

ABB in the Czech Republic

Leader in power and automation



ABB is a global leader in power and automation, providing complex services to industrial companies and to power producers and distributors. ABB's state-of-the-art technologies enable its customers to improve performance while lowering the environmental impact of their activities. ABB's products and services have been present in the Czech Republic since 1970 and the first ABB company in the Czech Republic was formally set up in 1991. During the 1990s, the ABB group grew by taking up new companies to form the current ABB s.r.o. (a limited-liability company).

The ABB group was established in 1988 by a merger of Swedish company Asea with Swiss company BBC Brown Boveri. Asea's history dates back to 1883, while BBC Brown Boveri was founded in 1891. The company is based in Zurich, Switzerland. ABB has operations in more than 100 countries of the world and has about 120,000 employees. ABB currently consists of five divisions: Power Products, Power Systems, Discrete Automation and Motion, Low Voltage Products and Process Automation.

Power Products

Power Products are the key products to transmit and distribute electricity. The division mainly produces and delivers HV substations and apparatuses, MV substations, switchgears and apparatuses, protection for power generation and industry, instrument transformers and sensors, power and distribution transformers. As for services, the division offers modernization, repairs, consulting, diagnostics, product support and hot line. The PP division is subdivided into several business units:

MV production and sales (Brno):

- Production of MV switchgears, instrument transformers and sensors.
- RFFF for air-insulated switchgears.
- GFFF for instrument transformers and sensors.
- Technology Centre—research & development in the field of instrument transformers, sensors and air-insulated switchgears.



- Service for MV products.
- Technical laboratory – testing of LV, MV and HV products.

HV component production (Praha, Brno):

- HV apparatuses, power and distribution transformers and accessories, generator circuit breakers, surge arresters.
- GIS components for HV applications – from 110kV up to 550kV.
- SF6 leakage tests, HV tests, service.

Power Systems

The division offers complex power solutions (engineering and turnkey deliveries of substations and transformer stations), HV/MV substation automation systems (protection and control systems), control systems for the energy sector, and HV cables and cable systems. Additional systems on offer include flexible alternating current transmission systems (FACTS), high-voltage direct current (HVDC) transmission systems and network management systems. As for services, the division offers modernization, repairs, consulting, diagnostics, product support and hot line. The division is subdivided into several business units:

Deliveries of systems for HV/MV substation monitoring, protection and control (Trutnov):

- Centralized switchgear production for ABB CEU region – engineering, production of switchgear, testing.

Service for substation control systems and generator circuit breakers (Trutnov, Prague):

- Long-term service contracts with all key industrial customers.

Deliveries of instruments & technological control systems for power generation (Brno, Pilsen):

- ABB regional engineering centre – delivery and service of control systems.

Deliveries for electrical components for the construction and reconstruction of power generation units – EBoP (Brno).

Discrete Automation and Motion

The division provides products, solutions and related services that increase industrial productivity and energy efficiency. This division's offer includes motors, generators, variable speed drives and controlled rectifiers, programmable logic controllers (PLC), power electronics and industrial robots and robotic units that provide power, motion and control for a wide range of automation applications. The leading position in generators for wind farms and a continuously growing

offering in solar power complement the industrial focus, leveraging joint technology, sales channels and operations platforms. Providing service both at the customer's site and in specialized plants is an integral part of the division's business. This division is also subdivided into several business units:

Robotics (Prague, Ostrava):

- The largest supplier of industrial robots, automated units and related services in the Czech Republic.
- Consultancy.
- Professional certified renovation of used industrial robots for further installation.
- Developing, manufacturing and deliveries of standardized arc welding cells for European customers.

Drives and motors sales (Prague, Ostrava, Brno):

- Local markets, solutions including special applications.
- Sale of motors, variable speed drives, controlled rectifiers and softstarters.

Drives service (Prague, Ostrava):

- Service for variable speed drives, controlled rectifiers and softstarters.

Motors service and production (Ostrava):

- Service of electric motors of all brands, production of DMI electric motors.

Low Voltage Products

The Low Voltage Products division is subdivided into two business units:

Production and sales low voltage products and switchgears (Brno):

- Production and service of low voltage switchgears type MNS and MNS iS up to 1000V for the Power distribution and Motor control centers.
- Feeder factory for MNS iS withdrawable modules.
- Production of motor starters, selective circuit breakers, thermal overload relays, contactors and other ABB low voltage products.
- Sales of complete range of ABB low voltage products, mainly circuit breakers, contactors, control products, consumer units and cabinets.
- Sales and technical support for intelligent building control system KNX/EIB.

