

***Dairy* Automation Pvt. Ltd**  
*Processing Simplified!*





DAPL (formerly e-Doodh Solutions Pvt.Ltd) has emerged as a leading innovator and implementor of cost-effective cutting-edge technology based solutions for Milk Processing. We offer solutions right from concept to commissioning.

At DAPL, Perfection has always been the driving force and Innovation has been the key to success.

## Automating your Milk Processing is now essential

1. The food and beverage industry highly demand compliance to new food safety regulations and standards across all its processes.
2. As Milk and milk product market is becoming more and more competitive day by day resulting into thinning of margins. Where automation can become instrumental to cover-up you're all processing losses.
3. With automation you can closely control, monitor and record entire processing which gives you tremendous advantage in terms of delivery consistent quality

## Our Expertise

We have extensive expertise in offering turn-key solutions across all the critical processes includes Milk Reception , Pre-Chilling, Raw Milk Storage, Automatic Milk Movements, Pasteurization, Homogenization, Batch Formation, Standardization, CIP etc.

We are having deep knowledge in handling process complexities of multiple tanks, filling units, routes, pipeline and valve matrix, CIP operations with multiple tanks and several routes with cleaning benchmarking with minimum chemical and utility consumptions.

With our multi platform expertise across Siemens, Rockwell, GE intelligent platforms, Wonder ware, Allen Bradley, Schneider, ABB, Emerson etc.

We are able to address all your Milk Process automation needs.



## Who are we ?



## What we offer

We offer the following solutions on turnkey basis.

- Modernization of existing plants to fully computerized.
- New fully computerized (integrated) dairy plant set-up with cutting edge technology.
- Fully Automated & Skid mounted Milk Pasteurizer Modules.
- Ultra-modern fully computerized CIP systems.
- Modular automation solutions based on specific section-wise needs.
- Automated Modular Hot water spray based Autoclave / sterilizer for log shelf life Milk Products
- Automated - Skid Mounted Deodorizer / Degasifier pluggable Modules to remove un-wanted smell from milk.



## Why Us ?



### OPERATIONAL EXCELLENCE

- Easy/Simple operation
- No need for extensive user training
- Fits very well with the existing plant environment/working

### EXECUTION EXCELLENCE

- Well Trained team of qualified engineers for smooth execution & commissioning of project.
- System works directly on Milk (No need of extensive trial runs on water)

