



# Catalogue of Industrial Companies of Voronezh Region 2012









*Dear readers,*

The industrial policy pursued by the regional government is in close alignment with the Development Strategy of Voronezh region up to 2020. It has been approved after thorough consideration and negotiations with non-governmental organizations and professional experts. Thus, the region is in for radical system changes in the regional economy.

The regional government is successfully developing innovative system. The main directions of cluster development policy have been outlined, which increases the region's competitive advantages and enhances connections between branches and industries.

The regional government has managed to create congenial investment climate in the region. The government is coming up with new ways of supporting Russian and foreign investors, developing the system of subsidies and preferences. Innovative industrial parks and zones are set up. Their infrastructure is financed from the state and regional budgets.

Voronezh region is one of top 10 in the investment attractiveness rating and is carrying out over 30 investment projects. All the projects are connected with technical re-equipment of companies and creation of high-technology manufacturers. The number of Russian and foreign investors is constantly increasing.

In the Catalogue of Industrial Companies of Voronezh Region, you will find information on the development of industries in Voronezh region, structural and quality changes in the industrial system.

Having read this catalogue, you will learn about the industrial potential of Voronezh region, the companies' production facilities, history and product range.

The regional strategy is based on coordinated efforts, a constructive dialogue between private businesses, the government and non-governmental organizations.

The regional government is looking forward to establishing cooperation and mutually beneficial relationship with potential partners.



*Governor of Voronezh region*

A handwritten signature in blue ink, appearing to read "А.Гордеев".

*Alexey Gordeyev*



## Development Prospects of Industrial Complex of Voronezh Region

*Dear friends and colleagues,*

The aim of this catalogue is to present a full picture of industrial potential of Voronezh region, perspectives of its development, its features and leaders.

Voronezh region is a leading centre of high-technology industry. The industrial complex, utilizing cutting-edge technology and having a formidable scientific potential, centres round aerospace and electronic industries, equipment manufacture, chemical and processing industries. A number of major companies, such as the Aircraft plant, Sozvezdiye federal

group of companies manufacturing telecommunication equipment, a number of high technology machine building companies, have a great cluster forming potential.

Industrial manufacture is a major branch of Voronezh economy, it is the biggest contributor to gross regional product and provides for one third of consolidated budget revenue.

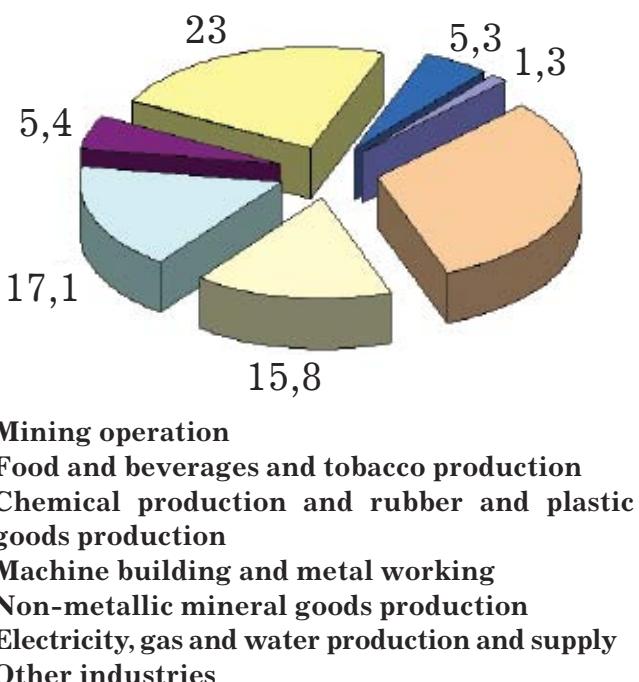
In 2010-2011 practically all segments of industrial manufacture showed sustainable growth. Moreover, it is worth mentioning that the crisis of 2008-2009 did not affect the production volumes, due to the specifics of the regional industrial structure. Some companies even continued to show growth, implement new investment and innovative projects, re-equip their production facilities.

The regional government believes that further development of industrial segments can be facilitated by effective cooperation of business and authorities. Currently, the government is implementing a government – business partnership model, aimed at executing infrastructure and investment projects of both individual enterprises and cluster groups, which will help to create a multilevel model of modern effective business based on increased innovative and investment activity of major industries, their strategic focus and market positioning.

At the core of this cooperation are such factors as the creation of industrial zones with developed infrastructure, technical and technological modernization of production processes, development of new innovative products, further vertical and horizontal integration of technological and human resources, including subcontracting and outsourcing. One of the main aspects of the governments work is attracting new industrial residents, capable of forming clusters of companies in the region.

Voronezh government has created favourable conditions for investors, is improving legal terms and developing the system of subsidies and preferences, setting up industrial parks. In 2010 Maslovskiy and Liskinskiy industrial parks were created. Maslovskiy industrial park is situated on the border of Voronezh city in Novousmanskiy district, and occupies an area of 598 hectares. The park specializes in machine building and metal processing. Today, among the park's residents are Armaaks Group Ltd fulfilling the investment project con-

### Industrial Structure of Voronezh Region





nected with the creation of production-logistical complex, Siemens Transformers Ltd involved in the construction of power transformers plant, and Voronezhselmash Ltd. The next projects to be fulfilled are metal processing and machine building projects by Spetsslaltekhmontazh Ltd and Soyuzkomplekt Ltd, fiber-optics production project by OFS Svyazstroy-1 Ltd, etc. The park's potential residents are industrial companies with different directions of activity, mainly machine building companies. Liskinskiy industrial park is situated in Lisky district of Voronezh region, and occupies an area of 262.535 hectares. The territory has an easy vehicle access, there are roads

with asphalt coating. The area is linked to M4 Don highway and Voronezh-Lugansk highway. A railway line running across the park allows for the transportation of goods in different directions. The government is currently developing the projects of Bobrovskiy industrial park in Bobrovsk district of Voronezh region, and creating a special federal economic-industrial zone in Voronezh region.

In order to increase competitive advantages of the regional industries, the government is implementing measures aimed at increasing energy efficiency and product quality, assisting in carrying out innovative projects and setting up innovative companies in various fields including nanoindustry.

Today, one of the main directions in the governmental economic policy is implementing a regional program of development of cluster-groups. The formation of regional and industrial clusters has been outlined by the government. Taking into account the multi-branch industrial structure of the region, a large amount of educational institutions and developed innovative structure, the government has started work aimed at creating interbranch innovative industrial clusters uniting a wide range of industrial, innovative, scientific, educational, engineering and consulting organizations, located in the region and cooperating in the process of production and implementation of joint cluster projects.

A number of Agreements have been signed in Voronezh region to form four branch clusters in the field of oil and gas and chemical engineering, electromechanical, aircraft and radioelectronic industries. The members of these clusters are leading industrial manufacturers of the region, which are presented in this catalogue in relevant sections.

In order to provide state (regional) governmental support to cluster-formation processes, the government has worked out and is implementing a purpose-oriented program, called *Formation and development of cluster groups in 2011-2013*. This program envisages working out and refining regulatory documents; providing methodological, consulting and educational support to cluster groups. It will help to define the required conditions, forms and amount of budgetary funding of cluster groups and infra-





from the federal centre. This support is shown mainly through joint mechanisms of cluster development, assistance in innovative, energy efficiency and investment activity. Thus, in 2012 Voronezh region won the contest held by the Russian Ministry of Economic Development and Trade and received state subsidies to carry out a project called *Support of Joint Cluster Projects* to support small and middle business. As part of this project, the Centre of Technological Competence in foundry. The aim was to provide small and middle businesses with an easy access to modern casting technologies, support in development of new products, small-scale production of a wide range of molds.

Joint (cluster) projects, including innovative, technological and marketing projects, are expected to become effective mechanisms of companies' development and competitive growth, and more importantly – be initiated by cluster members with government support.

One of the main directions of activity aimed at competitive growth of Voronezh manufacturers

is integration of industries with scientific, educational and innovation activities of high schools, which meets the current needs. In order to define priority directions of cluster policy and involve expert panels in choosing the best cluster projects, Cluster Policy Board of Supervisors and Cluster Development Panel of Experts were formed in December 2011. They consist of leading scientists, economics and industrial enterprises management experts, government representatives, and non-commercial organizations of professionals.



structure facilities, stimulate the formation of clusters in other industries (chemical industry, furniture industry, transport logistics, etc).

In 2011 the regional government started work aimed at developing infrastructure for cluster groups. Firstly, the Center of Cluster Development, a regional budgetary institution, will be set up. This specialized organization will provide efficient consulting and other services for cluster members, work out and execute strategic programs and action plans aimed at cluster development, participate in joint (cluster) projects.

Implementing cluster development programs, the regional government expects to get support from the federal centre. This support is shown mainly through joint mechanisms of cluster development, assistance in innovative, energy efficiency and investment activity. Thus, in 2012 Voronezh region won the contest held by the Russian Ministry of Economic Development and Trade and received state subsidies to carry out a project called *Support of Joint Cluster Projects* to support small and middle business. As part of this project, the Centre of Technological Competence in foundry. The aim was to provide small and middle businesses with an easy access to modern casting technologies, support in development of new products, small-scale production of a wide range of molds.



The regional government is convinced that further industrial development is connected with radical changes in scientific and educational process with a view to create innovative products and train highly-qualified professionals for cluster groups.

Today, most industrial companies pay great attention to personnel development, improving the quality of their workforce (training, re-training, further education), identifying internal candidates for the succession pool, working out employees' career development plans in order to



help them fulfill their potential and increase motivation. Some companies are successfully developing their training and production facilities through cooperation with leading regional institutions of higher education.

To conclude, I would like to point out that the aim of cooperating effort of businesses and authorities is to create a new image of the region's industrial manufacturers, competitive not only on the domestic but also on foreign markets. Branch and industrial clusters, utilizing technological, technical and scientific potential, can serve as a basis for such development.

I hope that information about Voronezh industrial companies presented in this catalogue will serve as an incentive for the establishment of long mutually beneficial cooperation.

Vice governor,  
Head of Department of Industry,  
Transport and Innovations of Voronezh region

A handwritten signature in blue ink, appearing to read "Марков".

Dmitriy V. Markov



Dear colleagues,

Let me address you on behalf of Voronezh Chamber of Commerce and Industry.

The Chamber of Commerce and Industry represents the interests of the regional business community, which brings to us great responsibility before business and society. Business community is the most active part of any society. It is responsible for employment, pay rise, regional economic results, the modern world is based on business communities.

The task of the Chamber of Commerce and Industry is to facilitate the dialogue between business community and authorities, international organizations.

In 2011 the Chamber of Commerce and Industry carried out research with a view to identify the main challenges facing businesses. It was found out that the main factor hindering development of Voronezh region is insufficient information about the industrial level and development prospects of the region. Lack of information affects business development and slows down economic growth.

The market economy has defined the industrial structure of Voronezh region. As a result, the old industrial structure has been transformed, territorial differentiation has increased.

This catalogue contains up-to-date information about the companies of Voronezh region and promotes business cooperation and increases its effectiveness. I am convinced that the Catalogue of Industrial Companies will enhance cooperation between regional enterprises and promote economic development of Voronezh region.

President of the Chamber of Commerce  
and Industry of Voronezh region

Yuriy F. Goncharov

A handwritten signature in blue ink, appearing to read "Юрий Гончаров".

## CHAMBER OF COMMERCE AND INDUSTRY OF VORONEZH REGION

**Company name (short):** CCI VR

**CEO:** Yuriy F. Goncharov

**Address:** 36 9-Yanvarya St., Voronezh 394018

**Year of foundation:** 05.07.1988

**Tel./Fax:** +7 (473) 277-24-87 — President (reception)

**Website:** [www.tppvo.ru](http://www.tppvo.ru)

### Specialization:

- Authentication of statements of origin;
- Examination of the amount and quality of Russian and imported goods and raw materials of various kinds;
- Examination of the quality of consumer goods for legal bodies (clothes, footwear, consumer electronics, computers, etc.)
- Assessment of workplaces with respect to working conditions;
- Training and testing the knowledge of labour protection requirements;
- Translation from the world's languages, editing and legal translation of documents, technical translation, translation of websites;
- Consulting on Russian and international commercial law;
- Confirmation of insurmountable circumstances (force majeure);
- Arbitration;
- Holding events on the territory of Voronezh region;
- Holding conferences, seminars, roundtable discussions;
- Appraisal and reappraisal of companies' fixed assets, appraisal of property, machines, equipment and vehicles;
- Conference halls for rent;
- Issuing digital signature key certificates;
- Drafting business plans (feasibility reports), expert examination of business plans (feasibility reports).



**Dear friends and colleagues,**

You are holding the Catalogue of Industrial Companies of Voronezh region, outlining the enterprises which show good results, increase their production facilities, have substantial workforce, develop new products, increase production output, and can be described as successful and rapidly advancing.

Today, many Voronezh companies utilize the latest technologies and manufacture unique products. They are highly demanded and have excellent reputation in the field.

Successful operation of industrial companies is a prerequisite of economic stability and social development of the region, its sustainable growth.

I hope that information presented in this Catalogue will help you find new partners and establish long-term mutually beneficial business relationships with the manufacturers from Voronezh region.

President of the *Council of Manufacturers and Entrepreneurs* Regional Association of Employers

A. B. Andreyev



## REGIONAL CENTRE OF INDUSTRIAL SUBCONTRACTION LTD

**Company name (short):** RCIS Ltd

**CEO:** Victor A. Popov

**Address:** office 145, 160 Leninskiy av., Voronezh 394033

**Year of foundation:** 09.12.2009

**Tel./Fax:** +7 (473) 260-60-42

**Website:** [www.promzakaz36.ru](http://www.promzakaz36.ru)

### **Specialization:**

Assistance in finding partners for industrial cooperation

### **Special features and competitive advantages**

RCIS Ltd has up-to-date information about production facilities of the companies of Voronezh region and Central Federal District, as well as other regions of Russia, keeps itself informed about the changes, has experience in assisting companies in establishing cooperation and provides services in finding business partners.

RCIS Ltd assists contractors in selecting a subcontractor to perform technical operations, manufacture parts, units, non-standard products on a regular or one-off basis, providing the following services:

- Completing an order assuming full responsibility to Contractors and Subcontractors;
- Target search for subcontractors with state-of-the-art equipment;
- Assessment of alternative subcontractors.

RCIS Ltd assist subcontractors in finding contractors to provide them with a full load for their production facilities, offering them the following services:

- Target search for contractors;
- Informational support;
- Presentation marketing of subcontractor's facilities.

RCIS Ltd belongs to the National Partnership for Development of Subcontraction (Moscow), which enables it to participate in the all-Russia subcontracting information system, interregional information exchange and ancillary services (subcontractors exchange, presentation seminars, etc).



*Dear friends,*

Following the Decree of the Government of Voronezh region №787 of 6 September 2011 a state-financed Centre of Cluster Development of Voronezh Region was founded.

The Governor of Voronezh region Alexey V. Gordyev outlined its aim, which is to facilitate the successful cooperation of cluster group members, educational institutions, non-commercial organizations, governmental institutions, and investors, with a view to guarantee the development of industrial cluster groups.

Some aspects of cluster development policy are outlined in the development strategy of the Russian federation up to 2020. Voronezh region development strategy to 202 is defined by cluster forming policy.

Now, a special purpose program Formation and Development of Cluster Groups in Voronezh Region for 2011-2013 is being implemented and the Casting Centre of Technological Competence was founded through the involvement of the Ministry of Economic Development with a view to support small and middle business.

The Centre of Cluster Development provides consultation services to potential members, assists in working out a cluster development strategy and carrying it out, provides information and helps carry out joint (cluster) projects.

Further development of industrial companies and organizations requires the creation of an effective system of informational communication and infrastructure.

As a result, we expect further development and integration by 2014 of educational institutions, engineering, consulting and financial organizations, innovation infrastructure objects, industrial companies situated in the region into cluster groups with the aim of manufacturing competitive products.

Director of the state-financed Centre  
of Cluster Development Of Voronezh region

Alexander F. Konoplin

## STATE-FINANCED ORGANIZATION OF VORONEZH REGION «CENTRE OF CLUSTER DEVELOPMENT OF VORONEZH REGION»

**Director** – Alexander F. Konoplin

**Deputy Director** – Pavel V. Kovalev

**Deputy Director** – Mikhail V. Drakin

**Year of foundation** – October 2011

**Address:** 6a Lenina Square, Voronezh 394018

**Tel.:** +7 (473) 255-74-39, 239-63-90

**Fax:** +7 (473) 255-24-28

**Email:** industry@govvrn.ru, ckrvrn@gmail.com

**Specialization:**

- Working out and implementing the strategy of cluster groups development;
- Putting forward suggestions concerning the improvement of legal regulations of cluster group activity;
- Developing and carrying out joint (cluster) projects involving small and middle businesses, educational institutions, infrastructure objects, outsourcing and subcontracting agents;
- Training and retraining workers, engineers and managers, providing consultation services to members of cluster groups;
- Assistance in launching new products (services), holding conferences, seminars, exhibitions,

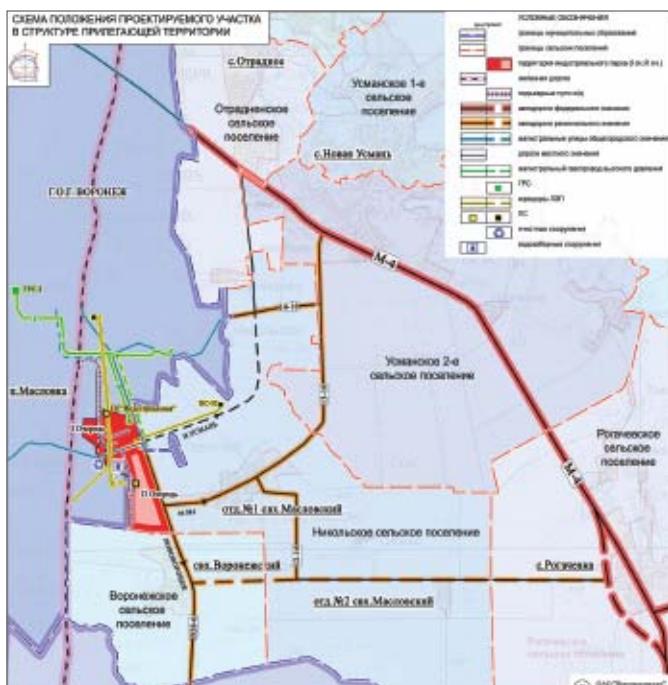
trade fares, trainings, meetings for members of cluster groups;

- Providing information services to institutions and organizations cooperating with cluster groups;
- Facilitating communication and cooperation between participants of joint (cluster) projects in the following directions:
  - assisting in the creation of cluster infrastructure and new production lines on participatory basis;
  - organizational arrangements of cluster marketing projects with a view to expand to new markets;
  - consulting on state support programs aimed at regional development.

# MASLOVSKIY INDUSTRIAL PARK

Industrial park is a part of Voronezh region where various industrial manufacturers, set up in accordance with innovative projects, are situated and operate, as well as auxiliary services, designed to a common plan with the necessary infrastructure.

Following the Decree of the government of Voronezh region №269 of 6 April 2010, Maslovskiy industrial park was founded on the border of Voronezh city and Novousmanskiy district. The industrial park occupies an area of 598 hectares (to be expanded to 2300 hectares) of industrial land belonging to Voronezh region.



The construction of infrastructure is financed from the budget of Voronezh region and Investment Fund of the Russian Federation.



## Measures of State Support

1. The residents of the industrial park can count on the following measure of state support offered to investors to Voronezh region:

Tax concessions:

- Profit tax rate – 13.5% on the part appropriated to the regional budget;
- Corporate property tax rate – 0% (up to 5 years).

2. Interest rate subsidies: the subsidies are given from the regional budget to investors at the rate of 2/3 of the key interest rate.

3. Subsidizing the construction of social and engineering infrastructure for the fulfillment of investment projects: subsidy rates – up to 100% of engineering communications design construction cost, but no more than 10% of the capital investment in the project.

4. Investment projects administration and assistance in carrying them out in accordance with the law of Voronezh region №67-OZ of 07.07.2006.

# Maslovskiy Industrial Park Infrastructure

Moscow – Novorossiysk railway line runs along Maslovskiy industrial park. Maslovka railway station is situated in close proximity to the park. The park has a road link to M4-Don highway (16 km).

In 2010 the construction of the main gas pipeline (with the capacity of 8.86 mln m<sup>3</sup>/year) and local waste treatment plants (1.5 thousand m<sup>3</sup> of

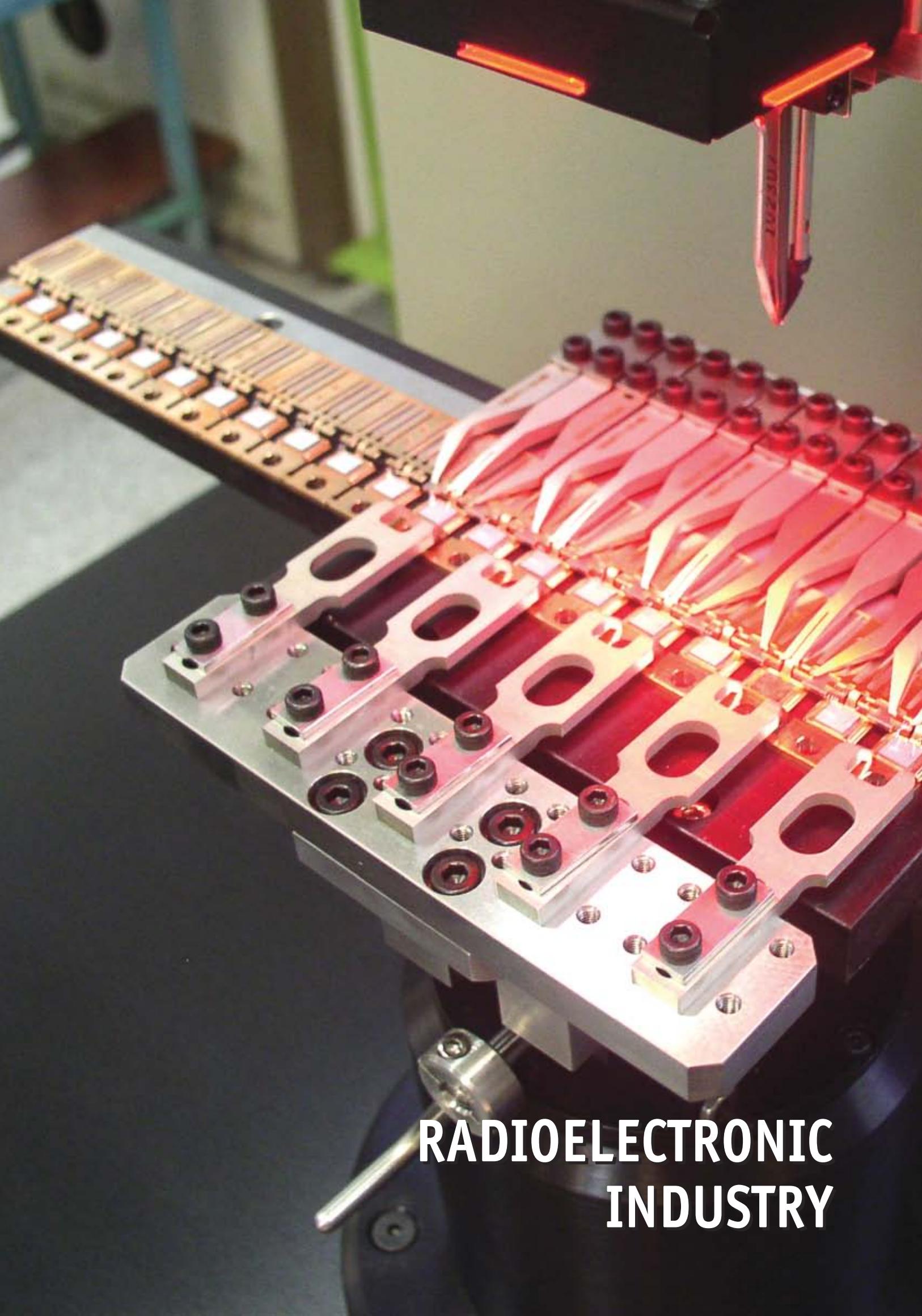
wastewater a day) was completed, underground railroad was laid. The objects were put into operation in 2011, besides new objects were constructed: water supply facility, water and wastewater distribution networks, two transformer plants 110/10 kV with the power of 40 MVA (can be increased to 63 MVA).

## Industrial Park Residents

Today, among the park's residents are Armaks Group Ltd fulfilling the investment project connected with the creation of production-logistical complex, and Siemens Transformers Ltd involved in the construction of power transformers plant. The park's new residents are metal processing and machine building companies: Voronezhselmash

Ltd, Spetsslaltekhmontazh Ltd and Soyuzkomplekt Ltd. Another four companies (Angstrem, NEKM, Verofarm, and Belstar-Agro) are planning to become the park's residents. The park's potential residents are industrial companies with different directions of activity, mainly machine building companies.





RADIOELECTRONIC  
INDUSTRY

# BPSZ JSC



## Company Profile

**Company name (short):** Borisoglebskiy Priborostroitelniy Plant JSC

**CEO:** Vladimir P. Kasymov

**Address:** 309 40-Let Oktyabrya Street,  
Borisoglebsk, Voronezh region, 397072

**OKPO code:** 22795081

**Year of foundation:** 15.03.1961

**Workforce:** 193 people

**Telephone:** +7 (47354) 5-18-35 — CEO (reception)

**Sales department:** +7 (47354) 5-18-44

**Supply department:** +7 (47354) 5-18-42

**HR department:** +7 (47354) 4-12-37

**Fax:** +7 (47354) 5-18-20

**Specialization:** radiofrequency contact plugs SShR,  
high frequency electropolar reversing relay  
RPPV-11/12/15/16, bonding terminals,  
portable and mobile interfering transmitters  
RP-377 VM1, intercommunication,  
commutation and control facilities (AVSKU)  
208850.1 thousand RUR (exclusive of VAT)

255400.0 thousand RUR

**Sales volume in 2010:**

**Production volume in 9 months of 2011:**

**Quality management system:** certificate of compliance with State Standard  
(GOST) R ISO 9001-2008 issued by voluntary  
certification system Military register  
Annually Soyuzcert certification centre (Moscow)  
inspects the QMS in order to check company's  
products for compliance with issued certificate.

**Certification:** In accordance with normative and technical  
documentation the company's production is not  
liable to obligatory certification.

## Historical Note

- In 1961 the company started producing paper capacitors BTM-1 and BTM-2 and consumer goods: doll carriage parts and aluminum plates for steam cookers.

- In 1971 the company mastered production of rural communication equipment, medical equipment and blocks for radioelectronic microwave devices Mil-31, prepared for the production of ultra-high frequency devices.

- In 1976 the plant started producing high technology UHF devices for defense industry.

- In 1990 the plant assimilated production of 23 UHF devices. Sales volumes reached 40 million RUR.

- In 1993 the company was privatized. The company changed its specialty due to the absence of

defense orders.

BPSZ JSC is an upswing company with 50-year history of production of special purpose devices. It is still holding the leading positions in the region.



## Characteristic of the production capacities

Assembly shop is equipped with modern machines produced in Japan, the USA, Germany and Italy. Existing production processes enable the plant to produce:

- Assembling of blocks and internet cable connections in radioelectronic and telecommunication cabinets;
- Passive commutation devices;
- High frequency relays and sockets;
- Units and blocks of radioelectronic devices;
- Antenna feeder systems;
- Wire-wrap devices;
- Adjustment and testing of products.

In the last 2 years the plant has tripled its production volumes due to expansion of technological capacity on the base of modern equipment, enabling the plant to complete high technology and science-intensive orders.

One factor of the company's success is a united team of professionals. Administration of the company applies growth and development approach and considers it necessary not only to improve skills of workers, but to give attention to young specialists by funding their education. For these

purposes the company opened Vostochniy business incubator in 2007.

BPSZ JSC occupies an area of 17500 square meters. Production area is 14500 square meters. The rest is occupied by engineering and technical departments equipped with modern computer-controlled machines:

- Design department;
- Production department;
- Office of the chief power engineer;
- IT department.



## Production Program

### • Applications.

BSPZ JSC produces and supplies parts, units, blocks and radioelectronic and telecommunication cabinets.

Its main customers are defense complex enterprises and companies of other ministries of the Russian Federation.

### • Special features and competitive advantages

The company is developing a project providing aimed at improving the production of civil products.

The company's main products are:

Hardware-software system for the building engineering system control.

Main aim: creation of comfortable and safe environment in the building and at the same time reduction of maintenance costs. The system consists of hardware and software set and dispatch control system for energy saving, effective control and improvement of safety parameters.

The equipment consists of heat metering device, controllers for collection and transmission of the information from all metering devices and sensors to the united processing centre, etc. Dedicated software provides for the creation of a united automatic dispatching system of communal services.

### Applications:

Residential houses, cottages, urban districts; Public places (schools, hospitals, etc.); Industrial buildings.

LED lamps and luminaires.

LED lamps are used to replace electroluminescent lamps and bulbs in existing luminaires, LED luminaires – for residential, commercial and industrial buildings and for street lighting.

### Advantages:

- Low energy consumption – twice less than in electroluminescent lamps;
- Long life – 5 times longer than that of electroluminescent lamps;
- Ultimate ecological security – no utilization needed;
- Absence of UV and IR radiation;
- 1-1.5 year pay-off period;
- Easy to use and mount;
- Noiseless work low heat emission;
- Mechanical strength, vibration resistance, independence on voltage drops
- Constant light flux;
- High luminous efficiency: 100-150 lm/w
- Low electric main load due to low energy consumption.

## Product Catalogue



### Radiofrequency contact plugs SShR

Radiofrequency contact plugs are used for intrablock and interblock connection of high frequency electric chains of civil and special purpose radiotechnical equipment. They provide for up to 500 connect-disconnect operations without destruction of contact elements. Production, testing and acceptance comply with State Standard (GOST) RV15.307-2002 and GOST V20.39.204-76.



### High frequency electropolar reversing relay RPPV-11/12/15/16

High frequency electropolar reversing relays are used for up to 30MHz alternating-current circuits commutation. The relay should be switched at de-energized HF contacts during relay-actuation and relay-release time.

Relay is controlled by short-time pulsing in direct-current circuit. Production, testing and acceptance comply with State Standard (GOST) RV15.307-2002 and GOST V20.39.204-76.



### Intercommunication, commutation and control system (AVSKU)

The system is used to provide intercommunication in command and control vehicles between crew members and switching of data transmitting equipment channels to different channel-forming facilities of the object. AVSKU system enables each crew member to keep up external radio communication without leaving the working place using radio facilities of the object, including channels of multichannel radio stations and satellite radio communication stations. AVSKU provides working of on-board computer in LAN through Ethernet 802.3 interface. AVSKU is made as hardware-software complex.



**Portable and mobile interfering transmitters  
RP-377 VM1**

The transmitters are used for countermeasures jamming and local radio communication and radiocontrol lines blocking both in motion and fixed-site conditions to ensure protection from radio-controlled explosive devices. The equipment can be installed in the armor vehicle or in a rucksack, briefcase, etc.



**Bonding terminal**

Bonding terminal is used to switch automatic control circuits of diesel generator sets. It is mounted on chassis of locomotives.

Bonding terminal is a construction made of metal, consisting of chassis and lid fixed to the chassis with 4 screws. For hermetization of the construction there is a rubber sealer between the lid and the chassis. A cable enters through the collect inlet, located on side walls of the terminal. The cable is switched by 30-contact terminal plate by Wiedmuller mounted on the bottom of the chassis. Cable mounting is performed by special screwdriver. Unused cable inlets are shut by protective cap, supplied with the terminal.

# VNII VEGA JSC



## Company Profile

<b>Company name (short):</b>	VNII VEGA JSC
<b>CEO:</b>	Vladimir I. Shtefan
<b>Address:</b>	7b, Moskovskiy av., Voronezh, 394026
<b>OKPO code:</b>	29692071
<b>Year of foundation:</b>	14.10.2005 (25.08.1956)
<b>Workforce:</b>	304 people
<b>Telephone:</b>	+7 (473) 262-27-03 — CEO (reception)
<b>Supply Dept:</b>	+7 (473) 262-27-09
<b>HR Dept:</b>	+7 (473) 262-27-16
<b>Fax:</b>	+7 (473) 262-27-20
<b>Website:</b>	<a href="http://www.vniivega.narod.ru">www.vniivega.narod.ru</a>
<b>Specialization:</b>	Scientific research in the field of natural and engineering sciences. Design and production of technical equipment and transmit-receive equipment for special purposes.
<b>Sales volume in 2010:</b>	142 000 thousand RUR (exclusive of VAT)
<b>Production volume in 9 months of 2011:</b>	121500.0 thousand RUR
<b>Quality management system:</b>	certificate of compliance with State Standard (GOST) ISO 9001-2008, product development and pilot production system standards, including GOST RV 15002-2003. Certification authority – Soyuzcert (Moscow).
<b>Certification:</b>	All products are supplied to the Ministry of Defense, Federal Protective Service and Federal Security Service of Russia.

## Historical Note

The company was founded on 25 August 1956 following the decree of the Central Committee of the Communist Party of the Soviet Union and Council of Ministers of the USSR № 1195-613 (setting up of speical design-engineering department on the base of Elektrosignal plant). In 1961 the department was reorganized into radioconnection design bureau (VKBR). In 1990 VKBR was reorganized into Vega Voronezh research institute, which was reorganized to Voronezh research institute VEGA JSC (VNII VEGA JSC) after privatization on 14 October 2005.

In over 50 years the company has carried over 30 scientific research projects and over 175 design projects on engineering of professional mobile wireless communication equipment for special and civil purposes for different branches of national economy. The company took part in equipping such radiocentres as Ostankino, MSU, radiocentres in all administrative centres and capitals of Union Republics within the USSR.

The company has scientific and technical potential and production base, providing for production of

equipment to meet the clients' demands in the latest radioconnections standards and reliability.

5 workers of the company were awarded the state award of the USSR For high scientific achievements, 46 workers were awarded the government awards, 50 workers were awarded the title of honourable radio men. Over 30 workers were awarded the medal of VDNKh.



## Production Facilities

VNII VEGA JSC production base includes equipment stock by Japan, German, American and Swiss manufacturers. Design experience enables the company to face science-intensive challenges.

Subject, design and process departments are equipped with modern computer machines with software control. Highly qualified professionals design the products using the latest 3D modelling methods.

Implementation of modern technologies in automated design and document management reduced development and document coordination time.

Production area of VNII VEGA is about 5000

square meters. It includes well-equipped production and engineering facilities:

- Subject department;
- Design department;
- Production department;
- Preparation shop;
- Assembly shop;
- Mechanic assembly department;
- Tool room;
- Rubber plant;
- Welding shop;
- Assembling shop;
- Quality management service;
- Energy-mechanical department.



## Production Program

### • Applications

The company's products are used for high quality encrypted information radiotransmission in mobile government radio networks, special purpose radio network of the Ministry of Defense and Federal Security Service of Russia and radio train communication of Russian Railways JSC.

### • Special features and competitive advantages

VNII VEGA JSC's main advantage is that drawing up design documentation and production process is executed in an integrated production cycle.

The company's products are low-volume at a wide range and narrowly-specialized in accordance with customer's requirements.

### • Innovations and new developments

The company's production activity is based on the use of advanced developments and innovations in radioelectronics. The company launches 2 and more new products annually. The company's objectives are:

- Development of systems on program-oriented units of own production on the base of SDR-technologies.

- Development of multifunctional hardware-software systems for Russian Navy and participation in development of fixed part of ground-based echelon of integrated automatic digital communication system.

## Product Catalogue



### Stationary tri-band digital radio station **RS-1MTs**.

Used for radio train communication by Russian Railways JSC.



### Radio monitoring system **RTK-K7**.

Radio monitoring system is used for logging of radiofrequency environment, spectral analysis, displaying and documentation of received signals specters, location of finding and displaying them on a digital map.



### Small-scale centric multichannel station **KIZIL-9TsM-2**

Provides high-quality full-duplex digital radiotelephonic connection of different systems' subscribers. Works as a part of both stationary and transportable radiocentres. Used as basis for building scalable radiostation systems using additional modules or modified software.



#### Test bench KIS SOSNA

Used for the maintenance of digital radio stations SOSNA-V, SOSNA-M, according to the operating manual, for voltage standing-wave rate and outsourcing interference level standing-wave rate measurement.



#### Stationary radio station TRANSPORT RS-1M

Used for full-duplex connection between station duty officers, train dispatchers, locomotive dispatchers, power dispatchers and electric locomotive operator.



#### Small-scale multichannel digital subscription station KIZIL-9AM

Used for high quality full-duplex digital radio-telephonic connection of different systems' subscribers. Used as a basis for building scalable radiostation systems using additional modules or modified software.

# VZPP MIKRON CJSC



## Company Profile

**Company name (short):** VZPP MIKRON CJSC

**CEO:** Sergey G. Przhimov

**Address:** 119a, Leninskiy Avenue, Voronezh, 394033

**OKPO code:** 17401068

**Year of foundation:** 26.07.2000

**Workforce:** 920 people

**Telephone:** +7 (473) 226-14-24 — CEO (reception)

+7 (473) 223-11-09

+7 (473) 226-65-01

**Material and Technical Supply Dept:** +7 (473) 223-79-02

**HR Dept:** +7 (473) 227-92-28

**Fax:** +7 (473) 226-14-24

**Website:** [www.vsp-mikron.com](http://www.vsp-mikron.com)

**Specialization:** Design and production of digital and linear integrated circuit chips, discrete semiconductor chips (UHF, HF and LF high-power bipolar transistors, MOS transistors, Shottky diodes, ultra-fast rectifier diodes, diode clippers and electromagnetic interference filters).

768 000 thousand RUR

516100.0 thousand RUR

**Sales volume in 2010:** Certificate of compliance with ISO 9001:2008.

**Production volume in 9 months of 2011:** Certification authority - Bureau Veritas

Certification (Great Britain)

**Certification:** The company's products are not subject to obligatory certification.

## Historical Note

VZPP-MIKRON JSC was founded in 2000 on the basis of chip manufacturer NPO Electronika which had been designing and manufacturing electronic components since 1959. VZPP Mikron CJSC, in cooperation with enterprises of Russian Silicon Valley in Zelenograd, is a part of Sitronics Microelektronika JSC.

Today VZPP MIKRON JSC is a modern high-technology research and production complex designing and manufacturing chips for semiconductor devices and integrated circuits as part of silicon slabs.

The scientific and technical potential, as well as production possibilities and human resources of NPO Electronika, which has been designing and manufacturing electronic components since 1959, enabled VZPP Mikron to become a leader in the production of energy-hungry components of electronic devices: Shottky diodes, MOS transistors, voltage suppress-

sors, RC and LC filters, UHF, HF and LF high-power bipolar transistors, ultra-fast rectifier diodes.

VZPP MICRON JSC manufacturing complex is located in a logically-developed part of Zheleznodorozhniy district of Voronezh and shares the industrial site with VZPP-S JSC, which assembles semiconductor device chips. VZPP Micron JSC has the necessary infrastructure for the production of semiconductor devices and integral circuit chips.



## Production Facilities

2 manufacturing lines provide the output of 23000 silicon slabs 100 mm in diameter and 6000 slabs 150 mm in diameter. Chips are produced in white rooms of 5 cleanliness grades

Production line characteristics		100mm	150mm
Production area, total	m <sup>2</sup>	3 936	3 970
<b>White rooms:</b>			
Class of cleanliness of 100.000	m <sup>2</sup>	562	-
Class of cleanliness of 10.000	m <sup>2</sup>	1 243	2 213
Class of cleanliness of 1.000	m <sup>2</sup>	565	415
Class of cleanliness of 100	m <sup>2</sup>	565	400
Class of cleanliness of 10	m <sup>2</sup>	565	322
<b>Staff, total</b>	people	332	244
Workers	people	227	156
Specialists	people	38	28
<b>Geometry rules</b>	mkm	1,5	1,5
<b>Devices</b>	Integrated Circuits, Schottky Diodes, TVS-diodes, Ultra Fast Diodes, MOS transistors Bipolar transistors		Schottky Diodes, Integrated Circuits
<b>Production facilities:</b>			
Integrated circuits	Slabs per month	10 000	1 500
Shottky diodes	Slabs per month	7 000	4 500
Ultra-fast diodes and transistors	Slabs per month	3 000	-
TVS-diodes	Slabs per month	2 000	-

The main target for 2012 is to increase production capacities and double the output.



## Production Programme

### • Applications

VZPP Mikron JSC products are used in telecommunication, computer devices, power engineering, space industry, aviation, domestic appliances, medical equipment.

### • Special features and competitive advantages

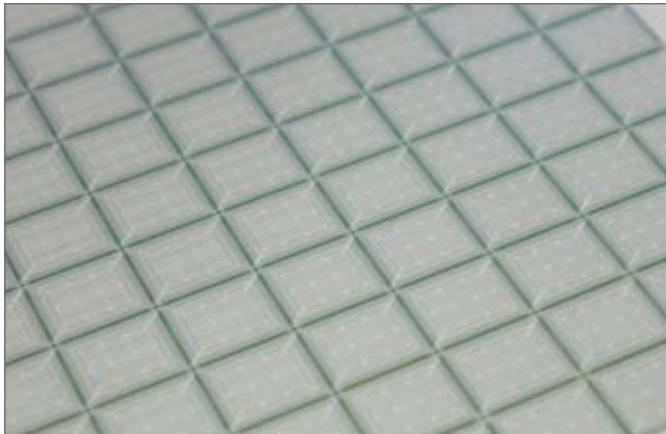
The company's main advantages are: a wealth of production experience, expansion prospects, highly-qualified specialists, high quality products, QMS certified in accordance with ISO 9001:2008 requirements. The company exports over 50% of its products.

Technological advantages: white rooms, including white rooms with cleanliness grade 10 particles per m<sup>3</sup>, designers capable of developing innovative products, experience in developing and testing new products, manufacturing technologies legal protection.

### • Innovative development

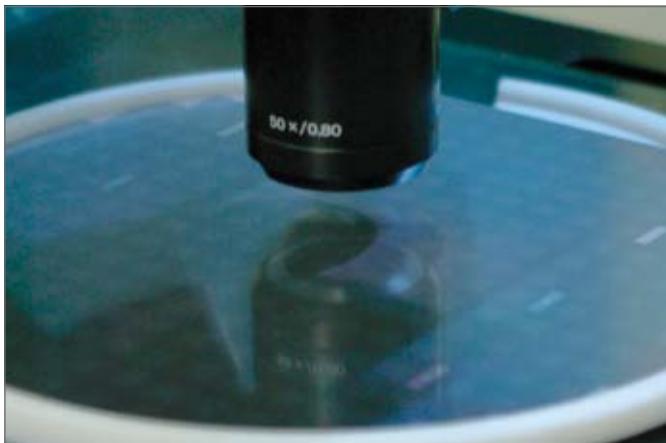
The company annually implements and launches from 20 to 50 new types of semiconductors, including the ones with patented technical solutions.

## Product Catalogue



### Bipolar integrated circuit chips.

Series 106, 706, 134, 734, 1504, 1505 and different types of digital integrated circuits series 1804. In total over 400 part types.



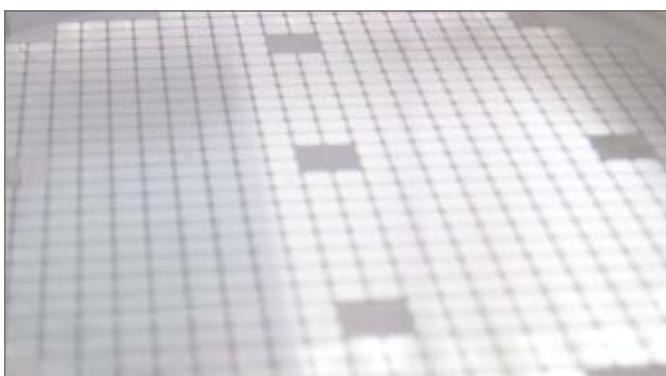
### Linear integrated circuit chips

- Operating amplifiers series 358, 324;
- Comparator units series 339, 393;
- Constant voltage stabiliser and regulator units series 78XX, 79XX, 520X, 295X, 317;
- Reference-voltage source series 431;
- Dc-to-dc converter series 34063;
- Pulse-time modulation controller series 284X;
- Note amplifier 386M.



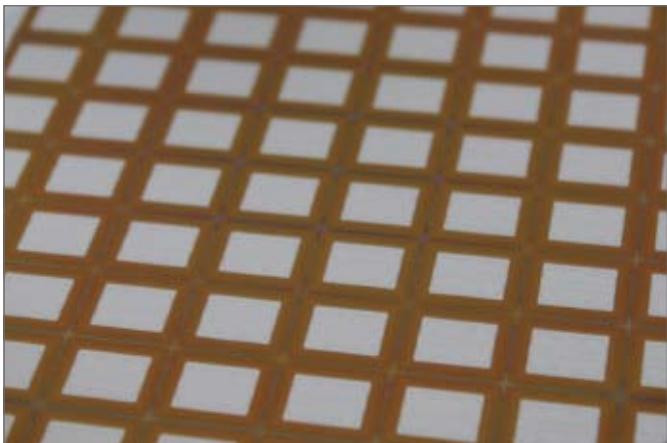
### High power MOS transistor chips

Used in high frequency switch-mode power supplies, converter systems, inverters for AC and DC electromotors speed management, high frequency induction heating generators, ultrasonic generators, peripheral devices, telecommunication equipment etc.



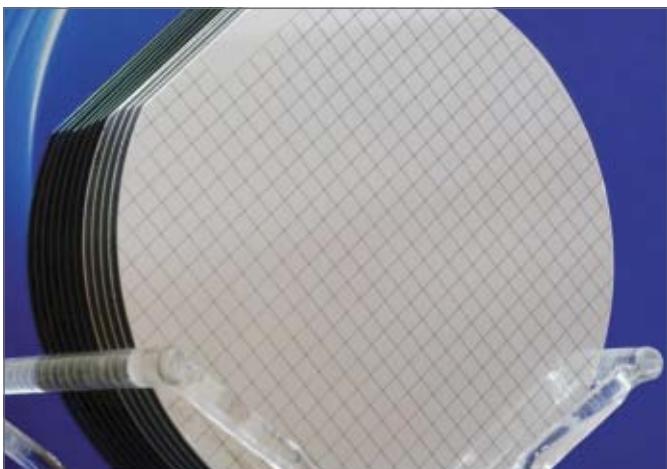
### UHF, HF and LF high-power bipolar transistors chips

Used in telemetric systems, communication equipment, television, automotive and audio equipment.



**High voltage high power ultra-fast diodes chips**

Operating voltage up to 1200V, current up to 120A. used in the production of switch-mode power supplies, converters, power modules as antiparallel diode.



**High power Schottky diodes chips**

Operating voltage up to 380V, current up to 350A. Used in the production of switch-mode power supplies, converters, overshoot protection systems, etc. Chips are produced on silicon epitaxial structures with different types of Schottky barrier.



**Low voltage discrete and integral diode clippers and electromagnetic interference filters**

Used in high sensitivity units of radioelectronic equipment from electrostatic discharge destructive effect and voltage swells in transient phenomena in electronic circuits. Low voltage diode clippers, LC and RC filters are used in high speed information links, mobile phones, MP-3 players, laptops and other portable equipment; in desktops for protection of ports and LCD screens.

# VZPP-S JSC



## Company Profile

**Company name (short):** VZPP-S JSC

**CEO:** Boris G. Ryazantsev

**Address:** 119a, Leninskiy Avenue, Voronezh, 394033

**OKPO code:** 22788135

**Year of foundation:** 1959

**Workforce:** 1023 people

**Telephone:** +7 (473) 227-92-52 — CEO (reception)

**Sales and Marketing Dept:** +7 (473) 223-69-51, 226-73-30, 237-92-62

**Supply Dept:** +7 (473) 223-68-12

**HR Dept:** +7 (473) 226-58-60

**Fax:** +7 (473) 2266016

**Website:** [www.vzpp-s.ru](http://www.vzpp-s.ru)

**Specialization:** Special purpose microelectronic devices (transistor assemblies, logic integrated circuits, field programmable logic devices), wide range of power electronic devices: high power n-channel field transistors, high power Shottky diodes, high voltage regenerative diodes, diode bridges, high power HF and UHF transistors, power modules, constant voltage units, automotive electronics.

**Sales volume in 2010:** 800 000 thousand RUR

**Production volume in 9 months of 2011:** 536900 thousand RUR

**Quality management system:** Certified in compliance with State Military Standards №SVS.01.431.0152.08 and №VR 03.1.2083-2008.

**Certification:** The company's products are not subject to obligatory certification.

## Historical Note

- On 31 December 1957, following the decree of Council of Ministries of the USSR, the plant producing semiconductor devices was set up in Voronezh.
- 1959 – the first batch of silicon high voltage alloyed diodes was produced.
- 1961 – the plant started producing germanium and silicon transistors.
- 1963 – the plant started producing high power germanium and silicon alloyed transistors.
- 1965 – diode-transistor logic integral circuit was designed.
- 1967 – the first Russian high power UHF diode was designed.
- 1968 – 16-bit MOS integral circuit RAM was designed.
- 1970 – pivots of Voronezh portable tape recorder were designed and assembled.
- 1974 – Electronika BZ-18 single-chip engineer calculator was designed.
- 1983 – High power silicon transistors in plastic housings were produced.

- 1997-1999 – Design and implementation of production of hardware components for power and automotive electronics.

• 2002 – The plant was renamed as VSPP-S JSC.

• 2009 – Participation in project: Setting up of 3D microchip assembly technopark in Russia.

Today, VZPP-S is a major hardware components supplier for radioelectronic equipment, communications tools, and special purpose equipment producers. The company's products are used by over 450 companies in Russia and CIS.



## Production Facilities

VZPP-S JSC occupies an area of 80700 m<sup>3</sup>. Production area with well-equipped working places takes up 41700 m<sup>3</sup>. The production area comprises:

- Production shops;
- Nonproductive shops;
- Design bureau;
- Development office;
- Production department;
- Chief engineer office;
- Laboratories.

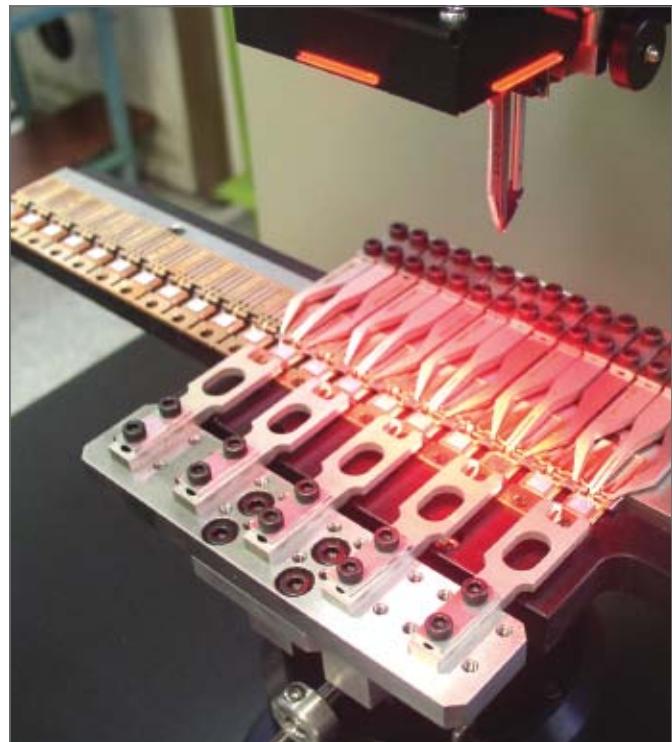
VZPP-S production area is tooled up with high precision and high technology equipment manufactured in Russia, the USA, Netherlands and Great Britain.

### **The plant possesses following technologies:**

- Assembly of integrated circuits in metalloceramic housings;
- Assembly of integrated circuits in plastic housings;
- Assembly of UHF transistors;
- Assembly of heavy duty semiconductor devices in plastic, metalloceramic and glass/metal housings;
- Production technologies of power modules based on field transistors, Shottky diodes and re-

generative high voltage diodes in plastic and metalloceramic housings;

- Production technologies of silicon patterns with dielectric isolation.



## Production Program

### **• Applications**

VZPP JSC product range includes products for civil purposes and military purposes and consists of over 400 part types.

Applications: aeronautical industry, aerospace industry, weapons and military equipment, computer equipment, connection facilities, automotive industry, lighting equipment.

### **• Special features and competitive advantages**

VZPP-S JSC produces high quality products at a reasonable price. All products comply with relevant technical rules and norms.

The company is open to mutually beneficial cooperation and is ready to consider any business proposal.

VZPP-S JSC often sends developmental prototypes to clients for quality check.

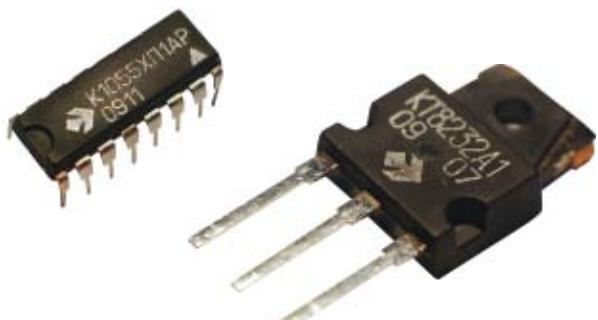
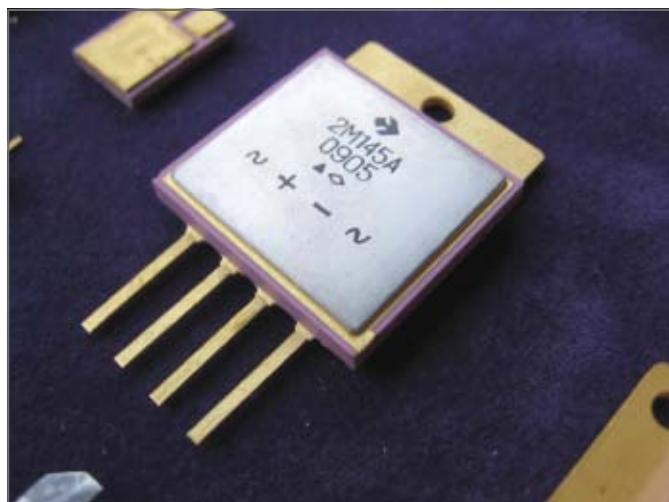
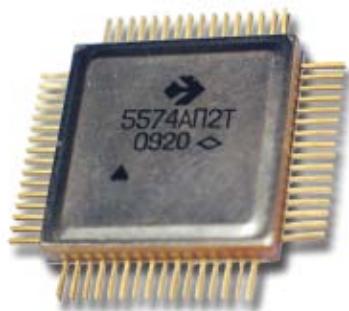
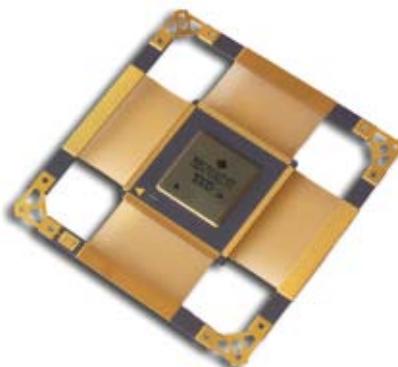
### **• Innovations and new developments**

VZPP-S JSC is constantly advancing. Trying to be up to date the company explores new areas of activity and improves its products in compliance with international standards.

### New areas of activity:

- Advancing of assembly technology of field programmable logic devices (FLPD) in metalloceramic housings;
- Development and implementation of wide range of modern power electronics;
- Development of production technology of radiation-proof component base;
- Expanding the range of logic integrated circuits with low energy consumption;
- Development and production of heavy duty power supplies with efficiency factor over 94%;
- Widening the range of electronic component base in plastic, glass/metal and metalloceramic housings;
- LED lighting;
- Technology of 3D assembly for microelectromechanical systems, field programmable logic devices, FLASH, etc.

## Product Catalogue



### Field programmable logic device **PLIS-5576HS-1T**

- TU-AEYa.R.431260.478 TU
- Compatible with field programmable logic device EPF10R50RI240 by Altera;
- Supply voltage 3,3+0,3V
- 5V input/output resistance
- Tripled testing block (JTAG) with boundary scan circuit (BST) compatible with IEEE 1149.1-1990 standard.
- Built-in configuring system, providing for multiple reprogramming by means of external configuring devices or intellectual controller through special boot port or JTAG port.

### Integral circuit series **5574 (13 part types)**

- Supply voltage 2.3-3.6V
- 5V input/output resistance
- 16bit bidirectional synchronous bus driver with 3 conditions output
- Housing 4235.88-1

### Monophase bridge modules – **2M145A**

Type	2M145A
Analogue	PKR60F
$V_{RRM}, B$	400
$I_{F(AV)}, A$	10
$V_{FM} @ I_{F(AV)}$ , $T_c = 25^\circ C$	1,2
$I_{RM} @ V_{RRM}$ , mA	$T_c = 25^\circ C$ $T_c = 125^\circ C$
$R_{thJC}$ , $^\circ C/Bt$	3,5
$t_{rr}$ , ns	120
Housing	KT-109-1

### Automotive electronics **K1055HP1AR; K1055HP1AT; KT8232A1, B1, A2, B2**

- Single-channel ignition controllers with octane selectors;
- High power bipolar Darlington transistor (n-p-n).

**Power module based on Shottky diode MD-4200-0.5**

Type	MD4-200-0,5
Analogue	-
$V_{RRM}$ , B	50
$I_{F(AV)}$ , A	-
$V_{FM} @ I_{F(AV)}$ $T_c = 25^\circ C$	0,75
$I_{RM} @ V_{RRM}$ , mA	$T_c = 25^\circ C$ $T_c = 125^\circ C$
$R_{thJC}$ , $^\circ C/Bt$	(0,4)
Housing	TO-244 mod.2 (isolated)

**Power module based on regenerative diodes**

Type	MD4-120-4-A6
Analogue	HFA120MD40C
$V_{RRM}$ , B	400
$I_{F(AV)}$ , A	60(2x60)
$V_{FM} @ I_{F(AV)}$ $T_c = 25^\circ C$ , B	1,3
$I_{RM} @ V_{RRM}$ , mA $T_c = 25^\circ C$ , mA	0,5
$t_{rr}$ , $\mu s$	100
$R_{thJC}$ , $^\circ C/Bt$	(0,5)
Housing	TO-244 mod.2 (isolated)

**Power module on bridge transistors MTKP1-200-0.6**

Type	MTKP1-200-0.6
Analogue	-
$VDS$ , B	60
$ID$ , A	200
$IDM$ , A	600
$RDS(on)$ , Ohm	0,005
$PD @ TC=25^\circ C$ , W	500
$R_{thJC}$ , C/W	0,25
Housing	TO-244 mod.1

# NIIPM JSC

## Company Profile



**Company name (short):** Research Institute of Semiconductor Mechanical Engineering

**CEO:** Vyacheslav F. Tupikin

**Address:** 160 Leninskiy av., Voronezh 394033

**OKPO code:** 07625513

**Year of foundation:** 1961

**Workforce:** 225 people

**Telephone:** +7 (473) 223-20-46 — CEO (reception)

+7 (473) 269-59- 82

**Supply Dept:**

**HR Dept:**

**Fax:**

**Website:**

Specialization:

Design and production of special equipment for scientific research and production of electronic devices and components

440 300 thousand RUR (exclusive of VAT)

167 700 thousand RUR

**Sales volume in 2010:**  
**Production volume in 9 months of 2011:**  
**Quality management system:** NIIPM JSC is certified in compliance with GOST R ISO 9001-2008, licensed to design aerospace equipment, materials and technologies.

## Historical note

- 1961 – NIIPM was set up as the head institute in research and design of monitoring and test equipment for the production of microelectronic devices;
- 1965 – The pilot plant on the base of NIIPM was put into operation;
- 1970 – The company merged with NPO Electronica;
- 1971 – The company designed and implemented the first full-cycle power-operated lines, designed the first prototype of computer-aided equipment;
- 1972 – The company designed and implemented the first prototypes of domestic video tape recorders;
- 1992 – The pilot plant separated and became an independent enterprise GVMZ;
- 1993 – NIIPM was transformed into JSC;
- 2006 – Sodruzhestvo Industrial park was organized on the base of NIIPM.

Many microelectronic manufacturers in Russia are tooled up with equipment produced by NIIPM. The company shipped its equipment to CMEA countries and PRC. The company performed over

1000 of Research and Advanced Developments, designed over 500 prototypes of special, monitoring and test equipment. Over 1000 technical decisions used in equipment are protected with copyright certificates and patents.

Products, designed by NIIPM were displayed at different domestic and foreign exhibitions and were awarded with over 100 gold, silver and bronze medals.



## Production facilities

The company comprises research and technology departments with highly-trained specialists with professional experience from 10 to 30 years. To improve developers' productivity, each department is toolled up with automated working stations. The company has a united local area network providing for effective use of resources of the company.



NIIPM has implemented automated complex of design and processes preparations produced by Compas-Lotsman-Vertical. The company set up the design centre enabling access to electronic libraries of state and industry-specific standards of the company, guides, catalogues of parts and components, united digital archive of design and engineering documentation of products produced by the company with adherence to author's rights and confidential information.

The company has sufficient equipment and area for the production of prototypes of equipment designed by the company.

The equipment stock (turning, milling jig-boring, sanding machines) and specialists (machine operators and assembly fitters) provide for the production of almost any prototypes and components. Many technological processes are carried out in cooperation (production of printed circuit boards, plating, casting etc). High-precision equipment (sensors, valves, screw pairs etc), supplied by specialist companies is widely used. Special shop producing LED fixtures was set up and toolled up with essential equipment to satisfy the demand of national economic enterprises.



## Production program

### • Applications

The company's products are used for the production of electronic devices at electronics manufacturing industry enterprises for examinations, testing and mass production of photoconverters (solar cells). LED fixtures designed and produced by the company are used at various national economic sites.

### • Competitive advantages

Special equipment, produced by NIIPM is on a par with foreign counterparts.

### • Innovations and new developments

New production program of the research and development institute focuses on the design and production of LED lighting fixtures, machines for the production of fullerene-containing blends production equipment, equipment for the production of domestic AMOLED displays.

The company is preparing for mass production of photoconverters (solar cells) used in electric power supply systems on space objects, integrated tests in conditions simulating outer space.

## Product catalogue

**NIIPM JSC** is scientific and research enterprise, not a batch production factory, therefore it doesn't have staple products. Production of special equipment in accordance with the company specialization is possible on direct contract basis with particular customers.



### Automatic high-speed plasma etching machine **PLASMA 150**

**Applications:** High-speed and high-precision plasma etching of SiO<sub>2</sub>, phosphosilicate glass, polycrystalline silicon, Si<sub>3</sub>N<sub>4</sub>, films over masking photoresist. Minimal pattern size – up to 0.6 μm. Process of high-speed plasma etching of dielectric films in spatially localized high pressure glow-discharge provides for high speed and adequate level of anisotropy of etching at admissible photoresist durability.



### Intellectual water purification system **ISOV-0.1**

**Applications:** Purification of main water from suspended materials, iron, mangan, ions of non-ferrous metals, organic materials, active chlorine with ability of fortification with iodine ions, oxygenization and other bioactive components. Productivity: 50-300 litres per hour.



### Chemical cleaning system **LADA-M**

**Applications:** Chemical treatment of slabs in sulphuric, hydrochloric, azotic acids, hydric dioxide, ammonia and their mixtures, with following rinsing in deionized water. The system can be fitted with dust catching zone and DV recycling unit.

#### Features:

- Slab diameter: 100, 150 mm. Chemical cleaning and rinsing in automatic mode.
- Multilevel control system provides for non-stop monitoring of technological features and for diagnostics of condition of mechanisms and units of the machine.

### Tunnel chamber – **PKV-4**

**Applications:** Static and functional check of electrical technology devices in planar packaging with 240 and 256 connectors mounted in carrier space vehicle.

**Features:** sorting devices into groups when the chamber works simultaneously with J750 Tera-dyne tester. For work in low temperature conditions the system needs liquid azote sort 1 under the pressure of 4 kgf/cm<sup>3</sup> or more.





#### **Measurer of static and dynamic parameters of microcircuits KVK.DITs.E-16-001**

Applications: Universal system for control of LSI and VLSI in the process of development and acceptance tests. The system provides for control of static parameters and dynamic operation of LSIs and VLSIs including microprocessors, FPLDs, MALSIs, EPROM and other digital microcircuits. The following equipment can be connected: terminal tester, manual or automatic device loader, automatic heat chamber loader.



#### **System of pyrolytic deposition of dielectric layers OKSIN**

Applications: Used for both clean and phosphorus doped dielectric SiO<sub>2</sub> layers on the slabs using low-temperature pyrolytic action for passivation and creation of intermediate insulator up to 1 μm. The system produced in the form of stand-alone blocks: chemical treatment module, primary preparation module. The system also comprises Laminar-C air-cleaning module which is an autonomous device. PC panel is used for data input and storage, visualisation of the operation process, function elements control.



#### **Robot-based production line used for production of new generation solar cells for space objects**

Applications: Used for the assembly of solar cells without permanent presence of operator. The line provides for: mounting of photoconverters into SN, entrance visual tests, sorting into conformance groups, unmount of PC from SN, assembly of strings, assembly of panels of photoconverting parts on honeycomb structures, etc.



#### **LED energy saving lighting fixtures**

Applications: used for lighting of offices, streets, corridors, ladders, educational institutions, toilets, warehouses, shops, etc. LED fixtures provide for energy economy up to 2-3 times more as compared to electroluminescent lamps. Operation lifetime of fixtures is 80000 hours. 3-year warranty.

# FGUP NIIET



## Company Profile

<b>Company name (short):</b>	FGUP NIIET
<b>CEO:</b>	Anatoliy I. Stoyanov
<b>Address:</b>	119a, Leninskiy Avenue, Voronezh, 394042
<b>OKPO code:</b>	10600824
<b>Year of foundation:</b>	20.09.1966
<b>Workforce:</b>	374 people
<b>Telephone:</b>	+7 (473) 223-55-31 — CEO (reception)
<b>Supply Dept:</b>	+7 (473) 225-44-14
<b>HR Dept:</b>	+7 (473) 226-20-28
<b>Fax:</b>	+7 (473) 226-98-95
<b>Website:</b>	<a href="http://www.niiet.ru">www.niiet.ru</a>
<b>Specialization:</b>	Design, production and distribution of electronic components for special equipment and civil purpose products. On contract basis the company tests and certifies Russian and imported electronic components and performs analytical studies.
<b>Sales volume in 2010:</b>	268 631 thousand RUR (exclusive of VAT)
<b>Production volume in 9 months of 2011:</b>	184600 thousand RUR
<b>Quality management system:</b>	Quality management certificate on design and production of integrated microcircuits, semiconductor devices, and electronic modules №SVS.01.431.0241.10 of 12.07.2010, issued by the headquarters of Voenenergcert system FGU 22 TsNII of the Ministry of Defense; certificate of compliance on design and production of integrated microcircuits, semiconductor devices and electronic modules №VR 03.1.3345-2010 of 12.07.2010, issued by the headquarters of Voenenergcert system FGU 22 TsNII of the Ministry of Defense
<b>Certification:</b>	All integrated microcircuits, semiconductor devices and electronic modules are approved in accordance with Register MOP 44 001

## Historical Note

FGUP NIIET was set up on 20 September 1966 as central design bureau at Voronezh plant of semiconductor devices.

On 1 January 1983 the design bureau was renamed as NIIET.

The main business activity of the company is design and production of electronic components for radioelectronic devices, communication equipment and management systems, digital information processing systems, computer equipment, etc.

In the second half of 1960s NIIET designed and produced the first domestic integrated circuits and was the first company in the country to produce (in cooperation with NPP Pulsar, Moscow),

silicon UHF generator transistors. Later NIIET designed microcontrollers, microcomputers, digital signal processors, high power HF and UHF transistors of about 50 types.

Today, the company focuses on design of high performance microcircuits with different types of program memory and execution of special functions. Besides, the company works on the creation of high power amplifier modules.

FGUP NIIET is equipped with assembling and testing machines providing for chip packaging and with mechanic and climatic examination systems. It enables the company to develop and produce highly reliable electronic components for MIC companies.

## Production Facilities

FGUP NIIET comprises:

- **Design centre which designs integrated circuits and high power UHF transistors.**

Design centre consists of 65 automated workstations for design of electronic components, server centre (application and database servers), hardware/software complex for the modelling of semiconductor devices based on CAD system ISE TCAD and hardware/software complex for the design of HF and UHF power amplifiers based on CAD systems AWR Design and Microwave Office.

- **Assembly shop.**

Assembly shop provides for packaging of LSI and VLSI chips into multipass metalloceramic housings with the number of passes up to 500-600.

The assembly shop is multitopic (over 10 different chip housings are used)

- **Analytic centre.**

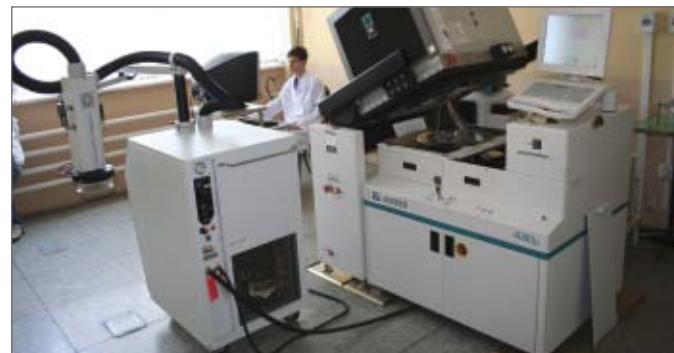
Analytic centre includes electron-scan microscope with X-ray microanalyzer, 1500x optical microscope with digital camera, scanning microanalyzer with 4nm resolution, 0.2 nm electron microscope, IR-

camera with resolution 32x32 micron and variable temperature ranging from -20 to 1500°C.

- **Testing centre.**

Provides for all types of mechanic, climatic, electric, structural and operational life examinations of microcircuits and UHF transistors.

Testing equipment includes centrifuges, vibrobenches, shock machines, heating and cooling cabinets, humidity chambers, high-altitude chambers, measuring systems, fail-safety benches – over 50 types.



## Production Program

### **Applications:**

#### Product types:

- Digital signal processors;
- Microcontrollers and monochip microcomputers;
- High performance multiprocessor VLSIs System on a Chip type;
- Interface and radiation proof microcircuits;
- Microcircuits for implantable cardiostimulators;
- High power HF and UHF silicon transistors;
- Power amplifiers for radio transmitting equipment.

#### Integrated microcircuits are used in following areas:

- Communication tools, and telecommunication systems;
- On-board and stationary compilation of data and control systems;
- Digital electric engine control systems;
- Fast-acting digital signal processing systems and on-board computers based on digital signal processing systems;
- Intellectual sensors;
- Automotive electronics, avionics and marine electronics;
- Electromechanical and robot devices;
- Serviceable and non-serviceable on-board equipment of space objects.

#### Applications of high power HF and UHF transistors and power amplifiers:

- High power transmitters of transportable, on-board and stationary radio communication equipment;
- Radio Detection and Ranging equipment, navi-

gation radiolocation and telemetric systems;

- Radars, active phased array antenna modules and radioelectronic struggle devices;
- High power transmission equipment for digital and analog broadcasting.

