China is the third die castings production country in the world, the annual growth rate of output of die castings retains about 10%.

In China the production of die castings began in the end of the 1940s. After several decades of development, China has become one of the large producers and consumers of die castings in the globe. With the rapid development of China automobile, communication, motorcycle, machinery and electric industries, the output of die castings in China keeps a high growth rate of more than 10% in recent years. In 2005, the output was approx. 864.2 thousand tons, ranking the third place in the world and just following U.S.A. and Japan. From the point of die castings categories, aluminum and magnesium die castings are rapidly growing. In 1995-2003, the average annual growth rates of them were 11.95% and 35.45%, respectively.

Compared with the strong die casting nations worldwide, for the die casting industry in our country, there is still a considerable gap. For instance, there are too many die casting enterprises, in which the scales are commonly small, the products are low-grade, and the competition is severe. In recent years, more and more multinational companies in the communication, automobile and other industries have established their bases in China to produce complete appliances or cars, providing opportunities for some large-sized die casting enterprises in our country to keep pace with the international advanced level. At present, the equipment and technology of several important die casting enterprises have approached to the international advanced level. They have established the stable long-term cooperation with the domestic large-sized enterprises manufacturing complete cars or machines, and joined the parts and components supply system of these enterprises. Thus, they stand in the advantageous place in the industrial competition, and have good prospect of development.

Currently, the die casting products which represent the main stream of die casting technology and application include:
(1) Automobile engine cylinder, piston, pump, gearbox, brake;
(2) Transmitting and receiving base station of communication system including GSM, CDMA, 3G, PHS (Personal Handphone System), etc.;
(3) Automatic elevator and automatic pavement facilities;
(4) Electronic and communication products, etc.

The tendencies of die casting development in the industrial competition are:
(1) To widely spread the foundry technical processes and equipment with excellent quality, high efficiency, low energy consumption and clean environment, to actively develop new types of die casting equipment and their control systems;
(2) To reinforce the research and development of aluminum and magnesium alloy die casting techniques and technologies, thus to promote the development of automobile parts and components manufacturing industry in our country;
(3) To reduce energy consumption and implement green die casting from the aspects of materials, techniques, equipment, and so on;
(4) To accelerate the renovation of traditional die casting processes by adopting information technology, computer technology and new die casting technology, to improve the grade and quality of products, to enhance the capability of rapidly keeping pace with the market and the level of automation for die casting enterprises.

The continuous rapid development of such industries in our country as automobile, communication equipment, equipment manufacturing, etc., and the transfer of international die casting industry to China, bring about a large market for China’s die castings. It is estimated that in the future several years the demand for die castings in our country will continue to keep the growth rate of more than 10%. And it is predicted that by 2010, the demand for die castings will approach 1.8 million tons.

The following listed are some die casting enterprises. For the enterprises listed out, their sales amount exceed RMB 200 million yuan, the prospect of their development are good, the scale of their production are comparatively large, and they have great influential power in our country.
**1. Shanghai Cosmopolitan Automobile Accessory Co. Ltd.**

*Http://www.scaac.com*

**Annual output:** 6,000 tons aluminum alloy die castings, 3,000 tons magnesium alloy die castings

**Twenty-five die casting machines employed:** Buhler, locking force: 22,000 kN; Idra, 35,000 kN; 18,000 kN, 16,000 kN, 15,000 kN; 13,500 kN; UBE, 35,500 kN, 22,500 kN, 18,000 kN

**Main die casting alloys:** aluminum and magnesium alloys

**Categories of products:** transmission housing blocks and covers, valves, grids, oil sole plates, side covers, etc. for automobiles of Shanghai Volkswagen Automotive Co. Ltd. and Shanghai General Motors Co. Ltd.

**Company Profile:**

Shanghai Cosmopolitan Automobile Accessory Co., Ltd. (Abbreviated as SCAAC), is a joint venture company invested by Shanghai Automotive Industry Corporation (SAIC) and Bardsey Group Limited which was registered at Virgin Islands of Great Britain. Its total investment is up to USD 5.99 million.

SCAAC mainly manufactures three series of products, i.e. large-sized nonferrous die castings employed for various types of automobiles, tractors, and internal combustion engines; machine oil pumps and water pumps; piston pins. The main customers at home include Shanghai Volkswagen Automotive Co. Ltd., Shanghai General Motors Co. Ltd., FAW Volkswagen Automotive Co. Ltd., Chang’an Ford Automobile Co. Ltd., and so on.

