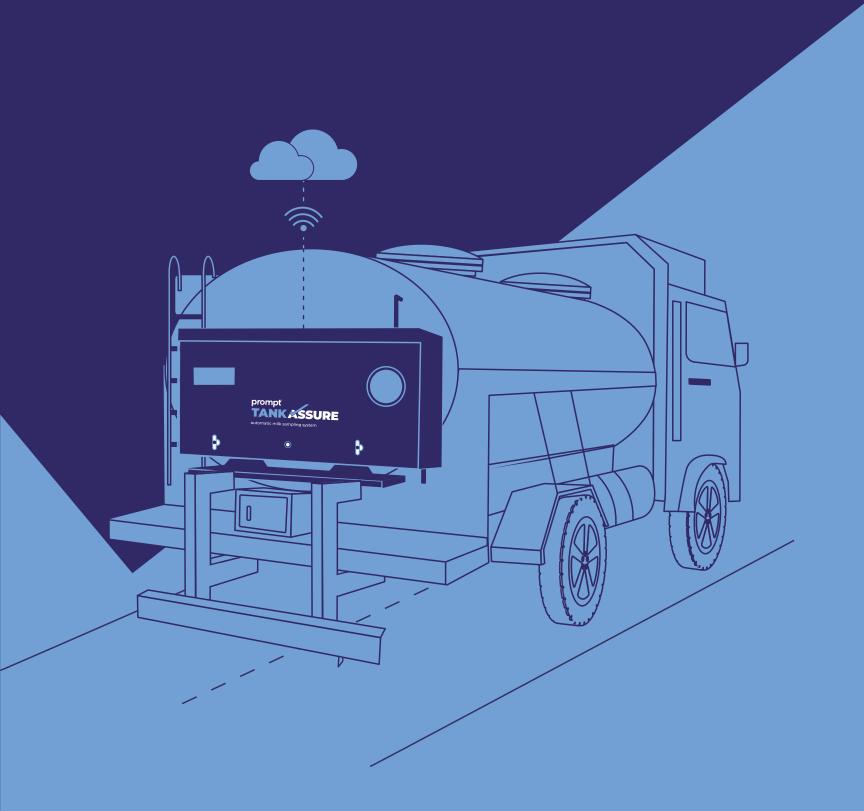


automatic milk sampling system



Existing Challenges

Accurate recording of the quantity and quality of milk samples collected at milk collection points is an essential piece of information. Currently, milk quantity is measured manually through dipstick reading and milk sampling is done manually by agitating Bulk Milk Cooler. The sample taken from the milk collection point is not secured and prone to manipulation. The temperature of the milk transferred to milk tanker is not measured. Also, there is no

method to map the samples with their respective milk collection points. Furthermore, the data of composite milk sample is also not taken into consideration. Therefore, to overcome these challenges, Prompt has developed TankAssure, an intelligent and digital system which automatically samples milk from milk tankers.



automatic milk sampling system

An Automatic Milk Sampling System, with GPS, Wi-Fi and RFID technology.

TankAssure is an electro-mechanical, intelligent box mounted behind the milk tanker. It is a closed, containerised and digitally password-protected secured system that consists of sampling pumps, and RFID-tagged tamper-proof sample vials. It automatically

collects the milk sample of milk collection point, measures the milk quantity and temperature with the help of an in-built magnetic flow meter equipped with a temperature sensor.

Key Highlights of the System

- Only authorised personnel can open the electronically protected door at the dairy.
- Enables secured and automatic sampling of composite milk samples of various milk collection points.
- The System can log the Location and time stamp data from where milk transfer starts and stop
- The entire operation is controlled by a web-based portal accessed through a tablet device. The milk quantity and temperature data of each milk collection point is transferred to a central portal which can be used by the dairy for further business analysis.
- The Prompt Logistics App and Prompt AMCS App can be integrated into this system for route management.

TANKASSURE - TE	CHNICAL SPECIFICATIONS
Model	S7 S15
No. of Sampling Bottles	6 for Society Samples 1 for Composite Sample 1 for Composite Sample
Peristaltic Pumps	7 No. 15 No.
Sampling Capacity	40 ml 60ml
Major Technical Parts	PLC, Electro Magnetic Flow Meter, GPS, RFID Tag & Reader, Peristaltic Pumps
Data Transmission	Wi-Fi, 4G
User Interface	8" 4G + Wi-Fi Tablet
Central Data Controlling	Central Web-Based Application
GPS	GPS, GLONASS or Galileo, 24VDC, Ethernet, IP68, Internal Antenna, Temperature Range -40°C to +70°C
Flow Meter	Electromagnetic Flowmeter Measure: Flow, Temperature and Quantity Output: 4-20mA, Pulse Accuracy Max. ±0.5 % o.f.s.
RFID Tag Reader	13.56MHz, LED Indication, IO-Link Interface, M12 Connection, IP67
RFID Tag	13.56MHz, Readable and Writable, 2kBit EEPROM, ISO15693, IP68
Supply Voltage	24V DC (From Tanker Battery)
Housing	SS 304
Electronic Control Panel	SS 304, IP65
Milk Line	1.5 Inch, MOC SS 304
Fitting Clamp	1.5 Inch, MOC SS 304
NRV	1.5 Inch, MOC SS 304
Filter	2mm Perforated 2mm Thickness
Air Vent	1 Inch, MOC SS 304 Gasket-EPDM End Connection-1.5" TC end
Weight of Auto Sampler	< 250kg
Dimension of Auto Sampler (mm)	1502 X 990 X 595 1581 X 957 X 632
Door Lock	Electro-mechanical, IP67 Protected

The above-mentioned specifications are for seven and fifteen samples, The same can be customized as per the customer requirement.

BENEFITS OF TANKASSURE



Transparency

System digitally captures the quantity, and temperature of milk, bringing transparency between milk collection point and dairy.



Composite Milk Sample

The system does auto-sampling of composite milk from all milk collection points.



Minimal Manual Intervention

The data is automatically recorded, hence there is no need to enter data manually, thereby reducing human error.



Data Analysis

The system automatically stores the milk quantity and temperature data of each milk collection point on the server which can be used for business analysis.



Farmer Assurance

The milk samples are highly accurate due to auto sampling, hence, the farmers are assured about getting fair payment for their milk poured.



Profitability of Dairy

With accuracy in sampling and quantity of milk, the overall effectiveness and profitability of the milk collection points and dairy increase.

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