Czech Engineering Industry at a Glance

The Czech Republic is well-known for the great reputation of the engineering industry worldwide.

Since the early 20th century, the engineering industry remains one of the cornerstones of the Czech economy. Stable economic environment, high level of manufacturing technological maturity and cutting-edge R&D programmes contribute to the creation of the optimal climate for business establishment and further development. This fact has been recognized by the world’s major players such as Siemens, ABB, Honeywell or Daikin, who have invested in various facilities in the Czech Republic.

100+ Years of MFG excellence

3rd Largest MFG industry in the Czech Republic

126,000 Employees

5,200 Machinery manufacturing companies
Total Operating Cost

This chart shows the rank and total annual operating costs of each location based on labour and utility costs.

Specialisation in Industrial Machinery, Equipment & Tools

Number of companies in industrial machinery, equipment & tools per 100,000 population

Largest Contribution of the Manufacturing Industry to GDP within EU (in %)

Source: Eurostat 2018

Source: fDi Intelligence from The Financial Times, 2018
Key Foreign Investors

Selected Investors in the Czech Republic

Sector Database of Suppliers on the Czech market available free of charge at suppliers.czechinvest.org
Investment Success Stories

**BOSCH**

“When deciding on the location of Bosch’s investments, the advisory voice and analytical assistance of CzechInvest was always an important parameter of success. The joint formulation of conditions and benefits for investment development has positively influenced Bosch’s decision at the concern level.”

*Pavel Roman*
Head of Corporate Communications, Public Affairs Bosch Group CZ and SK
Robert Bosch odbytová s.r.o., 2017

**Solar Turbines**

“Ambitious and efficient support of Solar Turbines, both during the founding and subsequent expansion of the Žatec repair centre, as well as in the preparation of our new investment – the construction of a test plant in Žebrák. The company continues to collaborate with the AfterCare department on a regular basis both in normal business operations and in identifying other investment opportunities.”

*Michal Hříva*
Facility Manager, Solar Turbines EAME s.r.o.

**DOOSAN**

“Doosan Corporation’s values that ‘The little grains of sand, all together, add up to make a mighty mountain’ is fully demonstrated in their partnering with Škoda Power, where both partners have over a 100-year history of manufacturing excellence and innovation, which forms the basis of the global R&D centre for turbine technologies based in the Czech Republic.”

*Jiří Šmandrlik*
Director General of Doosan Škoda Power

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**EUR 3,004 million**
Capital expenditure on FDI projects in the engineering sector, 2003 - 2017
Golden Czech Hands
A Tradition that Continues

1806
Establishment of the Royal Czech Estates Technical School

1815
The first steam-powered vehicle in Central Europe manufactured in Bohemia

1898
Tatra Präsident: the first car built in the Czech Republic

1913
Introduction of diesel combustion engines modified by prof. Kostal into mass production in Prague

1920
Škoda begins manufacturing of electric locomotives

1906
Steam turbine built according to an exclusively Czech design

1993
Czech Republic gains membership in CERN

2006
Siemens locomotive breaks the world speed record on Bonatrans wheels manufactured in Bohumin in the Czech Republic

1807
The first Watt steam engine in the Austrian Empire manufactured in Bohemia

1827
Josef Ressel invents the screw-propeller
Bright Outlook for the Future

Living Environment

The benchmarking quality results of living environment in selected countries, broken down into 4 comprehensive subcategories.

- Proximity to markets and customers
- Highly-developed infrastructure and logistics
- Domestic market growth potential
- R&D of cutting-edge manufacturing technologies
- 6th safest country in the world

Source: fDi Intelligence from The Financial Times, 2018
The Global Innovation Index ranks the innovative capacity of countries on the basis of 85 robust data points.

This chart shows research and development expenditure as a percentage of GDP.

Source: fDi Intelligence from The Financial Times, 2018
Mechanical Engineering at Czech Universities

Total students: 299,054  |  Total graduates: 72,057
Technical science students: 92,902  |  Technical science graduates: 21,857

Main universities with mechanical engineering study programmes

- Brno University of Technology
  Students: 4299
  Graduates: 1147

- Czech University of Technology, Prague
  Students: 3445
  Graduates: 724

- VSB – Technical University in Ostrava
  Students: 2873
  Graduates: 751

- University of West Bohemia, Plzen
  Students: 1174
  Graduates: 211

- Technical University, Liberec
  Students: 810
  Graduates: 149

- Charles University in Prague
  Students: 750
  Graduates: 136

- UJEP University in Usti nad Labem
  Students: 531
  Graduates: 61

- Palacky University, Olomouc
  Students: 260
  Graduates: 40

Source: Ministry of Education, Youth and Sports, 2018
About Czech Railway Industry Sector

+ 200 years of industry tradition
+ Exports account for 54% of total turnover
+ Highly competitive industrial sector
+ One of densest railway network in the world
+ Activities throughout industry segments
+ Support of the Association of the Czech Railway Industry

Source: ACRI, 2018
Research Institutes and Testing Laboratories

**Mechanical Engineering**

+ R&D for automotive industry, aerospace and power engineering; engineering technologies, e.g. manufacturing processes, machine tools and virtual machine design
+ Research, development and production of machinery for manufacturing, mainly machine tools, printing, food processing, packaging and medical equipment
+ Research in the fields of intelligent, distributed and complex systems, automatic control, CAM, biomedicine and assistive technologies
+ R&D of modern vehicle structures, machine tools and their modernization, forming and machining technologies
+ Support for technical excellence of the most significant machine tool manufacturers in the Czech Republic

**Railway Industry**

+ Development and design of rail vehicles, analyses and simulations for optimisation of vehicle handling in real conditions, CAD/CAE/CAM
+ Applied research and testing of metal, plastic and composite materials
+ Construction and testing of rail vehicles and their components, simulations and consulting
+ Expert services and comprehensive solutions in consulting and testing for railway systems and rail transport
+ Dynamic laboratory testing, computer simulations of vehicles, noise and vibration, material testing
Contact Us

engineering@czechinvest.org

CzechInvest Headquarters and Foreign Offices:

Czech Republic | Prague
Phone: +420 296 342 500
E-mail: fdi@czechinvest.org
Stepanska 15, 120 00 Prague 2

Germany | Düsseldorf
Phone: +49 211 250 56 190
E-mail: germany@czechinvest.org

China | Shanghai
Mobile phone: +86 13817792614
E-mail: china@czechinvest.org

Japan | Tokyo
Phone: +813-5485-8266
E-mail: tokyo@czechinvest.org

South Korea | Seoul
Phone: +82 2 720 6080
E-mail: seoul@czechinvest.org

Scandinavia
Phone: +420 296 342 799
E-mail: scandinavia@czechinvest.org

UK and Ireland | London
Phone: +44 20 8748 3695
Mobile phone: +44 77 8523 1520
E-mail: london@czechinvest.org

USA – East Coast | New York
Mobile phone: +1 (347) 789 0570
E-mail: newyork@czechinvest.org

USA – West Coast | San Francisco
Mobile phone: +1 831 313 6295
E-mail: california@czechinvest.org