

DAIRY SEGMENT

REIL

*Shaping Rural India
through Electronics, Renewable Energy and IT Solutions*



From Managing Director's desk ..

We have always been dedicated to take Electronics, Green Energy, Information Technology to rural areas and now diversifying in areas like Security Surveillance, EV Charging infrastructure under FAME India, Project Management Consultant for various projects, to address the needs of urban as well as rural brethren.

We are keen to address the needs of our customers through rugged, efficient, reliable and economic solutions. In dairy, we are providing milk analysis and automation solutions and products in line with the world's best, while maintaining continuous interaction with masses to assess their emerging requirement, so as to be ready when the needs arise.

We believe that technology holds the key to food safety, energy security, access to information, and economic freedom, which are necessary for empowering our rural brethren. We work in line with government's missions and policies that enables us to serve the masses while serving the nation.

REIL is committed to total customer satisfaction by identifying their specific needs, translating them into Quality products and providing dependable after-sales-services. This commitment is the corner stone of our Quality Policy and Green REIL Policy and we strive to achieve it by putting into place a Quality System, which adheres to the ISO 9001 Quality Standard, and an environmental management system which adheres to the ISO 14001 EMS standard.

We work in line with fulfilling these goals through immense dedication, commitment and team work of all employees and seek their continuous involvement in achieving the Company's objectives.

The organization is also committed to its shareholders by way of maximizing the wealth through sustained growth under the overall ambit of the spirit of a Public Sector Unit, to optimally balance the commercial objectives and the goals of social service to the nation at large.

I am thankful to our valued customers and all our stakeholders, who have faith and confidence in our products and services, I thank all of them for their continued patronage that inspires us to extend the best of services and enables us to provide value for their money

- RAKESH CHOPRA

Electronic Milk Tester

PRINCIPLE

Electronic Milk Tester works on the photometric measurement of light scattered by the fat globules present in the milk sample. The measuring procedure follows the conventional system of dilution, mixing, homogenisation and photometric measurement. Several thousand small/ large Dairies and Village Milk Collection Centres are being benefitted with its use.



FEATURES

- Auto Zero facility
- Automatic Switch-over to battery in case of power failure
- Measures upto 13% fat
- Runs on mains or battery
- Easy to read digital LED display
- Performs 120-150 tests per hour
- Dedicated Milk Fat Analyser
- Temper proof Auto Calibration (Optional)

PERFORMANCE DATA

Measuring range	: 0-13% fat
Capacity	: 120-150 samples/hour
Accuracy (Sd)	: 0.06% for 0-5% fat 0.10% for 5-8% fat 0.20% for 8-13% fat
Repeatability (Sd)	: 0.03% for 0-5% fat 0.04% for 5-8% fat 0.08% for 8-13% fat
Sample volume	: 0.5 ml/test
Diluent volume	: 6.5 ml/test

Automatic Electronic Milk Tester



FEATURES

- Sensor based Auto Milk Intake & Mixout
- Temper proof Auto Calibration
- Hands free operation
- Auto homogenization
- Auto Zeroing
- Process indication
- Run on mains or battery

Electronic Milk Adulteration Tester with Analyser (EMAT+)

Milk Adulteration A Serious Health Hazard

DETECTS
Urea
Ammonium Sulphate
Salt
Soda
Detergent
Caustic Soda
Hydrogen Peroxide



ANALYSE
FAT
SNF
Protein
Lactose
Density
Added Water

The Electronic Milk Adulteration Tester with Analyzer (EMAT+) is an ideal and low cost solution for accurate analysis of milk parameters and to discriminate between genuine and spurious milk. It detects adulterants in raw milk, which are hazardous to human health.

The instrument is simple, economical, reliable and rugged to identify harmful adulterants present in the Milk.

The instrument is suitable for the Village Milk Collection Centers, Milk Chilling Centers, Dairy Plants and Milk Testing Laboratories.

