



CBI
Ministry of Foreign Affairs

CBI Product Factsheet:

Railway Equipment Parts in Europe

Introduction

Driven by meta market trends, like growing urbanisation, an increasing population and increasing environmental awareness, imports of rolling stock parts offers a positive outlook. This growth is driven by the European rail vehicle industry, which is forecast to grow in the next five years by a total of about 15%. After a dip in 2012, European imports of rolling stock parts recovered strongly, reaching €2.5 billion in 2014. As Europe's main importers of rolling stock parts, Germany and the United Kingdom are interesting target markets. Major trends shaping this market include growing use of low weight and high strength materials, like aluminium, high-strength steel and composites.

Product description

Rolling stock refers to wheeled vehicles that move on a railway, such as locomotives, railroad cars, coaches and wagons. These vehicles consist of numerous parts, often metal, such as recognisable parts like wheels, axles, couples and buffers, and many other, non-recognisable parts.

When 'rolling stock parts' are referred to in this survey, this concerns the selection of products in Table 1 of the Annex, unless stated otherwise. The CN codes all belong to chapter 8607, which covers parts for rolling stock.

Product specifications

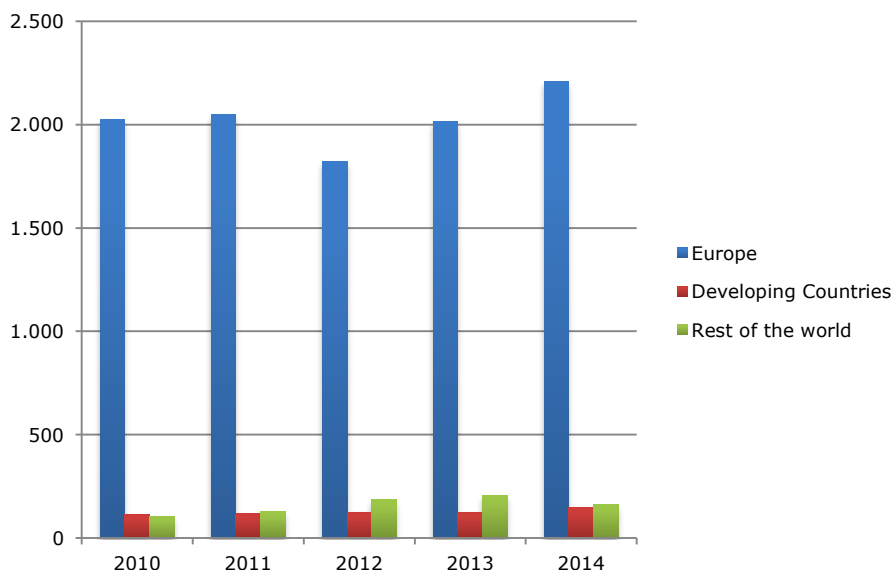
Specifications of rolling stock parts, as required by European buyers, are described below. Pictures 1-6 show some examples of rolling stock parts.

- Material: rolling stock parts are generally made of sturdy materials, such as iron and steel.
- Quality and reliability: quality assurance (QA) and reliability of the parts are essential and the more critical the application of the part, the higher the requirements. Railway companies work on zero defect targets (which can be compared to the requirements of the automotive industry).
- Labelling and packaging: the labelling and packaging of rolling stock parts depends on how critical its application is. The more critical the application, the higher the requirements. In general, rolling stock parts can be packed in a carton or a wooden box, depending on the size of the parts. The outer package should include the brand name and type number. The package for ocean transportation is a wooden, steel or plastic pallet, wrapped with plastic sheet and sealed with metal strips. The size of the boxes depends on customer requirements and preferences and is also influenced by the weight per box and handling possibilities.

What is the demand for rolling stock parts in Europe?

