



FOREIGN TRADE

OF THE DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA

JUCHE 105
(2016)

4

Antiseptic Solution Generators

The Korea Kumbok Technology Company produces sophisticated antiseptic solution generators that are designed to produce compound antiseptic solution containing ozone, hydrogen peroxide and activated chlorine by electrolyzing salt water whose concentration is low.

The generator, made up of a control board and electrolytic bath, is available in various sizes according to its treating capacities.

Large-sized generators are mainly used in reservoirs for water supply, medium-sized ones at factories and enterprises, and small-sized ones for home use.

One litre of water with 4 grammes of salt in it is electrolyzed at 10 watts to produce compound antiseptic solution with strong sterilizing power. It can sterilize 1 000 litres of water by killing various bacteria and amoeba as well as removing toxic materials.

As it uses salt, the generator is easy to operate, low in production costs and has no negative effect on human body. The sterilized water smells no antiseptic solution.

The company's products are also finding their way into foreign markets.

Technical specifications of large-sized antiseptic solution generators:

Model	EC 500	EC 1 000
Solution output (g/h)	500	1 000
Treating capacity (m ³ /d)	12 800	25 600
Input voltage (AC V)	220	380
Electrolytic voltage (DC V)	220	380
Electrolytic current (DC V)	25	25
Electrolytic bath	Large-size	Large-size
Power consumption (kW)	6	10
Case size (mm)	600 x 800 x 1 400	600 x 900 x 1 800

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Pyongyang Sports Goods Factory

The Pyongyang Sports Goods Factory in Sports Village on Chongchun Street, Pyongyang, is a comprehensive producer of sporting goods for professionals and amateurs, which are drawing the attention of sports fans.

Here is an interview of O Hae Yon, reporter of *Foreign Trade of the Democratic People's Republic of Korea*, with Jang Sok Ha, manager of the factory.

Reporter: Your factory plays a large part in developing the country's physical culture and sports and improving the people's physical fitness at the time when ours is advancing towards a sports power.

I think there are innumerable kinds of sporting goods, and what kind of goods do you manufacture, mainly for professionals?

Manager: We manufactured goods chiefly for pros in the past, but now we also produce them for ordinary people in keeping with the requirements of the reality in which sports are all the rage.

Our Taesongsan-brand articles amount to dozens, such as balls, gloves, nets, sportswear and bags.

The demand for volleyballs, footballs, basketballs and tennis balls is growing for their good quality.

Reporter: Tell me about the production processes of the factory.

Manager: Our factory has all production processes ranging from the feeding of raw materials to the shipment of goods. All our goods are finished products. They are made on production lines that



are fully equipped with an integrated manufacturing system capable of putting production and business activities on an IT and modern basis.

Reporter: I can see through your production processes that the factory is large in scale and has great production capacity. Would you also tell me about quality inspection in your factory?

Manager: Our factory is also fully equipped with a strict quality control system. Every product is forwarded after undergoing inspection according to index at each process.

This system has been set up to manufacture sporting goods that conform to international standards, so it fully guarantees the quality of products.

We will keep increasing the variety of goods, improve the scientific level of their designs to suit the world trend of sports development, raise the rate of domestic production of raw and other materials in business activities and make steady efforts to improve quality so as to satisfy the demand of both professionals and nonprofessionals.

We hope our Taesongsan-brand sports goods would serve as a good companion for people's health and life.

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Processing Trade Makes Good Headway

It is the consistent foreign trade policy of the government of the Democratic People's Republic of Korea to continuously expand and develop processing trade with other countries over the world on the principle of equality and mutual benefit.

The DPRK with strong scientific and technical forces and a solid foundation of the independent national economy is capable of producing quality processed goods that are in great demand in international markets.

There are dozens of trade ports on the east and west coasts of the country as well as efficient railway transport networks which give access to the Pacific region, Europe, China and the Far East Region in Russia.

Under such favourable circumstances the DPRK has conducted processing trade on a large scale with the countries in Europe, Asia and the Middle East.

It has pushed ahead with bonded processing trade in the sectors of garment and textile, electronic goods production and assembly, while conducting processing trade for nonferrous metals, IT industrial facilities, transformers and such large-size machinery and equipment as mining facilities, generators and freight cars.

In the new century the government has given definite priority to the development of the cutting-edge science and technology and worked to further develop processing trade on that basis.

A nationwide scientific and technological dissemination network has been set up centring the Sci-Tech Complex newly built in Pyongyang, which is linked to sci-tech learning spaces in scientific research institutes, universities and industrial establishments throughout the country, giving a powerful spur to the development and dissemination of new science and technology.

Lots of latest sci-tech hits have been made and the integration of the development of science and technology with production is being realized.

Modern factories have been built in large numbers as demanded by the IT era, the era of the knowledge-based economy, and the overall standard of technical equipment of the national economy is developing as the days go by.

Factories in the country are provided with quality management and integrated manufacturing systems that conform to the ISO and the international quality certification system so as to make production processes automated and IT-based on a high level.

Having laid firm material and technological foundations of enterprises, the government has taken various measures to encourage enterprises and trading companies in the processing trade.

It has authorized factories, enterprises, and scientific research organs capable of making inroads into foreign markets as well as trading companies with the right to trade so that they can conclude contracts of processing trade with foreign enterprises and implement them. In the meanwhile it has simplified relevant procedures in order to ensure smooth progress of the processing trade activities.

On the basis of the detailed survey and control of production abilities of industrial establishments, it has ensured favourable climate and conditions for conducting processing trade in a diverse way through investigation of information about international markets, mediation of customers and preferential use of trade ports and railways.

Satisfactory conditions for processing trade have been provided in the Songnim, Wau-do and Jindo export processing zones and other economic development zones.

Recently many enterprises and trading companies in the country are engaged in bonded processing trade for machinery and equipment, electrical and electronic products, communications equipment, seafoods, medicines and garments on the order of foreign businesses.