FEATURES

- Check majority of harmful adulterants i.e. Urea, Ammonium Sulphate, Salt, Soda, Detergent, Caustic Soda, Hydrogen Peroxide etc. along with Parametric Analysis of Fat, SNF, Protein, Lactose, Density & added Water.
- Performs 90-100 tests per hour.
- Quick measurement and instant read-out
- Low sample volume .
- Inexpensive method for testing of milk purity.
- User friendly operations.
- Green technology, no hazardous chemical.
- Runs on mains or battery.
- RS 232 Port for Data Transfer and Storage on SD Card.

EMAT+

Electronic Milk Adulteration Tester with Analyser

**Perfect solution to meet expectation
of Indian Dairy Industry**

Value for Money

High on Accuracy

Electronic Milk Analyser



LACTOSCAN SL-30

110 Samples/Hour

≈30 Sec Measurement



LACTOSCAN SL-20

160-170 Samples/Hour

≈20 Sec Measurement

**Speed No
Worry**

The Electronic Milk Analyser is based on ultrasonic measurement & suitable for measuring Fat, SNF, Protein, Lactose, Density & added Water in the milk.

The percentage of Milk parameter are measured accurately and displayed quickly on a Electronic Milk Analyser. LCD for the convenient read-out by the user and the milk producer. The instrument is simple, economical, reliable and rugged for milk analysis.

This instrument can also be integrated with Automatic Milk Collection and Data processing Milk Collection Unit for quick measurement of milk parameters, processing and storing them for records. The instrument is ideally suited for the village milk collection centers, milk chilling centers etc. and milk testing laboratories.

Parameter	Measuring Range	Accuracy
Fat	0.01– 25%	±0.1%
Solids-non-fat (SNF)	3% – 15%	±0.15%
Density	1015 – 1040 kg/m ³	±0.3kg/m ³
Protein	2% – 7%	±0.15%
Lactose	0.01% – 6%	±0.2%
Added water	0% – 70%	±3.0%
Milk sample temperature	1°C – 40 °C	±1°C
Freezing point	–0.4°C to –0.7°C	±0.001°C
Salts	0.4% – 1.5%	±0.05%

GPRS Based SPV DPMCU



Solar Photovoltaic (SPV) Based Power back up system for Data Processor Milk Collection Unit (DPMCU) is suitable for Primary Village Milk Collection Centres. The system is having charging through SPV and grid, with priority to SPV. The system minimizes the problems of inadequate power supply in rural areas to reduce down time of the equipments.

FEATURES

- SPV Panel : 75 Watt; 12 Volt,
- Charging Current : upto 10 Amp.
- Battery : 12 Volt; 75 Ah.
- DC Sockets for each peripheral component
- Network Support 2G/3G/4G/Wi Fi
- 3 days autonomy
- Data Storage 1000 members for 2 years
- Online Data Transfer & Rate Chart member & header updation
- Quality Performance
- Auto shift initialization & system health check

