

# MGT PROCESS DAIRIES



**MGT PROCESS** is a division of the MGT Liquid & Process Systems group of companies. By combining more than 40 years of experience supplying food processing plants worldwide and by utilizing state of the art technology, **MGT PROCESS** provides its customers with superior solutions adapted to their unique requirements. **MGT PROCESS** employs leading dairy experts with many years of experience in planning designing and manufacturing of turnkey dairies and dairy components worldwide.

At **MGT PROCESS** we believe in understanding the process of each product, our R&D department specifies each project in order to suit our solutions for maximum outcome.

## **MGT PROCESS Planning**

Any project begins with gaining a full understanding of the customer's requirements and the project scope. The next stage is the planning and design by MGT's team of dairy engineers, in full collaboration with the customer.

## **Project Management**

MGT refer a project management team for each and every project dealing with the following: In charge of the project scope including a management team, project specifications, commissioning, training program, budget and schedule.

## **MGT Technology**

MGT provide state of the art processing technology which is at the world's dairy process technology forefront. MGT Process provides its technology to the customer through:

- Technical and technological knowhow.
- Technical and technological training.
- Preliminary Courses and seminars.
- On site hands on training.

Major Industries: MGT Process specializes in solutions for three major industries:

Dairies - MGT supplies full turnkey solutions for dairy and dairy components for dairy projects ranging from 1,000 – 200,000 L per day.

- Whole and Skimmed milk
- ESL (Extended Shelf Life) Milk
- Flavored milk
- Yoghurt (Stirred and Set, Flavored)
- Soft cheeses
- Hard cheeses
- Cream and butter
- Ice cream

## **Beverages**

MGT offers a wide range of beverage processing solutions, for Juice processing plants ranging from 300 – 15,000 L/H, Juice Processing lines begin from the initial water treatment to the final processed and packed product:

- Whole juice,
- Nectar
- Soft drinks.

## **Food Processing**

MGT Process offers a wide range of liquid food processing plants, providing our customers with tailor made processing solutions for:

- Egg Processing.
- Syrup Processing.
- Oil Processing.
- Chocolate
- Sauces



## Stages in Turnkey projects

- Initial survey & pre planning
- Planning
- Comprehensive design
- In house manufacturing of dairy's components
- Installation and commissioning
- Training (technical, technological)
- Management services
- Environment and waste water solutions
- Branding and Marketing consulting
- After sales support

## Products Processing and Filling Lines:

### Pasteurized Milk Processing line for up to 15,000 L/H

Whole Milk, Skimmed Milk, ESL Milk and Flavored Milk

### Yogurt Processing and Filling Lines for up to 20,000 L/Day

Set Yogurt, Stirred Yogurt, Flavored Yogurt, Yogurt Fruit mixture, Sour Milk, Mala, Sour Cream, Kefir and Raznika.

### Hard/Semi/Soft Cheese Processing Lines capacity varies according to the cheese type

Complete cheese processing lines for all cheeses:

- Soft Cheese: Cream Cheese, White Cheese, Labane, Cottage and spreadable cheese.
- Semi Hard Cheese: Camembert, Feta, Fresh Cheese and Hallomi Cheese.
- Hard Cheese: Gouda, Emmental, Cheddar, Edam, Blue cheese and Parmigianino.

### Ice Cream Processing Lines for up to 25,000 L/Day

Complete Ice Cream Processing Lines for different ice Cream mixtures.



# MGT PROCESS DAIRY PRODUCTION LINES

MGT-PROCESS provides complete solutions for dairy projects and specific dairy processing lines.



