China Electric Vehicle Drive Motor Industry Report, 2016-2020

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STUDY GOAL AND OBJECTIVES

This report provides the industry executives with strategically significant competitor information, analysis, insight and projection on the competitive pattern and key companies in the industry, crucial to the development and implementation of effective business, marketing and R&D programs.

REPORT OBJECTIVES

- To establish a comprehensive, factual, annually updated and cost-effective information base on market size, competition patterns, market segments, goals and strategies of the leading players in the market, reviews and forecasts.
- To assist potential market entrants in evaluating prospective acquisition and joint venture candidates.
- To complement the organizations' internal competitor information gathering efforts with strategic analysis, data interpretation and insight.
- To suggest for concerned investors in line with the current development of this industry as well as the development tendency.
- To help company to succeed in a competitive market, and

METHODOLOGY

Both primary and secondary research methodologies were used in preparing this study. Initially, a comprehensive and exhaustive search of the literature on this industry was conducted. These sources included related books and journals, trade literature, marketing literature, other product/promotional literature, annual reports, security analyst reports, and other publications. Subsequently, telephone interviews or email correspondence was conducted with marketing executives etc. Other sources included related magazines, academics, and consulting companies.

INFORMATION SOURCES

The primary information sources include Company Reports, and National Bureau of Statistics of China etc.

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Abstract

China Electric Vehicle Drive Motor Industry Report, 2016-2020 highlights the following:
➢New energy vehicle drive motor industry in China (industry chain, cost analysis, business model, competitive landscape, competition among major manufacturers, competition pattern of drive motors for passenger car and commercial vehicle; technical status and development trends of drive motor);
➢22 Chinese and 6 global companies (operation, development strategy, supply chain, new energy vehicle drive motor business, etc.);
➢New energy vehicle drive motor industry (definition, classification, upstream & downstream industry chain of automotive drive motor);
➢Operating environment of new energy vehicle drive motor industry in China (policy, and development of new energy vehicle market and its impact on automotive drive motor industry).

China produced 134,000 units and sold 126,000 units of battery electric vehicles in the first six months of 2016, a surge of 160.8% and 161.6% over the same period of last year, according to the China Association of Automotive Manufacturers (CAAM). Adoption of motors in battery electric passenger car may lead to the following conclusions:

(1) Permanent magnet synchronous motor (PMSM) is the first choice for electric passenger car and finds increasing market share;
(2) With stable market share, AC asynchronous motor is one of mainstream motors for electric passenger car and will suffer a gradual decline in market share along with expansion of PMSM and other types of motors but still remain dominant for a longer period of time to come;
(3) Brushless DC motor experiences a collapse in market share, standing at 20.3% in the first half of 2015 and 14.8% at the end of the year, and less than 1% in the first six months of 2016;
(4) Hybrid excitation synchronous machine (HESM) is increasingly favored by battery electric car manufacturers with a higher market share from 0.03% in 2015H1 to 0.1% throughout the year and 1.1% in 2016H1.

Passenger cars mostly adopt PMSM; a single unit of drive motor system often has a power of 30KW-50KW and is priced at RMB10,000-20,000. As the power of drive motor for mini electric vehicle is generally 20KW, the price falls to RMB7,000/unit accordingly. Passenger car drive motor system now usually adopts the model of in-house, which prevails in companies like BYD, ZOTYE, Xin Dayang, SAIC Motor, and JAC Motors. And Zhongshan Broad-ocean Motor (serving BAIC Motor), Shanghai Edrive (serving Chery), Hangzhou Dewos Electric Technology (serving ZOTYE and acquired by Zhejiang Founder Motor) are a few independent motor manufacturers that have entered the supply chain of mainstream passenger car makers.

Bus drive motor system is the field that is highly competitive with a large number of manufacturers. The companies with the biggest market shares were Shanghai Edrive, Jing-Jin Electric and Hunan CRRC Times Electric Vehicle in 2014. 100KW AC asynchronous drive motor is priced at around RMB10,000/unit, and dual-motor system is quoted at RMB300,000/unit.

Over the next five to ten years, drive motor technology will develop towards permanent magnetization, integration, and digitalization. Motor control and integration technology will be the focus of competition among enterprises. China lags far behind the advanced world levels in the aspects of key IGBT chip packaging technology and 3rd-generation SiC IGBT research and development, which will be prioritized in the future.

