



CBI Product Factsheet

Vehicle Radiators in Eastern Europe

'Practical market insights for your product'

Given that the market for radiators is driven by OEM demand, one area of focus for developing country (DC) suppliers is the manufacturing hubs of the Czech Republic, Slovakia and Poland. However, the OEM market for liquid cooling radiators is dominated by the Tier 1 suppliers for automotive OEMs, while the aftermarket sector has a much less consolidated environment and more opportunity for new entrants. Exporters targeting the aftermarket sector might find it easier to enter the market through independent distributors. The OEM market for commercial vehicles, tractors, mopeds and other combustion engine-powered equipment also remains a sector with great potential.

Product definition

Radiators are grouped under the product category of Automotive parts and components/Parts, components and accessories for all kinds of common automotive vehicles/Radiators (HS codes 87089110; 87089120; 87089135; 87089190). This Product Factsheet analyses the market for automotive radiators in Eastern Europe, including Poland, the Czech Republic, Hungary, Bulgaria, Romania, Slovakia and Slovenia.

Product specifications

Quality

Compliance with international standards and European standards on safety is required, as is conformity with existing EU and national legislation and practices. The ISO/TS 16949 standard is considered to be the highest level of quality. This standard is important for the European automotive industry as it outlines best practices for the design, development, manufacture, installation and servicing of automotive products.

Materials

An operational radiator contains a water/antifreeze mix that flows through the radiator's tubes to absorb the heat generated by the engine. The radiators contain brass (coated in lead) and copper. To keep the radiator protected, once assembled it is painted with a heat-resistant paint. There has been an increasing demand from manufacturers for lightweight materials such as aluminium.

Design

Radiators are used in different types of vehicles that have varying specifications. OEMs will have specific commercial and technical requirements for suppliers, while purchasers in the aftermarket sector emphasise versatility and robust designs for shorter lead times.

Packaging & Labelling

In general, packaging is dependent on the buyer: either the OEM or the end user (the aftermarket sector). In the aftermarket sector, the packaging is typically disposable, as it is discarded after being used just once. Returnable packaging is most often used by OEM suppliers, so as to reduce cost and to improve the efficiency of packaging operations. Returnable packaging is not discarded after use and the empty packaging is recycled by the OEM or by a designated packaging operator. In order to export to the EU, product packaging must comply with all EU standards. To reduce the harmful impact of packaging on the environment, the EU has instituted legislation concerning the management of packaging and packaging waste.

Considerations for action

- For more information on packaging and packing waste requirements, please refer to the [EU legislation: Packaging and packaging waste](#)

Figure 1: Vehicle radiator parts and their packaging



Source: Fotolia

Legislative Requirements

Legislative Requirements: The most important requirement for automotive components is that they comply with the technical standards set by EU legislation in order to guarantee vehicle and environmental safety.

Type-approval is a certification for various types of motor vehicles and their components, which includes agricultural and forestry tractors. The type-approval or certification is valid in all EU Member States and is required when selling any products in the EU. Many automotive components are not approved until the final assembly, in which case certification of individual components is not necessary, although these components will still have to comply with type-approval requirements.

The End of Life Vehicles (ELV) Directive aims to avoid environmental pollution during the scrapping process through reducing the hazardous materials used in vehicle production. Vehicles must be designed to facilitate proper dismantling and recycling (by coding the components), and the use of heavy metals such as lead, mercury, cadmium and hexavalent chromium is prohibited (with the exception of a few applications).

Common buyer requirements: In addition to legislative approval, there are other common buyer requirements. While these are not obligatory in the legal sense, they are implemented by various competitors in the market and are thus necessary in order to compete effectively.

Quality Management: In order to apply for type-approval, production processes need to meet quality management criteria. ISO TS/16949 and ISO 9001 are accepted as standard requirements and EU buyers and manufacturers often insist on them.

Corporate social responsibility (CSR) and the extent to which buyers expect a certain level of social and environmental performance is becoming increasingly important. Bigger EU companies have developed their own CSR policies and require their suppliers (and their sub-suppliers) to conform to these. Signing a supplier code of conduct is often a prerequisite. These codes of conduct generally cover compliance with local laws, protection regarding workers' health and safety, respecting basic labour rights and also business ethics. The implementation of an environmental management system is often a requirement for core suppliers.