MILK RECEPTION & PASTEURIZATION



RECEPTION CHILLING UNIT



BOILER



HOMOGENIZER



POWDER MIXER



PASTEURIZER

TO PROCESS LINES



CHILLER



CREAM SEPARATOR



**PASTEURIZED MILK**



**SOFT CHEESE / YOGHURT**



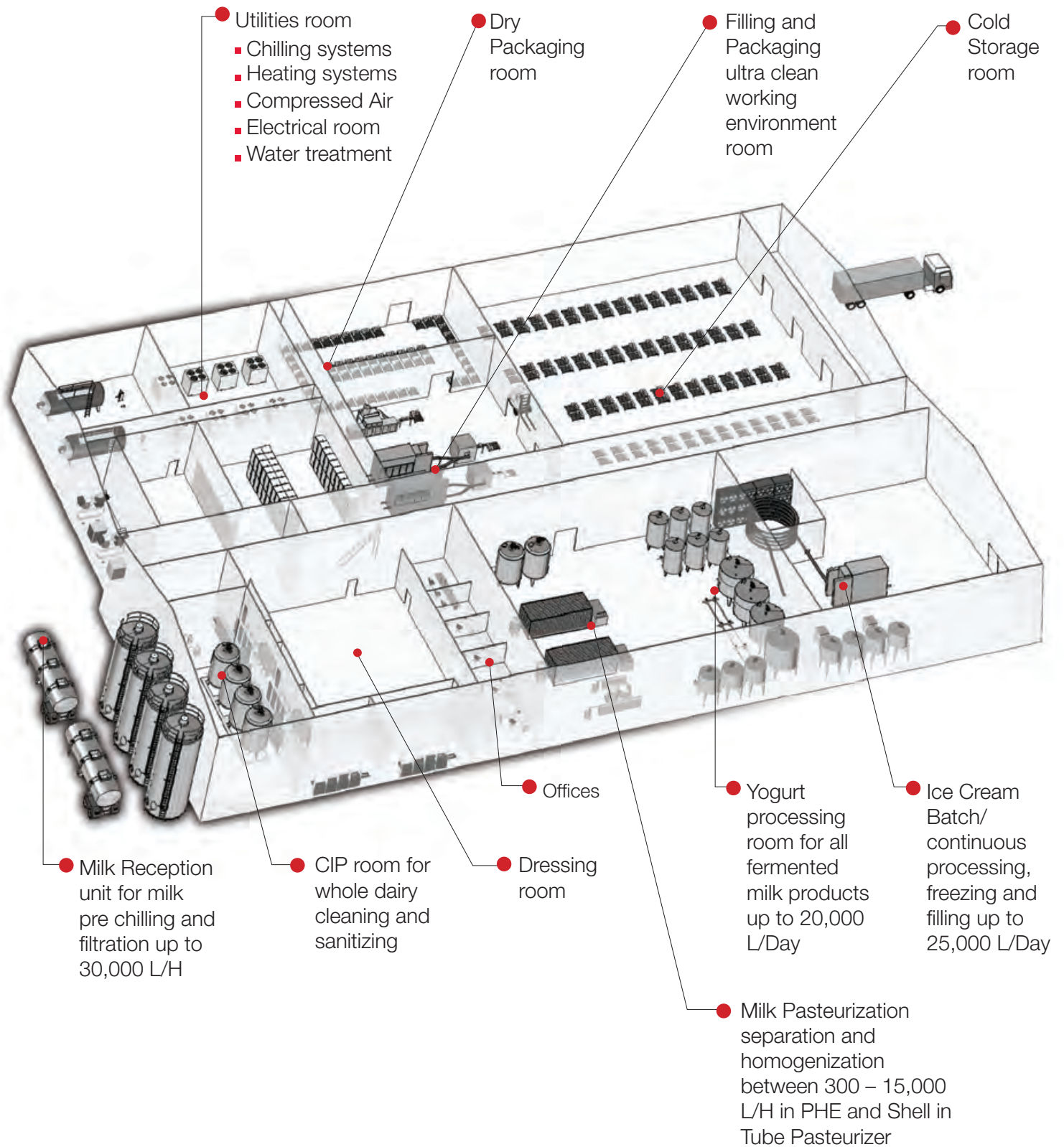
**HARD & SEMI-HARD CHEESES**

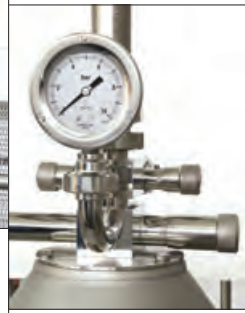


**ICE CREAM**



# MGT PROCESS DAIRY DESIGN





## Five Keys To Extending Product Shelf Life

1. Raw Product Quality
2. Processing Time and Temperatures
3. Intermediate Storage (Tanks) and process design and condition (Valves and Piping)
4. Packaging Environment, packaging material, Filler characteristic
5. Retail distribution storage environment

## ESL (Extended Shelf Life) Milk

MGT has developed a system for ESL milk processing in an Ultra Clean environment that is based on the precondition of the raw milk.

