



gemak  
dairy



gemak  
food



gemak  
pharma



gemak  
chem



gemak  
energy



gemak  
r&d



gemak  
control



gemak  
fix



gemak  
service



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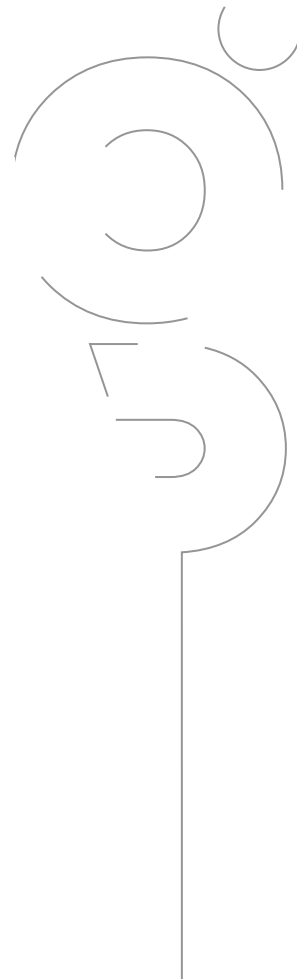
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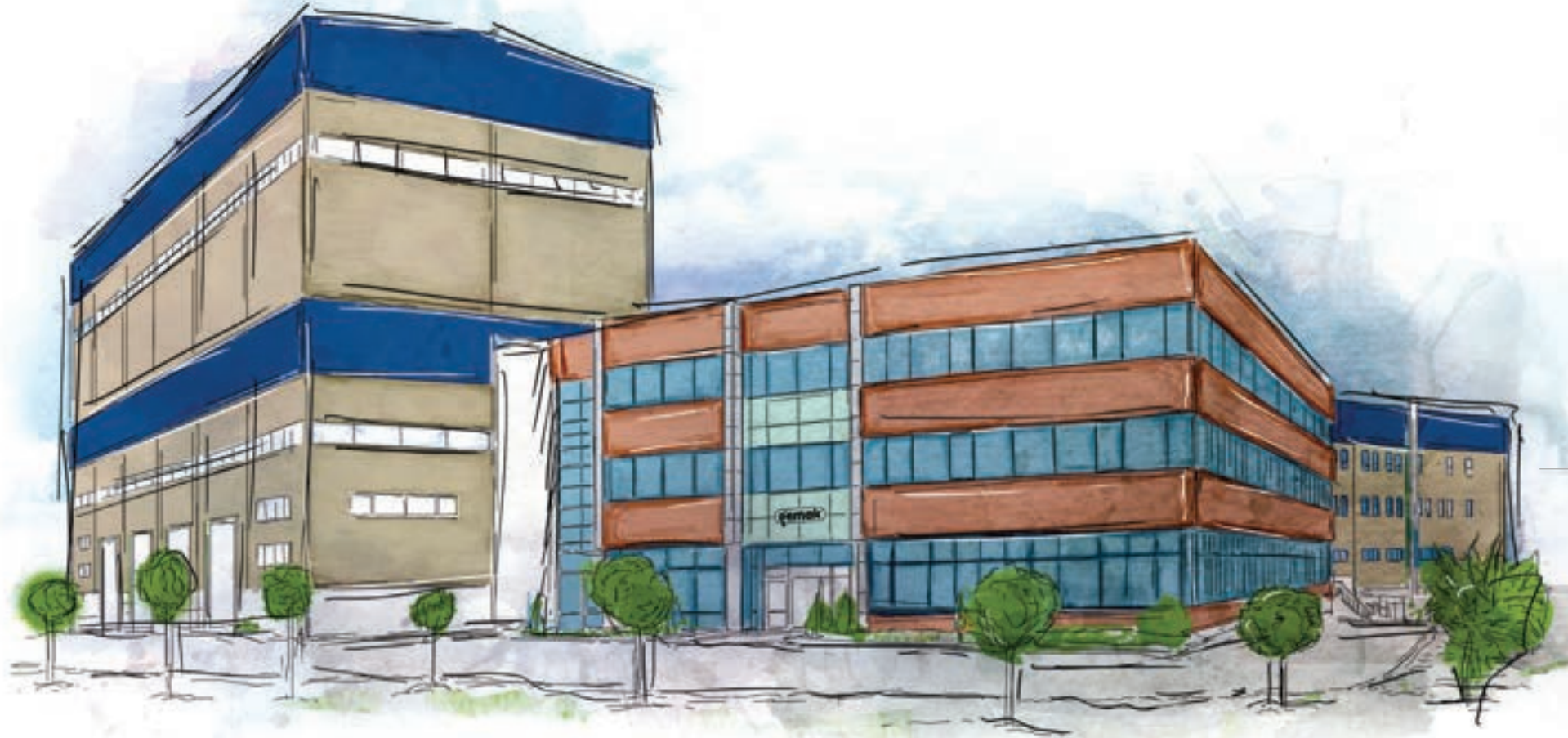
 gemak**service**

Products 27

Services 48



*factories*





## *new generation factories*

Since 1986, Gemak specializes in establishing turn-key plants for dairy, food, chemical, cosmetics and pharmaceutical sectors by combining process design, engineering, stainless steel manufacturing, installation, assembly and after sales service. Our team

of over 200 highly qualified and experienced employees and research, development and technology team working out of our state-of-the-art 23,000m<sup>2</sup> production facility in the 2nd organized industrial region of Ankara strive to build “new generation

factories” using contemporary process design principles, latest technologies, highest quality equipment and offer an extended guarantee and service period for our customers.



1994

TÜV ISO 9001 certificate was obtained.  
The **distribution agreement signed with Alfa Laval.**

1990

The company moved to its **own plant** in the Hasanoğlan Organized Industrial Zone.  
The workshop in the Ostim Organized Industrial Zone continued to function as a maintenance and assembly center.

1986

**GEMAK Gıda Endüstri Makinaları ve Ticaret Limited Şirketi**  
(GEMAK Food Industry Machines and Trade Limited Company)  
was officially founded by Hikmet Ünsal, Ekrem Türker and Necil Büyükpamukçu.

1969

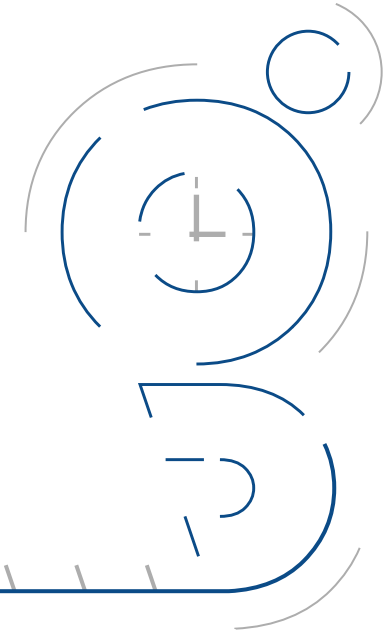
GEMAK's roots go back to 1969.

1984

**Production was launched in a 450 m<sup>2</sup> workshop**  
in the Ankara Ostim Organized Industrial Zone.

1996

**Only 3 companies all over the world** were permitted to use the Alfa Laval heat exchanger plates in manufacturing in 1996.  
We obtained permission to use those plates and started manufacturing heat exchangers and pasteurization equipment.



2014

GEMAK Ltd. Şti. (Ltd. Co.) was transformed into **GEMAK Gıda Endüstri Makinaları ve Ticaret Anonim Şirketi.**

2010

Become **the first Turkish company to complete a dairy plant in England on a turnkey basis.**

2007

Workshop in Ostim was closed down and commissioned the office and workshop building in the **Ankara Ivedik Organized Industrial Zone**, which is built on **1,500 m<sup>2</sup> of land**. This allowed GEMAK to create and **introduce ERP** infrastructure to control all processes and departments.

2011

We closed down our office in the Ivedik Organized Industrial Zone and Hasanoğlan plant in and gathered all departments **under the same roof in our new and modern plant in the 2<sup>nd</sup> Organized Industrial Zone of the Ankara Chamber of Industry.**

2017

We obtained a Research and Development Certificate from the Ministry of Science, Industry and Commerce and became **Turkey's 368<sup>th</sup> R&D Center.**

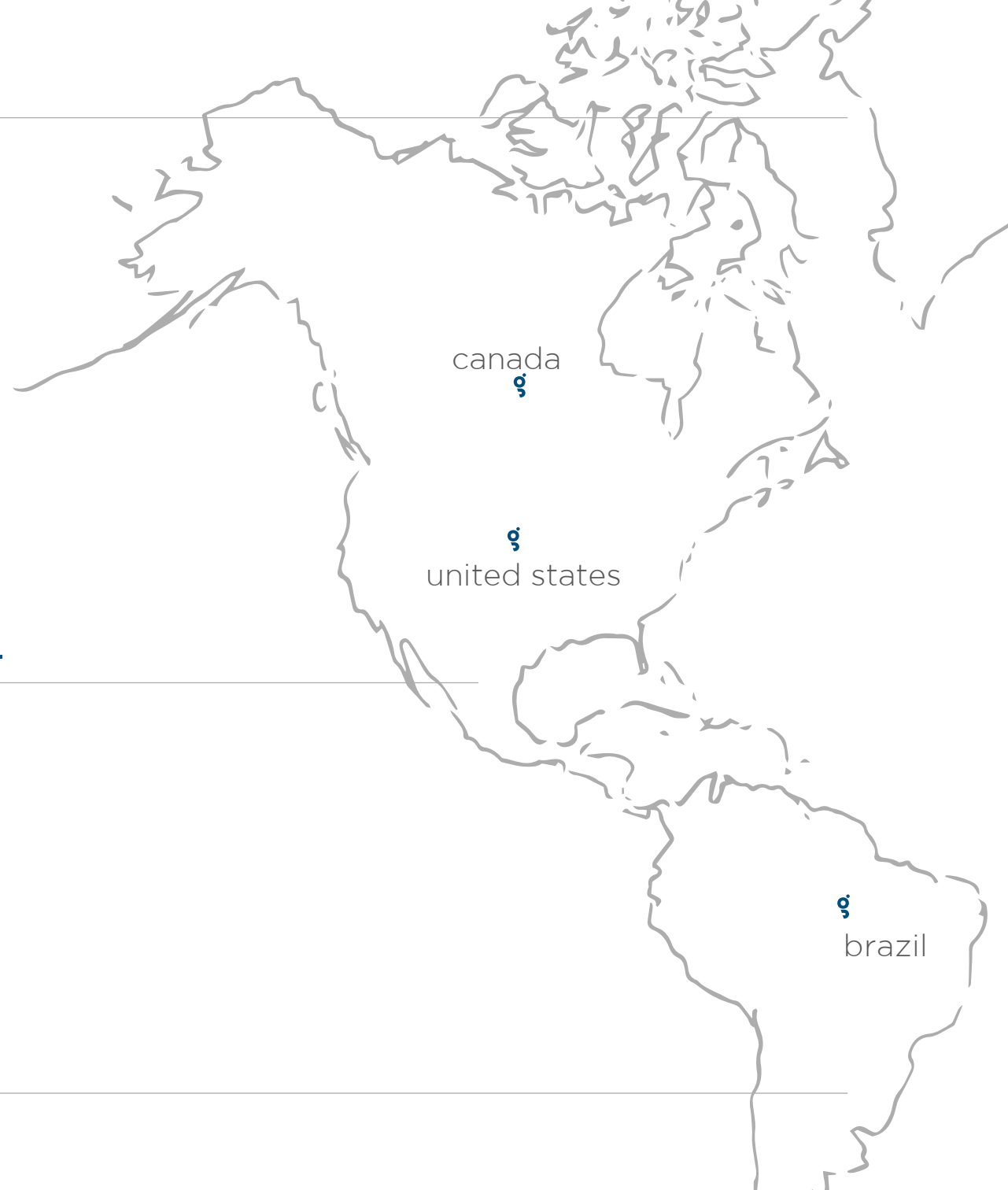
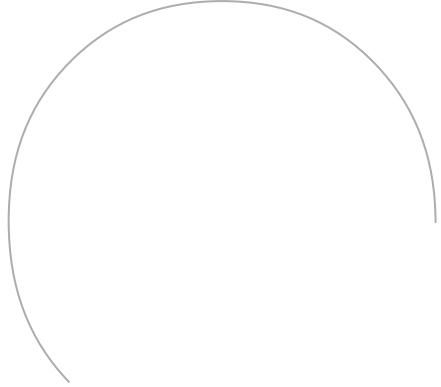
2003