Considerations for action

- Check with your buyer, or with [the approval authority of the country you want to export to](#), what the specific standards are for the parts you are manufacturing.
- Read more about type approval at the [EU Export Helpdesk](#).
- Check if your buyer uses the International Material Data System (IMDS). This is a collective, computer-based data system developed by automotive OEMs to manage environmentally relevant aspects of the different parts used in vehicles. It has been adopted as the global standard for reporting on material content in the automotive industry.

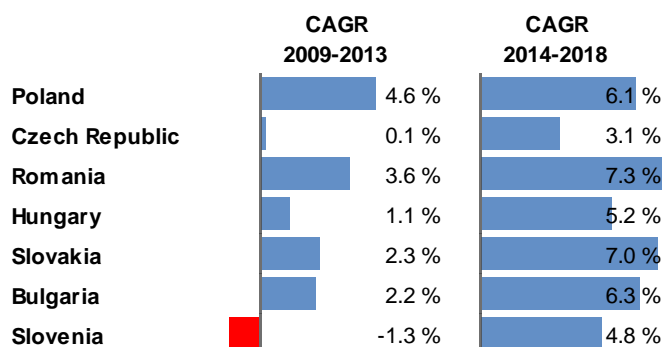
Considerations for action

- Implement ISO 9001 and ISO TS/16949, as it is a standard requirement of EU buyers. Click [here](#) for more information on ISO TS/16949 at the ISO website
- Most big car brands publish their CSR policies and supplier code of conduct on their websites. An internet search for these may give valuable insight into assessing your company's performance by comparison.
- Implement an environmental management system, such as [ISO 14001](#), as it is a common requirement.

Macroeconomic statistics

In 2013 Eastern Europe saw an average growth of 5.5% after the previous year's 6.8% contraction. Forecasts for 2014 and 2015 growth are estimated at 4.1% and 5.7% respectively. Poland, one of Eastern Europe's largest markets, as well as Romania and Slovakia, are all forecast to experience an average growth of more than 6% through 2018.

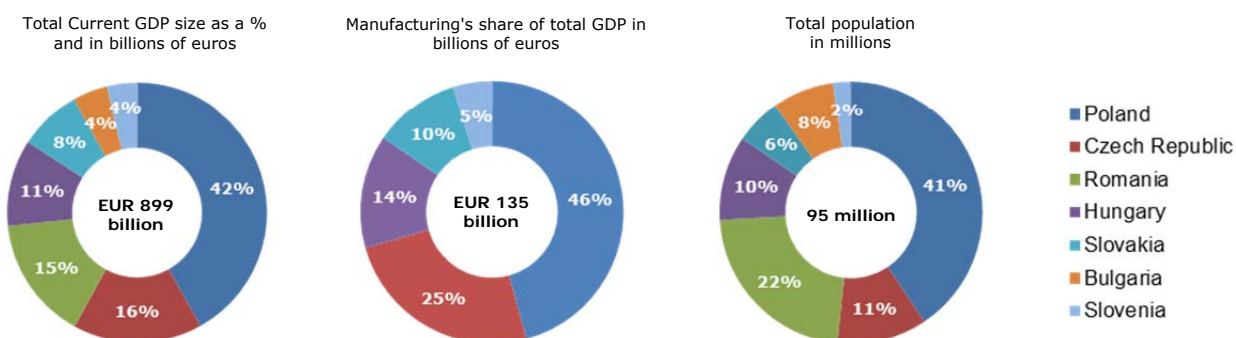
Figure 2: GDP (current prices) Compound Annual Growth Rate (CAGR) for 2009-2013 and estimate for 2014-2018 for selected Eastern European countries



Data source: IMF 2014, World Economic Outlook Database

The value of the GDP for the seven Eastern European countries covered by this document was estimated at €899 billion (or roughly one-tenth of the GDP value for the EU5 countries i.e. the biggest Western European economies: Germany, France, the UK, Italy and Spain) in 2013. Poland is the largest market in Eastern Europe, with a GDP of approximately €377 billion and a production value of €62 billion, accounting for more than 40% of the total GDP and production value for the seven Eastern European nations in question. The Czech Republic is the second largest Eastern European economy, with a strong manufacturing base, followed by Romania and Hungary. Bulgaria and Slovenia are relatively small economies, together accounting for less than 10% of the total Eastern European GDP.

