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MGT Process Case Studies



POB 367, Industrial Zone Maalot, Israel 24952
Tel. 972-4-9976212 | Fax. 972-4-9976217



Dairy - Case Studies



Project Overview:

- Full dairy processing turnkey project in Uzbekistan
- Production capacity: 1,000 L/Hour.
- Production lines for processing: Milk, Kefir, Riajenka, Stirred Yogurt, Tvorog, hard Cheese, Sour Cream
- Packaging lines: Plastic pouch filling machine, PET bottle filling line, plastic cup filling line

The project included:

- Initial survey
- Planning
- Comprehensive Design
- In house manufacturing of dairy components and equipment
- Installation and Commissioning
- Training (Technical, Technological)
- After Sales Support



Production

Preparation for production of Yogurt, Kefir and Riajenka 1,500L/Day



Packaging

Bottle Filling & Capping Machine, Manually Operated at 600 Bottles per Hour for PET or Glass Bottles



Cheese Production

Production of 1,000L/Day of hard cheese gouda style, 3Kg Cheese wheels



Training

Onsite technical & technological training by MGT engineers

Project Overview:

- ↻ Pilot dairy processing plant full turnkey project in Mexico
- ↻ Production capacity: 500 L/Hour
- ↻ Production lines for processing: Milk, Yogurt, different types of Cheese and local cheeses
- ↻ Packaging lines: milk in PET and yogurt in plastic cups

The project included:

- ↻ Planning
- ↻ In house manufacturing of dairy components and equipment
- ↻ Installation and Commissioning
- ↻ Training (Technical, Technological)
- ↻ After Sales Support



Installation

MGT Engineers and Dairy employees joint cooperation of installation of dairy plant



Packaging and filling

Bottle Filling & Capping Machine, Manually Operated at 600 Bottles per Hour for PET or Glass Bottles



Production Hall

Pasteurization system and production equipment for milk, yogurt and cheese



Training

Onsite technical & technological training by MGT engineers

Project Overview:

- ↻ Dairy processing line for the production of ESL (extended shelf life) milk
- ↻ Production capacity: 8,000 L/Hour of whole milk packed in plastic pouches
- ↻ Installation and commissioning
- ↻ Process line included:
 - 8,000L\H ESL pasteurizer
 - 8,000L\H homogenizer
 - 8,000L\H cream separator
 - Water chiller

The project included:

- ↻ Planning
- ↻ In house manufacturing of dairy components and equipment
- ↻ Installation and Commissioning
- ↻ Training (Technical, Technological)
- ↻ After Sales Support



Installation

Installation of equipment in dairy plant



Production

8,000L\H Production of ESL milk whole 3.5%, skimmed 1%, 2.5% and 3%



Training

Onsite technical & technological training by MGT engineers

Project Overview:

- ✔ Pilot dairy processing plant full turnkey project
- ✔ Dairy plant located next to milking parlor negating the need for milk reception and raw milk storage vessels
- ✔ Production capacity: 300 L/Hour
- ✔ Production lines for processing: Milk, Yogurt, farmers Cheese
- ✔ Packaging lines: milk in PET and yogurt and farmers cheese in plastic cups

The project included:

- ✔ Planning
- ✔ In house manufacturing of dairy components and equipment
- ✔ Installation and Commissioning
- ✔ Training (Technical, Technological)
- ✔ After Sales Support



Semi Hard Cheese

Production of semi hard farmers cheese 500L\Day milk, 100Kg/Day final products in 300g cheese wheels



Packaging

Semi Automatic Rotary Bottles Filling & Capping Machine for 600 bottles per hour



Yogurt

Production of Stirred yogurt Plain & Flavored 400L\Day



Training

Onsite technical & technological training by MGT engineers

Project Overview:

- Full dairy ESL processing turnkey project in Philippines
- Production capacity: 1,000 L/Hour ESL
- Production lines for processing: ESL Milk
- Packaging lines: milk in PET

The project included:

- Initial survey
- Planning
- Comprehensive Design
- In house manufacturing of dairy components and equipment
- Installation and Commissioning
- Training (Technical, Technological)
- After Sales Support



ESL Pasteurizer

1,000L\Hour ESL pasteurization system with Ultra Pasteurization which reaches the temperature of 127°C to 130°C for 2-3 sec.



ESL packaging and filling

Semi automatic Rotary Bottles Filling & Capping machine, close fitted with special HEPA filters for Ultra Clean environment inside the machine to avoid contamination of the milk.



ESL Milk Process Tanks

Pasteurized ESL milk tanks fitted with special HEPA filters for Ultra Clean environment inside tanks to avoid contamination of the milk.