We added dealership for the sales and after-sales services of Andritz Separation and HPM Bertoli homogenizers in Turkey to our portfolio.

2015

Became a member of the **EHEDG European Hygienic Engineering & Design Group.**

vo.



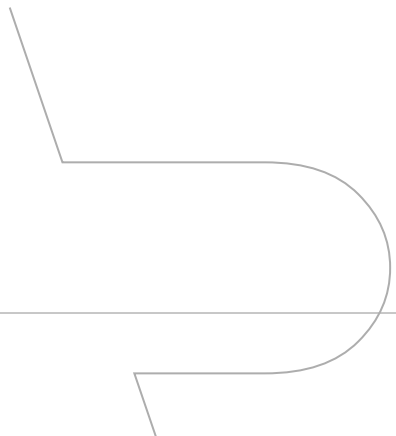
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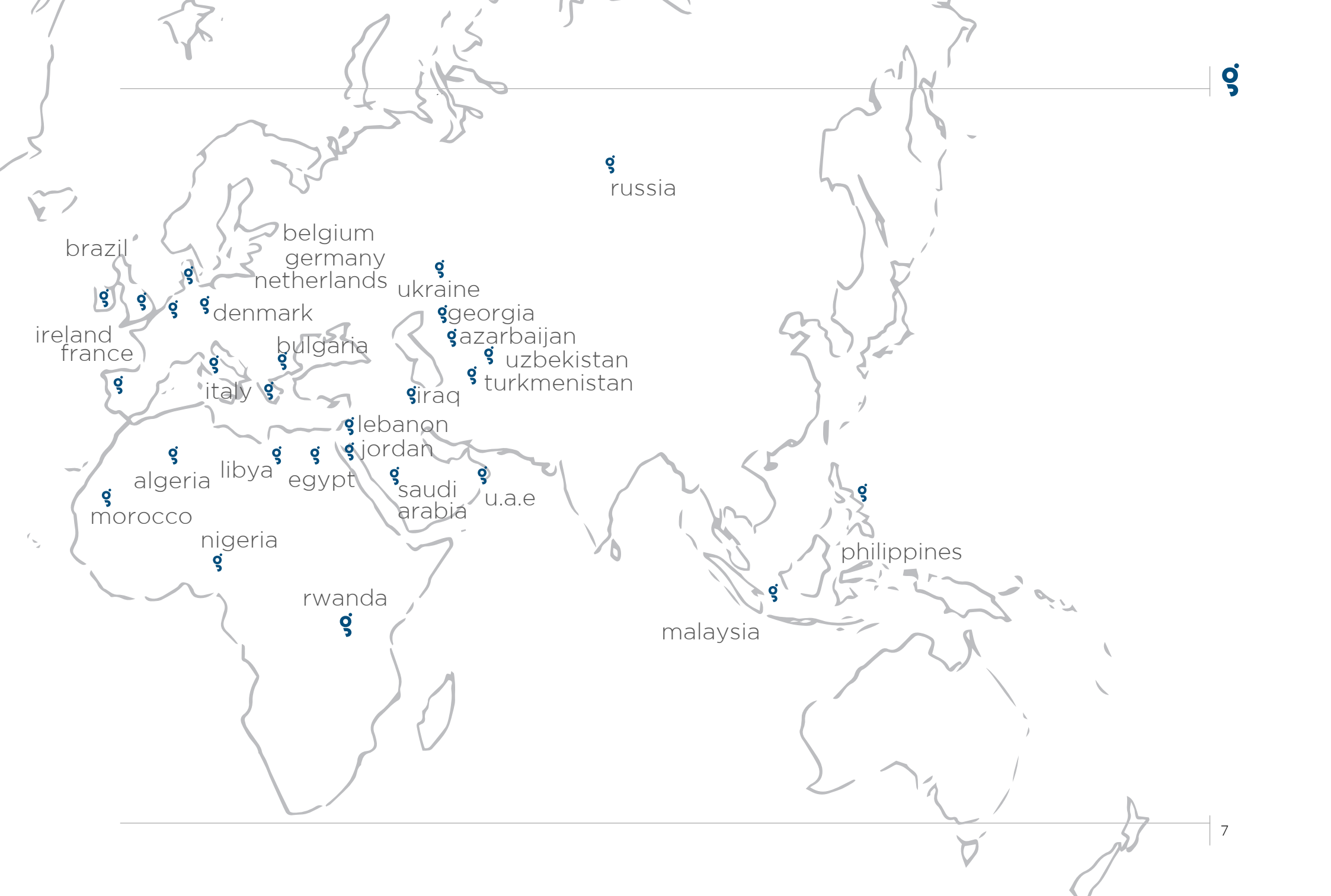
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exporting all over the world...

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gemak  
**dairy**



gemak  
**food**



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**pharma**



gemak  
**chem**



gemak  
**energy**



gemak  
**r&d**



gemak  
**control**



gemak  
**fix**



gemak  
**service**

## scope of activity

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- Engineering, Design, and R&D facilities,
- Installation of machinery and equipment in plants,
- Start-up facilities for turn-key project,
- Testing, training, logistical and operational support of turn-key projects,
- Steam, air, water and ice water piping and insulation,
- Electrical cable tray , brackets and cable assembly,
- Unit-based and full plant automation facilities,
- Manufacturing and installation of ventilation and air conditioning units,
- Facilities for laboratory and starter culture applications,
- After sales service and spare parts facilities.

## fields of activity

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- Dairy Industry,
- Beverage Industry, (fruit juice, mineral water)
- Confectionery Industry, (chocolate, cake, jam, marmalade)
- Food Industry, (soup, tomato, baby food, fruit products, baby food, oil, egg, honey, sauces, soya and almond milk)
- Pharmaceutical Industry,
- Petrochemical and Explosive Industries,
- Energy Industry,

# gemakdairy



Gemak establish turn-key plants for the dairy industry with the concept of “farm to fork”. We expertise in the design, engineering, manufacturing, commissioning and production start-up for the dairy industry and delivering turn-key production facilities to meet the demands of our customers.

#### **We manufacture:**

- Milk collection tanks,
- Milk transportation tanks,
- Milk reception lines and tanks,
- High Temperature Short Time (HTST) or Ultra High Temperature (UHT) milk pasteurization and standardization machinery,
- Production lines for spreadable, soft, semi hard and hard cheeses,
- Production lines for yogurt, drinkable yogurt (ayran), clotted cream, butter, milk powder, ice-cream, milk based desserts,
- Clean In Place (CIP) units.

#### **We commission:**

- High pressure piston pumps and Homogenizers,
- Emulsifiers and Inline Homogenizers,
- Centrifugal separators and decanters,
- Filling machines,

- Freezers and Ice-Cream Machines,
- Ceramic and Polymeric Membranes,
- Complete laboratory and utility equipment.

#### **Service Highlights:**

- We provide a full range of dairy processing solutions customized to the special needs and capacity requirements of our customers, whether they are small, medium sized or large operations.
- Each project we undertake is built on our customers' vision, demands, budget and future expansion plans.
- Whether you require a turnkey plant or a plug and play unit we offer the same commitment and quality.
- Our range of after sale services, periodic maintenance packages, spare parts and technical support is designed to ensure a high return on your investment.





# gemakfood



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Gemak establish turn-key lines, manufacture and commission process equipment and provide engineering and R&D solutions for practically any liquid food products such as fruit juice, fruit nectar, fruit flavoured drinks, carbonated drinks, soup, tomato products, baby food, fruit products, oil, egg, honey, sauces, beer and plant based milks.

#### **We Manufacture:**

- Holding and Process Tanks,
- High Temperature Short Time (HTST) and Ultra High Temperature (UHT) Pasteurization machines,
- Enzyme systems,
- Evaporation machines,
- Filtration machines,
- Concentration machines,
- Clean in Place (CIP) systems.

#### **We Commission:**

- Pressing machines,
- Clarification equipment,
- Separation equipment,
- Complete laboratory and utility equipment.

#### **Service Highlights:**

- We provide a full range of fluid food processing solutions customized to the special needs, capacity requirements and expansion plans of our customers.
  - Our engineers ensure that product loss is minimized using innovative engineering solutions and R&D technology.
  - Our range of after sale services, periodic maintenance packages, spare parts and technical support is designed to ensure a high return on your investment.
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# gemakpharma



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Gemak establish turn-key engineering solutions for the pharmaceutical industry, relying on its expertise in hygienic liquids.