At present the revenues and kinds of processing trade by local factories, enterprises and trading companies have increased and they are finding more markets in Southeast Asia, Middle and Near East, Europe and Latin America.

The DPRK government will, in the future, too, further develop processing trade with other countries in a diversified and multilateral way.

Law on Processing Trade of the DPRK

Adopted by Decree No. 1978 of the Presidium of the Supreme People's Assembly on December 26, Juche 89 (2000) and revised and supplemented by Decree No. 1066 of the Presidium of the Supreme People's Assembly on April 7, Juche 105 (2016)

Chapter I Fundamentals of the Law on Processing Trade

Article 1 (Mission of the Law on Processing Trade)

The Law on Processing Trade of the DPRK shall contribute to increasing foreign currency revenues and developing external economic exchanges by establishing a strict system and order in processing trade.

Article 2 (Definition)

Terms in this law are defined as follows:

1. Processing trade is an economic activity to earn foreign currency by importing raw and other materials, semi-finished goods or parts from a foreign country free of customs duties, processing or assembling them and then exporting them.

Processing trade is conducted in the forms of bonded processing trade and processing export trade.

2. Bonded processing trade is a form of processing trade whereby raw and other materials, semi-finished goods or parts are shipped in from a foreign enterprise without paying price and processed or assembled as requested in exchange for a processing fee.

3. Processing export trade is a form of processing trade whereby raw and other materials, semi-finished goods or parts are imported, processed or assembled and then exported.

Article 3 (Principle of encouragement of processing trade)

The State shall encourage processing trade.

Processing trade shall be carried out on the principles of increasing foreign currency earnings and sustaining credit by properly selecting transaction partner, form of transaction and processing indices and estimating processing capacities and demand in international markets.

Article 4 (Dealer of processing trade)

Processing trade shall be conducted by institutions, enterprises and other organizations that secured licenses to operate from the central trade guidance organ.

Article 5 (Application of law)

Any matter not provided for in this law shall be governed by relevant laws and regulations.

Article 6 (Exchange and cooperation in the field of processing trade)

The State shall develop cooperation and exchanges with foreign countries and international organizations in the field of processing trade.

Chapter II Selection of Project and Conclusion and Performance of Contract for Processing Trade

Article 7 (Selection of processing trade project)

Selection of a processing trade project is a priority in processing trade.

An institution, enterprise or other organization that intends to conduct processing trade shall select projects with economic and technical potentials and favourable credit conditions, projects that

can produce profits by using their capacities, projects that can contribute to the development of science and technology and to the renewal of equipment of the unit concerned and projects that are in great demand in international markets.

Article 8 (Conclusion of processing trade contract)

An institution, enterprise or other organization shall select the form and project properly and conclude a processing trade contract correctly pursuant to the external economic contract law.

Article 9 (Matters to be stated in processing trade contract)

A processing trade contract shall state to the contract the names of the parties, the items and quantities of raw and other materials, semi-finished products and parts, the items, quantities, specification and quality of products to be processed, trademark, place of origin, period of production, scope of processing fee or export and import prices and method of their payment, liability for breaches and damages, settlement of disputes, and the like.

Article 10 (Application for registration of the category of business of processing trade)

An institution, enterprise or other organization that concluded a processing trade contract shall submit an application for the registration of the category of business of processing trade to the central trade guidance organ. In this case, a business license, contract and feasibility study report shall be submitted together.

Article 11 (Registration of the category of business of processing trade)

The central trade guidance organ shall examine and register the relevant category of business in time after receiving an application for the registration of the category of business of processing trade.

The category of business of processing trade shall be registered by entering the relevant business category in the business license.

Article 12 (Registration at customs)

An institution, enterprise or other organization shall make customs registration within 15 days of the registration of the category of business of processing trade.

Article 13 (Amendment of processing trade contract and notification of it)

An institution, enterprise or other organization may change provisions of the contract through consultation with the contract partner. In this case, the central trade guidance organ and relevant customs shall be notified of such change.

Article 14 (Implementation of processing trade contract)

An institution, enterprise or other organization shall implement a processing trade contract to the letter.

Article 15 (Requirement for contract performance guarantee)

An institution, enterprise or other organization may request the contract partner to establish a contract performance guarantee for the fulfilment of a processing trade contract.

Article 16 (Conditions of claim for penalty for breach and damages)

An institution, enterprise or other organization may claim to the contract partner a penalty for breach and damages in any of the following cases:

1. Where the performance of the contract has been delayed or rejected without any valid reason,
2. Where packaging, quality, quantity and the like does not conform to the condition of the contract,
3. Where the processing fee has not been paid or the payment for the products has not been made in time as specified in the contract, or
4. In case of any other breach of the contract.

Chapter III Operation of a Processing Trade Project

Article 17 (Requirement of establishment of operational order)
Establishment of a proper operational order is an important requirement for processing trade.

An institution, enterprise or other organization engaged in processing trade shall conduct business activities pursuant to relevant laws and regulations.

Article 18 (Import of materials needed for processing trade)

An institution, enterprise or other organization may receive or import from a foreign enterprise raw and other materials, semi-finished products, parts, packaging materials, machinery, equipment and items for labour protection, which are necessary for processing trade. In this case, no permission of the central trade guidance organ shall be necessary for carrying them in and out.

Article 19 (Registration of the state of warehousing and delivery of materials and the state of production of goods)

An institution, enterprise or other organization shall enter correctly in an account book the state of warehousing and delivery of raw and other materials, semi-finished products and parts brought in under processing trade contract and the state of production of goods.

Article 20 (Processing of goods according to terms of contract)

An institution, enterprise or other organization shall process goods under a processing trade contract qualitatively as per the contract.

Article 21 (Processing on commission)

An institution, enterprise or other organization may commission other institution, enterprise or other organization to process goods under processing trade contract.

