COMPLETE DAIRY PLANT



Integrated processing, packaging and utility solutions



Turnkey Dairy Solutions

From raw-milk reception to finished-product dispatch, our complete dairy plant concept combines hygienic process design, efficient utilities, intelligent automation and flexible packaging. Each project is engineered around the required product mix, daily capacity, local milk conditions and applicable food-safety standards.

Plant Process Flow

1. **Milk reception:** tanker unloading, filtration, sampling, weighing and chilling.
2. **Raw-milk storage:** insulated silos with agitation and temperature control.
3. **Standardisation:** cream separation and adjustment of fat and solids.
4. **Heat treatment:** pasteurisation, thermisation or UHT processing as required.
5. **Product processing:** homogenisation, fermentation, coagulation, churning, concentration or freezing.
6. **Filling and packaging:** bottles, pouches, cups, cartons, tubs or bulk packs.
7. **Cold storage and dispatch:** controlled holding, palletising and distribution.
8. **Cleaning:** automated clean-in-place circuits for product-contact equipment.

Core Equipment Catalogue

Process Area	Typical Equipment	Key Purpose
Reception	Unloading skid, filter, air eliminator, flow meter, plate chiller	Fast, measured and hygienic intake
Storage	Insulated silos, balance tanks, agitators, level and temperature instruments	Preserve milk quality before processing
Separation	Clarifier, cream separator, standardisation unit	Remove impurities and control fat content
Heat treatment	Plate pasteuriser, tubular UHT system, holding tube, regeneration section	Deliver validated time-temperature treatment
Homogenisation	Single- or two-stage high-pressure homogeniser	Improve stability and mouthfeel
Fermentation	Jacketed yoghurt tanks, culture dosing, incubation control	Produce set, stirred or drinking yoghurt
Cheese	Cheese vat, curd knives, draining table, moulds, press, brining system	Form, drain, press and mature cheese
Butter and ghee	Cream ageing tank, butter churn or continuous butter maker,	Convert cream into spreadable or clarified

	ghee kettle	fat products
Ice cream	Mix plant, ageing vat, continuous freezer, inclusions feeder, hardening system	Create frozen desserts with controlled overrun
Packaging	Bottle rinser-filler-capper, pouch filler, cup filler-sealer, carton filler, labeller	Protect and present finished products
CIP	Caustic, acid and water tanks, dosing, heating, return monitoring	Repeatable automated cleaning

Product-Line Solutions



- **Pasteurised milk:** whole, semi-skimmed, skimmed and flavoured milk.
- **UHT and ESL milk:** extended-life products for ambient or chilled distribution.
- **Yoghurt:** set, stirred, drinking and fruit-preparation variants.
- **Cheese:** fresh, soft, semi-hard and hard cheese configurations.
- **Cream, butter and ghee:** retail and food-service formats.
- **Ice cream and frozen desserts:** batch or continuous production.
- **Whey and milk beverages:** value-added drinks and by-product recovery.
- **Milk powder:** evaporation and spray-drying modules for suitable plant scales.

Utilities, Automation & Hygiene

A complete installation may include steam generation, chilled-water or glycol systems, compressed air, potable and process-water treatment, refrigeration, electrical distribution, effluent handling and heat recovery. PLC/SCADA automation can provide recipe control, batch tracking, alarm management, trend recording and production reporting. Hygienic zoning, cleanable surfaces, controlled personnel and material flows, validated CIP recipes and documented quality checks support a robust food-safety programme.

Project Delivery Scope

- Feasibility study and capacity planning
- Process design, mass balance and equipment sizing
- Plant layout, utility schedule and hygienic zoning
- Equipment manufacture, supply and installation
- Automation, commissioning and performance trials
- Operator and maintenance training
- Documentation, spare-parts planning and after-sales support

Request a Tailored Proposal

For an accurate process concept and quotation, please provide: raw-milk availability and composition; target products and pack formats; required daily capacity and operating hours; utility conditions; site layout; preferred automation level; applicable local regulations; and target commissioning date.

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