### SOLUTION EXCELLENCE

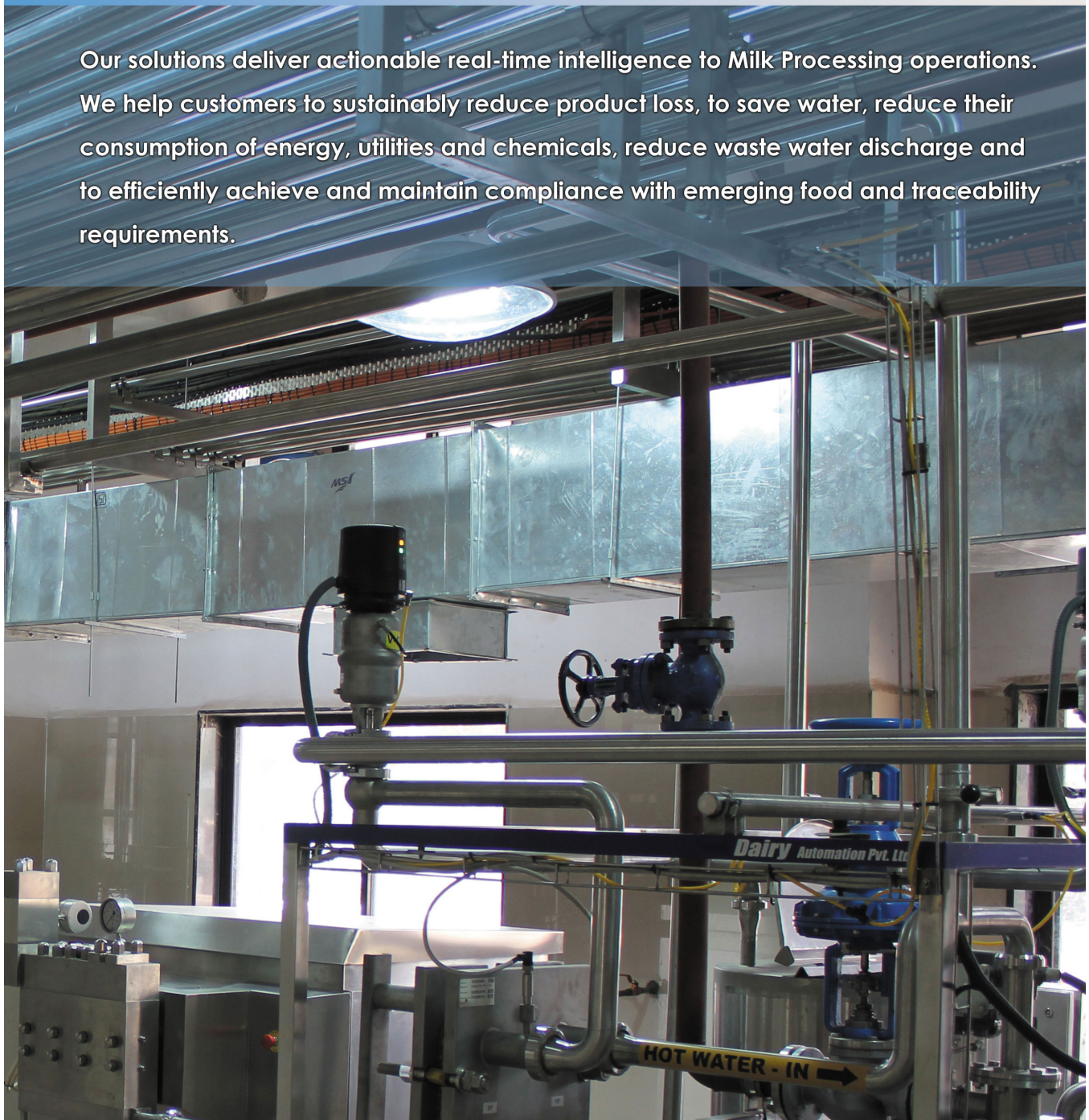
- Innovative, practical solution with top-quality technology & Milk Process expertise.
- Technical base in Houston, TX (USA)  
Panel manufacturing & support facility is in Silvassa (India)