**We provide solutions for:**

- Product transfer and dosing,
- Heat transfer,
- Storage,
- Transferring systems,
- Fermentation,
- Mechanical separation,
- Homogenization,
- Automation,
- Clean In Process (CIP) systems.

**Service Highlights:**

- Gemak design, manufacture/commission equipment for continuous processing of raw materials.
  
- Our capability to offer bespoke solutions ensures that we meet the complex and very specific process design requirements of our customers in the pharmaceuticals industry.
  
- Experience and capability to meet the precise requirements and manufacturing quality guidelines for the pharmaceuticals industry.







# gemakchem



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Gemak design, manufacture, engineer and establish liquid chemical processing plants.

Our systems are designed to comply with ATEX and PED standards to ensure maximum safety.

Gemak systems allow you to monitor and record and every single step of your process with our unit and plant based automation systems to meet Good Manufacturing Practice (GMP) requirements.

Our customized solutions designed by experts with many years of using the highest quality material and workmanship, ensure product loss and energy consumption is minimized.

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Gemak serves the energy industry with Alfa Laval and Grundfos equipment. We assemble non-food Alfa Laval plate heat exchangers and commission decanters and air units.

#### Alfa Laval plate heat exchangers:

- Prioritize heat transfer efficiency by improving the flow in the plate,
- Minimize energy consumption costs and environmental footprint,
- Are compact, space-saving equipment,
- Plate heat exchangers have a flexible, easy to service and maintain design,
- Can be used for heating, cooling, heat recovery, evaporation and condensation tasks,

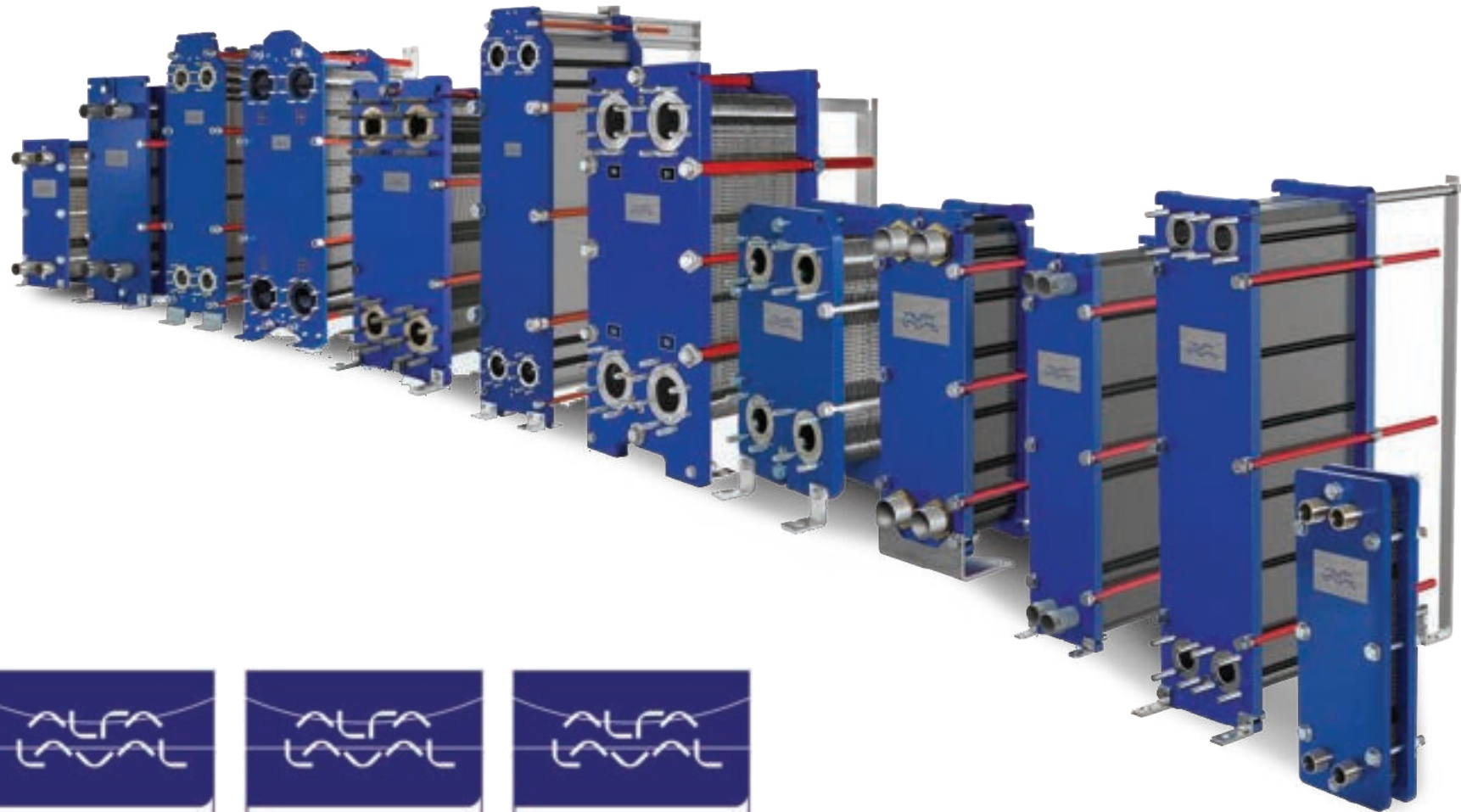
- Can be used for heavier processes such as heating, ventilation and air conditioning (HVAC), refrigeration, engine oil cooling chemical processes and power generation.

We commission Grundfos pumps and boosters, a global leader in pump solutions.

#### Grundfos pumps:

- Offer a unique opportunity to help improve the energy efficiency of water solutions,
- Produce and deliver quality solutions to water scarcity, mismanagement of energy and natural resources, lack of infrastructure and increasing CO<sup>2</sup> emissions.





# gemakr&d



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Gemak's Research, Development and Technology Center business unit gives utmost importance to developing value-added and sustainable technologies which turn into new products and processes. With over 35 years of practical experience in the market and a team of more than 30 part and full time researchers, the R&D business unit strives to combine high technology and high quality production techniques to improve machine productivity and enhance final product safety. In the past two years, our R&D team have 25 publications and have secured 5 patents.

Some of our Patented Technologies include:

- Scraped surface heat exchanger
- Milk and Cream Standardizer
- Ice Cream Mix Pasteurizer





# gemakcontrol



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Gemak designs optimum control systems for unit and plant based automation according to customers' needs.

Gemak strives to support customers in their journey to conforming to Industry 4.0 by offering solutions such as:

- recipe applications,
- process control,
- data collection and monitoring,
- machine control,
- Internet of Things (IoT) solutions,
- fully automated lights-out manufacturing with no human presence on site.

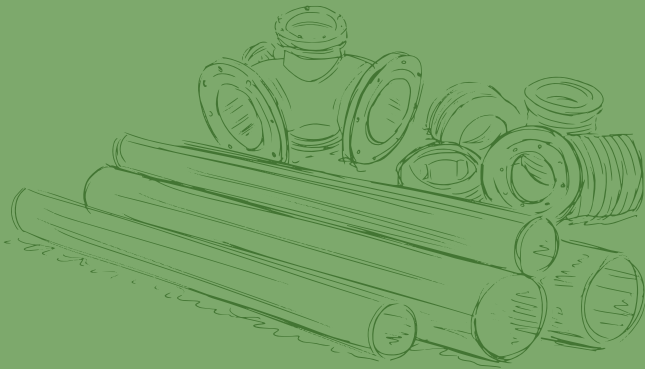
Gemak's Automation Services Department, together with our expert solution partners, develop and install customized automation projects which help our customers do more with less and reach higher levels of productivity with lower costs to stay ahead of the competition.







# gemakfix



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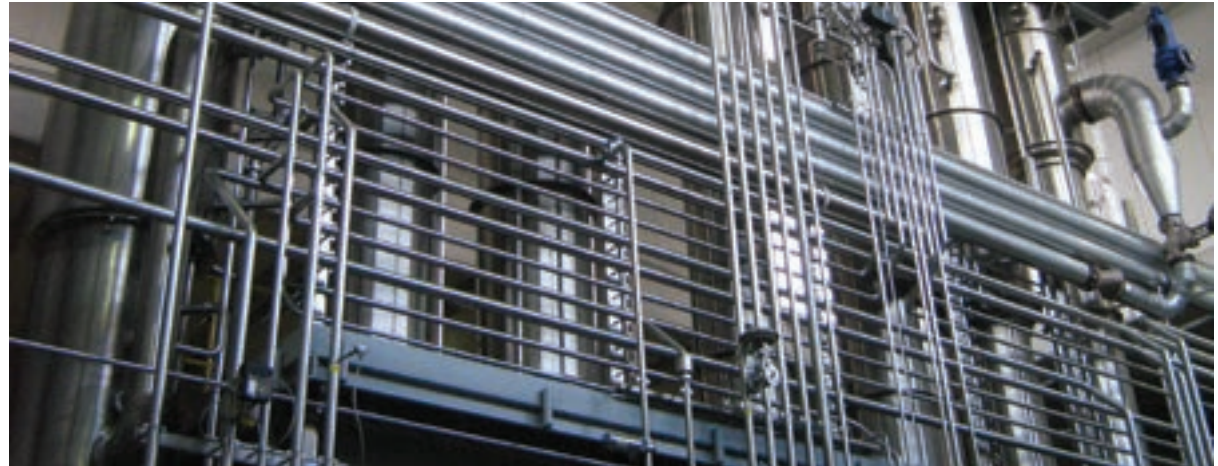
Gemak's dedicated and highly trained team works to ensure a quick yet thorough project installation and equipment assembly.

**We expertise in:**

- installation of machinery and equipment,
- providing initial start-up services,
- testing,
- training,
- logistical and operational support,
- steam, air, water and ice water piping and insulation and cladding,
- electrical cable tray, brackets and cable assembly,
- installation of ventilation and air-cooling units.

Our highly qualified engineers and project managers handle every detail of the installation or assembly to minimize the burden on our customer. Pipes, valves, fittings and insulation work are all done by our own technicians with years of experience. Our engineers monitor quality and compliance of the work throughout the process.