SCAAC actively exploits the international market, and has become one of the mating suppliers of OEMs of Visteon Corporation, U.S.A.

SCAAC actively introduces the foreign advanced technology and equipment, including the dosing furnace made by Striko Westofen GmbH, the automatically extracting robot of ABB Engineering Co. Ltd., the automatic sprayer and edge trimmer of Fanuc Ltd. and Acheson (Japan) Ltd. The die casting production of SCAAC is completely automated, being suitable for manufacturing various large-sized complicated die castings.

In June 2003, SCAAC and Meridian Technologies Inc., Canada, jointly established Shanghai Meridian Magnesium Products Co. Ltd., which has the production capacity of 1,100 thousand pieces of magnesium alloy die castings every year. At present, the production capacity of machine oil pumps and water pumps is up to 900 thousand pieces.

SCAAC’s quality test equipment meets the international advanced standards. The varieties of test equipment provides reliable assurance for producing first-class products. Up till now, SCAAC has successfully achieved ISO 9002, QS 9000 VDA 6.1 and ISO/TS16949 certifications.

Currently, SCAAC is building a new factory in An’ting, Shanghai city. The new factory takes up an area of 134 mu (approx. 89,400 m²). By then, the key business of SCAAC will transform to mainly produce large-sized commercial aluminum alloy die castings and automobile pumps.

**2. Guangdong Hongtu Technology (holding) Co. Ltd.**

*Http://www.ght-china.com*

**Annual output:** 7,200 tons

**Sales amount:** RMB 350 million yuan

**Twenty-one die casting machines employed:** Buhler, locking force: 8,400 kN; Idra, 21,500 kN; 18,000 kN; Toyo, 9,000 kN, 8,000 kN, 3,500 kN, 2,500 kN; LK, 30,000 kN, 20,000 kN, 8,000 kN; other domestic die casting machines, 16,000 kN, 6,300 kN, 4,000 kN

**Main die casting alloys:** aluminum alloys

**Categories of products:** automobile hoods, shells, carrier frames, brackets, and other automobile parts, elevator steps, electromechanical parts, communication components

**Company profile:**

Guangdong Hongtu Technology (holdings) Co. Ltd. is a leading company in the domestic die casting industry. As the largest precise aluminum alloy die-casting enterprise in south China, Hongtu is mainly engaged in developing, designing, manufacturing, and marketing 778 types of precise aluminum alloy die castings, including automobile, communication equipment, automatic elevator steps, and electromechanical parts and components. In 2005, the aluminum alloy die castings of auto engines, the transmitting and receiving base stations of communication system (including GSM, CDMA, 3G, PHS, etc.), and automatic elevator steps produced by Hongtu occupied 15%, 56% and 36% of the domestic markets, respectively. In recent years, the revenue, profit, and net profit of Hongtu’s main business averagely keep about 30% of the annual growth rate. Hongtu’s customers of automobile die castings include such world-famous automobile manufacturers as Honda, Nissan, GM, Mercedes Benz, etc. The customers of aluminum alloy die castings for the transmitting and receiving base stations of telecommunication system include such famous enterprises as Ericsson, Zhongxing Telecom, Huawei, etc. The
products of elevator steps are mainly used for the subway stations in Beijing, Shanghai, Guangzhou, and Shenzhen cities, and adopted in the infrastructure facilities for Beijing Olympic Games, Guangzhou Asia Games, and large-sized marketplaces. The electromechanical products and other categories of Hongtu products are mainly used for national defence, and other fields. In 2006, the output of the automobile die castings produced by Hongtu was up to 3,805 tons, the telecommunication die castings 2,636 tons, the elevator step die castings 1,815 tons, and the electromechanical die castings 625 tons.