With regard to drive technology, there are two main modes: centralized drive and hub drive.
(1) Centralized motor drive is transformed from structure of traditional diesel locomotive, is suitable for mass production, and has easily controllable cost, enabling it the mainstream motor drive mode.
(2) “Next-generation motor and electric control system” is likely to be hub motor and control system. Enjoying certain advantages in weight and efficiency, hub drive technology has started to be adopted in some hybrids by GM, Toyota and Benz and to be developed by some domestic makers with own brands. The technology now is still immature and has not been applied massively, but it may be the development direction of EV drive mode in the future. Japan and U.S. are way ahead in hub motor development, with industry leaders including Japanese Fuji Electric and Yasukawa Electric, and American Protean Electric.

New Energy Vehicle Drive Motor Output and Sales in China, 2013-2016

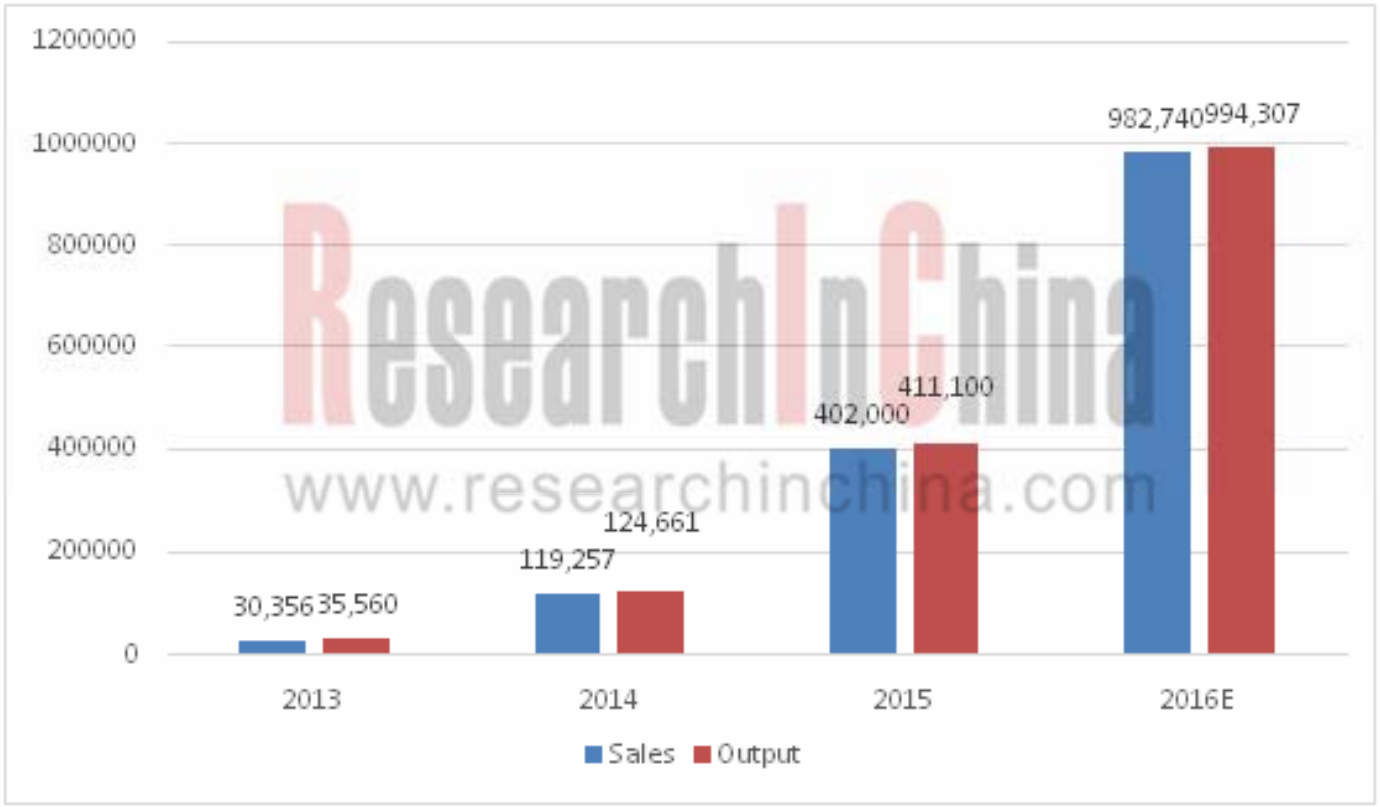

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Table of contents

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Table of contents

Selected Charts

- Composition of Drive Motor's Driving System
- Comparison of Parameters between EV Drive Motor and Traditional Motor
- Classification of EV Drive Motor
- Technical Features of Various EV Drive Motors
- Parameters of Various EV Drive Motors
- Block Diagram of Drive Motor Controller
- Control Strategies and Current Application of Various Drive Motors
- Structure of BEV Drive Motor System
- Operating Principle and Application of Hybrid Vehicle Drive Motor System
- Structure of Mild Hybrid Vehicle Drive Motor System
- Structure of Range-extended Power System
- Drive Motor System of BYD's PHEV "Tang"
- Dual-motor Hybrid Engine of Toyota Prius
- Sales Volume of Energy-efficient and New Energy (EV & PHEV) Passenger Cars in China, Jan.2015-Oct.2016
- Sales Volume of New Energy Vehicle (EV & PHEV) Worldwide, 2014-Sept.2016
- Sales Volume of Electric Passenger Cars (EV & PHEV) (by Model) in China, Jan-Oct 2016
- Import Volume of Energy-efficient and New Energy Passenger Vehicle (EV, PHEV, HEV) in China, Jan-Oct 2016