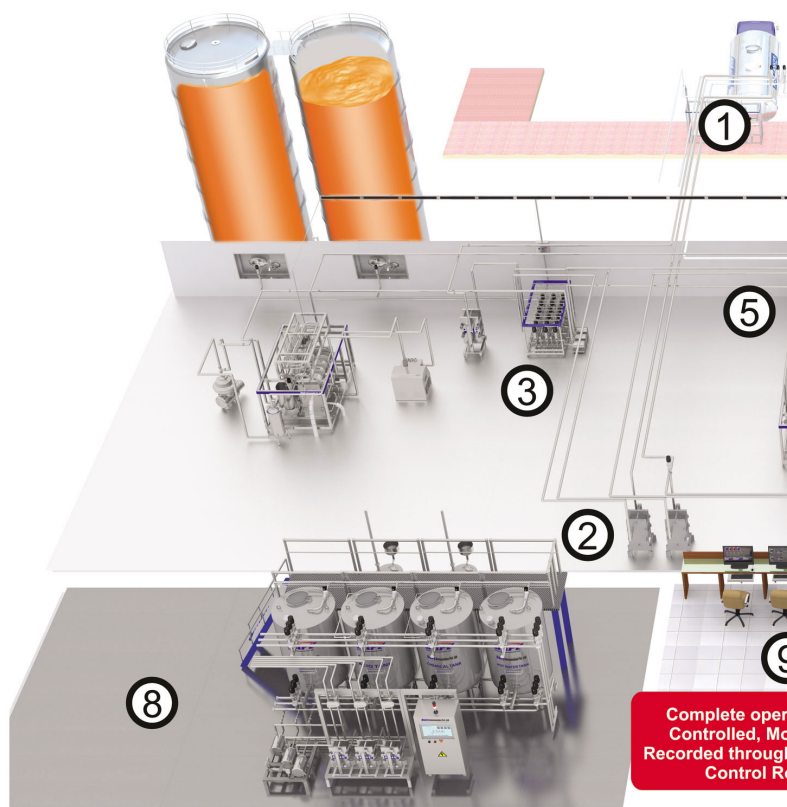


## Automation in today's scenario

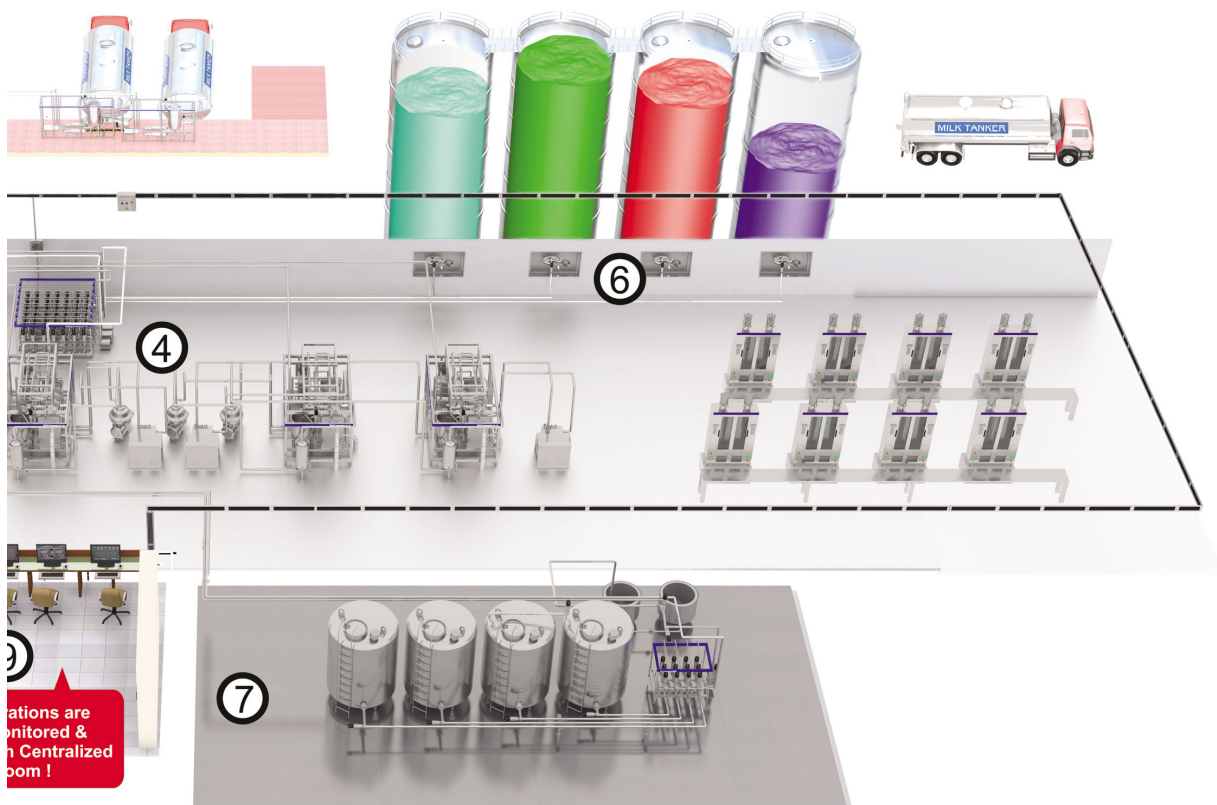
Our solutions deliver actionable real-time intelligence to Milk Processing operations. We help customers to sustainably reduce product loss, to save water, reduce their consumption of energy, utilities and chemicals, reduce waste water discharge and to efficiently achieve and maintain compliance with emerging food and traceability requirements.



- ① MILK RECEPTION THROUGH TANKERS
- ② PRE-CHILLING OF MILK IN MILK CHILLERS
- ③ TRANSFER TO RAW MILK STORAGE
- ④ CENTRALIZED CONTROL, MONITORING & RECORDING OF MILK PROCESSING  
OPERATION OF PASTEURIZERS, SEPARATORS, HOMOGENIZERS & ALLIED PROCESSING LINES
- ⑤ TRANSFER OF PROCESSED MILK TO STORAGE TANKS
- ⑥ MILK STANDARDIZATION & BATCH FORMATION
- ⑦ RECOMBINED MILK PREPARATION
- ⑧ CIP ROUTE CREATION FOR CLEANING TANKS, MILK LINES, PASTEURIZERS & ROAD TANKERS ETC.
- ⑨ PRODUCTION EXECUTION & REPORTING  
PRODUCTION TRACKING, PRODUCTION ANALYSIS, PRODUCTION DISPATCH, & PRODUCTION REPORTING