3. Guangdong Dongfeng Honda Engine Co. Ltd.

<table>
<thead>
<tr>
<th>Annual output:</th>
<th>10,000 tons</th>
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<tbody>
<tr>
<td>Four die casting machines employed:</td>
<td>UBE, locking force: 25,000 kN; Toshiba, 2,500 kN, 18,000 kN, 12,500 kN</td>
</tr>
<tr>
<td>Main die casting alloys:</td>
<td>aluminum alloys</td>
</tr>
<tr>
<td>Categories of products:</td>
<td>engine cylinder blocks, transmission cases</td>
</tr>
<tr>
<td>Company profile:</td>
<td>Guangdong Dongfeng Honda Engine Co. Ltd. is a joint venture company, established by Dongfeng Motor Corporation and Honda Motor, Ltd. on July 1st, 1998. Guangdong Dongfeng Honda Engine Co. Ltd. is responsible for developing, producing and marketing engines, transmission cases, other parts and components of cars, and providing the corresponding after-sale services. The products are mainly oriented for the ACCORD, ODYSSEY and Fit Saloon series of cars made by Guangzhou Honda Car Co. Ltd. These two companies are combined to construct the new car project of Guangzhou city.</td>
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4. Chongqing Yujiang Die Casting Co. Ltd.

<table>
<thead>
<tr>
<th>Annual output:</th>
<th>35,000 tons</th>
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<tbody>
<tr>
<td>Sales amount:</td>
<td>RMB 350 million yuan</td>
</tr>
<tr>
<td>Die casting machines employed:</td>
<td>total 83, locking force: 2,500 kN-12,500 kN</td>
</tr>
<tr>
<td>Main die casting alloys:</td>
<td>aluminum alloys</td>
</tr>
<tr>
<td>Categories of products:</td>
<td>die casting parts for motorcycles, automobiles, gasoline engines, and high speed yachts</td>
</tr>
<tr>
<td>Company profile:</td>
<td>Chongqing Yujiang Die Casting Co. Ltd., founded in 1992, has approx. 4,000 employees and covers an area of about 73,800 m². It possesses approx. 1,300 advanced equipment with the annually production capacity of 40,000 tons of aluminum die castings and the machining capacity of 4,500,000 various engine blocks. It is a comprehensive enterprise integrating design &amp; development, aluminum die casting, machining, surface treatment, and mould design and manufacturing. The company mainly produces about 300 kinds of aluminum alloy die castings for automobiles, motorcycles, general gasoline engines and high speed yachts. Besides the products provided for the medium-sized and large-sized main machine factories at home, a considerable part of products are sold throughout the world. The company has achieved the ISO 9001 certification of the international quality assurance system. In 2005, the company has the capacity of producing six million aluminum alloy engine die castings.</td>
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5. Guangdong Wencan Die Casting Co. Ltd.

<table>
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<tr>
<th>Annual output:</th>
<th>7,500 tons</th>
</tr>
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<tbody>
<tr>
<td>Forty-five die casting machines:</td>
<td>Buhler, locking force: 4,000 kN; UBE, 2,500 kN, 6,500 kN, 12,500 kN, 8,000 kN; Toyo, 9,000 kN, 6,500 kN, 5,000 kN, 3,500 kN, 1,250 kN; L.K., 8,000 kN, 6,300 kN, 5,000 kN, 4,000 kN; Toshiba, 8,000 kN, 3,500 kN, 2,500 kN, 1,250 kN</td>
</tr>
<tr>
<td>Main die casting alloy:</td>
<td>aluminum</td>
</tr>
<tr>
<td>Categories of products:</td>
<td>automobile parts, household appliances parts, machinery parts and telecommunication products</td>
</tr>
</tbody>
</table>
Guangdong Wencan Die Casting Co. Ltd., founded in 1987, with the factory area of 66 000 square meters, is one of the leading manufacturing companies in China which are certified by ISO9001:2000 and specialized in die casting alloy products and assembles to meet customers' requirements on the basis of OEM/ODM. Wencan is one of the very few companies which have the capability of manufacturing finished die casting products in China mainland. Friendly working environment has also been created for Wencan by using LPG central melting furnaces, electric crucibles and automatic transfer lines. Other facilities include 62 die casting machines, ranging from 125 tons to 1 650 tons, imported from Japan, and provided with super high speed and vacuum die casting technology; 66 CNC machining centers, imported from Japan and USA, used for finish machining; Impregnation Production Line and Auto-coating Spraying Line; Wire-cut EDM, etc. Equipped with the advanced foreign computerized facilities for tooling, die-casting, machining, surface finishing, controlling and assembling, Wencan has the outputs of 20 sets of tools monthly and over 20 000 tons of parts annually. The machining capacity is around 8 million pieces a year, and the turnover is more than USD 2.5 million in 2005.

