

ABB in the
Czech Republic



ABB

ABB Group

ABB is a leader in power and automation technologies that enable utility and industry customers to improve performance while lowering environmental impact.

The ABB Group was formed in 1988, when the Swedish Asea and the Swiss BBC Brown Boveri merged under the name ABB. Asea's history dates back to 1883. BBC Brown Boveri was founded in 1891.

ABB is headquartered in Zurich, Switzerland. The ABB Group of companies operates in around 100 countries, and employs around 104,000 people.

ABB Ltd shares are traded on the stock exchanges in Zurich, Stockholm, and New York.



Power and productivity
for a better world™



ABB in the Czech Republic

ABB s.r.o. is one of the leading technological and electro engineering companies in the Czech Republic operating in the power and automation sector.

The history of the Czech ABB dates back to 1970, when the Swiss company BBC, one of the predecessors of today's ABB, started to operate in the country. Formal establishment of ABB dates back to 1991. During 1990s, the group of ABB companies in the Czech Republic gradually grew in numbers, extending the scope of its activities as well as its portfolio of products and services. In 2001, the companies were merged into two basic units - ABB s.r.o. and ABB Lummus Global s.r.o. In 2002 - 2003, ABB s.r.o. went through a wide-ranging restructuring in accordance with the ABB's global objective to simplify its structure and focus on core businesses.

Nowadays ABB s.r.o. has five divisions:

Power Products - production and supplies of products for substations, high/medium voltage products and medium voltage switchgears, protection relays for power engineering and industry, instrument transformers and sensors, power and distribution transformers, cables and wiring accessories we also provide upgrade, service, consulting and hot line.

Power Systems - complete supplies for power sector, high/medium voltage substation automation systems (protection relays), systems for measurement and regulation in power sector we also provide upgrade, service, consulting and hot line.

Automation Products - energy efficient and reliable products increasing the client's productivity incl. drives, motors and generators, LV products, instrumentation and analytics, and power electronics.

Process Automation - provides customers with the best solution for operational control and optimization together with industry-specific application knowledge.

Robotics - focuses on the industrial robots and offers also software for robots, peripherals and modular production units for operations such as handling, welding, painting and surface treatment, and machine operation.

At present ABB s.r.o. employs approximately 2 000 people. The annual turnover exceeds CZK 6 bln.

The business activities of ABB are aimed especially at power and industrial plants, providing them with comprehensive services and solutions in the area of power generation, transmission and distribution, and industrial automation.

The strategy of ABB is to have a strong local presence ensuring its customers quick and easy access to ABB's offerings.

The Czech ABB can use the international know-how and the latest results of the research and development achieved by the global company. It offers its customers added value in the form of a strong base of its own engineering and service centres, and long-standing experience of traditional Czech producers.

The combination of the international know-how and local sources enables us to supply the best solutions, which increase the effectiveness while lowering material consumption in the heat and power generation as well as in industrial production. Thus, ABB contributes to higher productivity and competitiveness of its customers.

Our power and automation technologies help to increase productivity, performance and energy savings.

Automation Products Division Process Automation Division Robotics Division

Our deep process expertise and complete Industrial IT – based portfolio of products and services positions ABB as the preferred partner to create value for customers.

Thanks to customers needs understanding, innovative technologies and comprehensive portfolio of products, systems and services, ABB is able to supply the best solutions for automation, optimization, and control of industrial, commercial and utility operations.

The whole range of producers and suppliers face permanent pressure forcing them to increase the quality of products and, at the same time, to lower prices and shorten delivery terms. To be able to meet these demands, it is necessary to respond to these challenges for example by implementing new systems and technologies with the aim to maximize the utilization of current production capacities and to extend them. The offer of ABB includes products and services, which will fully meet the investment and business objectives of its business partners.

We deliver comprehensive solutions of control systems and software for various industrial sectors. The offer of ABB also includes robotics, a wide range of electric drives and motors, state-of-the-art industrial instrumentation and analytics, low voltage products and wiring accessories for both industrial and household use. Our offer also includes professional services in the area of repair and maintenance of rotary and stationary electrical machines.