- **Special features and competitive advantages:**

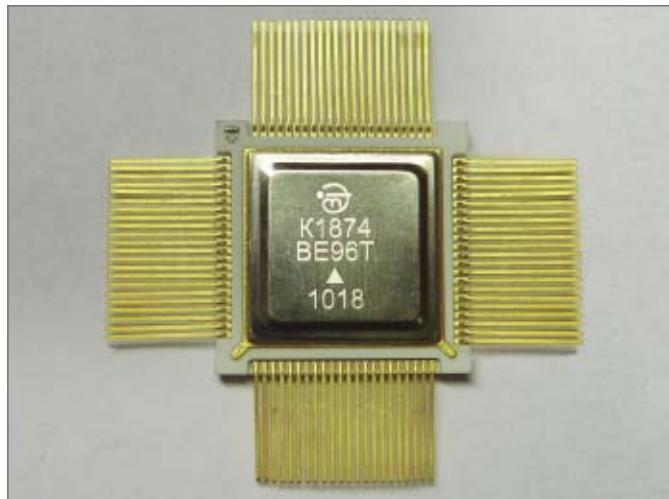
FGUP NIIET has competitive advantages in design and production of multiprocessor VLSIs for on-board aeronautical communication terminals, microcontrollers of micro-converter class for assembly of self-contained data collection and processing systems and intellectual sensors, radiation proof microcontrollers for aerospace equipment and nuclear power generation industry, digital electric engine control systems, small-scale power amplifiers for portable and mobile radio communication equipment and different chips of high power UHF field transistors.

- **Innovations and new developments:**

In electronic devices production the company uses innovative achievements.

Along with the production of widely used electronic devices, the company develops design techniques of fast-acting multichannel digital converters for high speed systems of digital signal processing and communication systems; distribution opportunities of modern microelectronic components: analog-to-digital encoders, DSPs, Flash, ROM, LVDS, PLL in digital signal processing microcircuits and microcontrollers. The company works on design of high power amplifier modules.

## Products Catalogue



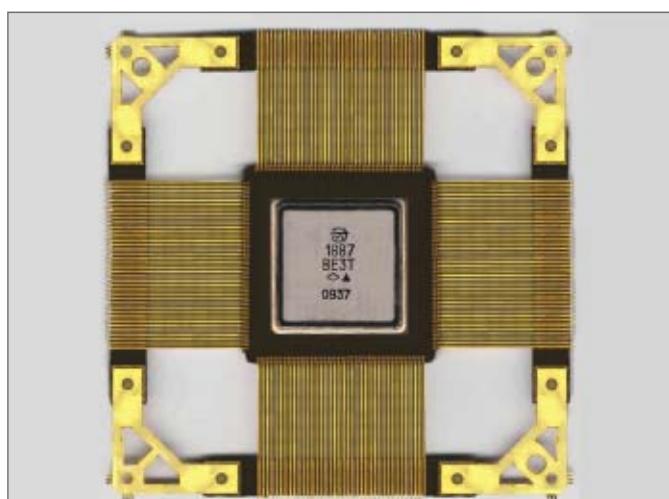
**High performance 16-bit microconverter K1874VE96T with built-in processor, non-volatile memory and multichannel DSP and analog-to-digital encoder.**

Features:

- Frequency: 33 MHz;
- Register RAM 2024x8 bit;
- Extended RAM 2Kx8bit;
- Built-in EEPROM memory 16Kx16bit with read/write protection;
- 8 16-bit analog-to-digital encoders;
- 14-bit DSP;
- 2 serial I/O UART ports;
- SPI and I2C interfaces;
- Pulse-time modulation module;
- Debugging module OCDS
- Supply voltage 3.3V

Applications:

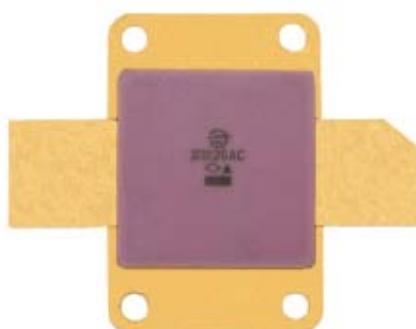
Self-contained precision information collection and processing systems, intellectual sensors (analog signals processing from different sensors) measuring and control equipment.



**16-bit RISC microcontroller 1887VE3T with built-in CAN bus and Flash EEPROM**

Features:

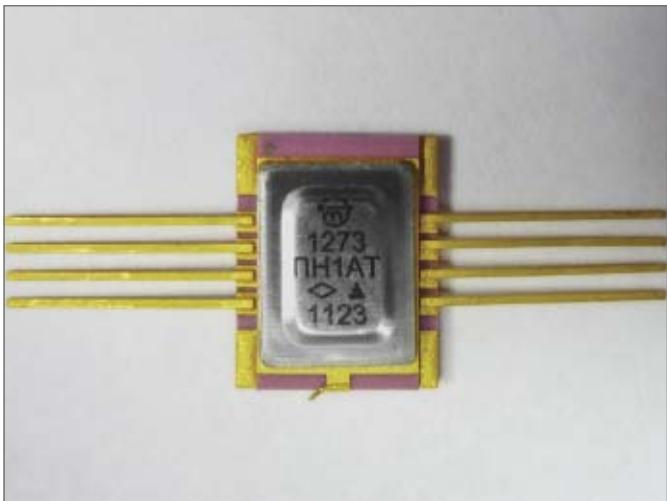
- Frequency 40 MHz
- Built-in RAM 15 KB
- Built-in EEPROM 256 KB
- 16-channel 8/10 bit analog-to-digital encoder
- 2 CAPCOM modules
- Pulse-time modulation module
- Serial ports USART, SPI
- Doubled CAN bus
- Watchdog timer WDT
- I2C interface
- Debugging interface JTAG
- Applications
- Automotive electronics
- Avionics and marine electronics
- Integrated digital control and connection systems
- Robot devices
- Electromechanic devices
- Electromotors management systems.



**High power field DMOS SW transistor 2P826AS**

Features:

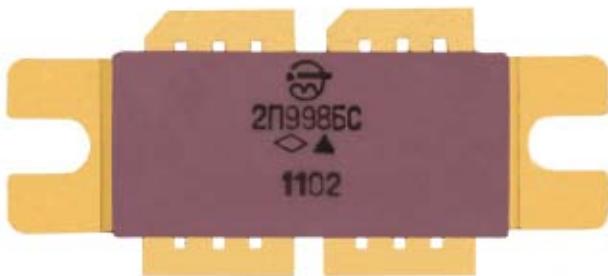
- Output power 600W
- Working frequency range 1.5 – 30 MHz
- Supply voltage 50V
- Power amplification 14 dB (min)
- Efficiency factor 50%
- Direct drain current 60A
- Applications:
- High power radio transmission systems

**Voltage converter 1273PN1T, 1273PN1AT**Features:

- Input voltage 8-40 V
- Output power 1.21-37 V
- Output current 1A
- Efficiency factor 70% (min) 90% (nom)
- Output switch resistance 0.5 Ohm (max)
- Clamping current 1.2-2.2 A
- Main oscillator frequency 225-275 KHz
- Dissipated power 1 W (max)

Applications

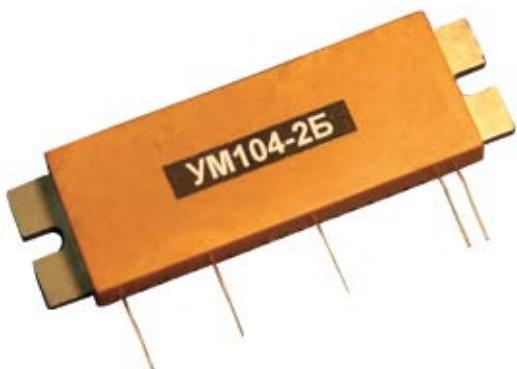
Stabilized secondary power supplies.

**High power UHF field (LDMOS) transistor 2P998BS**Features:

- Output power 150 W
- Frequency range up to 500 MHz
- Supply voltage 28 V
- Power amplification 15 dB (min)
- Efficiency factor 60%
- Clamping current 18 A

Applications

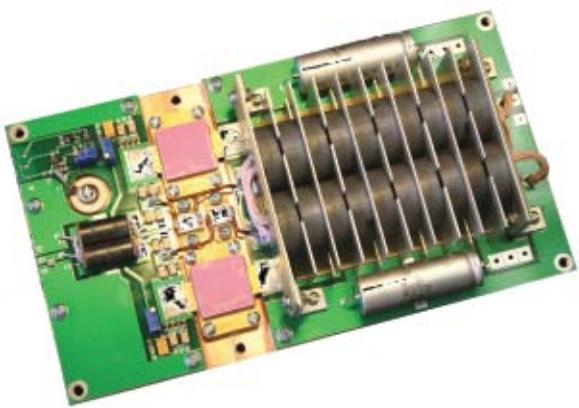
High power radio transmitting equipment

**Small-scale USB/FM power amplifier UM104-2B**Features:

- Output power 16 W
- Frequency range 146-174 MHz
- Supply voltage 12.5 V
- Input power 50 mW
- Efficiency factor 40%
- I/O coordination 50 Ohm

Applications

- Mobile, transportable and stationary radio communication equipment powered by chemical sources of electric energy.

**High power amplifying module****(pallet) UMP0328-1000**Features:

- Output power 1000 W
- Frequency range 3-28 MHz
- Supply voltage 50 V
- Power amplification 20 dB (min)
- Efficiency factor 50%
- I/O coordination 50 Ohm
- Dimensions 225x125x50 mm

Applications:

- High power radio communication equipment
- Radio Detection and Ranging equipment
- Radars, active phased array antenna modules

# VSKB RIKON JSC



## Company Profile

<b>Company name (short):</b>	VSKB RIKON JSC
<b>CEO:</b>	Vladimir K. Agupov
<b>Address:</b>	5 Druzhinnikov Street, Voronezh 294026
<b>OKPO code:</b>	07612077
<b>Year of foundation:</b>	31.10.1996
<b>Workforce:</b>	42 people
<b>Telephone:</b>	+7 (473) 246-35-60 — CEO (reception)
<b>Accounting Dept:</b>	+7 (473) 246-13-98, 272-89-95
<b>Fax:</b>	+7 (473) 278-46-66
<b>Website:</b>	<a href="http://www.ricon.ru">www.ricon.ru</a> , <a href="http://www.ricon.su">www.ricon.su</a>
<b>Specialization:</b>	Design and production of food industry equipment and supercapacitors
<b>Sales volume in 2010:</b>	24 972 thousand RUR (exclusive of VAT)
<b>Production volume in 9 months of 2011:</b>	27500 thousand RUR
<b>Quality management system:</b>	Products comply with State sanitary-hygienic standards which is proved by sanitary and epidemiological inspection report №36VTs.40.515.P.000263.04.02 of 17.04.2004. Quality is proved by the certificate of compliance with State Standard (GOST) R ISO 9001-2001 (ISO 9001-2000) registration number ROSS RU.IK 19.K00005 of 14.07.2004 and certificate of compliance № ROSS RU.AYa.60.V20392 of 12.08.2005.

## Historical Note

Voronezh Special Design Bureau Rikon JSC was set up in 1991 and is based on the Special Design Bureau (SKB) at Voronezh radio component plant set up on 25 may 1959.

Since its opening, VSKB Rikon JSC has gained extensive experience and scientific potential. The quality of aluminium wet foil capacitors designed by VKSB Rikon is on a par with foreign counterparts.

In 1991 for the first time in the USSR capacitors K50-53 were certified in compliance with MSS MECK ISO 9000 and implemented.

In 1997 the government orders stopped and demand for wet foil capacitors deceased. Development process in this direction was cut down.

To survive the company had to reorientate to the design of equipment for milk and processing

industry. Thanks to actions taken by the management, the company managed to maintain its scientific potential, equipment stock, low-vacuum condensation equipment and highly-qualified specialists.

Today, VSKB Rikon specialists design and do research work on development of advanced and high capacity equipment for chocolate glazed curd bars. In 1998 the company opened an experimental chocolate glazed curd bars production shop. In 2000 the company launched a manufacturing line – flexographic print on coverings and packaging.

Since August 2000 the company has been forming Rikon group of companies, including VSKB Rikon JSC, NPF Rikon LTD, Rikon CJSC and SHP Rikon CJSC.

## Production Facilities

VSKB Rikon production facilities are located in Voronezh at 5 Druzhinnkov Street. All design and research activities are performed by VSKB Rikon as it has its own design department, research and development laboratory and sub-standard equipment production shop with highly-qualified employees.

The qualifications of participating companies and scientific potential provide for the development of equipment which leaves behind foreign counterparts.

Scientific potential and experience in design and production enable the company to design highly competitive products.

## Production Program

The company develops and produces:

- Chocolate glazed curd bars production lines and auxiliary equipment;
- Glazed halva and nuts-and-honey bars production lines;
- Non-standard food and food processing equipment on demand;
- Agricultural equipment for sugar beet production;
- One of the company's strategic directions is production of roll-type supercapacitors.

### • Applications

The company's equipment is widely used in milk and food processing industry in Moscow and Moscow region, Voronezh, Lipetsk, Saint-Petersburg, Tver, Kaluga, Novorossiysk, Novosibirsk, Rostov, Stavropol, Ekaterinburg, Krasnodar, Omsk and other cities and regions and countries.

Advanced development of supercapacitors and supercapacitor modules will be applied in different areas of national economy, namely:

- Portable electronic devices;
- Digital TV, DVD, PC, inkjet printer, UPS;
- LED lighting on solar batteries;
- Engine management systems;
- Automotive electronics and car sound;
- Recuperation of energy;
- Energy saving systems.

### • Special features and competitive advantages

1. Lower price in comparison with analogues at better performance characteristics, including:

- Capacity 6 000-10 000 pcs per hour, when using 2 packing machines – up to 20 000 pcs per hour.
- Accessories, processors, frequency converters and other equipment provides for technological process maintenance.
- Smaller size and occupied area

2. Author's rights are protected with patents.

### • Innovations and new developments

VSKB Rikon is able to develop any equipment to satisfy the customers' demands. Throughout the production process, on all technological stages, technical characteristics of units provide for higher quality than that of counterparts.

VSKB Rikon JSC produces roll-type supercapacitors in aluminium housing. The company is capable of producing small-scale supercapacitors (and modules based on them) with radial and axial leads. Size and construction is similar to aluminium wet foil capacitors K50-35, K50-29.

VSKB Rikon is capable of producing high power supercapacitors (and modules based on them) with radial, axial and other leads. Size and construction is similar to aluminium wet foil capacitors K50-18, K50-32.

## Products Catalogue

Chocolate glazed curd bars production lines are used for the production of curd bars from curd substance with weight from 40 to 100 grams. Production capacity of the line is from 6 000 to 20 000 bars

per hour (line equipment depends on customer's demand). The use of frequency converters provides for capacity control without the change of equipment. Production line consists of the following parts:



### Filling feed station

Dimensions (WxHxD), mm	900x600x1700
Capacity, litres per hour	15-60
Nominal rating power, kW	1.3
Supply voltage, V	220/380
Frequency, Hz	50
Weight, kg	200



### Forming machine

Dimensions (WxHxD), mm	830x1950x1550
Capacity, pieces per hour	6000-20000
Substance dosing, g	30-100±1
Belt conveyer speed, meters per minute	4,5
Supply voltage, V	220/380
Frequency, Hz	50
Nominal rating power, kW	4,4
Weight, kg	800



### Glazing machine

Dimensions (WxHxD), mm	1200x1200x1500
Feed pump capacity, m³ per hour	2,5
Belt conveyor speed, meters per minute	4,35
Belt conveyer width, mm	418
Nominal rating power, kW	6,13
Supply voltage, V	220/380
Frequency, Hz	50
Weight, kg	400

**Refrigerating arrangement**

Inside temperature, C	0...-20
Belt conveyor speed, meters per minute	1,8-4,35
Supply voltage, V	220/380
Frequency, Hz	50
Weight, kg	1130-1850

**Packaging machine**

Dimensions (WxHxD), mm	3340x1320x1600
Capacity, pieces per minute	up to 160
Product dimensions:	
-Length, mm	50-70
-Width, mm	25-40
-Height, mm	5-35
Film roll diameter, mm	up to 300
Film width, mm	up to 300
Feeding conveyor width, mm	280
Supply voltage, V	220/380
Frequency, Hz	50
Nominal rating power, kW	2,5
Weight, kg	450

**Stacking table**

Inside temperature, C	0...-20
Dimensions (WxHxD), mm	1000x1000x950
Disc rotation speed, RPM	3 or 7±1
Nominal rating power, kW	0,18
Supply voltage, V	220/380
Frequency, Hz	50
Weight, kg	40

# RIF CORPORATION JSC



## Company Profile

<b>Company name (short):</b>	RIF Corporation JSC
<b>CEO:</b>	Alexander S. Ivanov
<b>Address:</b>	17/2 Dorozhnaya St., Voronezh 394062
<b>OKPO code:</b>	54704884
<b>Year of foundation:</b>	01.02.1988
<b>Workforce:</b>	1307 people
<b>Telephone:</b>	+7 (473) 270-64-98 — CEO (reception)
<b>Sales Dept :</b>	+7 (473) 220-24-23
<b>Supply Dept:</b>	+7 (473) 270-68-78
<b>HR Dept:</b>	+7 (473) 220-24-66
<b>Fax:</b>	+7 (473) 270-47-34
<b>Website:</b>	<a href="http://www.rifcorp.ru">www.rifcorp.ru</a>
<b>Specialization:</b>	Cooling/heating devices, thermoelectric generators, heating equipment, railway equipment.
<b>Sales volume in 2010:</b>	100 000 000 RUR (exclusive of VAT)
<b>Production volume in 9 months of 2011:</b>	823300 thousand RUR
<b>Quality management system:</b>	ISO 9001-2008
<b>Certification:</b>	certificate of compliance of QMS with State Standard (GOST) R ISO 9001-2008.

## Historical Note

RIF Corporation was established in Voronezh city on the basis of the microelectronics experimental plant RIF of the Ministry of Industry and Communications of the USSR.

RIF Corporation is structured in a unique way, having four independent production departments allowing for the intensive development in conditions of modern market economy, irrespective of the volume change of each business area.

RIF Corporation is an annual participant of conferences such as ICT, ECT, Russian Innovation Week, and also exhibitions such as Hannover Messe, Electronica, Innotrans, and OGS in the Middle East.

In the last three years RIF Corporation has mastered and implemented 6 new technological processes:

- Plasma spraying,
- Material laser cutting
- Material hydro-abrasive cutting,
- Production of fiber-glass products,
- Hot and cold pressing of thermoelectric materials,
- Production of optical ceramics



## Production Facilities

The company occupies an area of 98800 m<sup>3</sup>. The company comprises 3 design departments, preproduction department, metrology laboratory, computer-aided management system implementation bureau, quality control department, production shops.

The company is in search of new orders and fields of activity in order to show good results in conditions of the modern market economy. For these purposes, 3 design bureaus were set up:

- Special equipment for the Ministry of Defense;
- Railroad equipment;
- Thermoelectric equipment.

Each department is fitted with modern office equipment, connected by a network, and has a joint database. Each workplace is equipped so as to allow an engineer to work in licensed software, such as: Compass, Pro-Engineer, Galaktika.

For more successful development of the production process, the company brings in scientists from Voronezh high schools. Major partners of the company are Voronezh State University, Voronezh State Technical University, Russian research centre Kurchatov Institute, Moscow, ISMAN In-

stitute, Chernogolovka and Energiya rocket-and-space corporation.

Traditionally the company employs students of Russian High Schools. Today, 20 PhDs work for the company.

In November 2007 the NPO Phonon nanotechnology development centre was set up.

NPO Phonon aims at coordination of innovative activities, increase in efficiency, quality and competitive ability in research and development, production and management activities; development of projects on design of future nanotechnologies and nanoconstructions for further implementation of these projects.

In order to expand to European markets, the Prima company was set up in 2008 in Germany.

All innovative developments of the company are patented. Today the company has 55 patents, including 2 international patents.

Today, NPO RIF is a modern company showing dynamic growth in conditions of modern economy with a wide range of products and scientific and research activities.

## Производственная программа

### Production Program

#### • Applications

There are 4 main directions of activity:

#### - Thermoelectric coolers/heaters

Applications: medicine, railroad vehicles, automotive industry, military vehicles, industry, telecommunications.

#### - Thermoelectric generators

Applications: sea transport, main gas pipelines, space, railroad vehicles, medicine, tourism, automotive industry, domestic appliances.

#### - Heating equipment

Applications: mining industry, railroad vehicles, domestic appliances, electric equipment, leisure activities, chemical industry.

#### - Railroad equipment

Applications: power electronics, inner equipment, climate equipment.

#### • Competitive advantages

Eco-friendliness, use of nanotechnologies, uniqueness, high reliability, resistance to loads and vibrations. Flexible merchandising, advanced management strategies, flexible organisational structure and professional specialists of design bureaus enable the company to satisfy specific customers' demands, increase

marketability, of the company and to react on demands of domestic world markets.

#### • Innovations and new developments.

In the last three years RIF Corporation has mastered and implemented 6 new technological processes:

- Plasma spraying,
- Material laser cutting
- Material hydro-abrasive cutting,
- Production of fiber-glass products,
- Hot and cold pressing of thermoelectric materials,
- Production of optical ceramics



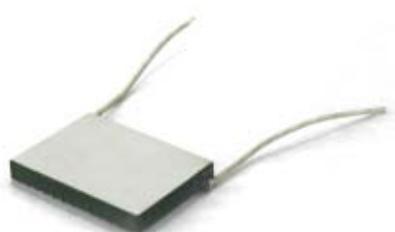
## Product Catalogue



### **Cylinder thermoelectric battery (TEB)**

The problem of finding energy sources, which are able to provide power supply in an autonomous mode, is very acute. Using a principle of direct conversion of thermal energy into electric energy enables the company to solve this problem.

A thermoelectric battery (TEB) is a device for direct conversion of thermal energy (isotope heat sources, organic fuel from gas main, etc.) into electric energy.



### **Thermogenerating battery (TB)**

The Thermogenerating battery is intended for converting thermal energy into electricity (via the Seebeck effect).

The TB is a finished product and it is used for manufacturing self-contained sources of electrical supply.

It is designed using a unique technology of closed circuits from semi-conductive material. The TB electric commutation is provided without using ceramic substrate both on hot and cold sides.

Maximal temperature on the hot side is 340°C.



### **Thermoelectric Gas Generator**

The thermoelectric gas generator (TGG) is a power supply of electric energy, which it generates by thermoelectric conversion, based on the Zeebeck phenomenon, by direct heat conversion, received by fuel combustion, into electric energy.

TGG-150 is intended for direct current supply of radio-electronic devices, complex, linear telemechanics and automatics, communications and cathode protection on trunk gas pipelines, on objects which lack standard power supplying units, but with available natural gas.



### **Thermoelectric generating system**

The thermoelectric generating system is used for self-contained electric supply of devices, air conditioning systems, batteries, lighting and etc. in any climatic zone regardless of the presence of other electric power sources.

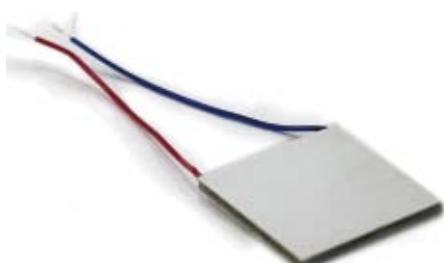
The operating principle is based on conversion of thermal energy into electric energy on the basis of the Zeebeck effect, which means occurrence of electromotive force (thermoelectric electromotive force) in the electric circuit, consisting of a series of connected semiconductors of p-type and n-type, contacts of which are at different temperature modes.



### **Thermoelectric self-contained current source**

The thermoelectric self-contained current source (AITT – 500G) is intended for self-contained power supply of electricity consumers, compatible with characteristics of the specific assembly. Electric energy is generated by a thermoelectric generator with thermal energy

conversion. Consumers of electrical energy are cathodic protection systems of main gas pipelines, technological systems, field gathering systems, gas transfer systems and etc. The primary energy source for AITT – 500G is natural gas, flowing to the system from high pressure main gas pipeline ~ 100 atm. The AITT – 500G is a product of repeated cyclic application, and is repairable and rebuildable. The system is fitted in protection container in vandal-proof version with a ventilation system and a fume-collecting chimney.



### **Thermoelectric Module**

The thermoelectric Module (TEM ) is a semiconductor solid-state thermoelectric device. Its operation is based on the Peltier effect. TEM can provide and maintain set temperatures in limited volumes and chambers with high precision.



### **Thermoelectric Air Conditioner KTE-0.9-220**

Used to maintain necessary parameters of the microclimate in living compartments of vans in motion and during parking.

Thermoelectric Air Conditioner KTE-0.9-220 is a split-type device, the operation of which is based on thermoelectric modules (TEM), operating on the Peltier effect. The Peltier effect arises when during the flow of direct current through the contact of two semiconductors and in the place of contact the thermal energy liberates or absorbs depending on the direction of electric current.

# ЗАО ОФС СВЯЗСТРОЙ-1 ВОКК



## Company Profile

<b>Company name (short):</b>	OFS SVYAZSTROY-1 VOKK CJSC
<b>CEO:</b>	Vladislav I. Kalashnikov
<b>Address:</b>	6 Zhemchuzhnaya Street, Voronezh 394019
<b>Year of foundation:</b>	17.06.1999
<b>Workforce:</b>	153 people
<b>Telephone:</b>	+7 (473) 267-27-95, 279-07-55 — CEO (reception) +7 (473) 220-29-01, 279-07-55
<b>Marketing and Sales department:</b>	+7 (473) 242-53-99, 242-54-04, 279-07-52, 279-07-53
<b>Production, logistics, technical services:</b>	+7 (473) 220-29-00
<b>Fax:</b>	
<b>Website:</b>	www.ofssvs1.ru
<b>Specialization:</b>	Production of fiber-optic cable for different spheres of application
<b>Sales volume in 2010:</b>	685 684.766 thousand RUR (exclusive of VAT)
<b>Production volume in 9 months of 2011:</b>	740000 thousand RUR
<b>Quality management system:</b>	DIN EN ISO 9001:2008, Certification authority: DQS (Germany), participant of European certification authority IQNet.
<b>Certification:</b>	Certificate of compliance of fiber-optic cable, sanitary and epidemiological inspection report, Certificate STO Gazprom 9001-2006, Certificate FSK EES, military register, defense register, fire safety certificate. 31 document in total.

## Historical Note

The company was set up on 17 June 1999 in Voronezh by two co-founders: Lucent Technologies International Inc., USA and Svyazstroy-1 JSC, Russia. In November 2001 Japanese company Furukawa along with Commscope USA purchased the fiber-optic division of Lucent Technologies and OFS Joint Venture was created with headquarters in Atlanta USA. OFS has 7 facilities including cable plants: 2 in the USA, 1 in Europe, 1 in Russia; optic fiber plants: 2 in the USA, 1 in Europe.

Today OFS Svyazstroy-1 VOKK CJSC is a reliable supplier of high quality fiber-optic cables in Russia, CIS and abroad. The company's clients are: Gazprom JSC, FSK EES JSC, Rostelecom JSC, leading mobile connection providers, force structures and other companies, developing their telecommunication infrastructure.



## Production Facilities

OFS Svyazstroy-1 VOKK JSC is the only fiber-optic cables manufacturer in Russia and CIS and works utilizing transferred technologies. The plant is fitted with modern equipment produced in Austria, Switzerland, Finland, Germany, and the USA. Thus, the company is able to perform incoming, intermediate and outgoing inspections, mechanic and climatic examinations, cover consistency tests if the cable contains metal components. Equipment of the laboratory enables the company to assess the quality of basic material, to perform comparative assessment of similar materials to choose the best supplier. As a result, the cable is made of a high-quality material by trustworthy suppliers. The range of materials is recommended by OFS company (with the approval of Furukawa Electric, Japan) and approved by the OFS headquarters in Atlanta. As a result, the company produces cables identical to the ones produced by other OFC and Furukawa Electric plants, located in the USA, Brazil, Thailand, Germany, Denmark,

Japan, China and Indonesia. These factors enable the company to produce up to 24000 kilometers of cable per year.

Production shops of the company take up the area of 5040 m<sup>3</sup>, auxiliary space takes up an area of 545 m<sup>3</sup>. Total area of the plant is 17771 m<sup>3</sup>.

The company is showing constant growth: in 2007 production facilities doubled. The same increase is planned for 2012.



## Production Program

### • Applications

The company produces fiber-optic cables for various applications:

- Cables for laying on the sea and river bottom;
- Direct burial cables and blown cables;
- Cables for installation in cable ducts;
- Dielectric self-supporting cable for power lines up to 220 kV;
- Cable for distribution circuits;
- Indoor cables;

The main customers are major mobile and landline communication providers, broadband internet access providers, telematic departmental connection of oil and gas complex of Russia and CIS, force structures alternative operators etc.

### • Special features and competitive advantages

OFS Svyazstroy-1 VOKK JSC produces cables utilizing transferred technologies by OFS FITEL LLC. Transferred technologies include patented methods of construction calculation, material quality assessment and patented technology of different modular systems cable production.

The company's quality management system complies with DIN EN ISO 9001:2008, certificate was issued by the audit at DQS German audit society which is a part of European certification authority IQNet. The range of materials is recommended by OFS Company (with the approval

of Furukawa Electric, Japan) and approved by the OFS headquarters in Atlanta. As a result, the company produces cable identical to the ones produced by other OFC and Furukawa Electric plants, located in the USA, Germany and Japan.

In compliance with TU 3587-01-05-51702873-2007 the cable is approved for laying at the temperature -30 C and higher. Warranty period is 5 years from the day when the cable was put into operation. Extended warranty on the base of constant monitoring of produced and supplied production by the client is 12 years.

### • Innovations and new developments

Being a subsidiary enterprise of OFS Fitel LLC, the OFS Svyazstroy-1 VOKK JSC uses the latest developments and innovations of OFS Labs, which are direct followers of Bell labs, founded by Alexander Bell in the 19th century. During the company's life 12 employees of Bell Labs have been awarded the Nobel Prize. This confirms the high level of innovative developments of the company. Besides, the use of developments of American and Japanese partners, the company performs Research and Advanced Development activities. The result of these activities is the cable with protection against gnawing animals. This is a unique product in Russia.

The company distributes its products not only in Russia, but in CIS, Romania, Germany and Egypt.

## Product Catalogue



### Cables for laying at sea bottom and river crossing

Used for laying through navigable and innavigable rivers, lakes, near-shore and deep water sea parts for sea objects.

Types DKPa, DKPam (with copper conductor).



### Direct burial cables

Used for laying on all types of ground, including liable to cryosolic deformation ones; cable duct systems, tubes, blocks, collectors, tunnels and bridges with high mechanical stability requirements.

Types DKP, SKP (armored by steel wire) DSP (armored by glass wire, fully dielectric) including fire-proof versions.



### Cables for installation in cable ducts

Used for laying on soft ground, cable ducts, tubes, blocks, collectors, bridges, overpasses.

Types DBP, DBp (with single polyethylene sheath) including fire-proof versions.



### Duct cables for blowing

Used for laying in special ducts (including blowing method) and for hanging on air lines of communications with mounting on core strength members as repair cushions.

Types DP, SP including fire-proof versions.



#### **Optical self-supporting cables**

Used for hanging on air lines of communications, railroad overhead system, power lines, between buildings, for surface work on walls, bridges and overpasses.

Types DT, DTs (with tracking resistant polyethylene sheath) including fire-proof versions.



#### **Optical self-supporting fully dielectric cables with bearing members**

Used for hanging on air lines of communications, public lighting poles and between buildings. Can be used for high electromagnetic effect conditions.



#### **Indoor cables**

Used for laying in residential and non-residential buildings, tubes, blocks, collectors with loose tube and tight-buffered fiber.

Type DN. Versions with PVC covering and with self-extinguishing halogen-free polyethylene covering are available. Colour, length and marking in accordance with customer's requirements.



# SOZVEZDIE GROUP OF COMPANIES

## Company Profile



Company name (short):	SOZVEZDIE GROUP OF COMPANIES JSC
Address:	14 Plekhanovskaya St., Voronezh 394018
OKPO code:	07512097
Year of foundation:	01.05.1958
Workforce:	5995 people
Telephone:	+7 (473) 252-12-59—CEO (reception)
Marketing Dept:	+7 (473) 252-10-06
Supply Dept:	+7 (473) 252-04-40
HR Dept:	+7 (473) 252-11-24
Fax:	+7 (473) 235-50-8
Website:	<a href="http://www.sozvezdie.su">www.sozvezdie.su</a>
Specialization:	Design, production, maintenance, upgrade, repair and disposal of ESU TZ, hardware-software systems of control and communications, devices for radio suppression of on-earth radio channels including exproted ones.
Sales volume in 2010:	8 696 700 thousand RUR (exclusive of VAT)
Production volume in 9 months of 2011:	4 629 300 thousand RUR
Quality management system:	Certified in compliance with GOST R ISO 9001, GOST RV 15.002 in War Register system; certificate of compliance of QMS applying to design, production and repair of products №VR 05.1.4132-2011, valid till 29 March 2014.

## Historical Note

Sozvezdie Group of companies JSC was set up according to the decree №933 of the President of Russian Federation of 29.06.2004 on the base of Voronezh Communications Research and Development Institute (the history of VCRD institute began in 1958). The company was set up to develop the potential of electronic suppression enterprises, for concentration of resources for the creation of United forces and weapon control system in tactical chain of Armed Forces and other formations, and for the design and production of civil products. The structure comprises 20 radioelectronic

companies from 10 regions.

In its over-50-year history the company has designed and implemented 5 generations of communication systems in various directions. It is over 600 devices and components, whose performance characteristics are on a par with the best foreign counterparts and many parameters are even better.

The company mainly manufactures products for the Armed Forces of Russia. However, the company has always manufactured products for civil purposes and always been guided by the needs of national economy.

## Production Facilities

Sozvezdie Group of companies has production facilities providing for the manufacture of high quality products. The company has high-performance equipment stock which includes modern equipment by world leading manufacturers. Production facilities provide for the ma-

nufacture of a wide range of products complying with international standards.

Scientific and technology services have modern computer equipment and software. Highly-trained professionals design new products using the latest engineering software tools.

**Production area of the company takes up over 36185 m<sup>2</sup> and comprises the following services:**



- Production department;
- Design departments;
- Mechanical treatment department;
- Stamping shop;
- Tool room;
- Plating and coating shop;
- Recycling of polymeric material shop;
- Ceramic and ferrite producing shop;
- Printed circuit boards production;
- Automatic surface-mounting of electronic components on printed circuit boards;
- Woodworking shop.



## Production Program

### • Applications

The company's products are used to satisfy the demand of Armed Forces and other uniformed services for modern armament system and domestic war equipment

### • Special features and competitive advantages

Today, the global community has entered the globalisation era and the world leading countries are solving their problems implementing nano-, bio- information technologies and new material technologies. These modern technologies are implemented and realized in a wide range of products.

### • Innovations and new developments

The group of companies designs and develops wide range of products, grouped in 7 main directions:

- Automatic communication and control systems for strategic level
- Automatic communication and control systems for operational level
- Automatic systems for communication and control for air defence and ballistic missile defence

- Automatic communication and control systems for tactical level

- Automatic systems and means of radioelectronic struggle

- Automatic systems and means of communication and control for special purposes

- Professional means of communication and communication systems for general use

Today, in accordance with top-priority goals of development of science, technologies and equipment in Russia, the company develops 6 technology platforms: automatic management service in global conflict medium; cognitive high-productive telecommunication systems of radio communication HF and VHF using SDR technology; building of broadband systems of IV and V generations; provision of information security and technological independence in building of information communication systems; intellectualisation of processes of radioelectronic monitoring and struggle including ones in anti-terror operations; energy saving technologies and autonomous renewable energy sources with a wide range of use.

## Product Catalogue



### Automatic communication and control systems for tactical level

- Family of radio stations R-168E Akveduk
- Combined radio station R-182-NMR

- Unified command vehicle R-149MA1  
SW-USW radio station R-168E

Akveduk systems are used to establish noise-resistant encrypted radio communication in severe environment in all subdivisions from soldier to division commander in range of frequencies from 1.5 to 108 MHz.



### Azimut Navigation equipment for mobile surface objects

Used to position and determine Y azimuth angle of direct axis of surface objects.



### Wi-Fi hotspot K-LINE. Equipment for broadband access and high speed data transmission channels

K-Line Base station is for professional use as part of professional communication systems, all-weather version and wide range of working temperatures.



**ASTRAMAX 4G communication system**

Used for broadband network access including Internet access. The system consists of network operation centre (NOC), base stations, subscriber terminals of different form factors.



**System of remote monitoring of condition and parameters of mobile objects Tracker**

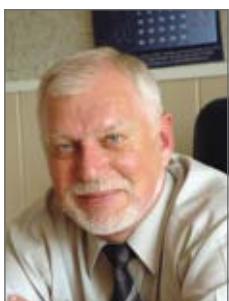
The system is used for remote monitoring of condition and parameters of mobile objects in real time.



**Solntsevorot Energy saving complex of entrance, yard and street lighting**

Used for lighting of entrance areas, yards and streets using solar energy.

# FGUP NKTB FERRIT



## Company Profile

<b>Company name (short):</b>	FGUP NKTB FERRIT
<b>CEO:</b>	Yuriy V. Litvinov
<b>Address:</b>	179, Moskovskiy Avenue, Voronezh, 394066
<b>OKPO code:</b>	05312906
<b>Year of foundation:</b>	31.03.1977
<b>Workforce:</b>	216 people
<b>Telephone:</b>	+7 (473) 2437702, 243-77-81 — CEO (reception)
<b>Supply Dept:</b>	+7 (473) 243-77-10
<b>HR Dept:</b>	+7 (473) 239-26-19
<b>Fax:</b>	+7 (473) 243-77-81
<b>Website:</b>	<a href="http://www.ferrit.vrn.ru">www.ferrit.vrn.ru</a>
<b>Specialization:</b>	research and advanced development, production, maintenance, after sales service and starting-up and adjustment operations of communications equipment.
<b>Sales volume in 2010:</b>	76 900 thousand RUR (exclusive of VAT)
<b>Production volume in 9 months of 2011:</b>	107000 thousand RUR
<b>Quality management system:</b>	Certified in compliance with GOST R ISO 9001-2008, GOST RV 15.002-2003, SRPP VT, certificate № 6300.311095/RU of 18.11.2010.

## Historical Note

Ferrit Federal state unitary enterprise scientific design-engineering bureau, based on the right of economic jurisdiction, was founded in accordance with decree №168 of the Ministry of Education of the Russian Soviet Federative Socialist Republic of 31.03.1977 under the name Experimental Design Bureau of special instrumentation engineering at Voronezh State Technical University. In accordance with the decree of the Ministry of Education of the Russian Soviet Federative Socialist Republic of 02.03.1982, the Experimental Design Bureau of special instrumentation engineering at Voronezh State Technical University was renamed as Experimental Design Bureau Ferrit at Voronezh State Technical University.

In accordance with the decree №110 of the Ministry of Education of the Russian Soviet Federative Socialist Republic of 18.04.1990, the company was renamed as Scientific Design-Engineering Bureau Ferrit.

In accordance with the decree of the State Committee of the Russian Federation in the

sphere of higher education in 1994 the company was renamed as Ferrit Federal state unitary enterprise scientific design-engineering bureau.



## Production Facilities

The company's production facilities occupy an area of 3996.2 m<sup>2</sup>.

The company comprises:

- 10 scientific and technical subdivisions toolled up with modern computer equipment and measuring equipment, which design and produce weapons and military equipment and equipment for space research.

- Metrology and examination department providing for the full cycle of climatic and mechanic tests, which are obligatory at the final stages of research and development process. The department has undergone certification at 22 TsNII of the Ministry of Defense of the Russian Federation;

- Design department, fitted with modern hardware and software which enables the company to accomplish complicated projects using 3D modelling in different software programs, such as AutoCAD, Solid Works, P-CAD.

- Standardization Department, performing maintenance, accounting, storage and updating normative and technical documentation.

- Processes Department, performing development and implementation of technological pro-

cesses of production of parts, units and special processes.

- QMS, comprising QC department, quality management office (BUK and A). BUK and A performs organizational supervision of QMS document development in compliance with GOST R ISO 9001-2008, GOST RV 15.002-2003 and GOST SRPP VT.



## Production Program

### • Applications:

The main direction of activity is the production of radio equipment, including self-contained systems for radio connection, radio bearing and radio monitoring in a wide range from several Hz to several GHz.

Today, the range of business activities is expanding rapidly. The company is starting the production of navigation components, mobile objects detection equipment, gas mixture monitoring devices. Today FGUP NKTB Ferrit has a full range of facilities for the production of radioelectronic equipment, except PCB production facilities.

### • Competitive advantages:

1. In accordance with the registry of the Federal Service for Defense Contracts, the company is the only manufacturer of a number of products.

2. Economic parameter analysis for 2009 showed that FGUP NKTB Ferrit is in the leading position among other radioelectronic components manufacturers in the region as to the criterion of the use of production area.

The experience in the production of modern mobile communications surveillance and moni-

toring systems, designing 3D models of container bodies, chassis and equipment enables the company to design and produce mobile systems for military and civil purposes based on domestic and imported vehicles with high level of endurance in particular tasks independently and in cooperation with other enterprises.

### • Innovations and new developments:

- New technologies and materials in power engineering;

- Energy efficient agricultural production technologies;

- Development of carbon-containing household waste disposal system.

- Development of livestock waste disposal systems with recycling of waste into energy;

- Technology of development of fuel accumulator (hydrogen fuel) with safe storage and low extraction power inputs.

- Reconditioning technology processes with use of pulse galvanochemical technologies.

- Design and production of analog (with digital signal conditioner) TV, USW-FM (with RDS channel) broadcast transmitters and antenna feeder systems with power up to 4 kW.

## Product Catalogue



### Ferrite valves and circulators

The company has been producing nonreciprocal ferrite UHF devices for over 25 years.

The total range of produced devices covers working frequency range up to 6.0 GHz with power up to 1500 W.

Ferrite valves and circulators are passive devices. Life cycle of such devices is no less than 100000 hours.

Operative improvement of design features is possible on customer's demand.

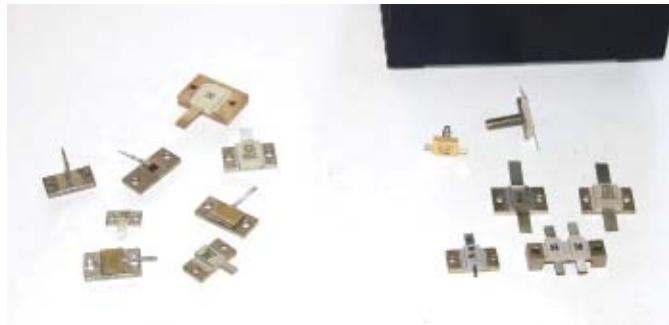


### Ferrite isolators

The company produces 3 types of ferrite isolators depending on feedthrough power: 100, 300, and 600 W. Isolators can be tuned to any frequency up to 1000 MHz.

The main advantage of isolators is that they can be tuned to the required range. The cost of an isolator is about 60% of the cost of a circulator or valve.

Life cycle of the device is no less than 100000 hours.



### Resistors and attenuators

The company produces HF resistors with maximum dissipated power up to 2000 W.

Resistors with power of 10 and 25 W have frequency range from 0 to 1500 MHz.

Attenuators with power of 200 and 2000 W have frequency range of 0 to 1000 MHz.

All resistors are produced in accordance with E96 series within 10 to 150 Ohm with precision + 5%.



### Radiotransmitter

STANDARD ER401 device is a radiotransmitter with adjustable power from 30 to 100 W used for establishment of stereophonic or monophonic broadcast in USW (65.9...74 MHz) and FM (87.5...108) ranges. Stereomodulation is performed by polar modulation method and by pilot tone method. Modulation method is set by the operator irrespective of the range. Use of the transmitter with antenna feeder systems allows for the broadcasting of sound programs.



### SYLPHE device

SYLPHE device is used for ionization, disinfection and deodorization of air in the room.

Power consumption – 20 W max.

Air flow speed – 0.3-0.8 m<sup>3</sup> per second

Concentration of negative ions – 103-5x10<sup>4</sup> per cm<sup>3</sup>

Noise level – 40 dB max.

Weight – 7 kg max.



### Matching unit

Used for matching of radio receiving equipment with input resistance to 50 Ohm and balanced or unbalanced antenna-feeder systems with resistance from 50 to 800 Ohm in SW range.

Resistance of balanced antenna-feeder systems – 50, 75, 200, 300, 450, 600, 800 Ohm.

Resistance of unbalanced antenna-feeder systems – 75, 300, 600 Ohm.

Standing-wave ratio rate in range from 1.5 to 30 MHz – up to 2.

Weight of one unit without packaging – no more than 0.410 kg.

# ELECTROPRIBOR JSC



## Company Profile

<b>Company name (short):</b>	ELECTROPRIBOR JSC
<b>CEO:</b>	Sergey V. Bytymov
<b>Address:</b>	59, 20 Let Oktyabrya Street, Voronezh, 3940071
<b>OKPO code:</b>	07515210
<b>Year of foundation:</b>	04.05.1956
<b>Workforce:</b>	1056 people
<b>Telephone:</b>	+7 (473) 277-85-25 — CEO (reception)
<b>Sales Dept:</b>	+7 (473) 277-83-39
<b>Supply Dept:</b>	+7 (473) 257-85-86
<b>HR Dept:</b>	+7 (473) 257-85-44
<b>Fax:</b>	+7 (473) 271-57-03
<b>Website:</b>	<a href="http://www.pribor.su">www.pribor.su</a> <a href="http://www.epribor.ru">www.epribor.ru</a>
<b>Specialization:</b>	Production of military equipment: units and systems for aircrafts and commercial products: electronic reatil balances, domestic gas meters, consumers goods.
<b>Sales volume in 2010:</b>	600 000 thousand RUR
<b>Production volume in 9 months of 2011:</b>	531500 thousand RUR
<b>Quality management system:</b>	Certificates of compliance with GOST R ISO 9001-2008, GOST RV 15.002-2003 on all production stages from design through to final product release.
<b>Certification:</b>	All products are certified and licensed.

## Historical Note

In accordance with the decree of the Minister of aircraft industry of 4.05.1956, the company called p/ya 2 was set up. For the first 2 or 3 years the plant produced trimming resistors, course correctors and plastic details and supplied the devices to aircraft plants. In 1960-1962 the company started to produce pressure control devices, power relays, vibration transducers. The first complex devices: critical conditions alarms, angles of attack and skew.

At the end of the 1960s the company's product range included 15-20 products.

In the 1980s the company started to produce complex systems for military and commercial aircrafts (MIG-29,31; SU-25,27; IL-76, IL-86 and others): digital computer-aided air data systems, pilot display units, computer information complexes of height and velocity parameters, restrictive signal systems. Along with production of special equipment, the company focuses on the manufacture of commercial and consumer products: Astra reel

to reel tape recorders, Elegiya cassette recorders, domestic balances, etc.

In the 1990s the company managed to maintain its main production activities, connected with aircraft equipment and to develop new activities – design and implementation of new devices – commercial electronic balances and domestic gas meters.

Today, the company in cooperation with UKPB (Ulyanovsk) produces devices and systems for new generation aircrafts. The company is implementing innovative technologies.



## Production Facilities

The company is improving material and technical facilities. ProEngineer system of automatic design has been implemented. The development of new products is performed rapidly using electrospark machines by Agie, processing centres by Fadal, turning machine by NOMURA and machine complex for powder coating in electrostatic field. The company has equipment for plastic moulding, sheet stamping and bulk forming, circuit-board work and tool room, which enables the company to manufacture any tools and complex stamps, injection and press moulds.



## Production Program

### • Applications

Devices and systems for different types of aircrafts (TU-154, SU-30, MIG-29, YAK-130, MI-8) are used for automatic aircraft control, increasing pilotage safety, collection and transmission of information to control actuators, critical flight conditions crew alerting and execution of other functions providing for flight safety.

Commercial products include medical equipment, gas metering devices, electronic commercial balances.

Domestic gas meters are used for gas consumption metering in flats and residential houses.

Electronic commercial balances are used for itinerant trade and in stationary conditions.

Medical devices are used in surgery and therapeutics departments.

### • Competitive advantages

Electropibor JSC advantages are reliability and high quality of products. Apart from serial products, the company provides once-only activities on customer's demand.

### • Innovations and new development

The company has mastered production of an intellectual gas meter which embeds into automatic system of commercial gas metering. The company is developing a small-scale gas meter. Also the company designs air conditioning systems for trucks of Voshina and Triumfator-M families. The company is considering implementing air conditioning systems on any wheel and caterpillar machines, mobile and stationary objects for any application. The company is designing and developing an innovative medical device – multifunction programmable aspirator pump AMP-01.

## Product Catalogue



### Positive displacement gas meter SGK-G

- Minimum flow (Qmin) 0.016-0.04 m<sup>3</sup>/h
- Nominal flow (Qnom) 1.6-4 m<sup>3</sup>/h
- Maximum flow (Qmax) 2.5-6 m<sup>3</sup>/h
- Sensitivity threshold 0.0032-0.008 m<sup>3</sup>/h
- Maximum operating pressure 3.0 kPa
- Working temperature -30...60 °C (-40...60 °C on customer's demand)
- Volume measurement of chemically neutral liquefied and natural gas.



### Positive displacement gas meter SGK-G-T

- Minimum flow (Qmin) 0.016-0.04 m<sup>3</sup>/h
- Nominal flow (Qnom) 1.6-4 m<sup>3</sup>/h
- Maximum flow (Qmax) 2.5-6 m<sup>3</sup>/h
- Sensitivity threshold 0.0032-0.008 m<sup>3</sup>/h
- Maximum operating pressure 3.0 kPa
- Working temperature: -30...60 °C
- Temperature compensating range: -20...25 °C
- Volume measurement of chemically neutral liquefied and natural gas.



### Positive displacement gas meter SGK-G-E

- Minimum flow (Qmin) 0.016-0.04 m<sup>3</sup>/h
- Nominal flow (Qnom) 1.6-4 m<sup>3</sup>/h
- Maximum flow (Qmax) 2.5-6 m<sup>3</sup>/h
- Sensitivity threshold 0.0032-0.008 m<sup>3</sup>/h
- Maximum operating pressure 3.0 kPa
- Pressure drop at Qmax: no more than 200 Pa
- Working temperature -30...50 °C
- Temperature compensating range: -30...50 °C
- Volume measurement of chemically neutral liquefied and natural gas.
- Power supply from AA form factor lithium battery • Lithium Saft LS 14500 or ER 14505 with voltage of 3.6 V
- Data exchange via RS232-TTL interface
- Indication time: 20 + 5 seconds, at the touch of the button the device comes out of sleep mode.



### Multifunction programmable aspirator unit AMP-01

- Solution delivery rate: 0.1-200 ml/min
- Evacuation speed: 0.1-400 ml/min
- Power consumption: up to 30 VA
- Dimensions: 290x215x250 mm
- Surgical drain tube TSM-RTI-S-8.0x1, outside diameter - 8mm, inside diameter - 6mm.

**Table commercial balance Shtrih-MR III**

## • Indication discretization

Version parameter	Readability, g
6-1,2	0,02-2 kg incl., 1 Over 2 kg, 2
6-2	2
15-1,2,5	0,02-2kg incl., 1 From 2 to 6 kg incl 2 Over 6 kg 5
15-2,5	0,04-6 kg incl., 2 Over 6 kg, 5
15-5	5

- Vibrofrequency sensor;
  - Luminescent indicator, operator/client display with height 12.8 mm
  - 36 keys keyboard
  - Weighing capacity range, kg: 0.02/6, 0.04/6, 0.02/15, 0.04/15, 0.1/15;
  - Permissible error, g: 1...5
  - Working temperature range: 10...40 C
- Power supply: 220 V, 50+ Hz AC

**Table commercial balance Shtrih-MR II**

## • Indication discretization:

Version parameter	Readability, g
6-1,2	0.02-2 kg incl., 1 Over 2 kg, 2
6-2	2
15-1,2,5	0.02-2 kg incl., 1 From 2 to 6 kg incl 2 Over 6 kg 5
15-2,5	0.04-6 kg incl., 2 Over 6 kg, 5
15-5	5

- Vibrofrequency sensor;
- LCD operator/client display with symbol height of 12 mm
- Weighing capacity range, kg: 0.02/6, 0.04/6, 0.02/15, 0.04/15, 0.1/15;
- Permissible error, g: 1...5
- Working temperature range: 10...40 C
- Power supply: 220 V, 50+ HZ AC
- Power consumption: no more than 1 VA

# ELECTRO SIGNAL JSC



## Company Profile

**Company name (short):** ELECTRO SIGNAL JSC

**CEO:** Gennadiy N. Potapov

**Address:** 1 Electrosignalnaya Street, Voronezh 394026

**OKPO code:** 08615801

**Year of foundation:** 10.09.1931

**Workforce:** 2050 people

**Telephone:** +7 (473) 246-10-51 — CEO (reception)

+7 (473) 246-42-72, 221-04-94

+7 (473) 246-27-70, 246-66-76

**Fax:** +7 (473) 246-34-72, 246-24-87

**Website:** www.electrosignal.ru www.el-signal.rosprom.org

**Specialization:** Design and production of SW, USW and UHF radiocommunication equipment for special and technical industrial applications, command and control vehicles and complex automatic radiotelecommunication systems.

**Sales volume in 2010:** 2 000 426 thousand RUR (exclusive of VAT)

**Production volume in 9 months of 2011:** 1441400 thousand RUR

**Quality management system:** Certificate of compliance with GOST R ISO

9001-2008, GOST RV 15.002-2003. Certification authority: Autonomous Non-Commercial Organization Institute of examination and certification of weapons and military equipment.

**Certification:** All products are certified by voluntary certification systems, Military register and GOST R State Standard of Russia

## Historical Note

- 1922-1933 – production of railroad clamps, pistons and piston rings.
- 1934-1941 – production of radio receiver sets, evacuation to Novosibirsk.
- 1942-1943 – production of radio stations for aviation, tank forces, infantry, and artillery.
- 1943-1944 – restoration of the plant and return from evacuation. Production of radio stations for the army.
- 1945-1957 – production of commercial radio sets.
- 1947 – Production of radio stations for command and control vehicles and distribution in Russia and abroad.
- 1950 – Production of radio stations for medical ambulance, traffic police, police, agricultural industry, fire brigades, railroad and ore mining industry.
- 1953 – Production of the first commercial TV set KVN-49.
- 1956 – Production of Rekord black and white TV sets.
- 1957 – The company was awarded a Grand Gold Medal at the exhibition in Brussels.
- 1960 – Distribution of TV and radio sets to 14

countries all over the world.

- 1966 – The plant was awarded the Order of Lenin.
- 1983 – Production of Rekord and VELS colour TV sets.
- 1990 – Over 50% of locomotive park in Russia were equipped with Transport radio stations, produced by Electrosignal.
- 1993 – The company was awarded the Commercial Prestige prize at the international competition in Madrid.
- 2000-2011 – the company got several medals and diplomas at various domestic and international exhibitions.
- 2008 and 2010 – Electrosignal JSC was regarded as the best enterprise of Voronezh region.



## Production Facilities

Production facilities of the plant take up an area of 13 hectares. Production facilities include moulding shop, mechanical processing shop, galvanizing plant, assembling shop, tool room, radioceramics shop, mechanical rubber shop, testing centre, repair and construction departments, storage/retrieval department.

Equipment stock includes high precision machines with extended functions and programmed numerical control. Surface mounting is performed by automatic machine M6ex (Japan), semi-automatic machines (Germany), melting furnace (Germany), soldering stations (USA). Quality management is carried out by visual stereoscopic systems Mantis.

Adjustment, diagnostics and testing of radio stations is carried out on monitoring and test stands of own production using computers, radiotesters and service monitors of Marconi type.

During design of technological processes and production tooling the company uses modern computer equipment and software.

In the recent years the galvanizing plant has been reequipped and restored. The plant got new automatic plating lines with characteristics to international standards.



## Production Program

### • Applications

Radio stations for special applications – mobile and transportable SW, USW and UHF stations used for establishment of reliable and secure radio communication.

Radio stations for technical industrial applications – Transport locomotive radio stations, working in simplex linear, simplex zonal, train and station radio communication systems used for equipping railroad transport.

The main customers are: the Ministry of Defense of the Russian Federation, the Ministry of Internal Affairs, Federal Security Service of Russia, Federal Protective Service, the Ministry of the Russian Federation for Civil Defense, Emergency Management and Natural Disasters Response, the Federal Service for Execution of Punishment, military-industrial complex enterprises, Russian Railways JSC.

### • Special features and competitive advantages

The use of such production methods as met-alwork on CNC machines, plating; production:

paint and coating, electric-grade ceramics, mechanical rubber, cables, radiotechnical equipment, plastic and aluminium alloys die-casting, woodworking; technologies: automatic assembling and circuit board manufacturing.

This range of production technologies and machines is the main advantage in comparison with other manufacturers.

The company has facilities enabling it to implement and produce up to 4 new complex radiotechnical systems annually.

Complex approach to distribution: each radiotechnical object is equipped with modems, control panels, cryptoprotection devices, filters, antennas, masts, power supply devices, inter-communication and commutation facilities, automation equipment and cable gears.

This enables the company to satisfy customers' demands and to have flexible approach to every order.

### • Innovations and new developments

Design and production of modern digital radio equipment.

## Product Catalogue



### Locomotive dual band radio station Transport RV-1.2 MK

- Simultaneous dual band operation
- Able to receive both incoming individual calls (by number of the train) and conference calls
- Frequency range: GMW (2.130 MHz, 2.150 MHz) and MW (151.725-156 MHz)
- Provides for joint work with Transport radio connection system, ZhRU complex and other radio stations.



### Portable USW radio station R-168-5UN-2

- Simplex and dual-frequency simplex
- Frequency range: 30-107,975 MHz
- Transmitter power, no less than (full/mid/low): 8/2/0.25 W
- Scanning reception of 8 preset channels
- Pseudorandom operational frequency readjustment with the number of frequencies up to 256 and readjustment speed up to 100 jumps per second.
- Readjustment interval: 25 kHz
- Technical information masking
- Reception with noise reduction.



### Transportable USW radio station R-168-5UT-2

- Simplex and dual-frequency simplex
- Frequency range: 30-107,975 MHz
- Readjustment interval: 25 kHz
- Pseudorandom operational frequency readjustment with number of frequencies up to 256 and readjustment speed up to 100 jumps per second.
- Scanning reception of 8 preset channels
- Adaptive communication
- Receiver sensitivity, no more than 0.8-1 mV
- Multichannel mode



**Transportable USW radio station R-168-25U-2**

- Simplex and dual-frequency simplex
- Frequency range: 30-107,975 MHz
- Readjustment interval: 25 kHz
- Technical information masking
- Analog data reception and transmission
- Immediate radiodata cancellation
- Program radiofrequency readjustment in 8, 16, 32, 64, 128 and 256 frequencies with readjustment speed up to 100 jumps per second.
- Scanning reception of 64 preset channels
- Supply voltage in range from 22.1 to 29.7 V



**Transportable SW radio station R-168-5KV**

- Simplex and dual-frequency simplex
- Frequency range: 1.5-29.9999 MHz
- Frequency spacing: 100 kHz
- Transmitter power: no less than 1.0, 10.0, 400.0 W
- Supply voltage: 27 V
- Working temperature range: -50...60 C
- Scanning reception of 8 preset frequencies
- Manual and automatic data recording
- Technical speech masking
- Automatic adaptive connection



**Transportable SW radio station R-168-100KB(T)**

- Simplex and dual-frequency simplex
- Frequency range: 1.5-30 MHz
- Frequency spacing: 100 kHz
- Scanning reception of 8 preset frequencies
- Supply voltage: 27 V
- Receiver sensitivity: 2 mV
- Automatic adaptive connection
- Listening silence mode



## VKB AFU JSC

**Company name (short):** VKB AFU JSC

**CEO:** Victor I. Sergeyev

**Address:** 1 Tekstilchikov St., Voronezh 394026

**Year of foundation:** 30.11.1989

**Telephone/fax:** +7 (473) 276-29-92, 246-30-64

### Specialization:

Research and development, design and production of Radio Detection and Ranging equipment, radio-electronic struggle systems, research on interaction of electromagnetic fields and material.

### Special features and competitive advantages:

Results of research and development on radio detection and ranging based on parametric absorption effect, radio detection and ranging based on double sounding signal diffraction, solitonic theory, long-range action of display of reaction of material objects (as resonance systems) on the external influence directly not turned on them for information transfer.

On the basis of research performed by VKB AFU JSC new types of antennas, radiotechnical and radiophysical systems were produced. VKB AFU JSC has developed impulse amplification and destruction system (electric, electromagnetic acoustic, mechanic, hydraulic etc) at the expense of additional and superfluous modulation envelope of transformed impulses. Methods of creation of artificial ionospheric formations, radio detection and ranging, impulse generation and other developments were awarded gold and bronze medals at different international exhibitions.

### Product range:

Scientific and technical reports, results of tests and experimental research, technical, design, maintenance documentation, prototypes are available on customer's request.



## VKZ CJSC

**Company name (short):** VKZ CJSC

**CEO:** Anatoliy V. Golovanyov

**Address:** 1 Druzhinnikov St., Voronezh 394026

**Year of foundation:** 06.03.1948

**Telephone/fax:** +7 (473) 221-07-59, 221-06-63

**Website:** [www.vkz.ru](http://www.vkz.ru)

### Specialization:

Production of electronic components – wet foil aluminium capacitors of K-50 type.

### Special features and competitive advantages:

Production of a wide range of wet foil capacitors with operational voltage from 6 to 450 V and capacity from 0.1 mF to 1000000 mF with extended operational temperature range: from -60 to 105°C.

### Product range:

- Capacitor K 50-29. Capacity: 4.7-4700.0 mF, voltage: 6.3-450 V
- Capacitor K 50-32A. Capacity: 4.7-15000.0 mF, voltage: 16-450 V
- Capacitor K 50-37. Capacity: 1000-470000.0 mF, voltage: 3.2-400 V
- Capacitor K 50-71. Capacity: 3.3-15000.0 mF, voltage: 6.3-450 V
- Capacitor K 50-75. Capacity: 10.0-10000.0 mF, voltage: 6.3-160 V
- Capacitor K 50-35. Capacity: 1.0-10000.0 mF, voltage: 6.3-350 V
- Capacitor K 50-40. Capacity: 1.0-10000.0 mF, voltage: 6.3-160 V

QMS complies with GOST R ISO 9001-2001 and GOST RV 15.003-2003



# VTsKB POLYUS JSC

**Company name (short):** VTsKB POLYUS JSC

**CEO:** Anatoliy V. Kuznetsov

**Address:** 16b Krasnodonskaya St., Voronezh 394019

**Year of foundation:** 19.03.1959

**Telephone/fax:** +7 (473) 276-24-60, 276-24-60

## Specialization:

Design, production, distribution, after sales maintenance of radiotechnical systems and other types of radioelectronic equipment for special and commercial applications.

## Advantages over rivals:

The main advantage of the company is its structure based on beginning-to-end production: from designing new devices to manufacturing and after sales maintenance.

## Product range:

Parallel-faced gate valve:

- Small size
- High reliability of the drive
- High effort on gate, providing for use in low temperatures conditions

## Park litter-box:

- Head cover, protection the box from atmospheric precipitation
- Tilting waste can with spring pin
- Advertising space of A2 size



# NPP NFL LTD

**Company name (short):** NPP NFL LTD

**CEO:** Alexander V. Novoseltsev

**Address:** 1b Krasnodonskaya St., Voronezh 394019

**Year of foundation:** 1993

**Telephone/fax:** +7 (473) 221-51-90, 276-27-87

**Website:** [www.nppnfl.ru](http://www.nppnfl.ru)

## Specialization:

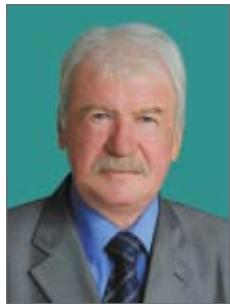
Manufacture of lighting equipment.

## Advantages over rivals:

The company focuses on the production of LED lighting fittings and energy saving lighting fittings with electronic starter-controlled device. The use of starter-controlled devices provides for luminosity control and saves up to 20% of energy. The use of LED lighting fittings reduces power consumption 8-fold comparing to bulbs and 3-fold comparing to luminous lamps. Payback period is about 3 years. All products are certified in compliance with GOST-R.

## Product range:

- Greenhouse lighting fittings ZhSP-64 Flora series;
- LED lighting fittings: fittings for housing and public utilities (SP series), office lighting fittings (SSO series), searchlights (SDU series), street lamp (SKU series);
- Searchlights ZhDU and GDU series;
- Industrial lighting fixture GSP series



# NVP PROTEK JSC

**Company name (short):** NVP PROTEK LTD

**CEO:** Yuriy A. Averin

**Address:** 6 Bazovaya St., Voronezh 394028

**Year of foundation:** 22.10.1990

**Telephone/fax:** +7 (473) 220-47-22, 220-47-23, 220-47-24

## Specialization:

Production:

Complex multichannel navigation equipment and automatic monitoring systems of mobile objects;  
Armoured electronic computer facilities;  
Special ACS software and military equipment;  
Radioelectronic struggle equipment.

## Special features and competitive advantages:

1. Beginning-to-end production: from designing new devices to manufacturing and after sales maintenance.
2. Compactness and optimality of the company's structure, ability to accomplish scientific-intensive and innovative processes.
3. Developed and optimized infrastructure.
4. Professionalism and efficiency of employees.
5. Demand for the company's research and advanced development and products in the Ministry of Defense and abroad.
6. Many years of experience and investments in initiative research and advanced developments on design and upgrade of products.

## Product range:

- Scientific and technical and design documentation on development of new weapons and military equipment.
- Orientir Navigation system (for air defense and missile defense objects) and KS-100M navigation equipment (for EW objects).
- Armoured electronic computer facilities.
- Radioelectronic struggle equipment (devices ARM-K, R-300KMA, Altaets-AM, R-330Zh, R-394UM, UM-2, APFAR, MRP)



AEROSPACE INDUSTRY

# VASO JSC



## Company Profile

<b>Company name (short):</b>	VASO JSC
<b>CEO:</b>	Vitaliy Y. Zubarev
<b>Address:</b>	27 Tsiolkovskogo St., Voronezh 394029
<b>OKPO code:</b>	07514713
<b>Year of foundation:</b>	1932
<b>Workforce:</b>	7300
<b>Telephone:</b>	+7 (473) 244-86-66, 244-85-01 — CEO (reception) +7 (473) 249-93-97, 249-94-26, 244-88-57

**Marketing and sales department:** +7 (473) 249-90-68

**HR department:** +7 (473) 249-90-17

**Fax:** www.vaso.ru

**Website:**

**Specialization:** Production of long-haul wide-body airliners of Ilyushin IL-96 family (IL-96-300, IL-96-400T), Antonov AN-148 regional jets; production of accessories for SSJ-100, Airbus, AN-148 in cooperation with corresponding engineering departments; post-guarantee maintenance of aerotechnics.

**Sales volume in 2010:** 3 813 689 thousand RUR (exclusive of VAT)

**Production volume in 9 months of 2011:** 4919200 thousand RUR

**Quality management system:** The company has all required certificates for full range of designing, manufacturing and maintenance works for all types of aerotechnics, including passenger and transport planes of any capacity.

## Historical Note

- In April 1929 it was decided to launch Voronezh aircraft manufacturing plant. According to the decision of the Ministry of Labour and Defense of 29.10.1929, the construction of the plant started and by the year 1932 the plant started working.
- Before World War II, the plant mastered 11 types of planes designed by A. N. Tupolev, A. S. Moskalyov, S. V. Ilyushin, V. G. Yermolaev. The plant produced TB-3 heavy bombers, SAM-5, ANT-25 planes. During the World War II IL-2 plane was produced at the plant.
- In 1947 the plant started the manufacture of IL-10 plane.
- In 1949 production of IL-28 jet bomber was launched. In 1956 the plant produced TU-16 turbojet bomber.
- In May 1961 the prototype of TU-128 supersonic interceptor made its first flight. In 1964 the plant started serial production of the aircraft. At the same time TU-123 unmanned reconnaissance aircraft was launched.
- In 1966 the plant was awarded the Order of Lenin.
- In the middle of 1960s the plant started development of passenger supersonic jet TU-144.
- In 1975 VASO started manufacturing IL-86 jumbo jet.
- In 1977 the first IL-86 made its first flight. In 1987 the plant was awarded the Order of the Red Banner of Labour.



## Production Facilities

VASO JSC production facilities include high-precision machinery produced in Italy, Germany, the USA and Switzerland, and a vast production and engineering experience enables the plant to produce science intensive planes.

Engineering and processes departments are equipped with modern computers and software. Highly-trained professionals design the products, using the newest methods of 3-D modelling.

The plant occupies an area of 550 000 square meters, housing well-equipped production facilities and technical services, including:

- Design department;
- Production department;
- Foundry;
- Assembly department;
- Mechanical assembly department;
- Production and technical department of polymer composite;

- Galvanizing plant;
- Tool rooms;
- Hardware plant;
- Rubber plant;
- Non-destructive testing, central smelter laboratory;
- Construction complex;
- Project Office;
- Quality control service;
- Airport.



## Production Program

VASO JSC is one of the biggest aircraft plants in Russia. Today VASO JSC is part of OAK JSC uniting the biggest Russian aircraft works. Participation in regional aircraft construction cluster since 2010 enables VASO JSC to hold the leading positions in the aeronautical branch. Besides VASO JSC, the cluster consists of Voronezh State Technical University (VSTU), Voronezh regional machine-tool centre JSC, Rusaviainter JSC, and the AKKO company. The aim of the cluster to work out production and professional possibilities for the engineering of new generation passenger planes and establishing of resource training centre.

In 2010 VASO JSC in association with Voronezh State Technical University became the winner of the competition organized by the Ministry of Education within a framework of Ministry of Education programme of cooperation of Russian high schools and manufacturing enterprises. Project establishing high technology processes and enhancing cooperation between VASO and VSTU put forward by VASO took part in the competition. The result of this project was the foundation of modern laboratory of incoming and outgoing inspection and pilot-line produc-

tion of polymer composite materials with special characteristics. The project aims to start serial production of products. VASO JSC participates in technical modernization programme for 2008-2012. Major part of investment was spent on new high-performance equipment. In the framework of upgrading mechanical assembly department, the contract for the delivery of 21 units of modern equipment produced by German company DMG was completed. New 5-dimension milling machines by Italian company JOBS were put into operation. Flight-test centre was reequipped in 2010. At the end of 2010 VASO purchased new integrated thermal center manufactured by German company IPSEN, 5-dimension portal milling machine with programmed numerical control by German company FOOKE, for composites machining, 5-dimensional milling machining center by Italian company Jobs for titan and steel alloys machining. The main aim of the company for 2011 is to accomplish the production targets in manufacturing of passenger airplanes. The company aims at producing IL96-300 according to the production plan, expanding the production of new AN-148 regional jets, completing of cooperation programmes.

## Product Catalogue



**IL96-400** is a long-haul widebody airliner with 4 turbofan engines of Aviadvigatel PS-90 model used for commercial air freight operations with max. payload up to 92 tonnes on airlines up to 14000 km length.



**IL96-300** is a long-haul wide body airliner with 4 efficient low-noise engines PS-90A. Fitted with modern fly-by-wire control systems and modern digital aircraft instrumentation.

The maximum range ability with 235 passengers on board is 10000 km with cruising speed of 850 kmh.



**AN-148** is a regional aircraft with maximum passenger capacity of 70–90 seats. The maximum range is 5000 km, cruising speed is 820–870 kmh.

### Other priority areas of VASO JSC activity:

- Production of units for AN-148 and AN-158 planes, assembled in the Ukraine;
- Working on international cooperation programme with Airbus company;
- Production and delivery of units for SSJ planes.