The final product can achieve up to 30 days shelf life.

ESL technology is the most advanced technology replacing the pasteurized milk product.

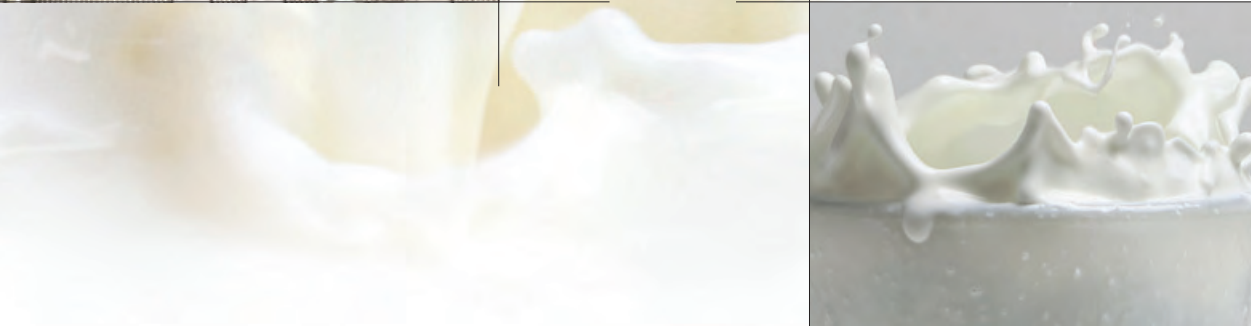
The ESL maintains the quality and extends the shelf life of the milk under cold chain of below 8°C. The system is based on an indirect heating system with Ultra Pasteurization reaching the temperature of 127°C for 0.5 sec.

After the ultra pasteurization, the milk is almost sterile and it is then transferred to buffer tanks with special HEPA filtration for preserving the Ultra Clean environment inside the buffer tanks and to avoid contamination of the milk.

The final step of the ESL processing and the most complicated is the filling stage using special filling systems with packaging sterilization and HEPA filtration in order to maintain the milk under Ultra Clean environment up to the final stage of sealed and packed product ready for the market.

## ESL advantages

1. **Low returns** of product from markets
2. **Possibility to compete** with identical products which have already gained longer shelf life for their products
3. To supply a so called **“fresh”** product with sufficient shelf life almost identical to those of UHT milk but with much better taste and organoleptic properties.
4. **Reduction of High cost distribution** and logistics/geographical restrictions identical to standard products
5. Opens opportunities of **exporting products** to neighboring countries/markets



# MGT PROCESS TRAINING & KNOW-HOW

## Technical Training

**MGT PROCESS** will provide Full Engineering, Technical and Maintenance training. This will consist of review of drawings, technical documentation and technical data, operation and maintenance of individual machines, rinsing and cleaning procedures, spare parts inventory and more. MGT's Chief Engineer will accompany the local team step by step and will provide hands-on training in all aspects of the dairy's machines.

## Technological Knowhow

**MGT PROCESS** will provide Full Technological and Laboratory training. It will include raw milk and milk products laboratory tests, products recipes, sanitary required systems, milk industry processing systems and more.

