CBI
Ministry of Foreign Affairs

CBI Product Factsheet:

Valves in the Czech Republic

Introduction

The Czech Republic is a medium-sized European market for valves. In the Central and Eastern European region, however, it is the second-largest market and the leading importer. The country is also home to several production facilities. The Czech market has an immature character, and it consists largely of new installations. In particular, the food and water industries are still developing. In the water industry, many investments are still expected in networks for the collection and distribution of water, as well as for sewers. The best opportunity for producers from developing countries would be to target specialised distributors. Another option for exporters from developing countries would be to supply parts to Czech manufacturers as a subcontractor. In some cases, exporters from developing countries could also supply finished products to these manufacturers. In all cases, exporters from developing countries should focus on just a few specialised valves within their range of products. Finally, the pricing strategy must be very competitive, particularly given the relatively low labour costs in the Czech Republic.

Product description

Valves are applied in almost all industrial production processes in which liquids are used. The valves covered in this survey are industrial devices that regulate, direct or control the flow of fluids (gases, liquids, fluidised solids or slurries) by opening, closing or partially blocking various passages. The water and wastewater industry is the largest sector of application for valves, in addition to the chemical-processing industry, the food-processing industry (including beverages) and the oil and gas industries.

One chapter in the CN nomenclature refers to valves and valve parts: Chapter 8481. This chapter of codes was selected for this survey. The classifications are presented in Table 1. Note that several of the codes in Chapter 8481 have been excluded from the selection, as they relate to applications other than the process industry, including pneumatic (including tyres), hydraulic and sanitary applications. Table 1 also shows the Prodcom codes used for the production and demand statistics for valves and valve parts.

Table 1: Selected products, based on CN and Prodcom nomenclature

Subsector and product group	CN code	Prodcom code	Description
Valves			
check valves	848130-91/99	29131172	check valves
safety valves	848140-10/90	29131176	safety or relief valves
pressure-reducing valves	84811005	29131134	pressure-reducing valves combined with filters or lubricators
	84811019	29131135	pressure-reducing valves of cast iron or steel
	84811099	29131139	pressure-reducing valves of base metal
process control valves	84818051	29131313	thermostatically controlled process valves
	84818059	29131315	process control valves
gate valves	84818061	29131333	gate valves
	84818063	29131335	gate valves
	84818069	29131337	gate valves
globe valves	84818071	29131353	globe valves of cast iron
	84818073	29131355	globe valves of steel
	84818079	29131357	globe valves
diaphragm valves	84818087	29131377	diaphragm valves
other valves	84818099	29131380	valves not defined elsewhere
parts thereof	84819000	29132000	parts of valves
a range of valves (quarter turn)	84818081	29131373	ball and plug valves
	84818085	29131375	butterfly valves

Source: Globally Cool, based on CN and Prodcom Nomenclature (2013)

The valve specifications required by Czech buyers are described below. These specifications include requirements pertaining to the material used, the processing steps, documentation and packaging. Illustrations 1–4 display examples of valves sold in the Czech Republic, and Illustration 5 provides an example of valve bodies packaged for transportation.

Material and design

The material used depends upon the valve's application. Materials range from nodular cast iron or alloy nodular cast iron for use in water and wastewater processes to stainless and heat-resistant steel in the chemical and power-generation industries. Designs are in line with customer specifications.

Documentation

Valve importers require associated reports about the quality and specification of the material used, registration of critical process parameters and test reports, along with traceability reports for the batches of products manufactured.

Labelling and packaging

Valves are individually packed in crates or boxes, generally made of wood. The packaging depends upon the characteristics of the valve, its level of treatment (100% treated valves require high-protection packaging in order to prevent breakage) and its size. Plastics or coatings are also used for additional packaging purposes. The standard of the valve should be imprinted on the rim, as well as the size, batch number and materials. Highly specialised valves have unique numbers, as they are tested individually.

Packaging is always labelled, not only for the purposes of identification during transport, but also to indicate the quantity, weight, the products themselves and the producer's name. In addition to general packaging requirements (see 'Requirements'), customers are likely to have their own additional packaging requirements and preferences. In most cases, the packaging and labelling requirements are included in the customer's specifications.

Quality and quantity

The quality standards of individual Czech companies are considered to be among the lowest in Europe. These quality standards have an impact on many aspects, including the finishing and painting of the product (the visual-optical qualities or the appearance of the valve), the packaging requirements and the documentation of accessories.