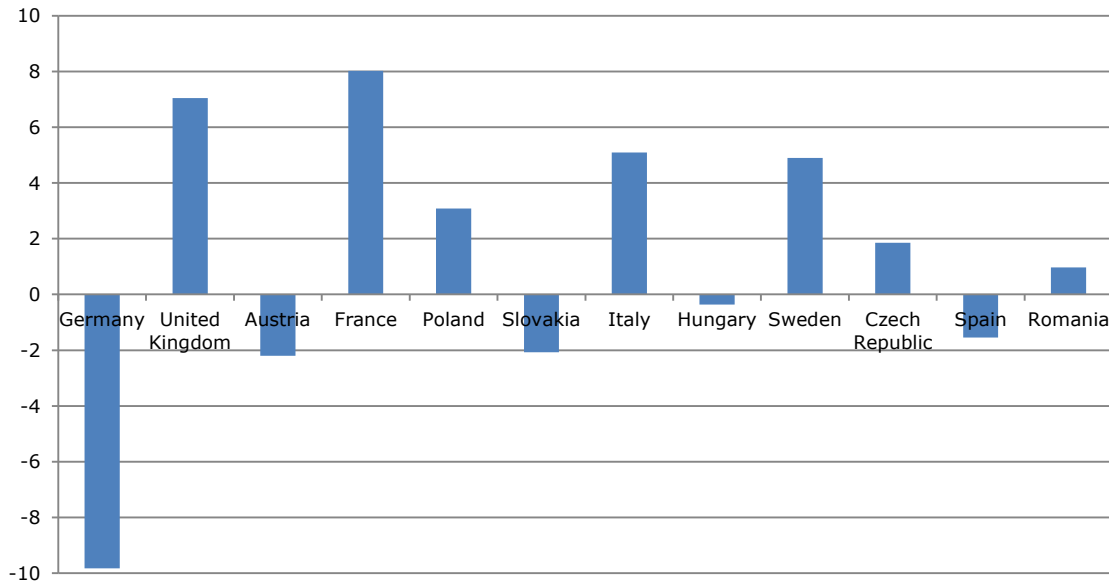
Imports

Figure 1: Imports of rolling stock parts to Europe by main origin, € million, 2010-2014



Source: Trademap

Figure 2: Absolute developing country import growth of rolling stock parts 2010-2014, € million (countries in range of largest importers)



Source: Trademap

- European imports of rolling stock parts recovered from a decline in 2012 and reached their highest level in 2014, at €2.5 billion. Average annual growth in 2010-2014 was 2.9%.
- Most imports originate from intra-European sources (nearly 90% of all imports). The developing country share in European imports amounted to 5.9% in 2014, up from 5.1% in 2010. For the coming years, the developing country share is forecast to remain relatively stable.
- The leading importer is Germany, accounting for 31% of European imports, followed by the United Kingdom and Austria (each with 10%) and France (8%). In terms of developing country imports, Germany is in the lead (taking 20% of European imports from developing countries). The drop in imports from developing countries between 2010 and 2014 (Figure 2) was caused by a drop in imports from China. Germany is followed by the United Kingdom (12%), Bulgaria and France (each 11%).
- Imports of rolling stock parts into Europe are expected to show slight growth in the next few years, in the range of 0-2%.

Leading suppliers

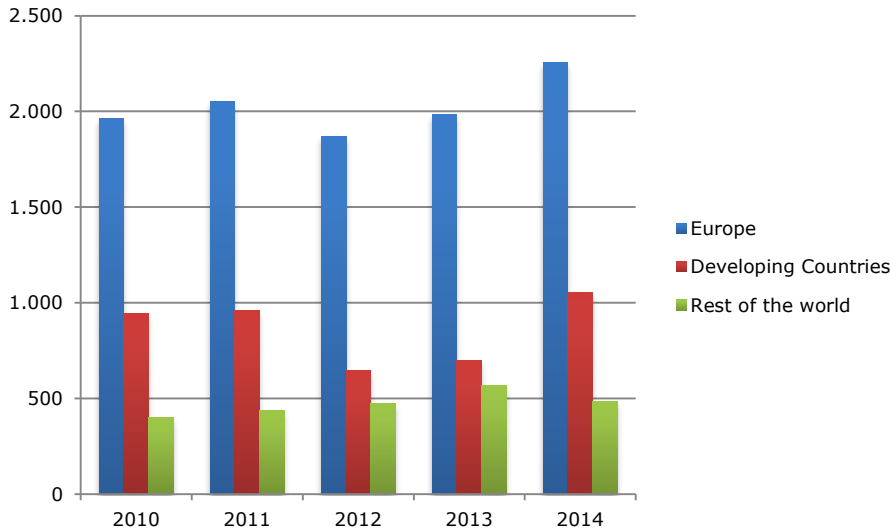
- Leading suppliers of rolling stock parts to European suppliers are based in European countries, with the exception of China, which is also the only developing country in the list of top suppliers. Germany, Austria, the Czech Republic, Italy and Spain are the top five suppliers. China is in 12th position, with exports of €54 million to Europe in 2014, and accounts for 37% of imports from developing countries.
- Other developing countries that export (smaller amounts of) rolling stock parts to Europe are Ukraine, Turkey, Serbia, Macedonia, India and South Africa.
- Switzerland is by far the largest supplier in the 'rest of the world' category, followed by Russia and the USA.