Training

onsite technical & technological training by MGT engineers

Project Overview:

- Full dairy processing turnkey project in the Philippines
- Production capacity: 1,000 L/Hour.
- Flavor and powder mixing 500L system for flavored milk and yogurt
- Production lines for processing: Whole fresh Milk, Flavored milk, Stirred and Flavored Yogurt, Local semi hard cheese
- Packaging lines: PET bottle filling line for milk and yoghurt

The project included:

- Initial survey
- Planning
- Comprehensive Design
- In house manufacturing of dairy components and equipment
- Installation and Commissioning
- Training (Technical, Technological)
- After Sales Support



production Hall

MGT StSt processing equipment, 1,000L/H pasteurization and homogenization system and MGT Processing tanks for driftnet products



Flavored milk Processing

Preparation and Production of Chocolate flavored milk



Packaging

Bottle Filling & Capping Machine, Manually Operated at 600 Bottles per Hour for milk, flavored milk and drinkable yogurt at different sizes (200ml, 300ml and 1L)



Training

On-site technical training by MGT engineers

Project Overview:

- Supplying of a full Hard cheese process line
- 1,000L milk per batch,
- 90Kg hard gouda style cheese in round 3Kg moulds
- The system included:
 - 1,000L cheese vat
 - Cheese process and prepress tools
 - Round 21Øcm moulds and pneumatic press
 - Brining plastic vat
 - Vacuum packaging machine



The project included:

- Planning
- In house manufacturing of dairy components and equipment
- After Sales Support



Cheese Vat

1,000L Cheese processing vat with Motored Stirrer



Brining plastic vat

For salting the cheese



Pneumatic Cheese Press

Cheese press for 16 cheese moulds of Ø21x10cm



Ripening room

Aging the hard cheese in 12°C room for 60 days

Juice - Case Studies



Project Overview:

- ↻ Full installation of syrup processing plant
- ↻ Two production lines
 - 2,500L preparation tank double jacket for mixing hot water with sugar
 - Two 2,000L single jacket tanks for flavoring tanks for filling in capsules
 - 1,000L preparation and flavoring for bulk filling and storage
 - Three tri-mixers one for each flavoring tank
 - PHE 5,000L/H for cooling the prepared syrup
 - PHE 6,000L/H for heating water for preparation tank
- ↻ Sugar silo
- ↻ Sugar pneumatic conveyor
- ↻ Hot and cold water supply for all plants systems for production and packaging
- ↻ Fully automated system with touch screen controlling unit
- ↻ Working platform
- ↻ CIP cleaning system

The project included:

- ↻ Planning
- ↻ In house manufacturing of dairy components and equipment
- ↻ Installation and Commissioning
- ↻ Technical & operation Training
- ↻ After Sales Support



Syrup processing system



Tanks working platform and sugar conveyor

4 MGT syrop production tanks with working platform and sugar inlet for the two preparation tanks



Sugar Silo

60m³ with conveying capacity of 8 ton/Hour



Sugar mixing system

Tri-Blender with 60L hoper with Sanitary food grade centrifugal pump



Fully automates system

Automated system with touch screen controlling unit



Project Overview:

- ↻ Juice with Pulp processing line
- ↻ Special pasteurizer for juice with pulp
- ↻ System capacity 3,000L/H
- ↻ Juice mixing from concentrate with pulp
- ↻ Preparation & chilling for cold fill

The project included:

- ↻ Planning
- ↻ In house manufacturing of dairy components and equipment
- ↻ Installation and Commissioning
- ↻ Technical & operation Training
- ↻ After Sales Support



Juice pasteurization

3,000L/H juice pulp pasteurizer



Juice pasteurization

3,000L/H juice pulp pasteurizer



Juice mixing

Juice preparation from concentrate



Project Overview:

- Full installation of syrup processing plant
- Installation of three 2,500L processing tanks with load cells for product weighing:
 - Double jacket tank for mixing hot water with sugar ratio of sugar to water 65%/35%
 - Two single jacket tanks for laving tanks
- Plate heat exchanger for heating the water for processing - 8,000L/H
- Cooling system with water chiller and cooling tower
- Fully automated system with touch screen controlling unit
- Access Platform
- Sugar mixing system
- CIP cleaning system

The project included:

- Planning
- In house manufacturing of dairy components and equipment
- Installation and Commissioning
- Technical & operation Training
- After Sales Support



Tanks & Podesta

Three process tanks of 2,500L with Access Platform



Sugar mixing system

60L hopper with Sanitary food grade centrifugal pump



PHE System

One PHE for heating the water and one PHE for cooling the syrup



Utilities

Hot water boiler and cooling tower

Project Overview:

- Full installation of Juice processing plant
- Installation of two juice preparation tanks 650L StSt single wall and agitator
- Juice preparation mixing system for adding syrup and mixing
- Installation of two 1,500L holding StSt tanks single wall and agitator
- Installation of 1,000L/h juice pasteurizer
- Installation of hot water Supply 150,000 Kcal/H
- System control panel

The project included:

- Planning
- In house manufacturing of dairy components and equipment
- Installation and Commissioning
- Technical & operation Training
- After Sales Support



Juice processing system



Holding tanks

Two holding tanks of 1,500L



Juice preparation

Two preparation tanks of 650L and mixing system



Pasteurizing System

1,000L/H PHE juice pasteurizing system



Food - Case Studies



Project Overview:

- ↻ Relocation of existing egg pasteurizing system
 - ↻ Installation of new egg pasteurizing system 2,000L/H with holding tube for 4 and 6 minutes
 - ↻ Installation of utilities water chiller and water boiler
 - ↻ Installation of raw egg cooling system
- Process line included:
- Pasteurization of whole eggs 2,000L/H
 - Pasteurization of egg whites 1,000L/H
 - Pasteurization of egg yolk 2,000L/H

The project included:

- ↻ Planning
- ↻ In house manufacturing of dairy components and equipment
- ↻ Installation and Commissioning
- ↻ Technical Training
- ↻ After Sales Support



2,000L/H Egg pasteurizer



Installation

2,000L/H Egg pasteurizer



Production

Utilities, hot water boiler and cold water chiller



Holding Tube

Additional holding tube for 4 & 6 minutes