Article 22 (Payment of money due to the State)

An institution, enterprise or other organization shall pay to the State a specified portion of its revenue earned from processing trade.

Article 23 (Utilization of foreign currencies earned)

An institution, enterprise or other organization shall deposit in its bank foreign currencies earned from processing trade and use them. In this case, it may use specified portions of them for the procurement of machinery, equipment, management supplies and bonus goods and to cover the expenses of trade negotiation, technological exchange, research and training.

Article 24 (Ban)

An institution, enterprise or other organization engaged in processing trade shall not:

1. Misappropriate foreign currencies earned or deposit them in a foreign country,

2. Change or expand the category of business or indices without approval,

3. Sell processed or assembled products in the domestic market, or

4. Misuse the materials brought in for processing trade.

Article 25 (Requirements for notification to the customs)

Where an institution, enterprise or other organization is to use the materials for processing trade for other purposes or sell the processed goods in the domestic market as may be required by a national measure, it shall notify the relevant customs after reaching agreement with the contract partner in advance.

Article 26 (Invitation of technician and apprenticeship)

An institution, enterprise or other organization may receive technical assistance from a foreign enterprise for the processing of goods. In this case, it may invite foreign technicians or send its technicians and workers to a foreign country for technical training after undergoing relevant procedures.

Article 27 (Quality inspection)

An institution, enterprise or other organization shall have its processed goods undergo quality inspection.

Quality inspection of goods may be made by the contract partner on the processing site as per the contract.

Article 28 (Period of carrying processed goods out)

An institution, enterprise or other organization shall process the raw and other materials, semi-finished goods and parts and take them out within six months of bringing them in.

In an unavoidable case, it may extend the period of taking them out by requesting the relevant customs.

Article 29 (Request for cancellation of customs registration)

Where the period of a processing trade contract expires or the category of business of processing trade is cancelled, an institution, enterprise or other organization shall request the relevant customs to cancel its registration within three days of the expiry and cancellation.

Article 30 (Meeting of liability)

Any liability arising in the course of processing trade shall be satisfied at the expenses of an institution, enterprise or other organization.

Chapter IV Guidance and Control over Processing Trade

Article 31 (Requirements for strengthening guidance and control over processing trade)

Intensification of guidance and control over processing trade is an important guarantee for the proper implementation of the processing trade policy of the State.

The State shall strengthen its guidance and control over processing trade in step with its development.

Article 32 (Guidance organ)

The central trade guidance organ shall provide unified guidance over processing trade under the leadership of the Cabinet.

It shall control and guide the work of processing trade on a regular basis.

Article 33 (Preferential treatment)

Bonus and other preferential treatment shall be given to the institutions, enterprises and other organizations that have brought great benefits to the State through processing trade.

Article 34 (Tightening of customs control)

The central customs guidance organ shall tighten customs control as processing trade is carried out in various forms and methods.

The customs shall exercise control to ensure that no materials brought in for processing trade are misappropriated or no processed goods are sold in the domestic market.

Article 35 (Suspension of operation, cancellation of approval for processing trade, confiscation and imposition of fine)

Where materials brought in for processing trade are used for other purposes, or processed goods are sold in the domestic market, or foreign currencies earned are misappropriated or deposited in a foreign country, or the category of business of processing trade is changed or expanded without approval, thereby hindering the work of processing trade, such measures shall be taken as the suspension of operation, cancellation of the category of business of processing trade, confiscation of the

materials in question or imposition of a fine.

Article 36 (Administrative or criminal punishment)

Where a grave consequence has been ensued in processing trade as a result of breach of this law, the officials of the institution, enterprise or other organization responsible for it and individual citizens concerned shall be subjected to administrative or criminal punishment depending on its gravity.

Article 37 (Settlement of dispute)

Any disagreement arising in connection with processing trade shall be settled through consultation.

Where it cannot be settled through consultation, it shall be brought before an arbitration body or a court of the DPRK for settlement.

Brisk Development of Tourist Zones

Projects are now under way to establish and develop tourist zones in the DPRK as part of a programme to promote more sustainably and activate tourism.

Korea has long been known as a 3 000-*ri* land of golden tapestry for its beautiful mountains and clear water. It has abundant tourism resources and favourable conditions for developing them with low costs.

The DPRK has many celebrated mountains and waterfalls like Mts Paektu, Kumgang, Myohyang and Chilbo, and Kuryong, Isonnam and Pagon falls. Amnok, Tuman, Taedong and other rivers, seas, fauna and flora tourism resources, spas and mineral waters, and lots of historical relics and remains are also densely distributed throughout the country.

Thanks to the tourism and ecosystem protection policy administered by the State, mountaineering and marine tourism resources are very clean in ecological environment and historical and cultural tourism resources are preserved in their original state.

The DPRK implements a policy of building and developing tourist and other development zones in a distinctive fashion in order to transform the land and environment of the country more beautifully and develop local economy.

Decrees have been proclaimed on establishing various international tourist special zones including Wonsan-Mt Kumgang international tourist zone, Onsongsom tourist zone in North Hamgyong Province, Sinphong tourist zone in North Hwanghae Province and Chongsu tourist zone in North Phyongan Province. These development projects are progressing ahead rapidly.

In particular, the government's efforts are being concentrated on developing Wonsan-Mt Kumgang international tourist zone, which is rich in mountaineering and marine tourism resources, into a world-class tourism destination.

The government has established a regular administration system to ensure uniform supervision and management of the work in tourist zones and directs a great deal of energies to land administration, infrastructure construction and tourism

resources development in the development zones.

Investment by foreign countries and individuals is also encouraged in the country that puts main emphasis on developing tourist attractions by its own efforts. Accordingly, investment briefings, study tours and short courses are held to give wide publicity to the investment environment in the country.