Order volumes follow the customer's standards and requirements. As a general guideline, transportation of standard valves or valve parts from overseas countries to the Czech Republic is viable only for full container loads.

Illustration 1: Three-way plug valve

Illustration 2: Lug-style butterfly valve

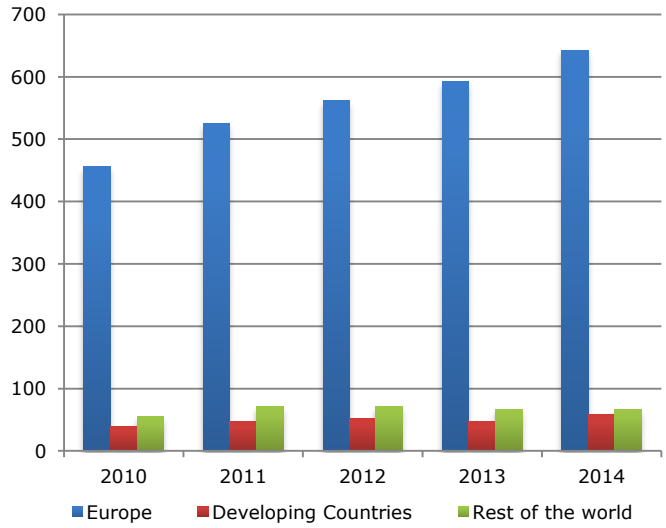
Illustration 3: Tilting disk-check valve

Illustration 4: High-pressure control valve

Illustration 5: Example of valve bodies ready for transport

What is the demand for valves in the Czech Republic?

Figure 1: Imports of valves to the Czech Republic by main origin (2010–2014), in € million

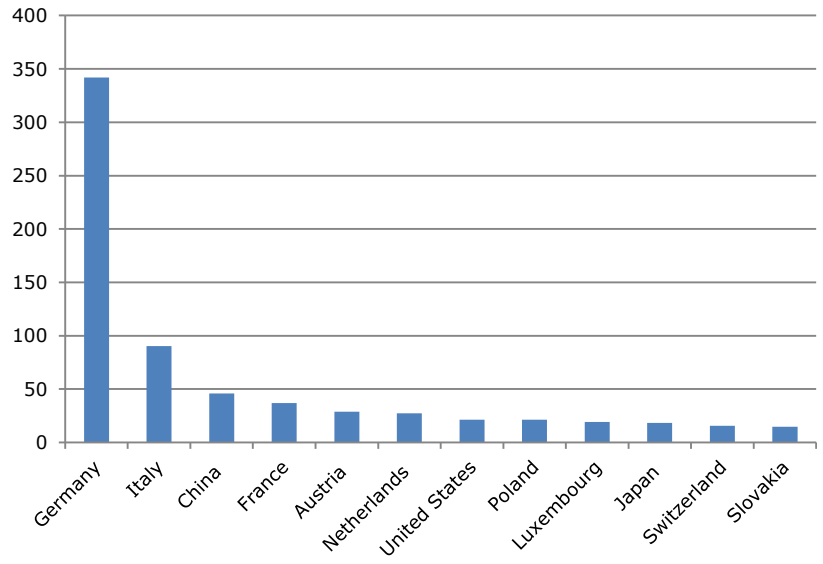


Source: Trade Map (2015)

- The Czech Republic is the leading importer of valves in the Central and Eastern European part of Europe, ahead of Poland. In 2014, it accounted for 4% of all European imports, which is comparable to the shares of Poland and Austria.
- Imports reached €769 million in 2014. On average, imports increased by 8.8% per year in the 2010–2014 period.
- Valve parts accounted for about a third of total imports (€244 million).

- At 7.7%, imports from developing countries as a share of total imports are far below the European average (14%). During the next few years, this share is expected to increase to about 8-10%.
- With regard to the share of imports from developing countries, the best-performing valve types are valve parts and gate valves.
- The import of valves is expected to exhibit slight growth over the next few years, in the range of 1%–3%.