Figure 3: Key 2013 macroeconomic indicators for Eastern Europe, in billions of euros (population in millions)



*No data available for Bulgaria and Romania
Data source: IMF and OECD 2014

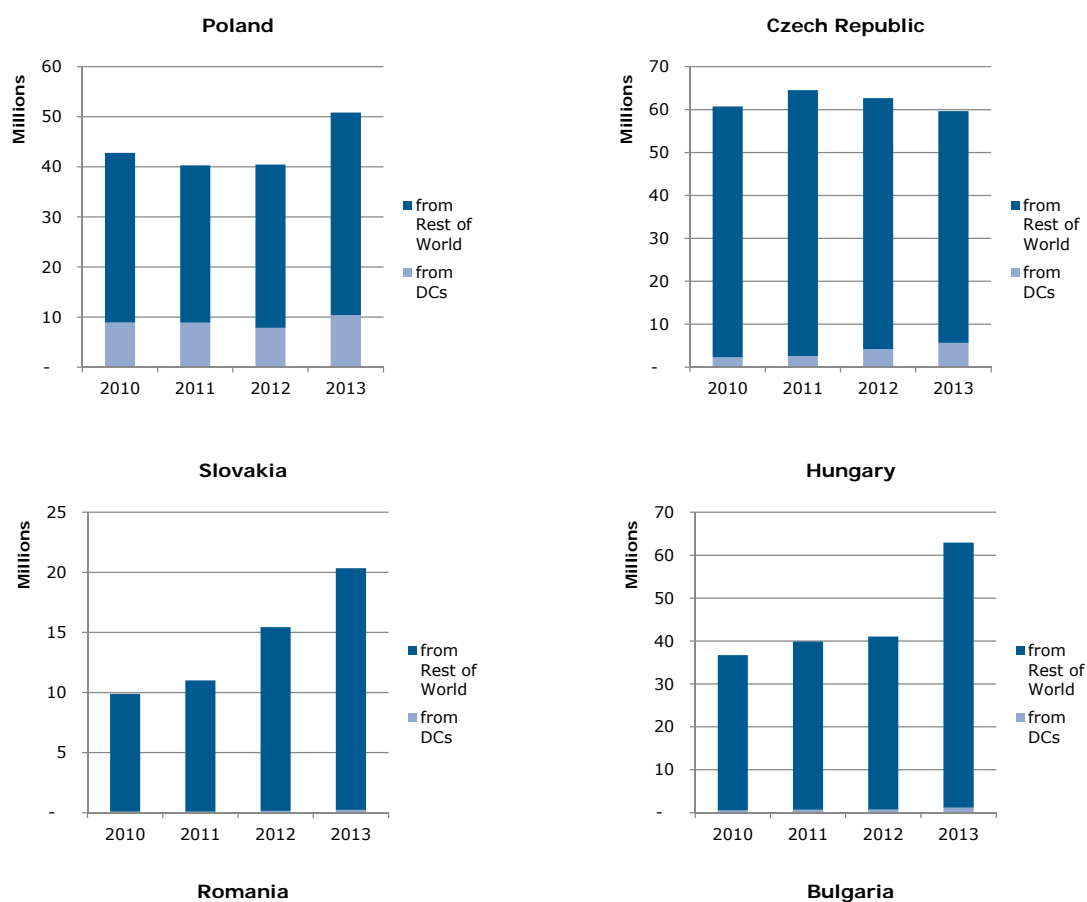
Trade Statistics

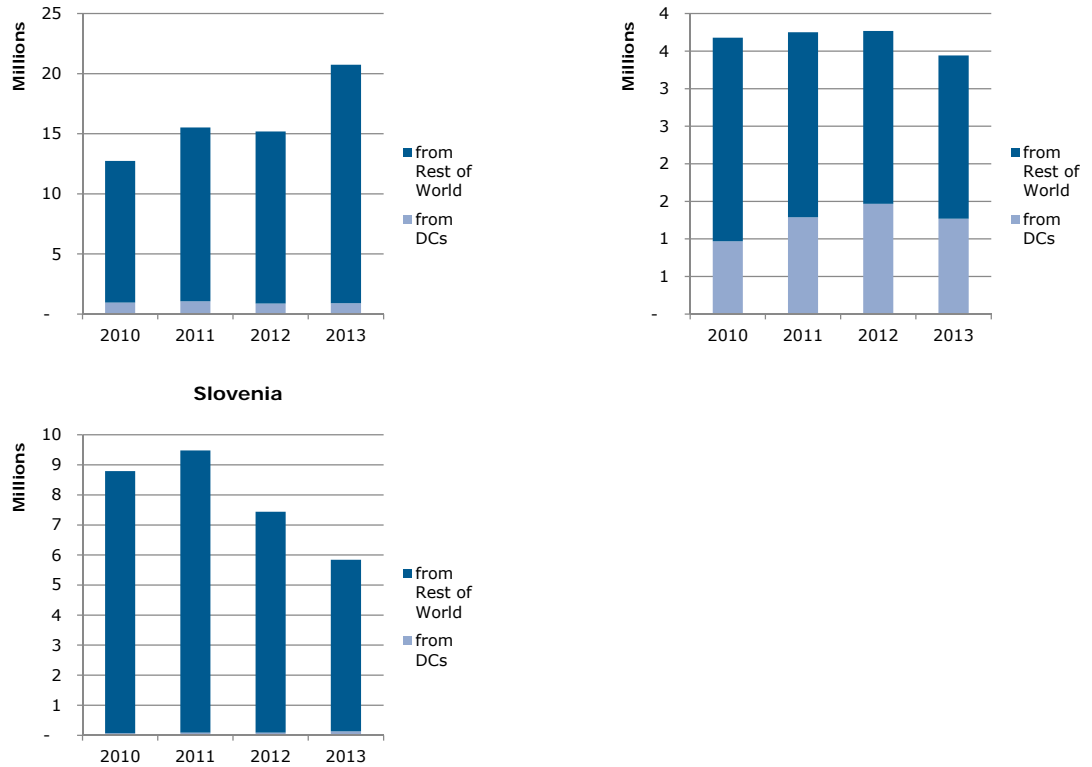
Imports and exports:

Eastern Europe imports roughly €224 million worth of automotive radiators a year. Taken together, Hungary, Poland and the Czech Republic represent nearly 78% of the total imports of automotive radiators into Eastern Europe. The imported radiators are shipped mainly from Eastern and Western Europe as well as from China and Korea.

The value of automotive radiators imports from the Developing Countries (DCs) to Eastern Europe was estimated at €20 million (8.8% of total radiators imports) in 2013 and grew at a 12.7% CAGR between 2010 and 2013. Poland imports by far the most radiators from the DCs