## Salient features of Dairy Dashboard®

Dairy Dashboard allows complete control over its processing and CIP operations with real-time display and history-tracking facilities. It is provided with 3 vital components Productivity, Efficiency and Sustainability. Dairy Dashboard boasts of a number of innovative features, some of which are listed below

- ▶ Quick and accurate identification and elimination of processing bottlenecks.
- ▶ Minimization of waste and energy consumption.
- ▶ Improved plant performance and reduction of unplanned shutdowns.
- ▶ Increase in Processing efficiency.
- ▶ Improved overall profitability.
- ▶ Zero-defect product achieved everytime.
- ▶ Shorter payback period.
- ▶ Better Return on Investment.
- ▶ Less manpower required.
- ▶ User friendly interface.
- ▶ Consistent process implementations.
- ▶ Product conformity at first instance.







## High Performance Cleaning Solutions from DAPL

DAPL being a leader in offering and implementing total automation solutions for the dairy industries, has also innovated cleaning solutions for the cleaning of process equipments, tanks, lines, filling lines etc.

This fully computerized CIP system is available in 4 skid mounted models and performs all the tasks assigned to it with speed and accuracy and at the same time proves to be cost-effective.

DAPL offers the fully computerized CIP system on turnkey basis which includes identifying plant requirement, design, supply, installation and commissioning. This also includes supply of tanks, valves, pipeline assemblies, instrumentation, control panels and ethernet-linked computer display. The entire system is offered as skid-mounted units along with total integration of your existing plant to facilitate very effective cleaning.







## Significant features of our CIP systems



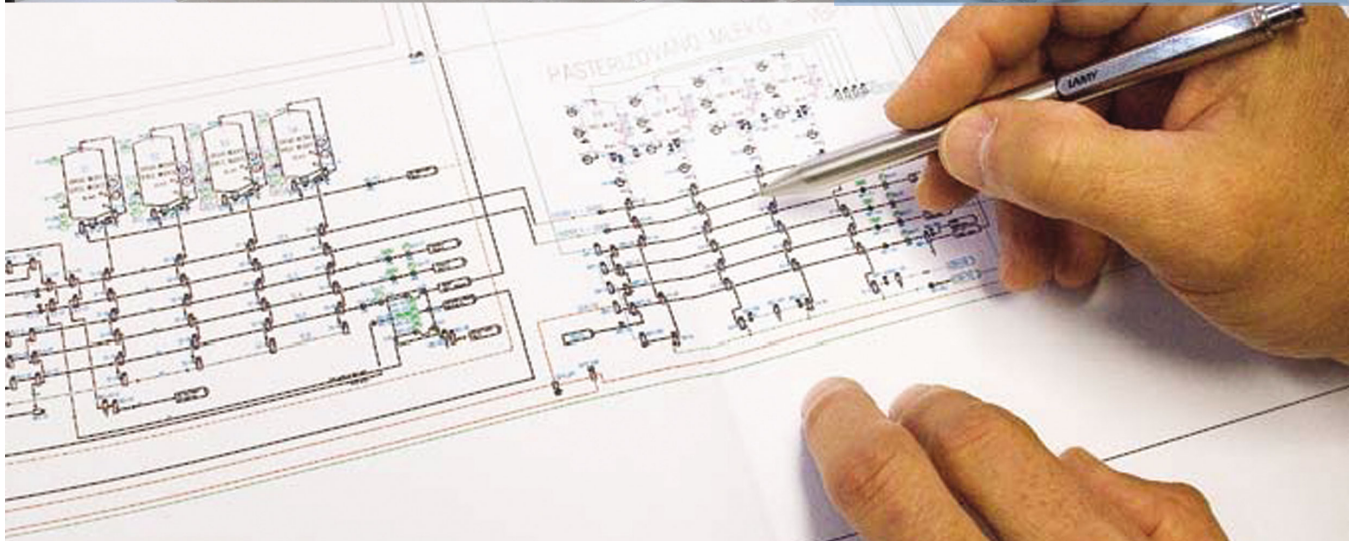
Operation facility from the computer and if required from the operator panel as well.

PLC supplied with analog and digital connectivity via terminals to field items. All hardware is supplied in IP55 rated SS panel with 3 sections for optimum space utilization.