At the same time, efforts are being made to create favourable investment environment by providing legal guarantee for international investment in the country's tourist zones.

Laws and regulations related to tourist zones have already been instituted and adopted, like regulations on tourism in economic development zones, law on the Kumgangsan special zone for international tourism and regulations on tourism in Rason economic and trade zone, and they have steadily been revised and supplemented as required by the developing reality.

Foreign investors are granted legal privileges and guarantees for business establishment and operation, land lease, taxation, entrance and exit, labour employment, free and independent management activities, protection of invested property, remittance of legitimate income and human and material property in the zones for tourism development.

Training of personnel who are capable of developing and managing tourism and economic development zones is also encouraged. EDZ department has been set up in the University of National Economy and Pyongyang College of Tourism founded in a bid to develop tourist zones into world-class ones in a short time.

Management personnel and experts that are needed for the management of tourist zones are also systematically trained in provinces.

An increasing number of tourists and investors have visited the DPRK in recent years, and the country provides them with convenient entrance and working conditions to promote tourism.



MINDULLE Notebook Factory



The newly-built Mindulle Notebook Factory is a modern producer of notebooks in scores of kinds for kindergarteners, and students of primary schools, junior and senior middle schools and universities.

With an annual production capacity of tens of millions of notebooks, the factory turns out notebooks in various sizes and cover designs to suit the mind of the schoolchildren by age as well as school subjects.

Fully equipped with production facilities including high-speed perfecting press, hybrid folding machines, multi-spindle wire bookbinding machines and hydraulic display cutting machines, it runs all the production processes and conducts business activities by establishing integrated manufacturing and management system.

It makes strenuous efforts to meet the increasing demand for notebooks by positive introduction of advanced technologies and attain the major goal of business strategy to make its business management IT-based at a higher level and ensure the domestic production of raw and other materials.

Mindulle Notebook Factory

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Developing into a Leading Finishing Materials Producer

The Pyongyang Building-Materials Factory located in Ryokpho District, Pyongyang, specializes in producing a variety of finishing materials such as tiles, sanitary ware, plastic frames, artificial marble, coating paints and waterproof sheets.

The production lines are all automated from input of raw materials to packaging and forwarding.

Major facilities are CNC machine for moulding sanitary ware, laser 3D shape-measuring instrument, automatic

rotary moulding press, glazing and carrying robots, and press moulding machine.

Tiles, sanitary ware, artificial marble and other products in different sizes and shapes are all made with locally available materials, making the factory's prospects bright.

Its tile production lines for blending raw materials, grinding, mixing, moulding, glazing, printing, baking, and packing are all automated. It thus produces tiles for exterior walls, embossed and underwater tiles in various sizes, colours and patterns.

Every year the factory develops dozens of sanitary ware models including snowy white and quality washbasin, twin sink, stand-up urinal, toilet seat and stool.

Organic water paints of different colours for interior and exterior decoration are made with acryl-styrene emulsion, pigments, inorganic and functional fillers, so they remain unchanged in their

properties with their solvents inseparable for a long time.

Artificial marble for steps and floor decoration are diverse in colours and shapes and steady.

Plastic frames for doors and windows are custom-built.

Degenerated asphalt waterproof sheets which are used to keep the floor and roof from being exposed to humidity are highly watertight, tenacious and resistant to heat.

The factory's products are widely used in major local projects, and they are favoured by customers for their solidity, diversity and convenience.

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“CNC G10-250×750”

It is the CNC internal and external surface grinder for high-precision grinding of curved surfaces in various shapes including cylindrical and conical surfaces by numerical control program.

Technical specifications:

Max. external surface grinding diameter: 250 mm
Max. external surface grinding length: 750 mm
Max. internal surface grinding diameter: 200 mm
Max. internal grinding length: 150 mm
Max. centre distance: 760 mm
Diameter of external surface grinding wheel: 350 mm
Width of external surface grinding wheel: 50 mm
Table feeding range: 1.2 - 7 mm/min
Speed of main shaft of external surface grinding wheel:
1 728 r/min
Speed of main shaft of internal surface grinding wheel:
1 750 r/min
Speed of welding: 60 - 680 r/min
Outer dimension: 3 600 x 2 030 x 1 800 mm
Weight: 1 570 kg

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Hamhung Woolen Textile Mill



Established in October Juche 56 (1967), the Hamhung Woolen Textile Mill, as a mother factory in the woolen textile industry of the DPRK, is making important contributions to improving material and cultural life of the people and developing the country's industry.

The factory produces various kinds of quality cloths for suits and overcoats, blankets and other industrial fabrics.

Its woolen products such as blended and combined fabrics with soft colours and warm and comfort feelings, are well sought-after materials. Clothes made with these fabrics look well-shaped and maintain their original forms for a long time.

Blankets for adults and children are soft and tender for their even and durable textures and dense fur, and in beautiful patterns.

The industrial fabrics are also in good demand as they fully meet the qualitative indicators for industrial purposes.

The factory products used for filtering in vinalon spinning and gold production, and for papermaking are durable, fast in dehydration speed and high in actual extraction rate, thus raising the production efficiency.

The factory also turns out cloth for shoes, heat-proof clothes, felt fabrics, cord yarn, fishing nets and knitting yarn.

It is directing great efforts to putting production lines on a modern footing, ensuring domestic production of raw materials and equipment, and increasing the variety of goods so as to satisfy the growing demands for its goods.

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Ryonmot Trading Company
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Nano-Gold Injection

Nano-gold injection is red gold colloid solution produced by nanoizing gold of over 99.99% purity.

The natural bioactivator of the injection raises the degree of disperse stability of the nano-gold particles and thus heightens the pharmacological action.

Because of strong permeability and various properties like conductivity, antibiosis, prevention of ultraviolet rays, far infrared emission, and elimination of active oxygen, nano-gold particles take remarkable medicinal effects on the prevention and treatment of various diseases.