in absolute terms (€10.4 million), followed by the Czech Republic (€5.7 million) and Bulgaria (€1.3 million). Slovakia and the Czech Republic are experiencing the fastest growth in radiator DC imports with respective compound annual growth rates of 37% and 35%.

Figure 4: Total import of vehicle radiators in the EE countries, in millions of euros (the range of the y-axes varies by country due to different import levels)

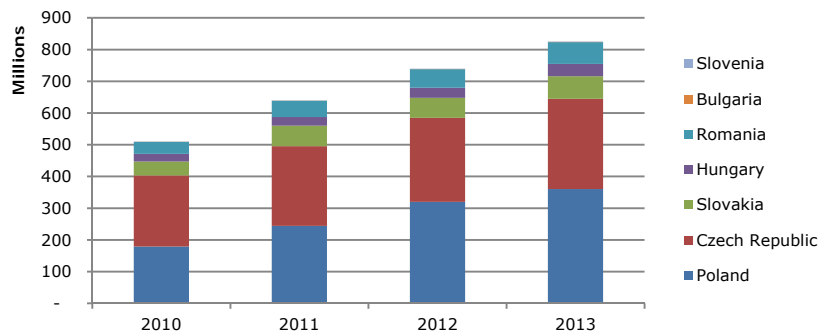




Data source: Eurostat 2014

The Czech Republic and Poland have set the trend for vehicle radiator exports. It is obvious that most of the radiator manufacturing in the region is concentrated in these two countries, which are also responsible for a significant portion of the radiator imports from other Eastern European countries. However, Germany remains the key export destination with a share of over 50%, followed by other EU countries.