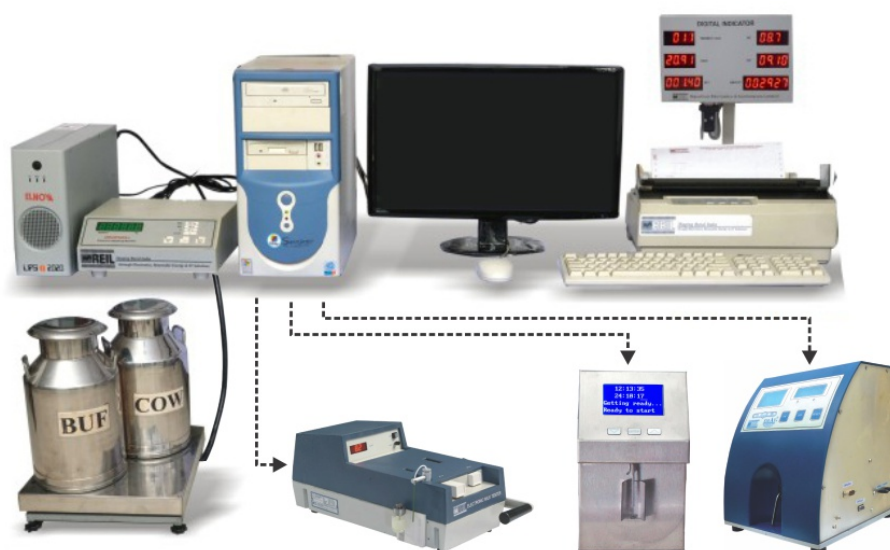
NEXT^{GEN} DPU



FEATURES

- Single board Computer (SBC) based smart solution.
- Integrated smart SQLite database management system.
- User friendly touch screen based interface
- Wi-fi and Blue tooth compatibility.
- Instant data upload/download from centralized Server.
- Customizable as per regional requirements such as language etc.
- Milk collection center information can be edited.
- System and peripheral health status on server.
- Remote firmware update.

Automatic Milk Collection Unit



SYSTEM DESCRIPTION:

The Automatic Milk Collection Unit is specially designed integrated system, which is combination of several units viz; Milk Analysis Unit, Milk Weighing System, Personal Computer, Digital Indicator, 80-column Printer & Uninterrupted power supply.

It is integrated with software support for milk collection and Society Accounts Management.

FEATURES

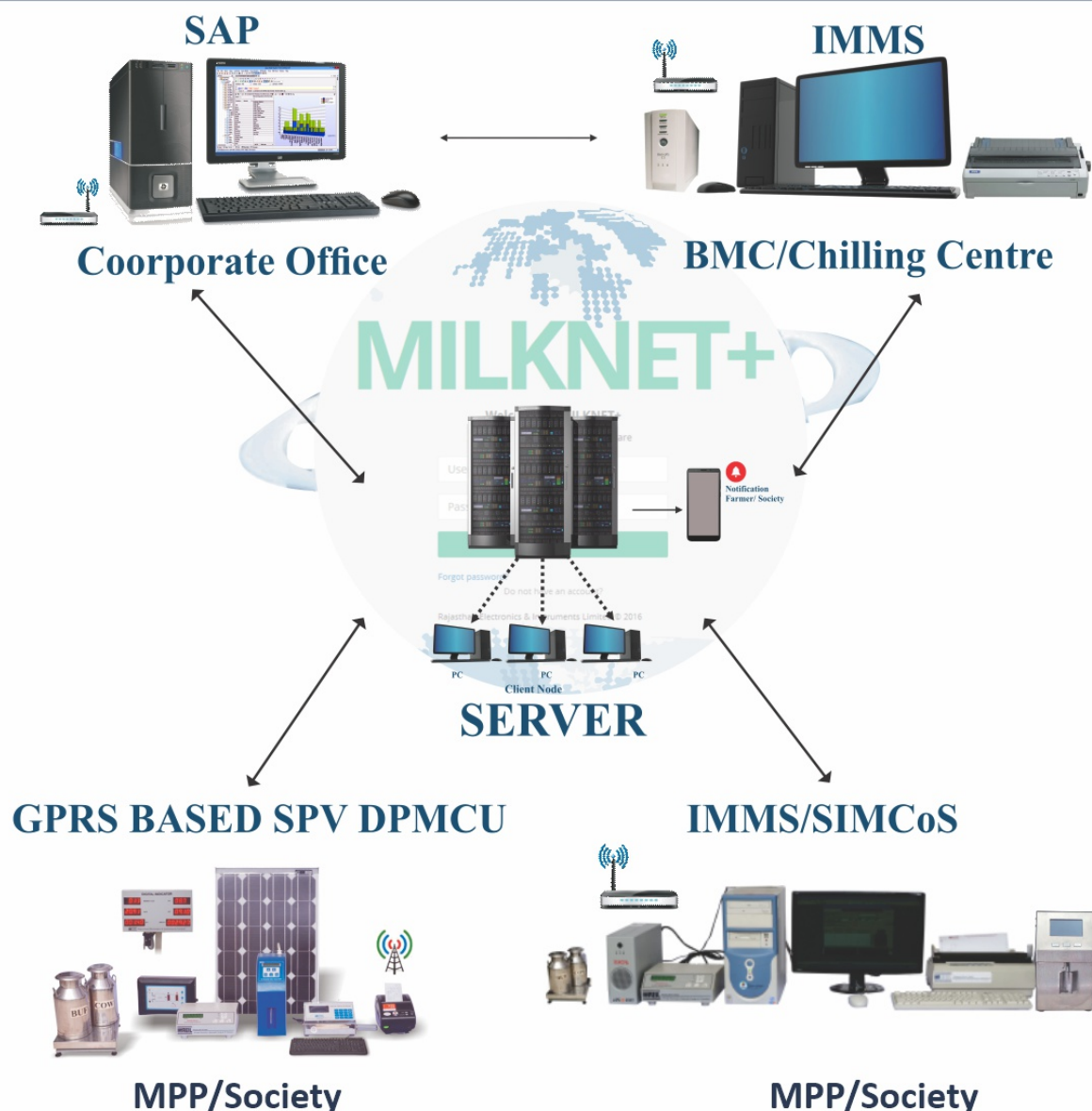
- Suitable for instant weighing of the milk, Parametric Measurement of Milk and calculating the amount payable to the individual member based on FAT/SNF/ Weight.
- 100-120 operations in an hour.
- Centralized testing and payment system.
- Multilingual Society Accounting & Management Software (SAMS).
- Computerization of the activities of the society in a cost effective manner.
- Provide a higher degree of automation for Dairy Co-operative.
- Printout of payment register at shift end/ ten days/ monthly/ yearly/ bonus summary.
- The Software language available in Hindi, Gujarati, Telugu and kannada.
- Interfacing with EMT / Milk Analyzer / Electronic Milk Adulteration Tester with Analyzer