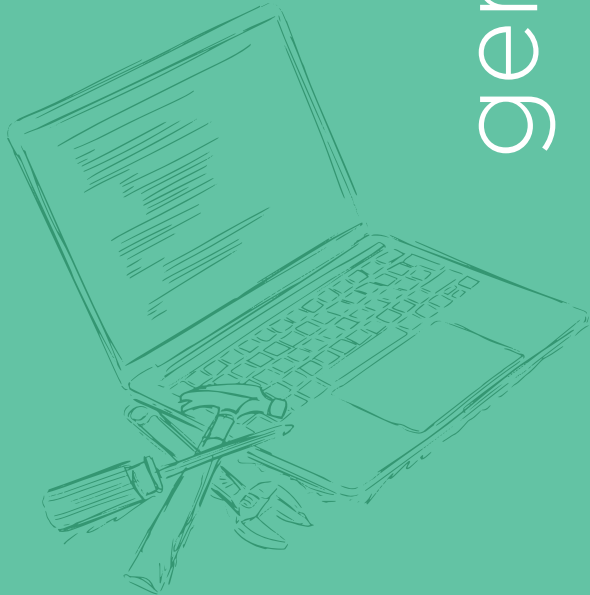
We provide all necessary technical training to the customer's staff and ensure the new installation is running smoothly and as expected before leaving the customer's premises.







# gemakservice



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## regular service, continuous gain!

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Gemak's dedicated after sales service team provides maintenance for your machinery. We strive to provide service within 24 hours to customers in Turkey and within 36 hours globally.

The design and engineering of our products ensure the highest standards of reliability and durability. To ensure longevity, we provide the best quality and professional service for our equipment.

Regular service is necessary for your equipment to function trouble-free with less energy consumption. Replacing any of the original spare parts with a part that does not meet

the necessary criteria could significantly affect equipment safety and performance. Using Gemak Original Spare Parts, technicians replace worn or malfunctioning parts as soon as possible to ensure your machine continues to operate with the quality and safety standards identified by Gemak.

Regular maintenance and using original spare parts maintains the performance and value of your equipment at an utmost level. Your Gemak Authorized Service will be pleased to respond to all your questions regarding the maintenance of your equipment and to schedule an appointment for their maintenance.

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## gemak service distinction

### Technical Superiority

The maintenance of your machines is always performed by expert engineers and technicians using specially designed repair tool sets.

### Expert Service Staff

The services department of our company consists of service engineers, technicians and skilled workers each specialized in their own field. Our team is always ready to help you 24 hours, 7 days a week for any questions and problems that you may have.

### Convenience

We are closely familiar with your Gemak equipment. Therefore, we offer you accurate services of repair and maintenance, spare parts and service guarantee packages from a single source with convenient prices.

### Flexibility

We offer a wide range of accessories and automation options to customize and personalize your Gemak equipment as your needs change.

### Accessibility

We are always by your side through Gemak Service. With the ability to remotely connect to your machine, a quick fix is only a call away.

### Maintenance Requirement Depending On The Age / Utilization Of The Machine

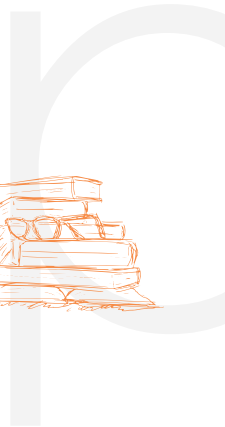
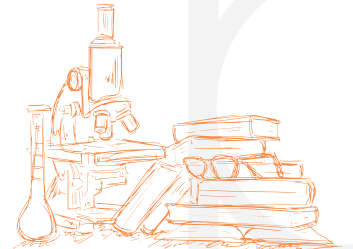
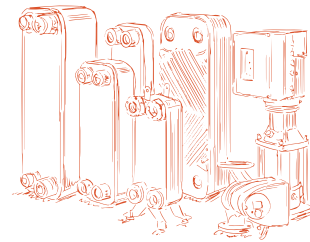
Your equipment may require more maintenance as its ages. We offer spare parts at extremely convenient prices along with repair and maintenance services. This keeps the costs under control and choose the best solution to meet the needs of your Gemak equipment.

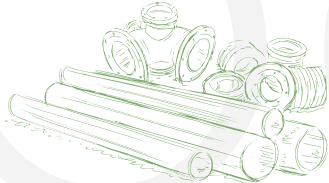
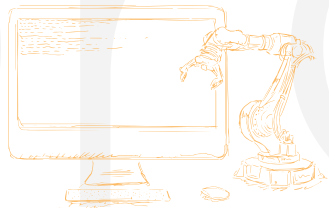
### Training

Gemak offers comprehensive training on our process, equipment and machinery. We provide detailed and easily comprehensible documents to our customers and machine operators on operation principles following installation.

### Procurement Of Spare Parts

- 30.000 unit of spare parts are kept in stock,
- Immediate delivery service from our stock,
- Electronic tracking of spare part from catalogue number,
- Electronic tracking of spare parts on customer and machine basis (series / lot),
- Spare part repair when necessary,
- Quick procurement process of spare parts.





# products

products



heat exchangers

## plate heat exchanger



**Capacity:** 500 - 60.000 lt/h in various capacities. Heat exchanger body frame is made of stainless steel and cut by using water jet without any heat treatment and polished with glass balls. Plates are ALFA LAVAL brand and made of special stainless steel ALLOY or titanium material. Plates may vary in properties of depth, angle, and thickness and the type of heating or cooling agent/ fluid. Gaskets are ALFA LAVAL and may be provided as Nitrile or EPDM. Design and calculations are made in accordance with fluid heating and cooling characteristics using ALFA LAVAL CAS program.

### Application Areas

- In Every Application Where Heating and Cooling Of Fluid Is Necessary.

heat exchangers

## tubular heat exchangers



**Capacity:** 100 lt/h-45.000 lt/h Made of AISI 304-316 stainless steel pipe bundles according to fluid feature as single or multi tubes. Calculations are made in accordance with fluid heating and cooling by using ALFA LAVAL CAS program. Pipe welding is made using TIG method. Inlet and outlets can be manufactured with unions, clamps or flanges. According to fluid characteristic, insulated with rock wool or polyurethane. Handles challenging process fluids including medium to higher viscosity products with large particulates.

### Application Areas

- In Heating and Cooling Applications,
- Heat Recovery,
- Pasteurization,
- CIP Applications,
- UHT, Pasteurizer; Hot Water Preparation Unit



heat exchangers

## scraped surface heat exchangers

**Capacity:** 500 - 10.000 lt/h

Scraped surface heat exchangers are designed as vertical, horizontal, single or multi tube in accordance with product feature and temperature and are made of AISI 304 or AISI 316L stainless steel. Hot water preparation system or ice water system can be integrated as option according to application of heating or cooling. Scraper blades are made of food grade material. Sealing is maintained by mechanical seals.

### Application Areas

- Caramel, Soft Candies,
- Hazelnut, Peanut Butter,
- Pudding,
- Sauces, Fruit,
- Egg, Cheese,
- Cream,
- Cheese, Marshmallow,
- Starch, Gelatin,
- Chocolate.



pasteurizer

## plate type pasteurizer



Available in capacities ranging from 500 to 60,000 l/h in accordance with customer needs. The Plated Pasteurizer is pre-assembled and factory-tested with water to ensure fast installation and commissioning for reliable performance and high ROI over a long service life. Mounted on a AISI 304 stainless steel frame. ALFA LAVAL plates are used and they are made of 316 ALLOY or Titanium. They are in form of herringbone and patented chocolate pattern. Clip on gaskets are used. Press plates are made of AISI 304 stainless steel. Balance tanks are made with 100, 200, 300, 500 lt capacities. AISI 316 balance pump included. Flow equipment are supplied from ALFA LAVAL and TIG welding method is used in 11850 norm. Alfa Laval CB type brazed heat exchangers are used in hot water preparation unit. Control and automation panels are made of SIEMENS equipment and control system can be provided as PID or PLC control.

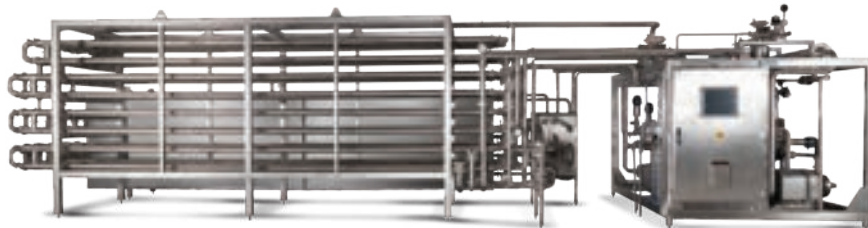
<b>Capacity</b>	: 500 lt/h-60.000 lt/h
<b>Inlet Temperature</b>	: +4°C/+40°C
<b>Separator Outlet</b>	: +45°C/+55°C
<b>Homogenizer Outlet</b>	: +65°/+70°C
<b>Pasteurization Temperature</b>	: +67°C/+110°C
<b>Incubation Temperature</b>	: +32°C/+45°C
<b>Storage Temperature</b>	: +4°C

### Application Areas

- Dairy Industry,
- Fruit Juice,
- Flavored and Carbonated Beverages,
- Honey,
- Molasses,
- Cream,
- Ice Cream Mix,
- Brine,
- Margarine,
- Egg,
- Ketchup,
- Mayonnaise,
- Sugar Syrup,
- Water,
- Fermented Carrot Juice.

pasteurizer

## tubular type pasteurizer



Manufactured in accordance with customer demands and type of fluid. Mounted on a AISI 304 stainless steel frame. Pipes are made of AISI 316 stainless steel. Press plates are made of AISI 304 stainless steel. Balance tanks are made with 100, 200, 300, 500 lt capacities. AISI 316 balance pump included. Flow equipment are supplied from ALFA LAVAL and TIG welding method is used in 11850 norm. Alfa Laval CB heat exchangers or tubular heat exchangers are used in hot water preparation unit. Control and electrical panels are made of SIEMENS equipment and control system can be provided with PID or PLC control.

