German textile machinery: Setting global quality standards

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Germany is the largest national economy in Europe, the fourth-largest by nominal GDP in the world, and fifth by GDP (PPP). The country is a founding member of the European Union and the Eurozone. The economic model of Germany is based on the concept of the social market economy. Germany is the world's top location for trade fairs. Around two-thirds of the world's leading trade fairs take place in Germany.

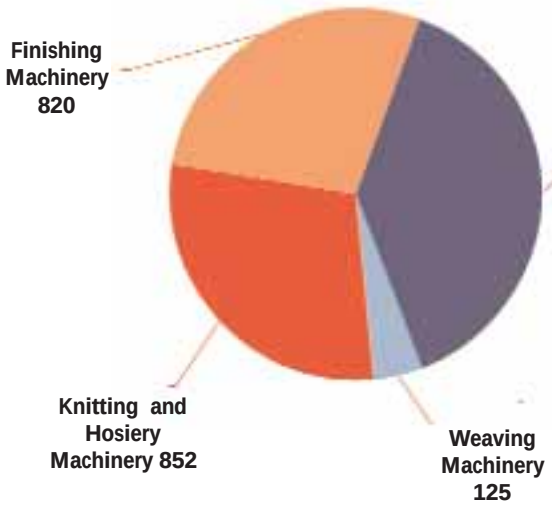
Germany is the first major industrialized nation to commit to the renewable energy transition called Energiewende. The Energiewende (German for energy transition) is the transition by Germany to a low carbon, environmentally sound, reliable, and affordable energy supply.

The new system will rely heavily on renewable energy (particularly wind, photovoltaics, and hydroelectricity), energy efficiency, and energy demand management. Most if not all existing coal-fired generation will need to be retired. The phase-out of Germany's fleet of nuclear reactors, to be complete by 2022, is a key part of the program.

Germany is the leading producer of wind turbines in the world. Renewables now produce over 27% of electricity consumed in Germany.

In 2016, Germany recorded the highest trade surplus in the world worth $310 billion, making it the biggest capital exporter globally. Germany is the third largest exporter in the world with 1.21 trillion euros ($1.27 trillion) in goods and services exported in 2016. Exports account for 41% of national output. The top 10 exports of Germany are vehicles, machinery, chemical goods, electronic products, electrical equipment, pharmaceuticals machinery, transport, basic metals, food products and plastics.

Export of German Textile Machinery 2016 (Million Euro)



Source: VDMA.

Textile machinery

Germany is known as one of the largest textile machinery manufacturers in the world, especially for technical textiles and nonwoven machinery. The country is among the top ten countries in textile machinery advancements. Today, textile machinery engineering is one of the important branches of engineering and

plant construction in Germany. The industry employs a staff of 15,300 and produced textile machinery and accessories worth euros 4.1 billion in 2016.

The German mechanical engineering industry plays a prominent role in developing and realizing sustainable solutions, such as effective solutions for new energy concepts and effective handling of scarce resources. The VDMA, the German Textile Machinery Association, has assumed patronage of the Blue Competence sustainability initiative, which aims to interconnect all of Germany's mechanical engineering industry. It pools the resources, know-how and strengths of VDMA members.

Textile machinery is one of 30 different mechanical engineering branches within Blue Competence and can be designed for the different demand profiles of the textile manufacturer, depending on the textile product and the specific process.

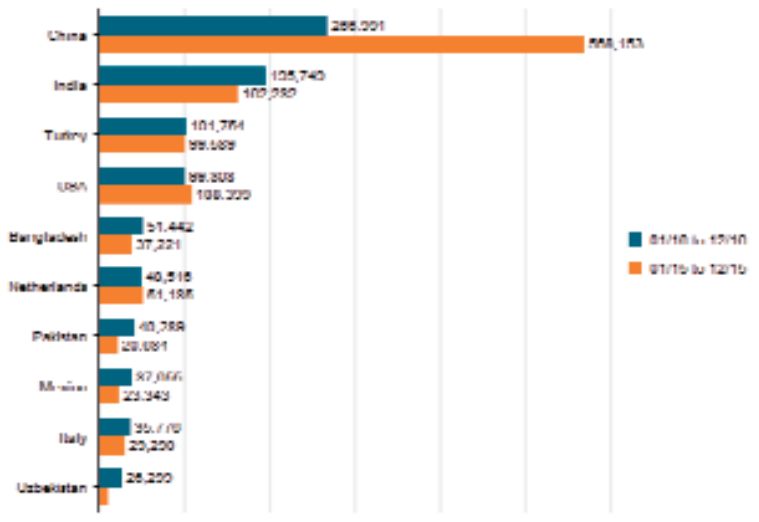
More than 70% of VDMA Textile Machinery members manufacture machinery, accessories, software and control units for the production of nonwovens and technical textiles. Some 50 member companies of VDMA Textile Machinery offer innovative technology and worldwide support for customers in the nonwovens process chain of web formation, bonding and finishing. The largest parts of the companies are medium-sized firms and stand for approximately 90% of the entire sector volume.

The VDMA member companies offer solutions for the entire textile chain. The portfolio covers machinery and accessories for spinning, nonwoven, weaving, knitting, hosiery and finishing (washing, bleaching, dyeing and drying).

