# Electric Motors

US Industry Study with Forecasts for **2017 & 2022**

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The Freedonia Group
767 Beta Drive
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Toll Free US Tel: 800.927.5900 or +1 440.684.9600
Fax: +1 440.646.0484
E-mail: info@freedoniagroup.com

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US Industry Study with Forecasts for ***2017 & 2022***



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### MARKET ENVIRONMENT



### PRODUCTS



### MARKETS



### INDUSTRY STRUCTURE

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*Demand for electric motors will track growing durable goods manufacturing. Motor vehicles will remain the largest market, the result of an increasing number of motor-dependent options.*

## US demand to rise 4.6% annually through 2017

US demand for electric motors is expected to increase 4.6 percent annually through 2017 to $14.4 billion, accelerating from the pace of the 2007-2012 period, when nearly every major market for these devices struggled. Price increases accounted for the overall dollar gains posted during that span. The market for AC motors -- which are used in a myriad of applications such as heating and cooling equipment and household appliances -- will grow the most in absolute terms and remain the largest product segment. DC motors are used extensively in automotive applications, and suppliers will benefit from a rebound in motor vehicle output. Hermetically-sealed motors will register the fastest market advances of any electric motor product segment.

**US Electric Motor Demand, 2017**
($14.4 billion)


## Heating, cooling equipment market to grow the fastest

Among major markets, heating and cooling equipment applications are projected to register the fastest sales growth through 2017, bolstered by increases in building construction after a prolonged period of weakness. The motor vehicle market will record the second most rapid gains as automotive production rises and the number of electric motor-dependent systems in the average vehicle continues to climb. Growing demand for electric traction motors used in hybrid/electric vehicles will also contribute to automotive sales gains, although this will remain a small market in absolute terms. Sizable advances are forecast as well for aerospace and other transportation equipment motor applications, as air traffic expands along with economic activity and more households purchase recreational products such as boats or campers.

## FHP motors to remain largest segment, but will be outpaced by IHP motors

Fractional horsepower (FHP) motors, those with a horsepower rating of less than one, are expected to remain the larger product category in 2017 in both value and volume terms. This will be due to their extensive use in the mechanical systems of products ranging from aerospace and heating and cooling equipment to motor vehicles, all of which will experience an increase in production. However, demand for integral horsepower (IHP) motors (those with a horsepower rating of one or greater), is expected to grow faster than that for FHP motors in both value and volume terms as industrial users upgrade to more energy efficient IHP. Electric motors account for more than four-fifths of all electricity used in industrial production activities, providing users with a strong incentive to replace older, less efficient motors despite the substantial upfront costs.

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## Sample Text, Table & Chart

**MARKETS**

**Household Appliance Market**

Sales of electric motors used in household appliances ar to expand at a 2.6 percent an 2017, ging overall electric motor c e wea advances posted during the will lated by modest increases in c hou shipments. In addition, risin fficie expensive) motors will cont How ing pressure from these same tition sources of appliance supply, will act as counterbalances, limi growth through 2017.

SAMPLE TEXT

In the appliance industry, motor quality is a major conce buyers because OEMs seek to build customer loyalty through A consumer who purchases a defective appliance is considere to buy that brand again. However, energy efficiency and nois tion are gaining in importance as selection factors, since thes viewed as potentially marketable advantages to end users. S a concern, particularly in smaller, handheld appliances such a tools, where the motor is often the heaviest part of the produ

Well over half of all motor demand in this market is accounted for by fractional products, although IHP motors are also frequently used. IHP induction motors, for instance, can be found in dishwashers and washing machines. AC motors are the type most commonly utilized by appliance manufacturers, especially capacitor start, perma capacitor, and shaded pole motors. Polyphase, split phase, a motors are also utilized to a lesser degree. However, an incr ber of manufacturers are turning to the use of DC motors, pa brushless permanent magnet types. Switched reluctance and able speed motor designs are widely used as well due to thei for greater efficiency and higher performance in many applic





**TABLE IV-3**

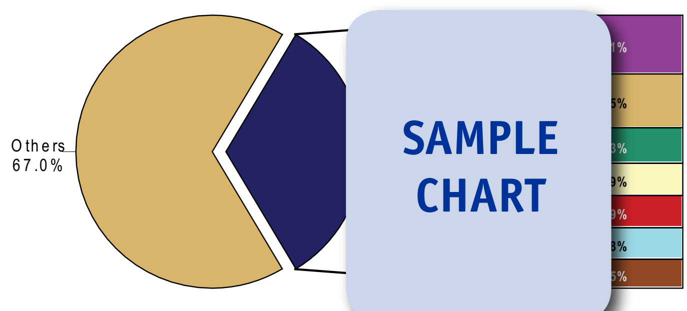
**MOTOR VEHICLE ELECTRIC MOTOR DEMAND BY TYPE, SEGMENT & APPLICATION (million dollars)**

| Item | 2002 | 2007 | 2012 | 2017 | 2022 |
|---|---|---|---|---|---|
| Motor Vehicle Production (000 units)1 | | | | | |
| $ OEM electric motors/vehicle | | | | | 2 |
| Motor Vehicles in Use (mil units) | | | | | 0 |
| $ aftermarket electric motors/vehicl | | | | | 3 |
| Motor Vehicle Electric Motor Demand | | | | | 0 |
| By Type: | | | | | |
| Fractional Horsepower | | | | | 0 |
| Integral Horsepower | | | | | 0 |
| By Segment: | | | | | |
| Light Vehicle | | | | | 0 |
| Internal Combustion Engine | | | | | 5 |
| Hybrid/Electric | | | | | 5 |
| Medium/Heavy Trucks & Buses | | | | | 0 |
| By Application: | | | | | |
| OEM | | | | | 0 |
| Aftermarket | | | | | 0 |
| % motor vehicle | | | | | 1 |
| Electric Motor Demand | | | | | 00 |