- Modular system for complete flexibility
- Simply connect and run
- Automatic control
- Simple low-cost maintenance
- Integration with existing control system
- Skid-mounted and small footprint for flexibility in limited space
- Short pay-back time and high ROI over a long service life

<b>Capacity</b>	: 500 lt/h-60.000 lt/h
<b>Inlet Temperature</b>	: +4°C/+40°C
<b>Separator Outlet</b>	: +45°C/+55°C
<b>Homogenizer Outlet</b>	: +65°C/+70°C
<b>Pasteurization Temperature</b>	: +67°C/+110°C
<b>Incubation Temperature</b>	: +32°C/+45°C
<b>Storage Temperature</b>	: +4°C

### Application Areas

- Dairy Industry,
- Fruit Juice,
- Flavored and Carbonated Beverages,
- Honey,
- Molasses,
- Cream,
- Ice Cream Mix,
- Brine,
- Margarine,
- Egg,
- Ketchup,
- Mayonnaise,
- Sugar Syrup,
- Water,
- Fermented Carrot Juice.



deaerators

## deaerators

**Capacity:** 500 - 60.000 lt/h

It is used for removing undesired odors, gas and air in fluids under vacuum. The plant operates continuously and is usually the last unit in a production line. Unit is designed to prevent oxidative modifications such as discoloration, alteration in flavor and aroma occurring especially in fat and oil. It ensures a regular glossy product surface and enhances long-time stability reached by deaeration. Deaerator is composed of deaeration tank, product pump that can work under vacuum, vacuum pump, tubular or plated type condensation heat exchanger, PT100, vacuum meter, regulation valves and electromagnetic flowmeter. The automation system of the deaerator can be provided with PID or PLC control.

### Application Areas

- Dairy Industry,
- Cream,
- Fruit Juice,
- Honey.



standardizer

## milk & cream standardization unit

**Capacity :** 3.000 lt/h - 45.000 lt/h

GEMAK automatic in-line standardization units are for standardization of the fat, protein, total solids and solids-non-fat in milk and cream directly after a cream separator. It can work continuously with pasteurizer, cream separator and homogenizer synchronically. The fat content can be adjusted according to the requested value of the recipe. The control of the unit can be done separately with the unit's own control cabinet or it can be controlled via pasteurizer's control unit. High sensitivity recipe application by use of Siemens PLC, proportional valve, Mass and Electromagnetic Flowmeters. System is equipped with stainless steel control panel including Siemens PLC.

### Application Areas

- Dairy Industry,
- UHT Milk,
- Esl Milk.

evaporators

## plate type evaporators

**Capacity:** 500 lt/h-7.500 lt/h

Evaporates the water from liquid. Designed as 2 graded for easy operation, energy saving and suitable for CIP cleaning. After evaporator completed the regime, water molecules inside the milk is evaporated in single pass and milk is concentrated. Evaporator can work for 20 hour in continuous production. Heat exchanger body frames are made of full AISI 304 Plates and gaskets are original ALFA LAVAL. Milk pumps, expansion vessels, pipe, valve and fittings are made of AISI 304 stainless steel. Evaporator group is mounted on a stainless steel platform. Electric, electronic devices and equipment are mounted in stainless steel panel. Milk inlet temperature may vary: 4 - 25°C 60 kg vapor is used to remove 100 kg water automatic brix controlled.

### Application Areas

- Milk,
- Whey,
- Fruit Juice.



evaporators

## falling film type evaporators



**Capacity:** 3.000 lt/h-40.000 lt/h Evaporates the water inside the liquid. Designed for easy operation, energy saving and suitable for CIP cleaning After evaporator completed the regime, water molecules inside the milk is evaporated in single pass and milk is concentrated in single pass, evaporator can work for 20 hour continuous production System can be provided in numbers of 2-3-5 stage and with thermo compressor Calendrias are made of AISI 304- 316 stainless steel. Pumps are ALFA LAVAL. Product pump, expansion vessels, pipes, valves and fittings are made of AISI 304-316 stainless steel Evaporator group is mounted on a stainless steel platform Group includes a ladder and service platform. Electronic devices and equipment is mounted in stainless steel panel. Milk inlet temperature may vary between 4-25 °C 60 kg vapor is consumed to remove 100 kg water for evaporation. Automatically brix is controlled.

### Application Areas

- Milk,
- Whey,
- Fruit Juice.



evaporators

## forced circulation type evaporators

**Capacity:** 300 kg/h-9.000 kg/h

System is designed as single pass, thermo-compressor, integrated separator in one body, semi barometric condenser and fully automatic. Made of AISI 304-316 stainless steel with vertical shape. System is controlled by PLC from single electrical panel made of stainless steel. Product is transferred when the requested concentration has been reached. System is ready to use on a stainless steel frame with pump piping, steam inlet, control panel. Piping is done in accordance with DN 11850 norm using TIG welding method.

### Application Areas

- Dairy Industry,
- Fruit Puree,
- Whey,
- Tomato Puree.
- Fruit Juice,

drying system

## spray dryer

**Capacity:** 50 - 2.000kg/h

Whey, milk powder, detergent powder drying systems are designed and produced according to the request of the customer. Depending on the product, the system can be equipped with rotary atomizer or nozzle atomizer. Special designed air distribution system is provided as optional to increase the yield The system may include instant product production unit, internal and external fluid beds, lecitation. Also special filtered air intake unit, fire protection unit and heat recovery unit can be added to the dryer system upon request.

### Application Areas

- Dairy Industry,
- Chemical Industry,
- Whey,
- Detergents.





stainless steel tanks

## silos tanks

**Capacity:** 100 It to 250.000 It

Product wetted parts are made of AISI 304-316 stainless steel. Can be insulated with polyurethane or rock wool. Top and side mounted agitators can be mounted in various forms as optional. It is manufactured by TIG or automatic plasma welding. 2B finish for stainless steel material according to food application and sanitary rules. Manufactured with manhole cover or openable lid. Welding points are tested by %100 penetrant tests. Mechanical, Digital Thermometer, Pressure Transmitter, Load cells, pH probes, level sensors and other instruments can be added as optional.

### Application Areas

- Dairy Industry,
- Liquid Foods,
- Olive Oil,
- Alkali, Acid,
- Water,
- Fruit Juice.

stainless steel tanks

## storage tanks



**Volume:** 100 It - 250.000 It

Made of AISI 304 or AISI316 stainless steel material, Atmospheric or pressurized, vertical or horizontal, with or without legs, or with lugs on frame. Top or side agitator can be mounted as optional. With adjustable leg design. It is manufactured by TIG or automatic plasma welding. 2B finish for stainless steel material according to food application and sanitary rules. Manufactured with manhole cover or openable lid. Welding points are tested by %100 penetrant tests. Mechanical, Digital Thermometer, Pressure Transmitter, Load cells, pH probes, level sensors and other instruments can be added as optional.

### Application Areas

- Dairy Industry,
- Liquid Foods,
- Olive Oil,
- Alkali, Acid,
- Water,
- Fruit Juice.

stainless steel tanks

## insulated storage tanks



**Capacity:** 100 It - 250.000 It

Product wetted parts are made of AISI 304-316 stainless steel. Insulated with polyurethane or rock wool. Top and side mounted agitators can be mounted in various forms as optional. Manufactured by TIG or automatic plasma welding. 2B finish for stainless steel material according to food application and sanitary standards. Manufactured with manhole cover or openable lid. Welding points are tested by %100 penetrant tests. Mechanical, Digital Thermometer, Pressure Transmitter, Load cells, pH probes, level sensors and other instruments can be added as optional.

### Application Areas

- Dairy Industry,
- Liquid Foods,
- Olive Oil,
- Alkali, Acid,
- Water,
- Fruit Juice.



stainless steel tanks

## process tanks



**Capacity:** 100 lt-20.000 lt  
 Product wetted parts are made of AISI 304-316 stainless steel. Heating or cooling jacket applications are done in various forms as dimple, roll bond, U serpentine. Heating and Cooling Jacket connections can be insulated with polyurethane or rock wool. Top or side mounted agitators can be mounted in various forms as optional. It is manufactured by TIG or automatic Plasma welding. 2B finish for stainless steel material according to food application and sanitary rules. Manufactured with manhole cover or openable lid. Welding points are %100 penetrant tested. Mechanical, Digital Thermometer, Pressure Transmitter, Load cells, pH probes, level sensors and other instruments can be added as optional.

### Application Areas

- Dairy Industry,
- Liquid Food,
- Yoghurt,
- Cream,
- Chemical Industry,
- Fruit Juice,
- Pharmaceutical Industry

stainless steel tanks

## ultraclean/aseptic tank



**Capacity:** 100 lt - 20.000 lt  
 Product wetted parts are made of AISI 316 stainless steel. Agitator in various forms alternatively positioned at the top and side surfaces of the tank. Manufactured by applying TIG and plasma welding techniques Produced under UC Aseptic Tank Standards. Welding points are %100 penetrant tested. PED certificate in ASME and DIN norms is supplied upon request.

### Application Areas

- Dairy Industry,
- Chemical Industry,
- Pharmaceutical Industry,

stainless steel tanks

## mobile tanks

**Capacity:** 70 lt-1.000 lt  
 Product wetted parts are made of AISI 304-316 stainless steel. It is manufactured by TIG or automatic plasma welding. 2B finish for stainless steel material according to food application and sanitary rules Heating or cooling jacket and insulation applications are optional. Aseptic model is available. PED certificate in ASME and DIN norms is supplied upon request.



### Application Areas

- Dairy Industry,
- Chemical Industry,
- Pharmaceutical Industry,



stainless steel tanks  
**transportation tankers**



**Capacity:** 200 lt-20.000 lt

Made of AISI 304 stainless steel and insulated. Can be produced as adjacent or compartment forms according to type and capacity of vehicle. Each section is equipped with CIP head, manhole cover, air vent, filling and discharge pipes, platform and ladder. Tank connection frame is completely made of AISI 304 stainless steel. It is manufactured by TIG or automatic Plasma welding. 2B finish for stainless steel material according to food application and sanitary regulations.

**Application Areas**

- Dairy Industry,
- Liquid Food,
- Fruit Juice,
- Cream,
- Whey,
- Chocolate,
- Liquid Sugar,
- Pharmaceutical Industry,
- Potable and Process Water.



stainless steel pumps  
**centrifugal and self priming pumps**

**Capacity** : 5.000 lt/h-35.000 lt/h  
**Total Head** : 1 bar-3.2 bar  
**Inlet Diameter** : DN32-DN65  
**Outlet Diameter** : DN32-DN50

High efficiency, easy maintenance, special design for protection of milk texture. Product wetted parts are made of AISI 316 stainless steel. Coupling connection between electric motor and rotor. Sanitary design for food applications. Robust structure. Electric motor Cover, adjustable legs. Self-priming centrifugal pump is specially designed for pumping liquids containing air or gas without losing its pumping ability.

**Application Areas**

- Dairy Industry,
- Fruit Juice,
- Liquid Foods,
- Oil,
- Drinking Water,
- Tap Water,
- Chemistry,
- Pharmaceutical Industry.

stainless steel products  
**milk reception unit**



**Capacity:** 3.000 lt/h -35.000 lt/h

Product wetted parts are made of AISI 304-316 stainless steel. It is manufactured by TIG or automatic Plasma welding of certificated, 2B finish stainless steel material according to food application and sanitary rules. 100% penetrant tests are applied to welded parts. System includes intake/suction pump, filter, mechanical deaerator, electromagnetic flowmeter with %0,3 accuracy. Flow sensor is PLC controlled. Control panel is manufactured as set on stainless steel skid. It can be provided with it temperature sensor, automatic sampling valve and printer as optional.