# VMZ – BRANCH OF FEDERAL STATE UNITARY ENTERPRISE STATE SPACE RESEARCH AND PRODUCTION CENTER AFTER M.V. KHRUNICHEV



## Company Profile

<b>Company name (short):</b>	VMZ – branch of federal state unitary enterprise State Space Research and Production Center after M.V. Khrunichev
<b>CEO:</b>	Ivan T. Koptev
<b>Address:</b>	22 Voroshilova St., Voronezh 394055
<b>OKPO code:</b>	07506837
<b>Year of foundation:</b>	01.10.1928
<b>Workforce:</b>	6500 people
<b>Telephone:</b>	+7 (473) 234-82-32, 234-82-34 — CEO (reception)
<b>Sales department:</b>	+7 (473) 234-82-73
<b>Supply department:</b>	+7 (473) 234-81-54
<b>HR department:</b>	+7 (473) 234-82-10
<b>Fax:</b>	+7 (473) 223-80-22
<b>Website:</b>	<a href="http://www.vmzvrn.ru">www.vmzvrn.ru</a>
<b>Specialization:</b>	Production of liquid rocket engines, aircraft piston engines, oil and gas production equipment, units for diesel locomotive engines
<b>Sales volume in 2010:</b>	723 600 thousand RUR (exclusive of VAT)
<b>Production volume in 9 months of 2011:</b>	2760000 thousand RUR
<b>Quality management system:</b>	certificate of compliance with ISO 9001
<b>Certification:</b>	Products manufactured by the enterprise are certified in accordance with 28 certificates including American Petroleum Institute certificates with specifications API6A and API16A.

## Historical Note

- In 1928 a plant producing grain gleaning machines was set up in Voronezh.
- In November 1931 the plant was renamed as Diesel plant and started producing diesel engines for distributed power generation and river fleet.
- In July 1940 the plant started the production of M11 engines for PO-2 planes.
- In June 1941 the plant was moved to Andijon, where more than 30000 aircraft motors for light aviation were produced during the war period.
- In 1946 the plant resumed the production of aircraft engines in Voronezh.
- 1957-1958 – serialization of liquid rocket engines. The plant assimilated progressive space technologies of that time: unique equipment was made and new materials and control procedures were developed.
- 1961-1989 - production of liquid rocket engines for the majority of the USSR space programmes, including Soyuz, Progress, Proton, and Energiya-Buran space program.
- Simultaneously, the plant produced piston aircraft

engines, units for railroad and motor transport, equipment for agricultural production processing.

- At the beginning of the 1990s in cooperation with GAZPROM JSC, the plant assimilated the production of oil and gas equipment meeting international quality standards.
- On 3 February 2007 VMZ became the business unit of the State Space Research and Production Center after M.V. Khrunichev in accordance with the Decree of President of the Russian Federation.



## Production Facilities

The company production structure based on the full-scale technology from blank production shop to end product testing. The plant has its own tool room, powerful staging department. In combination with design department, it enables the plant to produce unique equipment, special tools and progressive feedstock rapidly and with minimal effort. The plant is equipped with modern laboratories for the development and analysis of manufacturing process, including metal machining, mechanical and climatic testing, chemical analysis, ultrasonic check, X-Ray and magnetic control.

Metallurgical production has investment casting, nonferrous metal casting, iron and steel casting sections. The company's production facilities allow for the production of complex molds to specified dimensions with surfaces requiring minimal machining. Mold weight - up to 400 kg, dimensions: diameter – up to 700 mm, height – up to 600 mm.

Extensive equipment stock provides for metal cutting within a wide range of operating parame-

ters. Maximum dimensions are up to 2500 kg, while modern CND machines and 5-dimension machining centres allow for the production of parts to a precision of 1 mcm.

Production, staging and designing are fully computer-aided by fiber optic computer network.



## Production Program

### • Applications

The plant has 50 years of experience in the production of rocket engines of all classes, dimensions and applications and cooperates with all major manufacturers of engines for space crafts: KB-KHA, Energomash JSC, RKK, Energiya, etc.

The company's main products are rocket engines for rocket launchers Proton, Soyuz, Progress, Soyuz 21V, Angara, Morskoy Start programme, etc.

Piston engines for general purpose aircrafts are traditional products of the Voronezh Mechanical Plant (VMZ). In certified production centre the plant produces motors with power from 450 to 799 hp.

Simultaneously with aircraft engines the plant assimilated manufacturing rotor-wing reduction gear for general purpose KA-226 helicopters by Kamov JSC.

Today the plant produces over 100 types and modifications of oil and gas equipment, such as:

- Check and control valves;
- Wellhead connections;
- Manifolds,
- Blowout preventers;

- Christmas tree and blowout preventer control stations;

- Underground equipment systems.

Since 2002 VMZ has been producing heavy duty units for modern D49 locomotive diesel engines ordered by Kolomenskiy Plant for Russian Railways.

### • Innovations and new developments:

The company performs research activities for the development of new generation engines for rocket launchers.

Having own aircraft engines design department, the plant performs upgrade of existing aircraft engines.

The design of the company's aircraft engines requires the installation effective and reliable double ignition systems: carburetion and direct fuel injection, compact epicyclical reduction gear of propeller shaft drive and ability to work on motor oils and petrol.

New direction in engineering of equipment for oil and gas production is the design and serialization of Christmas tree control stations and underground equipment systems for GAZPROM JSC.

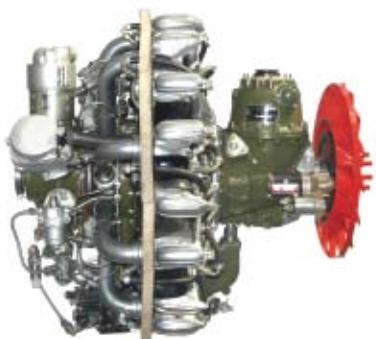
# Products Catalogue

## Aircraft technique



### M9FS engine for aircrafts.

Piston 4-cycle air-cooled radial reciprocating engine for SU-26, SU-29, SU-31, YAK-18T, YAK-50, YAK-52, YAK-54, YAK-55 and other general purpose aircrafts. Set up as a successor of M14P. Power – 45 hp, fuel injection system – electronic. Characterized by improved parameters.



### M9FV engine for helicopters.

Today, VMZ's design department develops new rotor-wing M9FV engine with the power of 365 hp for Mi-34C helicopter. The engine is fitted with low pressure electronic fuel injection system controlled by microprocessor, providing for the engine's thermal state optimization, reduction of specific fuel consumption, boosting of power per liter.



### VR-226 rotor-wing reducing gear box

Installed on KA-226 helicopter. Used for rotation frequency deviation and drawing power from 2 engines to 2 coaxial rotors and to auxiliary units. This epicyclic gear-type compact reducing gear box is made of modern high-duty materials. High precision technological process provides for improved mass-dimensional characteristics, endurance and reliability.



### Units for locomotive diesel engines.

Production of complex and science-based units for modern D-49m heavy duty diesel engines ordered by Kolomenskiy Plant JSC.

- Large-size cooled exhaust manifold 2-5D49.169 with pipeline 2-5D49.189, feeding exhaust gases to the turbocharger.
- Vibration absorber 5D49.12 with vibration damper for torque smoothness and vibration level reduction.
- Camshaft drive 1E-6D49.69 as a unit. (gear mechanism in rigid boxlike moulded case)

## **Oil and gas equipment**



### **Christmas tree with wellhead connection system**

Used to provide for the optimal oilwell production conditions, hermetization of tube side, annular space, and shell side; for production operations, deep investigations, sample drawing and surface pressure and temperature control.



### **Blowout preventer system**

Used for drilling, repair works, guarantees eco-friendliness. The system consists of: preventers – annular, ram; preventers and valves control station, hydraulic throttle valve with control panel, cross tree and manifold.

Working pressure – from 21 to 700 MPa

Nominal inside diameter – from 150 to 350 mm

Working medium: gas, gas-condensate with H<sub>2</sub>S and CO<sub>2</sub> content.

Climatic category: from -60 to +60°C



### **Christmas tree control stations**

Allow for:

- Remote control of valve actuators for 3 gas wells and gas condensate fields with H<sub>2</sub>S content.
- Check valves control according to commands transmitted from central dispatcher board.
- Changing and maintaining of the flow set for each well.
- Transmission of the information about working parameters of the well to central dispatcher board.
- Technical conditions analysis.
- Survival time in the event of power supply shut-off – up to 200 hours.



### **Underground equipment system**

Used for production operations accomplishment during the production of gas and gas condensate wells. Provides for industrial and fire safety of wells.

- Working media: Gas, oil and gas condensate
- Process pressure: up to 21 MPa
- Climatic category to State Standard (GOST) 15150-69
- Corrosive resistance to State Standard (GOST) 13846-89
- Outside diameter of housing pipe: 168 mm
- Tubing pipe: 114,3 mm

# KBKHA JSC

## Company Profile



<b>Company name (short):</b>	KBKhA JSC
<b>CEO:</b>	Vladimir S. Rachuk
<b>Address:</b>	20 Voroshilova St., Voronezh 394055
<b>OKPO code:</b>	29691226
<b>Year of foundation:</b>	13.10.1941
<b>Workforce:</b>	3267 people
<b>Telephone:</b>	+7 (473) 263-36-80 — CEO (reception)
<b>HR department:</b>	+7 (473) 234-64-17
<b>Fax:</b>	+7 (473) 234-65-71
<b>Website:</b>	<a href="http://www.kbkha.ru">www.kbkha.ru</a>
<b>Specialization:</b>	Engineering of high-efficient liquid rocket engines for space rocket launchers and intercontinental ballistic vehicles, development of power units, scientific research and development in the framework of the federal space program and other federal target programs.
<b>Sales volume in 2010:</b>	2 170 270 thousand RUR (exclusive of VAT)
<b>Production volume in 9 months of 2011:</b>	1290800 thousand RUR
<b>Quality management system:</b>	Products have certificate of compliance with State Standard (GOST) R ISO 9001:2008 (ISO 9001:2008). Certificate was issued by the aerospace certification centre of the Federal Space Agency.

## Historical Note

KBKhA was set up on 31 October 1941. During WWII the company produced direct fuel injection units for engines of battle aircrafts.

Design of liquid rocket engines by KBKhA provided for:

- The launch of rocket launchers Luna, Vostok (including the one with Yuriy Gagarin on board), Voshod, Soyuz, Proton, Energiya-Buran.
- The development of strategic missiles for strategic rocket forces and naval forces: R-9, UR-200, RS-18 (Stilet), RS-20 (Satana and Voevoda), RSM-54 (Sineva), many of which are still in service providing for nuclear parity with the USA.

Besides liquid rocket engines, KBKHA designed a unique nuclear rocket engine, technologies of which can be used in future flights to planets of the Solar system, hypervelocity turboram rocket engine working on liquid hydrogen, which was successfully tested as a part of Igla system and reached the speed 6 times over the supersonic speed, electron-beam controlled gas laser and other high technology devices.

Today liquid rocket engines produced by KBKhA are used in such rocket launchers as Soyuz, Proton, Soyuz-2, conversion rocket launchers Rokot, Dnepr, Shtil.

KBKhA developments have been implemented at many rocket-and-space enterprises of Russia. Over 4000 rocket engines, designed by KBKHA and produced by Russian plants have facilitated the launches of various purpose rockets.



## Production Facilities

Today, KBKhA operates in the form of scientific development and production center. This position is defined by the structure of cooperation ties. In 1987 the proportion of own developments in total volume of the company's scientific research and development works was about 30%. Today it is about 90%. Thus, the proportion of own developments has tripled.

KBKhA includes: research and technology department where research, engineering and computational works are carried out by highly-trained engineers; rocket engine plant with equipment stock for the production and assembly of liquid rocket engines; including commercial rocket en-

gines; testing facilities including a variety of firing and cold (hydraulic test stand, strength test stand, balancing rig) rocket testing facilities, and infrastructure providing for the experimental method of LRE and its units in line oriented conditions.

In recent years the process of reconstruction and technical re-equipment of KBKhA has increased. It is possible due to target financing both from the federal budget and from the company's own funds. The main aim is to create high technology production facilities for the manufacture of modern commercial liquid rocket engines and advanced rocket engines in the framework of the company's scientific research and development works.

## Production Program

Today KBKhA is designing new LREs for Russian new generation rocket launchers. These plans presuppose the design of new oxygen-kerosene ZHRD14D23 engines for use as a part of Soyuz-2-1b rocket launcher. In 2006-2011 this engine was flight-tested as a part of the rocket 4 times. In spring 2011 the certificate on the engine was issued and batch production started. This LRE is to be used as a part of Soyuz-ST-b rocket launcher, which is going to be launched from KURU launching site in French Guiana in the framework of cooperation with France.

KBKhA is finishing development tests of ZHRD-RD0124A engine. Is is a modification of ZHRD14D23 for use as a part of Angara advanced rocket launcher, which is to be launched from Plesetsk launching site.

Another oxygen-kerosene liquid rocket engine ZHRD RD-0110R by VMZ and KBKhA for LV Soyuz-2-1v is at the stage of stand-alone developmental testing.

An area of work of no less importance for KBKhA is design of RD-0146 oxygen-hydrogen rocket engine. It will be used as a part of the upper stage of the Angara heavy class rocket launcher and as the daughter missile of advanced Russian rocket which is being designed for Vostochniy launching site which is currently under construction.

The company is also working on the production and improvement of LREs used in Proton and Soyuz rocket launchers. At the same time KBKhA is implementing the Engineering of Civil Purpose Products program which presupposes the development of eco-friendly hydrogen steam-turbine electric power stations for use at nuclear and heat power plants, industrial high-rise buildings, etc. KBKhA has a wealth experience in engineering oil and gas equipment and equipment for adjustment of automobiles to use gas as fuel.

## Product Catalogue



ZHRD-RD0126



ZHRD-RD0146



ZHRD-RD0110R



ZHRD 14D23

# OKBM CJSC

## Company Profile



<b>Company name (short):</b>	OKBM CJSC
<b>CEO:</b>	Valeriy V. Dergilev
<b>Address:</b>	22 Voroshilova St., Voronezh 394044
<b>OKPO code:</b>	77876990
<b>Year of foundation:</b>	14.07.2005
<b>Workforce:</b>	220 people
<b>Telephone:</b>	+7 (473) 263-86-03 — CEO (reception)
<b>Supply Dept :</b>	+7 (473) 262-20-81, (473) 262-20-82 ext 134
<b>Sales Dept:</b>	+7 (473) 262-20-81, (473) 262-20-82 ext 141
<b>HR Dept:</b>	+7 (473) 225-77-59, (473) 256-29-96
<b>Fax:</b>	(473) 263-71-59
<b>Website:</b>	<a href="http://www.okbm.ru">www.okbm.ru</a>
<b>Specialization:</b>	Design, production and testing of aviation piston engines, reducing mechanisms and transmission systems for aircrafts and aerospace vehicles.
<b>Sales volume in 2010:</b>	158 025 thousand RUR
<b>Quality management system:</b>	Certified in compliance with requirements of GOST R ISO 9001-2008, GOST RV 15.002-2003 and SRPP VT standards. Certification authority: IIS Certification Centre Product certification: All products are licensed and have permits for use issued by the Federal Industry Agency.

## Historical Note

- 1959 – The experimental motor-building design bureau was set up
- 1964 – The company designed main reducer for KA-26 helicopter and helicopter engine M-14V26. At the same time the bureau was designing the engine on the base of ASh-62IR for air-cushion craft.
- 1974 – OKBM designed and serialized M-14P aviation piston engine, which became the base for the whole series of new engines: M-14PF, M-14X, M-14R.
  - In the 70s OKBM designed a variety of rotary piston engines with power from 50 to 400 hp.
  - In the 80s-90s the sphere of action has expanded. OKBM using modern design and technical principles produced transmissions for small and medium helicopters and new reducers with ultra high transmission ratio for aircrafts and aerospace crafts. The company designed main reducer

R-126 for Ka-126 helicopter, reducer R-40 for control system of wing variable sweep of TU-160, reducers R-35 and R-36 in flight control systems of spacecraft Buran, main reducer VR-226 for Ka-226, main reducers VR-60 and VR-60A and tail reducers HVR-600, HVR-600A for Ka-60 and Ka-62.

A wide range of torque amplifiers named as joint-reducers for modern aircrafts Su-47 Berkut, Yak-130 etc were designed.

- By the 90s OKBM became one of the leaders in motor-building. Aerial acrobatic planes Su-26, Su-29 powered by OKBM were awarded a lot of prizes in competitions in aerial acrobatics.
- 2005 – After transformation of OKBM into CJSC the company serialized main reducer VR-226 for Ka-226 helicopter, main reducer VR-60 and tail reducer HVR-600 for Ka-60.
- Today OKBM is designing details and units of

joint-reducer group and produced a wide range of mechanical torque amplifiers. New solutions were implemented to the construction of joint reducers (Patent RF #98509) which provided for increase of torque by 30% at the same dimensions.

Such units are installed on new trainer aircraft Yak-130, experimental aircraft Su-47 Berkut, designed in experimental design bureau after Sukhoi and advanced 5th-generation aircrafts.

## Production Facilities

OKBM CJSC has modern equipment stock allowing for the production of reducers and transmission systems, for carrying out complex tests and investigating parameters of prototypes and repair and maintenance of serial products.

Design and processes departments are toolled up with modern CAD systems providing for efficient and quality-based design process and operative test results processing.

QMS of the company enables it to fulfil customer's requirements and terms of the contract, conditions of technical documentation applying to respective activity types and products, prevent production of scrap components, guarantee stable high level of the quality of products and technological processes; product maintenance at all stages of operational lifetime.

Production facilities are located in designated area of 17 hectares and house:

- Design department;
- Processes department;
- Procuring rooms;
- Plating shops;
- Mechanical rubber shop;
- Machining workshops;
- Assembly department;

- Test complex;
- Quality control division;
- Head metrologist department.



## Production Program

### • Applications

OKBM is one of the few companies in the world and the only company in Russia which designs and produces reducer-joint units for aviation crafts. The units are used for transformation of high-speed rotary motion of cardan shafts with low torque into low-speed angular motion of final elements with high torque.

### • Special features and competitive advantages

Production facilities of OKBM CJSC are toolled up with modern equipment for mechanical processing of cog-wheels of various grades of difficulty from high-tension steel grades. The company pays special attention to the implementation of new materials, processes of surface impregnation of cog wheels, advanced laboratory research

which provide for high tension parameters and decrease in weight of the unit. The company works with high-duty materials used for production of fine pitch cog wheels.

For aviation engineering the company applies technological processes of production of units from high-tension steel grades. The company implemented technologies of production of three-gear satellites with 6-7 grade of precision without finishing of cogs.

### • Innovations and new developments

#### *Helicopter reducers:*

OKBM CJSC is a leading enterprise producing main reducers and transmission systems for small and medium helicopters KA-126, Ka-226, Ka-60. It designs the main reducer R-26 for Ka-26 heli-

copter, provides designer supervision and maintenance during operation and repair of Ka-26.

#### *Plane reducers:*

OKBM CJSC is a leading company which designs and produces reducer-joint units for new generation aircrafts. The units are used for transformation of high-speed rotary motion of cardan shafts with low torque into low-speed angular motion of final elements with high torque.

Today in the framework of improvement of parameters of serial products, which are in operation, the company upgrades them using new composite materials in cooperation with targeted enterprises in Russia, Germany, Czech Republic and China.

## Product Catalogue



#### • Procuring shop:

Cutting metal sheets and rolled sheets by rotary saws D(BxH) – 200mm 200x200, and on squaring shears S up to 10 mm.

#### • Galvanizing plant:

a.) Heat treatment of constructional steel, alloyed steel, highly alloyed steel:

- Maximum heating temperature – 1050 C
- Dimensions of product D(BxH)xL – up to 500x500 mm

Hardening with layer thickness over 0.4 mm

Heat treatment of aluminium alloys D(BxH)xL up to 400x600 mm

b.) Electroplating, chemical plating:

- Copperplating (measured and protective) – thickness up to 0.06...0.09 mm (chemical oxide phosphatization and magnesium oxidization). Product dimensions D(BxH)xL 1000x600 mm max;

c.) Painting and undercoating in special paint-spraying booths:

Maximum dimensions of products: BxHxZ1000 x1000x600 mm.

d.) Production of mechanical rubber products: boots, rings etc. The company is able to produce pressing tools and mechanical rubber products to customer's drawings.

#### • Mechanical treatment shop:

a.) Lathe machining on screw-cutting lathes (1K32Q, 1K631) and on PNC machines

- Maximum diameter of product – 600 mm (on

PNC machines – 200 mm)

- Maximum length of product – up to 2200 mm (on PNC machines – 180 mm)

b.) Milling on horizontal and vertical milling machines including machines of machining centre unit type:

- Maximum size of product – 2000x1800x200 mm

c.) Complex mechanical treatment of box-like workpieces on horizontal and multi-axis boring machines (2A450, 2D450, 2V441):

- Maximum size of product – 1000x630x800 mm

d.) Polishing on face and circular grinding machines GZD722, ZV711, ZP741, ZP740:

- Maximum size of product – 400x1400x320 mm or 800x400 mm

e.) Groove making on groove-milling and groove-grinding machines fZSKV40(X 5350B):

- Maximum centre distance 1400 mm

- Centre height 150 mm

f.) Making of cylindrical, cone gear shafts and cog-wheels with straight, helical and circular-arc teeth on gear-grinding and gear shaping machines (ZP311, ZP316, 5A276, W800CNO\*):

- Straight-tooth cylindrical - max D=800mm m=10

- Helical-tooth cylindrical - max D=500mm  
 $T=7/3=45^\circ$ ;

- Straight-tooth cone-shaped - max D=400mm  
 $T=10$ ;

- Conic-shaped with circular arc tooth - max D=500MM m=8;

- Cylindrical with inner tooth - max D=500MM m=8;

The company can produce cog-wheels with precision class 6g.

- All type tooth polish of straight, helical and circular-arc cylindrical teeth with involute tooth system on bevel gear hobbing machine NILES 2TSZ.

**The machine works in 2 modes: single-flank grinding and twin-flank grinding.**

Maximum outside diameter	1250 mm
Minimum root diameter	50 mm
Mormal module min/max	2/30
Teeth number	5-400
Maximum angle of obliquity	+ 45°
Angle of action	14°/31°
Maximum wheel length at angle of obliquity ( $\beta$ ) 0°	430 mm





## 711 ARZ JSC

**Company name (short):** 711 ARZ JSC

**CEO:** Alexander A. Volos

**Address:** 18 Chkalova St., Borisoglebsk, Voronezh region 397171

**Year of foundation:** 10.06.1923

**Telephone/Fax:** +7 (47354) 6-69-73

**Specialization:**

Repair of weapons and military equipment.

**Special features and competitive advantages:**

The only company in Russia repairing weapons and military equipment for the Ministry of Defense of the Russian Federation

**Product range:**

Repair of weapons and military equipment.



## NPP AVIAPROEKT LTD

**Company name (short):** NPP Aviaproekt LTD

**CEO:** Vladimir I. Korolkov

**Address:** office 40, building 30, 34 Tsiolkovskogo St., Voronezh 394029

**Year of foundation:** 31.12.2009

**Telephone/Fax:** +7 (473) 2481457

**Specialization:**

Scientific research and development.

**Special features and competitive advantages:**

Design works in licensed software environment NX 7.5, experience in the full-cycle development of complex constructions, including the ones connected with aeronautics, development of high precision envelope details by rotary drawing.

**Product range:**

Design and process plans, seamless envelope details with maximum dimensions up to 2 m and with thickness from 0.4 to 6 mm (for food processing industry, gas turbine engines, aircrafts and automobiles).



## INS OKBM CJSC

**Company name (short):** InS OKBM CJSC

**CEO:** Yelena L. Tikhonova

**Address:** 19 Pushkarskaya St., Voronezh

**Year of foundation:** 22.01.2002

**Telephone/Fax:** +7 (473) 236-64-63

**Website:** [www.insokbm.com](http://www.insokbm.com)

**Specialization:**

Development of projects aimed at on energy saving, energy efficiency, ecology, agricultural products processing, engines development, etc.

**Special features and competitive advantages:**

Coefficient of efficiency of production is higher, production has outstanding environmental performance.

**Product range:**

Wind driven generators. 2-rotor generators with 10 blades. Constant frequency of 50-60 Hz and absence of psychotronic infrasound effect. Coefficient of efficiency of wind energy – 0.75-0.8.

Fuel/water emulsion devices. Fuel saving up to 15%. Ecology - reduction of emission by 80% and more.

Engines for unmanned aircrafts.

Speed-increasing gear for underwater vehicles.

Plant oil purification. Unique technology of fully mechanical purification.

Phosphatide concentrate production (lecithine).



OIL AND GAS  
AND CHEMICAL  
MACHINE BUILDING

# BKMZLIT JSC



## Company Profile

<b>Company name (short):</b>	BKMZlit JSC
<b>CEO:</b>	<b>Yuriy V. Akimov</b>
<b>Address:</b>	office 11, 32 Sovetskaya St., Borisoglebsk, Voronezh region
<b>OKPO code:</b>	00288490
<b>Year of foundation:</b>	1932
<b>Workforce:</b>	144 people
<b>Telephone/fax:</b>	+7 (47354) 6-02-09, (47354) 6-34-35
<b>Website:</b>	<a href="http://www.bkmzlit.com">www.bkmzlit.com</a>
<b>Year of transformation into BKMZlit JSC:</b>	01.10.2010
<b>Production volume in 9 months of 2011:</b>	65091.2 thousand RUR
<b>Specialization:</b>	Production of heating boilers, lids, floor tiles, grates, fire bars, gulleys, storm water drainage systems, trusses, spare parts. Manufacture of gas-, liquid-, and solid-fuel heating boilers.
<b>Certificates:</b>	All company's products are certified and have permits for use.

## Historical Note

The foundation of Borisoglebsk boiler engineering plant dates back to 1932 when flour-mills repair shops were built in Borisoglebsk under the authority of Soyuzkhleb national association.

The plant started specializing in the manufacture of cast-iron boilers in 1934, but wasn't officially remained as iron foundry until 1937.

In the period from 1950 to 1956 the company managed to sort out difficulties connected with electricity, water and compressed air supply, while carrying out further mechanization of labour intensive processes.

In 1987 the company started building a new production site outside the town. At the end of the 80s a boiler building shop was put in operation. The beginning of the 90s saw the opening of a new gas-jets production shop.

In 1989 Rossantekhpron leased its production facilities to various companies including the Borisoglebsk plant. After two years of rent, the plant accumulated enough funds to buy out their production facilities in 1991.

On 23 July 1991 Borisoglebsk boiler engineering

plant was registered as a joint stock company by the Committee of People's Deputies. All the property became community property.



## Production Facilities

The company's premachining section, boiler and boiler rooms assembly shop occupy an area of 2304 m<sup>2</sup>. The machine-shop has an area of 360 m<sup>2</sup>.

The company's equipment stock includes:

- shears;
- pressure equipment;
- rolling press;
- pipe and rolled metal shearing equipment;
- welding equipment;



- drilling equipment;
- turning equipment;
- milling machines.

The company's specialists keep up with the leading boiler building technologies and, in order to meet the market needs, aim at product improvement utilizing innovative technology.

Borisoglebsk boiler engineering plant JSC is capable of annually producing over 330 thousand kW of products.



## Production Program

### • Applications

The plant's product range consists of a wide selection of heating boilers (0.25 MWt to 2.5 MWt), various types of automated burners from 0.34 MWt to 2.7 MWt, an extensive range of transportable block boiler rooms with the capacity from 50kW to 20MWt. Automated control systems guarantee reliable and trouble-free work of boilers and boiler rooms to achieve optimum performance in accordance with a specified temperature plan, which eliminates the possible negative effect of a human factor. Industrial boilers produced by the plant are used to supply heat to residential, public, office and industrial buildings.

### • Special features and competitive advantages

BKMZ JSC provides the whole range of services connected with the mounting of its equipment, as well as backup service and technical support. The company is licensed to perform mounting and launch the equipment and to design and construct buildings of the I and II levels of responsibility according to the State Stan-

dard. BKMZ is guided by the desire to satisfy the customers' needs to the full.

### • Innovations and new developments

One of the company's latest developments is modification of automated burners GBak series and designing their modulated version. Previously, the burners allowed for a three-stage heat power control mode, whereas now the progressive controlling enables one to increase heat power between 40 and 100%, which improves the work of both the burner and the boiler — durability increases, technical characteristics improve.

Today, BKMZ is one of the leading manufacturers of heating equipment in Russia. Taking into account the need for modernization of communal services, the company believes that it is possible only through comprehensive approach, which presupposes step-by-step decentralization of the city's heating system, putting in local and indirect heating systems, introduction of new highly automated equipment, energy-saving technologies and efficient servicing.

## Product Catalogue



### Block modulated automated burners

- GBak-0.34
- GBak-0.85
- GBak-1.2
- GBak-2.7
- GBp-0.85
- GBzh-0.8

Burners' power is controlled by slide control  
30 - 100%



### Industrial heating boilers

Industrial heating boilers with the capacity of 0.25 - 2.5 MWt are used to supply heat to residential, public, office and industrial buildings with working pressure of water in the heating system up to 0.6 MPa.

Since June 2011 the plant has been manufacturing boilers whose design allows for operation without smoke exhausts.

Steam boilers KPa-0.63 - with the performance of 1 tonne/vapour per hour.

Solid-fuelled boilers KSVr-0.25 - with the performance of 250 kW.



### Transportable block automated boiler rooms with capacity up to 20 MWt

Do not require the presence of maintenance staff. Operating parameters are transferred to a supervisory console.

The boiler rooms are delivered in full set according to customers' demands.



#### Boiler KSVr-0.25

Runs on solid fuels, coal, lignite, firewood, peat, agrowaste. Indispensable in areas where gas is not available.

Boiler KSVr-0.25 is not subject to obligatory certification in State Supervision authorities.



#### Steam boiler KPa-0.63

Used in agricultural, confectionary and processing industries and for manufacture of concrete products. The boilers run on gas and liquid fuels and are equipped with a water treatment system. Other fuels can also be used: gas, light furnace oil. The boiler is equipped with monitors, which allows for automatic process control.

# BORKHIMMASH JSC



## Company Profile

<b>Company name (short):</b>	Borkhimmash JSC
<b>CEO:</b>	Alexander N. Kakorkin
<b>Address:</b>	4a Prokhodnaya St., Borisoglebsk, 397164
<b>OKPO code:</b>	00218880
<b>Year of foundation:</b>	17.12.1969
<b>Workforce:</b>	831 people
<b>Telephone:</b>	+7 (47354) 6-05-14 — CEO (reception)
<b>Sales and Marketing Dept:</b>	+7 (47354) 6-56-18, 4-13-62, 4-11-15
<b>Supply Dept:</b>	+7 (47354) 6-37-69
<b>HR Dept:</b>	+7 (47354) 4-10-07
<b>Fax:</b>	+7 (47354) 4-18-02
<b>Website:</b>	<a href="http://www.oaobhm.ru">www.oaobhm.ru</a>
<b>Production volume in 9 months of 2011:</b>	1618235.0 thousand RUR
<b>Specialization:</b>	Design and manufacture of heat-exchange equipment - shell-and-tube heat exchangers and air-cooler units for oil and gas industry, oil processing, petrochemical, chemical, metallurgical industries and power engineering.
<b>Sales volume in 2010:</b>	1 238 649 thousand RUR (exclusive of VAT)
<b>Quality management system:</b>	certificate of compliance with ISO 9001:2008
<b>Certificates:</b>	All company's products are certified and have permits for use.

## Historical Note

- 1989 – railway shops are set up, which were later transformed into a chemical engineering plant.
- 1971 – the company starts serial production of capacitive equipment.
- 1975 – air-cooler units, capacitive equipment, heat-exchange equipment, aftercoolers for transportable refrigerating plants, air collectors and air filters are developed.
- 1975 – the plant develops natural gas-cooler units with inlet and outlet product collectors for compressor plants of main gaslines 2AVG-75 and 2AVG-100 for gas pressure of 75 and 100 atm.
- 1993 – the company develops and launches air-cooler units 1AVG-160 and AVG-160R (collector type) for underground gas storage points with gas pressure of 160 atm.
- 2000-2005 – in association with a leading design institute, the company launches a new range of modular air-cooler exchangers, including units with heated air recirculation.
- 2008 – new modular construction of a gas-cooler unit with nominal pressure of 135 atm. (AVG-BM-135) is designed.
- 2009 – The company designs a principally new for Russian manufacturers product line – modular air-cooler units Iceberg for pressures from 75 to 165 atm.
- 2009 – the company introduces a new system of automatic engineering utilizing the latest software: XACE heat calculation software provided to the company as a member of HTRI Association, T-flex software for automatic designing of technological documents. This enabled the company to reduce cost of designing equipment.
- 2011 – the plant is awarded a Laureate Diploma in the contest Voronezh Quality for its Iceberg air-cooler units.

## Production Facilities

Borkhimmash today is an upswing company affiliated to Limonte Group of companies.

- Production area over 80000 m<sup>2</sup>.
- Equipment by world leading manufacturers: Polysoude, ESAB, Lincoln Electric, Kempomat, Harding, etc.
- Design and Process departments well-equipped with software.
- A broad wealth of experience in the manufacture of heat exchangers – air-cooler units for pressures from 6 to 320 atm.
- Laboratory for nondestructive testing.
- Quality and process control departments.
- Participant of Gazprom JSC's megaproject Northern Gas Pipeline
- Over 800 team-oriented like-minded employees.



## Production Program

### • Applications

Borkhimmash JSC's product line includes standard air-cooler units (AVG, AVZ, AVM), a new generation of modular air-cooler units (BM, Iceberg) for working pressure from 0.6 to 32.0 MPa, shell-and-tube heat exchangers, and capacitive equipment made of different materials. The equipment is used for condensation, cooling and heat exchange of vapour, gaseous and liquid media in various technological processes in oil and gas production, oil processing, petrochemical, chemical, metallurgical industries and power engineering.

### • Special features and competitive advantages

Borkhimmash JSC has been manufacturing heat-exchange equipment for over 40 years. Today, the company considers the manufacture and further development of air-cooler exchangers as a priority direction.

### • Innovations and new developments

Borkhimmash JSC aims at designing new products and developing the existing ones. The company's key directions of innovative activity are:

- Expanding product range through the introduction of new technologies.
- Processes optimization through innovative work which allows for the equipment efficiency upgrading (lower energy and metal consumption, smaller production areas).
- Design and development of new products which are currently not included in Borkhimmash

JSC's product range.

- Processes improvement in order to enhance quality and reduce delivery time.

Borkhimmash JSC is currently working on the following projects:

- Design and development of air-cooler units with working pressure up to 320 atm., which has required taking a new approach to calculations, design and welding.
- Use of heat exchange intensifiers which increases the equipment performance by 30-50 %.
- Development of innovative equipment for gas separation.
- Installing VASO-produced electric motors with non-standard speed in order to optimize the exchanger's design.

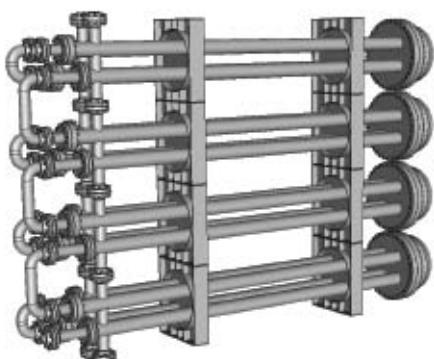


## Product Catalogue



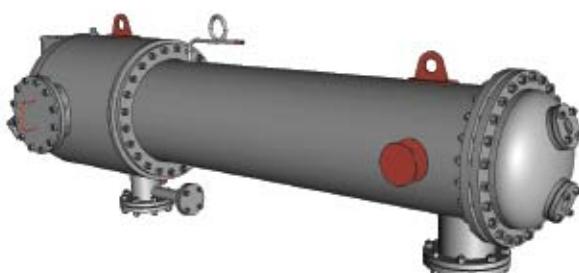
**Shell-and-tube heat exchangers with floating knobs and U-type tubes, vertical and horizontal, for increased thermal effectiveness. Tube bundles.**

- Pressure (MPa): 1.6, 2.5, 4.0, 6.3;
- Shell diameter (mm): 325 to 1200;
- Materials: Special steels and alloys (Ct 206 09Г2С, 12Х18Н10Т).



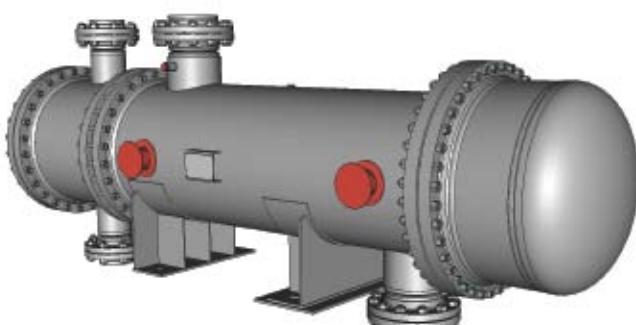
**Demountable heat exchangers of annular tube type: single-stream, multistream and their combinations.**

- Pressure (MPa): Pinternal/Pexternal – up to 16.0/10
- Diameter (mm): 25 to 219;
- Materials: Special steels and alloys (Ct 206 09Г2С, 12Х18Н10Т).



**Aftercoolers for permanent-set piston opposite compressors of general purpose with the productivity of 50 cubic meters/min (Kh/K-50), 100 cubic meters/min (Kh/K-100)**

- Pressure (MPa):  
in the casing 0.9;  
in the tube 0.3;
- Material: carbon steel.



**Water-steam heater. Tube bundles.**

- Pressure (MPa): up to 1.6;
- Shell diameter (mm): 325 to 820;
- Materials: carbon steel, stainless steel, yellow metal.



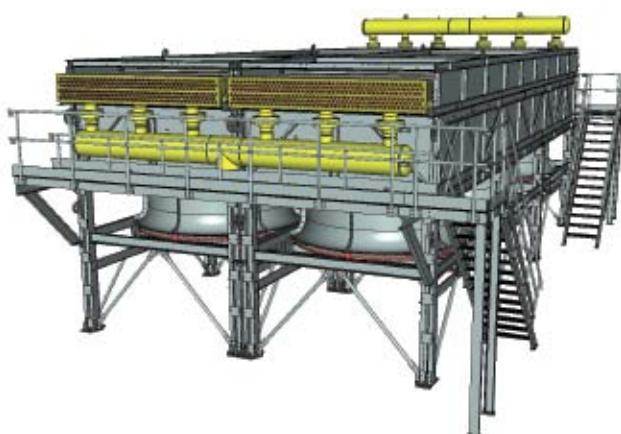
#### Capacity tank

- Nominal pressure, MPa, up to 2.5 (25);
- Tank diameter, mm, up to 2000;
- Capacity, m<sup>3</sup>, up to 50;
- Material: carbon or stainless steel.



#### Air-cooler units for condensation and cooling of vapour, gaseous and liquid media: horizontal, zigzag, modular, with hot air recirculation (AVM, AVZ, 2AVZ-D, AVG, 2AVG, AVG-BM, AVG-BMR). Unit sections.

- Pressure (MPa): up to 13.5;
- Air cooling surface (m<sup>2</sup>): from 105 to 9940;
- Tube length (m): up to 12;
- Tube ribbing coefficient: 20;
- Material: carbon steel, stainless steel, special steels and alloys.



#### Air-cooler plant Iceberg for cooling of natural gas at compressing stations of main gas pipelines under Extreme North conditions with minimum permissible working temperature minus 60 C.

- Pressure (MPa): up to 12.5;
- Air cooling surface (m<sup>2</sup>): from 10432;
- Tube length (m): 12;
- Tube ribbing coefficient: 20;
- Material: carbon steel, stainless steel.
- Zinc plated metalware is available on demand.

# Hydrogas CJSC



## Company Profile

<b>Company name (short):</b>	Hydrogas CJSC
<b>CEO:</b>	Vladimir V. Panov
<b>Address:</b>	160 Leninskiy av., Voronezh 394033
<b>OKPO code:</b>	42615767
<b>Year of foundation:</b>	18.01.1996
<b>Workforce:</b>	644 people
<b>Telephone:</b>	+7 (473) 223-72-33 — CEO (reception)
<b>Marketing Dept:</b>	+7 (473) 260-61-12, 260-61-13, 260-61-14, 223-96-26
<b>Supply Dept:</b>	+7 (473) 223-21-44, 223-01-41
<b>HR Dept:</b>	+7 (473) 223-48-18
<b>Fax:</b>	+7 (473) 223-72-31
<b>Website:</b>	<a href="http://www.hydrogas.ru">www.hydrogas.ru</a>
<b>Specialization:</b>	design and manufacture of special pumping equipment and check and control valves for chemical and petrochemical industries, water treatment systems based on baromembrane technologies, complex technological lines and plants for chemical and petrochemical industries, automated process control systems.
<b>Sales volume in 2010:</b>	526488 thousand RUR (exclusive of VAT)
<b>Production volume in 9 months of 2011:</b>	395300 thousand RUR
<b>Quality management system:</b>	certificate of compliance with EN ISO 9001-2008 issued by TUV CERT (Germany) certification authority.
<b>Certificates:</b>	All company's products are certified and have been permitted for use by the Federal Service for Ecological, Technological and Atomic Supervision and Industrial Inspection Service of Belarus.

## Historical Note

- 1996 – the company starts producing lined chemical pumps and valves.
- 1998 – amalgamation of Elmash plant and Hydrogas CJSC. Chemical pumps with liquid ends made of corrosion resistant steels and alloys are developed and launched.
- 1999 – the company starts designing industrial water treatment systems. The first automated process control systems are developed.
- 2001 – the company starts major innovation work, overhaul of production facilities and modernization of its park of machine tools.
- 2003 – the company launches a range of modern electrodeionization systems for fine water purification.
- 2004 – the company launches the line of oil pumps (NVD and VND series).
- 2008 – Hydrogas starts producing modular

systems for chemical and petrochemical industries.

- 2010 – the company expand production and purchases the assets of Panino Mechanical Plant JSC.

Today, Hydrogas is a leading company proud of its achievements, which has gained a broad wealth of practical experience in design and manufacture of equipment for petrochemical industry. Most our products have no analogues in Russia and comply with the strictest safety requirements.



## Production facilities

The company's production facilities house state-of-the-art equipment by leading manufacturers from Japan, Germany, the USA, Switzerland, which, combined with a wealth of experience in design and manufacture, allows the company to find optimum solutions to their clients' needs.

Design and Processes Departments are equipped with upgraded computers and use the latest software. 3D modeling is used to facilitate design and calculations.

Automated document management has enabled the company to speed up the developing and concurrence of documents.

Hydrogas is continually developing products from inception through to final product release.

The plant occupies about 50000 m<sup>2</sup> and houses:

- Design Department.
- Production Department.
- Die casting shop.
- Mechanical assembly shop.
- Polymer and elastomer processing shop.
- Galvanizing room.
- Tools production shop.

- Electronic equipment assembly shop.
- Polymer lining and rubber production shop.
- Metal goods production shop.
- Nondestructive testing laboratory
- Testing and maintenance centre.



## Production Program

### • Applications

Hydrogas's products are used to handle toxic and aggressive media, oil and oil products in hazardous applications in chemical, petrochemical, metallurgical, nuclear industries, power engineering, oil extraction, etc.

### • Special features and competitive advantages

The company's key advantages are and have always been the high quality, reliability and environmental safety of its products. Apart from serial products, the company develops and manufactures unique equipment for special applications in accordance with the customer's requirements.

All products comply with relevant technical and safety requirements.

Positive feedback and ever growing demand for the company's equipment proves the unrivaled quality of the plant's products.

Hydrogas is customer focused, internally driven to listen to the client's market needs and is con-

stantly aiming at developing its products, which has enabled the company to establish itself as the leading manufacturer of equipment for chemical industry.

### • Innovations and new developments

The company's production program is based on innovations and breakthrough technology. Hydrogas product line consists of over 1300 units of chemical equipment, including those having no analogues in Russia. Apart from standard products, the company is developing and manufacturing new equipment – self-priming pumps GHS and AHS series, and disk pumps GHD series used to handle highly-viscous media. The company is currently developing pumps made of high molecular weight polyethylene PE1000 and slurry pumps for aggressive liquids. Besides, Hydrogas manufactures electrodeionization and ultrafiltration water treatment systems, capacitive equipment, and tanks with mechanical mixers.

## Product Catalogue



### Modular plants for chemical and petrochemical industries

- the systems are produced as separate technological modular blocks unified in size;
- plant capacity - up to 100 kg per 24 hours;
- working temperature from -60 to +350°C;
- overpressure up to 6.3 MPa;
- dynamic viscosity of working media up to 5000 cSt;
- density up to 2000 kg/m<sup>3</sup>;
- drives with magnetic coupling allow for hermeticity of hazardous processes.



### Chemical capacitive equipment

- Nominal capacity, up to 10 m<sup>3</sup>;
- Working pressure, up to 6.3 MPa;
- Working media temperature from -70 to +350°C;
- Available with various types of check and control valves, monitors;
- Available with heating (cooling) jackets;
- Available with various types of mixers, including hermetic ones;
- A wide range of stainless steels and alloys used.



### Chemical pumps, including hermetic pumps

- Flow from 0.5 to 400 m<sup>3</sup>/h;
- Head from 8 to 150 m;
- Working temperature from -40 to +400°C;
- Volume content of solids up to 15%;
- Density of pumped media up to 1850 kg/m<sup>3</sup>;
- Media viscosity up to 10000 cSt;
- Inlet pressure up to 6.3 MPa;
- Can be used to handle explosive, hazardous, aggressive and toxic media.



### Oil high-pressure pumps

- Flow from 3 to 400 m<sup>3</sup>/h;
- Head from 32 to 640 m;
- Can be used to pump contaminated water and oil products, whose viscosity does not exceed 100 cSt, from underground tanks;
- Volume content of solids (up to 10 mm) – no more than 3%;
- Working temperature from -60 to +80°C;
- Immersion depth from 0.8 to 9 m;
- Included in AK Transneft JSC's register.



### Check and control valves

- DIN from 15 to 400 mm;
- PN up to 2.5 MPa;
- Working temperatures range from -50 to +160°C;
- Volume content of solids (up to 2 mm) in working media – no more than 0.5%;
- Hermeticity to State Standard (GOST) 9544, class A;
- Special hermetic valves with torque transfer through constant magnets;
- Available with all kinds of electric and pneumatic drives;
- Resistant to radiation;
- Antiseismic;
- Can be used to handle aggressive and toxic media, liquid and gaseous chlorine, chlorine-containing products.



### Industrial water treatment equipment

- Capacity from 0.1 to 100 m³/h;
- Water desalination;
- Water softening;
- Removal of colloids and natural impurities, microorganisms, bacteria, and viruses;
- Concentration of valuable substances from solutions and other methods of water purification;
- Low maintenance costs.



### Automated Process Control Systems

- Pump power ranging from 0.37 to 200 kW;;
- Microprocessor control;
- Remote control available on demand; operation/breakdown alarm;
- Switching power actuators;
- Intrinsic safety barriers;
- User-friendly Human-Machine Interface, including RS-485 Modbus and Ethernet.

## GRIBANOVSKIY MACHINE-BUILDING PLANT LTD



### Company Profile

**Company name (short):**

GMZ Ltd

**CEO:**

Pavel V. Mitskevich

**Address:**

11 Mashinozavodskaya St., Gribanovskiy settlement,  
Voronezh region 397243 Russia

**OKPO code:** 13499952

**Year of foundation:** 1936

**Workforce:** 451 people

**Telephone:** +7 (47348) 3-23-60 — reception

**Chief Engineer:**

+7 (47348) 3-23-60 extension 1058

**Commercial Director:**

+7 (47348) 6-25-58

**Supply Dept and Sales Dept:**

+7 (47348) 3-22-68

**HR Dept:**

+7 (47348) 3-66-40

**Fax:** +7 (47348) 3-21-41

**Website:** www.g-m-z.ru

**Specialization:**

design and manufacture of air-cooler exchangers,  
heat-exchange equipment and capacitive equipment  
for oil and gas industry, oil processing, chemical and  
metallurgical industries.

**Sales volume in 2010:**

553554 thousand RUR (exclusive of VAT)

**Quality management system:**

certificate of compliance with MS ISO 9001-2008

**Certificates:**

All company's products are certified and have permits  
for use in accordance with Machines and Equipment  
Safety regulations.

### Historical Note

The plant was set up following the first five-year plan of the Soviet Communist Party. In 1930 the party set out to start a new tanning and extraction industry. The party planned to build 518 new plants, one of which was Gribanovskiy Plant of Tanning Extractions.

In 1936 the plant was put into operation and started its production activity.

From 1942 to 1945 Dubitel plant suspended its work. After the war, the government issued a Decree №548 of 10 March 1946 to set up a repair and engineering plant based on Dubitel's production facilities in order to manufacture spare parts for tanning and extraction industry.

On 15 July 1948, in compliance with the government's decree, Gribanovskiy repair and engineering plant was renamed as Gribanovskiy Machine-Building Plant. In the second half of 1949 the first line of machines and equipment for leather-shoe

and fabric industry was launched. Since then the company has been modernizing its equipment and expanding product range. At the end of the 80s the company went bankrupt.

The change of ownership in 2003 served as an incentive for the company to resume production work.



## Production Facilities

- **Production area, m<sup>2</sup>**

- covered – 27752 m<sup>2</sup>
- open – 65000 m<sup>2</sup>

- **Production equipment**

- Shearing equipment:

- machines for oxygen cutting of sheet metal – steel up to 90 mm thick.

- machines for plasma arc cutting – metal tp to 70 mm thick.

- crop shears for sheet metal up to 12 mm thick

- Bending equipment:

- roll mills – maximum sheet thickness - 32 mm, width – 2000 mm.

- sheet bending press - maximum sheet thickness

- 10 mm, width – 2000 mm.

- Welding equipment:

- manual AC or DC arc welding

- semiautomatic gas-shielded welding

- manual argon arc welding

- contact welding

- equipment for orbital welding of pipes

- flux core welding.

- Machining equipment:

- machining centres (x, y, z) – 3200 x 1500 x 700 mm and 1600 x 1100 x 700 mm;

- drilling machines – maximum drilling diameter

- 70 mm.

- turning-and-boring mills – maximum turning diameter – 2500 mm.

- lathe machines – maximum turning diameter – 1000 mm.

- milling machines – maximum dimensions – 3000 x 1000 mm.

- Ribbed pipes production machines:

- 5 machines for cold rolling of ribbed pipes – Lmax of a pipe = 12000 mm.

Supporting pipe diameter – 12-38 mm.

- Lifting devices:

- Maximum loading capacity – up to 20 tons

- Thermal treatment equipment:

- Electrical furnaces for thermohardening and blazing off, 2000 x 700 x 500 mm, t up to 1000C.



## Production Program

- **Applications**

Air-cooler exchangers are used for cooling and condensation of vapourous, gaseous and liquid media in oil processing, petrochemical, chemical and other industries.

The products undergo various technological processes which require cooling to a certain temperature. Using air-cooler exchangers is the best way to lower temperature.

To meet ever growing quality, reliability and efficiency requirements, the plant is continually development its products cooperating closely with leading design organizations.

- **Special features and competitive advantages**

The company products' key features:

- Good value for money;
- Low material consumption;
- Air-cooler units equipped with modern automated control systems;
- Air-cooler units equipped with fans made of composite materials.

- **Innovations and new developments**

The company, together with VNIIneftemash JSC, has developed an oil air-cooler (AVO-M) for compressor plants of major gaslines. The air-cooler has no analogues in Russia. The company has patented a sealing unit of a fixed joint where monometallic tubes connect to the tubeplate. The patent №2387902 was entered into the state register on 24.04.2010, the patent term lasts until 12.04.2027.

# Product Catalogue



**Air-cooler units AVG-160**  
**TU 26-02-596-96**

Air-cooling surface, m <sup>2</sup>	9940
Tube ribbing coefficient	20
Number of cells	4
Tube length, m	8
Number of tubes	195
Number of tube rows in a cell	6
Number of courses within tubes	3
Specified temperature, C, up to	200C
Pressure, MPa (kgf/cm)	17.0 (170)
Cooler wheel diameter, mm	2.8
Number of fans	4

**Air-cooler units AVG-V**  
**TU 3612-001-00218880-2000**



Air-cooling surface, m <sup>2</sup>	890-3590
Tube ribbing coefficient	7.8
Number of cells	3
Tube length, m	4; 8
Number of tubes	
4 rows	222
6 rows	333
8 rows	444
Number of tube rows in a cell	4; 6; 8
Number of courses within tubes	
4 rows	1; 2; 4
6 rows	1; 2; 3; 6
8 rows	1; 2; 4; 8
Specified temperature, C	from -40 to 300C
Pressure, MPa (kgf/cm)	0.6; 1.6; 2.5; 4.0; 6.3
Cooler wheel diameter, mm	2.8
Number of fans	2.8
4 m	1
8 m	2
Material	B1 and B2
8 m	2
Material	B1 and B2



**Air-cooler units AVZ-D**  
**TU 26-02-1157-95**

Tube ribbing coefficient	9.20 (14.6 on demand)
Nominal pressure, MPa (kgf/cm)	0.6 (6); 1.6 (16); 2.5 (25); 4.0 (40); 6.3 (63)
Number of cells	6
Number of tube rows in a cell	4; 6
Number of courses within tubes	1; 2; 2a; 4; 4a; 8
Tube length, m	8
Air-cooling surface, m	3000 – 8400
Cooler wheel diameter, mm	2800
Electric motor	
Type	VASO2; VASO4
Power, kW	22; 30; 37
Number	2
Material	Carbon steel, stainless steel, brass (to GOST R 51364-99)



**Air-cooler units AVOM**  
**TU 3612-087-00220302-2007**

Number of tube rows	4; 6; 8
Number of courses within tubes	1; 2; 3; 4; 6; 8
Tube fixation	expansion
Turbulator	tape
Dn inlet and outlet, mm	Depends on number of rows and courses
Working temperature of cooled medium, C, up to	100°C
Working overpressure, MPa (kgf/cm)	0.7 (70)
Specified temperature, C (resistance)	100 °C
Minimum t, C	-40°C
Cooler wheel diameter, m	1.24
Rotation frequency	750
Number of fans	2
Power, kW	5.5
Explosion proof	1ExdIIIB3T4
Мощность, кВт	5,5
Исполнение по взрывозащите	1ExdIIIB3T4

# FPK KOSMOS-NEFT-GAZ LTD



## Company Profile

**Company name (short):** FPK Kosmos-Neft-Gaz Ltd

**CEO:** Alexander P. Shevtsov

**Address:** 180, 9 Yanvarya St., Voronezh 394019

**OKPO code:** 35844355

**Year of foundation:** 1994

**Workforce:** 775 people

**Telephone:** +7 (473) 247-91-00 — CEO (reception)

**Sales and Marketing Dept:** +7 (473) 247-95-31, 247-95-92, 247-95-14

**Supply Dept:** +7 (473) 247-91-25, 247-95-26, 247-91-33, 247-95-77

**HR Dept:** +7 (473) 247-95-27

**Fax:** +7 (473) 247-91-07

**Website:** www.kng.ru

**Specialization:** design and manufacture of equipment for oil and gas production, transportation and processing.

Development of gasfields. Design and development of equipment for chemical, petrochemical, oil and gas industries. General design. Engineering monitoring of field development. Commissioning operations.

Bringing foreign technologies and requirements into accordance with Russian standards and regulations

526488 thousand RUR (exclusive of VAT)

**Sales volume in 2010:** 2506200 thousand RUR

**Production volume in 9 months of 2011:** certificate of compliance with EN ISO 9001:2008 № TIC15 100 64008, TUV Thuringen e. V. 28.05.2009 certification authority. Certificate of compliance with STO Gazprom 9001-2006 № 00001 of 18.08.2008.

**Quality management system:** All company's products are certified and have been permitted for use by the Federal Service for Ecological, Technological and Atomic Supervision.

**Certificates:**

## Historical Note

FPK Kosmos-Neft-Gaz Ltd was founded in 1994 following the presidential decree N2096 of 05.12.93 "On creation of financial industrial groups" with the aim of developing a high scientific and technical potential of Voronezh region in order to meet the ever growing requirements of fuel and energy industry of Russia.

In 1994 FPK Kosmos-Neft-Gaz Ltd and Gazprom JSC signed an Agreement according to which the company was to manufacture equipment for Gazprom JSC to substitute foreign products. Today, FPK Kosmos-Neft-Gaz Ltd has two design divisions and state-of-the-art production facilities, which enables the com-

pany to manufacture a full range of equipment for safe and automated work of gas producing companies. The product range includes X-mas trees, gas dehydration systems, flare devices with automatic ignition and control systems, check and control valves, pilot devices, inlet manifold system control panels, condensate line valves control systems, gas heaters, automated process control systems, which guarantee operations to a set plan.

In 2004 Kosmost-Neft-Gaz Scientific and Technical Centre was created to develop products according to clients' requirements and own innovative programs.

## Production Facilities

FPK Kosmos-Neft-Gaz Ltd manufactures pilot, standard and small-lot products in accordance with specifications provided by Kosmos-Neft-Gaz Scientific and Technical Centre, Kosmos-Neft-Gaz Petrochemical Project or customers' designers.

The company's production facilities include a toolroom, a welding shop for various kinds of welding (argon arc-welding, electric welding, etc), mechanical assembly shops, foundry, testing facilities, laboratories and testing stands, refrigeration chambers with temperature up to -60°C, furnaces for thermal treatment with temperatures ranging from 0°C to 1500°C, painting shop. Kosmos-Neft-Gaz uses leading equipment by Russian and foreign manufacturers: turning, milling, boring, grinding and other equipment.

The company is currently reequipping its production facilities with modern high-performance machines, installing new testing stands.

FPK Kosmos-Neft-Gaz Ltd employs 147 specialists, engineers, technologists and workers. The staff are highly-trained with qualification category 6 and above. Processes and specialists have obtained NAKS certificates. A number of

specialists have undergone training in compliance with European welding association and International welding institute standards, and qualify as international welding engineers and international welding specialists.

The company has certificates of compliance with Atomic Power Engineering Regulations G-7-010-89 for typical welding processes and G-7-003-87 for welders.

Kosmos-Neft-Gaz offers installation supervision and maintenance services.



## Production Program

### • Applications

FPK Kosmos-Neft-Gaz Ltd manufactures equipment for oil and gas industry.

### • Special features and competitive advantages

FPK Kosmos-Neft-Gaz Ltd's main priority is establishing long mutually beneficial cooperation with partners from oil and gas industry. The company is continually improving its products and developing new ones utilizing leading technologies and software in order to meet the need for quality equipment for oil and gas production, transportation and processing.

### • Innovations and new developments

FPK Kosmos-Neft-Gaz Ltd is closely cooper-

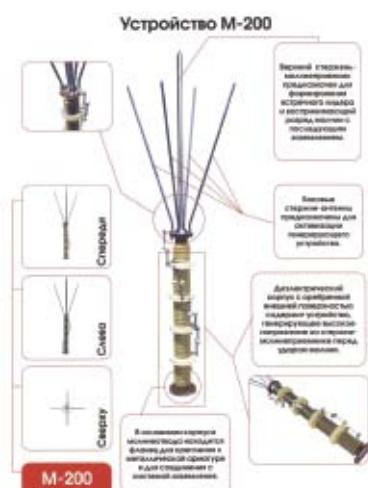
ating with Skolkovo Project managing company. Two applications are being examined by the Presidential Executive Office and Skolkovo panel of experts. These applications are connected with automatic gas-wells manifolding and manufacture of synthetic fuel oils from natural and oil gases. Apart from that, Kosmos-Neft-Gaz is participating in the development of Voronezh regional innovative system. The company has created a research and technology park providing companies with over 100 thousand square meters of production, office and warehousing facilities for their innovative activity. In 2009 over 20 companies united around FPK Kosmos-Neft-Gaz Ltd

## Product Catalogue



### Flare Units

Flare units (UFV) guarantee 100% smoke-free incineration of fuel gases and vapors in installations of oil and gas treatment and processing, when direct venting of gases and vapours is specified by the process. The unit requires minimal maintenance and is characterized by low maintenance costs.



### Lightning conductor M-200

#### *Applications:*

Lightning conductors M-200 are used to reduce accident risks at installations of oil and gas treatment and processing and to protect buildings in the event of lightning.

Lightning conductors guarantee protection by generating high-voltage pulses with amplitude up to 200 kV.

#### *Operation conditions:*

Lightning conductors are used in thunderous conditions when operating in the open air at ambient temperature ranging from 233 to 323 K (-40 to +50°C).



### Horizontal burner device UGG500

Horizontal burner devices UGG500 are used to burn off formation fluids in gas-wells and gas condensate fields with simultaneous thermal dehydration of liquid base containing formation water, condensate, rust inhibitor, drilling fluid, flushing liquid, etc.

Applications – gas fields with high concentration of hydrogen sulphide (up to 28%) in gas.



### Gas heater PG1000

Gas heaters PG1000 with intermediate heat carriers are used to heat mixtures containing hydrogen sulfide at gas-distribution stations and gas condensate fields in areas with moderate climate in order to prevent formation of hydrates during pressurization and transportation.



### **Noncontacting torque meter BIKM M-106 M for gas compressor unit GPA-Ts-6.3**

Noncontacting torque meters BIKM M-106 M are used to measure torque, rotation frequency and drive shaft power of gas compressor units GPA-Ts-6.3.

The meter has three main functions:

- measuring torque, rotation frequency and shaft power;
- displaying the results in physical units of measurement;
- transferring the results to supremal data collection systems as current signals through the interface RS-232.



### **Modular systems for hydrocarbons field facility construction**

Modular system for process piping of fields (hereinafter referred to as Module) was developed for well №28 GP-2 of Bovanenskiy oil-gas condensate field for operation in Extreme North conditions.

Well №28 GP-2 operating parameters:

- was developed to produce natural gas, containing carbon dioxide (CO<sub>2</sub>) whose volume content does not exceed 0.6%;
- working pressure of natural gas is 12 MPa;
- well production rate is up to 1500 thousand m<sup>3</sup>/24 hours;
- C5+ contents in raw natural gas ranges from 0.16 to 2.46 g/m<sup>3</sup>;
- Ambient temperature ranges from -60°C to +45°C, relative humidity – up to 87%.



### **Angular J-T valves with actuating mechanisms UDK410; UDK410-01; UDK410-02.**

Angular J-T valves with actuating mechanisms UDK410; UDK410-01; UDK410-02 are used to control gas flowrate at gas fields.

# FGUP TURBONASOS



## Company Profile

<b>Company name (short):</b>	FGUP Turbonasos
<b>CEO:</b>	Sergey G. Valyukhov
<b>Address:</b>	107 Ostrogozhskaya St., Voronezh 394052
<b>OKPO code:</b>	49756264
<b>Year of foundation:</b>	24.11.1992
<b>Workforce:</b>	393 people
<b>Telephone:</b>	+7 (473) 272-76-07 — CEO (reception)
<b>Marketing Dept:</b>	+7 (473) 272-76-08
<b>Supply Dept:</b>	+7 (473) 272-76-20
<b>HR Dept:</b>	+7 (473) 272-70-43
<b>Fax:</b>	+7 (473) 272-76-19
<b>Website:</b>	<a href="http://www.turbonasos.ru">www.turbonasos.ru</a>
<b>Specialization:</b>	design and manufacture of special equipment, turbines, pumps to handle aggressive and abrasive media, oil and oil products, hydrocyclones, pumps with hydrocyclones, multistage pumping stations, check and control valves, ejectors, etc.
<b>Sales volume in 2010:</b>	364211 thousand RUR (exclusive of VAT)
<b>Production volume in 9 months of 2011:</b>	1256600 thousand RUR
<b>Quality management system:</b>	certificate of compliance with EN ISO 9001-2008 issued by the Federal Agency for Technical Regulation and Metrology.
<b>Certificates:</b>	All company's products are certified and have been permitted for use by the Federal Service for Ecological, Technological and Atomic Supervision.

## Historical Note

- 1992 – Research-and-production complex Turbonasos is formed as a division of Design bureau of Chemical automation (Voronezh).
- 1997 – Research-and-production complex Turbonasos becomes a branch of Design bureau of Chemical automation (Voronezh).
- 1999 – A subsidiary enterprise FGUP Turbonasos is founded on the basis of research-and-production complex Turbonasos.
- 2003 – An independent Federal State Unitary Enterprise Turbonasos (FGUP Turbonasos) is founded and starts reporting to the Federal Space Agency.



## Production Facilities

The company's production facilities include Design, Production, Testing and Administration Departments connected by the production cycle.

- **Design department's main directions of activity are:**

- development of pumps and turbines;
- manufacture of power systems;
- hydraulic, gasdynamic, strength and thermal calculations.

Apart from that, FGUP production facilities include mechanical assembly shops, toolrooms and testing centers.

- **FGUP Turbonasos product range includes:**

- metal-working machinery (turning, milling, drilling, grinding boring, gear-making machines);
- welding equipment;
- hydraulic and gasdynamic testing stands for pumps and power systems;
- balancing equipment;
- painting and drying chambers;

- blasting equipment for treatment of surfaces.

The main form of production is object-closed production. The company is continually controlling the production process – from design through to assembly.

- **The main technologies:**

- the use of universal and computer-aided machines for metal cutting;
- assembly of units, pumps, systems and plants;
- hydraulic tests.



## Production Program

- **Applications**

Centrifugal pumps and power systems are used in technological processes in chemical, metallurgical, ore mining, oil and gas, and nuclear industries and power engineering.

- **Special features and competitive advantages**

The company has a lot of experience in the development and manufacture of pumps, turbines, pumping stations and power systems. This expe-

rience, combined with high industrial standards, modern technologies and know-how, enables the company to manufacture products for the toughest applications.

- **Innovations and new developments**

In 2010 a new testing stand with the power of 10 MW, modernized compressor plant, magnetic pumps assembly section and sand blasting section were put into operation.



## Product Catalogue



### Horizontal and vertical chemical pumps

- flow – from 6.3 to 1000 m<sup>3</sup>/h;
- head – from 10 to 120 m;

The pumps can be used to handle aggressive liquids (acids, alkalis, electrolytes, etc.) with density up to 1840 kg/m, temperature from 0 to +95°C, pH – 0... 14; volume content of solids (up to 1 mm in size) – up to 5%.



### Horizontal and vertical slurry pumps

- flow – from 12.5 to 2500 m<sup>3</sup>/h;
- head – from 15 to 60 m;

The pumps can be used to handle abrasive liquids (suspensions, pulp, industrial waste waters, recycled water) with density up to 2200 kg/m, temperature from 5 to +70°C, pH – 6...8; volume content of solids (up to 6 mm in size and micro-hardness up to 9 GPa) – up to 50%.



### Vertical oil pumps

- flow – from 25 to 65 m<sup>3</sup>/h;
- head – from 50 to 800 m;

The pumps can be used to handle stratum water, storm discharge, water condensate, oil-water emulsions, commercial oil, light oil products, etc. with density up to 1150 kg/m, temperature from -5 to +85°C, volume content of solids (up to 0.2 mm in size) – up to 2%.



### Main line pumps

- flow – from 1000 to 10000 m<sup>3</sup>/h;
- head – from 90 to 250 m;

The pumps can be used at oil pumping stations of main oil pipelines.



### Suspensions dispenser systems

Suspension dispenser systems are used for hydrocyclone separation of ore suspensions at mining and refining plants and metallurgical companies with the aim of reaching a specified volume content of solids using methods of centrifugal separation in hydrocyclones. The system performance ranges from 40 m<sup>3</sup>/h to 2500 m<sup>3</sup>/h.



### Automated multi-stage pumping stations

The pumping stations are used to handle media containing oil, gas, water and solids.

- Pumping station capacity, m<sup>3</sup>/h – from 60 to 3000 and over

- Intake pressure, MPa – from 0.05 to 2.0

- Gas content – up to 100%

- Differential head I – up to 2.0 MPa

- II – up to 4.0 MPa

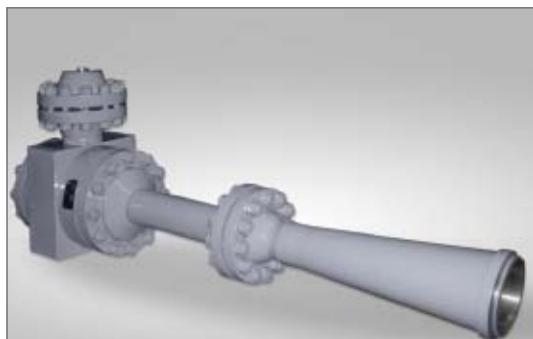
- III – 4.0-7.0 MPa



### Turbopumps for feeding water to steam heaters

- flow – 100 m<sup>3</sup>/h;
- head – 500 m;
- inlet vapour pressure – 3.6 + 0.1 MPa;
- outlet vapour pressure – 1.4 + 0.07 MPa

Turbopumps serve as vapour turbine drives and are used to feed water to steam heaters in oil and gas processing, chemical, petrochemical, metallurgical and other industries.



### Ejectors

Ejectors are used to increase gas production from wells with low pressure; for disposal of flush gases in oil processing industry; injection of gas to underground storage tanks; pumping gases from main pipelines.



# BORMASH LTD

**Company name (short):** BorMash Ltd

**CEO:** Sergey V. Sinyukov

**Address:** 59 Proletarskaya St., Peski settlement, Povorinskiy district, Voronezh region 397340

**Year of foundation:** 14.12.1999

**Workforce:** 393 people

**Tel./fax:** +7 (47376) 3-20-01, 4-36-56

**Website:** [www.bormash.ru](http://www.bormash.ru)

**Production volume in 9 months of 2011:** 492167 thousand RUR

**Specialization:**

Machine building

**Special features and advantages over rivals:**

High quality and customer focus

**Product range:**

The company develops and manufactures a wide range of heat-exchange products for cooling, vaporization and condensation of liquids, vapours, gases and their mixtures. The product range includes:

- Shell-and-tube heat exchangers with floating knobs and U-type tubes, vertical and horizontal, and their combinations;
- Demountable heat exchangers of annular tube type: single-stream, multistream and their combinations;
- Shell-and-tube condensers;
- High speed water-to-water and vapour-to-water heat exchangers;
- Capacitive equipment;
- Vaporizers with vapour space;
- Aftercoolers;
- Zigzag air-cooler units 1AVZ (1AVZ with hot air recirculation);
- Air-cooler units 1AVG, 2AVG (2AVG-R with hot air recirculation), modular block units AVG-BM, 2AVZD (2AVZD with hot air recirculation), low-stream units AVM, AVG-BMR with hot air recirculation.



**CHEMICAL INDUSTRY**

# ABC FARBEN CJSC

## Company Profile

<b>Company name (short):</b>	ABC Farben CJSC
<b>CEO:</b>	Andrey A. Afanasyev
<b>Address:</b>	84 Lomonosova St., Bugayevka settlement, Olkhovatskiy district, Voronezh region
<b>OKPO code:</b>	47800877
<b>Year of foundation:</b>	01.04.1995
<b>Workforce:</b>	351 people
<b>Telephone:</b>	+7 (47395) 45-000 — reception
<b>Call-centre:</b>	+7 (47395) 4-00-49, 4-49-34
<b>Fax:</b>	+7 (47395) 45-000
<b>Website:</b>	<a href="http://www.abcfarben.ru">www.abcfarben.ru</a>
<b>Specialization:</b>	Manufacture and distribution of household goods: paint-and-varnish materials, tools, ironmongery, electric lamps under house brand names.
<b>Certificates:</b>	All company's products have all obligatory and other certificates, quality certificates, safety and health certificates.

