with Large visible fonts**
- 1.2.3 Offer through mail are not accepted and stand for rejection, your competitive bids should be submitted through hardcopy only.
- 1.2.4 Office Address
- **AMULFED Dairy** (A Unit of G.C.M.M.F.Ltd.)
Plot No: 35, Near Indira Bridge,
Ahmedabad-Gandhinagar Highway,
At & Post: BHAT Village,
Dist.: Gandhinagar, Pin code: 382 428

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2. Rights Reserved by AFD

- AmulFed Dairy Management reserves the right of accepting or rejecting or cancellation of any tender/s. Final decision of Management shall be abiding on all bidders. Management can reject/cancel any tender/s without assigning any reason/s thereof. It shall not be obligatory on the part of the AmulFed Dairy to disclose the reasons.

3. **Validity** : The offer should must be valid for 120 days from the last date of bid submission.

4. Commercial offer through e-mail are not accepted and stand for rejection. Your competitive bid should be submitted in hardcopy only.

5. The price should be quoted on F.O.R basis inclusive of packing and forwarding, freight etc. However if it is separate, it should be clearly mentioned in the quotation. Taxes /GST will be extra at actual and should be mentioned clearly.

6. Bidder are abide by & bound to follow all the terms, conditions mentioned here in this Inquiry.

7. All pages of enquiry including rate form must be signed & sealed by bidder which are considered as your acceptance for all rates, terms & conditions mentioned in enquiry.

8. Offer which are incomplete or not meeting the conditions or only for part items, are liable for rejections.

9. It is not binding on us to accept lowest offer.

10. 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.

11. Realistic earliest delivery period should be indicated.

12. We are ISO 9001:2015 and ISO 14001 certified unit. We follow eco-friendly processes in our factory and expect the same to be followed in your company.

Contact person- Umang Vanani

Contact no: - 9106687886

Email Id: umang.vanani@amul.coop

Thanking you.

Encl.: Annexure: A (Eligibility Criteria), Annexure: B (Scope of work) , Annexure: C (Basic Hardware and software requirement), Annexure: D (Camera Requirement) , Annexure: E (Rate Format)

Annexure A

Eligibility Criteria

Vendor should submit documents for following (as eligibility criteria) :

1. Turnover of firm for last 3 years (2021-22, 2022-23, 2023-24) should be above Rs. 1.0 Crore (Sales + Services)
2. Minimum 1 similar nature of project / work should be carried out by vendor (PO copy required to submit with technical scope)

Annexure B

Details of Inquiry for Design, Supply, Installation testing and commissioning of Warehouse Management System using Barcode, QR code and RFID (Provisional) at Ice cream section of AmulFed dairy, Gandhinagar.

Warehouse Management System using Barcode, QR code and RFID (Provisional)

Background

Presently we are having 2D QR code based WMS, for Finished Goods inward and dispatch of Ice cream crates based on Batch code. We are using thermal printers for label printing.

Objective:

The objective is to streamline production, tracking, and dispatch processes through **web-based access**, barcode / QR Code / RFID management (Provisional).

It should cover all features of existing system & additionally shared as below:

- Web based application / Software (with license) for Production, warehouse & dispatch for multiple sections at AFD (Bhat). We may go live in phase manner in different department. Presently will go for Ice cream plant.
- Wi-Fi / LAN based production entry (Production IN) using handheld / automated scanning devices. Dispatch OUT will reduce stock from system.
- In case of automated scanning devices, 1 D barcode (product sticker) and QR code should be scanned, in background it should match, otherwise there should be error generation or rejection mechanism.
- Unique QR code labels for each and every Ice cream crate / Finished product / CBX (Selling unit) of different varieties based on batch generation.
- It should include Field of "Line no" in existing Label
- Material master database to be maintained include
 - ✓ User
 - ✓ Prefix
 - ✓ Price lot
 - ✓ Product
 - ✓ Line master
 - ✓ UOM - Should include options to select CRT, CAR
 - ✓ Vehicle
 - ✓ Conversion
 - ✓ Customer

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Scope of new system :

Part 1: User Registration & Management

1.1 User Administration

- User Groups
 - Administrator
 - Plant Manager
 - Plant Operator

1.2 User Rights

- **Admin Users:**
 - Full access to the system
 - Manage master tables, product data, and user roles
- **Normal Users:**
 - Limited access to perform product-related tasks (barcode printing, dispatching, report generation)

Part 2: Product Management

2.1 User Login:

- Users will log in using their registered credentials (username and password).

2.2 Master Data:

- Admin User will have rights to Modify and Manage Master data (Product List).

2.3 Product Selection from Master Data:

- Upon logging in, users will select a product from the master product list for Label printing.

2.4 Label Printing:

- The user will specify the number of barcode copies to print.
- After submitting, the system will save this request to the database and print the specified number of labels.