**Application Areas**

- Milk,
- Liquid Food,
- Fruit Juice,
- Whey.

vacuum cooker

## pudding, jelly, marmalade, dough preparation system



System is specially designed for production of different types of products. Different types of mixing solutions are possible with wide range of scraping mixers and mixing heads. Fully automated system is equipped with PLC control unit. System can optionally include a high shear mixer for optimum emulsification of fat and rehydration of milk powders. High shear mixer for homogenisation and lump free dispersion of the ingredients. Designed and manufactured according to EHEDG guidelines & principles. System can optionally include a high shear mixer for optimum emulsification of fat and rehydration of milk powders. High shear mixer for homogenization and lump free dispersion of the ingredients. System can be designed for cooking atmospherically, under pressure, under vacuum, post-vacuuming or cooling. Unit is equipped with Alfa-Laval ingredient infeed valves. Mounted on a robust frame equipped with operator platform with ladder. Fully CIP-able design. Designed and manufactured according to EHEDG guidelines&principles.

### Application Areas

- Dairy Industry,
- Food Industry,
- Cake,
- Cream,
- Pudding,
- Mayonnaise,
- Sauces,
- Jam,
- Marmelade

vacuum cooker

## jam, jelly, caramel, marmalade pre-mixing, cooking and holding unit

The system is composed of preparation, cooker, holder and cooling units. According to the recipe, the products are automatically received and mixed. The prepared mix is cooked under vacuum, the brix and the temperature control is done and transferred to the holder/cooling section. Mix is cooled down to the set temperature and transferred to the storage tanks. Fully automated system is equipped with PLC control unit. Low pressure steam in the jacketed bottom of the vessel is used to virtually eliminate any risk of overheating of the hydrocolloids (gelatin, pectin, gum, arabic corragen, starch, etc.) Designed and manufactured according to EHEDG guidelines & principles. Premix unit is designed for precise metering of raw ingredients prior to cooking.

### Application Areas

- Dairy Industry,
- Food Industry,
- Cake,
- Cream,
- Pudding,
- Mayonnaise,
- Sauces,
- Jam,
- Marmelade



vacuum cooker

## jam, jelly, caramel, marmalade pre-mixing, cooking and holding unit

Unit includes preparation, cooking and holding-cooling parts. Products are weighed, transferred and mixed according to recipe in the preparation stage. Prepared mix is transferred to the tank underneath the preparation unit. Mix is cooked under pressure, brix and temperature is controlled, if the mix is reached to desired condition, transferred to holding-cooling tank underneath this section. Products are cooled to desired temperature and then transferred to storage tank. System works with full automation. Mounted on single frame which made of AISI 304-316L stainless steel. Designed and manufactured according to EHEDG guidelines & principles. Premix unit is designed for precise metering of raw ingredients prior to cooking.

### Application Areas

- Jam, Marmalade, Similar Products,
- Marshmallow,
- Invert Syrup,
- Caramel,
- Puddings.





process automation  
**valve clusters**

The valve matrix can be designed and manufactured according to the production process. It provides full functionality and flexibility in production while minimizing product loss. The Alfa Laval Unique Mixproof valves enable the simultaneous flow of two products or fluids through the same valve without risk of cross-contamination. Their exceptional spillage free operation is compliant with most hygienic standards.

**Kullanım Alanları**

- Dairy Industry,
- Food Industry,
- Chemical Industry,
- Pharmaceutical Industry,
- Industrial Plants.



cleaning systems  
**cip (clean-in-place) units**

**Capacity:** 10.000 lt/h - 60.000 lt/h

The CIP unit is an advanced automatic on-site cleaning system used to clean process equipment such as tanks, filling machines, pasteurizers, sanitary pipes, plate heat exchangers and other process equipment. Fully automatic CIP units automatically control cleaning time, detergent temperature, flow and concentration.

The system is equipped with temperature, pressure, conductivity sensors and flow meter. It is produced with stainless steel PLC controlled electrical panel and the system is controlled automatically with these sensors. Mobile CIP units are also available.

**Application Areas**

- Dairy Industry,
- Liquid Food,
- Industrial Plants
- Chemical Industry
- Pharmaceutical Industry,
- Potable and Process Water,
- Fruit Juice.



stainless steel products  
**fat melter unit**

**Kapasite :** 100kg/h - 8.000 kg/h

**Hacim :** 200 lt. - 6.000 lt.

The stainless steel fat-melting unit is designed for melting and keeping in a liquid state of blocks, chunks, and granules of butter, margarine, palm oil, cocoa butter, chocolate butter, cosmetic oils, etc

The unit has pneumatic doors, heat controlled detachable grill, melted fat storage space, heat control, 2 groups of hot water preparation units, and PLC software system. It has a hygienic design that allows CIP cleaning.

**Kullanım Alanları**

- Food Industry,
- Chemical Industry,
- Cosmetic Industry,
- Pharmaceutical Industry.

mixing systems

## ribbon blender



**Capacity:** 300lt - 6.000lt

It is used to mix powder/powder, powder/liquid, liquid/liquid products homogeneously. It mixes the products with the special designed mixer without damaging the structure of the product. Blender is made of AISI 304 or AISI 316 stainless steel.

### Application Areas

- Dairy Industry,
- Labne Cheese
- Food Industry,
- Fruit Yoghurt



mixing systems

## ice-cream mix preparation unit (htst)

**Capacity:** 600 Lt/h - 10.000 Lt/h

HTST (high temperature/short time) ice-cream mix preparation units are skid mounted and ideal for preparation of high quality ice-cream mixture. It is designed to include all the process equipment that is necessary for the preparation of ice cream mix. With the plug and play concept, HTST units are ready to start-up after connection to the utilities. This system includes hot water preparation unit, ice-cream mix preparation tanks, circulation pump, and powder mixer, feeding pump, line filter, CIP pump, pasteurization unit and homogenizer.

### Application Areas

- Dairy Industry,
- Food Industry.

mixing systems

## liquid - powder mixers

**Capacity:** 20 % powder in single pass

4.000 kg/h powder dissolving capacity in milk powder applications Motor Power: 4 kW and 7.5 kW. Feeding Hopper Capacity: 100 lt It can make a homogenous mixture by dissolving and mixing liquid and powder for food and fermented products. Made of AISI 304-316 stainless steel plates and profiles. Made by using TIG welding method applicable to DIN11850 norm.

### Application Areas

- For Mixing Liquid And Powders,
- Milk Powder,
- Whey Powder,
- Sugar,
- Cacao,
- Pectin.







stainless steel products  
**bunker**

Manufactured from AISI 304- 316 quality stainless steel with 1-4 compartment alternatives. Bunkers are composed of cylindrical or prismatic top and conical bottom side. According to the characteristics of the assembly area, bunkers can be manufactured as brazed or screwed connection types.

**Kullanım Alanları**

- Food Industry,
- Chemical Industry,
- Civil Explosives,
- Industrial Plants.



stainless steel products  
**conveyor**

Belt conveyor, roller conveyor, return-belt conveyor, modular conveyor, chain conveyor and pan conveyor are designed and manufactured according the requirements of the plants.

**Application Areas**

- Food Industry,
- Pharmaceutical Industry,
- Chem Industry,
- Metal Industry.



liquid and milk cooling systems  
**ice-water unit**

**Capacity:** 5.000 lt/h-50.000  
 lt/h Water tank capacity

**Cooling Capacity:** 100.000 kcal/day-2.000.000 kcal/day Tank can be manufactured monoblock or split on demand. Cooling group and circulation pump are mounted on a single skid. Ethylene glycol is cooled down to -5°C and ethylene glycol is circulated down jacketed pipes that are placed inside the tank and ice is obtained around the jacketed pipes. ALFA LAVAL AC plated heat exchanger is used for heat recovery. R407C-404 gas are used as cooling agent. Compressor group is package type and placed in cabin. Ice water tank insulation is provided with 50 mm foam board and covered by +60 mm polyurethane/ polyurethane panel. AISI 304 stainless steel jacketed pipes (serpentines) are used for ice production. Tank is made of AISI 304 stainless steel. Saving great amount of energy as it does not include agitator.

**Kullanım Alanları**

- Cold Rooms and Cold Chain Warehouses,
- Dairy Industry,
- Meat Industry,
- Food Industry,
- Frozen Food Industry,
- Pharmaceutical Industry.





liquid and milk cooling systems

## grit arrestor & water softening

**Capacity:** 100lt/h-150.000 lt/h

Made of AISI 316 stainless steel body or HST, FRP body. To remove, organismal compounds that produce undesired odors and taste, to remove chlorine compounds, detergent, industrial wastes and asbestos from water utilized by absorption feature of active carbon. Iron and manganese levels in water can be increased up to 5 ppm using a special mineral and hydrogen sulfite, methane, free carbondioxide and organic wastes in high concentrations are removed from water. Water softening system is designed with maximum flexibility and higher efficiency to fulfill all requirements and can be provide as single tank system, tandem and multi tank with 40 different models and 3 different control systems. Works with ion exchange method. Can provide automatic regeneration from 1 day to 12 days in intended periods. Hardness control and regeneration time can be adjusted with flow rate and time.

### Application Areas

- Any Kind of Processing Plant.

flowell waste water systems

## floor drains

Available in AISI 304-316 stainless steel. Simple design for optimum hygiene. Shortest maintenance and cleaning time. Suitable for sanitary applications like food industry plants. Various types for different applications and usage areas. Fully glass blasted. Available for ceramic floor tiles. Models for heavy and light traffic loads. Insulated models provides sanitary by retain gutter gas to environment.

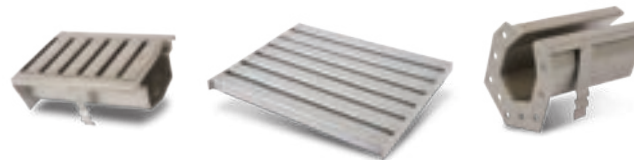
### Application Areas

- Food Industry,
- Pharm. Industry,
- Meat Industry,
- Buildings,
- Hotels,
- Chemical Ind.,
- Dairy Industry,
- Industrial Plants,
- Offices,
- Hospitals.



flowell waste water systems

## gutter channels



Available in AISI 304-316 stainless steel. Simple design for optimum hygiene. Shortest maintenance and cleaning time. Sanitary for food plants. Feasible dimension and types for your needs. Fully glass blasted. Available for ceramic floor tiles. Flowell gutter series designed and manufactured for your request by our specialized engineers.