## Historical Note

- On 1 April 1995 a shop for oil paints and enamel PF-115 production was commissioned in Olkhovatka settlement, Voronezh region.
- In 2001 ABC Farben Company started manufacturing water-dispersion paints and PVA glue.
- In 2001 the company started selling Olecolor products.
- In 2004 the company set up a Trade House in Voronezh. The Trade House employees worked out and implemented a new promotion and distribution system.
- In 2006 to meet the ever growing demand for premium class paint-and-varnish materials the company introduced a new trademark – Ticiana.
- Since 2009 the company has been selling tools for repair and construction work under brand names UpravDom and Petrovich, as well as gardening tools under brand names Darko and Quadra.
- In 2009 the company started implementing the SAP ERP software – the world leader in company management software. The process was divided

into several stages and finished in 2011. The implementation of the software will enable the company to optimize planning, quality management, distribution and other business processes inside the company, thus increasing its efficiency.

- In 2011 the company expanded its product range and introduced a new line of electric lamps under brand names UpravDom and Karat, as well as a new line of paints under brand name Farbitex.

Today, ABC Farben is a leading company, the 5th largest manufacturer of paint-and-varnish materials in Russia, proud of its environmentally friendly products, cutting-edge technology and a wide distribution network.



## Production Facilities

The project of the plant was worked out by Sinteznauchkauchuk scientific research institute and foreign equipment manufacturers Netzsch, De Vree and ProFarb.

Different production processes are performed in different shops.

Shop №1 manufactures varnishes and painting oils. Shop №2 houses dispersing equipment for the production of white primers A, B, and C for alkyd enamels, base coats and oil paints. In shop №3 the bases are mixed with colorants and colour paints and enamels are produced. Such step-by-step technology is used at western companies and was adapted by ABC Farben to increase the processes flexibility, speed up order handling, meet the customers' demand and produce high quality products.

Each shop has a laboratory responsible for incoming inspection of raw materials and product quality control, the central laboratory is responsible for overall quality control at the company.

The central laboratory is equipped with modern equipment and capable of developing its own formulations. The company employs experienced technologists, experts in paint-and-varnish manufacture. The company invited the best specialist

from different parts of the country.

The company's technologists and other specialists have undergone training in leading training centres in Russia, Finland and Germany.

### **The plant's annual capacity:**

- Paint MA-15 – 14000 tonnes
- Enamels – 40000 tonnes.
- Water-dispersion paints – 14000 tonnes.
- Varnishes and paint oils:
  - Varnish – 21000 tonnes
  - Paint oil – 7200 tonnes.



## Production Program

### **• Applications**

Each type of paint-and-varnish products is used for different purposes, however, the two main functions of all paint-and-varnish products are: protection of surfaces and buildings from environmental factors and decorative effect.

Universal and professional garden tools are used to work in the house or garden and facilitate the use of paint and varnishes. No construction or renovation work could do without them, the tools are used by locksmiths, electricians, plumbers, carpenters and others.

### **• Special features and competitive advantages**

- High-technology automated production facilities equipped with cutting-edge machines by Netzsch (Germany), De Vree (Belgium) and other world leaders;

- In-house half-finished products production, warehouses and laboratories, which allows for continuous quality monitoring;

- Use of local raw materials (availability of raw materials at reasonable prices: oils, limestone, etc);

- Wide distribution network and logistic centres in different regions of Russia.

### **• Innovations and new developments**

The company utilizes cutting-edge technology and latest innovative developments in its production activity.

When working out new formulations, the company involves, apart from its own laboratory specialists and technologists, experienced construction specialists and professional finishers. It enables the company to create a high quality product with excellent esthetic and protective properties, which is easy to apply and which the company improves until it becomes the best on the market.

When manufacturing tools, the company performs quality control at every stage of the production process. The company engineers carry out a number of tests in order to improve the quality and technical parameters of the products. The product range of tools is constantly expanding, many of the products are unique and have no analogues.

## Product Catalogue



### Ticiana TM

Ticiana TM range includes a wide selection of water-dispersion decorative coats, decorative-protective coats for wood and metal, color paint for a variety of applications, all complying with professionals' requirements. **The products under Ticiana trademark are:**

- primers;
- plasters, acrylic paints;
- acrylic and alkyd enamels;
- varnishes, decorative wood protection;
- colorants;
- decorative coats.



### Olecolor TM

Olecolor TM has been popular with customers for over 10 years. It includes high quality paint-and-varnish materials with excellent application properties, in convenient packages. Olecolor products are well presented throughout Russia. **The products under Olecolor trademark are:**

- primers, fillers, acrylic plasters;
- acrylic paints;
- alkyd enamels PF-11, PF-266;
- nitrocellulose enamels and varnishes;
- glues;
- paint oils.



### Farbitex TM

Farbitex TM is an optimized economy-class selection of paint-and-varnish materials, which includes the following products:

- primers, fillers, acrylic paints;
- alkyd enamels;
- glues;
- paint oils.

### ПАМЯТНИКИ АРХИТЕКТУРЫ



### Pamyatniki Arkhitektury TM

Pamyatniki Arkhitektury TM range includes oil paints of various colours and is an environmentally friendly product based on a natural component (plant oil). An extensive selection of colours and high quality of the product have made it extremely popular with customers all over Russia. The products are in high demand among enterprises – educational, medical, catering enterprises, communal services.



### UpravDom TM

UpravDom TM range includes a wide selection of high quality hand tools, electrical lamps and equipment, for professionals and laymen.

- painter's hand tools;
- carpenter bench tools;
- metering tools;
- wrenches;
- consumables;
- spreading material;
- tapes;
- protection tools.



### Petrovich TM

Petrovich TM is an optimized selection of tools for household use. It was determined by the customers' demand and includes the most popular tools and consumables:

- painter's hand tools;
- carpenter bench tools;
- wrenches;
- consumables;
- metering tools.



### Darko TM

Darko TM range offers a wide selection of garden tools for household use. They are characterized by consistent quality and high demand. This range is constantly expanding and includes:

- watering tools;
- garden tool sets;
- choppers and cutters;
- scythes and spades;
- wheelbarrows;
- benches.



### Quadra TM

Quadra TM is a series of locks for household use: garage locks, padlocks, door locks. All the products are in high demand. Quadra TM includes padlocks and deadlock of various materials which guarantee protection against sawing, breaking and corrosion.

# VORONEZH SINTEZKAUCHUK JSC



## Company Profile

<b>Company name (short):</b>	Voronezh Sintezkauchuk JSC
<b>CEO:</b>	Victor A. Kuklinov
<b>Address:</b>	2 Leninskiy av., Voronezh 394014 Russia
<b>OKPO code:</b>	00148889
<b>Year of foundation:</b>	19.10.1932
<b>Workforce:</b>	2360 people
<b>Telephone:</b>	+7 (473) 220-68-15, 220-68-68 — CEO (reception)
<b>Marketing Dept:</b>	+7 (473) 220-65-30, 220-66-64, 220-67-40
<b>Supply Dept:</b>	+7 (473) 220-65-50, 220-66-50
<b>HR Dept:</b>	+7 (473) 220-65-48, 220-68-48, 220-66-48
<b>Fax:</b>	+7 (473) 220-68-69
<b>Website:</b>	<a href="http://www.sibur.ru/vsk">www.sibur.ru/vsk</a>
<b>Specialization:</b>	Production of polybutadiene rubber of mortar polymerization, butadiene-styrene and butadiene-nitrile rubbers of emulsion polymerization, commercial latexes and thermoelastolayers.
<b>Sales volume in 2010:</b>	5374938 thousand RUR (exclusive of VAT)
<b>Production volume in 9 months of 2011:</b>	4633750 thousand RUR
<b>Quality management system:</b>	Quality management system to MS ISO 9001:2008, certificate № 44 100 077587 effective to 28.11.2013 (TUV NORD CERT GmbH certification authority, Essen, Germany)
<b>Corporate system of ecological management to ISO 14001:</b>	2007 (Veritas Certification Bureau)
<b>Certificates:</b>	The company's products are not subject to obligatory certification. All products have safety certificates.

## Historical Note

The history of Voronezh Sintezkauchuk JSC, which is now part of SIBUR Holding, dates back to the beginning of the 30s years of last century.

- In October 1932 a new company called Voronezh Synthetic Rubber Plant of the Order of the Red Banner of Labour n.a. S. M. Kirov (which was later to become Voronezh Sintezkauchuk) produced the first tonne of synthetic rubber. The plant's production process was unique and had no analogues in the world.
- In September 1949 the plant became the first company in Russia to produce styrene. A few

months later the production of butadiene-styrene rubbers was launched.

- In 1959 the company was the first one to open a commercial latex production shop.
- In 1967 the company produced the first polybutadiene rubber briquet.
- In 1991 the plant was the first company in Russia to start producing thermoelastolayers.
- In 2004 the company started producing polybutadiene-styrene rubber of mortar polymerization SSBR under the Green Tyre program.

## Production Facilities

The company's production facilities include facilities for the following processes: production of polybutadiene rubbers of mortar polymerization (SKD), butadiene-styrene and butadiene-nitrile rubbers of emulsion polymerization (SKS), and commercial latexes.

### Rubbers of mortar polymerization

In April 2010 the company completed the first stage of an investment project called The conversion of polybutadiene rubbers production to neodymium catalyst system, which allowed for independent production of three types of rubbers of mortar polymerization: SKD, SKD-ND, DSSK. The annual production capacity of SKD-2 rubber is 91 thousand tonnes, SKD-ND – 30 thousand tonnes, DSSK – 40 thousand tonnes. The annual production capacity of thermoelastolayers is 32 thousand tonnes.

In order to meet the ever growing demand for thermoelastolayers, the company has launched an innovation project which aims at increasing the production capacity of thermoelastolayers up to 50 thousand tonnes a year. After the project is completed, the company will be able to produce a significantly greater amount of thermoelastolayers, improve the quality of

the product, and make extra profit.

### Rubbers of emulsion polymerization

The production capacity of different types of rubbers of emulsion polymerization is 102 thousand tonnes a year. The annual production capacity of butadiene-styrene rubber of emulsion polymerization is 6 thousand tonnes.

### Commercial latexes

The production capacity of commercial latexes is 19.5 thousand tonnes a year. In order to meet the ever growing demand for commercial latexes, the company has launched an innovation project which aims at increasing the production capacity of commercial latexes up to 25 thousand tonnes a year.



## Production Program

### • Applications

Voronezhhsintezkauchuk JSC's main production activity is production of synthetic rubbers and latexes. The company's main products are polybutadiene rubbers of mortar polymerization, butadiene-styrene and butadiene-nitrile rubbers of emulsion polymerization, commercial latexes and thermoelastolayers.

The company's product range includes over 30 different types of products, some of which are unique and have no analogues in Russia. About 50% of the company's produce is exported to Spain, Italy, Germany, Austria, Finland, China, Taiwan, Indonesia, the USA and other countries in Europe, Asia and America. Among the plant's customers are such major companies as Michelin, Bridgestone, Nokian Tyres, Continental. Synthetic rubbers are widely used in the production of rubber for automotive, aviation and bicycle tyres, etc., as well as for wire insulation, production of footwear and rubber impregnated clothes and medical tools.

Synthetic latexes are used in the production of latex-based paints, impregnated bases of carpet-fabric coatings and other areas of hermetization and impregnation.

Thermoelastolayers combine the properties of

rubbers and thermolayers and are used in the manufacture of rail pads, bearings, couplings, etc.

### • Special features and competitive advantages

Voronezhhsintezkauchuk JSC is:

- one of the largest manufacturers in Russia (20% of the Russian rubber market) with an extensive product range;

- the only manufacturer of thermoelastolayers in Russia;

- the only producer of commercial latexes in Russia.

### • Innovations and new developments

**Building new thermoelastolayers production facilities with the capacity of 75000 tonnes:** The company has a license agreement for facilities with the capacity of 50 thousand tonnes a year, and has commissioned a new project to an engineering company, the project should be completed by 2012.

**Air separation shop outsourcing:** The company is carrying out project work and preparing documents for approval by relevant authorities. The partner of Voronezhhsintezkauchuk will be Air Products, American world leader in industrial gases supply.

**Building new commercial latexes production facilities with the capacity of 25000 tonnes:** The company is forming a joint enterprise with a foreign partner.

## Product Catalogue



**Production of solution-polymerized polybutadiene rubber using a titanium catalyst system (SKD).**

Started in 1967. Modernized in 2006 (automation of production process). Products: SKD for tyres. Technology: continuous polymerization.

**Features:**

- SKD is a continuous process with a Ti-catalyst;
- Solvent – toluene-nefras in the ratio 85/15;
- 1.4 cis- content – 88-92%;
- Polymerization process is accompanied with side reactions of butadiene oligomers formation, which can be disposed of by catalytically assisted combustion.



**Production of solution-polymerized polybutadiene rubber using a neodymium catalyst system (SKD-ND).**

Started in 2005. Modernized in 2008 (separation of SKD-ND and DSSK production processes). Products: SKD-ND for tyres with improved properties. Technology: continuous polymerization.

**Features:**

- SKD-ND is a continuous process with a Nd-catalyst;
- Solvent – Nefras 65-75;
- 1.4 cis- content – 96-98%;
- No side reactions of oligomers formation.



**Production of emulsion-polymerized butadiene-styrene rubbers (SKS).**

Started in 1949. Modernized in 2005 (automation of production process). Products: SKS for tyres. Technology: continuous polymerization.

**Features:**

- SKS is a continuous process of emulsion polymerization;
- Carries in aqueous phase;
- Cold polymerization;
- Initiating agent – hydroperoxides.



**Production of emulsion-polymerized butadiene-nitrile rubbers (Nitrilast).**

Started in 1989. Modernized in 2005 (automation of production process). Products: Special Nitrilast for tyres. Technology: continuous polymerization.

**Features:**

- Nitrilast is a continuous process of emulsion polymerization;
- Carries in aqueous phase;
- Cold polymerization;
- Initiating agent – hydroperoxides.

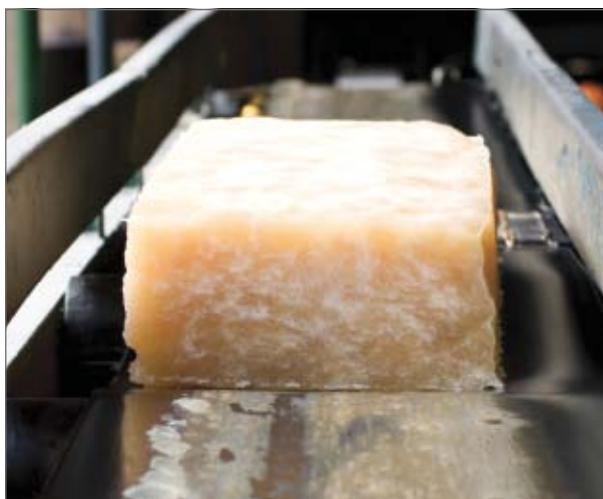


### Production of butadiene-styrene thermoplastic layers (TEP)

Started in 1991. Modernized in 2008 (increasing the capacity up to 35 thousand tonnes). Products: TEP for rolled roofing material and wearing carpets. Technology: batch polymerization.

#### Features:

- TEP is a batch process with LiBu-catalyst;
- Solvent – Hexanethylene-Nefras in the ratio 75/25;
- Wide range of types:  
Linear (with flow melt index from 0 to 14);  
Radial (with flow melt index from 0 to 14);  
Oil-extended.



### Production of solution-polymerized butadiene-styrene rubber (DSSK).

Started in 2005. Modernized in 2008 (separation of SKD-ND and DSSK production processes).

Products: DSSK for tyres with improved properties.

Technology: continuous polymerization.

#### Features:

- DSSK is a continuous process with a LiBu-catalyst;
- Solvent – Nefras 65-75;
- Working temperature from -40 to +400C;
- Wide range of types according to styrene and vinyl content, molecular weight, extension oils.



### Production of emulsion-polymerized carboxylated butadiene-styrene latexes (Latexes).

Started in 1959.

Products: Latexes for tyres, carpets, varnishes, paints and construction materials.

Technology: continuous and batch polymerization

#### Features:

- Latexes is a continuous and batch process of emulsion polymerization;
- Carries in aqueous phase;
- Concentration – 50%;
- Initiating agents – hydroperoxides and persulfates.

# VORONEZH TYRE PLANT



## Company Profile

<b>Company name (short):</b>	VShZ CJSC
<b>CEO:</b>	Valeriy Y. Samoylov
<b>Address:</b>	41 Rostovskaya St., Voronezh 394074
<b>OKPO code:</b>	94019843
<b>Year of foundation:</b>	1950
<b>Workforce:</b>	1230 people
<b>Telephone:</b>	+7 (473) 244-50-55 — CEO (reception)
<b>Finance Director:</b>	+7 (473) 244-53-96
<b>Technical Director:</b>	+7 (473) 244-50-12
<b>HR Dept:</b>	+7 (473) 244-59-10, 244-51-17
<b>Fax:</b>	+7 (473) 237-44-56
<b>Specialization:</b>	Production of brand tyres for passenger vehicles and light trucks.
<b>Sales volume in 2010:</b>	1717753.5 thousand RUR (exclusive of VAT)
<b>Production volume in 9 months of 2011:</b>	1911851 thousand RUR

**Certificates:**

The quality of the company's products is acknowledged by certificates of compliance with Russian standards and international regulations UNECE №30, №54 and №117. The quality management system complies with ISO 9001:2008, certificate № 318141QM08 issued by DQS GmbH certification authority on 20.06.2011, which has been extended annually since 2005.

## Historical Note

- Voronezh Tyre Plant was founded in 1950.
- 1950 – 1985 – the plant developed rapidly, in 1966 it was awarded the Order of Lenin. It was one of the leading companies in Russia and in the world.
- 1960 – the plant started manufacturing heavy-duty tyres.
- 1970 – the company designed and launched a giant tyre, size 24.00-49.
- 1963 – the plant was the first company in the world to develop and manufacture solid and silk sport bicycle tyres.
- 1965 – the plant was the first company in Russia to manufacture radial truck tyres.
- 1968 – the plant started manufacturing passenger vehicle tyres and became the only Russian company to produce tyres for Cart racing cars.
- 1969 – the plant became the largest manufacturer of road bicycle tyres in Europe (8 mln tyres a year).
- 2003 – 2004 – the company started major innovation activity, modernization of production facilities and equipping them with high-technology machines by leading manufacturers. Two shops for

the manufacture of brand tyres for passenger vehicles and light trucks were set up.

- 2004 – the production capacity of the plant was 2.2 million tyres a year.

• 2007 – the company carried out a joint project Voronezh -2 with VredesteinBanden company (Netherlands), which enabled the company to increase its production capacity to 2.47 million tyres a year.

In June 2010 SIBUR Holding became the principal creditor of Amtel Group companies and since then has been providing financial support to Voronezh Tyre Plant.



## Production Facilities

In the past ten years the company has been developing rapidly, modernizing production facilities, optimizing the product range, implementing cutting-edge technologies in accordance with global trends in tyre manufacture.

Production facilities utilize new technologies and are equipped with machines by world leading manufacturers: Netherlands – VMI, Germany – BERSTORFF, TROESTER, HOFMANN, HARBURG FREUDENBERGER, FISCHER, Italy – COMERIO ERCOLE. Passenger vehicle tyres produced by the plant comply with all technical, technological, safety and efficiency requirements. The company's production process is characterized by high level of automation, high precision and minimal manual labour, which enables the

plant to manufacture high quality tyres.

Voronezh Tyre Plant is an integrated company, whose production facilities include: stock-preparation, calendar, assembly, curing shops, testing stands and laboratories. Auxiliary services, such as mechanical-repair department, electrical department, operation automation shop, are responsible for equipment maintenance and guarantee trouble-free work of production facilities.

The company is well staffed with engineering specialists and has a significant growth potential.

The company is situated within Voronezh Industrial Estate, occupies an area of over 50 hectares and has a house track linking the company to major railway lines.



## Production Program

The company's product range includes over 50 tyre types with 13, 14, 15-inch diameters at rim seat, low-profile tyres, winter tyres, summer tyres, standard and high-speed tyres (Q, T and H speed categories) for passenger vehicles, SUVs and light trucks by Russian and foreign manufacturers.

A wide range of products, original design, high quality materials allow the company to satisfy and exceed customer expectations.

Voronezh tyres are produced for safe and trouble-free driving, characterized by high performance, excellent treadwear ratings and improve the vehicle's fuel efficiency, steering qualities,

composure, noise insulation, road holding capacity. The tyres have unique tread patterns, which allows for all-terrain driving.

All tyres comply with Russian and international standards and technical regulations concerning safety of wheeled vehicles.

The excellent properties of the products have been acknowledged with numerous awards and diplomas of regional and industrial contests, the company gets positive customer feedback from Russia, CIS and other countries (Lithuania, the Ukraine, Belarus, Cuba, etc).

Voronezh tyres guarantee safe, trouble-free and comfortable driving.

## Product Catalogue



### AMTEL Planet DC.

- 175/70R13 105B



### AMTEL NordMaster ST.

- 175/70R13 224B, 224B – 1
- 175/65R14 228B
- 185/65R14 220B
- 195/65R15 221B
- 205/65R15
- 223B, 223B – 1
- 205/70R15 222B



### AMTEL Planet.

- 165/70R13 NV-111
- 175/70R13 NV-112
- 175/65R14 NV-113
- 185/65R14 NV-114
- 195/65R15 NV-115
- 205/65R15 NV-116
- 205/70R15 NV-117



### AMTEL NordMaster CL.

- 185/70R14 227B
- 185/60R14 226B
- 185/65R15 229B
- 195/60R15 232B
- 195/65R15 231B
- 205/60R15 235B
- 205/65R15 233B



**AMTEL Planet T301.**

- 195/65R15 K-310
- 205/65R15 K-311
- 195/50R15 K-313



**AMTEL NordMaster ST-310.**

- 175/65R14 K-263



**AMTEL NordMaster2.**

- 165/70R13 M-508
- 155/70R13 M-513
- 175/70R13 M-501
- 175/65R14 M-505
- 185/65R14 M-503
- 195/65R14 M-510
- 195/70R14 M-517
- 185/70R14 M-507
- 175/80R14 M-512
- 175/70R14 M-509
- 185/65R15 M-511
- 195/65R15 M-502
- 205/65R15 M-504
- 195/60R15 M-516
- 195/55R15 M-515
- 205/70R15 M-514



**AMTEL CARGO LT.**

- 185R14C 301B

# DELTA-PACK LTD



## Company Profile

<b>Company name (short):</b>	Delta-Pack Ltd
<b>CEO:</b>	Victor T. Doroshevskiy
<b>Address:</b>	4 Khimzavodskaya St., Rossosh, Voronezh region 396657
<b>OKPO code:</b>	49757789
<b>Year of foundation:</b>	26.05.1999
<b>Workforce:</b>	256 people
<b>Telephone:</b>	+7 (47396) 5-26-40 — CEO (reception)
<b>Commercial Dept:</b>	+7 (47396) 2-37-80, 2-14-14
<b>Fax:</b>	+7 (47396) 5-26-40
<b>Website:</b>	<a href="http://www.dpack.ru">www.dpack.ru</a>
<b>Specialization:</b>	Production of polymer packaging films and high-quality flexoprinting for food and other industries, production of single-layer and multilayer films by extrusion, polymer pipes, bags.
<b>Sales volume in 2010:</b>	313059 thousand RUR (exclusive of VAT)
<b>Certificates:</b>	The company's products have certificates of compliance with the State Standard (GOST) and sanitary and epidemiological regulations.

## Historical Note

Delta-Pack Ltd was founded on 26 May 1999. It sprang out of Delta-Plus Ltd (100% founder of Delta-Pack Ltd) which had started manufacturing polyethylene film in 1996. Rapidly increasing demand and the need to expand product range to meet the market need resulted in the formation of a new independent enterprise.

Packaging materials produced by the company are in high demand not only in Voronezh region but all over the country. Delta-Pack Ltd supplies its products to a wide range of companies in Smolensk, Vladimir, Tula, Saratov, Lipetsk, Tambov, Belgorod, Volgograd, Rostov, Krasnodar and other regions.

The company specializes in the production of polymer films and high-quality flexoprinting for

food and other industries. The film has excellent barrier properties which guarantee hermeticity and, consequently, longer storage without the loss of taste.



## Production Facilities

The company's production facilities include modern high-quality extrusion, printing, lamination and cutting equipment by leading manufacturers such as Comexi, Soma, Nordmeccanika, Bimac (Italy, Spain, Germany, Czech Republic).

Delta-Pack's production facilities include:

- Flexible packaging production line;
- Liner bags production line;
- Pipes production line;
- Five extrusion line, including three lines for 3-layer film extrusion;
- Bags production line.



The company has a well-equipped in-house design studio. Delta-Pack Ltd has implemented a workflow system, which enables the company to promptly process documentation. The company has a car fleet used for products delivery.

Total production capacity of the company: extrusion of film – 300 tonnes a month, production of multilayer packaging material with flexoprinting – 450 tonnes a month, pipes production – 50 tonnes a month.

Additional production capacity: production of multilayer packaging material with flexoprinting – 250 tonnes a month.



## Production Program

### • Applications

Today, Delta-Pack packaging is used to package a significant proportion of Russian goods. These are confectionary goods, groceries, snacks, fat-and-oil products, frozen foods, juices and beverages, industrial products (household cleaning goods, fertilizers, etc). The film has excellent barrier properties which guarantee hermeticity and, consequently, longer storage without the loss of taste.

### • Special features and competitive advantages

The company's production facilities include modern high-quality extrusion, printing, lamination and cutting equipment by leading manufac-

turers such as Comexi, Soma, Nordmeccanika, Bimac (Italy, Spain, Germany, Czech Republic). The company utilizes the latest technologies, and offers flexible delivery options, prompt handling of orders, twenty-four-hour dispatch, free delivery to a number of regions, excellent service. Equipment setup is available on demand. The quality of products is acknowledged through positive customer feedback and ever growing demand.

### • Innovations and new developments

The company's production process is based on latest developments, new technologies and formations. Delta-Pack Ltd has implemented a new colour separation technology which aims at preventing forgery.

## Product Catalogue



### Flexible packaging

- Single-layer;
- double-layer (duplex): BOPP transp / BOPP met, BOPP transp / BOPP white; BOPP transp / BOPP transp; BOPP met/ BOPP matt; BOPP transp / BOPP purple; BOPP transp / CPP transp; PET transp / PE white;
- three-layer (triplex): PET transp / Al / PE white; BOPP transp / BOPP purple / BOPP met; Polyphanum, PVC films (films with twist effect);

### Dimensions:

Thickness: from 35 to 150 mcm;

Width: from 4 to 1170 cm;

Slip ratio: from 0.4 to 0.7

Laminated film strength: Longitudal 130, Transverse 150;

Single layer film strength: Longitudal 80, Transverse 130.



### Shrink wrap

- 20 mcm thick, 200 to 1900 mm wide. The film is supplied on cardboard and polyethylene rolls with internal diameter 76 x 10 mcm, cut along the film edges.
- Shrink hose 50 – 350 mcm thick and 250 – 4800 mm wide , also with seaming for pallet packaging. Raw material to State standard (GOST) 16337-77;
- Packaging bags, liner bags with thickness of 30 mcm and over;
- Shrink sheets, any dimensions.



### Packaging for dairy products

- High strength and strong seams (withstands pressure up to 150 kg);
- All layers are PE-based, but each one has individual formation and performs a particular function:

Outer layer – ensures protection from light and guarantees good slip;

Intermediate layer – provides additional strength, improves barrier properties;

Inner layer – improves sanitary and hygienic properties, provides for heat sealing.



### Film for general purposes

#### • Film for construction purposes

- Transparent, available in a range of widths and thicknesses.
- Black with conditioner and slip-enhancing additives. Serves as covers for construction sites, betons, for pipeline wrapping, waterproofing and

vapor-proofing (linear polyethylene added).

- 1500 x 100 mcm hose;
- 1500 x 150 mcm hose;
- 1500 x 200 mcm hose;
- 1800 x 200 mcm hose;

#### • Film for greenhouses

Transparent, used to cover greenhouses.

- 1500 x 100 mcm hose;
- 1500 x 150 mcm hose;
- 1500 x 200 mcm hose;
- 1800 x 200 mcm hose, etc;

#### • Film for agricultural purposes

Black with conditioner and slip-enhancing additives. Used to cover haystacks, silage, crops, construction sites, for pipeline wrapping, protection of different objects from environmental effects.

- 1900 x 150 mcm hose;
- 1900 x 200 mcm hose.



### Pipes

#### *Applications:*

- In construction – as feed or discharge pipes;
- In water supply – for water supply and drainage;
- In electrical engineering and communication – as protective pipes for cables.

Nº, n/n	Outside diameter, mm	Pipe wall thickness, mm	SDR	Pressure, kg/cm <sup>2</sup>	Weight 1m/ kg
1	25	2,0	13,6	6 atm.	0,146
2	32	2,4	13,6	6 atm.	0,226
3	40	3,0	13,6	6 atm.	0,364
4	50	3,7	13,6	6 atm.	0,534
5	63	4,7	13,6	6 atm.	0,885
6	90	6,7	13,6	6 atm.	1,72
7	110	8,1	13,6	6 atm.	2,54



### Bags

- With flap, loop handles, die cut handles, reinforced handles:

Width (min – max): 200 mm – 600 mm;

Height (min – max): 250 mm – 760 mm;

Film thickness: 40 – 90 mcm.

# MINUDOBRENIYA JSC



## Company Profile

<b>Company name (short):</b>	Minudobreniya JSC
<b>CEO:</b>	Dmitriy V. Pavlov
<b>Address:</b>	2 Khimzavodskaya St., Rossosh, Voronezh region 396657
<b>OKPO code:</b>	00206286
<b>Year of foundation:</b>	1979
<b>Workforce:</b>	4144 people
<b>Telephone:</b>	+7 (47396) 2-17-30 — CEO (reception)
<b>Commercial Dept:</b>	+7 (47396) 2-35-76
<b>Fax:</b>	+7 (47396) 2-78-90, 2-42-00
<b>Website:</b>	<a href="http://www.minudo.ru">www.minudo.ru</a>
<b>Production volume in 9 months of 2011:</b>	17863951 thousand RUR
<b>Specialization:</b>	Production of mineral fertilizers: Ammonia; Ammonium nitrate; NPK (nitroammophoska) – 26 types; Aqueous technical ammonia; Calcium carbonate. Fertilizers are supplied in 50 kg bags and big bags and delivered by rail or truck.
<b>Quality management system:</b>	ISO 9001:2008, ISO 14001:2004.
<b>Certificates:</b>	all company's products are certified.

## Historical Note

- 1974 – the construction of Pridonskoy chemical plant begins.
- 1979 – the first product line of weak nitric acid and ammonium nitrate is put into operation.
- 1981 – the company uses large-capacity ammonia aggregate to produce the first products.
- 1992 – Minudobreniya JSC is registered.
- 2005 – Norwegian company YARA International and Minudobreniya JSC sign a partnership agreement with the aim of implementing leading European technologies to increase production volumes, launch new types of fertilizers, and improve their qualities.
- 2009 – Calcium carbonate dehydration system with the capacity of 200 thousand tonnes a year is put into operation.
- 2009 – The company undergoes recertification audit of its quality management system within GOST and SGS systems to confirm its compliance with GOST R ISO 9001:2008 and ISO 9001:2008.

## Production Facilities

Production process	Annual Capacity, tonnes	Capacity Utilization, %
Liquid technical ammonia	1000000	105.7
NPK	1100000	101.5
Ammonium nitrate	520000	101.0
Non-concentrated nitric acid	760000	101.1



## Production Program

### • Applications

Minudobreniya JSC uses its 30 years of experience to offer solutions for enhancing soil fertility and high-yield harvest. Due to the balanced combination of nutrients in accordance with the customers' requirements, Minudobreniya JSC's fertilizers guarantee increased harvest and high quality. The use of fertilizers in autumn or in spring during preplanting cultivation helps to increase the harvest of grain and industrial crops.

### • Special features and competitive advantages

The company has tested and registered new brands of complex fertilizers with increased content of nitrogen and microelements. Various combinations of nutrients in different NPK brands allow the customer to choose the optimum solution for a particular type of soil. NPK's main advantage over fertilizer mixtures is that the balanced combination of nutrients allows for long-term storage without the loss of useful properties.

### Minudobreniya JSC guarantees:

1. Technological advantages: all products com-

ply with the State Standard (GOST) and Technical Conditions (TU).

### 2. Delivery across Russia and abroad:

- Voronezh region, Republic of Mordovia, Krasnodar region, Rostov region, Tambov region, Stavropol region, Lipetsk region, Belgorod region, Kursk region, Republic of Tatarstan, Orlov region, Volgograd region, Penza region, Astrakhan region.

- USA, Azerbaijan, Belgium, Brazil, India, China, Lebanon, Lithuania, Morocco, Mexico, Moldova, Netherlands, Norway, Poland, Serbia, Syria, Thailand, Tunisia, Turkey, Ukraine, Finland, France.

### • Innovations and new developments

Since May 2010 the company has been producing two new brands of NPK high in potassium content – N13P13K24 and N15P15K20. These new brands, together with a wide range of nitrogenous fertilizers, allow the company to offer optimum solutions for any clients' need and increase the harvest of grain, industrial and forage crops.

## Product Catalogue

### Liquid technical ammonia

GOST 6221-90

Grade A – industrial, grade B – agricultural.

Used for the production of nitric acid, urea, ammonium nitrate, compound mineral fertilizers, as fertilizers, in refrigerators. Delivered in rail tankers, tank trucks and steel drums.

### Ammonia nitrate

GOST 2-85

Grade B. Nitrogen content – 34.4%

Used as a spring-applied fertilizer or for topdressing. Especially effective when applied to grain crops in early spring. One of the most effective compound fertilizers. Does not cake, 100% friable. Universal fertilizer, can be applied to all kinds of crops and all types of soils. Delivered in rail tankers or tank trucks, in 50 kg bags or big bags.

### Nitroammophoska (azophoska)

TU 113-03-00206-486-14-00

Grades: 1: 1: 1, 2:1:1, 1:1:0, 2:1:0, 2:1:2, 1.9:1:2.1, 21-4-10, 20-10-10, 21-8-11, 24-6-12, 27-6-6, 15-15-15, 25-5-5, 27-5-5+S, 27-6-6+S, 21-20-0+S, 20-20-0, 21-6-11+S, 20-10-10+S, 22-22-0, 20-10-5, 20-20-

0+S, 23-10-5+S, 26-5-5, 13-13-24, 15-15-20.

Compound nitrogen-phosphorus-potassium fertilizer. Used for bulk, preplanting and local application and topdressing.

High concentration of nutrients allows for lower delivery, storage and application costs.

Can be applied to all kinds of agricultural crops and all types of soils. Does not cake, 100% friable. Universal fertilizer, can be applied to all kinds of crops and all types of soils.

Delivered in rail tankers or tank trucks, in 50 kg bags or big bags.





## SOVTEH LTD

**Company name (short):** Sovteh Ltd

**CEO:** Sergey G. Tikhomirov

**Address:** 106a Dimitrova St., Voronezh

**Year of foundation:** 26.12.1990

**Tel./Fax:** +7 (473) 221-81-29, 221-81-35

**Website:** [www.sovteh-eko.ru](http://www.sovteh-eko.ru)

### Specialization:

Processing and recycling of industrial polymer waste.

### Special features and competitive advantages:

The company has developed and started manufacturing an industrial-polymer-waste-based product Polycrumb. Sovteh Ltd utilizes a unique technology of polymer recycling and produces the product having no analogues in Russia. The cost of Polycrumb production is significantly lower than that of synthetic rubbers, therefore the company believes that their product can be used to substitute 30 – 80% of synthetic rubbers in the manufacture of rubber goods.

Today, Sovteh Ltd is reequipping its recycling and processing facilities. The new modern production process will enable the company to manufacture innovative products for domestic and international markets. This project will allow for 100% recycling of industrial waste, thus returning it into the production cycle.

The project will enable Voronezh and Voronezh region to solve ecological problems efficiently. According to experts, the averted losses caused by environmental pollution will amount to 15 million roubles a year.

The company has obtained 14 patents for the production technologies.

### Product range:

Apart from the Polycrumb product, the company has developed a technology for the recycling of food industry waste into vulcanizing accelerators Vulkativ, which allows for the reduction of white zinc in rubber goods and, consequently, makes the goods more eco-friendly.

Another Sovteh Ltd development is Antipores R, a highly competitive product which can be used in molded and non-molded rubber production and polymer recycling.



## FINIST LTD

**Company name (short):** Finist Ltd

**CEO:** Irina A. Molodina

**Address:** 2b Dorozhnaya St., Khokholskiy settlement, Khokholskiy district

**Year of foundation:** 27.09.2006

**Tel./Fax:** +7 (473) 277-02-44, 277-12-47

**Website:** [www.finist-milovar.ru](http://www.finist-milovar.ru)

### Specialization:

Soaps and liquid detergents manufacture.

### Special features and competitive advantages:

Good value for money.

Efficient service.

Timely delivery.

Product range

### Laundry soap:

- Rus, with gentle agents, 100 g;

- Universal, does not contain chemical additives, hypoallergenic, 90 g;

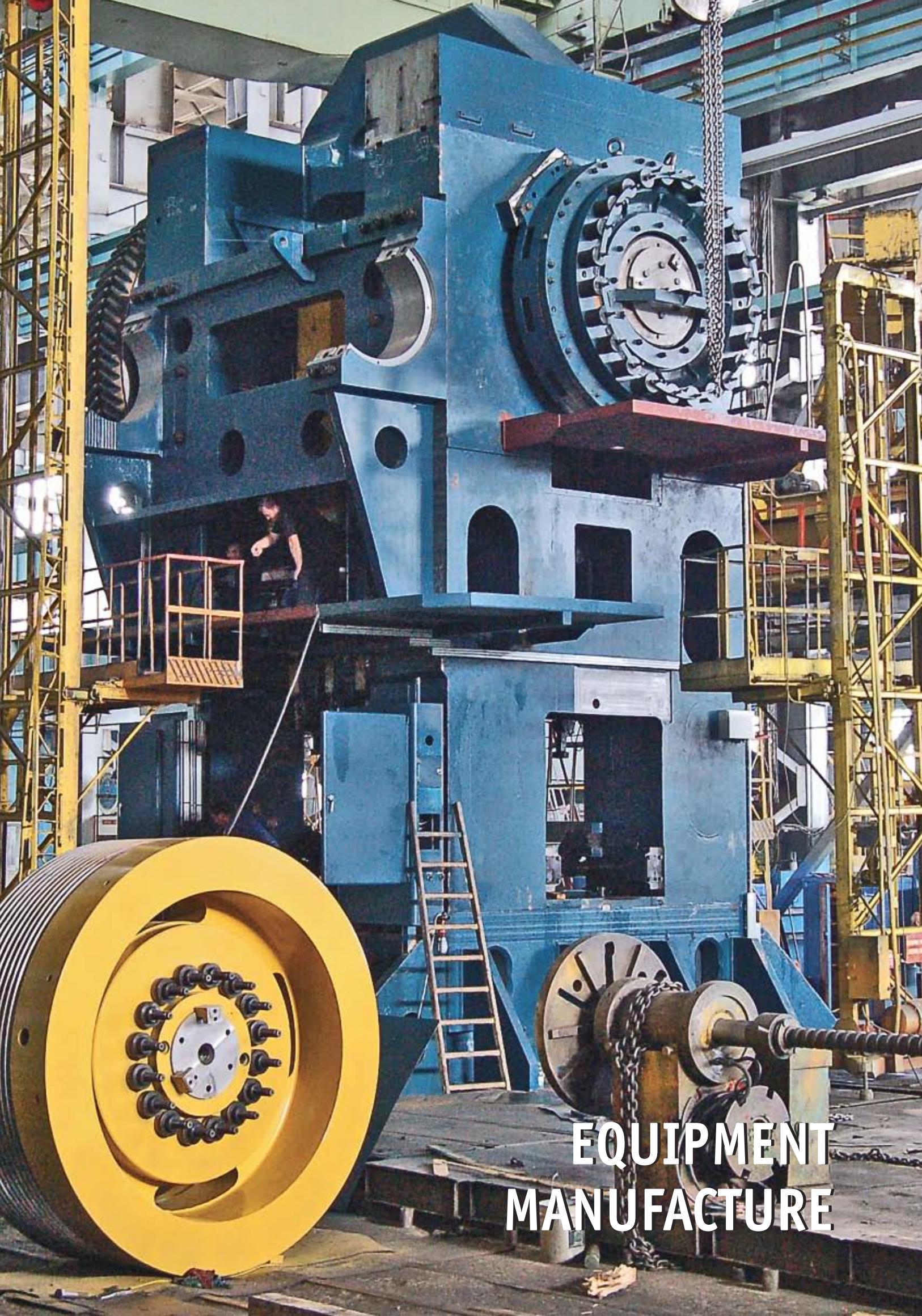
- Finist 72%, made to the classical recipe, has been manufactured for several decades, 200g.

A wide range of toilet soaps including:

- Baby soap (Feya 75g, Kotik 75g, Slonik 75g, Utyonok 75g, Skazka 75g, Detskoye 75g);

- Traditional soap (Pine, Flower, Bath, Fruit soaps) 190g;

- Family soap (Flower Magic 75g, Fresh 75g, Rose 140g, Flower Magic liquid soap 300 ml).



EQUIPMENT  
MANUFACTURE

# AVTOGEN JSC



## Company Profile

<b>Company name (short):</b>	Avtogen JSC
<b>CEO:</b>	Nickolay A. Sviridov
<b>Address:</b>	26 Moskovskiy av., Voronezh
<b>OKPO code:</b>	53149699
<b>Year of foundation:</b>	2000
<b>Workforce:</b>	149 people
<b>Telephone:</b>	+7 (473) 221-07-94
<b>Fax:</b>	+7 (473) 221-07-94
<b>Website:</b>	<a href="http://www.autogen.ru">www.autogen.ru</a>
<b>Specialization:</b>	Manufacture of acetylene plants, stationary and portable generators for acetylene production from water and calcium carbide, equipment for gas and plasma metal treatment using combustible gases and oxygen. Since 2005 the company has been producing steel welded tanks for liquefied petroleum gases for household use and vehicles.
<b>Quality management system:</b>	N/A
<b>Certificates:</b>	all company's products are certified.

## Historical Note

The company's history dates back to 1932 when Avtogen plant for acetylene and oxygen production was founded.

In 1956 the plant's business direction shifted towards mechanical engineering and the company was named Avtogenmash Plant.

In 1970 Avtogenmash merged with Voronezh office of the All-Soviet-Union Research and Development Institute of Autogenous Engineering (VNIIavtogenmash, Moscow) and Avtogenmash Production Association was formed, which was later to become Avtogenmash JSC.

On 4 April 2000 Avtogen JSC was established by the government of Voronezh region and Avtogenmash JSC.

The new enterprise was established with the aim of maintaining the high quality and developing gas and plasma treatment methods.



## Production Facilities

Avtogen JSC occupies an area of about 30000 m<sup>2</sup> housing the main production facilities, auxiliary departments, design, processes and commercial departments.

- **The company is equipped with the following machines:**

- Press-forging plants, including mechanical and hydraulic presses with the power of 16 to 315 ton-forces;
- Guillotine shears for metal sheets cutting;
- Metal-working machines, including CNC loathes, automatic and semi-automatic multispindle lathes;
- Automatic molding machines for polymer die-casting;
- Equipment for gas-shielded welding;
- Conveyor lines for assembly and painting of acetylene generators;
- Automobile and domestic gas tanks assembly lines;
- Equipment for rubber processing and rubber goods manufacture;
- Woodwork equipment;
- Modern Filin 9H765H X-ray TV and Extra-volt-160 X-ray equipment for radiographic weld inspection;
- Testing equipment.

- **The main departments are:**

- Production sections;

- Design and production department;
- Power supply services – boiler house, compressor room, laboratory;
- Mechanical and electrical services – mechanical and repair sections;
- Tool room;
- Quality control department and processes control department;
- Non-destructive testing laboratory;
- Testing facilities which comply with the State standard GOST R requirements;
- Supply department;
- Sales department;
- Shipping department.



## Production Program

Avtogen JSC is the only company in Russia and CIS with facilities allowing for carrying out a complete set of operations for the development and production of acetylene plants, equipment for acetylene plants and gas and plasma metal treatment.

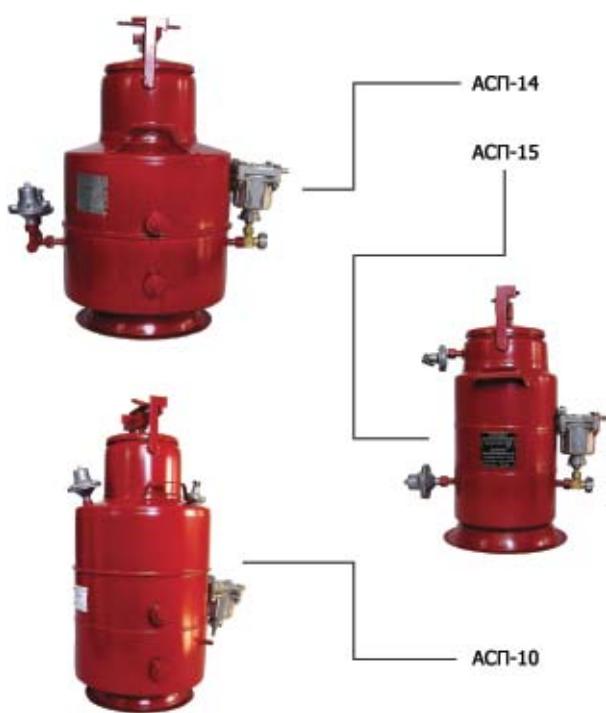
The company's product range includes 88 items:

- Acetylene generators with different capacities;
- Acetylene drying and purifying devices;
- Ramps;
- Gas dispensing racks;
- Various safety devices;
- Mechanical equipment.

Since 2005 the company has been producing automobile and domestic welded tanks for liquefied petroleum gases.



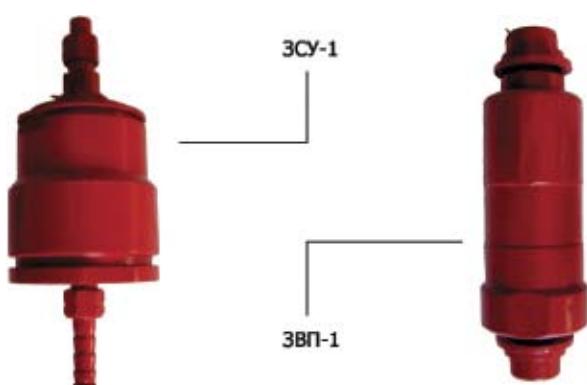
## Product Catalogue



### Acetylene generators AGM, APK, ASK, ASP series

#### Transportable acetylene generators

Generators are used to produce gaseous acetylene by calcium carbide hydrolytic splitting, there are two types of generators – dry-residue and wet-residue.



### Flame arresters ZVM, ZVP, ZSO and flashback arresters ZSP, ZSU

#### Flashback arresters

Used to stop the flame from acetylene and oxygen burning from burning back up into the equipment or pipelines and causing damage.

#### Flame arresters for high-pressure acetylene

- Are used to stop the flame from high-pressure acetylene burning from going back up into the equipment;
- ZVM-2 with manometers;
- Cylinder ZVM-2, ZVP-2;
- Line-operated ZSO-1, ZSO-2.



### BAV type automobile gas tanks

BAV type valveless automobile gas tanks for liquefied gases

The tanks are installed on automobiles and serve as fuel tanks. Working pressure – 1.6 MPa. The necks are produced in compliance with European standards.

Each tank:

- has high-quality weld joints;
- undergoes X-ray testing;
- undergoes hydraulic and pneumatic testing;
- withstands pressure up to 60 atm (working pressure 16 kgf/cm<sup>2</sup>);
- has an individual number and technical description;
- is packaged;
- has been awarded a diploma of Top 100 Russian Products contest.



### Gas control units PGA, PGK, PGU

Gas control units are used to control oxygen and acetylene pressure. The company offers open-type (O) and closed-type (Z) units, PKG-'90 – only open-type.

# VODMASHOBORUDOVANIYE PLANT JSC



## Company Profile

<b>Company name (short):</b>	Vodmashoborudovaniye Plant JSC
<b>CEO:</b>	Sergey Y. Tamlin
<b>Address:</b>	111 Truda av., Voronezh
<b>OKPO code:</b>	49751841
<b>Year of foundation:</b>	01.01.1944
<b>Workforce:</b>	405 people
<b>Telephone:</b>	+7 (473) 221-00-38 – CEO (reception)
<b>Standard Equipment Sales Dept:</b>	+7 (473) 221-0-222
<b>Non-Standard Equipment Sales Dept :</b>	+ 7 (473) 247-17-62
<b>Supply Dept:</b>	+7 (473) 247-18-70
<b>HR Dept:</b>	+7 (473) 246-34-57
<b>Fax:</b>	+7 (473) 247-17-65
<b>Website:</b>	www.vmo.su
<b>Specialization:</b>	Manufacture of water plumbing and sewage equipment, equipment for wastewater primary treatment, water disposal systems, decanting tanks, fire hydrants, radioactive waste transportation vehicles, sewage disposal plants, etc. Project work, mounting and start-up. Equipment servicing, maintenance and repair.
<b>Sales volume in 2010:</b>	300000 thousand RUR (including export – 4400 thousand RUR)
<b>Production volume in 9 months of 2011:</b>	184809 thousand RUR
<b>Quality management system:</b>	The company is undergoing a GOST R ISO compliance certification procedure at Voronezh Monitoring and Certification Centre.
<b>Certificates:</b>	The company's products have certificates of compliance with Machines and Equipment Safety technical regulations (following Governmental Decree №753 of 15.09.2009).

## Historical Note

Voronezh Sanitary-Engineering Plant (Santekh-izdeliy) was founded on 1 January 1944, following the Soviet of People's Deputies Decree № 4545-R of 01.01.1944. The plant reported to the Ministry of Communal Service and the Central Administration of Communal Facilities until 1954.

Following the Ministerial decrees № 897 of 31 July 1957 and №237 of 8 August 1957, Voronezh Sanitary-Engineering plant started reporting to Voronezh branch of the Council of National Economy and was under the Council's authority until 1961.

Following Decree № 55 of 20.01.1961 of the Council of Ministers and Decree № 54 of 15.03.1961 of

the Ministry of Communal Services, the plant was renamed as Vodmashoborudovaniye Research Machine-Building Plant, started producing water plumbing equipment and reported to the Central Water and Wastewater Treatment Office.

On 7.09.1993 the mayor of Voronezh issued a decree № 208/28 on renaming the plant as a structural subdivision of Vodmashoborudovaniye Plant JSC.

Since 2001 the company's name has been Vodmashoborudovaniye Plant JSC, State registration certificate № 3662/113923 of 15.06.2001.

In 2010 the company started retooling and modernization of its production facilities.

## Production Facilities

Vodmashoborudovaniye Plant JSC has all the necessary facilities for the production process: auxiliary services (power supply and communications services, warehouses), production facilities, as well as highly-qualified staff, modern technologies, state-of-the-art foundry, machining, cutting and welding equipment. The company has a highway approach from Eremeyeva St. and a railway approach.

The company occupies an area of 49847 m<sup>2</sup>, including production area of 20370 m<sup>2</sup>.

The company is completing the first stage of re-

tooling and modernization process: modernization of machinery, implementation of processes control system.

The company structure includes design and production departments and excellent testing facilities, which allows for the manufacture of equipment in accordance with customers' requirements.

The company is forming an Engineering Centre. The Centre's leading specialists have over 20 years of experience in water treatment and used to head engineering companies and project institutes.



## Production Program

### • Applications

Vodmashoborudovaniye Plant JSC manufactures the following equipment:

- equipment for mechanical treatment of wastewater and surface water;
- equipment for vertical and horizontal tanks;
- sewage disposal plants;
- fire-protection equipment;
- special vehicles;
- water plumbing equipment;
- special pumps.

The company's main customers are water and wastewater treatment plants, construction companies, Ministry of the Russian Federation for Civil Defense, Emergency Management and Natural Disasters Response, Rosatom, petrochemical and oil-processing companies.

### • Special features and competitive advantages:

- over 67 years of experience;
- a team of professionals;
- modern design methods;
- utilizing cutting-edge technologies and cooperation with leading European engineering companies;

- state-of-the-art machinery;

- powerful manufacturing base;

- certificates and licenses for project, construction and mounting works;

- continuous quality control;

Our customers gain the following competitive advantages:

- optimum solution to the clients' needs and providing them with all the necessary equipment;
- one equipment supplier at a construction site;
- flexible pricing policy;
- efficient after-sales service.

### • Innovations and new developments

The company's engineering centre is developing new sewage treatment technologies: mechanical treatment systems, coagulating and flocking agents treatment, denitrification, biological fluorine removal, anaerobic sewage water treatment, anaerobic and aerobic sludge fermentation.

The company is modernizing its equipment and continually developing new products. Vodmashoborudovaniye has started producing sewage disposal plants. The company uses such materials as stainless steels, polymer materials.

## Product Catalogue



### Rack filter GR 063, GR 125

Rack filters are used for mechanical sewage water treatment with contaminants discharge to waste containers and special vehicles. The rack filter can be operated in a continuous mode as part of technological lines of sewage disposal plants. GR rack filters are made of corrosion resistant material and equipped with NORD IP 54 electric drives. Rack filters are made to UHL climatic version, placement category 3 to GOST 15150-69.



### Belt filter press

Belt filter presses are used for mechanical sludge dewatering in sewage, water plumbing and other systems. The belt filter press can be operated in a continuous mode as part of technological lines of sewage disposal plants.

Belt filter presses can be used for mechanical sludge dewatering.

Belt filter presses are made to UHL climatic version, placement category 4 to GOST 15150-69.



### Sluice gates (stainless steel)

Sluice gates are used to control flow (sewage water) rates in open and sunken canals, and to control water level in canals.

There are several types of sluice gates:

- crest or bottom gates – for flow cut-off;
- adjustable crest or bottom gates – for partial flow cut-off;
- with manual or electric drives;
- for round-section and rectangular section canals.



### Slime pump IVR

Slime pumps are used to remove slime and sludge from decanting tanks and in biological treatment systems.

Slime pumps are produced for decanting tanks with 16, 18, 20, 24, 28, 30 and 40 m diameter.



### Solid radioactive waste transportation vehicles OT-20.

OT-20 are used to transport solid radioactive waste to waste disposal facilities. Vodmashoborudovaniye JSC is licensed to design and manufacture dedicated vehicles for radioactive waste transportation – OT-20.

There are various modifications of OT-20 on the base of ZIL-433360, ZIL-450850 (dump truck), GAZ-33104, Valday, ZIL-5301, Bychok, KAMAZ-6540. Dedicated vehicles are made of stainless steel and have the body space of 5.29, 6.44, 6.73 m<sup>3</sup>. To ensure driver's protection there is 30 mm-thick lead shielding. The vehicles are equipped with crane manipulators of different lifting ability by Russian and foreign manufacturers.



### Sewage disposal plants

- capacity: from 1 to 600 m<sup>3</sup>/h;
- treatment efficiency in compliance with effective norm and regulations;
- arctic versions available, power supply, ventilation, electricity;
- effective biological treatment in bioreactors;
- Coagulant sewage water treatment for phosphate removal;
- Ultraviolet sewage treatment;
- Integral dewatering;
- Remote process control by GPS-modules.



### Fire Hydrant P30.000

Fire hydrants are used to tap into the municipal water supply to assist in extinguishing a fire.

Fire hydrants are made of dci or steel. Corrosion warranty is 50 years. The hydrants are mechanically stable, the pipe does not bend or break. The company's hydrants comply with the State standard GOST 8220-85, have fire safety certificates.



### Sludge scrapers IPR

Sludge scrapers are used to remove sludge from primary decanting tanks in biological treatment systems. Can be operated in the open air and have different climatic versions.

Underwater parts are made of structural or stainless steel.

The company has modernized the design of sludge scrapers and increased the bridge girder hardness.

IPR sludge scrapers are made for tanks with 16, 18, 20, 24, 28, 30, 40 and 54 m diameter.

# VOMZ JSC

## Company Profile



**Company name (short):** VOMZ JSC

**Address:** 9, 121-Strelkovoy divizii street, Voronezh 394055

**OKPO code:** 83627268

**Year of foundation:** 01.05.1945

**Workforce:** 134 people

**Telephone:** +7 (473) 236-48-75 — CEO (reception)

**Sales Dept:** +7 (473) 236-48-84; (473) 236-34-32

**Supply Dept:** +7 (473) 239-55-87

**HR Dept:** +7 (473) 236-92-23

**Website:** [www.oao-vomz.ru](http://www.oao-vomz.ru)

**Specialization:** Production of lifting equipment, lifting and conveying machines. Production of building equipment.  
Sales volume in 2010: 66 176 (thousand RUR)

**Quality management system:** Is being implemented

**Certification:** Permit for use of equipment (technical devices, materials): parts for cargo slings, detachable and fixed connection links, grabbing attachments (hooks) complying to GOST 25573-82. Permit for use of the following equipment: rolling single-row swing mount with inner and outer teeth produced in compliance with 4835-017-05013929-99.

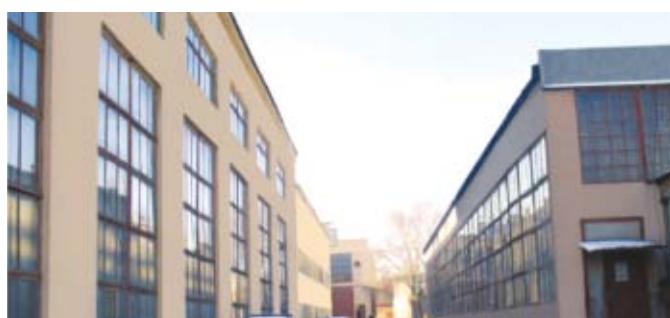
## Historical Note

- 1945 – Handicraft mechanization base was set up
- 1946 – Metal structures shop was built
- 1954 – Production tooling sector, compressor station and joiner's sector were put into operation.
- 1957 – Foundry floor, casting shop, with sectors for production of chains and steel melting, machine-tool area (reconstructed in 1973); electrical substation, laboratory comprising 2 departments (mechanical and chemical) were built.
- 1959 – Heat treating shop was built
- 1946-1965 - Forge-and-pressing sector and screw-cutting machines sector were set into operation
- 1970 – Metal structures shop was reconstructed
- 1971 – Gas distribution substation was put into operation
- 1990-2000 – The company reduced technological and building equipment, mechanization means for domestic and foreign companies.
- 2005 – Voronezh experimental mechanical plant produced parts and equipment for weight lifting machines, building equipment, construction metal structures.

• 2007-2008 – The company started production of joint products: equipment for children playgrounds.

• 2009-2010 – The company started production assimilation of amelioration equipment. The company developed and implemented new method of anti-rust protection of metal structures using parkerising method.

Today, Voronezh experimental mechanical plant develops small-scale mechanization, individual projects for each activity category, equipment and structures using own design base, production of import-replacing products, subcontracting of production process.



## Production Facilities

Highly-trained professionals and modern equipment such as automatic heat cutting machines, machining centre units with PNC (Germany), turning-and-boring lathe with PNC (Russia-Germany), unique gear-shaping and hobbing machines, milling, multi-axis boring and turning machines with PNC provide for complex mechanical machining of details. The company's production facilities include the following shops:

- Procuring



- Mechanical treatment
- Metal structures
- Forging-and-press

### Sectors:

- Turning and boring
- Tooling
- Assembly
- Conveying

Own design bureau.



## Production Program

### • Applications:

VOMZ JSC provides construction companies with tooling, metal molds, metal structures, spare parts for load lifting building machinery. The company produces and has facilities to produce parts from small-series to mass production. Today the company produces hooks, links which are used in grappling accessories of various lifting capacity, and metal structures.

Supporting and turning arrangement with inner and outer teeth used as main base unit in weight lifting machines and mechanisms (automobile, stationary cranes, excavators, scaffold towers, and other weight-lifting equipment). The plant produces and ships OPU-1190, OPU-1400, OPU-1450, and OPU-2500.

Also in all districts of Voronezh the company installed playground equipment for children. The plant is able to produce:

- Metal sheet cutting of any configuration with thickness up to 200 mm,
- Hot stamping of details with diameter up to 400 mm and weight up to 8 kg,
- Turning and boring machining with diameter up

to 3000 mm and height up to 1250 mm,

- Cutting of teeth with inner and outer tooth on details with diameter up to 2500 mm and module up to #18,

- Mechanical machining of complex configuration details with dimensions up to 1500x600x500 mm,

- Non-standard metal structures with weight of each unit up to 10 tons.

### • Special features and competitive advantages:

Traditions of high quality of domestic engineering – during production process the company uses domestic steel grades. Taking into consideration sphere of application of company's products, quality and safety are closely connected. Manufacture of products to individual customer's projects and design of individual projects. VOMZ JSC accepts orders for the production of non-standard metal structures.

### • Innovations and new developments:

New weld-deposit and spray room is at the stage of forming, collection, and putting into operation. New OPU-1600 and OPU-2240 are under construction. The company is capable of production change to other OPU series on condition that the customer provides engineering drawings.

# Каталог выпускаемой продукции

Spare parts and equipment for weight-lifting machines.

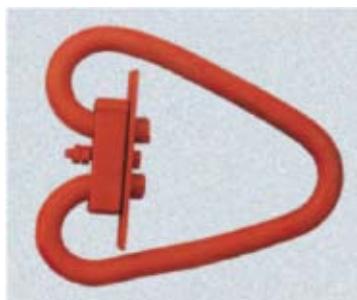


Carrying-capacity, t	Weight, kg	
	Of Art. 20	Of Art. 09G2S (CL)
0,5	0,3	-
1,0	0,7	0,5
2,0	1,5	1,1
2,5	2,4	1,4
3,2	3,1	1,7
4,0	3,8	2,4
5,0	5,1	3,5
6,3	7,2	5,0
8,0	10,2	7,5
10,0	14,3	10,9
12,5	20,6	14,6

- **Hooks** – used to hang cargo or grabbing devices to ropes or chains of lifting mechanisms.

Hooks of K1 and K2 types with locks in mild climatic version are made of grade 20 steel and used in all sling types except round slings and endless slings for gathering of wrenches.

Hooks in cold climatic version are made of 09G2S steel grade and provides high strength performance and lighter weight comparing to ordinary versions. These hooks can be used in low temperature conditions. GOST 25573-82. St.20St.09G2S



- **Detachable triangle link RT1, RT3;**
- **Non-detachable triangle link T.**

Detachable triangle link is used in 2-branh, 4-branch and endless slings. Link RT3 has smaller dimensions and thickening in top angle of the link. GOST 25573-82.St.09G2S.

## Parameters of triangle detachable links

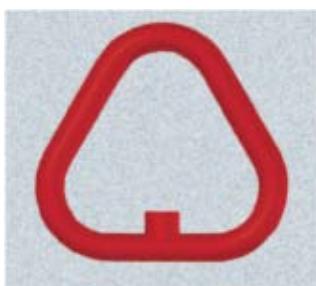
**RT1**

Carrying capacity, tons	Weight, kg
1.25	1.05
2.0	1.75
2.5	2.36
3.2	3.10
4.0	4.20
5.0	5.95
6.3	8.69
8.0	11.19
10.0	15.68
12.5	22.62
16.0	30.48
20.0	41.65

**RT3**

Carrying capacity, tons	Weight, kg
1.25	1.17
2.0	1.54
2.5	2.00
3.2	2.57
4.0	3.77
5.0	5.14
6.3	6.90
8.0	9.80
10.0	13.80
12.5	12.90
16.0	26.54
20.0	35.12
25.0	52.00

## Parameters of triangle non-detachable links



Carrying capacity, tons	Weight, kg
1.0	0.42
1.6	0.68
2.0	0.93
2.5	1.40
3.2	1.90
4.0	2.90
5.0	4.50
6.3	6.60
8.0	8.20
12.5	15.50

**T Link.** Non-detachable triangle link – used in 2-link, 4-link, and endless slings and in slings with big carrying capacity. GOST 25573-82. St.20 St.Spi3Sp.



• **Swing mount – OPU**

Roller single-row swing mounts with inner and outer toothing are used as base unit in weight-lifting machines (automobile, stationary cranes, excavators, scaffold towers, and other weight-lifting equipment), which have rotary unit with angular velocity up to 16 rpm.

**Parameters of OPU**  
**Roller single-row swing mounts with outer toothing**

Name	Diameter, mm	Weight, kg	Module, mm	Number of holes	Hole diameter
OPU 1400	1400	314	8	36	22
OPU 1450	1451	400	8	24; 40	22

**Roller single-row swing mounts with inner toothing**

Name	Diameter	Weight, kg	Module, mm	Number of holes	Hole diameter
OPU 1190	1190	180	8; 10	20	18
OPU 1400	1400	340	8; 12	24; 40	22
OPU 1600	1600	610	12; 14	32; 45	26
OPU 1900	1900	920	12; 18	36; 48	29
OPU 2240	2240	1150	12; 20	45; 54	32
OPU 2500	2500	1450	16	48; 60	32
Name	Diameter	Weight, kg	Module, mm	Number of holes	Hole diameter
OPU 1000	1000	165	8; 10	32	18
OPU 1250	1250	225	8; 12	36	18
OPU 2140	2139.2	690	14	48	33

The plant can produce mounts of other diameters to individual projects and engineering specifications – from 300 mm to 3200 mm.



• **Metal molds for concrete goods**

Metal molds for concrete goods are used to form of concrete goods (foundation blocks, piles, panels, floor slabs, columns, flights of stairs, cross-beams etc) used in industrial and civil construction.

Metal molds are produced in different grades of difficulty:

- Power metal molds with drop-down borders
- Reconfigurable cluster metal molds
- Metal molds with formed surface of bottom, with demountable packing blocks and elements forming openings.

**• Tunnel and panel form**

Flying form of tunnel type used for construction of walls and floor structures in solid-cast house building.

Main elements are made in the shape of half-tunnel. One of advantages of the form is its modularity thanks to that the height and length can be varied. It provides for the completion of projects with variable pitch, thickness of walls and story height.

*Universal panel form* consists of hard steel frame and waterproof laminated plywood. Produced to GOST R52085-2003 and GOST R52086-2003 with 1st quality grade

The form carries a load of newly-laid concrete up to 125 kN/m<sup>2</sup>. That enables builders not to lower the rate of concreting during construction of walls and columns with 3m height. Accuracy of dimensions of the form provides for high quality of solid-cast construction and lower amount of decoration work.

**• Aerial platform for construction and decoration work**

The platforms are used for the laying of outer walls and tiling at construction of multistory blocks. Used in places where mounting of staging and other devices is impossible such as narrow insets, walls of stairwells and cantilever sectors.

The platform is a rectangular frame structure welded from steel profiles with wooden flooring inside with borders outside. Platforms are mounted on outside walls of the building with crane.

For safety reasons the capacity of the platform is limited to 0.5 tonne. Amount of concrete, workers, bricks that can be loaded to both levels of the platform is limited. Use of such platforms, because of simplicity of mounting and flexibility provides for reducing of performance time on hard-to-reach areas. And presence of several platforms at a construction site provides for continuity of construction and decoration work.

The company can produce platforms to customers' individual projects.



### • Metal structures

Metal structures (steel columns of different types and diameters, pitched trusses, secondary trusses, tie beams, vertical and horizontal ties, hammer beams etc) used in construction of industrial and buildings (production shops, warehouses, overpasses, power transmission line towers, towers etc) and in construction of civil buildings (trade centres, supermarkets, logistic and automobile centres)

To customers' demand the company produces following products: (to technical requirements STO ASChM):

- anchorage support blocks,
- connecting irons,
- built-up beams,
- steel columns,
- fairleads (crane blocks)
- welded conducting ring of any diameter (up to 7m)

### • Strongbacks and grasps

Strongback is non-standard weight-lifting equipment. Strongbacks are used for safe lifting of oversized cargo in confined space conditions.

Strongbacks are widely used on construction sites and in conditions of working at height. Strongbacks must be strong and reliable. This will help to avoid accident situations especially when lifting fragile cargo. These strongbacks help to reduce nonmanufacturing costs.

For optimal capacity the stronbacks must be equipped with additional slings and grasps. The company produces detachable lifting equipment, strongbacks and grasps to customer's technical documentation.

# VORONEZHSELMASH LTD



## Company Profile

**Company name (short):** Voronezhselmash Ltd

**CEO:** Grigory V. Chuyko

**Address:** 68, 9-Yanvarya St., Voronezh

**Year of foundation:** 1928

**Workforce:** 300 people

**Telephone:** +7 (473) 271-30-27

**Sales Dept:** +7 (473) 220-43-02, 220-43-03

**HR Dept:** +7 (473) 220-43-06

**Fax:** +7 (473) 262-25-64

**Website:** [www.vselmash.ru](http://www.vselmash.ru)

**Production volume in 9 months of 2011:** 206228.3 thousand RUR

**Specialization:** Leading Russian agricultural company specializing in the manufacture of equipment and construction of post-harvest treatment, grain drying and storage facilities.

**Sales volume:** 617 197 thousand RUR

**Certificates:** All the company's products are certified.

## Historical Note

1928 – Official date of birth of the plant (first product – hand trieur)

07.10.1943 – The plant was renamed as Voronezhselmash

25.05.1979 – The company produced the millionth grain cleaner

2005 – Engineering centre was set up. The centre designs and produces post-harvest handling machines

2006 – Voronezhselmash produced new generation of high performance separators of SVT line which were awarded 10 gold prizes and a Big Gold medal of the Ministry of Agriculture of Russia.

2008 – Engineers of Voronezhselmash in co-operation with R&D Institute of physics at VSU

completed the design of a unique machine – Photoseparator F 5.1

2009 – To meet the request of the Government of Moscow, engineers of Voronezhselmash designed and put into operation macroincapsulation of corn seeds production line. It helped to solve the problem of growing corn in areas of risk farming.

2010 – The company started production of stationary and mobile grain dryers, high quality transport equipment, silos of all types.

2011 – The company started the construction of a new plant in Maslovskiy Industrial Park. In 2012 the company is planning to start manufacturing products under the brand Voronezhselmash using new production facilities.



## Production Facilities

Equipment stock of Voronezhselmash provides for the full-cycle process of manufacture: from casting raw parts to end product assembly and testing. The company is constantly improving technological processes, while high qualification of specialists of all departments allow for the use of complex developments and technologies.

The plant's shops which produce grind-cleaning equipment, photoseparators, elevator equipment, and procuring shop work at full capacity.

The plant constantly upgrades its equipment stock with high-technology equipment by world leading manufacturers in metal machining sphere.

The company has:

**HS 6001.20 R heat cutting machine** (with PNC and used for straight profiled cutting of metal with plasma cut; with high speed and precision)

**STRIPPIT – V1525/30 coordinate hydraulic press** (with PNC and fast hydraulic system)

**RREV8-320 / 30 hydraulic sheet bending press** (guarantees up to 0.01 mm precise bar positioning).

**MSA 2520 hydraulic four-high machines** (used to bend cylindrical, cone-shaped and polycentric metal sheet goods).



## Production Program

### • Applications

Voronezhselmash manufactures a wide range of equipment for post-harvest treatment, grain drying and storage. Millions of machines produced by Voronezhselmash operate in various agricultural companies across Russia and abroad.

### • Special features and competitive advantages

Voronezhselmash's main competitive advantages have always been the reliability and high quality of the company's products. The company's special feature is a complex solution of tasks connected with grain cleaning, drying and storage

– today, any complex grain cleaning and drying system, elevator or seed line can be tooled up with machines by Voronezhselmash.