Production and sale of wiring accessories (Jablonec nad Nisou):

- Switches, sockets and other wiring equipment for use in



all types of buildings. Intelligent house control systems for energy savings and comfort.

Process Automation

The Process Automation division provides customers with best solutions for plant control and optimization, as well as industry-specific application knowledge. The industries served include particularly metals and minerals, pulp and paper, power, chemicals and pharmaceuticals, oil and gas, marine and the production of turbochargers. Key customer benefits include improved asset productivity and energy savings. This division is subdivided into several business units:

Process automation for the local market (Prague, Ostrava, Most, Brno):

- Deliveries of control systems and drive applications, deliveries of complex automation solutions for technological processes and control systems service.
- Control systems engineering, instrumentation & analytics, drives engineering and service for instrumentation & analytics.
- Sales of control systems and industrial instrumentation & analytics.

Operation Center Czech Republic (Ostrava):

- Global engineering center for process automation in industries such as metals and minerals, marine, oil, gas and petrochemical, pulp and paper and other industries.
- Project design, engineering and commissioning of control systems and drives.

Contacts to ABB s. r. o. Czech Republic

Praha:

Sokolovská 84-86
186 00 Praha 8 – Karlín
Tel.: +420 234 322 111
Fax: +420 234 322 113

- Company headquarters
- Process Automation (Control system deliveries and service, drives engineering, instrumentation and analytics sales)
- Low Voltage Products
- Power Products
- Power Systems
- Discrete Automation and Motion

Bartákova 1121/3
140 00 Praha 4 – Krč
Tel.: +420 241 485 552
Fax: +420 241 481 050

- Process Automation (Instrumentation and analytical service, Spare parts sales)

Brno:

Olomoucká 7/9
656 66 Brno
Tel.: +420 545 103 608
Fax: +420 545 103 603

- Power Systems

Vídeňská 117
619 00 Brno
Tel.: +420 547 152 111
Fax: +420 547 152 399

- Power Products (PPMV – production and sales of MV apparatuses, AIS switchgears, inductive and electronic instr. transformers, technology center, testing laboratory)
- Process Automation (regional office)

Vídeňská 117
619 00 Brno
Tel.: +420 547 152 953
Fax: +420 547 152 855

- Power Products (PPHV – production of parts for HV)

Heršpická 13
619 00 Brno
Tel.: +420 543 145 111
Fax: +420 543 245 840

- Low Voltage Products (ELSYNN – LV products and systems)

Jablonec nad Nisou:
Resslova 3
466 02 Jablonec n. Nisou
Tel.: +420 483 364 111
Fax: +420 483 364 159

- Low Voltage Products (Elektro-Praga –wiring accessories)

Trutnov:
Komenského 821
541 70 Trutnov
Tel.: +420 499 808 111
Fax: +420 499 808 501

- Power Systems
- Power Products
- RFF – installation of switchgear and control systems for power industry

Ostrava:
ul. Na Rovince 879
720 00 Ostrava - Hrabová
Tel.: +420 597 468 801
Fax: +420 597 468 802

- Process Automation (Control system deliveries and service, drives engineering – regional office)
- Operation Center (CZOPC)
- Discrete Automation and Motion (Sale of drives and motors)
- Discrete Automation and Motion (Service)
- Power Systems (regional office)

1.máje 3155/98
703 00 Ostrava-
Moravská Ostrava
Tel.: +420 595 691 322
Fax: +420 595 691 312

- Discrete Automation and Motion
- Service of electric motors of all brands
- Production of DMI-series motors

Podnikatelská 877
720 00 Ostrava - Hrabová
Tel.: +420 597 010 723
Fax: +420 597 010 702

- Discrete Automation and Motion
- RA Regional Manufacturing Center Ostrava
- Robot Refurbishment Centre

Plzeň:
Avalon Business Centre
Poděbradova 2842/1
301 00 Plzeň
Tel.: +420 378 089 911
Fax: +420 378 089 949

- Power Systems (Design of power control systems)

Teplice:
ul. 28. října 32
415 01 Teplice
Tel.: +420 417 534 457
Fax: +420 417 534 458

- Power Systems (regional office)

Most:
Moskevská 1/14
434 51 Most
Tel.: +420 476 206 624
Fax: +420 476 206 628

- Process Automation (regional office)

Our achievements

ABB Czech Republic among suppliers to the world's tallest building

One of the most closely watched constructions today is undoubtedly the Khalifa Tower (Burj Khalifa). The skyscraper in the most populous city of the United Arab Emirates has 162 floors and towers more 828 meters above ground. One of the suppliers to this unique construction is ABB Czech Republic – PPMV Brno, which has delivered a total of 48 pieces of air-insulated medium voltage switchgears over the past 2 years of construction works. The deliveries ensure the supply of vital electric power to the building (for air-conditioning, lighting, communication equipment, etc.) and to the adjacent complex of lakes with fountains, which girdle the tower and add to its luxurious environment.