Did you know?

ABB was the first company in the world to sell 100,000 industrial robots. One of the first industrial robots was invented and launched by Asea (the predecessor of ABB) in 1974. ABB s.r.o. is No. 1 in robotics in the Czech Republic in most segments and applications. Thanks to its technical competence and outstanding performance, the company was chosen among ABB Group companies to be a centre of Central and Eastern European region for robotics.

Motors powering mechanical equipment consume an huge amount of energy. And when they run at a fixed speed, much of the energy used is simply wasted. Variable speed drives, like ABB's ACS550, precisely control motor speed to reflect actual power demand, eliminating the waste caused by fixed-speed operation and generating end-user savings of up to 70 percent.

ABB produces also the low voltage MNS type switchgears that comply with the world standards incl. the requirements on arch short circuit and seismic resistance.

We can be proud of a long list of successfully implemented projects and deliveries. Our facilities help many business partners to achieve higher effectiveness and competitiveness.

Out of many significant orders we can mention the extension of the rolling mill line, modernization of DUO 800 and KVARTO 1400 rolling mill stands control and feeding incl. the drive reconstruction in AL INVEST Břidličná a.s., modernization of control system in Třinecké železářny, a.s., reconstruction of the circulation pump drives of hot-water line in the power plant Elektrárna Mělník and heating plant Teplárna Malešice, the reconstruction of heavy mill drives and control system for ISPAT Nová Huť, a.s. or participation in delivery of turbine control system for ethylene unit of Chemopetrol, a.s. Litvínov.

In the area of robotics we delivered the completely robotized equipment for the new plant of Benteler Rumburk last year.

For the purposes of references the following companies can be mentioned: Benteler, Recticel, Magna (Intier), Hella, Peguform, Lear, Bosch, Laufen, Brose, Dura Automotive, Essa, Faurecia, Škoda Auto and others. The production schedule of ABB robots in the Czech Republic includes many types ranging from IRB 7600 robot with a payload up to 500 kg to the smallest robot able to handle max. 5 kg payload. Our department provides comprehensive set of activities for turn-key deliveries ranging from design, delivery, putting into operation to the final optimization of the delivered workplace.

Our LV products and switchgears were used in many important projects, such as NAFTA refinery in Belarus, automotive companies TPCA Kolín and KIA Žilina, Sazka Arena in Prague or in the shopping centre Zličín. ABB holds the leading position on the Czech market in the field of wiring accessories. Our wiring accessories can be found in such exclusive places as the representative halls and lounges of the Prague Castle and in an endless number of residential, office and industrial buildings.



- Chemicals and petrochemicals
- Pulp and paper
- Foundry and metals
- Cement and lime-kiln
- Automotive
- Food - processing industry
- Pharmaceuticals
- Power generation, transmission and distribution
- Residential, commercial and industrial buildings
- Wholesalers and distributors

**We offer our products
and services to
industries, such as:**

Power Products Division Power Systems Division

ABB technologies have traditionally set the direction of the development in transmission and distribution of power and its effective use. It is no overstatement when we say that ABB is the world leader in this area.

ABB provides industrial and commercial customers, as well as electric, gas and water utilities, with broad range of innovative products, services and solutions which enable the most reliable and effective generation, transmission and distribution of power, heat, gas and water.

The energy sector increasingly demands competitive, tailor-made solutions – solutions that optimize existing assets and processes while enabling for straightforward integration, future extension and smooth maintenance. Our modular systems allow you to use your existing operating resources to maximum effect, and our state-of-the-art control systems provide reliable information so needed for fast decision making and planning of business activities.

We provide complete services in the area of construction and modernization of power transmission and distribution facilities. Our comprehensive portfolio includes high and medium voltage substations and apparatus, medium voltage apparatus and switchgears, protection relays for power and industrial sectors, power and distribution transformers, instrument transformers and sensors, cables and wiring accessories, complete deliveries for energy sector and systems of measurement and regulation in power engineering. ABB offer also includes advanced systems of high and medium voltage substation automation, which provide users with reliable control of the whole process, from power generation to its consumption.

