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Freedonia Focus Reports
Global Collection

Global HVAC Equipment

August 2018

Table of Contents

List of Tables & Figures

About This Report

Scope

This report forecasts to 2022 global demand for heating, ventilation, and cooling (HVAC) equipment by product, market, and major world region in nominal US dollars at the manufacturer level. Product segments include:

- room air conditioners
- heat pumps
- unitary air conditioners
- boilers
- warm air furnaces
- other HVAC equipment such as absorption liquid chilling systems, chillers, dehumidifiers, humidifiers, packaged terminal air conditioners, and room and zone heaters

Reported markets encompass:

- residential
- commercial

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 2007, 2012, and 2017. Finally, global shipments are segmented by major world region and provided for 2007, 2012, 2017, and 2022.

For any given historical year, US dollar amounts are obtained from values expressed in the applicable local currency. These local currency values are converted to US dollars at the average annual exchange rate for that year. For forecast years, the US dollar amounts assume the same annual exchange rate as that prevailing in 2017.

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

Sources

Global HVAC Equipment (FW75034) 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 including:

- firms participating in the industry, and their suppliers and customers
- government/public agencies
- national, regional, and international 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 HVAC Equipment

NAICS/SCIAN 2007		SIC	
North American Industry Classification System		**Standard Industrial Classification**	
333414	Heating equipment (except warm air furnaces) manufacturing	3433	Heating equipment, except electric and warm air furnaces
333415	Air-conditioning and warm air heating equipment and commercial and industrial refrigeration equipment manufacturing	3585	Air-conditioning and warm air heating equipment and commercial and industrial refrigeration equipment

Source: US Census Bureau

Table 11 | NACE Codes Related to HVAC Equipment

NACE Code	Definition
28.22	Manufacture of central heating radiators and boilers
29.12	Manufacture of pumps and compressors
29.21	Manufacture of furnaces and furnace burners
29.23	Manufacture of non-domestic cooling and ventilation equipment
29.71	Manufacture of electric domestic appliances
29.72	Manufacture of non-electric domestic appliances

Source: European Commission

Table 12 | SITC Codes Related to HVAC Equipment

SITC Code	Definition
7412	Furnace burners; mechanical stokers, etc, and parts thereof, nes
7415	Air conditioning machines comprising a motor-driven fan and elements for changing the temperature and humidity, including those machines in which the humidity cannot be separately regulated; parts thereof
8121	Central heating equipment, not electrically heated, parts, nes

Source: United Nations Statistics Division

Table 13 | HS Codes Related to HVAC Equipment

HS Code	Definition
7322.90	Air heaters and hot air distributors, (not electrically heated), incorporating a motor-driven fan or blower and parts
8403.10	Central heating boilers
8415.10	Air conditioning machines; of a kind designed to be fixed to a window, wall, ceiling or floor, self-contained or split-system
8415.81	Air conditioning machines; other than window or wall types, incorporating a refrigerating unit and a valve for reversal of the cooling/heat cycle (reversible heat pumps)
8415.82	Air conditioning machines; other than window or wall types, incorporating a refrigerating unit
8415.83	Air conditioning machines; other than window or wall types, not incorporating a refrigerating unit
8416.10	Furnace burners for liquid fuel
8416.20	Furnace burners for pulverized solid fuel or gas, including combination burners

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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Resources

The Freedonia Group

Global HVAC Equipment, August 2018

Freedonia Industry Studies

Global Commercial Refrigeration Equipment, 10th Edition, August, 2018
Commercial Refrigeration Equipment in the US, 14th Edition, April 2018
US HVAC Market Forecasts, June 2017
Air Conditioning Equipment Market in the US, May 2017
Heating Equipment Market in the US, April 2017
Heat Pump Market in the US, March 2017
Global Air & Fluid Filters Market, January 2017

Freedonia Focus Reports

Air & Fluid Filters: United States
Global Housing
HVAC Equipment: United States
World Air & Fluid Filters
World Major Household Appliances

Freedonia Custom Research

Trade Publications

Air Conditioning, Heating & Refrigeration (ACHR) News
Appliance DESIGN Magazine
Heat Pumping Technologies Magazine
IEA Heat Pump Centre
JARN

Agencies & Associations

Air Conditioning, Heating, and Refrigeration Institute (AHRI)
American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)
Association of Professionals in Industry of Climat (APIC)
Brazilian Association for HVAC-R (ABRAVA)
European Heat Pump Association (EHPA)
Eurostat
French Association for air-handling, cooling, heating, and refrigeration (Uniclima)
French Environment and Energy Management Agency (ADEME)
German Federal Association for Heat Pumps
Heating, Refrigeration and Air Conditioning Institute of Canada (HRAI)
Indian Society of Heating, Refrigerating, and Air Conditioning Engineers (ISHRAE)

International Monetary Fund
Japan Refrigeration and Air Conditioning Industry Association (JRAIA)
Organization for Economic Co-operation and Development
Turkish Air-Conditioning and Refrigeration Manufacturers' Association (ISKID)
United Nations Comtrade
United States Census Bureau
United States Environmental Protection Agency
United States International Trade Commission
World Customs Organization