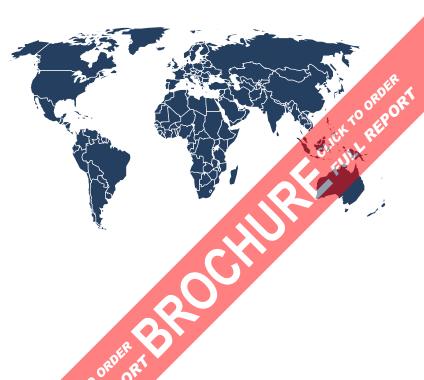


Freedonia Focus Reports
Global Collection

Global Fasteners

January 2020



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Scope

This report forecasts to 2023 global demand for industrial fasteners by product, market, and major world region in nominal US dollars at the manufacturer level. Product segments include:

- externally threaded
- internally threaded
- nonthreaded
- application-specific
- aerospace-grade

Reported markets encompass:

- motor vehicles
- machinery
- other original equipment manufacturing (OEM) markets such as fabricated metal products, and electronic, electrical, and aerospace equipment
- maintenance and repair operations
- construction

Major world regions include North America, Western Europe, Asia/Pacific, and all other regions.

To illustrate historical trends, world, product, market, and regional demand (including product and market segments) are provided for 2008, 2013, and 2018. Finally, global production is segmented by major world region and provided for 2008, 2013, 2018, and 2023.

This report analyzes the global supply of and demand for industrial mechanical fasteners. Excluded from the scope of this report are:

- nails, brads, spikes, tacks, and related items
- adhesives and other joining/bonding products
- nonindustrial type products like buttons, paper clips, and zippers

For the purposes of this report, the term "aerospace-grade" refers to a category of high-performance industrial fasteners manufactured to the specifications of aerospace/defense companies and agencies. End-use applications for these fasteners, however, are not confined to the aircraft/aerospace industries; they can also include construction, high-

performance automobiles, industrial machinery, and various other settings where the capabilities of such fasteners are warranted.

Other various topics, including profiles of pertinent leading companies, are covered in this report. A full outline of report items by page is available in the Table of Contents.

Sources

Global Industrial Fasteners (FW70011) is based on a comprehensive industry study published by The Freedonia Group. Reported findings represent the synthesis and analysis of data from various primary, secondary, macroeconomic, and demographic sources, such as:

- firms participating in the industry, and their suppliers and customers
- government/public agencies
- intergovernmental and non-governmental organizations
- trade associations and their publications
- the business and trade press
- indicator forecasts by The Freedonia Group
- the findings of other reports and studies by The Freedonia Group

Specific sources and additional resources are listed in the Resources section of this publication for reference and to facilitate further research.

Industry Codes

Table 10 NAICS & SIC Codes Related to Industrial Fasteners			
NAICS/SCI	AN 2017 erican Industry Classification System	SIC Standard	Industrial Classification
332722	Bolt, nut, screw, rivet, and washer mfg	3452	Bolts, nuts, rivets, and washers

Source: US Census Bureau

Table 11 | NACE Codes Related to Industrial Fasteners

NACE Code	Definition
25.94	Manufacture of fastener and screw machine products

Source: European Commission

Table 12	HS Codes Related to Industrial Fasteners
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HS Code	Definition
7318.11	Coach screws, threaded, of iron or steel
7318.12	Wood screws other than coach screws, threaded, of iron or steel
7318.13	Screw hook and screw rings, threaded, of iron or steel
7318.14	Self-tapping screws, threaded, of iron or steel
7318.15	Threaded screws and bolts nesoi, with or without their nuts or washers, of iron or steel
7318.16	Nuts, threaded, of iron or steel
7318.19	Threaded articles of iron or steel nesoi
7318.21	Spring washers and other lock washers, of iron or steel
7318.22	Washers, other than lock washers, of iron or steel
7318.23	Rivets of iron or steel
7318.24	Cotters and cotter pins, of iron or steel
7318.29	Nonthreaded articles (fasteners) nesoi, of iron or steel
7415.21	Washers, including spring washers, of copper
7415.29	Rivets, cotters, cotter pins and similar articles of copper (not threaded), nesoi
7415.33	Threaded screws, bolts, and nuts of copper or iron or steel with heads of copper
7415.39	Threaded fasteners nesoi, of copper
7616.10	Nails, tacks, staples (other than in strips), screws, bolts, nuts, screw hooks, rivets and similar articles, of aluminum
8308.20	Tubular or bifurcated rivets, of base metal