Tip:

- Benchmark your company against your peers from European countries and China. Several factors can be taken into account, such as market segments served, perceived price and quality level, countries served. A useful source for finding exporters/producers of rolling stock parts in each country is the [ITC Trademap](#).

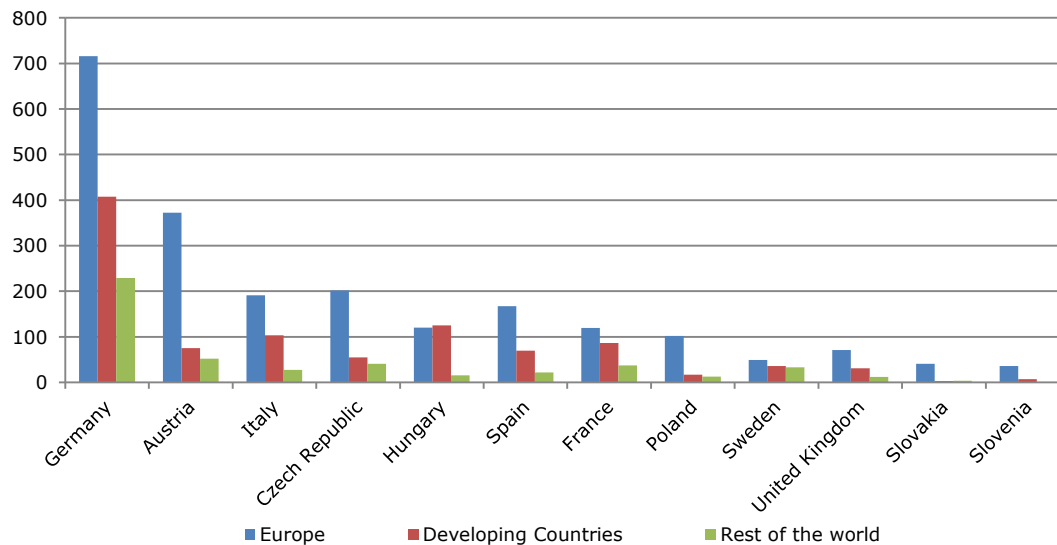
Exports

Figure 3: Exports of rolling stock parts from Europe by main destination, € million, 2010-2014



Source: Trademap

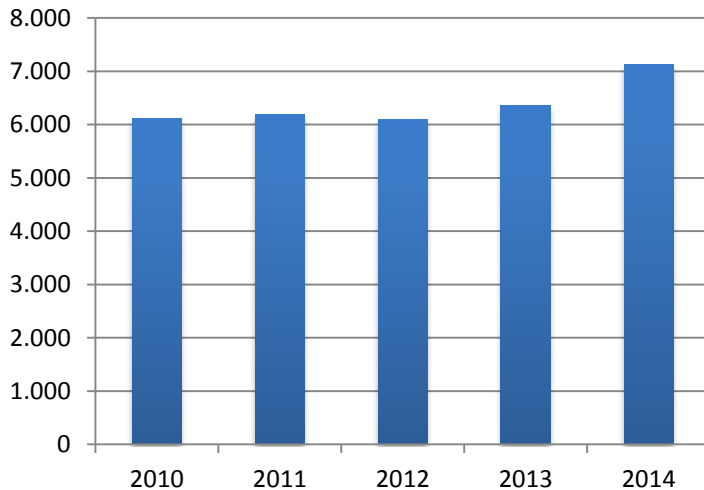
Figure 4: Main exporters of rolling stock parts, € million, 2014