The injection makes it possible to spread gold particles throughout the body, proving a remarkable medicinal effect of gold.

It enhances immune functions of the body, recovers the destroyed electrolyte balance in cells caused by diseases and thus improves self-healing power.

It is highly efficacious for the prevention and treatment of diseases such as rheumatic arthritis, hepatitis, diabetes, neuralgia, cancer and arteriosclerosis.

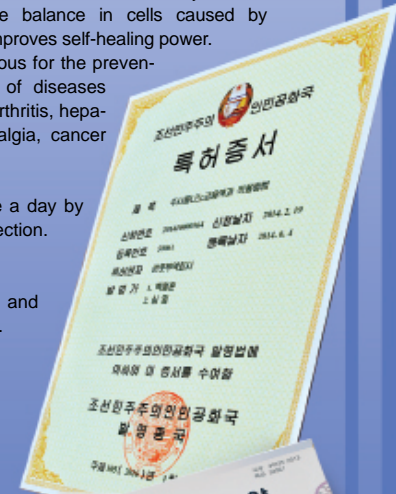
Dosage:

1 ampoule, twice a day by intramuscular injection.

Treatment cycle:

40 ampoules.

No side effects and contraindications.



Kangso Mineral Water, Korean Specialty

Kangso mineral water found in Kangso District, Nampho, DPRK, is widely known to the world, as it has remarkable effects on health promotion, is free from pollution and a unique mineral water which can not be synthesized artificially, and has long been used by the Korean people.

It gushes out by high pressure of natural carbonic acid gas through layers of biotite and mica bedrock, a structure of lower Proterozoic era, which were formed hundreds of millions of years back. It is 100 percent natural carbonated water and pure mineral water free from pollution.

As it contains dozens of useful microelements, it has been used as drinking water and for the treatment of various diseases from long ago.

Content of major ions of Kangso mineral water (mg/L)

Ca ²⁺	112	K ⁺	0.12	HCO ₃ ⁻	563.5	SO ₄ ²⁻	10.5
Mg ²⁺	54	Na ⁺	1.38	SiO ₂ ²⁺	10.5	Cl ⁻	10.5

Kangso mineral water cleans tissues and cells of human body.

The association of water molecule is 9 and below, with big kinetic energy and fast speed.

Therefore, it helps human body absorb minerals and microelements in the stomach and upper part of small intestines faster than ordinary drinking water and promotes absorption of nutrients in human body.

It easily infiltrates into the circulation of blood and lymph to supply cells with nutrients and minerals and expedite the secretion of gallstone,

waste matters, toxic materials and drug intoxication formed in the course of metabolism by enhancing the function of diuresis.

As it has positive influences on the main metabolism in the body including that of protein, lipid and sugar, it is effective for the prevention of metabolic diseases like arteriosclerosis, hyperlipemia and diabetes.

It is not only used as ordinary drinking water but also highly efficacious remedy for the treatment and prevention of gastric and duodenal ulcer, chronic hepatitis, chronic pyelitis and other diseases. It is good for children and pregnant women to supplement calcium and prevent osteoporosis from developing among aged people.

Kangso mineral water has been registered as state designated natural monument No. 56 and recognized as a pure and clean drinking water after receiving certifications of registration of the name of origin by the DPRK and WIPO and passing the test of SGS.

The mineral water presented by the beautiful Korean nature has become an ideal mineral water loved by humanity who values nature and wishes to live long in good health feeling its fragrance.

The Korea Unha Yaksu Trading Corporation makes products of Kangso mineral water, a world-class natural carbonated mineral water, in line with the international quality control standards and exports them to several countries.



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Pyongyang Chewing Gum Factory



Located in Thongil Street, Pyongyang, the Pyongyang Chewing Gum Factory is furnished with modern equipment and facilities for producing bubble and chewing gums, and all its production lines are automated.

It turns out dozens of kinds of gums with a wide variety of flavours and in various shapes.

Its products are functional as they satisfy the people's likings and are conducive to their health promotion. Among them are mint gum which gives a cooling aftertaste and refreshes breath, lemon gum containing vitamin C, fruit-flavoured gum which is effective in cleansing and whitening teeth, coffee gum that prevents drowsiness and blueberry gum that does not stick to false teeth.

The factory turns out various kinds of sugar-free gums and also those without artificial flavourings to

keep up to date with the present trend.

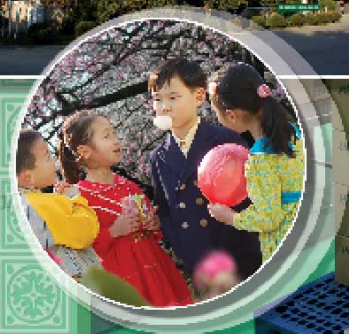
"Unbangul"-brand gums of the factory conform to HACCP and are in great demand as one of fancy items for their fragrant aroma and flavour.

The factory's annual production capacity reaches thousands of tons.

It is steadily improving the quality of products and increasing production by elevating the intelligent level of the integrated manufacturing system.

Jongwol Trading Company

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Pyongyang Mechanical Technology Company

The Pyongyang Mechanical Technology Company offers technical and sales services for intellectual products and cutting-edge machines, relying on strong scientific and technical force of the Pyongyang University of Mechanical Engineering and its production bases.

The Pyongyang University of Mechanical Engineering has Transport Machine College, faculties engaged in online education, mechanical production engineering, resource development mechanical engineering, light industry mechanical engineering, materials engineering and others, and dozens of institutes and laboratories, all conducive to breaking a new ground in the field of mechanical science and technology. It also conducts verification and certification of various materials by analyzing their compositions and structures down to the minutest levels of atoms and electrons in molecular unit.

It collaborates with many foreign universities in such sci-tech projects as design and manufacture of machines, development of nano materials, chaos control and software development and engages in joint research and academic exchanges of services, transfer and development of technology.