6. Dongguan Modern Metal Precision Die Casting Co. Ltd.

http://www.hkmr.com

Company profile:

Dongguan Modern Metal & Refining Ltd. (MMR), expertised in aluminum high pressure die-casting manufacturing for over thirty years, was established in Hong Kong in 1969. As the second manufacturing plant “Dongguan Modern Metal Precision Die Casting Co. Ltd.” was established in Dongguan city Guangdong province in 2003. Since the establishment, it has been providing high-quality aluminum die castings to many overseas famous companies, with its leading die casting technology and excellent product quality. Its business is spreading throughout the Euramerican regions. At present, the company possesses tens of cold-chamber die casting machines such as “TOYO”, “UBE”, “TOSHIBA”, ranging from 125 tons to 900 tons. Furthermore, there are two low speed die casting machines. And the finishing machining plant is equipped with more than twenty CNC precision machines such as “OKUMA”, “MAKINO”, “HOWA” imported from Japan. In mould design and manufacturing, the company has been the first to employ the advanced MAGMA computer simulation die-casting technology of Germany and the American Mark III X optical perspective equipment for casting defect inspection. The company offers high precision die castings for such fields as automobile, telecommunication, test instrument, mechanical equipment, light fittings and household appliances.

In May 1997, the company achieved the ISO9002 certification issued by British Standard Institution (BSI), and was the first to get the certification among the die casting enterprises in the region. In October 2001, the company was successfully certified in ISO9001:2000 and QS9000 qualifications.

7. Jiangsu Jiangxu Casting Group Co. Ltd.

http://www.jsjxzz.com

Company profile:

Jiangsu Jiangxu Casting Group Co. Ltd. is the foundry base of China FAW Wuxi Diesel Engine Works, and is a modern enterprise integrated non-ferrous metal high pressure die casting, low pressure casting, squeeze casting, gravity casting, sand casting, machining, mold design and manufacture. It covers an area of approx. 100 000 m², with the construction area of
Aluminum ingots are melted by continuous smelting furnace imported from Germany, and every machine has a holding furnace from abroad. The annual consumption of aluminum ingots are up to 44,600 tons, and its annual production capacity reaches more than 75 million pieces.

There are more than 1,700 pairs of the die casting dies imported from abroad. Generally, the large-sized roast plates are made by vacuum die cast method. The maximum weight of castings reaches 5,000 g. The machines are mostly equipped with automatic spraying. Part of them adopts automatic locking die and manipulator taking out device.

The company has imported tens of advanced equipment such as die casting machines, machining centers, drilling and cutting centers, spectrometer, etc. from Italy, Germany, Japan, U.K. and U.S.A. So far, the main facilities of the company include twenty die-casting machines ranging from 125 tons to 1600 tons, six low pressure die casting machines, three liquid extruding machines ranging from 350 tons to 500 tons, and the advanced production lines of gravity casting, sand casting and machining. The annual production capacity of non-ferrous metal castings has approached to 10,000 tons.

Currently, the company mainly produces more than 300 types of series products such as flywheel shells, air cylinder covers, intake manifolds, cooler covers, water outlet pipes, etc., which are used for automobile diesel engines. Meanwhile, the company also produces non-ferrous alloy castings for such industries as instruments and meters, chemical engineering, electric power, communication, household appliances and so on. The products are exported to more than 20 countries and regions such as Europe, America, Japan, the Middle East, etc.

The company has passed ISO/TS16949 and ISO 9000 quality management system certifications.

### 8. Tsann Kuen (Zhangzhou ) Ltd.

**Http://www.tsannkuen.cn**

**Annul output:** 44,000 tons  
**Sales amount:** RMB 1,050 million yuan  
**Die casting machines employed:** total 132, among them 46 machines, locking force: >5,000 kN, the largest locking force: 25,000 kN; 83 machines, locking force: <5,000 kN  
**Main die casting alloys:** aluminum alloys  
**Categories of products:** household appliances such as grills, irons, coffee makers, sandwich ovens, etc; automobile cylinder blocks and heads

**Company profile:**

Tsann Kuen Trans-nation Group was founded in 1978. Relying on its internationalized research, development and administrative groups worldwide, it has become one world-known multinational group integrating production and sales. The products are sold to more than 100 countries and regions all over the world.

At present, the die casting workshops of Tsann Kuen (Zhangzhou) Ltd, located at Tsann Industrial Park of Zhangzhou City, Fujian province China, covers an area of 50,000 m². There are 152 die casting machines imported from Japan, among them, 3 hot chamber machines, 129 cold chamber machines.