- Similar to the pattern of imports, European exports of rolling stock parts peaked in 2014, reaching €3.8 billion. Average annual growth in 2010-2014 was 3.5%.
- The developing country share of European exports increased to 28% in 2014, from 22% in the previous year. For the coming years, exports from the EU to developing countries are forecast to represent between 25-30%.
- Still, most exports originate from intra-European sources (60% of all exports). Note, however, that this also includes some re-exports of imports originally from developing countries.
- The leading exporter is Germany, accounting for 36% of total exports from Europe. Austria is in second position (13%), followed by Italy and the Czech Republic (each with 8%), Hungary and Spain (each with 7%).
- German exports to developing countries (mainly China) are massive. They represent nearly 40% of European exports to developing countries. Hungary is in second position (12%), followed by Italy (10%).
- European exports of rolling stock parts are expected to show slight growth in the next few years, in the range of 0-2%.

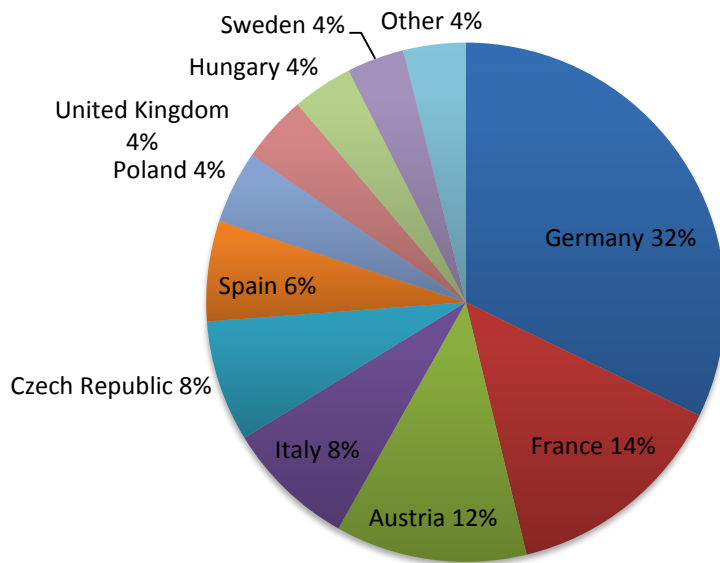
Production and apparent demand

Figure 5: European production of rolling stock parts, 2010-2014, € million



Source: Eurostat Prodcom

Figure 6: Main European producers of rolling stock parts, 2014



Source: Eurostat Prodcom

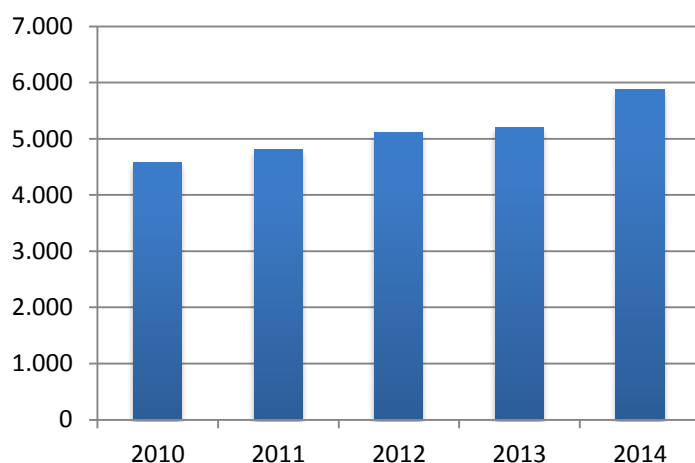
- European production totalled €7.1 billion in 2014, after an average annual increase of 3.9% in the period 2010-2014.
- Germany accounted for almost one-third of total European production in 2014, followed at quite some distance by France, Austria and Italy.
- Worldwide, the locomotive and rolling stock market is dominated by 30-40 locomotive and rolling stock manufacturers, which represent about 70% of total production. The supply chains of these companies consist of many (probably several thousand) small and medium-sized companies that supply systems and system parts.
- In Europe, the leading locomotive and rolling stock manufacturers are Bombardier, Siemens and Alstom:
 - [Alstom Transport](#) is headquartered in France and has European facilities in France, Germany, Italy, Spain and Switzerland.
 - [Bombardier Transport](#)'s European headquarters are in Germany; its European facilities are in France, Germany, Austria, Belgium, Hungary, Italy, Sweden, Switzerland and the UK.
 - [Siemens](#)' headquarters are in Germany and its production facilities are in Germany, Austria, the Czech Republic and Slovenia.

