



# China Electric Vehicle Air-conditioner Industry Report, 2017-2021

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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.

## Abstract

With exemption of purchase tax and full launching of preferential policies including central and local fiscal subsidies, NEV sales witness explosive growth. As a standard configuration of a car, air-conditioning system also experiences strong development with China's demand for EV air-conditioners reporting 516,300 units in 2016 as per one air-conditioner for a car, a year-on-year surge of 40.7%.

Affected by the "subsidy fraud" scandal, China's EV output and sales will suffer a decline in growth rate but still maintain a higher pace over the next couple years, creating an estimated demand of 1.1524 million air-conditioners in 2021, a CAGR of 17.4% during 2016-2021.

The market of air-conditioners for large and medium-sized buses is highly concentrated with major players including Songz Automobile Air Conditioning, Zhengzhou Kelin Motor Vehicle Air Conditioning, etc. Songz serves carmakers including BYD, Nanjing Golden Dragon Bus, Ankai Bus, and Zhongtong Bus, while Kelin mainly provides EV air-conditioners for its parent company Yutong Bus.







The market of air-conditioners for electric passenger cars is lowly concentrated with key market participants including Nanjing Aotecar New Energy Technology, Denso (Toyota Industries), Sanden Huayu Automotive Air-Conditioning, Xiezhong International, Valeo, and Hanon Systems. Foreign-funded companies are still technologically superior. As the first company launching electric air-conditioners in the world, Denso has applied its products to EVs and HEVs made by Toyota and other companies with compressors coming primarily from Toyota Industries. Sanden Huayu Automotive Air-Conditioning adopts "battery, motor, and electronic control" technology for electric compressors which have already been used in auto models like BAIC E150 EV, SAIC Rowe, and Riich M1. Nanjing Aotecar New Energy Technology provides mainly scroll compressors and aims at electric heat pump (EHP) air-conditioning compressor. Moreover, the company acquired Air International and Mudanjiang Foton Automotive Air Conditioner in recent two years, not only enriching product line but also realizing technology complementarity.

Passenger car air-conditioners are mostly sold to carmakers as standard configuration with characteristics of fierce competition, relative scattering, and lower profits; by contrast, bus air-conditioners are directly supplied to public transport and automobile transportation companies with stronger customer stickiness and gross margin of up to 40%.

China Electric Vehicle Air-conditioner Industry Report, 2017-2021 highlights the following:

- ◆ Overview of China's EV air-conditioner industry (definition, classification, main policies, etc.);
- ◆ China's EV industry (output & sales, competitive landscape, etc. of various types of EVs);
- ◆ Overview of China's EV air-conditioner industry (market size, demand, supply model, etc.);
- ◆ Chinese EV air-conditioner market segments (passenger car, bus, and special-purpose vehicle markets) (electric air-conditioner demand, market size, competitive landscape, supply relationship, and industry forecast);
- ◆ 8 manufacturers of air-conditioners for electric passenger cars (Sanden, Toyota Industries, Hanon Systems, Valeo, HUAYU Automotive Systems, Xiezhong International, Nanjing Aotecar New Energy Technology, Hefei Carnot Automotive Air Conditioning) and 6 manufacturers of air-conditioners for electric buses (Songz Automobile Air Conditioning, Zhengzhou Kelin Motor Vehicle Air Conditioning, Guangzhou Jingyi Automobile Air Conditioner, Suzhou New Tongchuang Auto Air-Conditioning, Hunan Vaquong Electric, and Taichang Bus Air Conditioner) (profile, financial position, main products, R&D, production bases, technical characteristics, etc.)