Apart from grain cleaning and drying systems production, the company does economic analysis, designs and constructs grain cleaning and grain drying objects, launches and puts them into op-

eration, and provides after-sales and warranty services. The company's Engineering Centre is constantly looking out for new grain cleaning and drying solutions.

### • Innovations and new developments

The company's activity is based on leading innovative technical achievements. The product range of Voronezhselmash includes over 100 grain cleaning and drying machines. Apart from tried and tested products, the company produces new equipment such as photoseparators.

Voronezhselmash takes part in governmental tenders and contests for the development of high-performance equipment and technological lines. Currently, Voronezhselmash is developing unique grain, seed and bean cleaning, drying and storage complexes for the Russian Ministry of Industry and Trade.

# Product Catalogue

## Photoseparators line



Voronezhselmash optic technology was created to guarantee careful handling of the most precious kind of crops – grain crops.

Photoseparators are used to sort grain, beans, cereals, snacks, candied fruit, and spices according to the following parameters: COLOUR / SHAPE / SIZE.

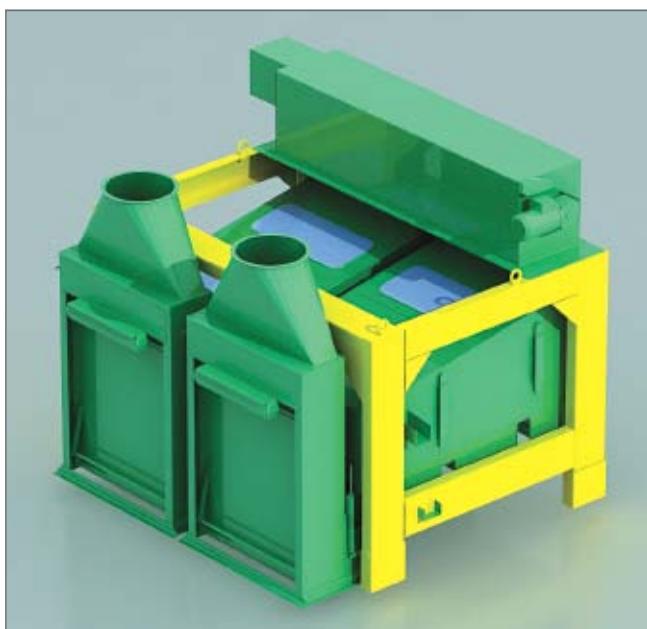
Voronezhselmash photoseparators automatically cull out defected gains or grains not complying with preset parameters, which enables the company to sort out extraneous material rapidly and effectively.

Voronezhselmash photoseparators provide:

- high effectiveness – 99.9%
- high performance – up to 20 tonnes/h
- product loss – no more than 0.5%
- excellent service parameters
- small size
- universal – can be used for separation of various products

Voronezhselmash photoseparators are successfully used in seed breeding, plant growing, and cereal-processing industry. They can be used to separate grain crops, beans, seeds and their products. Using Voronezhselmash photoseparators, a customer can be confident about the quality of separated products – buckwheat, oats, wheat or sunflower seeds.

## Grain Cleaning Equipment



Voronezhselmash manufactures a wide range of reliable high-performance self-moving and stationary equipment for coarse, primary and final grain cleaning on site and as part of technological lines. Voronezhselmash grain cleaning separators provide for rapid and effective grain cleaning to guarantee the required parameters, and sort out various crops to the first class characteristics.

Grain cleaning equipment range of Voronezhselmash includes over 20 grain cleaning separators. Some machines were designed over 30 years ago, have been modified and are now popular with agricultural producers.

**The company's new range of grain cleaning separators includes:**

- SVU-60 universal grain separator;
- SPO-100 grain coarse cleaning separator;
- SVT-40 primary (trade) cleaning separator;
- SPS-10 separator;

- SVT-30 separator;
  - SBP-100 and SBP-100-01 Hercules air and screen separator for coarse cleaning;
  - ST-8 and ST-12 cylinder separators.
- 

## Elevator Equipment



Voronezhselmash has developed and launched a new line of elevator products. Thus, the company provides a full range of post-harvest grain treatment equipment. Voronezhselmash elevator equipment is based on modern high technologies used by world leading manufacturers.

### Grain drying equipment:

- Lip type SVM series;
- Heath type SVSh series;
- SM-8 mobile grain dryers.

### Silos:

- SMP flat-bottom type;
- SMK cone type;
- Hoppers for railway and autoload;

### Conveying equipment:

- NV-25, NV-50, NV-100, NV-175 industrial norias;
- KSV-50, KSV-100, KSV-175 scraper conveyors.

# VORONEZHTELEKABEL CJSC



## Company Profile

<b>Company name (short):</b>	Voronezhtelekabel CJSC
<b>CEO:</b>	Mikhail I. Kirpichev
<b>Address:</b>	6 Zhemchuzhnaya St., Voronezh 394019 Russia
<b>OKPO code:</b>	35836462
<b>Workforce:</b>	117 people
<b>Telephone:</b>	+7 (473) 267-47-90 – (reception) +7 (473) 266-06-55
<b>Supply and Sales Dept:</b>	+7 (473) 267-25-02
<b>Fax:</b>	+7 (473) 266-09-90
<b>HR Dept:</b>	www.telekabel.ru
<b>Website:</b>	Production of insulated wires and cables
<b>Specialization:</b>	356.523 thousand RUR
<b>Sales volume in 2010:</b>	Certified
<b>Quality management system:</b>	Certified
<b>Certificates:</b>	Certified

## Historical Note

VORONEZHTELEKABEL CJSC was founded in 1994 and specializes in the production of multi-core cables and conductors.

The company was founded in partnership with a German firm called BICC KWO Kabel GmbH, is equipped with modern high-performance machines and utilizes leading technologies.

Today, among the company's shareholders are Svyazstroy-1 JSC, a major designer and constructor of telecommunication installations, and Russian National Institute of Cable Industry, a developer of advanced technologies and cable products.

In many years of operation, VORONEZHTELEKABEL CJSC has launched the following types of products – city telephone cables with capacitance of 600 pairs, high-frequency intercity cables, cables for computer networks (LAN), etc. The company has recently launched digital with capacitance of 25 pairs.

Lately, there has been high demand for power cables, digital cables for customer access networks and computer networks, and it is expected that this tendency will continue in Russia. Therefore, the company is working out development plans which stipulate purchasing new equipment with a view to increase production volume and expand the company's product range.



## Production Facilities

Production facilities of VORONEZHTELEKABEL CJSC consist of a production building with an area of 11 thousand square m and an administrative building housing the company's departments.

The company uses modern foreign high-performance equipment to facilitate its production activity. This equipment includes insulated conductors production lines, bundle assembled cable lines, core twisting, extrusion lines for insulation. Quality control is carried out with the help of measuring units at the end of every technological operation.

The company structure includes Processes Dept,



Production Dept, Mechanical Dept, Chief Power Engineer's Dept, Supply and Sales Dept. The company has an internal network to control processes and documentation.

The company's facilities allow for the full production cycle – from copper rod drag to packaging and dispatch of finished products. The Chief Process Engineer's Office is responsible for developing new products.

The company's production staff underwent training in Germany. Besides, they undergo regular training at Sectoral Research Institute of Cable Industry – VNIIKP JSC.



## Production Program

### • Applications

VORONEZHTELEKABEL CJSC produces copper wires and cables. The main application is communications. The company produces cables for city, country and intercity lines. Recently, the production of power cables has been organized.

### • Special features and competitive advantages:

- 100% quality control at every stage of production;
- full range of products of various types and dimensions;
- flexible production process, rapid development of new products;
- flexible pricing policy;

### • Innovations and new developments

In order to meet the demand of expanding residential construction, VORONEZHTELEKABEL CJSC started producing PV-1 and PV-3 electric cables, KVVG and KVVGng control cables, VVG, VVGng, VVG-P and VVGng-P power cables.

In 2008 VORONEZHTELEKABEL CJSC carried out an investment project called Setting up Electric Power Cables Production Facilities. The pro-

ject was aimed at providing construction industry in Voronezh and other regions of Russian Federation with this type of cables. The company envisages producing cables up to 120 sq mm including those with LS index (low smoke). The project was included in the Program of Social and Economic Development of Voronezh Region for 2010 – 2014. VORONEZHTELEKABEL CJSC is carrying out another project called Expanding Facilities to Produce Cables for Structured Systems. Implementation of this project will enable the company to produce cables of different capacitance (from 2 to 100 pairs) for computer networks and broadband Internet.



## Product Catalogue



• **TPPep, TPPepZ, TPPepBbShp,  
TPPepZBbShp to GOST R 51311-99**

Telephone cables with polyethylene insulation in polyethylene jacket. Applications. The cables are used in local primary networks with nominal AC voltage up to 225 and 145 V and frequency 50 Hz, or DC voltage up to 315 and 200 V respectively.



• **VVG, VVV-P, VVGng, VVGng-P  
to TU 3533-009-35836462-06**

Copper-conductor power cables with PVC insulation in PVC plasticate jacket, fire-resistant. Applications. The cable are used for power transfer and distribution in stationary installations, nominal AC voltage 0.66 V and frequency 50 Hz. VVGng and VVGng-P bunch cables have a flame-retarding ability.



• **SBZPu to GOST 51312-99**

Alarm and blocking system cables with polyethylene insulation in plastic jacket. Applications. The cables are used in electric alarm, blocking, locking, fire alarm installations and automated systems, nominal AC voltage 380 V and frequency 50 Hz or DC voltage 700 V.



• **ZKPz, ZKPm, ZKPzBbShp, ZKPmBbShp  
to TU 3571-007-35836462-02**

High-frequency fourth-quarter cables. Applications. The cables are used in K-60 intercity networks with frequency up to 250 kHz.

• **KSPZP, KSPZPBbShp to  
TU 3573-002-35836462-01**

High-frequency local network cables. Applications. The cables are used in interstation communications and house telephone lines with 2048 kBit/sec temporary-channel transmission systems, DC voltage up to 500 V.

• **NSP-5, NSP-5.02  
to TU 357413-003-35836462-06**

Balanced twisted pair cables. Applications. NSP unshielded balanced twisted pair cables (LAN cable UTP cat. 5E) comply with international standard IEC 61156 with additions to ISO / IEC 11801 (of 2002). These cables are used for installation inside buildings, stations and devices and D class electric wiring to ISO/IEC 11801 international standard, frequency up to 100 MHz, AC voltage up to 145 V, temperature range from -10 to 60°C. The cables are delivered in boxes or hanks.



# VORONEZH MACHINE TOOL PLANT LTD

**Company name (short):** VSZ Ltd

**CEO:** Alexander V. Saprykin

**Address:** 48 Truda av., Voronezh 394026

**Telephone:** +7 (473) 221-00-42; 246-46-62; 246-67-64

**E-mail:** vtf@stankozavod.com, marketing@stankozavod.com

**Website:** www.stankozavod.su

## Specialization:

Production of grinders, milling machines, lathes, and spare parts, machininh of metal goods.

## RANGE of serial machines produced by Voronezh Machine Tool Plant Ltd

Item	Model	Characteristics	Value
Internal grinders	3K227A 3K228A 3K229A	Internal hole grinding range, mm	40 – 300 100 – 500
Surface grinding machines with round tables	3E756 3E756L 3E756L-1	Diameter of electromagnetic table, mm	800 1000 1000
Surface grinding machines with rectangular tables	3D725	Rectangular table dimensions, mm	630x2000
Piano-type surface grinding machines	3K544	Maximum ways dimensions,mm	4000x1250 x1250
Special combined grinding and fluting machines	VSZ – 705 VSZ – 5013	Max length of ground shafts, mm Diameter of ground shafts, mm	1000/1500 220-300/ 50 – 450
Milling machines	65A60F1-11 65A60F4-111	Max dimensions of surface machined by 50 mm diameter end-milling cutter, mm	1500x530x x800
Lathes	VT-25.1(G) VT-25.1,5(G) VT-25.2(G)	Centre distance, mm Max working diameter, mm	1000/1500/2000 525(730)
Gripping plates for machines: 3B724, 3D725,3L725VF10, 3B756, 3D756, 3E756, 3E756L, 3E756L-1	Identification markings: 3B724. 94.000 3D725.861.000 3B756.862.000 3D756.862.000 3P756.862.000	Rectangular plate dimensions, mm Rectangular plate dimensions, mm Plate diameter, mm Plate diameter, mm Plate diameter, mm	400 x 2000 630 x 2000 800 800 1000

HEAD SPECIALIZED DESIGN BUREAU JSC  
**ZERNOOCHISTKA**



## Company Profile

**Company name (short):** Zernochistka Head Specialized Design Bureau JSC

**CEO:** Nivkolay E. Suntsov

**Technical Director:** Alexander Z. Perelyubskiy

**Telephone:** +7 (473) 264-15-30

**Deputy Marketing Director:** Alexander S. Pushkarev

**Telephone:** +7 (473) 263-21-51, 263-89-97

**Address:** 17 Kosmonavtov St., Voronezh 394038

**Year of foundation:** 6 October 1956

**Telephone:** +7 (473) 263-22-60 – reception

**Marketing Dept:** +7 (473) 263-28-40, 263-15-97

**E-mail:** zernoochistka@intercon.ru

**Website:** www.zernoochistka.ru

**Specialization:** Design and manufacture of machinery and equipment for grain cleaning lines, ZAV and KZS units, elevators, oil mills for grain and other crops. Assessment, reconstruction, modernization, assembly and launching services.

**Certificates:** The company's products have certificates and permits for use issued by Federal Service for Ecological, Technological and Nuclear Supervision (Rostekhnadzor).

## Special Features and Competitive Advantages

- Zernochistka HSDB JSC designs and manufactures a wide range of grain and seed cleaners and equipment including valve metalware: ramps, tankers, frames, conveyors, control panels and other equipment for large producers, as well as breeders and seed growers.

Grain and seed cleaners have a capacity of 500

kg/h to 70 tonnes/h (of wheat).

- A wide range of equipment allows for the full cycle of grain cleaning to comply with GOST State Standard for grain and seed crops;
- High degree of mechanization and automation of post-harvest grain treatment processes;
- Easy equipment adjustment and maintenance.

## Product Catalogue

Grain cleaners metal structures, receiving bins, proportioning feeders, control panels, coarse cleaning machines, screen cleaners, coarse cleaning machines with screen cleaners, air-and-screen cleaners, sifting cylinders, trieurs, corn seed cali-

brators, final cleaning machines, norias, self-moving grain throwers, grain loaders, bundle-sheaf threshers, hulling mill owner, universal seed cleaners, pneumatic sorting tables, friction seed separators, pelletizers, grain pipes, spare parts.



Grain cleaner metal structures ZAV-20,  
ZAV-40 types



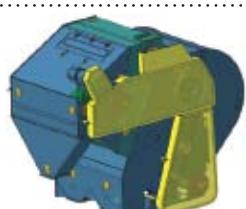
OP-50.02.000 Proportioning feeder



Grain cleaner control panel



MVR-7 (MPU-70) Machine for coarse cleaning



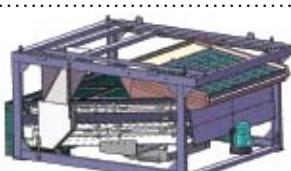
MPO-50S Machine for coarse cleaning



MPO-100 Machine for coarse cleaning



MVR-8 (RP-50) Screen cleaner (add-on screen)



MVR-8 (RP-50K) Screen cleaner (add-on screen)



MPR-50S Coarse cleaning machine with  
screen cleaner

## EQUIPMENT MANUFACTURE

**MVR-6 (OZS-50) Air-and-screen cleaner**



**MVR-4 (MVU-1500) Air-and-screen cleaner**



**BTC-700 Sifting cylinders**



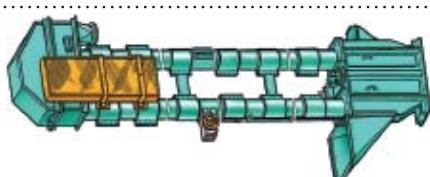
**KSK-1.5 Corn seed calibrator**



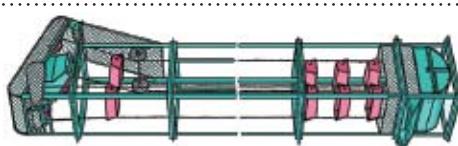
**MOS-9N Final cleaning machine (pneumatic sorting table)**



**NPK-10, 25, 50 Norias**



**NTH-10, 20 Slow norias**



**3M-60A-03 Self-moving grain thrower**





**3PS-100A-03 Self-moving grain loader**



**MSS-1 Bundle-sheaf thresher**



**ShSS 0.5 Hulling mill owner**



**MVR-2 (SU-0.1) Universal seed cleaner**



**PSS-1 Pneumatic sorting table**



**SSF-30 Friction seed separator**



**ID-10 Pelletizer**



**Grain pipes**

**Spare parts for cleaning machines**

# MITROFANOVSKIY MECHANICAL REPAIR FACTORY PROMAVTOREMONT JSC



## Company Profile

<b>Company name (short):</b>	Promavtoremont MMRF JSC
<b>CEO:</b>	Alexander D. Chubov
<b>Address:</b>	30 Vokzalnaya St., Mitrofanovka village, Kantemirovskiy district, Voronezh region 396700
<b>OKPO code:</b>	00861802
<b>Year of foundation:</b>	07.09.1957
<b>Workforce:</b>	280 people
<b>Telephone:</b>	+7 (47367) 68-698 – CEO
<b>Reception:</b>	+7 (47367) 68-191
<b>Sales and Marketing Dept:</b>	+7 (47367) 68-167
<b>Accounting Dept:</b>	+7 (47367) 68-198
<b>HR Dept:</b>	+7 (47367) 68-304
<b>Fax:</b>	+7 (47367) 68-507
<b>Website:</b>	<a href="http://www.tsn-promavto.ru">www.tsn-promavto.ru</a>
<b>Specialization:</b>	manufacture of dung removers, scraper dung removers, reaping machine carriers, fertilizer dispensers, automatic water bowls, feed dispensers, and spare parts.
<b>Sales volume in 2010:</b>	20000 thousand RUR
<b>Production volume in 9 months of 2011:</b>	79300.7 thousand RUR
<b>Certificates:</b>	The company's products are not subject to obligatory certification.

## Historical Note

Promavtoremont MMRF JSC was founded in 1957 on the basis of a major agricultural machinery repair workshop in Mitrofanovka village of Voronezh region. Apart from providing repair services, the factory started manufacturing dung removers and other equipment for agricultural companies.

In its first year of operation, the company had 205 thousand roubles of fixed assets and 310 thousand roubles production volume.

In 1957, 100 car engines and 816 vehicles were repaired.

Today, the company's product range includes dung removers TSN-3.0 V, TSN-2.0 V, TSN-160 V, scraper dung removers US-N-170, US-N-250, US-F-170, US-F-250, reaping machine carriers PTZh-6/7/9, fertilizer dispensers RUN-80.25, automatic water bowls PA-2M, feed dispensers KT-F-9, and spare parts for the abovementioned equipment.



## Production Facilities

The company's production facilities include 250 metal-cutting machines, 60 presses with the capacity of 15 to 500 tonnes, 3 gantry cranes and 3 travelling cranes, over 27 vehicles, up to 1000 motors, a rolling mill for the production of axles for carriers TSN-3.0B, TSN-2.0B with the annual capacity of 10 million axles, 7 thermal equipment units, etc. The factory's products are used by agricultural companies.

The company's production work is based on the following principles:

- Customer focus;
- Consistently high quality of products;
- Competitive prices;
- Continuous modernization of production process;
- Comprehensive solutions for clients' needs;
- Long-term cooperative relationship with customers.

The company develops products from molding through to painting and packaging. The plant occupies an area of 24 hectares housing production facilities and engineering departments:

- Design department;
- Production department;
- Foundry;
- Mechanical assembly shop and painting section;
- Tool rooms;
- Electrical equipment repair workshop;
- Main laboratory;
- Quality control and processes control departments;
- Repair shop,
- Cold pressing shop;
- Sunflower oil production plant.

## Production Program

### • Applications

The factory's products are used by agricultural companies.

The company's production work is based on the following principles:

- Customer focus;
- Consistently high quality of products;
- Competitive prices;
- Continuous modernization of production process;
- Comprehensive solutions for clients' needs;
- Long-term cooperative relationship with customers.

### • Special features and competitive advantages:

Promavtoremont MMRF JSC's main competitive advantages are reliability, eco-friendliness and high quality of its products.

### • Innovations and new developments

The company has developed a new scraper dung remover - USN 170 to substitute US-F-170 scraper dung remover. This product is used to remove dung from livestock buildings with the width of channel ranging from 0.8 m to 4.0 m.

A reciprocating scraper dung remover can be operated in automatic mode to a preset program due to its control unit.

The control unit has the following options:

- Sensor parking system;
- Movement control through current monitoring;
- Current-mode control in accordance with machine load;
- Temporary stop (pushing animals to remove them away from the remover's motion path);

Automatic chain tension control device prevents the scraper dung remover from backward turning at uneven load, therefore there is no need to install molds along the dung channel, the dung remover can be operated for a long time without chain-tension adjustment.

Current-mode and movement control through current monitoring options guarantee the optimum engine load, which allows for lower energy consumption when operating the scraper dung removers.

The use of anchor chains, spiders with arms joining with chain links guarantees trouble-free work for at least 8 years.

The cost of the company's scraper dung removers is significantly lower than that of foreign counterparts while product life is much longer.

The factory's sunflower oil production plant receives orders for sunflower seeds processing and oil production from agricultural companies. The company supplies its products to over 36 regions in Russia, as well as CIS.

# Product Catalogue



## Scraper carriers

### **TSN-3.0V, TSN-2.0V, TSN-160V**

are used to remove dung from livestock buildings and load it to a vehicle. There are different modification according to chain type and spare parts.

<b>Scraper carriers TSN-2.0V, TSN-3.0V, TSN-160V</b>			
Parameters	TSN-2.0V	TSN-3.0V	TSN-160V
Length of a chain contour of the horizontal carrier, m	160±1.3	100	160±1.6
Length of a chain contour of the inclined carrier, m	13±0.18	12.75	13±0.13
Mass feed per 1 hour, no less than, t/h	5.7	4.0 – 5.0	4.5
Angle of installation of the inclined carrier, not more	30	30	30
Height of loading, up to, m	2.65	2.65	2.65
Weight, kg	2400±50	2085	1825±30
Rated voltage, V	380	380	380
Frequency, Hz	50	50	50



## Lift-type fertilizer dispenser

- Coverage – 5; 10; 25 m
- Working speed – up to 10 km/h
- Bin space – 800 m<sup>3</sup>
- Dimensions, mm: length -1500; width – 1200; height – 1400
- Weight – 170 kg



**Reaping machine carriers PTZh-6, 7, 9**

- Reaping machine length – 6; 7; 9 m
- Load-carrier capacity – 24.5 kN (2.5 tonnes)
- Working speed – up to 20 km/h
- Weight – 620; 690; 850 kg
- Dimensions, mm:
  - Length – 9546/10800/12600
  - Width – 2500; height – 1020.



**Iron automatic water bowl PA-2M**

- Automatic water bowl PA-2M for animal stock consists of an iron bowl and a valve actuator arm.
- Dimensions, mm
  - Length – 320
  - Width – 210
  - Height – 140



**Dung scraper US-N-170, US-N-250**

- Power – 1.5 kW
- Contour length – 170, 250 m
- Dung channel dimensions:
  - Width – 1800-4000 mm
  - Depth – 200 mm
  - Scraper speed – 2.0 m/min
  - Weight – 1300; 1500 kg

# MMHC – RUDGORMASH CJSC

## Company Profile

<b>Company name (short):</b>	MMHC – Rudgormash CJSC
<b>CEO:</b>	Arkadiy R. Mozhaitov
<b>Address:</b>	13 Chebysheva St., Voronezh 394084
<b>Year of foundation:</b>	01.01.1949
<b>Telephone:</b>	+7 (473) 244-71-11 – CEO (reception)
<b>Sales and Marketing Dept:</b>	+7 (473) 244-72-96, 268-63-61, 268-68-84
<b>Supply Dept:</b>	+7 (473) 223-21-44, 223-01-41
<b>Free federal number:</b>	8-800-200-5689
<b>HR Dept:</b>	+7 (473) 244-70-77
<b>Fax:</b>	+7 (473) 244-72-00, 268-74-68
<b>Website:</b>	<a href="http://www.rudgormash.ru">www.rudgormash.ru</a>
<b>Specialization:</b>	design and manufacture of drilling, mineral processing, underground transports equipment for mining industry and coiled tubing equipment for oil and gas industry.
<b>Sales volume in 2010:</b>	1106000 thousand RUR
<b>Production volume in 9 months of 2011:</b>	769530 thousand RUR
<b>Quality management system:</b>	certificate of compliance with ISO 9001-2008.

## Historical Note

- On 1 January 1949, following the Decree of the Ministry of Machine-Building of the USSR and of Glavmashmet, Mashmet plant was registered an operating enterprise.
- In mid-50s the enterprise mainly produced mineral-processing equipment and was developing the first self-propelled percussion drilling rigs BU-2B and churn drilling rigs BS-1.
- In the 70s Rudgormash plant became the main company in the manufacturing association.
- In 1992 Rudgormash was awarded a prestigious Arch of Europe “Golden Star” award for its contribution to the industry development, good reputation and professionalism and high-performance equipment.
- In 1998 the company developed, implemented and certified quality management system in compliance with MS ISO 9001. The certificate was issued by the German certification authority TUV CERT, which is recognized and has offices all over the world.
- In 2000 the company started manufacturing coiled tubing equipment for oil and gas wells, and today the company is the only enterprise in Russia manufacturing Uran-20 and Uran-30 systems.
- In 2001 the company developed and started producing hydraulically-powered drilling machine SBSH-160/200-40.
- In the same year Rudgormash JSC was awarded the first prize in the Gold Reserves of Homeland – 2001 competition organized as part of the All-Russian Investment Forum. It was also awarded the Golden Fleece Grand Prix for its high financial efficiency and contribution to the development of economic potential of Russia.
- In 2003 the company developed frame-platform drilling machines SBSH-250 MNA-32KP. The company also designed UKR vehicles for transportation of people and equipment inside underground mines, self-propelled cars 10VS15M with the capacity of 5 tonnes and VS 30 with the capacity of 30 tonnes.
- In 2006 the company manufactured the first in Russia drilling machine SBSH-160/200-40D with diesel-engine drives.
- The company developed separators with increased magnetic induction, disk vacuum-filters, meal captures for conveyor belts, modernizes and designs new screens and feeders.
- Today, Rudgormash JSC is a leading machine building plant. A broad wealth of experience, scientific potential and cooperation with research and development centres enable the company to develop and manufacture equipment for specific mining and geological conditions in accordance with customers' demands.

## Production Facilities

Rudgormash JSC is a leading machine building company whose structure includes production shops and auxiliary services. The company's production process is based on the principle of specialty:

- Procurement services with the annual capacity: metalwork – 12000 tonnes, forgings – 4240 tonnes, hot pressings – 2400 tonnes, steel castings – 5000 tonnes, iron castings – 1500 tonnes.
- Machine shop, loom hours: 1440000
- Mechanical assembly shop with annual capacity: hydraulic cylinders – 10000 units, magnetic separators – 200 units, screens – 80 units, vacuum-filters – 20 units.
- Assembly shop with annual capacity: drilling

machines – 90 units, mine self-propelled cars – 80 units, oil and gas repair plants – 3 units.



## Production Program

Rudgormash JSC is one of the largest Russian companies that designs, manufactures, sells, and services equipment for mining and oil and gas industries.

The company has implemented a quality management system which complies with the requirements of ISO 9001:2008, ISO 14001:2005, OHSAS 18001:2007 international standards. The quality system guarantees the high quality of the company's products in accordance with ecological regulations and low production risks.

The company works in cooperation with 13 authorized dealers in Russia, CIS, India, and Vietnam. After-sales service department is responsible for putting into operation and warranty maintenance of the sold equipment. Regional dealers have their own warehouses and after-sales service departments.

In 2000-2010 Rudgormash JSC filed 39 IP applications and obtained 3 invention patents and 16 useful model patents. In 2010 the company filed 4 invention applications and 4 useful model applications, and obtained 2 useful model patent.

According to GS-Expert (Moscow) independent organization, Rudgormash JSC is the only drilling equipment manufacturer in CIS that for many years has been the second largest supplier of equipment for surface blasthole drilling. The company's products are operating in hundreds of mines in Russia, CIS and other countries.

An average annual Rudgormash equipment production volume accounts for:

- 89% of total demand for self-propelled cars;
- 33% of total demand for surface blasthole drilling equipment;
- 5 to 51% of total demand for mineral processing equipment: screens, separators, vacuum-filters.

In order to stay on a par with the world leading manufacturers, the company conducts research and development and is constantly modernizing its serial products while designing new competitive equipment. In 2011 Rudgormash produced the first industrial SBSh-250 machine with a diesel-engine drive, which can operate in an automatic mode in mines without power supply.

### The company's prospects are:

- Design and manufacture, testing and serial production of 18m single-thread drilling machine – SBSh 250 KP;
- Equipping SBSh 160 machine for roller-bit drilling with devices allowing for rotary percussion drilling;
- Development of a mobile rotary percussion drilling machine;
- Design and manufacture of a self-propelled car with the capacity of 40 tonnes;
- Design and production of a new vacuum-filter with ceramic filter elements.

## Product Catalogue



### Surface blasthole drilling rigs

Rudgormash JSC produces roller bit drilling machines with electric or diesel drives and BQ diameter from 160 to 311 mm. The equipment is supplied to companies in Russia, CIS and other countries. Since 1965 the company has manufactured and supplied over 3500 drilling rigs. Today, over 1000 Rudgromash machines are operated at open mines.

In the recent years the company specialists working in close cooperation with mining professionals have improved technical parameters of drilling rigs, which has made them more competitive. The technologies of production of caterpillars, frames have changed drastically. The machines are now equipped with hydraulic devices by Bosch-Rexroth and compressors by leading manufacturers, which allows for increased reliability and efficiency.



### Mineral processing equipment

Rudgormash manufacturers the following mineral processing equipment:

- Disc and vibration feeders used for uniform discharge of the product to processing lines;
- Screeners for dry and wet screening of ore, coal, slate coal and other minerals in the production process. Rudgormash JSC manufactures throw screens – light- and heavy-duty, high-frequency, double-impact screens, over 50 products in a range.

- Magnetic and electromagnetic separators used for wet and dry mineral processing. The separators are supplied to concentration plants, iron-works, non-ferrous metal industry and non-metal mining industry companies. The company's product range includes over 20 kinds of magnetic and electromagnetic separators.

The company's new development is a separator with magnetic system and fluctuating alternating gradient. According to experts from Sokolovo-Saraysk GPO (Kazakhstan), where the separators were tested, the new magnetic system allows for:

- increased concentrate yield and iron extraction;
- reduction of iron content in tails by 1%;
- reduction of the concentrate cost price.



### **Underground transportation vehicles**

Underground transportation vehicles range includes self-propelled cars and vehicles for the transportation of people and mined material in underground mines.

The main product in underground equipment range is self-propelled cars used in underground mineral salt and coal mines.

In 1965 the company started producing self-propelled cars with the aim to substitute imported cars. In 2001 in accordance with Uralkaliy JSC's production program to increase potassium salt production and in accordance with their requirements, the company developed a VS-30 self-propelled car and BPS-25 mobile loader. These products enabled Uralkaliy JSC to increase potassium salt production by 20%.



### **Equipment for oil and gas industry**

Mobile systems for major repair of oil and gas wells used to be produced only in the USA and by FID company (Belarus). In 2007 Rudgormash JSC started manufacturing mobile units for repair of oil and gas wells. Today the company produces Uran-20 and Uran-30 machines with the pulling power of 12 and 27 tonnes, as well as booster pump-compressor plants.



### **Vacuum-filters**

Since 2008 Rudgormash JSC has been manufacturing vacuum-filters DOO-100-2.5, DOO-80-2.5, DOO-63-2.5, which are used for dewatering of small coal fraction, ore concentrates, non-ferrous metal concentrates, apatite concentrates.

Rudgormash vacuum-filters have the following features:

- filter capacity has increased by 12% in comparison with DSh-100-2.5 filters;
- specific energy consumption for the production of 1 tonne of concentrate has reduced by 10%;
- small size and low metal consumption, which is an important factor for concentration plants with limited production area.

Rudgormash filters are supplied with advanced automatic process control systems, which guarantees extended life and eliminates major breakdowns.

# TEKHNIKA-SERVICE CJSC

## Company Profile



<b>Company name (short):</b>	Tekhnika-Service CJSC
<b>CEO:</b>	Sergey V. Kustovinov
<b>Address:</b>	75 Patriotov av., Voronezh 394065
<b>OKPO code:</b>	35842646
<b>Year of foundation:</b>	1992
<b>Workforce:</b>	258 people
<b>Telephone:</b>	+7 (473) 270-02-72 – reception
<b>Supply Dept:</b>	+7 (473) 270-11-88, 270-12-65, 270-41-51, 270-68-58
<b>HR Dept:</b>	+7 (473) 270-88-01
<b>Fax:</b>	+7 (473) 270-88-01
<b>Website:</b>	www.tese.ru
<b>Specialization:</b>	manufacture of agricultural machinery and equipment.
<b>Sales volume in 2010:</b>	620.587 thousand RUR
<b>Quality management system:</b>	Quality Control Department
<b>Certification:</b>	certified

## Historical Note

The company was founded in 1992 as sole proprietorship called Tekhnika-Service following classic Ford way – no start-up capital or any support, virtually in a garage. Initially, the company's main activity was assembly of agricultural equipment carried out by the company's founders. The profit was spent on further development and the company gradually expanded. At the end of 2011 Tekhnika-Service is a multi industry company employing over 1000 people and situated in four countries.

The head company is situated in Voronezh and manufactures agricultural machines and equipment. It is the biggest manufacturer in the Black-Soil region in terms of production volume and the largest manufacturer of row-crop planters in Russia. The quality of products complies with European standards and most of them have no analogue in CIS

and can only be compared to European counterparts.

Other activities:

- Foundry (steel, iron, special alloys);
- Production of steel thin-wall SSAW pipes;
- Production of structural steels (LSTK);
- Production of bearings and cardan shafts (FKL, Serbia);
- Production of perforated sheets;
- Production of electronic systems and sensors for agricultural machinery.



## Production Facilities

Tekhnika-Serive CJSC Main production site is situated in the right-bank district of Voronezh city. It occupies an area of 2.5 hectares including 6000 m<sup>2</sup> of production facilities. Here, the products are produced and dispatched to dealers and end users.

TS-Engineering Ltd foundry is situated in the

left-bank district of Voronezh city. It occupies an area of 3 hectares including 1500 m<sup>2</sup> of production facilities.

Ertıl Experimental Mechanical Plant is situated in Ertıl, 150 km from Voronezh and occupies an area of 2 hectares including 2000 m<sup>2</sup> of production facilities.

The company's managers pay great attention to equipment. The latest machines by leading foreign manufacturers account for over 80% of all machinery. Machines by well-known manufacturers expand production possibilities of the company and



produce a positive effect on the company's products. The company is currently expanding the production of perforated sheets of stainless materials.

Procuring production facilities: CNC band-saws, laser cutting, plasma arc cutting, crop shears,

bending machines, rolls, metal-cutting machines, presses, special equipment.

Welding facilities: welding robots, gas semiautomatic welders, dot welding. Painting facilities: automated line for liquid and powder painting.

## Production Program

- Tekhnika-Service CJSC manufactures agricultural machines for two spheres of agriculture:
- Post-harvest treatment equipment – grain cleaning machines (grain throwers and loaders, elevators, carriers and different kinds of auxiliary equipment, such as grain pipes, grain screens, aspiration systems, etc.);
- Row-crop planters and machines for pre-harvesting and post-harvesting soil treatment.

The company's products have a lot of advantages over counterparts, including foreign counertparts:

- Modern production facilities and full-cycle processing from steel, iron and alloys casting and mechanical treatment to the production of SSAW pipes, which enables the company to lower prices while keeping high quality standards;

- In-house design department enables the company to find flexible solutions to clients' needs;
- After-sales services are capable of handling any technical problem. Spare-parts are always available at the company's warehouses. Dealers make the company's services closer to the customers.
- The company employ highly qualified agronomists and engineers who assist the customers in choosing the best equipment to meet their needs and optimize costs.

The company designs equipment for continuous operation in tough Russian conditions. The company's objective is to enable its customers to make the most out of using the company's equipment. It is the only way to guarantee customer satisfaction and further purchases.

## Product Catalogue

### • Precision pneumatic raw-crop planters.

Two types of planters are available - with top and undermounted feeding mechanisms. Planters are available in different sizes and can be equipped with fertilizer systems, electronic systems, etc. The planters' technical parameters and competitive prices will satisfy any agricultural customer.

### • Machines and equipment for grain conveyance

Elevators, auger conveyors, conveyor belts, grain loaders and grain throwers. The company constantly implements the latest technical solutions, which guarantees stable demand for these products. For example, elevator pipes with round section, perfect shape of grain pipes which cannot be reached by

simple-roll-milling, patented electronic system for feeding optimization and other unique solutions developed by Tekhnika-Service CJSC.

### • Grain cleaning machines

Machines for coarse, primary and final grain cleaning. A wide range of machines with different parameters for various applications. Tried and tested working principles and reasonable prices guarantee good value for money.

### • Tilters

The only model is Cambridge roller. The width of 12.4 is unique and has not been reached by other manufacturers in CIS.

### • Wide range of spare parts for specialized equipment



**Tractor-towed** roller are used for pre-harvest and post-harvest soil compaction, aeration and packing of top-soil, breaking up clods, breaking up incrustated soils, field surface smoothing, packing late treated soils, rolling to reduce moisture loss caused by convection-diffuse evaporation, post-harvest rolling for top-soil packing.

**Multipurpose pneumatic precision planter TS-M 8000**  
A is used to plant different crops – corn, sugarbeet, wurzel, sunflower, sorghum, soy, vine crops, etc.



**Vibrating pneumatic sorting table SVP-7** is used to clean grain, beans, groats and oil crops off impurities having different weight, shape and surface characteristics, it is also used to remove stones.



# TYAZHMEKHPRESS JSC



## Company Profile

<b>Company name (short):</b>	Tyazhmekhpress JSC
<b>CEO:</b>	Merabi O. Merabishvili
<b>Address:</b>	31 Solnechnaya St., Voronezh 394026 Russia
<b>OKPO code:</b>	97914401
<b>Year of foundation:</b>	1953
<b>Workforce:</b>	1319 people
<b>Telephone:</b>	+7 (473) 239-26-36 – CEO (reception)
<b>Commercial Dept:</b>	+7 (473) 239-25-13, 239-25-43
<b>Supply Dept:</b>	+7 (473) 247-99-70
<b>HR Dept:</b>	+7 (473) 247-99-61, 251-25-11
<b>Fax:</b>	+7 (473) 246-59-97
<b>Website:</b>	<a href="http://www.tmp-press.ru">www.tmp-press.ru</a>
<b>Specialization:</b>	Manufacture of heavy mechanical presses with the tonnage up to 16500 ton-forces and automated press lines and plants; equipment for construction industry, including machines for foam concrete processing; equipment for railcar wheel repair facilities; industrial cranes. A wide range of engineering products.
<b>Sales volume in 2010:</b>	1106000 thousand RUR
<b>Quality management system:</b>	certificate of compliance with EN ISO 9001-2008 issued by TUV CERT (Germany) certification authority.
<b>Certification:</b>	All Tyazhmekhpress products have been tested and issued safety certificates.

## Historical Note

Tyazhmekhpress JSC is the world leader in the production of heavy mechanical presses with the tonnage up to 16500 ton-forces, automatic lines and plants for forging and stamping shops. The first products were manufactured in 1953.

- 1971 – the plant was awarded the Order of Lenin
- 1984 and 2003 – the company was awarded state scientific and technical awards.
- 1996 – the plant was the first engineering company to obtain a certificate of compliance with MS ISO 9001:2000 quality management system.

Tyazhmekhpress JSC is the only machine building company in Russia exporting over 80% of its products. About 15 thousand machines, produced by the company, are operated in 54 countries of the world in such industries as automobile industry, agricultural and power engineering industries, military and railway industries. Tyazhmekhpress

presses are used by FIAT, RENAULT, PEUGEOT, TOYOTA, etc, as well as spare car parts manufacturers in Germany, France, Italy, India, China, Japan, South Korea.

In 2010 and 2011 Tyazhmekhpress JSC was awarded by the Ministry of Industry and Trade as the best Russian exporter of industrial equipment.



## Production Facilities

The company's production facilities include: welding, forging, machining and assembly shops.

Forge presses production. The company produces forgings up to 100 kg from rolls and up to 3000 kg from ingots. The company carries out thermal treatment of parts: annealing, normalization, martempering, hardening, nitriding.

Welding production. The company has facilities to produce long-dimensioned load-lifting, building and other metal constructions up to 35 m long, up to 60 tonnes and to manufacture reservoirs up to 20 m long and up to 5 m in diameter as well as vessels working under pressure. The company's facilities allow for: gas cutting of metal sheets using numerically controlled (N/C) machines; guillotining; metal cutting on band-sawing machines; bending; straightening. Besides, the company does the following operations: assembly, semiautomatic welding in a carbonic environment; automatic welding of fabrications up to 160 t in weight utilizing a flux layer; electroslag welding of welded joints up to 400 mm in thickness; annealing of welded fabrications; vibration stabilization for long length parts of up to 25 t in weight; shot-blast cleaning of welded fabrications to remove rust and scale.

Machining production is equipped with unique machines, which allows for highly accurate machining of large dimension multi-ton parts (up to

200 t). LAMBDA coordinate-measuring machines provide for high accuracy measurements of the primary parts.

Assembly is carried out in production areas with bay up to 30 m wide, crane ways up to 21 m high and stand pits 6 m deep equipped with travelling cranes with load-carrying capacity up to 320 t. The company's facilities allow for the following operations: assembly and mounting of mechanical units; assembly of electric equipment, hydraulic and pneumatic equipment; assembly of immovable joints with heating treatment (heating-cooling); parts cooling for pressing-in in liquid nitrogen medium, parts pressing in.



## Production Program

### • Applications

Heavy mechanical presses are used in a number of industries whose production processes require metal pressing for the production of high-capacity equipment. Apart from that, mechanical presses are used to manufacture iron and non-ferrous forgings. Tyazhmekhpress equipment is used in automobile industry, agricultural, metallurgical and power engineering industries, military, railway, aircraft and ship-building industries.

In the Soviet times over 3000 car, tractor and agricultural equipment manufacturers used Tyazhmekhpress equipment.

Today, Tyazhmekhpress positions itself as forging – presses manufacturer with products targeted mainly at carmakers.

Among Tyazhmekhpress customers are machine-building companies in Russia and CIS.

### • Special features and competitive advantages

Tyazhmekhpress JSC manufactures high-capacity, reliable, and competitive quality products. The new generation of forging presses allows for lower metal consumption and high precision stamping and forging.

### • Innovations and new developments

As part of the company's innovative program, Tyazhmekhpress designed two crane-type hot die-forging presses with the nominal capacity of 14 MN (14000 tf). The company is now developing a unique crane-type hot die-forging press with the nominal capacity of 16000 tf, which has no analogues in the world. The equipment is used for die-stamping of crank-shafts and large parts of diesel engines for trucks and road-building machines.

The company's new direction of activity is production of equipment for construction industry and railcar wheel repair facilities, as well as crane production.

## Product Catalogue



### Die-forging equipment

- crane-type hot die-forging presses (KShG) with the nominal capacity of 630 tf for the production of iron and non-ferrous forgings;
- special presses;
- automatic lines and plants based on KShG presses for the production of 0.5 to 240 kg forgings;
- coining presses, cold extrusion presses, semi-hot die-forging presses, hydraulic and section shearing machines, forging rolls;
- diesets, dieset changing equipment.



### Sheet metal stamping equipment

- sheet metal stamping presses for the production of parts using the following operations: cutting, bending, shaping, correction, straightening, perforation;
- compression-testing presses and sheet metal stamping equipment for the production of large parts;
- automated lines and plants based on sheet stamping equipment for the production of parts from sheets, coils or forgings;



### Equipment for construction industry

- equipment for the manufacture of products from autoclave aerated concrete. The equipment can be used at lime brick production plants and for re-equipment of plants producing autoclave aerated concrete parts.
- automated plants for the production of lime brick based on presses with the capacity of 460 to 800 tf;
- mechanical presses for semi-dry pressing.



### Equipment for railcar wheel repair facilities

- automated plants for mounting and dismounting of railcar wheels.



### Industrial cranes

The company's unique equipment stock and large production area enable Tyazhmekhpress to produce heavy large-dimensions parts, including complex industrial cranes. The length of indivisible parts is up to 35 m, weight – up to 60 tonnes. The company's original technology has enabled it to abandon hot assembly, improve the quality of products and reduce assembly time.



### Forgings

The company produces forgings from rolls up to 100 kg and from ingots up to 3000 kg using carbon and alloy steels. Forging types: shafts, axles, bars, beams, plates, straps, couplings, gear, cylinders, discs, etc. The company carries out the following operations: annealing, normalization, improvement, thermohardening, nitrogenization.



### Pipe shells

- for furnaces in cement industry;
- for lifting cranes;
- for liquid friction bearing housing;



### All kinds of metal working and machining

# ERTILSKIY CASTING AND MECHANICAL PLANT JSC



## Company Profile

<b>Company name (short):</b>	ELMZ JSC
<b>CEO:</b>	Vladimir K. Lesnykh
<b>Address:</b>	1a Truda St, Ertile, Voronezh region 397030
<b>OKPO code:</b>	14966002
<b>Year of foundation:</b>	21.12.1957
<b>Workforce:</b>	192 people
<b>Telephone:</b>	+7 (47345) 2-25-41 – CEO (reception)
<b>Sales and Marketing Dept:</b>	+7 (47345) 2-17-61
<b>Supply Dept:</b>	+7 (473) 2 594-642, 6-71-07
<b>HR Dept:</b>	+7 (47345) 2-17-45, 2-28-81
<b>Fax:</b>	+7 (47345) 2-25-41
<b>Website:</b>	<a href="http://www.elmz.ru">www.elmz.ru</a>
<b>Specialization:</b>	Production of equipment for baking, sugar industries, feed mixing equipment, loose goods conveyors, slab forms, dams, safety fences and guard railings.
<b>Quality management system:</b>	The company's products undergo internal quality control at all stages of production.
<b>Certification:</b>	All Tyazhmekhpress products have NITC Stroyventmash and Certif – group certificates.

## Historical Note

- 1958 – Ertilekiy Casting and Mechanical Plant was founded following the decree of Voronezh branch of the Council of National Economy. The company's first products were water eliminators, sinks and conveyors for sugar refining plants.
- 1962 – the company started producing tractor lifts.
- 1971-1975 – the company was re-equipped, new machining, assemble and preparation shops were set up.
- 1976 – the company changed its production structure. New machine and fabrication shops, as well as auxiliary services, were set up, which expanded the company's production facilities.
- 1986 – the company installed CNC machines and launched 3 new machines for fish canning industry and manipulators for lump sugar packing machines.



## Production Facilities

The company's production area is 24831 m<sup>2</sup>, main production facilities occupy an area of 10615 m<sup>2</sup>.

The area houses the main production facilities – machine, assembly, preparation shops, foundry; auxiliary facilities – toolroom, power supply shop, woodshop, transportation department.

The total number of machines is 270, including 60 metal-cutting machines.

Machining is done in machine shops equipped with the following machines: turning lathes, turning-and-boring lathes, milling machines, boring machines, gear-milling machines, radial drilling machines, broaching machines and CNC-machines.

Welding and assembly equipment stock consists of 80 machines.

The company uses guillotines for sheet material processing (sheet thickness is up to 20 mm).

Plasma arc cutting is used for the production of intermediate products. Band saws are used for profile iron cutting: angle bars, channel bars and discs. Bend presses are used for bending metal sheets 1-8 mm thick. Roller sheet straightening machines are used for part rolling. Mechanical and

hydraulic presses the used for stamping (cutting, perforation and shaping).



## Production Program

The company's main products are equipment for food, sugar refining, construction industry and road building companies, as well as biowaste treatment and feed mixing equipment.

### • Applications

- equipment for baking and sugar refining industries;
- food mixing equipment;
- biowaste treatment plants;
- safety fences and guard railings;
- conveyors;
- metal molds for construction industry.

Special features and competitive advantages

ELMZ JSC's main competitive advantage is rapid document flow and high-quality products.

### • Innovations

The company has developed the technology of hot iron production by method of induction melt.

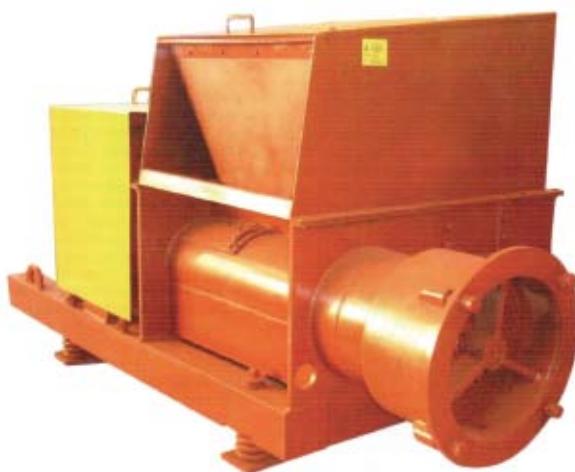


## Product Catalogue



### Kneaders MT-70

Kneaders are supplied to bakeries, confectionary plants and food factories. They are used for mixing wheat and rye dough; bagel dough, biscuit dough, half-finished meat for pizzas and meat pastries.



### Meat mincer G7-FIR

FIR, I76, DTK mincers are used for meat and bone (heads, fetlock joints, by-products, frozen fish, roots) cutting and grinding. Mincers can be used separately or as part of feed mixing lines.

Applications – fur farms, meat-processing shops, fallen stock disposal companies, animal feed mixing companies.



### Screw conveyor TSh-3600

KVO and TSh screw conveyors are used horizontally or at a slight incline as an efficient way to move loose goods (meat and bone meal, grains, flour, animal feed) at meat-processing shops, sugar refining plants, agricultural and construction companies.



### Food mixers

SK food mixers are used for mixing of meat and bone meal with additives (off-corn, grain, etc). Food mixers can be used separately or as part of technological lines. Applications – fur farms, hog farms, and chicken farms.

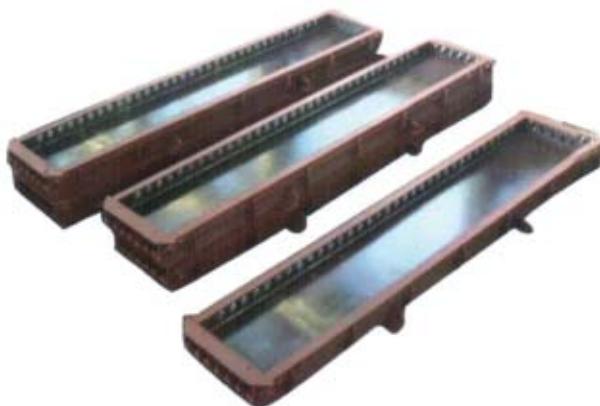


### Conveyors KLP

Conveyors are used to move goods (products).

KLP belt conveyors are universal allow for moving of loose and piece goods at distances from 4 to 200 m and over, belt width ranges from 0.5 to 1.6 m.

Belt conveyors are used in construction, agricultural industries, at supply depots.



### Metal molds

Steel metal molds are used for the production of concrete and concrete products – slabs, plates, blocks, columns, beams, crossbars, etc for residential and industrial building.



## AVTOMATIKA JSC

**Company name (short):** Avtomatika JSC

**CEO:** Nickolay Y. Suntsov

**Address:** 7 Merkulova St., Voronezh 394029

**Year of foundation:** 6.09.1955

**Tel./Fax:** +7 (473) 249-69-75, 249-82-51

**Website:** [www.oavt.ru](http://www.oavt.ru)

### Specialization:

Development and production of explosion-proof emergency shut-down systems for protection of equipment and processes.

### Special features and competitive advantages:

The company is equipped with high-precision machines from Japan, Germany, USA, Switzerland, which, combined with a wealth of experience in development and production, enables the company to find solutions for the toughest applications.

Design and Production Departments are equipped with modern computers and software. Highly-trained specialists perform calculations and design new products using the latest methods of 3D modeling.

### Product range:

Emergency shut-down systems, process control systems, pump lockup systems, level alarms and switches, pressure sensors, pressure switches, pressure differential switches, stabilizers, temperature switches, temperature gauges, pneumatic devices, fluid, gas, humidity analyzers, vibration checkers, ignition control devices, furnace protection devices, panels, explosion-proof circuit breakers, general industrial protection systems.



## AGROELECTROMASH JSC

**Company name (short):** Agroelectromash JSC

**CEO:** Victor N. Shaposhnikov

**Address:** 75 Svobody St., Voronezh 394006

**Year of foundation:** 27.01.1997

**Tel./Fax:** +7 (473) 277-87-67, 259-74-56

### Specialization:

Production of machine-building, electrotechnical, electromechanical, electronic equipment, research and development and design-and-testing works.

### Special features and competitive advantages:

The company has the following production facilities:

- Swiss machines and six-spindle turning machines;
- CNC turning machines;
- turn-milling machines;
- welding machines;
- painting chambers;
- housing production shops;
- electrical assembly shop;
- plastics shop;
- research and development laboratory;

- office of Electromechanical Systems and Electrical Supply Chair of Voronezh State Technical University.

The company is a co-founder of Voronezh Innovative Companies Association and is a member of electromechanical companies cluster.

# ATOMENERGOZAPCHAST LTD

**Company name (short):** AEZCh Ltd

**CEO:** Anatoliy N. Markeyev

**Deputy Director:** Alexander N. Strelchenko

**Year of foundation:** 2 December 2003

**Address:** 9 Voronezh highway, Novovoronezh, Voronezh region 396070

**Tel./Fax:** +7 (47364) 2-18-98, (47364) 2-55-65, (47364) 2-55-67

**Website:** pdovrn@mail.ru

**Specialization:**

Design and manufacture of equipment and spare parts for nuclear power stations, air cooling units for oil and gas industry.

**Special features and competitive advantages:**

Licensed by the Federal Service of Environmental, Technological and Nuclear Supervision to design and manufacture equipment for nuclear power stations.

Licensed to manufacture air cooling units.

**Product range:**

- parts and units for RBM-K and VVER reactors;
- containers for radioactive waste;
- FARTOS aerosol filters;
- capacitive equipment;
- air cooling units for oil and gas industry;
- non-standard equipment.



# VORONEZH-AQUA LTD

**Company name (short):** Voronezh-Aqua Ltd

**CEO:** Nickolay Y. Bezrukov

**Address:** 4b Tekstilschikov St., Voronezh 394026

**Year of foundation:** 11.12.1998

**Tel./Fax:** +7 (473) 271-12-24

**Website:** www.aqua.vrn.ru

**Specialization:**

Manufacture of water treatment equipment used in various industries: heat power engineering, microelectronics, food and distilled beverages industry.

**Special features and competitive advantages:**

- equipment capacity ranging from 0.2 to 2000 m<sup>3</sup>/h;
- high reliability;
- guaranteed product parameters according to specific requirements irrespective of the source of feed water:
- modern efficient and eco-friendly water treatment technologies;
- advanced hardware components;
- automated process control and monitoring;
- developments on a par with the best western counterparts;
- good value for money.

All Voronezh-Aqua equipment has certificates and invention patents.

**Product range:**

Granular bed filtration plants, water clarification, ion-exchange, water softening plants, micro-, nano- and ultrafiltration systems, reverse osmosis, electrodeionization, membrane degasation, ion implantation doping, ultraviolet water sterilization, impurities degradation systems; automated process control systems.



## VORONEZH ELECTROMECHANICAL PLANT CJSC

**Company name (short):** Voronezh Electromechanical Plant CJSC

**CEO:** Alexander S. Nikolayev

**Address:** 1 Druzhinnikov St., Voronezh 394026

**Year of foundation:** 05.12.2008

**Tel./Fax:** +7 (473) 272-74-19

**Specialization:**

Production of induction motors.

**Special features and competitive advantages:**

The main advantages of VEMP CJSC motors are the high quality of parts (due to the use of state-of-the-art equipment and quality materials), energy efficiency, modern design, low noise and vibration levels, IP 55 protection, climatic category U2, built-in thermistors (optional), dismountable legs, threaded shaft, swiveling junction boxes, convenient packaging.

VEMP CJSC offers single-phase motors with the power of 2.2 kW (up to 5.5 kW), single-phase motors with synchronous speed – 1000 RPM, single-phase motors with increased starting torque, three-phase motors with energy class EFF2, motors for variable frequency drive, etc. VEMP CJSC is doing research aiming at increasing energy efficiency and improve the products operating and energy parameters.

**Product range:**

Development and manufacture of general industrial and special induction motors with squirrel cage rotors, such as:

-single-phase induction AC motors (U = 220V) with rotation axis 56 – 112 mm high of AISE series (with operating capacitors) (to DIN standard) and AIS2E (with starting and operating capacitors) (to DIN standard), with power from 0.06 to 5.5 kW and with 2, 4 or 6 poles.

- single-phase induction AC motors (U = 220V) with rotation axis 56 – 80 mm high of AIRE series (to GOST standard) (with operating capacitors), with power from 0.25 to 2.2 kW and with 2 or 4 poles.

-three-phase induction AC motors (U = 380V) with rotation axis 56 – 132 mm high, with power from 0.12 to 11 kW and with 2, 4, 6 or 8 poles, AIR series (to GOST standard).

-three-phase induction AC motors (U = 380V) with rotation axis 56 – 132 mm high, with power from 0.06 to 15 kW and with 2, 4, 6 or 8 poles, AIS series (to DIN standard).



## PKF-VSZ HOLDING LTD

**Company name (short):** PKF VSZ Holding Ltd

**CEO:** Nikolay M. Borodkin

**Address:** 48 Truda Avenue, Voronezh, 394026

**Year of foundation:** 04.09.2001

**Telephone/fax:** +7 (473) 246-44-28, 246-41-01, 296-90-30

**Specialization:**

- Design and production of metalworking equipment;
- Overall repair and upgrade of all metal cutting machines including ones with CNC;
- Design and production of agricultural machines;
- Production of nonstandard equipment and metal structures;
- Production of spare parts, units and equipment (including foreign analogs) for metallurgical and mining industry;
- Production of tooling for railroad transport companies;
- Mechanical treatment services.

**Special features and competitive advantages:** The company was set up on the base of production facilities of Voronezh Machine Tool Plant. The company has production, office and storage premises. Equipped with processing, power, lifting and transporting equipment and staffed with highly-qualified professionals.

**Product range:** Bogatyr Mounted beet ploughs: Multifunctional rooters, Chisel plows, Staged plows, Circular rolls. Machines: Grinding machines, Milling machines, Cargo car units treatment machines, Snagging grinding machines, Garden tools.



# NPO DVA+K LTD

**Company name (short):** NPO Dva+K Ltd

**CEO:** Alexander N. Duda

**Address:** 101 Rabochiy av., Voronezh 394049

**Year of foundation:** 15.12.1991

**Tel./Fax:** +7 (473) 239-29-30

**Website:** [www.dvak.ru](http://www.dvak.ru)

## Specialization:

Food processing equipment

## Special features and competitive advantages:

- a wealth of experience on the market of food-processing equipment;
- good knowledge of technological process of manufactured meat production;
- own food processing equipment developments;
- diplomas issued by Innovation exhibition in 2005 – 2006.
- invention and useful model patents.

## Product range:

- cutters from 125 to 500 l;
- mincers D160 mm;
- mincemeat mixers 150 – 335 l;
- cutter grinders for food tools(10 models).



# MEL LTD

**Company name (short):** MEL Ltd

**CEO:** Anatoliy A. Soloviev

**Address:** 54 Krasnoarmeyskaya St., Voronezh 394006

**Year of foundation:** 29.10.2003

**Tel./Fax:** +7 (473) 277-10-91

**Website:** [www.oomel.ru](http://www.oomel.ru)

## Specialization:

Carrying out scientific research, design and project work, production of electrotechnical products.

## Special features and competitive advantages:

The company has a long history and over 50 years of experience in the field. The company structure allows for the complete production cycle (development, process preparation, serial production, after sales service). The company uses its patented know-how. Original production methods, authors' calculation methods. The company's product range includes over 250 products. Among the company's clients are over 600 companies. Some products are unique in Russia and CIS.

## Product range:

Commutator AC and DC machines with the power of 0.05 to 500 W. Non-contact DC motors with the power of 0.01 – 22000 W. Small-power motors with built-in reducers. Small-power induction motors. Electrical drives and other electrical products for general industrial, special, medical, and household use. Electrotechnical products for refrigerator plants in Russia.

## MECHANOTRONICS RESEARCH INSTITUTE- ALFA-NTS CJSC



**Company name (short):** Mechanotronics Research Institute- Alfa-NTs CJSC

**CEO:** Ernst G. Kuznetsov

**Address:** office 259, 160a Leninskiy av., Voronezh 394033

**Year of foundation:** 04.04.2000

**Tel./Fax:** +7 (473) 224-00-01, 296-99-10

**Website:** [www.niimt-a-nc.comch.ru](http://www.niimt-a-nc.comch.ru)

### Specialization:

Carrying out scientific research, design and project work, production of long-life, energy efficient electrotechnical products. Development and manufacture of digital mechanotronics technologies for space systems, military and special equipment; packaged equipment for control systems; aspiration-irrigation medical equipment.

### Special features and competitive advantages:

The company carries out patented innovative projects using modern software aimed at creating integrated electro-mechanic-electronic-information modules which allow for resulting vector scanning according to the alignment of electric reduction and coded reduction, which are combined in mechanotronic and aspiration-irrigation medical equipment and long-life controlled electric drives. It provides for competitive advantages, multifunctionality, energy efficiency, self-diagnostic, reliability, controllability, dynamics, and excellent frequency-response parameters of the company's products.

### Product range:

- digitally programmed electric drives: series DBU FV-D51, DBU D49-50,
- slave motors for autonomous objects control with competitive parameters: series BERP-9B655, ASEP,
- long-life energy efficient non-contact electric drives: series ZDSh, 4DSh,
- intelligent servo drives based on nano-controllers for a wide range of applications: series DVU-VT/MKRV-D51,
- heterogeneous linear motors for modern complex equipment.

Electric equipment based on digital mechanotronics technologies for aspiration-irrigation medicine (series APD, AM, AIR, AD, ALOE-ENDO, ALOE-FIBRO).



## ORBITA CJSC

**Company name (short):** Orbita CJSC

**CEO:** Anatoliy M. Znov

**Address:** 52 Krasnoarmeyskaya St., Voronezh 394006

**Year of foundation:** 19.10.2003

**Tel./Fax:** +7 (473) 277-08-30, 278-24-15

### Specialization:

Development and manufacture of electrotechnical and electromechanical equipment and gas drives.

### Special features and competitive advantages:

The company's main market segments are special-purpose goods (weapons, space and military equipment) and consumer goods.

The company's activities in the field of weapons, space and military equipment include research and development, drawing up design and technical documents, prototypes production and testing using the company's and customer's testing facilities, mass production of products. Orbita CJSC company structure includes research and development department, machining shop, assembly shop, LIMP testing facilities, and production facilities in a subsidiary company (Rossosh, Voronezh region). Orbita CJSC has been licensed to manufacture products for military and space industry, and has been certified by the Federal Security Service of Russia.

### Product range:

Turboelectric power supply equipment, thermal control and power-supply systems for spacecrafts, power-supply and control systems for lighting equipment, car starting arrangements, pull units for juice extractors.



# SPETSMASH LTD

**Company name (short):** Spetsmash Ltd

**CEO:** Alexander Y. Varnakov

**Address:** office 1, 1a, 160 Leninskiy av., Voronezh 394033

**Year of foundation:** 23.03.2007

**Tel./Fax:** +7 (473) 295-03-84, 223-72-44

**Website:** [www.spetsmash.ru](http://www.spetsmash.ru)

## Specialization:

Development and manufacture of equipment for plate glass processing. Development and production of ultrasonic equipment.

## Special features and applications:

The company utilizes innovative technologies, which guarantees the high quality of products on a par with the best European manufacturers, at the price equal or below that of Chinese counterparts.

The company's technical solutions are patented. All Spetsmash's equipment is in high demand, serves as import-substituting equipment and can be exported.

## Product range:

- SKS machines for curvilinear or combined glass edge machining (6 models);
- SKSC machines for straight glass edge machining;
- SKSF bevel-polishing machines;
- UZSK ultrasonic machines for precious and semiprecious stones needle piercing;
- UZS ultrasonic machines for ceramics, glass and other fragile materials piercing;
- Ultrasonic welding systems for polymer materials;
- UZS ultrasonic baths for jewelry production and car repair companies, laboratories, etc;
- Ultrasonic baths, lines and systems for industrial companies used burning-on removal from parts, drain bushings and press molds;
- Ultrasonic systems fuel assemblies cleaning;
- Ultrasonic equipment for impregnation, emulsification and other processes.



# NPO ELECTROAGREGAT LTD

**Company name (short):** NPO Electroagregat Ltd

**CEO:** Vladimir Y. Belimovich

**Address:** 1 6th-Strelkovoy Divisii St., Nikolskoye settlement, Voronezh 394083

**Year of foundation:** 06.08.2007

**Tel./Fax:** +7 (473) 244-45-55

## Specialization:

Manufacture of industrial pumps.

## Special features and competitive advantages:

Pumps can be equipped with motors by various Russian and foreign manufacturers, including motors with increased energy efficiency, lower noise and vibration levels, high protection class. Pumps are supplied with frequency-control drives. Besides, the company develops and manufactures automated control equipment.

## Product range:

Pumps of the following types: cradle-mounted pumps (K), single-unit cradle-mounted pumps (KM), horizontal (D), turbine (VK, VKS), centrifugal turbine (CVK), feed (CNSG), gear (NMSh, Sh), water packed vacuum (VVN), sludge (NZhN, NCI), chemical (H, AH), pulp (SM, SD), milk (ONC) pumps, etc.





**METAL STRUCTURES  
MANUFACTURE**

# VORONEZHSTALMOST CJSC



## Company Profile

<b>Company name (short):</b>	Voronezhstalmost CJSC
<b>CEO:</b>	Andrey V. Borovikov
<b>Address:</b>	39 Volgogradskaya St., Voronezh 394028
<b>OKPO code:</b>	10591025
<b>Year of foundation:</b>	21.12.1948
<b>Workforce:</b>	1850 people
<b>Telephone:</b>	+7 (473) 279-81-99 — CEO (reception)
<b>Sales department:</b>	+7 (473) 220-25-42
<b>Supply department:</b>	+7 (473) 220-25-71
<b>HR department:</b>	+7 (473) 220-25-69
<b>Fax:</b>	+7 (473) 220-25-88
<b>Website:</b>	<a href="http://www.stalmost.ru">www.stalmost.ru</a>
<b>Specialization:</b>	Production of steel bridge conduits and building constructions
<b>Sales volume in 2010:</b>	2 500 000 thousand RUR
<b>Production volume in 9 months of 2011:</b>	2280855.7 thousand RUR
<b>Quality management system:</b>	certificate of compliance with MS ISO 9001 international standard issued by 2 certification authorities – TV CERT (Germany) and GOST R (Russia)
<b>Certification:</b>	Welding fabrication is certified in compliance with ISO 3834-2. The company has GSI SLI certificate of International Welding Society certifying the qualification of fabricated steel constructions manufacturer in compliance with DIN 18800 7 standard.

## Historical Note

- On 21 December 1948 a 55 m bridge superstructure for the restoration of the bridge over the Chir River in Stalingradskaya railroad was sent from the construction ground near Voronezh. That day is regarded as the date of birth of the plant.
- The plant started its activity with typical designs of bridge superstructures, but in 1951 the plant started the production of the railroad bridge with 2x114 m span over the Oka River near Golutvin railway station. Today the plant is capable of producing spans of any length.
- In 1972-1982 the plant supplied structures for Baikal/Amur railway and in 1984 was awarded the Order of the Red Banner of Labour.
- In 2007 the plant manufactured a record number of bridge structures and building constructions – 55178 tonnes.
- In 2009 the construction of a unique bridge cross-

ing over the Volga River in Ulyanovsk city with the total weight of 100 000 tonnes was finished. Bridge conduits for that bridge were produced in Voronezh. In November 2011 the plant produced the 2 000 000th tonne of metal structures since its foundation.



## Production Facilities

Today the plant is tooled up with modern equipment, providing for the use of the latest technologies in bridge steel structures production. The plant uses computer machines, local area network, Lotsman software was implemented and the company is implementing Alpha software.

The plant is equipped with modern gas cutting CNC machines, providing for gas cutting of metal roll with dimensions up to 3600x18000 mm and thickness up to 32 mm. The quality of edges after gas cutting conforms to the 1st category and edges don't need further treatments.

The company set in operation 2 laser systems (made in Belgium) for the cutting of metal roll with dimensions up to 12000x2500 mm and thickness up to 32 mm. This system allows for minimal heat treatment and metal does not turn out of shape. As a result, structural components of bridge and industrial structures are cut to length without technological allowance for mechanical treatment and with mounting holes. This reduces production and transportation time.

The plant uses different welding methods, including automatic and semi-automatic flux welding, semi-automatic argon welding (80%Ar, 20%CO<sub>2</sub>).

The company manufactures extra strong metalware. The plant put in operation a roll-threading

machine with the capacity level of 120 bolts per second. There are 3 automatic lines for heat treatment of extra strong metalwork.

Metal roll and end products are liable to rotoblast on production lines, manufactured by Netherlands, Germany and Finland.

Besides bridge structures, the plant produces columns, arched girders, links and other industrial and commercial structures.



## Production program

### • Applications

Voronezhstalmost JSC focuses on the production of metal bridge structures for road, railroad, town and pedestrian bridge crossings. While in the 1980s the plant produced mainly typical bridge superstructures, today it is focusing on individual projects.

The plant is able to produce superstructures of up to 220 meters long and the whole bridge length, like for example the bridge over the Volga River, can be up to 6000 m long. The total weight of the bridge can amount to 100 000 tonnes. The plant is able to produce superstructures of greater length as well.

The plant also produces metal structures for trade centres, railway stations, and administrative buildings. In 2008-2009 the plant supplied metal structures to Novovoronezh AES-2 nuclear power plant, which is under construction.

### • Special features and competitive advantages

The company's main advantages are: convenient location (proximity to potential objects and customers), experience in metal structures manufacture, modern technologies and equipment.

- Development of drawings, structural engineering drawings is performed on the base of electronic database, which reduces development time.
- Use of 3D modelling in structural engineering drawings development.
- Double (before production start-up and before colouring) rotoblasting of metal rolls and complete metal structures.
- Use of modern CNC machines and laser systems for metal cutting.
- Automatic flux welding and semi-automatic argon (80% Ar, 20% CO<sub>2</sub>) welding.
- Use of high quality zinc additive paintwork materials.
- Use of laser meter providing for virtual check assembly.