Other smaller rail vehicle manufacturers in Europe are [CAF](#) and [Talgo](#) (Spain), [Ansaldo-Breda](#) and [Firema](#) (Italy; the latter was bought by Titagarh Wagons of India in 2015), [Skoda](#) (Czech Republic), [Solaris](#) (Poland, specialised in buses, but also produces low-floor trams), [Stadler](#) (Switzerland), and [Vossloh](#) (Germany, also parts and systems).

Tips:

- Figure 6 reveals that in addition to Germany, France and Austria, there is also considerable production output in Italy, the Czech Republic and Spain. The presence of producers in these countries offers subcontracting opportunities for developing country exporters.
- The websites of European railway vehicle manufacturers offer an interesting overview of their activities and company profile. Particularly interesting for suppliers are the dedicated supplier sections, for example of [Solaris](#) or [Stadler](#).

Figure 7: Apparent demand for rolling stock parts in Europe, 2010-2014, € million

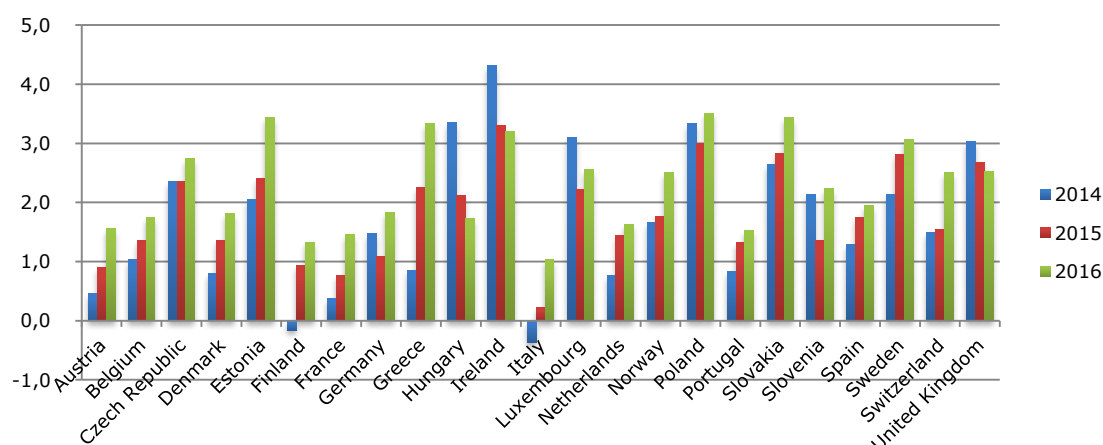


Source: Eurostat Prodcom

- European apparent demand totalled €5.9 billion in 2014, after an average annual increase of 6.4% in the period 2010-2014.
- Germany, France and Austria are the dominant railway equipment production countries in Europe. There is high demand for rolling stock parts to supply the factories in these countries. This is also reflected by the apparent demand figures of the individual countries. Of the total of €5.9 billion in 2014, Germany takes 28%, followed by France (18%), Austria and Italy (both 11%), the UK (8%), Poland (4.8%), Spain (3.0%) and the Czech Republic (2.9%).

Macro-economic indicators

Figure 8: Real GDP, % change from previous year



Source: OECD Economic Outlook 96 database

- The major determinant of rolling stock parts demand is the production of (new) railway equipment, while the aftermarket can also be an important driver (depending on the type of part, this is an important factor, especially for wear parts/systems).
- Demand is primarily driven by investment activities of government-led transport authorities and operators in Europe, such as the high-speed connection between the Netherlands and Belgium. The peak in import, export, production and apparent demand in 2014 (shown previously) can be explained by a peak in this investment activity.
- In addition, to some extent, this demand is in turn stimulated by economic growth. In each European country, GDP is expected to show continued growth in the years to come. At least, this growth will be a good basis for continuous market growth in the coming years.