## Development Characteristics of Air-conditioners for Electric Passenger Cars and Buses in China

	Air Conditioner for Electric Passenger Cars	Air Conditioners for Electric Buses
<b>Market Demand (2016) (sets)</b>	381,100	135,200
<b>Market Size (2016) (RMB mln)</b>	648	8,114
<b>Sales Model</b>	OEM standard configuration	Direct support for public transport and automobile transportation companies
<b>Market Concentration</b>	Low	High
<b>Level of Profit</b>	Low	High
<b>Superior Enterprises</b>	Foreign-funded	Chinese
<b>Major Players</b>	  	  

<p><b>1. Overview of Automobile Electric Air-conditioner</b></p> <p>1.1 Definition</p> <p>1.2 Classification</p> <p>1.3 Industry Supervision</p> <p>1.4 Industry Policy</p> <p><b>2. EV Industry</b></p> <p>2.1 Market Overview</p> <p>2.2 Market Size</p> <p>2.3 EV Market Segments</p> <p>2.3.1 Electric Passenger Car</p> <p>2.3.2 Special Electric Vehicle</p> <p>2.3.3 Electric Bus</p> <p><b>3. EV Air-conditioner Market</b></p> <p>3.1 Total Demand</p> <p>3.2 Market Size</p> <p>3.3 Sales Model</p> <p><b>4. Market Segments</b></p> <p>4.1 Electric Bus Air-conditioner</p> <p>4.1.1 Demand</p> <p>4.1.2 Market Size</p> <p>4.1.3 Competitive Pattern and Supply Relationship</p> <p>4.2 Passenger Vehicle / Special Vehicle Electric Air-conditioner</p> <p>4.2.1 Demand</p> <p>4.2.2 Market Size</p>	<p>4.2.3 Market Structure</p> <p>4.2.4 Competitive Pattern and Supply Relationship</p> <p><b>5. Electric Passenger Vehicle Air-conditioner Companies</b></p> <p>5.1 Sanden Holdings Corporation</p> <p>5.1.1 Profile</p> <p>5.1.2 Revenue</p> <p>5.1.3 Income Analysis</p> <p>5.1.4 Main Compressors</p> <p>5.1.5 Compressor Sales</p> <p>5.1.6 Business in China</p> <p>5.2 Toyota Industries Corporation (Denso)</p> <p>5.2.1 Profile</p> <p>5.2.2 Revenue</p> <p>5.2.3 Income Analysis</p> <p>5.2.4 Main Compressors</p> <p>5.2.5 Sales</p> <p>5.2.6 Capacity Distribution</p> <p>5.2.7 TD Automotive Compressor Kunshan Co., Ltd. (TACK)</p> <p>5.2.8 Yantai Shougang TD Automotive Compressor Co., Ltd. (YST)</p> <p>5.3 Hanon Systems (HVCC)</p> <p>5.3.1 Profile</p> <p>5.3.2 Revenue</p> <p>5.3.3 Income Analysis</p> <p>5.3.4 Capacity and Output</p>	<p>5.3.5 EV Thermal Management System</p> <p>5.3.6 Hanon Systems' Main Organizations in China</p> <p>5.3.7 Halla Visteon Climate Control (Dalian) Co., Ltd.</p> <p>5.4 Valeo</p> <p>5.4.1 Profile</p> <p>5.4.2 Revenue</p> <p>5.4.3 Income Analysis</p> <p>5.4.4 Order Analysis</p> <p>5.4.5 Thermal Solution for EV</p> <p>5.4.6 Valeo Compressor (Changchun) Co., Ltd.</p> <p>5.4.7 Huada Automotive Air Conditioner (Hunan)</p> <p>5.5 Sanden Huayu Automotive Air-Conditioning</p> <p>5.5.1 Profile</p> <p>5.5.2 Operation</p> <p>5.5.3 Electric Air-conditioner Business</p> <p>5.5.4 Operation of Major Subsidiaries</p> <p>5.5.5 Sales Network</p> <p>5.6 Nanjing Aotecar New Energy Technology Co., Ltd.</p> <p>5.6.1 Profile</p> <p>5.6.2 Operation</p> <p>5.6.3 Revenue Structure</p> <p>5.6.4 Motor Compressors</p> <p>5.6.5 Acquisition of Air International</p> <p>5.6.6 Acquisition of Mudanjiang Foton Automotive Air Conditioner Co., Ltd.</p> <p>5.7 Xiezhong International Holdings Limited</p> <p>5.7.1 Profile</p> <p>5.7.2 Operation</p>
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