

Global and China Automated Guided Vehicle (AGV) Industry Report, 2020-2026

January 2021

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

Automated Guided Vehicle (AGV), a kind of industrial robot, shares the same industry chain structure with industrial robot. Robot components, as the upstream also the core of the industry chain, occupies the most majority of costs in robot products. The medium sector is robot manufacturing & system integration enterprises, and downstream sectors covers application industries such as automobiles, 3C electronics and logistics.

As a substitute for human resources, the demand for moving AGVs has become increasingly strong. In 2019, China's AGVs sold 40,670 units, up 37.4% yr-on-yr. In 2020, the new application value of AGVs (reducing human-to-human contact) was released due to COVID-19 epidemic, accelerating the development of entire AGV industry application scenarios. It is estimated the AGV sales volume hit 53,000 units in 2020, and forecasted to exceed 130,000 units by 2026.

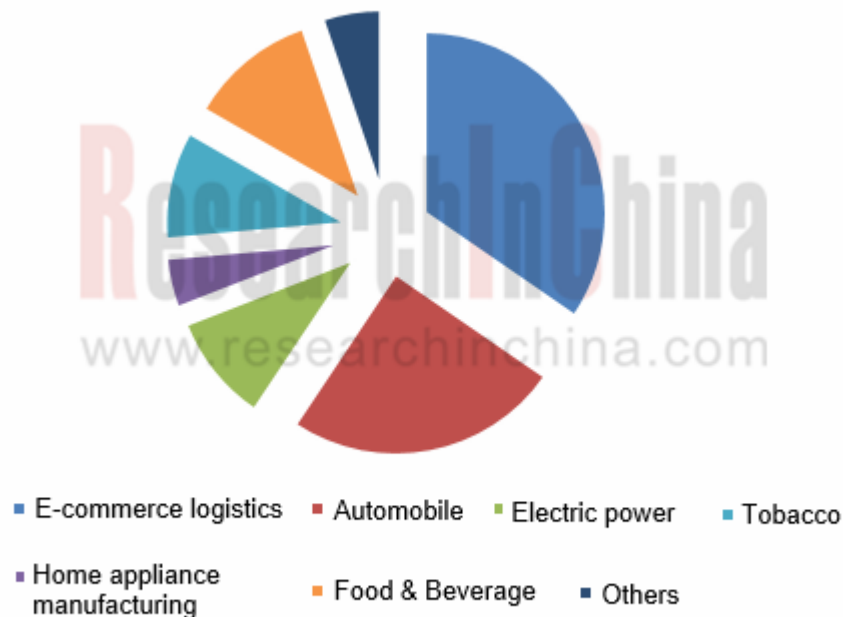
China AGV Sales Volume, 2016-2026E



Source: ResearchInChina

From the perspective of application scenarios, AGV are mainly used in handling scenarios, and wherever there is handling, there is the possibility of AGV application. By application fields, the automobile industry, 3C electronics, tobacco industry, and logistics industry are the most widely used and most promising industries for AGV. Among them, the largest application field is e-commerce logistics services, accounting for about 32.8% of the total AGV demand. AGVs can automatically carry according to the optimal driving route, accurately dock at the desired manual picking platform, and pick out the corresponding quantity of goods. The matching AGV intelligent management system can complete the supervision of all cargo situations and operation links, and can check the storage, delivery, transportation, etc. of goods at any time, so that customers can grasp the dynamics of their own goods in real time.

Application Structure of AGV in China, 2019



Source: ResearchInChina

Another typical application of AGV is in the automotive industry, and mainly in the engine assembly line, or the docking of the chassis and platform. For example: ① automatic transportation of raw materials ② transportation of the assembly line ③ transportation to and from the test area ④ automatic transportation between workshop and finished products. Judging from the current data of domestic automobile manufacturers, most players have adopted domestic AGV as a circulation hardware for in-plant production logistics, with a high localization rate.

In terms of competition pattern, AGV carries relatively high localization rate but scattered market concentration, and the market steps into an era of competition. Every AGV manufacturer has its own unique advantages. Since 2015, the AGV industry has entered a period of rapid development, and there are large variables in the industry. Relatively speaking, enterprises with deeper technological accumulation and more unique functional development may benefit more from industry changes.

Formally established in 2000 and affiliated to Shenyang Institute of Automation, Shenyang Siasun Robot & Automation Co., Ltd. specializes in industrial robots, automated assembly and inspection production lines, logistics and storage automation complete sets of equipment, etc. In 2019, it realized revenue of 2.745 billion yuan, down 11.3% yr-on-yr. Among them, the logistics and storage automation complete sets of equipment business harvested operating revenue of 1.060 billion yuan, up 9.3% yr-on-yr. Its AGV mainly includes handling AGVs and assembly AGVs. Navigation technology covers a variety of navigation methods such as magnetic tape, laser, inertia, vision, GPS, natural contour, etc. Its AGV products are mainly applied in automobile and military fields, and the market share in automobile sector ranks first.

Yunnan KSEC Intelligent Equipment Co., Ltd., a subsidiary of Kunming Shipbuilding Equipment Group Co., Ltd., started to set foot in the AGV industry as an agent for Samsung AGV products in South Korea in 1996. It has been dedicated to R&D, production and sales of AGV for nearly 20 years. Its AGV products are mainly concentrated in tobacco, automobile, and household appliances industries, of which the market share in tobacco industry accounts for more than 60%, ranking first in the industry. Food & beverage industry is its next focus. In 2019, Yunnan KSEC 's AGV business revenue exceeded 100 million yuan, second only to Shenyang Siasun.

Founded in 2003, Huaxiao Precision (Suzhou) Co., Ltd. specializes in logistics containers, logistics automation equipment and related non-standard equipment products, of which logistics automation equipment is mainly AGV products widely used in automotive field, customers include Nissan, Renault, etc., and are exported to overseas markets. In January 2016, CSG Smart Science & Technology invested 60 million yuan to acquire 100% equity of Huaxiao Precision. CSG Huaxiao put forward the concept of "AGV +," that is, to connect or carry more and more creative scene applications based on AGV robots.

Global and China Automated Guided Vehicle (AGV) Industry Report, 2020-2026 highlights the following:

- ◆ Definition and classification of AGV, including industry chain;
- ◆ Global AGV market (size, demand structure, competitive pattern, development in Japan, Europe, USA, etc.);
- ◆ China AGV market (size, product structure by product, demand structure, price, competitive, and development trends);
- ◆ Core components market for AGV, including AGV system, on-board control system, drive system (motor and speed reducer, etc), navigation system (magnetic navigation sensor, laser navigation, laser scanner, etc), and charging system;
- ◆ Major downstream sectors of AGV, including automobile, parking, power patrol, tobacco, and so on;
- ◆ 29 global and Chinese AGV companies (operation, AGV products, and development strategy, etc.).

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