Figure 2: Leading suppliers of valves to the Czech Republic (2014), in € million



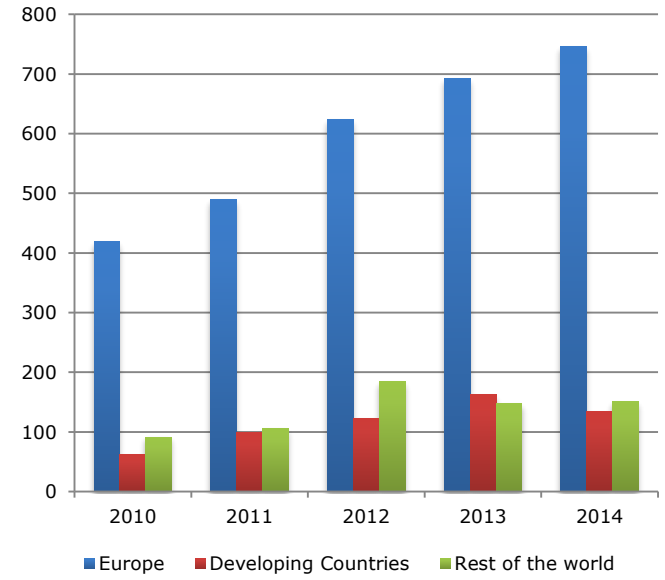
Source: Trade Map (2015)

- Most of the leading suppliers are from developed countries. China is the only developing country to appear in the top ten, taking the third position (€46 million), behind Germany and Italy.
- German companies have traditionally held a strong position in Central and Eastern European countries. This is also the case in the Czech market for valves and valve parts, where Germany represents 44% of all imported valves and valve parts.
- Thailand and Morocco (€4 million), India (€2 million), and Mexico and Turkey (€1 million each) also export valves and valve parts to the Czech Republic.
- The composition of suppliers from developing countries is not expected to change substantially in the next few years.

Tips:

- Benchmark your company against your peers from China, as well as against those from other countries that export to the Czech Republic. Several factors should be considered, including market segments served, perceived price and quality levels, and countries served. One source that can be used to find exporters of valves by country is the ITC Trade Map.
- Czech buyers have apparently not yet found good suppliers in developing countries other than China. Exporters from developing countries should do their utmost to demonstrate their reliability and potential for supplying valves and parts of a constant high quality to Czech buyers.

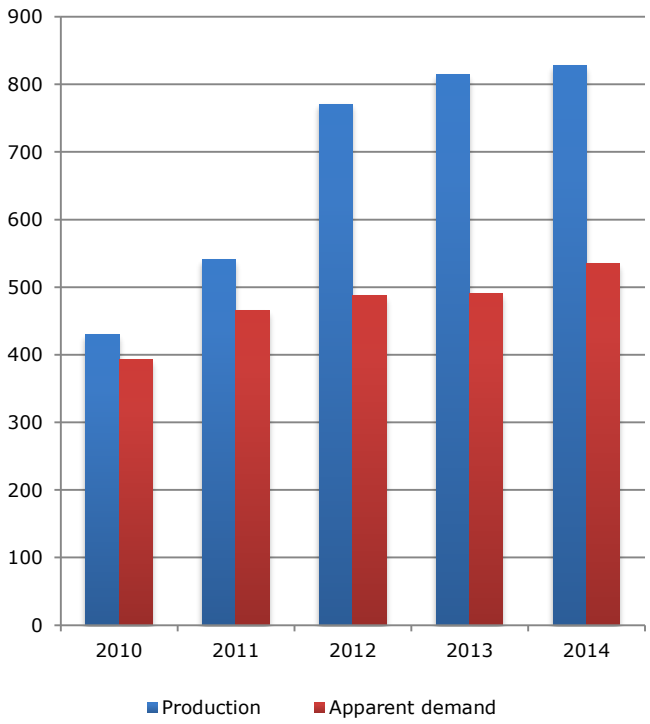
Figure 3: Exports of valves from the Czech Republic by main destination (2010–2014), in € million



Source: Trade Map (2015)

- The Czech Republic exports a considerable volume of valves. A large share of exports (72%) goes to other European countries.
- Czech exports performed strongly in the 2010–2014 period. Exports peaked in 2014 (€1 billion), after an impressive growth of 34% in 2012. On average, exports grew by 16% per year.
- The pattern over the 2010–2014 period is more or less the same as the pattern for Czech imports (Figure 1). This demonstrates the Czech Republic's participation in the European trade of valves and valve parts.
- Of all Czech exports, 13% are destined for developing countries. This presents an interesting opportunity for manufacturers of valves and valve parts in developing countries. Suppliers who are able to prove their ability to meet product specifications can also supply these valves and valve parts. The most important developing-country destinations are China, Turkey and India, followed by Belarus, Ukraine, Kazakhstan, Brazil and South Africa.