- Sales Volume of Energy-efficient and New Energy (EV & PHEV) Passenger Cars in China, Jan 2015-Oct 2016
- Sales Volume of Energy-efficient and New Energy (EV, PHEV, HEV) Passenger Cars in China, Jan-Oct 2016 (Attached Table)
- Price Structure of Permanent Magnet Synchronous Drive Motor
- Cost Percentage of Motor Controller
- Chinese Market Size of EV Drive Motor System, 2012-2020E
- Main Types of Drive Motor and System Enterprises
- Motor and Controller Installations of Drive Motor Manufacturers, Jan-Jul 2016
- Major Drive Motor and Controller Manufacturers in China

Selected Charts

- Seven Supply Modes of Chinese Motor and Controller Manufacturers
- Motor Controller IGBT Manufacturers Worldwide
- Motor Enterprises Supporting New Energy Passenger Cars in the 288th Batch New Vehicle Publicity
- Motor Industry Distribution and Supporting Relationship
- Production and Sales Volume of New Energy Vehicle Drive Motors in China, 2013-2016
- Types of Motors Adopted by Pure Electric Passenger Cars Made in China, Jan-Jun 2016
- Types of Motors Adopted by Pure Electric Passenger Cars Made in China, Jan-Dec 2015
- Supply Relation between Major Electric Bus Drive Motors and Controllers in China
- Drive Comparison between Centralized and Hub Motors
- Structure of Electric Drive Systems of Top 10 Best-selling EVs Worldwide, 2016H1
- Special Planning for China Electric Vehicle Industry during 2011-2015
- Motor and Controller IntegrationMethods and Effect
- BorgWarner (Left) and ZF (Right)'s Drive Motor and Single-stage Decelerator Integration
- Digitalization of Motor Control System
- Development Roadmap of IGBT Technology
- Block Diagram for Driving System of Hub Motor with Inner Rotor Structure
- Hub Motor Suited for All Kinds of New Energy Vehicle Models
- Operation of Zhongshan Broad-Ocean Motor, 2011-2016Q3
- Revenue Structure of Zhongshan Broad-Ocean Motor (by Sector), 2016H1
- Revenue Structure of Zhongshan Broad-Ocean Motor (by Region), 2011-2016H1
- Gross Margin of Zhongshan Broad-Ocean Motor, 2009-2016H1
- Gross Margin of Zhongshan Broad-Ocean Motor (by Product), 2015-2016H1
- Ten-year Development Strategy of Zhongshan Broad-Ocean Motor
- Ten-year Development Strategy and Executors of Zhongshan Broad-Ocean Motor
- Major Subsidiaries of Zhongshan Broad-Ocean Motor