## Product Catalogue





# LISKI-METALLIST JSC



## Company Profile

<b>Company name (short):</b>	Liski-Metallist JSC
<b>CEO:</b>	Andrey N. Nikulin
<b>Address:</b>	27 Voronezskaya St., Liski, Voronezh region 397902
<b>OKPO code:</b>	05145068
<b>Year of foundation:</b>	25.12.1975
<b>Workforce:</b>	146 people
<b>Telephone:</b>	+7 (47391) 3-77-93, 3-77-27 — CEO (reception)
<b>Sales Dept:</b>	+7 (47391) 3-78-75
<b>Supply Dept:</b>	+7 (47391) 3-77-95
<b>HR Dept:</b>	+7 (47391) 3-89-41
<b>Fax:</b>	+7 (47391) 3-77-27
<b>Website:</b>	<a href="http://www.liskimetallist.narod.ru">www.liskimetallist.narod.ru</a>
<b>Specialization:</b>	Production of elevated water towers, vertical and horizontal reservoirs (for dark and light oil products storage), building structures, water-cooled wall and roof panels for electric metallurgic furnace DSP 60 and more, water-cooled and uncooled gas passages. 72 598 thousand RUR (including VAT)
<b>Sales volume in 2010:</b>	72 598 thousand RUR (including VAT)
<b>Quality management system:</b>	Certificate of compliance with GOST R ISO 9001-2001.
<b>Certification authority:</b>	NTTs Technoprocess Independent Inspection Service.
<b>Certification:</b>	Licensed for the production and maintenance of measurement instrument, certificate for pattern approval of measurement instruments, licensed for the production of equipment for nuclear plants.

## Historical Note

Liski-metallist JSC is a successor of the metal building structures plant set up in 1975. The plant produced metal building structures for agricultural industry such as erection trusses, columns, girders, crossbars, etc. Later, the plant started producing metal vertical and horizontal reservoirs for dark and light oil products storage. Rated productivity of the plant was 20000 tonnes of structures. In 1981-1983 the plant was re-equipped and expanded its product range. The plant developed the manufacture of structures for elevator towers, cement storage siloes, collapsible scaffoldings, and airflow floors. In 1993-1995 the plant produced experimental batch of power operated graineries of MS-500 type, set up the production site of turnkey production of the granaries. In 2010 the plant started the production of equipment for nuclear power plants (nuclear power plant blocks),

water-cooled wall and roof panels, water-cooled and uncooled gas passages of different length and diameter.



## Production facilities

Liski-Metallist JSC has production facilities, providing for accomplishment of the orders for products of different complexity and volume at high level and within a resonable period. The company posesses modern equipment stock, testing equipment, laboratory instruments providing for quality production and testing of manufactured products.

The plant's subdivisions are tooled up with modern computer systems and software. Production facilities occupy an area of 57180 m<sup>2</sup>, housing well-equipped production shops and engineering



facilities: design department, processes department, quality check department, main laboratory (of non-destructive and destructive testing), assembly shop.

Geographic location of the plant provides for the use of any kind of transprot for supply of metal structures to clients. Shipping by rail is posible from Pridonskaya railway station, by water – by the navigable river Don, by truck – by M4 highway.

Today, the production process is subject to strict method of procedure to create the most productive working conditions.



## Production program

### • Applications

Liski-metallist JSC products of are used in metallurgic, oil ang gas, construction engineering, chemical industries; fuel & energy complex and agriculture. Aftersales service is provided for all company's products. The quality of products is highly competitive with foreign analogues.

### • Competitive advantages

Liski-metallist JSC advantages are rapid delivery, competitive price, long endurance period (when properly used).

Constant monitoring of manufacturing process is the key factor of the company's success. The

company carries out quality checks at all stages of manufacturing process. Products of the company complies with GOST, PB, RD, PNNE standards requirements. It is proved by positive customers feedback.

The company has all authorization letters (licenses, certificates etc).

35 years of experience, highly-qualified specialists, development of professional, off-gauge, field-proven projects have enabled the company to gain the trust of business partners.

### • Innovations and new developments

Tobay the company designs plane-bottomed containers for cryogenic industry.

## Product catalogue



### Horizontal and vertical reservoirs.

- Used for dark and light oil products storage (with density up to 1015 kg/m<sup>3</sup>).
- Volume of horizontal reservoirs: from 5 m<sup>3</sup> to 75 m<sup>3</sup>. The plant produces reservoirs for above ground and subsurface installation, single- and double-walled. Reservoirs can be additionally equipped with lodgments, access platforms, heaters.
- Volume of vertical reservoirs ranges from 100 m<sup>3</sup> to 3000. Vertical reservoir consists of the bottom, the body (dashes); step ladder, hatches, pipings, valves are available on demand.



### Water-cooled elements of electric steelmaking furnaces.

As the melt temperature can reach 1700°C water-cooled elements provide for burn-through and liquid metal leak prevention. Thick-walled pipes are used for production of the elements as during smelting the metal thins. Maximum operating life of units is 5000–7000 smeltings after this period the elements require replacement.



### Rectangular tanks.

Volume: from 5 m<sup>3</sup> to 50 m<sup>3</sup>. Used for aqua-gel storage, and for food and chemical industry. Tank consists of the vacuum envelope and chassis. In vertical wall there are 2 hermetical charging hatches. There are 2 step ladders providing access to the roof. On the roof there is a collapsable safety barrier.



#### Elevated water towers.

- Volume from 15 to 160 m<sup>3</sup>. Used in agricultural water supply systems and for provision of water reserve for plants and settlements, for emergency water storage.
- Produced in 2 versions:
  - Water tank of 3020 mm in diameter and with volume from 15 to 50 m<sup>3</sup> and water-filled stands with volume from 12 to 18 m<sup>3</sup>.
  - Pillar-tower with volume of 160 m<sup>3</sup> and height of 24 m<sup>3</sup>.
- Towers are equipped with inside and outside step ladders and access hatches on the roof and the stand.



#### Embedded items.

- Used in the construction of nuclear power plants, for mounting of equipment and metal structures, as parts of openings in walls and floor structures, ducts, cable systems.
- TA and TD types.
- Items for operation in low temperature conditions (-30 C and lower) are made of St3 steel, anchor bars are made of AIII class steel of 25G2S and 35GS steel grade. Coating type depends on the extent of medium exposure (Tsinol, EP, GF).

# LISKIMONTAZHKONSTRUKTSIYA CJSC



## Company Profile

<b>Company name (short):</b>	Liskimontazhkonzstruktsiya CJSC
<b>CEO:</b>	Nikolay V. Belokonev
<b>Address:</b>	1 Montazhnikov St., Liski, Voronezh region 397907
<b>OKPO code:</b>	01395041
<b>Year of foundation:</b>	1949
<b>Workforce:</b>	1206 people
<b>Telephone:</b>	+7 (47391) 3-18-08 — CEO (reception)
<b>Sales and Marketing Dept:</b>	+7 (47391) 4-48-48, 4-11-84
<b>Supply Dept:</b>	+7 (47391) 3-51-51
<b>HR Dept:</b>	+7 (47391) 3-51-57
<b>Fax:</b>	+7 (47391) 3-21-47
<b>Specialization:</b>	Manufacture of products for process pipelines, main pipelines, nuclear power plants and fossil-fuel power plants.
<b>Sales volume in 2010:</b>	3 154 000 thousand RUR
<b>Production volume in 9 months of 2011:</b>	2779090 thousand RUR
<b>Quality management system:</b>	In 1997 the company obtained a certificate of compliance with EN ISO 9001-2008, acknowledging the high quality of the company's products.
<b>Certification authority:</b>	TUV CERT (Germany).
<b>Certification:</b>	All company's products are certified in products and services certification authority Policert, Tehneftegaz, LTD and has permit for use issued by Rostechnadzor.

## Historical Note

- 1946 – The company was set up on the basis of mechanical workshop producing nonstandard equipment for grain elevator.
- 1957 – The mechanical workshop was reorganized into a mechanical plant. The plant started to produce crane trucks, flanges, pressed bends, blank flanges, and small size crossovers.
- 1973 – The plant became the head enterprise of the production of dismountable items in the country.
- 1991 – The plant started the production of boilers and independent boiling rooms.
- 1992 – The plant was renamed as Liskimontazhkonzstruktsiya JSC.
- 2003 – 2 shops with total area of 12000 m<sup>2</sup> were built. The company got a license for the production of units for nuclear power plants.
- 2004 – The company started the production of bottoms up to 1220 mm in diameter and stamp-welded tee fittings up to 1420 mm in diameter; a unique 1020, 1220 mm diameter bend broaching production line was put into operation.
- 2005 – The plant was reorganized into Liskimo-

ntazhkonzstruktsiya CJSC. New flange stamping production line based on presses with power of 4000 and 8000 tonnes was put into operation.

- 2006 – New pipe bender COJAFEX PB1400 for up to 1420 mm diameter pipes bending was set into operation.
- 2007 – New press IST 1200 made in Taiwan for hydroforming of up to 273 mm diameter tee fittings was purchased.
- 2010 – The plant started the construction of new workshops.



## Production Facilities

Production area of Liskimontazhkonzstruktsiya CJSC is over 38000 m<sup>2</sup>. The workshops are tooled up with modern domestic and imported equipment including unique machines for the production of pipeline fittings; with measurement and testing equipment for acceptance testing. Production facilities of Liskimontazhkonzstruktsiya CJSC provide for manufacturing up to 50000 tonnes of items per year. The company has modern tool rooms, 3 forge and press shops, repair and mechanic and carpenter shops. The plant designs and produces nonstandard equipment and production accessories, devices for mechanical treatment, welding tools (devices for gas and plasma cutting). The plant cooperates with science and research and design and engineering institutes of Russia. The product range is constantly expanding because of the region having reach primary and energy resources and well-equipped production facilities. The variety of technological equipment and implementation of new production methods

are directed to successful execution of orders, including specific ones.

Today, the plant is building 2 new forge and press shops with the total area of 15000 m<sup>2</sup>, carpenter shop for production of packages, storage complex with the area of 20000 m<sup>2</sup>. Construction of modern tool room is planned.



## Production Program

### • Applications

Liskimontazhkonzstruktsiya CJSC products are used for the construction of main pipelines and process pipelines for oil, gas and oil products transportation. The plant also produces units for nuclear power plants and fossil-fuel power plants. Products can be coated with anticorrosion polyurethane coating.

### • Special features and competitive advantages

Liskimontazhkonzstruktsiya CJSC is a reliable partner of over 250 domestic and foreign companies including the biggest oil and gas companies such as Transneft, Gazprom, Rosneft, Lukoil, Surgutneftegaz, TNK-BP. The city of Liski is a big railway hub in central Russia. That helps to solve the problem with transportation of the company's products.

High quality products – it is the concept implemented in the company due to operating control on all stages of production. The company has hygienic certificates acknowledging the quality of products.

### • Innovations and new developments

The plant is finishing the construction of a new workshop for the production of stamp-welded tee fittings up to 1020 mm in diameter by hydroforming method. For that purpose, the new press with 20000-tonne power was ordered in South Korea.

Putting the new press into operation will enable the plant to increase its productivity and quality of products twice. The new workshop will also comprise: central laboratory, production of tube rings up to 7 m long. For tooling of this production the company purchased step-type bending press with 2500 tons power, automatic welding complex, modern X-ray TV control systems and systems for ultrasonic examination of welding joints; stand for hydraulic examination of tube rings.

Another workshop is being built for the unique hot-stamping hydraulic press with 6000 tons power which will help to reach a new level of quality in production of tee fittings with diameter of 1420 mm and wall thickness up to 90 mm.



## Product catalogue

The company's product range includes piping parts: blank flanges (bottoms) with full diameter from 45 to 1420 mm, sharply-bent branches with full diameter from 21 to 1220 mm and bent branches

with full diameter from 57 to 1420 mm, concentric reducers with full diameter from 45 to 1420 mm, tee fittings with full diameter from 54x54 to 1420x1420 mm, flanges with diameter from 15 to 600 mm.



### Dished ends (bottoms).

*Application: piping hermetization.*

Dished stamped welded steel ends (bottoms) are produced with design and size to GOST 17379-2001 with engineering specification to GOST 17380-2001 with nominal pressure up to 16 MPa, with design, size and engineering specifications to TU 1469-014-01395041-03 (with requirements OTT-08.00-60.30.00-KTN-036-1-05), GazTU 1469-014-01395041-03 with nominal pressure up to 9.8 MPa (with requirements STT-08.00-60.30.00-KTN-015-1-05), TU 1469-012-01395041-10 (with requirements OTT-23.040.00-KTN-190-10), with nominal pressure up to 14.0 MPa, TU 1469-016-01395041-08 with nominal pressure up to 11.8 MPa for main pipelines and with nominal pressure up to 16.0 MPa for process pipelines.



### Steel flat and butt welded flanges

Steel flat and butt welded flanges are produced with design and size to GOST 12820-80, with engineering specification to GOST 12816-80, DIN, PN.



### Bent branches

*Application: line bends.*

Branches are produced with deflection point from 1' to 90' with 3' grading (1' grading on demand). On customer's request the company is able to produce bent branches with any length of straight reach.

Bent steel welded branches are made with design, size and engineering specification to TU 1469-014-01395041-03 (with requirements OTT-08.00-60.30.00-KTN-036-1-05), GazTU 1469-014-01395041-03 with nominal pressure up to 9.8 MPa (with requirements STT-08.00-60.30.00-KTN-015-1-05), TU 1469-012-01395041-10 (with requirements OTT-23.040.00-KTN-190-10), with nominal pressure up to 14.0 MPa, TU 1469-016-01395041-08 with nominal pressure up to 11.8 MPa for main pipelines and with nominal pressure up to 16.0 MPa for process pipelines.



### Concentric reducers

*Application: pipeline diameter change.*

Concentric steel welded reducers are made with design, size and engineering specification to TU 1469-014-01395041-03 (with requirements OTT-08.00-60.30.00-KTN-036-1-05), GazTU 1469-014-01395041-03 with nominal pressure up to 9.8 MPa (with requirements STT-08.00-60.30.00-KTN-015-1-05), TU 1469-012-01395041-10 (with requirements OTT-23.040.00-KTN-190-10), with nominal pressure up to 14.0 MPa, TU 1469-016-01395041-08 with nominal pressure up to 11.8 MPa for main pipelines and with nominal pressure up to 16.0 MPa for process pipelines.



### Tee-fittings stamp-welded and stamped

*Application: pipeline branching.*

Stamped steel welded tee-fittings are made with design, size and engineering specification to TU 1469-014-01395041-03 (with requirements OTT-08.00-60.30.00-KTN-036-1-05), GazTU 1469-014-01395041-03 with nominal pressure up to 9.8 MPa (with requirements STT-08.00-60.30.00-KTN-015-1-05), TU 1469-012-01395041-10 (with requirements OTT-23.040.00-KTN-190-10), with nominal pressure up to 14.0 MPa, TU 1469-016-01395041-08 with nominal pressure up to 11.8 MPa for main pipelines and with nominal pressure up to 16.0 MPa for process pipelines.



### Sharply-bent branches

*Application: line bends.*

Steel welded sharply-bent branches are produced with bending angles 30°, 45°, 60°, 90° with pulling-through-the-horn broach method with design and size to GOST 17375-2001 (3D type branches) and to GOST 30753-2001 (2D type branches) with engineering specification to GOST 17380-2001 with nominal pressure up to 16 MPa, with design, size and engineering specification TU 1469-014-01395041-03 (with requirements OTT-08.00-60.30.00-KTN-036-1-05), GazTU 1469-014-01395041-03 with nominal pressure up to 9.8 MPa (with requirements STT-08.00-60.30.00-KTN-015-1-05), TU 1469-012-01395041-10 (with requirements OTT-23.040.00-KTN-190-10), with nominal pressure up to 14.0 MPa, TU 1469-016-01395041-08 with nominal pressure up to 11.8 MPa for main pipelines and with nominal pressure up to 16.0 MPa for process pipelines.

A photograph comparing two types of locomotives. On the left is a black steam locomotive with a prominent smokestack, a headlight, and a circular emblem on its front featuring a red star. On the right is a modern electric locomotive, primarily red and grey, with large windows, a small headlight, and a logo consisting of stylized letters 'РД' (RZhD). The locomotive has the number '2ТЭ116-934' displayed on its front. Both locomotives are positioned in front of a blue industrial building with white ventilation units on the roof.

РД

2ТЭ116-934



**TRANSPORT MACHINE BUILDING**

# VORONEZH VRZ VRM JSC



## Company Profile

<b>Company name (short):</b>	Voronezh VRZ VRM JSC
<b>CEO:</b>	Nickolay V. Piglovskiy
<b>Address:</b>	1 Bogdana Khmetnitskogo Lane, Voronezh 394010
<b>OKPO code:</b>	01055753
<b>Year of foundation:</b>	01.06.1912
<b>Workforce:</b>	2450 people
<b>Telephone:</b>	+7 (473) 227-76-09 — CEO (reception)
<b>Sales Dept:</b>	+7 (473) 227-72-36
<b>Supply Dept:</b>	+7 (473) 227-88-18, 221-38-79, 279-55-78
<b>HR Dept:</b>	+7 (473) 221-36-71
<b>Fax:</b>	+7 (473) 279-55-90
<b>Website:</b>	<a href="http://www.vwrz.ru">www.vwrz.ru</a> , <a href="http://www.bvp3.pf">www.bvp3.pf</a>
<b>Specialization:</b>	Roundhouse servicing and overall repair of carriages of all types, repair and new formation of passenger, geared and cargo wheelpairs, repair of trucks for railways with 1435 and 1520 mm rail gauge, production of carriage spare parts.
<b>Sales volume in 2010:</b>	2 663 325 thousand RUR (exclusive of VAT)
<b>Production volume in 9 months of 2011:</b>	2180627 thousand RUR
<b>Quality management system:</b>	certificate of compliance with GOST R ISO 9001-2001 requirements. Certification authority: RS RZhD (Russia, Moscow).
<b>Certification:</b>	All products are certified and have certificates of compliance with State institution federal railroad certification Register RS FZhD (Russia, Moscow).

## Historical Note

Voronezh car-repair plant – since July 1st 2008 branch of Vagonremmash JSC

The plant started its history in 1912, when on 1st of June construction of Otrozhka car-repair workshops, belonged to share holders of SouthEast Railroad was finished. Repair of carriages, production and processing of units were performed by rule of thumb.

In 1927 Otrozhka car-repair workshops were re-nounced to command of People's commissariat of railways and were renamed as car-repair plant.

During the WWII the plant manufactured military products: armored trains, parts of Katyusha mortairs, heavy-caliber landmines, repaired tanks. Over 300 employees took part in military actions. There is the monument of honour of heroes who died during the war.

In 1950's the plant started to repair comfortable passenger carriages, refrigerator trains, imported refrigerator rolling stock. The plant became the biggest one in the head office of railways system.

In 1970's the plant was completely re-equipped, new workshops were built, including passenger, refrigerator and electrical repair, product output increased rapidly.

For the first time in Russia the plant started to perform overhaul reconditioning of passenger carriages, building of more comfortable passenger carriages on the base of reconditioned ones.

Today the main direction of activity of the plant is repair of passenger carriages, and new formation and repair with change of elements of wheelpairs of all cargo and passenger carriages.

## Production Facilities

The plant takes up the area of 419000 m<sup>2</sup>. Workshops take up the area of 116300 m<sup>2</sup>. Engineering and manufacturing complex includes production facilities and engineering and technical services:

- Rotoblast shop,
- Coating shop,
- Body shop,
- Forging and stamping shop,
- Repair and gathering shop,
- Mechanic treatment shop,
- Woodworking shop,
- Electro compressor shop,
- Wheel and truck shop,
- Mechanical rubber shop,
- Fiberglass shop,
- Galvanizing shop,
- Assembling shop,

Processes department,  
Non-destructive testing shop,  
Metrology control shop,  
Quality management department.

All production facilities are toolled up with modern computer equipment, connected into the local area network, which is a part of enterprise network of Vagonremmash JSC

VVRZ was re-equipped 3 times. The last re-equipment was in 2003-2007. During the re-equipment 342 units of modern high capacity equipment were purchased, such as:

- Laser cutting system AMADA for metal roll cutting with 5 μm precision.
- Automatic shot blasting chamber for body cleaning by Carlo Banfy (Italy)
- Painting and drying complex for painting of carriages and other large-scale parts.

## Production program

### • Applications

Products of Voronezh VRZ Vagonremmash JSC covers the requirements of RZhD JSC and outside clients in repair of passenger rolling stock, repair and new formation of passenger, geared and cargo wheelpairs.

### • Special features and competitive advantages

According to results of operation of passenger carriages reconditioned by Voronezh VRZ and positive reviews from railways operators the company's products are needed and meet the modern requirements of comfort, ecology and safety.

On the base of reconditioned bodies of passenger carriages the plant produces new carriages with enhanced comfort and improved interior. Operation life of reconditioned carriages is 15 years.

The company accepts any orders for production of interiors and furniture for passenger carriages from figure-shaped detections on high-precision equipment. On customer's demand the interior of the carriage can be changed and improved. The company can offer the client a variety of new types of special-purpose carriages: compartment carriage with radio coupe, hard/open carriage, child carriage, simulator carriage, lounge car, church carriage, laboratory carriage, dining carriage, Zdorov'ye train.

Main advantage of the company is that the

plant has mastered the repair of passenger carriages of all types.

### • Innovations and new developments

VVRZ VRM JSC has implemented new technologies, such as:

- Plasma cutting of metal roll
- Laser cutting of metal roll
- Powder spraying of parts in electrostatic field
- Body painting with paint with increased durability
- Argon welding with inverter welding machine Navigator 2500 AC/DC
- Production of fiberglass car parts
- Automatic body rotoblasting
- Automatic plastic pasting
- Heat treating in ebullated bed
- Complex examination of electric and brake equipment

Technical re-equipment enabled the plant to master production of innovative and competitive products: new generation passenger carriages on the basis of new developments in power loading of the carriage, extending of diagnostic control on equipment, use of eco-friendly toilets, creation of comfortable conditions for passengers, fitting the carriages with modern communication, audio and video systems.

## Product Catalogue



### **Enhanced comfort dining carriage with bar.**

Equipped with dining tables, soft seats with lockers, bar chairs, bar tables.

In the bar part of the carriage there is a refrigerator-showcase with transparent door. Number of seats in the carriage – 39.

The kitchen is tooled up with 2 washers for food, serving tables, electric cooker PE4Zh, steam-convection station, extraction hood, hanging cupboards, low- and medium temperature refrigerating cabinets. Surface of tables is made of stainless steel.



### **Training carriage on the basis of passenger carriage 47D**

Used for technical training and skills practice of personnel of railway stations remote from education centres.

The carriage is fitted with fire alarm system Delta, loudspeaking broadcast and train communication.

The carriage is equipped with diesel generator Vepr' (16 kW) installed in spare room.

The carriage is equipped with split-type air conditioner providing for ventilation, cooling and heating. Bathroom is fitted with shower module and eco-friendly toilet Ecotol-V.

The classroom is fitted with 10 workplaces and teacher's table with PC with automatic education system and simulator installed, office machines, TV set, training aids.



### **Mobile consultative and diagnostic centre – Zdorovie train**

The train is used for provision of medical care in distant population places, located in districts of North and Far East railroads.

The train comprises following carriages:

- 2 staff carriages
- Consultative carriage I (therapeutic)
- Diagnostic carriage I (laboratory)
- Consultative carriage I (surgical)
- Diagnostic carriage I (laboratory)
- Surgical/bandaging carriage
- Photofluorographic/ultrasound investigation carriage
- Dining carriage
- Power plant carriage



### Sleeping carriage SV-2 for excursion train Alexander Nevskiy

Main features:

- Air conditioning system (made in Russia) KZh2-4.5/2.5 with spare control for each coupe
- Vacuum eco-friendly toilets Ecotol-Vac
- Carriage heating with combined pre-heating SVOPV, information/entertainment system IN-BERA.
- Security signal system Intecity

Shower cabins are mounted between neighbouring coupes. Each coupe is equipped with refrigerator and microwave oven.



### Saloon carriage WDI k/ki model.

Features:

- Spare climate control for each coupe.
- Vacuum eco-friendly toilet Ecotol-Vac
- Aluminium/plastic window blocks faced with frames made of fireproof fiberglass and equipped with curtain devices with double curtains.
- Beds are covered with cloth with lowered flammability

The carriage is equipped with:

- Shower cabin, refrigerator, electric heater, infotainment system



### Carriage-laboratory.

Special carriage used for accomplishing of special tasks of railroad operators subdivisions.

During production of the carriage the plant performs all upgrades in compliance with requirements for fire safety, ecology, sanitary norms and safety in operation.

The plant produces following special carriages:

- Brake examination carriage (project 0601, 0601SK)
- Pull and energy efficiency lab (0301P)
- Dynamometric carriage (project 0201P)

# VORONEZH ZHELDORREMMASH TRZ JSC



## Company Profile

<b>Company name (short):</b>	Voronezh Zheldorremmash TRZ JSC
<b>CEO:</b>	Nikolay N. Muzalevskiy
<b>Address:</b>	5 Sverdlova St., Voronezh 394026
<b>OKPO code:</b>	01055747
<b>Year of foundation:</b>	28.07.1868
<b>Workforce:</b>	1874 people
<b>Telephone:</b>	+7 (473) 252-78-86, 265-20-90 — CEO (reception)
<b>Sales Dept:</b>	+7 (473) 255-94-64, 265-24-18
<b>Unit Completing Dept:</b>	+7 (473) 255-94-73, 265-24-18
<b>Supply Dept:</b>	+7 (473) 252-07-00, 265-24-77
<b>HR Dept:</b>	+7 (473) 239-92-91, 239-92-65
<b>Fax:</b>	+7 (473) 253-15-6
<b>Website:</b>	<a href="http://www.vrntrz.ru">www.vrntrz.ru</a> , <a href="http://www.ao-zdrm.ru">www.ao-zdrm.ru</a>
<b>Specialization:</b>	Overall and medium repair of diesel-electric locomotives 2TE116, 2TE116K, TEP-70, TEP-70U, TEP70BS, 2TE10MK, 2TE10UTK. Overall and medium repair of parts and units of diesel-electric locomotives. Overall and medium repair of electric AC and DC machines, power transformers, welding machines.  locomotive and car axles, brakeblocks, air tanks, including ones, certified by SSFZhT. Production of nonstandard equipment, air tanks, ferrous and nonferrous casting, cold- and hot-stamped components, forging.
<b>Production of spare parts for rolling stock:</b>	1 573 760 thousand RUR (exclusive of VAT) 1898091 thousand RUR
<b>Sales volume in 2010:</b>	1 573 760 thousand RUR (exclusive of VAT)
<b>Production volume in 9 months of 2011:</b>	1898091 thousand RUR
<b>Quality management system:</b>	certificate of compliance with GOST ISO 9001 requirements. Certification authority: RS FZhD (Russia, Moscow).
<b>Certification:</b>	The company has certificates of compliance on following products: iron brakeblocks of M type for locomotives, locomotives wheelpairs without axle equipment for diesel-electric locomotives 2TE116, 2TE10 (all indexes), locomotive air tanks, rough and finishing locomotive axles, rough car axles.

## Historical Note

Voronezh diesel-electric locomotive repair plant – main locomotive maintenance enterprise of Zheldorremmash JSC.

The plant was founded on 28 July 1868 as railroad workshop for locomotives and carriages maintenance. During industrialization years the plant was reconstructed and in 1929 renamed as Voronezh Locomotive-repair plant. Before the WWII the

plant performed full repair and upgrade of high-power locomotives of FD, IS series etc.

During WWII the plant produced military machines. The plant produced parts for Katyusha mortairs in cooperation with other plants, manufactured shells and other products.

In the first days of the war hundreds of workers joined voluntary regiment. Hundreds of the best

workers of the plant joined the army by the armoured train made by them.

On 15 august 1944 after reconstruction of the plant first repaired armoured train was sent to the lines.

There is a monument with names of 222 workers, who died in the lines.

In the first days of liberation of Voronezh the workers started to restore the plant from ruins. Soon the plant started working for the Victory.

After the reconstruction in 1960 the plant repaired first TE3 locomotive. Since that day the new period in the history of the plant started. Over 16000 repaired locomotives continued operation on railroad mainlines of the country.



## Production Facilities

Production facilities of the plant take up the area of 26 hectares with building density of 53%. This area comprises workshops and administrative offices:

- Main office;
- Casting/procuring shop;
- Locomotive assembly shop;
- Mechanic treatment shop with plating and mechanical rubber sectors;
- Tool rooms;
- Metalware production shop;
- Non-destructive testing laboratory;
- Main laboratory;
- Testing stations.

Locomotives pass through the full cycle of repair works from disassembly and repair to painting and running tests.

The plant gained rich experience in accomplishment of complex production tasks.



## Production Program

- Overall and medium repair of locomotives of 2TE116, 2TE116K, TEP-70, TEP-70U, TEP70BS series.

- Outsource overall and medium repair of units of 2TE116, TEP-70 locomotives.

- Outsource production of spare parts for rolling stock: locomotive and car axles, brakeblocks, air tanks, ferrous and nonferrous casting, cold- and hot-stamped components.

### Applications

Products and services of the plant are widely used in railroad industry; main clients are Russian Railroads JSC, companies having own rolling stock, companies working in car-repair and car-building industries, such as: Norilsk Nikel JSC, Vagonremmash JSC, Bryansk machine-building plant CJSC, Kolomenskiy plant JSC etc. The plant also manufactures products for oil and gas industry and for national economy. The plant accepts

orders for the manufacture of products to customer's drafts and drawings.

### • Competitive advantages

The main advantage of the plant comparing to other manufacturers is the high quality of services and products, production stability and constant improvement, developed social policy.

### • Innovations and new developments

Currently, the plant is developing the middle repair of new TEP70BS (U) locomotives. The plant is implementing new concepts and principles in the repair of mainline locomotives. The first locomotive repaired in accordance with new principles was set into operation in June 2011 and is successfully operating in the Ritsch-evo engine house of South-East railroad. During the official acceptance of the locomotive the Vice-president of Russian Railways JSC Alexey V. Vorotilkin was present.

## Product catalogue



### Overall and middle repair of locomotives:

- 2TE116,
- 2TE116K,
- TEP-70,
- TEP-70U,
- TEP70BS,
- 2TE10MK,
- 2TE10UTK.



### Overall and middle repair of traction motors and electric machines:

- ED118A (B);
- ED121;
- ED133;
- ED150.



### Overall and middle repair of electric machines:

- Generators GS-501;
- GP-300, GP-321;
- Exciter VS-650;
- Electric motors 2P2K;
- P-11M, P-21
- P-51;
- PSGU-2 motor-fans 4AZh160;
- 4AZh.225.602, MV-11;
- Starter-generator 5PSG;
- Compressors KT-6;
- KT-7;
- 6TK.



### Wheelpairs repair:

- TEP75.31.15.0'SB;
- T1748.01.0'SB;
- T1748.02.0'SB.



**Wheelpairs for locomotives 2TE116, 2TE10:**

- T1748.01.00 sb;
- T1748.02.00 sb.



**Tanks:**

- 103.266.00.00.00.000 sb;
- 103.267.00.00.00.000 sb;
- 103.268.00.00.00.000 sb;
- 103.269.00.00.00.000 sb;
- 103.270.00.00.00.000 sb;
- 103.271.00.00.00.000 sb.



**Rough car axles:**

- RU-1Sh.



**Spare parts for locomotives:**

- 2TE116,
- 2TE116K,
- TEP-70,
- TEP-70U,
- TEP70BS,
- 2TE10MK,
- 2TE10UTK.
- TEM-2 etc.

# NPP IZMERON-V LTD



## Company Profile

<b>Company name (short):</b>	NPP Izmeron-V LTD
<b>CEO:</b>	Mikhail V. Biryukov
<b>Address:</b>	Office 10, 111 Truda av., Voronezh
<b>OKPO code:</b>	10600014
<b>Year of foundation:</b>	18.12.1992
<b>Workforce:</b>	41 people
<b>Telephone:</b>	+7 (473) 261-36-60, 261-36-59 — CEO (reception)
<b>Fax:</b>	+7 (473) 261-36-60, 261-36-59
<b>Website:</b>	<a href="http://www.izmeron-v.ru">www.izmeron-v.ru</a>
<b>Specialization:</b>	Development of laser measurement and geometric control systems.
<b>Sales volume in 2010:</b>	25 000 thousand RUR
<b>Quality management system:</b>	The company is developing the QMS complying with international standard ISO 9001:2008
<b>Certification:</b>	All products are certified.

## Historical Note

Research and production enterprise Izmeron-V LTD is the leader in the design and production of laser geometric control systems. Founded in 1992, the company is constantly developing and has the reputation of high-quality equipment producer.

- 2003 – The company's products were included into the State program of equipping of RZhD JSC with laser measuring systems.
- 2004 – The company got certificates on produced measuring devices.
- 2005 – The company was licensed as the developer and producer of measuring equipment.
- 2006 – The products of the company were added to the list of obligatory equipment of engine houses and plants of RZhD JSC as obligatory devices for overall and middle repair.
- 2008 – For the first time in Russia in Magnitogorsk engine house the 3D-scanning laser system for high-precision cargo carriages size measuring was implemented.

The company has all facilities for scientific research, design and production of new measuring equipment. Students of Voronezh high schools have practical trainings in the company.



## Production Facilities

Production facilities of NPP Izmeron-V LTD are based on use of advanced technologies and high-precision equipment. The company comprises: blank production and welding sector, machining process sector, assembling and packaging sectors.

Production of laser measuring equipment conforms to modern requirements in technical level, reliability and efficiency.

The company has metrology laboratory for the calibration and testing of products.

The company is located in Kominternovskiy district in Voronezh and takes up the area of 1350 m<sup>2</sup>.

Total employment size – 41 people.

Production facilities infrastructure is the following:

### **Production shop:**

- Blank production and welding sector – 2 working places.

- Machining process sector – 3 milling machines, 2 turning machines, 5 working places.

- Assembling sector – 6 working places.

### **Metrology laboratory – 10 testing devices**



## Production Program

Predictable sales volume for 2011 – 35 million RUR

### **• Applications**

Laser gauges made by NPP Izmeron-V LTD are used for measuring of the geometric parameters of large-scale machines.

Main spheres of application – heat and nuclear power engineering, railroad transport, metallurgy, mining industry, shipbuilding etc.

### **• Special features and competitive advantages**

- Products of the company are certified and listed in the State register of measuring devices.

- The company's measuring devices are successfully operating in different industries.

- NPP Izmeron-V is licensed for carrying out calibration works.

- All products made by NPP Izmeron-V LTD provide measuring results in the form of electronic report, which protects the executor from quality reclamations from operating organisations.

### **• Innovations and new developments**

NPP Izmeron-V LTD performs research and development activity, resulting in the development of new measuring systems. Today the innovation of the company is development of laser 3D scanning and videogrammetry system. By now the company has developed the following systems:

- Automatic 3D laser scanning system ALSI. Used for high-precision and fast production of 3D

model of the object and definition of its geometry.

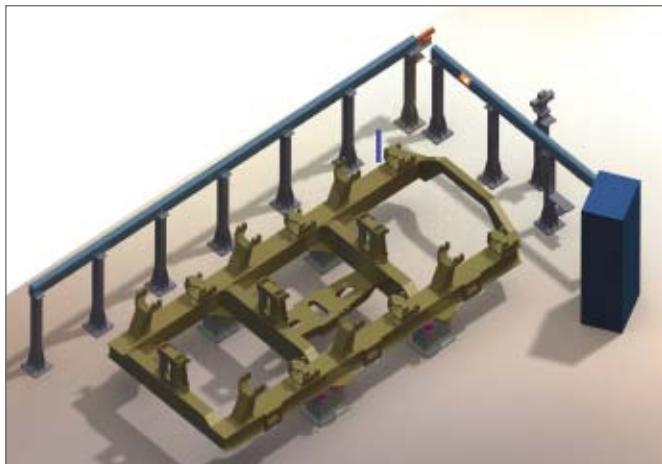
Today this system is operating in Magnitogorsk engine house, where it is used for geometrics definition of cargo carriages.

- Carriage size measuring system LIGA-01. The system uses videogrammetry method with structured light. High precision of measuring is possible due to synchronous analysis of several pictures of the same part of the object, captured by different calibrated video cameras.

- Measuring system for geometric parameters of concrete sleepers. The system uses videogrammetry method. Provides control of geometric parameters of each sleeper. Application – quality management systems. Measuring time – 2 minutes. Measuring result – electronic measuring profile for each concrete sleeper.



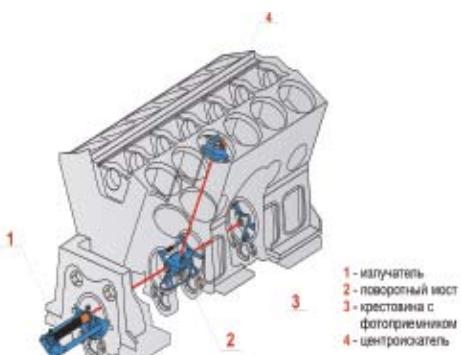
## Product Catalogue



### Laser measuring device LIS RT-3

Used for geometries measuring of the chassis of the car trucks and traction equipment trucks.

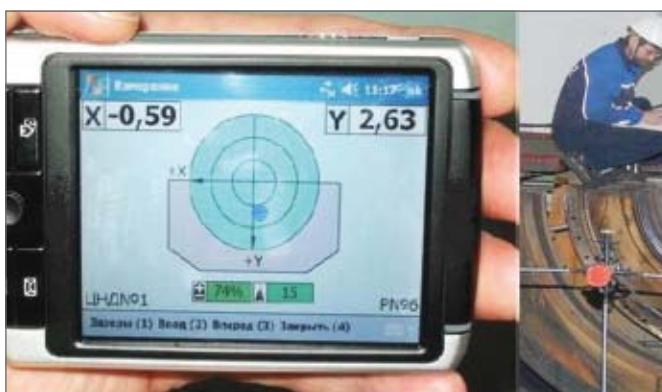
- Measurement accuracy: 0.2 mm
- Measurement time: 30 minutes



### Engine block control system SKBD-3

Unique system for the control of the geometric parameters of large-scale engine blocks of diesel engines.

- Distance range: 0-6 m
- Resolution: 0.001 mm



### Laser system for centering of air-gas channels of turbines Centroel-3

- Distance range up to 40 m
- Centering accuracy:
  - At 10 m: + 0.02 mm
  - At 20 m: + 0.05 mm



### Automatic 3D laser scanning system ALSI

Used for high-precision and fast production of 3D model of the object and definition of its geometry.

- Precision of measurements: 2 mm
- Measurement time: from 3 to 30 mm



# 172 TSARZ JSC

**Company name (short):** 172 TsARZ JSC

**CEO:** Vladimir E. Revyuk

**Address:** 83 Dimitrova Street, Voronezh 394042

**Year of foundation:** 01.09.1945

**Telephone/fax:** +7 (473) 226-38-77, 224-68-02

**Website:** [www.172carz.ru](http://www.172carz.ru)

**Specialization:**

Machine building

**Special features and competitive advantages:**

Highly-trained professionals, modern equipment purchased within the framework of federal goal program, convenient location.

**Product range:**

Overall repair of KAMAZ, URAL, GAZ, ZIL trucks, special wheel chassis BAZ and special truck chassis ZIL-135, production of crew buses based on KAMAZ, URAL, GAZ chassis, production of wheeled recovery tractors TK6AM.1, fire-fighting vehicles ATs 6.0-40, trailers for motorcars, nonstandard equipment.

# PAVLOVSK SHIPYARD JSC

**Company name (short):** Pavlovsk Shipyard JSC

**CEO:** Nadezhda I. Omelchenko

**Address:** 1 Olega Koshevogo St., Pavlovsk, Voronezh region 396422

**Year of foundation:** May 1709

**Telephone/fax:** +7 (47362) 2-53-48, 2-55-48

**Website:** [www.web.vrn.ru](http://www.web.vrn.ru)

**Specialization:** Ship building, ship repair

**Product range:**

- barges,
- tug-boats,
- houseboats,
- float bridges.





# PHARMACEUTICAL INDUSRTY AND MEDICAL EQUIPMENT

# VEROPHARM JSC



## Company Profile

<b>Company name (short):</b>	Veropharm JSC
<b>CEO:</b>	Albert A. Ivanov
<b>Address:</b>	80 Koltsovskaya St., Voronezh 394006
<b>OKPO code:</b>	45961725
<b>Year of foundation:</b>	1934
<b>Workforce:</b>	638 people
<b>Telephone:</b>	+7 (473) 272-72-95 — CEO (reception)
<b>HR Dept:</b>	+7 (473) 277-13-20
<b>Fax:</b>	+7 (473) 277-26-11, 276-55-32
<b>Website:</b>	<a href="http://www.veropharm.ru">www.veropharm.ru</a>
<b>Specialization:</b>	Pharmaceutical industry
<b>Sales volume in 2010:</b>	911 482 thousand RUS (exclusive of VAT)
<b>Production volume in 9 months of 2011:</b>	908495 thousand RUR
<b>Quality management system:</b>	QMS of Veropharm JSC complies with the requirements of MS ISO 9001:2008, State Standard (GOST) R ISO 9001-2008. Production of medical products (plasters) in Voronezh plant fully complies with the requirements of ISO13485:2003
<b>Certificates:</b>	All company's products are liable to obligatory certification or declaring.

## Historical Note

- 1934 - organization of Pharmaceutical plant №7 enterprise.
- 1943 – the first 50,000 medicinal ampoules were made.
- 1944 - for the first time in the history of the USSR, Voronezh plant began manufacturing rolled adhesive plasters.
- 1946 - the plant had five shops, including pharmaceutical shop, tablet shop, coated plaster shop, packing shop, and ampoule shop.
- 1994 – the plant started working on development and implementation of new medications.

Currently, the Voronezh-based Veropharm branch produces over 226 different types and form-factors used in different branches of medicine. Voronezh-based branch produces up to 80% of rolled fixation plasters, up to 70% of bactericidal plasters, up to 70% of capsicum plasters, up to 99% of blotters in the total amount of plasters produced in Russia.



## Production Facilities

Production facilities of Voronezh branch of Veropharm JSC occupy an area of 25000 square meters housing well-equipped production of medications, medical devices and beauty products. Voronezh-based branch of Veropharm JSC holds leading positions of plaster production in Russia. Production volume is about 468 million plasters a year. Products are divided into a number of product lines, based on different types of glues and materials (cloth, non-woven fabric, film). It gives an opportunity to release a wide range of plaster products. Product range of Veropharm JSC is constantly expanding. Production facilities include modern high-capacity equipment manufactured in Italy, England, Germany, and Taiwan. Veropharm JSC is constantly improving its production equipment. The company is aiming at improving its production equipment. The plant's development department includes the division of product development and the central laboratory. All plasters are engineered and developed by high-skilled professionals of this department. In 2010 the plant developed liquid beauty products for intimate hygiene and hands, feet and mouth cavity cleaning products.



## Production Program



Veropharm JSC has modern production base and a team of highly-educated professionals. It looks into the future, improving its research, manufacturing and human resources for effective use of scientific achievements in its products. Today the company's portfolio includes over 300 products, used in different branches of medicine. There are over 2000 competent employees working in the company.

Veropharm team uses their unique knowledge raising the level of modern medicine and produces quality and affordable medication for millions of people. Veropharm JSC is constantly improving its manufacturing equipment and Research and Development processes.

The company's main asset is its high-skilled personnel. Therefore, Veropharm uses the latest innovations in the production of its medications. The company product range is constantly expanding.

## Product catalogue



### **UNIPLAST adhesive bandage**

Used for fixation of dressings on wounds, furuncles etc; for fixation of drain tubes, catheters, suture and other medical items. Produced in 5 variants – on 5 various carrier materials (non-woven cloth, non-woven textiform base, film, silk) and in 3 form-factors: 1,25x500 cm, 2,5x500 cm, 5x500 cm (except UNIPLAST adhesive bandage on non-woven textiform base, which is produced in 10x500 cm form-factor). The quality of UNIPLAST adhesive bandage exceeds the quality of imported counterparts. In 2009 on the basis of the National Research Center of toxicological and biological safety of medical products a comparative examination on sensitizing and irritating effect on skin and mucous coats of adhesive bandages from different manufacturers was carried out. The research proved that UNIPLAST is the most hypoallergic plaster. It is important, that UNIPLAST plasters are more reasonably priced for Russian clinics and ordinary consumers. In 2003 UNIPLAST adhesive bandage was awarded a silver medal in Top 100 Russian Products contest. UNIPLAST adhesive bandage – the highest quality at a reasonable price.

### **Bactericidal plasters group (Adhesive plaster Veropharm UNIPLAST Bactericidal)**

Veropharm bactericidal adhesive plaster is produced on cotton fabric base with triple antiseptic impregnation (synthomycin, brilliant green, furacilin) to be used for dermatic dressing antiseptic in case of cut, scratch and other minor dermatic defects. Natural fabric is hypoallergic and air-permeable. 3-layer impregnation provides for bactericidal effect against microorganisms in the wound.

UNIPLAST bactericidal plaster is produced on 3 various bases (microperforated film, fabric, elastic cloth, semitranslucent extra soft cloth, foamed absorbing film) with antitraumatic sponge, impregnated with chlorhexidine. Used as antiseptic dressing in case of minor dermatic defects. In 2003 UNIPLAST bactericidal plaster was awarded a gold medal in Top 100 Russian Products contest.

In 2009 the Institute of surgery after A. V. Vishnevskiy carried out a research in which 10 different plasters by Russian and foreign manufacturers took part. It was proved that Veropharm bactericidal adhesive plaster and UNIPLAST bactericidal plaster have the best bactericidal effect.

### **Blood-stopping plaster group (UNIPLAST blood-stopping)**

UNIPLAST blood-stopping plaster is produced on microperforated film base with antitraumatic sponge, impregnated with haemostatic substance – oxygenized cellulose. As a result of its physico-chemical properties the bleeding stops rapidly and surely. UNIPLAST blood-stopping plaster is used as a local haemostatic in case of minor wounds. The base of plaster is film with microholes in the shape of funnel. It is nonwatertight and breathable that helps the wound to heal faster. And the sponge, made of antitraumatic material makes it possible to take off the plaster without damaging the wound. Besides, all UNIPLAST blood-stopping plasters are sterile, provide good adhesion and are reasonably priced. UNIPLAST blood-stopping – the best plaster for cuts.

### **Capsicum plasters group (DOCTOR PERETZ capsicum plaster. DOCTOR PERETZ capsicum plaster with anesthetic effect)**

DOCTOR PERETZ capsicum plaster is used as locally-irritating and distracting product for musculoskeletal system diseases (degenerative spine disease, radiculitis, myositis, arthritis, lumbago, arthralgia), wounds, bruises and catarrhal diseases. The active substance of DOCTOR PERETZ is capsicum dense extract. Voronezh branch of Veropharm JSC produces it on its own facilities from vegetable stock – capsicum. DOCTOR PERETZ contains no toxic products. DOCTOR PERETZ – 100% natural warmth.

Capsicum plaster DOCTOR PERETZ with anesthetic effect is an original product. It is used in the event of pain in muscles and joints. Anesthetic and antiphlogistic effect is reached by means of use of non-steroidal anti-inflammatory medicinal substance – metamizole sodium. DOCTOR PERETZ with anesthetic effect is a powerful anesthetic and anti-inflammatory product.

### **Corn plasters group (SALIPOD corn adhesive plaster)**

SALIPOD corn adhesive plaster is used for dry corns and plantars. It contains salicylic acid, having keratolytic effect. It means that plaster softens even old dry corns and plantars and heals them. In 2009 Institute of surgery after A. V. Vishnevskiy carried out the research on plasters, used as corn plasters. The research proved that SALIPOD is the most effective plaster on the Russian market. SALIPOD – high performance, proved by research.

### **Bandages and dressings group (UNIPLAST self-locking bandage on non-woven base, film-based self-locking UNIPLAST bandage, UNIPLAST surgical film, UNIPLAST plaster in strips, UNIPLAST antibacterial bandage, UNIPLAST bandage for catheter fixation)**

In 2010 Veropharm JSC started the production of new modern bandages – self locking bandages, surgical films, surgical strips.

All UNIPLAST bandages are sterile and antitraumatic, so there is no risk of postprimary contamination.

Self-locking UNIPLAST bandage is used for covering wounds, surgical incisions, fixation of salve dressings, catheters, drain tubes and other medical items. The bandages are produced on non-woven base or on film base. Non-woven base is soft and breathable; film is transparent, breathable and waterproof.

UNIPLAST surgical film is used to cover surgical field during and after operative treatment. It is ideal for insulation of the wound, non-exudative incisions, for locking of tampons and other medical items. UNIPLAST film is hypoallergic, and characterised by high water and steam permeability, humid resistance. It locks firmly and is easy to use.

UNIPLAST strip plasters are used for nonsuture contracture to prevent cicatrix. UNIPLAST strip plasters are water and steam permeable, antitraumatic, firmly held-up, hypoallergic, and easy to use.

In 2010 Voronezh branch launched the new line liquid cosmetics Veromistin – Russian antiseptic product of new generation. Veromistin is the line of new antiseptic products for different applications.

Veromistin Silver – silver is better than gold!

Veromistin contains 2 strong antiseptics and silver ions. Antiseptics react on viruses, bacteria and fungi; silver is not only amplifies antiseptic effect, but has strong antibacterial effect.

# NPO POLYUS LTD



## Company Profile

<b>Company name (short):</b>	NPO Polyus Ltd
<b>CEO:</b>	Victor A. Savvateev
<b>Address:</b>	180, 9 Yanvarya St., Voronezh
<b>OKPO code:</b>	59563632
<b>Year of foundation:</b>	2002
<b>Workforce:</b>	99 people
<b>Telephone:</b>	+7 (473) 247-95-15, 247-07-72
<b>Fax:</b>	+7 (473) 247-95-39, 247-95-34
<b>Website:</b>	<a href="http://www.npopolus.ru">www.npopolus.ru</a>
<b>Specialization:</b>	Engineering and production of mobile medical systems based on KAMAZ trucks.
<b>Sales volume in 2010:</b>	78 640 thousand RUS (exclusive of VAT)
<b>Production volume in 9 months of 2011:</b>	56500 thousand RUR
<b>Quality management system:</b>	Certificate of compliance № VR 15.112.1549-2007 with State Standard (GOST) R ISO 9001-2001.
<b>Certificates:</b>	Registration certificate on all production.

## Historical Note

- NPO Polyus Ltd was founded in 2002 on the base of Radio manufacturing plant Poluys JSC for engineering and production of mobile medical systems based on off-road vehicles.
- In 2007 The X-Ray diagnostic system PDRK was awarded a silver medal at the VII Moscow international exhibition of innovations and investment.
- In 2008 NPO Polyus LTD was awarded a gold medal at the III international exhibition of weapons and military equipment for engineering of the field-type mobile stomatological system PPDK.
- In 2008 NPO Polyus was awarded a gold medal at the XII international exhibition Interpolytech 2008 for engineering of the field-type mobile diagnostic laboratory LKDP.
- In 2008 the field-type mobile stomatological system PPSK was shown at the international research and practice conference Condition and development prospects of disaster medicine in Russia. International experts expressed the high opinion of the production.
- In 2010 NPO Polyus was awarded a medal at the III Voronezh industrial meeting for innovative development of mobile diagnostic laboratory LKDP.
- In 2010 NPO Polyus was awarded a gold medal and diploma Quality and safety guarantee at the XIV International exhibition Interpolytech 2010 for development and implementation of mobile medical system for special purposes KMP-SN.
- In 2011 NPO Poluys was awarded a medal and diploma at the IV Voronezh industrial meeting for innovative development of mobile medical system for special purposes KMP-SN.
- All mobile complexes are patented by federal agency on intellectual property.
- Industrial patent № 66795 of 03.05.2007. Mobile X-Ray diagnostic system.
- Patent on utility pattern № 67031 of 18.06.2007. Mobile X-Ray diagnostic complex with self-contained power supply and load box with lifting tool for equipment loading and unloading.
- Patent on utility pattern № 72184 of 03.12.2007. Field-type mobile stomatological system with dental room, orthopedic room, and dental laboratory.
- Patent on utility pattern № 81461 of 15.12.2008. Mobile diagnostic laboratory.
- Production of NPO Polyus Ltd production is certified with certificate of conformity № VR 15.112.1549-2007 in accordance with State Standard (GOST) R ISO 9001-2001.

## Production Facilities

Industrial building takes up area of 10000 square meters.

Blank production shop comprises procuring, metalworkers, turners, milling, welding, and powder coating sectors.

Assembling shop comprises assembling, wiring, sewing, metalworker's, etching sectors.

Administration comprises engineering, technological, production, commercial, quality check, supply, accounting departments.

Industrial sectors are fitted with digital-controlled modern equipment, which enables the company to manufacture high-quality products.

In 2007 the company worked out the development programme, defining main working directions:

- Creation of scientific and production integrated structures, coordinating the realization of major projects in order to optimize production.
- Maintenance of competitiveness of the enterprise on home and international market.
- Intensification of innovative activity of the enterprise.
- Expanding of scientific and manufacturing capacity for engineering of modern mobile medical systems.
- Advanced personnel training, including improvement of additional tainting system and employing highly-qualified specialists.
- Effective personnel motivation.
- Constant pay increase and job creation.

## Production program

### • Function and application of products.

Mobile medical systems are used for qualified health care delivery in field conditions.

Sphere of application is diagnostics of people living in distant areas; qualified health care delivery to ill and injured in natural and industrial disasters.

### • Distinctive features and advantages, comparing to other manufacturers.

Innovative projects implementations.

### • Innovative works.

Production of the company is innovative.



## Product catalogue



### **Field-type X-Ray diagnostic system (PDRK)**

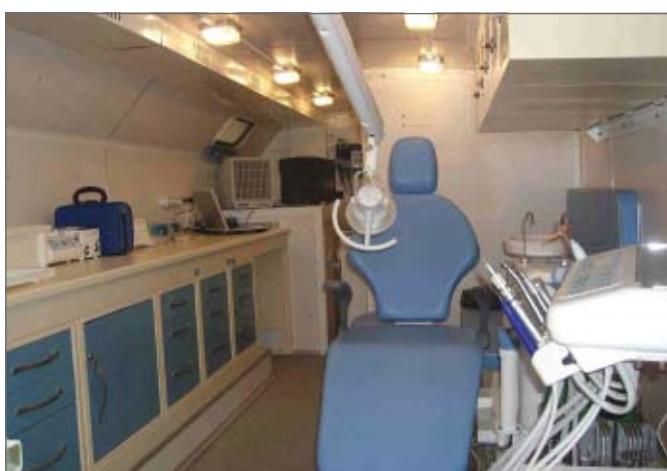
PDRK makes it possible to perform roentgenoscopy, radiographic examination, photofluorographic examination and ultrasound investigation in field conditions.

PDRK is housed in a box-body, installed on KAMAZ truck chassis, in a box-body, installed on a truck trailer and in air-inflated pavilion.



### **Mobile medical system for special purposes (KMP-SN)**

Used for first-aid delivery to injured and ill people in field conditions, for military operations support, for liquidation of consequences of natural and industrial disasters.



### **Field-type mobile stomatological system (PPSK)**

PPSK allows delivering therapeutic, orthopedic, stomatological treatment in field conditions. The system is fitted with stomatological, tomographic and X-Ray equipment, which allows making prosthetic appliance including metallo-ceramic appliance.

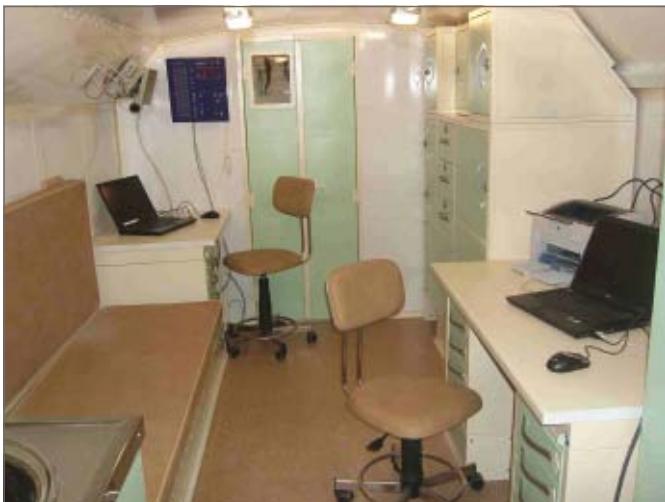
PPSK is housed in a box-body, installed on KAMAZ truck chassis, orthopedic room is housed in a box-body, installed on a truck trailer.



### **Mobile diagnostic laboratory (LKDP)**

LDPK is used for diagnostic, bioorganic, serological and isoserological examination.

LDPK is housed in a box-body, installed on KAMAZ truck chassis



#### **Mobile photofluorographic room with digital photofluorographic unit (KFP)**

KFP is housed in a box-body, installed on KAMAZ truck chassis



#### **Mobile medical system (KMP)**

Used for qualified specialty medical care delivery to injured and ill people in field conditions, for military operations support, for liquidation of medical and sanitary consequences of armed conflicts, natural and industrial disasters.

##### KMP provides:

- Attendance and triage of injured and ill people.
- First-aid and qualified specialty medical care delivery to injured and ill people, temporary hospitalization and further evacuation.
- Reanimation and post-surgical care.
- Antishock actions.
- Diagnostic, bioorganic, serological and isosero-logical examination.
- X-Ray diagnostic and ultrasound examinations.
- Registration of patients.

Patient capacity of the system: not less than 150 patients per day.

- Operating personnel number: 30 people.
- Main units of the system, pcs.:
  - Truck van KamAZ-43114.....5
  - Air-inflated pavilion, type MPK-36....5
  - Air-inflated pavilion, type MPK-54....5
  - Air-inflated pavilion, type MPK-72....3
  - Tented sided truck KamAZ-43114.....2
  - Road-tanker based on KamAZ-43114..1



## NPF KRYLO

**Company name (short):** NPF Krylo

**CEO:** Vladimir D. Polyakov

**Address:** 47 Starykh Bolshevikov St., Voronezh

**Year of foundation:** 24.02.1992

**Telephone/fax:** +7 (473) 223-05-03

**Website:** [www.krylo.ru](http://www.krylo.ru)

**Specialization:**

Manufacture of endosurgical medical devices.

**Special features and competitive advantages:**

Medical devices and equipment produced by the company are used in high technology surgical treatments. This equipment enables the doctors to put into perspective the treatment principles in such medical fields as cancerology, gynecology, urology, thoracoscopy and arthroscopy.

**Product range:**

The company's products are sold all over the Russian Federation. Among the company's clients are research medical centres, regional, municipal and district hospitals, private medical centres. Total number of clients is over 1000 medical institutions.

In 2000 the company's administration has launched its products in international market. The first step in this direction was certification of the products in Ukraine, Belarus, Kazakhstan, Tajikistan and Moldova and opening of offices in these countries.

In order to sale in CIS and other countries the company obtained the certificate of compliance with ISO 13485 requirements. In 2006 the company obtained the certificate of compliance with ISO 13485:2003 in Quality Service Schaffhausen AG, Switzerland. In 2007 the company collected the certificate of compliance with European directive 93/42/EEC (CE marking) on its hardware tools. That enabled the company to set up its offices in a number of European countries (Belgium, Germany, Poland, Czech Republic, and Bulgaria) and to sell its products in Europe and Middle East. Since its foundation in 1992, the company has been manufacturing innovative equipment. Today NPF Krylo engineers microprocessor-controlled medical instrument on a par with best foreign products.

NPF Krylo possesses all necessary production facilities. The company owns the industrial building with space of 3000 m<sup>2</sup>. Equipment stock consists of over 120 units, including unique machining centers with programmed numerical control.



## MEDTORG + LTD

**Company name (short):** Medtorg + Ltd

**CEO:** Alexander G. Reshetin

**Address:** 2a Minskaya St., Voronezh 394042

**Year of foundation:** 01.11.1999

**Telephone/Fax:** +7 (473) 239-60-21, 239-60-03, 225-49-39

**Website:** [www.medtorg-plus.ru](http://www.medtorg-plus.ru)

**Specialization:**

Production of medical equipment.

**Special features and competitive advantages:**

Medtorg + is the only company in Russia producing brush-commutated and brushless micromotors and dental drills.

**All company's products have passed medical certification.**

All company's developments are patented.

Product range:

Medical aci utilizers;

Brush-commutated and brushless micromotors;

Dental drills;

Equipage complexes for dental units;

Photopolymerization lamps for stomatology.



## STOMEL-K LTD

**Company name (short):** Stomel-K Ltd

**CEO:** Alexey P. Inozemtsev

**Address:** 13 Vitruka St., Voronezh 394033

**Year of foundation:** 29.12.1991

**Telephone/Fax:** +7 (473) 223-33-05, 223-24-46

**Website:** [www.stomel.ru](http://www.stomel.ru)

**Specialization:**

Production of stomatological and gynecological equipment.

**Special features and competitive advantages:**

Modern design, good value for money, use of LED technology.

**Product range:**

Dental units, compressors, light curing resin luting units, dental and gynecological lamps, furniture for medical institutions, furniture for autoclave rooms, tables with UV-irradiator



## CELIT LTD

**Company name (short):** Celit Ltd

**CEO:** Valeriy A. Blazhko

**Address:** 124i Dimitrova St., Voronezh 394002

**Year of foundation:** 16.94.1992

**Telephone/Fax:** +7 (473) 279-76-82

**Website:** [www.celit.ru](http://www.celit.ru)

**Specialization:**

- Production of stomatological materials.

**Features and advantages over rivals:**

- High quality materials at a reasonable price.

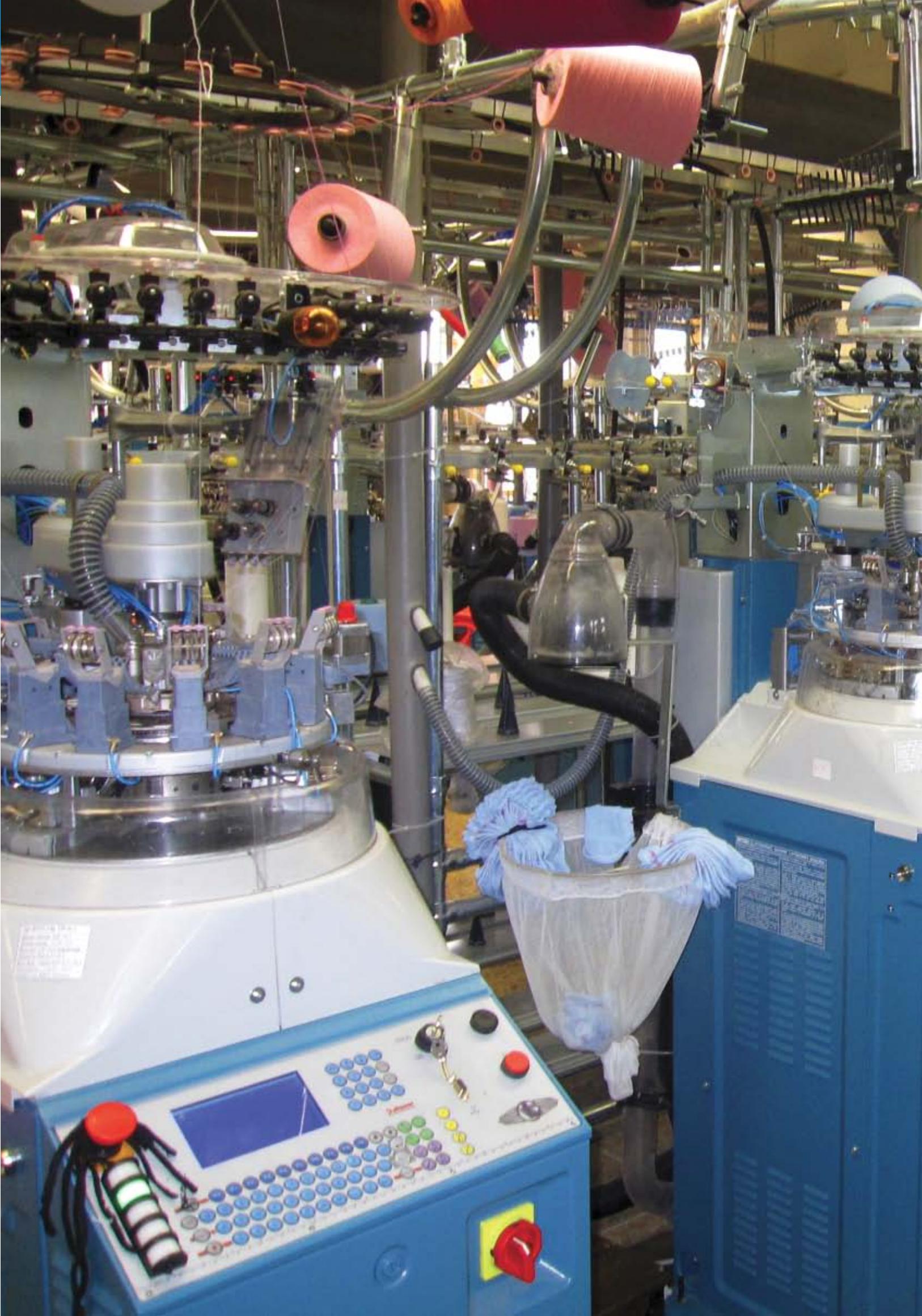
**Product range:**

- Dental plaster, III and IV type;

- Polishing heads;

- Elastic abrasive dental wheels;

- Therapeutic materials.





**LIGHT INDUSTRY**

# ACCORD CJSC



## Company Profile

<b>Company name (short):</b>	Accord CJSC
<b>CEO:</b>	Vitaliy V. Samarchenko
<b>Address:</b>	1 Avdeyeva St., Bobrov, Voronezh region 397700
<b>OKPO code:</b>	02956754
<b>Year of foundation:</b>	1924
<b>Workforce:</b>	110 people
<b>Telephone:</b>	+7 (47350) 4-12-91 — CEO (reception)
<b>Sales Dept tel./fax:</b>	+7 (47350) 4-14-52
<b>Specialization:</b>	Production of Russian folk artistic crafts goods: fretted instruments – guitars; cane furniture.
<b>Sales volume in 2010:</b>	45000 thousand RUR (exclusive of VAT)
<b>Production volume in 9 months of 2011:</b>	31128 thousand RUR
<b>Quality management system:</b>	PDCA (Deming cycle)
<b>Certificates:</b>	In accordance with the decree № 64 of 30.07.2002 of the State Committee for Standardization, Metrology and Certification, folk artistic crafts have been exempt from certification since 01.12.2002.

## Historical Note

Voronezh folk art traditions date centuries back. Folk arts have never stopped in their development reflecting the time and artistic traditions of different generations of craftsmen. In the 30s years of the twentieth century Workmen's Cooperative Association named after Voroshilov, now known as Accord CJSC, was founded in Bobrov. In the beginning, the Workmen's Cooperative Association produced cane goods and furniture – baskets, chairs, armchairs, picture frames. In 1939 the company started manufacturing fretted instruments – namely, guitars. Nowadays, the company produces a wide range of high-quality acoustic guitars.

There are over 25 guitar models with scale length – 450, 610, 650, with different variants of soundhole decoration – inlay, traditional Voronezh painting, high-quality polyurethane lacquer finish of the guitar body and fretboard. Guitars are made of the best sounding spruce, birch and ply-

wood. Leading production technology and silver-plated strings allow for the fullness of sound and melodiousness.

The company's main priority is the high quality of the equipment and non-waste production.

Another company's product line is cane furniture which will make any interior nice and cosy. The following traditional caning methods are typical of Voronezh region: lacing, spiraling, plaiting, twisting. Combination of hand craft and modern technologies makes each piece unique and attractive.

The company's products have been awarded the first prize in the national contest Top 100 Russian Products. The company's customers, as well as the field professionals, value the high professionalism of the company's specialists and their striving for perfection.

The company's production facilities allow for the manufacture of 3 thousand guitars and over 20 furniture sets a month.

## Product Catalogue



### Acoustic guitar – Article-8S4

The guitar has a large body with two sound-holes decorated with Voronezh traditional painting. The strings are held in place with the help of the bridge on the body and with the help of machine heads on the headstock. The upper part of the body is made of sounding spruce. The lower part is made of birch plywood. The bridge is made of Krasnodar beech. The neck is made of karelian birch, the head stock has machine heads on it. The guitar is of tinted natural colour with high-gloss polyurethane finish.



### Guitar Article-OS3

It is a plucked musical instrument with a curved body and one painted soundhole, scale length – 650 mm.

The lower part of the body is made of birch plywood. The bridge is made of Krasnodar beech. The neck is made of karelian birch plywood, the head stock has machine heads on it. The guitar has a black-and-white design, but can be of a different colour to meet the customer's requirements. Today, an acoustic guitar is one of the most popular guitar types. It is used as a primary instrument in genres such as rock, country, pop-music, reggae, etc.



### Elena cane furniture set

The set consists of two armchairs, a sofa and a coffee table. The furniture is made of osier and combines different caning techniques. Elena furniture has a simple but at the same elegant and original design, and is very comfortable.



### Natasha cane furniture set

The set consists of an armchair, a rocking chair, a coffee table, a dining table and four stools. The set combines traditional decorative elements with modern design, which help to create the atmosphere of peace and comfort. The articles are made in accordance with the masters' drawings and keep up the artistic traditions of Voronezh craftsmen. The company aims to satisfy the customer's requirements, and treats each task with great dedication.

# BORISOGLEBSK CLOTHING FACTORY LTD

## Company Profile

<b>Company name (short):</b>	BCF Ltd
<b>CEO:</b>	Elena V. Schukina
<b>Address:</b>	2a Seredina St., Borisoglebsk, Voronezh region 397160
<b>OKPO code:</b>	20206000000
<b>Year of foundation:</b>	01.03.2001
<b>Workforce:</b>	163 people
<b>Telephone:</b>	+7 (47354) 6-70-71 — CEO (reception)
<b>Deputy Director:</b>	+7 (47354) 6-63-04
<b>HR Dept:</b>	+7 (47354) 6-71-07
<b>Fax:</b>	+7 (47354) 6-68-60
<b>Specialization:</b>	Fabrication of work clothes, uniforms for armed forces and paramilitaries, and knitwear.
<b>Sales volume in 2010:</b>	47201 thousand RUR (exclusive of VAT)
<b>Production volume in 9 months of 2011:</b>	36021 thousand RUR
<b>Quality management system:</b>	Quality control at all stages of production – from design to final product release.
<b>Certificates:</b>	All the company's products are certified and declared in accordance with customers' demands.

## Historical Note

BCF Ltd was formed on the base of a clothing factory which was founded in 1960, was a member of Voronezh Odezhda Association and was later reorganized into Nina CJSC. The company fabricated men's and women's outerwear, boys' and girls' winter overcoats. Borisoglebsk Clothing Factory Ltd was founded on 1 March 2001. The founder was Artmex CJSC (Moscow). According to the sales contract of 28.02.2005 and participatory interest, Oleg D. Marchenko became the only owner. He invested substantially in re-equipping the company with state-of-the-art equipment, as well as in the improvement of working conditions. The company regularly bids for ministerial tenders and has signed a number of federal contracts. The high quality of the company's products and short production time have gained Borisoglebsk Clothing Factory CJSC its high reputation and excellent ratings.



## Production Facilities

BCF CJSC is situated in the southern part of Borisoglebsk industrial area. The company has a production building and an office building with the total area of 7043 m<sup>2</sup>. All the buildings have central heating, water supply and sewage system. Apart from that, the company has its own water well. The company owns the grounds with the area of 5741 m<sup>2</sup>. The main directions of production activity are: clothing manufacture and knitwear manufacture. The company is equipped with 470 machines. All the staff are highly-qualified and have many years of experience, which enables the company to produce a wide range of garments.

The company's production facilities allow for the production of the following amount of products in a shift:

- Winter suit – 102 items;
- Summer suits for the Ministry of the Russian Federation for Civil Defense, Emergency Management and Natural Disasters Response – 212 items;
- Winter suit of high complexity – 76 items;
- Summer suit of high complexity – 120 items;
- Women's suit – 136 items;
- Half-woolen service trousers – 388 items;

- Woolsey jacket – 225 items.