LED based mimic with pictorial representation of CIP status indication on the PLC panel for operator in the field.

Graphical User Interface showing the real-time status of CIP system including the status of valves, pumps, temperature, concentration, circuits, recipe, destination etc.

Monitoring, controlling and recording of all critical parameters related to CIP







## Overall benefits of DAPL CIP

- Cost-effective system.
- Improved cleaning effectiveness.
- Enhanced product quality.
- Better Plant functioning.
- Flexible CIP recipes for ease of operation.
- Maximum recovery of chemicals.
- Liquid tracking available.
- Easy Documentation and process optimization.
- Energy Efficient.
- Easily upgradable.





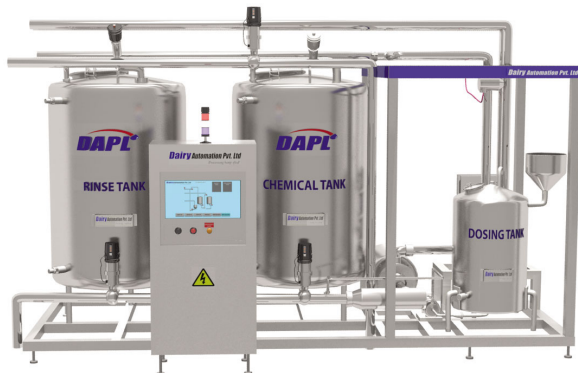
## Various skid-mounted

### Single Tank CIP System

This is a simple and low cost unit which is specially suitable for plants with low budgetary requirements and simple technical operations. It's simple and skid-mounting feature offers a space-saving option with the facility of portability.



### Two Tank CIP System



This skid-mounted unit is for dairies, breweries and beverage plants with a medium budgetary allocation and slightly complex processing facilities.



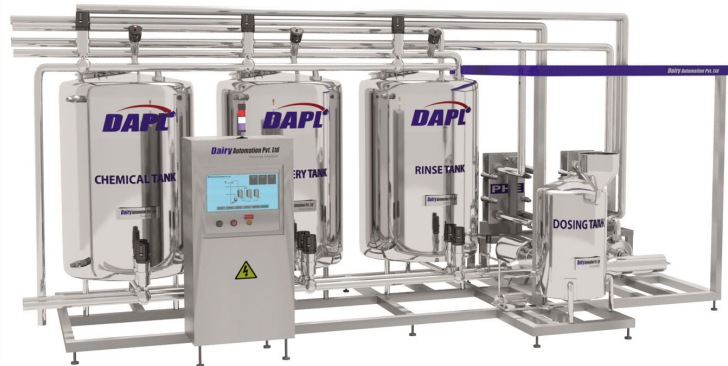




## ed CIP systems

### Three Tank CIP System

This skid-mounted is for slightly high budget allocation plant. Depending upon the technical challenges of the plant, this system offers wide options in terms of CIP circuits (1,2,3 circuit) to meet the day to day operations.



### Four Tank CIP System



This amazing cleaning solution fulfills all requirements of heavy load of CIP operations through a 4 circuit system making it easy for the CIP's of 4 different destinations to be performed simultaneously. It's significant features include speed, accuracy, cost-effective, chemical recovery, operational ease, upgradable, energy efficient etc





## Aseptic Tanks for UHT

The Aseptic Tank is the most important link between the UHT Plant and the packaging lines. Basically an Aseptic Tank is used for UHT processed milk storage upstream the final packaging.



### Significant Features

- 1) Indication of all operational phases of the unit (Production, CIP, Sterilization) and relevant subphases.
- 2) Dynamic block diagram of the unit with display of each motor status (run, shut-down, alarm, stop, rpm) and of each valve (open, closed) with piping color depending on the fluid Contained in each operational phase.
- 3) Possibility of controlling each valve/motor automatically/manually.
- 4) Dynamic display of all PID controlled operations with real-time trend of last 10 minutes of work (set point, controlled variables and controller output graphs).
- 5) Recording of all processing variables and graphic display.
- 6) Recording and display of all alarms.
- 7) Recording and display of production data.
- 8) Operational parameter input.
- 9) Product parameters input.





## Sterilization of Milk and Milk Products

Sterilization is aimed at killing all microorganisms present, including bacterial spores, so that the packaged product can be stored for long period at ambient temperature without spoilage by microorganisms.