Cemented carbide tools, wire for CNC wire cut electro-discharge machining centre, 3D printer, small three-axis CNC milling machine, tampon production line and others are produced at the production bases of the university by applying up-to-date technologies, so they are able to gain the world competitive edge for their high quality and reasonable price.



- Cemented carbide tools

They are used in manufacturing bit edges and drilling heads of rock drilling and boring machines in coal and other mines, cutting blades and tipped tools for machine tools in metal processing factories and drawing dies in various sizes for producing round bars and wires.



Technical specifications:

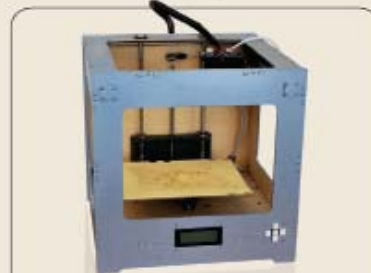
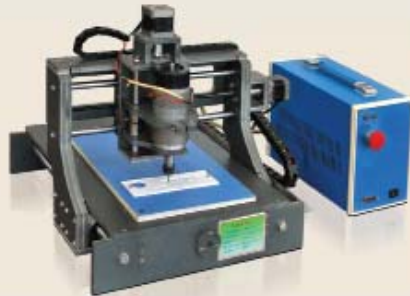
Classification	Hardness (HRA)	Bending strength (MPa)
Bit edge	87-88	20 000
Cutting blade	91-91.5	1 400-1 500
Die	88-89	1 800-1 900

- Small three-axis CNC milling machine

It can precisely process flat and curved surfaces and holes of nonferrous metals, plastics, wood products and printed boards on the basis of computer-designed models.

Technical specifications:

Power consumption: 200W
 Spindle speed: 7 000 r/min
 Machining accuracy: 0.01mm
 Working space (length × width × height): 200 × 300 × 70mm
 Max. machining speed: 250mm/min



- 3D printer

As the equipment for producing finished goods by dividing the three-dimensional model of a product into several layer sections and piling it up one by one, it is used in the making of the invested moulds and dies.

Technical specifications:

Processing materials: SLA, PLA and other plastics
 Power consumption: 150W
 Min. thickness: 0.1mm
 Working space (length × width × height): 400 × 400 × 400mm

- Portable vibration measuring instrument

It is used in vibration measurement, frequency analysis and dynamic balancing in thermal and hydropower turbines, blowers, exhausters and other rotary machines.

Technical specifications:

Measuring frequency band: 0 - 300Hz
 Vibration acceleration: 0 - 8G
 Vibration speed: 0 - 1 200mm/s
 Vibration displacement: 0 - 1 000µm
 Weight: 500g



- Wire for CNC wire cut electro-discharge machining centre

Technical specifications:

Size	Diameter φ (0.2, 0.25, 0.3)mm
Max. error in diameter	±0.1µm
Strength	Soft: 500-800MPa Hard: over 1 000 MPa
Linear rate	99.9%

Pyongyang Mechanical Technology Company
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 DPR Korea
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- Tampon production line

Technical specifications:

Output: 25/min
 Operation mode: Automatic operation based on PLC
 Total power consumption: 15kW
 Air pressure: 5 bar
 External size (length × width × height): 3 800 × 1 600 × 1 800mm



- Wind-powered water pump

It can supply drinking and industrial water without using electric power. One water pump can irrigate five hectares of grassland.

Technical specifications:

Starting wind speed: 2.5m/s
 Lift of wind-driven pump: 26m
 Pump efficiency: 89%
 External size (length × width × height): 18 × 3.2 × 4.2m
 Discharge flow: 2.4m³/h when wind speed measures 3.5m/s
 4.5m³/h when wind speed measures 7m/s
 Efficiency of windmill: 38%





Kumsong General Tractor Factory

The Kumsong General Tractor Factory turns out tractors of various models and accessories in scores of kinds, as well as bulldozers, harvesters, machines for spraying agricultural chemicals, and snowblowers.

The factory attaches primary importance to science and technology. By so doing, it has steadily raised its level of modernization of production processes and improved its management activities.

All the production processes including designing, casting, forging, processing and assembling are organically combined and equipped with CNC machine tools and other high-efficiency machines.

Tractors of models "Chollima-28" and "Chollima-2000" and "Phungnyon"-model bulldozers are highly commented by users.

"Chollima-804" model tractor that has recently been made by the factory is designed to perform various farm works like ploughing, harvesting and spraying agrochemicals.

Its technical specifications are as follows:

Driving system: 4-wheel drive

Engine type: 4 cycle, serial water-cooled, direct-jet diesel engine

Number of cylinders: 4

Cylinder dia. × stroke (mm): 110 × 125 (mm)

Operating output: 80 hp (58.8kW)

Rated revolution: 2 200 r/min

Fuel consumption: 175g/(hp × h)

Compression ratio: 17

Weight of engine: 490kg



Traction power: 17kN

Turning radius: 4 000 mm

Weight: 3 800kg (counterweight included)

Number of gears: 12 forward, 12 backward

Max. speed: 33.75 km/h

The factory has won kudos for its satisfactory service to customers as well as its manufacture and export of tens of thousands of machines.

It is boosting its tractor production by consolidating its

material and technological foundations and raising the technological levels and skills of the employees, while developing exchange and cooperation with other countries.

Korea General Machinery Trading Corporation

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Songam Cave

Songam Cave is a natural cave with stone flowers, stalagmites and stalactites of myriad shapes which are formed through the centuries-long process of the erosion of dolomite by underground water. The cave is designated as a natural living monument in December Juche 69 (1980).

Total length of the cave is 2 160 metres, and the temperature is always 12°C inside all the year round.