The German textile machines are exported all over the world with their major clients being China, India, Turkey, USA, Italy, Brazil, Mexico, Pakistan, Bangladesh, and the Czech Republic.

German technology can indeed play a major role in China's and other countries efforts to make the environment cleaner and to increase the energy efficiency of the textile industry. The wide range of German textile machinery manufacturers lets them meet the myriad needs of all the potential customers. With an export rate of 95%, the industry is one of the strongest engineering branches in terms of exports.

Export of German Spinning Machinery 2016 (Euro)



Source: VDMA

Table 1: Sector-wise Export of German Textile Machinery 2016
Value: Million Euro

Sector	Value	% Share
Spinning	1,132	38.6
Knitting and Hosiery	852	29.1
Finishing	820	28.0
Weaving	125	4.3
Total	**2,929**	**100%**

Source: German Textile Machinery Association (VDMA).

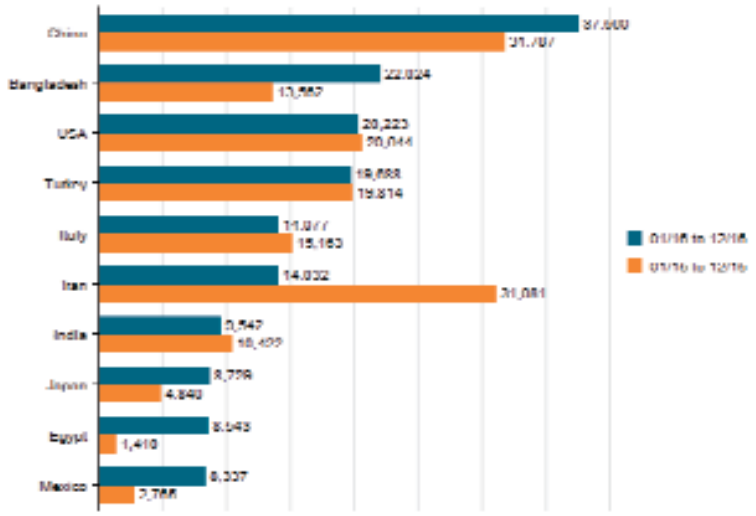
In 2016, German exports of textile machines were divided as follows: Spinning (38.6%), followed by Knitting and Hosiery (29.1%), Finishing (28%) and Weaving (4.3%). Sector-wise German textile machinery exports are given in **Table 1.**

In 2016, German spinning machinery exports reached euros 1,132 million, representing a share of 38.6% of the total German textile machinery export value.

China is the most important country of German textile spinning machinery, followed by India, Turkey, USA, Bangladesh and Pakistan.

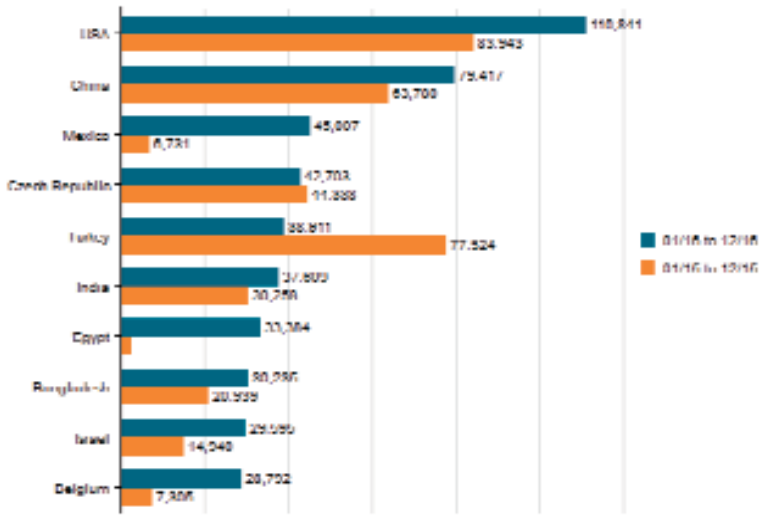
In 2016, the German manufacturers exported weaving machines worth euros 125 million, representing a share of 4.3% of the total German textile machinery export value. China is the most important country of German textile weaving machinery in 2016, followed by Bangladesh, USA, Turkey, Italy, Iran and India.

Export of German Weaving Machinery 2016 (Euro)



Source: VDMA.

Export of German Finishing Machinery 2016 (Euro)



Source: VDMA.

German manufacturers exported finishing machinery worth euros 820 million in 2016 representing a share of 28% of the total German textile machinery export value. The USA is the most important country of German textile finishing machinery in 2016, followed by China, Mexico, Czech Republic, Turkey and India.

The production of nonwovens and technical textiles see growth rates worldwide. In application areas like the automotive and filtration sector, business is strong. The demand of nonwovens products like personal care wipes and floor coverings is increasing significantly while the hygiene sector is still the main nonwoven end-use application area.

However, Europe is still a very important market, especially for technical textiles and nonwovens. The rise in technical textile has also ensured that the German companies earn profits by exporting technically advanced machinery to China, USA, Mexico and India.

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The textile sector investment in other countries has also improved. Today companies from China are investing in Bangladesh and Vietnam, following which there is a rise in demand for textile machines. Developed countries have also experienced a consistent growth in demand for textiles and this has paved way for the need of more sophisticated and result-oriented machines. ◆