TREATMENT PLANT FOR DRINKING WATER

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<tbody>
<tr>
<td>I</td>
<td>1,000 m$^3$/day</td>
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<td>II</td>
<td>2,000 m$^3$/day</td>
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<td>III</td>
<td>10,500 m$^3$/day</td>
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ASSIGNOR

- Ministry of Agriculture of the Republic of Kalmykia, Russian Federation (MCX PK);

- Funding for the project is provided by the federal target program "Development of the agricultural lands of Russia for 2014-2020", approved by the federal government of the Russian Federation;
EuroBion is a company, established in 2005, and more than 10 years is market leader in production of treatment plants for the Balkans and nearby countries.

At the moment it has realized over 1,000 treatment plants for drinking and waste water, both for individual homes, and for hotel, manufacturing and public complexes.

In this project it is the head project manager and a consultant for the construction of the facilities.
Tal Project is a team of architects and engineers, established in 2010. Since then, we have prepared over 150 projects in conceptual and technical phase, 70% of which are already implemented.

Our activities cover a wide range of projects: Our activities cover a wide range of projects: residential, public and industrial buildings, urban planning and interior.

In this current project we implement the following parts: Architectural, Structural, Water and Sewage, Electrical, Automatics, HVAC, Geodesy.
The project is a group of water treatment plants for drinking water with a total capacity of 15,000 m³/day. The stations are designed to provide drinking water for several villages with a total population of 50,000 people. Stavropol region, Russian Federation.
• The project for treatment plants is part of a large-scale project “Icky-Burulski group plumbing” implemented in the territories of the Republic of Kalmykia and the Stavropol region of the Russian Federation. The project shall provide clean drinking water for more than 150 thousand inhabitants.

• Four of the treatment plants will have a capacity of 1 000 m³/day and will provide drinking water to the villages respectively: Turksad, Priozerskoe, Sadovoe and Chorgayskiy.

• One of the treatment plants will have a capacity of 2 000 m³/day and it is designed for village Velichaevskoe.

• The biggest treatment plant is with capacity 10 500 m³/day and will be built near village Arzgir.
Resolution of the President of Russian Federation Vladimir Putin to a request by the President of the Republic of Kalmykia, to finance the project.
The project covers requirements for design, engineering and manufacturing of equipment for the preparation of drinking water using reverse osmosis technology from salty (slightly mineralized) waters. The installation is designed as a two-stage system:

- **1st stage** is equipped with special elements of reverse osmosis;
- **2nd stage** operates on the basis of the modular technology annular disc for converting the concentrate and increases the productivity by 65 to 78%.

During the design of the installation are taken into account the environmental conditions (temperature, humidity, requirements for constant load). Complete equipment will be housed in three containers measuring 40 feet (1 foot = 30.48 cm) each container.
Processes involved in the system of purification:
- purification of water from particulate pollutants;
- water purification from dissolved external components;
- lightening of water;
- water softener;
- desalination;
- disinfection.

The modular technology with annular disc with a special estimate of flow regime offers some significant advantages, such as:
- Optimal characteristics of the fluid and hydraulics;
- very low loss of pressure (about 2 bar) by means of a module;
- Excellent quality of cleaning;
- Long service life of the membrane;
- Lower energy costs.
TECHNICAL DATA OF THE PROJECT

Capacity of purified water 1 000 m³/day, supplying villages with 1 500 – 2 500 inhabitants;

- Area of the site: 1 110 m²;
- Three technological containers, two storage and one – for staff, ground water tank;
- Total built-up area: 240 m²;
- Total built-up volume: 960 m³;
- Required power: 124 kW;
- Required number of employees: 3 people on three shifts.
- Automatic work of the plant
1. Purifying containers
The system of containers carries out the purification of raw water and its preparation to the necessary parameters.

2. Tank for clean water
Over ground tank with metal structure, ensuring a storage of 500 m$^3$ of purified water.

3. Storage containers

4. Container for staff
TECHNICAL DATA OF THE PROJECT

- Capacity of purified water 2 000 m³/day, supplying villages with 3 000 – 5 000 inhabitants;
- Area of the site: 1 550 m²;
- Two groups per three technological containers, two storage and one – for staff, two ground water tanks;
- Total built-up area: 396 m²;
- Total built-up volume: 1 574 m³;
- Required power: 238 kW;
- Required number of employees: 3 people on three shifts.
- Automatic work of the plant
1. Purifying containers
The system of containers carries out the purification of raw water and its preparation to the necessary parameters.

2. Tanks for clean water
Two over ground tanks with metal structure, ensuring a storage of 500 m³ of purified water each.

3. Storage containers

4. Container for staff
2 000 m³/day

VISUALIZATIONS
Eurobion

II

2 000 m³/day

VISUALIZATIONS
TECHNICAL DATA OF THE PROJECT

- Capacity of purified water 10 500 m³/day, supplying villages with 15 000 inhabitants;
- Area of the site: 2 970 m²;
- Three groups per five technological containers, service building;
- Total built-up area: 660 m²;
- Total built-up volume: 1 830 m³;
- Required power: 680 kW;
- Required number of employees: 3 people on three shifts.
- Automatic work of the plant
1. Purifying containers
Three groups of containers, performing the purification of raw water and its preparation to the necessary parameters

2. Service building
Solid building, which houses the premises for staff, warehouses, electric panel, etc.
VISUALIZATIONS

III

10 500 m³/day
10 500 m³/day

VISUALIZATIONS
III 10 500 m³/day

VISUALIZATIONS
Save water! It is life!

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