### Application Areas

- Food Industry,
- Industrial Plants,
- Chemical Industry,
- Buildings,
- Pharmaceutical Industry,
- Offices,
- Dairy Industry,
- Hotels,
- Meat Industry,
- Hospitals.

cold room storage and cooling systems

## establishing turn-key systems



In every phase of project and mechanical installation processes, we provide service with our expert engineers and technical staff. We start the project with field survey on site of cold stores where it will be located, and then entering collected data to digital media, determining the cooling capacity using CAD programs, detailing the projects and cold store installation is submitted in working condition to customer as turn-key.

### Application Areas

- Industrial Plants,
- Dairy Industry,
- Food Industry.

alfa laval products

## brazed heat exchanger



**Capacity:** between 0,5-600 kW.

Compact and durable design with consistently high quality. Equalancer system provides a substantial saving in heat transfer surface compared to BHEs with traditional distribution system. Cost efficient, space savings due to the compact design of BHEs compared to shell-and-tube heat exchangers. Every BHE is pressured and leak is tested before delivery, ensuring top quality products. First-class manufacturing facilities of ALFA LAVAL, global presence and high product availability. Pressure vessel codes are available as standard.

### Application Areas

- Hydraulic Oil Cooling,
- Heating/Cooling Systems,
- Heating/Cooling Systems, Which Have Corrosion Risk



alfa laval products

## plate heat exchanger

**Capacity:** 0,5m<sup>3</sup>/h - 2.000.000 m<sup>3</sup>/h.

Wide range of heating and cooling duties. DN25-DN350 diameter range facilities heat exchangers Between 6 bar- 40 bar Frame pressure category. Plate pressure depths may vary according to the applications More efficiency with less m<sup>2</sup> by ALFA LAVAL patented plates design. Long-life gasket equipment has full protection for leaking by its geometry and chemical structure. ALFA LAVAL patented chocolate pattern on the plates ensures the fluids to reach to most far corners through the channels and the heat transfer surface of the plate to be used at maximum level.

### Application Areas

- Water Heating,
- Cooling,
- Centralized Building Heating, • Oil Cooling,
- Heating Recovery Systems, • Food Industry,
- Pharmaceutical Sector,
- Industrial Plants,
- Chemical Sector,
- Marine Sector,
- Hvac.

alfa laval products

## lobe pumps

**Capacity** : 100 lt/h-20.000 lt/h

**Total Head** : 1 bar-8 bar

**Inlet Diameter** : DN25-DN80

**Outlet Diameter** : DN25-DN80

High efficiency, easy maintenance, special design for protection of milk texture. Product wetted parts are made of AISI 316 stainless steel. Adapter connection between electric motor and rotor. Sanitary design for food applications. Robust structure. AISI 304 stainless steel electric motor cover, Adjustable legs.



### Application Areas

- Dairy Industry,
- Fruit Juice,
- Liquid Foods,
- Chemistry Industry
- Pharmaceutical Industry.

alfa laval products

## centrifugal pump

**Capacity :** Between 0,5m<sup>3</sup>/h- 230m<sup>3</sup>/h.

**Maximum head:** 190 mSS.

The SolidC centrifugal pump is a standard duty pump for basic transport duties in hygienic applications. It provides reliable, low-maintenance operation. With its hygienic design, cost effective operation and quick, easy maintenance, the SolidC offers excellent value for money. For more demanding duties, ALFA LAVAL offers the premium LKH centrifugal pump. The LKH Prime is a highly efficient self-priming pump, which meets the requirements of hygienic applications. The ability to evacuate air from the suction pipe combined with a low noise level and high pumping efficiency makes the LKH Prime ideal for tank emptying and CIP return applications. With verified effective CIP cleanability, LKH Prime can be used as a product pump as well.



### Application Areas

- Dairy Industry,
- Fruit Juice,
- Liquid Foods,
- Chemistry Industry
- Pharmaceutical Industry.

alfa laval products

## twin screw pump



Designed for process flexibility, the Alfa Laval Twin Screw Pump is built on a robust, reliable platform that meets stringent hygienic standards. It is capable of handling both product transfer and Cleaning-in-Place (CIP). Its low pulsation characteristics and excellent solids handling capability reduce the risk of product damage, thereby improving product quality. Maintenance is simplified and process uptime increased. Designed for handling sensitive, abrasive and high and low viscosity fluids, the Alfa Laval Twin Screw Pump is ideal for use in hygienic applications in the dairy, food, beverage and personal care industries. Its quiet, virtually pulse-free, smooth and gentle operation makes the pump an excellent choice for handling sensitive products.

### Application Areas

- Particle Products,
- Cheese Curd,
- High Viscosity Products,
- Foaming Products.

alfa laval products

## membrane systems

ALFA LAVAL sanitary membrane housing, appropriately designed and manufactured with snug spiral filtration elements. ALFA LAVAL clamp fittings are designed to operate at maximum working pressures of up to 64 bar at 80 °C. Due to totally fault free and high tolerance production, the housings have low energy consumption and absolute minimum bypass, microfiltration, ultrafiltration flow qualifications. Microfiltration, ultrafiltration, nanofiltration and reverse osmosis lines can be designed.

alfa laval products

## hygienic flow equipment

ALFA LAVAL supplies wide range of pipe and fittings equipment with maximum hygiene which uses for connection of equipment and lines where sanitary is essential. Provides dimension standards of DIN 11850, ISO 2037, BS 4825, JIS G 3447 and ASME. Matt, raw, bright and polished surface endings, Ra <0.8-1.6 Qm hardness.



### Application Areas

- Food Industry,
- Chemical Industry,
- Dairy Industry,
- Pharmaceutical Industry.



### Application Areas

- Casein Standardization.
- Removal of Bacteria.
- Using Whey Protein Concentrate,
- Partial Demineralization,
- Water Decomposition,
- All Concentration Processes.

bertoli products

## homogenizers



### Capacities :

**Michelangelo series** : 25-400 bar, 3-15kW, 130-3200 lt/h

**Rafaello series** : 25-400bar, 2-132kW, 2000-21.500 lt/h

**Leonardo series** : 25-400bar, 30-400kW, 6.100-70.400 lt/h

### R&D Homogenizers :

**Atomo serie** : 3kW, 20 lt/h, 600-2000bar

**Molecola serie** : 3kW, 120 lt/h, 600-1200bar

**Quark serie** : 3kW, 40-130 lt/h, 25-400bar

**Mago serie** : 3kW, 4-130 lt/h, 25-400 bar

Complete range for high pressure homogenizers for various industries and R&D centers.

### Application Areas

- Food Industry,
- Chemical Industry,
- Pharmaceutical Industry,
- Dairy Industry,
- Meat Industry.

andritz products

## cream separator



Bowl is manufactured from duplex and super duplex special stainless steel durable to mechanical stress and corrosion; other parts that are in contact with product are manufactured from AISI 304 stainless steel. The study of optimum geometrical features, applied to liquid / liquid and solid/ liquid centrifugal separation, has made it possible to obtain large-volume bowls and sludge chambers, so that the interval between one sludge evacuation and the next may be increased, thus reducing the number of discharges per unit of time. The main elements of the bowls, made of special stainless steel, are obtained by press-forging, all in one piece. Each of these components is subjected to accurate mechanical tests and laboratory examinations such as ultrasound controls and micrographic examinations. Efficiency <math>< \%0,054.</math>

**Manuel Mode** : Flowrate: 1.500 lt/h-7.500 lt/h

**Gear Drive Model** : Flowrate: 5.000 lt/h-30.000 lt/h

**Belt Drive Model** : Flowrate: 1.500 lt/h - 55.000 lt/h

### Application Areas

- Dairy Industry,
- Whey.

andritz products

## clarificator



Bowl is manufactured from duplex and super duplex special stainless steel durable to mechanical stress and corrosion; other parts that are in contact with product are manufactured from AISI 304 stainless steel. The study of optimum geometrical features, applied to liquid / liquid and solid/liquid centrifugal separation, has made it possible to obtain large-volume bowls and sludge chambers, so that the interval between one sludge evacuation and the next may be increased, thus reducing the number of discharges per unit of time. The main elements of the bowls, made of special stainless steel, are obtained by press-forging, all in one piece. Each of these components is subjected to accurate mechanical tests and laboratory examinations such as ultrasound controls and micrographic examinations.

**Manuel Mode** : Flowrate: 1.500 lt/h-9.000 lt/h

**Gear Drive Model** : Flowrate: 7.500 lt/h-30.000 lt/h

**Belt Drive Model** : Flowrate: 1.500 lt/h - 70.000 lt/h

### Application Areas

- Dairy Industry,
- Food Industry,
- Fruit Juice,
- Egg,
- Oil,
- Fermented Products,
- Beer.



andritz products

## bactafuga separator



Two models are available: Belt Drive and Gear Drive Separates out 99-99,5 % bacteria of milk. The unit is suitable for automatic CIP. It is mounted on stainless steel frame and includes PLC controlled stainless steel panel.

**Gear Drive Model : Flowrate:** 4.000 lt/h-25.000 lt/h  
**Belt Drive Model : Flowrate:** 4.000 lt/h-40.000 lt/h

### Application Areas

- Milk.

andritz products

## beverage separator



### Application Areas

- Purification of Fermented Drinks,
- To Decrease Ntu Degree in Fruit Juice /
- Fruit Juice Production,
- Clarification,
- Purification,
- Fruit Peel Oil.