Smart Integrated Milk Collection System (SIMCoS)



- Client-Server Architecture.
- Configurable as Standalone working as well as Cloud based.
- Unique Milk Producer Codification by using Census code of State and Village.
- Secured rate chart downloading/ uploading through Internet/GPRS.
- Secure MS Access / SQL Server Database backend.
- Centralized Billing at BMC / Head Office.
- Multiple device interfacing, rate charts
- Auto Sync services & Tanker Management
- Online data transfer between Milk Collection Centers, BMC and Head office.
- Text based Notification facility to the pourer.
- Customizable Dashboard & BMC Assets Management.

Online Milk Procurement Software (MILKNET+)



- Client-Server Architecture
- Unique Milk Producer Codification by using Census code of State and Village
- Secured rate chart downloading/uploading through Smart Card/pen drive/GPRS.

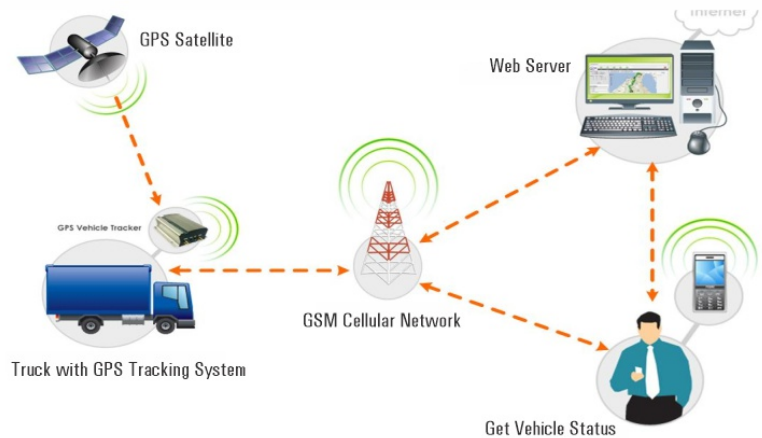
- Centralized Billing at BMC/Head office.
- Multiple device interfacing
- Online data transfer between Pooling point, BMC and Head office.