In service we provide long-term cooperation based on contracts, warranty and post-warranty service, hot line as well as consulting, diagnosis, maintenance, upgrade and repair.



Did you know?

Annually, ABB companies all over the world produce 350,000 – 400,000 distribution transformers, 1,200 power transformers and hundreds of thousands of instrument transformers and sensors. Corporate centre for research and development of instrument transformers and sensors is located in ABB s.r.o. in Brno. The first instrument transformers were produced there already in 1919. Brno unit is also the key ABB manufacturer of air insulated switchgears that are delivered all over the world.

The group of micro-processor for distribution networks protection now includes new RE_610 series, offering at the moment two types of protection.. The first one is the multifunctional protection for medium voltage motors REM 610 enabling also bearing and winding temperatures measuring. The other one is overcurrent and ground protection REF 610 that includes also the flash protection. In emergency the construction of these protections enables their immediate replacement under operation.

We have also launched the new complete series of control and protection terminals Rex670 for high voltage networks that fully supports the new communication standard IEC61850.

A number of projects have been successfully realized for power plants as well as for the industrial, transport and public sectors throughout the period of the company's operation.

Among the significant orders, projects for the power plant Elektrárna Chvaletice should be mentioned. ABB delivery consisted of 6kV substation incl. control and protection and of the control and protection system for the 110 kV substation reconstruction. Another reference worth mentioning is the delivery of control system and protection for the reconstruction of the third power unit of a power plant Elektrárna Poříčí. The replacement of the generator circuit breakers in the power plants Elektrárna Počerady and Elektrárna Pruněfov and delivery of electrical part of the power plant Kelelnfold in Budapest can be considered the important projects, too.

40 delivered systems of numerical distributed busbar protection REB 500 is the evidence of the outstanding position of ABB in the field of high voltage protection deliveries for ČEPS, ČEZ and other power-producing companies in the Czech and Slovak Republics. This number makes ABB the third biggest supplier of protections in the world. In 2005 the first REB 500Sys busbar protection with integrated functions of distance line protection was installed at the 110 kV substation Čebín (E.ON).

In power transmission and distribution, a significant project executed was the construction of the transformer station Kutná Hora combined with the delivery of main ABB products, such as breakers, transformers and instrument transformers. In 2004 the complete delivery of the sealed substation 110 kV Strakonice was implemented. Other deliveries worth mentioning comprise the deliveries of high-voltage circuit breakers and instrument transformers for ČEZ Distribuce and PRE, a.s., high voltage cable system delivery, PRE and E.ON ČR and deliveries of generator circuit-breakers for power plant Elektrárna Poříčí and companies Delia ČR and Plzeňská teplárenská.

Among the projects for industrial sector the deliveries of high voltage products and switchgears, distribution transformers and protections for automotive companies Škoda Auto, TPCA Kolín, KIA Motors Žilina and retrofit of medium voltage switchgear for Česká Rafinérská – Rafinérie Kralupy and Litvínov can be

References

We offer our products and services to industries, such as:



mentioned, as well as the important delivery of high voltage products to Technoplast Chropyně or Krupka – Modlany industrial zone. In the area of transformers the deliveries of dry transformers for the KIA production plant, dry traction transformers for ČD and dry transformers for DP hl. m. Prahy rank among the most important. Oil transformers were delivered for example to ČEZ Distribuce or Energetika Třinec.

As far as the transport sector is concerned, it is necessary to mention especially ABB's continuing participation in the construction of new stations of the Prague underground system, where ABB supplies high voltage switchgear, including control system and protection, to the Prague public transport company – Dopravní podnik hl. m. Prahy. For the new stations of the Czech railways Lipno, Kadaň and Karlovy Vary the new modular substations 110 kV were delivered and put into operation.