ABB helps create a giant lake in the old Most area

Several decades ago, the area under the now non-existent old city of Most was extracted as a brown coal mine. Only the well-known Gothic church was transported and survived. A huge pit occurred, as many as 70 meters deep. After years of thought on how to secure the pressures of the surrounding rock, a decision was taken to flood the whole area. Water would stabilize slopes and create conditions for building a recreational area larger than Mácha's lake. Since there is not enough water for flooding on the site, the existing industrial water piping is used to pump water from the Ohře river 24km away. Near the Stranná community, Povodí Ohře (Ohře Basin Management) operates a pump station equipped with 3 ABB's ACS 1000 MV variable speed drives. The new lake started to fill with water in October 2008 and should be full until the end of 2011. The water flows through 1,200mm-diameter piping into distributive shaft in Komořany and then through 800mm piping to Most. The average rate of flow is 600–800 l/s, with maximum reaching 1,200 l/s. After filling up, the lake will contain 69 million cubic meters of water, with an area of 311 hectares. The information stated above suggests that this is a grandiose project involving immense volume of transported water. One of its highlights is the reliability of the equipment and the considerable energy savings thanks to the efficient regulation of the pump performance using ABB's variable speed drives.

ABB robots help to automate Hamé's logistic centre

Robotics division completed the project of automated depalletizing, packaging and palletizing of glasses in Hamé's new Central Distribution Stock in Staré Město. The goal was to fully automate the process, improving its productivity. Our solution is based on three ABB IRB660 industrial robots with grippers and the necessary peripherals, enabling manipulation with dozens of various types of packaging. The palletizing process is controlled by PickMasterTM5 software, allowing customers easy and independent programming of new products in the future. From the beginning to the end, when the products are wrapped and stacked on the pallet, no glass is touched by the human hand and the line handles more than 4 glasses per second. The resulting efficiency of the system is very high and brings Hamé the required growth in productivity of its operations.

ABB s. r. o. successfully implements large amount of projects and deliveries in the Czech Republic

ABB has become the supplier of medium voltage switchgear retrofits for all units of Dukovany nuclear power station and

for the first unit of Temelín nuclear power station. Retrofitting, i.e. the replacement of an original switch with a new one, increases the reliability of switchgear, at the same time reducing maintenance requirements. Medium voltage equipment and switchgear have been used in a number of major projects, such as TPSA Kolín automobile factory, O2 Arena in Prague or in Zličín shopping centre. We are no. 1 supplier of wiring accessories in the Czech market. ABB switches and sockets are present in an endless number of housing units, in office and industrial buildings, as well as at such exclusive places as the representation halls of the Prague Castle or the Centre of Air Navigation Services at Jeneč near Prague. Motors regulated by ABB's variable speed drives have been supplied to a number of branches of Czech industry, particularly to heat generation and power. The results of energy savings calculations and the return on investment have been proved in practice.

In the field of robotics, we have successfully delivered complete automated palletizing lines for rubber briquettes to Synthos Kralupy a. s. and several robotized units for CNS machining centers to Kovokon Kunovice s. r. o.

ABB implemented an extension of the ethylene unit control system for the new extractive benzene distillation operation for Unipetrol RPA, s. r. o. The project was implemented during full operation, without any need for technology shut-down. Among other things, ABB supplied and installed a new modern controller and special I/O units for use in explosive environment. The new unit is controlled from the central control room of the ethylene unit and can be controlled from the existing operator station as well as from a new operator station with ABB's System 800xA system for MOD in place.

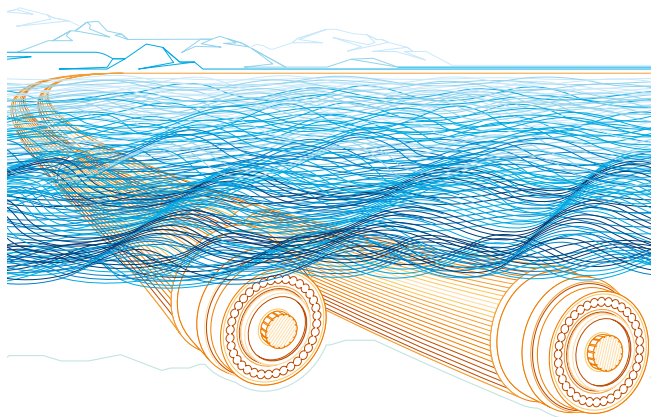


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