Figure 4: Production of and local demand for valves in the Czech Republic (2010–2014), in € million



Source: Prodcom (2015)

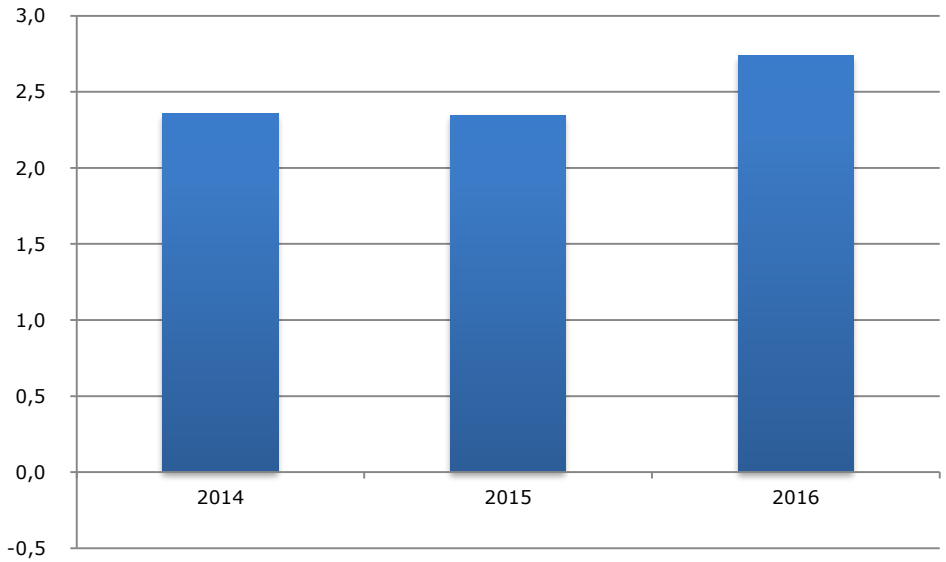
- The Czech Republic is the largest producer of valves and valve parts in Central and Eastern Europe, ahead of Poland.
- After the drop in 2009, production output nearly doubled between 2010 (€430 million) and 2014 (€828 million). As a result, production increased by an average of 18% per year in the 2010–2014 period.
- As indicated in Figure 4, the Czech Republic is a net exporter of valves, as its production output exceeds its local demand.
- The Czech market (€535 million in 2014) grew by an average of 8.1% per year in the 2010–2014 period.
- The Czech demand for valves is expected to show limited growth or even a decline (-3-2% per year) during the 2015–2016 period, as investments in valves and other processing equipment in the country is expected to increase only slightly or even decrease in the coming years. One major reason is the generally low level of investments in the oil and gas industry.
- The Czech market has an immature character, and it consists largely of new installations. In particular, the food and water industries are still developing. For example, in the water industry, many investments are still expected in the networks for the collection and distribution of water, as well as for sewer networks, in order to comply with the European Water Directives by 2015.

Tips:

- Some short-term and medium-term subcontracting opportunities with Czech valve producers are available to manufacturers of valve parts.
- Considering the forecasts for 2015 and beyond, pricing is and will continue to be one of the most influential competitive factors, particularly in the range of low-end valves offered by most exporters in developing countries. Exporters from developing countries who have difficulty achieving competitive pricing should consider specialising, as competition tends to be less intense in the market for specialised valves.
- See the CBI document on Trends for Pipes and Process Equipment (which is actually about valves alone) for an overview of trends in the European market.

Macro-economic indicators

Figure 5: Real GDP Czech Republic (2014–2016), % change from previous year



Source: OECD Economic Outlook 96 database

- The major determinant of demand for valves is industrial spending activity, which is stimulated by economic growth. As indicated in Figure 5, the GDP is expected to exhibit continued growth year on year. For the longer term, it will provide a significant base for continued import growth.
- The profitability of imports of valves is affected by the CZK:USD exchange rate, as many valves and valve parts that are sourced globally are paid for in USD. The dramatic decline in the CZK:USD exchange rate since the summer of 2014 (to a rate of 24–26 CZK to the USD) has led to considerable changes in the price level of valve (and valve-parts), making imports paid with USD relatively expensive.

Tip:

- Although GDP growth forecasts are improving, pricing is and will continue to be one of the most important factors influencing competition. Competitive pricing is essential for exporters from developing countries planning to enter the European market.

What trends offer opportunities on the Czech market for valves?