**Http://www.chinese-lamp.com**

**Annual output:** 15,000 tons  
**Sales amount:** RMB 350 million yuan  
**Die casting machines employed:** total 16, the total locking force: 50,000 kN  
**Main die casting alloys:** aluminum alloys  
**Categories of products:** light fittings  
**Areas of trade:** China, Europe, USA and Japan

**Company profile:**

Ningbo GEOSUN Electronics (Lighting) Co. Ltd. was set up in 1992 and is located in Ningbo City, Zhejiang province, China. It is a professional enterprise manufacturing varieties of outdoor lightings. It possesses six subsidiary companies which have their independent accounting systems. At present, Ningbo GEOSUN Electronics (Lighting) Co. Ltd. has the fixed assets of RMB 120 million yuan, and the value of annual output is RMB 300 million yuan. There are 1,350 employees, including 150
In cooperation with TUV Company, Ningbo GEOSUN Electronics (Lighting) Co. Ltd. invested about RMB ten million yuan to establish a lighting laboratory which met the international standards. GEOSUN is the only manufacturer in China who has such a lighting laboratory. So far, collaborating with GE (USA), Guzzini Company (Italy), EML Company (USA), GEOSUN has developed ten series of more than 800 kinds of lights such as quartz lights, halogen work lights, infrared induction lights, garden lights, etc. All kinds of products have passed the international and national certifications such as UL (USA), CSA (Canada), CE (Community of Europe), GS, SASO (Middle East), FI (Finland) Great Wall (China) and 3C (China), and the products are sold well to more than 100 countries and regions such as Euramerican and Afro-Asian regions.

GEOSUN has passed the ISO9002:1994 and the ISO9001:2000 quality certification. Currently, the company is taking the ISO14000 Environment & Quality certification.

**10. Ka Shui Manufactory Co. Ltd.**

**Annual output:** zinc alloy: 5 500 tons, magnesium alloy: 500 tons

**Forty-five die casting machines:** total 43, locking force: 4 000 - 1 250 kN

**Categories of products:** zinc alloys: hardware parts; magnesium alloys: 3C products, automobile parts

**Company profile:**

Ka Shui Manufactory Co. Ltd., established in 1994 in Hong Kong where the head office of the Group is located, is the first company in Hong Kong using the hot chamber die casting technology to start the mass production of magnesium parts, the weight of which range from 3 g to 780 g, with the dimensional accuracy of 0.02 mm. The main products include household, electronic and auto parts of zinc, aluminum or magnesium alloys. Ka Shui has two manufacturing plants in China mainland. The fully integrated production facilities allow Ka Shui to offer customers the complete turnkey solutions, including design, tooling, die-casting, machining, surface finishing and assembly. Ka Shui has passed ISO9001: 2000, ISO14000 and ISO/TS16949 quality management system certifications.

**11. Foxconn Technology Group**

**Die casting machines employed:** total 60, locking force: 1 500 kN - 8 000 kN

**Main die casting alloys:** magnesium alloys

**Categories of products:** 3C products, automobile parts

**Company profile:**

In 1988, Foxconn Technology Group began to invest in China mainland. It is a high and new technology group specified in manufacturing 3C products and semiconductor devices. It has dozens of subsidiary companies in China mainland, Taiwan Region, America, Europe and Japan. In mainland China, Foxconn has production facilities located in two areas-Shenzhen, in the Guangdong Province and Kunshan in the Jiangsu Province.

Today, Foxconn Technology Group is focusing on the fields of nanotechnology, heat transfer, wireless connectivity, material sciences, green manufacturing process, CAD/CAE, optical filming, ultra-precision nano-machining, SMT technology, network chip design, etc. The group has developed its products to such industry fields as precision machinery, mould, semiconductor, information, liquid crystal display, wireless communication and network, and it has become the most important science and technology company in the field of opto-mechatronic integration all over the world.

Foxconn has invested in China mainland for 18 years. Its products are widely used in such industry fields as computer, automobile, communication, consumption products, medical treatment, protection equipment, etc.

Foxconn has a team of over 2 000 experienced and dedicated engineers and technicians in mainland China and Taiwan focusing purely on mold and die fabrication and design. One of Foxconn's key competitive advantages over its competitors is its ability of designing and fabricating quickly the dies and molds required for its manufacturing operations.