Composed of the main body and dozens of branches, it looks like an underground palace, as it has many scenic spots, including Kwanmundong, Phokphodong, Kiamdong, Solgyongdong, Unhadong, Surimdong, Pomuldong, Paekhwadong, Kungjondong, Sosaengdong, Hwasandong and Jangsudong.

Stone flowers, stalactites and stalagmites are named after the shapes found in the nature, such as the Great Bear, flower-decorated pillar, and a sea of frostworks. There are also rocks in the shape of gold fish, lobster,

hedgehog, eagle with spread wings, goshawk and others. Some stalactites and stalagmites look like fresh medicinal herbs and an erupting volcano, and even produce various sounds like an organ.

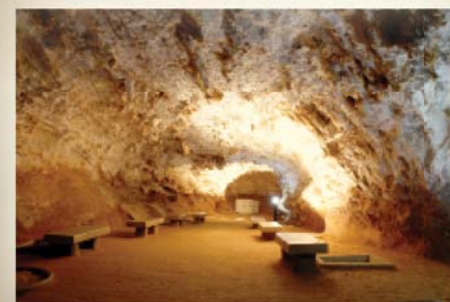
Found in the cave are Mangyong Stream, waterfalls cascading in ten tiers, a natural small spring, and a pool for boating.

Touring the cave along the sightseeing path running upward from the entrance, people are attracted by its spectacular scenery resembling celebrated mountains and scenic spots in Korea.

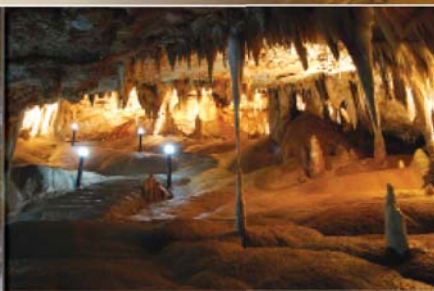
As a Korean saying goes, "Seeing is believing," it would be best to visit the underground scenery.

On the way to the cave are also found such tourist attractions in Mt Myohyang, one of the six celebrated mountains in Korea, as International Friendship Exhibition House, Manphok Valley, Isonnam Falls and Pohyon Temple, a national cultural heritage.

The Songam Cave is situated in Kaechon, South Phyongan Province, DPRK.



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Hungnam Fertilizer Complex

The Hungnam Fertilizer Complex has been reconstructed to produce fertilizers based on domestic materials and fuels.

The complex consists of the main sector engaged in the production of urea, nitrogen and ammonium sulfate fertilizers, and other relevant enterprises and factories.

The fertilizer production sector is equipped with production lines of gas generation fed by coal abundant in the country, gas purification, ammonia synthesis and others, which are controlled by the integrated manufacturing system.

The complex is pushing ahead with the technical reconstruction of the ammonia production line by relying on competent scientific and technical personnel.

It newly built a concentration and separation tower and ammonia evaporator, and established a computer-aided monitoring system of the concentration of oxygen supplied to the generator. It also succeeded in domestic production of catalysts for ammonia synthesis, methanization and desulfurization for purifying carbonic acid gas.

It is taking positive measures to prevent environmental

pollution and corrosion caused by harmful gases. To this end, it has set up lines to treat waste gas and obtain crude benzole and other organic matters coming out in the course of fertilizer production.

The complex is promoting scientific and technological dissemination through university education and nationwide computer network so as to train technical personnel and improve technical knowledge and skill of workers in a far-sighted way.

The Hungnam Fertilizer Complex greatly contributes to the DPRK's agricultural development with its increased fertilizer production based on abundant local resources.

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Korea Yusong General Corporation

Korea Yusong General Corporation
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The Korea Yusong General Corporation includes Songyong Shipping Company, Taegyong Company, Amnokgang Friendship Joint Venture Corporation, dozens of enterprises and representative offices in foreign countries.

The Songyong Shipping Company engages in the transport service of oil and exports and imports.

The Taegyong Company has several garment factories and conducts bonded processing of embroidery.

The Amnokgang Friendship Joint Venture Corporation and the Sinji J.V.Co. Ltd., engage in sales services of various electronic products,

garments, foodstuffs and other light industrial goods and have restaurants.

The general corporation has dozens of tanker trucks for petrol service stations set up in many places across the country, and offers repair service of dump trucks and transport service in the country.

It also has hospitals in several countries.

It has established representative offices in Russia, Indonesia and other countries to promote economic exchanges, including investment and equity and contractual joint ventures, in maritime transport, lead and zinc mining, rolling stocks and others.



Korea Natural Resources Development & Investment Company
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Patented Water Electrolytic Hydrogen Generator RS-1

The Korea Natural Resources Development & Investment Company developed water electrolytic hydrogen generator RS-1 by introducing up-to-date technologies of asymmetric impulse resonance water electrolysis, 4-upper bound combined catalyse, functional pressure equalizing and micro-backfire prevention based on microchannel heat absorption. It also realized uniform liquid circulation by designing a new electrolytic bath structure.

Technical specifications of RS-1 for industrial use

Type	Small-size			Medium-size			Large-size			
	Model	RS101-1	RS101-15	RS101-2	RS1101-5	RS1101-10	RS1101-20	RS1101-50	RS1101-100	RS1101-200
H ₂ output (m ³ /h)	1	1.5	2	5	10	20	50	100	200	
O ₂ output (m ³ /h)	0.5	0.75	1	2.5	5	10	25	50	100	
Input voltage (V)	AC220	AC220	AC220	3-phase 380	3-phase 380	3-phase 380	3-phase 380	3-phase 380	3-phase 380	3-phase 380
Input current (A)	3 300	3-phase	36.4	52.6	105.3	205.3	63	122	243	
Power consumption (kW/nm ³)	3 300	3-phase	4.0	4.0	4.0	3.9	3.9	3.8	3.7	
H ₂ purity (%)	3 300	≥99.8	≥99.7	≥99.8	≥99.8	≥99.8	≥99.7	≥99.7	≥99.7	
Working pressure (MPa)	≤0.1	≤0.1	≤0.1	≤0.3	≤0.3	≤0.4	≤0.5	≤0.6	≤1	
Water consumption (L/h)	0.82	1.2	1.65	4.1	8.2	16.2	41	82	162	

Economical effectiveness:

- It guarantees over 70 percent efficiency of hydrogen generation by water electrolysis.
- It actively ensures neutral and reducing flames.
- It is cheap, widely-used and practical.