The most important trends in the Czech valve sector include the following:

- Clean water: In the water and sewerage industry, clean water shortages and environmental legislation will result in several investments in infrastructure and water-treatment equipment.
- Environment: A rising demand for certain types of valves can be regarded as a result of the search for energy efficiency and the restriction of CO2 and NOx emissions (following legislation from the European Union). This has led to the increased use of innovative production techniques, resulting in greater efficiency and less waste. One of the effects of this trend is that there has been an increase in demand for certain types of valves. For example, a range of valves has become more appealing as control valves for petrochemical companies. The main reason is that a range of valves has lower gland emissions than globe valves do. In addition, one specific range of valves, eccentric plug valves, is suitable for a very large number of applications. Eccentric plug valves have thus experienced relatively high growth in demand, especially for control-valve applications in the oil and gas industry.

Tips:

- Consider focussing on the water and sewerage treatment segment, as it offers the best opportunities, due to its relatively low technical requirements.
- The trend towards greater energy efficiency provides opportunities for producers from developing countries who are able to supply certain types of low-emission valves or parts for such valves.
- The CBI document on Trends for Pipes and Process Equipment provides a general overview of trends in the European industry.

With which requirements should valves comply in order to be allowed on the Czech market?

Requirements can be divided into the following categories: (1) musts, which are legal requirements that you must meet in order to enter the market, and (2) additional requirements, which consist of the relatively common requirements that most competitors have already implemented (in other words, requirements that you should meet in order to stay abreast of the market).

A general overview of EU buyer requirements for pipes and process equipment is available on the CBI Market Intelligence Platform. Additional sources of information on gaining access to the European market include the EU Export Helpdesk and the ITC Market Access Map.

Musts

For industrial valves, the most important legal requirements are compliance with the Essential Safety Requirements of (1) the Pressure Equipment Directive (PED) 97/23/EC, and (2) the ATEX Directive 94/9/EC, which applies to valves in potentially explosive atmospheres.

Valve parts are not subject to any specific legal requirements for market access. For finished valves, the following legislation applies:

- The Product Liability Directive states that the European importer is liable for the products put on the European market. In theory, however, European importers can pass claims along to their producers/exporters.
- Valves are subject to the PED directive.
- Valves intended for use in potentially explosive atmospheres must comply with the ATEX directive (Directive 94/9/EC).

Other general legislation that must be taken into account includes:

- Wood packaging materials used for transport (Directive 2005/15/EC): The European Union sets requirements for wood packaging materials (WPM), including packing cases, boxes, crates, drums, pallets, box pallets and dunnage (i.e. wood used to wedge and support non-wood cargo).
- Another packaging-related directive is the general directive for packaging and packaging waste, which prescribes the marking of the kind of packaging material used and maximum levels of heavy metals in the packaging material.

Tips:

- also offer consultancy services to help manufacturers meet the requirements. Be aware that notified bodies are often notified for only a part of the conformity assessment procedure, or for only a specific sector (e.g. electrical equipment).
- Consult the European ATEX Guidelines for the Valve Industry published by the European Valves Committee.
- Make sure that your wood packaging material (WPM) qualifies for the European market. If you are not certain, ask your WPM supplier to confirm and explain this to you. Your WPM supplier should undertake any further actions required to comply with the Directive. If the supplier is not able to do so, it would be advisable to select another supplier.
- A Certificate of Origin is obligatory; note that it must be validated by a local Chamber of Commerce. Additional information is available here.
- To obtain PED or ATEX certification, valves must be certified by a Notified Body. In some cases, these notified bodies Additional requirements

For finished valves, the customer's main requirements will be related to technical aspects, many of which are covered in the CE or other standards. General standards (e.g. EN558 and EN12982) can serve as a starting point, while other standards

apply to specific market segments (e.g. ISO 15761, 10434 and 17292 for gas and oil). Yet other standards apply to specific types of valves (e.g. EN 13709, 13789 and 1349 for globe and control valves and ISO 5996 for cast-iron gate valves).

For valve parts, material requirements are the most important customer requirement. The material that is used for valve parts must be covered by an international standard and certificated. The metal used must meet the material standard, which can be stated in an EN10204 Type 3 certificate. This type of certificate is internationally accepted.

While the American ASTM standards link material requirements with applications, this is not the case for the European EN standards. Instead, European customers have their own specific requirements, in addition to the EN standards. Such additional requirements from customers can be NDT (non-destructive testing), surface (MT or magnetic testing, PT or penetrant testing) and section (UT or ultrasonic testing and RT or X-ray testing) tests.

