Milk processing equipment
Our Mission
We work tightly with our clients and investigate their needs in order to provide ideal processing solutions for food and pharmaceutical industries. Due to our understanding of consumer needs in combination with our relationships with suppliers, we are able to make these solutions real.
Corporate culture and values in the company fully correspond to the way each specialist performs one’s job. We share a common set of values and this is part of the spirit at Biomashin creating a nice work atmosphere.
Our core values comprise two interrelated pairs:

Responsibility & Long-Term Orientation
We offer our clients friendly and efficient technological solutions and are oriented at building long-run relationships as we realize customers come to us by choice. We take responsibility for our actions and provide kind support to our clients.

Quality & Innovation
We do not compromise on quality. We persistently drive for better, seek for opportunities to learn and develop.

Storage Tank/ Silo
In the production lines for milk processing, the Silo tank serves to take and store at atmospheric pressure a given volume of raw, pasteurized, skim milk, or whey. During the storage process, milk is very delicate; therefore, the mixing process should be very careful so that fat molecules release is prevented. More than that, increase in storage temperature with 15 degrees Celsius results in increase of 250 times in the number of bad bacteria per milliliter milk. This is why temperature control during storage and processing is a crucial factor. The equipment that Biomashin offers aims to control these processes effectively and in the most optimal way.
Our storage tanks ensure maximum product protection during its storage. Biomashin offers Silo tanks with standard dimensions and equipment. However, they could be customized upon request – designed in accordance with a particular technical specification. Silo tanks could be produced on legs or support ring.

Silo tank for raw/pasteurized milk storage, basic design
- Volume: up to 250 m³ built in the workshop
- Made of stainless steel AISI 304
- Surface in contact with the product 2B, welding seams polished with sandpaper P180, Ra≤ 1.2 µm
- Insulation made of mineral wool – on shell and top. Insulation cladding is made of stainless steel and is fully welded. Accurate calculation of exact insulation thickness for Silos stored outside depends on the specific climate conditions.
- Agitator with precisely calculated speed and construction, without foaming and stratification of milk, and with uniform action in the entire volume
- Cleaning system with specially selected elements and calculated parameters ensuring impeccable cleaning
- In high temperature environment and depending on the period for milk storage, Silo tanks could be produced with cooling jackets to maintain milk temperature
Process Tank

Process tanks are used for production of dairy products when the technology requires maintenance of a certain temperature regime and stirring of the components. The processes that run in them are for treatment, inoculation, maturation, assertion, homogenization, fermentation of yoghurt and other dairy products. When designing and producing process tanks for milk, we pay much attention to hygiene which plays an essential role for quality of the produced dairy products. The equipment that we offer guarantees optimal control of stirring processes of milk with added components as well as precise control of thermal processes in time.

Process Tank, basic design

- Volume: from 160 l up to 20 000 l. Dimensions could be customized upon request
- Made of stainless steel AISI 304/2B
- Surfaces in contact with the product 2B, welding seams polished with sandpaper P180, Ra ≤ 1.2 µm
- Insulation with mineral wool on shell and bottom, fully welded insulation cladding
- Heating/Cooling system on shell and bottom of the tank with maximum allowable working pressure of 3 bar for optimal cooling/heating.
- Agitator with construction fully oriented towards the requirements of process and product.
- Cleaning system with specially selected elements and calculated parameters ensuring impeccable cleaning

Aseptic Tank

Aseptic tank occupies a central position in the aseptic processes, ensuring a certain level of sterility through thermal treatment, followed by storage and filling in sterile conditions and sterile packaging. A sterile product is the result of this process which has a relatively long lifetime at normal room temperature and requires neither cooling nor freezing.

Biomashin produces aseptic tanks with the following application:

- under aseptic filling for short storage;
- under aseptic storage for long time in warehouses;
- under aseptic transport for medium to long storage.

We design and produce mainly aseptic tanks made of stainless steel that work under pressure or vacuum. Our aseptic tanks are produced in accordance with the European Directive for pressure vessels PED 97/23/EC. Due to its specificity, the tanks are produced with very high requirements towards design and surfaces, as well as the accompanying armature. The tanks are designed to be resistant to the large temperature fluctuations that they experience.

Aseptic Tank, basic design

- Made of stainless steel AISI 304 or AISI316
- Surfaces in contact with the product Ra ≤ 0.8 µm
- Special safety armature
- High-hygiene sensors for control of the process
CIP tanks

Biomashin designs and produces installations and tanks for cleaning in place of process equipment. The installations that we offer could be mobile or stationary. According to their level and capacity, the installations could be manual or automated. The specific function of the tanks in these installations requires maintenance of precise volumes in order to achieve correct concentrations of the contained washing solutions. At smaller capacities, tempering and maintenance of concentrations of the washing solutions is done in the CIP tanks themselves through heat-exchanging devices and stirring mechanisms. Based on our vast experience, Biomashin offers a standard range of CIP tanks starting from 1000 l to 20 000 l.

CIP tanks, basic design

- Material: stainless steel AISI 304/EN 1.4301 or AISI 316L/1.4404
- Insulation with mineral wool and fully welded insulation cladding made of stainless steel, if cladding is needed
- Overflow
- Level control equipment

S&T heat-exchangers

S&T heat-exchangers are widely spread. Their simplified design makes them a perfect solution when it comes to heating or cooling processes for wide application. Biomashinostroene AD is equipped with up-to-date machines suitable for the production of S&T heat-exchangers made of stainless steel. We have highly efficient equipment for the production of plates. To fix the tubes to the plates, we use specialized instruments as well as automatic orbital welding heads. Biomashin's equipment and technologies, as well as experience, allow us to cover all hygiene standards for heat-exchangers used in the pharmaceutical and food industries.

For heat-exchangers working under pressure we offer product certification in accordance with PED 97/23/EC. During their construction we apply the European norm for design EN 13445 or AD -2000 Merkblätter. Biomashinostroene AD covers the highest levels of quality of welded joints with the support and supervision of our welding control and quality control.
Quality and Environment

The management of Biomashin builds a corporate culture aimed at creating quality products and mentality towards meeting customers’ needs and bringing satisfaction. Consequently, the following certificates are implemented in the company:

- System for Quality Control ISO 9001:2008 which is permanently and precisely controlled and upgraded
- Product certification in accordance to the Pressure Equipment Directive EC 97/23/EG – PED
- A system for Occupational Health & Safety Advisory Services: BS OHSAS 18001:2007
- GOST-R – a quality certificate in accordance to the requirements of the Russian Federation
- RTN (Russian Technonadzor) for producing vessels under pressure in accordance to the requirements of the Russian Federation

These certificates allow Biomashin to export and legitimate its products on the territory of the European Union, Switzerland, Russia and the countries from the former Soviet Union, as well as many others.

Excellent performance.