



Car Air-Conditioning Compressor Business – Establishing a Global Presence

Car air-conditioning compressor production is a core business of our Automobile Segment. We develop and manufacture products that meet the needs of local markets throughout the world.

Technological Superiority

Toyota Industries' compressors are distinguished by their superior technology, and are the preferred product of many major car manufacturers.

Toyota Industries has made an important contribution to innovation in the automobile field. We anticipate changes in market needs accurately and develop products to meet those needs ahead of competitors. For example, in the 1980s, we launched our compact and lightweight ten-cylinder compressor with swash plate and fixed displacement, which is extremely reliable at high operating speeds. In the

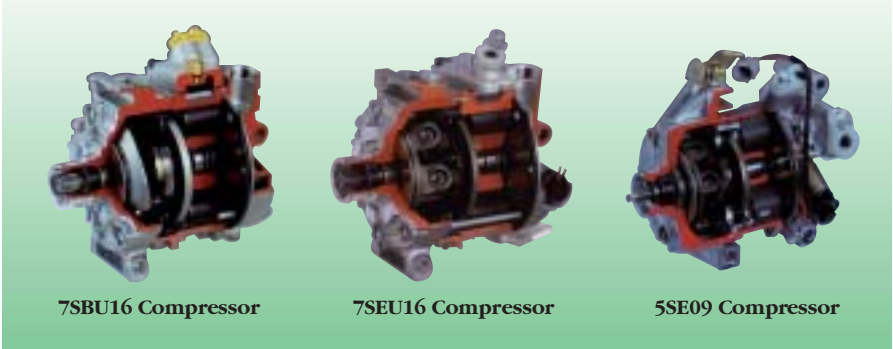
1990s, in response to increased concern for the global environment, we launched a one-way swash plate compressor with continuous variable displacement, which reduces the load on the engine and enhances fuel efficiency. In the late 1990s, we introduced an external signal-controlled compressor with one-way swash plate and continuous variable displacement, which offers both excellent acceleration and lower energy consumption.

In the near future, electric vehicles are expected to become more popular, leading to increased demand for electric compressors. Toyota Industries is undertaking substantial research and development in this field. We are also actively conducting extensive research into new compressors, using environment-friendly refrigerants to replace chlorofluorocarbons (CFCs).

Fixed Displacement Type



Continuous Variable Displacement Type



Global Operator

We hold a leading share in the global car air-conditioning compressor market, producing more than 12 million units a year at our facilities around the world.

Outside of Japan, we commenced production in the U.S. in 1990 and in Europe in 2000. We thus established a tri-polar production network with bases in all the major automobile markets. We also license production in Asia, South America and Europe. Local production allows the manufacture of products that reflect local needs, while at the same time reducing exchange rate risks.

In early 2000, Michigan Automotive Compressor, Inc. ("MACI")*, our U.S. production base, reached a cumulative total production mark of 20 million units. MACI has steadily expanded its production capacity.

In April 2000, TD Deutsche Klimakompressor GmbH ("TDDK")*, our European production base, began manufacturing operations in Sachsen, Germany. Output was approximately 300 thousand units in fiscal 2001 and is estimated to be approximately 750 thousand units in fiscal 2002. TDDK aims to gradually expand its production capacity.

In fiscal 2001, Toyota Industries was the major player in the Japanese market, selling approximately 4.6 million units to major car manufacturers, including TMC.

Toyota Industries sold over 4.4 million units, mainly fixed displacement compressors, for both American automakers and Japanese manufacturers producing in North America.

In Europe, Toyota Industries sold over 3.4 million units, including variable displacement compressors for luxury cars and compact variable displacement compressors for smaller cars.

Despite an economic slowdown in the U.S., our mid-term focus is on North America and Europe. In North America, we will seek new orders aggressively. In Europe, the potential for sales is vast as the proportion of cars fitted with car air-conditioners is expected to increase significantly. We will vigorously cultivate new customers by rapidly developing and launching products tailored to local needs, such as the compact variable displacement compressor for the European market.

All our car air-conditioning compressors are supplied to DENSO Corporation, which then sells them to major automakers worldwide with an electromagnetic clutch attached or incorporated in DENSO's car air-conditioning systems.

* MACI and TDDK are joint ventures with DENSO Corporation. As of March 31, 2001, Toyota Industries holds 60% and 65%, respectively, of the shares of these companies. The fiscal years of MACI and TDDK, unlike that of Toyota Industries, run from January 1 to December 31.

Worldwide Manufacturing Bases and Local Offices