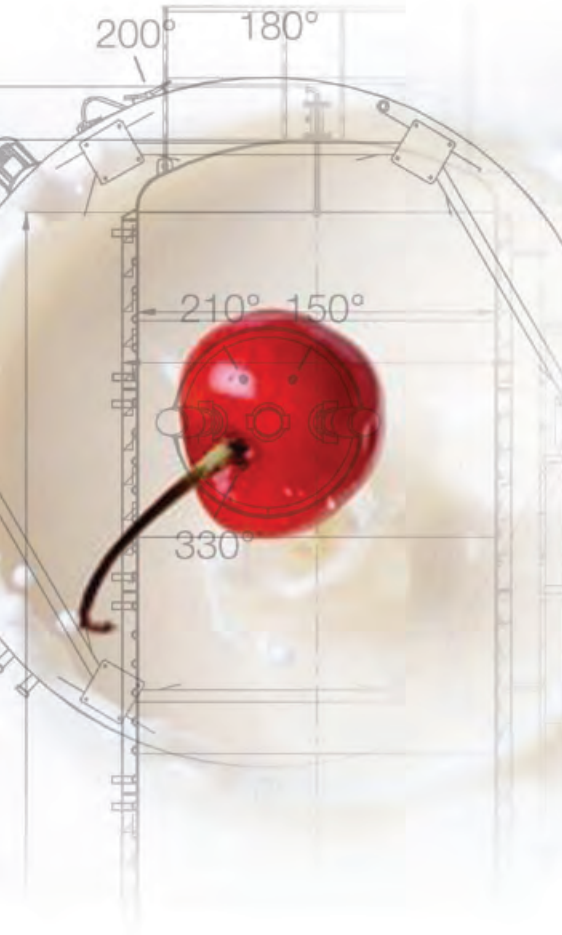
MGT Chief Technologist will accompany the local team, and step by step will provide hands-on training with all types of products: Preparations, Processing, Packaging, Storage, Lab test and Hygienic systems.

## After Sales Service

**MGT PROCESS** will provide Full Service and after sales Support (Technical and Technological), by the various communications ways, including e-mail and telephone support.

## Dairy processing seminars in Israel

**MGT PROCESS** provides full processing seminars in a renowned academic college in Israel. The seminars are offered to our customers in order to provide them with the latest dairy processing technology, range of products and milk quality analysis. The Seminars can range between 4 – 30 days and include lectures dealing with all processing aspects and educational tours to some of Israel's most modern dairy processing facilities.



## Cooling & storage tank



Designed for fast cooling of milk immediately after milking, in accordance with international standards. Available in volumes from 500 liters - 1,000,000 liters.

## Powder mixer



Used for mixing powder such as milk, cocoa, sugar and stabilizers with milk or water, for the process of: reconstructed milk, flavoured milk, yoghurts, ice cream and others. Available in sizes of 500-20,000 L/H.

## Pasteurizer



Type PHE (Plate Heat Exchanger) is the most important system for the milk processing. MGT pasteurizers from 300 L/H up to 20,000 L/H heated by electricity or boiler.

## Cream Separator



Used for separating the cream from the Whole Milk. This allows controlling the fat in milk products. MGT Separators types and sizes. From 300 L/H up to 1,500 L/H open or closed type. From 2,000 L/H-20,000 L/H separators will be automatically discharged.

## Homogenizer



Used to prevent cream separation, by separating the cream globules into very small particles. MGT homogenizers can be with single or double homogenization stages, dampers and pneumatic by-pass valves. Sizes are from 300 up to 20,000 L/H.

## Processing tanks



For pasteurized milk storage, yoghurt and sour cream fermentation, cheese coagulation and ice cream ageing. The tanks are with an insulated layer and can have a double jacket for heating or cooling, agitator with gear-motor and drain butterfly valve. Sizes are from 400 up to 5,000 liters.

### Bottle Filling Machines



For filling liquid products into bottles such as Milk, Yoghurt, Juice and Water. MGT supply semi & fully automatic filling machines for different bottle shapes and sizes. Capacity range from 600 up to 15,000 Bottles/H. Including cap feeder, cap closer and date printing system.

### Cup filling machines



For filling liquid and semi-liquid products into cups. MGT supply semi & fully automatic cup filling and sealing machines for different cup sizes. Capacity range from 600 up to 20,000 Cups/H. Including piston filler system, foil feeder, hot sealing system and date printing system.

### Ice cream freezer



For processing & freezing the Ice Cream to the desired temperatures.

### Batch pasteurizer



Used to pasteurize small quantities of milk, for cheeses and yogurts. Includes heating system, agitator with gear-motor and control board. MGT batch pasteurizers come in sizes from 400 up to 2000 liters.

### Ripening room



For Hard Cheese storage at the desired temperatures.

### Butter churn



Processing Butter from the cream. MGT butter churn.

# MGT PROCESS **WORLDWIDE**



**MGT PROCESS**  
DAIRIES



**MGT Ltd.** POB 367, Industrial Zone Maalot, Israel 24952  
www.mgt.co.il, mgt@mgt.co.il, Tel: 972-4-9976212 Fax: 972-4-9976217