Tip:

- Although GDP growth forecasts are improving, pricing is and will continue to be a leading influential competitive factor. Competitive pricing is elementary for developing country exporters planning to enter the European market.

What trends offer opportunities on the European market for rolling stock parts?

- Driven by meta market trends, like growing urbanisation, an increasing population and increasing environmental awareness, the European rail vehicle industry is forecast to grow in the next five years by a total of about 15%.
- The main trends that will shape the industry are related to the aim of railway vehicle manufacturers to offer better technological solutions, which are of high quality, reliable, safe, durable and, last but not least, reduce environmental impact. It should be noted that this aim is not only focused on the vehicles, but also on the track system.
 - High on the agenda of R&D departments in the next few years will, therefore, be noise and vibration reduction inside vehicles, bringing down overall weight and energy consumption.
 - On the component level this means there will be a growing interest in low-weight and high-strength materials, like aluminium, high-strength steel and composites.

What requirements should rolling stock parts comply with to be allowed on the European market?

Requirements can be divided into: (1) musts, which are legal and non-legal requirements you have to comply with; and (2) additional requirements that are commonly used on the market, to give you a competitive edge, keep up with the competition or focus on a niche market.

You can find a general overview of the [EU buyer requirements for metal parts](#) on the Market Intelligence Platform of CBI. Also refer to the [EU Export Helpdesk](#), the [ITC Market Access Map](#) and the [ITC Standards Map](#) for more information related to gaining access to the European market.

Musts

Rolling stock in Europe has to comply with the European Commission's [Railway Safety Directive 2004/49/EC](#) and [Interoperability Directive 2008/57/EC](#).

The Railway Safety Directive covers safety requirements for the European railway system as a whole, including infrastructure and traffic management and the interaction between railway undertakings and infrastructure managers. It establishes common safety indicators (CSIs) in order to assess the system's compliance with common safety targets (CSTs).

The Interoperability Directive covers conditions to be met to achieve interoperability within Europe's rail system, compatible with the Railway Safety Directive. It establishes technical specifications for interoperability (TSIs), concerning the design, construction, placing in service, upgrading, renewal, operation and maintenance of the system, particularly railway vehicles.

The CSIs and TSIs are developed by the [European Railway Agency](#), together with representatives from the sector.

There are several European [standards for railway applications](#). Various rolling stock parts can acquire CE marking according to their own standards, e.g. [EN 13261](#) for axles, [EN 13262](#) for wheels and [EN 14198](#) for braking systems.

For rolling stock parts, [a 1.7%, 2.7% or 3.7% duty](#) is levied on European imports from third countries. Several countries benefit from a preferential 0% tariff, for example, Indonesia, Pakistan, Vietnam, the Philippines, Bosnia and Egypt. Note that it is only possible to claim a preferential tariff treatment with a certificate of origin.

If you use wood packaging materials to export products to Europe, you must consider [health \(phytosanitary\) requirements set for these materials](#); in practice, this means that the wood must have undergone heat treatment or been fumigated with methyl bromide.

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.

Additional requirements

Although the European Union is striving for an integrated European rail network, national rail networks have developed different technical specifications and legislation (e.g. gauge widths, electrification standards and safety and signalling systems). Hence, your product may face varying standards of buyers, depending on their local legislation and your specific product.

Tips:

- You can keep up-to-date on European railway legislation via the [European Railway Agency](#) and the European Commission's [Rail Transport website](#).
- Please refer to the European Railway Agency's [Application Guide](#) for assistance in the application of the TSIs.
- For more information on CE marking, please refer to the ['Blue Guide'](#) and the [manufacturer's six steps to affix a CE marking to your product](#).

What do the trade channels and interesting market segments look like in Europe for rolling stock parts?

You can find a general overview of the [European market channels and segments for metal parts](#) on the Market Intelligence Platform of CBI. Rolling stock parts can be considered as specialities, which are metal parts made according to the buyer's specifications. Since they are tailored to the needs of the buyer, they are not so suitable for holding in stock. For this reason, the market channels and segments for rolling stock parts do not differ significantly from those for the sector in general. The best way to reach the European market is to work as a subcontractor for European producers of rolling stock parts. In order for imports from developing countries to be feasible, order volumes have to be big enough (large or medium-sized series) and lead times sufficient.