### Advantages :

1. Remarkable keeping quality, do not require cold chain
2. High technology solution for extended shelf life milk in several packaging options like -
  - Glass Bottles
  - PP/HDPE bottles, Jars, Pouches etc.
3. Cost-effective in setting-up and usage.
4. No burning flavour / caramelization in final product
5. Can be used for multiple milk products: Flavoured milk, Fresh milk, cream, paneer, shrikhand, gulabjamun etc.

### Aqua Sterilizer





## Deodorizer - Degasifier

Our Fully Automated PLC controlled Deodorizer removes unpleasant smell and taste from milk. This can be attached with existing Milk processing line.

### Advantages :

1. Removes off flavour from milk
2. Removes oxygen from curd milk which acts as bottle neck for proper curd formation







## HTST Pasteurizer

DAPL is an expert in pasteurization technology and the design, fabrication, and installation of fully automated pasteurization systems, particularly HTST systems.

From concept to completion, DAPL can design and build a pasteurization systems that meets your expectations.

Our systems are designed with main focus on product safety, low running cost and minimum product losses. Process automation and control systems compliant with current 3-A and/or pasteurization milk ordinance standards and acceptable practices.

We design automated – skid mounted Pasteurizer modules for Market milk, Curd milk, Yoghurt milk, Lassi, Butter milk Thermization, cream, ice-cream mix and also multi-profile modules to address variety of profiles through single equipment.

### Advantages of DAPL Pasteurizers :

1. Guarantees precise pasteurization
2. Increased food safety
3. Minimum energy consumption
4. Plug and play skid mounted modules
5. User friendly HMI with animation and generation of all kind of reports as per ISO and HACCP standards



## Paneer / Cheese Micro-perforated Moulds



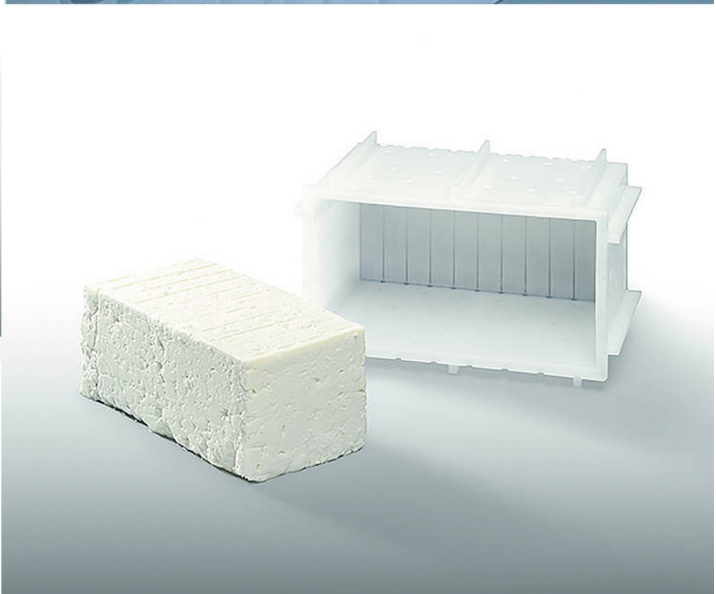
We are the 1st in India to produce these moulds.

Micro-perforated moulds are next generation methodology in Paneer manufacturing. Gives many advantages over traditional cloth usage in paneer production

DAPL produce moulds for multiple types: shapes / designs for cheese and Paneer manufacturing. We have specially developed High Technology Moulds for Paneer production.

Advantages in Paneer Production:

1. Increases yield of Paneer in comparison to the traditional cloth based manufacturing.
2. Produces Paneer with Better (soft) Texture and Taste.
3. More hygienic, easy cleanable and can work with conventional Pressing unit.
4. Produce firm square block of paneer to ensure NO wastage in dicing and cutting
5. Less Fat and SNF losses in whey







## Our Esteemed Customers

Dairy Automation Pvt. Ltd (Formerly e-Doodh Solutions Pvt. Ltd) has an excellent track record of successfully implementing turn-key solutions in various plants in India. Our esteemed customers are satisfied with the high-technology cutting edge solutions we have offered and have realized that our buzzwords of Cost-Driven Operational Excellence" are true to nature.





QUALITY  
FIRST

SAVE <sup>Electricity</sup>  E



Money Isn't All You're Saving

***Dairy Automation Pvt. Ltd***  
*Processing Simplified!*

***DAPL***

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