**Flowrate:** 7.500lt/h-90.000lt/h

Two Models Are Available: Belt Drive and Gear Drive Bowl is manufactured from duplex and super duplex special stainless steel durable to mechanical stress and corrosion; other parts that are in contact with product are manufactured from AISI 304 stainless steel. The study of optimum geometrical features, applied to liquid/liquid and solid/liquid centrifugal separation, has made it possible to obtain large-volume bowls and sludge chambers, so that the interval between one sludge evacuation and the next may be increased, thus reducing the number of discharges per unit of time. The main elements of the bowls, made of special stainless steel, are obtained by press-forging, all in one piece. Each of these components is subjected to accurate mechanical tests and laboratory examinations such as ultrasound controls and micrographic examinations.

cmt products

## rotary atomizer



With a range from 1 to 30.000 kg/h in feed rate and speed up to 60.000 rpm, CMT Atomizers can cover from small scale to large industrial productions ensuring extreme reliability, superior product quality and high performances. CMT atomizers are engineered with the most modern design technologies 2D and 3D including FEM,FEA and CFD analysis and manufactured with first class materials and components to meet the high quality standards and customer expectations GMP and ATEX compliant atomizers are available in CMT program. cmt atomizers have flexible characteristics to be able to handle a wide range of products and possesses a controllable operation in order to produce any type of desired powder

### Application Areas

- Milk Powder,
- Chemistry Powder Production
- Detergent
- Pharmaceutical Industry

teknoice products

## freezers



### Capacity:

300 lt/h - 400 lt/h - 600 lt/h - 800 lt/h - 1200 lt/h - 1600 lt/h

High production flexibility. Special care in choosing materials, which are all top quality, to guarantee robustness, corrosion resistance and durability. A tubular condenser that can be opened for manual and chemical cleaning. Refrigerator compressor with an built-in semi sealed piston (if there should be a malfunction, can be opened and adjusted), which is more reliable and efficient than a sealed compressor. Automatic freezer barrel pressure adjustment. Use of a dual-piston pump (patented). All models are set-up to be connected with a C.I.P. cleaning unit with a program incorporated into the freezer controls. High-performance refrigeration system Production of especially firm, consistent ice cream, reaching temperature levels up to -9°C Energy saving. All our products are designed to obtain maximum energy saving and the best production capacity/energy consumption ratio.

### Application Areas

- Industrial Production of Ice Cream,
- Traditional Turkish Production of Ice Cream: "Kahramanmaras Type Ice-cream".

teknoice products

## filling machines

**Cup Filling** : 600 - 3.000 unit/h

**Stick Type** : 6.000 - 20.000 unit/h

**Cone** : 5.000 - 20.000 unit/h

**Tub** : 300 - 1.500 unit/h

Automatic linear and rotary filling machines for cups, cones, containers and tubs. The automatic filling line that Teknoice offers its clients is able to fulfil all production requirements, from filling cups of various capacities to the production of different-sized cones, to filling tubs and buckets with customized decorations and types of finishes. With linear or rotary versions, there is always a model suited to the space available in the factory. What distinguishes this machines is its versatility, production efficiency, care in detail, focus on hygiene and easy maintenance.



### Application Areas

- Ice-cream,
- Chocolate,
- Cake,
- Biscuit,
- Chocolate Wafers.



alimabis products

## membrane systems

**Capacity:** 1.000 lt/h - 60.000 lt/h

Membrane filtration is the separation of liquid product in the level of molecules and ions. Generally, according to the pore diameter of polymer filter, while allowing the penetration of required substances (permeate), retendant is separated from the liquid.

RO (Reverse Osmosis)

10 bar - 100 bar

NF (Nano Filtration)

UF (Ultra Filtration)

1 µ m - 10 µ m

MF (Micro Filtration)

10 µ m - 50 µ m.

### Application Areas

- Microfiltration,
- Concentration of Milk Protein,
- Concentration of Whey,
- Brine,
- Ultrafiltration,
- Productions of Quark and Feta Cheeses,
- Fruit Juice Clarification,
- Standardizations of Milk & Casein,
- Nanofiltration,
- Process Water Recovery,
- Reverse Osmosis,
- Ro Polishing,
- Whey Concentrating .

grundfos products  
**booster**



**Flowrate** : Max. 1080 m<sup>3</sup>/h

**Total Head** : 155m.

Parallel processing availability up to 6 pumps. Pump frame is produced by cast or stainless steel AISI 304 AISI 316. Pump jacket and impeller are in stainless steel AISI 304 - 316.

**Application Areas**

- Water Providing Systems,
- Industrial Plants,
- Irrigation Systems,
- Commercial Buildings.

grundfos products  
**circulation pumps**



**Flowrate Capacity** : 0,5m<sup>3</sup>/h - 200m<sup>3</sup>/h

**Maximum Head** : 1,2m-170m

**Liquid Temp** : -25°C - +150°C

**Working Pressure** : 10 Bar-25 Bar

Low energy consumption, maintenance-free. Available with types of wet and dry rotor with block type frequency converter. Single or twin types. Pump types are ALPHA2, COMFORT PM, MAGNA1, MAGNA3, TP.

**Application Areas**

- Heating Systems,
- Domestic Hot Water Systems,
- Cooling and Conditioning Systems,
- Geothermal and Solar Energy Systems,
- Centralized and Local Heating Systems.

grundfos products  
**centrifugal pumps**



**Flowrate Capacity:** 4 - 4600 m<sup>3</sup>/h

**Total Head:** 4m - 160m

**Temperature:** -25 °C - 140 °C

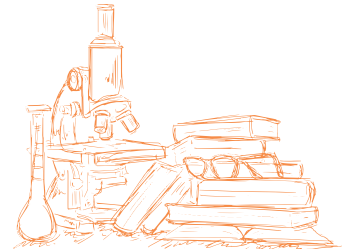
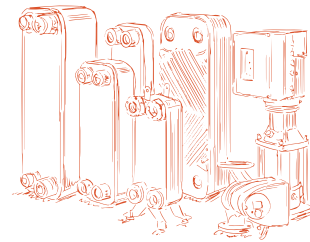
**Working Pressure:** 16 bar - 25bar

Low Energy Consumption Easy integration to existing working conditions Easy assembly Ease of control from multiple points With mechanical seal Single Stage Standard and Frequency Controlled, Single or gradual stage.

**Types:** TPE 2000 serie, TPE 1000 serie, NBG, NE, NBGE, and HS series.

**Application Areas**

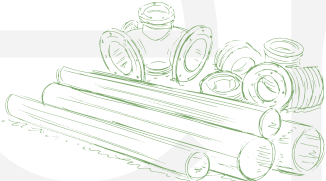
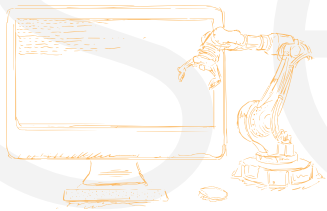
- Heating Systems,
- Partial/Central Heating Systems,
- Water Procurement,
- Washing Systems,
- Cooling and Ventilation Systems,
- Sprinkler System,
- Fire Protection System,
- Other Industrial Systems.







# services



services

project and installation facilities

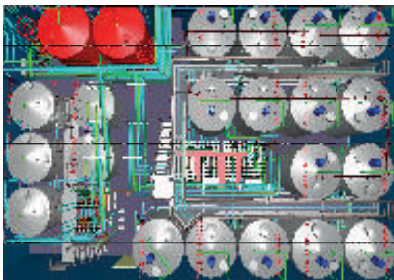
## automation



Gemak JSC. provides automation solutions in accordance with system requirements with ALFA LAVAL and SIEMENS equipment. Gemak JSC. automation systems composed of several modules, user interface, process control, reporting of production, tracking and traceability, production planning and application. Gemak JSC. provides automation solutions specific for machine, line or complete plant.

project and installation facilities

## mechanical works



With our expert engineer and technical staff, Gemak JSC. provides all kind of project works using design software programs regarding customer needs. Stainless steel, carbon steel, PE utility line installation, piping and insulation services are provided.

project and installation facilities

## process



Engineering, project management, drawing, equipment and system manufacturing and supplying, installation and piping on site, commissioning and training services are provided for dairy, food, cosmetics, pharmaceutical industries. Machine and equipment installation, steam, air, ice water, condensate lines installation and piping, air ventilation and conditioning ducts and pipes production and installation are also done. Building of turn-key plants for food and chemistry Industries with commissioning and start up services.

project and installation facilities

## electrical works



Medium Voltage, low current and signal cabling, cable tray installation, power calculations, e-plan projects, assembling, determination of equipment, drawing of electrical power and control projects, panel design, installation on site, remote control and access, profinet communication and project services are provided.

project and installation facilities  
**stainless steel piping**



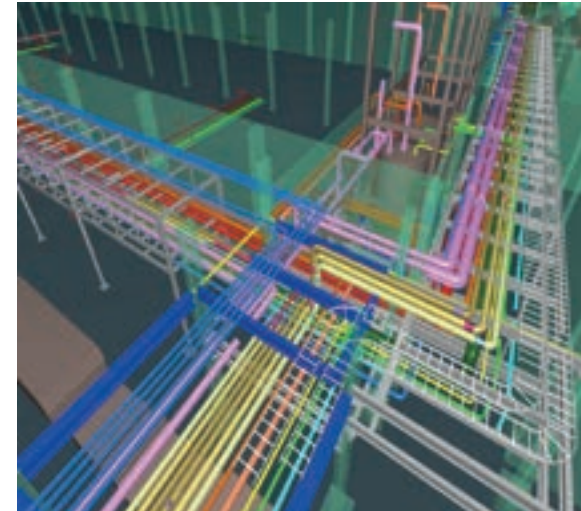
Turn-key mechanical installation, commissioning and training services are provided by Gemak JSC European norms by using 1st class ALFA LAVAL equipment and materials with high quality workmanship. After delivery of completed equipment and machines, mechanical team start mechanical works and mechanical installation is completed coordinately with customer Engineers who are responsible from commissioning complete commissioning works and deliver plant to customer. For effective operation of plant, training is given to customer.

project and installation facilities  
**industrial piping**



Project preparation, layout and 3D drawing of industrial pipe lines and assembling of various types like stainless steel, galvanized steel, copper, PVC Preparation of pipe routing plans, isometric drawings, capacity calculation, manufacturing, assembly and installation, testing and commissioning services are provided.

project and installation facilities  
**electrical installation**



Assembling of HV, MV, and low current control panels, connections and commissioning necessary cable works and installation of cable trays and cable connections between equipment and electrical cabinets, connection and cabling of field instruments, control panels, valves, sensors, and electrical works of utility lines (water demineralization systems, water cooling systems etc.) services are provided.



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*new generation factories*

*new generation*







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**GEMAK GIDA ENDÜSTRİ MAKİNALARI ve TİC. A.Ş.**

ALCI OSB Mh. (ASO 2. OSB) 2032. Cd. No: 1/1

06909 Sincan/Ankara/Türkiye

**T** : +90 312 394 77 94

**F** : +90 312 394 77 95

**M** : +90 530 667 00 73

[www.gemak.com.tr](http://www.gemak.com.tr)

[gemak@gemak.com.tr](mailto:gemak@gemak.com.tr)

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