Useful sources

- Associations: [UNIFE - the European Rail Industry](#), and in some countries there is a national association, e.g. [French Railway Industries Association](#), [German Railway Industry Association](#), [Holland Rail Industry](#) and [Railway Industry Association](#) (United Kingdom).
- Finding prospects: [ABC Business Directories](#), [Europages](#), [European Railway Review Directory](#), [Kompass](#), [Railway Directory](#), as well as via each of the associations.
- Magazines and news portals: [European Railway Review](#), [International Railway Journal](#), [Railway Gazette](#).
- Trade fairs: [InnoTrans](#) (Germany), [RailTech](#) (Netherlands), [Railtex](#) (United Kingdom).
- Trade fair databases: [AUMA](#), [Eventseye](#).
- Trade statistics: [Eurostat](#), [ITC International Trade Statistics](#).
- Other: [EU Export Helpdesk](#), [Kwintessential](#).



CBI Market Intelligence

P.O. Box 93144
2509 AC The Hague
The Netherlands

www.cbi.eu/market-information

marketintel@cbi.eu

This survey was compiled for CBI by Globally Cool – Creative Solutions for Sustainable Business
in collaboration with CBI sector expert Peter Lichthart

Disclaimer CBI market information tools: <http://www.cbi.eu/disclaimer>

December 2015

Annex

Twenty-one codes have been selected for rolling stock parts. Also refer to Table 1 below for the classification. Table 1 also shows the list of Prodcom codes used for the production statistics of rolling stock parts.

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

CN code	Prodcom code	Description
86071100	30204030	driving bogies and bissel-bogies for railway or tramway locomotives or rolling stock
86071200		bogies and driving bissel-bogies for railway or tramway locomotives or rolling stock (excl. driving bogies)
86071901		axles, assembled or not; wheels and parts thereof, of cast iron or cast steel, of railway or tramway locomotives or rolling stock
86071910		axles, wheels and wheel parts, of railway or tramway locomotives or rolling stock, n.e.s.
86071911		axles, assembled or not; wheels and parts thereof, of closed-die forged steel, for railway or tramway locomotives or rolling stock
86071918		axles, assembled or not; wheels and parts thereof (excl. 8607.19.01 and 8607.19.11), of railway or tramway locomotives or rolling stock
86071990		parts of bogies, bissel-bogies and the like, of railway or tramway locomotives or rolling stock, n.e.s.
86071991		parts of bogies, bissel-bogies and the like, of railway or tramway locomotives or rolling stock, of cast iron or cast steel, n.e.s.
86071999		parts of bogies, bissel-bogies and the like, of railway or tramway locomotives or rolling stock (excl. of cast iron or cast steel)
86072110		air brakes and parts thereof, of railway or tramway locomotives or rolling stock, of cast iron or cast steel
86072190		air brakes and parts thereof, of railway or tramway locomotives or rolling stock (excl. of cast iron or cast steel)
86072900		brakes (other than air brakes), and parts thereof, for railway or tramway locomotives or rolling stock, n.e.s.
86072910		brakes and parts thereof, of cast iron or cast steel (excl. air brakes), of railway or tramway locomotives or rolling stock
86072990		brakes and parts thereof (excl. air brakes and of cast iron or cast steel), of railway or tramway locomotives or rolling stock, n.e.s.
86073000		hooks and other coupling devices, buffers, and parts thereof, for railway or tramway locomotives or rolling stock, n.e.s.
86073001		hooks and other coupling devices, buffers, and parts thereof, of cast iron or cast steel, of railway or tramway locomotives or rolling stock, n.e.s.
86073099		hooks and other coupling devices, buffers and parts thereof, for railway or tramway locomotives or rolling stock, n.e.s.
86079190		parts of railway or tramway locomotives, n.e.s.
86079191		parts of railway or tramway locomotives, of cast iron or cast steel, n.e.s.
86079199		parts of railway or tramway locomotives, n.e.s.
86079910		axle-boxes and parts thereof, of railway or tramway locomotives or rolling stock of heading 8603, 8604, 8605 or 8606, n.e.s.

Source: CN and Prodcom Nomenclature