Knitwear output per shift:

- Dress – 80 items;
- Blouse – 94 items;

Knitting shop output per shift:

- Work gloves – 1200 items;
- Military gloves – 800 items.



## Production Program

### • Applications

Cotton summer suits, demiseason suits, warm winter suits for the Ministry of Defense, the Ministry of Internal Affairs, the Russian Federation for Civil Defense, Emergency Management and Natural Disasters Response, Rosatom, Transneft, etc; artificial leather jackets, women's knitted dresses and tops.

### • Special features and competitive advantages

The company is tooled up with steaming equipment.

### • Innovations and new developments

The company has started producing knitted garments, and is tooled up with modern steaming equipment.



## Product Catalogue



### **Summer field uniform**

#### Summer field jacket to TU 858-5325-94

Blind fly; patch pockets on sleeves and front; lined sleeves with sewn cuffs. Blended fabric, colour – green camouflage.

#### Summer field trousers TU 858-5325-94

Trousers with waistband, patch pockets with flaps. Foot loops. Blended fabric, colour – green camouflage.

#### Cotton service cap (without ear warmers) TU 858-5418-97

Lined. Plastic lined visor. Elastic band for cap adjustment. Blended fabric, colour – green camouflage.



### **Strazh summer suit**

#### Strazh summer jacket TU EMERCOM 2004

Zipper, patch and slash pockets, elastic band on waist. Lined sleeves, variable volume due to elastic band. Greta fabric, black colour.

#### Strazh summer trousers TU EMERCOM 2004

Trousers with waistband and side pockets, slash pocket with a flap on the seat of trousers. Greta fabric, black colour.



### **Palitra women's gown**

#### GOST 24760-81

Slimline gown. Central opening, button-down. Lay-down collar. Cord seams and patch pockets on the front. Short set-in sleeve, one-piece cuff. Detailing by blue satin ribbon on the collar, pockets and sleeves. SISU fabric, white colour.



**EMERCOM rescuer's summer suit**

Rescuer's summer jacket (EMERCOM) TU EMERCOM 2006

Zipper, patch and slash pockets, elastic band on the waist. Lined sleeves, variable volume due to elastic band. Chevrons with EMERCOM insignia on the front, EMERCOM logo on the back. INDESTR fabric, dark-blue colour.

Rescuer's summer trousers (EMERCOM) TU EMERCOM 2006

Trousers with waistband and side pockets, slash pocket with a flap on the seat of trousers. INDESTR fabric, dark-blue colour.

Summer cap (EMERCOM) TU EMERCOM 2006

Lined top. Lapelled crown with snap fasteners. Plastic lined visor. Chevrons with EMERCOM insignia on the front. INDESTR fabric, dark-blue colour. Size: 54 – 62.



**Master summer suit**

Master summer jacket GOST 27575-87

Button-down, patch pockets. Elastic band on the waist. Greta fabric, dark-blue colour with yellow detailing.

Master summer overalls GOST 27575-87

Overalls with waist seam, side and patch pockets. Greta fabric, dark-blue colour with yellow detailing.



**Alaska winter jacket GOST 29335-92**

Blind zipper, slash pockets, faux fur collar, inverness cape. Wristlets on sleeves. Oxford fabric, camouflage pattern, insulation – polyester.

**Reis winter trousers GOST 29335-92**

Trousers with elastic band on the waist, with slash side and zipped patch pockets. Oxford fabric, camouflage pattern, insulation – polyester.

# BORISOGLEBSKIY TRIKOTAZH JSC



## Company Profile

<b>Company name (short):</b>	Borisoglebskiy Trikotazh JSC
<b>CEO:</b>	Yevgeniy I. Pastushkov
<b>Address:</b>	1a Seredina St., Borisoglebsk, Voronezh region 397160
<b>OKPO code:</b>	00322790
<b>Year of foundation:</b>	01.03.1960
<b>Workforce:</b>	503 people
<b>Telephone:</b>	+7 (47354) 6-70-95 — CEO (reception)
<b>Sales Dept:</b>	+7 (47354) 6-71-77
<b>Supply Dept:</b>	+7 (47354) 6-71-95, 6-76-93, 6-72-73
<b>HR Dept:</b>	+7 (47354) 6-72-20
<b>Fax:</b>	+7 (47354) 6-70-89
<b>Website:</b>	<a href="http://www.bor-t.ru">www.bor-t.ru</a>
<b>Specialization:</b>	Production of men's, women's and kid's socks from cotton, acryl, half-wool. Kid's pantyhose from cotton, cotton + elastane.
<b>Sales volume in 2010:</b>	250000 thousand RUR (exclusive of VAT)
<b>Production volume in 9 months of 2011:</b>	142056 thousand RUR
<b>Quality management system:</b>	The company is implementing ISO 9001:2008. Certification is scheduled for 2012.
<b>Certificates:</b>	All the company's products are certified.

## Historical Note

Borisoglebsk Hosiery and Knitting Factory was founded on 1 March 1960.

The first employees received training at Voronezh Hosiery Factory. The company invited specialists from Volgograd, Kharkov, Novosibirsk, and Voronezh and hired them to instruct masters' assistants and knitters.

The company's product range was rather limited – men's socks, women's and kids' stockings. Subsequently, the company expanded its production facilities and increased the production volume, and in 1963 it started manufacturing kid's pantyhose, which gained great popularity. Production facilities were not sufficient and Voronezh Council of Economy issued a decree to authorize reconstruction of one production shop for the manufacture of socks and stockings.

In 1964 – 1965 the company moved into new production shops, purchased new knitting equipment, and extended its product range. In 1971 the company started performing dyeing-finishing operations.

In 2002 – 2004 the company's knitting, sewing

and packaging equipped was modernized and substituted for Italian machines by Lonati, Matec, Santoni, etc. It enabled the company to use computer graphics and elastane yarns and increase production of highly competitive products.

Due to ever growing demand for the company's socks and pantyhose with computer graphics, Borisoglebskiy Trikotazh JSC continued re-equipment in 2008-2011.



## Production Facilities

Borisoglebskiy Trikotazh JSC production capacity is 16 million pairs of hosiery a year. It is possible due to the continuous work of high-technology equipment. The company specializes in the manufacture of men's, women's and kids' hosiery.

The company is tooled up with modern knitting, sawing and dyeing equipment by Italian, South Korean, Japanese and Russian manufacturers. The main production facilities occupy an area of 12237 m<sup>2</sup>.

The company's production process is based on the principle of flexibility of production processes, when production can be adapted in accordance with production volume and product range.



## Production Program

### • Applications

Borisoglebskiy Trikotazh JSC is the largest men's, women's and kids' hosiery manufacturer in the Central Black-soil region. The products are aimed at men, women and kids of all ages and from all social groups.

### • Special features and competitive advantages

Borisoglebskiy Trikotazh JSC uses only ecologically clean materials: organic cotton, linen, bamboo, viscose, wool, etc. A wide selection colours and patterns and cutting-edge technology allow for the manufacture of products to cater for all tastes.

### • Innovations and new developments

The company has carried out major re-equipment, implemented cutting-edge technology. Its product range includes over 100 hosiery products. Apart from standard models, the company has started production of hosiery with 3D computer graphics (kids' socks and pantyhose).



## Product Catalogue

### Men's hosiery



### Women's hosiery



### Kids' hosiery



# PTO VORONEZH KNITWEAR MANUFACTORY LTD

## Company Profile

<b>Company name (short):</b>	PTO VKM Ltd
<b>CEO:</b>	Elena A. Mesnyankina
<b>Address:</b>	27 Krasnodonskaya St., Voronezh 394026
<b>OKPO code:</b>	51716450
<b>Year of foundation:</b>	1947
<b>Workforce:</b>	85 people
<b>Telephone:</b>	+7 (473) 276-03-47 — CEO (reception)
<b>Sales Dept:</b>	+7 (473) 276-28-29, 276-25-82, 276-26-98, 276-26-81
<b>Supply Dept:</b>	+7 (473) 276-28-03
<b>Fax:</b>	+7 (473) 276-26-81, 275-25-82
<b>Website:</b>	<a href="http://www.vrntrikotazh.ru">www.vrntrikotazh.ru</a>
<b>Specialization:</b>	Fabrication of knitted outerwear, lingerie, sportswear, home clothing. Fabrication of a wide range of knitted goods in different sizes and for various consumer groups.
<b>Sales volume in 2010:</b>	51000 thousand RUR (exclusive of VAT)
<b>Certificates:</b>	All the company's products are declared and have health and safety certificates issued by the Federal Service for Supervision of Consumer Rights Protection and Human Welfare.

## Historical Note

PTO VKM Ltd traces its history back to 1939, when the first shop was opened as part of Gorpromcombinat № 17 Company. In December 1940 the shop became an independent enterprise, which was called Voronezh Knitwear Factory.

In 1942, during the Nazi occupation, the factory was destroyed. When the city was liberated in 1943, the factory was restored and resumed the manufacture of knitwear and woven garments.

Today, PTO Voronezh Knitwear Manufactory Ltd is a leading knitwear manufacturer in the Central Black-Soil region of Russia.

Since 1995 the company has been producing clothing and underwear under ILI trademark. It

is a modern clothes line, which is characterized by: the use of advanced technologies in woven fabric manufacture, modern and original design, convenient packaging. The lingerie is created for a woman who wants to keep up with the times.

The company's production experience, professionalism, and social responsibility enable it to establish itself as a leading company in the field.

PTO VKM Ltd has been the winner of numerous contests such as Top 100 Russian Products, European Quality and many others.

60 years of successful operation have gained the company its stable position on the Russian market from the Central region to the Far East.



## Production Facilities

PTO Voronezh Knitwear Manufactory Ltd is equipped with multifunctional machines by German, Italian and Japanese manufacturers, which enables the company to carry out a complete production cycle including the following stages:

- Knitting;
- Dyeing;
- Cutting;
- Pattern making;
- Embroidery;
- Hemming.



The company carries out production from making-up to fabrication and packaging.

### Company Structure

Main production facilities	Auxiliary services
Knitting shop	Shipping department
Dyeing shop	Security services
Cutting shop	Boiler room
Sewing shop	Supply department
	Sales department

Design and Processes departments are toolled up with state-of-the-art equipment and modern software. Highly qualified specialists perform calculations and develop new products using modern methods of 3D modeling, cutting and sewing.

The company's laboratory has been certified by the Federal Service for Supervision of Consumer Rights Protection and Human Welfare to carry out testing of knitted and woven products.

The company's production strategy presupposes expanding product range, improving the products' quality, modernizing equipment stock and expanding to new markets.

## Production Program

### • Applications

PTO VKM Ltd product range includes knitted outerwear, underwear for kids and adults in a variety of sizes, knitwear for work and leisure, family knitwear.

### • Special features and competitive advantages

PTO VKM's main advantages are safety, high quality and competitive prices of its products. The company pays great attention to marketing. Marketing research and customer survey enable the company to set itself clear targets, which are solved at every stage of production process: the

company starts using new yarns, high-quality dyes, fabrics, purchases new knitting and sewing equipment. The company offers consulting services to its clients. The company's vast experience enables it to produce high-quality garments which will satisfy even the most demanding customer.

### • Innovations and new developments

The company is rapidly advancing, modernizing production, improving working conditions, expanding product range. New technologies in processing and decoration are being implemented.



## Product Catalogue



### **Women's nightgown**

Over 25 models for different age groups.

Composition:

- 100% cotton;
- 95% cotton + 5% elastane.



### **Lingerie set**

Elegant lingerie made of high-quality material to modern technologies.

Composition:

- 100% cotton;
- 95% cotton + 5% elastane.



### **Women's tops**

Over 75 models in tune with current fashion trends to cater for all tastes.

Composition:

- 100% cotton;
- 95% cotton + 5% elastane.



### **Kids' tops**

Over 20 brightly-coloured original design models made of high-quality materials.

Composition:

- 100% cotton;
- 100% polyester;
- 95% cotton + 5% elastane;
- 69% cotton + 31% polyester.



#### **Men's tops**

Over 15 models for different age groups.

Composition:

- 100% cotton;
- 95% cotton + 5% elastane.



#### **Men's sportswear**

Made of long-wearing durable fabric in accordance with tough standards.

Composition:

- 100% polyester;
- 29% cotton + 71% polyester.



#### **Children's sportswear**

Various sportswear models for different kinds of sport.

Composition:

- 100% cotton;
- 100% polyester;
- 95% cotton + 5% elastane;
- 26% cotton + 74% polyester.



#### **Baby clothes**

Made of high-quality, hypoallergenic cotton fabrics. Each set consists of basic pieces.

# TAIT FASHION HOUSE



## Company Profile

<b>Company name (short):</b>	TAIT Fashion House
<b>CEO:</b>	Nadezhda P. Lapinskaya
<b>Address:</b>	54 F. Engelsa St., Voronezh 394018
<b>OKPO code:</b>	34032589
<b>Year of foundation:</b>	31.08.1987
<b>Workforce:</b>	100 people
<b>Telephone:</b>	+7 (473) 252-36-53 — CEO (reception)
<b>Marketing Dept:</b>	+7 (473) 239-00-36
<b>Sales Dept:</b>	+7 (473) 259-89-52, 235-64-11, 235-57-32
<b>HR Dept:</b>	+7 (473) 253-14-03
<b>Fax:</b>	+7 (473) 252-36-53
<b>Website:</b>	<a href="http://www.tait.ru">www.tait.ru</a>
<b>Specialization:</b>	Fabrication of women's clothing: blouses, woven tops, jackets, skirts, trousers, dresses, knitted dresses, sundresses, jumpsuits, etc.
<b>Sales volume in 2010:</b>	42000 thousand RUR (exclusive of VAT)
<b>Production volume in 9 months of 2011:</b>	14217.6 thousand RUR
<b>Quality management system:</b>	The company has certificates of compliance with GOST R ISO 9001-2001 (ISO 9001:2000), GOST R ISO 9001-2008 (ISO 9001:2008), issued by Voronezh Certification and Monitoring Centre (Russia).
<b>Certificates:</b>	All the company's products have certificates of compliance, the products are manufactured to State Standard (GOST 25294-2003; 25295-2003).

## Historical Note

- 1987 – TAIT Fashion House with the workforce of 35 people was founded and started working under the jurisdiction of the Department of Voronezh regional industry. Its aim was to design models and prepare technical descriptions for regional companies.
- 1988 – the company started small-lot production of garments and sold it in Voronezh shops.
- In 1991 the company became an independent enterprise called TAIT Fashion House.
- 1994 – the company opened its first outlet.
- 1997 – the company implemented computer making-up technologies.
- 1998 – despite severe economic crisis, TAIT Fashion House expanded its production facilities.
- In 2001 the company opened a chain of outlets.

- Since 2003 TAIT Fashion House has been participating in Textile-legprom federal trade fair.
- In 2007 the company formed Sales Department.
- In the same year the company underwent certification of compliance with international quality management standards GOST R ISO 9001-2001 (ISO 9001:2000). In 2011 the company was issued a certificate of compliance with GOST R ISO 9001-2008.

TAIT Fashion House employs highly-qualified designers, technologists, tailors, fitters and other specialists. All of them are dedicated professionals with many years of experience and a great creative potential. The company creates conditions for professional development and growth. Warm interpersonal relationships inside the team stimulate the specialists' creative development.

## Production Facilities

TAIT Fashion House utilizes technologies based on innovations.

The company's specialists use modern software for making-up, preparing documents, and launching new products. Quality control is also facilitated by using special software. Quality is monitored at every stage of production.

TAIT Fashion House is a garment manufacturer with facilities allowing for the complete production cycle, and with company structure including the following departments: Design Department, Processes Department, Making-up Department, three sewing shops, raw-material storeroom, finished products warehouse, Sales Department. The company's activities are based on market research carried out by Marketing Department and aim at promoting the company's products.

The company uses a wide range of fabrics selected according to their ecological and processing properties. Today, natural-blend fabrics, fabrics with Lycra, and woven fabrics are especially popular.

The company employs about 100 people. TAIT Fashion House annually designs 300-350 models of clothes in tune with fashion trends and in accordance with market needs, and manufactures 60-70 thousand items of clothing a years.

TAIT Fashion House is constantly developing, which results in the expansion of production facilities and outlet chain, improvement of service, and reinforcement of its position on the market on the Central and other regions of Russia.



## Production Program

### • Applications

TAIT Fashion House manufactures women's classical business clothes of mid-range price segment.

The company develops four collections annually: Spring, Summer, Autumn/Winter and a special Christmas collection. Each collection is unique, follows current fashion trends and caters for different tastes.

The company's target consumer group is women aged 23 to 45, university graduates, building a career or having fulfilled their career potential.

TAIT Fashion House's mission is to make a woman's dream come true – make women more beautiful and confident through elegant and comfortable clothes.

### • Special features and competitive advantages

TAIT Fashion House's main competitive advantages are an extensive range of products (blouses, knitted tops, jackets, skirts, trousers, dresses, knitted dresses, summer dresses, jumpsuits, etc.), a wide size range (from 42 to 60), and the high-quality and excellent fit of products. The style of clothes is modern classics which is always fashionable and sought-after.

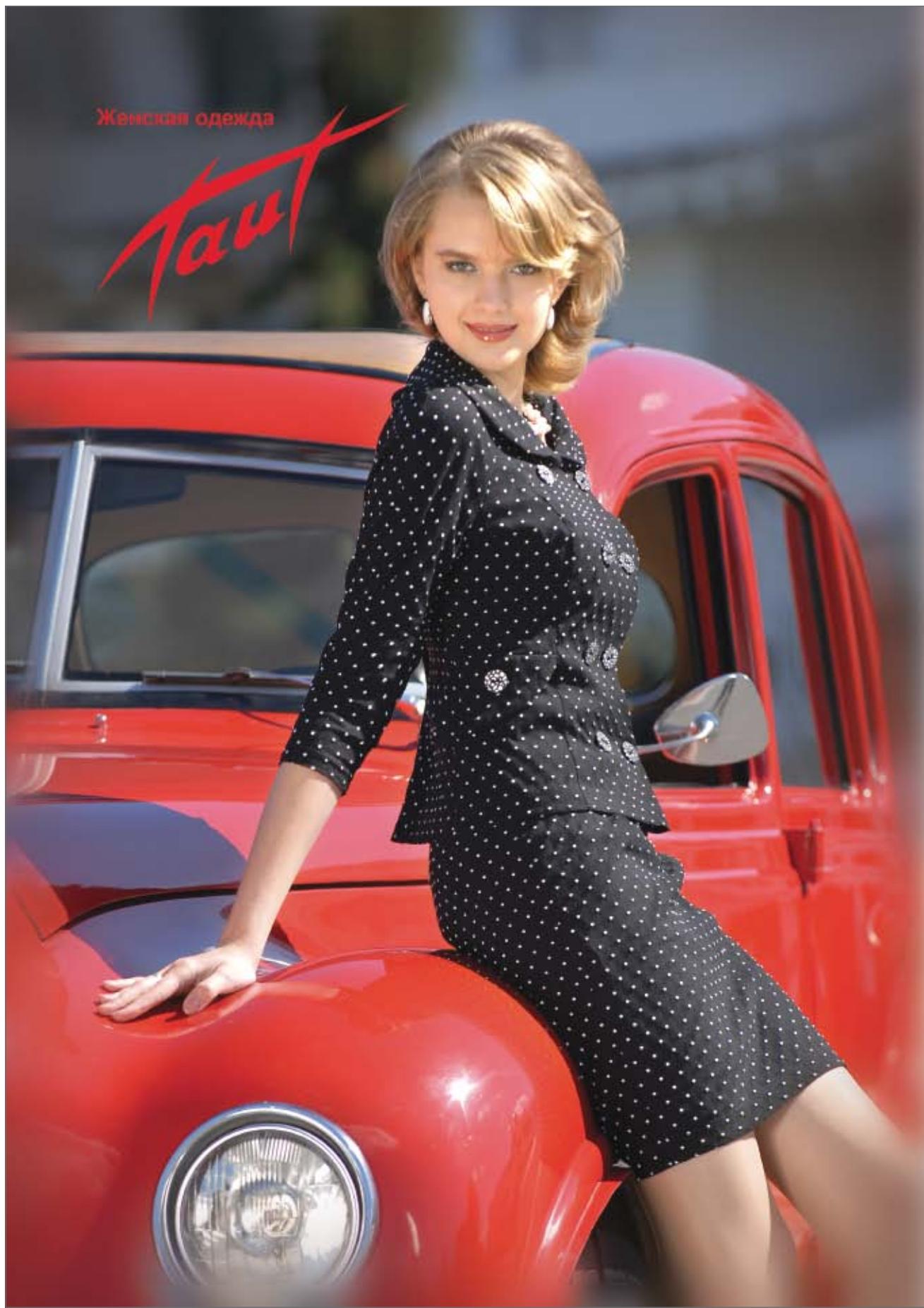
Combination of experience and advanced technologies, traditions and innovations keep the company's products in high demand.

### • Innovations and new developments

Innovative activity is an integral part of TAIT Fashion House production process. TAIT utilized the latest technologies to work with new fabrics with improved properties. TAIT is constantly testing new methods and technologies and engaging young professionals in order to increase its competitive advantages.



## Product Catalogue





# PROMTEXTILE CJSC



## Company Profile

<b>Company name (short):</b>	PromTextile CJSC
<b>CEO:</b>	Roman A. Novichikhin
<b>Address:</b>	5 Tekstilschikov St., Voronezh 394026
<b>OKPO code:</b>	59566688
<b>Year of foundation:</b>	27.12.1949
<b>Workforce:</b>	203 people
<b>Telephone:</b>	+7 (473) 246-12-14 — CEO (reception)
<b>Sales Dept:</b>	+7 (473) 239-22-04, 239-22-07, 239-22-08
<b>Supply Dept:</b>	+7 (473) 239-22-03
<b>HR Dept:</b>	+7 (473) 239-22-18
<b>Fax:</b>	+7 (473) 278-53-90
<b>Website:</b>	<a href="http://www.promtextile.ru">www.promtextile.ru</a>
<b>Specialization:</b>	Production of industrial fabrics. The company manufactures over 40 types of cotton, synthetic and blended fabrics with different surface density values and constructions.
<b>Sales volume in 2010:</b>	298403.14 thousand RUR (exclusive of VAT)
<b>Production volume in 9 months of 2011:</b>	342420 thousand RUR
<b>Quality management system:</b>	The company is implementing quality management system to MS ISO 9001:2008.
<b>Certificates:</b>	Fabrics by PromTextile undergo certification in accordance with All-Russian Product Classifier (OKP). In 2010 the company's products were issued certificate of registration by Voronezh Centre of Regulation, Metrology and Certification.

## Historical Note

- 1937 – USSR government approved the throwing mill building project.
- 1941 – the mill started manufacturing tire fabrics for Voronezh Tyre Plant.
- During World War II the company's production facilities were used to provide for the needs of defense industry.
- 1949 – the company resumed its activity and produced the first sheet of fabric. PromTextile was founded.
- 1966 – tyre plants started using synthetic tire materials, PromTextile focused on the production of fabrics for general rubber goods – OT1 and Chefer. The company became known as an industrial fabrics manufacture.
- 1970 – the company expanded its equipment stock, purchased twisting machines.
- 1980-90 – the company started using equipment by Benninger (Switzerland).
- 1991 – the company became PromTextile joint stock company.
- 2002 – the company expanded to synthetic fabrics market.
- 2004 – 15 fabrics were acknowledged in Top 100 Russian Products contest. The company started investing significantly in the development of textile industry and manufacture of high-technology products. Weaving looms by Picanol (Belgium) were put into operation.



## Production Facilities

The company's production facilities are the main indicators of the company's growth. PromTextile has always based its production process on the latest technologies and utilized modern equipment. Today, the company is well-equipped with high-production pneumatic weaving machines by Pinacol (Belgium) and Toyota (Japan). The main advantage of these machines is that they can be used to manufacture all kinds of industrial fabrics: cotton, blended, and synthetic.



The company has Processes Department which is capable of developing new kinds of industrial fabrics to meet the customers' requirements, as well as of assessing physical and mechanical properties of products and raw material. This allows for elimination of defects during production process and increase the quality of the PromTextile's products.

PromTextile occupies an area of 40000 m<sup>2</sup> housing:

- Weaving machines,
- Doubling and twisting machines;
- Sizing machines.



## Production Program

### • Applications

PromTextile CJSC is a reliable supplier of fabrics for filter, abrasive, unwoven and rubber products.

The company's products are widely used in mining, heavy, food, chemical, metallurgical, and medical industries. Therefore, tough requirements are specified to the fabrics as to their strength, low elongation, structure and thickness.

The company's product range includes over 40 fabrics with different constructions and surface density:

- Fabrics for V-belts;
- Hose fabrics;
- Fabrics for conveyor belts;
- Emery cloth;
- Filter fabrics;
- Nonwoven fabrics (cotton batting, shop towels), etc.

PromTextile cooperates with leading Russian companies: SIBUR, Yaroslavl Rubber Goods Plant, Kursk Rubber Goods Plant, Kamskiy Tyre plant, Belgorod Abrasive Plant, Efko, GK Prodimeks, Lebedyanskiy mineral processing plant, Stolenskiy mineral processing plant, etc.

### • Special features and competitive advantages

PromTextile is characterized by great production potential and well-equipped with high-production weaving machines by Toyota (Japan) and Picanol (Belgium). The company's laboratory develops new fabrics in accordance with customers' requirements.

### • Fabrics should guarantee the required properties of the end product:

- High adhesive strength;
- Low elongation of belts during operation;
- Tractile efficiency and durability;
- High tensile strength;
- High toughness of material (resistance to tensile stress).

### • Innovations and new developments

Most PromTextile products are innovative as their physical and mechanical properties are better than those of competitors. Apart from serial products, the company is constantly developing new types of industrial fabrics. Among the latest developments are KIRA and YURSA fabrics which are used for the production of rubber-fabric hoses, special technical goods.

# Product Catalogue

## Fabrics for general rubber products



### OT-1

Cotton plain weave fabric. Composition: cotton – 100%. Surface density 285 g/m<sup>2</sup>. Width -140 cm. Used for the production of V-belts and work mittens.



### Chefer-BD

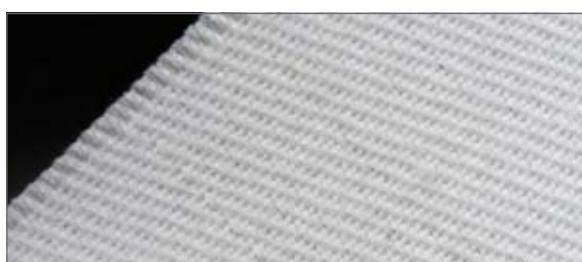
Cotton plain weave fabric. Composition: cotton – 100%. Surface density 285 g/m<sup>2</sup>. Width -146 cm. Used for the production of V-belts and work mittens.



### Compound fabric BKNL-65-2

The fabric is used for the production of rubber-fabric conveyor belts and driving-belts. Cotton plain weave fabric. Composition: cotton – 100%. Surface density 550 g/m<sup>2</sup>. Width – 95-160 cm.

## Filter fabrics



### Filtrodiagonal

Cotton twill weave fabric. Composition: cotton – 100%. Surface density 575 g/m<sup>2</sup>. Width – 100-120 cm. Used for filtration in many industries – food, chemical industries, non-ferrous metallurgy, etc.



### Nylon TT-98

Twill weave fabric. Composition: nylon – 100%. Surface density 540 g/m<sup>2</sup>. Width – 173 cm. Used in food industry for filtration of sugar syrups and solutions in sugar production.



### Polypropylene TF-20PT

Plain weave fabric. Composition: polypropylene – 100%. Surface density 540 g/m<sup>2</sup>. Width – 105-170 cm. Used for filtration of sugar syrups and solutions in sugar production.

## Fabrics for abrasive materials



### Weighted twill

Cotton twill weave fabric. Composition: cotton – 100%. Surface density 265 g/m<sup>2</sup>. Width – 103 cm. Used for the production of emery cloth.



### Twill type 50

The only wide European quality fabric in Russia and CIS used for the production of abrasive materials. Cotton twill weave fabric. Composition: cotton – 100%. Surface density 275 g/m<sup>2</sup>. Width – 170 cm. Used for the production of emery cloth and other technical goods.

## Nonwoven fabrics



### Nonwoven stitched fabric

Cotton twill weave fabric. Composition: cotton – 100%. Surface density 575 g/m<sup>2</sup>. Width – 100-120 cm. Used for filtration in many industries – food, chemical industries, non-ferrous metallurgy, etc.



### Batting

Twill weave fabric. Composition: nylon – 100%. Surface density 540 g/m<sup>2</sup>. Width – 173 cm. Used in food industry for filtration of sugar syrups and solutions in sugar production.

# SHEVRO LTD

## Company Profile

<b>Company name (short):</b>	Shevro Ltd
<b>CEO:</b>	Rustam A. Tyartin
<b>Address:</b>	1 Vokzalnaya St., Ostrogozhsk, Voronezh region 397837
<b>OKPO code:</b>	44747711
<b>Year of foundation:</b>	1911
<b>Workforce:</b>	137 people
<b>Telephone:</b>	+7 (47375) 4-23-36 — CEO (reception)
<b>Sales Dept:</b>	+7 (47375) 4-12-04
<b>Supply Dept:</b>	+7 (47375) 4-14-02
<b>HR Dept:</b>	+7 (47375) 4-14-02
<b>Fax:</b>	+7 (47375) 4-23-36
<b>Website:</b>	<a href="http://www.shevro.com">www.shevro.com</a>
<b>Specialization:</b>	Manufacture of harness leather and bottom leather.
<b>Sales volume in 2010:</b>	164411 thousand RUR (exclusive of VAT)
<b>Production volume in 9 months of 2011:</b>	102690 thousand RUR
<b>Quality management system:</b>	Process control, assessment of workplaces, process modeling, statistical analysis.
<b>Certificates:</b>	Products have health and safety certificates

## Historical Note

Ostrogozhsk tannage has been operating since 1911. Traditions of leather production were on the verge of disappearing at the end of the last century when the company was facing bankruptcy. In 1998 Shevro Ltd bought the tannage. After that, the plant was renovated, the shops were repaired, and the tannage was equipped with the best foreign equipment. The company implemented modern technologies and started using natural tannins, which enabled the company to establish itself on the market, increase production volume, improve the quality and expand the range of products, develop an effective distribution network in the country and abroad, and gain an excellent reputation among professionals. The company's achievements were acknowledged with numerous awards including the one For high consumer properties of the goods.



## Production Facilities

Natural leather production is a complex technological process consisting of several stages. Each process is done by a separate department. All production shops are equipped with Czech and Italian equipment. The company's production stock includes 120 machines.

All processes are controlled by engineering and technical departments.



## Production Program

### • Applications

Shevro Ltd main clients are shoe and leather goods factories and prosthetic and orthopaedic appliances manufacturers.

### • Special features and competitive advantages

The company utilizes a special tanning technology which allows for the increased durability and resilience of products. Shevro Ltd cooperates with leading chemical companies, such as BASF, TANIN, TFL, ZSCHIMMER&SCHWARZ.

Shevro Ltd is the only company in Russia that

manufactures bottom leather using only natural tannins, therefore its products are highly sought-after by shoe factories producing fancy, children's, military, dancing, orthopaedic footwear. Treated leathers have a beautiful tan colour variable according to customer's requirements.

### • Innovations and new developments

Currently, Shevro Ltd, in cooperation with foreign partners, is improving production technology, experimenting with new chemical components.

## Product Catalogue



### Bottom leather

(treated with natural tannins)

- Thickness from 2.0 to 5.0 mm;
- Used for the production of soles and sockliners;

### Harness leather

- Front, belly, side leather;
- Thickness from 2.0 to 5.0 mm;
- Used for the production of belts, saddles, and harness.

### Leather for leather goods

- Thickness from 1.8 to 2.6 mm;
- Used for the production of leather goods.

# **INNOVATSIYA LTD**

**Company name (short):** Innovatsiya Ltd

**CEO:** Oleg D. Panov

**Address:** 8 Osvobozhdeniya Truda St., Voronezh

**Year of foundation:** 01.07.2004

**Tel./fax:** +7 (473) 253-26-04

**Specialization:**

Manufacture and delivery of uniforms and special clothing.

**Special features and competitive advantages:**

- The company uses high-quality fabrics and accessories by Russian and foreign manufacturers to produce clothes. For garments with increased durability properties, the company uses Reap-stop fabric with excellent strength and wear characteristics due to the combined weave of beam and supported threads.

- Special clothing made of membrane fabrics by W. L. Gore & Associates GmbH guarantees comfort in any weather conditions. Membrane fabrics are proof against water, keep water from condensing, let the vapour out.

- Laser cutting, edging up to 0.1 cm, special technology of pasting-in watertight zips, and sealing seams with watertight bands allow for the production of water-proof garments meeting rigid requirements.

- Winter clothes are made with insulation layers of natural fur or Thinsulate and Primaloft synthetic materials, which keep water out, dry fast, do not lose their shape. These synthetic materials have characteristics on a par with natural down.

**Product range:**

- Winter and summer clothes of camouflage and uniformly dried fabrics, garments made of membrane fabrics, clothes for special services.



# **ELEGANT CJSC**

**Company name (short):** ELEGANT CJSC

**CEO:** Victor I. Semenov

**Address:** Mira St., Novovoronezh 396070

**Year of foundation:** 14.12.1990

**Tel./fax:** +7 (47364) 2-99-02 – CEO, reception.

**Website:** [www.nvelegant.narod.ru](http://www.nvelegant.narod.ru)

**Specialization:**

Production of corporate and special clothes.

**Special features and competitive advantages:**

The company's products are certified by NITs Odezhda Independent inspection Services, Moscow. Protective gear by Elegant CJSC has been licensed by the State Scientific Centre – Biophysics Institute FMBA GUP to be used at nuclear power stations and Rosenergoatom companies. The company is well-staffed with highly qualified engineers and specialists. The company's leading specialists undergo training and attend seminars at the Central Scientific Research Institute of Garment Industry. The CEO underwent training in the USA. The company has automated the process of layout planning, which enables the company to speed the production and modeling process. The company uses modern equipment to produce special clothes.

**Product range:** Corporate, special clothing, uniforms for power engineering, construction, communication, medical, food companies. Production of special footwear, water-proof clothing, individual protection gear. Developing corporate style. Logo application by methods of silk screening and embroidery.



# FURNITURE INDUSTRY



# ANGSTREM GROUP OF COMPANIES

## Company Profile



**Company name (short):** Angstrem GC

**CEO of Angstrem Group of Companies:** Gennadiy V. Chernushkin

**CEO of Angstrem Furniture Holding:** Sergey F. Radchenko

**Address:** 43 Torpedo St., Voronezh 394019

**OKPO code:** 56445777

**Year of foundation:** 14.05.1991

**Workforce:** 2000 people

**Telephone:** +7 (473) 279-44-97 — reception of G. V. Chernushkin

**Reception of S. F. Radchenko:** +7 (473) 279-44-98

**HR Dept:** +7 (473) 228-23-01

**PR Dept:** +7 (473) 228-23-10

**Logistics Dept:** +7 (473) 228-23-82

**Supply Dept:** +7 (473) 228-21-64

**Marketing Dept:** +7 (473) 228-23-17

**Fax:** +7 (473) 279-44-98

**Website:** www.angstrem-mebel.ru

**Specialization:** Manufacture and distribution of upholstery and case goods.

**Sales volume in 2010:** 4000000 thousand RUR (exclusive of VAT)

**Quality management system:** Certificate of compliance with GOST R ISO 9001-2008, certificate №POCC RU.IC11.P00568

**Certificates:** certificates of compliance №POCC RU.AE56.Д06022, №POCC RU.AE56.Д07381. Voluntary certification of compliance №POCC RU.AE56.H14196, №POCC RU.AE56.H15432, Certificate of compliance with Customs Union requirements RU Д-RU.АЯ46.В.00018.

## Historical Note

- 1991 – Angstrem sole proprietor, producing po-go-sticks, is set up.
  - 1992 – the company starts to manufacture furniture.
  - 1994 – the company signs its first contract to purchase Italian equipment, and later – German HOMAG machinery.
  - 1995 – the company starts bulk delivery of furniture to various regions of Russia and CIS.
  - 1998 – the first Angstrem furniture store is opened in Voronezh
  - 1999 – the company signs a procurement contract to supply furniture to IKEA.
  - 2001- the company sets up a representative office in Moscow.
  - 2005 – the company develops a regional distribution network and opens representative offices in Novosibirsk, Saint-Petersburg and Kazakhstan.
  - 2006 – Divaldi upholstery factory is founded
  - 2007 – the second case goods factory starts its production activity.
  - 2009 – Diana factory (kitchen and bathroom furniture) joins the Holding; the company wins the Best Company national nomination
  - 2010 – Angstrem regional network becomes the second largest in the country, noncommercial education project Repnoye School of Effective Communication is set up.
  - 2011 – the company is awarded the first prize in the national nomination The Best Enterprise of 2011.
- Today, Angstrem GC is one of the top 5 Russian furniture manufacturers. Angstrem trademark is the 9th most recognizable Russian furniture brand (according to RBK, 2010).

## Production Facilities

### Angstrem GC comprises:

- ANGSTREM Production company (two factories: 43 Torpedo St. and 5a Tekstilschikov St.) – serial manufacture of case goods;
- DIVALDI factory – serial manufacture of upholstered furniture;
- DIANA factory – kitchen and bathroom furniture, case goods made to measure;
- ANGSTREM trading house – bulk delivery of furniture;
- A-STIL – furniture trading network (200 shops across Russia and the Ukraine);
- DON CJSC – livestock breeding complexes and crop enterprises.

Angstrem production facilities are equipped with modern machines. The Holding is constantly investing in its production facilities. We keep up with the times, implement innovative technologies, increase production volumes, thus creating jobs.

We work in cooperation with leading woodworking enterprises such as HOMAG, GROUP, KOCH, CEFLA. Thus, Angstrem is well-equipped with machinery by HOMAG, has facilities for edge-lipping (Tamburat) with thickness up to 100 mm.

The company's production facilities allow for the manufacture of case goods from: laminated

chipboard, wood chipboard, veneered chipboard, film-faced chipboard, various kinds of face covered with lacquer, enamel and patina.

In 2010 the company's production facilities were equipped with the following machines:

- HOLZMA plate material sawing machine. The saw is made of mineral metals, which gives a number of advantages: maximum twisting resistance, optimal cutting quality, long-term saw blade service, low noise level, etc.
- HOMAG edge bander. The machine is used for machining and banding of edges and plates with banding material up to 3mm thick.
- HOMAG woodworking machining centre – a CNC machining centre for trimming, banding, lipping and drilling furniture parts.
- LIGMATECH packaging line. The line consists of a conveyor belt 20 m long and a closing station for closing of cardboards using hot-melt adhesive.
- KUKA palletizing robot. The robot stacks packages into empty pallets. Not many Russian furniture factories utilize such equipment, and the use of palletizing robots is not typical of the Russian furniture manufacture.

Angstrem's production facilities and equipment stock are considered to be among the best in Russia.

## Production Program

### The company's perspectives are:

- implementing innovative approach to business, creating Product Development Centres regarding living habitat engineering. Moving from furniture manufacture to living habitat engineering – project at the intersection of architectural, construction and furniture technologies and innovations;
- to become in 2012 one of top three Russian furniture manufacturers;
- to increase annual turnover up to 10 billion roubles by 2014;
- building and putting into operation a production and logistics complex – 100 thousand sq m in Maslovskiy industrial park.
- fulfilling the following program:
- hostel building;
- creating an educational centre for technical specialists training;
- developing a project for talented youth - Repnoye School of Effective Communication;
- expanding the Angstrem Generation project

- hands-on training programs for high school students, including Voronezh Forest Engineering Academy; profession-oriented education in secondary schools.



## Product Catalogue



### **Adagio living room (unit furniture)**

Adagio is a new interpretation of classics. Strict cubic forms combined with elegant frame facades in Old Maple colour make this furniture unique and full of character. Patina and lacquered d cor is a tribute to classical style and an element of luxury. Lack of cumbersome bookcases and moderate decoration, unusual for classical furniture, make the furniture light and informal. Classics is becoming more modern leaving you a lot of free space while making your dwellings cosy, comfortable and elegant at the same time.



### **Laina bedroom and living room (unit furniture)**

Laina is a furniture line for those who value basic geometric forms and modern laconic design. Plum and white gloss decor, geometric forms and mat surfaces contrasting with streamline facades make Laina unique and full of character.

This furniture's special feature is that its design allows for a variety of combinations of modules providing you with a whole range of interior solutions. The modules dimensions allow for the optimum solution for any dwelling.





**Izotta bedroom and living room (unit furniture)**

Izotta is a beautiful combination of elegant forms and functionality, while a wide selection of bedroom and living room furniture modules made in the same style help create various compositions maintaining the philosophy of your dwellings.

In the production process, the company uses only the best quality materials by European manufacturers and complements them with unique fittings combining Italian taste and German quality.



**Latika bedroom (unit furniture)**

Latika is bedroom furniture for those who value functionality and prefer soft lines and subdued colours. Gentle forms and soothing wooden surfaces create the atmosphere of harmony and comfort tempting you to have a rest.

The furniture is made of high-quality materials with shatterproof mirrors and wearproof doors, which guarantees reliability and long-term service of furniture.

# GRAFSKOYE JSC



## Company Profile

<b>Company name (short):</b>	Grafskoye JSC
<b>CEO:</b>	Valentin A. Stepanov
<b>Address:</b>	149 Nikitina St., Voronezh 394080
<b>OKPO code:</b>	253273
<b>Year of foundation:</b>	24.09.1924
<b>Workforce:</b>	208 people
<b>Telephone:</b>	+7 (473) 2-594-581 — CEO (reception)
<b>Sales and Marketing Dept:</b>	+7 (473) 2-594-770, 2-594-987, 2-594-590
<b>Supply Dept:</b>	+7 (473) 2-594-642, 26-71-07
<b>HR Dept:</b>	+7 (473) 2-594-529
<b>Fax:</b>	+7 (473) 2-594-770
<b>Website:</b>	www.graf.ru
<b>Specialization:</b>	Design and manufacture of kitchen furniture.
<b>Sales volume in 2010:</b>	125278 thousand RUR (exclusive of VAT)
<b>Production volume in 9 months of 2011:</b>	88107 thousand RUR
<b>Quality management system:</b>	Certificate of compliance with MS ISO 9001:2000. MS ISO 14001:2004, MC OHSAS 18001-2007
<b>Certificates:</b>	all the company's products are certified

## Historical Note

- 1924 – woodworking workmen's cooperative association, employing 16 people, was founded.
- 1932 – the association was reorganized into Krasnaya Zvezda saw-mill.
- Wood processing output increased every year.
- During the Great Patriotic War the company's main products were wooden crates for defense industry.
- After WWII, the company was reconversed and started manufacturing wheels, sleighs, door and window frames, desks, upholstery, single kitchen furniture items.
- 1956 – the company was reorganized into Grafskiy woodworking company.
- 1965 – the company started producing wash-basins (bathroom cabinets) which made the company popular outside Voronezh region.
- 1975 – the company was reorganized into Grafskiy furniture company. The company was re-equipped for the production of kitchen furniture. The company monthly dispatches up to 80 carloads of furniture to trade houses all over the country.

• 1992 – Grafskoye plc was set up, which in 2002 was reorganized into Grafskoye JSC. In tough economic conditions the company coped with difficulties and entered a new stage with a shareholders board, expanding and modifying its product range to meet the market needs.



## Production Facilities

The company's production facilities are equipped with state-of-the-art machinery by German manufacturers which allows for sawing, drilling, facing and shaping. In other words, these machines are capable of performing multiple operations and can substitute several different machines, and more importantly – work with German precision. All equipment is computerized with software allowing for operations precision to a millimeter.

Preproduction department is tooled up with modern computers and software. Highly qualified specialists use the latest 3D modeling methods and technologies for design and calculations.

The company fulfills the full production cycle – from cutting to assembling and packaging. Grafskoye JSC is the only company in the country capable of manufacturing the complete range of kitchen fronts. The optimum solution in Grafskoye kitchen production is the use of Italian paper laminate. The company offers a selection of over 1000 laminate decors. However,

fronts can be made of:

- Glossy enamel faced MDF;
- Natural wood;
- MDF covered with an innovative material called Acriluxe;

- Glass fronts in aluminium frames are getting increasingly popular with customers.

The company's production facilities occupy an area of 6000 m<sup>2</sup>:

- Plates cutting shop;
- Board processing shop;
- Admixture shop;
- Finishing shop;
- Section of set completing;
- Assembly and dispatch section;
- Mechanical repair department;

The companies production capacity at full load and advanced labour management methods is 800 kitchen sets a month.

## Production Program

### • Applications

The company manufactures kitchen furniture to meet ever growing demand for high-quality Russian furniture made to measure.

### • Special features and competitive advantages

The company has acquired a wealth of experience at different stages of development: from handcrafts to industrial production. The company has always kept up with the times.

Kitchen furniture has changed with the times, however, quality standards have always remained invariably high.

Kitchen furniture is designed in accordance with artistic traditions of Russian and foreign furniture manufacturers. High quality, modern design, a wide selection of fronts decors and worktops are the main features of the company's furniture. This is the reason why the Grafskoye furniture was in high demand even during the economic decline.

The company's production facilities enable the company to meet the demand for modern Russian kitchen furniture made to European standards.

The company has been awarded 40 gold medals and a number of diplomas. 6 furniture sets have been awarded the Grand Prix and 2 sets have been awarded Russian Cabriol award. The com-

pany's products have won the Top 100 Russian Products contest 13 times, Grafskoye JSC is the only furniture company to have won the Quality Leader contest.

### • Innovations and new developments

The company has developed technologies combining traditional and modern processing methods. The company is currently producing 300 furniture items with different dimensions.

Production process is based on innovations and advanced technology.

The company was one of the first manufacturers in Russia to start producing Granikout artificial stone worktops. The use of Granikour artificial stone is a new trend in kitchen furniture design. It is a unique material allowing for the production of solid worktops with any dimensions.

Oval, curved and s-shaped fronts have been popular with customers for many years now. This front type was developed and implemented by our company and has been improved over the years – radial parts of different lengths and widths are used to make your kitchens welcoming and cosy.

While the world market is a source of inspiration for Grafskoye, the company itself is a trendsetter on the Russian market, which explains the company's numerous awards and diplomas.

## Product Catalogue

The company publishes an annual product catalogue. However, it provides information on a small portion of products, as no catalogue could hold information on over 7000 products. Besides prod-

ucts, the catalogue provides information about the company, the materials it uses and its services. The catalogue serves as a guide for the customer in making a design-project.



Original composition of this kitchen with boat-shaped kitchen island is an example of innovative techniques. The island design demonstrates unlimited possibilities of Granikout artificial stone. The fronts are made of modern high-gloss Acrilux material. Black fronts contrasting with white stone and glass make this set really special. As for the cupboards capacity, one can be sure that this kitchen will provide its owner with excellent storage facilities.



Originality is the main feature of this kitchen. Cooking, storage and butcher sections are located around the cook to save time and effort.

A wide worktop provides enough space for built-in appliances, work and accessories display, while spacious drawers provide virtually unlimited storage possibilities.



This kitchen was designed for those who value traditional style and want to live in comfortable dwellings, as in this kitchen everything is at hand and its atmosphere makes you leave the city bustle behind.



Standard work station is supplied with a high bar counter which is, in its turn, connected to low cabinets with drawers. Such differences in levels bring kitchen and living room furniture closer to each other, which is in tune with the latest furniture fashion trends. The bar counter is made of Granikout stone and is decorated with designer horizontal and vertical lines, which makes this kitchen look elegant and exquisite.



Due to the integration of work and dining zones, curved fronts and complex shape of worktop made of Granikout artificial stone with built in 2-section sink, this kitchen is ergonomic and elegant. Artificial stone perfectly imitates the texture of natural stone and does not require any special care.

Pay attention to upper cabinets with glass doors and a utility cupboard with built in appliances. The refrigerator looks like a cupboard and does not interfere with the kitchen harmonic design. It is possible due to a special cupboard designed to hide the refrigerator.

The white worktop is highlighted by dark front colour and makes this kitchen a reflection of the owner's unique personality.



The composition of this kitchen is strictly linear. Horizontal lines and simple forms allow for the maximum use of even the smallest room. Straight lines, combination of red fronts with black or white provoke distinct associations.

Colours effect our emotions and reflect our lifestyle. It is fair to say that there are no bad colours, one can experiment endlessly matching different hues. A wide selection of colours the company offers will cater for all tastes.

The furniture fittings are made in the same style. In this kitchen drawers are prevalent, as from our experience, this storage form is the most convenient.

# KRISTINA CJSC



## Паспорт предприятия

<b>Company name (short):</b>	Kristina CJSC
<b>CEO:</b>	Olga B. Barteneva
<b>Address:</b>	9a Latnenskaya St., Voronezh 394040
<b>OKPO code:</b>	10622330
<b>Year of foundation:</b>	2 April 1993
<b>Workforce:</b>	90 people
<b>Telephone:</b>	+7 (473) 224-86-00 — CEO (reception)
<b>Sales Dept:</b>	+7 (473) 224-81-81
<b>Supply Dept:</b>	+7 (473) 224-95-75
<b>HR Dept:</b>	+7 (473) 224-93-11
<b>Fax:</b>	+7 (473) 263-71-59
<b>HR Dept:</b>	+7 (473) 224-81-81
<b>Website:</b>	<a href="http://www.kristina.ru">www.kristina.ru</a>
<b>Specialization:</b>	Manufacture of case goods and upholstered furniture.
<b>Sales volume in 2010:</b>	62 220 thousand RUR (exclusive of VAT)
<b>Quality management system:</b>	ISO 9001
<b>Certificates:</b>	all the company's products are certified

## Historical Note

- 1993 – Kristina furniture factory was founded.
- 1997 – production facilities were moved to 9a Latnenskaya St., Voronezh
- 2001-2003 - new woodworking machines by SHELLING, IMA, HOMAG, HOFFMANN were put into operation.
- 2004 – Kristina becomes the member of Association of Russian Furniture and Woodworking Companies.

The company was founded as a small enterprise, but continually expanded implementing new technologies, launching new equipment, training its staff, and today it is one of the well-known and reliable companies in the furniture industry.

Due to well-coordinated work of the company's employees – from designers to machine operators, Kristina manufactures functional,

comfortable and ecologically safe and, more importantly, beautiful furniture. Kristina furniture caters for our clients' perfect taste and has been highly appreciated by customers and expert panels of various international and national furniture contests and exhibitions. Therefore, in the 25



years of its history, Kristina has been the winner of many contests.

Kristina has always been socially responsible and taken care of its employees, as well as other people in need of help or support. Kris-

tina furniture factory supports WWII veterans, orphanages, takes part in the restoration of Christian churches, and follows the President's message concerning the social responsibility of business.

## Production Facilities

Kristina furniture factory occupies an area of 6000 m<sup>2</sup>.

Materials are cut on SHELLING machines, IMA equipment is used for edge machining and for holemaking, BRANDT, ALTENDORF, RAPID equipment is used for auxiliary operations (material cutting, fronts assembly).

The majority of staff has worked for the

company for over 10 years, whereas some employees have worked for Kristina since its foundation. Therefore, the company is proud of unrivaled qualification of its staff.

The company's production facilities allow for the manufacture of 1500 nominal walls of furniture a month which accounts for 5% of total demand for case goods in Russia.

## Production Program

### • Applications

Kristina furniture is produced to satisfy the demand for high-quality, comfortable and beautiful furniture for living-rooms, bedrooms, nurseries and halls in mid-range price segment.

### • Special features and competitive advantages

Kristina furniture factory manufactures 5 designer lines of case goods and 3 designer lines of upholstered furniture. The company produces modular furniture, which allows for over 500 of combinations, thus catering for various tastes of our clients.

The company's main advantage over rivals is the quality of Kristina products. The amount of defective products does not exceed 0.3%, which explains why the company was included in the list of companies producing products of international standard. Apart from that, Kristina products are characterized by unique design in accordance with the latest furniture trends, therefore the company is on a

par with leading Italian and German manufacturers.

### • Innovations and new developments

The company's technologists have developed unique and innovative design techniques, not used by other furniture manufacturers. Among such unique developments are radial laminated MDF facades, gloss coated facades, etc. Besides, the company's specialists design and produce new collections twice a year.



## Product Catalogue



### Gloria collection

This collection includes living-room, bedroom and children furniture. The body is made of Pegas coloured laminated chipboard. The facades are made of Pegas coloured MDF.



### Virginia collection

This collection includes bedroom, living-room and library furniture. The body is made of Virginia coloured laminated chipboard. The facades are made of Virginia coloured laminated chipboard with half-lacquer Virginia coloured high-gloss coating.



### Patrizia collection

This collection includes living-room, bedroom, children and hall furniture. The body is made of Pegas coloured laminated chipboard. The facades are made of Pegas or Cream coloured laminated chipboard or MDF.



#### Dorotea collection

This collection includes living-room, bedroom and children furniture. The body is made of Bleached Oak coloured laminated chipboard. The facades are made of laminated chipboard or MDF of lacquered Zebrano, lacked Wenge or Bleached Oak colours. Matt glass facades in film-faced MDF are available.



#### Polo upholstered furniture

This collection includes armchairs, banquettes and sofas. The furniture can be upholstered in materials of 5 different colours.



#### Soprano upholstered furniture

This collection includes sofas, armchairs, and banquettes. The furniture can be upholstered in materials of 6 different colours.

# MEBEL CHERNOZEMIA HC JSC



## Company Profile

<b>Company name (short):</b>	Mebel Chernozemia HC JSC
<b>CEO:</b>	Nickolay I. Poslukhayev
<b>Address:</b>	51a B. Khmelnitskogo St., Voronezh 394010
<b>OKPO code:</b>	47793290
<b>Year of foundation:</b>	30.12.1997
<b>Workforce:</b>	1118 people
<b>Telephone:</b>	+7 (473) 224-30-25 — CEO (reception)
<b>Sales and Marketing Dept:</b>	+7 (473) 223-66-42
<b>Supply Dept:</b>	+7 (473) 223-32-55
<b>HR Dept:</b>	+7 (473) 227-79-72
<b>Fax:</b>	+7 (473) 223-12-07
<b>Website:</b>	<a href="http://www.mche.ru">www.mche.ru</a>
<b>Specialization:</b>	Design, manufacture and distribution of a wide range of furniture: living room, kitchen, bedroom, dining room furniture, entry benches, upholstered furniture, office furniture (studies).
<b>Sales volume in 2010:</b>	1800205 thousand RUR (exclusive of VAT)
<b>Production volume in 9 months of 2011:</b>	524008 thousand RUR
<b>Quality management system:</b>	Certificate of compliance with ISO 9001:2000. TUV CERT certificate issued by a renowned European company RW TUV (Germany), in January 2007 the company was certified as complying with ISO 14001 ecological management system.
<b>Certificates:</b>	all the company's products are certified by Mebel Project-S Ltd.

## Historical Note

- 1943 – regional industrial complex of Railway District of Voronezh is founded.
- 1966 – the first furniture item – Ladoga convertible sofa – is produced
- 1968 – the company is restructured for furniture manufacture and is called Voronezh furniture factory.
- 1976 – the company is reorganized into Voronezh furniture parts complex (VKMD) and starts producing furniture parts and plates for furniture factories in Central Black-soil region.
- 1967 – 1992 – production of furniture boards covered with synthetic veneer, soft double-sided mattresses, upholstery, case goods.
- 1993 – Increase in production of case goods, prevalence of case goods production over upholstery production.
- 1996 – manufacture of film faces and veneered furniture, production of furniture of natural wood.

- 30.12.1997 – Mebel Chernozemia Holding Company JSC is set up, the product range is altered, investment, financial and administrative operations are centralized.

Today, Mebel Chernozemia HC JSC is a major customer focused furniture manufacturer utilizing the latest technology to produce high-quality products to cater for all tastes. Mebel Chernozemia Holding Company JSC comprises not only furniture factories, but also 56 trade centres in 20 regions of Russia.



## Production Facilities

Mebel Chernozemia HC JSC occupies over 12 hectares. The company's production facilities consist of a number of shops equipped with high-precision CNC machinery made in Italy, Germany, France and Spain and allowing for manufacturing furniture for various applications.

The company's production processes and quality management system have certificates of compliance with ISO 9001:2000 issued by TUV CERT RWTUV Systems GmbH.

The company is well-equipped with machinery, which enables the company to perform a complete cycle of production of case goods and upholstery – from material drying and board cutting through to final release of high-quality products.

The use of automatic process controllers, digital sensors, transducers (of size, movement, speed, humidity, material density, temperature, effort) has allowed to tool stabilizing systems and controlling software up with digital regulators and

microprocessors, thus enabling the company to choose the optimum working parameters for wood processing.

The holding has all the necessary technical and engineering departments using integrated automated computer software.



## Production Program

### • Applications

The company's main products are a wide range of furniture with unique design for various applications: including over 1500 furniture items from 16 main lines (living rooms, nurseries, entry benches, studies, dining rooms, bedrooms, upholstery) – which are available at the company's warehouses. The company has implemented a program of kitchen manufacture to measure (11 front types, 554 modules).

### • Special features and competitive advantages

The company has over 70 years of experience in furniture manufacture.

Over 250 trade houses carry out marketing and advertising programs. Production volume – 4.5% of all furniture produced in Russia. 92 prestigious awards have been given to the company at exhibitions in the last 11 years, including such national awards as Russian Cabriol 2005-2010, Top 100 Russian Products 2001 – 2009, Quality Leader, Price-Quality Balance, Russian Quality, The Best

in Russia (RFZPP).

The company accepts any form of payment to customers' preferences, and has a unified price-list for all points of sale.

The company offers a flexible discount system, excellent terms for VIP-partners.

### • Innovations and new developments

Regarding the company's quality management system, one of the main innovations is implementation by Mebel Chernozemia HC JSC of 1S8.2 automated control system, which has enabled the company to optimize its business processes in financial, production and technological spheres and thus increase the effectiveness of management decisions. Mebel Chernozemia HC JSC uses production processes based on innovative technologies and modern automated CNC machinery by Italian and German manufacturers allowing for processing up to 10 thousand cubic meters of material a day. The company's main development is the technology of glossing of curved parts.

## Product Catalogue



### **Eleganza collection (bedroom and living room)**

Eleganza series has a beautiful but at the same time modest decor. Carved fronts, salient panels, trimmings, fretted plinths and cornices make this furniture intrinsically elegant and exquisite. Wooden texture is emphasized by contrasting patinas, which looks original. Eleganza living room is a beautiful, elegant and at the same time functional furniture set providing excellent storage facilities and representing a fine example of harmonious ensemble. Eleganza bedroom is characterized by classical Italian design, its main elements are decorated by handwork carving which makes the furniture look like a piece of art, at the same time the furniture is reasonably priced – much cheaper than Italian counterparts. The company is especially proud of this series.



### **Laura bedroom**

Elegant, luxurious bedroom series combining artistic traditions of the past with modern technologies. The furniture is made of fine wood reflecting the status and delicate taste of its owner.



### **Valencia bedroom**

The bedroom is designed in the style of modern classics. Straight, ascetic lines, fine carving on dark wood, mat polish and an excellent quality of furniture fittings make Valencia stand out in the bedroom collection. It is not just bedroom – it is Italian style of a Russian house.



### **Palermo bedroom**

An ideal set for a carefully designed interior is a functional and beautiful Palermo furniture set. The high quality of materials and fittings, original design, balanced colours – saturated venge and mild vanilla – is combined with ergonomics, multifunctionality and compactness.



### **Кухня Афродита.**

Фасады кухни выполнены из массива и обработаны по специальной технологии, которая позволяет выявить текстуру дерева. Красоту изящного декора фасадов подчёркивает патинирование золотом и серебром. Благородный облик кухни завершают классические элементы: декоративный цоколь, карнизы, пилястры.



### **Aphrodite kitchen**

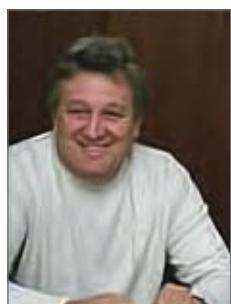
Kitchen fronts are made of wood processed using a special technology in order to highlight the wood texture. The beauty of fronts was emphasized by silver and golden patinas. The elegant design of this kitchen is completed with classical elements: decorative plinths, cornices, pilasters.



### **Martel bedroom**

This bedroom will appeal to those who prefer modern style. Decorative panes on wardrobe doors and commode drawer, as well as soft head of the bed, make this furniture unique and full of character. The main feature of this furniture is the combination of front colours – venge and white. The company uses IMPRESSDECORGmbH film by German manufacturer for surfaces decoration. Front face – high gloss.

# SOMOVO-MEBEL LTD



## Company Profile

<b>Company name (short):</b>	Somovo-Mebel Ltd
<b>CEO:</b>	Alexey I. Poslukhayev
<b>Address:</b>	4 Kharkovskaya St., Somovo settlement, Voronezh 394011
<b>OKPO code:</b>	49748632
<b>Year of foundation:</b>	1929
<b>Workforce:</b>	over 200 people
<b>Telephone:</b>	+7 (473) 227-44-89 — CEO (reception)
<b>Sales Dept:</b>	+7 (473) 227-63-49
<b>Supply Dept:</b>	+7 (473) 227-46-67
<b>HR Dept:</b>	+7 (473) 227-41-58
<b>Finance Dept.:</b>	+7 (473) 227-48-57
<b>Fax:</b>	+7 (473) 227-48-57
<b>Website:</b>	<a href="http://somovo.net">http://somovo.net</a>
<b>Specialization:</b>	Production and distribution of case goods
<b>Certificates:</b>	all the company's products are certified

## Historical Note

Somovo Furniture Factory was founded in 1929. Initially, it was an artel producing wood chips for manufacture of roofs. Later manufacture of barrels was set up. In 1935 a small furniture manufacture shop was set up to produce basic case goods: double-door cabinets, stools, chairs. Later, the company improved the quality of case goods and started producing upholstered furniture. In 1965 the company launched machine and production shop, purchased wood-working equipment and started producing furniture sets. The company also produced console

mirrors, book shelves and tables. In 1970 the company set up assembly and decoration shops, purchased curtain coating and polishing machines, and started manufacturing lacquered furniture made of fine wood veneer. In 1983 the company carried out major re-equipment of its production facilities, purchased new German equipment and started manufacturing rustic furniture. The company started serial manufacture of Vospominaniye 2M furniture set. Chests of drawers, shelves, entry benches and dining-room sets were produced for export.

## Production Facilities

The company uses equipment by such major manufacturers as IMA, Homag, Barberan, Reichenbacher, Burkle, Brandt, Biesse, SCM to produce its furniture sets.

Kristina uses only eco-friendly materials and accessories by Russian and foreign manufacturers in accordance with the highest quality requirements.



## Production Program

- Today, Somovo Furniture Factory is one of the major furniture manufacturers in Russia, the winner of numerous national and international contests, the winner of Top 100 Russian Products contest.

- Reliability, ecological safety and high quality have always been Somovo-Mebel Ltd's main advantages. Somovo-Mebel Ltd not only manufac-

tures serial products, but also designs and produces furniture to individual projects to cater for any customer's tastes.

Positive customer feedback and ever growing production volume prove the high quality of the company's products.

- Currently, the company is designing and launching a new furniture line.

## Product Catalogue

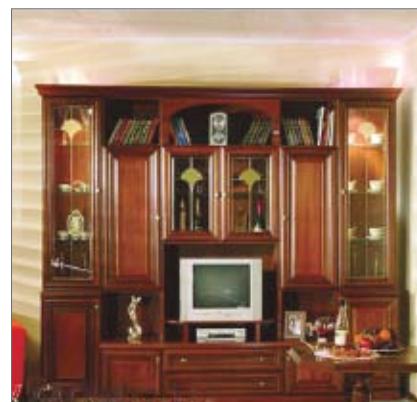


**Ekaterina LN-Redwood bedroom furniture**

- Bed - 1800x2000
- Bedside cabinet - 581x466x677
- Five door wardrobe without mirrors - 2310x638x2324
- Corner toilet table - 1150x500x1471
- Commode with five drawers and a mirror - 996x622x2037



**Five-drawer commode – oak, black silver**  
996x622x1028



**Ekaterina-30**

Colour: redwood  
Dimensions: 2594x2288x590  
Set: SN-07+TVS-02,  
SS-13+TNG-09,  
SS-04+DP-01+TNG-08,  
SS-13+TNG-09,  
SN-07+TVS-02.

**Ekaterina-31**

Colour: redwood  
Dimensions: 2600x2300x590  
Set: SP-02 (2 pcs.)+SP-09 (2 pcs.)+SP-04.





## KDM-OPT LTD

**Company name (short):** KDM-Opt Ltd

**CEO:** Alexander A. Shevchenko

**Address:** 25 Solnechnaya St., Voronezh 394026

**Year of foundation:** 03.11.2006

**Tel./fax:** +7 (473) 72-228-27

**Website:** [www.kedrvrn.ru](http://www.kedrvrn.ru)

**Specialization:**

Production of furniture accessories.

**Special features and competitive advantages:**

Reliability. Effectiveness. Pragmatism. – this is our motto in our customer relationship. Our objective is to expand production due to the launch of new equipment by German manufacturers.

**Product range:**

- Worktops,
- Wall panels,
- Angle units.



## KEDR-FASADY LTD

**Company name (short):** Kedr-Fasady Ltd

**CEO:** V. A. Haustov

**Address:** Office 11, 25 Solnechnaya St., Voronezh 394026

**Year of foundation:** January 2000

**Tel./fax:** +7 (473) 72-228-27

**Website:** [www.kedrvrn.ru](http://www.kedrvrn.ru)

**Specialization:**

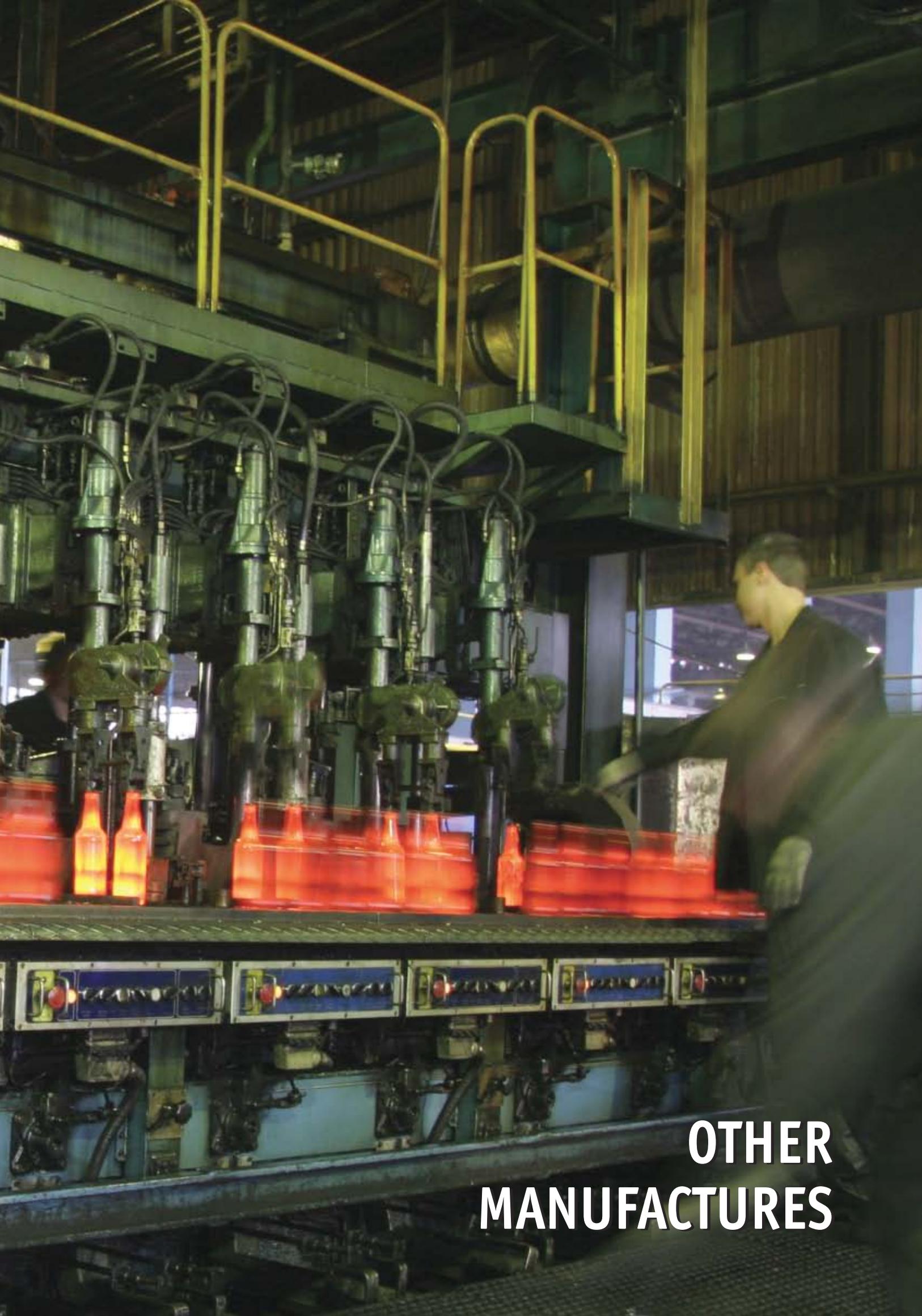
Production of furniture accessories.

**Special features and competitive advantages:**

Production of accessories made of high-quality materials to international standards using modern equipment. Ample warehousing facilities.

**Product range:**

- PVC film faced furniture facades;
- Laminated furniture facades.



OTHER  
MANUFACTURES

# VORONEZH MINING ADMINISTRATION JSC



## Company Profile

**Company name (short):** Voronezh Mining Administration JSC  
**CEO:** Alexander E. Muzyka  
**Address:** 1a Tsentralnaya Street, Strelitsa settlement, Voronezh region 396941

**OKPO code:** 10612023  
**Year of foundation:** 24.12.1992  
**Workforce:** 345 people  
**Telephone:** +7 (47372) 51-301 — CEO (reception)  
**Sales department:** +7 (47372) 51-938  
**Supply department:** +7 (47372) 51-977  
**HR department:** +7 (47372) 51-989  
**Fax:** +7 (47372) 51-542  
**Website:** [www.web.vrn.ru/vru](http://www.web.vrn.ru/vru)

**Specialization:** Extraction of:  
- refractory clay  
- glass-making sand  
- molding sand  
- mortar sand  
- sandstone

**Sales volume in 2010:** 257 295 thousand RUR (exclusive of VAT)

**Production volume in 9 months of 2011:** 183503 thousand RUR

**Quality management system:** acceptance and shipping are carried out in compliance with regulations of acceptance and shipping of manufactures products and GOST 24297-87 requirements; with Instruction for categorization of refractory clay and kaolin clay, Instruction for the procedure of technical and industrial products acceptance P-6 and P-7, GOST and TU requirements for clays and sands.

**Certification:** Products are delivered with quality certificate.

## Historical Note

The development of Latnenskaya field started in 1840. In 1891 912 tons of refractory clay was extracted. From 1891 to 1898 the clay from Latnenskaya mine was the main material for the German refractories industry.

• In 1898 the Latnoe refractory plant was put into operation. Since that time extraction volumes increased. Putting into operation of the Semiluki refractories plant required increasing in production volumes.

• In 1932 the Voronezh mining administration got 2 steam excavators from Germany. Further development was suspended until the WWII

Technical re-equipment of Voronezh mining administration was recommenced after in 1947. In this year the company got first domestic excavator.

In 1948 the company got the second one. These machines were equal to foreign ones.