We have implemented also many export projects, especially in the area of high voltage apparatus and switchgear, such as deliveries for Sloznaft Bratislava, for the Chinese power plant ShenTou, in Russia deliveries for Sosnogorsk and Sachalin projects of Shell and Exxon Mobil companies or for the project Alrosa (diamond mines), as well as deliveries for United Paper Mill or Stora Enso in Finland, HAMA Cement Syria and Ministry of Water and Electricity DEWA in the United Arab Emirates.

Our cooperation develops also in services. We have a number of contracts with our business partners such as: ČEPS, ČEZ, Ško-Energo, PRE, Dalkia, Sloznaft. We also provide service to our partners from Sweden, Switzerland, Italy and Germany.

- Power generation (power plant, heating plants)
- Power distribution
- Water and gas utilities
- Ecological projects (water treatment plants, waste incinerating plants, desulphurisation plants)
- Chemicals and petrochemicals
- Cement, minerals and mining
- Manufacturing
- Automotive
- Pulp and paper
- Commercial and industrial buildings
- Design and assembly companies

Technology

Technology plays a key role in ABB. By continuously developing innovative new technologies and improving existing ones, we aim to provide our customers with products and services that help make them more competitive while minimizing environmental impact.

ABB technology is the backbone of many industries

Take your car, for example. It's very likely ABB robots helped assemble the car you drive, in operations ranging from precision material handling, spot welding and production of assembly units to the application of paint finishes. All of this equipment is powered by electricity which probably passed through a substation using ABB transformers, switches or circuit breakers, which may in turn be controlled by our substation automation or network control systems for reliable and cost-effective power transmission.

Investment into research and development guarantees our competitive position on the market. That is why ABB invested roughly 5 % of revenues, or \$930 million, in R&D in 2003. We work closely with the scientists from more than 50 leading universities and research institutes throughout the world. 50-92% of products we supply at the moment are the result of the latest achievements in research and development.



Industrial IT

A large part of our work is concentrated on Industrial IT, our patented concept for linking products and services together with the information needed to run, service and maintain them. Industrial IT allows our customers to optimize their operations and link up in real time with their suppliers and customers. The result is a leap in efficiency, quality and competitiveness.

ABB is moving all its offerings to this common systems integration architecture to ensure its full compatibility and information integration on all process levels. So far more than 37 000 ABB products have been certified for Industrial IT.

We make our effort to balance economic, environmental and social impact of our business activities and actively contribute to the economic growth, environment protection and sustainable development in all countries and communities we operate.

Our contribution to environment protection

ABB's environmental policy has two main aspects. The first one is reducing environmental impact of our own operations. Environmental management system ISO 14001 is implemented in all of our production units and we strictly adhere to all environmental laws and norms.

However, our main contribution to sustainability lies in the strong environmental performance of our products over their complete life cycles. Using life cycle assessments, we supply products and systems that require less material, have greater efficiency and consume less energy, which means less harmful emissions – particularly during long operating lifetimes.



ABB tries to become good neighbour that is sensitive to local culture and traditions, under all circumstances adheres to ethical conduct and accepts responsibility for the impact of its activities in all countries and communities where it operates. ABB in the Czech Republic traditionally helps children and handicapped people. ABB is the main partner of the Czech Special Olympics, an organization supporting sports activity of mentally handicapped people.

ABB has a long tradition of cooperation with Czech technical universities and colleges through internships, thesis consultations and lectures. Every year ABB gives opportunity to university graduates to participate in its Global trainee program in areas of Finance and Business Control that enables them to acquire valuable experience and expertise while working for ABB both in the Czech Republic and abroad.

In respect to its employees, ABB offers them the opportunity of continuous education and training while continuously supporting openness, personal initiative and creativity. An integral part of ABB's social policy is an occupational health and safety program, which focuses on safe and healthy working environment in all plants and production units and on taking the adequate measures to prevent accidents and injuries.

In all our plants and units the system of management complying with OHSAS 18001 was introduced.

Contacts

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*Process automation, control systems, electrical drives and motors,
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Low voltage products and switchgears

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power cables and high voltage wiring accessories, generator circuit-breakers*

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