Water electrolysis hydrogen generator RS-1 obtained WO2015/125981 conforming to PCT system from the WIPO in August Juche 104 (2015).



Kumkhop General Foodstuff Factory for Sportspeople

Kumkhop Trading Company

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The Kumkhop General Foodstuff Factory for Sportspeople was inaugurated in Juche 100 (2011) for the production of mainly nutritive foods for sportspeople and other various foodstuffs.

The factory has put its overall production processes on an intensive footing and automated them at a high level by establishing an integrated manufacturing system.

All the processes from feeding of raw materials to packaging are flowlined.

The factory's products, such as bread, beverages, biscuits, sweets, rice cakes, and others, are much favoured by people.

A variety of beverages containing compound mineral matters and other activating materials are good for sportspersons to relieve fatigue and rehydrate. And other foodstuffs rich in protein and fat are widely used as nutritional foods.

Biscuits with natural flavourings of peanuts and pumpkin seeds are highly appreciated by consumers.

The factory turns out foods in hundreds of kinds, including carrot-flavoured bread rich in vitamin A, calcium yeast bread, peach-flavoured carbonated drink, biscuits and processed meat.

Modern equipment and facilities for analysis, sanitation and air conditioning are installed to ensure safety of foodstuff.

Maintaining it as its consistent management principle to develop new products and ensure high quality, the factory is making strenuous efforts to strengthen its material and technical foundations and produce more famous goods.



New Model of 5-ton Lorry



Technical specifications:

Engine type: 3rd-generation 4- cycle,
supercharged direct-injection diesel engine
Max. output: 115 hp
Max. speed: 90 km/h
Fuel consumption: 160 g/hp>h
Max. revolution of supercharger: 100 000 r/min

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Technical specifications:

Driving system: 4-wheel drive
Engine type: 4 cycle, serial water-cooled, direct-injection
diesel engine
Number of cylinders: 4
Cylinder dia. x stroke (mm): 110 x 125 (mm)
Operating output: 80 hp (58.8kW)
Rated revolution: 2 200 r/min
Fuel consumption: 175g/(hp xh)
Compression ratio: 17
Weight of engine: 490kg
Traction power: 17kN
Turning radius: 4 000 mm
Weight: 3 800kg (counterweight included)
Number of gears: 12 forward, 12 backward
Max. speed: 33.75 km/h

"Chollima-804"- Model Tractor



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High-efficiency Farm Machines

Agricultural Machinery Trading Company

Add: Mangyongdae District, Pyongyang, DPR Korea
Tel: 00850-2-18111-(EXT)341-8278
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Mist Sprayer

Technical specifications:

Working power: 28 hp
Working capacity: 1.5 ha/h
Horizontal spraying distance: 10 m
Fuel consumption: 2 kg/ha
Vertical spraying distance: 4.5 m
Weight: 220 kg

Combined Ploughing Machine

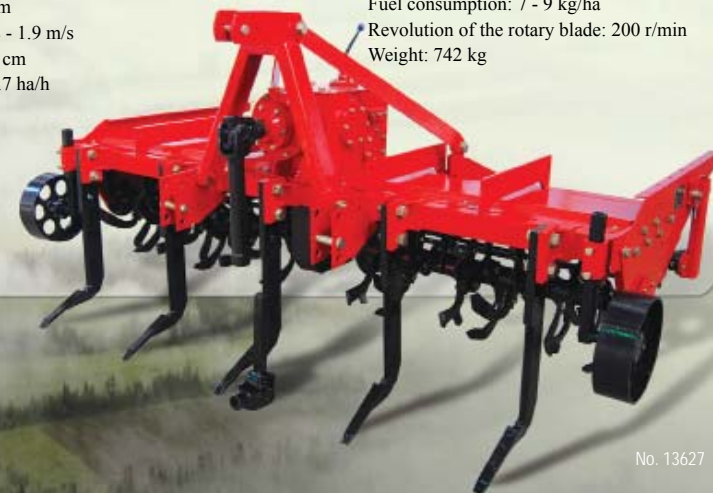
It can turn over the soil, till its surface, crumble lumps
of subsoil and level the ground at the same time.

Technical specifications:

Working width: 2.4 m
Working speed: 1.38 - 1.9 m/s
Ploughing depth: 27 cm
Working capacity: 0.7 ha/h

Topsoil-ploughing depth: 11 cm

Pulling capacity: over 50 hp
Rotary blade diameter: 500 mm
Fuel consumption: 7 - 9 kg/ha
Revolution of the rotary blade: 200 r/min
Weight: 742 kg



Brassware Wins Public Favour

The Pyongyang Daesong Posok Trading Company turns out high-quality brassware in various kinds and shapes.

Its products such as sinsollo braziers, noodles vessels, bowls, spoons and chopsticks, are listed on the domestic best products.

Brass goods are known effective in the treatment of heart diseases and hepatitis, as well as in the prevention of cancer and cerebral thrombosis.

Liquor kettle sets, tea cups, cruet sets and other brass ware are mainly composed of copper, tin and zinc that are melted, rolled, straightened, ground and engraved in a delicate and precise way.

They are well commented aesthetically for their soft colours, glaze, resonance, and fine decorations. And as they are light in weight, they are also very useful.

Pyongyang Daesong Posok Trading Company

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