Figure 5: Total export of radiators from the EE countries, in millions of euros



Data source: Eurostat 2014

Market trends and opportunities

Eastern Europe is in a prime position to capitalise on the decline in the European automotive market, with lower labour costs, a solid infrastructure and locations close to major Western European markets. Before the economic crisis started in

2008, many European OEMs invested in production sites across Eastern Europe. Few of these plants have been closed and production volumes have remained stable. Eastern Europe looks set to remain a strong hub of automotive manufacturing for the near future, although the risk does exist that OEMs may move labour intensive operations to lower-cost regions, such as North Africa. This again provides an opportunity for the DC exporters to do business with these countries.

As the market for radiators is driven by OEM demand, one area of focus for the DC suppliers is the manufacturing hubs of the Czech Republic, Slovakia and Poland. However, the OEM market for liquid cooling radiators is dominated by the Tier 1 suppliers for automotive OEMs, while the aftermarket sector has a much less consolidated environment and more opportunity for new entrants. Exporters targeting the aftermarket sector might find it easier to enter the market through independent distributors instead of OEM workshops, as they tend to include a larger range of suppliers. The OEM market for commercial vehicles, tractors, mopeds and other combustion engine powered equipment also remains a sector with great potential.

For more information on automotive market trends and opportunities, please refer to [CBI Trend Mapping for Automotive Parts and Components](#).

Price

Apart from the distribution of new parts, the aftermarket for automotive parts also encompasses the vigorous distribution of used or overhauled parts and components. Pricing depends on supply chain positioning. The aftermarket sector, in particular, is very discount-driven and has varied mark-ups at each distribution step for different parts and components. Due to the large variation in parts types and models, it is difficult to provide a general overview of radiator prices, but it is possible to provide some insight into the margins imposed by different players in the supply chain. Based on the margin ranges, DC suppliers selling to a tier 3 supplier in the OEM supply chain could price their products at between 64% and 81% of the OEM delivery price. In order to better ascertain the prices of specific products and models, check the internet to determine the appropriate range, or talk directly to wholesalers

and/or retailers. The price of branded spare parts will not differ greatly among the various countries. Those players who are active in several European nations have largely harmonised their prices, and any differences in pricing may be because of different logistical and local costs. In the Original Equipment sector, the price is set in contracts of four years or more, which usually include a 3-5% price reduction each year after the first year. In the aftermarket sector, the prices are negotiated every year.

OEM supply chain	Margin
Tier 1 supplier delivering to OEM	6-8%
Tier 2 supplier delivering to tier 1	6-15%
Tier 3 supplier delivering to tier 2	10-25%
Aftermarket OES supply chain	Margin
Tier 1 delivering to OEM for OES sales through approved service chain	10-30%
Tier 1 delivering to OEM for OES sales through independent outlets	10-25%
OEM delivering OES parts through its approved service chain	25-65%
OEM delivering OES parts through independent outlets	30-50%

Main sources

- [European Commission's macroeconomic publications](#)
- [IMF](#) – a good source for macroeconomic information
- [OECD](#) – a good source for macroeconomic and industry-specific information

- [European Commission's Directives and Regulations pertaining to motor vehicles, their trailers, systems and components](#)
- [CLEPA](#) – the European Association of Automotive Suppliers
- [ACEA](#) – the European Automobile Manufacturers Association
- [Ernst & Young](#)'s Automotive information - Automotive information – a good source of automotive information
- [Ernst & Young's European Automotive Survey 2013](#) – interviews mostly with automotive suppliers
- [Inovev](#) - Worldwide automotive knowledge platform that offers free-of-charge and fee-based content
- Trade fairs are a good place to network, to meet buyers and to promote your company. The most prominent automotive trade fairs in Eastern Europe are: the [Sofia Motor Show](#) (site in Bulgarian) – Bulgarian automotive trade fair; [Motor Show Poznań](#) – Polish automotive trade fair; [Bucharest Auto Show and Accessories](#) – Romanian automotive trade fair; [AUTOSALON Brno](#) – the Czech automotive trade fair; [Autosalon Bratislava](#) (annual) – Slovak automotive trade fair

More information

CBI market information:

- [CBI Buyer Requirements: Automotive Parts and Components](#)
- [CBI Buyers' Black Box: Automotive Parts and Components](#)
- [CBI Market Channels and Segments Automotive Parts and Components](#)
- [CBI Market Competitiveness Automotive Parts and Components](#)

This survey was compiled for CBI by the Global Intelligence Alliance

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