From 1958 to 1992 the mining administration was part of the Semiluki refractories plant as organization department. As a result of industrial reform on December 24, 1992 the Voronezh Mining Administration JSC was set up.



## Production Facilities

Today the company has 2 surface mines, equipped with modern machines, possesses own heavy load and auxiliary trucks and railroad workshop which enables the company to supply the material in time. Own service station provides for equipment maintenance.

Rated capacity of the mines is 600000 tons of clay and 100000 m<sup>2</sup> of mortar sand. Real extrac-

tion volumes depend on customer's demand and on qualitative composition of the material.

The system of field development provides for efficient use of the equipment and productivity of the mine at minimum expenses for daylighting and mining works; provides for safe mining, conservation of resources and environmental protection.



## Production Program

### • Applications

#### Refractory clay:

This product is characterized by high ductility, low iron and copper content, absence of carbonates, low detrimental impurities. These factors provide for the manufacturability and eco-friendliness of the product.

Refractory clays are used for production of chamotte ware, porcelain, ceramics, sanitary ceramic and high-quality dielectrics.

#### Porcelain clay:

Latneneskaya field is the only mine in Russia where porcelain clays are being extracted. These clays are used in ceramic and faience industry. The majority of brick-making plants of Moscow, Yaroslavl and Tula regions use this material for the production of bright ceramic bricks. The clay can be used for production of ornamental stone, tiles and tiling.

#### Glass-making sand:

Used for production of sheet window and com-

mercial glass, laboratory, medical and perfume glass, fiberglass for electrical products, glass for electric light fittings, sodium silicate.

#### Molding sand:

Used in foundry engineering as mold material in the process of production of casting forms and mild cores.

#### Mortar sand:

Used in construction industry in the process of production of concrete items, filters, ruberoid and abrasives.

#### Sandstone:

Used for production of blocks of I-III class, facing slabs construction products and paving stones.

### • Special features and competitive advantages

Extracting material is unique. High qualitative characteristics.

### • Innovations and new developments

The company is planning to improve the manufacturing method of dry sand production for complete satisfaction of customers' demand.

# Product Catalogue

## Refractory clays

Indicator name	Value by sort				
	Main				Semiacid LTPK-1
	LT-0	LT-1	LT-2	LT-3	
Content on iginitied material, %					
Al <sub>2</sub> O <sub>3</sub> , no less than	39	37	33	28	23
Fe <sub>2</sub> O <sub>3</sub> , no less than	1.5	1.5	2.0	2.5	not rated
Ignition loss, %, no more than	15	18	20	20	14
Fire resistance C, no less than	1730	1730	1690	1670	1670

## Porcelain clay

Indicator name	Value
mass concentration of Al <sub>2</sub> O <sub>3</sub> , no less than, %	15
no more than, %	20
Mass concentration of Si <sub>2</sub> O <sub>3</sub>	
No more than	75
Incl. pure Si <sub>2</sub> O <sub>3</sub> , no more than	40
Mass concentration of total sulfur in equivalent SO <sub>3</sub> , %	
No more than	0.3
Incl sulphide sulphur, % no more than	0.1

## Glass-making sand

Indicator name	Value
Mass concentration of SiO <sub>2</sub> , no less than	98.7
Fe <sub>2</sub> O <sub>3</sub> , no more than, %	0.05
Al <sub>2</sub> O <sub>3</sub> , no less than, %	0.55
TiO <sub>3</sub> no more than	0.25
#08 Screening rezidue, no more than	1.0
Pass through screening machine #1, no more than	7.0



Molding sand	
Indicator name	Value
Mass concentration of clay bond, % no less than	0.5-1.0
SiO <sub>2</sub> , no more than, %	98.5-99.5
Uniforming factor	60-75
Avg. grain diameter, mm	0.13-0.24

Enriched mortar sand	
Indicator name	Value
Avg. grain diameter, mm	0.65-1.25 1.25-5.0
Chemical compound, %	
SiO <sub>2</sub>	99.2-99.7
Al <sub>2</sub> O <sub>3</sub>	0.25-0.33
Fe <sub>2</sub> O <sub>3</sub>	0.01-0.03
TiO <sub>2</sub>	0.01-0.06



# IGRUSHKI PCF CJSC



## Company Profile

<b>Company name (short):</b>	Igrushki Production Commercial Firm CJSC
<b>CEO:</b>	Yuriy A. Vorotyagin
<b>Address:</b>	74a Peshestreletskaya St., Voronezh 394062 Russia
<b>OKPO code:</b>	10590818
<b>Year of foundation:</b>	1927
<b>Workforce:</b>	98 people
<b>Telephone:</b>	+7 (473) 263-71-01 — CEO (reception)
<b>Supply Dept:</b>	+7 (473) 263-71-59
<b>Fax:</b>	+7 (473) 263-71-59
<b>HR Dept:</b>	+7 (473) 263-40-81
<b>Website:</b>	<a href="http://www.pkfigrushki.ru">www.pkfigrushki.ru</a>
<b>Specialization:</b>	Production of games and toys for children
<b>Sales volume in 2010:</b>	55510.0 thousand RUR (exclusive of VAT)
<b>Production volume in 9 months of 2011:</b>	32953.2 thousand RUR
<b>Quality management system:</b>	The quality is controlled by the company's Quality Control Dept at every stage of production.
<b>Certification:</b>	Quality and safety of products are certified by Hygienic certificate № 36.VC.40.963.P.002170.05.09 of 18.05.2009 valid till 18.05.2014. Certificate of compliance № ROSS RU.AYa60. V21090 valid till 18.05.2012.

## Historical Note

Igrushki PCF CJSC has operated since 1927. That year an artel called Univertrud was set up in Voronezh to produce a wide range of products such as glass objects by blowing, shell buttons, plastics and leather goods.

Production of glass objects was separated as an individual artel called Chetvertaya Pyatiletka.

In 1960 Chetvertaya Pyatiletka artel was transformed into a light industry company called Igrushki.

In 1981 Igrushki CJSC started manufacturing

toys using PVC plasticate - PVC-plastisol.

The first equipment was Italian, later the company started using German and Russian equipment.

During restructuring in 1991 the company was transformed into Igrushki Production Commercial Firm CJSC.

Today, Igrushki PCF CJSC is a Russian manufacturer of PVC-plastisol toys complying with safety requirements, and having reasonable prices which makes them accessible to the majority of customers.

## Production Facilities

Igrushki PCF CJSC's production facilities allow for complete production cycle including:

- production of raw material for the production of toys – PVC plasticate PVC plastisol;
- colour division of raw material according to application;

- production by method of rotational moulding;
- mechanical and hand painting;
- vacuum treatment of toys;
- assembly and packaging of end products – toys.

The company designs new products and tools.

The company's products are safe for children and comply with all safety requirements to children's goods approved by Decree № 299 the Customs Union of Russia, Belarus and Kazakhstan of 28.05.2010, which apply to all goods sold in the three countries.

The company implements a three-stage control system, uses the company laborato-

ry certified by Federal Agency for Technical Regulation and Metrology and complying with GOST R ISO/MEK 17025-2006 as a testing laboratory for children products certification.

The board of directors and the company's managers are constantly striving for modernization and re-equipment of production facilities.



## Production Program

### • Applications

Igrushki PCF CJSC manufactures products for kids aged 3 to 6 years old.

*The company's product range includes products helping children get acquainted with the world:*

- series of toys acquainting kids with plants and animals, birds, sea and river animals;
- series of toys for boys – cars, military machines, soldiers of Russian and foreign armies;
- series of toys for girls – dolls and other toys which develop the girls' household and childcare skills;
- series of toys to develop a child's logical thinking;
- other series. Over 500 products.

### • Special features and competitive advantages

The company's products are characterized by their national characters and recognizability, as all of them are characters from Russian folk tales known to many generations.

Ecologically friendly, safe for children. High quality combined with reasonable prices. Products with elements of folk artistic crafts of Voronezh region. Souvenir products to celebrate Defender of the Motherland Day, 8 March, St Valentine's Day, New Year's Day, etc. The company launches 5 new products a month.

### • Innovations and new developments

As part of the company's development program, Igrushki PCF CJSC has developed a new technology of using PVC-plastisol with improved properties for the production of toys. Implementation of this new technology resulted in development and manufacture of new innovative equipment. The company's employees, in cooperation with scientists from Voronezh State Technological Academy, successfully tackle challenges which clients, technology and production pose before them.

Today, the company produces over 500 toys made of PVC-plastisol. The company's product range expands monthly. Due to the use of new technologies, the company's toys are considered by the market to be eco-friendly and safe.



## Product Catalogue

When manufacturing products, including those presented in this catalogue, Igrushki PCF CJSC follows the motto: We do not live in a fairy tale – we make it in Voronezh city.



**Traditional People's Artistic Crafts series** - Vanechka doll and Mashenka doll are dressed in traditional costumes of peasants typical of Voronezh region.



**Friendly Clique** series consists of 153 types of animals, birds, fishes, and fairy tale characters. Cheerful, friendly characters will make the education of your kid exciting and interesting.



**Souvenir and New Year's series of products** consists of Farther Frost, Snegurochka snow maiden, Snowman and other characters, souvenir variants available. Apart from that, the New Year's series includes a symbol-of-the-year toy (Cat – the year 2011, Dragon – the year 2012).

**Water Amusement** series allows for playing with squirting toy animals which helps to create joyful mood and improve a child's well-being in a hot season. All squirting toy are absolutely safe.



Fairy Tales series consists of 30 different board games based on Russian and international folk tales. Each toy is hand-painted with great care. As a result, it seems that these magic characters communicate with a child in a special language. It teaches the child to speak correctly and to express their thoughts.

**Puppet Theater** series consists of sets for 20 different fairy tales to provide children and adults with an opportunity to stage their favourite tales. It develops the child's logical and creative thinking, the images created by the child help develop their individuality.



numbers on them help parents teach their children basic arithmetics. Such games develop a child's memory, speech and fine motor skills.

**Development Games** series is developed for children under six years old. 18 cubes with wild and domestic animals with the first letters of the names of these animals depicted on them help a child learn the alphabet and assist the parents in teaching reading skills. 18 cubes with



# PAVLOVSKGRANIT JSC



## Company Profile

<b>Company name (short):</b>	Pavlovskgranit JSC
<b>CEO:</b>	Vladimir M. Singatulin
<b>Address:</b>	Pavlovsk, Voronezh region 396420
<b>OKPO code:</b>	05169287
<b>Year of foundation:</b>	12.08.1976
<b>Workforce:</b>	2992 people
<b>Telephone:</b>	+7 (47362) 2-20-59; 2-25-59 (reception)
<b>Sales Dept:</b>	+7 (47362) 3-17-74; 3-17-68; 2-26-47
<b>Dept of Equipment and Spare Parts:</b>	+7 (47362) 2-14-45; 2-68-89; 3-17-89
<b>Supply Dept:</b>	+7 (47362) 2-21-59; 3-15-10; 3-18-95
<b>Fax:</b>	+7 (47362) 2-20-12; 2-29-55
<b>HR Dept:</b>	+7 (47362) 2-63-77
<b>Website:</b>	<a href="http://www.pavlovskgranit-uk.ru">www.pavlovskgranit-uk.ru</a>
<b>Specialization:</b>	Open mining of Shkurlatovskoye granite deposit; production of nonmetallic and mineral raw material; production of concrete goods.
<b>Sales volume in 2010:</b>	1 673 632 thousand RUR (exclusive of VAT)
<b>Quality management system:</b>	Certificate of compliance with GOST R ISO 9001-2008, certification authority – Astrakhandorstroycertifikatsiya.
<b>Certification:</b>	Certificates issued by Rosdorcetifikatsiya, GOST R, Mosstroycertifikatsiya, FZhT.

## Historical Note

- Spring 1969 – Voronezh branch of All-Union Leninist Young Communist League decreed that Pavlovsk motorized opencast should be made a regional Komsomol construction.
- 1971 – development of Shkurlatovskoye granite deposit started.
- 11 March 1974 – tow truck scoop reached the deposit dome.
- 29 June 1974 – the first explosion was carried out at, the deposit.
- 30 June 1976 – the first products were produced.
- 12.08.1976 – Pavlovsk motorized opencast was renamed as Pavlovsk Mining Processing Plant.
- 1988 – the company reached an output of 7.954 mln m<sup>2</sup> (10.9 mln tonnes).
- 20.06.1986 – Pavlovsk Mining Processing Plant was renamed as Pavlovskgranit Production Association.
- 18.11.1992 – Pavlovskgranit Production Association was renamed as Pavlovskgranit OJSC
- 24.04.1996 – Pavlovskgranit OJSC was renamed as Pavlovskgranit JSC.
- 2008 – the company reached an output of up to 10 mln m<sup>2</sup> (13.7 mln tonnes).



## Production Facilities

The company is unique, as it develops the only natural stone deposit in Central and Southern Russia with such properties and characteristics. The company's rated capacity is 7 870 thousand m<sup>2</sup> of nonmetallic minerals a year and balance reserves are 613.5 mln m<sup>2</sup>, which guarantees another 106 years of trouble-free work. Minetake can be expanded to increase reserves up to 700 mln m<sup>2</sup>.

The main direction of activity for Pavlovskgranit JSC is granite and high-grade fractionated



breakstone production. Main production facilities include:

- Granite opencast;
- Rock crashing plant;
- Industrial railway transport plant;
- Car plant;
- Loading shop;
- Freight shop;
- Emulsion explosives components production plant.

## Production Program

In the last 6 years the company has invested over 2 bln roubles in modernization and re-equipment of production facilities. The company has a flexible production technology which can be adapted to different production conditions according to market demand.

A new rock crashing plant is being built to produce coarse stone fraction which is in high demand, it will allow to increase production of 5-20 mm fractions.

Pavlovskgranit JSC is a fully independent enterprise. All technological processes from opencast

mining to end product dispatch, maintenance and repair of equipment, as well as power supply, are carried out by the company's departments.

Pavlovskgranit JSC is a company with highly automated production. The company has implemented Autotracker system to control the work of vehicles and railway transport, tow trucks, and numerous production processes.

Pavlovskgranit JSC is developing rapidly, keeping with the times, utilizing modern technologies, and being a reliable partner to over 300 customers in Black Soil region and Central Russia.



## Product Catalogue



**Building granite (0 – 1200 mm)**



**Building granite (0 – 300 mm)**



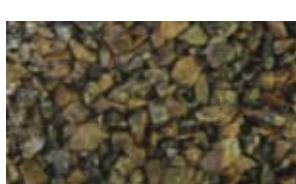
**Crashed stone, mixture of fractions from 5 to 20 mm group 3 grain shape**



**Crashed stone, mixture of fractions from 25 to 60 mm**



**Crashed stone, mixture of fractions from 5 to 20 mm group 2 grain shape**



**Crashed stone, fraction over 10 to 15 mm**



**Crashed stone, fraction over 10 to 20 mm**



**Crushed stone, fraction from 5 to 10 mm**



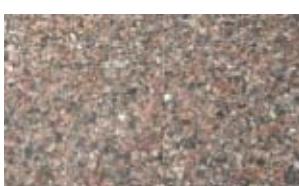
**Crushed stone, fraction over 20 to 40 mm**



**Crushed stone and sand mixture from  
0 to 10 mm (C7)**



**Crushed stone and sand mixture from  
0 to 80 mm (C4)**



**Sand from screening of granites from Shkurlatovskoye deposit grade II, coarse Mk 2.5-3.0 with hardness of no less than 60 MPa for coatings and bases of highways and airport roads.**



**Sand from screenings, increased coarseness  
grade I**



**Sand from screenings, medium coarseness  
grade I**

# PROMTECHMODEL LTD

## Company profile

<b>Company name (short):</b>	Promtechmodel Ltd
<b>CEO:</b>	Vladimir O. Alyokhin
<b>Address:</b>	11, Moskovskiy Avenue, Voronezh, 394026
<b>OKPO code:</b>	83638071
<b>Year of foundation:</b>	08.02.2008
<b>Workforce:</b>	134 people
<b>Telephone:</b>	+7 (473) 239-38-23 — CEO (reception)
<b>Accounting department:</b>	+7 (473) 239-38-24
<b>Supply department:</b>	+7 (473) 239-66-46
<b>Sales department:</b>	+7 (473) 239-66-47
<b>Senior metallurgist's department:</b>	+7 (473) 239-66-48
<b>Fax:</b>	+7 (473) 239-38-25
<b>Website:</b>	<a href="http://www.roslit.com">www.roslit.com</a>
<b>Specialization:</b>	Production of steel casts and pattern equipment.
<b>Sales volume in 2010:</b>	526 488 thousand RUR (exclusive of VAT)
<b>Quality management system:</b>	Production control department is operating in the company.
<b>Certification:</b>	Products are not liable to obligatory certification.

## Historical Note

Promtechmodel LTD has conducted production activities since 2005, when the company got production facilities of the Voronezh excavator plant after Komintern.

In the 1970s on the basis of the Voronezh Production Association after Komintern the ferrous and nonferrous casting shop was put into operation. The main aim of the shop was distribution of pattern equipment to the excavator plants of the USSR. Rated power of the plant was 52000 tons of casts per year was reached in 1990.

The manufacturing unit of Promtechmodel LTD comprises 2 main buildings: casting building and charge building and a variety of auxiliary subdivisions. Building area of the main shops takes up over 50000 m<sup>2</sup>. Buildings and structures were constructed and put into operation in 1974-1978 and are in good technical condition.

Today, Promtechmodel LTD repairs old equipment, buildings and structures. The company is re-equipping its facilities with modern machines meeting world standards.

## Production Facilities

Production activity is carried out in 2 main shops with total area of 50000 m<sup>2</sup>. The company uses over 1000 equipment units for the full-cycle production of steel casts from sand drying to carrying out finishing (dressing) operations on casts.

Equipment of main technological facilities:

**Melting compartment:**

- electric steel furnaces DSP-6 and DSP-12

Moulding shop and core room:

- HTS-mixer OMEGA

Thermic cleaning room

- 2-rotor tunnel shotblast chamber SISSON-LEHMANN

- Heating pool furnace with 50 tons load capacity

- Gas cutting stations and suspended abrasives

The plant's laboratory is tooled up with modern for mechanical, chemical and metallographic examination of casts.

Dimension types of the equipment enable the plant to produce casts with weight from 30 kg to 8 tons.

The plant's priority products are steel casts with



weight from 100 to 1200 kg, dimensions (length/width/height) up to 1000 mm and 7th grade of precision by GOST 26645-85.

In small-batch or single-piece manufacture the plant produces large-scale steel casts (8000x2000x1000 mm) with weight up to 8 tons.

Promtechmodel JSC produces metal casts both from standard steel grades and by the client's specifications.

## Production Program

**• Applications**

The company manufactures pattern equipment and steel casts from structural carbon and alloyed steel of the following grades: 25L, 45L, 50L, 35GL, 20GSL, 30GSL, 20GML, 30HML, 30HNML, 20HGSL, 15 H1M1FL1 for different branches of industry.

**Main customers are:**

- Companies of gas- and oil-refining industry (stop valves)
- Companies of engineering industry
- Producers of equipment for mining and food industry
- Bridge construction plants
- Companies of tube-rolling industry
- Railroad

**• Special features and competitive advantages**

The company carried out the ambitious program of equipment, buildings and structures repair; new forming and core room working by alpha set technology was set into operation. It was equipped

with machines produced by Omega Foundry Equipment LTD, UK. This provided for dramatic increase in the quality of casts.

Promtechmodel JSC produces metal casts both from standard steel grades and by the client's specifications (both by ready ones and with improvements). The plant produces both batch casts and single-piece ones.

The full preparation of manufacturing process enables the plant to follow all requirements, set by standards for the products.

Because of modern equipment and new technologies the parts and units, produced by the plant are final high quality products which don't need any further treatments. The plant manufactures different casts, from small-scale to large-scale with different weight.

Steel casts, molded by highly-qualified professionals has outstanding characteristics and mechanical properties. New technologies and casting forms, used by the plant provide for decrease of production time and increase of economy and efficiency while producing complex units.

## Product Catalogue



### Gland oil-filled valve (ZMS)

- Internal diameter – 100 mm
- Operating pressure – 21 MPa
- Steel grade – 30 HML



### Block valve

- Internal diameter – 200 mm
- Operating pressure – 16 MPa
- Steel grade – 30 HML



### Wellhead connection

- Internal diameter – 230 mm
- Operating pressure – 21 MPa
- Steel grade – 30 HML



### Wellhead connection

- Internal diameter – 280 mm
- Operating pressure – 35 MPa
- Steel grade – 30 HML



**Christmas tree body**

- Internal diameter – 230 mm
- Operating pressure – 70 MPa
- Steel grade – 20 HGSL



**Ram preventer**

- Internal diameter – 200 mm
- Operating pressure – 20 MPa
- Steel grade – 30 HML



**Shock absorber body**

- Steel grade – 30 GSL



**Excavator driving sprocket**

- Steel grade – 40 HL

# RASCO VSTZ LTD BRANCH



## Company profile

<b>Company name (short):</b>	Rasco VStZ Ltd Branch
<b>CEO:</b>	Victor V. Selyutin
<b>Address:</b>	172 Leninskiy Avenue, Voronezh
<b>OKPO code:</b>	54698623
<b>Year of foundation:</b>	05.10.2000
<b>Workforce:</b>	530 people
<b>Telephone:</b>	+7 (473) 224-31-33 — CEO (reception)
<b>CFO:</b>	+7 (473) 239-42-22
<b>Sales department:</b>	+7 (473) 239-44-23
<b>Supply department:</b>	+7 (473) 223-86-47
<b>Fax:</b>	+7 (473) 224-31-33
<b>Website:</b>	<a href="http://www.rasko.ru">www.rasko.ru</a>
<b>Specialization:</b>	Production of hollow glass objects from colored glass.
<b>Sales volume in 2010:</b>	1 230 thousand RUR (exclusive of VAT)
<b>Production volume in 9 months of 2011:</b>	1027300 thousand RUR
<b>Quality management system:</b>	ISO 9001-2008. Certification authority: DNV MANAGEMENT SYSTEM CERTIFICATE OY/AB, Finland
<b>Certification:</b>	Design, production and distribution of glass bottles for food liquor.

## Historical Note

- On 5 October 2000 the Voronezh branch of RASCO VStZ was set up on the base of Voronezh plant VELT
- July 2001 – The reconstruction of production buildings started. The reconstruction became the matter of honor for the plant's workers as the backbone of the team consisted of the workers of formerly famous plant.
- May 2001 – The first order of glass manufacturing was set into operation. The company produced the first batch of glass products of brown glass with total number of 124.6 mln pieces.
- July 2003 – the second order of glass manufacturing was put into operation. The plant produced 255.5 bottles of 20 types from green and brown glass.
- 2005 – The company was up and running at full capacity and became able to produce about 400 mln of bottles of 37 different types from green and brown glass.
- February 2008 – April 2011 – massive recon-

struction and upgrade of production facilities in the framework of the implementation of the investment project. Production capacity increased to 500 mln pieces of high quality products of exclusive design. The project was included to the social and economic development of the region Program.



## Production Facilities

Production facilities comprise 2 main shops: batch room and machined shop and highly-developed infrastructure of energy and auxiliary utilities and tooled up with modern high capacity glass-forming, processing and testing equipment.

The plant uses modern continuous regenerative glass-melting furnaces with U-type flame direction for glass melting.

Production of glass objects carries out on 2 GPS (IS) machines, 3 AL-116 automatic machines and 2 AL-118-2 automatic machines.

For prolonging of operation life of expensive glass-forming equipment the company renovates it at the forms renovation sector.

All services of the company are fitted with modern computers and software.

Equipment is provided by such famous companies as:

- HORN Glass Industries AG, Germany – equipment for production of liquid glass melt.
- GPS, Germany – glass-forming equipment.

- Ernst Pennecamp Germany LTD – transport equipment.

- Sklostroy, Czech Republic – transport and glass-forming equipment.

- SGCC, France – check equipment.

- Steklopak JSC, Orel – transport and packaging equipment.



## Production Program

### • Applications

The company produces bottles of various capacity and design from brown, green and transparent glass for bottling, storage and transportation of food liquors.

### • Special features and competitive advantages:

#### Features:

- Use of modern glass objects production method – press-and-blow
- Production multifunctionality – change of glass colour, design, production methods on client's demand.
- The company performs a thorough analysis of potential material suppliers and final product consumers.
- Ability to recycle the glass fragments, generated as consume waste (Eco-friendly complete cycle)
- High economic effectiveness of the company

#### Advantages:

1. Convenient geographic location:
  - Located in the centre of transport mainlines, has convenient railroad approach lines providing for expanding of trading area from Donetsk to Omsk and Vladivostok.
  - Accessibility of main raw material sources (dolomite – Lipetsk)
  - Developed local raw material sources (sand –

Semiluki)

- The backbone of the team – professionals, working in glass industry since foundation of the picture-tube plant in Voronezh.

### • Innovations and new developments

The main innovation is implementation of the new production method – press-and-blow in 2008. Implementation of this method provided for considerable decrease in the weight of the final product during its molding, increase in quality of the glass objects as a result of the omnipresence of liquid glass melt around the glass-forming machine. All these innovations result in decrease of production costs.



## Product catalogue



### Glass bottles from brown and green glass

- Production method: double inflation, press-and-blow.
- Volume – 643–750 c<sup>3</sup>.
- Weight – 325–780 g.



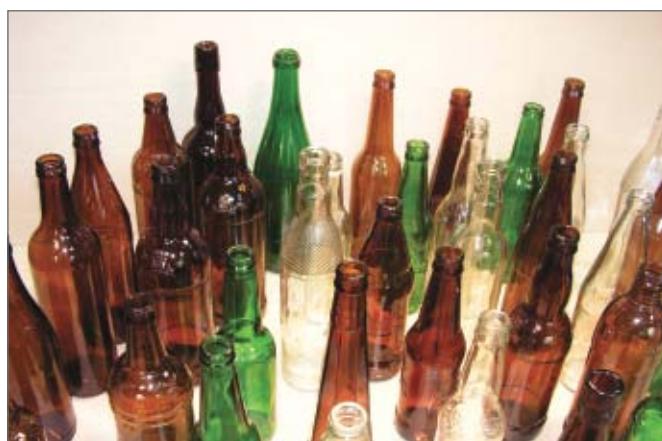
### Glass bottles from brown glass

- Production method: double inflation, press-and-blow.
- Volume – 500 c<sup>3</sup>.
- Weight – 280–360 g.



### Glass bottles from brown glass

- Production method: double inflation, press-and-blow.
- Volume – 500 c<sup>3</sup>.
- Weight – 280–360 g.



### Glass bottles from brown, green and transparent glass

- Production method: double inflation, press-and-blow.
- Volume – 330–750 c<sup>3</sup>.
- Weight – 200–780 g.



**Glass bottles from green glass**

- Production method: double inflation.
- Volume – 500 c<sup>3</sup>.
- Weight – 340-360 g.



**Glass bottles from transparent glass**

- Production method: double inflation, press-and-blow.
- Volume – 500 c<sup>3</sup>.
- Weight – 270-350 g.



**Glass bottles from brown, green and transparent glass**

- Production method: double inflation, press-and-blow.
- Volume – 250-330 c<sup>3</sup>.
- Weight – 180-280 g.

# SEMILUKI REFRactory PLANT JSC



## Паспорт предприятия

<b>Company name (short):</b>	Semiluki Refractory Plant JSC
<b>CEO:</b>	Pavel N. Goncharov
<b>Address:</b>	5a Lenina Street, Semiluki, Voronezh region 396901
<b>OKPO code:</b>	00187027
<b>Year of foundation:</b>	1931
<b>Workforce:</b>	1325 people
<b>Telephone:</b>	+7 (47372) 2-85-05, 2-85-08 — CEO (reception)
<b>Sales Dept:</b>	+7 (47372) 2-85-37, 2-86-57, 2-86-59
<b>Supply Dept:</b>	+7 (47372) 2-86-55, 2-85-06
<b>HR Dept:</b>	+7 (47372) 2-86-36, 2-85-45
<b>Fax:</b>	+7 (47372) 2-85-99, 2-86-21
<b>Website:</b>	<a href="http://www.semiluki.ru">www.semiluki.ru</a>
<b>Specialization:</b>	Design, development and production of oxycarbonic, aluminosilicate, aluminous, zirconium formed and unshaped refractories.
<b>Sales volume in 2010:</b>	812 940 thousand RUR (exclusive of VAT)
<b>Production volume in 9 months of 2011:</b>	563448 thousand RUR
<b>Quality management system:</b>	Certificate of compliance with GOST R ISO 9001-2008. Certification authority – TEST-St. Petersburg LTD

## Historical Note

- 1926-1930 – Construction of the plant on the base of Latnoe field of refractory clays.
- 1931 – The plant started the production of chamotte refractories.
- 1954 – The plant started the production of high-aluminous refractories.
- 1965 – The plant started the production of corundum lightweight. The company remains the monopolist in manufacturing of this product.
- 1973 – The plant started the production of slabs for steel teeming
- 1998 – Reconstruction of chamotte refractories shop. The plant starts the production of carbonic refractories for ladle lining. Production facilities met the latest standards of the time: high-precision batch-weighing scales, modern transportation, mixing and pressure equipment.
- 2000 – Construction of special manufacturing site producing ready-mix concrete, the plant starts the production of ready-mix concrete.
- 2001 – The plant started the production of shaped refractories by vibratory casting from low-cement castable method.
- 2005 – The plant starts cooperation with glass manufacturers and implements the technologies of the production of refractory products for glass furnaces.



## Production Facilities

The company's production facilities allow for the full cycle of the production of refractories from reference design documentation development to final product packaging. Production base includes equipment stock for drying, milling, degradation, batch preparation, drying and ignition of the products.

The development experience provides for the design and production of the full range of aluminosilicate refractory and insulation products and ready-mix concrete.

Production facilities take up the area of 85000 m<sup>2</sup>.

The company comprises 5 main refractory shops and 2 special production sites for the production of a wide range of chamottes, refractory mortars, refractory aggregates and the fitting shop.

The range of Semiluki refractory plant JSC products includes over 50 grades of refractory products. The range of formed products includes over 1500 nominal sizes of simple, complex and bottleneck forms.

These are chamotte and high-aluminous refractories with content of Al<sub>2</sub>O<sub>3</sub> from 42% to 95%: products for steel teeming, for soot production reactors, anode kilns blast-furnace bottoms,

lightweight insulation, carbonaceous steel pots, carbonaceous material for converter backing run, refractory concrete products, mortars, refractory aggregates, ramming mixtures, ready-mix concrete etc.



## Production Program

### • Applications

Semiluki refractory plant JSC products – refractory products and powders – are used for casing of heat units and are applied in industries which use high temperature production processes:

- Ferrous and nonferrous casting
- Cement industry
- Glass industry
- Machine engineering
- Chemical industry
- Sugar refining industry
- Building materials industry
- Heat power engineering

Without refractories it is impossible to perform high temperature treatment processes of metals, alloys, cement clinker, liquid glass melt etc.

Main clients of the Semiluki refractory plant JSC are over 4000 companies. Among them are the biggest metallurgic companies, such as – Oskol electrometallurgical plant JSC, Novolipetsk, metallurgical plant JSC, Severstal JSC, Mechel

JSC, AvtoVAZ JSC, Volzhskiy tube plant JSC, Severskiy tube plant JSC, Mikhailovskiy GOK JSC, Orenburggazprom LTD.

### • Innovations and new developments

The company started production of concrete products for glass industry. Glass-manufacturing plants use feed supply devices, damper devices, feeding canal closure devices, burner blocks, produced by the Semiluki plant.

The company succeeded in production of large-block products for glass-melting furnace bottoms – bottom blocks. The product developed as alternative for chamotte blocks and exceeded the characteristics of chamotte blocks.

The technology allows for manufacturing of products by the client's drawings. This excepts bench assembly and additional mechanic treatment during the production process.

The company is developing technologies of mixtures for glass furnaces feed spouts. The company is implementing the production of sintered periclase powder and products on the base of this powder.

## Product Catalogue



### **High-aluminous refractories MLS-62, MKS-62, MKB-73, MKS-83, MKT-80, MKS-90 KS-95, MLLD.**

Applications: blocking of the air heaters of blast-furnaces, blast-furnace bottoms, steel-teeming ladles, mixer ladles, domes of electric furnaces, rotary furnaces, anode kilns.

#### Contents:

Mullite: (content of  $\text{Al}_2\text{O}_3$  from 62 to 72%)

Mullite-corundum: (content of  $\text{Al}_2\text{O}_3$  from 72 to 90%)

Corundum: (content of  $\text{Al}_2\text{O}_3$  over 90%)

Operation temperature: 1700 C

Certification: GOST 24704-94, 10381-94

Opened porosity: no more than 20%

Compression ultimate strength: 40 n/mm<sup>2</sup> min.

High thermal stability

Volume stability up to 1700C



### **Refractories for casing, glass furnace heads ShNR-47, ShNR-39, ShNR-42, MLNR-62, MKNR-72.**

Applications: blocking of glass furnace heads.

#### Contents:

Chamotte (content of  $\text{Al}_2\text{O}_3$  from 37 to 42%)

Mullite and mullite-corundum: (content of  $\text{Al}_2\text{O}_3$  from 62 to 72%)

Operation temperature: 1700 C

Certification: TU 1547-028-00187827-2006

Sizing

Compression ultimate strength: 35 n/mm<sup>2</sup> min.

High chemical stability



### **Lightweight insulation ShT-1.3, ShT-1.0, ShT-0.6, MKRT-0.8, MLT-0.9, MLT-1.0, KL-1.3**

Applications: Non-conducting lining of heat machines.

Operation temperature: 1550 C

Certification: GOST R 52803-2007

Apparent volume weight: 1.3-0.5 g/c<sup>3</sup>

Compression ultimate strength: 20 N/mm<sup>2</sup> min.

Volume stability up to 1500 C



**Vibratory casted concrete refractories of bottle-neck shape for glass-furnaces VKS-95, VMKS-85, VMLS-65, VTsMS-13.**

Applications: Glass furnace feeders.

Certification: TU 1547-024-00187827-2004

Operation temperature: 1700 C

Content of  $\text{Al}_2\text{O}_3$ : up to 97%

Impurity content: less than 1%

High glass attack resistance

High thermal stability

Dimensional accuracy



**Concrete refractories for steel teeming SVN-1, SVN-2, SVN-3**

Applications: Products for steel-teeming ladles: teeming pots, well and purging block

Certification: TU 14-199-199-2001

Operation temperature: up to 1750 C

Dimensional accuracy

Content of  $\text{Al}_2\text{O}_3$ : up to 98%

Impurity content: less than 0.5%

High metal and slag resistance

High thermal stability



## VERA FIRM LTD

**Company name (short):** Vera Firm Ltd

**CEO:** Valeriy N. Anisimov

**Address:** 29b, Taranchenko Street, Voronezh, 394018

**Year of foundation:** 30.06.1989

**Telephone/fax:** +7 (473) 220-77-99, 2207-888

**Website:** [www.kampan.ru](http://www.kampan.ru)

**Specialization:**

Nonferrous casting from cupriferous alloys: church bells, art castings, ship screws.

**Advantages over rivals:**

Wide range of products: from a few grams to 300 tons, from art casting to industrial with unique dimensions and weight.

**Short product list:** Main technologies: alpha-set and Shaw-process.



## IRISMASH LTD

**Company name (short):** IRISMASH LTD

**CEO:** Yyriy V. Govorov

**Address:** 124G, Dimitrova Street, Voronezh, 394028

**Year of foundation:** 21.09.2001

**Telephone/fax:** +7 (473) 237-35-09, 237-34-94

**Website:** [www.nppiris.vrn.ru](http://www.nppiris.vrn.ru)

**Specialization:**

Design and production of equipment for waste recycling, design and production of stockpile tooling for aircraft construction.

**Advantages over rivals:**

Russian manufacturer which has deep experience in recycling of waste containing nonferrous metal, design and production of recycling equipment. By now the company produced 27 units of stockpile tooling.

**Short product list:**

MKS – cable preparation machine, VSI – rolls for delagging, BIL big waste crusher, KRAB – line of full disassembly of accumulator batteries, LPK – line of cable waste recycling, PNK – line of oil submersible cable recycling, GRS –granulating machine, VBS – vibrobench, SM - magnetic cobbling machine, TRL – conveyor, storage hopper with dozing device, hose tanks. Stockpile tooling: Device for the assembly of the service door, device for the assembly of the back service door, device for the assembly of the back luggage hatch, device for the assembly of the entrance stairs, device for the assembly of the back service door, device for the assembly of the luggage door, device for the assembly of the front luggage hatch, device for the assembly of the pressure bulkhead 42, device for the assembly of the pressure bulkhead 45, device for the assembly of the bottom panel of the bottom fuselage bay, device for the assembly of the top panel of the bottom fuselage bay, device for the assembly of the side panel of the bottom left fuselage bay, device for the assembly of the side panel of the bottom right fuselage bay, building berth for the core engine assembly, building berth for the assembly of the muzzle of the ventilator, device for the assembly of the front tailplane spar (left), device for the assembly of the front tailplane spar (right), device for the assembly of the tailpiece of stabiliser, device for the assembly of the front toilet, device for the assembly of the back toilet, device for the assembly of the back sideboard, device for the assembly of the right hatrack, device for the assembly of the left hatrack, columns for hattracks complectation stand, assembly of the centre section imitator and coupling of the imitator with KM-wing prototype.

# ITR LTD

**Company name (short):** ITR Ltd

**CEO:** Pavel S. Ptitsyn

**Address:** 119, 20-Letiya Oktyabrya St., Voronezh

**Year of foundation:** 04.12.2008

**Telephone/fax:** +7 (473) 277-45-88

**Website:** <http://innotechsolutions.ru/>

## Specialization:

Development and implementation of IT solutions for financial and state organizations and industrial companies. The company employs highly qualified specialists with expertise in IT, industrial automation and development of high-technology business.

## Special features and competitive advantages:

The company's objective is to compete successfully with major system integrators and software developers by optimizing and lowering the cost of developing and implementing IT solutions. Carrying out research and developing innovative high-tech products.

## Product range:

- FlexWebView Standard data visualisaton system;
- FlexWebView Enterprise data consolidation system;
- Software providing analytical support of research in nanobiotechnology.



# NIIASPK JSC

**Company name (short):** NIIASPK LTD

**CEO:** Vladislav G. Yegorov

**Address:** 129a, Ciolkovskogo Street, Voronezh, 394076

**Year of foundation:** 09.12.1961

**Telephone/fax:** +7 (473) 275-30-52, 248-80-65

**Website:** [www.akvapaskal.vrn.ru](http://www.akvapaskal.vrn.ru)

## Specialization:

Design and production of special equipment and products.

## Special features and competitive advantages:

All products are protected with Russian patents and provide for the decrease of materials consumption for machine engineering for 25-30% at the increase of operation life by 3-5 times.

## Product range:

- Design and production of the equipment for galvanizing the details of single and double curvative, providing for the increase in performance characteristics of the products and parts, increase in operation life of the details, decrease in labor, energy and materials costs.
- Development of the ways of forming of unitized elements of thin-wall conduits from high-impact materials providing for production of high capacity high pressure conduit systems for aircrafts.
- Production of the equipment for forming of unitized elements of thin-wall conduits from high-impact materials.
- Production of the elements of thin-wall conduits
- Production of automatic graphic-analytical and hydro abrasive cutting machines with CNC for automatization of research and development and mold works and for the cutting of different materials.
- Production of equipment for laser monitoring of the quality of large-scale items in machine engineering industry.



## NPP ORT LTD

**Company name (short):** NPP Ort Ltd

**CEO:** Valeriy M. Shishkov

**Address:** 22, Moskovskiy Avenue, Voronezh, 394026

**Year of foundation:** 20.08.1991

**Telephone/fax:** +7 (473) 221-24-26, 221-45-19

**Website:** [www.ort-vrn.ru](http://www.ort-vrn.ru)

**Specialization:**

Manufacturing of fire protection equipment.

**Special features and competitive advantages:**

Improved technical characteristics.

**Product range:**

Hand fire nozzle composite ORT-50

Hand fire nozzle composite ORT-50A

Hand fire nozzle composite universal ORT-50KP

Hand fire nozzle composite universal with controlled flow KURS-8

## PATRONY JSC

**Company name (short):** Patroney JSC

**CEO:** Nickolay P. Pereladov

**Address:** 69 Blanskaya St., Borisoglebsk, Voronezh region

**Year of foundation:** 1961

**Telephone/fax:** +7 (4735) 6-05-00, 6-24-72

**Email:** [borpatron@mail.ru](mailto:borpatron@mail.ru)

**Specialization:** Metalworking

Production volume in 9 months of 2011: 36159 thousand RUR

**Special features and competitive advantages:**

Rapid development of new products

**Product range:**

- Reducer parts;

- Railways cars;

- Elastic Couplings for generators 32 kW;

- Conveyor chains (pitch from 50 mm to 260 mm).



# RADICS TOOLS LTD

**Company name (short):** RADICS TOOS LTD

**CEO:** I. A. Shadrin

**Address:** Office 4, 100, Rabochiy Avenue, Voronezh, 394049

**Year of foundation:** 2003

**Telephone/fax:** +7 (473) 251-94-97, 296-95-35

**Website:** [www.radixtools.ru](http://www.radixtools.ru)

#### **Specialization:**

Software development in areas of automation of design in microelectronics, characterization of libraries of standard cells, radio monitoring, cartography and navigation systems, information systems

#### **Special features and competitive advantages:**

Software developed by Radix-Tools was awarded as the best solution in the field of radio monitoring, cartography and navigation systems, information systems and automation of design in microelectronics.

#### **Product range:**

Charizma – automatic characterization of libraries of standard cells system

REBUS – electronic publishing system, information and analytical system

Zoom – platform for development of application-oriented geographic information systems, irrespective of map format and main geographic information systems.

Monument – system for accounting and control of cultural heritage objects.



# NPP RELEX CJSC

**Company name (short):** NPP RELEX CJSC

**CEO:** Igor A. Boychenko

**Address:** 119, 20-Letiya Oktyabrya Street, Voronezh, 394006

**Year of foundation:** 02.07.1990

**Telephone/fax:** +7 (473) 271-17-11, 277-83-33

**Website:** [www.relex.ru](http://www.relex.ru) [www.rmcsoft.ru](http://www.rmcsoft.ru) [www.linter.ru](http://www.linter.ru)

#### **Specialization:**

Software development: data access systems, low-level software and drivers, information and analytic systems, web-oriented solutions, project management systems, mobile applications, special science-intensive solutions.

#### **Special features and competitive advantages:**

-20 years of experience in software development and hundreds of completed projects (from TDA composition to implementation and maintenance of the project)

-Certified QMS, complying to GOST R ISO 9001-2008, SRPP VT (incl. GOST RV 15.002-2003) applying to development, production, designer supervision and maintenance of applications.

-License by the Ministry of Education and FSTEK on information safety products development.

#### **Product range:**

DBMS LINTER (versions BASTION, Real Time, Standard, Multiversion), CPMS Project Tracking 2.0



## **ROSOGNEUPORY GROUP CJSC**

**Company name (short):** ROSOGNEUPORY GROUP CJSC

**CEO:** Pavel T. Kryuchkov

**Address:** 2a, Zavodskaya Street, Latnaya village, Voronezh region

**Year of foundation:** 14.02.2005

**Telephone/fax:** +7 (47372) 63-619, 62-389

**Website:** [www.rosogneupor.com](http://www.rosogneupor.com)

**Specialization:**

Refractories production

**Special features and competitive advantages:**

Production of silicon carbide refractories on nitrogen bond.

**Product range:**

- Chamotte products (content of Al<sub>2</sub>O<sub>3</sub> less than 30%, operation temperature: 1730 C compression ultimate strength: 20 n/mm<sup>2</sup> min., volume stability at pressure 2kgf/cm 1300C)

- Silicon carbide refractories

Aluminosilicate (content of SiC no less than 82%, content of Al<sub>2</sub>O<sub>3</sub> no less than 3%, volume stability 1500 C, compression ultimate strength: 100 n/mm<sup>2</sup>)

- Silicon carbide refractories

On nitrogen bond (content of SiC no less than 70%, content of N<sub>2</sub> no less than 7%, volume stability 1500 C, compression ultimate strength: 100 n/mm<sup>2</sup>)

- Unshaped products: chamotte products, chamotte aggregate, ground chamotte powder, ground refractory clay.

## **RUSSKAYA OLIVA LTD**

**Company name (short):** Russkaya Oliva Ltd

**CEO:** Lidia A. Miroshnichenko

**Address:** office 346, 160 Leninskiy av., Voronezh

**Year of foundation:** 16.06.2005

**Telephone/fax:** +7 (473) 250-29-70, 250-29-71

**Website:** [www.rusoliva.ru](http://www.rusoliva.ru)

**Specialization:**

Development and production of health products of amaranth, research and development.

**Special features and competitive advantages:**

Warm-press amaranth oil, extruded amaranth products are characterized by better price-quality parameters than Russian and foreign counterparts.

**Product range:**

Warm-press amaranth oil, amaranth flour, extruded amaranth products, therapeutic natural oils.



# EPROM JSC

**Company name (short):** Eprom JSC

**CEO:** Yuriy A. Sukhochev

**Address:** 45 Ostuzheva St., Voronezh 394033

**Year of foundation:** 15.12.1992

**Telephone/fax:** +7 (473) 221-83-28

**Website:** <http://www.comch.ru/~eprom>

**Specialization:**

- Processing nonmetallic residue and junk;

**Special features and competitive advantages:**

- The only company in the Central Black-Soil region specializing on galvanic sludge and wastewater treatment systems residue processing;

**Product range:**

- galvanic sludge and wastewater treatment systems residue processing;
- casting waste processing.





**TRANSPORT  
LOGISTICS**



# INTER LOGISTICS GROUP

**Company name (short):** Inter Logistics Group (ILG)

**CEO:** Sergey Y. Nesterov

**Address:** 15 Zemlyachki St., Voronezh

**Year of foundation:** 01.02.2003

**Tel./Fax:** 8-800-700-40-30

**Website:** [www.ilgroup.ru](http://www.ilgroup.ru), [www.logisticcom.ru](http://www.logisticcom.ru)

## Specialization:

Transport logistics and warehousing.

## Special features and competitive advantages:

- Our Customers' success is the main prerequisite of Company's business development.
  - Customer satisfaction is our formula for successful cooperation.
  - The company provides a full range of transportation and freight forwarding services and accounts for every Customer's need.
  - We maintain the high quality of our services which comply with international standards and guarantee confidentiality.
  - We provide consulting services and support to every Customer.
- We do our best to offer the optimum solution for our clients' needs.
- Services: Transport logistics, Warehousing, Secure storage;
- Cross-docking;
  - Handling services;
  - Insurance;
  - Consulting;
  - Embarking.



# ATD-SERVICE LTD

**Company name (short):** ATD-Service Ltd

**CEO:** Yuriy N. Babayev

**Address:** 9/1 Sovkhoznaya St., Babyakovo settlement, Novousmanskiy district, Voronezh region 396313

**Year of foundation:** 19.05.2004

**Tel./Fax:** +7 (47341) 2-30-60

**Website:** [www.atd.ru](http://www.atd.ru)

## Specialization:

Avtotractordetal and ATD-Service Group of companies are authorized dealers of such companies as Rostselmash, Shaanxi, Beifang, Franz Kleine, TCM, Agrotekhmash-Rabe, Gaspardo, and Lemken.

ATD has a service station shop where SHAANXI and BEIFANG BRNCHI trucks, buses, construction machinery and Rostselmash, Agtotekhmash, TCM agricultural machinery are repaired and serviced.

The warehouse of spare car parts provides the company's customers with the necessary expendables and units.

The company's mobile repair service will come to you providing you with technical support 24 hours a day.

The company's broad wealth of experience has made it possible for the company to provide a wide range of services, including assisting the clients in choosing the right machinery to meet their requirements. The company strives to find the best solution for the customers' needs.



# AEROBUS LTD

**Company name (short):** Aerobus Ltd

**CEO:** Denis A. Sechkov

**Address:** 19 building B, Moskovskiy av., Voronezh 394030

**Year of foundation:** 29.08.2006

**Tel./Fax:** +7 (473) 233-02-27, 233-02-28

## Specialization:

Providing warehousing and cargo processing services.

## Special features and competitive advantages:

- Customer focus, we strive for total customer satisfaction at all stages – from initial planning stage through to receiving customer feedback.
- We keep tabs on the quality of our services at all times.
- Smoothly running processes,
- Easy access from M4 highway.

## Equipment:

- Racks up to 12 high;
- Loading equipment by leading European manufacturers;
- Loading and unloading gates for trucks – 40;
- Gas-run mini-CHP;
- Steam fire protection and smoke exhaust system;
- Secured premises, twenty-four-hour guarding.

## Services

- Twenty-four-hour cargo handling and processing;
- Storage, inventory auditing;
- Special processing to customers' requirements;
- Segregating and packaging;
- Marking and labeling;
- Preparation of goods for promotion;
- Order picking;
- Faulty products disposal;
- Freight;
- Shipping documents.



# BRIG AGROINDUSTRIAL COMPANY LTD

**Company name (short):** Brig Agroindustrial Company Ltd

**CEO:** Boris N. Averianov

**Address:** 14 Proletarskaya St., Peski settlement, Povorinskiy district, Voronezh region

**Year of foundation:** 15.12.2009

**Tel./Fax:** +7 (47376) 4-34-59, 3-20-19, 3-20-21

## Specialization:

- Fuel wholesale, passenger vehicles and truck services, grain wholesale
- Fuel and lubrication materials distribution, freight services.



## VLK LTD

**Company name (short):** VLK Ltd

**CEO:** Vladimir P. Kaverzin

**Address:** Aydarovo settlement, Ramon district, Voronezh region 396002

**Year of foundation:** 13.12.2005

**Tel./Fax:** +7 (473) 262-25-31

**Specialization:**

Warehousing services

Special features and competitive advantages

- A-class logistics depot to Eurostandard

**Services:**

- Office buildings and warehouses for rent.



## EUROROSTRANS LTD

**Company name (short):** Eurorostrans Ltd

**CEO:** Olga I. Mozgovaya

**Address:** 15b Komissarzhevskoy St., Voronezh

**Year of foundation:** 01.02.2003

**Tel./Fax:** +7 (473) 253-12-80, 277-67-79, 255-95-66

**Website:** [www.ertrans.ru](http://www.ertrans.ru)

**Specialization:**

- Truck and railway freight

Special features and competitive advantages

- Rapid order handling and low fares

**Services:**

- Truck and railway freight



## INKOM TRANS LOGISTIC LTD

**Company name (short):** Inkom Trans Logistic Ltd

**CEO:** Galib Telman ogly Aslanov

**Address:** 15 Zemlyachki St., Voronezh

**Year of foundation:** 2002

**Tel./Fax:** +7 (473) 220-15-10

**Website:** [www.inkom-trans.ru](http://www.inkom-trans.ru)

**Specialization:**

- International truck shipping of consignments up to 20 tonnes.

- Air freight from Voronezh to any part of the world. Containerized cargo.

- Package freight from Europe and any part of Russia

- Assistance in customs clearance



# KASKAD VORONEZH LTD

**Company name (short):** Kaskad Voronezh Ltd

**CEO:** Vladimir A. Smirnov

**Address:** 57a Patriotov av., Voronezh 394065

**Year of foundation:** 14.03.2005

**Tel./Fax:** +7 (473) 260-44-63, 260-44-64

**Website:** [www.rss-kaskad.ru](http://www.rss-kaskad.ru)

## **Specialization:**

- warehouses for rent (B class)
- office building for rent
- secure storage

## **Special features and competitive advantages:**

Total warehouse area – 21354 sq. m, total buildings area – 3163 sq m.

### **Location:**

- South-western part of the city,
- 2 km from E-38 federal highway,
- 25 km from Chertovitskoye airport,
- 489 km from Moscow.

### **Warehouse description:**

- B-class one-storey building;
- Ceiling height - 12.5 m;
- Concrete floor with anti-dust coating;
- Floor load bearing capacity – 6 tonnes/m ;
- Temperature conditions +5/+20 C;
- Security alarm and video surveillance systems;
- Fire alarm and fire extinguishing system;
- 25 docks equipped with dock levelers and dock shelters.

### **Office building description:**

- B-class office building;
- telephone and Internet (fiber optics);
- car park;
- security guarding.

### **Lines:**

- Electricity, power – 3 MWt;
- Sewage system;
- Heating supplied by independent boiler house;

Among Kaskad Voronezh Ltd main clients are Kopeyka-Voronezh Ltd, TsV Protek CJSC, NPK Katren CJSC, O-C-S Yug Ltd, JFC Group CJSC.

### **Services:**

- Property for rent (warehouses, offices, open sites);
- Warehousing and storage of goods, including oversized cargo;
- Freight



## **LOGISTICA SERVICE COMPANY**

**Company name (short):** Logistica Service Company

**CEO:** Oxana Y. Maslennikova

**Address:** 259d 45-Strelkovoy Divisii St., Voronezh

**Year of foundation:** 01.10.2005

**Tel./Fax:** +7 (473) 234-69-16, 234-69-19

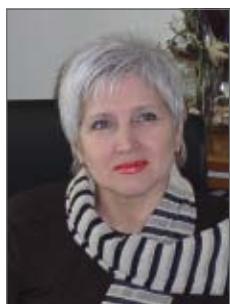
**Website:** [www.lgsv.ru](http://www.lgsv.ru)

**Specialization:**

Providing logistics services, transport logistics and warehousing services

**Special features and competitive advantages**

- 3Pl-operator;
- Cold chain, rapid delivery of products with short shelf life;
- Refrigerators for cold chains capable of maintaining temperature +2 to +6C;
- Own refrigerator trucks;
- Secure storage;
- Certified warehouses for seeds and pesticides.



## **REGION-TERMINAL-CENTRE GROUP OF COMPANIES**

**Company name (short):** Region-Terminal-Centre Group of Companies

**CEO:** Nadezhda A. Mazalova

**Address:** office 113, 14 40-let Oktyabrya St., Voronezh 394030

**Year of foundation:** 04.06.1999

**Tel./Fax:** +7 (473) 259-93-15, 277-99-73, 277-99-72, 277-99-59

**Website:** [www.rterminal.ru](http://www.rterminal.ru)

**Specialization:**

Customs clearance, storage, forwarding, certification, cross border logistics, customs audit.

**Special features and competitive advantages:**

Customs clearance for investment projects, customs clearance of agricultural machines, agricultural products, outsized equipment, vehicles, meat products.

**Services:**

Region-Terminal-Centre Group of Companies has been providing customs clearance services for over 10 years. They specialize in logistics services including customs clearance (also Internet declaration), storage (temporary, secure storage), forwarding, certification, cross border logistics, customs audit.

The Group of companies owns a Customs-Logistics Centre which houses:

Temporary Storage Warehouse (total airspace – 14000 m<sup>2</sup>, open site – 4000 m<sup>2</sup>, refrigerators, car park for 100 vehicles);

**State Supervisory Authorities:**

- The customs station (authorized to carry out customs clearance of vehicles and meat products);
- The branch office of the Federal Service for Veterinarian and Vegetation Sanitary Supervision (Ros selkhoznadzor);

The Centre is situated on the circular road leading to M4 (Moscow-Don) highway.

All the operations are done by highly-qualified specialists and customs clearance professionals with 3 to 14 years of experience.



# RUSAGROTRANS CJSC

**Company name (short):** Rusagrotrans CJSC

**CEO:** Vachagan A. Minasyan

**Address:** office 302, 25b F. Engelsa St., Voronezh 394036

**Year of foundation:** 05.05.2009

**Tel./Fax:** +7 (473) 250-25-82, 250-29-22

**Website:** [www.rusagrotrans.ru](http://www.rusagrotrans.ru)

## Specialization:

Rusagrotrans is the largest rail infrastructure operator providing a wide range of services for internal transportation of grain cargo and other agricultural products (raw sugar, press cake, oil cake) by special railway vehicles.

## Special features and competitive advantages:

Rusagrotrans CJSC is constantly looking out for new logistical solutions to optimize the shipment of grain cargo.

**The company's investment program covers all elements of logistics chain and presupposes:**

- Construction of elevator facilities,
- Developing port infrastructure,
- Acquisition of new and repair of existing rail vehicles.

Rusagrotrans CJSC has undertaken voluntary obligation to keep to fixed fares in internal market freight in accordance with Price-list 10-01 as long as a consignor abides by relevant norms and regulations.



# SVT-SERVICE CJSC

**Company name (short):** SVT-Service CJSC

**CEO:** Valeriy A. Anferov

**Address:** 148a Dimitrova St., Voronezh 394028

**Year of foundation:** 16.12.1997

**Tel./Fax:** +7 (473) 221-98-84

## Specialization:

Customs clearance of exported and imported goods, temporary storage, secure storage, freight and forwarding of consignment across Russia.

## Special features and competitive advantages:

- Monitoring the freight process from loading through to unloading at destination point by experienced managers;
- Competitive fares for internal truck shipping;
- Integrated customer support and freight quality control department.



## SIGMA-OPT LTD

**Company name (short):** Sigma-Opt Ltd

**CEO:** Andrey A. Lenkov

**Address:** 71 Novosibirskaya St., Voronezh

**Year of foundation:** 17.04.1994

**Tel./Fax:** +7 (473) 227-10-00

**Specialization:**

Providing storage and cargo processing logistical services, WMS warehouse management system.

**Special features and competitive advantages:**

Extensive truck fleet consisting of trucks with different capacities (MAN, Mercedes, MAZ, ZIL, Hyundai, Gazel);

Customer focus.



## SFERA LTD

**Company name (short):** Sfera Ltd

**CEO:** Artem S. Kocharyan

**Address:** 30 Volgogradskaya St., Voronezh 394028

**Tel./Fax:** +7 (473) 247-58-34, 247-52-37

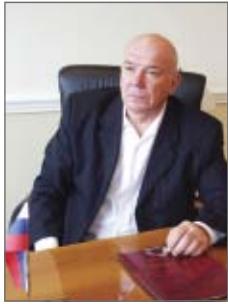
**Website:** [www.invstroy.com](http://www.invstroy.com)

**Specialization:**

Heated warehouses for rent

**Special features and competitive advantages:**

The warehouse is situated in the industrial area of Voronezh Left Bank district, 2 km from M-4 Don federal highway. Apart from the main building, there are several boxes with the area of 1000 sq m and over. The total area of heated warehouses is 18280 sq m. The warehouse is conveniently located between railway lines with elevated approach and a highway (also with elevated approach), which allows for straight-through processing of cargo. A large adjacent territory (4 hectares) and well-developed infrastructure allows for simultaneous loading of 24 trucks and 10 rail vehicles.



# HIMOPTTORG LTD

**Company name (short):** Himopttorg Ltd

**CEO:** Victor M. Goncharov

**Address:** office 302, 21 Zemlyachki St., Voronezh 394033

**Tel./Fax:** +7 (473) 223-10-35, 223-00-62, 223-52-85

**Website:** [www.himtroppttorg.ru](http://www.himtroppttorg.ru)

## **Specialization:**

Warehousing

## **Special features and competitive advantages:**

- Proximity (900 m) to M-4 highway;
- All the necessary conveniences available (electricity, water supply, gas, heating supplied by an independent boiler house, high-speed Internet, telephone);
- Approach railway lines;
- Extensive range of handling machinery;
- Different warehouse types – from cold docks to heated buildings which can be used for various business activities.

## **Services:**

- Warehouses, office buildings and open grounds for rent;
- Secure storage;
- Handling all freight types, including outsized cargo;
- Private approach lines for rail dispatch.

# INDEX

172 TsARZ JSC .....	211
711 ARZ JSC .....	86
ABC Farben CJSC .....	114
Accord CJSC .....	226
Aerobus Ltd .....	303
ANGSTREM Group of Companies .....	250
ATD-Service Ltd .....	302
Atomenergozapchast Ltd.....	179
Aviaproekt NPP LTD .....	86
Avtogen JSC .....	134
Avtomatika JSC .....	178
BKMZLIT JSC .....	88
Borisoglebsk Clothing Factory Ltd .....	228
Borisoglebskiy Priborostroitelniy Plant JSC.....	16
Borisoglebskiy Trikotazh JSC.....	232
Borkhimmash JSC.....	92
BorMash Ltd.....	112
Brig Agroindustrial Company Ltd .....	303
Celit Ltd.....	223
Chamber of Commerce and Industry of Voronezh region .....	10
Delta-Pack Ltd .....	126
Dva+K NPO Ltd .....	181
Electroagregat NPO Ltd.....	183
Electropribor JSC.....	60
Electrosignal JSC .....	64
Eeprom JSC .....	299
Ertliskiy Casting and Mechanical Plant JSC .....	174
Eurorostrans Ltd.....	304
Ferrit NKTB FGUP .....	56
FGUP NIIET.....	36
Finist Ltd .....	132
Grafskoye JSC .....	254
Gribanovskiy Machine-Building Plant Ltd.....	100
Himopttorg Ltd .....	309
Hydrogas CJSC .....	96
Igrushki CJSC .....	274
Inkom Trans Logistic Ltd.....	304
Innovatsiya Ltd .....	248
InS OKBM CJSC .....	86
Inter Logistics Group (ILG).....	302
IRISMASH LTD .....	294
ITR Ltd.....	295
Izmeron-V NPP LTD .....	208

# INDEX

Kaskad Voronezh Ltd .....	305
KBKhA JSC.....	80
KDM-OPT Ltd.....	268
Kedr-Fasady Ltd .....	268
Kosmos-Neft-Gaz FPK Ltd .....	104
Kristina CJSC.....	258
Krylo NPF .....	222
Liski-Metallist JSC.....	190
Liskimontazhkonstruktsiya CJSC .....	194
Logistica Service Company .....	306
Maslovskiy Industrial Park .....	13
Mebel Chernozemia HC JSC.....	262
Mechanotronics Research Institute- Alfa-NTs CJSC.....	182
Medtorg + Ltd.....	222
MEL Ltd.....	181
Minudobreniya JSC.....	130
MMHC – Rudgormash CJSC.....	164
NIIASK LTD .....	295
NIIPM JSC.....	32
NPP NFL LTD.....	69
NPP Ort Ltd.....	296
NVP PROTEK JSC .....	70
OKBM CJSC .....	82
Orbita CJSC .....	182
Patroney JSC.....	296
Pavlovsk Shipyard JSC .....	211
Pavlovskgranit JSC .....	278
Polyus NPO Ltd .....	218
Polyus VTsKB JSC.....	69
Promavtoremont MMRF JSC.....	160
Promtechmodel Ltd.....	282
Rasco VStZ Branch Ltd.....	286
PromTextile CJSC.....	242
Radics Tools Ltd.....	297
Regional Centre of Industrial Subcontracting Ltd .....	11
Region-Terminal-Centre Group of Companies.....	306
RELEX NPP CJSC .....	297
RIF Corporation JSC.....	44
Rosogneupory Group CJSC .....	298
Rusagrotrans CJSC.....	307
Russkaya Oliva Ltd.....	298
Semiluki Refractory Plant JSC.....	290
Sfera Ltd.....	308

# INDEX

Shevro Ltd.....	246
Sigma-Opt Ltd.....	308
Somovo-Mebel Ltd.....	266
Sovteh Ltd.....	132
Sozvezdiye Group of Companies.....	52
Spetsmash Ltd .....	183
State-financed organization of Voronezh region Centre of Cluster Development of Voronezh Region.....	12
Stomel-K LTD.....	223
SVT-Service CJSC.....	307
Svyazstroy-1 OFS VOKK CJSC.....	48
TAIT Fashion House .....	238
Tekhnika-Service CJSC.....	168
Turbonasos FGUP.....	108
Tyazhmekhpress JSC.....	170
VASO JSC .....	72
Vera Firm Ltd.....	294
Veropharm JSC .....	214
VKB AFU JSC .....	68
VKZ CJSC .....	68
VLK Ltd .....	304
VMZ, branch of FGUP GKNPTs after M.V. Khrunichev.....	76
VNII VEGA JSC.....	20
Vodmashoborudovaniye Plant JSC .....	138
VOMZ JSC .....	142
Voronezh Electromechanical Plant CJSC.....	180
Voronezh Knitwear Manufactory PTO Ltd.....	234
Voronezh Machine Tool Plant Ltd .....	155
Voronezh Mining Administration JSC .....	270
Voronezh Tyre Plant CJSC.....	122
Voronezh VRZ VRM JSC.....	200
Voronezh Zheldorremmash TRZ JSC .....	204
Voronezh-Aqua Ltd.....	179
Voronezhselmash Ltd.....	148
Voronezhsintezkauchuk JSC .....	118
Voronezhstalmost CJSC.....	186
Voronezhtelekabel CJSC.....	152
VSKB Rikon JSC .....	40
VSZ Holding PFK Ltd.....	180
VZPP Mikron CJSC.....	24
VZPP-S JSC .....	28
Zernoochistka JSC.....	156

# CONTENTS

A.V. Gordeyev's address.....	5
D.V. Markov's address.....	6
Y.F. Goncharov's address.....	10
Chamber of Commerce and Industry of Voronezh region.....	10
A.B. Andreyev's address.....	11
Regional Centre of Industrial Subcontraction Ltd.....	11
State-financed organization of Voronezh region Centre of Cluster	
Development of Voronezh Region .....	12
Maslovskiy Industrial Park .....	13

## RADIOELECTRONIC INDUSTRY

● Borisoglebskiy Priborostroitelniy Plant JSC.....	16
● VNII VEGA JSC.....	20
● VZPP Mikron CJSC.....	24
● VZPP-S JSC .....	28
● NIIPM JSC.....	32
● FGUP NIET.....	36
● VSKB Rikon JSC .....	40
● RIF Corporation JSC.....	44
● Svyazstroy-1 OFS VOKK CJSC.....	48
● Sozvezdiye Group of Companies .....	52
● Ferrit NKTB FGUP .....	56
● Electropribor JSC.....	60
● Electrosignal JSC.....	64
● VKB AFU JSC .....	68
● VKZ CJSC.....	68
● Polyus VTsKB JSC.....	69
● NPP NFL LTD .....	69
● NVP PROTEK JSC .....	70

## AEROSPACE INDUSTRY

● VASO JSC .....	72
● VMZ, branch of FGUP GKNPTs after M.V. Khrunichev.....	76
● KBKhA JSC.....	80
● OKBM CJSC .....	82
● 711 ARZ JSC.....	86
● Aviaproekt NPP LTD.....	86
● InS OKBM CJSC .....	86

## OIL AND GAS AND CHEMICAL MACHINE BUILDING

● BKMZLIT JSC.....	88
● Borkhimmash JSC.....	92
● Hydrogas CJSC .....	96
● Gribanovskiy Machine-Building Plant Ltd.....	100
● Kosmos-Neft-Gaz FPK Ltd.....	104
● Turbonasos FGUP.....	108
● BorMash Ltd .....	112

## CHEMICAL INDUSTRY

● ABC Farben CJSC .....	114
● Voronezhsintezkauchuk JSC .....	118
● Voronezh Tyre Plant CJSC.....	122
● Delta-Pack Ltd .....	126
● Minudobreniya JSC .....	130
● Sovteh Ltd .....	132
● Finist Ltd .....	132

# CONTENTS

## EQUIPMENT MANUFACTURE

● Avtogen JSC .....	134
● Vodmashoborudovaniye Plant JSC .....	138
● VOMZ JSC .....	142
● Voronezhselmash Ltd.....	148
● Voronezhtelekabel CJSC .....	152
● Voronezh Machine Tool Plant Ltd .....	155
● Zernoochistka JSC.....	156
● Promavtoremont MMRF JSC.....	160
● MMHC – Rudgormash CJSC .....	164
● Tekhnika-Service CJSC .....	168
● Tyazhmekhpress JSC.....	170
● Ertislkiy Casting and Mechanical Plant JSC.....	174
● Avtomatika JSC.....	178
● Agroelectromash JSC .....	178
● Atomenergozapchast Ltd.....	179
● Voronezh-Aqua Ltd.....	179
● Voronezh Electromechanical Plant CJSC .....	180
● VSZ Holding PFK Ltd.....	180
● Dva+K NPO Ltd.....	181
● MEL Ltd .....	181
● Mechanotronics Research Institute- Alfa-NTs CJSC .....	182
● Orbita CJSC .....	182
● Spetsmash Ltd .....	183
● Electroagregat NPO Ltd .....	183

## METAL STRUCTURES MANUFACTURE

● Voronezhstalmost CJSC.....	186
● Liski-Metallist JSC.....	190
● Liskimontazhkonstruktsiya CJSC .....	194

## TRANSPORT MACHINE BUILDING

● Voronezh VRZ VRM JSC .....	200
● Voronezh Zheldorremmash TRZ JSC.....	204
● Izmeron-V NPP LTD .....	208
● 172 TsARZ JSC.....	211
● Pavlovsk Shipyard JSC .....	211

## PHARMACEUTICAL INDUSRTY AND MEDICAL EQUIPMENT

● Veropharm JSC.....	214
● Polus NPO Ltd .....	218
● Krylo NPF .....	222
● Medtorg + Ltd.....	222
● Stomel-K LTD.....	223
● Celit Ltd.....	223

## LIGHT INDUSTRY

● Accord CJSC.....	226
● Borisoglebsk Clothing Factory Ltd.....	228
● Borisoglebskiy Trikotazh JSC .....	232
● Voronezh Knitwear Manufactory PTO Ltd.....	234
● TAIT Fashion House .....	238
● PromTextile CJSC .....	242
● Shevro Ltd.....	246
● Innovatsiya Ltd.....	248
● Elegant CJSC .....	248

# CONTENTS

## FURNITURE INDUSTRY

● ANGSTREM Group of Companies.....	250
● Grafskoye JSC .....	254
● Kristina CJSC .....	258
● Mebel Chernozemia HC JSC .....	262
● Somovo-Mebel Ltd.....	266
● KDM-OPT Ltd.....	268
● Kedr-Fasady Ltd .....	268

## OTHER MANUFACTURES

● Voronezh Mining Administration JSC .....	270
● Igrushki CJSC .....	274
● Pavlovskgranit JSC .....	278
● Promtechmodel Ltd.....	282
● Rasco VStZ Branch Ltd .....	286
● Semiluki Refractory Plant JSC.....	290
● Vera Firm Ltd.....	294
● IRISMASH LTD .....	294
● ITR Ltd .....	295
● NIIASPK LTD.....	295
● NPP Ort Ltd.....	296
● Patrony JSC .....	296
● Radics Tools Ltd.....	297
● RELEX NPP CJSC .....	297
● Rosogneupory Group CJSC.....	298
● Russkaya Oliva Ltd.....	298
● Eprom JSC .....	299

## TRANSPORT LOGISTICS

● Inter Logistics Group (ILG).....	302
● ATD-Service Ltd .....	302
● Aerobus Ltd .....	303
● Brig Agroindustrial Company Ltd.....	303
● VLK Ltd .....	304
● Eurorostrans Ltd .....	304
● Inkom Trans Logistic Ltd.....	304
● Kaskad Voronezh Ltd.....	305
● Logistica Service Company .....	306
● Region-Terminal-Centre Group of Companies.....	306
● Rusagrotrans CJSC.....	307
● SVT-Service CJSC .....	307
● Sigma-Opt Ltd.....	308
● Sfera Ltd.....	308
● Himopttorg Ltd .....	309
 INDEX.....	 310

# FOR NOTES

# FOR NOTES

# FOR NOTES



## **Department on Industry, Transport and Innovations of Voronezh region**

1 Lenina sq., Voronezh 394000  
Tel. +7 (473) 255-14-68  
[www.govvrn.ru](http://www.govvrn.ru), e-mail: [industry@govvrn.ru](mailto:industry@govvrn.ru)