FEATURES:

- Web based solution to manage milk procurement process starting from society to plant.
- Provide a single platform to evaluate milk collection at Society, BMC/MCC and Plant level.
- Rate Chart creation and allocation to respective societies and BMCs along with effective date.
- Integrated with GPRS based DPMCU and AMCU. i.e. Download masters and rate chart from server and upload transactions. Also provide facility to manage client side software.
- Tanker Management i.e. Tanker Dispatch at MCC/BMC → Tanker in a Plant → Quality Test Chamber wise → Weighment chamber wise. Interfaced with weigh bridge and milk quality testing machine.
- User Management
- Various kind of MIS Reports & Online Dashboards.

Vehicle Tracking System (VTS)

REIL provides an innovative web-enabled "On-line Vehicle Tracking System" to manage vehicle fleet comprising of trucks, dumper, car, trailers, tankers, containers or any four-wheel vehicles. It comprises of the Vehicle mount unit, which determines its positional data by communicating with the Geographical Positioning System (GPS) satellites, and communicating the data with real time stamp – using the General Packet Radio Service (GPRS) / Global System of Mobile (GSM) Communication network to the web servers.



Hardware Features

- GSM Quad-band
- GPS+GSM+GPRS wireless network
- High sensitive GPS chipset
- Real-time tracking
- Built-in ON/OFF power, wide voltage input range
- Built-in acceleration sensor for vibration alarm
- Support ACC detection, real-time reporting car status

Software Features

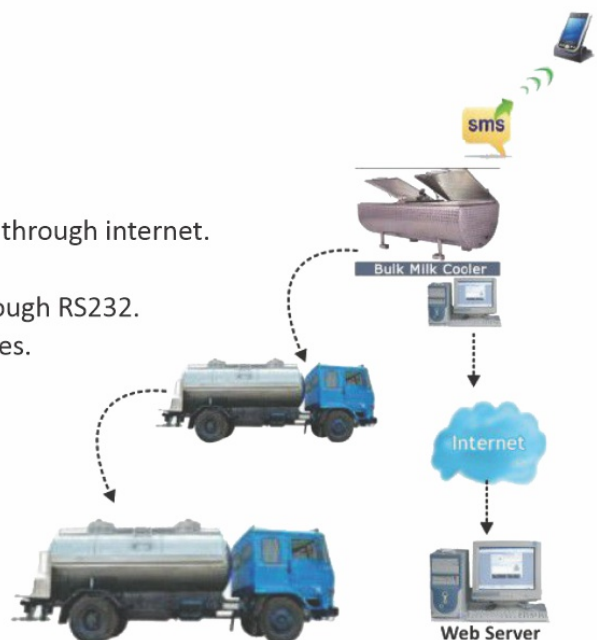
- Sites / Geofence
- Alerts
 - Pop up
 - SMS
 - Email
- Routes Reports
 - Route Deviation Report
 - Restricted Route Entry Report
 - Route Based SMS
 - Route Progress Report
- Event Log
- Route Mapper
- Reminders

Tanker Management System

- Web based n-tier Architecture .
- Secure MS SQL express database back-end.
- Multiple device interfacing.
- Tanker in & out management
- RMRD milk collection handling
- BMC milk collection management.
- Associated society milk collection online at each BMCs through internet.
- Tanker wise milk variation report.
- Weigh bridge interfaced with direct data capturing through RS232.
- Menu can be customized according to the user privileges.
- Event based (shift, daily / periodic) reports.
- Event based SMS triggering to society / BMC

Optional

- Interfacing with weigh bridge.
- Event based SMS triggering
- Multilingual option.



RMRD Network Automation System

The Raw Milk Reception Dock (RMRD) is the primary intake point of liquid milk entry in dairies/chilling centres. It is specifically meant for the reception of milk brought in cans from village milk collection centres located over a wide area. It is different from the bulk milk collection systems, which are also in operation in these dairies. The collection process starts from the village milk collection centres, groups of which are assigned to distinct milk truck routes.