Source: United Nations Statistics Division

Freedonia Methodology

The Freedonia Group, a subsidiary of MarketResearch.com, has been in business for more than 30 years and in that time has developed a comprehensive approach to data analysis that takes into account the variety of industries covered and the evolving needs of our customers.

Every industry presents different challenges in market sizing and forecasting, and this requires flexibility in methodology and approach. Freedonia methodology integrates a variety of quantitative and qualitative techniques to present the best overall picture of a market's current position as well as its future outlook: When published data are available, we make sure they are correct and representative of reality. We understand that published data often have flaws either in scope or quality, and adjustments are made accordingly. Where no data are available, we use various methodologies to develop market sizing (both top-down and bottom-up) and then triangulate those results to come up with the most accurate data series possible. Regardless of approach, we also talk to industry participants to verify both historical perspective and future growth opportunities.

Methods used in the preparation of Freedonia market research include, but are not limited to, the following activities: comprehensive data mining and evaluation, primary research, consensus forecasting and analysis, ratio analysis using key indicators, regression analysis, end use growth indices and intensity factors, purchase power parity adjustments for global data, consumer and end user surveys, market share and corporate sales analysis, product lifespan analysis, product or market life cycle analysis, graphical data modeling, long-term historical trend analysis, bottom-up and top-down demand modeling, and comparative market size ranking.

Freedonia quantifies trends in various measures of growth and volatility. Growth (or decline) expressed as an average annual growth rate (AAGR) is the least squares growth rate, which takes into account all available datapoints over a period. The volatility of datapoints around a least squares growth trend over time is expressed via the coefficient of determination, or r^2 . The most stable data series relative to the trend carries an r^2 value of 1.0; the most volatile – 0.0. Growth calculated as a compound annual growth rate (CAGR) employs, by definition, only the first and last datapoints over a period. The CAGR is used to describe forecast growth, defined as the expected trend beginning in the base year and ending in the forecast year. Readers are encouraged to consider historical volatility when assessing particular annual values along the forecast trend, including in the forecast year.

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Global Commercial Refrigeration Equipment

Global Construction Machinery

Global Diesel Engines

Global HVAC Equipment

Global Industrial Rubber Products

Global Industrial Valves

Global Machine Tools

Global Mining Equipment

Global Pumps Market

Global Rubber Conveyor Belts

Global Thermoplastic Elastomers

Plumbing Fittings Market in the US

Plumbing Fixtures Market in the US

Windows & Doors

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Computers & Peripherals: United States

Construction: United States

Electronic Components: United States

Global Light Vehicles

Global Medium- & Heavy-Duty Trucks & Buses

Hardware: United States
Manufacturing: United States

Paper Industry Machinery: United States Small Kitchen Appliances: United States Thermoplastic Resins: United States

Window & Door Components: United States

Freedonia Custom Research

Trade Publications

Aerospace & Design Technology American Fastener Journal Assembly Design News Fastener Technology International

Agencies & Associations

Bank of Japan

Bureau of Foreign Trade (Taiwan)

European Fastener Distributor Association

Eurostat

Federal Statistical Office (Germany)

Industrial Fasteners Institute

Instituto Brasileiro de Geografia e Estatística

Instituto Nacional de Estadística y Geografía (Mexico)

Korean Statistical Information Service

Ministry of Economy, Trade, and Industry (Japan)

National Bureau of Statistics of China

National Fastener Distributors Association

National Institute of Statistics and Economic Studies (France)

Office for National Statistics (United Kingdom)

Office of the Economic Adviser (India)

Statistics Canada

Turkish Statistical Institute

United Nations Comtrade

United States Census Bureau

United States International Trade Commission