Note: All the labels will have pre-defined Data from Master Data Table with QR Code generated from System.

Part 3: Dairy Production, (AFD – Bhat, Gandhinagar)

3.1 Production IN Entry:

- After Labels are printed, it will be manually pasted on the Ice cream crate / Finished product / CBX.
- When the Ice cream crate / Finished Product / CBX moves to the godown, users will scan the Label with the help of Mounted scanner on conveyor. The system will mark the product as **Production IN Entry** in the database.
- A “CSV” file is required to unload from system every day / at regular interval.
- Display TV to be installed in production hall.
- Confirmation / Acknowledge from dispatch side after end of production
- Conveyor And display TV 42” in scope of vendor
- Refer to Annexure A – 2

3.2 Warehouse IN Entry: (Selectable Option)

- If Officer Select Warehouse Entry Option then Job holder (labour) will scan Tray at the time of Warehouse Entry. The System will mark Product as Warehouse IN Entry. System will generate negative flag at Production IN Entry.
- If Warehouse Entry Option is not production flow will be as per description of Step 3.1 to 3.3. (Step 3.2 will be bypassed if Warehouse IN Entry option is not selected.)

Note: Negative Entry means flag only. System will register Production OUT Entry at time of Dispatch Scanning Only.

3.3 Dispatch Out Entry:

- There will be 2 Ways of Product Out Entry (Optional) at Dispatch:

a) Without Dispatch loading slip:

- As per pre-planning with dispatch officer, Job holder (Labour) will takeout X number of Ice cream crate / Finished Product / CBX from godown.
- Job holder will scan each Label / QR code which is available on the Ice cream crate / Finished Product / CBX.
- On Each Label Scan system will mark the Product as **OUT Entry** in Database.

b) With Dispatch loading slip:

- Dispatch Officer will select Ice cream crate / Finished Product / CBX number from Product in Entry Table from web-based System and dispatch officer will print selected Ice cream crate / Finished Product / CBX list loading Slip & hand over to Job holder (labour).
- Job holder (labour) will takeout Ice cream crate / Finished Product / CBX which was printed on loading slip from godown to Dispatch.
- Job holder (labour) will scan each Label / QR code which is available on the Ice cream crate / Finished Product / CBX.
- On Each Label Scan system will mark the Product as **OUT Entry** in Database.
- While Scanning System will match label data & Dispatch loading Slip Data. If label

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data match with loading Slip data system will allow jobholder (labour) to Dispatch that Ice cream crate / Finished Product / CBX & System will mark that pallet as **OUT Entry** in Database. If label data does not match with loading Slip data, system will generate alarm on handheld scanner.

Note: Dispatch officer will have rights to modify Dispatch loading Slip.

3.4 Palletize dispatch :

Approach: 1

- Pallet Creation by Selecting Ice cream crate / Finished Product / CBX in Web Application
- Dispatch Officer will select Ice cream crate / Finished Product / CBX (selling SKU) number from Product In Entry Table from web based System to prepare 1 pallet list. Dispatch officer will print 1 new QR code label and paste the same on pallet (physically pallet preparation done by Job holder (labour)).(Parent child relation established). When this pallet is dispatched as a whole all rolls will be considered as OUT ENTRY in 1 go.

Approach: 2

- Pallet Creation by Scanning Ice cream crate / Finished Product / CBX barcodes using Handheld Terminal
- Dispatch Officer will Scan Ice cream crate / Finished Product / CBX (selling SKU) barcode prepare pallet list.
- System will generate & print new QR code label and paste the same on pallet (physically pallet preparation done by Job holder (labour)). (Parent child relation established). When this pallet is dispatched as a whole all rolls will be considered as OUT ENTRY in 1 go.

This form shall be customize further based on requirement.

Plant visit is must to understand current system.

Report requirement

All reports should ask option for particular interval / day:

- Live Production, Warehouse & Dispatch activities monitoring report (for particular interval, day wise)
- Summarised report of Label printing - Label scan - label discard (manual entry filed) = difference of
Note: - Label In this report we need to add name of Operator shift wise to be added manually.
- Summarised Inward
- Detailed Inward report
- Line wise production
- SAP production (in csv format with and without item description)
- Summarised Dispatch
- Vehicle wise report
- Summarised Stock
- Unplanned receipt report
- Unplanned issue report.
- Detailed Dispatch reports

Annexure C

Basic Hardware & Software requisites

1. Software:

- Software development language would be any. (with required license)
- Different types of Pre-defined reports can be generated via system.
- Admin User will have manual Production IN/OUT Entry right.
- Communication with handheld scanner will be via wireless.
- Duplication of Label printing facility will be available in system with duplication mark.
- Vendor should also include any required software's / Licenses in their offer.
- SQL Server Express Edition or equivalent database would be installed on Server PC
- Backup: Auto scheduled backup (daily / weekly/ monthly)
- Production to warehouse , warehouse to warehouse , warehouse to dispatch , Production to dispatch. Provision should be available for either or all of above cycle.
- The software system should be able to map QR Code and RFID in the future. Reader devices for QR Code scanning and RFID Scanning can be different, but software should support in future. (This relevant details need to be applied to all scope)

2. Hardware:

- a) There will be standalone Master Database Server system with Redundancy (RAID 1) for AmulFed dairy, Bhat, Gandhingar. Server must have capability to handle operation of multiple section of AFD not only ice cream plant.