SAMPLE TABLE

**CHART V-1**

**US ELECTRIC MOTOR MARKET SHARE BY COMPANY ($11.5 billion)**

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## Sample Profile, Table & Forecast

**TABLE III-12**

**INTEGRAL SYNCHRONOUS MOTOR DEMAND**

| Item | 2002 | 2007 | 2012 | 2017 | 2022 |
|---|---|---|---|---|---|
| Durable Goods Shipments (bil 2005$) | | | | | |
| units/mil $ durables | | | | | |
| Integral Synchronous Motors (000 unit | | | | | |
| $/unit | | | | | |
| Integral Synchro Motor Demand (mil $ | | | | | |
| % synchronous | | | | | |
| Integral HP AC Motor Demand (mil $) | | | | | |

**SAMPLE TABLE**

**COMPANY PROFILES**

**Allied Motion Technologies Incorporated**
23 Inverness Way East, Suite 150
Englewood, C
303-799-852
http://www.al

Revenues: $
Employment:

Key Products precision, and torque motors

**SAMPLE PROFILE**

Allied Motion Technologies designs and produces motors, electronic motion controls, gearing and optical encoder products for the commercial motor, industrial motion control and other markets. The Company operates through seven subsidiaries: Stature Electric Incorporated, Motor Products Corporation, Emoteq Corporation, Allied Motion Controls, Precision Motor Technology BV, Östergrens Elmotor AB, and Ostergrens Changzhou.

The Company participates in the US electric motor industry through the production of such motors as brushless DC, permanent magnet, small precision, and torque motors; gearmotors; and servo-motors. Brushless DC motors from Allied Motion Technologies are sold under the ENDURAMAX brand name and are available with or without integrated drive electronics. Specific applications for these motors include mobile heating, ventilation, and air conditioning (HVAC) systems; pumps; and conveyers. Permanent magnet DC motors encompass ENDURANCE products in 2-, 2.5-, 3-, and 4-inch diameters.

155



"The US market for DC motors is projected to expand at a 4.6 percent annual rate through 2017 to $5.7 billion, growing in line with the electric motor market in aggregate. Increases in unit terms will average 2.9 percent annually through 2017, when sales will total 965 million, an improvement over the 2007-2012 performance. Demand will primarily be spurred by the continued rebound ..."

--Section III, pg. 66

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## Other Studies

### Power Lawn & Garden Equipment

This study analyzes the US power lawn and garden equipment industry. It presents historical demand data for the years 2002, 2007 and 2012, and forecasts for 2017 and 2022 by product (e.g., lawnmowers, turf and grounds equipment, trimmers and edgers, garden tractors and rotary tillers, snow throwers), market (e.g., residential, commercial), material (e.g., metals, plastic) and US region. The study also considers market environment factors, details industry structure, evaluates company market share and profiles industry players.

*#3008 .................. April 2013 ................... $5100*

### World Power Tools

World power tool demand is forecast to increase 4.5 percent annually through 2016 to $28.1 billion. The Asia/Pacific region will be the fastest growing market, followed by North America. In the US, gains will be driven by a rebound in housing starts and manufacturing activity. Cordless electric tools will be the fastest growing segment. This study analyzes the $22.5 billion world power tool industry, with forecasts for 2016 and 2021 by product, market, world region and for 25 countries. The study also evaluates company market share and profiles industry players.

*#2996 ............... February 2013 ................. $6300*

### World Motorcycles

The global market for motorcycles, including electrically-powered machines, will grow 7.2 percent annually to 134.5 million units in 2016. China will remain by far the largest national market, followed by India and Indonesia. Sales of e-bikes and e-cycles will grow roughly in line with internal combustion engine (ICE) motorcycle demand. This study analyzes the 95 million unit world motorcycle industry, with forecasts for 2016 and 2021 by type, world region and for 23 countries. The study also evaluates company market share and profiles industry players.

*#2972 ................ January 2013 ................. $6300*

### Power & Hand Tools

Demand for power and hand tools in the US will rise 4.8 percent per year to $13.1 billion in 2016. Power tools will outpace hand tools, as power tools -- especially cordless electric tools -- benefit from greater capacity for innovation. Professional demand growth will outpace consumer gains due to a rebound in housing starts and increases in manufacturing output. This study analyzes the $10.4 billion US power and hand tool industry, with forecasts for 2016 and 2021 by product and market. The study also evaluates company market share and profiles industry players.

*#2941 ................ August 2012 .................. $5200*

### Automotive Aftermarket in North America

The North American light vehicle aftermarket is projected to rise 3.2 percent annually to $85.5 billion in 2016. The US will record the slowest gains but will represent four-fifths of the region's total sales growth. Electronics will be the fastest growing product segment. The dominant professional market will outpace the DIY segment. This study analyzes the $73 billion automotive aftermarket in North America, with forecasts for 2016 and 2021 by country, product and service performer. The study also evaluates company market shares and profiles industry participants.

*#2927 ................ August 2012 .................. $5100*

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