Selected Charts

- EV Electric Drive System Projects under Way of Zhongshan Broad-Ocean Motor
- Equity Structure of Shanghai Edrive (before Acquisition)
- Drive Motor System Sales Volume of Shanghai Edrive, 2015-2022E
- Operating Performance of Shanghai Edrive, 2009-2016H1
- Types and Parameters of Drive Motor Systems Made by Shanghai Edrive
- Dimensions and Appearance of Drive Motor System of Shanghai Edrive
- Ranking by Monthly Sales Volume of Public Transportation Buses, 2016
- Types and Parameters of Drive Motors Made by Hunan CRRC Times Electric Vehicle
- Revenue and Net Income of WanxiangQianchao, 2011-2016H1
- Revenue Structure of WanxiangQianchao (by Product), 2011-2016H1
- Revenue Breakdown of WanxiangQianchao (by Product), 2011-2016H1
- Revenue Structure of WanxiangQianchao (by Region), 2011-2016H1
- WanxiangQianchao's Revenue from Top 5 Customers, 2015
- Gross Margin of WanxiangQianchao, 2012-2016H1
- Gross Margin of WanxiangQianchao (by Product), 2011-2016H1
- Operating Performance of Shanghai DAJUN Technologies, 2012-2016H1
- Major Customers of Shanghai DAJUN Technologies
- Drive Motor Product System of Shanghai DAJUN Technologies
- Parameters and Application of Drive Motor Products of Shanghai DAJUN Technologies
- Specifications of Drive Motors Made by JJE
- Revenue and Net Income of Zhejiang Founder Motor, 2011-2016Q1-Q3
- Revenue Structure of Zhejiang Founder Motor (by Product), 2011-2016H1
- Revenue Breakdown of Zhejiang Founder Motor (by Product), 2011-2016H1
- Revenue Structure of Zhejiang Founder Motor (by Region), 2011-2016H1
- Gross Margin of Zhejiang Founder Motor, 2011-2016H1

Selected Charts

- Electric Logistics Vehicle Powertrain System Orders (Estimated) of Zhejiang Founder Motor, 2016
- Passenger Car Powertrain SystemOrders (Estimated) of Zhejiang Founder Motor, 2016
- Framework and Layout in EV Drive Control Field
- Revenue and Net Income of Wolong Electric Group, 2011-2016Q1-Q3
- Revenue Structure of Wolong Electric Group (by Product), 2011-2016H1
- Revenue Breakdown of Wolong Electric Group (by Product), 2011-2016H1
- Revenue Structure of Wolong Electric Group (by Region), 2011-2016H1
- Gross Margin of Wolong Electric Group, 2011-2016H1
- Gross Margin of Wolong Electric Group, (by Product), 2011-2016H1
- Revenue and Net Income of Xinzhi Motor, 2010-2016Q1-Q3
- Revenue Structure of Xinzhi Motor (by Product), 2015-2016H1
- Revenue Structure of Xinzhi Motor (by Region), 2011-2016H1
- Xinzhi Motor's Revenue from Top 5 Customers, 2015
- Gross Margin of Xinzhi Motor, 2011-2016H1
- Gross Margin of Xinzhi Motor (by Product), 2015-2016H1
- Revenue and Net Income of Jiangxi Special Electric Motor, 2011-2016Q1-Q3
- Revenue Structure of Jiangxi Special Electric Motor (by Product), 2016H1
- Revenue Structure of Jiangxi Special Electric Motor (by Region), 2011-2016H1
- Gross Margin of Jiangxi Special Electric Motor, 2012-2016H1
- Gross Margin of Jiangxi Special Electric Motor (by Product), 2015-2016H1
- Jiangxi Special Electric Motor's Subsidiaries Involved in EV Business
- Drive Motor R&D of Jiangxi Special Electric Motor, 2014
- Specifications of EV SRD Motor Made by China Tex MEE
- Revenue and Net Income of Bosch, 2010-2015
- Revenue Structure of Bosch (by Division), 2015

Selected Charts

- Revenue Structure of Bosch (by Region), 2010-2015
- Gross Margin of Bosch, 2010-2015
- Revenue and Net Income of ZF Friedrichshafen AG, 2011-2016H1
- Revenue Structure of ZF Friedrichshafen AG (by Division), 2015
- Revenue Structure of ZF Friedrichshafen AG (by Region), 2014-2015
- Gross Margin of ZF Friedrichshafen AG, 2010-2015
- Revenue and Net Income of Continental AG, 2011-2016H1
- Revenue Structure of Continental AG (by Division), 2011-2016H1
- Revenue Structure of Continental AG (by Region), 2010-2015
- Gross Margin of Continental AG, 2010-2016H1
- Revenue and Net Income of Aisin AW, FY2011-FY2015
- Revenue Structure of Aisin AW (by Division), FY2011-FY2015
- Revenue Structure of Aisin AW (by Region), FY2011-FY2015
- Aisin AW's Revenue from Top 5 Customers, FY2015
- Gross Margin of Aisin AW, FY2011-FY2015
- Revenue and Net Income of Hyundai Mobis, 2010-Sept.2016
- Revenue Structure of Hyundai Mobis (by Region)，2016H1
- Revenue and Net Income of Siemens, FY2010-FY2016
- Specifications and Appearance of Passenger Car Drive Motor of Siemens
- Composition of Commercial Vehicle ELFA Drive System of Siemens

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