3. Non-Functional Requirements

3.1 Performance

- Efficient handling of concurrent users and data processing.
- Fast response times for barcode printing and data integration.

3.2 Reliability

- High availability with minimal downtime.
- Regular system maintenance and updates.

3.3 Scalability

- Ability to scale resources and storage based on business growth.

3.4 Usability

- Intuitive user interface.
- Comprehensive training and support.

4. Web-Based Access
 - Platform: Web-based interface with secure login
 - Role-based access controls
5. Service support (software) : 5 year from installation
6. Service support (OEM Hardware) : 5 year from installation
7. Team Training : Proper training & documentation is required for end user.

Annexure D

Scope of Barcode system production side

CAMERA REQUIREMENT

1. Camera mounted system should have conveyor system
2. We require – 2 conveyors with Camera mounted on each line. Here one conveyor is with radius (will be located trailing existing Metal detector).
3. Error or stoppage of conveyor when:
 - a) 2D and 1D not scanned – in impulse variety.
 - b) When 2D and 1D not matching – in case of impulse variety.
 - c) When 2D code not scanned- in case of CP/BP/Combos.
- Generation of report of crates rejected for above error.
4. For Bulk variety like CP/BP/Combos – 2D QR code scanning only.
5. Scanner should work in temperature between 15-25 Deg C and humid condition 55% to 80% (In Monsoon & during CIP) RH

CONVEYOR REQUIREMENT

For designing of Conveyors with control panel, kindly consider following data/specs

- No of conveyor : - 2.
- 1st conveyor : - Straight conveyor with motor (IP65 or suitable grade)for Scanning at cone crate entry.
Belt – Modular type
- 2nd conveyor : - Curved conveyor for other product. To be place after metal detector.
- SS 304 Roller (conical at radius) type with motor (IP65 or suitable grade)
- Space available : - 4 mt length max
- Empty Crate size : - ID 510*328*285 mm+/- 3mm
OD 540*360*295 mm+/- 3mm
- Crate weight : -15 to 17 kg max (filled condition)
- VFD (Make Danfoss) required for speed adjustment (IP65 or suitable grade)
- Conveyor structure MOC : - SS 304
- Gear box : - SEW

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In feed Speed to conveyor (from metal detector): - Max 20 crts per min

Design speed required of conveyor: -

1. Based on In feed to conveyor, (filled crts) Design speed should be around 3 times higher.
2. Ensure to maintain In feed and out feed speed ratio of Filled Crates on conveyor.
3. There should be gap between crates, before scanning, for error proofing so that crate does not goes without scanning

Provision for dehumidifier if required for mounted scanner

DISPLAY SCREEN REQUIREMENT

Make :- Reputed Brand

Display 43", Resolution 4K,

LED screen with LAN Port & Android OS / OS with Browser access

Operating Temp: - 15°C~ 25°C, Humidity: - 50~80%

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Annexure E

Inquiry : AFD:PUR:ENQ:2025:184

Rate Format for Design, Supply, Installation testing and commissioning of Warehouse Management System using Barcode, QR code and RFID (Provisional) at Ice cream section of AmulFed dairy, Gandhinagar.

Name of Bidder / firm :

Sr. No.	Particular		Amount (Rs.)		
			Basic	GST	Total
1	Software (with 1 year warranty from I&C)	1 lot			
2	Software support (5 year after warranty)	1 lot			
3	Server / Hardware with 5 year OEM warranty	1 lot			
4	Handheld Terminal as per technical scope	2 each			
5	Top mounted fixed scanner as per technical scope with conveyor	2 each			
6	Display screen	1 for production			

I&C - Installation and Commissioning

Delivery period: _____

Payment Terms: After commissioning of total project + user acceptance. Within 30 days of bill submission.

Special Note : RFID Based WMS is provisional requirement, vendor provided solution must be compatible / adaptable in future whenever it is required by AmulFed Dairy.

I/We have understood the terms and conditions properly contain in Enquiry & Annexure A,B,C,D&E. I/We also declare that our system are open to adapt RFID solution in future whenever it is required by AmulFed Dairy.

Bidder's Sign

Company Seal & Name

Date: