



Think Dairy

Think big...  
Start small...  
Act Now...

## Mini Dairy Plant From 1000 LPD to 10000 LPD

**SURUCHI CONSULTANTS**  
SINCE (1990)  
AN ISO 9001:2008 COMPANY



Learning Document 2020



# Think Dairy

## Mini Dairy Plant

### Dairy Scenario in India

Dairy is a part of fragmented industry and the local needs of consumers are to be met through local supplies of milk and milk products. India is a country of over 100 metropolitan cities (with population of more than 4 millions). There are 400 middle India towns ( 1lac to 1million population) and over 2000 small towns with population around 1 lac of population. On an average the demand of milk is around 20000 lpd for a population of 100000. Consumption of Dahi would be close to 2000 lpd in the same town with Panir accounting for around 1000 kgs per day. The consumption for milk products will vary depending upon cultural diversity and seasonal conditions. While there are a few National brands in milk like Amul, Mother Dairy, Britannia and Nestle but for small towns even these companies are making strategic alliances with local players in mini dairy segment to cater to the requirements of those markets. India is currently largest producer of milk with around 188.7 million MT per day in 2018-19. There has been a growth in milk production by 6.5% in last few years. The demand fo value added products like Dahi, butter milk, cheese, butter, flavored milk are showing a double digit growth and even above 20% on YOY basis in certain categories.

### Opportunities ahead

Recent outbreak of **Covid-19** has led to a surge in demand for packaged milk and milk products. All product categories which are still covered under unorganized sector and sold in loose like milk, dahi and paneer are bound to come under organized sector. Our Mini dairy plants have been designed to get best out of this opportunity of helping both farmers and the consumers in and around large numbers of middle and small towns in India. Our mini dairy plants are available in three capacities ranging from 1klpd to 5000 LPD . Each of these plants have a provision for 100 % capacity expansion. This way our mini dairy plants could cover a capacity of up to 10000 liters of milk per day at the highest level. Think Dairy division of Suruchi Consultants have designed these plants after an intensive research on technology and skill requirements of the dairy entrepreneur at small town level. Robust technology and simplicity are the key factors supporting the designing of the plants. The plants are modular in design and could be expanded as well as small capacities milk products sections could also be added in the same plant, particularly dahi and panir lines where the growth is immense. The main plant however is capable of pasteurizing milk in poly-packs and plastic /glass bottles/jars as per the requirements of the client. We also offer independent plants for making sterilized flavored milk, cheese, ice creams , frozen yogurt , curd(dahi), lassi, buttermilk , panir, butter and ghee. Still as per our experience the best combination in mini dairy plants is pasteurized milk with cream or ghee using conventional systems.

### Land Requirements

Capacity	Land (s.mtr) Minimum	Covered area (s.mtr) Min
1000 LPD	200	100*
2000 LPD	200	150*
5000 LPD	450	300 *

\* These are the minimum requirements for pasteurized milk in poly-packs or bottles but may vary depending upon other products to be added and level of expansion to be achieved in the same premises. Preferably it should be set up in an industrial area so as to have availability of drains for discharge of treated effluent.

### Electric and Water Requirements

Capacity	Electric Load (in KVA) Minimum	Water required (in LPD) Minimum
1000 LPD	20	1-2000*
2000 LPD	35	2-3000*
5000 LPD	50	3-5000 *

\* These are the minimum requirements for pasteurized milk in poly-packs or bottles but may vary depending upon other products to be added and level of expansion to be achieved in the same premises.

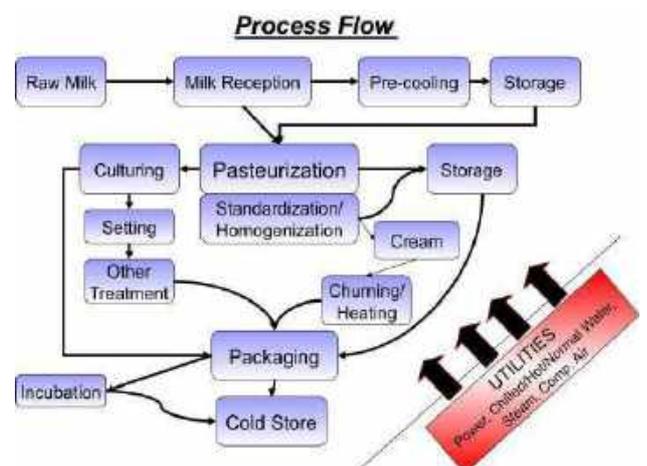
### Value Addition

Dairy is a cash rich industry in fresh milk products category of Pasteurized milk, Cream, Dahi, Panir and Ghee. It offers great opportunity for value addition. Our research has shown that normally a value addition of 30 % (pasteurized milk), 60% (panir), 75% (Dahi) and 125% (sterilized flavored milk) is achievable on raw material costs.

## The Process

### Manufacturing of Pasteurized Milk

Raw milk is brought to the processing plant, tested for quality and weighed. The process requires receipt of chilled milk or chilling of raw milk instantly at the plant before storage and further processing. It improves the quality and shelf life of pasteurized milk. For a mini dairy plant we keep the systems and technology simpler and all the complexities of installing and operating a conventional boiler and ice plant for chilling milk is replaced with a fully automatic electric hot water generator and Package chiller. This makes our plant unique and provides a capability to start the complete pasteurization unit only at the time when you need to run it. This design helps in optimizing the time and human resource management thereby processing milk in the most cost effective manner. We have also kept a provision for standardization of milk using an offline cream separator in the plant up to 2000 lpd, however for all the plants above 5000 LPD have an online cream separator for milk standardization. The pasteurized milk is packed in a fully automatic packing machine in 200,500 or 1000 ml. We provide storage cabinet for 1000 LPD plant and for 2000 lpd onwards we provide a cold store. Our package of complete system integration for mini dairy come is exclusive of small QC lab, plastic crates and Aluminum cans.



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## Value Proposition

Our basic model offers milk reception, weighing, filtration, storage, pasteurization with heating and chilling systems, cream separation, packing machine and cold storage with mini QC lab and other critical miscellaneous fixed assets. All our equipment are manufactured under our stringent quality assurance systems based on our robust designs at our captive and other vendor's site all over the country. Most of our vendor's are of global repute and have over decades of experience in serving the industry. We are amongst very few dairy plant integrator in the world with a unique ISO 9001 registration from training, designing, manufacturing, supplying, installing and commissioning. We have an ever growing network of service provider and project coordinators with long experience in the industry. Homogenizers, butter and ghee making plant, bulk milk coolers and DG set are offered as an optional items and are excluded from standard offers.



### Special Attractions :

**Availability of Farm fresh category from commercial dairy farms in Delhi and NCR region**

## Engagement Protocol

### What you get as valued customer from us

- Preparation of a customized project pre-feasibility report suited for your project based on actual data on raw milk prices, labor costs, fuels and power costs and market prices.
- Our most competitive offer for a mini dairy plant with equipment and components from best vendor in the country. The whole plant is designed, fabricated and assembled under most stringent quality control based upon our over two decades experience in the industry.
- Execution of complete integration of plant with timely handholding for developing operational manuals, selection and recruitment of trained manpower, training, milk procurement and marketing strategies and stabilizing the commercial production.
- Conducting market research to identify potential products in your market place and designing and supplying mini milk processing plant for products like dahi, yogurt, buttermilk, butter, sweetened sterilized milk and ghee etc.
- We also help our clients plan for expansion as an advisor for making value added products with latest technologies in long shelf life milk, mozzarella and Pizza cheese, frozen yogurts etc as an advisor with technology transfers from the best suppliers from the world.

Our value proposition for the three categories of mini dairy plant for anywhere in the world is as follows :

Capacity	Offer Ex works Noida Starting from	Offer Ex works USD starting from	Packing
1000 -2000 lpd	IRS 25 lacs **	40000.00*	20 Ft cont.
2000-5000 lpd	IRS 35 Lacs **	50000.00*	40 Ft cont.
5000-10000 lpd	IRS 48 Lacs **	75000.00*	20+40 ft cont.

\*All the plants have fully automatic FDV in pasteurizer and but homogenizer will be optional .But for offshore exports proposal is with homogenizer.

\*\* Without turnkey advisory charges for the project, taxes, packing and forwarding and freight and insurance. Additional cost for product mix like Curd, Cheese, Butter, Ghee etc.

**Delivery:** 75-90 days from 1klpd to 5klpd plants

**Packing and forwarding :** 2% for domestic and 4 % for exports

**Installation and commissioning:** Included but traveling, lodging and boarding for 3- 4 persons for 10 days to 30 days. For exports the charges will be informed after knowing about the location.

**Warranty:** One year for all manufacturing defects excluding electrical and consumable.

### CLIENTS ASSOCIATION



## JOURNEY SINCE 1990



ADMC SHD Malaysia UHT & Yogurt Plant



Indigenous Foods Saha Ice Cream Plant



1 lakh lpd composite milk Plant Purica Foods Unnao



Hamsa Dairy Chittoor Cheese Plant

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