The cans of individual village milk collection centres from many such routes are unloaded at the RMRD, after which their milk is weighed & tested separately to issue a milk receipt statement according to the measured parameters during the daily shift.

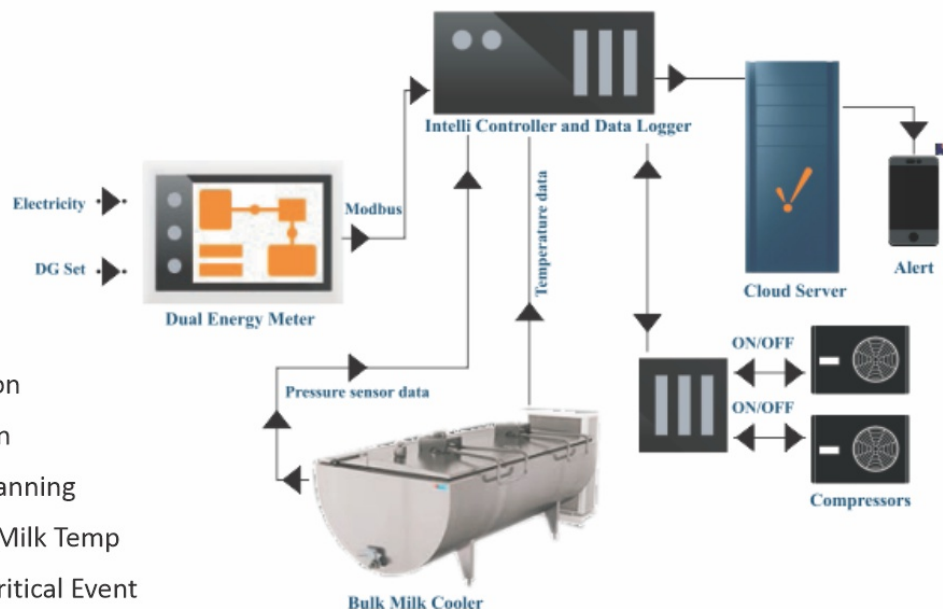
Salient Features

- Automatic recording of weight and testing parameters
- Online process automation
- Network based system design
- Modular in nature
- Flexible and adaptation to upgradation
- Merges easily with the existing plant layout and procedure
- Suitable for highly humid and corrosive environment
- User authentication, authorisation and data validation
- Performance monitoring