Buyers may also have specific requirements relating to the dimension and surface of the valve parts. In practice, these requirements are highly dependent upon the customer and application. In some cases, buyers ask their suppliers to adhere to the EN ISO 8062 standard and, in other cases, they include their specific dimensional and surface requirements in the technical drawing.

Finally, many customers are likely to demand that you work according to such general organisational quality systems as ISO 9001 (version 2008) and process control. Some may also demand compliance with ISO 14001 (environmental) and OHSAS 18000 (labour standards).

Tips:

- Valves produced for the European market must be designed and manufactured with an emphasis on low emissions, safety, simplicity of maintenance, ease of operation and, above all, long and reliable service life.
- Additional details are available on the following websites:
  - ISO Catalogue - See 'TC 153' (Valves) for an overview of ISO standards.
  - Search EN norms in the online shop of the British Standards Institution.
  - CBI Buyers' Black Box offers further information on topics that are decisive for buyers when searching for new suppliers.

Import tariffs

For valves and valve parts, a 2.2% duty is levied on European imports from third countries. Several countries benefit from a preferential 0% tariff, including Indonesia, Pakistan, Vietnam, the Philippines, Bosnia-Herzegovina and Egypt. The TARIC database provides additional details relating to Chapter 8481. Note that a Certificate of Origin is required in order to claim a preferential tariff.

Tip:

- Exporters from countries subject to a preferential 0% tariff have a slight competitive advantage over competitors from countries without such preferential tariffs.

What do the trade channels and interesting market segments for valves look like in the Czech Republic?

Distributors are the most prominent targets in the Czech Republic, as they have good access to the local markets. Valve producers (subcontracting) can also be good targets.

Additional information is available in the CBI documents on 1) Market Channels and Segments for Pipes and Process Equipment and 2) Competition for Valves. Explanations of the types of prospects are provided below, including a few examples for each type. Resources that can be used for finding prospects are included in the section 'useful resources'.

Distributors

Distributors are attractive targets for exporters from developing countries aiming to export large volumes of commodity-type products (e.g. common valves). This is because distributors often buy and/or import commodities in relatively large volumes on a scheduled basis. In most cases, the distributor is also the importer. Distributors often have their own stock, thus explaining why they are also called 'stockists'. Products must be kept in stock, as they need to be available for urgent deliveries to end-users.

Some distributors offer a range of valves and other pipe-related processing equipment. Examples include the following:
- Fluidtechnic Bohemia – distributor of valves and a range of pneumatic and mechanical equipment.
- Heckl – stockholding distributor of valves and fittings for water supply and the sanitary industry.

Other distributors are true valve specialists, as they are exclusively specialised in valves. Examples of such specialists include the following:
- Interfluid – distributor of industrial valves.
- Valve Control – distributor of industrial valves and actuators.

Note that this list is not complete, and it is intended only as an illustration of a particular category of companies.

Manufacturers

Czech manufacturers have some potential with regard to supplying valve parts, and possibly for some finished valve products. Subcontracting offers the best opportunities for specialised products, including special valves or parts thereof (e.g. knife valves). Examples include the following:
- ABO valve – manufacturer of ball valves, a range of valves.
- Arako – producer of industrial valves.
- Armatury – manufacturer of ball, metallurgical, butterfly and high-pressure valves.
- IBC Praha – manufacturer of a range of various types of valves.
- MSA – maker of a range of valves. The MSA company is probably the largest Czech valve manufacturer. It also provides a vendor list (downloadable from the website) of companies that have approved MSA valves for their process installations.
- Severočeská armaturka – maker of butterfly valves and other types of valves.

Note that this list is not complete, and it is intended only as an illustration of a particular category of companies.

Useful resources

Associations, portals, magazines and trade fairs

- Automation – annual process automation fair, held in October in Brno. Hydraulic, pneumatic and control valves are part of the Automation product range.
- Czech Statistical Office – facts and figures on Czech industry.
- Eurostat – official statistics office of the European Union. Registration is free and provides access to large collections of data.
- Export Helpdesk – information on European trade statistics, tariffs and quotas for developing countries.
- ITC International Trade Statistics – registration required.
- Kwintessential – provides practical tips on business culture and etiquette.
- MSV – process engineering fair, held annually in September, Brno.
- Valveworld – biennial trade fair dedicated to valves, held in December in even-numbered years in Dusseldorf, Germany. This is Europe's annual meeting place for the valve industry.
- Wer liefert was? – online trade directory. Search by product name.

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May 2016