Smart BMC Data Logger

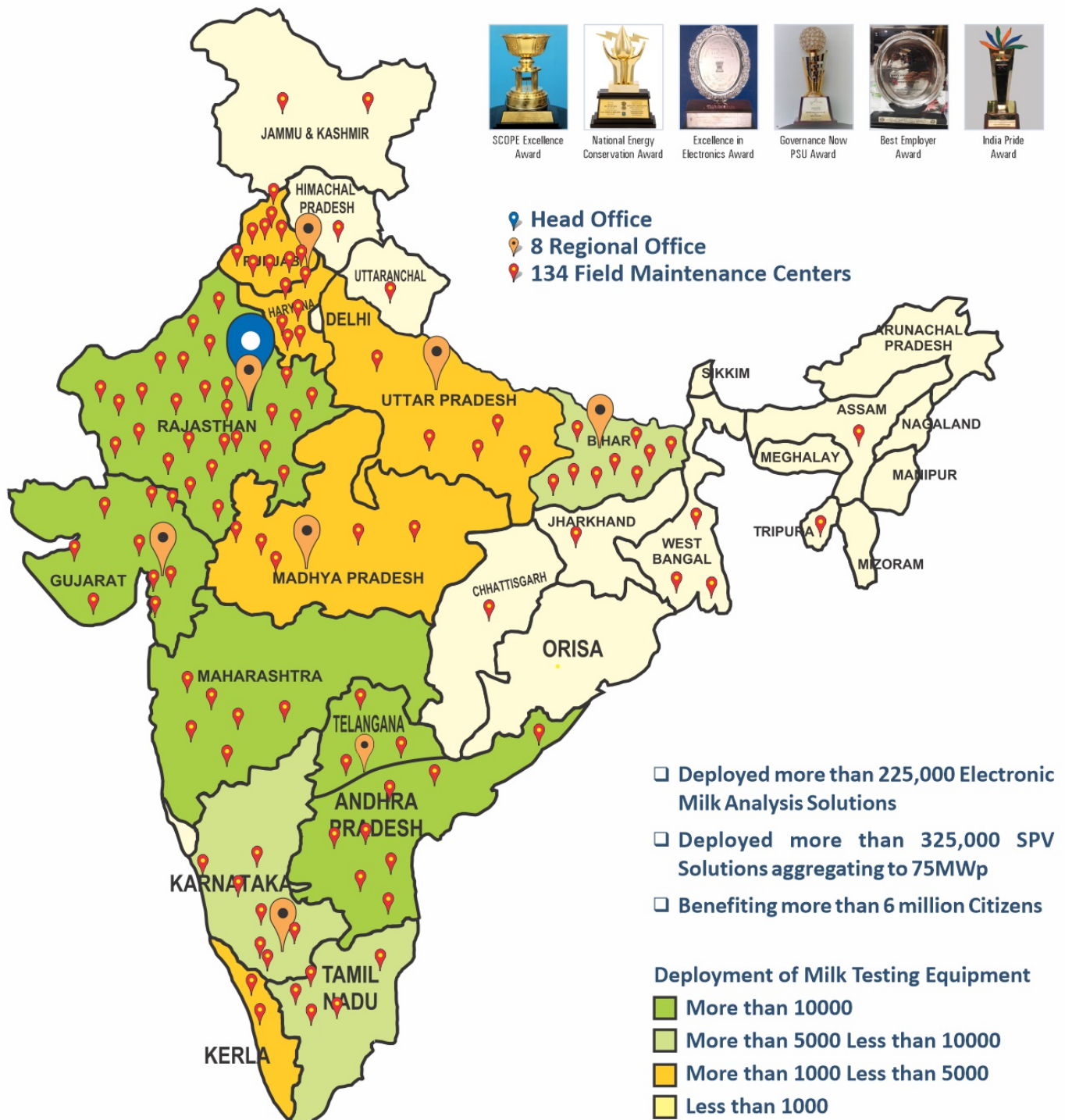
- Agitator Monitoring
- Battery Backup
- Mobile Application
- DG Set Monitoring
- Compressor Monitoring
- BMC Complaint Register
- Cloud based Application
- Mains Power Consumption
- Total Energy Consumption
- Dynamic Tanker Route Planning
- Real Time Monitoring of Milk Temp
- Alerts & Notification of Critical Event
- Real Time Measurement of Milk Volume
- Comparative Analysis of BMC of same Capacity
- Centralized Control and Monitoring for Real Time Analysis



Infrastructure, Development & Service Network

The Manufacturing facilities with state-of-the-art technology has been maintained and augmented to undertake manufacture of the increased quantities of products every year, while ensuring consistently high standards of quality, reliability and accuracy in all its products. Every stage of product evolution design, development, manufacturing, assembly and quality control, is carried out scrupulously.

Manufacturing facilities are complemented by sustained high levels of quality control at intermediate stages of material procurement, Manufacture of Sub-assemblies, Integration, final product assembly and pre-shipment



Largest Milk Analyser manufacture & significant Solar Power Solution provider over Last 3 decades....

A Well Earned 'MINI RATNA'

A status conferred in the year 1997 by Department of Public Enterprises,
Ministry of Heavy Industries & Public Enterprises, Government of India



REIL House (Information Technology, Education, Training Research & Development Center)



Production Hall



IT Laboratory



Automatic SPV Module Line



Registered Office

Regional Office

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